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NAVAL STAFF MONOGRAPHS
(HISTORICAL).

FLEET ISSUE.

VOLUME XIV.

HOME WATERS—Part V.

From July to October 1915.

April 1926.

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HOME WATERS—Part V.

From July to October 1915

Monograph No. 30.

NAVAL STAFF,
Training and Staff Duties Division,
April 1926.

HOME WATERS, PART V.

July to October 1915.

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The High Sea Fleet under Admiral von Pohl's leadership continued to make occasional excursions; not indeed aimless cruises but definite mining raids covered by the whole of the Fleet. In the course of these the Fleet came into contact with the principal form of offensive adopted by the British at this period, that of mining Heligoland Bight; but it suffered no important loss, owing partly to the defects of the British mine then in use. In Chapter VIII will be found an account of the remarkable cruise of the German minelayer *Meteor*.

Note on Sources.

The sources from which this volume has been compiled are the same as those which were used for Part IV of this series (C.B. 917*k*). The Admiralty telegrams for the period are contained in H.S. Vols. 248-259, 276-281. Telegrams based on, or connected with, intercepted German signals are separately bound in H.S. 203.

A selection of Admiralty telegrams will be found in Appendix A. The principle of selection is the same as that explained in the Introduction to the previous volume; only those telegrams are printed which radically alter the routine in force.

HOME WATERS, PART V.

CHAPTER I.

SUBMARINE ATTACK IN THE SOUTH-WEST APPROACH.

1. "U. 24" with York, June 27 to July 1. — Although the German submarine war on commerce was to some extent hampered by Admiral von Pohl's desire to employ some of his submarines in operations directed against the British Fleet rather than against trading vessels, endeavours were made to continue operations in the western approaches to the British Isles, where not only the imports from America and the East could be attacked, but also there was the chance of sinking transports bound for the Dardanelles with troops and military stores. There was further the possibility of attack on the transports crossing from England to France; but by this time the dangers attendant on penetrating deep into the English Channel were sufficient to deter both the authorities from ordering and the submarine commanders from attempting a raid to the eastward of the Start. For commerce warfare there was no need to take this risk; the area between Ireland and the coasts of Brittany was sufficiently rich in unprotected vessels to satisfy even the most ambitious of officers, who, had they known it, had also many chances of meeting unescorted transports.

The month of July opened with two submarines at work in the South-western Approach. One of these had commenced operations on June 27 when she sank by gunfire the sailing vessel *Edith* and the steamer *Lucena* within sight of the coast of County Cork. The third vessel she attacked had a luckier fate. This ship, the *Kenmare*, shortly before coming up to the submarine, had passed a patrol trawler, the *Rodney*, which, being only a few miles away, heard the submarine firing and turned to attack it. The trawler's 3-pdr. was within range in less than half an hour; with the second shot the gunner claimed a hit on the enemy's hull. Whether the claim was justified or not could not be seen, for the submarine immediately made off at a higher speed than the trawler's and soon disappeared in the haze. In the course of pursuit the *Rodney* came up with the boat containing the crew of the *Lucena*, who declared that oil was spurting out of a hole in the submarine's hull.¹

¹ *Edith* papers, M. 24855/15; *Lucena* papers, M. 724776/15; Queenstown A.P. Reports, H.S. 592, pp. 341-345.

The enemy, when chased by the *Rodney*, made off westward ; but she soon doubled back, and some four hours later attacked a steamer, the *Indrani*, bound from Glasgow for Montreal and now 40 miles west of the Smalls. While the attack was in process three Milford patrol trawlers came up, whereupon the submarine torpedoed the *Indrani* and left, but not before one of the trawlers had opened fire at a range of 3½ miles. The steamer did not sink and attempts were made to tow her in ; they were frustrated by a violent explosion in her, which all attributed to a second torpedo from the submarine.¹

A steamer, the *Orduna*, bringing an important cargo from America, was approaching the area of this activity. The Admiralty had warned Admiral Dare, commanding the Milford Auxiliary Patrol area, that this vessel would make 50° N, 9° W, and thence pass midway between Tuskar Rock and the Smalls.² She was met by the armed yacht *Narcissus*, and, being faster than the yacht, went on ahead while the yacht followed at her highest speed. The *Orduna* was about 4 miles ahead when the submarine appeared and began to attack her. Seeing this, the *Narcissus* opened fire and with her fourth shot succeeded in making the enemy submerge and disappear.³

The enemy's next attempt was on a sailing vessel, the *Dumfriesshire*, torpedoed at 10.5 a.m., June 28, 25 miles south-west of the Smalls. An armed trawler saw the explosion and rescued the crew ; neither they nor the trawler saw anything of the submarine. In the enemy's next attack, however, she had no hesitation in showing herself. That evening (June 28) the Leyland liner *Armenian*, making for Avonmouth with nearly 1,500 mules from North America for the Army, sighted her when 20 miles west of Trevoze Head, Cornwall. At first the *Armenian's* master, Mr. James Trickey, headed for the submarine in the hope of closing near enough to ram her ; but she opened fire while he was still 3 miles distant, and seeing that he had little chance of success, Captain Trickey turned the *Armenian's* stern to the enemy and put on full speed. The submarine followed, and for an hour shelled the unarmed steamer, which was soon on fire in several places ; a dozen of her crew were killed and several others injured ; but Captain Trickey had no thought of surrender till the fiftieth shell, passing down the funnel, put the boilers out of action. After the ship had been abandoned, the submarine, which had been lying off, sank her with two torpedoes. It was now about 8 p.m. Captain Trickey connected all the boats to his and waited for assistance, burning red flares to attract attention. He could see lights on the horizon from time to time ; but nothing approached, and as night wore on he made for the land under sail. Next morning the crew were taken aboard by a Belgian trawler, which at noon turned them over to two destroyers. Captain Trickey

¹ Papers titled X. 4368/15.

² Tel. to V.A., Old Milford, sent 12.35 p.m., 27.6.15.

³ Milford A.P. Reports ; H.S. 590, p. 171.

had sent out a wireless call for help as soon as the submarine attacked him ; it was correctly taken in by one of the Falmouth armed yachts at Mounts Bay, which warned the trawlers patrolling in the section of Falmouth Auxiliary Patrol in which the incident was occurring. Some Devonport destroyers also went out. They all failed to find anything.¹

Some of the *Armenian's* crew reported that they had seen the number U.38 on the submarine, and, in consequence, the operations described above were attributed by the Admiralty to that boat.² She was, however, U.24. By this time she was on her way home. She sank several more vessels before she was clear of the South-West approach.

The steamer *Scottish Monarch*, which she met on June 29, about 30 miles south of Queenstown, she sank by gunfire.³ On June 30 and July 1 she destroyed by bombs two sailing vessels, the Norwegian *Thistlebank* and the British *L. C. Tower*. A third sailing vessel came up ; she was being followed by an armed trawler, and U.24, therefore, torpedoed the sailing vessel, thinking it was British. It was, however, an Italian named *Sardomene*. The survivors of its crew were rescued by the accompanying trawler. The submarine made no attack on the armed vessel but continued westward, where she was sighted and chased by another armed trawler, the *Luneda*. This she soon outdistanced and seemed to regard so little that she began to fire on a steamer, the *Welbury*, while the trawler was still in sight. U.24 succeeded in sinking the steamer although the *Luneda* opened fire and gave chase.⁴

These were her last victims in the South-west Approach. Proceeding northabout she made for home, on July 6 sinking a Danish sailing vessel *Ellen*, which carried a cargo of timber from Norway to England. Next day the submarine reached Heligoland. She reported that strong patrols existed in Fair Island channel and extended up to 25 miles from shore off the Hebrides and the west and south coasts of Ireland ; in some cases she had found the patrol boats carried a heavy armament.⁵

2. " U.39 " in the South-west Approach, June 28 to July 4.— The master of the *Scottish Monarch*, sunk on June 29, saw two submarines in company, of which one attacked him while the other made off. This latter may well have been U.39, which had already commenced operations by shelling a Norwegian sailing vessel, the *Kotka*, 30 miles from the south-west corner of Ireland. Although the Norwegian was abandoned by her crew and left by the submarine, she did not sink, and a few days later was found and towed in to Queenstown. U.39 chose the southern part of the

¹ *Armenian* papers titled *Treasury*, 31 July 1915. The Captain and officers were awarded gold watches, and the crew were given £3 a head.

² See Appendix A. 10.

³ *Scottish Monarch* papers titled *Board of Trade*, 3 July 1915.

⁴ M. 05424/15. Report from V.A., Queenstown.

⁵ I.D.H.S., Vol. 3111.

South-west Approach for her sphere of action, sinking another Norwegian sailing vessel, the *Cambuskenneth*, about 26 miles south of Galley Head in the evening of the 29th. Next day she sank her first steamer, the *Lomas*, about 100 miles west of the Scillies.

Between July 1 and 3 she remained half-way between the Scillies and Ushant, picking off the steamers which, whether from the Atlantic or the Downs, were following a mid-channel course according to Admiralty orders. Most of them she shelled until they surrendered. Two, the *City of Edinburgh* and *Zealandic*, escaped by superior speed. One, the P. and O. liner *Arabia*, had a gun astern, but with her high speed escaped without there being any necessity to use it. The others, *Gadsby*, *Caucasian*, *Inglemoor*,¹ *Richmond*, *Craigard*, *Boduognat* (Belgian), *Renfrew*, *Larchmore*, and the French sailing vessel *Hirondelle*, were all sunk.

In the afternoon of July 3, after this profitable raid on the mid-channel route, U.39 proceeded for home, in the evening sinking another Norwegian sailing vessel, the *Fiery Cross*.²

The raid thus concluded had been characterised by some incidents worthy of notice. The sinking of the *Gadsby* was not known to the Admiralty till 57 hours after its occurrence.³ The *Caucasian's* destruction had one picturesque, if sinister, feature, best described in the words of Mr. F. H. Robinson, her master*, as given in his deposition.⁴

The submarine signalled "abandon ship at once," but deponent kept vessel going full speed (about 9 knots) on a zigzag course to keep the submarine astern. Shells were continuously coming through the bridge, and the steersman left the wheel and went forward to escape the shells. Deponent, who was on the upper bridge watching movements of submarine, descended to lower bridge and took the wheel while the second mate was on the look out.

After a chase of 65 minutes, the seventeenth shell struck the compass stand and steering standard, completely carrying it away and rendering vessel unmanageable. Crew then took to boats.

The commander of the submarine informed deponent that he was going to sink the lifeboats because vessel had not stopped when ordered to.

At that moment deponent's dog fell overboard and deponent jumped into the water to save it. He clung to rails of the submarine, and the commander said, "You jump overboard to save a dog!" to which deponent made no reply, and the commander then told him that his boats could proceed.

In the case of the *Richmond*, bringing sleepers for Boulogne, she had already made a safe arrival at Queenstown. There she received orders to make the parallel of 49° N and follow it till abeam of Ushant,⁵ a route which, while complying with Admiralty

¹ An Admiralty collier for Gibraltar.

² *Fiery Cross* papers: M. 40203/15, titled *Board of Trade*, 7 July 1915.

³ H.S. 128, p. 577, and papers titled *Board of Trade*, 23 July 1915.

⁴ Papers titled *Board of Trade*, 5 July 1915, *Caucasian*.

⁵ The report of C.-in-C., Plymouth, on the *Richmond* incident (M. 24968/15), states that she was directed to steer E by S from Queenstown, but this is possibly a misprint for S by E, which is the course she took.

directions that steamers should keep as far as possible from headlands, led her into the area where U.39 was exercising undisputed command.

As on so many occasions, a steamer in the neighbourhood of a submarine was suspected of aiding her. In this case it was the master of the *Boduognat* who reported this suspicious vessel, which on investigation turned out to be an innocent Spaniard.

The area in which U.39 had been operating was well furnished with destroyers, those detailed for the escort of the transports leaving for the Dardanelles or coming in from Canada; in fact, the 10th Flotilla, comprising the latest "M" class destroyers, with the *Aurora* as ship of Captain (D), was based at the time on Devonport. The work of escort necessarily left them little leisure; but there were from time to time some boats resting; and at 8.45 p.m., July 2, the Admiralty ordered any destroyers available after escort duties had been arranged to go out and hunt submarines. A newly commissioned decoy ship, the *Princess Ema*, was also off Devonport; she was ordered to proceed westward and operate in the area Falmouth-Fastnet-Millford—that is, the northern half of the South-western Approach.¹ As a result of these orders a vessel was saved, though only after a gallant and almost ineffectual struggle.

The horse-transport *Anglo-Californian*, bringing 927 horses from Canada for Avonmouth at 8 a.m. July 4, was about 80 miles south of the south-west corner of Ireland when she sighted U.39 a mile off. The transport was unarmed; she turned her stern to the enemy, put on full speed, and sent out an S O S call. It was picked up and answered by a destroyer, and the following signals passed:—

9.50 a.m. *Mentor* to *Anglo-Californian*. Will be with you in about an hour.

11.00 a.m. *Anglo-Californian* to all ships. Submarine is keeping pace.

11.05 a.m. *Anglo-Californian* to all ships. He is still very close, within a couple of hundred yards.

11.21 a.m. *Anglo-Californian* to all ships. Submarine has dived.

11.23 a.m. *Mentor* to *Anglo-Californian*. Can you see us yet?

11.25 a.m. *Anglo-Californian* to *Mentor*. Yes. Two ships coming up on beam and one on the port quarter.

But these signals tell little of the story. The submarine had maintained a steady fire on the transport from 9 to 10.30 a.m. gaining on her till the master decided he must surrender, and stopped. Another vessel was in sight; it was the *Princess Ema*, which had taken in the transport's call. She was still at long

range; she opened fire but her shots fell short. At this moment the *Anglo-Californian* took in the *Mentor's* signal that she was coming up, and her master, Captain F. Parslow, determined he would not give up his ship. The engines had been stopped; one boat was in the water; the other boats were manned with the fireman aboard; and the submarine was within rifle range; but when Captain Parslow ordered his firemen below they came out of the boats and recommenced to get up steam. Captain Parslow was aware of the danger he was running; he ordered everyone down below such protection as the hull and decks afforded; the only men he permitted to remain above decks were himself in charge, the wireless operator in the wireless house, and his own son at the wheel. The submarine, seeing her prey attempting to escape, opened a heavy fire with the two guns she carried and even with rifles. A shell struck Captain Parslow on the chest; nothing remained of him except a huge splash of blood on the paintwork of the bridge. His son beside him at the wheel did not falter. The upper bridge was riddled, the wheel he was at had a spoke knocked off, the binnacle was struck, the peak of his cap was taken away by a shell; but he stuck to his place of duty and was there alone till the submarine dived on the appearance of the *Mentor* and *Miranda*. It is satisfactory to know that this courageous officer was unhurt and able to receive the Distinguished Service Cross. The young wireless operator, Mr. J. Rea, who remained at his post directly under the upper bridge throughout the firing, received a gold watch marked "for gallantry."¹

U.39 was now returning. The Admiralty realised this; and estimating that she would be off the Orkneys between July 8 and 9, suggested to Admiral Jellicoe that a special effort should be made to intercept her.² Another submarine was known to have left the Ems on July 3, probably for the west of England, and could therefore be expected to make the passage round the north of Scotland at about the same time. The Commander-in-Chief concentrated a force of destroyers, sloops,³ trawlers and net-drifters to the number of 65 vessels in Fair Island Channel, where they remained on the alert from the evening of July 5 to the afternoon of July 9; seaplanes from the *Campania* assisted, but no submarines were seen. Admiral Jellicoe, considering the number of vessels available not sufficient to provide an effective patrol both north and south of the Shetlands, had concentrated on Fair Island Channel; from the failure of this patrol to sight anything he assumed that submarines now avoided the channel and passed wide of Muckle Flugga.⁴

¹ *Anglo-Californian* papers titled L. 249/15. The Chief Engineer received the D.S.C., the Second Engineer a gold watch, and the Chief Officer a gold watch.

² A. 16.

³ There were now seven sloops with the Grand Fleet: *Hollyhoek* (Senior Officer), *Foxglove*, *Acacia*, *Dahlia*, *Daphne*, *Lilac*, *Larkspur*.

⁴ H.S. 129, p. 975, and G.F.N.

Apart from this special effort, which was of a temporary nature and intended to catch a particular submarine, a reorganisation of the auxiliary patrol of the Orkneys and Shetlands came into effect on July 5. By this a certain number of trawlers were released from routine patrol duties, formed into a "Striking Force," and stationed in the Fair Island Channels. In the event of a submarine being reported the entire Striking Force was to concentrate at the site of the report and make a systematic search on definite lines laid down. If it was known beforehand that a submarine was approaching, the striking force would be reinforced by destroyers.¹

3. **Instructions to secure greater Safety for Sailing Vessels.**—Of all the ships sunk by *U.24* and *U.39* in July, the sailing vessel *Dumfriesshire* was particularly unfortunate, in that she had already made a safe arrival at Falmouth with her cargo of barley from America; but as it was consigned to Dublin she had been ordered out of Falmouth to complete her voyage. In reporting her loss, Admiral Dare drew attention to this fact, adding that he considered it "a very injudicious procedure, seeing that she was only a sailing vessel and would have to pass through waters much frequented by enemy submarines."²

The scarcity of steamship tonnage for ordinary purposes, owing to the requisitions of so many ships for the transport and supply services of the Army and Navy, was having the effect of bringing into activity a great number of sailing vessels; and since their dependence on favourable winds made them an easy prey for marauding submarines it had already been suggested that the Admiralty should arrange to tow them into port as soon as they appeared at the entrance to the English Channel.³

Lloyds pointed out on July 21 that, since March 30, 43 sailing vessels had been destroyed by submarine action, and at the moment 143 more were on passage to the United Kingdom; they asked the Admiralty to take steps to warn incoming vessels of the safest routes for them to take. "There are no safe routes," wrote the Director of the Trade Division⁴, with regard to this letter; "wherever she goes a sailing vessel is in grave danger. As matters stand at present it is most dangerous for sailing ships to try to beat up the English or Irish Channels." A conference was held at the Admiralty on July 16, shipowners and representatives of the Board of Trade attending; as a result, intelligence officers abroad were instructed on July 22 to advise sailing ships for the United Kingdom to wait outside the 100-fathom line till a favourable wind enabled them to lay a direct course for their destination; and on August 6 a general order went out that if outward bound

¹ Details of the scheme will be found in H.S. 138, A.P. Reports, Orkneys and Shetlands, pp. 178-183.

² Milford Letter 240/63 of June 28, in papers titled *Lloyds*, 6 July 1915.

³ Letter Mercantile Marine Service Association to Admiralty, 14 June 1915, in papers titled *Lloyds*, 6 July 1915.

⁴ Captain Richard Webb, R.N.

sailing vessels required and could not obtain towage commercially, they were to be assisted so far as the exigencies of the service admitted.¹

4. **Suggestion to take Light Guns from the Fleet for Arming Merchant Vessels.**—As a result of these attacks in the South-west Approach, the route of vessels on government business coming in from America was altered. Those bound for Liverpool were to pass through 50°24' N, 9°35' W, and 51°57' N, 5°56' W, afterwards keeping in mid-channel; while those bound for Devonport were to make 49°12' N, 9° W, as their first rendezvous, the next being as before, 30 miles south of the Lizard.²

The fate of the numerous transports bringing men and stores from American and Canadian ports was being watched by the masters whose turn it would be to sail next from New York; and when the story of the *Armenian's* heroic but ineffectual attempt to escape from U-24 reached them certain parts of it had a great effect upon them. Not only among the masters, but also among the seamen who would have to work the ships, there was much comment upon the fact that though the *Armenian* was close to land and was chased for two hours in an area where hostile submarines might be expected, yet no assistance was given to her.³ A body of nine masters of ships engaged in carrying stores for the French Government from America sent in to the Ambassador a signed request for their ships to be provided each with a small gun.⁴

The request was difficult to grant. There was a shortage of guns of all kinds and many very urgent calls on those that existed. The immense fleet of trawlers and drifters of the auxiliary patrol was still not all armed; and, further, the air raids of the month of June had given rise to widespread demands from threatened areas for light guns to be set up on anti-aircraft mountings. The Trade Division of the Naval Staff was in close touch with owners and masters of merchant ships. On July 19 it put forward a minute embodying its suggestions. The requests of the Mercantile Marine fell under three principal heads: (a) adequate protection by patrol vessels in narrow waters, (b) merchant ships to be allowed to keep close to the coast if submarines could not be prevented from operating on the surface in order to give their crews a chance of safety, (c) that every effort should be made to equip merchant ships with guns so that they could offer resistance when attacked by gunfire. Proposals had been made to divert slow unarmed vessels along fixed routes where patrols would reduce the probability of gun attack; but the ultimate solution of the difficulty in the opinion of the Trade Division was to arm

¹ C.I.O. 799, of 6 August 1915. Papers titled *Lloyds*, 6 July 1915.

² A. 22.

³ Ambassador, Washington, to F.O. Tel. 1202 of July 8.

⁴ Despatch 358 of July 8 from Ambassador, Washington, to F.O. Copy in papers titled *Treasury*, 31 July 1915.

every merchant ship and let it fight for itself. The alternative plan of arming the auxiliary patrol in preference would merely have the effect of driving the submarines farther afield; it had already had that effect but had not led to any decrease in casualties. The seriousness of the situation was clearly perceived. "The wastage of British tonnage due to submarines now exceeds the output," wrote the Director of the Trade Division,¹ "and assuming the war lasts for another year or more, this may prove a deciding factor." It seemed to him so urgent that he suggested removing the light guns from certain ships of the Fleet, and gave a list of 594 12 and 3-pdrs. that, in his opinion, could best be spared. This suggestion was, in fact, a proposal to arm merchant ships instead of the vessels whose work was to protect them.²

A return dated 4 August 1915 gave an idea of the distribution of guns of 4-7-in. and under since the outbreak of war. Of the 2,349 guns of these calibres issued during the first year of the war to additional services and ships other than new cruisers and destroyers, 1,159 had gone to the auxiliary patrol, 832 for miscellaneous services ashore and afloat, and only 262 to defensively armed merchant ships. Nearly 1,200 more would be required to complete the arming of the auxiliary patrol and minesweeping services. Guns were being sought for in all directions; even the 12 and 3-pdrs. captured by Japan from Russia had been bought and were awaiting examination before being distributed.³ This being the condition of affairs as regards supply of guns, nothing more was done towards arming merchant vessels.

The other two suggestions—(a) that the patrols should protect merchant vessels in narrow waters, and (b) that slow unarmed merchant vessels should keep inshore to give the crews a chance of safety—seem to have escaped attention. At any rate nothing was then done to put them into practice. As the statements of masters show, ships continued to keep as far from land as they could get, and continued to be sunk there; the patrols, tied by their limitations to the close neighbourhood of the shore, rarely were near enough to afford any assistance to a ship attacked; and after the submarine had completed her work in a leisurely and undisturbed fashion the crews in their boats had often to wait a day or more before meeting any of the armed vessels they assumed to be protecting them.

5. "**U.20**" operating on the South Coast of Ireland, July 8-10. —The attack on commerce in the South-west Approach was continued by *U.20*, Lieutenant-Commander Schwieger, which made her first appearance off this coast about 40 miles west of the coast of Ireland in 52°20' N at dawn on July 8. The armed

¹ His whole memorandum is given in Appendix E.

² Minute by First Sea Lord in papers titled *Foreign Office*, 10 July 1915.

³ D.N.O.'s return in M. 05377155.

trawler *Lord Henage* of Galway patrol happened to be out there, sighted her and attempted to close. The submarine opened fire; but when the trawler replied she made off.¹

By the evening she was south of Cape Clear. There, about 50 miles from shore, she came across a Russian sailing vessel from America with barley, the *Marian Lightbody*, which she stopped and, after giving the crew ten minutes to leave, sank by gunfire and a torpedo.²

The Queenstown patrol at this period did not extend far from the land. Admiral Coke considered the armed trawlers, from their limitations, not suitable for acting out of touch with the shore. On the south Irish coast they patrolled in line abreast at visual distance apart, the inner one being 5 to 10 miles from the land. He did not care to weaken the coast patrols for more distant operations, and if these extended as far as 40 miles from shore he thought they should be carried out by fast destroyers.³ Consequently the crew of the *Marian Lightbody* had to wait twelve hours before they were found by one of the Milford Yacht Squadron, which by Admiral Dare's orders worked farther afield.

Proceeding eastward, *U720* early on July 9 found and attacked the liner *Ortuna*, now bound from Liverpool to America with passengers. The first intimation of her presence was a torpedo which passed astern; the submarine then came to the surface and began to shell the liner, which turned her stern and put on full speed, 16 knots. She gradually drew ahead and was one of the vessels which escaped by superior speed. As the position was 35 miles south of Queenstown no patrol was near, but the *Ortuna's* calls for assistance succeeded in bringing up one of the armed yachts four hours after the submarine had been left behind.⁴

U720 meanwhile had gone on and at 2.15 p.m., July 9, sank by gunfire s.s. *Meadowfield*, bringing copper ore for Glasgow, and then 30 miles south-west of Tuskar Rock. No patrol was near, but seven hours later the crew were rescued from their boats by a fishing vessel.⁵

During the afternoon of July 9 *U720* sank two more vessels, the British s.s. *Ellesmere* and the Russian s.s. *Leo*. The *Ellesmere* was bound for Manchester with a general cargo. *U720* came up to her at 4.35 p.m. and began shelling her. She surrendered and was torpedoed after an attempt to escape, during which she suffered some damage and one man was killed. The crew were rescued later by one of the Milford Auxiliary Patrol trawlers. About half an hour after the *Ellesmere* sank, her crew saw the submarine destroy the *Leo* in the same vicinity.⁶

¹ Queenstown A.P. Reports, H.S. 592, p. 372.

² Papers titled X. 3363/15 and L. 221/15.

³ Admiral Coke to Admiralty, 6 July 1915; M. 05280/15.

⁴ Papers titled Foreign Office, 3 August 1915, *Ortuna*.

⁵ *Meadowfield* papers titled Board of Trade, 14 July 1915.

⁶ *Ellesmere* papers titled Board of Trade, 14 July 1915.

The destruction of the *Leo* presents some curious features. She was an ordinary tramp steamer on passage from the United States to Manchester. She was faithfully keeping as far as possible from land and was half-way between Ireland and Cornwall, 60 miles from either shore. No patrol vessel was in sight and her lookouts could see nothing but an American barque. Suddenly she was struck, and in two minutes she sank. No submarine was seen by any member of the crew, either then or afterwards, nor had the track of an approaching torpedo been observed, although it was 5.35 p.m. on a fine clear day. Her boats had been swung out; but in the brief two minutes available only 13 out of her 24 souls on board were saved; among the drowned were three stewardesses.¹

One can only guess at the object of this heartless attack. Possibly Lieutenant-Commander Schwieger mistook this wretched tramp for something more formidable; possibly his nerves were less under control than usual. It may have been that, having decided to return, he wished to expend his last torpedo and found in the *Leo* a convenient target for practice. At any rate the sinking of the *Leo* concluded his cruise in the South-west Approach. He proceeded home round the west of Ireland. On July 13 when north of the Shetlands, he sank another Russian, the s.s. *Lennok*, and passing 40 miles west of Lindesnaes, was back home by July 17.

6. Destroyers in the South-west Approach, July 1-10.—The first week of July had been a specially busy one for the 10th Destroyer Flotilla,² under the *Aurora*, operating from Devonport.

Besides the routine of taking out transports from Avonmouth or Devonport, leaving them, and then picking up a transport from Canada at a rendezvous, there was special anxiety about the big liners being used to transport large numbers of troops from Liverpool to the Dardanelles. On July 2 the *Empress of Britain*, originally an armed merchant cruiser in one of the Atlantic cruiser forces but now disarmed and a transport, left Liverpool with 4,500 troops on board. She was escorted through the Irish Channel by the *Mentor*, *Manly* and *Miranda* sent up from Devonport with orders to accompany her as far as 50° N. 8.30 W. They were to return from this position to pick up the next liner transport, the *Aquitania*, which, being one of the largest ships in the world, seemed in special danger of submarine attack. The *Empress of Britain* had been a little slow in getting away, but the *Aquitania* was well up to her programme time and left Liverpool at 1.30 p.m., July 3, with 5,939 troops on board. In order to provide her with escort the three destroyers were ordered to leave the *Empress of Britain* as soon as the Fastnet-Bishop line was crossed.³

¹ *Leo* papers M. 40830/15, titled Board of Trade, 17 July 1915.

² *Manly*, *Mansfield*, *Mastiff*, *Matchless*, *Medea*, *Mentor*, *Meteor*, *Milne*, *Mines*, *Miranda*, *Moorsom*, *Morris*, *Murray*, *Myngs*.

³ J.A. 88.

Accordingly at 5 p.m., July 2, the *Mentor* and *Miranda* parted company with the *Empress of Britain* in 51.20 N, 7.2 W; the *Manly* remained with the transport till 9 p.m. and then proceeded to Queenstown for oil before meeting the *Aquitania* in the Irish Channel.¹ Unfortunately the destroyer ran ashore in a dense fog off Queenstown, and the *Aurora* at Devonport was ordered to send another boat to relieve her.² This was no easy matter; Liverpool was nearly 400 miles away and no boats were within reach, and it seems that in the end the *Aquitania* had no other escort than the *Mentor* and *Miranda*.

These conducted her as far as the 50 N, 8.30 W rendezvous, where at 5.10 a.m., July 4, they parted company and proceeded for Plymouth. Only 20 minutes after they had left her the big liner saw a torpedo coming towards her,³ fired doubtless by *U.39*, on her way home from her raid south of the Lizard. Luckily the torpedo missed, and Lieutenant-Commander Forstmann in *U.39* lost the chance of sinking one of the finest merchant ships in the world and her company of 6,000 soldiers in addition to her own crew.

The two destroyers were south of Bishop Rock when they intercepted the *Anglo-Californian's* call for help. Turning at once, they were able to save that ship after her very courageous defence.

Meanwhile the Xth (Ulster) Division, destined for the Dardanelles, had to be brought across from Ireland during the first week in July. As with the previous division from Ireland, part sailed from Belfast to Liverpool and part from Dublin to Holyhead. The latter went in the fast railway packets and had no direct escort; but as before, the Kingstown Auxiliary Patrol guarded the mail route.⁴ The boats from Belfast to Liverpool were slower and two destroyers of the 10th Flotilla were sent from Devonport to guard the passages nightly from July 1 to 6 inclusive.⁵

At the conclusion of this duty the two destroyers, *Moorsom* and *Murray*, which had been running the escorts from Belfast to Liverpool, took out the Cunarder *Transylvania* on July 7 from Liverpool with 2,983 troops for the Mediterranean. Her route was midway down the Irish Channel and through 50° N, 8.30 W, which she passed at 6.45 p.m., July 8; thence she continued wide of the land to Gibraltar.

The two destroyers returned from the rendezvous in 50 N, 8.30 W to meet the *Mawretania*, which left Liverpool on the 9th with part of the Xth Division, en route for the Dardanelles. Her route was the same as that of the other large transports from

¹ Deck logs.

² A, 13.

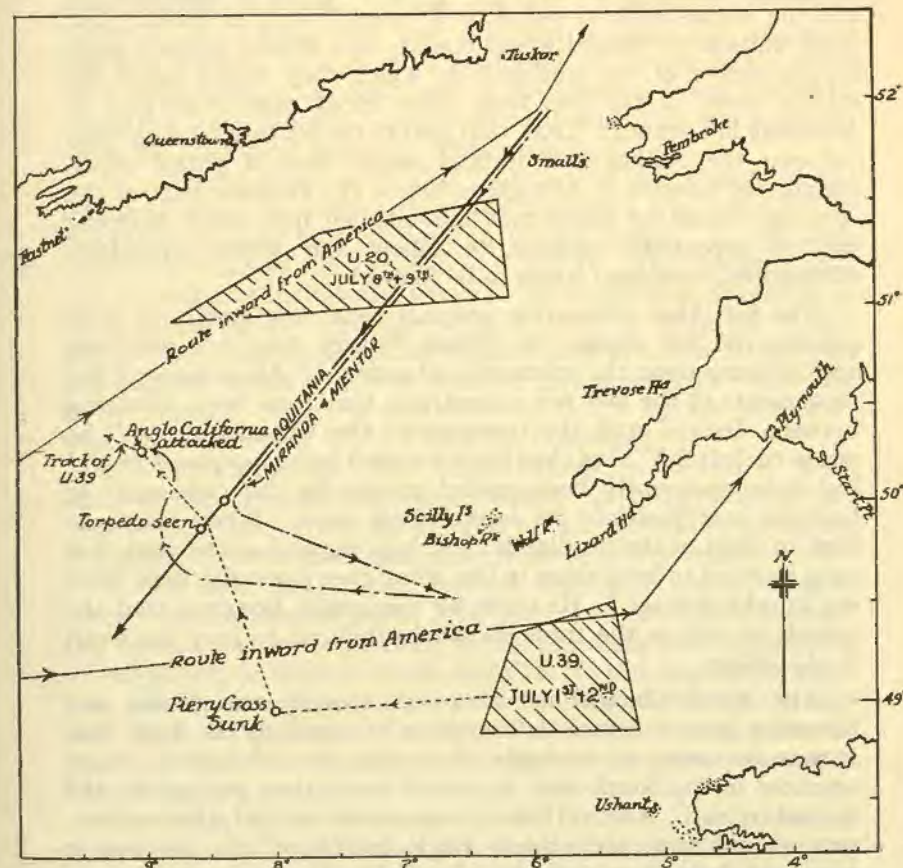
³ Signal from *Aquitania*: Torpedo fired at us 5.30 a.m., July 4, 49.56 N, 6.35 W. (H.S. 128, p. 801.) N.B.—The 6.35 W is considered a clerical error for 8.35 (T.S.D.D.).

⁴ Kingstown A.P. Reports.

⁵ Tel. sent 9.40 p.m., June 29, to V.A., Queenstown.

Liverpool. At 10.45 a.m., July 10, the *Moorsom* and *Murray* parted company at the 50 N, 8.30 W rendezvous and went into Devonport.¹

PASSAGE OF *Aquitania*, JULY 4.



7. Attempts to deal with the Submarines in the South-west Approaches.—By the latest orders² as many units of the auxiliary patrol as could be spared from other duties were to be utilised by Admiral Dare, commanding at Milford, in a concerted effort in the South-west Approach. As the result of a large increase of net drifters he found himself at the end of the first week of July in command of 100 of these vessels and with them was able to maintain a line of nets between the Smalls and Tuskar from July 9 onwards, thus closing the southern entrance to the Irish Channel, in so far as the nets could close it. By the end of July the nets were submerged to a depth of 6 fathoms³ and their

¹ H.S. 129, pp. 133, 193. Deck log, *Moorsom*.

² M. 04734/15 of June 26. See *Home Waters*, IV, Section 129.

³ Milford A.P. Reports. H.S. 590, p. 262.

presence should therefore be unsuspected by passing submarines. He also organised a co-ordinated scheme of patrol,¹ which by Admiralty orders came in force on July 7. By this scheme the Yacht Squadron was to patrol to westward of the line joining Queenstown to the Scillies; the trawler units from Queenstown and the Scillies were to patrol to 40 miles from their bases. The spare units from Milford would operate in a similar manner using for the centre of the semicircle in which they would patrol the middle point of the line from Mine Head near Waterford to Newquay in Cornwall. Thus, that part of the South-west Approach between the Scillies and Ireland would have a patrol which completely covered it, though as before the thinnest part of the covering would be along that mid-channel line which shipping was so repeatedly ordered to follow and where, therefore, submarines were most likely to be found.²

The fact that submarine sinkings were now mostly in mid-channel did not escape Sir Arthur Wilson, who was watching and advising upon the submarine situation. "An analysis of the movements of the last few submarines that have been operating between Ireland and the entrance of the Channel shows," he wrote on July 9,³ "that they have not used laying up places at all,⁴ but have apparently been guided mainly by the endeavour to find the best positions for intercepting ships. When the trade kept in sight of the headlands they kept in, and as the trade has been induced to keep more in the offing they have also kept more out in mid-channel." He made no suggestion, however, that the patrols as well as the trade should be induced to keep more out in the offing.

The North Channel net area was steadily maintained and formed a barrier across the northern entrance to the Irish Sea. It was becoming increasingly clear that the submarines which operated in the South-west Approach made their passage by the west of Ireland. Admiral Coke, Commander-in-Chief, Queenstown, pointed out that they made Eagle Island off the north-west corner of Ireland as their first landfall. They were frequently sighted from the lighthouse there; and the Admiral suggested that the best thing to do would be to strengthen the patrol in the Blacksod Area, by the addition of two trawler units and eight net drifters; a captain to command the whole; and operations more than 40 miles from shore⁵ to be carried out by sweeps of fast destroyers. At the Admiralty it was thought that the effect of a strong patrol at Eagle Island would merely be to compel

¹ See Appendix C.

² See plan at p. 208.

³ M. 05280/15.

⁴ Admiral Coke positively asserted that submarines had laying up places near the Stags and to the eastward of Old Head of Kinsale (M. 05280/15).

⁵ Forty miles from shore seems to have been regarded as the limit for routine trawler patrols. Compare Admiral Dare's scheme in Appendix C, T.S.D.D.

the submarines to pass a little further off, which would not add much to their difficulties; and Admiral Coke's suggestion was not adopted.¹

8. Appointment of new Commander-in-Chief, Queenstown, with enlarged Command.—One reason why no action was taken on Admiral Coke's letter was that his term of office was about to expire. His successor was Vice-Admiral Sir Lewis Bayly, who, after relinquishing the command of the Channel Fleet, had been ashore for some months. Simultaneously with this new appointment the command was very greatly enlarged.²

In order to avoid a divided control over the waters of the North Channel the boundary of his command was extended to touch the coast line of Scotland in certain places. In the Irish Channel it followed the meridian of 4° 51' W. The southern limit was extended to include the whole of the South-west Approach as far as a line S 52° W from the point midway between the Scillies and Ushant. The three auxiliary patrol bases at Larne, Kingstown and Milford, which had been separate commands, were now put under Admiral Bayly, as was also the Scilly Islands sub base, which had been part of the Falmouth Command.

It was contemplated that Admiral Bayly, in the course of his visits to this extended command, would, unlike his predecessor, have a good deal of sea-work; and he was given the *Adventure* of the 6th Light Cruiser Squadron for his seagoing vessel.

A new area XXII, with base at Holyhead, was formed to include the eastern half of the Irish Sea; and the Bristol Channel also became a separate auxiliary patrol area with base at Swansea. At Holyhead, to which Captain Raby, R.N., was appointed, there were already two units; a third unit was transferred to the new base from Kingstown. To work the Swansea area, when in August it had been organised, a complete unit was transferred from Milford.³

The fixing of the northern limit of the new Irish command at Skerryvore, about 20 miles south of the former limit, made an increase in the area of the Stornoway auxiliary patrol command and a corresponding reduction of that of Larne. To meet this alteration one trawler unit was transferred from Larne to Stornoway and another from Bunrana, the minesweepers which had been clearing the Tory Island minefield to be armed and operate in lieu of the unit taken from Bunrana. The changes left Larne with only one yacht and twelve trawlers, of which at any moment only seven were available for patrolling and for the escorts frequently demanded. No more could be spared and the Admiral, Larne, had to do his best with these.¹

Besides the *Adventure*, which was for his personal use, Admiral Bayly was to have under him the second twelve of the new sloops, which were to be formed into a flotilla organised and administered

¹ M. 05280/15.

³ M. 05568/15.

² Appendix D.

⁴ M. 05783/15.

exactly in the same manner as a destroyer flotilla. They were to operate in the South-west Approach, but were not to be employed in the Irish Channel or in the English Channel east of the Lizard-Ushant line. They were to be known as the 1st Sloop Flotilla.¹

The original intention was for them to operate from Millford Haven, but at Admiral Bayly's request this was changed; by his first proposals eight were based on Queenstown and two each at Lame and Millford Haven, but as soon as he had experience in his command he arranged to have them all at Queenstown, whence he could send them to operate either in the South-west Approach or at the north-west and south-west corner of Ireland to catch the submarines making their landfall.²

Admiral Bayly was also to have some aircraft under him for scouting in the South-west Approach. However desirable it might be to have coastal airships operating from stations in Ireland, the disloyal state of the country made the establishment of aerodromes difficult; but the value of air scouting was such that it was decided to send the seaplane carrier *Empress* to Queenstown to act as a floating seaplane base.³

Admiral Bayly arrived in the *Adventure* and took over the Irish Station from Admiral Coke on July 22.

9. The ~~Final~~ ~~Raid~~ ~~of~~ ~~25~~ ~~July~~ ~~1915~~ ~~to~~ ~~August~~ ~~4~~ ~~or~~ ~~For~~ ~~the~~ ~~first~~ week of Admiral Bayly's command there were no submarines in the South-west Approach; but on July 30 the sinkings began again with the s.s. *Iberian*, sunk at 4.30 p.m. about 76 miles south of the Fastnet. She was a Leyland liner bound from Manchester for Boston, Massachusetts, with general cargo. She had been shelled at long range; so long a range, in fact, that the submarine did not seem to realise that she had stopped at the first shell. Six men were killed and seven wounded by the shell fire. These were given bandages by the submarine when she came up to the boats containing the crew. They then observed that she was painted in chequers of dark grey and white and that she had the number 58 on her conning tower. The position was so far from land that no boats of the auxiliary patrol were near. It was not till four hours later that any vessel was sighted by the *Iberian's* crew. The new sloop *Sunflower*, which had commissioned at Glasgow on July 5, had left Queenstown on her first turn of duty on July 29; it was she that picked up the survivors of the *Iberian*.⁴

The submarine did not remain on the route of Liverpool trade, but proceeded southward to the mouth of the English Channel where on July 31 she spoke and released a Spaniard, and sank two vessels, the s.s. *Nugget* and the s.s. *Turquoise*, which were intended

¹ The first twelve of these sloops were with the Grand Fleet and were there known as minesweeping sloops.

² Papers titled *Admiralty*, 2 July 1915, *Formation of 1st Sloop Flotilla*.

³ M. 05702 of 23 July 1915.

⁴ *Iberian* papers titled *Board of Trade*, 9 August 1915. The telegraphic report of V.A., Queenstown (H.S. 133, p. 905), gives the position 1 deg. too far north.

as auxiliaries for the Dardanelles operations. These were sunk round about 49° N, 7° W, on the mid-channel line and far from any patrols; their crews were picked up by a Dutch sailing vessel and 16 hours elapsed before the loss of these two auxiliaries was known to the Admiralty.¹

The master of the *Turquoise* had made an attempt to ram the submarine, although he was under fire at the time; unfortunately a shell carried away his steering gear and frustrated the attempt. When the master and the crew were in the boats, the submarine drew up to them and a German officer informed them that he would be fully justified in shooting them all, as the *Turquoise* had attempted to ram his submarine. He did not, however, proceed to shoot them; but left them and went and sank the *Turquoise*.²

The submarine did not continue operating on the mid-channel route; she proceeded to the southward of Ushant and on August 1 destroyed four steamers. The first was the s.s. *Clintonia* from Marseilles, which was torpedoed after she had been abandoned 30 miles to the south-westward of Ushant. Two French patrol boats came up an hour later and picked up the crew. Meanwhile the submarine had moved off to the westward and about noon destroyed two vessels, the s.s. *Benvorlich* and the collier *Ranza*, bound from the Tyne to the Mediterranean. The crew of the latter were picked up by a French sailing vessel and a passing Dutch steamer, and the crew of the *Benvorlich* were rescued by the hospital ship *Loyalty*, bringing wounded from the Mediterranean. The submarine watched the hospital ship's proceedings but made no attempt to interfere with her. These crews noticed the number 0768 on her conning tower.³ The fourth vessel sunk on August 1 was the Belgian s.s. *Koophandel*, stopped by the submarine at 6 p.m., 35 miles S 60° W from Ushant.⁴

On August 2 the submarine started her return journey; at 4 p.m., once more near the mid-channel line, she sank the s.s. *Portia* 70 miles south of the Scillies.⁵ Next morning, well to the westward, the s.s. *Costello*, from Liverpool for Genoa, was met and sunk 50 miles south-west of Bishop Rock. Her crew were picked up six hours later by the armed trawler *Lord Percy* of Falmouth Auxiliary Patrol, which was now working farther out from shore.⁶

The last vessel destroyed by this submarine was the s.s. *Midland Queen*, sunk 70 miles S 58 E from the Fastnet at daylight, August 4.

¹ Papers titled *Board of Trade*, 25 August 1915, and H.S. 143, pp. 56 and 496.

² *Turquoise* papers titled X. 8977/15.

³ *Clintonia* papers titled *Board of Trade*, 5 August 1915. *Benvorlich* papers titled *Board of Trade*, 4 August 1915. *Ranza* papers titled *Board of Trade*, 7 August 1915. Telegrams H.S. 143/312, 338, 342, 374.

⁴ Tels. H.S. 143, pp. 779, 1028.

⁵ H.S. 143, pp. 547, 694.

⁶ *Costello* papers titled *Board of Trade*, 6 August 1915. Tels. H.S. 143, pp. 815, 882, 897.

No patrol was so far out as this and the crew were rescued by a Norwegian steamer after being 36 hours in the boats.¹

The operations of this submarine were so far from land, and the reports of them were so long in reaching the responsible authorities, that they gave no clue to the position of the enemy at the time they were received; consequently no special action was taken on them.

Three "Q" ships were in the South-west Approach; the *Baralong* went to Plymouth on August 1 to embark Lieutenant-Commander Godfrey Hembert; the *Lyons* was sent across to Ushant to escort an important vessel coming from St. Nazaire; and the *Princess Ena* went to Southampton on July 31; none of the three, therefore, had much chance of meeting the submarine.

Slight variations were made in the routes of incoming vessels from America with valuable cargo. Those for Queenstown were to make 50° N, 12° W, pass through 51° N, 8° W, and proceed thence into port; this would keep them 50 miles from the coast of Ireland.² Those for Liverpool were to pass through 50.24 N, 9.35 W, and midway between the Tuskar and Smalls; these also would be some 50 miles from the coast of Ireland.

Vessels returning from the Mediterranean operations were mostly empty. But the arrival of the hospital ship with the crew of the *Benvorlich*, whose torpedoing she had witnessed, drew attention to the dangers run by the wounded from the Dardanelles in their passage home. There were now far too many wounded to be accommodated in the limited number of properly constituted hospital ships available; and, as the only way of dealing with the congestion, wounded and invalids were embarked in homeward bound transports, although in such vessels they could not be protected by the Red Cross. At the time of sailing these transports with wounded were given sealed orders directing them to pass through 48.20 N, 6.10 W, and the intention was that they should be met there by destroyers and escorted into Plymouth.³

The rendezvous was within 30 miles of the scene of the sinking of four vessels by *E7.28* on August 1, which itself was a little further from Ushant. It was in the French zone, and on August 2 the French were informed of the route prescribed to the transports with wounded; protection was not definitely asked, but it is possible that increased anti-submarine activity was considered to be implied in the information.⁴

10. Escorts in the South-west Approach, last half of July.—Although there was so much submarine activity on the transport

¹ *Midland Queen* papers titled L. 379/15. Tel. H.S. 143, p. 1012, from Naval Centre, Queenstown, gives 70 miles south-west of Fastnet as the position.

² Tel. 786 to V.A., Queenstown, 1 August 1915.

³ A. 90.

⁴ A. 100.

route to the Mediterranean, and indeed two vessels detailed for the Dardanelles had been sunk, no troop transports or men-of-war were attacked.

From the middle of the month onward the 10th Flotilla was relieved at Devonport by three divisions of the 3rd Flotilla ("L" class), with the *Tipperary* as leader. The departures of transports proceeded steadily under their escorts; besides the ships leaving Devonport, which was the normal port of embarkation, the *Aquitania* was again employed. She left Liverpool 11 p.m., July 30, escorted by the *Liberty* and *Hope* as far as the Tuskar-Smalls line, where the destroyers turned back to resume escorting the transport *Commodore*, which was making nightly passages between Dublin and Liverpool.¹

The total number of troops for the Mediterranean embarked at Devonport during July was 44,737, and the number of outward bound transports to be escorted can be seen from the following table:—

OUTWARD-BOUND TRANSPORTS IN THE SOUTH-WESTERN APPROACH.

XIth DIVISION.²

July 1	..	<i>Empress of Britain</i>	..	..	From Liverpool.
		<i>Knighr Templar</i>	..	..	" Devonport.
" 3	..	<i>Aquitania</i>	..	..	" Liverpool.
		<i>Kalyan, Ionian, Haverford</i>	..	..	" Devonport.
" 4	..	<i>Toronto</i>	..	..	" Devonport.
" 5	..	<i>Lake Michigan, Karroo</i>	..	..	" Devonport.

XIIth DIVISION.³

July 7	..	<i>Kingstonian</i>	..	..	From Devonport.
		<i>Transylvania</i>	..	..	" Liverpool.
" 8	..	<i>Nitonian, Georgian</i>	..	..	" Devonport.
" 9	..	<i>Bornu</i>	..	..	" Devonport.
		<i>Mauretania</i>	..	..	" Liverpool.
" 10	..	<i>Melville, Alauania, Noviam</i>	..	..	} From Devonport.
" 11	..	<i>Karoo</i>	..	..
" 12	..	<i>Andania</i>	..	..
" 14	..	<i>Canada</i>	..	..

LIIIrd (WELSH) DIVISION.⁴

All from Devonport.

July 13	..	<i>Oxonian, Simla.</i>
" 14	..	<i>Caledonia.</i>
" 15	..	<i>City of Edinbungh, Crown of Aragon.</i>
" 16	..	<i>Euripides, Wiltshire.</i>
" 17	..	<i>Ulysses, Huntsend (late Lutzow).</i>
" 18	..	<i>Themistacles.</i>
" 19	..	<i>Huntsgreen (late Derfflinger).</i>
" 20	..	<i>Northland.</i>

¹ Deck log; *Liberty*.
³ T. 17249, 24547/15.

² Transport Dept. papers, T. 9645/15.
⁴ T. 18031/15.

LIVESH (EAST ANGLIAN) DIVISION.¹

FROM DEVONPORT:

July 21	::	<i>Marquette</i> .
" 23	::	<i>Grampian</i> .
" 25	::	<i>Southland</i> .
" 26	::	<i>Braemar Castle</i> .
" 27	::	<i>Ascot, Scotian</i> .
" 29	::	<i>Manitou</i> .
" 30	::	<i>Royal George, Royal Edward</i> .
		<i>Aquintania</i> from Liverpool (5,865 o. and m.).
August 1	::	<i>Asturias</i> from Southampton.
		<i>Aescanius</i> from Devonport with reinforcements of Royal Naval Division. ²
August 3	::	<i>Arcadian, Franconia</i> .

Besides the Mediterranean transports there were incoming vessels to be escorted. During July, 7,598 troops from Canada were disembarked at Devonport. At the end of the month the weather was bad and the vessels could not always be found at the rendezvous. One of these incoming vessels, the *Corsican*, arrived on July 30, bringing ammunition workers from Canada bound for Glasgow. They refused to go on by sea and demanded to be put ashore at Devonport, throwing overboard their mattresses to emphasise their request.³

After the end of July the escort work in the South-west Approach diminished, since the divisions had been despatched, and reinforcements sailed at less frequent intervals, averaging only one or two transports a week.

Besides all these troops, numerous craft of various kinds intended for the Dardanelles operations had to be got away in safety. There were the motor lighters for the actual landing, known as "X" lighters, which had been built at various yards in the kingdom. The passage of these down the coast gave rise to many reports of submarines. As a rule they were taken in tow by a collier and got out that way to the Mediterranean. Other craft were the monitors, of two kinds, small and large. The small ones, when opportunity offered, went in company with an armed vessel, often one of the sloops on passage out to the Dardanelles. The larger ones were towed by cruisers. For instance, on June 29 the monitor *Raglan* went from Pembroke with the *Snaefell* and four trawlers; the *Diana*, which had been at anchor at Devonport since February 12, weighed, picked up the monitor at a rendezvous, and, proceeding through the positions 50° N, 8° 30' W, and 48° 30' N, 9° 8' W, remained with it till 100 miles from Gibraltar.⁴ There she parted company and returned to Devonport; after coaling she received orders to join the Mediterranean Squadron and on July 11 she departed from Home Waters.

¹T. 25548/15.²T. 26926/15.³Devonport Office Records.⁴M. 0497/15 gives the sailing orders.

Another large monitor, the *Havelock*, left on July 11. This monitor was convoyed by the armed boarding steamer *Huzell* and six trawlers, the *Juno* joining them at sea, and proceeding on with them to the Mediterranean. The *Scottia* also left Home Waters at this time, escorting a distilling ship out for the Dardanelles operations.

By these successive departures the South-west Approach, which at the outset of the war had been guarded by two cruiser squadrons, was left with only such protection as could be afforded by the destroyers specially sent to escort the Dardanelles army and by the sloops, trawlers and yachts of the Auxiliary Patrol.

CHAPTER III.

THE NORTH SEA, JULY 1915.

11. ~~Attack on the *Erasmus*.~~¹ In the North Sea enemy submarine activity was directed not only against commerce but also against the vessels of the Fleet; in fact, every submarine commander sent out with orders to operate in the North Sea cherished the hope that he might find a man-of-war to attack. [7.25, Lieutenant-Commander Wünsche, left the Bight on June 28 with orders to operate off Moray Firth to catch any vessels which might come out as the result of an intended enterprise.¹ On the way to her station she observed that most of the vessels fishing on the Dogger Bank were armed, except for a few which appeared to be acting as decoys; and passing to the northward of the Dogger Bank along the Ekersund-May Island line she found herself early on June 30 near a line of patrols. What she thought she saw at a distance of 10 miles was a line of eight small cruisers; but in this she was mistaken. It was part of the Granton Auxiliary Patrol carrying out a submarine trap.

Admiral Startin, the Senior Naval Officer, Granton, had arranged his trawlers in a special formation in the area round the point where the Skaw-Firth of Forth line cuts that from Heligoland to the Orkneys in 57.5 N, 1 E. On a line running 20 miles north-west from this he spread his trawlers in groups of four; they were disguised and were fishing, to give the impression that they were an ordinary fishing fleet. There were Dutch luggers about; these were suspected of spying, and when on June 30 instructions were received that they might be taken into Aberdeen for examination, several of the trawlers abandoned their disguise to take the Dutchmen in. The remaining disguised trawlers continued their apparent fishing operations till July 7, when they were ordered back to harbour.²

¹Her cruise is briefly described in *Nordsee IV*, p. 245.²Granton A.P. Reports, H.S. 201, pp. 218-222.

It was probably this trawler fleet that *U.25* had mistaken for a cruiser patrol. She seems to have passed through it at night and sighted it astern at dawn. She made no attempt at a closer investigation but continued her voyage to the Moray Firth. She was sighted off the south shore of the Firth at night, June 30, by one of the Cromarty Patrol trawlers,¹ and as she was at that moment close to a Danish sailing vessel, this was at once suspected of collusion with her and towed in by the trawler for examination.²

Crossing the Firth, *U.25*, at 1.8 p.m., July 1, off Noss Head sighted a cruiser and fired a torpedo at her. The cruiser was the *Hampshire* which, after docking at Liverpool, was on the way to rejoin the 7th Cruiser Squadron at Cromarty. The sea was smooth and the officer of the watch observed the track of the approaching torpedo at a distance of a mile, and putting the helm over succeeded in making it pass 30 yards astern. He did not see the submarine itself.³

The report of the attack on the *Hampshire* set on foot a vigorous hunt. Part of the 2nd Destroyer Flotilla was patrolling to east of the Pentland Firth; these the Commander-in-Chief sent to carry out the latest scheme of search, taking 58.12 N, 3 W where the torpedo had been seen, as the centre. Eight destroyers left at 3 p.m. and four more at 5 p.m.; the Captain (D) of the 4th Flotilla in the *Faulknor* took charge of the operations. In addition to these destroyers, trawlers of the Orkneys Southern Patrol and of Cromarty and Peterhead Auxiliary Patrol base swept energetically for the enemy, assisted by the Cromarty defence flotilla and the picket boats of the squadrons in harbour. Special orders were sent by the Commander-in-Chief that modified sweeps and charges were to be exploded in the sandy bays of Moray Firth, in case the enemy might be resting there.⁴

But *U.25* had already gone off. The activity of the patrols was sufficient to cause her withdrawal before the end of the afternoon watch and by nightfall she had arrived at the north point of the Orkneys. For a week Lieutenant-Commander Wünsche cruised between there and the Moray Firth, thus missing a net line maintained by the Peterhead drifters from July 4 to 5 along the meridian of 0.20 W.⁵ On the 4th he sank the British sailing vessel *Sunbeam* by gunfire about 17 miles south from Wick.⁶

Had Lieutenant-Commander Wünsche remained in that neighbourhood he might have had a chance of attacking important vessels. The 2nd Battle Squadron had been at Cromarty since June 26 in pursuance of the plan for giving the crews of the battleships opportunities for recreation impossible at Scapa; the

¹ For system of Moray Firth patrols, see Appendix B.

² Cromarty A.P. Reports and Tel. in H.S. 128, pp. 70, 346.

³ M. 65243/15, in papers titled X. 6801/15.

⁴ G.F.N.; Cromarty and Peterhead A.P. Reports.

⁵ Peterhead A.P. Reports, H.S. 159, p. 96.

⁶ H.S. 128, pp. 934, 1011.

squadron returned to Scapa during the night of July 5-6 and passed close to the spot where *U.25* had sunk the *Sunbeam*. The squadron made the passage zigzagging in darkness and fog and screened by three divisions of the 2nd Flotilla.¹ Only by luck could *U.25* have been in a position from which she could fire; but the occasion might have given her, what the German submarines so rarely had, a glimpse of a British battleship.

On the last day of her cruise in the Firth she was sighted by one of the Peterhead units in the afternoon of July 8. She had just attacked a steamer, but made off as soon as she observed the trawlers. Easily outdistancing them she attacked with gunfire a steamer on the horizon; and when it did not immediately stop, she torpedoed it, and disappeared. The first steamer was the s.s. *Anna*, Russian, with lumber; the second was the British s.s. *Guido*, with a general cargo for Archangel.²

U.25 now proceeded for home, but not by the direct route. She steered southward, keeping some 30 miles from shore. East of Aberdeen she stopped and sank the Norwegian steamer *Aordaas*; in this case she towed the boats containing the crew about 14 miles towards the coast.³ Continuing southward, by the afternoon of July 10 she was 60 miles east of Blyth, and soon after dawn of July 11 found herself among a fishing fleet 40 miles east of Flamborough Head. When she opened fire, without warning, on these, the sound brought up the armed trawler *Kalmia* of the Tyne Patrol. The submarine opened fire on her, but when the trawler replied at long range dived and moved off to westward. Here she came on to the Dogger Bank patrol disguised as ordinary fishing craft. She came up fairly close to one of these, the *Ariadne II*, commanded by Sub-Lieutenant C. J. Gibbon, R.N.R., who opened fire and gallantly remained in close action though severely wounded by the submarine's 4-in. gun. Two hits were claimed by the *Ariadne* in this encounter, as a result of which the enemy appeared to sink by the stern. The Admiral of Patrols, in reporting these incidents, observed that, where a trawler was commanded by a skipper, though there was no lack of courage there was frequently a lack of initiative, as in the case of the *Kalmia*, which had made no attempt to close to effective range; he would prefer his trawlers to be commanded by the R.N.R. officers at the time serving in the motor boats under his command.⁴

U.25 was not sunk. She had destroyed two fishing vessels, the *Syrian* and the *Hainton*; and later in the day fired on another trawler. No special damage seems to have been done to her,

¹ G.F.N.

² Peterhead A.P. Reports, H.S. 159, pp. 101, 102.

³ H.S. 129, p. 819.

⁴ Papers titled X. 9185/15. The sub-lieutenant and skipper of *Ariadne II* were awarded the D.S.C.; two hands who had been severely wounded were given the D.S.M.

and in her wireless report on arrival in the Bight she made no mention of the *Armitie's* action.¹

12. **Operation T, July 11-13.**—The Grand Fleet had now been a month in harbour. On July 6 the Commander-in-Chief proposed an exercise cruise for the Scapa battle squadrons towards the Faeroes, while the Battle Cruiser Fleet swept down to the Dogger Bank. The proposed cruise, to which, at the Commander-in-Chief's suggestion, the name Operation T was given, was at once approved in so far as the battle fleet was concerned; but in view of the general conditions in the North Sea, especially the recent activity of submarines there, the Admiralty withheld for some time permission for the battle cruisers to go to the Dogger Bank, in spite of the Commander-in-Chief's suggestion that their movements might lend colour to the idea that we acted on information received through spies and would disguise the fact that we had an accurate source of intelligence based on interception of the enemy's orders.²

At length, in the afternoon of July 11, permission was given for the sweep to take place as proposed by the Commander-in-Chief.³ Although before the battle cruiser fleet sailed from Rosyth reports came in from Hull that a submarine was raiding the fishing fleet between the south-western end of the Dogger Bank and the shore,⁴ no alteration was made in the orders for the battle cruiser fleet; but the Admiral of Patrols, who did not as a rule send his patrol destroyers further than 20 miles from shore, was instructed to send out destroyers to hunt any submarines reported off the coast of his command.⁵ He accordingly despatched four destroyers of the Patrol Flotilla to search for the submarine at work near the Dogger Bank.

The Battle Cruiser Fleet with the 1st Destroyer Flotilla carried out its sweep down the western edge of the suspected area No. 1 on the Dogger Bank,⁶ the easternmost vessel of the sweep missing the German minefield by 10 to 15 miles. The Admiralty and the Fleet knew nothing of this minefield; and in addition it seems that Admiral Beatty had not been informed that *U.25* was operating in the district he was sweeping. He encountered neither mine nor submarine; but in the forenoon of July 12 the *Southampton*, Commodore of light cruisers with Admiral Beatty, sighted two destroyers. These immediately made off at full speed, giving the impression that they were enemy vessels, an impression which was heightened when they failed to reply immediately to the challenge made by the *Southampton*. Before

¹ Signal 0430 of July 11 in Current Log, I.D.H.S. It is stated in *Nordsee* IV, p. 246, that she engaged two armed trawlers on July 11 and hit them several times.

² A. 27, 30, 31, 33.

³ A. 44.

⁴ From Hull, 5.26 p.m., 7.30 p.m. Battle cruisers sailed 10.037 p.m.

⁵ A. 46.

⁶ For this area see plan at page 208 of *Home Waters*, Vol. IV.

she opened fire, however, they made the proper recognition signal and thus showed themselves to be British. They were, in fact, part of the division of destroyers sent out by the Admiral of Patrols in response to the orders of the Admiralty. These orders had not been communicated to the Battle Cruiser Fleet, who were unaware that British destroyers might be met; and, as pointed out by the Commodore, had the destroyers been encountered at night or in thick weather he would have fired on them without any hesitation. In consequence of this incident the Admiral of Patrols was instructed to keep the Vice-Admiral Commanding, 3rd Battle Squadron, and the Vice-Admiral Commanding, Battle Cruiser Fleet, informed of the disposition of his patrol; these two officers would inform him of any movements of their vessels in waters in which the Patrol Flotillas might be working.¹

Meanwhile the Grand Fleet battle squadrons with the Scapa cruiser squadrons (1st, 2nd and 7th Cruiser Squadrons and the 4th Light Cruiser Squadron) and the 2nd and 4th Flotillas had been exercising and firing between the Shetlands and Faeroes. The seaplane carrier *Campania* was with the Fleet, and the intention was that her seaplanes should exercise scouting with the battle fleet; she got out a seaplane on the 12th and two machines on the 13th, but in both cases they were unable to rise owing to a slight swell.² The Fleet returned to Scapa in the evening of the 13th, the 1st Cruiser Squadron going on to Cromarty, followed next evening by the 2nd Battle Squadron.

13. **Anti-submarine operations round the Shetlands during the first half of July.**—From intercepted German wireless messages the Admiralty knew that an enemy submarine had left the Ems on July 3 for the North and, further, they calculated that *U.39*, which had been sinking ships in the South-west Approach, would shortly have to return, in which case she should be in the neighbourhood of the Orkneys about July 8 or 9. On the 4th they suggested to Admiral Jellicoe that a special effort should be made to intercept the two submarines. He should use all the available drifters to net the Fair Island Channels, and establish the most effective patrols both there and to the northward of the Shetlands from July 4 to 10. Half his destroyers should be added to the patrol. They could not, therefore, be ready to accompany the Commander-in-Chief if he had to leave suddenly to meet the High Sea Fleet; but in the words of the Admiralty telegram,³ "the risk of the Fleet having to go to sea that number short must be accepted for the time, as the vessels on patrol will at all events be available to clear the road for the Fleet's return."

¹ M. 05626/15; and Battle Cruiser Force War Records, H.S.A. 331, pp. 133-142.

² The orders and details of the exercises are in G.F.N., H.S. 425, pp. 666, 71.

³ A. 146.

This ruling is of interest in view of the Commander-in-Chief's opinion that even with his full number of destroyers he was so much inferior to the Germans in that particular arm that he would be seriously hampered in a fleet action.¹

In response to this instruction Admiral Jellicoe concentrated a force of destroyers, sloops, trawlers and drifters to the number of 65 vessels in the Fair Island Channels. He did not consider he had enough small craft for an effective patrol to the northward of the Shetlands in addition to that between them and the Orkneys, and, in fact, he withdrew the patrol usually working north of Muckle Flugga to increase the force in the channels. The 65 vessels began their patrol in the evening of July 5. They were assisted, whenever the weather permitted, by seaplanes from the *Campania*, which anchored at Westray, the north-westernmost of the Orkney Islands.

Scarcely had the patrol become established than it seemed from intercepted telegrams that the High Sea Fleet was coming out, though probably only for exercises, and at 10.40 a.m., July 6, the Grand Fleet was ordered to have steam at two hours' notice.² Admiral Jellicoe at once recalled the destroyers on the Fair Island patrol to Scapa, where they remained till 10.40 p.m., at which time the Admiralty informed him that the High Sea Fleet was returning after its exercises.³ The destroyers were back on patrol at midnight. In the afternoon of July 9, by which time the expected submarines should have passed, the special concentration was dissolved and the various sections resumed their normal routine. They had seen no submarines and the Commander-in-Chief concluded that these now made North Rona or Sule Skerry and then passed wide of Muckle Flugga, possibly not sighting it.⁴

Calculating from known positions of the submarines in question, the Admiralty concluded that the one on passage to the South-west Approach passed through Fair Island Channel during daylight of July 5, while *E7.39* made her way homeward round the north of the Shetlands, passing there early on the 8th.⁵

The Commander-in-Chief's conviction that the Fair Island Channel was no longer being used by enemy submarines led him, at the conclusion of the special concentration, to station all the trawlers of Shetland Auxiliary Patrol, except those supporting the net drifters, to the northward of the Shetlands, and further to strengthen this North Shetland patrol by ten trawlers and a yacht sent from the Orkneys.⁶

¹ *Home Waters*, Vol. III, p. 81.

² A. 23, 24.

³ A. 28, 29.

⁴ H.S. 129, p. 975.

⁵ H.S. 129, p. 1066. *U.39's* positions were: Off St. Kilda, 10 p.m., 6th. Off List, 7 a.m., 9th (Signals 0815, 1000, 1020 of July 9, in I.D.H.S. Current Log).

⁶ Orders for the new arrangement dated July 9 are in Orkneys and Shetlands A.P. Reports, H.S. 138, p. 205.

This reinforced patrol commenced on July 12. Two days later the Admiralty ordered another attempt to be made to intercept passing submarines; and the Commander-in-Chief sent seven gunboats to assist the patrol and six sloops to hunt for submarines to the eastward of the Orkneys. The *Campania* once more proceeded to Westray in order that her seaplanes might help in looking for the enemy.¹

One reason for this special activity was probably the necessity of protecting the fleet during its exercises, which were carried out to the north-west of the Shetlands. While the exercises were in progress *E7.20* passed the Shetlands on her way home from the west. She seems to have given Muckle Flugga a wide berth; for she sank a Russian steamer, the *Lenmok*, 50 miles to the northward of the Shetlands at 6 p.m., July 13.² It appeared later that a Danish steamer was chased by a submarine in the forenoon of the 13th, 80 miles to the northward of the Shetlands at a time when the Grand Fleet exercising was 40 miles to the westward of that position,³ the general effect of these reports being to show that German submarines now kept well away from the patrol operating to the north of the Shetlands. This patrol, strengthened, continued till the 18th.

In the evening of the 16th a drifter in Fair Island Channel reported a submarine in her nets; a modified sweep was fired and destroyers hunted round, but nothing more was seen of it.⁴ But though this supposed submarine was ultimately assumed to be a fish, there was no doubt about another which was engaged by one of the gunboats.

14. Engagement with a Submarine near the Orkneys, July 16.— Though the special patrol had failed to intercept any of the submarines known to be passing, there was one other which, to judge from the position signals she made, was clearly steering to round the Shetlands. This was *E7.41*, which left Heligoland on July 14. It was this submarine which had made a successful raid on merchant shipping near the Scillies at the end of May. She remained in harbour at Wilhelmshaven throughout the month of June,⁵ and it is probable that she was now on the way back to the South-western Approach where she had been so successful.⁶

On July 16 she stopped the Russian s.s. *Balva*, 70 miles east of Fair Island, and sank her by placing bombs on board. At 6.30 p.m., July 16, she reported by wireless that her position was 20 miles north-east of Muckle Flugga. Here she would come within sight of the intensified patrol.⁷

¹ H.S. 130, pp. 409, 446; G.F.N. of July 15, 16.

² Signals 1830, 1840/15 July and 2204/16 July, in I.D.H.S. Current Log.

³ H.S. 131, pp. 283, 328.

⁴ G.F.N.

⁵ From I.D.H.S., Vol. 3112, "Submarines U.31 to U.45."

⁶ *Nordsee IV* does not mention her cruise, and we may thus conclude that it was purely for commerce warfare. (T.S.D.D.)

⁷ The orders for this patrol are in Appendix F.

She turned southward and thus came across another part of the patrol. The three gunboats *Gossamer*, *Circe* and *Speedwell* were proceeding from Scapa to take up their stations off Muckle Flugga. The last of these sighted her periscope at 9.45 p.m. at a distance of 250 yards on the port bow. The submarine appears not to have seen the *Speedwell* which, though steaming only 13 knots, was able to ram the enemy and turn her over on her side. The submarine immediately disappeared; and a search for her, conducted by all the gunboats, failed to find any trace of her. The evidence did not seem to the Commander-in-Chief to justify the assumption that she had been sunk; but the officers concerned received a letter of commendation for their prompt and skilful action on the occasion.¹

[74], though indeed surprised by the encounter, had suffered no damage beyond the crushing of both her periscopes.² It was enough to bring her cruise to an end. She turned back for home, abandoning all idea of commercial warfare in the South-west Approach; but she was fortunate enough to meet another Russian steamer, the *General Radetsky*, which she sank by gunfire. Her report on the 18th, made as she was crossing the mouth of the Skaggerack, that she had encountered the gunboat patrol off the Shetlands, and had sunk two Russian steamers, effectually disposed of any idea in the Admiralty that the *Speedwell* had sunk her.

15. "U.19" engaged by a Peterhead Trawler, July 16.—On the same day that the gunboat rammed her submarine off the Orkneys, an armed trawler had an engagement with another well to the southward. The Peterhead Auxiliary Patrol habitually was kept further out to sea than the trawlers of most other stations and at frequent intervals had come into contact with enemy submarines.

On July 16 three of the Peterhead armed trawlers, one being the *Cameo*, were patrolling in 57.20 N, 0.40 E, about 80 miles to eastward of Peterhead, when at 8.30 a.m. the *Cameo* sighted a submarine approaching. The enemy soon opened fire with a 3-4 in. gun, to which the trawler replied with her 3-pdr. The unequal action which followed remained unobserved by the other two trawlers for a quarter of an hour, during which the *Cameo* was gallantly fought and badly damaged. At the expiration of the quarter of an hour one of the other trawlers steered for the submarine, which thereupon made off to the westward at high speed and disappeared.³

The submarine's number had not been seen; but it is now known that she was (U.19), Lieutenant-Commander Constantin Kolbe. She left Emden on July 14 to operate on the west and

¹I.M. 05714/15; H.S. 131, p. 476.

²Signal from *741, 1830/18 July, I.D.H.S.

³The *Cameo's* master was given the D.S.C.; the captain of the gun received the D.S.M., and £150 was distributed among the crew. (Papers titled X 8435/15, Action between *Cameo* and an enemy submarine.)

north-west of Scotland against warships. On the journeys to and from her station she was to carry on commerce warfare. Next day she reached the Far Islands-Lindesaes line, where she stopped several Scandinavian vessels, causing one of them to jettison that part of her cargo which Germany had declared contraband. After her meeting with the *Cameo* she proceeded northward. A Norwegian steamer which had been near at the time of that engagement she suspected and actually reported to be an unarmed decoy, intended to attract submarines into danger from the armed trawlers.

When 50 miles ESE of Pentland Firth, U.19 sighted a battle cruiser about 110 miles off; this was the *Indefatigable*, which after docking at Cromarty had been exercising in Scapa Flow and left there for Rosyth at 4.30 p.m., July 16, with two destroyers. A battle cruiser was an unusual sight for a German submarine and U.19 tried to inform Heligoland by wireless,² but failed. Proceeding further northward, U.19 was about 60 miles east of Fair Island on the 17th and there she stopped and released a Danish steamer. On that date the net drifters at the Orkneys and Shetlands were laying nets to the south-west of Fair Island. But U.19 did not attempt the passage. While still well east of the Island she found that her battery had broken down and that she could not go on to her station.

Since her departure for the west and south-west coasts of Scotland fresh intelligence of British naval dispositions had reached Berlin. The only way of communicating to submarines at sea was by Norddeich high-power wireless station, and it was from there that the news was signalled in code:—3

Trustworthy. In Irish Sea, opposite Lancaster, there is a large squadron of large cruisers. Seven dreadnoughts left Glasgow on July 15.

It was on intelligence such as this, though perhaps not always so grotesquely inaccurate, that the Germans had to base their plans. On the other side of the North Sea we were receiving not only the actual orders made to ships by wireless but also their reports, and in the case of U.19 even more than the German listening stations. Although she was unable to communicate it to Germany, we read her signal announcing her distant view of the *Indefatigable* and also the message she sent at 5 p.m. July 17, to the effect that she was returning home with disabled batteries.⁴ Action was taken on this at once.

At 6.30 p.m. Commodore (D) was warned to prepare his squadron for sea and at 7 p.m. orders went out from the Admiralty for Commodore (D) to make a sweep to meet the submarine with light cruisers, and destroyers also if the weather permitted. They

¹Nordsee IV, p. 218.

²Signal 0900/16 July, I.D.H.S.

³Norddeich to all ships, Nos 40 and 41 of July 16, in I.D.H.S.

⁴Signal 1800/17 July, in I.D.H.S.

estimated that she would return to Emden on the surface at 10-13 knots, probably passing to the eastward of the suspected mined area whose north-east corner was 56° N, 5° E.¹

The Commodore left at 10 p.m. with four light cruisers, the *Tipperary*, and 16 "L" class destroyers. The force passed out by the channel between the British and German minefields, turning to a north-easterly course as soon as the North Hinder Light Vessel was safely astern. There was a very heavy sea and a strong northerly wind; but at 9 a.m. on the 18th, a position of 53.20 N, 4.17 E, was reached. The Commodore intended to make 54.22 N, 5.50 E, before spreading; but at 11.30 a.m. the Admiralty, learning the state of the weather, recalled his force; and his squadron was back at Harwich at 11 p.m. U.19 reported herself in 54.3 N, 5.25 E, next morning,² a position which shows the accuracy of the Commodore's forecast of her course, and the good chance of catching the submarine that he would have had if the weather had been favourable.

16. Cruise of "U.16," July 17-22.—Submarine operations in the North Sea were continued by three boats which left Heligoland Bight on July 17—U.16 and U.16 for the Forth-Skagerrack line and U.36 to cruise in the Hebrides-Faeroes-Shetlands triangle. These three boats were all that could be spared after the needs of the commercial war in the South-west Approaches had been satisfied. The three for the North Sea had as their primary object to attack and observe the movements of men-of-war; they were to carry on commerce war only on their journeys out and home. The station for U.6 was 120 miles east of the Forth, while U.16 was to operate 60 miles further east.³

The cruise of U.16, Lieutenant Hillebrand, was short. She was on her station in 57° N, 3° E, by the 20th, and at 10 a.m. prepared to stop a small steamer flying Norwegian colours. U.16 closed to 1,000 yards and fired a gun; whereupon the supposed neutral steamer changed her Norwegian for British colours and opened fire in return, immediately scoring a hit on the submarine's conning tower. The vessel thus proclaimed herself as a decoy ship.

The decoy was the *Quickly*, at the moment commanded by Admiral Startin,⁴ Senior Naval Officer, Granton. She was one of his armed trawlers, now carrying a 12-pdr. gun amidships instead of her 3-pdr. gun, and having also a 6-pdr. aft. Her disguise and sham cargo had been brought to her the previous day by the *Gunner*, another armed trawler, with some special naval ratings from the *Zealandia*; Admiral Startin personally superintended all the arrangements, which were of his own devising, and also carried out target practice near Bell Rock with both vessels till he was satisfied with their shooting. He had chosen the position

¹ A. 60. The latitude given in this order should more likely be 58.57; the code group seems to have been incorrectly intercepted. (F.S.D.D.)

² Signal 0700/19 July in I.D.H.S.

³ *Nordsee* IV, pp. 218, 219.

⁴ He had returned to active service as Captain James Startin, R.N.R.

in 57° N, 3° E, for his principal rendezvous because it was there that submarines were often reported. His choice was soon justified. Only an hour elapsed between his arrival and the sighting of a large submarine on the surface. She shaped a parallel course to his and at a distance of 5 miles scrutinised the *Quickly*. Apparently satisfied that this was a genuine neutral vessel, the submarine closed to cut her off; and was received as has been described. She was hit several times, the third shot from the 12-pdr. striking her right forward, and flames were seen to issue from the bows.

At 10.50 a.m. the enemy submerged till her conning tower was awash; but she rose again and tried to make off on the surface. By this time, the *Gunner*, which was not disguised, had arrived and joined in the fight. The submarine appeared to be in difficulties and at times was enveloped in smoke. Another shot from the 12-pdr. shattered her conning tower and the *Gunner* also succeeded in hitting her.

The *Quickly* closed with a view to ramming, but by the time she came up with the submarine, at 11.15 a.m., it had sunk, and could clearly be seen beneath the surface. There was much oil and many bubbles. The depth was sounded at 42 fathoms and a charge exploded at about 16 fathoms, but nothing came to the surface and the submarine disappeared. Both vessels remained in the vicinity till 1 p.m. Having only six 12-pdr. charges left, Admiral Startin decided to return to St. Andrew's Bay, sending the *Gunner* back for more ammunition before continuing the cruise.

The Admiralty sent their appreciation to Admiral Startin, commended the officers and crew of both vessels and awarded £500 to be divided between them. The Distinguished Service Cross was awarded to Lieutenant T. E. Price, R.N.R., and Sub-Lieutenant C. H. Hudson, R.N.R., commanding the two vessels, and three of the men at the guns of the *Quickly* received the D.S.M.¹

Nevertheless, in spite of the apparently numerous hits and the damage obviously done to U.16, she had not been sunk. She had been hit three times and though she was still seaworthy Lieutenant Hillebrand had no option but to return home for repairs. He reached Heligoland on July 22.² He made no signals and the number of his boat was not seen by either the *Quickly* or *Gunner*; and it was not till the publication of the German Official History that anything was known of this cruise of U.16.

The submarine's report of the attack on her caused a German destroyer flotilla to be sent out on July 25 to hunt for the decoy vessel; they had to guide them Lieutenant Hillebrand's description of her as being of 1,000 tons gross, resembling one

¹ M. 05722/15, Sinking of German submarine by armed trawlers *Quickly* and *Gunner*; M. 05921/15, Rewards for above.

² *Nordsee*, pp. 219, 220. Inprints in extensio his detailed report in the encounter.

of the Swedish canal boats, with one funnel and two masts, and carrying two 3-in. or 4-in. guns. The destroyers examined many neutral vessels and on the evening of July 25 sank a Danish steamer with railway iron, the *Nogill*, which they met 150 miles east of the Firth of Forth. Here they heard loud wireless. It was now time for the flotilla to retire according to the programme and at 11 p.m. they directed course for Horn Reefs. They had seen nothing of the decoy vessel,¹ which was as well for Admiral Startin and the crew of the *Quickly*.

When it was discovered that the enemy knew of the encounter, it was expected by the Admiral at Rosyth that reprisals would be attempted. He suggested a series of destroyer sweeps to meet them and meanwhile kept his patrol trawlers near the western limits of these areas, within easy distance of their leaders, these being the only patrol trawlers which carried wireless telegraphy.²

17. "U.8 U.6 off the North midnights July. Meanwhile £7.6. Lieutenant Lepsius, which had left the Bight at the same time as U.16, was having her own experiences of our anti-submarine methods. On the way north she sank the Swedish s.s. *Kapetta* and stopped and released several other neutral vessels: but she had experienced bad weather and the sea had crushed her exhaust and one of her oil bunkers. As soon as she was on her station 120 miles east of the Firth she found that though steamers frequently passed no warships ever came in sight. Capturing a Swede, the *Germania*, on the 21st, she took her in prize to List, where she carried out the repairs necessary to her own hull. On the 24th £7.6 returned to her station. Next day, besides examining a couple of neutral vessels, she burned five Scandinavian sailing vessels.³

Coming westward, on July 26, she found at daylight a fleet of British drifters fishing. There was also a trawler in sight. The submarine moved about among the drifters, but before doing them any damage proceeded towards a steamer which was passing in the distance. She failed to come up with it and, turning, headed towards the trawler.

The trawler was not so innocent as it appeared. It was, in fact, the *Taranaki* out once more with a submarine, C.24, Lieutenant Frederick H. Taylor, in tow. The *Taranaki* first sighted the submarine at 6.17 a.m. on the horizon when there were 20 sailing drifters in sight. Seeing the enemy coming towards him, Lieutenant F. H. Peterson, R.N.R., commanding the *Taranaki*, warned his collaborator in C.24 that she was approaching. The position was 56.43 N, 0.55 E. At 7 a.m., C.24 slipped the tow and stood by to fire: but just then the enemy turned away after a steamer, becoming almost impossible to distinguish among the herring drifters, and C.24 could not see

¹ *Nordsee IV*, pp. 223, 224. The *Quickly* was of 242 tons gross.

² H.S. 132, p. 640.

³ Norwegian *Hanboe*, Sognedalen, G. P. Harbitz; Swedish *Madonna*, *Fortuna*. Position approximately 56.30 N, 2.30 E.

her at all. The *Taranaki*, however, managed to keep track of her and followed up. When the enemy turned, the trawler waited till 9.3 a.m. when the range was 1,500 yards before showing her colours and opening fire with her starboard 3-pdr. The fourth shot seemed to be a hit and many of the 21 rounds fired in the two minutes before the submarine had submerged looked like hits. Meanwhile, C.24 had come up and Lieutenant Taylor, putting his head out of the conning tower hatch, saw, to his surprise, that what in his periscope he had taken for a sailing ship was really the enemy submarine. He dived at once but did not see it again. Although the *Taranaki* claimed to have sunk the enemy, the Admiralty thought the sinking doubtful, and awarded her only £20.¹

£7.6 had not been damaged.² An hour after the encounter she examined and released a Swedish steamer,³ and later in the day sank the Swedish s.s. *Emma* by bombs and burned three Danish sailing vessels.⁴ Her fuel was running low, and after stopping another Danish steamer on the 27th she proceeded along the steamer route to the Skagerrack and then turned for home, arriving at Heligoland on the 30th.

18. **A British Submarine sinks an Enemy Submarine.**—It will be remembered that the *Taranaki* was only one of a series of trawlers operating with a towed submarine. Arrangements had already been made for C.26 and C.27 to work from Scapa, C.14 and C.16 from the Tyne, C.21 and C.29 from the Humber, and C.33 and C.34 from Harwich.⁵

At Scapa, the trawlers trained to tow and work with C.26 and C.27 were the *Walsey* and the *Princess Marie Josif*, the latter being temporarily named *Princess Louise* for the purpose of these operations. On July 21 Admiral Colville, commanding in the Orkneys and Shetlands, issued to them general instructions,⁶ as follows:—

MOST SECRET.

Cyclops,
12th July 1915.

No. 008/1
MEMORANDUM.

It is essential for the successful working of this scheme that there should be no hitch on sighting the enemy, and therefore there must be a very clear understanding between the Commanding Officers of Submarine and Trawler as to their plan of action.

2. If the enemy is sighted and a shot fired to make the trawler heave to, she must comply as soon as possible with the order, but she is never to stop until she has slipped the submarine.

¹ Papers titled X. 8960/1915.

² *Nordsee IV*, p. 221.

³ H.S. 133, p. 528: "Swedish steamer *Guntuld*. Master reports that he was stopped by a German submarine 120 miles E.N. from Farn Islands at 10 a.m., 26th inst."

⁴ *Neptunus*, *Elma*, *Mianie*. Position approximately 57.0 N, 1.30 E.

⁵ See Home Waters IV, Section 123.

⁶ Copy in M. 05713/15, Sinking of German submarine U.23.

3. The trawler must then endeavour to allay suspicion as long as possible by such means as commencing to get their boat out and generally appearing to be hurriedly preparing to abandon ship, etc.

4. On no account is the trawler to lay herself open to suspicion by uncovering the gun or manoeuvring for position.

It may even happen that a portion of the crew will have to leave the trawler in the boat, leaving hands for wheel, engines and two for the gun on board, who must remain out of sight.

5. The White Ensign is to be ready to hoist if the trawler has to open fire. This will only be done if the submarine attack has failed.

6. As C.26 and C.27 cannot be taken in tow or work in anything but fine weather, the Officers in command are to communicate with Captain Cust, R.N.R., directly weather appears favourable and arrange with him for the towing trawler.

7. It is to be impressed on Officers of trawlers that when U.40 was sunk, the Captain of the submarine said he had watched the trawler (which was towing the British submarine) all the morning through his periscope and presumably waited until nothing was in sight so as to avoid being reported.

8. It is very important for the trawler to have every appearance of a fishing craft and great care is to be taken to ensure this—otter boards must be in place, no ensign staff, etc.

(Sd.) S. C. COLVILLE,
Admiral.

Commanding Officers of Submarines
C.26 and C.27 and of Armed
Trawlers *Princess Louise* and
Wolsey.

(Copy to each and copy also sent to
Captain-in-Charge Orkney Trawlers.)

In pursuance of these instructions, C.27, Lieutenant-Commander C. C. Dobson, R.N., left Longhope in the forenoon on July 18, to meet the *Princess Marie José* and get into tow. The trawler was commanded by Lieutenant L. Morton, R.N.R., but on this occasion Lieutenant C. Cantlie, R.N., and Lieutenant A. M. Tarver, R.N.R., were on board, for the purpose of instructing the officers and crew of the trawler in the nature of their work.

The submarine remained submerged during the light hours, coming up to ventilate only after dark. The trawler took her to Fair Island and then steered south-easterly. It was a fortunate course, for it led her straight towards an enemy submarine approaching from Germany apparently to pass through Fair Island Channel.

On July 20, at 7.55 a.m., Lieutenant-Commander Dobson, in the submerged C.27, received a telephone call from his colleague, Lieutenant Cantlie, in the *Princess Marie José*; it was to tell him that a hostile submarine was in sight on the port bow at 2,000 yards range. With this exciting information the Commander of C.27 had to be content; no answer came to his calls and it seemed the telephone had broken down. He waited five minutes, hoping that communication would be re-established, but nothing came through; and as by that time he could hear the sound of shots striking the water, he decided to slip the tow. He steered to get clear away from the trawler and came up for a look round.

Meanwhile the enemy, after firing one warning round, had begun to shell the *Princess Marie José*. According to the scheme, it was her part to deceive the German and if possible decoy him nearer. She stopped, hoisted the Red Ensign and dipped it again in token of surrender; and her crew, simulating panic, rushed about the deck and began to hoist out the boat as if to abandon ship. It was a difficult part to play without the panic becoming real, for all depended on C.27, with whom no communication was possible; but of the success of the comedy there can be no doubt. "From the hurry," writes Captain Gayer,¹ "in which the English crew abandoned their trawler after the first warning shot, (the German submarine) felt herself so secure, that she actually stopped close to the abandoned steamer."

It was this situation which greeted Lieutenant-Commander Dobson when he put up his periscope, and by great good fortune he found himself only 500 yards on the enemy's starboard beam. He fired. It would seem the torpedo could hardly miss; but the enemy unexpectedly started engines and it passed under her stern. A second torpedo was more successful; it hit the enemy just abaft the conning tower; and when the column of water and smoke had cleared away, no vestige of the enemy submarine remained. Coming to the surface C.27 proceeded to the rapidly spreading patch of oil which marked the spot of the explosion, and was successful in picking up the Captain² of the late hostile craft, two other officers and four seamen and stokers. Three more were rescued by the trawler.³

The prisoners were well treated. Perhaps in consequence, as soon as they had recovered from the shock they gave a good deal of information, not only of a technical character concerning their boat, but also on the general work of German submarines. Some of the intelligence was fresh, though most of it we knew already from our own sources. The boat was U.23, making for Fair Island passage and thence to the west coast of the British Isles; in general, three submarines were maintained on our coasts, one always being in the western approaches, a cruise which entailed her absence from home for about four weeks. They stated that the highest-numbered boat in commission was U.48 and that other boats up to £7.54 were building.⁴ U.23 had left the Bight on July 17. On the Farn Islands-Lindesnaes line she stopped and released two neutral steamers; she had molested no other vessels.

The two submarines at Harwich detailed to work with a trawler were C.33 and C.34. The latter, commanded by Lieutenant J. F. Hutchings, cruised from July 15-17 off Smith's Knoll, in tow of the trawler *Weelsby*. It was intended that the two

¹ *Die Deutschen U-Boote in ihrer Kriegsführung*. Vol. II, p. 39.

² Lieutenant Schultess.

³ M. 05713/15 Lt.-Cdr. Dobson received the D.S.O., Lt.-Cdr. Cantlie the D.S.C.; the D.S.M. was awarded to one hand in *Princess Marie José* and C.27 respectively.

⁴ M. 05713/15.

submarines should take watch and watch, but for three days bad weather intervened. C.33 was out from July 21-23 and C.34 from July 24-26. They cruised roughly on the meridian of 3.10 E between 53.40 and 52.40 ; but saw no hostile submarine. It was soon realised that the cruising area was not well chosen, for there were practically no steam trawlers fishing south of 54 deg. and the whole scheme depended on the party being mistaken for a trawler engaged in fishing on its usual grounds. Captain Waistell proposed that when operations were resumed they should be carried out in the Humber Auxiliary Patrol area as far north as 54.30.¹

Of the active anti-submarine projects this of a submarine towed by a trawler had now two successes to its credit, whereas the armed decoy could not yet count one. The Commander-in-Chief at once asked for two more "C" class boats to work while the fine weather lasted at the northern end of the route from Muckle Flugga to Horn Reefs. There he thought they would meet with success. The Admiralty, agreeing with him, ordered two of the Rosyth boats to Scapa. This order called forth a protest from Admiral Lowry, commanding at Rosyth, that two of his boats were already working with trawlers from Scapa, two more from Aberdeen, and two from Leith ; if he had to send two more boats to Scapa they would be those of the defence of the Firth of Forth, which should not be further weakened.²

Admiral Lowry's misgivings were so far recognised that he was called upon to send only one more submarine to Scapa instead of the two in the original order.³

19. First Success of an Armed Decoy, July 24. This was not the only success of the special anti-submarine service under Admiral Colville. Beside the scheme for utilising a submarine in touch with a trawler, the idea of a vessel with a concealed armament parading as an unarmed tramp was being tested in various places. Admiral Colville's staff was anxious to try with a small vessel and obtained Admiralty permission for the collier *Prince Charles* to be used in an experiment; she was under Admiralty charter, but there was no need to cancel her charter, since a collier had the right to defend herself if attacked.⁴ One of the factors in determining the choice of this particular vessel was her small size ; it was considered no submarine would expend a torpedo on her. She was given two 6-pdr. and two 3-pdr. guns, and carried in addition enough rifles for two firing parties, one forward and one aft. She was manned by volunteer naval ratings and her own merchant seamen crew who were anxious to serve

¹ Capt. (S), Memo. No. 0115 of July 28, in H.S. 294, pp. 160 to 162.

² A. 67, 68.

³ A. 68.

⁴ H.S. 131, pp. 284, 370.

⁵ 373 tons gross.

on this cruise. Lieutenant W. P. Mark-Wardlaw, Lieutenant (T) on the staff of Admiral Colville, took temporary command with Lieutenant J. G. Spencer, R.N.R. as assistant.

By Admiral Colville's orders the *Prince Charles* was to cruise east about round the Orkneys and Shetlands to Stornoway, keeping about 60 miles from land and following more or less the routes used by steamers from east and west coast ports to Archangel, on which submarines had several times been observed. It was impressed on Lieutenant Mark-Wardlaw by the Admiral that throughout the cruise he was to remember that at any time a submarine might be scrutinising his ship through a periscope and that he must allow nothing to appear that would impair her appearance as an unarmed tramp steamer. Though the success of the apparently panic-stricken crew of the *Princess Marie Josi* in luring U.23 to her end was not known to Admiral Colville when he drafted his orders, these included the same idea of a "panic-party" hoisting out boats as soon as the ship was accosted, while the gun's crews waited in concealment for the enemy to approach the apparently abandoned vessel.

The *Prince Charles* proceeded from Scapa Flow at 8 p.m., July 21, and followed the prescribed track without special incident until early on the 24th, when she was 10 miles WNW of North Rona. There she saw a merchant vessel, apparently stopped, with a submarine on the surface quite close to her. Lieutenant Mark-Wardlaw continued his course as if he had not seen the submarine ; but he closed up his gun's crews behind the screens which concealed the guns and awaited events. These worked out as described in his report.²

Shortly after this the submarine was observed to start her oil engine and proceed towards us at full speed. I then hoisted my ensign. At about 7.5 p.m., submarine being about 3 miles distant, 5 points on the port bow, she fired a shot which pitched about 1,000 yards over.

I then stopped engines, put ship's head to seaward from N.W. and blew three blasts, and boat's crews were ordered to get boats out.

All this time the submarine was coming very fast towards us (20 knots) and at 7.10 she fired a second shot which went between funnel and foremast and landed 50 yards over.

The submarine then turned so as to bring her broadside to us at about 600 yards, and as the submarine continued to fire and seeing that the range could not close any more, I opened fire with both port guns.

Directly I opened fire the gun's crew of the submarine deserted their gun and entered conning tower and she apparently attempted to dive.

But the submarine was not to escape. As she was sinking a shell struck her abaft the conning tower. She turned completely round and began to rise, only to be hit again and again by the

¹ Appendix J.

² M. 05782/15 ; Sinking of German submarine U.36 by collier *Prince Charles*.

Prince Charles, which rapidly closed to 300 yards. By this time men of the submarine's crew were scrambling out of the conning tower; her stern seemed to be settling, but no external damage was visible, and the *Prince Charles* continued firing till the submarine made a sudden plunge and disappeared. Lieutenant Mark Wardlaw then busied himself in picking up the Germans from the water.¹

Two other vessels were in sight. One was a small sailing boat which proved to contain the crew of the fish carrier *Anglia* sunk by the submarine the previous afternoon. The other was the steamer, a Dane, which had been near the submarine when it was first sighted; Lieutenant Mark Wardlaw suspected her of being a supply ship and ordered her to follow him into port for examination. Nothing suspicious was found in her; on the contrary, her captain and crew were apparently most friendly towards the English and delighted at the result of the action, promising not to divulge anything about the position or method of destruction of the submarine. In order that there should be no mistake, Admiral Colville put an armed guard aboard to take her to Liverpool, explaining to the Danish captain, who was anxious to go through the Minches, that the armed guard would ensure his getting through without interference.

The submarine was £7.36, commanded by Lieutenant-Commander Graeff, who with 14 others was saved; three of the submarine's crew had been killed and fifteen drowned. From the prisoners it was learned that she had left Heligoland on July 19 and was due home on August 10. Her officers confirmed the opinion that the *Prince Charles* was too small to be worth the expenditure of a torpedo.

20. The last Cruise of "U.36," July 17-24, £7.36 had done a good deal of damage before meeting the *Prince Charles*. It appears she left Heligoland on July 17. Two days later she was on the Farn Islands—Lindesaes line. There she stopped several neutral vessels and burned the Norwegian sailing vessel *Nordbyse*. As she was bound for the Shetlands-Faeroes-Hebrides triangle she did not delay in the fruitful North Sea zone, but rounding Muckle Flugga on the 21st reached her appointed cruising area.

The first vessel attacked by her there was the armed merchant cruiser *Columbella* of the 10th Cruiser Squadron, which had been patrolling to the north-west of the Hebrides and was now on her way to Scapa in preparation for a voyage to Spitzbergen.² At 6.40 a.m., July 22, the *Columbella* sighted a submarine, which apparently fired two torpedoes at her. The armed merchant

¹ £1,000 was distributed among the naval and mercantile crew of the *Prince Charles*. Lt. Mark Wardlaw was given the D.S.C., which was later replaced by the D.S.O., and two of the naval ratings received the D.S.M. (M. 05782, 06036, 05848/15.)

² U.36 had stopped and released a Danish steamer on the 21st, 30 miles west of the Shetlands.

cruiser avoided these by an alteration of helm and steered to pass straight over the submarine, forcing it to dive. When it reappeared on the surface at 7.15 it was 3 miles astern.¹

Being too far astern to continue his attack on the *Columbella*, which had not fired and which he apparently mistook for an ordinary merchant ship,² Lieutenant-Commander Graeff sank by gunfire, at 9.30 a.m., the British trawler *Sar of Peace*, in 60.40 N, 5° W, over a hundred miles from the nearest land. The crew were allowed to leave in their own boat and were picked up next day by another trawler.³ About noon he sank the Russian collier *Rubonia*,⁴ bound for Archangel, and in the afternoon another British trawler, the *King Athelstan*.

By dawn on July 23 he was well out to the west of the Faeroes-Hebrides line, which is roughly the meridian of 7° W. In 8.43 W he sighted a Norwegian steamer, the *Fimreite*, stopped her, and called the master to the submarine. This vessel, bound for Hull, had been boarded by one of the cruisers of the 10th Cruiser Squadron and was in charge of an armed guard, whose duty it was to ensure that she called at Kirkwall. Lieutenant-Commander Graeff asked the master of the *Fimreite* whether she had been boarded, and, learning that a British armed guard was in the ship, shouted: "Don't let them go into the boats. Let them sink." The guard had, however, removed everything of the nature of uniform and were already in the boats, indistinguishable from the Norwegian crew; and the *Fimreite*, when she sank, had no one aboard.⁵

Having finished with the *Fimreite*, Lieutenant-Commander Graeff a few hours later sank three British trawlers, the *Hermione*, *Sutton* and *Honoris*; and then proceeding southward between the meridians of 7° and 8° W he began to operate some 30 miles to the westward of North Rona. There the French steamer *Damae* was sunk by gunfire at 11 p.m., July 23; and in the early hours of the 24th, the British trawlers, *Cassio*, *Roslin* and *Strathmore*.

All this time observing the destruction carried out by £7.36 was a large United States full rigged ship, the *Pass of Balmaha*, making her way for Archangel with cotton. In her was a British armed guard, placed on board by a vessel of the 10th Cruiser Squadron Patrol, with instructions to see that she was navigated to Lerwick or Kirkwall as the wind might suit. She was not to be left undisturbed; at 7 a.m., July 24, the submarine came alongside to capture the ship. The question whether an armed

¹ Deck Log, *Columbella*.

² *Nordsee* IV, p. 222, says U.36 saw no men-of-war.

³ MI 41839/155.

⁴ Sunk in 60.20 N, 5.19 W, the boat containing her crew made the Orkneys late on the 23rd (Papers titled XY 5117/155).

⁵ NID 9602/155. See also Monograph 19: *The Tenth Cruiser Squadron*, Section 444.

guard was entitled to defend itself in such a case was at the time under discussion in the Admiralty¹; meanwhile, the Commander-in-Chief had given instructions that an armed guard must not fight until the submarine had committed a hostile act. Consequently, the armed guard remained below, changed into borrowed clothing, in the hope that the submarine would release the ship. Lieutenant-Commander Graeff, however, put a German petty officer on board with instructions to compel her to sail into Cuxhaven. The British guard made no attempt to recapture the ship from this single German. It appears that they were told that the vessel was escorted by the submarine, which off the Shetlands was relieved by another. Thus convoyed, the *Pass of Balmaha* reached Cuxhaven on August 1, and the unfortunate guard gave themselves up as prisoners.²

The story told to the British armed guard down in the hold of the *Pass of Balmaha* was untrue. No submarine escorted the vessel and the German petty officer brought the prize in entirely alone.³ The Admiralty, from intercepted telegrams and other trustworthy reports, had sufficient intelligence to enable them to know with great accuracy the number of submarines out and their approximate positions; but this information which, as the event proved, would have saved many ships, was not in the possession of the officer of the armed guard, a sub-lieutenant of the Royal Naval Reserve, who waited patiently in the dark till a British man-of-war should rescue him from the imaginary submarine.

The *Pass of Balmaha* was condemned by the German prize court and later became the auxiliary cruiser *Seeadler*, which in the following year made expensive raids on our shipping in foreign waters.

After putting his petty officer on board the *Pass of Balmaha* at about 9 a.m., July 24, Lieutenant-Commander Graeff proceeded with *U.36* to the eastward. At 3.30 p.m. he stopped and released the Norwegian steamer *Baune* and at 4.10 p.m. sank the trawler *Anglia*. At 6.20 p.m. he accosted a small collier. It was the *Prince Charles*, and at that point the career of *U.36* came to an end.

21. **Cruise of "U.41," July 23-31.**—The place of *U.36* on the west coast of Scotland was almost immediately taken by *U.41*, the submarine which had been rammed by the *Speedwell* on July 16. She was again ready for sea on July 23, when she started once more from Heligoland to resume her interrupted course to the Faeroes-Hebrides area. In all probability her orders were solely directed towards commerce raiding.⁴ Lieutenant-Commander Hansen was in command as before.⁵ She signalled

¹ See Monograph 19 : *The Tenth Cruiser Squadron*, Section 44.

² M. 06829/15, in papers titled *Treasury*, 29.12.15.

* Letter from Admiral von Pohl in *Monthly Intelligence Review*, 15 October 1920, p. 41.

⁴ Her *Heretic* cruise, like that of other submarines solely employed in commerce raiding, is not given in *Nordsee IV*.

⁵ Gayer II, p. 40.

her position at frequent intervals, thus enabling us to follow her track with great accuracy. Shortly after she had left, it would appear that intelligence of the *Quickly's* encounter with *U.16* reached Berlin, for a signal went out from Norddeich warning all ships¹ that a steamer of 800 tons, painted black and under a neutral flag, had been met by a submarine on passage from Horn Reefs to Fair Island and had fired two 4-in. guns.²

U.41 did not delay on the Farn Islands-Lindesmaes line, but continued her course without delay. She signalled her position as she crossed the line at 5 p.m., July 23, and this position the Admiralty telegraphed to the Commander-in-Chief with the suggestion that she would very likely go well north of the Shetlands this time to avoid the patrols, in view of her encounter with the *Speedwell* on the previous occasion.³

The assumption proved incorrect. Far from avoiding the spot, *U.41* passed through the actual place where before she had been rammed, and at 7.30 p.m., July 24, sank the British steamer *Grangewood* by gunfire and torpedo less than 20 miles east of Muckle Flugga, and only a few miles from the scene of the *Speedwell* encounter. The *Grangewood* was in that position only by an unfortunate mischance. She was returning from Archangel with a cargo of wheat and flax for Havre and was intending to coal in the Tyne. Some 200 miles north of Muckle Flugga she was boarded by one of the 10th Cruiser Squadron, and her master, at the suggestion of the boarding officer, changed his intention of keeping 60 miles out from land to a course direct from Muckle Flugga and thence close to the east coast of the Shetlands. Some hours after he had proceeded on his voyage the boarding cruiser received instructions by wireless to order the *Grangewood* to keep west of 10° W so that she might avoid *U.36*, known to be operating off the Shetlands. The order could not be communicated to her and she steered direct for the Shetlands, only to be sunk by *U.41*.⁴

Lieutenant-Commander Hansen did not spend much time over the *Grangewood*. He torpedoed her and continued his voyage, rounding Muckle Flugga at less than 10 miles distance. He was several times chased by the patrols, but escaped them all; and in the forenoon of the 25th was among a fishing fleet 60 miles north-west of the Orkneys. Five trawlers⁵ were sunk by him, the last two within sight of an American steamer, the *Leelanaw*, returning from Archangel with flax. He then turned his attention to the American, which he stopped, fired at and finally sank by bomb or torpedo. The crew of this vessel he towed for 50 miles towards the Orkneys; on the way he had coffee and sandwiches passed out to them.⁶

¹ That is, all submarines at sea (T.S.D.D.).

² Norddeich No. 56 of July 23, in I.D.H.S.

³ A. 78.

⁴ Papers titled X. 9078/15, *Grangewood*.

⁵ *Emblem, Honoria, Gadwall, Celtic, Cydonia*.

⁶ Papers titled X. 5117/15.

These repeated attacks on vessels plying to and from Archangel led the Commander-in-Chief to suggest that all Archangel trade should keep west of 11° W until in 61° N, a route which would take them west of the Faeroes. His suggestion was adopted and the route fixed so as to pass at least 100 miles outside St. Kilda and well to the westward of 11° W as far as 63° N, about midway between the Faeroes and Iceland.¹

By this time U741 was well to the southward, near Barra Head. There she was sighted at 4.15 a.m., July 27, by the armed trawler *Pearl*, Sub-Lieutenant A. C. Allman, R.N.R. The trawler carried only a 3-pdr. gun and Sub-Lieutenant Allman decided not to fire till he had closed to 1,000 yards. In fact, the submarine was the first to fire; she was travelling at high speed and having fortunately closed to 500 yards before firing, gave the trawler a chance. The fifth and sixth shots from the 3-pdr. looked like certain hits; the submarine began to submerge and narrowly escaped being rammed by the trawler, which by a specially careful shot managed as she passed to break off the periscope/all that could then be seen of the submarine. The enemy remained below, but could be traced by a thick oily wake which the *Pearl* chased till mid-day. The trawler attempted to explode a modified sweep over the submerged boat; but in getting it over the electric lead was damaged and it would not fire. The *Pearl* had now been chasing for 7½ hours; at this point her air pump broke down and she had to abandon the pursuit. She managed, however, to get in to St. Kilda at 4.30 p.m. and sent from there a wireless report of her encounter.²

At 9.10 p.m. an armed yacht, which had taken in the *Pearl's* message, and had steered to cut off the submarine, sighted the enemy and gave chase for nearly an hour till darkness hid her. Next morning at dawn she was again sighted and chased close to where U36 had captured the *Pass of Balmaha*. This was considerably north of the scene of her encounter with the *Pearl* and it seemed that she was endeavouring to get home again! Such was indeed the case. The *Pearl* had hit her in the conning tower and for the second time she was obliged to shorten her cruise and turn back for home.³

A few hours' steaming ahead of her there happened to be two destroyers of the 4th Flotilla which had been sent out from Scapa in the evening of July 25, soon after U741 had cast off the tow of the boat containing the crew of the *Leelanaw*. The duty of these destroyers was to screen the *Ajax* on the first part of her passage from Scapa to Devonport to refit. By the orders in force, Grand Fleet battleships proceeding either to or from dockyard ports in the south had to follow the "westabout outside route," passing 100 miles west of the Hebrides and Ireland and 50 miles south of

¹ A. 84, 89.

² M. 06078/15. The Admiralty promoted the Sub-Lieutenant and awarded £150 to the crew of the *Pearl*.

³ Gayer, II.

the Scillies.¹ The two destroyers were to screen the *Ajax* as far as 8° W where she would turn southward and where as it happened U36 had been operating on the 23rd and 24th; having parted company with the *Ajax*, the destroyers were to search the area between 8° W and Sulisker, and between 58.50 N and 59.30 N, for submarines and for a small two-masted sailing vessel reported to be working with them. This area they searched till 9 p.m., July 26, only seven hours before U741 made up her mind to return and pass through that very area. The destroyers moved off north-easterly to 60 N, 5° W, returning from there to Scapa at noon July 27, just as U741 was approaching. As, however, four sloops from Scapa continued hunting operations there till 7.30 p.m., July 28, and saw nothing,² it is probable that U741 passed to the eastward of them early on the 28th.

In 60° N, 4° W, shortly after noon of July 28, she came in sight of a large Norwegian vessel, the *Trondjemsfjord*. This she stopped; and finding that the vessel had transferred her flag from British to Norwegian since the outbreak of war, she torpedoed and sank her. This ship also had been boarded by the 10th Cruiser Squadron well to the westward and was on her way to Kirkwall in charge of an armed guard. The master of the *Trondjemsfjord* did not reveal this fact to the submarine; on the contrary, he ordered the guard to be rigged out in the crew's clothes and arranged for them to be accommodated in the ship's boats.³

A few hours after leaving the *Trondjemsfjord*, U741 had again to escape the patrols.⁴ Passing well north of Muckle Flugga she crossed over to the Norwegian side of the North Sea and was back at Heligoland on July 31. She had not come through her cruise without injury; her steering gear was out of order, her conning tower leaked, and one of her officers had died of wounds.⁵

The frequent submarine attacks on vessels sent in by the 10th Cruiser Squadron for examination showed the necessity for examination ports which would be nearer to the western patrols than Lerwick, Kirkwall and Stornoway. The Commander-in-Chief suggested Loch Ewe for winter use instead of Stornoway, and proposed that Lough Swilly should be used as an additional alternative port for neutral vessels. This was approved; but the arrangements for Lough Swilly were not complete till October 28.⁶

22. **The White Sea Minefield.**—The operations of successive German submarines on the Scotch end of the route of vessels plying to and from Archangel was only one of the two principal methods by which attempts were being made to hamper the

¹ G.F.O. and M. Various, 21.7.15.

² G.F.N.

³ Papers titled X. 9406/15. He received an expression of thanks and a sum of £50 in acknowledgment of his services.

⁴ In 60.15 N, 3.8 W. (H.S. 133, p. 400.)

⁵ Her signal 1830 of July 30 in I.D.E.S.

⁶ Papers titled X. 9077/15. For further details see Grand Fleet Secret Packs, Vol. XXXVII.

import by Russia of munitions. The port of Archangel was not sufficiently free from ice to be safe for approach till the middle of May. By that time 30 or more merchant vessels were waiting to enter. They seemed to invite attack by either German small craft or submarines, a situation which made the Russian Admiralty uneasy, seeing that they had no sort of mobile defence in the Arctic. The laying of a minefield by the Germans appeared also a matter of little difficulty, since there was nothing to prevent it.¹

The undefended state of the district through which this vital traffic in munitions had to pass in its approach to Archangel gave rise to the suspicion that the Germans had established a submarine base somewhere on that desolate coast, a suspicion kept alive by reports that submarines had been seen in high northern latitudes.²

On June 10 occurred the first loss in the White Sea, the sinking of the British steamer *Arndale* by a mine; and the long-expected minefield was clearly an accomplished fact. Its extent and the name and nature of the minelayer remained unknown for several weeks, though a vessel called *Meteor*, which had been seen by a neutral steamer, was suspected.³ The Russians seemed quite incapable of dealing with the situation; the only means of securing a mine-free passage into Archangel was felt to be the despatch of a minesweeping flotilla from England. On June 22 Lieutenant-Commander Bernays sailed from Lowestoft with six minesweeping trawlers, each armed with 12-pdr. guns, to sweep and patrol the shores of the White Sea. Another British vessel was blown up on June 24.⁴

Lieutenant-Commander Bernays found the Russian mine-sweeping service worse than useless and the Port Admiral at Archangel disinclined to render any assistance; nevertheless, our minesweepers managed to clear and maintain a safe route in spite of friction and opposition from the local authorities. Thus the mine danger at the White Sea end of the Archangel route was well in hand by mid-July.⁵

Intercepted wireless messages revealed much of German intentions and operations; but minelaying cruises were treated even in the German wireless offices with such extra secrecy that we had little to help us to discover the enemy's mining plans. We now know that the White Sea minefield had been laid by the armed minelayer *Meteor*, which, as has been related,⁶ came out from Germany at the end of May for the express purpose of mining the approach to Archangel in response to an urgent request from the German Army Command that the import of munitions into Russia should be stopped. The minefield did not achieve that

¹M. 03518/15.

³H.S. 143, pp. 1113, 1155.

⁵M. 050375, 056416, 06484, 06859/15. There are a few words about this

minesweeping in C.B. 1533, *History of British Minesweeping*, p. 25.

⁸*Home Waters*, IV, Section 99.

²M. 04328/15.

⁴M. 04731, 05037/15.

object; but it helped to strengthen the opinion long held in the Admiralty that the Arctic regions were being used by the enemy as bases for submarines, minelayers and wireless telegraphy.

23. **The Bear Island and Spitzbergen Expedition, July-August 1915.**—In the first month of the war questions had been raised as to German W/T installations in West Spitzbergen, and in October 1914 the Director of the Intelligence Division submitted that, before the expiration of daylight on the 25th of that month, a cruiser should be sent to destroy the station and bring away the Germans. The *Gibraltar* was accordingly detailed for this purpose and sailed on October 10. In the meanwhile most satisfactory assurances were received from the Norwegian Government with regard to the harmlessness of the German station at Cross Bay. All operators had been called up and the station closed, while the Norwegian Government vouched for the reliability of their own operators at the Green harbour station. As a result of these assurances the *Gibraltar* was recalled.¹

On 3 June 1915, the Admiralty received a report from Petrograd, emanating from the Russian Naval Attaché at Stockholm, that Germany intended to use Bear Island, midway between Spitzbergen and North Cape, as a base for submarines working against the Archangel trade. It was reported that before the war the island had been bought by a German, and it was known to be ice-free from about the end of May.² Admiral Jellicoe forthwith suggested the sending of an expedition to reconnoitre the base and, if possible, to destroy the submarines before the alarm was given. He suggested sending the *Teutonic*, with 100 marines, 4 trawler leaders with W/T and one "D" or "E" class submarine, to be towed by the *Teutonic* when north of the Shetlands. This last he considered essential. The Admiralty, however, were not satisfied as to the reliability of the report and waited for further information before moving.³

By July a semblance of possibility had been lent to this report by the sinking, during the last two months, of no fewer than five merchant ships in northern waters. As it happened, all these were in the White Sea minefield, but it was not always possible to be certain at the time whether loss was occasioned by mine or by torpedo.⁴ On July 20, therefore, the Commander-in-Chief was asked to make arrangements for sending an armed merchant cruiser, with a small vessel, preferably a sloop, to act as tender, to visit Bear Island and Spitzbergen.

¹M. 01543/14; M. 02534/14; M. 02629/14; M. 02707/14; M. 02728/14; M. 6713/14; M. 01441/14.

²H.S. 122, p. 472.

³H.S. 122, pp. 860, 1047.

⁴These ships were the following:—

Arndale (British), sunk June 11.

Nicolaï (Russian), sunk June 17.

Drumloist (British), sunk June 24.

African Monarch (British), sunk July 6.

Ilyakër (Norwegian), sunk July 6.

The force detailed for this expedition, which received the name of "Operation M," consisted of the *Columbella* of the 10th Cruiser Squadron, the sloop *Acacia*, and the armed trawlers *Arley* and *Mafeking*, the whole force being under the orders of Captain Arthur Bromley of the *Columbella*. His orders included a search of Bear Island, Cross Bay, and the vicinity of Green Harbour in Spitzbergen, and the coasts of Norway and Russia, from North Cape to the entrance to the White Sea. Care was to be taken to carry out the search of the Norwegian coast in an unostentatious manner, though any submarine found in an unfrequented bay was to be sunk, on the assumption that the Norwegian Government had been unable to prevent infringement of her neutrality through lack of knowledge of the vessel's presence.¹

The two trawlers left Scapa Flow on July 27, and passing west of the Orkneys and Shetlands, proceeded direct for South Haven, Bear Island, at 8½ knots. The armed merchant cruiser and sloop proceeded at 8 a.m. on the 29th, intending to arrive at South Haven at the same time as the trawlers. The *Mafeking*, however, had some trouble with her engines, and arrived at Bear Island in tow of the *Arley* the following day. This trouble continued throughout the expedition and she frequently had to be taken in tow.

Having thoroughly searched Bear Island on August 2 and 3, the force proceeded to Spitzbergen. Captain Bromley found that ice rendered it impossible to approach the island, and returned to Bear Island on August 8. The force arrived off North Cape at 6 p.m. on the 10th, and for the following two weeks carried out the search of the Norwegian and Russian coasts to the eastward. The *Acacia* was sent back on the 16th, owing to shortage of coal, and the *Columbella* proceeded westward on the 21st, returning to Scapa on the 26th. The trawlers were left behind and made their way to Archangel, where they remained till they were recalled on August 30.

The result of his very thorough search was to convince Captain Bromley that Spitzbergen at this season would be an impossible base for submarines, and that it was very doubtful whether any German submarine had ever really been in the White Sea at all.² We now know that he was right and that so far no German submarine had rounded the North Cape.

24. Cruiser and Flotilla Sweep of the Skagerrack, July 28-31.—

The efforts of Germany to hamper the passage of munitions to Archangel by submarine and mine attacks had their counterpart in the attempts made by us to stop the passage of iron ore from Sweden to Germany by sea. This ore came by rail from the Swedish mines to Narvik, a port in the north of Norway. The 10th Cruiser Squadron maintained a patrol off the Norwegian coast after April 11, but as the voyage of the iron ore steamers for

¹ H.F. 0016/6 of 26.7.15, in (H.S.A. 222 ; H.S.A. 112, p. 53-57).

² H.S.A. 112, pp. 38-81 ; H.S. 148, p. 633.

most of its length could be made in Norwegian territorial waters the cruisers could do little or nothing to hinder them. A submarine patrol had been suggested, tried, and abandoned after one cruise of one *E* boat at the end of June. A trawler sent across at the same time proved more successful; she sank one of the iron ore steamers and captured, but had to release, another.¹

Besides endeavouring to stop this elusive transport of iron ore to Germany, the Commander-in-Chief was doing his best to bring Germany's export overseas to a standstill. Here he was met by political difficulties. Although it was probable that such exports were carried by the United States vessels coming from countries contiguous to Germany, the objections of the States to interference with their ships were backed by arguments concrete and powerful enough to cause the Admiralty to send to Admiral Jellicoe the order: "You should immediately, without assigning reason, order release of any westward bound United States vessel which is reported to you as having been detained by H.M. ships, but no general signal is to be made."²

Although thus preventing the Commander-in-Chief from stopping exports to America, the Admiralty at the same time gave him permission to carry out a large cruiser and flotilla sweep, called by him "Operation C," designed as a systematic search of the Skagerrack for vessels carrying exports from Hamburg to Gothenburg; the search would also locate and destroy a patrol of large German trawlers reported to be working on the Naze-Hanstholm line. As first drafted by him on July 16, the arrangements included the stationing of three Harwich submarines off Horn Reefs to deal with any enemy forces which might come out from the Bight to support the reported trawler patrol; but by July 24, when the Admiralty gave permission for the operation to be carried out, they had already sent three British submarines, *D.3*, *E.4* and *E.117*, to the Skagerrack area and that part of the original orders had to be modified; for although the three boats had been warned that British forces might be met at any time, they had not been told to expect British submarines and they might attack their colleagues. The date for the commencement of the flotilla operation was fixed as July 28; the orders then in force are given in Appendix G.

The composition of the forces employed was as follows:—

Force A	::	::	<i>Arethusa</i> , <i>Cleopatra</i> , <i>Aurora</i> , <i>Undaunted</i> , with 12 destroyers of the Harwich Force.
Force B	::	::	<i>Galatea</i> , <i>Inconstant</i> , with 4 destroyers of the 1st Flotilla.
Force C	::	::	<i>Comus</i> , <i>Royalist</i> , with 4 destroyers of the 4th Flotilla.
Supporting Force	::		2nd Battle Cruiser Squadron and 2nd Light Cruiser Squadron, with a screen of 6 destroyers from the 1st Flotilla.

¹ Further details in Monograph 19: *The Tenth Cruiser Squadron*, Chapter VI.

² Tel. 642 to C.-in-C., H.F. sent 6.30 p.m., 24 July 1915.

Commodore Alexander Sinclair in the *Galatea* was the Senior Officer of Forces A, B and C, the whole operation being under the Rear-Admiral, 2nd Battle Cruiser Squadron, in the *Australia*.

Force A left Harwich at 5.30 p.m. on July 28. A destroyer was sent on in advance to Lowestoft, to pick up interpreters in German, who were subsequently distributed among the destroyers at sea.

Force B proceeded from Rosyth at 110 p.m. on the 28th; Force C from Scapa at 8 a.m. the following morning, while the Supporting Force left Rosyth at midnight July 28-29.

A rendezvous between Forces A and B had been ordered at 3 p.m., July 28, in latitude $56^{\circ} 30' N$, longitude $3^{\circ} 10' E$; thence they were to proceed to Jutland Bank and Hanstholm respectively. Commodore (T) sighted the *Galatea* and the *Inconstant* at 2 p.m. and proceeded in execution of orders, examining several steamers during the day. At 2.45 a.m. on the 30th the Harwich contingent was in latitude $56^{\circ} 55' N$, longitude $7^{\circ} 42' E$. The wind and sea had increased during the night, so much so that it was out of the question to board any vessels. At 8.30 a.m., in latitude $57^{\circ} 13' N$, longitude $8^{\circ} 5' E$, Commodore (T) shaped course for latitude $57^{\circ} 0' N$, longitude $6^{\circ} 15' E$, the rendezvous ordered for noon.

After effecting the rendezvous with Commodore (T) in the afternoon of July 29, Force B proceeded for Hanstholm, to arrive there at 3 a.m. on the 30th, while Force C shaped course from Scapa to the Naze, to arrive off the point at the same time. Forces B and C then swept into the Skagerrack as far east as longitude $9^{\circ} E$ and then worked towards each other. All forces had been ordered to be west of the Naze-Hanstholm line by 9 a.m. on the 30th and Forces A, B and C were to have concentrated at noon in latitude $57^{\circ} 0' N$, longitude $6^{\circ} 15' E$. Since, however, the strong wind and sea would have prevented Forces A and C from arriving at the rendezvous at the scheduled time, Commodore Alexander Sinclair ordered their Senior Officers to proceed straight to their bases.

The Supporting Force swept east of the Newcastle mined area and west and south of the Dogger Bank, to arrive in latitude $56^{\circ} 45' N$, longitude $6^{\circ} 20' E$, at 9 a.m. on the 30th. Forces A, B and C being safely withdrawn from the Skagerrack, it returned to Rosyth.

The result of the sweep was that one German trawler, the *Hanseat*, of Bremerhaven, was sunk by the *Goshawk*, and the *Phoenix*, attached to Force B. The crew was ordered into the boat and taken on board the *Goshawk*, after the trawler had been sunk by gunfire. In addition, a Danish steamer, s.s. *Cito*, laden with wood for St. Helier, was thought by the Commanding Officer of the *Lysander* to be behaving in a very suspicious manner. On reporting this, he was ordered to escort her to the Humber for examination. The Dutch fishing fleet was sighted in the vicinity

of latitude $56^{\circ} 30' N$, between the meridians of $0^{\circ} 30'$ and $11^{\circ} 30' E$.

The sweeping forces had traversed the merchant ship routes to the Skagerrack so frequently raided by German submarines; but, as it happened, at that particular period, no enemy boats were working in that zone. The only German submarine out at the time was [741] returning from the Hebrides; it seems that she crossed the tracks of the returning British forces only a few hours astern of them. She did not see them, and no enemy vessels were sighted by the sweeping forces, nor by the submarines stationed at Horn Reefs.

25. British Submarines in the Bight during Operation C, July 25-31. 2—The British submarines at Horn Reefs and in the Bight had been sent in compliance with Admiralty orders of July 23. 3 These instructed Captain Waistell to send—

- (a) One submarine to work between Norderney and the Ems.
- (b) One "E" class boat to cruise inside the Skagerrack to the east of $9^{\circ} 30' E$.
- (c) Two submarines to cruise between $55^{\circ} N$ and $57^{\circ} N$ to the eastward of $6^{\circ} E$.

All were to remain six or seven days on their stations.

The submarine detailed for the western end of the Bight was E.16, whose cruise is described in Section 30.

E.17 was the boat despatched to the Skagerrack. She left Yarmouth early on July 24 and after an uneventful passage passed the Skaw in the evening of July 25. She remained on her station cruising as far south as the entrance to the Sound and the Belts till the evening of August 1, when she commenced her return to Harwich. She had seen no enemy vessels, either men-of-war or merchantmen, and no aircraft were visible. About 20 ships—Danish, Swedish and Norwegian merchantmen—passed both ways every day; but there were no signs of enemy activity.

The submarines operating off Horn Reefs were D.3 and E.4. They left Harwich at 9 a.m., July 24, D.3 to cruise between 57° and $56^{\circ} N$, E.4 between $56^{\circ} N$ and $55^{\circ} N$, both keeping to the eastward of the meridian of $6^{\circ} E$. Going out by the North Hinder Channel at noon, they sighted an enemy submarine about 15 miles before they reached the lights. D.3 went on; but E.4 made a determined effort to stalk the enemy, which had dived on sighting the two boats. After an hour E.4 saw her again on the surface and gave chase under water till finally, at 6.5 p.m., the

1 A. 74, 80, 81, 82, 91, 92; H.S. 132, p. 603.

H.S. 133, pp. 66, 432;

H.S. 143, p. 171;

H.F. 0022/14 of 25 July 1915, in H.S.A. 291, pp. 38-40; Modification to codebook C in C.O.s 7, p. 11, July 27, in H.S.A. 66; Harwich Force Backs; No. 0086 in H.S.A. 291, pp. 36-53; G.F.S.P. 0022, in H.S.A. 14, pp. 53-115; G.F.N.N. of date.

2 Comm. (S) War Records.

3 A. 75, 76, 77.

quarry was within close range. *EA* fired a torpedo, but it passed right under the enemy's stern where the draught was very small. The German boat dived and *EA* did not see it again. It appeared to be about 160 ft. in length with a conning tower of a type not previously seen, and was doubtless one of the Flanders boats.

Going on, Commander E. W. Leir, in *EA*, in the forenoon of the 25th saw two large destroyers patrolling north of Borkum Flat, where also a Zeppelin was on watch. This was not his station, and as he had no chance to fire he went on to Horn Reefs. There at 4 p.m., July 28, he was engaged by two large armed trawlers, one of which he torpedoed, while the other retired at full speed, having lowered a boat. This boat rescued 110 men; *EA* picked up 111 more. Commander Leir kept as prisoners three of the active service ratings, putting the remainder of the rescued men on board Horn Reefs Light Vessel.

The two trawlers so effectively dealt with by Commander Leir were not on ordinary duty. They really represented a submarine trap. They had been ordered to mix with the ordinary fishing fleet and carry on a pretence of fishing in the hopes that a British submarine would approach near enough to render her destruction certain. The plan was spoiled by the premature opening of fire by one of them. As the German historian remarks, doubtless to offset the coolness with which the crews of British decoys treated similar emergencies, "sheer gallantry and uncontrolled lust of battle were qualities more frequently found in the German, often to his disadvantage, than treachery and guile."¹

D.3 observed three neutral timber ships steering south-westerly; and both submarines saw numerous trawlers, many of them German, fishing between 55° N and 57° N, there generally being five or six in sight. Zeppelins and seaplanes were seen scouting south of the Reefs.

D.3 sighted the force under Commodore Tyrwhitt at 4 a.m., July 30, and again at 2.10 p.m. as it passed through her station on the return passage to Harwich. The force was west of *E.4*'s limit when it crossed the latitudes of her station, and Commander Leir did not sight it.

Both during and after Operation C there was a strong north-westerly wind, and on July 31 the two submarines began to return to Harwich.

No intelligence of the presence of our cruisers in the Skagerrack reached the Germans in time for any useful action,² as had been the case on so many of our former approaches to the Bight. On the nights of July 29 and July 30 the direction-finder at Borkum located wireless signals to the north-west. The first impulse of the naval command to send out Zeppelins to scout was prevented by weather from being carried into effect; minesweeping, that necessary prelude to any emergency of heavy vessels, was also

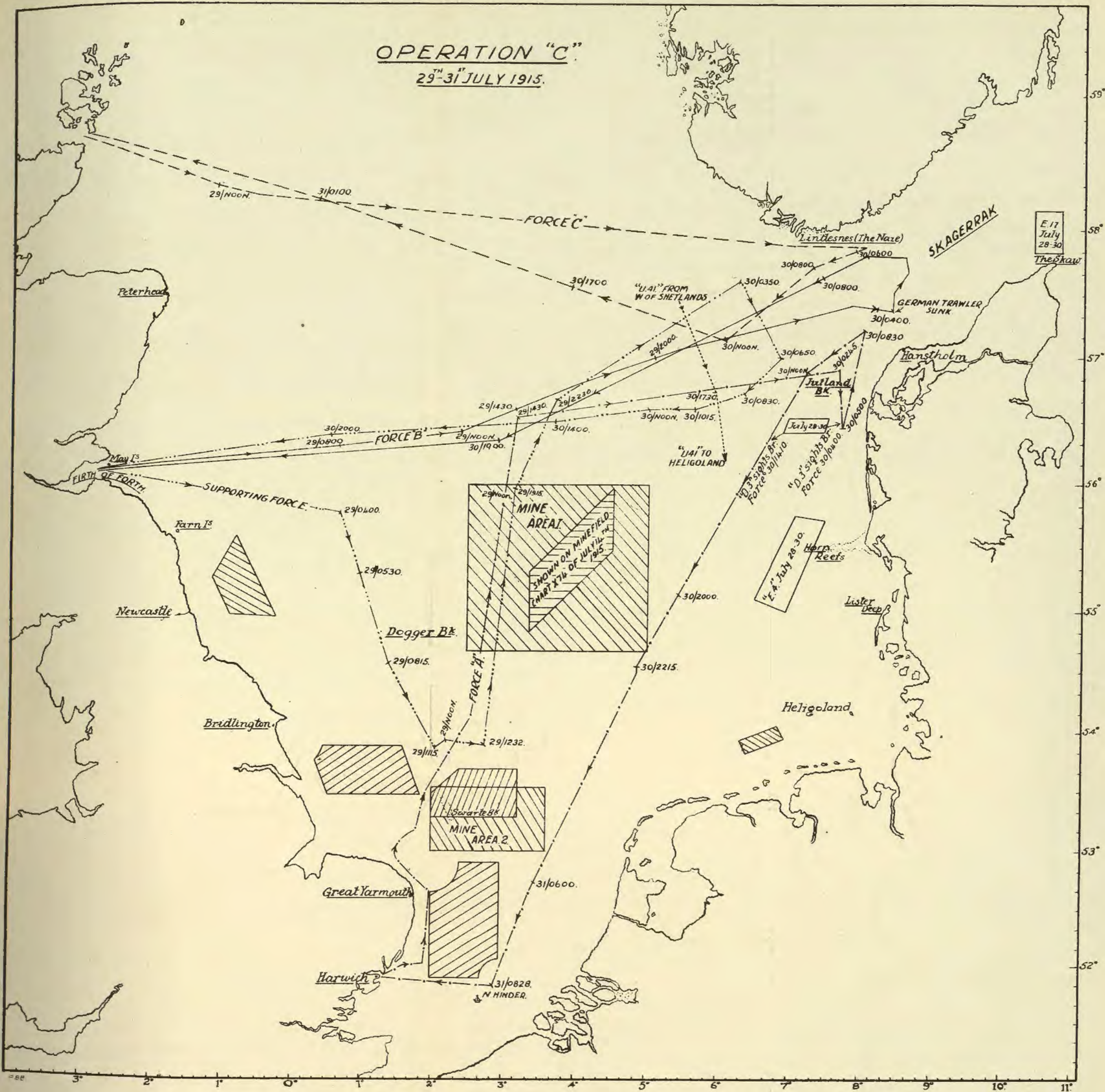


¹ Nordsee IV, p. 212.

² This paragraph is based on Nordsee IV, pp. 226, 227.

OPERATION "C"

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E 17
July
28-30
The Skaw

impossible from the same cause. Then came news of a British submarine to the eastward of the Skaw, followed on the 31st by a report from a trawler that she had seen five four-funnelled English cruisers in line ahead steering WSW at 10 a.m., July 28, on the Little Fisher Bank.¹ Another report on the same date spoke more vaguely of British forces north and west of Horn Reefs on the 29th and 30th. The general conclusions deduced by the German Staff from these reports was that some British forces had been enticed out by the operations of the 2nd Flotilla,² or that the whole movement covered the passage of more British submarines into the Baltic to operate there as in the previous autumn.³

CHAPTER III.

BRITISH OPERATIONS IN THE HOOFDEN, JULY 1915.

26. Air Reconnaissance called Operation G, 4 July 1915.— Although the despatch of the Dardanelles army had led to the temporary detachment of one of the Harwich destroyer flotillas to the west of England, Commodore Tyrwhitt had still one flotilla left, and was anxious to utilise it in some sort of offensive. What he proposed was another air operation by seaplanes, the seaplane carriers to be escorted, as had been the custom on previous occasions, by all the available destroyers and light cruisers. The object of the operation was a reconnaissance of Borkum and the Ems, which it was hoped might lead to action with Zeppelins.⁴ The seaplane carriers *Engadine* from Harwich and *Riviera* from Sheerness were to carry the seaplanes. They were to be escorted by the destroyers and light cruisers from Harwich, to which at the last moment the 6th Light Cruiser Squadron was added.

The position for releasing the seaplanes was fixed at 53.40 N, 5.36 E. As soon as the aircraft were away, the carriers were to steam off westward at high speed, accompanied by a division of destroyers, while the *Undaunted* with the remainder of the destroyers proceeded N 78 E for an hour and a half and then returned to the picking up position in 53.35 N, 5.28 E. Meanwhile Commodore Tyrwhitt in the *Anethusa*, with another light cruiser and a division of destroyers, would proceed from a position in 53.51 N, 5.4 E, round the British minefield to 53.57 N, 6.30 E, and thence to the picking up position. The 6th Light Cruiser

¹The report seems to be two days out. At 10 a.m., July 30, there were several groups of British four-funnelled vessels steering WSW in that district.

²See Section 16.

³See C.B. 917e, Monograph 25, *The Baltic*.

⁴Comm. T's Orders and Reports are in Harwich Force Packs H.S.A. 290, pp. 541 to 598.

Squadron with their anti-Zeppelin armament would be to the westward in 53° 48' N, 4° 43' E.¹

The raid was intended for dawn of July 3. There would be two British submarines in the Bight at the time; but they were both at the Horn Reefs end, and it was decided to send four more to keep watch close in to the Ems, to pick up pilots if necessary and to attack anything that might present itself.

In order to embark some special seaplanes of the new Schneider Cup pattern the departure of the force was delayed 24 hours. The operation began at 11 a.m., July 3, when the *Undaunted* with two divisions of "L" class destroyers left Harwich with the *Engadine*; the third division of the flotilla proceeded in advance to Sheerness to pick up the *Riviera*. Both parties went out by the North Hinder Channel between the British and German minefields. Just outside Harwich two German seaplanes flew over the force and, proceeding farther, dropped bombs on Landguard Fort. The programme was carried out as in the orders, except that Commodore (T) gave the carriers an escort of two destroyer divisions, leaving only one division to accompany the *Undaunted*. The whole of the proceedings in the Bight were watched by Zeppelins, which, however, made no attempt to attack, but remained well out of range of the anti-aircraft guns. They did not close the 6th Light Cruiser Squadron nearer than 10 miles.

The air operation could hardly be thought a success. Although the weather conditions were favourable the seaplanes from the *Engadine* came to grief. Two were of Schneider Cup pattern and had their floats smashed by the wash of the destroyers circling round. The third, a Short machine, broke its propeller on the same wash. Of the *Riviera's* seaplanes two returned to the ship after half an hour with engines running badly; one was lost, its pilot ultimately reaching Holland; and only one carried out the reconnaissance.

It procured no particularly valuable information. Four large destroyers and two torpedo boats were seen to leave the Western Ems at 4.25 a.m.; 11 more torpedo boats were observed 2 miles south of Borkum, and on these the seaplane dropped bombs.

The more noteworthy feature of the operation seemed to Commodore (T) to be the fact that our ships were free to operate in German waters in the vicinity of Borkum without interference by surface craft, observing that our ships and destroyers were in those waters from 2.30 a.m. until 2.30 p.m. entirely undisturbed except by harmless Zeppelins. No submarines were seen. This immunity from attack prompted the Commodore to suggest that the operation should be repeated as soon as a more suitable machine than the Schneider Cup could be prepared, and that it should include a bombardment of Borkum by battle cruisers or battleships.²

¹ Telegrams dealing with the orders are A. 1 to 6, 14.

² Comm. T's letter 690/0084 of 5 July, 1915, a copy of which is in Harwich Force Papers, H.S.A. 290, p. 531.

Strangely enough, the British air attack which had passed off without effective interference from the enemy had not been unexpected. Intelligence reports had reached the German Staff, which, though made by merchant ships and incorrect in detail, had been sufficiently credible to cause orders for an extensive reconnaissance at daybreak by airships and flying machines. Between 12.30 and 1.30 a.m., July 4, as the British force was approaching the rendezvous at which the aircraft were to be released, no fewer than six airships came out from Nordholz. During the same interval all the flying machines at Borkum and Norderney went up. L.9 at 3 a.m. reported several heavy ships and about 10 destroyers 15 miles north of Ameland; and other airships soon established touch in conditions of low visibility. They all found difficulty in flying high enough to be able to make attacks. One airship reported that she had seen a battle cruiser. Altogether our squadron was kept under surveillance till 6.30 a.m. and, though the reports received often disagreed and could not be reconciled with the calculations of the direction-finding stations, sufficient evidence came in to give a very fair idea of its proceedings. Nevertheless no German surface craft were sent out and the High Sea Fleet allowed the operation to be carried out without interference.¹

The British submarines which were stationed off the Ems had little to report. The easternmost was *DA* off Norderney Gat; westward of her were *E.8* in 53.40 N, 6.20 E; *D.8* in 53.37 N, 6.12 E; and *D.7* in 53.34 N, 6.5 E. They were thus placed in a row 5 miles apart across the mouth of the Ems inside the 10-fathom line. They left Harwich after midnight July 2-3, expecting the air raid to take place on the 3rd; their orders, however, made allowance for a 24-hour postponement of the operation, which, in fact, occurred. *DA* at Norderney Gat was bombed by a seaplane at 8.4 a.m., July 4, but escaped damage. Next day she began an attack on 12 enemy destroyers; but before reaching a suitable position for firing she grounded in 5½ fathoms, broke surface, and had to abandon the attack. *E.8* at 10.45 a.m., July 3, sighted two destroyers leaving the Ems, followed by a submarine. She attacked the submarine. Unfortunately she was on its quarter, it observed the torpedo coming, altered course and the torpedo missed. *D.8* was the only one of the submarines to sight our forces; she also saw four German destroyers proceeding into the Western Ems. Later in the day she was attacked by an aeroplane. *D.7* saw nothing except the Zeppelins. The last to leave the Bight was *DA*, which proceeded for Harwich at 8.30 p.m., July 5.²

Although it had been assumed that the seaplanes which had flown over the force as it left Harwich would certainly report its

¹ Nordsee IV, pp. 199-2077.

² Orders and Report of Capt (S); reports from submarine commanders; all in H.S.A. 270, pp. 404 to 417.

departure and reveal the object of the operation, this does not seem to have been the case. The enemy aircraft were from Flanders, making a lengthy flight with the object of bombing Harwich itself, and when they saw the flotilla coming out, assumed and reported that it was leaving to escape their air attack.¹

A Harwich trawler engaged the two planes,² and the destroyers also fired on them. British machines went up but failed to find the enemy. The German bombs all fell in the sea, and the raid passed off without any tangible result.³

27. Attempt to Intercept German Merchant Vessels, July 11-13.

—The Harwich Force did not participate in Operation T, which was confined to Grand Fleet vessels. At Harwich was only the 3rd Destroyer Flotilla, and this was shortly to relieve the 10th Flotilla at Devonport and take over from it the duty of escorting clear of Home Waters the transports of the Dardanelles army.⁴ With only one flotilla available, not much could be done in the way of offensive operations; but some activity was possible.

A pilot from Holland had reported that several German liners at Rotterdam were preparing to make a dash for Emden, and it was proposed by Commodore Tyrwhitt that his destroyers should endeavour to intercept them. Although it seemed probable the steamers would keep to Dutch territorial waters and would, therefore, be beyond attack, the Commodore was allowed to send a division of destroyers to patrol outside territorial waters as far north as Terschelling.⁵

The destroyer division detailed—*Laurel*, *Lucifer*, *Liberty*, *Leonidas*—left Harwich at 1.30 p.m., July 11, to patrol off the Texel till noon, July 12. This position was chosen since the German merchant vessels would be obliged by navigational difficulties to emerge from territorial waters there. The patrol passed without incident; in fact, the German steamers did not leave Rotterdam; and the division arrived once more in Harwich at 8 p.m., July 13.

On July 15 the whole available force at Harwich went out for an exercise cruise, giving the Commodore an opportunity for flotilla manoeuvres with one of his flotillas. On this occasion there took part in the exercises the light cruisers *Arctura*, *Undaunted*, *Penelope*, *Cleopatra*,⁶ *Tipperary* and 12 of the "L"

¹ *Nordsee* IV, p. 119.

² H.S. 128, p. 560.

³ *Aeroplane and Seaplane Raids, 1914-1916*, issued by War Office G.H.Q., H.F. (1).

⁴ A. 55.

⁵ A. 43.

⁶ She joined the Fifth Light Cruiser Squadron at Harwich on July 6. *Cleopatra*, Capt. F. P. Loder-Symonds, 3,750 tons, 28-5 knots, two 6-in., eight 4-in. guns.

class destroyers. The flotilla went out by the passage between the German and British mined areas, practising steam tactics and manoeuvring. When the Hinder Light Vessel was reached an exercise submarine sweep was carried out. The flotilla was back at Harwich by 7.30 p.m., some of the vessels passing round the Shipwash Light and entering by the Shipway.¹

28. ~~The Dover Minelayer Reinforced, July 9-11~~ At the outset of the submarine attack on merchant shipping the northern entrance to Dover Strait had been heavily mined to prevent the passage of submarines; but the minelaying had been done as an emergency operation with such material as was then available, and the mines speedily began to break adrift in large numbers. At the end of May Admiral Jellicoe proposed that the minefield should be laid again. This was considered impossible since there were not enough sweepers to make the necessary clearance of the remainder of the field before the minelayers could approach the position; but it was decided to lay four new lines of mines to the northward of the position of the northernmost lines of the February field. These new lines were to be laid between the North Falls and North Hinder shoals by four of the ex-merchant ship minelayers proceeding abreast, the first time that such vessels were to operate as a squadron.

The Harwich Force was called upon for the escort during the minelaying. On July 5 Commodore (T) was ordered to provide three destroyers to escort the minelayer *Orvieta* from the Corton Light Vessel to Sheerness and to have eight destroyers at Sheerness by noon July 8 to protect the minelayers while they laid the mines. This employment of the Harwich Force on escort duty put a stop to an offensive operation which had been in contemplation.²

Next day, July 6, intercepted enemy messages indicated that the German Fleet was preparing to come out in the course of the afternoon, apparently for an exercise cruise. This information was passed on to the Commander-in-Chief with instructions that he should keep the Grand Fleet at two hours' notice for sea, the light cruisers to be at one hour's notice. By 10.40 p.m. it was clear to the Admiralty that the German Fleet was returning to harbour after its exercises, whatever they had been; the Grand Fleet ships reverted to their usual notice for steam, and preparations for the minelaying operation and its escort went on uninterrupted.³

The *Orvieta* was escorted to Sheerness on July 6 by three of the Harwich destroyers, which were joined on the 8th by five more of the "L" class. The minelaying operation proceeded as

¹ Deck Log: *Undaunted*.

² A. 20, 21.

³ A. 23, 24, 28, 29, 32.

planned and in the afternoon of July 9 the minefield guarding the Straits of Dover was reinforced by the following lines:—¹

On the parallel of 51.39.10 N from 1.57 E to 2.40 E,
254 Service mines, 640 ft. apart.

On the parallel of 51.38.10 N from 1.56.50 E to 2.40 E,
258 Service mines, 640 ft. apart.

On the parallel of 51.37.10 N from 1.56.40 E to 2.40 E,
256 B.E. mines, 640 ft. apart.

On the parallel of 51.36.10 N from 2.2.0 E to 2.40 E,
116 B.E. mines, 1,200 ft. apart.

These mines were all in the area proclaimed as dangerous in the Admiralty Notices to Mariners,² which specified latitude 51.40 N as the northern limit of the British mined area; and no further Notice to Mariners was required or issued. But a general telegram was despatched to all H.M. ships and bases detailing the exact area covered by the new fields.³

No more British mines were laid in the proclaimed area during 1915. Altogether, since 20 October 1914, when the first British minefield of the war was laid, 7,438 mines had been expended⁴ in this area in the hope of preventing submarines from entering the Channel through Dover Straits.

29. British Submarines in Heligoland Bight, July 10-15.—

After Commodore (Ts) Operation G of July 4 there was an interval of nearly a week during which none of our submarines was keeping watch off the exits from the Bight. On the 9th the Admiralty ordered two submarines to cruise off Horn Reefs and one off Norderney, remaining five days on their stations, to attack German men-of-war or fleet auxiliaries,⁵ and especially to keep a lookout for a minelayer reported to be preparing. Captain Waistell detailed D.7 to cruise between Horn Reefs and 55.15 N, E.13 between 55.15 N and 55.0N, both to keep east of the meridian of 6.30 E; E.18 was to keep the Norderney watch. All three boats were warned that German submarines were reported to be working in concert with aeroplanes.

The three submarines left Yarmouth in the afternoon of July 9, and proceeding via Smith's Knoll Channel, which was now regularly swept, reached their stations next forenoon. The two boats at the Horn Reefs exit saw no vessels except small steamers and fishing craft; a patrolling Zeppelin kept them diving on the 14th. E.13 on the 12th saw a British mine drift past her periscope. Apart from this, their part of the watch, which terminated when they shaped course for Harwich at dark on July 14, proved uneventful. They saw no men-of-war or minelayers, and were not attacked.

¹ Lockhart Leith: *History of British Minefields*.

² 1626 of 9 October, 1914, 1706 of 3 November, 1914, 149 of 3 March, 1915.

³ A. 39; M. 05406/15.

⁴ Lockhart Leith.

⁵ A. 36.

E.18 each day saw a steamer of about 3,000 tons patrolling at about 6 knots between Wester Ems and Norderney Cat. The vessel kept all the time in from 3 to 4 fathoms of water, and E.18 found so much difficulty in approaching that she could not make an attack. Indeed, once the submarine grounded, but managed to retire into deeper water. On the 13th and 14th a Zeppelin appeared and seemed to be acting in collaboration with the steamer. At noon, Lieutenant-Commander R. C. Halahan, commanding E.18, dived to 60 ft. for lunch. He records the subsequent proceedings as follows:—

12.15. Bomb exploded astern; dived 70 feet.

12.30. Was just coming up when another bomb exploded. Thought it impossible that I was seen but decided to wait a little longer, and at

12.50 two more bombs were dropped fairly close. Dived to 80 feet, being convinced that I was being attacked and hoping that the greater depth would throw him off the scent.

3.10 p.m. At this depth three more bombs were dropped, the last one being just over the centre of the boat. Speed was 13 knots, grouper down, one motor, course NW. Went ahead both motors, dived to 85 feet, maximum possible, and altered course to N. No more bombs were dropped after this.

E.18 was the first submarine to be fitted with two wireless masts and part of her duty was to test the efficient range of her wireless communications. It was found that when she was off the Ems she could read signals made by Ipswich Wireless Station, over 200 miles off, and, what was a still further advance, E.18's signals from the Bight could be heard quite plainly in the Maidstone.¹

This result was certainly satisfactory; but in the bombing to which E.18 had been subjected, Captain Waistell saw serious portents. "This is one of the most definite cases," he wrote,² "of a Zeppelin being able to locate submarines when submerged, even at depths of from 60 to 80 ft., in spite of the sea being ruffled and with a slight swell. So far, all bombs appear to explode on contact with the water, and there is little danger to the submarine when at depths of over 30 ft. But it will be much more serious if delay action bombs are used, and it therefore seems necessary to carry out experiments to ascertain the best method of painting submarines in order to render them invisible when submerged." He suggested the outline of the submarine should be broken up by painting it in light and dark irregular patches, as it was evidently the silhouette of the boat that could be seen.

Strangely enough, the explosions heard by E.18 were not those of Zeppelin bombs. After a long pause, the Germans that morning recommenced minesweeping on the field laid by us off

¹ Captain (S), in his report No. 0114 of July 17, does not mention this last; but Lt.-Cdr. Halahan states: "7.0 am. Heard Ipswich quite readable and at 7.10 Maidstone heard me quite plainly—distance about 220 miles?" HJSSA 270, p. 424.

² In his report (No. 0114 of July 17).

Borkum and also on their own minefield laid west of Heligoland. This latter had been down nearly a year and it was felt that it must soon become a danger to ships in the Bight, through deterioration of the mooring ropes and safety arrangements. Consequently, minesweepers were now working on it. The Zeppelin seen by E.18 was E.6, specially employed in locating mines. Though she complained that in the rough sea it was impossible to be sure that objects seen were really mines, she buoyed a spot near 54° N, 6° E, as a guide to the minesweeping flotilla. Though it worked there for some hours, it found nothing except some specially large jelly fish. The flotilla working west of Heligoland on a German field of which they knew the exact position exploded the 10 northern mines between 1.20 and 2.50 p.m. This was in 54.22 N, 7.35 E. Lieutenant-Commander Halahan does not record his exact position when he heard the explosions he took to be those of Zeppelin bombs, but it must have been at least 30 miles from the minesweepers at work to the north-west of Heligoland; and it is of interest that, even at that distance, one of these explosions seemed to be right over E.18.¹

30. A German Destroyer Torpedoed in the Bight, July 36.—

The policy of keeping a British submarine off Nordemey was continued on July 23, when the Admiralty ordered one boat to be sent over to remain six days on her station.² The boat chosen by Captain (S) was E.16 (Commander C. P. Talbot), which left Yarmouth in the forenoon of July 24 to cruise to southward of 54° N between the Western Ems and Norderney.

Off Borkum Riff Light Vessel on July 25, Commander Talbot saw through his periscope a submarine come to the surface a mile and a half away. He rose to the surface himself and gave chase, but the enemy dived and he himself was forced under by a seaplane and a Zeppelin. An hour and a half later five destroyers came out and hunted round on various courses. In the afternoon, when 3 miles from Borkum Riff Light Vessel, he suddenly found his boat foul of some heavy obstruction, apparently a net, whose weight began to drag her down by the bow; at the same time two small bombs exploded near him. After efforts to free himself he came to the surface, the boat still at a large inclination downwards, and opening the conning tower to see what was foul, found a Zeppelin a few hundred feet above him. He descended to the bottom hurriedly and again attempted to shake off the obstruction. At length, after an hour's manœuvring, the boat suddenly freed herself and resumed her normal trim. For the past hour her position must have been clearly visible from the amount of blowing and pumping during her struggles to get free. Commander Talbot dived away to westward as soon as his boat was clear, and found when he rose to periscope depth that there was nothing in sight. Next morning he released four pigeons bearing a message that he had fouled the net.

¹ Nordsee IV, pp. 207, 208; Signals of July 14 in I.D.H.S. ² A, 75.

Returning to his station, he was in 54.11 N, 5.23 E, at 11.20 a.m. July 26, when he sighted three German destroyers apparently hunting on various courses. At 12.36 p.m. he got a good shot at one of them, hitting her and blowing off her stern. The two others came up at full speed; he fired a torpedo at each of them, but in both cases the destroyers avoided them and continued their attempts to ram E.16. Commander Talbot retired to the north-eastward, watched by a Zeppelin, which kept him diving till 7 p.m.

From time to time, during the remainder of his watch, he saw steamers on passage between Norderney and Borkum; but they kept within the 5-fathom line and could not be approached. He left for Harwich at 4.30 p.m., July 30.¹

The destroyer sunk by E.16 was not in the position in which she was operating solely by accident; she was V.188, one of the 1st Torpedo-boat Half-flotilla, then acting as guard of a mine-sweeping division. Although no British mines had been found on July 14 when E.18 thought herself bombed by the mineseeing Zeppelin L.6, that same airship a few hours after the incident had sighted some mines to the southward of the minesweepers, and after a series of laborious exploratory sweeps and reconnaissances by airships our Borkum field was at length discovered in the oblong between 54.0 N and 54.15 N, and 6.0 E and 6.15 E. Systematic sweeping of this area began on July 25, the mine-sweepers being protected by destroyers. The sinking of F.188 resulted in the immediate recall of destroyers and minesweepers to the Ems, but they went out again next day to continue the sweeping. Eight bombs² were dropped on a suspicious patch of oil to the northward of the spot where V.188 sank; depth charges³ were not carried by German destroyers at this period.⁴

CHAPTER IV.

ACTIVITIES OF THE FLANDERS SUBMARINES, JULY 1915.

31. Minefield off the Longsand Light Vessel, July 5.—Our submarines and vessels operating in Heligoland Bight had not only the dangers belonging to enemy waters to contend with; the safety of their return was continually being threatened by the little minefields sown by the U.C. boats from Flanders. The first of these discovered in July was laid at the north end of the Longsand Shoal⁵ by U.C.3, which came out from Flanders early on the 5th.

¹ His report is in H.S.A. 270, pp. 447-450.

² Sprengpatronen.

³ Wasserbomben.

⁴ Nordsee IV, pp. 209, 210.

⁵ Nordsee IV, Karte 14, and German Statement of Mines Laid by Flanders Command (O.U. 6020D), Minefield 4.

The field soon revealed itself. The Norwegian s.s. *Peik*, which had been conveying coal to France, was on passage northward in ballast up the east coast war channel, when at 10 a.m., July 5, 1 mile north-west of the Longsand Light Vessel, she blew up and sank. She had no pilot aboard and there were certain suspicious circumstances which led authorities in the Nore Command to think she had been sunk deliberately, either to block the channel into Harwich or to constitute a mark during the hours when the light ships extinguished their lights. It was noticed that the gas buoys for the wrecks of the *Peik* and other vessels recently sunk had the result of very efficiently marking the Shipwash and Longsand Shoals, and Trinity House was asked to extinguish them.¹

The position in which the *Peik* sank had been swept on July 4 and was swept again shortly afterwards. Since on neither occasion were any mines found, the loss of the vessel was at first put down to the work of a submarine;² but further consideration of the circumstances suggested foul play on the part of the crew. This latter supposition received great impetus when divers sent down reported that her hold was full of mines; it was hastily assumed that these mines were intended as the wreck broke up to float out and anchor themselves in the vicinity, an idea of which the Admiral of Minesweepers remarked, "Nothing more fantastic has ever been put forward than this idea of mines with 1,000 lb. sinkers floating out of a wreck and anchoring themselves."³

Nevertheless, some time elapsed before the loss of the *Peik* was attributed to a minefield laid by a submarine. So early in July the existence of the submarine minelayer had not yet been definitely proved;⁴ and so much was the accident thought to be the result of a torpedo attack that net drifters and patrol trawlers were sent to operate in the actual area.⁵ Strangely enough, they escaped injury and, in fact, seem to have missed the mines.

A fortnight elapsed before any other vessels were sunk on these mines. On July 20 the armed yacht *Rhiannon* blew up and sank close to the wreck of the *Peik*. This accident was now attributed to a mine; and four paddle minesweepers from Grimsby and two of the minesweeping gunboats from the Grand Fleet were ordered to Harwich.⁶ The latter were not only to deal with this particular field but to remain at Harwich and sweep ahead of the Harwich Force whenever it put to sea.⁷

¹ M. 05531 of 25 July 1915.

² Minesweeping Statement No. 73.

³ Minesweeping Statement No. 79. The supposed mines were eventually found to be bundles of grass mats.

⁴ See *Home Waters* IV, Section 132.

⁵ Harwich and Lowestoft P. Reports, SH 180, 140, SH 181, 161, Telegrams H.S. 128, pp. 1006, 1009, 1016; H.S. 129, p. 520.

⁶ H.S. 131, pp. 515, 543, 584.

⁷ Papers titled X. 8697/15.

Next day, July 21, the armed trawler *Briton* was blown up near Longsand Head; this was the third victim of the field. In view of the sweeping which this area near Longsand Light had received, the continued existence of the minefield seemed to need explanation; the Admiral of Minesweepers, in reference to the loss of the *Rhiannon* and *Briton*, remarked: "It is quite possible that the mooring gear of mines laid by submarines may have been fitted with Schaumberger's soluble plugs which would allow of release of mines at any time up to several days subsequent to their being laid. This would allow of sweeps passing over the mines until the time arrived for them to take up their depth. The remedy is close examination at low water and daily sweeps each side of high water."¹

In October 1915, after considerable inquiry, it was decided that though three mines had been found in the vicinity where the *Rhiannon* and *Briton* had sunk, these mines had probably been laid by a submarine and that the *Peik* had no mines on board. So long had the opinion persisted that the unfortunate Norwegian was the cause of the trouble.²

32. Minefield near the Shipwash Light Vessel, July 11.—The Shipwash, used occasionally by Commodore (T) as a mark when he was returning from cruises, also received the attention of the minelaying submarines from Zeebrugge. At daybreak, July 11, a German mine was seen 1 mile SSW of the Light Vessel by a patrol trawler which exploded the mine by gunfire. Thus early made aware of danger, the patrol was able to warn shipping to pass at least 2 miles east of the Light Vessel, by this precaution doubtless saving several ships.³

At 9 a.m. a submarine was reported to be 8 miles south-east of the Shipwash Light and trawlers and net drifters went out from Harwich and Yarmouth to catch her, without success.⁴ Another mine was exploded during the day within a mile of the light; and minesweepers sent out from Harwich found two more. On the 13th the minesweepers reported the area swept. Drifters shot their nets there; and next day the Commander-in-Chief, the Nore, ordered all stations to warn traffic to resume the normal course. That evening another ship, the Norwegian s.s. *Rym*, blew up 1 mile south-west from the Shipwash Light Vessel.⁵ Her loss appears to have been attributed to the action of a torpedo rather than a mine;⁶ but next day a minesweeper in the same neighbourhood suffered the same fate. In reporting upon the field the Admiral of Minesweepers remarked, "this tends to prove that mines are being laid by submarines in close proximity to

¹ *Minesweeping Statements*, Vol. II, No. 75, dated 1 August 1915.

² Papers titled C. 1320/15.

³ Harwich A. P. Reports, H.S. 140, p. 86.

⁴ A. P. Reports, H.S. 140, p. 26; H.S. 161, p. 101.

⁵ H.S. 130, pp. 394, 509, 672.

⁶ The Naval Staff (Trade Division) *Return of Foreign Vessels Sunk or Damaged by the Enemy* definitely states that she was torpedoed.

a well known mark so that the enemy's submarines can keep clear of the temporarily mined area. These submarines probably carry not less than six mines."¹

The field really contained 12 mines, laid in groups of six about 2 and 4 miles respectively west of the Shipwash Light Vessel. It had been laid by U.C.12 early on July 11 and can have been in position only an hour or two before its discovery.

Up to that date there were only vague suspicions that the little groups of mines found from time to time near light vessels had been laid by specially constructed submarines. These suspicions were strongly confirmed by a German signal intercepted on July 12: it was known to come from a submarine on the way back to Zeebrugge and read: "Mines laid as ordered."³ The evidence was now strong enough for the Admiralty to warn the Senior Naval Officers from Dover to Lowestoft that the submarines from Belgium were being used to lay mines and that additional precautions should be taken as regards sweeping.⁴

The channels swept by the Harwich minesweepers extended only to the Shipwash and Sunk Light Vessels. Beyond these the Harwich Force had to traverse unswept waters. It would be inadvisable to divert the six Harwich trawlers used as minesweepers from their routine duties, and the 78 minesweepers based on Lowestoft were fully employed in the East Coast War Channel and on the German minefields out in the North Sea. After a request from the Senior Naval Officer, Harwich, for some of the paddle sweepers then at Dover, it was decided to take two of the minesweeping gunboats from Scapa, where the continuous work in those rough waters was proving too heavy for the old craft. The two selected, *Seagull* and *Spanker*, arrived at Harwich on July 22, their duty being to sweep ahead of Commodore (T) whenever he put to sea.⁵

The Nore Command included 25 minesweepers. The mine-sweeping routine was to sweep the War Channel from the Nore to the Sunk daily, the Black and Knock Deeps fortnightly and the area between the Tongue, Elbow Buoys, Galloper, Longsand and Kentish Knock as often as possible; in addition to this, the Commander-in-Chief proposed to carry out occasional night sweeps of the passage between the Sunk and the North Hinder with an explosive kite creep which had been devised at the Nore.⁶

The discovery of moored mines in or near the swept channel off the Thames Estuary presented an awkward problem for solution.

¹ Minesweeping Statement No. 74, dated 15 July 1915.

² *Notes*, see IV, Karte 14 and O.U. 6020, Field 6a, six mines extending 500 metres in direction 213° from 52° 1' 54" N, 104° 3' 30" E; and Field 6b, six mines extending 500 metres in direction 71° from 52° 1' 36" N, 1° 40' 54" E.

³ Signal 0325/12 July, in Current Log I.D.H.S.S.

⁴ A. 47.

⁶ M. 05539/15; H.S. 131, pp. 543, 638; H.S. 132, pp. 51, 128.

⁸ M. 05556/15.

Admiral Callaghan, Commander-in-Chief, The Nore, made the following suggestions:—¹

- (1) These mines must either be laid by merchant ships following the stream of traffic, or by submarines as mentioned by Admiralty telegram No. 1722. The latter appears to be the more probable, as it has been noticed that the reported presence of enemy submarines off the estuary has been followed by the finding of enemy mines in or near the swept channel and close to the light ships.
- (2) To endeavour to prevent this, several courses are possible, viz.:—
 - (a) Removal of swept channel buoys.
 - (b) Periodical shifting of position of the following lightships: Galloper, Kentish Knock, Long Sand, Shipwash and Sunk.
 - (c) Mining in conjunction with (b).
 - (d) Compulsory use of pilots between Downs, London and Dutch ports.

In commenting on these proposals, the Admiral of Minesweepers observed, "There is little doubt that the mines are laid by submarines, probably about six each time";³ he suggested the laying of observation mines to be fired from each light vessel, but the Director of Naval Ordnance objected that such fields would not be worth the expenditure of personnel and materiel. His solution consisted in the institution of compulsory pilotage in conjunction with nets with explosives attached. The Director of Navigation observed that the removal of buoys and lightships had already been tried and had failed; it was dangerous to shipping in that they could be moved only in very calm weather and consequently the prearranged dates could never be relied upon. That part of the suggestion was therefore not adopted. The final conclusion of the Admiralty, as expressed in their reply to Admiral Callaghan,⁴ was: "Net drifters are the best means of meeting this menace. All mercantile traffic should be kept to one channel inside Aldeburgh Napes and the Shipwash Light Vessels, and this channel must be constantly swept. Whenever mines are found patrol vessels should be stationed to divert all ships clear of them. As soon as E.C. mines for indicator nets are available they will be issued to all drifters on the southern part of the East Coast for use outside the lines of traffic."⁵

383. **Raid on Lowestoft Fishing Fleet, July 12.**—While U.C.1 was mining the Shipwash, one of the U.B. boats was conducting a raid on a fleet of smacks which were fishing by special permission about 20 miles to the eastward of Lowestoft. Although the position was so near the base of the Lowestoft Auxiliary Patrol,

¹ His letter 1522/C. 301, of 13 July 1915, in M. 05437/15.

² A. 47.

³ AMISS Minute dated 15 July 1915, in M. 05437/15.

⁴ M. 05437/15, dated 17 September 1915.

no idea that anything was wrong seems to have arisen till 11 a.m. on the 13th, when one of these smacks returned with news that five or six of them had been sunk the previous day by a submarine which, when the fishermen left, had been hove to as if its machinery had broken down.¹

The submarine was U.5.6 from Zeebrugge. She had come up to the fishing fleet at 2 p.m., July 12, and began to deal with the smacks she found scattered round her. The conditions were favourable to her in that there was scarcely any wind and her prey could not easily escape. She proceeded in systematic fashion. She first fired rifles to make a smack heave to and then called its crew aboard her. Three of the submarine's men then boarded the smack; one secured the ensign, another searched the cabin, and the third placed a bomb in the forecabin.

The first to be so treated was the *Emerald*. She did not immediately sink. The submarine then arrested and blew up the *Purple Heather*, *Merlin*, *Speedwell* and *Woodbine*, all of which sank. The crews of these smacks noticed that no two of the Germans aboard the submarine wore the same name on their cap ribbons; one skipper saw on the vessel the raised number U.5.6 painted over as if to hide it. In some cases the fishermen were given bread and water when they were shoved off in their boats. After destroying the *Woodbine* the submarine appeared to be in difficulties and unable to reach other smacks which were in sight. She was last seen about 9 p.m., having been operating 20 miles from Lowestoft for seven hours. The fishermen were picked up by other smacks; the crew of the *Speedwell* came across the *Emerald*, which was still afloat; and getting aboard her, they sailed her in to Lowestoft.²

No particular action appears to have been taken at Lowestoft on the arrival of the news that a submarine, possibly broken down, was so near.

34. The Entrance to Calais Mined, July 11. The discovery of the minefield at the Shipwash was followed by the report of still another. In the afternoon of July 13 Admiral Bacon passed on a report from Calais that German mines had been found off the harbour entrance; the minesweepers had exploded two that day and one the previous day.³ Although information of the presence of this minefield had taken so long to reach the British authorities no harm had yet been done. On receipt of the news Admiral Bacon countermanded the departure from Calais of the mail boat for Folkestone until the area should be declared clear, and the Admiralty stopped all transport traffic to the port. Admiral Bacon further sent out destroyers to turn back any vessel which was known to have sailed for Calais.⁴

¹ Tel. from S.N.O., Lowestoft, H.S. 130, p. 218.

² M. 40646, 40702, 40725/15.

³ 451 from R.A., Dover, reed. 5.31 p.m., July 13.

⁴ H.S. 130, pp. 290, 171.

Admiral Favereau went further; he thought it prudent that vessels should enter or leave only at high water and suggested that this restriction should apply also to Boulogne, Dieppe and Havre, in fact, to all the ports used for the supply to the British Expeditionary Force. This would entail an undesirable delay; for there were numerous transports waiting passage to these ports that night. There were eight for Havre and Rouen and six for Boulogne.¹ The Admiralty decided to accept the risk of letting these sail, since they would arrive very nearly at the time of high water; the telegram reporting this decision to the French Ministry of Marine concluded: "It is thought that the evening's low water will have been taken advantage of to sweep the entrance channels."²

The sweeping of the entrance to Calais on the 14th brought four more mines to light. Something also besides mines seems to have been found; the French reported, "we have dredged up an apparatus for laying mines which is different from those we dredged in February last in front of Nieuport. The Commandant is convinced that the apparatus is entirely new, renders possible a vertical laying of mines either by vessel on surface or submarine boat."³

The minefield had, in fact, been laid by submarine U.C.3 on July 11.⁴ She dropped two groups, each of six mines, one between the red and green lights marking the entrance to Calais harbour and the other to the westward of the entrance.

After the French minesweepers had discovered six mines between the red and green lights, permission was given on the 17th for transports to enter at daylight, high water. Accordingly, the empty hospital ships waiting at Dover were sent across to embark wounded.⁵ There were three transports with ordnance stores and food supplies ready at Newhaven. These also were sent across; presumably, they arrived at the wrong time, for the authorities at Calais protested at their coming.⁶

On the 19th, two more mines were found to the westward of the entrance into Calais; these would be those of the second group of six laid by U.C.3. In view of this discovery all traffic was stopped by the French, but next day ships were allowed to enter or leave the port, provided they did not cross the line between the red buoys of Ridens de la Rade and Ridens de Calais. Finally, on July 23, a safe route into Calais was given. Thus the field laid by U.C.3 had seriously hampered the use of Calais for nearly a fortnight.

Efforts had been made to assist the French both in the patrol of their coast and in clearing the minefield. Before U.C.3 paid

¹ H.S. 130, pp. 527, 531.

² French Naval Attaché to Marine, Paris, No. 2750, H.S. 130, p. 529.

³ Tel. 461, from Admiral, Dover, reed. 1.45 p.m., 15 July 1915.

⁴ Nordsee, IV, Karte 14, and O.U. 6020 B. Fields *la* and *lb*.

⁵ H.S. 131, p. 46.

⁶ H.S. 130, p. 720; H.S. 131, p. 212.

her visit Admiral Bacon had arranged to patrol the French coast from July 10 onwards, but no details of the arrangements are forthcoming and it is, at present, not known whether there was any British patrol near Calais at the time of the minelaying. When, from the delay in reopening Calais to transports, it seemed that the French were experiencing difficulty in clearing a passage, offers were made on the 20th of assistance in keeping the channel open, and Commander Walters was ordered to go across in a paddle-sweeper to gain information about the minefield. Although it seemed that the Germans had strengthened the mooring wire of their mines to a point which practically defeated the French cutters, Admiral Favereau was disinclined to accept any help and Commander Walters did not cross the Channel.²

35. Mines laid near the Dyck Light Vessel off Gravelines, July 17.—*U.C.3*, having replenished after her return from Calais, went out again as soon as ready and on July 17 laid a line of mines running north and south near the Dyck Light Vessel off Gravelines.³ The presence of this field remained for a long time unsuspected by either the French or ourselves. It was not on any route in general use; and British ships were not likely to approach it except in the course of proceeding for operations on the Belgian coast.

Far more serious was the mining of the Downs, now one of the most frequented rendezvous of merchant shipping.

36. Mining of the Downs, July 10, 27 and 31.—On July 10 a zigzag field of 12 mines was laid by *U.C.11* in the entrance to the Downs, close to and on the north side of the South Goodwin Light Vessel. Mines in such a situation would seem likely to immediate discovery; but they were to the eastward of the track of shipping through the Downs and no hint of their presence transpired till July 19 when a heavy explosion took place in the explosive nets being towed by a drifter 5½ miles east of the South Goodwin Light Vessel. Various attendant circumstances—the presence of oil, the appearance of the cut wires of the net and warp, and the position of the occurrence—suggested that what had exploded was a submarine with mines aboard. A Court of Enquiry held on July 23 agreed that this was the probable explanation of the occurrence, and on Admiral Bacon's recommendation that it was desirable to encourage the Dover patrol, £500 was paid to the drifter, *Clover Bank*, while a further £500 was distributed among the seven other patrol vessels of her division, all of which were considered to have contributed to the destruction of the supposed submarine.⁴ This reward may have discouraged minesweeping in the neighbourhood; at any rate, no more mines were found in those waters till nearly the end of the month.

¹ A. 25.

² A. 66, 69; H.S. 131, pp. 611, 671; H.S. 132, p. 215.

³ Karte 14 and Field 8 in O.U. 6020 B.

⁴ M. 05773, 06243/15.

Meanwhile *U.C.1* laid a complicated field of 12 mines at the northern end of the Downs in the small hours of July 27.¹ These being in the middle of the fairway south of the Gull Light Vessel were discovered by the minesweepers at dawn. In the course of the day nine mines were found and Admiral Bacon declared the passage clear.² No ships were lost on this field.

Admiral Bacon found it difficult to account for the presence of these mines. There was an idea current that the enemy might be employing neutral vessels to lay mines in the swept channel; but the only neutral which had passed during the night was a well-known Spanish collier from the Tyne. The moonlight had been so bright that the conning tower of a submarine would easily have been seen, and moreover, the water was shallower than submarines liked, being only 33 to 48 ft. Nevertheless, the general consensus of opinion was that the minelayer must have been a submarine.

In view of the large extent of the War Channel in his area, Admiral Bacon pointed out that he had not enough minesweepers and suggested fitting eight of his armed trawlers for minesweeping, an arrangement which would bring up to 20 his total of minesweepers, exclusive of the paddlers temporarily at Dover.³

The discovery of the field in the north part of the Downs was followed on July 29 by the finding of the mines laid by *U.C.11* on July 10 at the South Goodwin. In the course of July 29 eight of these were destroyed and four more before the last of the month.⁴

The Downs appeared to be clear; but in the forenoon of July 31 the steamer *Galicia* struck a mine in the fairway between the Gull Light Vessel and the Elbow Buoy. Traffic both ways was held up till the position could be swept; when this was done six mines were found. It was thought they were part of the field discovered on July 27; but in fact they belonged to a separate field of 12 mines, laid north of the Gull Light Vessel in the morning of July 31.⁵

37. An Oil Transport Torpedoed in the Swept Channel while under Escort, July 18.—It was the practice for important store ships, such as oilers, to be escorted during their passage along the coast by one or more armed trawlers. Some sort of protection may have resulted from the presence of this escort, but fast vessels in the wider spaces of the English Channel were apt to prefer to rely for immunity from attack on their own speed rather than on the guns of the slowly moving trawler. In the swept war channel, however, navigation was more restricted and an escorted vessel

¹ *Nordsee*, IV, Karte 14, and O.U. 6020 B, Field 9.

² H.S. 133, pp. 42, 98, 113, 200, 293.

³ M. 05886/15.

⁴ Dover A.P. Reports, H.S. 175, p. 177.

⁵ The field is No. 10 in O.U. 6020 B. Karte 14 ascribes it to *U.C.1* but it seems unlikely that she could have got back from Zeebrugge with a fresh cargo of mines so soon; and the submarine was more probably *U.C.11*, which would have had plenty of time since July 10 to replenish.

was passed on from trawler to trawler as she moved from one auxiliary patrol area to the next.

The oiler transport *Batoum* left the Humber on July 17 under escort of the armed trawler *Cotismuir*, which should have been relieved at Yarmouth by vessels of the Lowestoft area. As frequently happened, no relief was there, and the *Cotismuir* continued southward with her charge. In the morning of the 18th they were in the swept channel between Southwold and Aldeburgh. There was a strong wind and heavy sea, and the trawler was keeping station on the quarter of the oiler instead of on the bow, as was customary, when about 8.15 a.m. a torpedo struck the oiler and disabled her. Shortly afterwards the *Cotismuir* sighted a periscope and fired on it without effect. Luckily the *Batoum* was not sunk; and with the aid of a tug was got ashore and beached.

In reporting on this incident the Admiral of Patrols remarked that the numerous duties of his auxiliary patrol vessels, which included the trawler patrol on the Dogger Bank, had prevented him from detailing more than one trawler for this particular escort; he further drew attention to the unsatisfactory results of dividing the east coast, which had been his original command, into different areas of responsibility as regards escort, patrol and naval defence.¹ The arranging of relief of escorts had proved difficult in many cases and the Admiralty once again instructed the Senior Naval Officers of the East Coast areas to take special care to avoid delays in reliefs.²

The *Batoum* had been torpedoed in the Lowestoft area. The system here was to maintain a regular patrol in the northern part of the area, and more or less constant patrols of three or more vessels on the southern and eastern boundaries; a fourth division, called the local patrol, worked from the Shipwash via Yarmouth Roads out to Smith's Knoll. On receipt of the news of the presence of a submarine near Southwold, 20 trawlers were despatched to hunt round the spot, while three net drifters shot their nets between Southwold and Aldeburgh. One of the trawlers sighted a submarine at 4 p.m., 12 miles south of Southwold, and fired at it without any discernible result.³

Harwich also sent a couple of trawlers and seven drifters. The drifters shot their nets to screen the *Batoum*, on which salvage operations were proceeding. The enemy seemed to be still about; for at 10 a.m., July 19, two nets were carried away and in a short time the submarine came to the surface. She was immediately fired on by one of the armed trawlers, but submerged too soon to be hit. She then fired a torpedo at and missed the attacking trawler. This was all that was seen of her.⁴ There is no evidence yet from the German side to identify this submarine, but it may confidently be assumed to be one of the *U.B.* boats from Flanders.

¹ Papers titled X, 8974/1915.

² H.S. 132, p. 150.

³ Lowestoft A.P. Reports, H.S. 161, p. 109.

⁴ Harwich A.P. Reports, H.S. 140, pp. 92, 95.

38. Decision for a Net Barrage outside the Swept Channel between Harwich and the Downs, July 21.—The next appearance of a *U.B.* boat was on July 21 when one attempted to board and blow up a sailing smack 18 miles east of Gorleston. This occurrence was observed by the armed trawler *Brigadier* at a distance of 5 miles; she put on full speed and saw that the submarine returned the smack's crew to their own vessel and submerged. The enemy submarine came up again at a range of 8 yards from the *Brigadier*; but the trawler could fire only one round before it disappeared again without being hit. It was a small boat and mounted no gun; the number on it was read as 30 without any *U.I.*

The boat was probably *U.B.* 10 from Zeebrugge. The Harwich-Rotterdam steamer *Brussels* had a torpedo fired at her when half-way across at 12.10 p.m., July 20, and this was most likely the work of the same submarine on the way out.²

These attacks in the swept channel and also the discovery of the minefields off the Shipwash and Longsand Light Vessels decided the Admiralty to maintain net drifter barrages outside the swept channel between the Sunk and Longsand Light Ships and between the South Knock and North Goodwin. To render this possible, 20 drifters were transferred from Poole to the Nore. They were based on Birchington and began work early in August.³

A further effort to combat the Zeebrugge submarines was the establishment of regular operations with flying boats and Schneider Cup seaplanes, working from Harwich and Yarmouth.⁴

39. Activity of the Flanders Flotilla, end of July.—The operations of the three submarine minelayers, *U.C.* 1, *U.C.* 3 and *U.C.* 11 have already been described. They had been helped by their colleagues, the *U.B.* boats, which reconnoitred in advance the positions they were to mine. In this connection *U.B.* 10 on one occasion visited the Downs, entering by the north and penetrating as far as the Gull Buoy, thereby obtaining knowledge of the exceptionally active watch maintained there by trawlers and destroyers.⁵

In addition to these reconnaissances, the last week of July was one of special activity by the Flanders submarines. Reports of them began to be frequent on July 24, when they were seen on eight separate occasions; at least, what was sighted might very well have been a *U.B.* boat. Shortly after noon a minesweeping

¹ H.S. 132, pp. 166, 822.

² H.S. 131, p. 566.

³ Papers titled C. 1390/15 and "Positions and Movements of Armed Yachts, etc., August 1915."

⁴ A. 93.

⁵ Gayer II, p. 42. This was a reconnaissance prior to *U.C.* 1's minelaying on July 27. Gayer states that *U.C.* 2 also laid mines in July, but Karte 14 attributes no fields to her.

trawler from Harwich sighted one on the surface 4 miles east of the South Gabbard Light Vessel. The trawler fired a round, but the submarine was out of range and disappeared to the south-eastward.¹

At the same time another boat was seen and stalked by *EA* from 15 miles WNW of the North Hinder Light Vessel as far as 7 miles west of the Shipwash Lightship, where the enemy disappeared at 6 p.m.² Meanwhile, still another was out among the fishing smacks off Smith's Knoll. She appeared there about 6 p.m. and sank by means of bombs four of them between 6 and 8.30 p.m.—the *Henry Charles*, *Kathleen*, *Prosper* and *Activity*—which with other smacks were fishing 30 miles to the north-east of Lowestoft. The number of the submarine was not noticed by any of the fishing smacks.³

Next day, July 25, six Lowestoft drifters went out to shoot their nets near Smith's Knoll pillar buoy; and the Harwich drifters worked in several places. They had no luck, though at 5.50 a.m. a periscope was seen in 52.39 N, 2.47 E, which may have been that of the submarine which sank the four smacks. Other reports placed a submarine near the North Hinder Light Vessel at 7 a.m. and some 20 miles farther westward at 10 a.m. This boat seems to have proceeded northward along the swept channel past Harwich, for at 1 p.m. the steamer *Firth* suddenly blew up in the channel in 52.10 N, 1.50 E. An unarmed drifter patrolling near came up and rescued the crew, and immediately a periscope appeared for a moment as if to see whether the rescuer was worth a torpedo. None was fired and the drifter took the crew of the *Firth* into Lowestoft.⁴

Though on July 26 there were three reports of submarines off the Suffolk coast, no vessels were lost and no encounter took place. Besides the trawlers and drifters of the Auxiliary Patrol, other craft which might have met the enemy where the Grimsby paddlers which were completing the sweeping of a passage across the minefield in the latitude of Southwold. They saw nothing, as did also the flotilla of Harwich destroyers which went out for exercises that day.

Three Lowestoft armed trawlers sailed on the 27th to search the area between the Shipwash, Yarmouth Roads and Smith's Knoll pillar buoy. This was a special arrangement, for the general policy ruling at Lowestoft was to protect merchant shipping in the swept channel and act more on the defensive. That part of the swept channel which was in the Lowestoft area was divided into four sections, in each of which a continuous patrol of two trawlers was maintained, the remainder being fully occupied with the

¹ The telegraphic report of this occurrence (H.S. 132, p. 444) gives the time as 12.5 p.m.; the written report as 1 p.m. (Harwich A.P. Reports, H.S. 140, p. 92).

² H.S. 132, p. 507, and Comm. (S) War Records.

³ Papers titled *Board of Trade*, 28 July 1915 (M. 41431/15).

⁴ Papers titled *Board of Trade*, 30 July 1915 (M. 41553/15).

miscellaneous duties of escort, guarding nets, and hunting for submarines reported close in.¹

Two of the Harwich trawlers chased two submarines at 10.30 a.m. from 5 miles east of the Outer Gabbard in an ESE direction, but were outdistanced.² The enemy, probably only one submarine, after eluding them, apparently resumed her voyage northwards. Between 3 and 4 p.m. she overtook and blew up by a bomb the smack *Westward Ho* which for two hours had been trying to escape her and was then 25 miles south-east from Lowestoft. The crew were rescued five hours later by one of the three trawlers sent out from Lowestoft to search the Smith's Knoll Channel. The men of the smack had observed on the submarine the number 30 with an eagle cut above it.³

While the *Westward Ho* was endeavouring to escape from the submarine marked 30, another smack, the *Salacia*, when half-way home from Smith's Knoll with fish for Lowestoft, observed a smack with two sails approaching in a curious manner. At half a mile distance it lowered these sails and revealed itself as a submarine and soon captured and blew up the *Salacia*. Another smack, the *Iceni*, which also had seen the suspicious craft lower her sails, was blown up by her a few minutes after the *Salacia* went down. The crews of both smacks were rescued half an hour later by one of the three Lowestoft armed trawlers sent out to search that area.⁴

Another smack, the *Young Percy*, on the Smith's Knoll fishing grounds, was sunk by a submarine on July 28 at 5 p.m. The crew were picked up by a Dutch steamer and taken on to the Tyne.⁵ A Lowestoft armed trawler sighted the submarine shortly afterwards and fired, but without result.⁶

That morning the steamer *Mangara* was blown up in the swept channel close to Sizewell Bank buoy, half-way between Southwold and Aldborough. No submarine or periscope was seen, but the violence of the explosion was such that it was attributed to a torpedo; the hatches and cargo blew up through the deck fully 100 ft., and in less than a minute the ship sank.⁷

Two Belgian vessels blown up close to the Shipwash Light Vessel—the *Princess Marie Josi* on the 29th, 1½ miles east of it, and the *Prince Albert* on the 30th, 1 mile south of it—were at first considered to have been torpedoed, although the Commodore at Harwich thought the evidence in the latter case pointed more surely to a minefield. The minesweeping gunboats *Seagull* and *Sparmlsker* had just arrived at Harwich; and they were despatched

¹ Lowestoft A.P. Reports, H.S. 161, p. 127.

² Harwich A. P. Reports, H.S. 140, p. 101.

³ Papers titled *Board of Trade*, 30 July 1915 (M. 41509/15).

⁴ Papers titled *Board of Trade*, 30 July 1915 (M. 41510/15).

⁵ Papers titled *Board of Trade*, 4 August 1915 (M. 41849/15).

⁶ Lowestoft A.P. Reports, H.S. 161, p. 119; H.S. 133, p. 530.

⁷ Papers titled *Board of Trade*, 31 July 1915 (M. 41566/15).

for their first spell of sweeping to cover the triangular area from the light vessel to points 11 miles SSE and SSW of it, where they found no mines. The Harwich Force was out with Commodore (T) at the time, searching the Skagerrack; he returned on the 31st and was then warned not to approach the Shipwash within 1½ miles.¹

The *Princess Marie Jose* was blown up at 11.40 a.m., July 29. At 11 that morning the drifter *Sam Richards*, which with others was working nets to the eastward of Aldborough Napes, found that a submarine was in her nets, the strain being heavy enough to pull the drifter astern. A pair of periscopes came up and were fired upon by the armed trawler *Retako*, in attendance on the drifters. For more than 20 minutes the *Sam Richards* was towed astern by the struggling submarine, whose periscopes then came up for the second time. At this point the drifter parted from her nets and the *Retako* fired a modified sweep over the boil in the water. A large quantity of oil came up and a small wooden ladder was seen floating.

Although the Admiralty awarded £500 to those concerned in this operation, they were not convinced that a submarine had been destroyed. The President of the Submarine Attack Committee² pointed out that what had caught the nets might well have been one of the numerous wrecks in the vicinity, which also might have provided the oil. Nevertheless, his final judgment was, "it is considered probable that a submarine was destroyed, if present."³

The Lowestoft smacks suffered another heavy raid on the 30th. The morning was still and fine and they were lying becalmed and scattered widely over the fishing grounds round about Smith's Knoll. The first to suffer was the *Coriander*, which at 4.30 a.m. was accosted and eventually scuppered by a submarine which placed a bomb in her hold. At 5 a.m. the *Fitzgerald* was treated in the same way. This smack's crew were told by the submarine's men that their boat was *U.B.10*. Having finished with the *Fitzgerald*, the submarine set two small lug sails, and made off after two more smacks, the *Achieve* and *Quest*, whose crews also learned that the assailant was *U.B.10*. The men of the next smack to suffer, the *Strive*, observed more detail of the enemy; they saw that her head was painted like a fish and that on the after deck she was marked with a number 30.⁴ Three more smacks—the *Athena*, *Prospector* and *Venture*—were destroyed by her about noon; and with these her raid concluded. In each case,

¹ H.S. 133, pp. 513, 568, 595, 722, 801, 817, 941, 1,000.

² Captain L. Donaldson. This Committee later developed into the Anti-submarine Division.

³ Papers, titled Xy 8136/15. The *U.B.* boats hardly ever used wireless and there are no intercepted signals on this subject.

⁴ Another smack saw the number 23 painted in white on her after part. H.S. 143, p. 281.

the smacks had been sunk by a bomb exploded in the hold or against the side.¹

40. Attempts to deal with the "U.B." Boats. These frequently repeated raids on the Lowestoft fishing fleet and the immunity from attack of the submarines making them seemed to the Admiralty to call for inquiry. An officer of the staff, Captain W. Ruck Keene, R.N., was sent to Lowestoft to make inquiries "especially as to the time information was received of the presence of the submarine, the orders given, the means available for collecting the vessels, how much is known previously of the movements of the fishing fleet, and any other information that is likely to be of assistance in improving the methods of dealing with submarines and protecting the fishing fleet in this area."²

In his report dated 5 August 1915, Captain Ruck Keene observed:—³

Reports of enemy submarines are in most cases received from fishing vessels returning to harbour unless they are met previously at sea by a patrol vessel fitted with W/T. The pigeon service is slow and unreliable. On receipt of definite information the unit nearest is directed by W/T to search the area with sweeps ready, but there is no doubt that submarines make off at once on sighting patrol vessels. A group of net drifters is also sent to the spot.

Commander Sherbrooke⁴ informed me that he does not think it advisable to issue detailed orders how to conduct the search, as so much depends on condition of wind, weather and tides; but he gives frequent lectures to the officers and skippers on the subject and is of opinion that they thoroughly understand how to act in the varying conditions.

As regards movements of the fishing fleet, Captain Ellison⁵ said they are scattered from Smith's Knoll all round the banks to the northward, each skipper making for his favourite spot.

Owing to the large amount of traffic passing up and down the coast Captain Ellison has considered it advisable to discontinue the outer patrols and establish four other areas along the swept channel.

Four smacks have now been armed with 3-pdr. guns and will cruise to seaward of and near to the fishing fleet. It is hoped that success will attend this scheme, as from all reports the submarines engaged in this work are of small size, carry no guns, and always come close alongside the smacks they are going to sink.

This report satisfied the Admiralty and no further suggestions on the subject were made by the Naval Staff.

¹ Papers titled *Board of Trade*, 4 August 1915 and 13 August 1915 (M. 41849, 41850, 42414, 42962/15).

² H.S. 161, p. 122.

³ H.S. 161, p. 123.

⁴ SNOI, Great Yarmouth, in charge of the Auxiliary Patrol.

⁵ Captain-in-Charge, Naval Base, Lowestoft, under whom Commander Sherbrooke served.

CHAPTER V.

THE ATTACK IN THE SOUTH-WEST APPROACH,
AUGUST 1915.**41. Three Submarines start for the West of Ireland, August 3-5.**

—There was a gap of a few days in the attack on shipping in the South-west Approach after the departure of *U.28* on August 4; but other submarines were about to start for the area and their cruises proved some of the most expensive for us of the war.

The attack was continued by three boats: *U.38*, Lieutenant-Commander Valentiner, which left on August 3; *U.27*, Lieutenant-Commander Wegener, which proceeded next day; and *U.24*, Lieutenant-Commander Schneider, which left on August 5. As they passed up the North Sea they signalled their positions from time to time, enabling us to observe the general direction of the courses they were taking. Besides these three boats, two others left at about the same time for the Arctic, and two others for the Mediterranean.

When *U.38* crossed the Farn Islands-Lindesnaes line on the 5th, rather nearer to Norway than the centre of the line, she came across and set on fire two Scandinavian sailing vessels carrying timber for the United Kingdom.¹

On August 6 *U.38* was approaching the Shetlands to round Muckle Flugga, where an active submarine hunt was in progress. The signals made by her and other submarines led the Admiralty to the conclusion that five submarines were out for action either in the North Sea or on the west coast, and on August 4 they warned the Commander-in-Chief to keep a specially good look-out off the Orkneys and Shetlands from the night of August 5 onwards.²

The hunt thereupon devised employed eight destroyers with a leader and all the available gunboats and sloops. These forces were distributed along zones covering the probable tracks of the enemy boats, whether they came through Fair Island Channels or rounded Muckle Flugga; the armed trawlers of the Orkney and Shetlands area patrolled on the flanks of the faster forces to watch for and report to them the presence of a submarine or to force it to dive towards the faster vessels.³

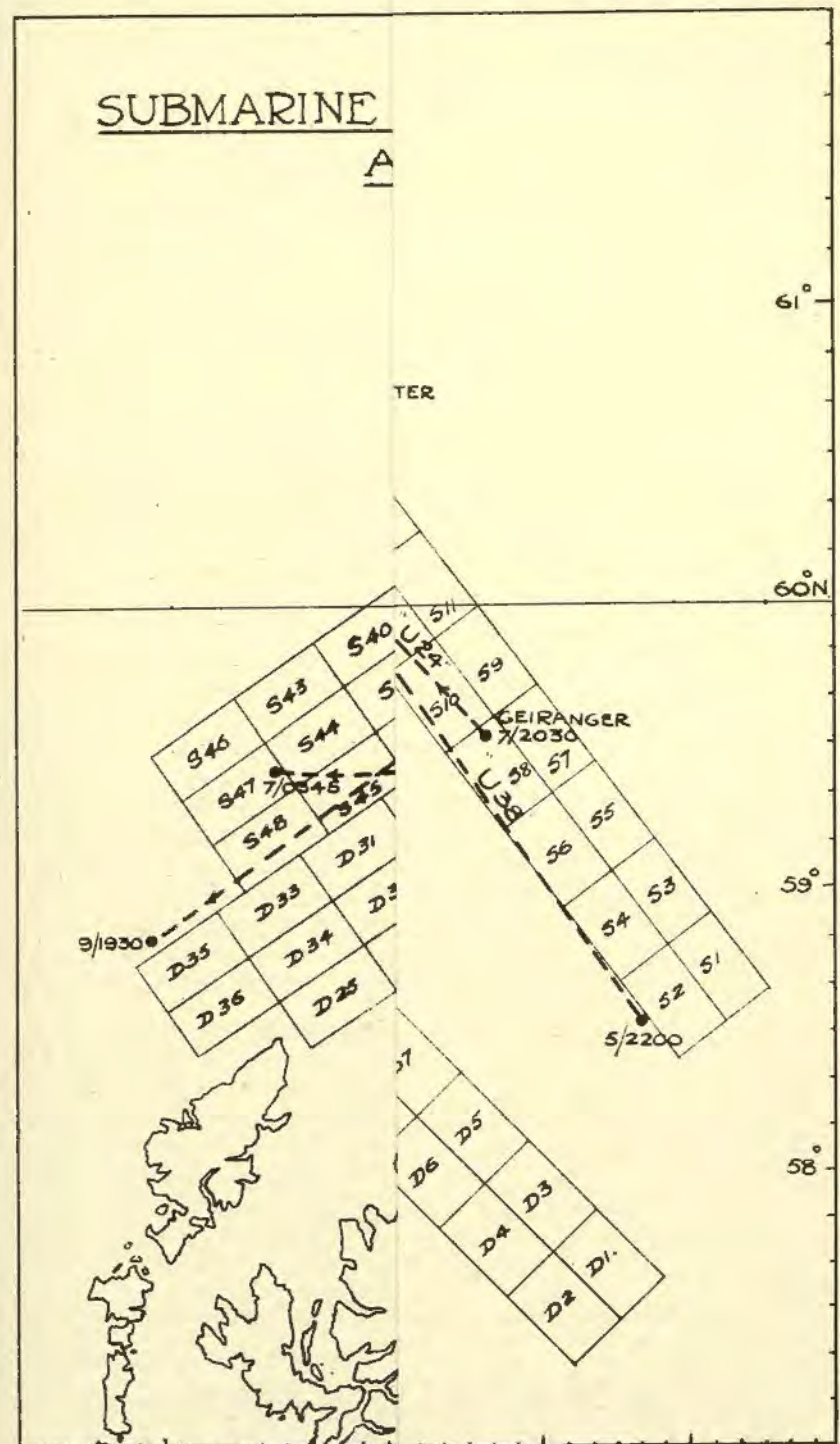
In addition to these hunting forces taking part in the operation, there were two disguised trawlers working on the Pentland-Faeroes route and a third disguised trawler to the east of Fair Island.⁴

¹ Norwegian sailing vessel *Vanadis*; Danish sailing vessel *Haus Emil*. Signal 1753/5 August, in I.D.H.S. Records.

² A. 102.

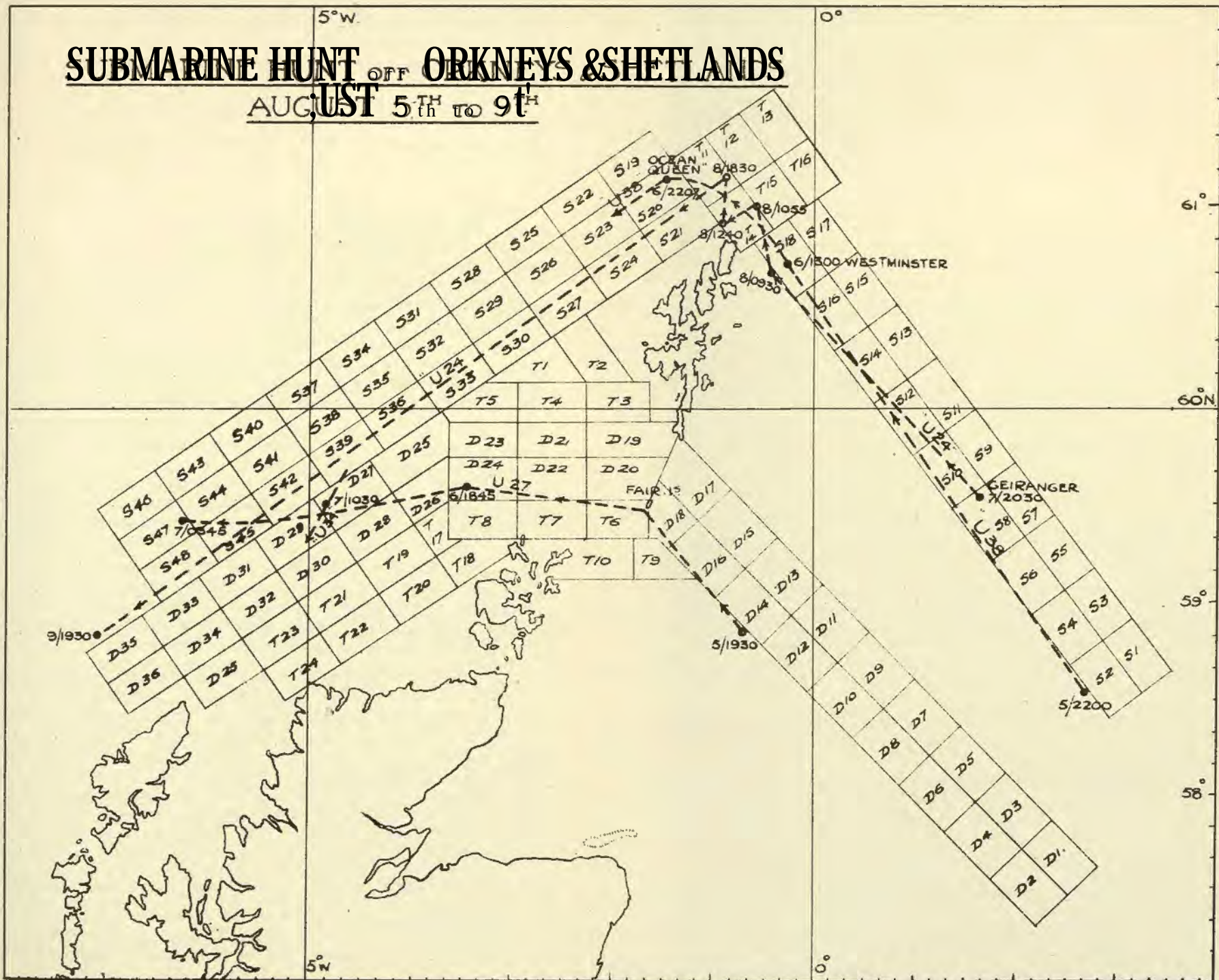
³ The orders, called "Operation P.1," are in Appendix H.

⁴ Orkneys A.P. Reports, H.S. 138, p. 255.



SUBMARINE HUNT OFF ORKNEYS & SHETLANDS

AUGUST 5TH TO 9TH



It was in this last district that *E7.38* first appeared, though not to any of the hunting craft. At 1 p.m., August 6, she fired at and stopped the fishing trawler *Westminster* about 20 miles ESE from Muckle Flugga, on the line which by the operation orders should be patrolled by the sloops. There were none near; in fact, the only vessels in sight were a Swedish sailing vessel and a Dutch steam trawler. It was to the latter that the crew of the *Westminster* pulled after their ship had been sunk by a bomb; and by her they were taken to Rotterdam. Only on their arrival in the Dutch port was it known that a submarine had been in the hunted area east of the Shetlands.¹

Rounding Muckle Flugga unseen, *E7.38* at 7 p.m., August 6, fired two shots at another trawler, the *Ocean Queen*, then fishing 23 miles N by W from Flugga Light. This again was in the hunted zone; but nothing was in sight. After the crew of the *Ocean Queen* had rowed away *E7.38* sank the vessel by gunfire, and passed on. The crew, after 14 hours rowing, reached the shore without having sighted even one of the hunting or patrol vessels.²

The hunting forces kept mostly to the westward of the Orkneys and Shetlands and were recalled in the forenoon of the 9th.³ Twice they sighted a submarine steering south-westerly, but neither was *E7.38*, which continued her voyage to the South-west Approach unmolested and unseen.

About 30 miles to the north-westward of the Butt of Lewis she stopped and released a Danish steamer on the 9th, and then steered for the north-west corner of Ireland. Several times submarines had been sighted off Eagle Island, the natural landfall to make after passing the Hebrides, and the trawlers of Blacksoed patrol area paid particular attention to this likely spot. Commander Valentiner in *E7.38* kept well out from it and was 50 miles west of Eagle Island when he came across and stopped the steam trawler *Thrush*, bound for the fishing grounds. This small vessel was sunk by gunfire at 2.30 p.m., August 9, and it was not till 4.30 a.m., August 12, 62 hours after the occurrence, that the crew in their boat were sighted by any patrol vessels.⁴

42. A Vigorous Submarine Hunt off the Fastnet, August 8 and 9.—*E7.38* continued her voyage southward keeping 30 miles from land, probably to avoid the patrols. She was really running into danger. The signals made by the German submarines at sea when decoded at the Admiralty showed clearly that two of the boats were on passage for the Mediterranean. Moreover, the information they unwittingly gave was enough for us to forecast their positions. On August 7 the Admiralty informed Admiral Bayly that these two submarines would be in 54.30, 10.30 W in

¹ *Westminster* papers titled *Foreign Office*, 11 August 1915 and 20 August 1915.

² *Ocean Queen* papers titled *Board of Trade*, 12 August 1915 (M. 42329/15).

³ G.F.N.

⁴ *Thrush* papers titled *Board of Trade*, 16 August 1915 (M. 42571/15).

the morning of the 8th, and in 51.20 off the Fastnet in the morning of the 9th; he was to hunt them with all his available forces, and these would be increased for the operation by the *Tipperary* and six destroyers from Devonport.¹

These destroyers were the *Leonidas*, *Legion*, *Laurel*, *Fury*, *Landrail* and *Liberty*. With the *Laverock* and *Louis* already at Queenstown they made eight destroyers to assist Admiral Bayly, who had the light cruiser *Adventure* and four sloops already at his base.

The sloops he placed off the west coast to cover as far out as 25 miles from shore, where they steamed 20 miles north and south. Four of the destroyers and the *Adventure*, in which Admiral Bayly himself embarked, patrolled in line abreast from the Fastnet to the southern limit of the sloops' patrol, covering a front of 20 miles. The *Tipperary* and the four remaining destroyers covered a zone 10 miles broad, extending east and west from 9.40 W to 11.30 W, with 51° N as its northern limit. This was divided into five squares, in each of which a destroyer steamed east and west at 15 knots.

The division with the *Adventure* were in position by 6 p.m., August 8, the sloops by 8.30 p.m. and the *Tipperary's* division by midnight. The patrols were maintained till 1 p.m., August 9, when Admiral Bayly sent them home. The weather had been foggy and nothing had been seen.²

The submarines he had been searching for were U.34 and U.35, which left Heligoland on August 4. The former was probably one of those sighted by the forces sent west of the Orkneys by the Commander-in-Chief's orders of August 4. She made no appearance near Ireland and was next heard of in the Mediterranean.

U.35 seems to have skirted the west coast of Ireland. She was off the Fastnet the day after Admiral Bayly had gone home. At 8 a.m., August 10, she sank the Russian sailing vessel *Baltzer* by gunfire 22 miles W½S of the Fastnet; at noon, 20 miles farther south-west, she destroyed in the same way the Norwegian sailing vessel *Morna*, whose crew observed that she was marked U.35; and at 2 p.m. the French sailing vessel *Francois* suffered the same fate, at the southern limit of the zone lately occupied by the *Tipperary* division.³ U.35 then went on to the Mediterranean.

Although Admiral Bayly's hunting flotilla had not sighted the submarines bound for the Mediterranean the Admiralty were so sure that there was danger on the route to Gibraltar that they ordered the transports carrying the Dardanelles wounded to be detained at Gibraltar till the danger was less. The order was not welcome in the Mediterranean; from Mudros came an appeal to

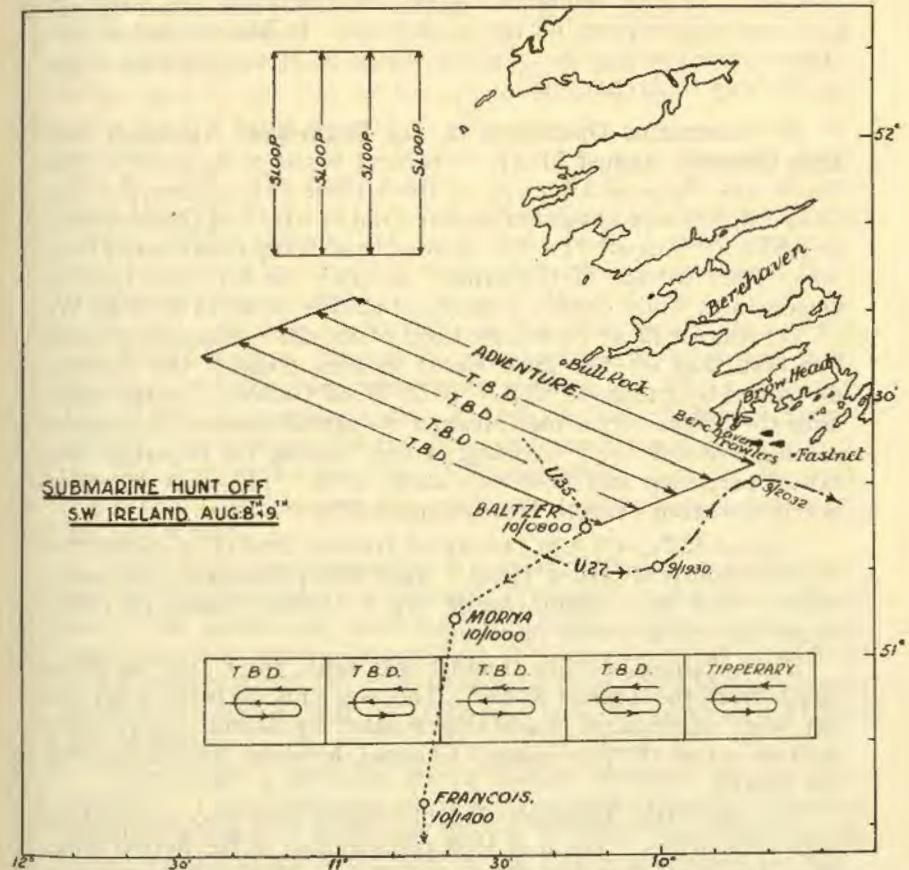
¹A. 1109, 1110.

²H.S. 1444, p. 475, and M. 06231/15 titled L. 938/15.

³H.S. 1444, pp. 901, 911, 921, 966, 989, 11010; and M. 42473, 42574/15.

hurry out more hospital ships, for the accumulation of wounded was so great that the situation was becoming acute.¹

Had Admiral Bayly remained out another 24 hours, at least three submarines would have passed through his lines, for besides the two submarines for the Mediterranean there were really three others, entering the South-west Approach: U.38 already mentioned, U.24, and U.27. The last named was sighted from Brow Head a few hours after Admiral Bayly passed there on his way back to Queenstown.² She had so far attacked no vessels, either in the North Sea or on the west coast.



By this time U.24 also was approaching Irish waters. On the way to Muckle Flugga she stopped and released several neutral vessels and late on August 7 she attacked by gunfire and caused to be abandoned the Norwegian s.s. *Gairanger*, about half-way between Fair Island and Lindesnaes. She rounded Muckle

¹Tel. 669 to S.N.O., Gibraltar, sent 2.15 p.m., August 9, and tel. from S.N.O., Mudros, recd. 11.20 p.m., August 10.

²H.S. 1444, p. 592.

Flugga on the 8th, being sighted 20 miles east of the point at 9.30 a.m., 15 miles north-east of it at 10.55 a.m., and 10 miles north of it at 12.40 p.m. At 6.30 p.m., when 17 miles north-west of it, she stopped and released the Danish steamer *Eleonora Marsk*.¹ The Commander-in-Chief's submarine hunt was still in progress; but it does not seem to have been much hindrance to *U.24*.

The submarine, having passed through the patrolled area, was next seen 30 miles north-west of the Butt of Lewis, where she stopped and released a Danish steamer at 7.30 p.m., August 9. She seems to have remained in this neighbourhood for a day or two, probably hoping, like her predecessors, to have a shot at the cruisers maintaining the blockade there or at ammunition ships on the way to Archangel.

43. Submarine Operations in the Southwest Approach and Irish Channel, August 11-17.—

The first vessel to be sunk in the South-west Approach by any of these three submarines was the *Oakwood*, destroyed by gunfire about 45 miles S by E of Queenstown, at 3.55 a.m., August 11. The crew of this steamer was saved four hours later by one of the armed yachts.² At 8.15 that night a Queenstown sloop chased a large submarine in 49.45 N, 8.40 W.

On August 12, at 7 a.m., the third of the three submarines sank her first ship off the Irish Coast in this cruise: the *Osprey*, destroyed by gunfire in 53.3 N, 10.50 W, off Galway. At the same hour the defensively armed steamer *Woodfield* observed a torpedo coming towards her; avoiding it and looking for its origin she saw a periscope and fired two shots at it. This was 10 miles north-east from Trevoise Head, Cornwall.³

On the 13th, at 9 a.m., an armed trawler fired on a submarine 20 miles south of Galley Head; what was presumably the same enemy boat was again chased by a trawler some 10 miles north-east of its former position.

That evening another steamer was sunk, the *Cairo*, 34 miles S22W from the Tuskar Rock.⁴ This was only 20 miles from the net being maintained in suitable weather by Admiral Dare's net drifters across the St. George's Channel, between the Tuskar and the Smalls.

On the 14th Auxiliary Patrol vessels had two encounters with submarines. The first took place almost in the netted area. The armed trawler *Amadavat*, at 3.45 a.m., sighted the steamer *Maxton*, late *Start Point*, which had been abandoned by her crew at the bidding of a submarine. The enemy had not yet sunk the *Maxton* and was on the surface. The *Amadavat* fired 11 rounds, and was declared by the *Maxton's* crew to have hit and sunk the submarine. Although the evidence seemed too slight to

¹ H.S. 144, p. 567.

² M. 42571/15.

³ *Osprey*: M. 42571/15. *Woodfield*: H.S. 145, p. 197.

⁴ *Cairo* papers titled *Board of Trade*, 3 September 15 (M. 43692/15).

convince either Admiral Dare or the Admiralty, the skipper of the *Amadavat* was highly commended and informed that his promptness and foresight had undoubtedly saved the *Maxton*.¹ At almost the same time as this encounter, another submarine was sighted by a schooner 8 miles west of Bardsey Island.²

Since the inception of the St. George's Channel net no submarine had yet attempted to pass through it. But its effectiveness was doubtful, for the next encounter was in the Irish Sea on the north side of the net. The steamer *City of Exeter*, armed defensively with two 4.7-in. guns aft, was off the North Arklow Light Vessel at 4 p.m. on the 14th, when she sighted a submarine to westward of her. The submarine made no attack but kept pace for an hour, when the armed yacht *Sabrina* appeared, drawn to the spot by the *City of Exeter's* wireless report. The *Sabrina* fired, but the firing seemed so wild that the *City of Exeter* felt impelled to join in and, turning her stern to the enemy, fired four rounds. Like the *Sabrina's* they fell very short. At this point the submarine dived. The incident was followed later by a German official protest that a merchant vessel, armed nominally for defence only, had fired before any attack had been made on her.³

Having passed through the net, the submarine went on northward. At 5.30 that afternoon, the *Kempensfeldt*, one of the new flotilla leaders engaged in running trials in Liverpool Bay, passed a periscope 4½ miles north-west of the Bar Lightship.⁴ This, if really a periscope, may have been that of the submarine sighted that morning off Bardsey; it cannot have been part of the one fired at by the *City of Exeter*, which kept to the west side of the Irish Channel and was twice reported on the 15th off the Isle of Man.

On the 16th she appeared at 5 a.m. off Whitehaven in Cumberland and shelled the Lowca Benzol Producing Works for half an hour; 35 shells were fired into the works, some damage was done, but there was no loss of life.⁵ This seemed to be the object of her incursion into the Irish Channel; she turned back and was sighted by various craft till at 11 a.m. she was again west of the Isle of Man.

Now began a specially severe raid on shipping in the Irish Channel. Two submarines seem to have been at work; between them on August 17 they sank 10 vessels in the area between the South Arklow Light Vessel and the St. George's Channel net line.

The tale of destruction began at 6 a.m. with the *Paros*, torpedoed after surrender. It continued with the *Repeat* at 7.15, the *Kirkby*, which tried to escape but was brought to by gunfire

¹ M. 06314/15.

² H.S. 145, p. 807.

³ The Admiralty's attempt to get at the truth is in H.S. 590, pp. 299 to 308. The *City of Exeter* stated later that the *Sabrina* ordered her to fire. (See p. 303.)

⁴ Papers titled X. 9213/15.

⁵ H.S. 145, pp. 874, 875, 891.

and torpedoed at 7.30 a.m., and the *Maggie* at 8.58 a.m. At 9.15 the *George Baker* was sunk by gunfire, some 20 miles to the south-eastward of the *Maggie*, the distance between the two positions suggesting either that they were inaccurately reported or that two submarines must be present.¹

At 11.50 the British steamer *Matje*, a Government collier, was fired on and surrendered, her crew abandoning ship. Before the submarine could sink the collier an ordinary fishing trawler, the *Majestic*, attempted to ram the submarine, which dived and for a time was not seen. About half an hour later the armed yacht *Bacchante II* came up, the submarine reappeared, but, possibly unwilling to meet the yacht's guns, dived and was not seen again by the *Matje*. The question of giving some award to the fishing boat was raised; £200 was granted, but it seems that for some technical reason it was not actually paid.²

The site of the sinkings continued moving steadily southward. At 3 p.m. gunfire from a submarine brought to the *Thornfield* which was speedily sunk; and at 4.15 the *Glenby*, an Admiralty collier from Cardiff for Archangel, suffered the same fate about 10 miles east of the Tuskar. At 5 p.m. another Admiralty collier, the *Queen*, was sunk by gunfire; in this case, as in some others, the submarine asked the men in the boat for the name of their ship, which she had not troubled to ascertain before sinking her. At 6 p.m. a Spaniard, the *Isidoro*, was destroyed by gunfire, the submarine seeming in no hurry about the process although only about 10 miles from the Tuskar-Small's net patrol line.³

The last ship to suffer on this day was the *Bonny*, sunk at 7.4 p.m. midway between the Small's and Tuskar. Although on the actual line of the net barrage the crew were not found by any patrol vessel till 4 the following morning. Until a short time before she was attacked, the *Bonny*, which was on passage from Marseilles for Liverpool, had been escorted by a trawler. This trawler heard firing, and proceeding in the direction from which it came sighted a submarine submerging among some wreckage, evidently that of the *Bonny*. She opened fire at once, but the light was very bad, and the enemy disappeared uninjured.⁴

No further submarine operations took place in the Irish Channel during August. Having a second time passed through the barrage, which, since there was a smooth sea and a light northerly wind,⁵ was presumably in place, the enemy boat or boats which had been operating in the Irish Channel made across to the coast of Cornwall.

¹ *Paros* papers, M. 42662/15; *Repeat*, Cap A. 30/15 and M. 42814/15; *Kirkby*, M. 42881/15; *Maggie*, M. 42727/15; *George Baker*, M. 42813/15.

² M. 42929/15 and M. 06473/15.

³ *Thornfield* papers, M. 42814/15; *Glenby*, M. 42727, 42732/15; *The Queen*, M. 42727, 42786/15; *Isidoro*, X. 4499/15; *Bonny*, M. 42814, 06473/15.

⁴ Milford A.P. Reports, H.S. 590, p. 317.

⁵ Deposition of Master of *Bonny*, M. 42814/15.

About noon on the 18th the armed trawler *Spider*, of Milford Auxiliary Patrol, in 51.10 N, 6.13 W, sighted a submarine, gave chase and opened fire, the gunner claiming three hits on the enemy's conning tower before she submerged. The *Spider* then observed a large steamer, stopped and with its crews in the boats and found her to be the *City of Liverpool* on Government service, returning from Calais to Manchester. The crew returned to her and she continued her voyage. At the Admiralty it was recognised that the *Spider* had undoubtedly saved the *City of Liverpool*, and from the evidence, including the fact that no further attack was made while the transport was stopped and presenting an easy target, judged that the submarine had been injured if not sunk.¹ A few hours later, however, a defensively armed ship, the *Lady Wolseley*, was fired on in the same locality but drove off the submarine by her own gunfire. It was seen still in the same district—52° N, 5.40 W,—at 7 p.m. by the steamer *Deseado*.² From there it presumably proceeded towards Trevose Head, where at 10 and 11.30 p.m. the Norwegian steamers *Svernesborg* and *Magda* were torpedoed, without warning.³

Meanwhile, a different submarine had been engaged by the armed trawler *Rodney* off the coast of Cork, at 5 p.m. The trawler claimed to have put four rounds into the enemy; but the Captain of Patrols was not satisfied that the submarine was actually sunk.⁴

44. "U.24" Torpedoes the Liner "Arabic," August 19.—The submarine fired on by the *City of Exeter* in the Irish Sea on the 14th was U.24, Lieutenant-Commander Schneider.⁵ He was now nearing the conclusion of his cruise. After passing through the St. George's Channel netted area he came westward and was about 60 miles south of Queenstown at 6 a.m. on the 19th. There he sighted the steamer *Dunsley* and fired a shot to make her heave to. Her master refused to surrender and endeavoured to escape till the submarine, which had closed to a range equal to the ship's length distance, blew half the bridge away and killed two men, wounding six others. He then stopped his ship and abandoned it with his crew and the wounded men. The *Dunsley* did not sink at once; she was still afloat, though down by the head, when at 9 a.m. she was passed by the White Star liner *Anablic*, bound for New York with 181 passengers in addition to her crew of 248 hands.

While the *Dunsley* was still in sight, the master of the *Anablic* suddenly observed the wake of a torpedo about to strike the starboard side of his ship. He had no time to avoid it; the torpedo exploded and the *Anablic* began to settle by the stern. In 10 minutes she was gone. By good management and discipline

¹ Milford A.P. Reports, H.S. 590.

² H.S. 146, p. 496.

³ H.S. 146, pp. 647, 705.

⁴ Queenstown A.P. Reports, H.S. 593, p. 71.

⁵ *Nordsee*, IV, p. 279, and "German Note to America," given in papers titled *Board of Trade*, 24 August 1915 (M. 42850/15, etc.).

226 of the crew and 163 passengers were saved by the liner's own boats ; after sailing 5 miles they were rescued by two patrol vessels. No one on board the *Arabic* had seen anything of the submarine except the lookout man who thought he saw a periscope; and even had the enemy been awash, the *Arabic*, which was totally unarmed, could have done nothing to defend herself.¹

After torpedoing the *Arabic*, Lieutenant-Commander Schneider continued westward. At 2.30 p.m. he destroyed the sailing vessel *St. Olaf*, and half an hour later called on the steamer *New York City* to stop. This ship's master also refused to give in. He endured the submarine's fire for an hour and a half when, fearing that his boats would be destroyed, he stopped and lowered them. All the crew of this ship were saved.²

This was the last vessel sunk by *U.24* in the South-west Approach. Lieutenant-Commander Schneider passed the Fastnet in the afternoon of the 20th, and next day, not far from Eagle Island, was engaged by the armed yacht *Zarefah*, of Galway Bay Auxiliary Patrol.³

In the North Sea he captured a Norwegian steamer with iron ore and took her as prize into List, reporting on the way that he had accomplished his special undertaking,⁴ doubtless the bombardment of the Lowca Works near Whitehaven.

45. Destruction of "U.27" by "Baralong," August 19.—At the time of the torpedoing of the *Arabic*, an event which proved to be of considerable importance in the submarine campaign of 1915 took place. *U.27*, Lieutenant-Commander Wegener, was engaged in sinking ships some 30 miles to the eastward. At 9.20 a.m. on the 19th he fired on the steamer *Gladiator*. She stopped ; but, according to her master, "the submarine did not cease firing whilst the crew were abandoning the ship ; she continued to fire until the vessel began to settle down by the head."⁵ About sunset the boats were met by two patrol vessels and the crews were taken into Milford.

Shortly after destroying the *Gladiator* the submarine gave chase to the steamer *Howth Head*, but this one escaped.⁶ At 1 p.m. she sank the Admiralty collier *Ben Vrackie* by gunfire.⁷ All these ships had been following the mid-channel route prescribed ; and the submarine kept her station half-way between Ireland and Cornwall waiting for more defenceless prey.

This appeared in the form of the mule transport *Nicosian*, bound for Avonmouth. Lieutenant-Commander Wegener fired on her and forced her to stop, though not before she had sent

¹ Dunsley and *Arabic* papers titled *Board of Trade*, 24 August 1915 (M. 43064, etc.).

² *St. Olaf* papers, M. 45533/15 ; *New York City*, M. 43339/15.

³ H.S. 146, p. 1236.

⁴ Signal 0730/25 August, in I.D.H.S. Records.

⁵ Deposition of master of *Gladiator* (M. 43213/15).

⁶ H.S. 146, p. 665.

⁷ M. 43188/15.

out a wireless call for assistance. This was taken in by the stations round and Admiral Bayly at Queenstown immediately proceeded in the *Adventure* for the spot reported by the *Nicosian* as 50.22 N, 8.12 W, nearly 100 miles from Queenstown.¹

A more speedy help was approaching the damaged mule ship : in fact it was already in sight. The armed decoy *Baralong*, Lieutenant-Commander Godfrey Herbert, R.N., had been cruising in the Channel since April in the hope of meeting a submarine. She had covered 12,000 miles and had not yet met one ; but now she was at hand. She took in the *Nicosian's* SOS call. It was unnecessary, for Lieutenant-Commander Herbert had already seen that the mule ship was in difficulties and was on the point of coming up to assist her. Soon he sighted the submarine on the far side of the *Nicosian* and waited his moment. It came when the enemy passed behind the mule ship and was for a little time unable to see the *Baralong*. Lieutenant-Commander Herbert seized the chance. He was within effective range. Striking the neutral colours his ship was wearing, he hoisted the white ensign and trained two guns just in front of the *Nicosian's* bows ready for the next appearance of the submarine. As it emerged it was greeted with 34 shell and a heavy rifle fire, and in a minute the submarine heeled over and disappeared. While Lieutenant-Commander Herbert was speaking the *Nicosian's* boats he observed some Germans swarming up the ropes ends and pilot ladder which had been left hanging down from the *Nicosian*. Fearing they might scuttle or set fire to the transport, whose safe arrival with her mules was a matter of military importance, he ordered the Germans to be shot away. Some half dozen refused to let go, scrambled on board and disappeared down below. As soon as possible he placed a party of Marines on board, warning them to be careful of snipers since the Germans might have seized some rifles which had been left in the *Nicosian's* chart house. The Marines made a thorough search and, taking no risks, shot at sight, till of the submarine's crew there was no survivor.²

It was not known at the time that the submarine destroyed was *U.27*, since no number had been seen on her by any of the ships she had destroyed, all of which she had attacked and sunk at long range. The *Nicosian*, though badly damaged, did not sink ; she was taken in tow by the *Baralong* and eventually reached port.

Lieutenant-Commander Herbert, following on his success and in view of his experience, suggested to the Admiralty that decoy ships should in general be armed on similar lines to the *Baralong* ; since April she had frequently lain at anchor in Falmouth close to

¹ H.S. 146, pp. 650, 664, 692, 696.

² Lieut.-Commander Herbert's report is in Appendix N. Other papers dealing with this episode and the German protests that followed it are in H.S. 385, H.M.S. *Baralong*. For the destruction of *U.27* the D.S.O. was awarded to Lieut.-Commander Herbert, the D.S.C. to another officer, and three D.S.M.s. to members of the crew.

foreign merchantmen and had never been suspected by them of carrying guns, whereas, in the case of the *Lyons* and *Princess Ena* anyone alongside could see what they were. He made other suggestions on points of detail with which the Admiralty were in general agreement. The *Princess Ena* belonged to the London and South Western Railway and had been built to run as a fruit steamer between the Channel Islands and Southampton. It was recognised that if found anywhere else except on railway steamer routes she would be suspected by submarines, especially since she had already revealed her decoy character by firing on one; accordingly she was paid off. The *Lyons*, also, was handicapped by her appearance for work in the South-west Approach; she, too, was paid off.¹

46. The Conclusion of U.38's Cruise. There was still one of the three submarines in the South-west Approach: *U.38*, which on the 18th had torpedoed without warning the two unfortunate Norwegian ships off Trevoese Head. In the early hours of August 19 she torpedoed a third neutral steamer, the Spanish *Pená Castillo*, killing in the darkness all except three of her crew of 26. These three were picked up by a passing steamer.²

At 7 a.m. she stopped by gunfire and then torpedoed the *Restormel*, a steamer on Admiralty charter with a cargo of iron, 28 miles NNW of Bishop Rock; at 9 a.m. the *Baron Erskine*, from Avonmouth to New Orleans, was stopped by her in the same neighbourhood. The armed yacht *Rovenska* happened to be near and, hearing the firing, came up, to find the *Baron Erskine* still afloat with the submarine astern of her. The yacht opened fire; but her shots fell so short that the submarine, disregarding them, sent a torpedo into the *Baron Erskine*, and then, seeing that ship's fate was settled, reopened fire at the *Restormel* which had not yet sunk. The *Rovenska* continued firing but never quite reached the submarine, which made off and submerged as soon as the *Restormel* began to sink.³

Lieutenant-Commander Valentiner in *U.38* was on his way to change the scene of his attack to that rich field in mid-channel where merchant ships were plentiful and patrol vessels rare. It is possible that his object was not these only, for on August 13 Norddeich had made a wireless signal conveying to all ships at sea the information that troop transports would be sailing from Plymouth within the next few days.⁴ We do not know whether Lieutenant-Commander Valentiner took in this intelligence; at any rate, he deferred acting upon it for a week. On the way he sank by gunfire a sugar ship from Java, the *British Samaras*, 35 miles west of the Bishops, at 2.30 p.m.; and then in the mouth

¹ M. 06491/15: *Remarks on the Anti-Submarine Campaign.*

² *Pená Castillo* papers, (M. 42963/163).

³ M. 43024/15 and H.S. 592, pp. 361, 362.

⁴ Signal Norddeich 98 of August 13, in I.D.H.S. Records.

of the Channel, midway between the Scillies and Ushant, he proceeded to sink ships as fast as he could.

On the 20th he destroyed the British steamers *Bittern*, *Martha Edmunds*, and *Carterswell*,¹ the Belgian steamer *Dughesdan*; and chased the Norwegian s.s. *Mars*, which, though fired on, ran away and eventually escaped.

Next day the laden colliers *Windsor* and *Cober* were destroyed, the latter being torpedoed at 1.20 p.m. in full view of a Dutch steamer which rescued the crew.² At 3.30 Lieutenant-Commander Valentiner gave chase to an Italian, but desisted in a few minutes in favour of the big oil tank steamer *San Melito*. This fast sent out an S O S signal which was taken in by the armed yacht *Rovenska*. On the appearance of this yacht some 20 minutes later the submarine dived and the *San Melito* was saved, though not before her deck had been holed.³

U.38 at this point commenced her return journey, but before leaving the mouth of the Channel Lieutenant-Commander Valentiner achieved some notoriety. He came upon the steamer *Ruel* about 5.30 and commenced to fire upon her. Her master, Mr. Henry Story, turned his vessel's stern to the enemy and began to run off. After an hour and a half's chase a shot went through her stern and another burst over the bridge. Mr. Story then stopped and gave orders to abandon ship. Lieutenant-Commander Valentiner's patience seems to have been tried too high by the behaviour of the *Ruel*. After putting six shots into her and seeing that she was sinking he turned his attention to the men in the boats, attacking them with shrapnel and rifles and even, according to one witness, firing his revolver at them. As a result, the steward was killed and the courageous Captain Story and six men were wounded. This was the first case of a submarine commander actually firing on the men of a steamer after they had abandoned her.⁴ Leaving the sinking *Ruel*, *U.38* gave chase to and fired at the *Westbury*, a collier bound for Genoa; but at this juncture an armed trawler and an armed drifter came up and fired upon *U.38*, which dived and went off.

Next morning, August 22, *U.38* attacked the *Palmgrove*, 56 miles west of the Scillies, and seeing that she would sink, made for another vessel, the *Clan Leslie*. This vessel carried a gun astern; and Lieutenant-Commander Valentiner soon abandoned the chase in favour of another ship, the *Diomed*, which, however, shook him off. He then returned to the men of the *Palmgrove*, which had sunk, and, asking the ship's name and destination, cleared off to westward after the *Diomed*. An hour later the *Clan Leslie* returned and picked them up.

At 11.45 the submarine opened fire on the *Diomed* but did not hit her till 1.45 p.m. In a short time the captain, quartermaster,

¹ M. 422360/155.

³ H.S. 590, pp. 362.

² M. 429183, 43024, 43045/155.

⁴ Papers filed B. 1062/155, N. 931/155.

and steward were killed and the chief officer seriously wounded. Seeing there was no help (the position was 1100 miles south of Queenstown), the *Diomed* stopped and the crew began to abandon her. Two of the boats had been smashed by the submarine's fire and one of the two others was holed. The sound boat held 34 men; the remainder clung to the damaged boat which had capsized as soon as she got into the water. Lieutenant-Commander Valentiner rendered no assistance; he looked at the men in the water and shook his fist at the mate, growling some words in German, and then made off. At 6 p.m. a sloop met the master's boat and went on to pick up the survivors clinging to the capsized boat. Of the *Diomed's* crew three were killed by gunfire and ten were drowned.¹

On the 23rd U.38 rounded the Fastnet 40 to 50 miles from shore. She sank two more vessels that day—the *Trafalgar* and the *Silvia*—both of which were blown up by bombs after they had surrendered to gunfire. Both were on Admiralty charter, the former with nitrates and the latter with oil fuel for Queenstown.² These were the last ships sunk in the South-west Approach during August.

U.38 was not sighted again by us on this voyage. In the evening of the 27th she reported herself off Norway, Lieutenant-Commander Valentiner adding, "Have sunk three sailing vessels, five trawlers, 22 merchant ships; total registered tonnage, 75,000."³ He arrived at Heligoland on the 29th. His voyage had resulted in the greatest destruction of tonnage by any submarine during a single cruise in Home Waters throughout the whole war, and showed clearly the value of the gun as a weapon for the submarine attack on commerce under the conditions of low visibility prevailing in the waters round the British Isles.⁴

47. The Climax of the First Submarine Campaign. August 1915 was the month of the greatest number of sinkings by submarine action of the whole of the first submarine campaign of 1915, and it was not till 1917 that so many ships were sunk in any one month. Most of them were destroyed in the South-west Approach, which only the best submarines could reach and where there were no distractions such as the possibility of attack on men-of-war.

Four submarines operated in that area during August. At present it is not possible to say for certain in all cases which of these submarines was the one concerned, but the allocation for

sinkings and encounters arrived at after consideration of all the evidence available is as follows:—

Sinkings and Encounters in the South-west Approaches, August 1915.

Date.	Ship.	Submarine.	Area.
1st ..	<i>Climonia</i> <i>Ben Vorlich</i> <i>Ranza</i> <i>Koophandel</i> (Belgian)	U.28 ..	Falmouth.
2nd ..	<i>Portra</i>	.. ..	.. ..
3rd ..	<i>Costello</i>	.. ..	Milford.
4th ..	<i>Midiana Queen</i>	.. ..	Queenstown.
9th ..	<i>Thrush</i>	U.38 ..	Killybegs.
10th ..	<i>Baltzer</i> (Russian) <i>Morna</i> (Norwegian) <i>François</i> (French)	C.33	Queenstown.
11th ..	<i>Oakwood</i>	U.27 ..	Milford.
12th ..	<i>Woodfield</i> <i>Osprey</i>	U.38 .. U.24 ..	Galway Bay. Milford
13th ..	<i>Cairo</i>	U.38 ..	.. ..
14th ..	<i>Amadavat</i> (encounter) <i>Kempenfeldt</i> (encounter)	.. .. .. .. U.38 ..	.. .. .. .. Liverpool.
16th ..	<i>Whitehaven</i> (bombardeed)	U.24 ..	Holyhead.
17th ..	<i>Maggie</i> <i>Matie</i> (rescued) <i>The Queen</i> <i>Pavos</i> <i>Repeat</i> <i>Kimby</i> <i>George Baker</i> <i>Thornfield</i> <i>Glenby</i> <i>Isaburo</i> (Spanish) <i>Bonny</i>	.. .. .. .. .. .. !! U.38 !! U.27 .. U.24 ..	.. .... .... .... .... .... .... .... .... .... .... ..
18th ..	<i>Lady Wolseley</i> (encounter) <i>Rothley</i> (encounter) <i>Spider</i> (encounter) <i>Sverresborg</i> (Norwegian) <i>Magda</i> (Norwegian)	.. .. .. .. U.27 U.38 .. .. .. .. ..	.. .. .. .. Queenstown. Milford.
19th ..	<i>Pena Castillo</i> (Spanish) <i>Restonnet</i> <i>Baron Erskine</i> <i>Rovenska</i> (encounter) <i>Samara</i> <i>Gladiator</i> <i>Ben Vrekkie</i> Sunk by <i>Baralong</i> <i>Danstes</i> <i>Arabie</i> <i>Sgt. Oliff</i> <i>New York City</i>	.. U.24 .. .. .. .. .. .. .. .. .. .. ..	.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. Queenstown.

¹ *Diomed* papers, titled *Board of Trade*, 26 August 1915 (M. 48213155, etc.).

² M. 43578, 43247, 43289, 155.

³ Signals 2100/27 August and 0800/28 August, in I.D.H.Ss.

⁴ Gayer, H.J., p. 44.

⁵ June 1925.

Date.	Ship.	Submarine.	Area.
20th..	<i>Bittern</i>	U.38	Falmouth.
	<i>Martha Edmunds</i>	" " " "	" "
	<i>Carterswell</i>	" " " "	" "
	<i>Daghestan</i> (Belgian)	" " " "	" "
21st ..	<i>Cober</i>	" " " "	" "
	<i>San Melito</i>	" " " "	" "
	(rescued)	" " " "	" "
	<i>Ruel</i>	" " " "	Milford.
	<i>Zarefah</i>	U.24	Galway Bay.
	(encounter)	" " " "	" "
22nd	<i>Palmgrove</i>	U.38	Milford.
	<i>Diomed</i>	" " " "	" "
23rd..	<i>Trafalgar</i>	" " " "	Queenstown.
	<i>Silvia</i>	" " " "	" "

The St. George's Channel net, from which much had been hoped, failed entirely to prevent the passage northward of U.24 and U.38 in the small hours of August 14, and again as they passed southward late on August 17.

The Auxiliary Patrol in the South-west Approach, on which rested the defence of merchant vessels against submarines in that section of Home Waters, had been for some time complete, the numbers on August 19 being—¹

Liverpool : 1 yacht, 12 trawlers, 12 net drifters.
 Larne (Area XVII) : 2 yachts, 13 trawlers, 103 net drifters.
 Lough Swilly (Area XVIII) : 3 yachts, 18 trawlers, 6 net drifters.
 Killybegs (Area XIX) : 1 yacht, 6 trawlers.
 Galway Bay (Area XX) : 1 yacht, 6 trawlers.
 Queenstown (Area XXI) : 4 yachts, 24 trawlers, 8 net drifters.
 Holyhead (Area XXII) : 3 yachts, 18 trawlers, 12 net drifters.
 Falmouth (Area XIV) : 4 yachts, 63 trawlers, 86 net drifters.
 Bristol Channel : 6 trawlers.
 Kingstown (Area XVI) : 3 yachts, 18 trawlers, 12 net drifters.
 Milford (Area XV) : 9 yachts, 36 trawlers, 98 net drifters.

Besides these—a total of 31 armed yachts, 220 armed trawlers, 337 net drifters—there was the 1st Sloop Flotilla² under Admiral Bayly, and his own light cruiser *Adventure*; while based at Devonport were half of the 3rd Destroyer Flotilla constantly passing along the home ends of the routes used by ships and occasionally available for hunting submarines. One of the objects of the appointment of Admiral Bayly to the command at Queenstown with the whole of the South-west Approach under his control had been to secure an active and co-ordinated effort for the destruction of submarines and the protection of merchant vessels. The vastly increased rate of the destruction of merchant vessels and the penetration of possibly two submarines into the Irish Channel which followed so soon on the new arrangement cannot have been expected by the Admiralty. In the case of the

¹ From *Positions and Movements of Armed Yachts, etc.*, dated 20 August 1915.

² Under this heading are included armed trawlers and armed drifters for patrol purposes.

³ *Primrose* (Senior Officer), *Iris*, *Lavender*, *Lily*, *Magnolia*, *Sunflower*, *Veronica*, *Laburnum*.

raid on the Lowestoft fishing smacks in July they had sent an officer from the Staff specially to inquire into the matter; but no officer was sent to the South-west Approach.

Admiral Bayly, seeing the number of valuable ships being lost in the waters under his charge, sent in a memorandum in which he examined the two alternative methods of dispersing the merchant vessels and concentrating them on a protected route. In this open and stormy area, dispersal seemed the better of the two schemes, though neither was satisfactory. He pointed out that to make his waters reasonably safe he required 18 to 24 sloops, 12 destroyers and 6 armed disguised merchant ships; also the extinction of the lights on important landfalls. But a better method of dealing with the submarine menace than either dispersal or protection was, in his opinion, that the exits of the submarines should be blocked, though he fully recognised that this was a very difficult operation which had failed in the Spanish-American and Russo-Japanese wars.

The Admiralty had already decided to put the *Banalong*, as well as two similar decoy ships in preparation, under his orders.¹ As regards the other reinforcements he asked for, the pressure on naval resources caused by the increase of the number of troops operating abroad, in the munition ships coming from America or going from England to Archangel, and by the numerous other claims on the services of small armed craft was such that it was practicable to furnish protection for only the most important interests; but it was intended to add to his forces as soon as vessels under construction were delivered. No reasonably hopeful suggestion for blocking the exits of submarines on the German coast short of extensive combined naval and military operations had yet been received, and the Admiralty asked him, should he have any proposals, to put them forward.²

In Admiral Dare's account of the proceedings of the Auxiliary Patrol in the Milford area for the crucial week August 14-21 he was able to report that his vessels had twice fired on submarines and twice given chase to them without firing. His report was minuted "the Auxiliary Patrol vessels are doing good work in this area,"³ from which it would appear that the Admiralty were satisfied.

¹ Tel. 934 to V.A., Queenstown, 24.8.15.

² Admiral Bayly's Memorandum and Admiralty reply are in M. 06566/15.

³ Minute on p. 328 of H.S. 590, Milford A.P. Reports.

CHAPTER VI.

THE CLIMAX AND END OF THE *U.B.* CAMPAIGN,
AUGUST AND SEPTEMBER 1915.

48. "U.B. Operations off the Norfolk Coast." The operations of the Flanders flotilla are peculiarly difficult to unravel because the boats, being without defence, rarely allowed themselves to be seen on the surface; and even if they were observed they generally wore a false number. Further, they made few wireless messages, and those signals intercepted are of little assistance in identifying boats. No attempt, therefore, will be made here to allot to individual submarines the various events of the month, unless such allocation is justified by some particularly good evidence.

At 9 a.m., August 1, the steamer *Fulgens* was blown up 3 miles ESE from Haisborough Light Vessel. No submarine was seen by her, but the wake of an approaching torpedo was sighted too late for it to be avoided.¹ The position was in an important part of the swept channel, at the junction of the East Coast and Haisborough Channels frequently used by submarines or Commodore (T) on his way to and from the North Sea. Thinking it not impossible that the *Fulgens* had been mined, the Admiralty ordered the Grimsby paddle-sweepers to make a close sweep of the area between the lines from Haisborough and Would Light Vessels to shore. They found nothing;² and the conclusion was that the *Fulgens* had been torpedoed by one of the *U.B.* boats.

As soon as the Senior Naval Officer, Lowestoft, received news of the loss of the *Fulgens* in his area he sent five drifters to shoot their nets in the vicinity of Haisborough Light Vessel. The weather was bad and difficulty was experienced in keeping the nets in position in the rough sea, but they remained till August 3.³

A more active step was taken by the Admiralty in ordering a division of the Harwich destroyers to be employed in submarine hunting between Yarmouth and the Thames, while another division was occasionally to go over towards the North Hinder and the Hook of Holland.⁴ In accordance with these orders two destroyers of the division detailed for the Yarmouth hunt made a round *via* the Shipwash, Orfordness, Yarmouth, Inner Gabbard, Galloper, Kentish Knock, Longsand and Sunk, the remaining pair of destroyers of the division to make the round the opposite way. As the Shipwash was known to be mined, they were warned not to approach it within 1½ miles. The other division for the hunt to the Dutch coast spread 2 miles apart and swept to the eastward

¹ *Fulgens* papers (M. 42254/15).

² H.S. 143, pp. 74, 213, 379.

³ Lowestoft A.P. Reports, H.S. 161 p. 129.

⁴ A. 98.

along the channel between the minefields as far as the Schouwen Bank. These two divisions left Harwich at 9 a.m., August 2, and returned that night with nothing to report. The Yarmouth Patrol was continued daily as a matter of routine till the middle of August; the North Hinder-Schouwen Patrol was also carried out at fairly frequent intervals.¹

Meanwhile, the *U.B.* boats continued their attacks on fishing vessels. Two smacks, the *Lark* and the *Allert*, were sunk in the afternoon of August 1, only 10 miles north-east of Yarmouth.² This was before the destroyer patrol had commenced.

Two more smacks, the *Challenger* and *Heliotrope*, were sunk by a *U.B.* boat on August 4 not far from Smith's Knoll Buoy. In this case the submarine fired a rifle, apparently the only deck weapon she carried, to indicate to the crews that they must leave their ships. She then sank the smacks by bombs.³

49. **Raid on the Smith's Knoll Fishing Fleet, August 6 and 8.**—The Lowestoft fishing smacks had to endure further attacks by the *U.B.* boats. On August 6 five⁴ were sunk between 12 and 20 miles north-east of Smith's Knoll Pillar Buoy. In the case of two of these one of the Lowestoft armed trawlers saved the crews and also, it would appear, prevented the submarine from attacking a Norwegian steamer. The crews of the other sunken smacks were picked up by the *Finedrake*, which had gone out to meet a homeward bound British submarine.⁵

Four "M" class destroyers were out that day making the round trip from the Thames to Yarmouth. Their itinerary did not take them so far as Smith's Knoll and they were of no assistance to the fishing smacks.⁶

Another of these unprotected craft was sunk on the 8th by a *U.B.* boat, in the customary area 10 miles north-east of Smith's Knoll.⁷

50. **Doubtful Destruction of a Submarine, August 7.**—On August 7 eight Harwich destroyers went out for the patrol, four "M" class between Harwich and the Hinder and four "L" class from the Longsand to Yarmouth. As the latter passed Aldborough Napes a trawler signalled at 9.40 a.m. that she had just seen a submarine dive. The four destroyers began to carry out a sweep over the spot, being joined by the four "M" class and by another destroyer sent up from Harwich by Commodore (T). The sweep produced no results, and at 11.40 the destroyers resumed their patrol. Scarcely had they done so when a drifter reported a

¹ Comm. (T)'s Diary.

² M. 42962/15 and H.S. 143, p. 974.

³ M. 42057/15 and H.S. 143, p. 963.

⁴ *Hesperus, Fisherman, C.E.S., Ivan, Xmas Rose.* Papers M. 42134, 42352/15.

⁵ H.S. 143, pp. 1184, 1233; H.S. 144, p. 79.

⁶ Comm. (T)'s Diary.

⁷ *Anbor Vitae.* Papers M. 42329/15.

submarine in her nets about 4 miles east of the Sunk Light Vessel. The trawler *Daisy* exploded a sweep over the supposed submarine, and the four "M" class came up and searched the vicinity. Neither the explosion nor the search revealed any positive evidence of the presence of a submarine; nor did another sweep exploded over the same spot. Minesweepers also failed to find any obstruction.¹

The four "L" class destroyers had started to join the others in sweeping for the submarine near the Sunk Light Vessel, but were soon recalled to deal with another submarine to the northward. The trawler *Jay* saw it submerging 4 miles east of Aldborough Napes and exploded a sweep over it. The destroyers swept in all directions from the spot and later exploded a sweep of their own over it. In this case there was also no evidence that a submarine had been destroyed, and although net drifters operated all round Aldborough Napes for several days they found nothing.²

51. Another "U.B." Raid, August 10 and 11.—At 6 p.m. on August 10 the steamer *Rosalie* was torpedoed off Blakeney; she did not sink and was beached near Sheringham. The assailant had fired two torpedoes³ and then made off in the direction of Haisborough. That night she destroyed seven smacks⁴ by bombs within 7 miles to the north-eastward of Haisborough Light Vessel. This was not known ashore till 9.40 a.m., August 11,⁵ by which time the submarine, presumably *U.B. 10*, was well away after sinking another smack, *Ocean's Gift*, 26 miles north-east of the Newarp Light Vessel.⁶ Only one of the fishermen had observed any number on the submarine and he could not remember it.

Another of these *U.B.* boats sank the smack *Humphrey* off Smith's Knoll at 4.30 a.m., August 11, and at 1.30 p.m. came up and fired a rifle at the smack *Leader*, fishing on the same grounds. The submarine went alongside the smack, ordered the crew into their boat, and then exploded a bomb on board.⁷ This made the fortieth smack to be destroyed since July 1; in them the *U.B.* boats had found their easiest and most defenceless prey.

Another smack was in sight. Towards it the submarine proceeded, to find that here at last was something which could sting.

52. The First Action between an Armed Smack and a Submarine, August 11.—The absolute impunity with which the weak little *U.B.* boats held up and destroyed the Lowestoft smacks was, in some sense, due to the arrangements made by

¹ Lowestoft and Harwich A.P. Reports; Comm. (T)'s Diary; H.S. 144, pp. 81, 87, 100, 171, 189.

² Lowestoft A.P. Reports; Comm. (T)'s Diary; H.S. 144, pp. 89, 161.

³ *Rosalie* papers, M. 42677/15.

⁴ *Young Admiral, Trevear, Welcome, Palm, Illustrious, George Crabbe, George Borrow.* Papers M. 42352/15.

⁵ H.S. 144, p. 913.

⁶ Papers M. 42414/15.

⁷ *Humphrey*, M. 42653, 42865/15. *Leader*, M. 42414/15.

Captain Ellison, commanding in the Yarmouth Area, for the disposition of the Auxiliary Patrol Units at his disposal. It seemed to him useless to send armed trawlers out to pretend to be fishing among the rest of the fishing craft, as was the custom in the Humber and Tyne Commands, for the neighbourhood of Smith's Knoll was frequented only by sailing smacks among which a steam trawler, even if her armament could be effectively hidden, would merely attract attention and be avoided. Distant patrols by trawlers seemed to him of little value. "As regards the patrol trawlers," he wrote,¹ "I have now concentrated them all for the protection of the War Channel, and am no longer sending the far eastern patrols out, or patrols in the vicinity of the North Hinder Light Vessel, as, owing to their slow speed, and the necessity for them to remain in company in the event of an attack by torpedo boats or destroyers, they have little chance of successfully attacking a submarine which, in these vicinities, would probably be on passage."

But Captain Ellison had no intention of allowing the submarines a perfectly free hand among the fishing smacks which sailed from his own base, Lowestoft. In the same letter he wrote: "I have commissioned four sailing smacks,² part R.N.R. crew, and with four active service ratings in each, and have armed each smack with a 3-pdr. gun (disguised as far as it is possible) and also with some lance bombs, and I hope they will be attacked in the usual manner, *i.e.*, by the submarine coming practically alongside, with conning tower open, and three or four men on deck, when I think that the destruction of the submarine will be a certainty."

His hopes seemed about to be realised. The smack for which the *U.B.* boat, having finished with the *Leader*, was making, was none other than the *G and E*, commanded by Lieutenant C. E. Hamond, R.N., of the gunboat *Halcyon*. The *U.B.* boat closed unsuspectingly and at 200 yards fired a rifle shot. The crew of the *G and E* immediately made a pretence of getting their boat out until the submarine had closed to 40 yards and had slewed herself round parallel to the armed smack, presenting a perfect target. Lieutenant Hamond then hoisted the white ensign, brought his gun into action, and in less than a minute obtained three hits on the base of the conning tower of the enemy. The submarine dived with great rapidity, nose first and at a very high angle to the horizontal—and it seemed that the conning tower had not been closed, for a man was seen in it just before she submerged. No Germans, living or dead, were picked up and no identifying marks were seen on the submarine, which did not reappear. The Admiralty, assuming that the submarine was undoubtedly

¹ Captain Ellison to Admiralty, 8 August 1915, M. 06113/15.

² Smack *G and E* taken up July 26; smacks *Pet, Glory*, and *Inverlyon* taken up August 2 (M. 06545/15).

destroyed, awarded £1,000 to the *G and E*.¹ On further consideration, however, it now seems probable that the boat reached port.²

53. **Attacks on Fishing Craft, August 12-14.**—More than one *U.B.* boat was out at the time of the *G and E*'s encounter. On August 12, at 4 p.m., the smack *Sunflower*, fishing 30 miles E by N from Lowestoft, saw a submarine approaching, with a man on deck covering the crew of the smack with a rifle. She had *U.2* painted on the bow, showing faintly through a red painted circle; it was noticed that she was very dirty with seaweed. She is reported to have "come alongside" the *Sunflower* and transferred the crew of the smack to her own deck while the destruction of the fishing vessel by bomb was in progress, sending them off later in their own boat. They were picked up after some hours by a Dutch sailing vessel, the proceeding being watched by two Zeppelins hovering overhead.³ The submarine marked *U.2* is not likely to be the one attacked by the *G and E*; the crew of the *Leader* saw no number on that boat and it seems natural to assume that after her encounter with an armed smack she would have taken every precaution against surprise before closing to decisive range with another.

On August 12 also one of the *U.C.* boats took a hand in the attack on the fishing craft. A smack was chased by one at 10 p.m. but escaped. But next morning the submarine sank the smack *Amethyst* by a bomb. No number was seen on the enemy boat, but in the log of *U.C.5* which was subsequently captured, is the entry on August 12, "6.55 to 7.35 a.m. stopped. Sank sailing vessel."⁴ This was the first case of a *U.C.* boat sinking a vessel by a bomb.

On the 13th, two more fishing boats, the *E.M.W.* and the *J.W.F.T.*, were sunk by bombs in 53.15 N, 1.30 E; the crew of the latter vessel saw the number 6 on the submarine's bows. On the 14th the fishing vessel *White City* was sunk at Cromer Knoll by a submarine marked *U.B.5*. None of these enemy submarines took any special precautions against surprise and all closed to ranges which showed they expected no gunfire.⁵

The next submarine sighted came up to the smack *Bona Fide*, fishing 35 miles ENE from Lowestoft, at 10.30 a.m., August 14, and ordered the crew to abandon ship. She then towed the boats towards shore for two hours, giving them ample time to see that she was marked *U.B.A.* Four vessels appeared ahead and she cast off the tow. To the fishermen the four vessels seemed to be gunboats; but they were really four armed paddle-sweepers⁶

¹ Papers titled *Cap. E.*, 49/15. Lieutenant Hamond was awarded the D.S.C.

² Neither the German History nor Gayer mentions this encounter.

³ M. 42498, 42653/15.

⁴ *Amethyst* papers, M. 06345/15. *U.C.5*'s log in C.B. 01242.

⁵ *E.M.W.*, *J.W.F.T.*, and *White City* papers, M. 42653/15; H.S. 145, pp. 719 and 721.

⁶ *Brighton Queen*, 2—3-pdrs.; *Westward Ho*, 2—6-pdrs.; *Glen Avon*, 2—6-pdrs.; *Cambridge*, 2—6-prs.

working near Smith's Knoll. These slipped their sweeps and opened fire on *U.B.A.* The gunners of the *Brighton Queen* claimed a hit on the enemy's conning tower before she submerged.

It is clear from her proceedings that *U.B.A.* expected no resistance from smacks and cannot therefore have been warned by the boat which had been attacked by the *G and E*.

54. **An Undoubted Success by one of our Captains in his Armed Smacks, August 15.**—Another of these armed smacks, the *Inverlyon*, under the command of Gunner Ernest M. Jehan of the *Dryad*, was fishing off Smith's Knoll Spar Buoy when at 8.15 p.m., August 15, a submarine came up to her so close that the German officer who was steering could be heard shouting something about a boat, obviously instructions for the crew of the *Inverlyon* to abandon ship. The enemy closed within 30 yards and then stopped. It was dusk and no better target could be expected. The *Inverlyon* hoisted the White Ensign; Mr. Jehan fired his revolver at the Captain of the submarine, which was the signal for the *Inverlyon*'s gun to commence. Only nine rounds were necessary. The first and third shots pierced the centre of the conning tower and exploded inside; the second shot cleared away the after part of the conning tower and the ensign. The officer steering fell overboard. The submarine, carried by the tide, swept round the *Inverlyon*'s stern within about 10 yards and four more hits were made on her conning tower and hull. She sank, head down, at an angle of 80°, and three bodies came up with the swirl. One appeared to be alive and the skipper of the *Inverlyon* flung off his clothes and swam out with a lifebuoy; but the German seaman sank before he could be reached. The *Inverlyon* had not cast off her trawl; it drifted over the submarine and brought up on it, proving that this submarine did not get away.²

It was *U.B.A.*, Lieutenant Gross, which had left Zeebrugge on the doubly unlucky day, the 13th of the month and Friday of the week. She had gone out to operate off Yarmouth, and never returned.³ It is probable she left before the arrival home of the submarine taught by the *G and E* that some smacks were to be respected. Nevertheless, efforts had been made to warn her. It would seem that the *G and E*'s submarine reached port early on the 15th. On that day Norddeich sent out a signal to all ships "A submarine has been fired at by a sailing cutter with a concealed gun; the sailing vessel was amongst a fishing fleet."⁴ The warning cannot have been taken in by *U.B.A.*

¹ Minesweeping Statement No. 77; H.S. 145, p. 745; *Bona Fide* papers, M. 43065/15.

² Papers titled *Cap. E.*, 49/15. Gunner Jehan was awarded the D.S.C., and £1,000 was divided among the crew of the *Inverlyon*.

³ Gayer, II, 50.

⁴ Signal Norddeich No. 1 of August 15, in I.D.H.S. Records.

55. Possible Destruction of a Third "U.B." Boat, August 23.—

After these two encounters, though submarines, periscopes and torpedoes were several times reported, it was not till August 23 that an undoubted *U.B.* boat again appeared; and then it was observed that she carried a machine or quick-firing gun and commenced attack at a long range. The lesson taught by the *G* and *E* had been learned.

She began operations at 9.40 a.m., August 24, about 6 miles S by E of Smith's Knoll Spar Buoy. The first smack she accosted with a dozen rounds at 1,000 yards range proved to be the armed decoy smack *Pet*, commanded by Petty Officer George Moore Lee, the first petty officer to command a man-of-war in action for many years. Petty Officer Lee seems to have made no attempt to lure the enemy nearer by a feigned surrender. He replied with nine rounds, registering as he thought three hits on the conning tower. The submarine dived; but reappeared 40 minutes later with a pole up as if to send a wireless message. Again the *Pet* fired, the range being 1,100 yards, and one more hit was claimed by the gun's crew. Once more the enemy reappeared, this time at 100 yards range, evidently to fire a torpedo. It missed by about 12 ft. The submarine's momentary appearance enabled four more hits to be put into her; she heeled over at an angle of 45 deg. and sank nose down, her planes being visible as her stern disappeared. Captain Ellison, as soon as the *Pet* made her report, sent five drifters with nets to operate over the spot. They found nothing; but a few days later minesweepers fouled an obstruction and two charges were exploded on it.¹ Captain Ellison regarded the *Pet's* action as undoubtedly successful, and considered the submarine was sunk with no survivors to tell the tale that smacks were armed.²

He may have been unduly optimistic; it seems not unlikely that the submarine escaped. That afternoon three more smacks were sunk. At 1.30 p.m., 50 miles east of Lowestoft, the *Boy Bert* was accosted by a submarine which went to the weather side and opened fire with a machine gun. As soon as the four men of the smack were in their boat she called them up to her, made them get on her deck, and sent the mate to the smack with the bombing party. The submarine had an eye painted on the bow, the figure 9 on the stern, and a machine gun mounted on the conning tower; she was very rusty and had grass 6 in. long growing on her sides. When the boat returned the crew of the sunken smack re-embarked in it; and the submarine departed.³

¹ Yarmouth A.P. Reports, H.S. 161, pp. 165, 166.

² M. 06573/15. Apparently the Norddeich signal was not communicated to him. The D.S.M. was awarded to Petty Officer Lee and £1,000 was divided amongst the crew (papers titled *Cap. E.*, 49/15). The only *U.B.* boat stated as lost in August by Gayer is *U.B.A*; he does not mention this encounter. (Gayer, II, 49, 50.)

³ M. 43422/15.

About half an hour later, at 2.30 p.m., the smack *Integrity* was fired on for 10 minutes by a submarine a mile off. In this case also the smack's crew went on to the submarine while their boat was being used for the destruction of the smack. They noticed no machine gun and do not mention its distinctive stuttering fire; nor do they speak of a rusty hull and long grass which would be sure to catch a fisherman's eye.¹ It is not improbable that this was not the *U.B.* boat which had sunk *Boy Bert*.

The third smack destroyed that day, *Young Frank*, was 38 miles NE by E from Lowestoft when at 5 p.m. five rifle shots were fired at her. This crew also went on board the submarine and noticed no machine gun nor grass.²

Their assailant was probably the second of the two submarines out. The number 9 worn by the first was obviously not her *U.B.* number; *U.B.* 9 was at Kiel. On August 23, *U.B.* 5, 10 and 17 were in their coast defence stations off Zeebrugge,³ and only *U.B.* 2, 6 and 12 are unaccounted for; which of these was fired on by the *Pet* and which sank the three smacks cannot yet be ascertained.

56. The Bombardment of Zeebrugge August 23.— Besides the defensive methods of entrapping the *U.B.* boats in the course of their cruises, a scheme for disposing of them in their own home port had been for months in preparation under Admiral Bacon. What was intended was a heavy bombardment by monitors of the locks and caissons of the canal connecting Bruges, the submarines' base, to the sea at Zeebrugge, and also of the factory where the submarines were put together.

The bombardment was carried out on August 23. The operation employed most of the Dover Patrol Force, to which 12 Harwich destroyers⁵ were temporarily attached. Reports from the Belgians gave a favourable view of the results of the bombardment. They stated that the first lock, the factory and two submarines had been destroyed. We now know that this account of the damage done is much exaggerated; in fact the operation appeared to have little effect on the activities of the *U.B.* and *U.C.* boats.

There was certainly a pause of a fortnight before any more smacks were destroyed.⁶ The raid that then began opened like the previous one with an encounter between the *U.B.* boat and an armed decoy smack.

¹ M. 43186/15.

² M. 43186/15.

³ *Nordsee*, IV, p. 309.

⁴ Details of this operation will be found in C.B. 936a, *The Dover Command*; the German account is in *Nordsee* IV, Chapter 13.

⁵ *Laurel*, *Lydiard*, *Legion*, *Linnet*, *Morris*, *Murray*, *Moorson*, *Milne*, *Melpomene*, *Minos*, *Mianly*, *Lookout*. (Comm. (T)'s Diary.)

⁶ The monitor *Muushalpe* was thought to have fired her on September 2 at 11.55 a.m., 2 miles E by S of Aldborough Napes Buoy. She saw no submarine or periscope. (H.S. 149, p. 349.)

57. **The Fourth Encounter between an Armed Smack and a "U.B." Boat, September 7.**—The raid, which first became apparent on September 7, was conducted by two *U.B.* boats in company—a new feature of the *U.B.* campaign evidently adopted as a defensive measure.

One of these boats opened fire with a machine gun at 11 a.m., September 7, on a smack fishing off Brown Ridge in the middle of the Hoofden. She did not approach nearer than 2,000 yards and continued firing till she had expended about 200 rounds. The smack which had to endure this fusillade was, however, not a defenceless vessel; it was the *Inverlyon*. Mr. Jehan withheld his fire, hoping the enemy would close, till he concluded it to be useless to wait longer. He then replied with three rounds. The submarine immediately dived and could be seen coming towards the decoy. Mr. Jehan backed so as to cross her path and dropped a lance bomb as he passed her. It proved ineffective and the periscope appeared again 1,500 yards off. The *Inverlyon* fired at it; but it steadily approached till, at 150 yards, the submarine fired a torpedo. It missed. The periscope passed within 10 ft. of the smack's stern and another lance bomb was thrown, also without effect, for the submarine appeared on the surface 5,000 yards off and steamed slowly away.¹

Though, in this encounter, all the appearances were credited to one submarine, there was undoubtedly a pair of them when next they were seen.

At 3 p.m. four smacks—*Victorious*, *Emblem*, *Emmanuel*, *Constance*—were fishing in company about 44 miles ESE from Lowestoft when two submarines appeared. One of them attacked the *Victorious* with a machine gun and ordered the crew to come aboard. As soon as they arrived the Germans threatened to shoot them all if anyone were found on board the smack, which they then proceeded to sink by bombs. The crew of the *Victorious* saw no number on the submarine, but observed that she had some dented plates as if she had recently been hit by small shell which had glanced off; there were three or four such marks.

The same procedure—opening fire with a machine gun, ordering crew aboard, and sinking by a bomb—was carried out with the *Emmanuel*, *Emblem* and *Constance*. In the case of the *Emblem* it is alleged that the submarine fired on the crew in their small boat after they had left their smack.²

The crews of the four sunken vessels were picked up by a Dutch steam trawler and taken to Ymuiden, and it was not till September 11 that it was known in England what had happened to them.³

58. **The Last Appearance of the "U.B." Boats in 1915.**—The principle of sending out *U.B.* boats in pairs was continued in the

¹ Papers titled *Cap. E.*, 49/15.

² *Victorious*, *Emblem*, *Emmanuel*, *Constance* papers, M. 44343/15.

³ H.S. 150, p. 1067.

next raid of September 10. They appeared at 8 a.m. to the smack *Boy Ermie*, fishing 30 miles north-east of Smith's Knoll Spar Buoy. The nearer of the two, at a range of about a mile, opened fire with a machine gun and continued firing even after the smack was abandoned. In this case also the small boat was attacked by the submarine, which had closed to 400 yards; the sides of the boat were pierced and one man wounded. Meanwhile the second submarine came up and sank the smack.¹

That afternoon another smack, the *Nimrod*, when 10 miles NNW of Jim Howe Bank, was fired on without warning by two submarines. The Germans in this case seemed less ferocious; they hailed the boat, remarked that the fishermen had a fair wind, and wished them good-night. These also were picked up by a Dutch steamer and landed in Holland;² the circumstances of the destruction of this smack were not known till September 16.

This was the last time a *U.B.* boat was seen in 1915 by a smack, though on September 15, at 9.15 p.m., an invisible vessel fired with a machine gun on a smack 40 miles E by S from Lowestoft; the smack also thought a torpedo passed under her.³

Towards the end of September the decoy smacks *Glory*, *Inverlyon*, *G and E*, and *Pet* were paid off, but attacks on the Lowestoft fishing fleet did not increase. The *U.B.* boats no longer made extended voyages.

Even though they remained attached to their ports for defence purposes they were not free from danger. On September 24, in one of the almost continuous air attacks on the Belgian ports, *U.B.6* was hit by a bomb from a seaplane and seriously damaged though not destroyed.⁴

CHAPTER VII.

A MONTH OF U.C. WARFARE, AUGUST 1915.

59. **The Wreck of "U.C.2."**—Although the *U.B.* campaign came to a full stop in the autumn of 1915 as a result of various circumstances, the minelaying *U.C.* boats were not affected by these conditions and continued their stealthy warfare. Even less than the *U.B.* boats did they come into sight; there are very few credible reports of them; and from contemporary British records it is impossible to find one's way through the maze of their activities. Even the minesweeping contributed to confuse the investigation, for the trawler minesweepers frequently towed

¹ *Boy Ermie* papers, M. 44343/15; H.S. 150, p. 968.

² *Nimrod* papers, M. 44967/15; H.S. 151, pp. 1079, 1170.

³ H.S. 151, p. 1043; H.S. 152, p. 556.

⁴ *Nondsee* IV, p. 320.

mines from the positions in which they had been laid and exploded or left them elsewhere. Again, areas we know now to have been mined were swept and wrongly reported clear, possibly because in the tideway the mines were at such an angle to the vertical that the sweeps passed over them without picking them up.

At the Armistice the Germans furnished a list of the positions in which mines had been laid; it did not give the date of laying or the name of the minelayer. Fortunately a plan (Karte 14) in the German Official History (*Nordsee*, Vol. IV) supplies these missing particulars in all but a few cases; and it is now possible to reconstruct the U.C. campaign and the British efforts to render it ineffective.

One of the submarine minelayers, U.C.2, had been sunk on July 2,² and since then its wreck had been lying in Stanford Channel off Lowestoft. Whenever possible, Captain Ellison sent down divers to examine it, and on August 8 he forwarded a report to the Admiralty embodying the results of their observations. The sunken U.C. boat was found to be in two parts. The after section, 66 ft. long, contained no features of special interest; but the fore part, 44 ft. long, had its mine tubes in good condition.

There were seven of them remaining, each 3 ft. 6 in. diameter and 18 ft. long, extending from deck to bottom. The four after-tubes were empty, but the three foremost ones still contained mines. These were weighed complete with their sinkers by the divers, an evolution of great danger. The after part of the boat was considered to have had more mine tubes where the explosion had occurred, but it was now too shattered there to afford any positive information. Captain Ellison suggested that the fore part could be raised and interesting information obtained from it; but the Admiralty had long ago decided to have no salvage operations on it, and had in fact ordered him on July 17 to disperse the wreck by explosion. They now reiterated the order,³ and it was, we may believe reluctantly, carried out by Captain Ellison. The Admiralty then expressed their appreciation of the manner in which the divers had performed their hazardous work.⁴

Meanwhile the remainder of the U.C. boats were carrying out the policy of laying little groups of mines in the swept channel.

60. Three more Minefields discovered, August 4 and 5.⁵—In the afternoon of August 4 a mine was discovered in the swept channel 3 miles NNE of the Elbow Buoy, and before any damage had been done shipping was directed to keep clear.⁶ It was probably a mine from a field laid by U.C.1, presumably in the

¹ Issued by the Admiralty as O.U. 6020.

² See *Home Waters*, IV, Section 132.

³ Tel. 462 to S.N.O., Lowestoft, sent 1.37 p.m., 13.8.15.

⁴ M. 06114, 06574/15.

⁵ See plan at p. 110.

⁶ H.S. 143, pp. 729, 769, 771.

early hours of August 4.¹ Three more mines were found there on the 6th. All the mines were to the eastward of the buoy, and on the 6th traffic was resumed by the channel passing westward of the buoy to the Gull Light. Two days later the minesweeper *Ben Ardna* was blown up three-quarters of a mile east of the Elbow Buoy.²

The Sunk Light Vessel was again found to be mined in the afternoon of August 5, when one of the Harwich sweepers exploded four mines evidently recently laid to the westward of the light vessel.³ In fact, they had been laid that morning by U.C.6.⁴ The *Seagull* and *Spanker* went out next day to make a thorough sweep of the district, and found one mine. A week elapsed before any more mines were found; but on the 12th another was swept up 1 mile north-west of the light vessel.⁵

The third minefield found at this date was discovered as a result of a report from a steamer that when passing the North Knock Buoy she had seen a mine below water; traffic was warned to avoid Knock Deep until it had been swept. At the morning high tide of August 6 the minesweepers attached to the Nore Command exploded three or four mines less than a mile north-west of the North Knock Buoy. During the evening sweep the minesweeping trawler *Leandros* was blown up with the loss of eight lives.

Effective minesweeping outside the Thames Estuary was proving a matter of difficulty, and Captain E. Villiers, in charge of the Nore Local Defence, reported:⁶ "As the rise and fall outside the estuary is only about 12 ft. it is exceedingly difficult to clear places where mines are known to exist close to the surface without great risk to vessels drawing 15 ft. of water, and as the enemy are very active minelaying in the Estuary of the Thames, I would submit that the Admiralty be asked to attach some light draught sweepers to the Nore Command. In many cases mines have only been found after repeatedly sweeping over the same place, and I feel convinced that the enemy have some fairly efficient anti-sweeping device of some sort which can only be defeated by cutters on the sweep."

The Admiralty did not consider any anti-sweeping device was being used by the Germans. The low speed of the trawlers and the fact that in a tideway the mines lay over at an angle would account for their being passed over; it was further recognised as quite possible that the mines might be fitted with a soluble plug

¹ Given in O.U. 6020^b as Field 14, 12 mines in direction 71½° from 51° 22' N, 1° 32' 30" E. Karte 14 gives August 5 as the date of laying this field.

² M. 06285/15; M. 06371/15; Dover A.P. Reports, H.S. 175, pp. 187, 195.

³ H.S. 143, p. 937.

⁴ Field 13 in O.U. 6020^b, 12 mines 197° from 51.52 N, 1.34 E. Attributed in Karte 14 to U.C.6.

⁵ Harwich A.P. Reports, H.S. 140, pp. 108, 117, 120.

⁶ M. 06197/15, titled C.1195/15.

to delay their taking up their depth, though so far there had been no evidence that such plugs were in use.¹ The French cutting sweep had been tried and had proved incapable of severing the mooring ropes of the German mines in use at this time;² and the solution of the problem appeared to rest with the taking up of four paddle steamers for use as minesweepers in the Thames. Suitable vessels were not easy to find, and the Commander-in-Chief, The Nore, was asked if he could use the London County Council steamers which in peace time plied from Westminster to Richmond. None of these was available till October³ and until then the Nore minesweeping service had to do its best with the 17 minesweeping trawlers allotted to it. Even of these, six were ordered to Malta for the Dardanelles operations, their place in the minesweeping service to be taken by the six trawlers prepared for minelaying whose gear was now to be changed for minesweeping.⁴ On the 13th the area was declared clear and restrictions as to passing were removed.⁵

This minefield at the North Knock Buoy had been laid on August 3 by *U.C.5*, which had also placed four mines about 2 miles east of the Kentish Knock Light Vessel.⁶

On August 7 a mine was exploded by a trawler passing through Edinburgh Channel. The channel was at once closed to navigation under the impression that a minefield had been laid there. The Nore minesweepers swept it thoroughly for two days and paddlers were sent down to assist in clearing this vitally important channel; no more mines were found and on the 9th it was reopened to traffic, the conclusion being that the mine had drifted into the channel from elsewhere.⁷ This was most probably a correct diagnosis; the Germans announce no mines as having been laid there in 1915.

61. ~~MinMines in the War Channel off Lowestoft and Aldborough,~~
August 13.⁸—It will be remembered that a smack was sunk on August 12 by *U.C.5*, this being the first occasion on which any of the *U.C.* boats attempted to fire while on the surface. They carried no fixed armament and their object was to lay mines; and we may assume that it was only after successfully carrying out his main function of laying a minefield that the captain of *U.C.5* permitted himself the relaxation of a little surface activity.

¹ At the Armistice the Germans stated that they had never employed any anti-sweep devices or delay release arrangements, and that all their mines had been moored with wire mooring ropes. (O.U. 6020b, title page.)

² M. 06197/15 contains a report on this subject.

³ Papers titled *C.1252/15*.

⁴ Tel. 409 to C.-in-C., Nore, 10.8.15. (H.S. 144, p. 821.)

⁵ H.S. 143, p. 369.

⁶ Field 11, four mines 90° from 51° 39' 18" N, 1° 43' 30" E; and Field 12, five mines 270° and 315° from 51° 42' 18" N, 1° 37' 30" E, (O.U. 6020b and Karte 14.)

⁷ Minesweeping Statement No. 76.

⁸ See plan facing p. 184.

The minefield revealed itself at 7.45 a.m. on the 13th, when the British steamer *Summerfield*, with a cargo of wooden huts for temporary barracks, was blown up and sunk 2 miles east of Lowestoft.¹ The report was that she had been torpedoed, and Captain Ellison sent four trawlers to search the district and four net drifters to moor nets 4 miles ESE of Corton. They failed to prevent another steamer, a Swede, the *Sverige*, from being blown up within a mile of the wreck of the *Summerfield* that evening.² Though this last accident was also attributed to a torpedo, Captain Ellison, realising that it might be due to a mine, closed Stanford Channel to navigation and commenced sweeping operations next morning.³ Four mines were found on the 14th by a pair of paddle-sweepers; but the Channel was thought still unsafe, since a submarine was sighted in it and the natural assumption was that more mines had been laid by the intruder. After further sweeping Stanford Channel was declared clear in the forenoon of August 15.⁴

The field consisted of only six mines at large intervals between south-west and south Holm buoys.⁵ Presumably it was laid by *U.C.5* early on August 12.⁸

The remaining six mines carried by the submarine she deposited round the south-east of the Corton Lightship.⁷ This field remained undiscovered till the 19th when a mine was exploded in Hewitt Channel, which the Corton Light Vessel marks. Traffic there was diverted and the channel was swept; it was declared clear on the 22nd.⁸ Next day, one of the Lowestoft armed trawlers, the *Miura*, was blown up half a mile south (magnetic) of Middle Cross Sand Buoy (52.36 N, 1.53 E).⁹ This seems a long way from the Corton minefield; but the mine which destroyed the *Miura* may have drifted or been towed from that or some other field. This area was not considered clear till the 27th.

Another armed trawler of Lowestoft Auxiliary Patrol, the *Worsley*, was blown up at 6 p.m. on the 14th in the swept channel abreast of North Aldborough Napes Buoy.¹⁰ Her loss was the means of discovering that the channel between Aldborough Ridge and Aldborough Napes was blocked. The position of her

¹ *Summerfield's* papers, M. 42493/15; H.S. 145, p. 248.

² H.S. 145, pp. 368, 420.

³ Lowestoft A.P. Reports, H.S. 161, pp. 139, 140.

⁴ H.S. 145, pp. 404, 432, 454, 610, 612, 647, 710.

⁵ Field 16b in O.U. 6020b.

⁶ Karte 14, our authority for date and name, does not go farther north than 52.5 N, and gives no evidence on this point. *U.C.5* mined the Kentish Knock on August 3 and was off Boulogne on August 21; she would thus have been available on August 12.

⁷ Field 16a, our authority for date and name, does not go farther north than 52.5 N, and gives no evidence on this point. *U.C.5* mined the Kentish Knock on August 3 and was off Boulogne on August 21; she would thus have been available on August 12.

⁸ Minesweeping Statement No. 77; Harwich A.P. Reports, H.S. 140, p. 131; H.S. 147, p. 160.

⁹ Lowestoft A.P. Reports, H.S. 161, p. 164; Minesweeping Statement No. 77.

¹⁰ Lowestoft A.P. Reports, H.S. 161, p. 139.

loss was two or three miles north of the site of the minefield as reported later by the Germans; we do not know which submarine laid it or on what date, but in its position right across the swept channel it could not have been laid long before discovery. At this date nets were out from August 10-15 from North Aldborough Napes Buoy to the north-eastward,² and it is possible that the U.C. boat approached Aldborough Ridge to the southward of the Napes.

Minesweepers found one mine east of Aldborough Napes on the 14th and traffic was temporarily diverted clear of the shoal. In spite of this precaution the Swedish steamer *Disa* was mined on the 25th in 52° 7' N, 1° 41' 18" E; and the armed trawler *Dane* on the 28th in 52° 9' 30" N, 1° 41' E.

Admiral Jellicoe, noticing that the neighbourhood of Aldborough seemed a favourable locality for the attention of mine-laying submarines, suggested that a deep minefield should be laid there.³ The reply to this suggestion has not been traced; but the attitude of the Admiralty towards deep minefields was not very favourable at that time. A few weeks previously the Admiral of Patrols had suggested deep minefields in the approach to the Longstone, where submarines had been specially active; but the Chief of Staff considered that the use of deep mines had not been justified by results and the suggestion of the Admiral of Patrols was not adopted.⁴ Nor was that of the Commander-in-Chief.

62. The Elbow Buoy Minefield again August 14.—Only a week after traffic had been allowed to use the route past the Elbow Buoy, a steamer, the *Highland Corrie*, was mined there early on August 14. She did not sink and she managed to make Tilbury; but as it was clear the channel had again been mined traffic was once more held up. At high water a thorough sweep was made. Two mines were found to the north-west of the buoy and a third came up when the sweeps were slipped on Margate Sands. After this, at 7.30 p.m. the channel by the Elbow Buoy was declared safe, having been closed all day.⁵

The field⁶ really consisted of 12 mines laid by U.C.1 to the north-west of the Elbow Buoy. Though scarcely more than a mile from the field she had laid on August 5, she ran little danger in laying it since the former field started at the buoy and ran eastward, while the present one started north-west and ended north of the buoy. The new field was located by the minesweepers

¹ Field 15a, five mines 100° from 52° 6' 30" N, 1° 38' 36" E; and Field 15b, seven mines 111° from 52° 5' 54" N, 1° 41' 30" E.

² Lowestoft A.P. Reports, p. 149.

³ H.S. 145, p. 771.

⁴ Papers titled ST7848/15.

⁵ H.S. 145, p. 455; Minesweeping Statement No. 76.

⁶ Field 17, 2,040 metres long in direction 45° and 100° from 51° 22' 8" N, 1° 31' 0" E. The date of laying is not given in Karte 14; presumably it was the night of August 13-14.

as consisting of mines laid in a line NW by W 6 cables apart, from a position E by S 1½ miles from the Elbow Buoy; the difference between this and the officially reported position shows the difficulty then experienced in exactly locating a minefield.

On the 15th two moored mines were destroyed within a mile of the Shipwash Light Vessel. On the 16th the minesweeper *Japan* was blown up near the South Shipwash Buoy; and on the 17th two more mines were found 12 cables N37E from North Ship Head Buoy. All these were probably part of a previous field,² that laid on July 11. Minesweepers worked on the area and on August 18 the neighbourhood of the Shipwash Light Vessel was reported as thoroughly swept. On the 19th, however, another mine was found near the South Shipwash Buoy.³

63. Three Minefields discovered on the French Coast, August 20 and 21.—Calais had been mined early in July. Since then the U.C. boats had left the French coast unattacked. But on August 20 a German moored mine was found in the West Pass into Dunkirk, and the entry and departure of all ships was prohibited. The French minesweepers found no mines on the 21st, and at 3 p.m. the Marine authorities pronounced the channel from Dunkirk clear. That night the sailing of transports was resumed.⁴

The field of 12 mines had been laid by U.C.1 on August 18⁵ to close the entrance into Dunkirk. No vessels were lost on it.

A far more serious obstacle was a field before Boulogne, which revealed itself by blowing up the *William Dawson*, a small collier bound originally for Dunkirk but diverted to Boulogne by the French patrols as soon as it was known that Dunkirk had been mined. The change of destination was unfortunate for her; at 4.30 p.m., August 21, when she was a mile and a half north of Boulogne breakwater, one or two mines exploded under her and she sank in two minutes.⁶

Boulogne was at once closed to shipping, and all transport of troops and ammunition to that port had to cease. The French minesweepers found five mines during the next 24 hours;⁷ by 1.30 p.m., August 22, it was considered safe for small boats and the shallow draught mail steamers to pass near the top of high water, and in the course of the day the swept channel was reported

¹ Minesweeping Statement No. 77.

² See Section 32. Neither the "German Statement of Mines Laid" (O.U. 6020B) nor Karte 14 gives any minefield near this position in the first half of August.

³ Harwich A.P. Reports and Minesweeping Statement No. 77; H.S. 146, p. 252.

⁴ H.S. 146, pp. 909, 1154, 1171.

⁵ Field 18, 12 mines extending 1,700 metres in direction 187° from 51° 3' 30" N, 2° 10' E.

⁶ *William Dawson* papers, N. 44183, 44640/15.

⁷ Minesweeping Statement No. 77.

clear. The flow of transports was resumed on the 23rd, entering Boulogne by a new channel which had been swept.¹

The closing of Boulogne was a serious matter, since it was one of the principal ports used by the British Army for access to France. For several months it had been used equally with Havre for the disembarkation of troops, and often as many as four transports full of soldiers arrived there during the night. It was also the principal port for the supply of ammunition to the British Army in France; and since the beginning of August 53 transports carrying either troops or ammunition had arrived at Boulogne from British ports.² All these transports were of sufficient importance to be escorted across the English Channel. Besides these transports of the first importance, there were numerous others not thought sufficiently important to demand escort by the slender and hard worked force available, but yet their loss would certainly be inconvenient. It is possible that the value of Boulogne, a port second only to Havre in its position of the lines of communication between England and France, was not fully appreciated in Germany.

The mines had been laid by U.C.5 on August 21,³ and the field represented the result of the first successful crossing of the Dover-Calais line.⁴

The third minefield laid off the French coast at this time seems to have remained undiscovered. It was placed by U.C.3 on August 20,⁵ about 2 miles to the westward of that deposited off Calais on July 11. Possibly the channel in use for the entry into Calais did not cross these mined lines.

64. Condition of the Anti-Submarine Booms in Dover Strait and the Downs.—It had been the Admiralty's intention that no submarine should pass the Folkestone-Grisnez line when in March they put in hand the construction of a solid boom between those points. At that time it was hoped that the Folkestone-Grisnez boom would be finished by July;⁶ but unexpected difficulties arose, partly from the merchant vessels whose passage it was

¹ H.S. 146, pp. 1190, 1253; H.S. 147, pp. 15, 100, 359.

² Troops passed from Folkestone to Boulogne; ammunition from Newhaven to Boulogne; siege batteries from Avonmouth or Southampton to Boulogne. Admiral Bacon, writing to the Admiralty on June 29 on the work of the Dover Patrol, said: "we have concentrated on this patrol in narrow waters a large proportion of our British shipping, as well as practically all the troops and ammunition transports of our Expeditionary Force to the Continent." (Papers titled X.7996/15.)

³ Field 20, 12 mines extending 660 metres in the direction 336° from 50.44 N, 1° 34' 48" E.

⁴ Gayer, II, p. 49. A French patrol boat claimed to have fired on and sunk a submarine 6 miles north-west of Boulogne on July 4; but the claim does not seem to have been taken as founded on fact. (M. 05251/15.)

⁵ Field 19a, three mines extending 350 metres in direction 145° from 50° 58' 36" N, 1° 45' E; and Field 19b, nine mines extending 800 metres in direction 160° from 50° 58' 18" N, 1° 45' 30" E.

⁶ See *Home Waters*, IV, Section 32.

designed to protect, and by August 3 out of the 19 miles of boom required very little was in place. The two vessels marking the gate had been in position for some time. From the southern of these, 2½ miles of boom had been laid towards France, while from the French end at Cape Grisnez 1 mile had been laid. Even that small amount was broken in places. "This damage," reported Captain Learmonth, President of the Committee on Anti-submarine Defences,¹ "is almost entirely to be attributed to the boom having been repeatedly fouled by vessels failing to pass through the gate; and some of the vessels—including sailing ships—have remained binding alongside the boom and have in consequence strained it severely. As a result, with the heavy south-west winds which have sprung up, the damage has developed, and sections of net have parted. Each section of net is 500 ft. long and is supported by 13 floats, each of which weighs about 3 tons. At each change of tide the damaged nets and floats become more and more entangled and approach by the craft engaged upon the construction of the boom is rendered impossible except in moderate weather."

Reporting again on August 20, he said: "In view of the magnitude of the work and of the multiplicity of indeterminate factors which it involves, it is impossible to estimate or even to surmise at what date the Dover Strait Boom will be completed. Experience has shown that the work of maintenance must be continuous and that it will constitute an undertaking of scarcely less magnitude than the first construction. The inference is that construction and maintenance will only cease when the war ends." In spite of this discouraging report, the First Sea Lord thought it would be a mistake to give up work on the boom, which he considered to be a great deterrent to the submarines.²

In these conditions, although instructions were given for work to be begun from the Vame towards the English coast, as well as from Folkestone and Boulogne, there seemed little prospect of completion of the anti-submarine boom before the following summer.

A similar boom across the Gull Stream south of the Gull Buoy, to prevent submarines from entering the Downs from the north, had been projected at the same time as the Folkestone-Grisnez boom. No work was done on it, and in August the scheme was abandoned.³

65. Further Mining of the East Coast Channel in the last Half of August.—Part of the routine of minesweeping in the Dover Area was a daily sweep of the channel from the Gull Light Vessel up to and round the Elbow Buoy. On August 25 the trawlers performing this sweep found mines 2 miles west of the North Goodwin and 4 miles south-east of the North Foreland Light. Seven mines were destroyed here between the 25th and

¹ C.S.D. Reports, *Submarine Defences*, Vol. VI.

² C.S.D. Reports, Vol. VII.

³ *Ibid.*

28th.¹ What they had found really consisted of two minefields laid on separate occasions but fairly close together. The first was the remains of the field laid round the Elbow Buoy from north to west by *U.C.1* about August 14; the second between the North Goodwins and the West Gull Buoy had been laid, also by *U.C.1*, only the morning before it was discovered.² The district was declared clear again on August 30.

That same day, August 25, the Harwich minesweepers found that the *Galloper* had been mined.³ This field had been laid three days before by *U.C.7*.⁴ It was her first minelaying cruise; she had left Germany for Flanders on August 10.⁵

The next field was found at 8 a.m. on the 28th by the armed trawler *Dane*, which blew up in the war channel west of North Aldborough Napes Buoy. A submarine had been sighted by a net drifter close to this spot only half an hour previously. Traffic was again diverted and sweeping carried out. Seven mines were found during the day, and the channel was then considered clear.⁶

Aldborough Napes is beyond the limits of Karte 14 and we thus do not know for certain the date of the laying of this field⁷ or the name of the submarine employed; but from its position between the swept channel and the shore it may be assumed that it cannot have been laid long before discovery. This would make the date August 28; the submarine was most probably *U.C.6*.

On the 29th two fresh mined areas appeared. On the northernmost, off the Cackle Light Vessel 4 miles north of Yarmouth, the tramp steamer *Sir William Stephenson* was blown up at 5.18 a.m. The vessel did not sink at once; she was taken in tow for Yarmouth, but sank when a mile east of Nelson's monument.⁸ Traffic from the north was diverted to Haisborough Gat and minesweeping commenced. The field was found to run north and south 3 cables south-east of the Cackle Light Vessel; four mines were destroyed there and on August 30 the area was declared clear.⁹

This area, which contained two groups of mines,¹⁰ is also beyond the range of Karte 14, and the date of its being mined is not yet

¹ Dover A.P. Reports, H.S. 175, p. 216.

² Field 23, 12 mines extending 2,400 metres in direction 90° from 51° 18' 9" N, 1° 30' 2" E, laid on August 24.

³ H.S. 147, p. 761; Harwich A.P. Reports, H.S. 140, p. 131.

⁴ Field 22, 12 mines extending 770 metres in direction 190° from 51° 43' 4" N, 1° 56' 6" E; and Karte 14.

⁵ Signal 1010/9 August, in I.D.H.S. Records.

⁶ Lowestoft A.P. Reports, H.S. 161, pp. 166, 173; H.S. 148, pp. 265, 271, 358, 369, 374, 694.

⁷ Field 26, 12 mines extending 3,520 metres in the direction 295° from 52° 9' 7" N, 1° 42' 2" E.

⁸ *Sir William Stephenson* papers, M. 43513, 43759/15.

⁹ H.S. 148, pp. 452, 454, 694, 760; Lowestoft A.P. Reports, H.S. 161, p. 173.

¹⁰ Field 21a, 6 mines extending 900 metres in direction 100° from 52° 41' 7" N, 1° 45' 9" E; and Field 21b, 6 mines extending 1,200 metres in direction 180° from 52° 41' 3" N, 1° 46' 9" E.

known. Between August 21 and 22 seems the most probable time,¹ and *U.C.6* the minelayer, since all the others were employed elsewhere within a few days of that date.

The second minefield discovered on the 29th was east of the Sunk Light Vessel, where two mines were found by the minesweepers in the War Channel between there and the Longsand Light Vessel. This was a district regularly swept; by September 3 it was considered clear of mines.² The field had been laid by *U.C.3* on August 28.³

The last minefield found in August blew up three merchant vessels. The first of these, the collier *Bretwalda*, struck a mine at 7.30 a.m., August 30, about 11 mile east of the Longsand Light Vessel. She did not sink and was towed to Sheerness. That afternoon another vessel, the *Honiton*, bringing 7,300 tons of maize and linseed from South America, was blown up 2½ miles east of the Longsand Light Vessel. She also did not sink, but was towed and supported by patrol vessels till she was beached off Shoeburyness.⁴

When the report of her blowing up reached Harwich, four of Commodore (T)'s destroyers—*Laurel*, *Linnæus*, *Lookout*, *Lysander*—went out at 6.40 p.m. and patrolled eastward out to the North Hinder, returning next morning.⁵ They saw no submarine and encountered no mines.

The field⁶ had been laid a day or two before by *U.C.5* to the eastward of the light vessel. It damaged a third vessel, the French steamer *St. Chamond*, on September 3; she was able to proceed under her own steam into Harwich.⁷

The last minefield actually laid in August was not discovered till September 1, when four vessels were destroyed on it. The Admiral Commanding the East Coast Minesweeping Vessels,⁸ in his flagship, the armed yacht *Sagitta*,⁹ had left Yarmouth at 4.30 a.m., September 1, with three paddle minesweepers, and swept from the Corton Light Vessel to Aldborough Napes, ½ mile outside the War Channel. At 12.53 p.m. he saw a merchant vessel blown up close to the North Shipwash Buoy, within a few hundred yards of a line swept by his paddlers. The mined vessel was the *Savona*,

¹ There is little room for doubt that the fields given in the "German Statement" (O.U. 6020b) are listed and numbered in chronological order. Field 20, off Boulogne, was certainly laid on August 20 or 21, and Field 22 off the Galloper, on August 22.

² Harwich A.P. Reports, H.S. 140, p. 138; H.S. 148, p. 585.

³ Field 25, 12 mines extending 900 metres in direction 144° from 51° 52' 1" N, 1° 38' E.

⁴ *Bretwalda* papers, M. 44883/15; *Honiton* papers, M. 44344/15.

⁵ This is what they did, according to their logs. The entry in Comm. (T)'s diary of August 30 is misleading.

⁶ Field 24, 12 mines extending 2,400 metres in direction 0° from 51° 47' 4" N, 1° 42' 1" E. Karte 14 gives August 27 as the date of its laying.

⁷ Harwich A.P. Reports, H.S. 140, p. 138.

⁸ Rear-Admiral E. F. Charlton, C.B.

⁹ 756 tons, 2—12-pdrs. and 1—6-pdr.; owner, Due de Valeney.

bringing lead from Spain. Two armed trawlers proceeded at once to pick up the survivors; one of the would-be rescuers, the *Malta*, struck a mine and sank in 10 seconds, leaving only seven survivors. A few hours later another armed trawler, the *Nadime*, was blown up in the same area; all but three of her crew were killed.¹

The second merchant vessel destroyed on this minefield also, by a curious coincidence, was blown up before the eyes of the Admiral of Minesweepers. He was coming as before from the north with the same force to sweep round the North Shipwash Buoy when at 8.30 a.m., September 3, he saw a heavily laden vessel approaching the area he knew to be dangerous. He endeavoured to attract her attention and fired a loaded gun at her, but she could not be diverted and at 8.38 a mine exploded under her. She did not sink at once and a naval party sent on board anchored her. She was the Government collier *Churston*, and had a gun aft for protection against surface craft. Unfortunately, a strong sea got up and she sank before 1 o'clock; but not before a few things, including the ship's kitten, had been saved from her. Four men had been killed by the explosion.²

This field, the most disastrous of any of these in August, was the work of *U.C.7* and had been laid on August 30.³

66. The East Coast Minesweeping Service. The problem that confronted the East Coast Minesweeping Service can well be seen from the following analysis of the mining activity of the *U.C.* boats up to the end of August:—

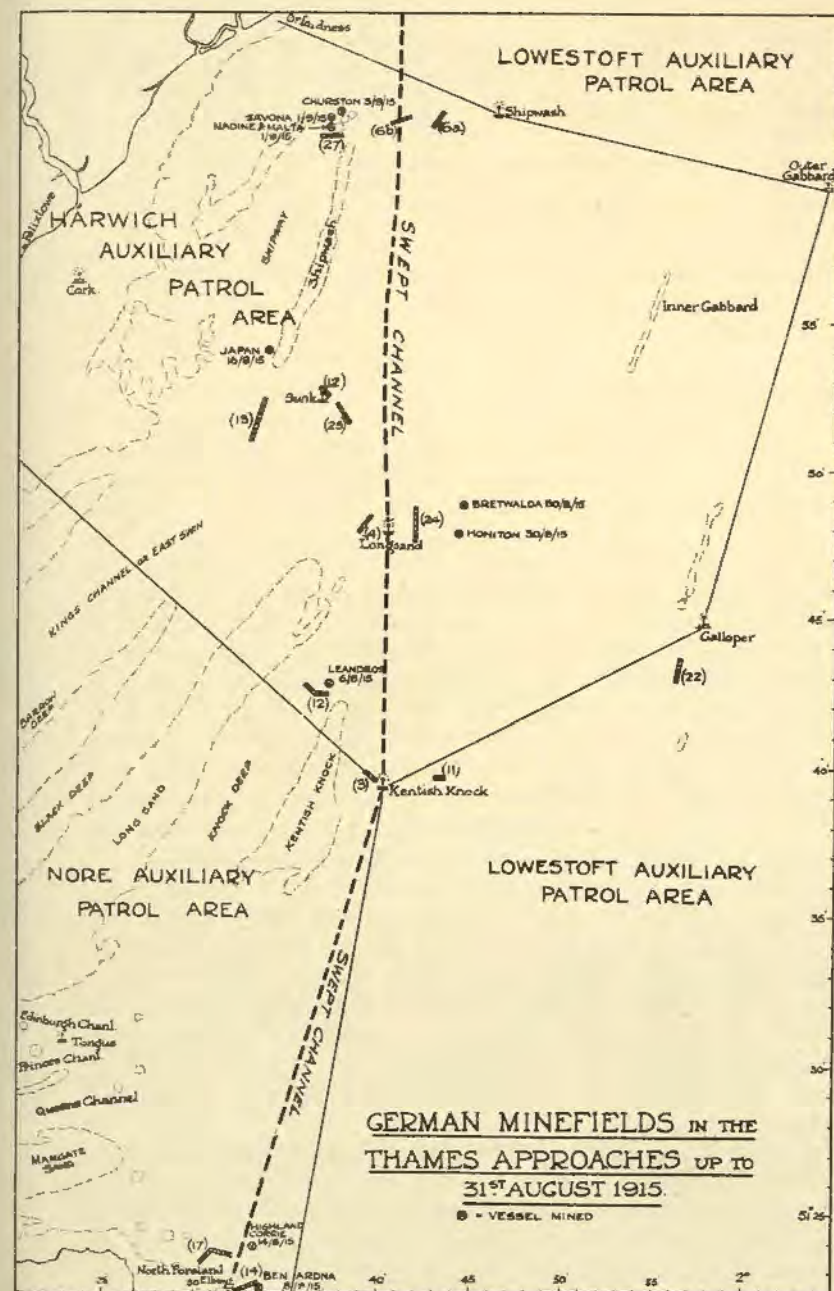
Minefields Laid by "U.C." Boats.

No.	Date.	Position.	Boat.	A.P. Area.
1	May 31	S. Foreland	<i>U.C.11</i>	Dover.
2	June 8	Sunk L.V.	<i>U.C.11</i>	Yarmouth.
3	June 30	Kentish Knock L.V.	<i>U.C.1</i>	Yarmouth.
3a	July 2	Stanford Channel	<i>U.C.2</i>	Yarmouth.
4	July 5	Longsand L.V.	<i>U.C.3</i>	Yarmouth.
5	July 10	S. Goodwin L.V.	<i>U.C.11</i>	Dover.
6a & b	July 11	W. of Shipwash L.V.	<i>U.C.1</i>	Yarmouth.
7a & b	July 11	Calais	<i>U.C.3</i>	French.
8	July 17	Dyck L.V.	<i>U.C.3</i>	French.
9	July 27	Gull L.V.	<i>U.C.1</i>	Dover.
10	July 31	Gull Buoy	<i>U.C.1</i> or 3	Dover.
11 & 12	August 3	Kentish Knock	<i>U.C.5</i>	Yarmouth.
14	August 4	Elbow Buoy	<i>U.C.1</i>	Nore.
13	August 5	W. of Sunk L.V.	<i>U.C.6</i>	Yarmouth.
15a & b	August 12	Aldborough Ridge	?	Yarmouth.
16a	August 12	Corton	<i>W.C.5</i>	Yarmouth.
166	August 12	Stanford Channel	<i>PC/C.5</i>	Yarmouth.
17	P	NW of Elbow Buoy	<i>U.C.1</i>	Nore.
18	August 18	Dunkirk	<i>U.C.1</i>	French.

¹ M. 06795/15, etc., titled *Board of Trade*, 5.11.15.

² *Churston* papers and report of A.M.S. titled *Admiralty*, 3 September 1915.

³ Field 27, 12 mines extending 600 metres in direction 270° from 52° 1' 2" N, 1° 38' V E.



Minefields Laid by "U.C." Boats—continued.

No.	Date.	Position.	Boat.	A.P. Area.
19a & b	August 20	Calais	U.C.3	French.
20	August 21	Boulogne	U.C.5	French.
21a & b	August 21	Cockle L.V.....	?U.C.6	Yarmouth.
22	August 22	Galloper L.V. .. .	U.C.7	Yarmouth.
23	August 25	W Gull Buoy .. .	U.C.1	Dover.
24	August 27	Longsand L.V. .. .	U.C.5	Yarmouth.
25	August 28	Sunk L.V.....	U.C.3	Yarmouth.
26	August 28	N Aldborough Napes	?U.C.6	Yarmouth.
27	August 30	NE Shipwash Buoy..	U.C.7	Yarmouth.

To deal with the mines the Nore Area had 22 minesweepers in August, Dover had 10 trawler sweepers and 6 paddlers, while the Yarmouth area had the East Coast Minesweeping Service consisting of 76 minesweepers based on Lowestoft. Valuable help was rendered by the six paddlers based on the Humber which for the greater part of the month operated in the Lowestoft area and acted from Harwich. For the other parts of the coast not immediately threatened by the U.C. boats, there were 32 minesweepers in the Humber area, 75 from the Tyne to the Shetlands, and 43 on the south and west coasts.

Only the two fields off the Elbow Buoy were actually in the Nore area. They were swept by the Dover Force which included in its daily routine three sweeps: (a) from the Gull Light Vessel up to and round the Elbow Buoy, (b) between the Folkestone Gate and the South Goodwin, (c) along the cross-channel route from Folkestone to the Varne. The Lowestoft service swept daily the whole of the War Channel and the several outlets into the North Sea. It has been seen that the activity of the minesweepers resulted in the discovery of the minefields in most cases before any merchant vessels had been destroyed.

The estuary of the Thames between the North Foreland and the Naze had not been entered; the two fields at the Elbow Buoy are outside the estuary though within the Nore area. The immunity enjoyed by the Thames is difficult to explain; there was a constant stream of merchant ships passing along one or two channels in which traffic was concentrated in consequence of orders closing the others to navigation. The Queen's and Prince's Channels between the Edinburgh Channel and the Kent coast, and Barrow Deep had been closed by moored nets in February 1915 the Middle Deep and East Swin were blocked by permanent obstructions in which the gates were guarded and through which merchant vessels were not allowed to pass. Thus only the Black Deep and Edinburgh Channel were open to commercial navigation.²

The drifters based on Birchington, now 30 in number, maintained a drift net barrage between the South Knock Buoy and the North Goodwin Light Vessel, and between the Sunk and Longsand Light Vessels. In other districts drift nets do not seem to have prevented the U.C. boats from getting into the areas

¹ M. 01326/15.

² C.S.D. Reports; M. 05644/15.

supposedly guarded by them. Nor did the drift nets catch the submarines; the only *U.C.* boat known to be lost up to the end of August was *U.C.2*, rammed by accident when submerged in the War Channel.

Altogether 312 mines had been laid by the submarines. They had blown up 13 merchant vessels, of which four were Scandinavian. Several minesweepers and patrol vessels had been destroyed. This result had been obtained by a series of voyages of which the hardship is difficult to exaggerate. To navigate among the shoals and swirls of the East Coast of England in a *U.C.* boat whose maximum speed was 61 knots on the surface, and less below it, seems in itself sufficiently difficult; but, in addition to that, to cross continually waters known to be mined and to penetrate through a patrol keenly alert and ready with nets, guns and bombs, calls for a special degree of courage. Yet, in spite of all the opposition and danger they knew they could expect, the *U.C.* boats had fouled with their mines all the parts of the swept channel within their reach; and even in Boulogne Harbour itself they had destroyed some ships.

Unlike the *U.B.* boats, whose operations ceased in September, the *U.C.* boats continued to show an increasing boldness and activity throughout the remainder of the year 1915. They were, in fact, the principal means by which Germany carried on the war in Home Waters, apart from an attempt to injure the Grand Fleet carried out in the early part of August.

CHAPTER VIII.

THE LAST CRUISE OF THE GERMAN AUXILIARY *METEOR*, AUGUST 6-10.

67. ~~The increasing use of Cromarty as a Fleet Base. Since~~
February it had been the custom for one battle squadron and one cruiser squadron to go for a short period to Cromarty to give opportunities for rest and recreation to the men.¹ At the beginning of August the 2nd Battle Squadron and the 1st Cruiser Squadron were at Cromarty; the Commander-in-Chief also was there in the *Iron Duke*.

He took the opportunity to carry out target practice in Moray Firth—a new departure, the practice hitherto having been limited to firing either at a rock or at a small towed target to the northward of the Shetlands. Both these were highly unsatisfactory methods, and did not enable the gunnery efficiency of ships to be either tested or greatly improved.²

¹ *Home Waters*, Vol. IV, Section 63.

² Jellicoe: *The Grand Fleet*, p. 236.

Admiral Jellicoe now decided to risk sending ships out from Cromarty to fire at a large target of the pattern used in peace practices; it was towed across the Moray Firth, the ships firing and the towing vessels being protected from submarine attack by a screen of all the available destroyers, sloops and gunboats to the number of about 25 vessels. Another advantage of carrying out practices in Moray Firth was that less coal was consumed, a matter of special consideration at the time, since the miners of South Wales had been "on strike" since July 18. On this occasion, the morning of August 2, the ships reached their firing station about 40 minutes after leaving Invergordon, so that the practices took place in Cromarty Firth.² That evening the 2nd Battle Squadron, the *Iron Duke*, and the 1st Cruiser Squadron proceeded for Scapa, their place at Invergordon being taken by the 4th Battle Squadron and the 2nd Cruiser Squadron. The destroyers and small craft which had been screening during the practices also returned to Scapa; the *Faulknor* and two divisions of the 4th Flotilla came with the 4th Battle Squadron and remained at Cromarty.

68. **Patrols in the Moray Firth.**—The presence of Grand Fleet squadrons at Cromarty made the patrols of the Moray Firth of special importance. Under Admiral Pears, Commanding the Cromarty base, were four auxiliary patrol units, each of six trawlers and an armed yacht, six net drifters and 18 trawler minesweepers, in addition to the trawlers guarding the boom defence which stretched in two lines across the entrance between the North and South Sutors. Besides these he had four old destroyers for the extended defence of the port. The principle of keeping the 4th Destroyer Flotilla at Cromarty had been partially abandoned in favour of stationing half of it at Scapa, and at the moment the only Grand Fleet destroyers at the Moray Firth base were the eight brought by the *Faulknor*.

Up to August 7 the patrols were distributed on three lines across the Firth.³ The outermost line, 55 miles long, between Wick and Kinnaird Head, was maintained by such of the old destroyers as were available, assisted by one or two of the 4th Flotilla; on the next line, between Lybster and Banff, 45 miles long, one auxiliary patrol unit was maintained day and night; another unit patrolled the inner line, 25 miles, from Helmsdale to Lossiemouth, also day and night. The net drifters and a third auxiliary patrol unit covered the 12 miles between Tarbet Ness and Findhorn day and night. Thus any hostile vessel hoping to penetrate as far as the Sutors would have to pass through four lines of patrol.⁴

¹ A. 58.

² The arrangements for the firing and the anti-submarine screen are in G.O. and M. Various, H.S.A. 222, pp. 120-126.

³ See Appendix B.

⁴ Moray Firth A.P. Reports, H.S. 139, pp. 108-116.

On August 7 a slight alteration was made. The outermost patrol line became that from Noss Head to Rosehearty; at night the destroyers were to close to the southward taking three beats—the southernmost from Rosehearty to 13 miles towards Noss Head, the middle 13 to 26 miles from Rosehearty, and the northern section 26 to 39 miles from Rosehearty.

Further out to the north-east was a patrol of Scapa destroyers; these steered south-east from the Pentland Firth for 60 miles out to about 58.20 N, 1.10 W, from 9 p.m. to midnight, and then back again.¹

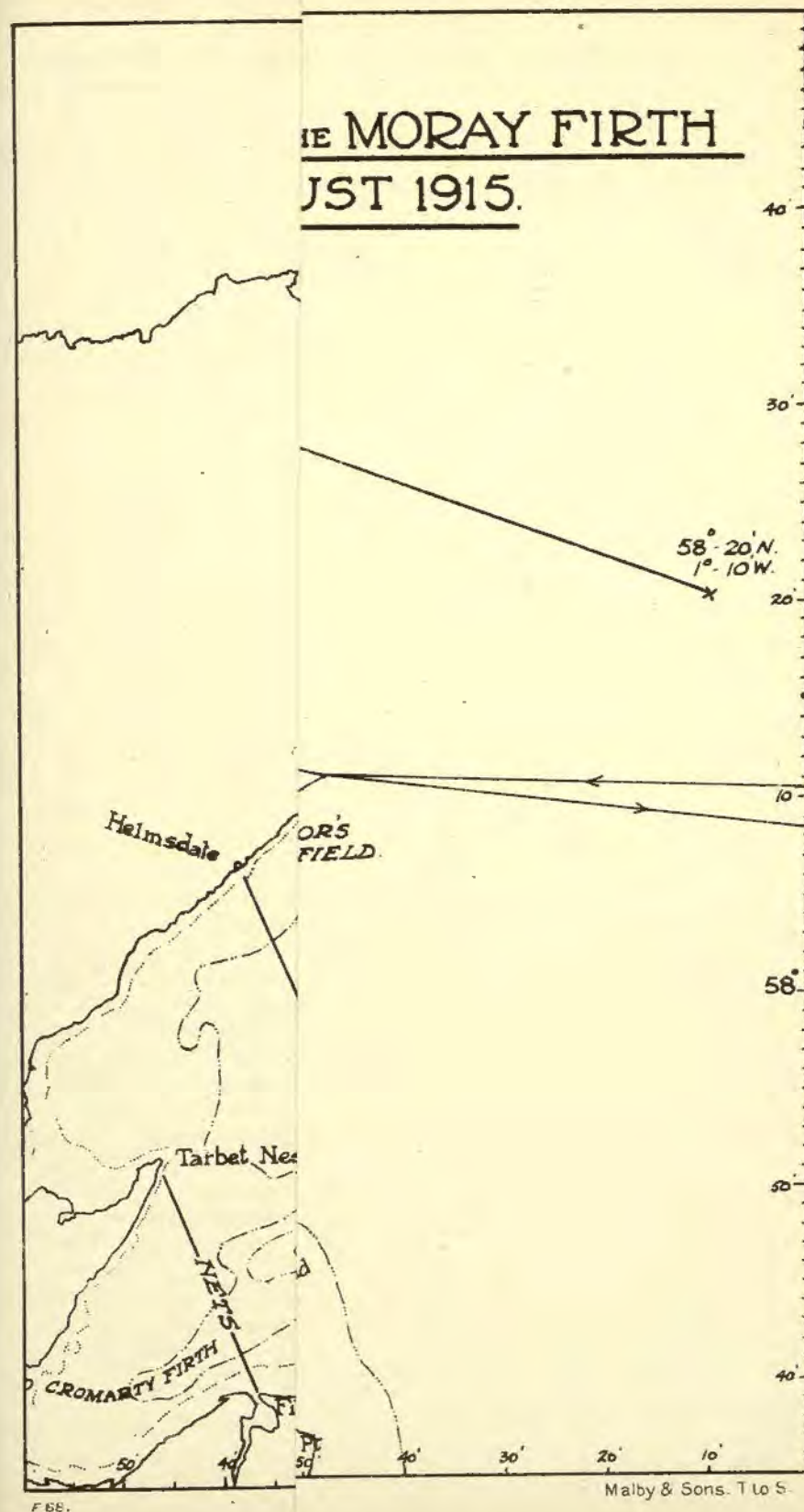
69. ~~Decoy Cruise of a Dummy Battleship.~~ Since early July no submarine had been seen for certain on the track used by Grand Fleet ships from Scapa to Cromarty or Rosyth. Yet there was every probability that some of the submarines known to be in the North Sea would be found there; and a special form of decoy was put into effect. For some months the dummy battleships—merchant vessels with false superstructures designed to give the silhouettes of dreadnoughts or battle cruisers—had been at Scapa or Loch Ewe, and so far no one had succeeded in devising any practical use for them. Now it was proposed to send one of them on a voyage from Scapa to the Forth to entice submarine attack, which it was hoped would lead to the destruction of the attacker by the accompanying escort of destroyers and armed trawlers.

As at first arranged, the dummy was to be anchored just inside the outer net of the Forth defence between Inchcolm and Oxcars, the idea being that submarines would be tempted to try and torpedo her through the net. Admiral Lowry, commanding at Rosyth, did not welcome this part of the plan; his policy had been to draw submarines away from the Forth rather than entice them in; and, on his strong representations, that part of the plan was abandoned, and the final scheme was for the dummy to cruise to the Forth and back again, without waiting there.

She left Scapa at 4.40 a.m., August 3, escorted by two destroyers and two armed trawlers fitted with the modified sweep. To add to the attractiveness of the decoy she was given a list of 5 deg. so that the whole party should present the appearance of a damaged battleship under escort proceeding to the Forth for repairs. The escort towed their sweeps, the trawlers being stationed 6 points on each bow of the dummy, with the destroyers outside the trawlers.

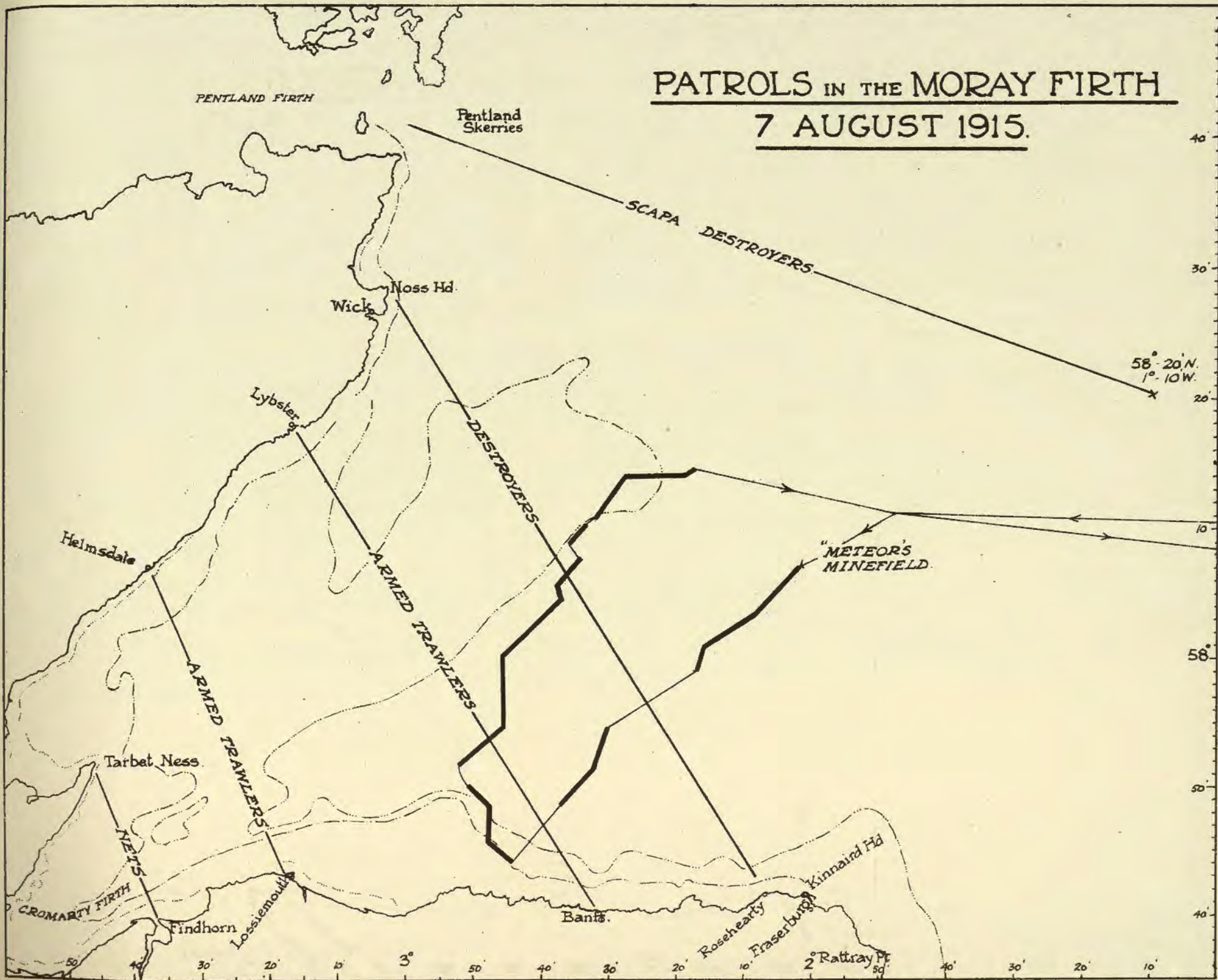
In this realistic formation the force passed 30 miles off Kinnaird Head and rounded May Island in the forenoon of August 4; it was back at Scapa at 11.40 a.m. on the 5th. The cruise had produced no attack; indeed, had there been one the issue would probably have been in favour of the aggressor, for one of the trawlers was unable to make more than 5½ knots when

¹ M. 06255/15.



PATROLS IN THE MORAY FIRTH

7 AUGUST 1915.



towing her sweep in smooth water and only 8½ knots without it. The destroyers were consequently unable to remain within the limits of a favourable position for dealing with a submarine attack.¹ The experiment had given no particular result and was not repeated.

One reason why the decoy was not attacked was that no submarine was anywhere near her track at the time she passed. But a few days after she was safe again at Scapa, submarine operations began again off Kinnaird Head.

70. A Submarine off Kinnaird Head, August 8.—Shortly after 8 a.m. on Sunday, August 8, the lookouts at Rosehearty near Kinnaird Head observed a steamer being attacked by a submarine 12 miles to the northward of their station.

Admiral Jellicoe was again at Cromarty. The Prime Minister and Chancellor of the Exchequer had come up to Scotland specially to confer with him, and to save them time he moved from Scapa to Cromarty in the *Iron Duke* for the duration of their visit. At the time of this incident they were breakfasting with him on board the *Iron Duke*. Learning of the presence of this submarine just outside the limit of the Moray Firth patrol he ordered the Admiral, Peterhead, to concentrate his patrols on her and sent out four destroyers of the 4th Flotilla, followed later by three others, to make an active search for the enemy.²

The steamer was the *Glenravel*, on passage from Belfast to Leith with private cargo. The submarine kept up a continuous fire on her from 7.30 a.m. onwards till the ship's master, seeing further flight to be useless, ordered his ship to be abandoned. The submarine then went alongside her and sank her by bombs. No patrols were near and the crew were taken over by the Fraserburgh lifeboat.³

There was, however, a destroyer on the outer patrol. This was the *Christopher*, which at 8.58 a.m. was 22 miles from Noss Head steaming towards the promontory. At that moment she took in a signal from Cromarty reporting the submarine to be 12 miles NNE of Rosehearty; she turned in that direction and sighted the *Glenravel* sinking. Right ahead was another steamer which turned out to be the Swedish *Malmland*. On approaching her the *Christopher* sighted the submarine submerging and opened fire, but the enemy was still outside her range. As the destroyer passed the steamer, two explosions occurred, and in three minutes the *Malmland* sank.

This second attack by the submarine had been seen by Peterhead Coastguard Station only 8 miles to the south-westward. The Peterhead trawlers and net drifters were already on their way to try and intercept the enemy. One of the trawlers sighted the

¹ The cruise, called Operation L, is described in G.F.S.P., Vol. LXIV; H.S.A. 146, pp. 172-193.

² Grand Fleet, In and Out Telegrams, H.S.A. 17 and 66; G.F.N. August 1915.

³ *Glenravel* papers titled M. 42277/15.

submarine's conning tower at 11.35 a.m. and fired; it was thought in the trawler that one hit was made before the enemy disappeared.

The search continued without success for several hours till at 4.45 p.m. the Commander-in-Chief recalled all the destroyers except the *Lynx* and *Midge*. A fresh incident had occurred and they were required for a different service.¹

71. Discovery of a Minefield in Moray Firth.—Shortly after the Commander-in-Chief had given orders for the destroyers to raise steam in order to search for the submarine near Rosehearty, it was reported to him that two horned mines had been found by a minesweeper some 12 miles to the northward of Banff.²

He had ordered a search for the submarine on the Grand Fleet method, each destroyer to work an area 20 miles long by 10 miles broad east of the Helmsdale-Elgin line between the parallel of Helmsdale and the coast; but now he gave instructions that they were to keep more than 20 miles from Banff.

Later reports of drifting mines seen along the coast and in the Firth came in, and at 1 p.m. the *Lynx* observed an explosion. At Cromarty it was thought at first that the mines had been laid by a submarine, but in view of the area that had been found to be mined the Commander-in-Chief now began to fear that the minefield extended across the Firth. He ordered the destroyers working inside the Lybster-Banff line not to cross it, and at 4.40 recalled all except the two who had the turn for the outer patrol that night.³

By 7.30 p.m. the limits of the new minefield were fixed as between 57.50 N and 58.5 N, 2.15 W and 2.45 W. The trawler minesweepers worked in this area; the destroyers were also fitted for minesweeping and it was to reinforce them that they had been recalled from their chase of the submarine.

The fleet sweepers—that is, the sloops and gunboats—were taking part in the hunt for submarines passing north of the Shetlands.⁴ The Commander-in-Chief now recalled them to Scapa to fuel and then sweep the fleet concentration routes as far as 57.40 N, longitude 0°; the destroyers fitted for minesweeping to clear a passage along the north shore of Moray Firth from Ness Head to Tarbet Ness; the 4th Flotilla destroyers to sweep between 2.0 W and 2.50 W south of latitude 57.50 N; while the local Cromarty minesweeping trawlers worked to the southward of Smith's Bank.⁵

The *Agincourt*, which after refitting at Portsmouth was on her way to the base, he ordered to stop at Scapa instead of

¹ Reports from *Christopher* and Admiral, Peterhead, in H.S. 159, pp. 142 to 157.

² This information reached the C.-in-C. at 10 a.m. and the Admiralty at 10.37 a.m. G.F.N. and H.S. 144, pp. 235, 267.

³ Signals in N.L. 26264/15: Court of Enquiry on *Lynx*.

⁴ See Section 41.

⁵ G.F.N.

rejoining the 4th Battle Squadron at Cromarty. A warning was sent out for all ships entering Moray Firth to keep within 5 miles of the coast.¹

Before long mines were discovered as far north as Smith's Bank in the middle of the Forth; and the dangerous area was manifestly a large one. The discovery that the exit from the fleet base at Cromarty had been mined suggested to the Commander-in-Chief that the other bases might similarly have been mined as part of an enemy operation. He had made arrangements for sweeping the passage from Scapa and Cromarty out to the concentration position of the Fleet, and he suggested to the Admiralty that any fast sweepers available should be sent to sweep the route out from the Forth. The Humber paddle-sweepers were already at sea clearing one of the U.C. minefields off the Thames, and the only other fast sweepers were six paddle-sweepers based on the Clyde, which since the discovery of the Tory Island minefield had been employed in routine sweeping of the route between the Hebrides and the North Channel used by the 10th Cruiser Squadron. These Clyde sweepers were at first ordered to Rosyth; but when the extent of the Moray Firth minefield was realised four of them were despatched to sweep from Cromarty instead.²

No sooner were these arrangements complete than a vessel was sunk by the mines. The outer patrol on the Noss Head—Rosehearty line had been maintained on the night of the 8th by the *Lynx* and *Midge*, which were left out when the remainder of the destroyers were recalled from their submarine hunt. At 6.10 a.m., August 9, the *Lynx* struck a mine in 58.7 N, 2.38 W, and sank with the loss of all but 24 survivors. These were adrift for three hours till they were sighted and picked up by a passing steamer. A Court of Enquiry found that the Captain of the *Lynx*³ was in possession of all available information concerning the presence and position of mines in the Moray Firth, and that no blame was attributable to anyone for her loss.⁴

It only emphasised the danger to which the fleet was exposed; and Admiral Jellicoe did not consider heavy ships should go out except in a great emergency until a channel could be swept.⁵ There seemed to be mines in widely separated areas. One of the Scapa destroyers sweeping along the northern shore of Moray Firth reported a "probable mine" not far from Lybstei; and undoubted mines had been found in several places between Rosehearty and Smith's Bank. So far, none had been discovered off Scapa or Rosyth.

¹ H.S. 144, p. 386.

² A. 115, 116. H.S. 144, pp. 390, 429, 482, 539, 580, 612.

³ Commander John F. H. Cole, R.N.

⁴ G.F.S.P., H.S.A. 121; N.L. 26264/15: Loss of *Lynx*, Report of Court of Enquiry.

⁵ Tel. 609 from C.-in-C., H.F., to Admiralty, sent 9.20 a.m., 10 August 1915.

An additional disturbing circumstance was that at 1.15 p.m. on the 8th, one of the Peterhead trawlers had found in 58.20 N, 1.30 W, well out to sea from the Moray Firth, a quantity of wreckage and four empty boats belonging to the armed boarding steamer *Ramsey*, which had been patrolling east of Pentland Firth. No survivors and no bodies were found and there was nothing to show how the destruction had been effected; but that evening the Commander-in-Chief received from the Admiralty the unexpected news that the *Ramsey* had been sunk by the German armed minelayer *Meteor*.¹

72. German Decision to Use the *Meteor* for another Minelaying Expedition.—The *Meteor* had already in June successfully mined the entrance to the White Sea, an operation intended more as a hit at Russia and her import of munitions than as a blow at England's navy. But the Admiralstab had long been anxious to mine one of the bases of the Grand Fleet, and concentrated their attention on Cromarty where their agents placed important detachments of the fleet. In the course of the summer they definitely decided to attempt the laying of a minefield there and detailed for the operation the *Meteor* which, being a British ship,² might have some chance of lulling the suspicions of the patrols. She had disadvantages. She was so slow that her captain, Commander von Knorr, looked upon the enterprise almost as a forlorn hope. He demanded and obtained a certain amount of reconstruction to enable the mines to be concealed below decks and was given not only an additional gun astern to repel destroyers, but what was to prove a doubtful blessing in the shape of a wireless installation powerful enough to make signals readable at long distances. In a letter he stated that he could only hope for success "if he secured the co-operation of the fleet to such an extent that the operation would not from the beginning bear the stamp of complete futility; he expected the co-operation of a group of barrier breakers, of a submarine to go ahead of him, sufficient reconnaissance from the air, and the exclusive services of the submarines operating off the Scottish coast."³

The enterprise was originally intended to be carried out at the mid-July new moon, but the *Meteor* was not then ready. It had to be postponed to the new moon of August 8, which had in the German eyes the additional advantage of occurring on a Saturday night, when, as was generally believed in Berlin, most Englishmen were sure to be drunk.

Preliminary reconnaissance of the patrols in Moray Firth was carried out by *E725*, which between July 2 and 8 cruised into the Firth as far as the Tarbet Ness-Findhorn line of nets. She reported

¹ Tel. 719 to C.-in-C., H.F., sent 8.40 p.m., 8 August 1915.

² She was the s.s. *Vienna* of the Leith, Hull and Hamburg Line, 1,912 tons, speed 14 knots. She was seized at Hamburg on the outbreak of war. (M. 06255/15.)

³ *Nordsee* IV, 244, 245.

a strong outer patrol between Noss Head and Kinnaird Head and a trawler patrol 10 miles inside it, with torpedo boats and trawlers cruising between the lines and further in towards Cromarty.

Commander von Knorr decided to start on August 6, choosing that date, as he said, "because of the approaching new moon and in order to take advantage of the effect Saturday night is reported to have upon the English patrol forces."¹

He was given the submarine *U.17* and the airship *S.L.3* as scouts. He drew up a track chart for them on which he marked the positions they were to occupy every four hours relative to the *Meteor*. *E7.17* proceeded in the afternoon of August 5, followed by the *Meteor* at 3 a.m., August 6. The other scout, the airship, rose at 7 a.m. From the first the weather was unfavourable for her; there was a rising south-westerly wind with a threat of rain. She had to turn back when 45 miles west of Horn Reefs and her part of the plan so carefully drawn up by Commander von Knorr was omitted.

73. Despatch of Light Cruisers to intercept the "Meteor."—Among the German signals intercepted and decoded on August 5 was one for the outer lights of the *Jade* to be lighted from 3 a.m. to 4.30 a.m. next morning for the passage outward of a vessel named in the signal as *Meteor*.² This was the name of the auxiliary armed vessel which had come out in June and was now thought at the Admiralty to be responsible for the White Sea minefield.

Interpreting this information to mean that the *Meteor* was off again on a minelaying expedition, they decided to make attempts to intercept her. At 9.23 a.m., August 6, they warned Admiral Jellicoe that she had left the *Jade* at 4 a.m. possibly to take mines once more to the White Sea; he should watch for her off the Norway coast with something more powerful than armed trawlers, which were no match for her.³ The Commander-in-Chief had not known that the White Sea minefield was laid by the *Meteor* and, in fact, knew very little about her. He asked for a description of her, eliciting in response the information that she was "believed to have laid mines in the entrance to the White Sea in June. Description: 1,912 tons, 14 knots speed, two masts, one funnel, two searchlights on bridge, straight bow, two torpedo tubes on fore-castle. She is reported to carry guns of about 4 in. by a neutral steamer which passed her, number not known."⁴ Another fact that was not known was that she had her armament and warlike preparations hidden after the manner of our own decoy ships.

The Commander-in-Chief decided to send light cruisers to intercept her, and detailed for the operation the only light cruisers he had at Scapa: *Calliope*, *Phaeton*, *Carysfort* of the 4th Light

¹ *Nordsee* IV, p. 245.

² Signal 7414, 9.2 p.m., August 5, in I.D.H.S. Current Log.

³ A. 107.

⁴ H.S. 143, p. 1,113.

Cruiser Squadron, under Commodore Le Mesurier. They left Scapa at 6 p.m., August 6, to patrol from 60° N, 2° E, to the Norwegian coast.¹ They were to leave this patrol in time to be back at Scapa by midnight, August 8-9. The only British men-of-war normally off the Norwegian coast were those of the 10th Cruiser Squadron on "G" patrol.² These were warned to be on the lookout for the *Meteor*.³

74. **The Meteor reports Progress.**—It will be remembered that Commander von Knorr had insisted upon and obtained a powerful wireless plant. His first use of it appears to have been at 4.45 p.m., August 8; only the latter part of his signal was taken in by us, and that was not properly understood till he repeated it at 6.6 p.m. He then stated that he had laid his mines, had sunk the *Ramsey* in 58.15 N, 1.30 W, had saved the crew, and was now on the return to Wilhelmshaven. The decode reached the Chief of Staff soon after 7.15 p.m.⁴

There was still time to intercept the raider, and two of the Rosyth light cruiser squadrons and all the light cruisers with Commodore (T) were ordered to raise steam at once. By 9 p.m. the executive orders were despatched. The Commodore was to take all his available light cruisers and steer towards Horn Reefs and intercept the *Meteor*; while the two Rosyth squadrons were to sweep along her probable track and overtake her. Both squadrons were informed that on board the *Meteor* were survivors from the *Ramsey*, which she had sunk, and that the *Meteor's* 6 p.m. position was 58.20 N, 0.5 W.⁵

By this time the 4th Light Cruiser Squadron was returning from its cruise off the Norwegian coast. At 12.5 a.m. on the 9th, when the squadron was still 80 miles from Scapa, the Commander-in-Chief directed it to Horn Reefs at 20 knots, shortly afterwards giving Commodore Le Mesurier the intelligence he had received respecting the *Meteor's* 6 p.m. position and the dispositions to intercept her, and ordering him to proceed as fast as his fuel permitted.

Nothing of interest had marked the cruise to Norway; but at 8.10 p.m. on the 8th the squadron passed the derelict of the *Geiranger*, which, though scuttled or torpedoed, was still afloat in 59.28 N, 0.51 E.⁶

Before long Commander von Knorr made another signal. It was taken in by several listening stations and forwarded to the Admiralty, where it was interpreted as follows: "Southern

¹ Their orders are in G.F.O. and Mr Various, H.S.S.A. 222, pp. 1522.

² See Monograph 19: *The 10th Cruiser Squadron*.

³ Signal 10.11 a.m., August 8, C-in-C. to R.A. 10th C.S., in H.S.S.A. 666, G.F. *Out Telegrams*.

⁴ I.D.H.S. Vols. 2, 325 and 365.

⁵ A. 111 to 114. It is not clear from the records on what evidence the Chief of Staff arrived at this 6 p.m. position.

⁶ See Section 42. She had been torpedoed by U.24 on the way out to the South-west Approach.

minefield laid according to plan, northern not possible because of the watch, therefore sowed middle of bay and steamer track favourably with mines. Although 72,059 (ship's name unknown) was observed, her character was not recognised; she laid mines unnoticed. Auxiliary cruiser crew of 98 perished, except 40 men and four officers, among them five severely wounded." This report was brought to the Chief of Staff about midnight.¹ Admiral Jellicoe had already reported a minefield between 58.5 and 57.50 N, and between 2.30 W and 2.37 W; he was now informed that in addition to laying this minefield the *Meteor* had mined a steamer track, possibly that between Rattray Head and Pentland Firth.²

75. **The Hunt for the "Meteor."**—By this time the three hunting squadrons were well on their way. Commodore Le Mesurier, in obedience to the Commander-in-Chief's signals,³ shaped course at first for Horn Reefs. But on thinking the problem over, he came to the conclusion that he could scarcely get to Horn Reefs before the raider and that he ran a better chance of catching her if he were to sweep down the Danish coast, where he might meet her if she had been headed off towards the Baltic by the other squadrons. He therefore at 2.15 a.m. steered for Hanstholm at 25 knots. Unfortunately the *Phaeton*, whose design did not permit a large stowage of fuel, had only 334 tons remaining and could not participate in the sweep; and Commodore Le Mesurier proceeded for the Skagerrack with the *Calliope* and *Carysfort* only. His use of his discretion in disregarding the letter of his instructions was justified when at 8.32 a.m. he received by wireless definite orders to proceed to the entrance of the Skagerrack. By the method then in use these orders were not addressed direct to him, but in order to confuse the enemy's interception were made as "Cyclops for Rear-Admiral, Scapa," the words "For Senior Officer, 4th Light Cruiser Squadron" appearing in the body of the message.⁴

The two squadrons from Rosyth left there at 12.40 a.m., August 9. On the direct route from the Forth to Heligoland Bight intervened the prohibited area enclosing the Dogger Bank minefield, and also the large square known to the Grand Fleet as North Sea Area No. 1, which, though not prohibited, was considered inadvisable for ships to cross. Commodore Goodenough of the 2nd Light Cruiser Squadron, being senior to Commodore Alexander Sinclair of the 1st Light Cruiser Squadron, took command of the sweep. The 2nd Squadron proceeded on an east-north-easterly course to the line joining Horn Reefs to the

¹ No. 7,509, in I.D.H.S. Current Log.

² A. 1177.

³ August 9. 0005. Steer for Horn Reefs at 20 knots; 0030. *Meteor* was in lat. 58.20 N, long. 0.5 W, at 6 p.m.; probably returning Horn Reefs. Intercept. Go as fast as fuel permits. Two Rosyth squadrons and Commodore (T) are co-operating. Keep wireless silence. Return to base if not sighted before arriving lat. 56° N.

⁴ M. 06420/155. "German Mine-layer *Meteor*."

position ascribed to the *Meteor* by the Admiralty, and then swept along the line towards the Reefs in line abreast. The 1st Squadron proceeded for the Reefs on the most direct course the Dogger Bank minefield would permit.

Converging on Horn Reefs from the southward was Commodore Tyrwhitt in the *Arethusa*, with the *Conquest*, *Cleopatra*, *Aurora* and *Undaunted*. He left Harwich at 11.30 p.m., August 8 and, going out by the new K.K. channel through the minefield, shaped course for Horn Reefs, forming at daylight in line abreast at 3 cables apart. At 7.45 a.m., when he was in 54.3 N, 5° E, a German seaplane appeared from the west flying nearly over the squadron; it was fired at without result. Shortly afterwards the airship *L.7* appeared, and, together with another of the Parseval type, remained in touch till 4 p.m. though never approaching within 10 miles.²

76. **Commander Tyrwhitt off Horn Reefs.** Commander von Knorr had once more used his powerful wireless, to announce that he had burned a Danish barque, the *Jason*, and that at 4 a.m. he was in 55.45 N, 5.5 E, course SE-NE, speed 13 knots, and he asked that a hospital ship might be sent out to receive the British wounded. This signal he made at 5.50 a.m. An hour later it had been deciphered in the Admiralty.³

No action was taken on it for more than two hours; but at 9.20 a.m. a signal was made to Commodore Tyrwhitt giving the *Meteor's* 4 a.m. position, course and speed.⁴ The Commodore took in the intelligence, which was made to him by the indirect method known as "F procedure," at 9.54 a.m. He could not make it agree with the position given for 6 p.m. the previous day, the full speed of the German vessel being known to be 14 knots; he therefore asked for a repetition, and received at 10 a.m. the same figures. The position was about 50 miles to the NNW of where he was at 10 a.m., and if correct the *Meteor* should now be to the south-eastward of him.

It was the usual procedure for German vessels which had been out on distant enterprises, to announce their position and course when approaching the limits of the Bight, probably in order that they might be informed of any new minefields or dangers discovered since their departure. Commodore Tyrwhitt may not have known this; at any rate he attached little importance to this 4 a.m. position. Finding that by her supposed speed of 14 knots the *Meteor* could not have covered the distance from the Admiralty's position for 6 p.m. the previous night, he had to

¹ For position of K.K. Channel see Section 84.

² M. 06161/15; Harwich Force, Packss, No. 00887, in HISSA, 291, pp. 555.

³ Signal 7516 in I.D. H.S.S. Vol. 8655. Current Log.

⁴ A. 118. In this signal the position is given as 55.50N, 5.33E. The discrepancy is due to the fact that all positions in German signals were coded by a chart of 6 mile squares. The Admiralty did not always take the centre of the square when transmitting positions; in this case the centre of the square is, as given, 55.45N, 5.55E.

choose which he would accept. For some reason which he does not mention in his report he chose to consider the 6 p.m. position correct; he determined to disregard the 4 a.m. figures and to carry out his original plan. He continued his north-easterly course till noon, when, about 12 miles west of Horn Reefs Lightship, he spread his cruisers 10 miles apart on the course towards the Moray Firth, taking the centre line himself in the *Arethusa*. Half an hour later a steamer was sighted ahead and was closed by the *Arethusa* and *Cleopatra*. She appeared to be turning in a small circle; and as the light cruisers approached they could see that she was sinking by the stern. She was flying no colours. While the cruisers were still 2 miles off, at 1.7 p.m., she sank rapidly.

The *Cleopatra* a few minutes before had passed a Swedish lugger which apparently contained the crew of the sunken ship. Among them were men in British naval uniform, one a signalman; when asked, "What ship is that?" he signalled the word "*Ramsey*," whereupon the *Cleopatra* ordered the lugger to steer south-west. Just at this moment, 1.10 p.m., the *Undaunted* reported a submarine about 4 miles west of the wreck. Commodore Tyrwhitt, believing that the two Zeppelins which had been dogging him were working in co-operation with submarines, continued his north-westerly course for more than an hour. The Commodore, who perhaps thought the steamer had been sunk by the submarine,² now inquired the name of the steamer, receiving the reply "Name not visible but crew were of *Ramsey*." This surprised him, and he asked the *Cleopatra* further: "What made you think they were crew of *Ramsey*?"³

It was then that he learned from the *Cleopatra* that the men in the Swedish lugger were obviously English, that some of them were in British naval uniform and that a signalman among them had answered "*Ramsey*" when asked "What ship is that?" The *Cleopatra* had already asked him whether the *Ramsey's* crew ought to be left; and at 2.40 he turned back to rescue them. By 3.30 p.m. they were on board the ships of his squadron, and from them he learned for the first time that the sinking steamer seen at 1 o'clock was the very *Meteor* he had been sent out to intercept. This important news he signalled to the Admiralty by wireless at 4.38 p.m. in the words "*Meteor* has been sunk."⁴

¹ *Undaunted's* log has: 1.10, observed submarine NNW; 1.15, submarine dived; 1.20 a/c. N75W 25 knots; 1.45 a/c. N40W 22 knots; 1.50, 20 knots; 2.0 a/c. N75W; 2.15 a/c. S80W 22 knots; 2.23 a/c. S by W; 2.30 a/c. N70W, to examine steamer, s.s. *Memento*, Danish—to Aarhus; 2.40 a/c. S30E.

² This is an assumption. The *Arethusa's* signal logs are all missing, and the Commodore's report is very brief. T.S.D.D.

³ *Arethusa* to *Cleopatra* 2.15 and 2.25 p.m.; in *Cleopatra's* signal log 28888.

⁴ *Cleopatra* to Commodore (P), 1.53 p.m.; recorded in *Undaunted's* signal log 18735.

⁵ A. 1122.

77. The Admiralty learn of the Destruction of the "Meteor."

—Strangely enough, the Admiralty had known of the destruction of the *Meteor* several hours before the *Commodore*. Commander von Knorr, when informed by the Zeppelin *L.7* that British cruisers were approaching him, determined to sink his ship rather than risk an action, and when the *Cleopatra* appeared on the horizon he threw his code book overboard and speedily disembarked his crew and prisoners into a Swedish sailing vessel. He then opened the sea cocks; and as his last gesture made by wireless in plain German the signal to the Commander-in-Chief, High Sea Fleet, "Schiff wird versenkt."

This was intercepted by the Admiralty listening stations, and before 1 o'clock was handed to the Chief of Staff in the form "Meteor (Z.P.) to Flagship 12.40 p.m. Ship sunk."¹ Thus, while the *Cleopatra* was watching the unnamed vessel sink, the Admiralty were already aware, not only that she was sinking but also that it was the actual *Meteor* after which they had sent out four light cruiser squadrons.

The quest was over and the raider destroyed. They at once decided to recall the light cruisers. At 1.25 p.m. a signal was made to *Commodore (T)* by ordinary procedure, since it was no longer necessary to attempt to conceal the fact that he was at sea; it ordered him to return, making a detour to the north-westward, as submarines were out to intercept him. This latter fact they had learned from German signals. At the same time they recalled the 1st and 2nd Light Cruiser Squadrons.² These turned back as soon as they received the order,³ The signal to the 1st and 2nd Light Cruiser Squadrons to return was intercepted by *Commodore Le Mesurier*, who thereupon shaped course for Scapa in anticipation of a recall from the Commander-in-Chief.

But *Commodore Tyrwhitt* had the *Ramsey's* crew to rescue. He had not completed this till nearly 4 p.m. On his return journey he made, as ordered, a detour to the north-westward, passing north of the Dogger Bank minefield and reaching the coast by the Haisborough Channel. In the course of his cruise one German trawler, the *Mund*, had been captured and despatched to Newcastle in charge of a prize crew; another, the *Saturn P.G.78*, he ordered to be sunk after her crew had been made to abandon her; he did not pick them up as the sea was smooth and there were other vessels near.⁴

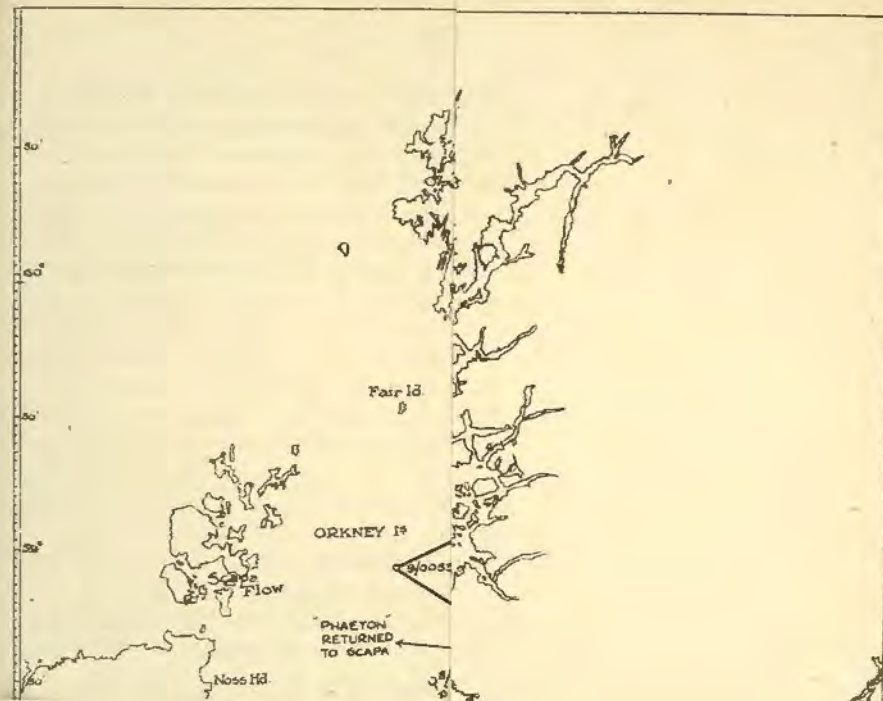
78. Report of the "Ramsey's" Survivors.—The vessel from which he took the *Ramsey's* survivors was not the one from which

¹ Signal 7547 in I.D.H.S. Records, Vol. 865. It bears the note, "Above was made *en clair* in German. B. N. 12.52 p.m." (B. N. are the initials of the decoding officer.)

² A. 119, 120.

³ *Southampton* does not record the receipt of this signal, but at 2.17 p.m. *Commodore Goodenough* gave the order for his squadron to steer N81W. (Signal Log No. 18672.)

⁴ M. 06161/15.



THE LAST CRUISE OF THE METEOR.

AREA PATROLLED
BY "CALLIOPE" "PHAETON"
& "CARYSPORT"
7/0400 TO 8/1600



SEE
INSET

they had signalled to him. The whole of the *Meteor* story is marked by improbable incidents of which what had taken place between the two appearances of the *Anethusa* is not the least curious. When Commodore Tyrwhitt steamed off to the north-west to elude the submarine reported by the *Undaunted*, there was a considerable dispute between the British prisoners and the Germans, who were all armed, as to whether or not they should obey the orders given to the vessel to steer south-west. For some reason or other the Germans did not take charge of the ship, and the British actually worked the helm. Owing to the dispute, Lieutenant Percy S. Atkins, R.N.R., the senior surviving British officer, proposed to Commander von Knorr that the British should change into a Norwegian lugger and leave the Germans to do as they thought fit. To this the German commander agreed. Now that the British were shifting to the Norwegian lugger it occurred to him that Lieutenant Atkins might require money, and he insisted that he should take £7, which, curiously enough was in English banknotes. The sum was returned later to Commander von Knorr, through the United States Embassy, with an acknowledgment of his great courtesy.¹

Indeed, the relations between the British and Germans on board the *Meteor* had been quite friendly, and in conversation Lieutenant Atkins had learned a good deal of the events of the *Meteor's* cruise. An officer told him that she had sighted three destroyers on the night of August 7, and remarked upon the poor lookout they must have been keeping; he also said she had laid 450 mines before coming across the *Ramsey*, and that she had sighted Fair Island. On approaching the Bight, Commander von Knorr had been informed by a Zeppelin that British cruisers were in the vicinity.

As regards the loss of his own ship, Lieutenant Atkins had to report that the *Ramsey* had left the Orkneys at 6 p.m., August 7, to patrol to the eastward. "At 4.30 a.m., August 8," his report² continues, "we sighted a vessel which appeared to be an ordinary merchant steamer, flying the Russian ensign, which vessel we steamed after with the intention of boarding. At 5.45 a.m. we closed on the vessel, which stopped on seeing our Commercial Code Signal (M.N.). We closed on the vessel to within about 80 yards, and were about to lower a boat when without the slightest warning she launched a torpedo and swept our decks with a machine gun, at the same time firing a 4-5-in. Q.F. gun from her poop into our engine room. As the torpedo left the tube the vessel hauled up the German ensign and hauled down the Russian one. All her guns and torpedo tubes were absolutely concealed. Our

¹ M. 06161, 06255/15; Harwich Force Packs, H.S.A. 291, p. 61; G.F.S.P., H.S.A. 146, p. 137. Possibly Commander von Knorr, anticipating his own capture, had provided himself with English money. T.S.D.D.

² M. 06161/15.

guns¹ were so placed that we could only fire one at a time, this gun being continually under fire, and the gun's crew all killed."

The Germans had well assimilated the lessons taught by our own decoy ships. The *Ramsey*, in fact, had been caught in a trap and the contest was soon ended; from the time she was first struck till the time she sank was only three minutes, and owing to the list she was able to get out only the two starboard boats. These had to pull out quickly from the side of the sinking ship and most of the crew took to the water. The *Meteor* succeeded in picking up 4 officers and 39 men before shaping course for Heligoland Bight.

Another interesting statement made to the British survivors by the *Meteor's* crew was that she had laid 450 mines 70 miles south-eastward from Pentland Firth on August 8. This the Commodore did not report till he was entering the Haisboiough Channel at 4.30 a.m., August 10. His signal reached the Admiralty at 6.15 a.m. and at 11.15 they instructed him to get as exact particulars as possible of the minefields for the benefit of the Commander-in-Chief. This instruction they marked urgent. He reached Harwich at 1.30 p.m., and at 2 p.m. replied that according to her crew the *Meteor* laid her last mine at 10 p.m.; reckoning from the course she was steering when sighted by the *Ramsey* she would then have been in 59.0 N, 1.56 W; but Lieutenant Atkins thought the mines had been laid between Fair Island and the Skerries, as they admitted having sighted Fair Island.²

79. The ~~The~~ *Meteor's* Visit to the Moray Firth. Before leaving Heligoland Bight, Commander von Knorr gave *U.17* a rendezvous 40 miles north of Kinnaird Head for 8 p.m., August 7. In her passage across the North Sea the *Meteor* saw nothing except a Dutch fishing fleet and *U.24*; reaching the rendezvous at 7.47 p.m., August 7, she found *U.17* waiting.

The programme before Commander von Knorr was an extensive one. The *Meteor* carried 374 mines, which were, if possible, to be laid in three areas all west of the meridian of Kinnaird Head (2° W). The plans provided for blocking the main warship tracks along the north and south coasts of Moray Firth, then for mining the middle of the Firth, and finally for fouling the steamer route between Pentland Firth and Peterhead. Knowing that he would have to penetrate deeply into the Firth in order to find on the precipitous south shore water sufficiently shallow for mining, and that he must cross the patrol lines observed by the reconnoitring submarine in June, he doubted whether the *Meteor* with her slow speed could lay all these mines in one night, since the dark hours lasted only from 9 p.m. to 3 a.m. He might have to spend two nights on the work, and he arranged to meet *U.17* at the same rendezvous next morning in case her services

¹ *Ramsey*: 1,443 tons, 17 knots full speed, two 12-pdr. 12-cwt. guns.

² H.S. 144, pp. 670, 707, 742, 760.

might still be required. This matter settled, he proceeded westward on his hazardous mission; and, sending the submarine off to attack a steamer coming up from the southward, commenced laying his mines.¹

The first field was placed across the steamer track. Before it was quite finished the *Meteor* sighted two lighted trawlers. Commander von Knorr took them for patrol vessels and moved off southward unobserved, only to find a darkened destroyer advancing towards him. Before she quite reached him she turned 16 points and disappeared. He was now through the first patrol line. The second field was laid without incident; but as the third field, which ran northward from the rocky shore, was in progress, at about 11.40 p.m. what he took for a torpedo boat passed quite close. This was probably a trawler on the Lybster-Banff line. Just as the third line was complete an armed yacht came up and demanded the recognition signal.

Commander von Knorr was now in a difficult situation. The events and decisions which followed are thus described by him:² "It was now about midnight. The distance to the outer patrol line was still about 12 miles, i.e., one hour's steaming for the ship. I had to assume that the yacht would make some kind of alarm signal to the outpost vessels, which would probably seal the fate of the *Meteor*. Therefore, as the yacht was still following and making signals by searchlight, I decided not to carry out the plan for mining the northern part of the Moray Firth, but to concentrate on laying the ready mines before the ship was destroyed. I made no answer to the challenge but steered north-easterly through the mist, having given orders for all the mines to be dropped. The mines for the fourth field thus fell in their right area but closer together than had been intended. I then ordered the remainder to be set shallower so that they would catch the light forces sent out to chase me. This adjustment of the depth had to be carried out in complete darkness and took some time. About 12.15 a.m. the yacht was lost to sight astern."

Commander von Knorr naturally assumed that the alarm had been given and abandoned any idea of laying the northern field, which had been planned for the northern shores of Moray Firth. He passed the outer patrol line at 1.30 a.m., a destroyer having crossed his bows steering NNW just before he reached it. She turned 16 points soon after passing him, and crossed his track once more, this time astern of him. On neither occasion did she take any notice of the *Meteor*. Commander von Knorr was now clear of the patrols. He had still some mines, and these he laid across the Pentland-Peterhead steamer track. Then, at 2.15 a.m., his task finished after a series of remarkable escapes, he made for the rendezvous with *U.17*. He considered his faith in the

¹ There is no record of an attack that night and the steamer seems to have escaped. T.S.D.D.

² *Nordsee* IV, pp. 248, 249.

Englishman's Saturday night to be justified ; " no other explanation," he says,¹ " seems possible than that the crews of the English patrol boats were either too drunk or too stupid to be able to recognise as hostile a vessel coming from inside the patrol lines, although the challenge had not been answered."

U.17 continually emitted jets of smoke to render herself more conspicuous, and he sighted her about 4 a.m., by which time it was broad daylight. She told him that a destroyer had passed the rendezvous twice. Commander von Knorr ordered her to remain where she was for two hours to deal with any forces that might be in chase, after which he dispensed with her services. The *Meteor* began her return voyage and had proceeded only 15 miles from the rendezvous when she sighted the *Ramsey* approaching. Wishing to avoid action so near the minefields he enticed her eastward by pretending to evade her, until she was near enough for his torpedoes to be effective, for he knew that only a torpedo would prevent her signalling his presence.

Having successfully finished off the *Ramsey*, Commander von Knorr continued his voyage homeward. He assumed that the loss of the boarding steamer when discovered would set to work a search after him, and in case the *Meteor* should be destroyed he sent off that evening a long wireless signal announcing that his mission had been accomplished, though he realised that to send it might give the British directional stations an opportunity of locating him. As nothing occurred in the course of the next day he felt himself safe enough to stop the Danish sailing ship *Janson*, bound for Leith with pit props, and after transferring her crew to the *Meteor*, set her on fire.

Neither his first signal nor his second gave any position, but about 5.30 a.m. the anxious German authorities in the Bight received a message announcing his position at 5 a.m. as 80 miles WNW of Horn Reefs.² This showed that he intended to enter the Bight by Norderney and not by Horns Reef as expected. The airships *L.7* and *P.L.25* had been sent out in the direction of Horn Reefs to look for him, and two light cruisers and a flotilla of destroyers were under orders to go out to meet him. But soon after they sailed a report came in at 8 a.m. from an aeroplane that five British vessels were 60 miles north of Terschelling, steering east. She had dropped five bombs on them without result.³

80. German Movements in the Bight, August 9.—The aeroplane described the British vessels as "armoured" cruisers. They were really the force with Commodore Tyrwhitt—three of the *Arethusa* class and two of the *Caroline* class—and were all three-funnelled

¹ *Nordsee* IV, p. 249.

² As intercepted by us this signal gave 4 a.m. as the position time. Signal 7516 in I.D.H.S. Records.

³ The bombs seem to have been unnoticed by our ships. They are not mentioned in their logs.

ships, whereas all our heavy cruisers, except the slow old county class, had four funnels. It is not surprising that the crew of the German aeroplane—a midshipman and a stoker petty officer—should fail to recognise our ships for what they were ; but Admiral von Pohl seems to have accepted their report as literally true, and to have based his subsequent action upon it without further inquiry.

Light forces, such as would suffice to escort in the *Meteor* and help to protect her against British submarines or light cruisers, would stand little chance against armoured vessels ; and Admiral von Pohl immediately recalled the destroyer flotillas and light cruisers he had ordered out ; at the same time withdrawing the patrol vessels in the outer Bight. On the other hand, he ordered all available submarines and airships to take the offensive against the armoured cruisers and ordered the High Sea Fleet to be held in readiness to proceed.¹

None of the aeroplanes which then went up found the British Force, but *L.7* sighted the five ships soon after 10 a.m. and followed them up, reporting their position from time to time for the benefit of the *Meteor*. The naval lieutenant in command of the airship also considered them to be armoured cruisers, though later he concluded that one of the vessels looked more like a destroyer.² On account of the clouds the airship had to fly so low that she could do no more than keep our force under observation and could not attack it, though all the time she tried to entice it away from the direction in which the *Meteor* would most likely approach.

At 10 a.m. the only available submarine, U.32, put to sea from the Ems. She went as far as 100 miles north-west of Borkum but failed to find the British forces. Another submarine proved of more use. This was U.28, returning from the South-west Approaches and known to be not far from Horn Reefs ; she was told to attack the British forces whose position was, however, given to her as 30 miles too far westward owing to a mistake in reception of *L.7*'s signals. About 1 p.m. two cruisers passed the submarine, steaming so fast that she was unable to attack them.

L.7 from time to time lost touch owing to clouds. Soon after 1.30 p.m. she sighted four more cruisers to the westward ;³ these must have been the 1st Light Cruiser Squadron ; a westerly wind prevented her from keeping touch with them. At 3.30 p.m., on emerging from a cloud, she came under fire from Commodore Tyrwhitt's force ; for the first time she recognised the ships as light cruisers, and she reported them as of the *Adventure* class.⁴ This was the last time she saw them ; they were then steaming east and west, as if searching for the *Meteor*. Her motor broke down and she had to return. Another airship, *P.L.25*, sighted

¹ *Nordsee* IV, p. 254 ; Signals 2006, 2147, 2148, 2241 of August 9, in I.D.H.S. Records.

² Signals 2300, 2335 of August 9, in I.D.H.S. Records.

³ Signal 0235, August 9.

⁴ Signal 0455, August 9.

them a little earlier; she was driven off by gunfire and saw no more of them.

Meanwhile Admiral von Pohl had ordered the 2nd Destroyer Flotilla to go out and attack the British as they retired, being guided by the reports of the airships. Scarcely had the destroyers emerged clear of the minefields than they met the airships returning, and though the flotilla spread across the track from Horn Reefs to Rosyth, they were recalled at 8 p.m. since the fleet staff considered that without exact knowledge of the position and type of ship they were to attack the operation had little hope of success. Moreover, the Commander-in-Chief had decided to go to sea at 11 p.m. with a battle squadron, a scouting group and two flotillas, and to pick up the *Meteor* with the whole force. At 11 p.m., therefore, he proceeded. For a long time no signals had been received from the returning minelayer—but this was not unexpected. Various messages reporting the presence of the British in the Bight had been made to her; she would certainly keep wireless silence and might even have taken down her aerial in order not to compromise her mercantile appearance. She might have gone in any direction to avoid meeting the British, and at 5.45 a.m., August 10, Admiral von Pohl made a signal asking her to report her position.¹ No answer came; and at 7 a.m. he returned to the Bight.

The latest signal received from her reported her noon position, August 9, as 20 miles north-west of Horn Reefs Lightship. Strange as it seems, no German station or ship had taken in the *Meteor's* last message, "Ship sunk." It had reached the British Admiralty, but not the High Sea Fleet.

Although Commodore Tyrwhitt had made no attempt to capture the *Meteor's* crew and they had watched his departure with relief, their troubles were not yet over. No German vessel came near them, but at 11 p.m., August 9, they reached Horn Reefs Light Vessel. There they transferred the *Jason's* crew to a Danish craft and continued their voyage in the Swedish lugger, "living upon raw mackerel, biscuits, potatoes and patriotic songs," as the humorous Commander von Knorr wrote in his log.² Not till 6 next morning did any German vessel come within sight. This was *U.28*, which took them in tow and brought them into Lister Deep. The submarine's signal reporting the finding of the lost crew of the *Meteor* reached Admiral von Pohl soon after he turned back;³ and he then realised that his move had been 12 hours too late to save her.

81. Inquiry into the System of Patrol.—The fact that a German minelayer had penetrated so far into the Moray Firth could not pass without investigation, and Admiral Pears, Commanding at

¹ Signal 1241, August 10, in I.D.H.S. Records.

² *Nordsee* IV, p. 259.

³ Signal 2100, August 10.

Invergordon, asked for an inquiry into the circumstances "with a view to ascertaining any weak points in the patrol arrangements of the Moray Firth, and any means of improving them."¹ The Court which assembled for the inquiry found that two of the destroyers on the outer patrol were working by the old patrol orders, while the third had the amended orders of August 7, the result being a gap in the patrol line; it was also found that they left their patrol too soon. But this did not explain the fact that the *Meteor* had seen them while they had not seen her, and the Commander-in-Chief expressed his entire concurrence with the First Lieutenant of the German ship who had remarked on the extremely bad lookout they must have been keeping.²

The only suggestions for improvement seemed to be to increase the number of destroyers, which was difficult, and, by showing the lights on Noss Head and Kinnaird Head at prearranged times, to secure that the patrolling destroyers should keep to their proper beats. The Court further remarked on the inadequate means of communication possessed by the auxiliary patrol trawlers.

At the time this inquiry was held, August 12, the Commander-in-Chief was not aware that the *Meteor* had been challenged by one of the patrol yachts. This fact first became known to him in October and another Court of Inquiry was held; it found that though the yacht in question, the *Agatha*, had sighted the *Meteor*, the captain of the yacht had taken her for a destroyer and had not reported the incident; when asked if he had seen any strange vessel he replied that he had not; and even when he knew a minelayer had penetrated into the Firth he did not tell anyone of his experience. He was removed from his command.³

82. The Sweeping of Moray Firth.—So extensive a minefield as that laid required a great deal of work in sweeping. On August 10 the Commander-in-Chief laid down the track for vessels bound to the Pentland Firth from the south; if of less than 15 ft. draught they were to pass close to Kinnaird Head and steer north up the meridian of 2° W to 58.10 N and make thence for Duncansby Head. This track, it will be seen, enabled them just to escape the two lines laid by the *Meteor* across the normal direct route. Ships from the south for Cromarty were to keep inside the 20-fathom line; this route was not such a good estimate of safety since it took ships across the southernmost field started by the *Meteor* close to the cliffs of Port Knockie.

On August 18 the minesweeping sloop *Lilac* had her forepart blown away on the easternmost field, which was located by this accident. Another minesweeping sloop, the *Dahlia*, struck a mine on September 2 within a mile of the southern shore.

The definition of the whole area was completed by September 10. A channel 10 miles wide was swept and maintained along

¹ G.F.S.P., H.S.A. 95, pp. 372 to 430.

² *Ibid.*, pp. 421, 422.

³ G.F.S.P., H.S.A. 95, pp. 431-460.

the northern shore, and a similar channel along the southern shore ; the middle portion was not touched, since it was considered to afford protection to the Cromarty approach, and greatly reduced the area to be watched by the small and quite inadequate force of old destroyers and armed trawlers under Admiral Pears in the Cromarty Auxiliary Patrol area.¹

An interesting effort to locate the mines in the Moray Firth was made by the seaplanes of the *Campania*. One pilot thought he saw a mine and waited for the sweepers to come up ; they caught and exploded a mine in the indicated spot although the pilot had not felt very certain about what he saw. This was the only mine seen ; the weather between August 16 and 23 when the seaplanes were at work was dull and overcast, and the Captain of the *Campania* had to report that "except perhaps under very favourable conditions, searching for mines by heavier-than-air craft is not likely to be productive of good results." It was thought at the Admiralty that airships might be more successful in locating mines, but as yet no experiments had been carried out by them.²

It is not clear what result the Germans expected from the *Meteor's* mining of the Moray Firth ; but the destruction of two minesweeping sloops, one or two trawlers and a couple of small coasting steamers can hardly have compensated them for the loss of the *Meteor* with all her possibilities of mischief. The fact that Admiral von Pohl made no attempt to entice any part of our fleet over the field before its discovery undoubtedly reduced its chance of doing us any damage of importance. While its boundaries were uncertainly known to us it was an obstacle in the way of concentrating the fleet at sea³; but since the Germans did not emerge outside the confines of the Bight the inconvenience had no serious results. For instance, when Admiral von Pohl came out to receive the *Meteor* the Grand Fleet was kept ready at two hours' notice till it was realised that the German Admiral had gone home again.⁴ Had he come as far as the Dogger Bank Admiral Jellicoe would have been in some difficulty. But no such enterprise was in the German Admiral's mind, and the Moray Firth minefield was soon sufficiently swept to present no special obstacle to the concentration of the fleet.

¹ Further details of the minesweeping and its progress from time to time will be found in G.F.S.P., H.S.A. 89, pp. 128-280.

² M. 06649/15, titled X. 8178/15.

³ A. 150.

⁴ A. 125, 126, 127, 128, 129, 131, 133, 134.

CHAPTER IX.

THE NORTH SEA, AUGUST 1915 ; ANTI-SUBMARINE OPERATIONS, ZEPPELIN RAIDS, MINING OF HELIGOLAND BIGHT.

83. Anti-Submarine Operations in the First Half of August.—Of the various anti-submarine schemes in practice, that of a British submarine towed by a trawler had proved one of the most successful. It was continued during August from various ports. From Harwich the trawler *Weelsby*, renamed *Mralta* for these operations, went out on July 31 to meet C.33 and take her in tow at Jim Howe Bank Buoy, at the extremity of Smith's Knoll Channel; they were to cruise on the meridian of 3° E for two days, when C.33 was to return, the trawler picking up C.34 at the same rendezvous for another two days cruise.

The cruise with C.33 was carried out as arranged, without any hostile vessels being seen, and at 8.15 p.m., August 4, C.33, Lieutenant Gerald E. B. Carter, slipped the tow and started for home from the position 5 miles east of Jim Howe Bank Buoy.¹ Nothing more was heard of the submarine except a few wireless signals: "Have nothing to communicate," which ceased at 9.50 p.m. When she failed to arrive as expected, Captain Waistell sent the *Firedrake* at daylight, August 6, to look for her ; the *Firedrake* managed to save the crews of four smaeks sunk near Jim Howe Bank, but found no trace of C.33. Three Lowestoft armed trawlers sent out on the 6th, 7th and 8th were equally unsuccessful; and the submarine was given up for lost, the cause of her destruction being presumed to be a mine.²

C.34, which had been picked up at the Jim Howe rendezvous by the *Weelsby*, continued the cruise till August 7. Again no hostile vessels were seen. C.34 returned in safety.

It was soon evident that the scheme was known to the enemy, as well as that of the small armed decoy of the *Quickly* type. On August 9 Norddeich sent out this warning³ intended for submarines at sea:—"All over the North Sea there are trawlers which tow nets or mines, and often work with a submerged submarine ; also a number of small armed trawlers made to resemble freight steamers."

This signal may possibly have reached U.17, which after leaving the *Meteor* came southward towards Peterhead and sank the *Glenravel* and *Malmiland* on August 8. The 1st and 2nd Light Cruiser Squadrons returned to Rosyth about 5 a.m., August 10,

¹ This buoy was in 52-58 N, 2.19 E.

² Commodore (S) War Records, H.S.A. 270, pp. 462-474 ; Lowestoft A.P. Reports, H.S. 161, p. 137 ; M. 06084/15.

³ Signal Norddeich 91 of August 9, in I.D.H.S. Records.

from their chase of the *Meteor*. Probably *U.17* crossed their track soon after midnight; continuing southward, she sank the British s.s. *Utopia* from Aberdeen, empty for Newcastle, at 5.30 p.m., August 10, about 12 miles east of St. Abbs Head, firing at least 15 shots into her. No patrol was near and the crew were picked up 5 hours later by a Danish steamer which landed them at Leith. They reported that the submarine had no letter or number and that she had a dummy funnel, but no mast or wireless visible.¹

The submarine's next encounter was with just such a decoy as the Norddeich signal had endeavoured to warn her against. This was *C.23* in tow of the armed trawler *Ratapiko* from Rosyth. The German opened fire on the trawler about 30 miles east of May Island at 4 a.m., August 11. Luring the enemy closer by an "abandon ship," in imitation panic the *Ratapiko* stopped *C.23* which, on putting up her periscope, found the German well within range. Not content with this chance, the officer in *C.23* closed to 900 yards only to find that when he raised his periscope the enemy had disappeared. The officer in charge of the *Ratapiko*, observing that *C.23* made no attack, thought it time for him to begin, and opened fire with his 6-pdr. gun. Only 12 rounds could be fired before the enemy dived; she was evidently uninjured, since she fired a torpedo at the *Ratapiko*. The trawler easily avoided it.²

Although no wireless had been seen in *U.17* by the *Utopia*'s crew, she certainly carried it; in the course of the day she reported by it that we had a trawler and a submarine working together off the Forth.³ Leaving that district, she went back to the Peterhead area. There she attacked the fishing trawler *Gloria*, 55 miles east of Aberdeen, opening fire with one round at a distance of a mile. She seems to have approached with caution and did not sink the *Gloria* till fully two hours after the crew had abandoned her.⁴ Just at the conclusion of these proceedings, the armed yacht *Monsoon* and a trawler of Peterhead Patrol came up and opened fire, upon which *U.17* made off.⁵ On the 15th she burned the Danish sailing vessel *Marie* and commenced her journey homeward. Her last exploit was the torpedoing of the Norwegian steamer *Romulus* on the 16th, in the middle of the North Sea. Besides these sinkings she made one capture, of the Swedish *Gottaland*, which she sent in with a prize crew on board.

Of the three decoy submarines at Scapa—*C.25*, *C.26*, *C.27*—the last, working with the *Princess Marie José*, operated off Muckle Flugga during the first half of August. The cruise was uneventful except that one night *C.27* was fired on by a patrol trawler and hit on the conning tower. There was no explosion and the submarine suffered so little damage that she was able to continue her duties. *C.25* cruised on the trawling ground south-east of

¹ *Utopia* papers, M. 42573, titled *Board of Trade*, 16 August 1915.

² M. 06296/15.

³ Signal 1635 August 11, in I.D.H.S. Records.

⁴ M. 42727/15: *Gloria's* Deposition.

⁵ Peterhead A.P. Reports, H.S. 159, p. 159.

Fair Island; and *C.26* in various selected areas. None of the three met any German submarine.¹

84. Sweep of the Hoofden by the Harwich Force, August 4 and 5.—One of the British submarines returning from the Bight reported that there was a German armed trawler and torpedo boat patrol off Terschelling. This afforded an objective for a cruise by Commodore (T)'s force; and he proposed a sweep as far as Terschelling with four light cruisers and four destroyers. In approving this, the Admiralty warned the Commodore not to allow himself to be drawn to the eastward of 5.55 E because from intercepted signals and reports from our own submarines there was a strong presumption that the enemy had laid mines near the Ems.²

A new channel, called K.K., had recently been swept through the German mined area.³ This gave the Harwich Force four exits: by the Hinder Channel between the minefields, by Smith's Knoll and Jim Howe Channel, by the Haisborough and Jim Howe Channel, and now by the K.K. Channel. The Commodore on this occasion chose the last, passing through it at night. His force consisted of the *Arcthusa*, *Conquest*, *Aurora* and *Undaunted*, with the *Mentor*, *Mansfield*, *Medea* and *Medusa*; they swept in line-abreast 5 miles apart, each cruiser with a destroyer attached for boarding purposes, from 3.30 a.m., August 5, to 9.45 a.m., off Terschelling and the Texel. They saw nothing of the reported patrol; and the Commodore turned back, with his force still in line-abreast, to return by the Hinder Channel. Shortly after passing the Hinder Light Vessel the Commodore sighted a submarine on the horizon about 6 miles distant, which dived very soon after it was sighted. "Being spread," writes the Commodore,⁴ "and having only one destroyer in company with each cruiser, and the position of the submarine being vague, I turned the squadron 4 points away and increased speed and did not attempt any offensive measures. It appeared to me that any hesitation on my part would give the submarine time to place herself for attack on one of my squadron." It was lucky that he was in the comparatively wide Hinder Channel; in the narrow K.K. Channel a turn away of this description would not have been possible.

During his absence from Harwich mines had been laid near the Sunk Light Vessel. A signal to that effect had been received by him; in consequence he avoided that light and returned via the Galloper and Longsand Light Vessels.

Although the enemy torpedo boats reported as patrolling near Terschelling were imaginary, there had been real German

¹ M. 06569/15.

² A. 101, 103; H.S. 143, pp. 691, 701.

³ The K.K. Channel ran from 52° 15' N, 2° E, to long. 3°, between the bearings N73E and N84E (Mag.). It is first shown on the "Minefield" Chart X.74, edition of 28 July 1915.

⁴ M. 06064/15. "Report of Proceedings 4-5 August 1915," in Comm. (T)'s Diary.

destroyers at sea on August 5. A French seaplane broke down and alighted near Thornton Ridge; when this became known at Zeebrugge the three destroyers *A.5*, *A.7* and *A.8* went out, captured the seaplane and towed it in intact, with its ammunition and its six bombs.¹ The time of this little episode is not given, but it is unlikely to have been at 5 p.m. when the four British light cruisers passed less than a dozen miles north of Thornton Ridge.

The sweep by the Harwich light cruisers had been directed against surface vessels. A series of sweeps of a different kind, intended to catch submarines, had been proposed by the Nore Command; a large number of the local defence vessels were fitted to work an explosive kite creep,² an extension of the modified sweep, and with these creeps made cruises at night between the Sunk and North Hinder Light Vessels. In order to avoid accidents with our own submarines returning from Heligoland Bight, these were instructed to report by wireless when they were about to enter the Hinder Channel; should any British submarine not fitted with improved wireless be out, the *Firedrake* or *Luncher* went to the eastern entrance of the channel to pick up the submarine.³

85. Raid by Zeppelin Airships, August 9 and 10; Reports and British Movements.—Among the intercepted German signals of August 8 was one from the Senior Officer of Airships asking whether airship reconnaissance would be required on August 9 "in view of the special undertaking."⁴ This seems to have suggested the idea that a Zeppelin raid was in contemplation; and we may assume that the air stations were warned, for we find at 8.45 p.m., August 9, the military authorities at Chatham signalling to the Naval Centre, Sheerness, "Keep sharp lookout for Zeppelins to-night; cannot give particulars, but if raid is directed against London, probable time 11 p.m."⁸

By the time this last signal was repeated to the Admiralty a Zeppelin was sighted on the coast, not near London but close to Flamborough Head, where it was seen at 8.15 p.m. steering southward. After this, a succession of reports came in showing that several Zeppelins were at work. At 9.30 one was seen off the Shipwash; at 10.15 bombs were dropped on Lowestoft; at 11.15 on Goole in Yorkshire; at 12.8 some fell in the Isle of Sheppey; about 12.30 three or four dropped on Dover; and at 1 a.m. some fell into the sea south of Ramsgate.

The lights in Sheerness Dockyard were extinguished at 12.15 a.m. when the sound of the Zeppelins' engines was heard

¹ *Nordsee IV*, p. 126.

² The vessels so fitted by 25 August 1915 comprised 10 torpedo boat destroyers, 16 torpedo boats, 5 armed trawlers, 1 armed yacht, 30 drifters, 13 minesweepers, and 5 minelaying trawlers (Papers titled *C. 1353/15*).

³ Papers titled *C. 1353/15*.

⁴ Signal 1150 August 8, in I.D.H.S. Records.

⁸ H.S. 144, p. 585.

over Southend; and when bombs began falling at the Nore a few minutes later, the lights of Chatham Dockyard also were put out. The two dockyards remained dark till 1.21 a.m. on the return of the six machines from Eastchurch after their unsuccessful hunt for the airships.¹

Aeroplanes went up from the Royal Naval Air Stations near the bombed areas although the whole coast was enveloped in fog, in some places very thick. None of them succeeded in making contact with the raiders.²

The anti-aircraft batteries seemed more successful, especially a 3-in. gun at Dover, which claimed two hits, a claim which time was to substantiate.³

No action was taken by the Admiralty till 12.35 a.m., August 10, more than two hours after Lowestoft had been bombed and more than four hours after a Zeppelin had been reported approaching the Humber. They now ordered the 6th Light Cruiser Squadron, which was specially armed and prepared for attacking airships, to be ready at one hour's notice, while the destroyers and submarines at Harwich were to be ready at half an hour's notice. The executive order to sail did not follow, and both forces reverted in a short time to less ready conditions.⁴

No damage was done to combatants or buildings of any national importance; in Lowestoft one woman was killed, two houses were completely wrecked, while others were seriously damaged; in Yorkshire about 10 cottages were destroyed, six children and 10 adult civilians were killed; in Dover harbour a trawler was damaged. The total value of the damage done was estimated at £11,971.⁵

86. Destruction of "L.12."—About 6 a.m., August 10, an intercepted signal revealed that one of the Zeppelins, *LA12*, had been seriously hit and had had to descend on to the sea off Flanders.⁶ Orders were at once sent to Admiral Bacon that she was to be attacked with aircraft and destroyers. She was located 3 miles west of Ostend about 9 a.m. by a British naval aeroplane from Dunkirk; the Zeppelin was flying just above the surface of the water and had with her an escort of four torpedo boats. The British patrol bombed her from a height of 500 ft. and then returned to report. Other aeroplanes continued the bombing till about 2 p.m. she had been so severely damaged that her back broke; she was then alongside Ostend Quay. This ended her career; what remained of her was scrapped, the materials being taken to Germany by rail.⁷ The destroyers sent by

¹ M. 06168/15.

² *Airship Raids*.

³ *Airship Raids*.

⁴ A. 127, 128; H.S. 144, pp. 635, 636, 744, 795.

⁵ *Airship Raids*.

⁶ Signal 1820 August 10, in I.D.H.S. Records.

⁷ *Airship Raids*.

Admiral Bacon could not help in her destruction and were recalled by him at 4.30 p.m.¹

87. **The Air Raid on August 9 and 10; Objective and German Reports.**²—The raid was really the first attempt by the Germans to employ their Zeppelins as a squadron; and the objective was London. It will be remembered that the Kaiser had refused permission for London to be bombed, other than the docks; and it was only after a British air attack on Karlsruhe that his resolution in this matter wavered. The Chief of the Naval Staff and the General von Falkenhayn were agreed that London would be a profitable objective, though the General thought it of little value to attack it except with a numerous squadron operating simultaneously. The Chancellor, Dr. von Bethmann-Hollweg, reluctantly consented on July 9, provided the attack was made only at a week end when the city would be empty; for what was in the mind of the naval and military staffs was the bombing of the centre of London, which they considered the heart and brain of British power and where, moreover, the War Office and the Admiralty were situated. The Kaiser, however, renewed his embargo; but on July 20 yielded to the arguments of his military advisers and permitted the bombing of London at any time, provided historical monuments, particularly St. Paul's Cathedral, were spared.

The next new moon was on August 10 and this was the date chosen for the big attempt. The five newest and most powerful airships—L.10, 11, 12, 13 and 14 (the last only just completed)—were told off for the operation. Three others—L.9, S.L.3, and S.L.4—were simultaneously to operate against the Tyne and Humber and the industrial districts between them. The older airships were not suitable for summer offensive work, since they could not fly high enough.

The L airships went up at noon, August 9, from the sheds at Nordholz and at Hage, near Norddeich. They assembled about 2.30 p.m. about 20 miles North of Borkum, and commenced to fly westward in squadron formation. Their intention was to strike the coast about Harwich and then attack London independently. They were seen near Terschelling at 5 p.m.; and at 9 p.m. a smack sighted them just before they separated. Neither of these reports reached London till the raid was over.³ A Yarmouth armed trawler saw one approaching and fired at it, but it was too high for effective attack.⁴

The night was extremely dark, with rain and fog. L.10, however, made out the Shipwash Light vessel and, passing over Colchester, steered for London. Through gaps in the fog she sighted various landmarks, and dropped two bombs of 220 lb.,

¹ H.S. 144, pp. 677, 775.

² Compiled from *Nordsee* IV, pp. 261-268 and Karte II.

³ H.S. 144, pp. 724, 810.

⁴ H.S. 161, p. 138.

20 of 110 lb. and 60 incendiary bombs on what she took to be the docks of East London. Only 20 altogether of these were observed by us, six falling in the sea between Southend and Sheerness and 14 at Eastchurch. Searchlights picked her up and she came under a heavy fire; she stayed no longer, but went off home.¹

L.11 went on through the mist till at 10.15 she found herself over a lighted town and speedily came under fire. Anxious to get away, she hastily assumed the town below her to be Harwich, and dropping her whole outfit of 28 explosive and 60 incendiary bombs on an "unexceptionable target"² she made off. The unexceptionable target is not specifically mentioned; the objects on which her bombs were dropped were some private houses and a woman. The town which she bombed was not Harwich but Lowestoft.

L.13 had no sooner come within reach of the coast than one of her motors broke down and she had to return.³

Of the three airships intended for the simultaneous attack on the Tyne and Humber only one, L.9, was able to make the passage. She was detached from the rendezvous north of Borkum about 2.30 p.m. August 9 to proceed direct for Yorkshire, while the four other airships made for Harwich.

L.9 struck the English coast at Flamborough Head at 8.15 p.m. and was immediately observed by the shore stations,⁴ who noticed that she was steering southwesterly.

She was flying low, at a little over 4,000 ft., the warm air considerably reducing the lift of her displacement. In order to rise higher she discharged as much petrol as it was safe to spare and manoeuvred to gain an accurate fix of her position, some uncertainty being caused by a defect in her steering gear which made her describe two complete circles. At length a searchlight beam shone out. This she located as coming from Hull and, proceeding towards the town, could see the street lights reflected from the wet pavements. Beginning at the eastern end of the docks she dropped 10 explosive and 56 incendiary bombs in a long line and started a number of fires which blazed for a considerable time and betokened serious damage to Hull docks. It was not till she had moved off to the north that any guns opened fire; the shells came near her, but she was not hit; however, when she was back in her shed a few holes made by rifle bullets were found. L.9, like the other airships, was out of her reckoning; the port whose docks she had bombed was not Hull, but Goole, a town

¹ Her report, made at 1.20 a.m., speaks of her having bombarded ships on the Thames and the East Coast and London with 22 explosive and incendiary bombs; thick fog made observation difficult; she was picked up by searchlights and shot at (Signal 1420 August 10, in I.D.H.S. Records).

² *Einwandfrei auszumachendes Ziel.*

³ Signal 1139 August 9, in I.D.H.S. Records.

⁴ H.S. 144, p. 584. The telegram sent at 8.15 p.m. from Flamborough Head did not reach the Admiralty till 8.54 p.m.

20 miles farther inland. Of her bombs 45 were accounted for. In Goole about 10 cottages were demolished; nine women, six children and one man were killed by her, and 11 persons were injured.¹

L. 12 was less fortunate than the other airships. When they scattered to operate independently she steered to make the coast at Harwich; but failing to allow sufficiently for the southerly breeze crossed the coast near Haisborough. She was too far from London for a successful attack in the dark hours and, therefore, selected Harwich, which she passed as she thought at 12.50 a.m. She immediately came under heavy fire to which she replied by dropping 12 explosive and 70 incendiary bombs.²

As usual with airships at that time, she was wildly wrong in her reckoning. The supposed Harwich on which she dropped her bombs was really Dover, where about 12 were counted; they damaged a trawler and injured three of the men in it. Two aeroplanes went up after her, but in the fog failed to find her. The other part of the defence was more successful.

In this case the anti-aircraft guns made several hits. Two of the gas cells of L. 12 speedily emptied themselves and the airship's stern began to sink. Every item of the gear which was not absolutely necessary to navigation was thrown overboard. At 2.40 a.m. the after motor gave out, the last ballast was thrown overboard, and the ship had then to be settled in the sea in a fog. The stern sank deeply, the three after motors ceased to work, and finally the fourth and last motor became submerged. In pouring rain Z. 12 drifted southwards, sinking deeper and deeper. In this distressful situation the airship commander saw, to his alarm, a destroyer approaching at full speed, and hastily throwing away the last of the secret documents and charts, he awaited capture. But the destroyer was not British. It was A. 13 from Flanders, and by her the crumpled Zeppelin was towed in. In the air attacks to which later she was subjected she was not hit; but she had been too damaged by the sea in the course of her drifting to be repairable. Her destruction represented the other side of the account of profit and loss in the first airship squadron raid on London.

88. Air Raid of August 12-13.—During the air raid of August 9 and 10, Commodore Tyrwhitt had been engaged in the chase of the German minelayer *Meteor*. He was back at Harwich with his light cruisers by 1 p.m. August 10.³ On the 11th two divisions of Harwich destroyers went out to patrol the swept channel to Yarmouth and to the Hinder Light Vessel in the hope of meeting U.B. or U.C. boats; this patrol was now practically a routine,

¹ She reported having dropped 1,150 kilos of bombs at midnight on the decks and town of Hull and along the Humber; many fires and explosions; damage estimated as very great. (Signal 1415 of August 10, in I.D.H.S. Records.)

² Karte II.

³ Log of *Undaunted*.

but it had so far had no success. On the 12th it was not carried out, since the destroyers were employed on a different quest—a hunt for a lost seaplane. One of these had not returned from its routine patrol, and the Commodore sent out three destroyers to look for it as far as the Hinder. A second seaplane sent to look for the first, also was reported missing, and a second division of destroyers went out to search for this. They found it in tow of a trawler, but continued the search for the first seaplane till 10.30 p.m. when they returned to harbour, the lights being lit to enable them to find their way in. Ten minutes later bombs began to fall in the neighbourhood of Harwich and it was concluded that the lights had attracted the attention of a passing Zeppelin.¹

But this was not the case. Undeterred by the loss of L. 12 in the previous squadron raid, the German airship service decided to continue the principle of squadron raids, and on August 12, L. 9, L. 10, Z. 11 and Z. 13 set out on another expedition. L. 9, whose objective was to have been Hartlepool, had to turn back with a loose propeller shaft; L. 13's port motor broke down; L. 11 got so far as the English coast where, made heavy by rain and with a faulty motor, she had also to turn back.

Z. 10 went on alone. It was so cold that the rain turned to ice on the Zeppelin; nevertheless by discarding all her spare petrol she succeeded in rising to 10,000 ft., and felt able to make an attack. She was at the Shipwash by 9 p.m. hoping to reach London; but a strong southerly wind forced Lieutenant Wenke, her commander, to choose Harwich instead. Although when he arrived the port was well darkened he recognised it by its characteristic contour and obtained as he thought good results by his bombing. Though actively engaged by numerous guns he had not been hit when he finished his attack. He did some damage and killed seven civilians at Woodbridge in Suffolk, and wrecked two houses at Parkeston. His raid was otherwise of little effect.²

89. Plan for Minelayer Borkum Riff Proposed and Abandoned; August 13.—Although the German authorities expected air reprisals for these bombing raids, what was in the mind of the Admiralty at the time was rather to hinder the operations of enemy submarines by laying another minefield in Heligoland Bight. The Commander-in-Chief proposed the west side of the Bight as a good site and found the Admiralty drawing up plans for just such an operation before the moon became too light.³

As finally issued on August 12 the plan, known as A.Z., provided for four of the fast minelayers to lay a large field on the western edge of Borkum Riff. Eight Harwich destroyers were to form their direct escort, while Commodore (T) with the 5th Light Cruiser Squadron and the remaining destroyers covered

¹ Commodore (T)'s Diary and *Airship Raids*.

² *Nordsee IV*, p. 268; *Airship Raids*.

³ H.S. 144, p. 331. The C.-in-C.'s letter was a private one to the First Sea Lord.

their retirement, two light cruiser squadrons from Rosyth, each with a destroyer division co-operating from the northward.¹ Further, three groups each of three submarines were to be spread across the line of the enemy's probable advance.²

In accordance with the orders Commodore (T) sent eight destroyers to Sheerness on August 13 to serve as the minelayer's direct escort. Only after they had started was it discovered that the proposed operation would have to be abandoned.

German signals intercepted on the 12th showed that a minelayer was engaged in lengthening the mine barrier off the Ems,³ the district which was the objective of Operation A.Z. The departure of the minelayers and the rest of the force was at once delayed, and on the following day the whole operation was cancelled.⁴ A few days later a German wireless signal made for the benefit of U.C.9 and U.C.10 informed us that the new mine barrier extended along the meridian of 6° 15' E, between 53° 45' N and 54° 9' N,⁵ very close to the area we had ourselves intended to mine.

90. ~~The German expectation that air attacks on their Zeppelin sheds were imminent was strengthened on August 15 when their agents reported through Holland that forces, especially seaplane carriers, were lying in readiness in Tyne, Humber and Thames. Admiral von Pohl, remembering the earlier occasions when British forces had cruised about for four hours close off the German coast, now issued orders that when an attack was expected the sections of the fleet on patrol duty should not wait in the roads but cruise in the Bight in spite of the danger from submarines. On August 15 the weather was not favourable to an air attack; but in case the British had begun their movement he sent out aeroplanes and minesweepers to search the exits from the Bight for submarines and in the evening detailed half a destroyer flotilla to cruise in the Bight. All available submarines were to patrol between Terschelling and Horn Reefs.~~ ~~The German expectation that air attacks on their Zeppelin sheds were imminent was strengthened on August 15 when their agents reported through Holland that forces, especially seaplane carriers, were lying in readiness in Tyne, Humber and Thames. Admiral von Pohl, remembering the earlier occasions when British forces had cruised about for four hours close off the German coast, now issued orders that when an attack was expected the sections of the fleet on patrol duty should not wait in the roads but cruise in the Bight in spite of the danger from submarines. On August 15 the weather was not favourable to an air attack; but in case the British had begun their movement he sent out aeroplanes and minesweepers to search the exits from the Bight for submarines and in the evening detailed half a destroyer flotilla to cruise in the Bight. All available submarines were to patrol between Terschelling and Horn Reefs.~~

This last order raised a protest from the officer commanding submarines. He pointed out that no German submarine had achieved any success against hostile surface craft in the Bight, and that the fast light vessels of the British were too nimbly handled to offer chances for attack. The only reasonably hopeful targets were the seaplane carriers, and he suggested it would be better to wait for these on their route of approach; on former occasions they had come either from the north or the west, and in the present instance it was not unlikely they would try the middle of the Bight.

¹ Orders for Operation A.Z., in Harwich Force Packs, H.S.A. 291 pp. 68 to 87.

² The orders for the submarines are in Commodore (S) War Records, H.S.A. 270, pp. 476, 477.

³ Signals 0734, 0742, 0920, 1230 of August 12, in I.D.H.S. Records.

⁴ A. 135, 136.

⁵ Signal 0205 August 18, in I.D.H.S. Records.

A battle squadron cruised during the 16th inside the mine barrier to be ready for action if required. This became known to us by intercepted signals; and though the object of the movement was not clear, Admiral Jellicoe was ordered to stand by at two hours' notice in case some operation was intended. The German outpost forces were recalled in the evening and all the Jade squadrons returned to their ordinary state of readiness, whereupon the Grand Fleet did the same.¹

91. **Additional Anti-minelaying Precautions off Scapa.**—Admiral Jellicoe, since the *Meteor* episode, had given attention to the question of the better safeguarding of the approaches to Scapa Flow and the Moray Firth against enemy minelaying. He arranged that the northern half of the eastern approach to the Pentland Firth should be watched by armed boarding steamers, each being accompanied by a destroyer of the fleet; they would work as far as the meridian of 0.30 W well over the 50-fathom line. He had the vessels for this patrol and put it in force at once.

For the southern half of the approach as far as Peterhead, he proposed to use the armed whalers which were being prepared for use with the Grand Fleet, basing them on Peterhead and adding to them the *Sappho* and *Swift*. The area between Peterhead and the line 120 deg. from Pentland Skerries, which was the boundary between the two patrols, was one much frequented by submarines; the whalers, on account of their handiness and light draught, were very suitable for anti-submarine work. The first intention as regards the use of these whalers had been that they should take the place in the Orkneys patrol of the trawlers working on the Norwegian coast or guarding the 10th Cruiser Squadron base at Swarbacks Minn; as they would now be based at Peterhead he suggested that an equivalent number of good trawlers from Peterhead area should come to the Orkneys.

He did not ask for any more vessels, except indirectly by a suggestion that he would like more destroyers; but the Admiralty, in approving his patrol arrangements, remarked:² "no further vessels beyond those already allotted can be spared to you for the present, as the difficulty of stopping the enemy submarines passing the northern waters patrolled by vessels under your orders is apparently greater than was anticipated, and has rendered the situation very serious in the waters to the south of Ireland. It is therefore necessary to reinforce the Queenstown command as soon as possible to deal with the submarine menace locally.

"Moreover, demands on naval resources are increasing daily owing to—

- (a) The continual increase in the number of troops operating abroad.
- (b) The larger number of munition ships coming from America and of Russian munition ships leaving England for Archangel.

¹ A. 139 to 142.

² M. 06651, 06651/15.

(c) The increase in large vessels in the Grand Fleet requiring escort.

(d) The gold escorts.

(e) The absence of a sufficient number of ships under the Geneva convention for the transport of the wounded, necessitating the escort of transports returning with wounded from the Mediterranean.

“No further dispersion of forces from the south or east coast is possible owing to minelaying by submarines on the south-east coast.”

In addition to the new patrol arrangements Admiral Jellicoe proposed to make more frequent sweeps into the North Sea by cruisers accompanied by destroyers with the object of intercepting disguised vessels and minelayers, especially during the periods of little or no moon: his hope being that the greater activity of our cruisers in the North Sea would render mining more difficult and probably deter the enemy from sending out fast and valuable vessels to lay mines.¹

92. **Cruiser Sweep in the North Sea, August 16-18.** The first of these anti-minelaying sweeps took place on August 16 as a result of a report from Holland that two armed auxiliaries were to leave Wilhelmshaven that day for a minelaying expedition off the English coast.

Intelligence from Rotterdam generally proved unreliable, and the Admiralty attached little weight to it; but as a precaution they circulated the information to all naval centres.² The Commander-in-Chief decided to send light cruisers from Scapa and Rosyth to sweep along the line of approach, and at his suggestion the 6th Light Cruiser Squadron also was sent out, mainly as an exercise cruise, to patrol the approach between the Humber and Dogger Bank minefields.³

The ships of the 4th Light Cruiser Squadron from Scapa proceeded to the fourth meridian between 57° and 58° N, and swept back 15 miles apart, in zigzags, to the meridian of 0.30 W, where they covered from 57.0 to 58.30 N.⁴ The 1st Light Cruiser Squadron from Rosyth swept back from 4° W to the Forth, covering from 55.15 to 56.45 in the course of their zigzags. Each squadron was accompanied by destroyers, but neither found any suspicious vessel. While the sweep was in progress the 3rd Battle Squadron on the 16th exercised tactics east of May Island, with the *Fearless* and 15 destroyers screening it.⁵

It was known from intercepted telegrams that the German battle cruisers were in the Baltic; and the opportunity was taken, on the return of the 1st Light Cruiser Squadron to Rosyth, to

¹ M. 06531, 06651/15.

² H.S. 145, p. 853.

³ A. 143; H.S. 145, p. 914.

⁴ Track chart in M. 06651/15.

⁵ G.F.N.

send the *Lion*, the 1st Battle Cruiser Squadron and the 2nd Light Cruiser Squadron with a destroyer screen for an exercise and firing cruise to the north of the Shetlands. They returned five days later.

93. **Orders for Mining Amrum Bank (Operation B.Y.).**—Although the idea of mining near Borkum Riff was abandoned in view of the minefield laid there by the Germans themselves, the project of laying another offensive minefield in the Bight was not abandoned; only the position was changed. Instead of the Norderney exit, that by Amrum Bank was now chosen as the site for the minefield.

The orders were issued on August 15.¹ The idea was that there should be some minelaying before the moon conditions became unfavourable.² The operation was a small one. Only one minelayer, the *Princess Margaret*, was employed. She was to be accompanied throughout the operation by two divisions of destroyers, while all the available Harwich light cruisers and another destroyer division, all under Captain Wilmot Nicholson, were to cruise 30 to 50 miles to the westward of the minelayer while the operation was in progress. They were not to wait for her; but if they had not met her by 4 a.m. G.M.T., which was ample time for her to have finished her work, they were to return to Harwich.

Both going and returning, the minelayer and her escort were to use G Channel, which terminated at the pillar buoy in 54.3 N, 2.34 E. To avoid being sighted by the German air patrols in daylight they were to make a wide detour to the northward of the Dogger Bank mined area as far as 56.4 N, 4.25 E. From this point they were to make for Horn Reefs Light Vessel, arriving off it shortly after dark in order to fix their position. The new minefield was to be laid in an irregular curve, passing 10 miles west of Amrum Bank Light Vessel.

The orders also detailed the tactics to be employed by the destroyer escort. Should the enemy make an attack, the destroyers were not to leave the minelayer but were to keep contact with her, maintaining a running fight.

On the 16th the *Arethusa* was to begin a refit; Commodore Tyrwhitt was to go on leave, and would not be available to take charge of the light cruisers. As originally intended, the command of them would be in the hands of Captain Wilmot Nicholson in the *Aurora*, and he was ordered to come to the Admiralty to go through the scheme. On the night of the 15th, however, the German Fleet began to move and the Grand Fleet and Harwich Forces were put at short notice for sea. Consequently Captain Nicholson could not attend at the Admiralty, and the orders were sent him by messenger. No sooner had they been despatched than

¹ Appendix L.

² Remarks by C.O.S. in M. 06621/15.

Commodore Tyrwhitt represented that the *Arethusa* was complete with oil and could not go to Chatham till it was consumed. In the circumstances he asked to take command instead of Captain Nicholson and was directed to take over the orders when they arrived at Harwich in the course of the afternoon of August 16.¹

94. The "Princess Margaret" and Escort proceed.—The operation commenced at 4.45 p.m., August 16, when the *Princess Margaret* left Sheerness. Commanding the operation was Captain S. Litchfield, Captain-in-Charge of Minelayers, on board the minelayer. He was met in Black Deep by two divisions of the 10th Flotilla: *Mentor* (Commander E. T. Inman), *Mimos*, *Moorsom*, and *Miranda*; *Morris* (Commander R. Henniker-Heaton), *Manly*, *Matchless*, and *Medusa*. After arranging the details of the operation with the two Commanders Captain Litchfield proceeded with his squadron up the swept channel and out by G Channel into the North Sea, adjusting speed so as to pass Haisborough Light before it was extinguished at 2 a.m. and to sight Horn Reefs Light at dark, August 17.²

The 5th Light Cruiser Squadron from Harwich—*Arethusa* (Commodore Tyrwhitt), *Penelope*, *Cleopatra*, *Conquest*—with the *Undaunted* (Captain (D) 3rd Flotilla) and *Aurora* (Captain (D) 10th Flotilla), sailed from Harwich at 9 a.m. accompanied by four destroyers of the 3rd Flotilla.³ Reaching the North Sea by the KK Channel, they proceeded for their supporting position.⁴

The passage of the minelayer and her escort was without incident till about 4 p.m., when German trawlers came in sight. As the squadron proceeded the number of trawlers increased; some had no colours and were considered to be German; several were Swedish or Danish. Captain Litchfield had no doubt that among the trawlers were patrol vessels ostensibly engaged in fishing. Between 6 and 7 p.m., when he was still some 30 miles from Horn Reefs Light Vessel, he intercepted wireless signals apparently in some code unknown to him; it seemed most probable that these signals came from the trawlers and deepened his suspicion of them. Moreover, their disposition at fairly regular intervals along his route and to the southward looked significant. It was not practicable to examine all the trawlers sighted, but one passed close at 6 p.m., was boarded by the *Miranda* and found to be the *Roland B. XA 0* (German). The crew abandoned her before the boarding party arrived, but nothing compromising was found on board. Captain Litchfield had given orders that, if she were German, she was to be taken to Harwich under a prize crew; but later, he ordered the *Miranda* to sink her and take the crew on board as prisoners.⁵

¹ A. 139 to 145.

² Captain Litchfield's Report, M. 06453/15.

³ *Lawrel*, *Lysander*, *Lookout*, *Llewellyn*.

⁴ Track chart in Harwich Force Packs, Vol. XII, H.S.A. 291, p. 126.

⁵ Appendix M 4 to 9 and Captain Litchfield's Report.

At 6.50 p.m., shortly after the *Miranda* rejoined and took up station again, the *Mimos* heard wireless signals in code being made by some vessel in the near neighbourhood. Though the signals could not be decoded, they seemed to have some reference to the *Princess Margaret* and her eight destroyers; accordingly the *Medusa* was ordered to board a trawler from which the signalling appeared to come. She was found to be the German *Boreas*. Exhaustive search failed to find wireless gear or anything incriminating. Captain Litchfield's orders had been, "If she is German or if she is a neutral and has wireless and cannot satisfactorily explain its use, take crew and papers off and sink her"; but the *Medusa* read, "if she cannot give a thorough explanation for its use if she be German or neutral, take off her crew and sink her."¹ The *Boreas* had no wireless installation and the Commanding Officer of the *Medusa*, thinking the orders to sink referred only to the presence of wireless, let her go and proceeded at 8½ knots for the rendezvous.

The squadrons, less the *Medusa*, continued till 8 p.m., when Horn Reefs Light Vessel was sighted 12 miles ahead. It was now an hour after sunset. So many trawlers had seen the squadron and there was so much wireless signalling going on that Captain Litchfield had little hope of being able to complete the operation unopposed.

95. German Destroyers known to be out. Besides the probability that the presence of the minelayer had been reported, a further source of anxiety to Captain Litchfield was his knowledge that a German destroyer flotilla had come out and was reconnoitring. This fact the Admiralty had learned from intercepted German signals which gave the 2nd Torpedo Boat Flotilla as about to proceed for some enterprise to the north of Heligoland;² shortly after noon August 17 these German destroyers, nine in number, reported themselves as about 40 miles north of the Ems, operating to the north-west of Heligoland. The Admiralty did not inform Captain Litchfield of this; possibly they thought that as the destroyers would be north-west of Heligoland they would not come across the minelayer at Amrum Bank. But they warned the 6th Light Cruiser Squadron operating on the Dogger Bank, and they passed the information at 6.35 p.m. to Commodore Tyrwhitt, with the addition that he might intercept the enemy after he had met the *Princess Margaret*.³ This signal Captain Litchfield also took in.

Having fixed his position by Horn Reefs Light Vessel, he held on at 15 knots for the area he was to mine, trusting to escape observation in the dark. At 8.25 p.m. he turned to S 15° E and increased to 19 knots, the highest reliable speed of the *Princess*

¹ M. 10 to 14; *Medusa* Signal Log, No. 17974.

² Signals 0803 August 15; 2133, 2254, 0737 August 16; 2043, 2046 August 17.

³ A. 146 a, b, and c.

Margaret. She led the squadron, the escorting destroyers being in columns, divisions 4 cables apart, 2 cables on each quarter of the minelayer.

She was only 6 miles further on her course when at 8.45 p.m. Captain Litchfield sighted four German destroyers a mile or so off to the south-east—that is, three points on the port bow; and searchlights, apparently of two cruisers, shone out to the northward of the enemy destroyers. He turned to starboard to north-west and increased to his utmost speed, assuming that his escorting destroyers had also seen the enemy and would engage them. Just as he turned, he heard a loud report astern, which he took to be that of the first round fired by his escort.

96. ~~The Tier German Reconnaissance off Horn Reefs.~~ Although the appearance of the German destroyers seemed only a natural consequence of the wireless calls made by the supposed patrol trawlers, such was by no means the real explanation of their presence. The destruction of the German minelayer *Meteor* so near home on August 8 had been a shock to the High Sea Fleet authorities, who were, moreover, expecting air reprisals for the Zeppelin raids now so frequent. The result was an increased state of readiness and watchfulness in the Bight, particularly in anticipation of raids by seaplanes from carriers at dawn. But the arrival of British forces at the entrances to the Bight at such an hour as 8 p.m. was totally unexpected, by none more than the flotilla which sighted our squadron.

These German destroyers, part of the 2nd Flotilla, had come out to search for a British submarine and for some British armed trawlers repeatedly reported or observed to the northward of Horn Reefs. In the afternoon of the 17th the five boats—j.B.98, B.109, E.110, G.103, G.104—searched about 18 German and Dutch trawlers in that area. None of the vessels boarded had seen any English forces, armed trawlers or submarines. At 7 p.m. the German destroyers turned and steamed southward for Horn Reefs Light Vessel, their course and that of Captain Litchfield's squadron rapidly converging on that point.

The night was fine with heavy clouds to the eastward. As the two squadrons approached each other, the grey hulls of the Germans to the eastward were merged in the overhanging thunder-cloud while the British showed up against the faintly illuminated western sky. At 8.23 p.m.¹ the German leader, Captain Schuur in S.98, when 5 miles north of Horn Reefs Light Vessel, sighted a large darkened ship 9,000 yards on his starboard beam. He at once altered course towards her at 21 knots and speedily made out what he thought was a light cruiser and eight smaller craft steering in company with the first vessel. Realising that this was a hostile force he determined to attack. After a little time he abandoned the idea of making his attack on opposite courses,

¹ The *Phonograms* in *Nordsee*, lyp. pp. 1251-2 to 1274, are here re-arranged in minutes to make them agree with Captain Litchfield's account.

partly because he had not much chance of getting far enough ahead without being observed and partly because such an attack would bring him on to the heavier forces which he made up his mind must be following in support. He therefore decided on a running attack. By 8.38 he was in a position to fire, but the torpedo then discharged by B.98 was apparently outranged. He therefore closed, manoeuvring to avoid damage from a fishing fleet through which the flotilla was passing. By 8.45 he was little more than 2,000 yards from the leading large ship and expecting every moment to be fired upon. He turned to port and discharged two torpedoes; both exploded, one as he thought on the large ship, the other on the leading destroyer. The latter broke in two and the large ship seemed to disappear in a whirlpool. The rest of the destroyers went off at such a high speed that no further attack was possible. None of the other German destroyers had fired; they were approaching at a large angle and, obstructed by the leader's smoke, did not know that torpedoes had been discharged till they heard the explosion.

The German flotilla commander made no attempt to follow up his initial success. Loud wireless signals which he heard immediately after the attack strengthened his conviction that strong British forces would soon be on the spot, and he did not feel justified in hazarding his flotilla against anything less than British battleships, which were most unlikely to be approaching the Bight at that time in the evening. At 8.57, therefore, he turned off eastward and left the scene of action.¹

He had not suspected that the vessels he had seen represented a minelaying expedition; and it was not till August 21, when a trawler reported having seen a British minelayer on the 17th, 30 miles from Horn Reefs, that the Germans realised the object of our visit to the Bight. The airships were then instructed to look out for a new minefield,² possibly laid by the squadron which had been surprised by the German destroyers.

97. ~~The Night Attack.~~ The approaching Germans had been seen by at least two of our destroyers—the *Mentor* and *Morris*, leaders of the two divisions, as well as by the *Princess Margaret*.

Commander Henniker-Heaton in the *Morris* at once increased to 25 knots and steered towards the craft seen on his port bow. As he did so he heard an explosion in the direction of the *Mentor*. After this he saw no more of the enemy. In his report he states: ³ "when I was abeam of the *Princess Margaret* she turned to north-west and shortly afterwards I also turned and formed on her port quarter, considering it of the first importance to guard her from the enemy by intervening between them, which was in accordance with the Admiralty orders shown me on board the

¹ *Nordsee* IV, pp. 271-274.

² Signal 0553 August 21, in I.D.H.S. Records.

³ M.06621/15. There is a typewritten copy in Harwich Force Packs, Vol. XII, H.S.A. 251, p. 99.

Princess Margaret, in which it stated that torpedo boat destroyers were not to go after the enemy, but to carry on a running fight."

The *Manly*, next astern of the *Morris*, saw no enemy and thought the squadron had run into a minefield. She followed the *Morris* round about 8 points to port and then again to starboard to take up station on the port beam of the *Princess Margaret*, which by that time was steering north-west. During this manoeuvre she sighted for a moment three objects to port which she thought were torpedo craft.

The *Matchless* also thought the flotilla had run into a minefield. She followed the motions of the *Morris* and took up station on the minelayer's port beam. She saw nothing of the enemy and received no signals till 10.20 p.m. when the *Princess Margaret* made "Where is *Mentor*?"

That destroyer had been leading the starboard division, furthest from the enemy. A few minutes before the explosion, the *Mentor's* first lieutenant had seen flashes coming from three darkened vessels on the minelayer's port beam. Commander Inman, thinking he had best get between these vessels and the *Princess Margaret*, at once ordered "Starboard 10, full speed, guns stand by." Almost instantly, his vessel was struck in the bows. A column of water knocked down everyone on the bridge, a dense cloud of black smoke obscured everything, and the ship began to settle by the head.

The *Mimos*, next astern to the *Mentor*, immediately put her helm hard-a-port, intending to make a 32 point turn to rejoin the *Mentor* and render what assistance was possible. But, observing the *Mentor* increase speed and cross the bows of the minelayer, which had turned to north-west, she resumed her course to rejoin the *Princess Margaret*.

The *Moorsom* thought the squadron had run into a minefield. She did not follow the *Mimos* round to starboard, but held on, following the *Mentor*, which turned 8 points to starboard, steaming 15 knots and, so far as could be seen from the *Moorsom*, was undamaged. The *Mentor* crossed the bows of the *Princess Margaret*. There was not room for the *Moorsom* to follow; that destroyer dropped astern of the minelayer and felt no further anxiety for the *Mentor*.

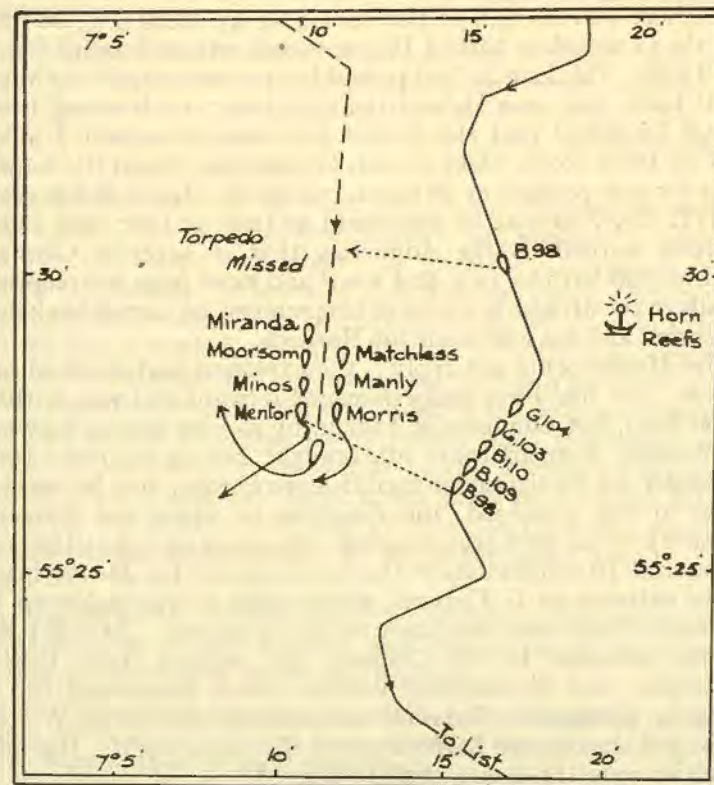
The *Miranda* could see nothing wrong with the *Mentor* after the smoke of the explosion had cleared away. Observing the *Mimos* steer out to starboard, the *Miranda* presumed the attack had come from that direction and turned also to starboard. A few minutes later she saw the *Princess Margaret* signal "Pass under my stern and join 1st Division."

Captain Litchfield had made other signals. As soon as he sighted the enemy he ordered his destroyers to engage them, the starboard division to pass under his stern and join up astern of the port division.¹ So little of the enemy had been seen that no

¹ M. 16-19.

attack was possible so long as the destroyers remained in contact with the minelayer, now steaming north-west. He had taken the explosion of the torpedo to be either a bursting shell or gunfire, and any suspicion that the *Mentor* had been torpedoed was put further from his mind by the report of the officer-in-charge of his after guns that the *Mentor* had fired her forward gun. The result was that the *Mentor* was entirely deserted.

THE NIGHT ATTACK.



98. The Operation Abandoned. After running to the north-west at full speed for half an hour, Captain Litchfield turned 8 points to port at 9.20 p.m. under cover of a rain-squall, intending to resume the minelaying operation. A few minutes later he learned from the *Morris* that it was believed the *Mentor* had been torpedoed, and since this intelligence, if correct, must mean that the enemy were aware of the presence of the squadron, he decided to abandon the operation. He reported his intention to Commodore Tyrwhitt and shaped course for G Channel.¹ It was not until 1.15 a.m. on the 18th, however, that Captain Litchfield was able to get a definite report from the destroyers that the *Mentor* had been torpedoed.²

¹ M. 18-28.

² M. 29, 32-38.

Commodore Tyrwhitt learnt from the *Princess Margaret* at 9.41 p.m. on the 17th that she had been observed and had abandoned the operation.¹ A series of signals ensued, and by 11 p.m.² Commodore Tyrwhitt knew that the squadron had been in contact with enemy cruisers and destroyers, and was now steering for G Channel.³ At 9.41 p.m., on receiving the first news that the operation was compromised, the Commodore, then in 54° 34' N, 4° 19' E, steered N48E at 25 knots to intercept the *Princess Margaret*.

As there was no sign of the minelayer by 12.30 a.m. on the 18th, the Commodore turned 16 points and returned on his track until 4 a.m. Thinking he had passed her in the darkness, he then turned back, and soon sighted the squadron; on learning from Captain Litchfield that the *Mentor* had been torpedoed 7 miles WSW of Horn Reefs Light Vessel, Commodore Tyrwhitt shaped course for that position at 20 knots, calling the *Mentor* at intervals by W/T. By 7.30 a.m. he had found no trace of her; and as he had been warned by the Admiralty that a superior German squadron had left the Jade at 4 a.m.⁴ and must from intercepting his calls to the *Mentor* be aware of his presence, he turned back in a rising wind and sea and made for Harwich.

The *Mentor* could not reply; the explosion had wrecked her wireless. She had been badly damaged forward and was settling by the head, but Commander Inman, by shoring her up forward and flooding compartments aft brought her to an even keel. Practically all navigational facilities were gone, but he set his course to the westward, the direction in which the *Princess Margaret* had last been seen steering. Steaming at first at 16 knots and later at 10 and 8 knots as the sea increased, the *Mentor* made for the entrance to G Channel, where, since it was unknown to the enemy, they were less likely to search for her. At 3.30 p.m., off the entrance to G Channel, she sighted two British submarines, and it was their wireless which announced her to Harwich. Commodore Tyrwhitt was in touch with her by W/T by 5 p.m. and she reached harbour safely that same night. Her only casualties were three men slightly injured.⁵

99. Criticisms of the Orders.—The fact that a few German torpedo craft had been able to approach the squadron within a mile, torpedo one of the seven British destroyers present, and cause the abandonment of a carefully planned operation without a single shot being fired at them gave rise to some comment. Commodore Tyrwhitt adversely criticised Captain Litchfield's disposition of the destroyers in columns astern of the minelayer;

¹ M. 23.

² *Arethusa's* W/T and signal logs are not extant, but presumably Commodore (T) received the *Princess Margaret's* signals correctly. His report (M. 06620/15) does not mention all the signals.

³ M. 23, 24, 26.

⁴ M. 31.

⁵ *Mentor's* Report is in M. 06621/15.

he remarked,¹ "their position rendered the *Princess Margaret* no protection from attack from ahead and gave the attacking vessels a better chance of 'browning' the whole squadron. Had they been stationed on the beam, it would have been impossible for the enemy to have attacked without being seen, at least by the destroyers on the attacking side." He thought that in future operations which employed destroyers and vessels not accustomed to working with destroyers, the disposition of the latter should remain at the discretion of the Senior Officer of destroyers present.

This suggestion the Admiralty could not accept. They considered the disposition of the destroyers must remain in the hands of the Senior Officer under whom they were working. Nor did they agree that a disposition on the beams of the minelayer would have been the best possible.

The Commodore also ventured to question the wisdom of that paragraph in the operation orders which had enjoined a running fight on the destroyers when the enemy was sighted. "I respectfully submit," he wrote,² "that the destroyer's duty in this case was to follow and sink the enemy and thereby prevent them from making a further attack." To this the Admiralty replied:³ "The operation order B.Y. of 15 August 1915 was issued with the express intention of affording protection to the *Princess Margaret* if she was sighted by enemy patrol vessels when minelaying, and the duty of the escorting destroyers on this occasion was not to scour the sea and look for a fight," which might have led the flotilla away from her after a very inferior force and left her exposed to be overhauled and attacked by any other patrol vessel which sighted her."

As the Admiralty further asked the Commodore for a statement of his views as to the number and disposition of destroyers escorting minelayers in future, he replied:—⁴

It is my opinion that the destroyers, whether stationed on the bow, beam, or quarter, could not have prevented the *Princess Margaret* from being attacked by enemy destroyers.

My original report was not intended to suggest that the destroyers should be used "to scour the seas and look for a fight." I wished to convey that had they been stationed on the beam of the *Princess Margaret* they would have been in a better position for seeing, and consequently bringing to action, the attacking destroyers; and even if both divisions had given chase, the chances of meeting another flotilla ahead were extremely small, and it is considered that the *Princess Margaret* is capable of dealing with any overhauling patrol vessel by means of her speed, guns and mines. It must be clearly recognised that destroyers escorting a minelayer will lose touch with her the moment they turn away from her, and having once lost touch, they must not attempt to regain their station until daylight.

¹ His letter 778/0089 of 26 August 1915, in M. 06621/15.

² *Ibid.*

³ M. 00621 of 7 September 1915.

⁴ M. 07189/15.

Therefore, I am of opinion that after dark destroyers are of no value to a minelayer for protective or for offensive measures if they are not permitted to bring the enemy to action. In reality they become an encumbrance, as wherever they are stationed they deprive the minelayer of freedom of manoeuvre.

I submit that the operation of minelaying in the enemy waters should be conducted with absolute secrecy, and that the minelayer or minelayers should, after dark, be entirely alone, on the principle that the smaller the number of ships, the less the chance of discovery.

Minelaying must be accepted as a dangerous operation, and should only be undertaken on the darkest nights of the months or during foggy or misty weather.

Given a dark night the risk of discovery is exceedingly small, especially as it is of necessity a surprise to the enemy, who neither know the locality it is proposed to lay the mines in, nor even that such an operation is in hand.

I would also add that the majority of the German patrol consist of trawlers, which are slow and harmless and cannot prevent our minelayers from laying their mines even after discovery.

100. The Question of Treatment of Enemy Fishing Vessels.—Another point which was adversely criticised was the action of the commanding officer of the *Medusa* in releasing the German trawler *Boreas*. Captain Nicholson, Commodore Tyrwhitt, and Admiral Jellicoe all agreed that the *Boreas* should have been sunk in spite of the fact that she had no wireless apparatus and that nothing incriminating could be found on board her.

On July 24, Admiral Jellicoe had received orders that, in the course of Operation C, enemy fishing vessels should not be sunk unless being used for military purposes.¹ He now asked for this order to be cancelled. "It is not possible," he wrote,² "to be certain that a trawler is carrying out military duty, and it is perfectly easy for a trawler to get rid of compromising articles, such as W/T fittings, etc., whilst an examining vessel is approaching. I am, therefore, strongly of opinion that there should be no latitude given whatever in the case of German trawlers met in positions where they may obviously be acting as scouts, and I submit that the Admiralty instructions in this matter be rescinded. I am compelled to state that I can have no hesitation in taking action of this nature under similar conditions, as failure to do so may well jeopardise the success of a military objective, as it did no doubt in the case referred to."

His arguments did not shake the Admiralty's resolution to adhere in principle to the practice of civilised warfare; and they repeated their instructions "that enemy fishing vessels employed exclusively in coast fisheries, or small boats employed in local trade, should only be sunk if they are being used for military purposes, as laid down in the Naval Prize Manual, Article 10^a, and page 68, Chapter II.3."³

¹ A. 82.

² His letter 1906/H.F. 005 of September 6 1915 in M. 06965/15.

³ Article 10^d. The following ships are in general exempted from attention, provided that they have taken no part whatever in hostilities, and have observed the restrictions (if any) imposed upon their action

101. Air Raid of August 17-18.—The waxing of the moon and diminution of moon darkness which had led to the abortive attempt to mine the Bight, produced also another air raid. Among the German signals intercepted on August 17 was one giving orders for a distant operation by large airships.¹ The four airships concerned—*L.10*, *L.11*, *L.13*, *Z.14*—left their sheds at Nordholz and Hage early in the afternoon of the 17th for the distant operation, which was a concerted attack on London. *L.13* broke down and had to return. *L.14* and *L.10* reached the coast south of Lowestoft about 8 p.m., and *L.11* was over the Isle of Sheppey an hour later. *Z.14* had several failures in her motors and, abandoning the idea of attacking London, contented herself with dropping 50 incendiary and 20 explosive bombs on what she took to be factories and blast furnaces near Ipswich.²

Of the four Zeppelins which had started, only *L.10* and *L.11* definitely attacked London. *Z.10*, approaching from the north-east, dropped 20 explosive and 40 incendiary bombs on a district she identified as lying between Blackfriars and London Bridge;³ *Z.11*, approaching from the east along the river, dropped the same amount of bombs on a district she took to be Woolwich.⁴

Four Yarmouth armed trawlers had been cruising with a seaplane off Jim Howe Bank in readiness to attack any Zeppelins. One of them sighted an airship approaching and proceeded eastward to try and intercept it on its return. It apparently went homeward by a different route, since neither the trawlers nor seaplane saw any more of it.⁵

The first British report of these airships was made at 8.20 p.m. by the Would Lightship, which sighted a Zeppelin now known to have been *L.14*. She proceeded southward as far as Lowestoft; down the coast, which she did not cross, and the factories and blast furnaces which she claimed to have bombed appear to have been in reality the Cross Sand Lightship, near which she dropped at least 20 bombs, without doing any damage.⁶

either by special orders or by the terms of the licence or convention under which they claim exemption:—

* * * * *

(d) Enemy vessels employed exclusively in coast fisheries or small boats employed in local trade.

Chapter II of the Hague Convention, 1907. Vessels employed exclusively in coast fisheries, or small boats employed in local trade, together with their appliances, rigging, tackle, and cargo, are exempt from capture. This exemption no longer applies from the moment they take any part whatever in hostilities. The Contracting Powers bind themselves not to take advantage of the harmless character of the said vessels in order to use them for military purposes while preserving their peaceful appearance.

¹ Signal 0000 August 17.

² Signal 1130 August 17, in I.D.H.S. Records.

³ Signal 1310 August 18, in I.D.H.S. Records.

⁴ *Nordsee* IV, pp. 275, 276, and Karte 12.

⁵ Yarmouth A.P. Reports, H.S. 161, p. 148.

⁶ *Airship Raids*.

£.10 was first sighted at 8.25 p.m. near Aldeburgh. Passing west of Harwich, she came along the main Great Eastern Railway Line and dropped bombs at Walthamstow and Leyton, in the north-east of London. This district she apparently mistook for the City itself. Of her 60 bombs, 45 were located. They killed 10 people, destroyed a church, and more or less damaged a railway station and a large number of private houses, to a monetary value estimated at £30,000. So little was seen of the airship that only one anti-aircraft gun came into action, and that fired only two rounds. Six machines of the Royal Naval Air Service went up, but failed to find the enemy.

£.11 seems to have crossed the coast at 9.30 p.m. at Herne Bay, not at Sheppey; and proceeding inland dropped her bombs at Ashford and between Ashford and Faversham, not going west of Faversham. With her 60 bombs she managed to kill a sheep; they also broke some church windows; otherwise the damage she did was negligible. It is impossible to trace in her actual proceedings any resemblance to the passage up the Thames and the bombing of Woolwich attributed to her by the German historian,¹ or even to her own wireless report.²

It will be remembered that the 6th Light Cruiser Squadron had been based on the Humber and specially fitted with high-angle guns in order to meet and attack airships. They had gone out on the 16th to look for minelayers and suspicious ships, and on the 17th were ordered to the Dogger Bank in case the destroyers known to be operating to the north-west of Heligoland should attack the fishing fleet. When it was known that an air raid was in progress they were recalled to coal and await further instructions; but this order did not leave the Admiralty till after midnight, by which time the raid was over.³

The moon was now eight days old; and no more airship raids were expected, or took place, till near the next new moon on September 9.

102. Anti-Submarine Operations in the Last Half of August.—

Though the air raids for the month were finished, the war by and against submarines continued unabated. Much was hoped from disguised ships of the *Prince Charles* type, and on August 20 the Commander-in-Chief asked that the number of these might be increased to 40.⁴

When, a few days later, the submarines which had been working off south-west Ireland were expected to be passing the Shetlands on their homeward journeys, the decoy ships based on

¹ *Nordsee* IV, p. 276.

² "Heavily fired at east of City of London by several batteries. Warehouses on the Thames and several ships attacked with 40 incendiary bombs and 20 explosive bombs; good results observed" (Signal 1430 August 18, in I.D.H.S. Records). The only firing recorded is that of some rifles at Herne Bay and Herne Village. (*Airship Raids*.)

³ A. 143, 146, 147.

⁴ M. 06448/15; papers titled A.9463/15.

Scapa all went out. In addition, half the 2nd Destroyer Flotilla cruised in Fair Island passage and a division of the 1st Flotilla swept between May Island and Coquet Island.¹ The 3rd Cruiser Squadron at Rosyth changed places with the 7th Cruiser Squadron at Scapa, the squadrons carrying out a sweep of the North Sea between the 24th to 26th *en route*.² But this was a precaution against minelayers rather than a hunt for submarines; the latter type of operation was left more to destroyers and to both types of decoy, the merchant vessel with a hidden armament and the submarine towed by a trawler.

On August 25 the *Taranaki*, with C.24 in tow, sighted a submarine in 56.43 N, 0.55 E. C.24 was unable to attack but the *Taranaki* opened fire and claimed several hits. It was considered only "probable" that the enemy had been sunk.³ No German submarine is known to have been in that neighbourhood and there are no German signals which refer to an encounter of this character at the time. Indeed, the latter half of August was a period of little submarine activity in the North Sea.

U.25, returning from her cruise to the north, passed down the coast of Norway and Denmark between the 17th and 20th, searching and occasionally sinking neutral vessels. On August 21, U.32 left for operations on the west coast of the British Isles,⁴ but her compass broke down and she turned back before reaching the Shetlands Isles. On the 29th, U.20 proceeded for the west coast. These and the boats returning from the west coast or *en route* to Mediterranean are the only submarines known to have been in the North Sea at this time; and none of them had been detailed for operations against either the Grand Fleet or merchant ships in the North Sea.

Several encounters took place or were reported to have taken place in the swept channel; in these cases the submarines, if such were present, would be U.B. or U.C. boats, of whose movements we have no detailed information.

The towed submarine decoy service suffered another loss on August 29 when C.29, one of the submarines specially put under the Admiral of Patrols, in tow of the armed trawler *Amiadme*, struck a mine and sank with all hands.⁵ The position, 53.59 N, 1.25 E, though outside the areas prohibited as mined, was really on the minefield laid off the Indefatigable Bank in January.⁶

103. ~~Movements of British Submarines.~~ From July onwards British submarines operated in the Baltic from Reval. E.1 commenced on July 20; E.9 on July 29. On August 15, E.8 and E.13 left Harwich in company for Reval. E.8 arrived safely, but E.13 ran ashore in the Sound and was set on fire; her crew were interned in Denmark. On August 29, E.18 and E.19 left

¹ H.S. 147, pp. 94, 135, 188, 376.

² M. 05897/15.

³ H.S. 148, pp. 637, 648.

⁴ M. 06651/15.

⁵ *Nordsee* IV, p. 271.

⁶ M. 06842/15.

Harwich for the Tyne to prepare for their voyage to the Baltic ; they proceeded for Reval on September 4.¹

The bombardment of Zeebrugge had been originally planned for August 21, and four submarines were ordered on the 19th to the Bight to deal with any activity that might result from the operations on the Belgian coast.²

Shortly after this order had gone out Admiral Jellicoe suggested that two "D" or "E" class submarines should cruise off the Norwegian coast in 60° N, where German U-boats had been active, in the hope of surprising the enemy while he was boarding ships. But with so many submarines employed the Admiralty had to reply that they were unable to spare any for the Norwegian coast.³

In accordance with the orders for operations in the Bight, four submarines proceeded on the 20th: ZL16, E.5, DA, D.3. The last, which had the westernmost station off the Dutch coast, left her station in the evening of August 21 and returned on account of an injured stoker. She had seen nothing worthy of remark beyond the fact that there were no Dutch trawlers east of Terschelling. The others also had nothing to report except that airships were actively patrolling. This patrol, it would appear, was made specially active on the sighting of our boats.⁴ The three submarines left their stations at dark on the 25th and returned to Harwich.⁵

CHAPTER X.

AIR RAIDS AND MINELAYING IN SEPTEMBER 1915.

104. Anti-Zeppelin Operations by Submarines, September 1-5.

—The next period of moon darkness was about September 9, on which date the moon was new, a condition favourable for Zeppelin raids. To damage the airships before they started, the Admiralty tried a new plan in September. Attacks by seaplanes had not proved specially successful and the weapon now to be employed was not a flying machine, but a submarine.

E.4 and E.6 were each fitted with four 6-pdr. high-angle anti-aircraft guns and sent over to the western side of the German Bight with the special duty of attacking Zeppelins. They were to act in concert and were both to fire on the same airship, which could not attack the two boats simultaneously ; and they were to

¹ Proceedings of submarines in the Baltic, bound in H.S. 271 ; another copy in Commodore (S) War Records, Vol. XI ; H.S.A. 279.

² A 149.

³ H.S. 146, pp. 712, 917.

⁴ Signals 2109, 2330, 0000 August 25, in I.D.H.S. Records.

⁵ H.S. 294 ; H.S.A. 270.

cruise in company for five days. They left on September 1. It proved impossible for them to keep together; early on September 2 they had to dive to avoid discovery, and on coming to the surface found themselves out of touch. For the rest of the cruise they acted independently. Their orders allowed for the possibility of separation and gave E.4 the station north of 54° 12' N, and E.6 the station south of that parallel.

E.4, working to the north of 54° 12' N, sighted an airship on September 3, but it was too far off to attack. This was the only Zeppelin she saw. On the 5th she arrested the German trawler *Esteburg* and brought it back to Harwich in custody. From its crew she obtained interesting information as to the food position and even a sample of German "war bread."

E. 6 on September 4, when in 53.37 N, 5.37 E, sighted a Zeppelin coming from eastward at 5.45 a.m. "Opened fire on Zeppelin at 3,000 yards with all guns," reports Lieutenant-Commander W. J. Foster, her Captain.¹ "Zeppelin dropped by the nose, then righted herself and turned right round on her tail and proceeded to open the distance, finally stationing herself on starboard beam at about 7,000 yards range, where she remained. The first shot (tracer) fired as sighting shot was a hit as far as could be observed. The state of weather at the time was, no wind and moderate swell, so the laying of the guns was difficult. 6.20 a.m. sighted aeroplane approaching from south-east. Dived to avoid same till 2 p.m." When he put up his periscope from time to time the aeroplane was still hovering over him, but the Zeppelin had retired to the horizon and during the remainder of his stay he saw no more airships.

It was L.9 that he had engaged. She was not hit. She reported the encounter by wireless, adding that in the neighbourhood of the submarine was a suspicious sailing cutter. Accordingly the 2nd and 9th Destroyer Flotillas were ordered out to hunt for the submarine and for the suspicious cutter, which, when found, proved to be quite innocent.²

Although our submarines had failed to damage any Zeppelins one was destroyed on September 3. This was L.10, struck by lightning over the mouth of the Elbe when returning from a scouting trip over the outskirts of the Bight. She fell in flames and her whole crew perished.³

The anti-airship patrol by Yarmouth trawlers with seaplanes was carried on continuously in the neighbourhood of Swarte and Jim Howe Banks throughout the early part of the month. The patrol passed without incident⁴, though airships became active enough as the moon waned.

¹ H.S.A. 270, p. 500.

² *Nordsee* IV, p. 278.

³ *Nordsee* IV, p. 277. The German signals announcing this were decoded by us as referring to Z.11 (Signal 0450 September 3, in I.D.H.S. Records).

⁴ Lowestoft A.P. Reports, H.S. 161, pp. 183, 191.

105. **The Military Air Raids of September 7-8.**—In the succession of air raids carried out by the Germans during the September new moon period, military airships took their part and in fact began the series. Military airships, shelled in Belgium, made no wireless signals, or at least we intercepted none that we could read, and consequently we had no warning such as was customary in the case of raids by naval airships starting from Heligoland Bight. It was a surprise when at 10.40 p.m., September 7, a Zeppelin was seen over Clacton, a report followed by others from various parts of the Thames Estuary.

An analysis of the reports of airships sighted and bombs dropped showed that three of these craft came over from Belgium on this occasion. One, crossing the coast at Clacton, wandered over Suffolk and retired over Lowestoft at 2.20 a.m., having done some slight damage to the buildings of one farm.

Another, *S.L.2*, entering at the River Crouch, reached North-east London and then turned eastward, following the Thames. She circled over South-east London, dropping bombs in various parts of Greenwich, Deptford and Woolwich. New Cross Station and the Royal Victualling Yard at Deptford received some slight damage. In these thickly populated neighbourhoods many houses were destroyed; one of her bombs, falling in Edward Street, Deptford, demolished and damaged 100 houses. She crossed over the Thames and, passing over Harwich, made for Belgium. A trawler sighted her overhead at 2.10 a.m. and fired five rounds at her without apparent effect.¹ Though she seems to have been undamaged by any of the branches of the anti-aircraft service, she did not reach home safely. Her petrol appears to have given out; and in descending, out of control, she struck a house and damaged herself so much that she had to be rebuilt.

The third raider crossed the coast between the other two, but a little later; she entered London from the North and, passing right over the City, dropped one bomb near Fenchurch Street. She skirted South-east London and went back via Harwich in company with *S.L.2*.

The total casualties were 18 killed and 38 injured. The monetary value of the damage done was estimated at less than £10,000. Anti-aircraft guns had great difficulty in seeing any targets and fired only a few rounds. Two machines went up in chase; neither was able to attack.²

106. **The Naval Air Raid of September 8-9.**³—German naval airships, before leaving for a raid on Great Britain, always landed all their code books except the mercantile code known as H.V.B. This the Germans knew to be in our possession, and therefore,

¹ Harwich A.P. Reports, H.S. 140, pp. 144, 150.

² Details of the raid are in *Airship Raids*. It is not mentioned in *Nordsee IV*.

³ Details in *Airship Raids*.

if a Zeppelin were brought down over England and captured with its code book intact, the secrecy of German signals would be no further compromised. As a matter of routine the airships reported by wireless as soon as they had started that they had only H.V.B. on board, a type of message which immediately conveyed to us the knowledge that the airship making the signal was about to raid the British Isles. About 1 p.m., September 8, four naval airships in Heligoland Bight announced that they had gone up with only H.V.B. on board, and it was obvious that an air raid was to be expected. One of them, *L.11*, broke down and turned back; but the three others came on. At 5 p.m. they signalled that they were near Terschelling.¹

The first of them was seen by two trawlers, the *Conway* and *Manx Queen* of the Humber patrol, which were specially cruising off Haisborough Light Vessel. It was flying quite low and, being within range, the *Conway* fired eight rounds from her 1-pdr. gun, making the enemy rise at a sharp angle. A quarter of an hour later the *Manx Queen* had a similar chance, and fired nine rounds at the second airship.² The report from Haisborough Light Vessel reached the Admiralty at 7.24 p.m.³ A third Zeppelin was reported from Whitby soon after 10 p.m.

In the raid which followed, a few bombs were dropped at 8.35 p.m. on a village west of Norwich. About 9.35, Skinningrove Ironworks, near Middlesbrough-on-Tees, was attacked; a high explosive bomb fell within 10 ft. of the benzol house, which contained 45,000 gallons of benzol; luckily the benzol house was undamaged, as was also the T.N.T. storehouse. Between 10.40 and 11 North and Central London received a full cargo of bombs, 15 high explosive and 55 incendiary bombs being counted. They killed 22 men, women and children, and did damage in the city estimated at over half a million pounds. Amongst other buildings wrecked was that of the Penny Bank in Bloomsbury; a photograph of the ruins, on which the word "Bank" could still be read, reached Germany, and was confidently claimed as a proof that the Bank of England had been destroyed.

A curious relic of this raid on London is a clean-scraped ham bone, dropped at Barnet; on it is a rude drawing of a Zeppelin dropping a bomb on a severe personage labelled "Edward Grey," who is made to be saying, "What can I do, poor devil." On the other side of the bone is written, "A souvenir from starved-out Germany."⁴

It is stated by the War Office⁵ that a military airship from Belgium attempted to co-operate in this raid, coming as far as the Suffolk coast and dropping eight bombs near the Galloper Lightship. The authority for this statement is not given.

¹ Signals of September 8, in I.D.H.S. Records.

² Humber A.P. Reports, H.S. 158, pp. 252, 253.

³ H.S. 150, p. 441.

⁴ Sir Edward Grey, Foreign Secretary when war broke out, was of all Englishmen the most obnoxious to the Germans. T.S.D.D.

⁵ *Airship Raids*.

The airship which had bombed Middlesbrough was L.9, an older Zeppelin unable to climb to the height considered necessary in attacking well-defended London. Her principal objective was the benzol distillery which, however, she could not recognise, and the bombs which landed there she had dropped by guesswork.¹

The Zeppelin fired on by the *Conway* was L.14, which mistook the trawler patrol for a light cruiser squadron, and hurriedly made off northward. Her motors were giving trouble and she had to abandon the idea of attacking London; she contented herself with bombing what she considered to be factories and railway stations in and near Norwich.

The *Manx Queen's* airship was L.13 which, after waiting outside the Wash for the approach of darkness, proceeded to London, and, fixing her position by the inner circle of Regent's Park, which was lit as in peace time, made her damaging attack on London. The efficiency of the defence showed that L.9 had been wise to keep away, and the commanding officer of L.13 reported on his return that the airships would in future be able to remain only a short time over the City, and that it would hardly be possible to search for particular targets.²

107. Military Air Raids of September 11-12 and 12-13.³—

The next raid was carried out by a military airship which dropped a large number of bombs at the northern end of Epping Forest without effecting any damage. The Kentish Knock Light Vessel sighted her at 10.35 p.m., September 11; the bombs were dropped at 11.50 p.m.; at 1.40 a.m. she was over Norwich; and at 2.8 a.m. she crossed the coast going eastward, near Great Yarmouth.

Next night another military airship raided Suffolk. She was reported over Nieuport at 7.50 p.m., September 12, and at the Kentish Knock at 10.27 p.m. There was a thick ground fog which presumably hampered her view; she passed over several towns, and dropped her bombs only when fired on by maxims mounted on armoured cars, west of Colchester, between Colchester and Ipswich, and near Ipswich itself. The damage done was estimated at £8.

108. Naval Air Raids of September 13, 14 and 15.—The last raids of this period of moon darkness were made by naval airships, which, as usual, announced by wireless that they had gone up with only H.V.B. on board. On the night of the 13th there was a strong westerly wind and a good deal of fog on the English coast. Only one airship actually crossed it. She appeared over Harwich shortly before midnight, September 13-14, and dropped about 50 bombs on Suffolk villages north-east of Ipswich. At the same time two bombs were dropped from an airship over Margate Sands. The total value of the damage done was £2, and there were no casualties.⁴

¹ *Nordsee* IV, p. 283.

³ *Airship Raids*.

² *Nordsee* IV, pp. 285, 286.

⁴ *Airship Raids*.

What the Germans had intended was another raid on London. Three airships started, but strong westerly winds disheartened all but L.13, which wished to repeat her previous exploits. When off the coast of Norfolk she came under fire from a darkened warship, but was undamaged, and proceeded through clouds to cross the coast near Orfordness. About midnight she was attacked by anti-aircraft guns with a heavy fire; two gas cells were pierced by it, and the idea of bombing London had to be abandoned. With no thought of anything but preserving buoyancy she dropped all her bombs in open country and made for home. By discarding fuel, stores and water she managed to keep afloat as far as Hage, but there she took the ground so heavily that she suffered some damage, enough to keep her four days under repair.¹

On September 15 another attempt on London was made by L.11. She, like L.13, came under fire from ships off Haisborough at 9.15 p.m. Taken unawares, for she had not seen them and was flying low in atmospheric conditions which made climbing difficult, she had to jettison her reserve fuel and even her bombs in order to rise out of danger—and her raid perished stillborn.²

Strangely enough, this definite defeat by naval forces of an attempt at a raid on London is not mentioned in our records. The firing by a ship on a Zeppelin at any time that evening is not reported either in the telegrams or in the Auxiliary Patrol reports of the Humber, Lowestoft, Harwich and Nore areas. Neither do we find it reported by Commodore Tyrwhitt's light cruisers which, owing to a new arrangement, would be the most likely vessels to come across a Zeppelin at night.³

109. Attempts to attack Airships, September 13.—Since September 13 the cruisers of the Harwich Force had been carrying out a Zeppelin patrol every night.⁴

Three beats were arranged—

- (a) Between Cromer Knoll and Newnamp;
- (b) Between Cross Sand Light Vessel and a line drawn E by S through Southwold Light;
- (c) Between this line and a position 4 miles east of the Sunk Light Vessel.

The *Arethusa* left Harwich at 6 p.m. for beat (a); the *Undaunted* and *Penelope* at 8 p.m. for beats (b) and (c) respectively.⁵ The *Arethusa* and *Penelope* saw nothing; but at 10.50 p.m., September 13, the *Undaunted* near Aldborough Napes sighted a Zeppelin flying low, close on the starboard bow, and opened fire on it. In three minutes it disappeared, apparently undamaged. On the 15th the *Penelope*, *Aurora* and *Conquest* went out, but they

¹ *Nordsee* IV, p. 295.

² *Nordsee* IV, p. 295, and Signal 1055 September 15, in I.D.H.S. Records.

³ *Airship Raids* says nothing of this raid.

⁴ A. 163, 164.

⁵ Commodore (T)'s Diary.

returned in the morning with nothing to report.¹ The encounter which broke off L.11's raid cannot have been with them.

This Zeppelin patrol by Harwich cruisers continued till September 18 when, in view of the bright moonlight, air raids seemed unlikely, and the Admiralty approved that the patrol should not proceed to sea unless reports of the approach of aircraft were received.

Meanwhile a further attempt to attack airships patrolling in the Bight was made. On September 14 four submarines proceeded for the Outer Bight, E.17 and D.3 for the usual form of patrol, and EA and E.6 as before to act in concert against Zeppelins. As on the previous occasion it proved impossible for them to keep together; bad weather separated them on the 15th. A Zeppelin was seen by EA early on the 31st near Horn Reefs. She fired tracer shell at it with her four 6-pdr. anti-aircraft guns till it came nearly overhead and she had to submerge. While under water she felt the shocks of three bombs. The encounter showed the difficulty of damaging airships with the anti-aircraft guns in use, and Captain (S) suggested larger guns with high explosive shell.²

The airship which had dropped the bombs observed, where the submarine had dived, a large spot of oil rising and steadily increasing. She did not actually claim to have hit the submarine, but thought it worth while to report the oil.³ This well-known result of exploding bombs under water did not betoken any damage to EA, which after further prospecting for Zeppelins returned home safely.

The anti-aircraft service was thought to have proved not particularly effective and on September 13 Admiral Sir Percy Scott was appointed to take charge of the gunnery defences of London.⁴ At the same time steps were taken to reduce the power of lights on the East Coast between the South Foreland and Cromer. This reduction was afterwards extended to as much as 50 per cent, in the brilliancy of all the principal lights on the South-east Coast.⁵

The appointment of Sir Percy Scott happened to coincide with serious doubts in responsible quarters in Germany whether air raids on London were advisable. The Chief of the General Staff of the Army in the Field feared that they might provoke attacks on open German towns, which had so far been spared by the Allies. His views carried weight enough for Admiral von Holtzendorff, Chief of the Naval Staff, to recommend that future attacks should be confined to the wharves and docks of the Thames; whereupon Admiral von Pohl, Commander-in-Chief of

¹ Deck Log *Undaunted*.

² H.S.A. 270, pp. 508-519.

³ Signals 0130, 0400 September 21, in I.D.H.S. Records; *Nordsee*, IV, p. 303.

⁴ H.S. 151, p. 466.

⁵ Papers titled *Trinity House*, 8 September 1915.

the Fleet, on September 19 decided that distant operations of airships should cease altogether until the advent of darker nights.¹

110. German Seaplane Raids of September.²—This decision to abstain for the time from airship raids on England did not apply to the Flanders Command, which in September recommenced air raids by seaplanes, after a quiescent interval since July. On September 13, at 5.40 p.m., a seaplane dropped 10 high-explosive bombs on Cliftonville, Margate, killing two women and two cab horses. It was pursued by two machines from Maidstone, but escaped untouched.

Next morning another enemy seaplane approached the coast near Westgate. Possibly it was only on reconnaissance; it did not cross the coast and made off again before any machine could be sent up after it.

On the 23rd, an aeroplane dropped six bombs very close to a Harwich drifter near the Sunk Light Vessel. No damage was done to her, but in view of the fact that she was unarmed the Admiralty issued instructions that the disposition of the Harwich Auxiliary Patrol should ensure that unarmed drifters should be in touch with armed trawlers.³

111. The Third Minefield laid off Amrum Bank, September 11.⁴—As in the previous month, the opportunity of moon darkness was utilised by us for a minelaying operation. It was to be on a larger scale than the abortive expedition of August 17. The three minelayers, *Princess Margaret*, *Angora* and *Orvieto*, were employed, and altogether the operation, known as Operation CY, was the most extensive of the whole war in that on no other single night was so much ground covered in the Bight.⁵

Each minelayer was to have a direct escort of two Harwich destroyers at the absolute disposal of Captain Litchfield, who could give them what orders he thought fit. In support, but not in contact, were the 5th Light Cruiser Squadron, from Harwich, with the rest of the Harwich destroyers, now known as the 9th and 10th Flotillas.⁶

A further and more powerful support, in case the Harwich Force should be attacked, was to be provided by two battle cruiser squadrons, each with a light cruiser squadron and two divisions of destroyers from Rosyth; this force was to be under the personal command of Admiral Beatty, and was to take up an advanced position between the Dogger Bank and Amrum Light Vessel.

¹ *Nordsee* IV, p. 296.

² *Aeroplane and Seaplane Raids*.

³ Harwich A.P. Reports, H.S. 140, pp. 163, 168, 169, 173.

⁴ A convenient collection of copies of orders and reports on this operation is in Harwich Force Papers, Vol. XII, H.S.A. 291, pp. 213 to 229.

⁵ Lockhart Leith: *History of British Minefields*.

⁶ From midnight September 7 the name of the 3rd Flotilla was altered to 9th Flotilla, all the boats under Admiral of Patrols being grouped in the 7th and 8th Flotillas (M. 06563/15).

• Six submarines were to be stationed on the meridian of the East end of Terschelling Island to be ready to attack any German force which might come out with the object of cutting off the minelayers on their return.¹

The minelayers and their escort sailed from the Humber at 6.30 a.m. September 10, and proceeded via H Channel. The Harwich Force left Harwich an hour later with Commodore Tyrwhitt's pendant in the *Cleopatra*, and passed into the North Sea by the Haisborough Channel. Only five destroyers of the 9th Flotilla were available;² the remainder were at Devonport on escort duty with transports for the Mediterranean. The six available "M" class destroyers were with the minelayers, but the *Nimrod*, Second in Command of the 10th Flotilla, went with the Commodore.

As soon as the operation started it looked to be more than usually hazardous. The day proved to be brilliantly clear, without a cloud in the sky, and it was followed by an extraordinarily light night. It did not seem possible to Captain Litchfield that the minelayers could escape observation if any patrol were on the lookout. But no trawlers were seen by him, and no Zeppelins made their appearance.

A further trouble was that the *Orvieta* was unable to get the anticipated speed and reduced the squadron to 15½ knots. Some small modifications of the plan were thereby rendered necessary.

Captain Litchfield decided to dispense with the destroyer escort, and at 7 p.m. sent them to join Commodore (T). He considered that "the chances of getting through unobserved would be increased by not taking the destroyers after dark, whilst any advantage resulting from the company of two only with each minelayer might be neutralised by restricting freedom of action of the minelayers if chased."³

In spite of the lightness of the night, which was so bright that Captain Litchfield could easily recognise people on the further side of the bridge of the *Princess Margaret*, there were no indications that the minelayers had been observed either before or while laying out the minefield, between midnight and 2.12 a.m. Two dark objects were seen inshore moving southward at 1.40 a.m.; if they were destroyers they apparently did not observe the minelayers, for they made no attack and no opposition was encountered. The whole squadron returned safely to harbour.⁴

The only incident of Commodore Tyrwhitt's cruise to the Bight in support of the minelayers was the capture and sinking of a German trawler, the *Fischandel*, on the morning of September 10. This was the only German vessel seen.⁵ On return to

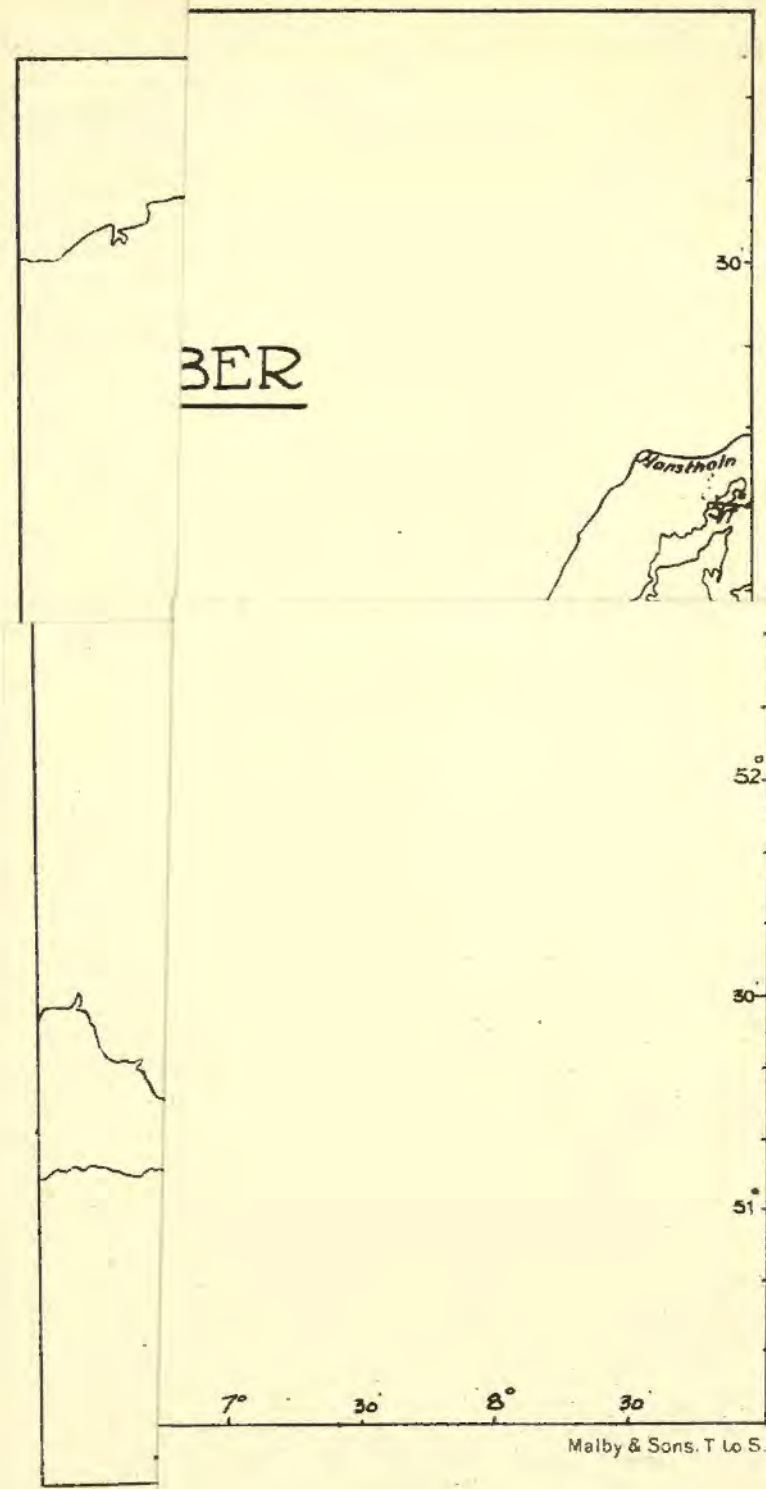
¹ The Operation Orders are given in full in Appendix Q.

² *Loyal, Legion, Lysander, Lucifer, Linnet.*

³ Captain Litchfield's Report, M. 07128/15.

⁴ M. 07128/15.

⁵ Commodore (T)'s Report, M. 07026/15.



BRITISH MINEFIELD LAID OFF AMRUM BANK 10-11 SEPTEMBER



Harwich the Commodore rehoisted his pendant in the *Aneithusa*, which had completed her refit.

The battle cruiser squadron's cruise had passed almost without incident. The force—a large one consisting of the 1st and 3rd Battle Cruiser Squadrons, the 1st and 2nd Light Cruiser Squadrons, the *Fearless*, *Botha* and four divisions of the 1st Flotilla—on the way out to the supporting positions passed a Norwegian steamer, and shortly afterwards heard strong telefunken signals in code, which Admiral Beatty suspected to be a report of his presence. There was, however, no remedy, nor was there any means of preventing neutral vessels on the high seas from making such signals.¹

The minefield consisted of 1,450 mines, in three extremely irregular lines, which it was hoped would prove difficult to locate and sweep. Four of the mines exploded prematurely; the minelayers were not damaged and as the wind was from the east it was thought the sound of the explosion had not been heard ashore. But, as in the case of our other minefields, it was soon learned that some of the mines had come to the surface. A conference held on October 7 suggested various improvements in manufacture and methods for laying.²

The watch by the six submarines came to an end at noon September 11, when by their orders they left their stations and returned to Harwich. Seaplanes were on patrol in the Bight; they bombed *D.7* without result. Apart from this there was no incident to record.³

112. Cruiser Sweeps in the North Sea, September 1 to 8.— Admiral Beatty was surprised that no enemy vessels were encountered in the course of an operation conducted so close to the German base. He attributed this fact largely to the recent activity of our cruisers in the North Sea. There had, in fact, been an exceptional amount of cruising in the past week or so. On August 30, and again on August 31, a light cruiser squadron from Rosyth swept east of May Island, returning in 24 hours. On September 1 a report came in from Esbjerg that two German cruisers with a flotilla of destroyers had been sighted 25 miles west of Horn Reefs, steering NW.⁴ To meet them, the 2nd Light Cruiser Squadron went out from Rosyth; the Scapa light cruisers also sailed with six destroyers for the same purpose. Neither squadron saw anything of the enemy in the course of their cruises, which were over by September 2.

The whole Grand Fleet went out on September 2 for exercises to the south-west of Faeroe Bank. Before its departure the channels to the westward of the Orkneys were swept by eight destroyers fitted with minesweeping gear. This was the first

¹ Admiral Beatty's Report, M. 07217/15.

² M. 07239, 07447, 07471/15.

³ H.S.A. 270, pp. 505 to 507.

⁴ H.S. 149, p. 11, 18, 148.

time that destroyers were used for minesweeping.¹ The exercises, called Operation A, lasted till September 5. The plan for them was drawn up in the Grand Fleet, but the date of departure was ordered by the Admiralty, who in selecting it chose a period when intercepted telegrams showed no submarines as likely to be in the exercising area.² A change of commands had taken place. The new type of fast battleship was coming forward. The *Queen Elizabeth* had for some time been attached to the 4th Battle Squadron; the *Warspite* to the Second Battle Squadron; and the *Barham* of the same class was commissioned on August 15. This class was now constituted the 5th Battle Squadron; and Rear-Admiral Hugh Evan-Thomas was appointed to command it. He was relieved as Rear-Admiral in the 1st Battle Squadron on August 25 by Rear-Admiral E. F. A. Gaunt, C.M.G., who sailed for the first time in his new command to take part in Operation A on September 2. On September 7 the 3rd Cruiser Squadron sailed from Scapa for Rosyth, making a wide detour to the meridian of 3° E; the following day the 7th Cruiser Squadron left Rosyth for Scapa making a similar sweep.

Four vessels of the 6th Light Cruiser Squadron, which had made occasional excursions from the Humber, were ordered on September 6 to the Mediterranean, each to escort one of the local defence torpedo boats which were also ordered out to Mudros.³ This move left only one cruiser, the *Patrol*, under the command of the Admiral of Patrols, and thinking it advisable to have her in a central position he moved her from the Tyne to the Humber.⁴ Not only the light cruisers, but four of Commodore Tyrwhitt's destroyers were ordered to the Mediterranean.⁵ He chose the *Lafforey*, *Lawford*, *Louis* and *Lydiard*. They left Sheerness on September 13.

In the course of cruiser sweeps and the movements of the various forces taking part in the minelaying operation just concluded a good part of the mine-free area of the North Sea had been traversed, and yet no encounter with the enemy had taken place. On September 11 intercepted signals implied that the High Sea Fleet was coming out for an exercise; its nature was not disclosed by the telegrams, and the Grand Fleet was ordered to have steam at two hours' notice.⁶ No further indication of activity came in, and on the morning of September 13 the Grand Fleet reverted to its usual notice for steam,⁷ the Admiralty's impression being that no special movement of German Forces had taken place. In this they were wrong. The High Sea Fleet had carried out another operation of some importance.

¹ G.F.N.

² H.S. 149, pp. 238, 260, 264.

³ A. 159, 160, 162.

⁴ Papers titled X. 9113/15.

⁵ A. 161.

⁶ Tel. 26 to C.-in-C., H.S. 7.17 p.m. 11 September 1915.

⁷ Tel. 41 to C.-in-C., H.E. 11.10 a.m. 13 September 1915.

113. Another German Minefield laid off Swarte Bank, September 12.¹—Admiral von Pohl had decided to place another minefield in the North Sea to catch forces which might be en route to Heligoland Bight. The position of this new minefield was the subject of some debate. The first idea was to mine from Smith's Knoll to the limit of the German war zone, which ran 30 miles from the coast of Holland;² but here the Flanders Command objected on the grounds that as far as the parallel of 53° 10' N—between the Wash and the Texel—must be left open for the operations of the submarines based on Zeebrugge. Of the areas north of this, that to the north-eastward of Swarte Bank seemed the most promising, since British forces were frequently reported there as if the favourite route to the Bight passed through it; and this became the chosen site for the mines. They were embarked in the light cruisers *Stralsund* and *Regensburg*, 140 mines in each ship, on September 11.

Admiral von Pohl, as customary with him, made the operation one of the whole High Sea Fleet. The preliminary step of aerial reconnaissance by seaplanes all over the Bight showed that there were several British submarines north of Terschelling and on three occasions bombs were dropped on them. At 10.50 a.m. the aircraft sighted a destroyer north of Ameland steering WNW, and attacked it unsuccessfully. Two airships which reconnoitred as far as Swarte Bank in the afternoon saw nothing. Another preliminary to the operation was the stationing of five submarines, including the newest boats *U.43* and *U.44*, roughly on the parallel of 54° 30' as far as the longitude of Swarte Bank, to be an extended screen on the northern flank of the fleet.

At 5 p.m. September 11, the last of the British submarines watching near Norderney left her station and proceeded for home. At the same hour the German minelayers proceeded from Wilhelmshaven, accompanied by the 2nd Scouting Group, their passage out of the Bight being that by Norderney, which had been well swept beforehand. At 8.30 p.m. Admiral Hipper followed by the same route with the battle cruisers and six destroyers for his supporting position in about 54° 10' N, 4° 30' E; this was close to the Rendezvous A used by Commander Tyrwhitt and the British minelayers the previous evening. At 10 p.m. Admiral von Pohl followed with the battle fleet: 14 dreadnoughts, 7 older battleships, 6 light cruisers and 37 destroyers; his station was to be 20 miles to eastward of the battle cruisers at daybreak.

To confuse minesweeping the mines were to be laid in six groups en echelon, the *Stralsund* taking the northern three groups and the *Regensburg* the others. Each minelayer was preceded by another light cruiser, and each had an escort of three destroyers, stationed on the British side of the minelayer. The destroyers were thus free to attack any force sighted to the westward while at the same time they did not hamper the minelayer should it be

¹ *Nordsee* IV, pp. 286 to 291.

² See *Home Waters*, IV, Section II.

necessary for her to escape in the direction of home. At 1.15 a.m. September 12 the minelaying began; at 2.24 a.m. it was finished. The minefield extended in a zigzag line from 53° 52' N, 3° 10' E to 53° 27' N, 3° 50' E.¹

114. The High Sea Fleet, primarily by avoiding an unsuspected minefield.²—In returning, Admiral von Pohl chose to steam across the German Bight and to enter by Amrum Bank, since submarines had been sighted so many times outside the Norderney passage. At 5 a.m. September 12 he left the rendezvous and steered for Amrum Bank Light Vessel, completely unaware that he was following the track of the British minelayers and steering straight for the British minefield laid the day before. Fortunately for the German fleet some of the British mines had failed to keep their depth and were now on or visible from the surface. At 9.30 a.m. the *München*, one of the group scouting to north-east of the fleet, sighted a mine to starboard and, turning to port to avoid it, found herself in a field running east and west. She directed a destroyer to sink the mines by gunfire, and reported their presence by wireless. Her signal was not marked "Priority" and therefore did not reach the Commander-in-Chief till 9.50, by which time the battle squadrons knew from the reports of the destroyers screening to northward of them that they were in mine-infested waters.

Here again badly worded signals led Admiral von Pohl to the impression that he had to do with drifting and not moored mines. He altered course three points to clear the dangerous area, a course which would bring the fleet on to the German minefield, which, however, he intended to round. The fleet was widely spread and it was not for some time that signals made clear that moored mines had been seen. He then ordered single line ahead and turned again north-eastward to round the German field. No sooner had the fleet taken up its new course than moored mines were sighted right ahead. He made another sharp turn to avoid them. Even when clear of the German field, and about to turn to southward the fleet had another narrow escape. For the third time the *München* observed mines and, what was more alarming, the destroyer G.196, 500 yards on the port beam of the battleship *Kaiser*, blew up and nearly sank.³ After the turn to south, more mines were seen, and it was obvious that for the third time the area to the westward of Amrum Bank had been rendered

¹ Fields 42 to 47 in O.U. 6020a: "German Statement of Mines laid by * * * the High Sea Fleet."

Field 42, 40 mines, extending 6,500 metres, in direction 90° from 53° 52' N, 3° 9' 30" E.

Field 43, 52 mines, 8,900 metres, 90° from 53° 48' 24" N, 3° 17' E.

Field 44, 48 mines, 9,300 metres, 84° from 53° 44' 36" N, 3° 27' E.

Field 45, 47 mines, 9,700 metres, 169° from 53° 39' 42" N, 3° 33' 30" E.

Field 46, 53 mines, 9,300 metres, 173° from 53° 34' 54" N, 3° 41' 54" E.

Field 47, 41 mines, 9,300 metres, 90° from 53° 27' 12" N, 3° 45' E.

² *Nordsee* IV, pp. 291-294.

³ She was towed in by another destroyer.

dangerous. Yet because the mines had failed to keep their depth the whole High Sea Fleet passed unscathed, with the trifling exception of one destroyer disabled.

145. **The New German Minefield**—The Germans, in selecting the site of the minefield they laid on September 12, had acted on the principle of laying the mines where British forces had been reported. It would seem that the reports were not specially accurate, since the actual positions chosen were at the time scarcely ever traversed by British men-of-war. Channel G, used by Commodore (T) in proceeding to and returning from Amrum Bank, emerged at the pillar buoy in 54.3 N, 2.34 E, whence a normal course to the Bight would take him well north of the new field. Channel D by Smith's Knoll led to the buoy on Jim Howe Bank in 52.58 N, 2.19 E; from here a course to Borkum led close to but clear of the southern end of the field. This last channel had not been used by the Harwich Force for some time, the Commodore preferring to go out more quickly by the IC Channel, which took him still further south of the danger.

A month elapsed before any of the mines were found. In September the Grimsby paddlers swept a suspected area just south of the new field between 2° E and 3° 40' E, and finding nothing declared it clear. For some time after this they did not go so far out to sea, being fully occupied with the operations on the Belgian coast and in clearing away the mines in the swept channel laid by U.C. boats. It was the fate of the Dutch fishing fleet to come across the mines. One exploded in a fishing net on October 8 and again another on October 13. An unfortunate Dutch lugger was blown up on October 8; but the position given for this accident, inaccurate though it is likely to be, as in the case of all fishing boats' positions, implies that the lugger had run on a mine from the southern of the two Dogger Bank fields. In fact, the confused situation arising from the various minefields laid between the east coast and the Dogger Bank was such that no suspicion that a new minefield had been laid on September 12 seems to have arisen in the Admiralty. The mines reported from time to time were assumed to belong to one or other of the fields in existence before that date, and no new dangerous area was proclaimed.

Various incidents seemed to show that in some cases the German mines were losing their efficiency. A fishing boat at night secured to what she thought was a buoy; at daylight it turned out to be a German mine, from which she hurriedly cast off without accident. One of the mines from the Moray Firth washed ashore at Banff Golf Links and was seen to have four of its five horns broken. And, most conclusive proof of all, a Grimsby fisherman returned to port with a mine in tow. When it was pointed out to him that all the horns were broken, "Well," said he, "I was told the horns was the dangerous part; so to avoid accidents I knocked them off with a boat-hook."²

¹54° 55' N, 3° 10' E (Minesweeping Statement No. 81).

²Minesweeping Statement, No. 79.

CHAPTER XI.

THE END OF THE 1ST SUBMARINE CAMPAIGN IN HOME WATERS.

116. **Suggestion to take a Grand Fleet Destroyer for Anti-Submarine Operations.**—The unhampered ease with which enemy submarines seemed to operate in the South-west Approach raised the question whether the available destroyers were allocated to the best advantage. To the First Lord, Mr. A. J. Balfour, it seemed that the 70 or 80 destroyers with the Grand Fleet were doing little to hamper the movements of submarines, and he suggested that some of these should be definitely detailed for submarine hunting, either in the North Sea under Admiral Jellicoe or in the South-west Approach under Admiral Bayly.

In the Admiralty it was recognised that the primary role of destroyers was to operate offensively against enemy fleets and flotillas. To this had been added the defensive roles of screening our squadrons at sea against submarine attack and escorting prodigious numbers of transports, valuable store ships and men-of-war on single passage. Emphatically worded letters advocating strenuous measures to be taken to deal with the submarine menace were constantly being received from all quarters; and each Senior Officer from the Commander-in-Chief downwards was pressing that his particular claim to light craft should be satisfied. But to take destroyers from the Grand Fleet was an undesirable way of meeting these claims; since if the Grand Fleet were not to remain stagnant in harbour there must always be enough destroyers ready to safeguard it when at sea. "One thing at least is certain," wrote the First Sea Lord.¹ "The Germans are conserving their destroyers, presumably for the day of battle, and they will number about 100, if not more. At the present moment we could only put 85 against them and this assumes that about 35 Harwich torpedo boats will be available; which is never the case."

It followed from these statements that it would be unwise to take destroyers from the Grand Fleet. Moreover, the Admiralty were not quite sure that destroyers were really a very efficient antidote for submarines. It was decided, however, to give Admiral Bayly some of these vessels as soon as they were available. But these were not to come from the Grand Fleet. On August 31 the Commander-in-Chief, Devonport, was instructed to send four destroyers, if he could spare them from escort work, to Admiral Bayly for hunting submarines;² and thus it was the Harwich Force that supplied the South-west Approach with its hunting flotilla.

¹ The whole of his memorandum dated 20 August 1915 is in Appendix O.
*A. 157.

117. **The Kaiser's Orders of August 27 and 30.**—The order to employ even four destroyers in hunting submarines came too late to be of any avail. Germany on her side had been brought to a decision of even greater importance. The operations of her submarines, and particularly the sinking of the *Lusitania* and *Arabia* with a loss of American lives, had given rise to so sharp a series of American diplomatic notes that the Chancellor prevailed on the Kaiser to issue orders on August 27 that in future submarine commanders were not to sink passenger steamers, not even those of enemy nationality, in the prohibited zone, without warning and without saving the passengers. Three days later this prohibition was extended to include "small passenger steamers," until further notice. No definition was given as to the kind of ship to be considered as a passenger steamer.¹

Admiral von Tirpitz, who had repeatedly urged unrestricted submarine warfare as the only means of winning the war for Germany, again tendered his resignation. It was again refused; he was told that the employment of naval forces rested ultimately with the Kaiser, who could not permit an officer to resign in wartime because his opinion in this matter differed from that of the Supreme War Lord; and he was informed that his presence at consultations on naval questions connected with foreign politics would no longer be required.

Admiral Bachmann also protested against the Kaiser's restriction order. He was a lesser luminary than Admiral Tirpitz and his extinction would cause little stir in political circles. He was relieved as Chief of the Staff on September 3 by Admiral von Holtzendorff, a retired officer, a relative of Admiral von Müller, and not a friend to Admiral Tirpitz. The Deputy Chief of the Naval Staff, Rear-Admiral Behncke, was relieved at the same time by Vice-Admiral Reinhard Koch, hitherto Admiral Superintendent at Kiel. The attention of these new men was drawn to the ruling that the function of the Chief of the Naval Staff was mostly advisory. Once the Kaiser had made his decision, the duty of the Naval Staff was to see that it was carried out.²

Among the last acts of Admiral Bachmann was a suggestion to the High Sea Fleet command that if the submarines abandoned the South-west Approaches as a cruising ground and concentrated on the English Channel he would endeavour to obtain permission for cross-channel transports and store ships to be attacked without warning. The suggestion was coldly received. British counter-measures in the Channel were already too effective for submarine warfare and would become more efficient still if more submarines appeared. Moreover, it was not practicable to distinguish between steamers crossing the Channel and those proceeding up or down it, and further incidents might occur. The fleet thought that the only course was to carry on as before, observing the restrictions, until they were removed.

¹ *Nordsee* IV, p. 279.

² *Nordsee* IV, p. 280.

The intercepted German signals gave an inkling of what was occurring in the German Admiralty. On August 24 a general signal was made by Norddeich to the effect that Prize Regulation Number 8 with regard to mails was to be strictly observed.¹ Shortly afterwards Norddeich made another signal to U.32. "Remember the limitations ordered by the All Highest." Both these messages conveyed little hint of their real meaning; but on August 30 a more explicit signal was made. It read: "Norddeich to all ships. Henceforth passenger steamers may only be sunk after warning has been given, and the passengers and crew have been saved."²

118. **Cruise of "U.20," August 29 to September 15.**—The Norddeich signal of August 30 may have been intended for U.20, which under Lieutenant-Commander Schwieger had left the Bight the previous day for operations in the west. Two other submarines were at sea, U.39 and U.33, which had left on August 27 and 28 respectively for the Mediterranean.

It was the last, U.33, which sank the first ship, the British steamer *Whitefield*, coming from Archangel with wheat for France. She was brought to by U.33 early on September 1 midway between the Faeroes and the Butt of Lewis.³ Another British vessel returning from Archangel, the *Roumanie*, was following a day behind the *Whitefield*. At dawn, September 2, some 80 miles west of the Hebrides, she was accosted by a submarine, which showed considerable circumspection in approaching, and eventually torpedoed the steamer from a distance. Admiral Jellicoe considered that the *Roumanie* had been too close in, and requested that vessels to and from Archangel should keep at least 100 miles to the westward of the line joining the Hebrides to the north-west corner of Ireland.⁴

That evening the British sailing vessel *William T. Lewis* was fired on and abandoned in 51° N, 12° W. This being 70 miles west of the Fastnet was too far to the southward for U.20 to have reached by that time, and the submarine was probably U.39. The *William T. Lewis* did not sink and was found and brought in.⁵

The Danish steamer *Frode*, from Buenos Aires for Sweden, was stopped by a submarine at 4.15 p.m., September 3, off the west of Ireland, and allowed to proceed. Four hours later she was torpedoed without warning.⁶ The submarine which released her is considered to be U.33, and the one which torpedoed her to be U.20, the boat of Lieutenant-Commander Schwieger, who on

¹ Possibly this was Number 7 of the German Prize Regulations published 3 August 1914 (N.L. 01918/14), which enjoined that neutral mail ships should only be searched in case of necessity and then only with as much consideration and expedition as possible.

² I.D.H.S. Records.

³ M. 44184/15.

⁴ *Roumanie* papers titled X. 8248/15.

⁵ *William T. Lewis* papers titled M. 43921/15.

⁶ *Frode* papers titled M. 44317/15.

several other occasions had torpedoed vessels without examination or warning.

U.33 now found some victims as she proceeded southward along the twelfth meridian. On September 4 she sank three vessels, the oilers *Cymbeline* and *Mimosa* and a Norwegian sailing vessel, the *Storesand*.¹ These were all sunk between the parallels of 51° N and 49° N. From the last position U.33 made for Cape Finisterre and sank no more vessels in British waters.

By this time U.39 also had gone on and only U.20 was left in the South-west Approach. Lieutenant-Commander Schwieger, after sinking a Norwegian sailing vessel, the *Glimt*, about 70 miles west of the Fastnet, steered south-eastward for an entirely new field of operations. At 8.30 p.m. the *Hesperian*, an outward bound liner from Liverpool for Canada, was blown up 125 miles south-west of Queenstown. No warning had been given and no submarine was seen. Although the German Government denied that any submarine was near the spot and attributed the accident to a mine, fragments considered to be of a torpedo were found on board the *Hesperian* before she sank, and the position is halfway between the spots where Lieutenant-Commander Schwieger sank the *Glimt* and his next victim. The *Hesperian's* call for help was taken in by the seaplane carrier *Empress*, whose seaplanes had been patrolling between Galley Head and the Fastnet. The carrier proceeded full speed for the spot, 50° N, 10° W; she was there by 9.50 p.m. and was the first help to arrive. She took on board 430 people. Other vessels which heard the S O S call were the sloops *Laburnum*, which arrived at 10.50 p.m., and the *Magnolia* at 12.30 a.m. The sloop *Veronica* was at the time escorting a transport; she obtained permission from Admiral Bayly to leave her transport and go to the *Hesperian's* assistance. Two other sloops arrived later.² U.20 was making for a new cruising ground that had so far been untouched—the approach to Bordeaux. As she passed west of Ushant on September 5 she accosted and sank by gunfire three more ships: the British steamer *Dictator* in 49° 9' N, 8.58 W, at 7 a.m., another British steamer the *Douro* some 50 miles further east in the afternoon, and the Russian sailing vessel *Rhea* in the evening.³ On the 6th she sank the French steamer *Guatemala* in 46° 50' N, 4° W, and next day approached close to the mouth of the Gironde; there she sank by gunfire and torpedo two vessels, the French *Bordeaux* and the British *Caroni*, within 15 miles of the shore at Rochefort. That old naval base was now entirely denuded of its *defense mobile*.⁴ and there were no French war vessels south of Brest.⁵ U.20

¹ *Cymbeline*, M. 44197; *Mimosa*, M. 44479/15.

² *Hesperian* papers titled L. 122115. Further details and incidents will be found in Hurd: *The Merchant Navy*, II, 35-37.

³ M. 43954, 44350, 44194, 44199/15.

⁴ Report from Consul, Bordeaux, M. 44585/15.

⁵ Weekly French Official Report of Positions, September 4, and September 11.

stayed only the one day off Bordeaux. On the 8th, 160 miles from the Gironde, she fired on and sank the British steamer *Mora*, continuing to fire while the crew were abandoning ship.¹ This was the last of Lieutenant-Commander Schwieger's victims on this cruise. He was back in Germany on the 15th.

One effect of his cruise had been to stop the sailing of transports and store ships from Bristol Channel ports between September 5 and 7, except those bound through the Irish Channel.² They were again stopped from the 9th to the 10th. The movement of transports from and to Devonport was unaffected. On September 4 two, bringing reinforcements from Canada, came in, each escorted by two destroyers; on the 5th one left for the Mediterranean; on the 6th one came in from Canada and one left for the Mediterranean; on the 8th two left for the Mediterranean; and on the 9th another, the *Royal George*. In each case two destroyers escorted them clear of the Channel.

119. The ~~The~~ ~~last~~ ~~cruise~~ of U.C. 41, ~~Sept~~ ~~September~~ ~~24-24~~ ~~No~~ ~~other~~ submarine was despatched to the South-west Approach until September 14, when U. 741, Lieutenant-Commander Hansen, proceeded from Heligoland. She began work on September 23 by sinking three British ships about 80 miles south of Queenstown. The first, the *Anglo-Columbian*, with Government horses from Canada, sent out a wireless call for help which brought three sloops, but they were too late to do more than pick up the crew. The others were the *Chancellor* and *Hesione*. The *Hesione*, outward bound from Liverpool for the River Plate, had been fitted for a gun, but its crew had not arrived when she left Liverpool and the gun was not mounted. The gun's crew reached Liverpool about the time their ship was sinking.³

Next day, September 24, U. 741, now in 49° N, 7.30 W, stopped and destroyed the Wilson liner *Urbino*. Before this ship sank, another came in sight to the northward and U. 741 went off after this new prey. In obedience to U. 741's signals the vessel stopped and lowered a boat, swinging round towards the submarine to provide a lee for her boat, the result being that she closed to 500 yards. Suddenly the merchant ship opened fire. It was the *Baralong*.

She was at Falmouth when the news of the sinking of the *Anglo-Columbian* came in, and she thereupon proceeded to sea under her new captain, Lieutenant-Commander A. Wilmot-Smith, R.N., who had recently relieved Lieutenant-Commander Godfrey Herbert. The submarine, though she was approaching warily with her guns trained on the quarry, was taken completely by surprise; overwhelmed by the *Baralong's* fire, she disappeared

¹ M. 44882/15.

² H.S. 149, pp. 887, 898; H.S. 150, p. 366.

³ *Anglo-Columbian*, M. 45054/15, 07575/15. *Chancellor*, M. 46764/15. *Hesione*, M. 45184/15. Other details in Hurd: *The Merchant Navy*, II, 38, 39.

after two or three minutes, stern first, in a condition that showed her to be mortally crippled. A huge burst of air and fuel oil rose to the surface; four similar bursts in the next three-quarters of an hour suggested that her bulkheads were giving way one by one from the pressure of the 75 fathoms of water in which she had sunk.

Seeing no Germans in the water, Lieutenant-Commander Wilmot-Smith proceeded to pick up the crew of the *Urbino*, which had meanwhile disappeared. He then observed that one of the *Urbino's* boats which had been cleared and had drifted away had two men in her. They proved to be a lieutenant and a boatswain of the submarine, and when rescued and questioned gave a certain amount of information, not all of it true and not much of it new.¹

After this second success, the name of the *Baralong* was altered to *Wyandra*, the change being effected while she was at sea on her next cruise. Although she operated still in the western waters her services were not required there; not again till the end of the year did any German submarine appear in the South-west Approach.

120. "U.C. Warfare continues Folkestone Gate and the North Knock Mined, September 6 and 7.—Not much progress had been made with the Folkestone-Grisnez boom which had been intended to keep submarines from penetrating into the Channel. By September 1 only 3 miles on the English side and a mile and a half on the French side had been completed. Since April all mercantile traffic had to pass between two gate vessels, 5 cables apart, stationed 2½ and 3 miles from Folkestone,² the number of steamers passing daily in one direction or the other through the gate averaging in September as many as 120.³ That part of the obstruction which was complete stretched for 3 miles from the southern gate towards the Varne shoal; between the northern gate and Folkestone no construction had yet been begun.

There was a defect in the Beachy Head-Havre cable, and the cable ship *Monarch* left Dover at 5 a.m., September 8, to repair it. Arrangements were made to escort her by the British patrols as far as latitude 50.16 and with the French to take over the duty of escort at that point. All these arrangements proved unnecessary; just as the *Monarch* passed through Folkestone Gate she was blown up and sunk by a mine.⁴

The field⁵ had been laid by U.C. 5, which, apparently taking the northern gate vessel as her mark, had laid six mines in the direction of Folkestone. They were thus not across the gate, though the

¹ H.S. 385, pp. 54 to 80; M. 07446/15; M. 45534/15.

² Light vessel (1) in 51° 2' 40" N, 1° 14' 10" E; Light vessel (2) at a distance of 5 cables 150° from (1). N. to M. 228 of 26 March 1915.

³ C.S.D. Reports, Vol. 7, Report of 1 September 1915.

⁴ H.S. 149, p. 1,110; H.S. 150, pp. 144, 276, 328.

⁵ Field 30, consisting of 6 mines in direction 326° for 1,200 metres from 51° 2' 18" N, 1° 13' 54" E.

southernmost mine was within the channel and had caught the *Monarch*.¹

The Dover minesweepers worked on the area; and on September 11 the gate was pronounced clear again. Mercantile traffic was allowed to pass once more, with the injunction to keep $\frac{1}{2}$ mile north of the gate instead of passing through it.² This route we now know was right over the mines; but by that time it was clear and no more losses occurred on that field.

U.C.5 on the same night deposited the other half of her cargo off Boulogne.³ Her mines were discovered before any loss had occurred, although it was not till the afternoon of September 9 that the Admiralty received from Paris the information that on account of mines Boulogne should only be approached at high water and by a special channel. This intelligence they repeated to Admiral Bacon and to the Commander-in-Chief, Portsmouth, at 4.32 p.m.⁴ There was no stoppage of the transport traffic except that on September 16 another moored mine was found and Boulogne was closed for a few hours.⁵

While *U.C. 5* was busy on the west side of the Folkestone-Grisnez boom, *U.C.3* laid 12 mines near the North Knock Buoy.⁶ They were laid on September 6, but being to the westward of the swept channel were not discovered till the 8th. Traffic up and down the coast was thereupon ordered to take the Shipway and Black Deep route and vessels to and from the Thames had to pass midway between the Longsand and Sunk Light Vessels. After the area had been swept, the War Channel was declared clear again on the 9th.⁷

121. Ostend Bombarded, September 7.—While *U.C.5* and *U.C.3* were out on their minelaying expeditions, Admiral Bacon carried out a bombardment of Ostend, which was known to be a base for submarines and to be used by them for repairs. He had left Dover originally on September 2 with some large monitors, but the weather was then unsuitable and operations were abandoned. They were resumed on September 7, when the docks and various factories were bombarded and Allied aeroplanes made a bombing attack.⁸

122. Five New Minefields in the Thames Approaches, September 8-30.—Admiral Bacon's attack on the Belgian coast made little difference to the frequency with which minefields were laid by

¹ M. 07057/15.

² H.S. 150, p. 1,073.

³ Field 29, consisting of 6 mines, extending 500 metres in the direction 205° from 50° 43' 30" N, 1° 31' 30" E.

⁴ H.S. 150, p. 656.

⁵ H.S. 151, p. 1,138; Minesweeping statement No. 79.

⁶ Field 28, starting from 51° 42' 12" N, 1° 38' 30" E, 6 mines for 2,000 metres at 340° and 6 mines for 350 metres at 90°.

⁷ H.S. 150, pp. 409, 517, 722.

⁸ Details in Monograph 18: The Dover Command (C.B. 917D). The papers are M. 07012, 07055, 07335/5.

the *U.C.* boats, and fresh danger areas continued to be discovered. In the Thames Estuary three new fields revealed themselves on September 9, one near the North Knock Buoy already described, one near Sunk Head across the King's Channel, and the third near the Tongue Light Vessel.

The Sunk Head field was discovered by minesweepers on September 9. It was not on any route at the moment in use and no vessels had yet been lost on it. The field had been laid the previous evening by *U.C.6*. On the 12th the area between Sunk Head and South Shipwash was declared clear; but on September 2 the Dutch s.s. *Koningin Emma* and the British s.s. *Groningen* were blown up 1 mile west of the Sunk Light Vessel and 1 mile north of the Sunk Head respectively. No doubt was felt at the time that the *Groningen* had been mined, but at first, since no mines were found near the Sunk Light Vessel, it was thought the *Koningin Emma* had been torpedoed. But between the 22nd and 27th moored mines were swept up at various places between the Sunk Light Vessel and the South Shipwash,³ possibly towed from their original positions by the minesweepers.

The mines near the Tongue Light Vessel⁴ revealed themselves by blowing up the oiler *Balakani* in the entrance to the Edinburgh Channel in the afternoon of September 9. As all the entrances to the Thames except the Black Deep were now blocked by mines, Admiral Bacon was ordered to send his paddle-sweepers to work under the Commander-in-Chief, The Nore. As it happened, they were all cleaning boilers after their work with the bombarding squadron on the Belgian coast, and he sent four trawler sweepers instead. It was not till the 14th that the Edinburgh Channel was considered safe.⁵

About the next ship lost in the Thames Estuary there was some doubt whether she had been mined or torpedoed. The British s.s. *Ashmore*, bringing food consigned to the Belgian Relief Commission, was following a Swedish steamer, and was between the Kentish Knock and Galloper Light Vessels when an explosion occurred and the *Ashmore* sank. One man deposed that he saw the track of a torpedo. An armed trawler near came up and saved the crew at considerable risk, for there was nothing to tell her the vessel had not been mined. The *Ashmore*, being a Relief Commission ship, was under the protection of the United

¹ Field 31a, consisting of 6 mines extending 1,200 metres in directions 126° and 67° from 51° 47' 48" N, 1° 30' 54" E; and Field 31b, 6 mines, 2,600 metres, 261° from 51° 49' 18" N, 1° 31' 6" E.

² H.S. 150, pp. 774, 1,101; H.S. 151, p. 181.

³ M. 07501, 07500, 08338/15; H.S. 152, pp. 898, 899, 922, 1,046, 1,075. Harwich and Nore A.P. Reports of date; Minesweeping Statement No. 79.

⁴ Field 32, 12 mines, 1,200 metres, 205° from 51° 31' 18" N, 1° 22' 30" E, laid by *U.C.1*. The date given on Karte 14 is September 10, but they must have been laid during the night of September 8-9.

⁵ H.S. 150, pp. 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000. A.P. Reports; Minesweeping Statements; H.S. 151, pp. 579, 659.

States, to whom the facts were represented, including the suggestion that the ship had been torpedoed.¹

It is not impossible that she ran on a mine laid by U.C.7, which that morning deposited six mines south of the Outer Gabbard Shoal and six to the northward of the Galloper,² though the position given for the blowing up of the *Ashmore*, 3 miles E.S. from the Kentish Knock Light Vessel, is some distance from the position of the Galloper field as reported by the Germans after the war.

A moored mine was found 2 miles west of the Galloper Light Vessel that day and sweepers found another near it. The other field near the Gabbard was not found till the 24th, when sweepers discovered several moored mines. At that date the Nore sweepers were too busy in the regular channels to attack the new area, and Lowestoft trawlers after they had cleared the Sunk area were set to work on it. It was finally declared clear on September 29.³

A fourth minefield laid at this time remained undiscovered for more than a week, although according to the German post-war report it was very close to the Longsand Light Vessel and across the entrance to the Black Deep.⁴ On its discovery on September 23 the Black Deep was closed and traffic was ordered to keep east of the line joining the Sunk and Longsands Light Vessels till the field was cleared.⁵

From September 21 onwards certain small alterations were made in the positions of some buoys marking the swept channel, in order to secure safer navigation; and from that date the buoys were regarded as marking the middle of the channel. Ships had to pass them on the port side.⁶

The last vessel blown up in the old channel was the British s.s. *Horden*, which on September 20 sank as the result of an explosion $\frac{1}{2}$ mile east of Aldborough Napes Buoy. At the time it was thought possible she had been torpedoed;⁷ but the truth more probably is that she ran on a mine from one of the earlier fields. Next day the new channel further out from Aldborough Napes became the normal track for shipping.

On the day this new regulation came into force U.C.7 laid mines across the southern entrance to the Shipway.⁸ Being well to the landward of the prescribed route, which was swept daily, the

¹ M. 44480, 44494, 45768/15.

² Field 33a, 6 mines, 300 metres, 0° from $51^{\circ} 58' 54''$ N, $2^{\circ} 3' 30''$ E. Field 33b, 6 mines, 300 metres, 0° from $51^{\circ} 48' 36''$ N, $1^{\circ} 58' 24''$ E.

³ H.S. 151, pp. 157, 196, 240, 368; H.S. 153, pp. 49, 80, 82, 89, 397, 513, 1,094, 1,107, 1,166; Minesweeping Statement No. 79.

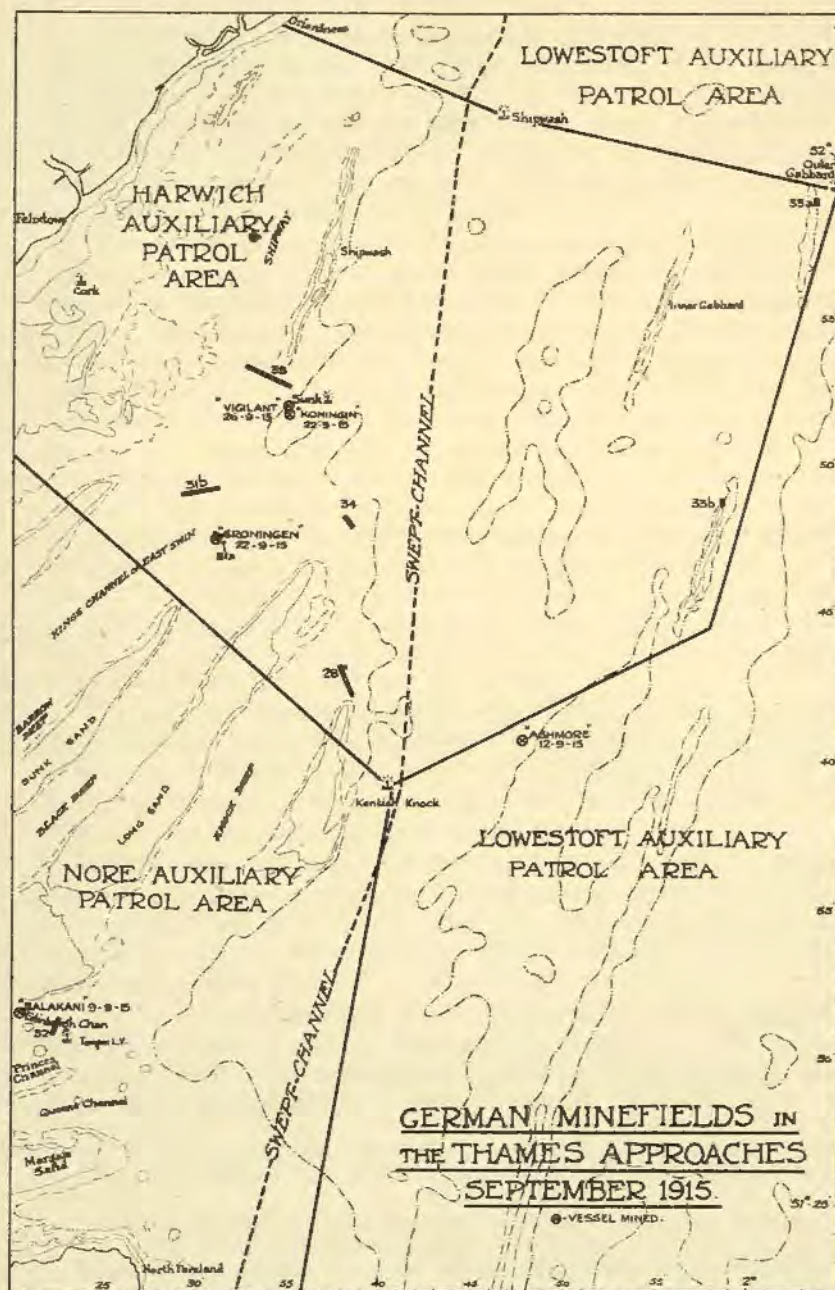
⁴ Field 34, 6 mines, 930 metres, 329° from $51^{\circ} 48'$ N, $1^{\circ} 38' 12''$ E, laid by U.C. 11 on September 14.

⁵ H.S. 152, pp. 1,071, 1,080, 1,101.

⁶ M. 07065/15; General Telegram, 9.25 p.m. 16 September 1915.

⁷ M. 44881/15; Telegrams H.S. 152, pp. 583, 587, 593, 595, 603, 629.

⁸ Field 38, 12 mines, 2,780 metres, 115° from $51^{\circ} 53' 24''$ N, $1032' 30''$ E.



field remained undiscovered till the 26th, when the Trinity House pilot boat *Vigilant* blew up on it.¹

123. ~~MinMines in the Dover Area, Deal, last half of September.~~ Admiral Bacon left Dover in the evening of September 15 for another bombardment of the military works at Ostend. The weather proved unfavourable, and the ships had to remain at Dunkirk till the 19th. When the bombardment took place on that day it was chiefly the heavy batteries on shore which he engaged ; and his operations² did not affect the submarine situation.

A few hours after he left Dover a minefield was laid by *U.C.6* across the passage abreast of the South Goodwin Light Vessel.³ The mines remained a day undiscovered ; but in the evening of the 16th the British s.s. *Africa* was sunk by them. The idea that mines were occasionally dropped by steamers masquerading as neutrals was still alive, and it was thought at the time that the field might have been laid by a small steamer which at 6 p.m. had passed through the nets in the middle of the Strait and had outsteamed a trawler which attempted to stop her.⁴ In spite of the sweeping carried on there were several more casualties on this field. On the 18th the oiler *San Zeferino* under trawler escort blew up on it ; she did not sink and was got safely to the Nore, but the armed trawler *Lydiam*, which had stood by her during the night, struck a mine in the morning and sank in 10 seconds with a loss of eight of her crew of 12. Another steamer, the *Nigretian*, was mined that day ; she also did not sink.

The area between Deal and the South Goodwin was declared dangerous and traffic was instructed to keep to eastward of the Elbow Buoy, and all transport traffic was stopped for 24 hours. Sweeping brought to light six mines on the 18th, and on the 20th the area was declared clear again.⁵

This minefield, laid in the path of traffic passing along the Kentish coast, had succeeded in inflicting some losses on us. But another field laid by *U.C.3* on the 16th remained undiscovered, because its site was not crossed by ships. This was at the south end of the Colbart Ridge.⁶

The third minefield laid in the Dover area during Admiral Bacon's excursion to the Belgian coast was again placed in the fruitful area off Folkestone. Though laid by *U.C.5* on the 16th⁷ it was not discovered till the 19th when the Swedish s.s. *Tord*

¹ H.S. 153, pp. 572, 586, 614, 1,000 ; M. 07703/15.

² Details in Monograph 18 : *The Dover Command*. The papers are M. 08153/15.

³ Field 35, 12 mines, 1,110 metres, 65° from 51° 9' 21" N, 1° 26' 6" E.

⁴ M. 07306, 44603, 44723, 45855/15.

⁵ *San Zeferino* papers, M. 07306, 45089, 35058, 26708/15 ; *Nigretian* papers, N.L. 45907/15 ; telegrams H.S. 152, pp. 262, 330, 334, 346, 353, 424, 547.

⁶ Field 37, 12 mines, 900 metres, 180° from 50° 49' 12" N, 1° 16' E.

⁷ Field 36a, 6 mines, 1,000 metres, 0° from 50° 58' 6" N, 1° 6' 24" E ; Field 36b, 6 mines, 1,000 metres, 172° from 51° 2' 24" N, 1° 11' 12" E.

was mined at the entrance to Folkestone Gate. She also was beached. All traffic for Boulogne and from Folkestone was stopped for a day, but was resumed on the 20th.¹

It is noteworthy that these U.C. minefields in the thickly peopled Dover area brought about the total loss of very few ships; many of those mined were safely beached on the shelving shores of Kent, and after repair continued their voyages. The Dover minesweepers were now making daily sweeps of the channel from the Elbow Buoy to Folkestone Gate, which though not buoyed, was easily followed, since it passed through the two gates at the Gull and South Goodwin ends of the Downs.²

On September 23, traffic past the South Foreland had again to be diverted to the eastward, on the discovery by the minesweepers of five moored mines two or three miles to the south-east of it. Next day the armed drifter *Greatheart* blew up and sank on this field,³ under the eyes of Admiral Bacon who had just left Dover for another bombardment of the Belgian coast, taking with him the paddle-sweepers and all the destroyers of the Dover Patrol. The field had been laid by U.C.6 during the previous night.⁴

During Admiral Bacon's absence U.C.3 again passed through the obstructions of Dover Strait and on September 25 mined the neighbourhood of the Varne Light Vessel and Boulogne Harbour.⁵

Neither field caused any loss, though the mines off Boulogne were not discovered till the 29th. The port was immediately closed, to be reopened next day.⁶ Only two troop transports had been held up, an unusually small number, since during September 120 troop and ammunition transport arrived at Boulogne, an average of four a day.⁷

124. Commerce Warfare in the North Sea during September.—

In the North Sea the Kaiser's order for submarines to examine vessels before sinking them brought to a full stop the destruction of British merchant ships. A few small attempts were made in

¹ M. 44909/15; Telegrams H.S. 152, pp. 445, 459, 482, 493, 497, 506, 508, 510, 582, 588, 642.

² H.S. 153, p. 475.

³ H.S. 152, pp. 1,096, 1,216; Dover A.P. Reports, H.S. 175, p. 273.

⁴ Field 39a, 4 mines, 465 metres, 93° from 51° 8' 45" N, 1° 23' 54" E. Field 39b, 8 mines, 850 metres, 93° from 51° 8' 42" N, 1° 25' 6" E.

⁵ Field 40a, 6 mines, 1,000 metres, 360° from 50° 44' 54" N, 1° 31' 12" E.

Field 40b, 6 mines, 740 metres, 260° from 50° 56' 30" N, 1° 16' 30" E.

⁶ H.S. 153, pp. 1,072, 1,182, 1,278.

⁷ Every day the French Naval Attaché reported to the Ministry of Marine, Paris, the number of transports that would cross to France that night. A typical example is that of September 25 (H.S. 153, p. 350):—

4 from Southampton for Havre with troops and horses.

2 from Southampton for Havre with troops.

5 from Southampton for Boulogne with troops.

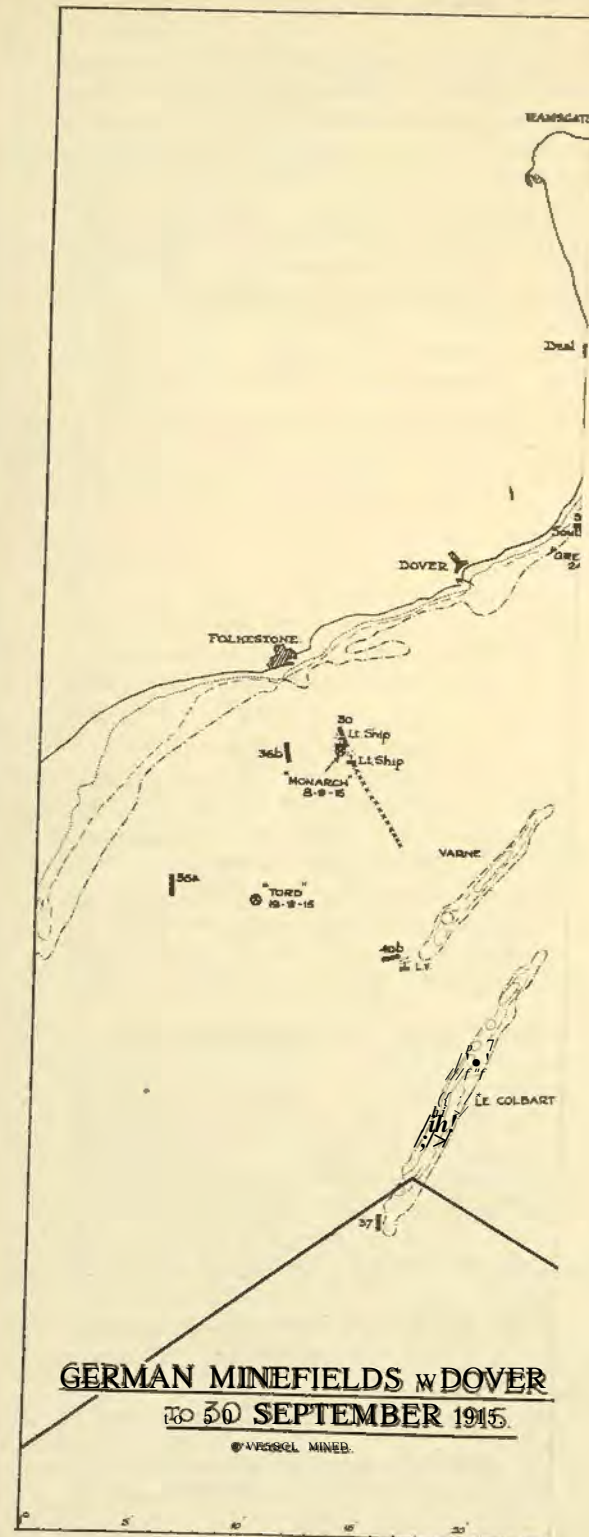
1 from Newhaven for Boulogne with oats.

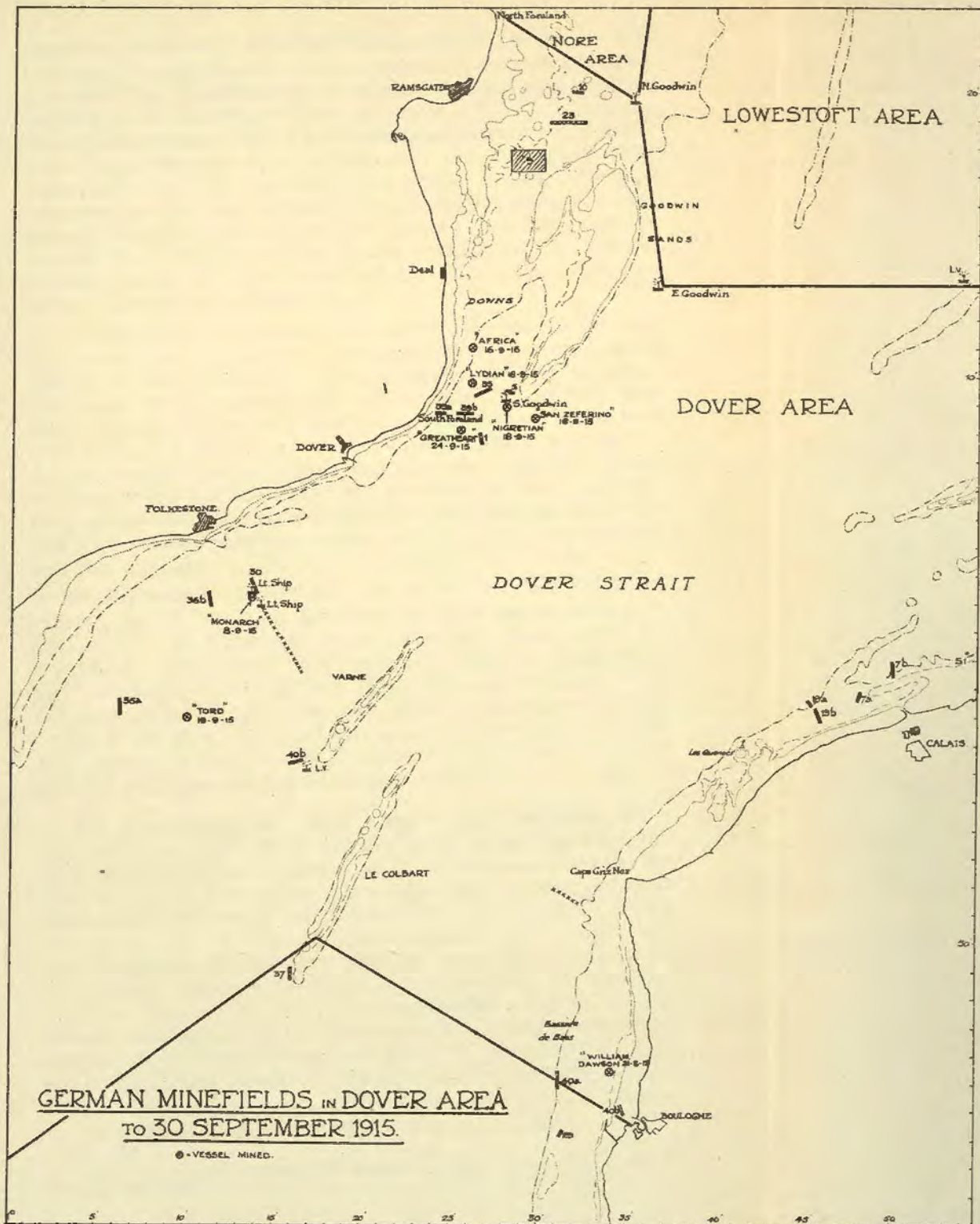
1 from Newhaven for Boulogne with munitions.

1 from Newhaven for Dieppe with forage.

1 from Devonport for Havre with hay.

1 from Avonmouth for Boulogne via Southampton with siege battery.





GERMAN MINEFIELDS IN DOVER AREA
TO 30 SEPTEMBER 1915.

● - VESSEL MINED.

September to interfere with Scandinavian traffic, the first by *U.66*, to whom it brought disaster. *XI.66* Lieutenant Leppsius in command, proceeded from Heligoland on September 9, picked up a scouting seaplane which had broken down and towed it into Lister. Leaving there at dawn on the 10th, Lieutenant Leppsius spent a day in the mouth of the Skagerrack, where he burned four Norwegian sailing vessels and captured and sent in a Norwegian steamer. He then proceeded up the coast of Norway. He did not come westward towards the North and thus gave no chance to the decoy *Gunner*. A new decoy, the brigantine *Ready*, commanded by Admiral Startin, cruised like the *Gunner* on the North-Skagerrack line during the first half of September.¹

The operations of German submarines off the coast of Norway had already been the subject of correspondence between Admiral Jellicoe and the Admiralty. The Commander-in-Chief had asked that one of the long distance submarines of the "D" or "E" class might be sent to those waters where it seemed there would be a good chance of surprising an enemy boat while it was on the surface engaged in examining a neutral vessel. One "E" boat had gone; but her one cruise had produced no result, and the Commander-in-Chief's latest request for the despatch of another British submarine had been refused on the grounds that no boat was then available.

By September 1 conditions were easier, and the Admiralty ordered an "E" boat to Aberdeen for the express purpose of operating on the Norwegian coast.² The boat chosen was *E.16*, Commander C. P. Talbot. She reached Aberdeen on September 3 and was ready for sea by the 6th. The Commander-in-Chief would not despatch her till there were indications of a submarine working on the Norwegian coast, and she was not ordered away till the 11th, leaving in the forenoon of September 12. Thus both *E.16* and *U.6* proceeded for the Norwegian coast on the same day.³

125. The Meeting of "E.16" and "U.6," September 13.—The orders on which *E.16* was acting had been issued by the Commander-in-Chief on September 2, as soon as he knew the Admiralty were giving him a submarine for the long proposed operations. Her object was solely to attack and sink German submarines. She was first to make Obrestad Light at night, was then to operate off Udsire for 48 hours, and finally to cruise off the southern entrance to Bergensfjord, returning to Aberdeen only when necessary to refuel. She was to keep a wireless lookout between midnight and 1 a.m. each night, when information of the movements of enemy submarines would be passed to her. She was on no account to acknowledge any wireless messages and was

¹ M. 07149/15; Granton A.P. Reports, H.S. 201, p. 369.

² A. 158.

³ Copies of the telegrams re *E.16* are in G.F.S.P., Vol., XLV, H.S.A. 127, pp. 151 to 171.

to make no signals unless in need of assistance, in which case she might call up the armed trawlers operating to the northward.¹

U.16 did not reach Obrestad till the morning of September 13. In her anxiety not to be observed she had been delayed for over three hours by diving to avoid the notice of passing steamers. She was off Udsire on the 14th and by noon of the 15th was 4 miles south-west from Syre Naes, Karmo Island. Suddenly Commander Talbot sighted through his periscope a German submarine approaching from the southward. It was *U.6*, totally unaware of what was in store for her.

The laconic report of Commander Talbot² describes what then happened. "12.43. Fired both torpedoes, allowing 15 knots speed for enemy; torpedoes set to each diverge 2½ deg. One torpedo hit a few feet before conning tower. Submarine had disappeared before smoke of explosion had cleared away. Rescued five survivors."

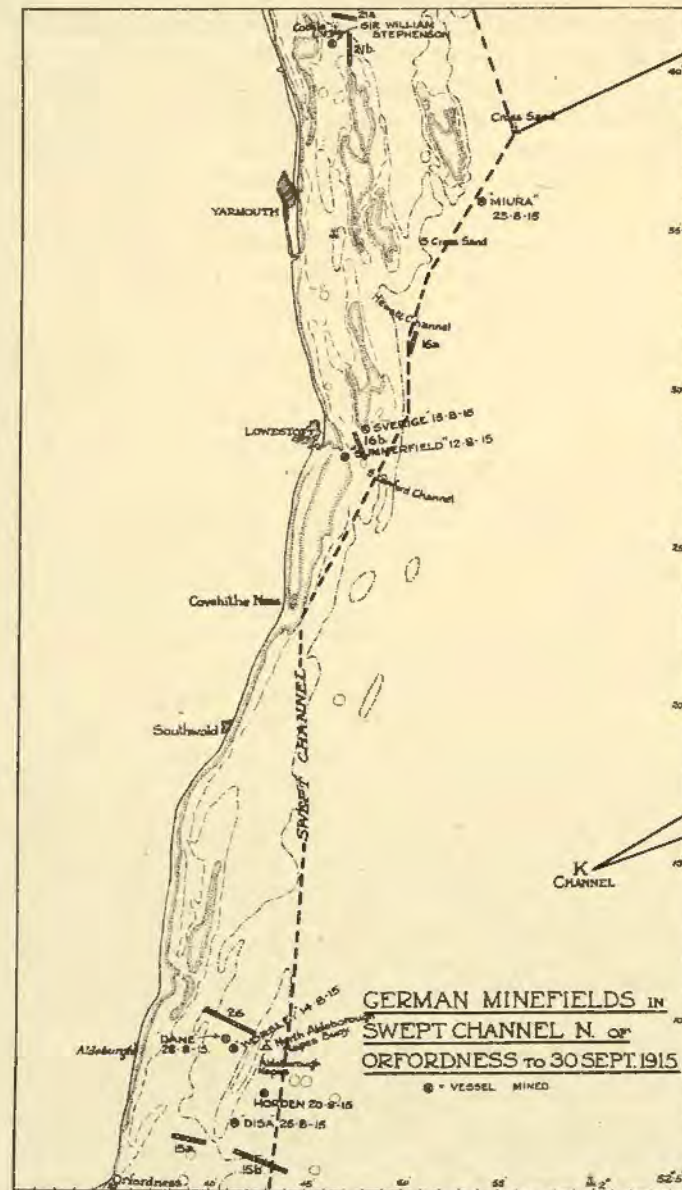
The Commander of *U.6* was not among them. From the rescued men Commander Talbot learned that no other boat was working with her. It seemed, therefore, to him that there was no object in remaining longer, since the destruction of the German submarine had taken place in full view of Karmo Island and would undoubtedly be reported to Germany. Accordingly he returned direct to Aberdeen without completing the programme laid down in his orders.

126. German Submarine Operations off the Skagerrack, September 20 to October 1.—The destruction of *U.6* seemed to put a stop to the cruises of German submarines up the Norwegian coast, though they still operated further south. On September 20 and 21, *U.16* spent a couple of days cruising across the mouth of the Skagerrack, on the Danish side of which she sank a Danish steamer. On the 23rd she was recalled to Heligoland,³ probably to take part in a larger operation, the last attempt on the Forth-Skagerrack merchant ship track.

The submarines taking part were *U.16*, *U.28* and *U.43*. The last, making her first extended cruise, took the western section of the line, but did not approach the shore within 60 miles. She did not molest any vessels. Neither did *U.28* at the eastern end of the line. Both these returned home before the end of the month.

There were two decoys out waiting to be accosted. These were the *Quickly* and the brigantine *Ready*, which cruised from Granton towards the Skagerrack between September 13 and 15, without sighting either *U.43* or *U.28*.⁴

The third submarine, *U.16*, made a serious raid on Scandinavian shipping. She began work halfway between the Forth and the



¹ The orders are given in full in Appendix P.

² H.S. 626, p. 12.

³ Signal 1026 September 23, in I.D.H.S. Records.

⁴ Granton A.P. Reports, H.S. 201, p. 397.

Skagerrack and there, on the 26th and 27th, she burned a Danish sailing vessel and examined three Danish steamers. Proceeding thence to the neighbourhood of the Naaze, she destroyed one steamer, three sailing vessels and one lighter with a cargo of pit props. She also captured and sent in to List a Swedish steamer.¹

This concluded the organised attack on merchant shipping in Home Waters, and brought to an end the submarine campaign in Home Waters of 1915. Thenceforward German submarines were used only for reconnaissance or for work with the fleet.

Though the defenceless Scandinavian shipping in the close neighbourhood of its own territorial waters might seem a safe object for occasional submarine attacks, the British anti-submarine service was elsewhere too formidable. "The danger," states the German historian,² "run by the submarines on coming to the surface to stop and search merchant ships, as was now necessary, was out of all proportion to the results attainable in this way; and after September 18 no more submarines were sent into English waters for commerce raiding."

¹ Signal 06300 October 2, in I.D.H.S. Records.

² Nordsee IV, p. 282.

APPENDIX A.

SELECTION OF TELEGRAPHIC ORDERS, ETC.,
JULY TO SEPTEMBER 1915.

Thursday, 1st July 1915.

A 1. Capt. (S) to Adty. Reed. 12.41 p.m.
169 C.O.S. Request permission for two out of four submarines taking part in the operations with Commodore (T) to remain three days cruising off Norderney and Ems. (1230.)

A 2. Adty. to A.O.P., Immingham. Reed. 1.50 p.m.
6th Light Cruiser Squadron will be required to co-operate with Commodore (T) for two days. S.N.O., 6th Light Cruiser Squadron, should be sent to Harwich in a destroyer to-day to receive his orders from Commodore (T) and return. Report when he leaves. Addressed to A.O.P., Immingham. Repeated to Commodore (T).

A 3. Adty. to Capt. (S). Sent 5.20 p.m.
189 Your 169 Approved.

A 4. Comm. (T) to Adty. Reed. 5.24 p.m.
443 For C.O.S. With reference to operations in hand, seaplane will not be ready in time to start to-morrow. Propose postponing for 24 hours.

A 5. Adty. to Comm. (T). Reed. 7.15 p.m.
Orders for Operation G approved and also the postponement for 24 hours referred to in your 443.

A 6. Adty. to C.-in-C., Nore. Reed. 7.20 p.m.
Riviera should be placed under orders of Commodore (T) temporarily. He will report to you when she is finished with.

1st July 1915.

A 7. C.-in-C., H.F., to Adty. Sent 7.35 p.m.
Reed. 8.57 p.m.
349 Referring to letter No. 0109 of 29th June, addressed by Captain (S) to Chief of War Staff. Submarine E.8 appears to have sunk only one German trawler suspected of acting as patrol on 22nd June. Submit orders may be given to our submarines to sink all German trawlers met after giving the crew time to leave their vessels.

2nd July 1915.

A 8. Adty. to *Mentor*. Sent 1.40 p.m.
Aquitania must sail at 5 o'clock to-morrow morning, and you should be off the Bar before that hour in readiness to escort her. If necessary, to ensure that you are back in time you may leave *Empress of Britain* as soon as she is well past the line joining Fastnet and Bishop Rock.

A 9. Adty. to C.O., M.F.A. *Princess Ena*. Sent 1.40 p.m.
Work in area Falmouth to Milford to Fastnet until further orders.

¹This letter was the report of the proceedings of E.8. See *Home Waters*, IV, Section 131.

A 10. Adty. to Admiral, Queenstown. Sent 1.50 p.m.

The movements of German submarines in the approaches to the English and Irish Channels from the 27th June to 1st July appear to have been as follows:—

U.38 sank s.s. *Lucena* 15 miles E by S from Ballycotton 12.30 p.m. on the 27th, and the *Edith* schooner near the same place at 1.0 p.m. She then sank the *Indrani* 35 miles SW of the Tuskar at 5.30 p.m.

On the 28th she chased the *Orduna* at 6 a.m., 20 miles SW of the Smalls. At 10.0 a.m. she sank the *Dumfriesshire* barque 25 miles SW of the Smalls. At 7.15 p.m. she sank the *Armenian* 20 miles west of Trevoze Head.

On the 29th, at 2.30 p.m., she sank the *Scottish Monarch* in lat. 51° 10' N, long. 8° W.

At noon on the 29th the Norwegian sailing vessel *Kotka* was sunk 30 miles SW by W from the Bull Light. This must have been by a different submarine, probably *U.39*, and probably the same one which stopped and overhauled the Swedish vessel *Sagoland* off Slyne Head at 4.0 p.m. on the 28th.

U.39 then sank the Norwegian ship *Cambuskenneth* 27 miles SW by S of Galley Head at 7.0 p.m. on the 29th, and the s.s. *Lomas* 65 miles west of Scilly at 2.0 p.m. on the 30th. It was possibly the same submarine which chased the *Kitama Maru* at 10.30 a.m. on the 1st July, in lat. 48° 35' N, long. 5° 54' N, and sank the *Caucasian* and *Inglemoor* near the same position.

In the meantime *U.38* sank the *Thistlebank* at 6.0 a.m. on the 30th, 25 miles SW of the Fastnet, the *L.C. Tower* schooner 25 miles SSW of the Fastnet at 10.0 a.m. on the 1st July, the *Sardonia* 20 miles off Mizen Head at 1.44 p.m., and the s.s. *Welbury* 15 miles west of the Bull at 5.50 p.m. on the same day. It will be found instructive to plot the courses of these submarines on the chart.

2nd July 1915.

A 11. Adty. to C.-in-C., Devonport. Sent 8.45 p.m.
For *Aurora*. If any destroyers are available after escort duties have been arranged for they should be sent to hunt submarines.

A 12. Adty. to C.-in-C., H.F. Sent 11.55 p.m.
Your 349 Not approved. In cases where there is reasonable suspicion that German trawlers are engaged in aiding military operations they may be dealt with drastically, but not otherwise.

3rd July 1915.

A 13. Adty. to Admiral, Devonport. Sent 1.15 p.m.
Another destroyer is to be sent to assist the escort of *Aquitania* (stop). *Aquitania* will proceed south through Irish Sea, passing midway between Tuskar and Smalls, and destroyer should steer to meet her. Destroyers are only to be used to hunt submarines when this does not interfere with their escort duties.

A 14. Adty. to C.-in-C., H.F. Sent 10.40 p.m.
441 To-morrow morning the Commodore (T) is making an air raid on *Emden* to ascertain what may be in the river. He has 3 light cruisers and 14 destroyers with 2 seaplanes, ships supported by 6th Light Cruiser Squadron and submarines.

Sunday, 4th July 1915.

A 15. Admiral, Dover, to Adty. Reed. 9.24 a.m.
411 I have now got 12 armed trawlers on escort duties and four returned yesterday (Saturday) after waiting four days at Beachy Head. When these 12 armed trawlers return I shall have no vessels to relieve the Beachy
(C8104)

Head and Dungeness patrols. I must either relieve the armed trawlers of their escort work or abandon the Dungeness and Beachy Head patrols entirely. The armed trawlers are escorting vessels by Admiralty order. I submit this escorting is entirely unnecessary in Dover patrol, where I have definite trade routes, and that taking trawlers off this route to escort vessels past other trawlers is merely waste of trawlers. It is most unwise to leave Beachy Head and Dungeness unprotected. Request that I may be allowed to use my discretion as to escorting by warning existing patrol and not detail special vessels.

A 16. Adty. to C.-in-C., H.F. Sent 11.30 a.m.

446 A determined effort should be made to intercept U.39 on her return voyage with all the resources at your disposal that can be usefully employed. U.39 has been sinking ships at the entrance of the English Channel since the 29th June, and will probably be starting on his return voyage very soon, in which case she should be in the neighbourhood of the Orkneys about 8th or 9th July. There will also be probably another submarine going opposite way which left Ems yesterday. It is suggested all the available net drifters should be collected and used in the Fair Island Channel and the most effective patrols you can arrange for should be established both there and to the northward of Shetland from now to the 10th July. Destroyers up to the number of half the effective vessels with you may be used to assist in this patrol, and the risk of the Fleet having to go to sea that number short must be accepted for the time, as the vessels on patrol will at all events be available to clear the road for the Fleet's return. Trawlers and other vessels taking part should be given any necessary assistance to make their signalling as efficient as possible by the loan of signal ratings or Junior Officers from the Fleet. Destroyers must be specially warned to keep moving at high speed on irregular courses, with an exceptionally good look out.

A 17. Adty. to C.-in-C., G.F. Sent 12.15 p.m.

From 4 S.L. Your private letter. Proposed four coastal airships at Aberdeen. None further north pending further experience. Date for completion twelve weeks from now. All smaller airships which are now being delivered are allocated to English and Irish Channels.

A 18. Adty. to R.A., Dover. Sent 11.25 p.m.

374 Your 411. Your statement as to escort work is not clear. Our record of orders to provide escort does not agree with your telegram. If you keep in touch with authorities at Ports of departure and with S.N.O.s of adjacent areas unnecessary waiting should not occur. You must use your discretion in all cases.

5th July 1915.

A 19. Adty. to V.A., Queenstown. Sent 11.25 a.m.

As U.39 is apparently now on her way home, the opportunity should be taken to organise your forces for carrying out the order in M. 04734, 26th June, before another submarine arrives. Addressed to V.A., Queenstown; V.A., Milford; Captain-in-Charge, Falmouth. Repeated to C.-in-C., Plymouth.

A 20. Adty. to Comm. (T).

This week mines will be laid to reinforce the protection to Dover Straits. Eight destroyers will be required to be at Sheerness by noon on Thursday to escort minelayers. It would be convenient if Commander Egerton is put in charge, as the arrangements have been explained to him. Orvieto has been ordered to Sheerness, probably leaving the Humber at midnight to-night. Three destroyers should meet her off Corton Light Vessel and escort her to Sheerness. A.O.P. has been directed to inform you of time of meeting.

A 21. Adty. to C.-in-C., H.F. Sent 8 p.m.

465 Your 380. It is not proposed to carry out operation S in view of Harwich destroyers being required this week to escort minelayers reinforcing the Dover Strait minefields.

A 22. Adty. to Consul-General, New York. Sent 10.20 p.m.

In future when sealed orders are given to merchant vessels, the following routes are to be substituted for those in use hitherto. Vessels bound for Liverpool are to be directed to pass through a point in lat. 50.24' N, long. 9.35 W, and thence to steer for position in lat. 51.57 N, long. 5.56 W, afterwards keeping in mid-channel and not approaching Anglesey within 15 miles. Vessels bound to Devonport are to be directed to pass through a point in lat. 49.12 N, long. 9 W, and then to steer for a point 30 miles south (true) from Lizard and thence to Devonport. Acknowledge. Sent 5th July, 8.30 p.m.

6th July 1915.

A 23. Adty. to C.-in-C., H.F. Sent 10.35 a.m.

472 Secret. 1st, 2nd and 3rd Battle Squadrons of High Sea Fleet, with 2nd Scouting Group, appear to be making ready to go out about 4 p.m. 1st Scouting Group remains at Schillig Roads. It appears to be an exercise cruise.

A 24. Adty. to C.-in-C., H.F. Sent 10.40 a.m.

Grand Fleet to have steam at two hours' notice. Light cruisers at one hour's notice.

A 25. Admiral, Dover, to Adty. Sent 1.5 p.m.

41 I propose commencing watch off French Coast at daylight, Saturday, 10th July, in accordance with arrangements made with French authorities.

A 26. Adty. to S.N.O., Liverpool. Sent 8.50 p.m.

Transylvania and Mauretania should be escorted to lat. 50 N, long. 8° 30' W. Round Anglesey not within 15 miles, then in mid-channel and mid-way between Tuskar and Smalls.

A 27. C.-in-C., H.F., to Adty.

Sent 7.15 p.m.
Reed. 9.27 p.m.

394 If circumstances permit, submit 1st, 2nd and 4th Battle Squadrons, 1st Cruiser Squadron, 2nd Cruiser Squadron, and 7th Cruiser Squadron, 4th Light Cruiser Squadron, 2nd Destroyer Flotilla, 4th Destroyer Flotilla may proceed eastward of Faeroe Islands for exercises, leaving base p.m., Sunday, 11th July, and returning a.m., Wednesday, 14th July. Submit also that Battle Cruiser Fleet with 1st Destroyer Flotilla leave at same time and sweep down to Dogger Bank, returning to base Monday night, 12th July; 3rd Battle Squadron and 3rd Cruiser Squadron remaining at base. If approved, suggest fleet be ordered out by Admiralty as on last occasion, operations being termed Operation T.

A 28. Adty. to C.-in-C., H.F. Sent 10.40 p.m.

482 German squadrons are returning to harbour after exercising.

A 29. Adty. to C.-in-C., H.F. Sent 10.42 p.m.

Grand Fleet ships to revert to usual notice for steam.

7th July 1915.

A 30. Adty. to C.-in-C., H.F. Sent 1.25 p.m.

492 Your 394. Approved, except B.C. sweep, which must depend on general conditions at the time. Light cruisers appear more suitable for this sweep.

Sent 7.45 p.m.
Reed. 8.47 p.m.

A 31. C-in-C., H.F., to Adty.
401 Your 492. I suggest battle cruisers for the double purpose of lending colour to the idea of receipt of information and for exercising them. Two light cruiser squadrons are quite sufficient for the sweep. Submit I may be informed later of final decision.

A 32. Adty. to Comm. (T). Sent 11.50 p.m.
Eight destroyers will be required to be at Sheerness by noon to-morrow, Thursday, to escort minelayers.

8th July 1915.

A 33. Adty. to C-in-C., H.F. Sent 1.45 p.m.
501 Your 401. Battle cruisers should be ready to go for cruise. Whether they carry out sweep to Dogger Bank or not will depend on information we obtain as to movements of enemy submarines.

A 34. Adty. to Comm. (T). Sent 7.35 p.m.
365 Two of the destroyers escorting minelayers should escort *Orvioto* to the Humber. C.C.M.L. has been informed.

A 35. Admiral, Portsmouth, to Adty. Reed. 10.32 p.m.
75 Submit that two further destroyers may be sent to Portsmouth at once for transport escort duty whilst pressure lasts, as I am unable to meet military requirements with those at my disposal.

Reply. Sent 11.32 a.m., 9th July.
Your 75 No more destroyers are available. You should only sail as many ships as you can provide escort for with present resources.

9th July 1915.

A 36. Adty. to Capt. (S), Harwich. Sent 11.50 a.m.
Send two submarines to cruise to the northward of lat. 55.0 N, in vicinity of Horn Reefs. Send one submarine to cruise off Norderney. They should attack any German men-of-war or Fleet Auxiliaries, and keep a look-out for a minelayer which is reported to be preparing. Caution submarines against aeroplanes working in concert with enemy submarines. Vessels should remain five days on their station unless prevented by bad weather.

A 37. Adty. to Admiral, Devonport. Sent 5.40 p.m.
Inform *Aurora* that whenever any destroyers are available they are to hunt submarines. A submarine was in lat. 51.10 N, long. 7.50 W, this morning at 7.30. A second submarine is coming down the west coast of Ireland. The destroyers should go to a central position between Queenstown, Lands End, and Milford, and cruise about, keeping one vessel on Q tube to intercept merchant ships' signals.

A 38. Adty. to Admiral, Devonport.
Consul-General, New York, and Department of Naval Service, Ottawa, are to-day being instructed that when sealed orders are given to merchant vessels the following route is to be substituted for that in use hitherto, when vessel is ordered to Devonport. Orders direct ships to pass through a point in lat. 49.12 N, long. 9 W, and then to steer for a point 30 miles south (true) from Lizard, and thence to Devonport. Orders also direct that Masters should be instructed to maintain secrecy of the route after arrival at destination, and that the orders are to be handed to boarding officer at Plymouth in a sealed envelope for transmission to you.

A 39. Adty. to All Bases. Sent 10 p.m.
Mines have been laid in an area enclosed by the following positions :—

- (A) Lat. 51.39 N, long. 1.57 E.
- (B) Lat. 51.39 N, long. 2.41 E.
- (C) Lat. 51.36 N, long. 2.41 E.
- (D) Lat. 51.36 N, long. 2.2 E.
- (E) Lat. 51.37 N, long. 1.56 E.

Principal chart affected, No. 1406.

10th July 1915.

A 40. Admiral, Portsmouth, to Adty. Reed. 1.15 p.m.
98 Submit that *Eria* may leave for her base at 8.30 p.m., 13th inst. As all Portsmouth torpedo craft are required for escorting transports, request that destroyers may be sent to escort her clear of channel, observing that the River class destroyers cannot be trusted to keep up more than 19 knots and the coastal torpedo boats are too small to go far should the weather be rough.

A 41. Adty. to Admiral, Portsmouth. Sent 7.5 p.m.
Your 98 Approved. Two destroyers of 10th Flotilla will escort *Eria*.

A 42. Adty. to Admiral, Devonport. Sent 7.10 p.m.
Two destroyers of 10th Flotilla are to be at Portsmouth by 8.30 p.m., 13th July, in readiness to escort *Eria* to long. 8-30 W. If necessary the transports sailings must be postponed.

A 43. Adty. to Comm. (T). Sent 11 p.m.
A division of destroyers may be used to patrol outside Dutch territorial waters, but they are not to go north of Lat. 53-26 N. It is probable that the steamers will keep to Dutch territorial waters, and these waters must be respected.

Sunday, 11th July 1915.

A 44 (a). Adty. to C-in-C., H.F. (530). Sent 1.45 p.m.
V.A., Battle Cruisers (255).
Grand Fleet, except 3rd Battle Squadron and 3rd Cruiser Squadron, to proceed at a time ordered by C-in-C. in execution of Operation T.

A 44 (b). Adty. to C-in-C., H.F. (531). Sent 1.46 p.m.
V.A., Battle Cruisers (256).
No objection to proposed sweep to Dogger Bank returning to base Monday night.

A 45. Naval Centre, Portsmouth, to Adty. Reed. 4.36 p.m.
428 4.20 p.m. French Admiral, Cherbourg, telegraphs. (begins.) According to W/T from destroyer *Epieu*, torpedo has been fired without result at British mail steamer at 6 miles N, 60° W, off Cap de la Heve; destroyer is convoying steamer; have sent all available torpedo boats to proceed against submarine. (ends.) Aberdeen N.C.s. Sheerness, to Devonport and Guernsey, Admiralty, Transports Dublin, Belfast, Glasgow, Southampton, Newhaven, S.N.O.s, Dover, Poole, Ramsgate, informed.

A 46. Adty. to A.O.P. Sent 10.14 p.m.
Battle Cruiser Fleet are cruising from the Forth towards Dogger Bank, sailing to-night and returning to-morrow night. If any submarines are reported off your coast destroyers should be sent after them promptly.

12th July 1915.

A 47. Adty. to R.A., Dover, etc.

Sent 8.25 p.m.

We have good evidence that German submarines from Belgium are being used to lay mines, and additional precautions should be taken as regards sweeping. Addressed to R.A., Dover; C-in-C., Nore; S.N.O., Harwich, and S.N.O., Lowestoft.

13th July 1915.

A 48. R.A., Dover, to Adty.

Reed. 5.31 p.m.

451 Calais reports German mines have been found between 2 and 3 miles off the coast in front of the harbour entrance, minesweepers have exploded one yesterday and two to-day. Have directed the Calais-Folkestone boat to remain at Calais till French consider the area clear. Propose sweeping in the offing from Boulogne with Dover minesweepers to-morrow (Wednesday).

A 49. Adty. to R.A., Dover, by telephone.

Step the transport traffic.

14th July 1915.

A 50. Adty. to C-in-C., H.F., etc.

Sent 8.32 p.m.

A report has been received of submarine minelayers being under construction in Germany. It is considered possible that some vessels of type mentioned have already been completed. Any facts tending to confirm this should immediately be reported to Admiralty for information of D.I.D. Has been sent to C-in-C., H.F., and all naval centres.

A 51. F.N.A., to Marine, Paris.

2747 Transports crossing to-might:—

From	To	With
5 Southampton	Havre.. ..	Troops and horses.
1 "	"	Troops.
1 "	Rouen	Troops.
5 Folkestone	Boulogne	Troops.
1 Devonport	Havre	Stores.
1 Newhaven ..	Boulogne	Ordnance Stores.

A 52. F.N.A., to Marine, Paris.

2750 Although a telegram from Admiral Bavreau advises entry into Boulogne, Dieppe, and Le Havre only at high water by reason mines found off Calais, the Admiralty has decided to allow the sailing of the transports announced by my 2747 on account of the importance of not delaying the military transport. Moreover the ships will arrive very nearly at the time of high water, and it is thought that the evening's low water will have been taken advantage of to sweep the entrance channels.

15th July 1915.

A 53. Adty. to C-in-C., H.F.

Sent 3.30 p.m.

555 A German submarine has been reported in lat. 58-15° N, long. 3-40° E, at 3 p.m. It will probably pass north of Shetland. Another which was in lat. 36-30° N, and 3-55° E, at 8 a.m., may probably pass through the Fair Island Channel.

556 (Sent 4.25 p.m.) The second submarine mentioned in my 555 is heading to pass 30 or 40 miles off Rinnalrd Head and may interfere with *Iron Duke* to-morrow.

A 54. Admiral, Dover, to Adty.

Reed. 5.15 p.m.

463 Your 425. I would suggest that all eastbound steamers be directed to pass within 3 miles of Royal Sovereign Light Vessel and within 3 miles of Dungeness. They will then pass inside our patrol, straight up to gate. If the owners were fined, say, £500 if their vessel was to southward of this line no trouble would be experienced.

Note—Adty. Tel. 425 asked: "Can you suggest any steps to prevent eastbound steamers fouling the anti-submarine boom north of the Vame?"

A 55. Adty. to Comm. (T).

Tipperary and one division of 3rd Flotilla should arrive at Devonport on 18th. One division of 10th Flotilla should leave Devonport in time to arrive at Harwich on 18th. *Aurora* will complete refit on 19th and leave for Harwich with remainder of 10th Flotilla. *Hope* is to remain at Devonport and follow orders of *Tipperary*. On the 20th two divisions of 3rd Flotilla should leave Harwich to join *Tipperary*. *Penelope* should be sent to Chatham in time to commence refit on 21st.

16th July 1915.

A 56. Marine, Paris, to F.N.A.

Sent 7.55 p.m.

683 Very Secret. Please inform the Admiralty that we propose to use for an offensive patrol in the neighbourhood of Ushant a submarine, escorted by a steamer of mercantile appearance, operating on a line running to the north-west (true) of Ushant, with a possible range of 30 miles to the right and left of this line, the distance from Ushant never exceeding 60 miles. The escorting vessel will be furnished with A.F.R. code, and will be able to make herself known to the patrols. Unless the Admiralty have any objection, this plan will come into operation from 20th July. Please reply immediately.

17th July 1915.

A 57. Marine, Paris, to Adty.

685 Reply to 2772 of 16.7.15. The Commandant, Front De Mer, Calais, informs us that transports may enter on condition that they arrive off the port at a daylight high water to the north of the green buoy, whence they will be piloted inside the port.

A 58. Adty. to C-in-C., H.F.

Sent 4.15 p.m.

In view of the trouble in the South Wales coal trade, Welsh coal should be economised as much as possible.

A 59. Adty. to Comm. (T).

Sent 6.30 p.m.

Prepare for sea.

A 60. Adty. to Comm. (T).

Sent 7.0 p.m.

383 Secret. A German submarine is reported to be in lat. 57-57° N, long. 0-54° E, at 5.0 p.m. G.M.T. to-day, with batteries disabled. She will return to Emden on the surface, and will probably pass to the eastward of the minefield in the middle of North Sea, northern limit 56.0° N, eastern limit long. 5.0° E. Her surface speed is 10 to 13 knots on passage. You should make a sweep to meet her with light cruisers and destroyers, unless the weather is too bad for destroyers. Report what vessels you are taking out.

Sunday, 18th July 1915.

A 61. Adty. to Comm. (T).

Sent 11.30 a.m.

Return at once.

19th July 1915.

A 62. Adty. to C.-in-C., H.F.

Sent 12.5 p.m.

587 Secret. This afternoon the 1st, 2nd, and 3rd Battle Squadrons of High Sea Fleet are leaving the Elbe and Jade. Apparently some of the cruiser squadrons are remaining at anchor. There is nothing to indicate that anything is intended except an exercise.

A 63. Adty. to V.A., Old Milford.

Sent 4.50 p.m.

Re your report 274/30 of 11th July. According to our estimate only one submarine, U-20, was operating in your waters from the 8th July to the 10th. She sank the *Marian Lightbody*, 6 p.m. on the 8th; the *Ellesmere, Clio*, at 4.30 a.m. to 5.30 a.m. on the 9th; chased the *Orduna* at 7.40 a.m. on the 9th; sunk the *Meadowfield* at 2.15 p.m. the same day, and was sighted by the yacht *Marynthea* at 6 a.m. on the 10th. After this she returned home, and sank the *Linnox* North of Shetland at 7 p.m. on the 13th. The reports of submarines being sighted by the *Ebro, Etonian, Panama*, are probably unreliable. There are no submarines known to be on the west coast at the present time.

A 64. Admiral, Dover, to Adty.

Reed. 7.7 p.m.

484 Calais reports no ships are allowed to anchor or leave Calais harbour for the present because some new mines have been found in front of Calais. Naval centres informed.

A 65. Adty. to C.-in-C., H.F.

Sent 11.0 p.m.

592 Secret. High Sea Fleet has returned to the rivers.

20th July 1915.

A 66. Adty. to Marine, Paris.

2815 On account of the importance of Calais for the supply of the English Army, the Admiralty propose their help should you wish it in keeping a channel clear of mines. Please let me know if you wish this help and to what extent.

21st July 1915.

A 67. C.-in-C., Home Fleets, to Adty.

Reed. 12.8 p.m.

493 Could two more "C" class submarines be spared to work while weather is fine at northern end of route Muckle Flugga to Horn Reefs Light Vessel in manner that C.27 has been working? They will probably meet with success.

Adty. to Admiral, Rosyth.

Sent 7.0 p.m.

76 Two "C" class submarines are to be detached temporarily from the 7th Flotilla for special service under the orders of C.-in-C., H.F., and are to proceed to Scapa forthwith (stop). C.-in-C., H.F., has been informed, and you should arrange details with him direct, reporting action taken to Admiralty.

Adty. to C.in-C., H.F.

618 Your 493. Admiral, Rosyth, has been directed to send two submarines from 7th Flotilla to serve under your orders temporarily.

A 68. Admiral, Rosyth, to Adty.

Reed. 9.33 p.m.

817 Your 76. Two "C" class submarines are already at Scapa. Two operating with trawlers from Aberdeen and two similarly from Leith. One of the remaining two has no Commanding Officer as he is in charge of armed trawler working with submarines. I do not consider defence Firth of Forth should be further weakened by taking away two more submarines, which are doing good work; if four submarines in all are sent to Scapa Flow, the work from Aberdeen, which has had such good results, will have to be stopped. Immediate reply requested. (2110.)

Reply: Adty. to Admiral, Rosyth.

81 Your 817. The defence of the Forth is well provided for by the proximity of a large portion of the Grand Fleet. The East Coast of England is not so protected. The northern route seems best place for attacking submarines at present. Send one more to Scapa temporarily and arrange to take Commanding Officer of remaining submarines out of trawler for employment in his own boat. (Sent 12.5 p.m., 22.7.15.)

A 69. Marine, Paris, to Adty.

696 Reply to 2815. I have discussed the question with Admiral Favereau. While thanking the Admiralty for their offer of help, I hope that our means will be sufficient to keep the channel clear.

22nd July 1915.

A 70. Adty. to I.O., Gibraltar, etc.

Sent 5.15 a.m.

Advise British and Allied sailing vessels clearing for British ports that when approaching the United Kingdom they should remain well to westward of the 100-fathom line until a favourable wind enables them to lay a direct course for their destination. If port of destination is not known, the master should be directed to call at the Azores, Canaries, Cape Verde Islands, Madeira or Gibraltar for orders. Sailing vessels should avoid calling at ports or headlands in the United Kingdom for orders, but should proceed direct to their destination.

A 71. Admiral, Queenstown, to Adty.

Sent 1.6 p.m.

Reed. 1.32 p.m.

784 Submitted the command of Irish Station has been transferred to Vice-Admiral Sir Lewis Bayly.

A 72. Adty. to R.A., Stornoway, etc.

Sent 8.20 p.m.

When practicable oilers and important store carriers, etc., may be given an escort of two auxiliary patrol vessels. Orders detailing the S.N.O.s who should provide the escort will be issued as hitherto from the Admiralty. As it is not always possible to give the exact time of sailing and also, as occasionally happens, the vessel may not be able to sail on the date anticipated, the S.N.O. of the port of departure should telegraph to the S.N.O.s concerned the actual date and time of sailing and estimated speed. This should obviate the necessity for escorts having to wait for long periods at the ordered rendezvous. (2020.)

23rd July 1915.

A 73. Admiral, Dover, to Adty.

Reed. noon.

502 I am informed by Captain Salneau that experience with mines off Calais has shown that Germans have increased the thickness of wire mooring rope of their mines, and also the hardness of the wire, so that it practically defeats their cutters.

A 74. C.-in-C., H.F., to Adty.

Sent 7.25 p.m.

504 Secret and personal for First Sea Lord. Operation C. In view of full moon it is undesirable for Force A to pass southward of mined Area I now. Propose following modifications: Force A to meet supporting force at 6 p.m., Wednesday, 28th, in position (1) lat. 54.45 N, long. 2.40 E. Supporting force, consisting of 2nd Battle Cruiser Squadron and 2nd Light Cruiser Squadron, leave base midnight, Tuesday 27th, sweep to Dogger Bank, meet Force A at 6 p.m., 28th, and both forces proceed in company to position (2) lat. 56.30 N, long. 3.10 E, arriving 2 a.m., Thursday 29th. Force A to then part company, proceeding to Jutland Bank, supporting force going through position (3) lat. 57.45 N, long. 8.30 E, to position (4) lat. 57.15 N, long. 7.40 E, arriving at noon 29th, proceeding thence to base passing through position (5) lat. 56.45 N, long. 8.20 E, at

3 p.m. 29th, at which time Forces B and C are to be west of the line Naze-Hanstholm Light retiring. Forces A, B, and C to concentrate 3 p.m. 29th in position (6) lat. 57.0 N, long. 6.15 E, at 6 p.m. Thursday 29th, thence as in para. 10, arriving base Friday 30th.

A 75. Adty. to Capt. (S), Harwich. Sent 8 p.m.

193 Send one submarine to work between Norderney and Western Ems. She should occasionally cruise to the northward but not north of lat. 54.30 N. She should remain six days on her station unless bad weather or other circumstances necessitate an earlier return.

A 76. Adty. to Capt. (S), Harwich. Sent 8.2 p.m.

194 Send one "E" class submarine to cruise inside the Skaw and Skagerrack to the east of long. 9.30 E. She should not enter the Belts of the Sound and is to be careful not to attack neutral men-of-war or neutral submarines. She should remain seven days on her station unless return is necessitated by bad weather or other circumstances. Warn her that British cruisers and destroyers may be met with carrying out a sweep towards the entrance of Skagerrack. Report name of the vessel detailed.

A 77. Adty. to Capt. (S), Harwich. Sent 8.5 p.m.

195 Send two submarines to cruise at discretion of their captains between lat. 55.0 N, and lat. 57.0 N, to the eastward of long. 6.0 E. They should remain seven days on their cruising ground unless necessary to return earlier owing to bad weather or other circumstances. Warn them British cruisers and destroyers may be carrying out a sweep towards entrance of Skagerrack at any time. They should keep a lookout for enemy submarines.

A 78. Adty. to C.-in-C., H.F. Sent 8.30 p.m.

637 The submarine that was rammed by *Speedwell* is now on her way north again. She was reported in lat. 57.10 N, long. 4.55 E, at 5 p.m. She may very likely go well north of the Shetlands this time to avoid the patrols.

A 79. Adty. to V.A.C., Queenstown. Sent 3.40 p.m.

Referring A.L. M.05134 of 6th July, paragraphs 2 and 4. The 1st Sloop Flotilla is hereby placed under the orders of V.A.C., Queenstown, for employment within the limits of his command. This telegram has been sent to V.A.C., Queenstown, C.-in-C., Devonport, C.S., Pembroke, Capt.-in-C., Falmouth, V.A., Old Milford, S.N.O., 1st Sloop Flotilla.

24th July 1915.

A 80. From C.-in-C., H.F., to Adty. Sent 11.24 p.m.
Reed. 12.5 p.m.

507 Urgent. Secret and personal for First Sea Lord. Operation C. My telegram 504. In order to shorten operations for destroyers I propose that Forces B and C shall be to the westward of the Naze-Hanstholm Light line by noon on 29th instead of 3 p.m., course of supporting force being shortened accordingly, arriving at position (5) by noon. (1117.)

A 81. Adty. to Comm. (T). Sent 5.20 p.m.

Your available light cruisers and destroyers will be required to co-operate with northern forces in a sweep commencing on 28th or later. C.-in-C., H.F., will send your orders direct to you.

A 82. Adty. to C.-in-C., H.F. Sent 5.20 p.m.

Your letter 1446 H.F. 0022 of 16th and telegrams to 1st S.L. Nos. 504 and 507. Operation C can be carried out commencing Wednesday 28th or later if circumstances should require a postponement. Enemy fishing vessels should not be sunk unless being used for military purpose. All

available light cruisers and destroyers from Harwich will be sent to form Force A. In view of submarines in my telegram No. 639 working between lat. 55.0 N, and lat. 57.0 N, to eastward of long. 6.0 E, having orders to attack enemy submarines, it will not be safe to station your force E off Horn Reefs as proposed. Redraft original orders for Operation C, dated 16th July as modified by your telegrams and send copy direct to Commodore (T) by an officer; also send copy to Admiralty. Commodore (T) will be warned to be ready.

A 83. S.N.O., Liverpool, to S.N.O., Kingstown. Sent 9.15 p.m.

Transport of troops will take place between Liverpool and Dublin from 28th to 31st July. Route should be carefully patrolled. Two destroyers will be sent as escort to horse transport and will act under Admiralty orders. Made to S.N.O., Kingstown; repeated to Admiral, Queenstown, and S.N.O., Liverpool.

Sunday, 25th July 1915.

A 84. From C.-in-C., H.F., to Adty.

Sent 11.12 a.m.

Reed. 11.47 a.m.

Urgent Priority 514 Enemy's submarines show great activity on trade passing between Faeroe Islands and on Admiralty Arkhangel route. Submit all allied Arkhangel trade be advised to keep west of 11.0 W until 61.0 N.

A 85. Adty. to V.A., Queenstown.

Sent 12.20 p.m.

V.A., Old Milford.

R.A., Larne.

Capt.-in-C., Falmouth.

R.A., Stornoway.

Submarine U.36 which sank French steamer *Danae* 80 miles NW of Cape Wrath at 11 p.m. on the 23rd is probably on her way to the south of Ireland and should be there to-morrow (Monday) morning. Another submarine passes north of Shetland at 9 p.m. last night, and may very likely try to get through North Channel during the night of the 26th to 27th

A 86. Adty. to Admiral, Rosyth.

Sent 5.55 p.m.

Vice-Admiral William L. Grant appointed Commander-in-Chief, China Station; is to strike flag on 27th July, being succeeded by Rear-Admiral Montagu E. Browning as Rear-Admiral Commanding 3rd Cruiser Squadron. Rear-Admiral Sydney R. Fremantle appointed as Rear-Admiral in 3rd Battle Squadron vice Browning to date 27th July. Letter follows. Inform V.A., 3rd Battle Squadron, Rear-Admiral 3rd Battle Squadron and vice-Admiral 3rd Cruiser Squadron. Commander in Chief Home Fleets informed.

26th July 1915.

A 88. Adty. to C.-in-C., H.F.

Sent 5.13 p.m.

Lowestoft has been ordered to Devonport. She is required for a special mission to Halifax N.S. and will sail about 24 hours after arrival at Devonport. As soon as she has coaled at Halifax she will return direct to Scapa Flow.

A 89. Adty. to C.-in-C., H.F.

Sent 8.36 p.m.

654 Your 514. British and allied vessels proceeding from North Irish Channel to Archangel are being directed to pass at least 100 miles outside St. Kilda and well to the west of long. 11° W until lat. 63° N is reached, thence to destination, taking care not to approach the Norwegian coast within 80 miles. Russian examination steamers will be found off Svyatoi Nos and Sozonova, and ships should report to both of them and apply for the latest instructions for entering the White Sea.

27th July 1915.

A 90. Adty. to Admiral, Devonport. Sent 3.48 p.m.

910 *Secret*. Homeward bound transports carrying wounded and invalids and not protected by Geneva Convention will be given sealed orders directing them to pass through lat. 48.20 N, long. 6.10 W, and proceed to Plymouth, reporting to you by wireless the date and time of arrival at that rendezvous. They should be met at rendezvous and escorted in. *Secret* orders will be handed to boarding officer. Acknowledge.

A 91. Adty. to Comm. (T). Sent 7.30 p.m.

You should sail in time to carry out your part in Operation C, in compliance with H.F. 0022/114 of 25th July 1915. You should take all available cruisers and destroyers except *Conquest*, and inform Admiralty and C.-in-C., Home Fleet, of the composition of your force.

A 92. C.-in-C., H.F., to Adty. Sent 7.24 p.m.
Reed. 10.20 p.m.

527 With reference to H.F. 0022 of 25th July, orders for Operation C are modified as follows: Forces A and B are to meet at position (2) lat. 56.30 N, long. 3.10 E, at 3 p.m. Thursday July 29th, and thence proceed to Jutland Bank and Hanstholm respectively. The supporting force is to modify sweep to the southward so as to pass through positions numbered (1) to (5) inclusive three hours earlier than previously arranged. Force A, therefore, will not meet supporting force. Forces A, B, and C, are to be west of line Naze to Hanstholm by 9 a.m. Friday 30th concentrate in position (6) at noon and thence proceed as previously arranged. Report when understood.

28th July 1915.

A 93. Adty. to S.N.O., Harwich. Sent 5.35 p.m.

Commander Porte at Harwich and Lieutenant Ireland at Yarmouth should arrange with respective S.N.O.s for establishing regular operations with flying boats and Schneider Cup seaplanes against the small submarines which infest the neighbourhood of Harwich and Lowestoft. Addressed to S.N.O. Harwich and S.N.O., Lowestoft.

30th July 1915.

A 94. Adty. to C.-in-C., H.F. Sent 3.20 a.m.

Your 501 Diplomatic negotiations are in progress with Norwegian Government as to territorial waters and pending final settlement it has been decided by the Government, without admitting any abrogation of our rights for visit and search outside 3 miles, that a 4 mile limit is to be adhered to for the present on the Norwegian coast. Otherwise as in our Prize Manual. Give confidential directions accordingly to all vessels employed on or near Norwegian coasts.

A 95. Adty. to Admiral, Devonport. Sent 4.5 p.m.

Urgent. Three destroyers are to proceed to St. George's Channel to escort *Aquitania* sailing to night. *Aquitania* will round Anglesea at distance of 15 miles and then steer to pass midway between Tuskar and Smalls. She will be escorted by destroyers from Liverpool until met by Devonport destroyers. Devonport destroyers are to take her to lat. 50 N, long. 8.30 W. Report name of Senior Officer's ship.

31st July, 1915.

A 96. Adty. to C.O., M.F.A., Lyons. Sent 4.30 a.m.
c/o C.G., Falmouth.

Urgent. s.s. *Georgie* is due at St. Nazaire, 31st July, from New York, and leaves for Liverpool after discharging cargo. Route given is inside Scillies. *Lyons* is to proceed to westward of Ushant and escort *Georgie* on voyage from St. Nazaire to Liverpool. Report if understood.

1st August 1915.

A 97. Adty. to Admiral, Queenstown. Sent 6.42 p.m.

786 Vessels from New York to Queenstown with valuable cargoes will be given sealed orders directing them to pass through a point in lat. 50° N, long. 12° W, thence to steer for lat. 51° N, long. 8° W, thence to Queenstown, proceeding at utmost speed after passing first position. They will report to you, by wireless, probable time of arrival at first rendezvous. They should be looked out for. You will be informed by Admiralty when these orders are given to any vessel.

A 98. Adty. to Comm. (T). Sent 11.45 p.m.

406 For the next few days one division of destroyers should be employed submarine hunting between Yarmouth and the Thames, and another division should occasionally go over towards Hook of Holland and North Hinder.

2nd August 1915.

A 99. Adty. to S.N.O.s of all Auxiliary Patrol Areas.

Sent 2 p.m.

The division lines between the Auxiliary Patrol areas are only for administrative purposes. Vessels should overlap whenever necessary for co-operation, and limits should not be considered when attacking submarines.

A 100. F.N.A. to Marine, Paris. Sent 2.30 p.m.

2921 *Secret*. On account of the presence of enemy submarines off Ushant, the Admiralty wish you to be informed that several transports bringing back wounded and convalescents and not protected by the Geneva Convention are *en route* or are about to be sent from the Mediterranean to England. They receive secret orders to pass 100 miles west of Cape Finisterre and to rendezvous in lat. 48.20 N, long. 6.10 W, where an escort should await them. One of them, the *Transylvania*, passed Gibraltar 31st July.

4th August 1915.

A 101. Comm. (T), to Adty. Reed. 10.13 a.m.

509 Report of German armed trawler and torpedo boat patrol off Terschelling Island has been received. Suggest four light cruisers and four destroyers sail to-night and sweep vicinity of Terschelling Island at daylight, returning to base before dark. (0930.)

A 102. Adty. to C.-in-C., H.F. (689). Sent 1.30 p.m.
Admiral, Rosyth (131).

We have reason to believe that five submarines have left the German Bight in the course of yesterday and to-day, for action either in the North Sea or west coast. (Following for C.-in-C. only.) A good lookout should be kept off Orkneys and Shetlands from to-morrow night on.

A 103. Adty. to Comm. (T). Sent 3.47 p.m.

411 Your 509 approved. Do not be drawn to the eastward of long. 5.55 E, because there is a strong presumption that some German mines have been recently laid near the Ems. Captain (S) can give you all the information we possess.

5th August 1915.

A 104. Adty. to Admiral, Queenstown. Sent 12.45 p.m.

905 Vessels from New York bound for Liverpool with valuable cargoes have orders to pass through a point in lat. 50.24 N, long. 9.35 W, and thence to steer for a position in lat. 51.57 N, long. 5.56 W, afterwards keeping in mid-channel and not approaching Anglesey within 15 miles. At present

vessels are reporting to Devonport their time of arrival at first rendezvous, but orders are being given that, in future, reports shall be addressed to you. As vessels have valuable Government cargo they should be looked out for. These rendezvous were recently ordered and are just coming into use.

A 105. Adty. to C.-in-C., H.F. Sent 4.25 p.m.

698 A submarine believed to be U.35 bore N 94° E, true, from Aberdeen Wireless Directional Station at 11.37 a.m. to-day.

A 106. Adty. to C.-in-C., H.F. Sent 10.48 p.m.

702 At 6.32 p.m. a submarine believed to be U.27 bore N 29° E, true, from Aberdeen. At 5.50 p.m. a submarine believed to be U.38 bore N 69 E, true, from Aberdeen.

6th August 1915.

A 107. Adty. to C.-in-C., H.F. Sent 9.23 a.m.

704 German armed fleet auxiliary steamer *Meteor* left the Jade at 4 a.m. Nothing is known of her intentions, but it is possible that she will again take mines to the White Sea. She is more than a match for armed trawlers, and should be watched for off Norway Coast and intercepted.

7th August 1915.

A 108. Adty. to Naval, Ottawa. Sent 12.5 p.m.

448 In future, when sealed orders are given to merchant vessels bound for Queenstown the following route is to be used. Vessels bound for Queenstown are to be directed to pass through a point in lat. 50.00 N, long. 12.00 W, thence to steer for position in lat. 51.00 N, long. 8.00 W, thence to Queenstown. They are to proceed at utmost speed after reaching lat. 50.00 N, long. 12.00 W, and take every precaution against submarine attack. As soon as in wireless range they should report to Admiral, Queenstown, the probable time of their arrival at the first position, being careful to refer to it as the first rendezvous and not give its latitude and longitude.

A 109. Adty. to Admiral, Devonport. Sent 4.51 p.m.

63 Urgent. *Tipperary* and six destroyers should be sent to Queenstown to assist the Vice-Admiral in hunting two submarines, which are expected to pass the Fastnet on morning of 9th.

A 110. Adty. to S.N.O., Queenstown. Sent 5.7 p.m.

822 Two German submarines are passing down west coast of Scotland bound for the Mediterranean. Their speed is about 9 knots. To-morrow morning they will be in approximately lat. 54.30 N, long. 10.30 W. On the morning of the 9th they will be off the Fastnet in about lat. 51.20 N. You should concentrate all your available force and hunt them. *Tipperary* and six destroyers are being sent from Devonport to assist you.

8th August 1915.

A 111. Adty. to Comm. (T). Sent 7.55 p.m.

419 Urgent. Raise steam, all Light Cruisers.

A 112. Adty. to V.A., B.C.S. Sent 8.25 p.m.

272 Raise steam at once in two Light Cruiser Squadrons. Acknowledge.

A 113. Adty. to Comm. (T). Sent 8.40 p.m.

420 German armed minelayer *Meteor* sunk armed boarding steamer *Ramsay* north of Kinnaird Head this afternoon. At 6 p.m. *Meteor* was in lat. 58.20 N, long. 0.5 W, approx. She will probably return to Heligoland going east of lat. 56.0 N, long. 5.0 E, and will probably make for Horn Reefs. Take all available light cruisers and steer towards Horn Reefs to intercept her. She has survivors of *Ramsay* on board. *Meteor's* description:

1,912 tons, 14 knots speed, two masts, one funnel, two searchlights on bridge, straight bow, two torpedo tubes on fore-castle. She has 4-in. guns. Do not make wireless or German directional stations will get you. We will use F procedure. Acknowledge.

A 114. Adty. to V.A., B.C.S. (273),
Comm. (T) (421),
C.-in-C., H.F. (718). Sent 9 p.m.

German minelayer *Meteor* sunk *Ramsay* north of Kinnaird Head to-day. At 6 p.m. *Meteor* was in lat. 58.20 N, long. 0.5 W. Comm. (T) with Harwich Light Cruisers is going towards Horn Reefs to intercept her sailing about 11 p.m. Send two Light Cruiser Squadrons to get on *Meteor's* track to Horn Reefs to sweep along it to south-east in case she doubles back. Caution them to avoid wireless, and return should they reach latitude of Horn Reefs without result. *Ramsay's* survivors are on board *Meteor*.

A 115. C.-in-C., G.F., to Adty. Reed. 9.20 p.m.

588. Moored mines have been located between latitudes 57.50 N and 58.5 N, and between longitudes 2.15 W and 2.45 W. Am warning all ships entering Moray Firth to keep within 5 miles of coast of Moray Firth.

A 116. C.-in-C., H.F., to Adty. Reed. 9.50 p.m.

589 In view of minefield discovered in Moray Firth, similar field may have been laid outside Firth of Forth. All fleet sweepers are sweeping route off northern base. Submit any fast sweepers available may be sent to examine exit(s) from Firth of Forth. If any available the route requiring examination will be named.

9th August 1915.

A 117. Adty. to C.-in-C., H.F. Sent 12.21 a.m.

722 Secret. As well as the minefield between lat. 58.5 and 57.50 N and long. 2.30 W to .37 W, *Meteor* has laid mines on a steamer track. This track is possibly the route between Rattray Head and Pentland Firth.

A 118. Adty. to Comm. (T) by F procedure. Sent 9.20 a.m.

423 Position at 4 a.m., lat. 55.50 N, 5.3 E. Speed 13 knots, course SE 1/4 E.

A 119. Adty. to Comm. (T) by ordinary procedure. Sent 1.25 p.m.

425 Return. Make a detour to north-westward as submarines are out to intercept you.

A 120. Adty. to *Galatea* and *Southampton*
(via Cleethorpes, No. 147). Drafted 1.30 p.m.

1st and 2nd Squadrons return to base. (1400.)

A 121. C.-in-C., H.F., to Adty. Reed. 4.59 p.m.

596 I propose to send a Light Cruiser squadron and two destroyers from Rosyth, leaving night of 11th as far east as long. 5 in 56.0 N lat. *Quickly* and *Gunner* will be in that vicinity on 12th. Force will return on 13th.

A 122. Comm. (T) to Adty. and C.-in-C., H.F. Reed. 5.20 p.m.
522 *Meteor* has been sunk.

A 123. Adty. to C.-in-C., H.F. Sent 10.5 p.m.

727 Your 575. 4th Light Cruiser Squadron should be recalled.

A 124. Adty. to C.-in-C., H.F. Sent 11 p.m.

728 Your 596. No objection, but we should like two Battle Cruiser Squadrons and two Light Cruiser Squadrons and one Flotilla ready from 11th onwards to cover mining operations which will be carried out when Harwich Force is again available. We should prefer 3rd Battle Squadron to postpone exercises till this has been completed.

A 125. Adty. to Comm. (T).
Return to English coast with all despatch.
Return to English coast with all despatch.

Sent 11 135 p.m.

A 126. Adty. to C. in C., H.F. (729).
A 126. Adty. to V.A., 3rd B.S. (167).
V.A., B.C.S. (275).
V.A., 1st B.S. (204).
S.Sent 11 140 p.m.

Grand Fleet to have steam at two hours' notice.
Grand Fleet to have steam at two hours' notice.

10th August 1915.

A 127. Adty. to A.O.P., Immingham.
684 6th Light Cruiser Squadron is to be ready to go to sea at one hour's notice.
684 6th Light Cruiser Squadron is to be ready to go to sea at one hour's notice.

Sent 11 235 a.m.

A 128. Adty. to Capt. (S), Harwich (207).
A 128. Adty. to Capt. (D), *Dido*.
All destroyers and submarines are to be ready to go out at half an hour's notice.
All destroyers and submarines are to be ready to go out at half an hour's notice.

Sent 11 240 a.m.

A 129. Adty. to C. in C., H.F.
A 129. Adty. to C. in C., H.F.
730 Fleet flagship and 3rd Battle Squadron are coming out. At 3.30 a.m., G.M.T. they will be met by E.F. 9 miles from Heligoland, steering N by W at 15 knots with 4th Scouting Group 8 miles ahead. Objective not known but they are probably disturbed by presence of Comm. (T)'s cruisers today. It is not proposed to order fleet out unless there are further developments. Be ready to move at two hours' notice.

Sent 11 245 a.m.

A 130. Adty. to V.A., Dover.
A 130. Adty. to V.A., Dover.
555 Urgent. A damaged German Zeppelin is down and they are trying to tow it into Ostende. Attack it with aircraft and destroyers.
to tow it into Ostende. Attack it with aircraft and destroyers.

Sent 7.32 a.m.

A 131. Adty. to C. in C., H.F. (733).
A 131. Adty. to V.A., B.C.S. (276).
V.A., 3rd B.S. (168).
V.A., 1st B.S. (203).
Grand Fleet revert to six hours' notice for steam. Two Light Cruiser Squadrons in Fort should be kept at two hours' notice.
Grand Fleet revert to six hours' notice for steam. Two Light Cruiser Squadrons in Fort should be kept at two hours' notice.

Sent 12.10 p.m.

A 132. Adty. to C. in C., Devonport.
A 132. Adty. to C. in C., Devonport.
92 Send one division of 3rd Flotilla to Sheerness as soon as possible.
92 Send one division of 3rd Flotilla to Sheerness as soon as possible.

Sent 1.9 p.m.

A 133. Adty. to A.O.P.
A 133. Adty. to A.O.P.
686 My 684. 6th Light Cruiser Squadron to revert to usual notice.
686 My 684. 6th Light Cruiser Squadron to revert to usual notice.

Sent 6.20 p.m.

A 134. Adty. to Comm. (T) (431).
A 134. Adty. to Capt. (S) (208).
43 Your 524. All vessels to revert to usual notice.
208 My 207. Vessels to revert to usual notice.
208 My 207. Vessels to revert to usual notice.

Sent 6.30 p.m.

13th August 1915.

A 135. Adty. to C. in C., H.F. (758).
A 135. Adty. to V.A., B.C.S. (281).
Comm. (T) (437).
Capt. (S) (210).
C. in C., Nore (428).
for C.C.M.L.
for C.C.M.L.

Sent 11 p.m.

Secret. Not to be transmitted by visual or W/T. Operation XXXX AZ is postponed for the present owing to report of German minelayer being seen laying mines off the Ems last night. Everything is to be kept in readiness, but minelayers should remain at Sheerness.

14th August 1915.

A 136. Adty. to C. in C., H.F. (771).
W.A., B.C.S. (283).
Comm. (T) (441).
Capt. (S) (212).
C. in C., Nore (435).
for C.C.M.L.
Sent 7.30 p.m.
Operation AZ is cancelled. Ships concerned revert to usual notice for steam. (Add to C. in C., Nore.) Not to be passed by W/T or visual signal.

15th August 1915.

A 137. C. in C., H.F., to Adty.
673 In view of constant attacks of enemy's submarines on vessels in vicinity of Aldeburgh suggest for consideration the question of laying a deep minefield in that neighbourhood.

Recd. 4.17 p.m.

A 138. Adty. to Comm. (T).
442 Secret. *Arethusa* should proceed to refit and Commodore (T)'s leave is approved. To-morrow evening eight destroyers will be required to meet *Princess Margaret* in Black Deep. The S.N.O.'s destroyer should be at Sheerness by 2 p.m. to see C.C.M.L. The remainder should not leave Harwich until ordered. Divisions of good steaming qualities should be selected and they should be full up with fuel before starting. Captain Nicholson should attend at Admiralty to see C.O.S. at 10.30 a.m. to-morrow, and all light cruisers except *Arethusa*, with one division of destroyers to attend them, should be at two hours' notice by 6 p.m. to-morrow.

Sent 6.10 p.m.

16th August 1915.

A 139. Adty. to Capt. (S), Harwich.
213 All submarines to be ready to go out at half an hour's notice. Acknowledge.

Sent 6.10 a.m.

A 140. Adty. to Comm. (T).
444 Light cruisers and destroyers raise steam at half an hour's notice. Acknowledge.

Sent 6.15 a.m.

A 141. Adty. to C. in C., H.F. (784).
V.A., B.C.S. (285).
V.A., 1st B.S. (209).
V.A., 4th B.S. (70).
Grand Fleet to have steam at two hours' notice. Acknowledge.

Sent 6.15 a.m.

A 142. Adty. to C. in C., H.F.
785 Fourth B.S., accompanied by cruisers, is at sea inside minefields of Heligoland Light. It is not proposed to order Grand Fleet to sea unless movement develops. Be ready to move at two hours' notice.

Sent 7.5 a.m.

A 143. Adty. to A.O.P., Immingham.
707 6th Light Cruiser Squadron should proceed to sea at nightfall to-day by H Channel and patrol at high speed between Outer Well Bank and a position in lat. 53.0 N, long. 2.20 E, to look out for minelayers or suspicious vessels. The destroyers for boarding purposes should accompany them. They should return to-morrow after nightfall. *Princess Margaret* with eight destroyers will be passing northward from G Channel early to-morrow morning outside Dogger Bank. 6th Light Cruiser Squadron should be told before sailing. Wireless signals about *Princess Margaret* are not to be made.

Sent 3.5 p.m.

A 144: Adty. to C.-in-C., H.F. Sent 3.15 p.m.

789 Not to be communicated by W/T, *Princess Margaret* with eight destroyers is leaving to-night to operate off Amrum Bank. They will pass north-west of area 1 to-morrow to avoid observation by aircraft and pass Horn Reefs after dark on 17th. At 3 a.m. on 18th they will be met in lat. 54.39 long., 6.30 E, by *Aurora*, S.N.O. and four light cruisers and will return by G Channel.

A 145: Adty. to Comm. (T). Sent 3.20 p.m.

447 Orders sent to Captain of *Aurora* by 2.15 train should be transferred to *Commodore* (F), and *Arethusa* should take part with the other cruisers.

17th August 1915.

A 146 (a): Adty. to A.O.P. Sent 6.5 p.m.

714 Direct 6th Light Cruiser Squadron in cypher to remain at sea to-night in vicinity of Dogger Bank fishing fleet. Nine German destroyers are believed to be cruising to north-west from Heligoland. These destroyers must not be referred to in A.P. Code but only in cypher.

A 146 (b): Adty. to Comm. (T). Sent 6.35 p.m.

Via Scarborough three times as an F message; also via Cleethorpes No. 159 at 2000.

448 Nine German destroyers are going NW from Heligoland position at 0.30 p.m., lat. 54.27 N, long. 6.23 E, approximate. After meeting *Princess Margaret* to-morrow you may intercept them returning.

A 146 (c): Adty. to C.-in-C., H.F. Sent 6.40 p.m.

799 Secret. Nine German destroyers were in approximate position lat. 54.27 N, long. 6.23 E, at 0.30 p.m., believed to be steering to north-westward. 6th Light Cruiser Squadron has been sent to Dogger Bank Fleet and *Commodore* (T) warned.

18th August 1915.

A 147: Adty. to A.O.P. Sent 12.20 a.m.

718 6th Light Cruiser Squadron should return to coal and await further orders.

19th August 1915.

A 148: Adty. to Comm. (T) (452), V.A., Dover (633). Sent 5 p.m.

One division of destroyers should be placed under the orders of the V.A., Dover, from noon on 21st August to noon on 24th August. V.A., Dover, will inform *Commodore* (T) of time and place of joining.

A 149: Adty. to Capt. (S), Harwich. Sent 5.28 p.m.

216 One submarine is to cruise eastward of long. 6° E, between lat. 55.0 N, and lat. 56.0 N. One submarine is to cruise west of long. 8.0 E, between the Dutch Coast and lat. 54.0 N. Two submarines are to cruise between lat. 54.0 N, and lat. 55.0 N, and between long. 3.0 E and long. 7.0 E. A very good lookout is to be kept for German submarines. Warn all submarines that enemy mines are believed to be laid north of Ems River between lat. 53.44 N and 54.12 N, and long. 6.10 E, and 6.20 E. Submarines should remain five days on their stations unless prevented by bad weather or other circumstances.

24th August 1915.

A 150: C.-in-C., H.F., to Adty. Reed. 10.56 p.m.

757 In consequence of minefield at Moray Firth preventing rapid concentration of ships from that base at present have brought 4th Battle Squadron and 2nd Cruiser Squadron from Cromarty to my base to-day.

26th August 1915.

A 151: Comm. (T), *Maidstone*, to Adty. Reed. 10.39 a.m.

559 Urgent. Request permission to sail at 4 p.m. to-day for exercise cruise. All light cruisers and three destroyer divisions. Propose to sweep as far as lat. 54.40 N, and keep to the west of long. 5° E, returning p.m. 27th.

A 152: Adty. to Comm. (T). Sent 12.25 p.m.

458 Your 559. Approved. It would be advisable to leave a division of destroyers at Harwich in case of submarines being located in the vicinity during your absence.

27th August 1915.

A 153: Adty. to Capt. (S), *Maidstone*. Sent 1.45 p.m.

220 The two submarines fitted with additional guns should cruise for five days between long. 5.0 E and 7.0 E, and between the Dutch coast and lat. 55.0 N. The area east of long. 6.0 E, and south of lat. 54.12 should be avoided. To attack Zeppelins they should work in concert so that one submarine attracts the Zeppelin and the other comes up and fires at it. A Zeppelin cannot be vertically over two submarines at once. They should be prepared for enemy aircraft and submarines working in concert. A submarine should be got ready to go to coast of Norway to-morrow.

30th August 1915.

A 154: Adty. to S.N.O., Gibraltar. Sent 1.15 a.m.

816 Secret. Cancel my 558 and substitute:—
Homeward bound transports carrying wounded and invalids and not protected by the Geneva Convention are to be given sealed orders to be opened after sailing, directing them to proceed by the following route:—
60 miles west of Cape St. Vincent, 100 miles west of Cape Finisterre to a position in lat. 48.5 N, long. 5.40 W, and thence to Plymouth.

As soon as they are within wireless touch they should report to Admiral, Devonport, the date and time of arrival at foregoing position, referring to it as rendezvous Z and not signalling its latitude and longitude. Sealed orders should be handed to Boarding Officer on arrival.

A 155: C.-in-C., H.F., to Adty. Reed. 12.53 p.m.

809 Propose, if no objection is seen, to take 1st, 2nd and 4th Battle Squadrons, 1st and 3rd Cruiser Squadrons and 4th Light Cruiser Squadron to exercise south-west of Faeroe Bank, weather permitting, leaving between 5.30 p.m. and 8 p.m. 2nd September, after departure of French visitors. This area seems less likely to be visited by submarines than position east of Faeroe Isles in view of presence of submarines on Norwegian coast. Submit any submarine position that becomes known up to 6 p.m. 2nd September may be communicated to me by land wire. Suggest operations should be ordered by Admiralty in terms optional to carry out Operation A, this telegram being received by me not later than 3 p.m. 2nd September.

A 156: Adty. to C.-in-C., H.F. Sent 4.55 p.m.

921 Your 809. Approved. Operation will be ordered as you suggest and submarine positions communicated.

A 157: Adty. to C.-in-C., Devonport. Sent 11.23 p.m.

372 If you can spare four destroyers or a less number from escort work they should be sent to V.A., Queenstown, to hunt submarines. Arrange with him date you require them back. Reply if any can be spared.

Reply. 384. Your 372. *Lavenock* and *Sheldrake* leave here at 7 p.m. to-day for duty under Admiral Commanding Coast of Ireland. *Lennox* and *Liberty* will proceed to Queenstown for the same purpose on leaving *Jupiter* in lat. 53.28 N, long. 5.5 W (reed. 2.58 p.m. 31.8.15).

1st September.

A 158. Adty. to Capt. (S) (228),
C.-in-C., H.F. (937). Sent 4.35 p.m.

One "E" class submarine should be sent to Aberdeen escorted by a destroyer which is to return as soon as the submarine arrives. After completing with fuel she will work on coast of Norway as may be ordered by C.-in-C., Home Fleet. Addressed to Captain (S), repeated to C.-in-C., Home Fleet.

6th September.

A 159. Adty. to A.O.P. Sent 7.55 p.m.

842 *Skirmisher, Foresight, Sentinel, Forward* should proceed independently as soon as possible to Devonport, and coal in readiness to proceed to Gibraltar. . . .

A 160. Adty. to C.-in-C., H.F. Sent 8.23 p.m.

974 The 6th Light Cruiser Squadron is being withdrawn from the Humber for service abroad.

9th September.

A 161. Adty. to Comm. (T). Sent 12.15 p.m.

470 After C.Y. is completed it will be necessary to detach one division of destroyers from your command to the Eastern Mediterranean. . . .

10th September.

A 162. Adty. to C.-in-C., Devonport. Sent 12.55 p.m.

530 T.B.s 17, 18, 29 and 30 are to proceed to Port Mudros, each one in company with a Scout of 6th Light Cruiser Squadron. . . .

10th September.

A 163. Comm. (T) to Adty. Recd. 10.1 a.m.

585 In view of interception and possible attack on Zeppelins arriving and leaving East Coast suggest carrying out night patrol of light cruisers on the following beats:—

Cromer Knoll Light Vessel to Haisborough Light Vessel, and
Haisborough Light Vessel to Cross Sand Light Vessel, and
Cross Sand Light Vessel to North Gabbard Light Vessel, Inner.

The patrol only to proceed in suitable weather or when Zeppelins have been reported approaching. Suggest 6th Light Cruiser Squadron should co-operate and might take Cromer to Haisborough Light Vessel beat. (0930.)

12th September.

A 164. Adty. to Comm. (T). Sent 3.27 p.m.

473 Your 585. Approved. 6th Light Cruiser Squadron will not be available as they have gone abroad. You should arrange to send the vessels out when weather is suitable for Zeppelins, informing Admiralty of movements. Admiralty will inform you of reports of Zeppelins.

APPENDIX B.

PATROLS IN MORAY FIRTH, JUNE TO AUGUST 1915.

Extended Defence Office,
Cromarty,
12th June 1915.

No. 1L/15.
Sir,

I have the honour to submit the following weekly report:—

(1) PATROLS CARRIED OUT:

(a) One unit in eastern part of Area IV, day and night (extended patrol).

(b) One unit on Noss Head-Rosehearty line, day and night (outer patrol).

Note.—When there are destroyers of a running flotilla available the unit takes the north end of the line and the destroyers the remainder.

(c) One unit on the net obstruction line (Portmahomack to Findhorn) by day. Same unit on the Helmsdale-Lossiemouth line by night (inner patrol).

Note.—One vessel of this unit is always off entrance to Cromarty as Whistle Buoy Patrol.

(d) The indicator net drifters (six in number) maintain the permanent net obstruction of 64 nets in two sections, 32 in each section, one section off Portmahomack War Signal Station, and the other off Findhorn (north and south sections). Each drifter carries eight nets in addition ready for replacements, or to shoot elsewhere if required.

(e) The motor drifters (four in number) watch the coast on each side of the Firth as follows:—

Two patrol from Burghhead to Knock Head—headquarters at Lossiemouth.

Two patrol from North Sutor to Helmsdale—headquarters at Portmahomack village.

The fifth (stand-by) boat has been taken away from us. I am advised by the Committee that they do not intend to replace her as we have our number.

(f) The motor boats (four in number) patrol Nairn Bay and the waters west of the line North Sutor to Nairn; headquarters, Fortrose. It is proposed to use these craft to watch the cork lines, and they are also used when it is necessary to communicate with a vessel sent to the Inner Examination Anchorage inside Chanonry Point.

T.S.D.D. Note.—Up to the 6th August the general disposition and work of the vessels patrolling Area IV (Cromarty) was carried out in accordance with the system detailed above.¹

¹ Cromarty A.P. Reports, pp. 68, 69, 108.

APPENDIX C.
SYSTEM OF PATROL IN MILFORD AREA.

Admiral's Office, Milford Haven,
4th July 1915.

Memorandum.

The following system for the patrol of the area bounded by the lines joining Milford-The Scillies-Queenstown are to come into force on the receipt of a telegram to that effect from the Vice-Admiral-in-Charge, Old Milford.

2. From the attached plan it will be observed that the Milford Patrol has been pushed out to position "D." This is due to the fact that Area XV is already patrolled down to its extreme southern boundary.

3. The area inside circles described from centre "D" will be worked by two, and possibly three, trawler units from Milford. If with two, they will be at sea for six days and will spend two days in harbour. By this means two units will be constantly on patrol for four days, working alternately with one unit also out for four days.

4. Falmouth and Queenstown should also provide (at least) two units for the areas inside circles described from "E" and "F," the remaining portions of their respective areas being patrolled as before. Admiralty Letter M. 04734 of 26th June 1915 will explain the procedure of these extended patrols.

5. There may be difficulty in maintaining communication by W/T with regard to the Milford units, on account of the distance from Fishguard. This would be compensated by the fact that these vessels will be well within range of Queenstown or Land's End, and would also be in touch with the Falmouth and Queenstown units.

6. The three circles from each of the centres "D," "E," and "F," represent distances of 20, 30 and 40 miles respectively, and the extended circle of 80 miles. It is not proposed that the trawlers shall operate beyond this latter distance.

7. The actual areas for patrol are contained in the sectors between the red line, but if a submarine is sighted the procedure as laid down in the enclosure to the Admiralty Letter (Remarks on Submarine Patrol) is to be observed.

8. *Yacht Squadron.*—The Yacht Squadron will patrol to the westward of the red line joining The Scillies and Queenstown, as also should the two yachts detailed from Falmouth. The latter should keep in touch with W/T stations at Queenstown and Land's End, and, when necessary and possible, support the trawler units.

9. The yachts of the Milford Patrol units will not, as a rule, be available to assist the Yacht Squadron.

10. The new dispositions will be in excess of the usual patrols carried out by Areas XV, XIV and XXI.

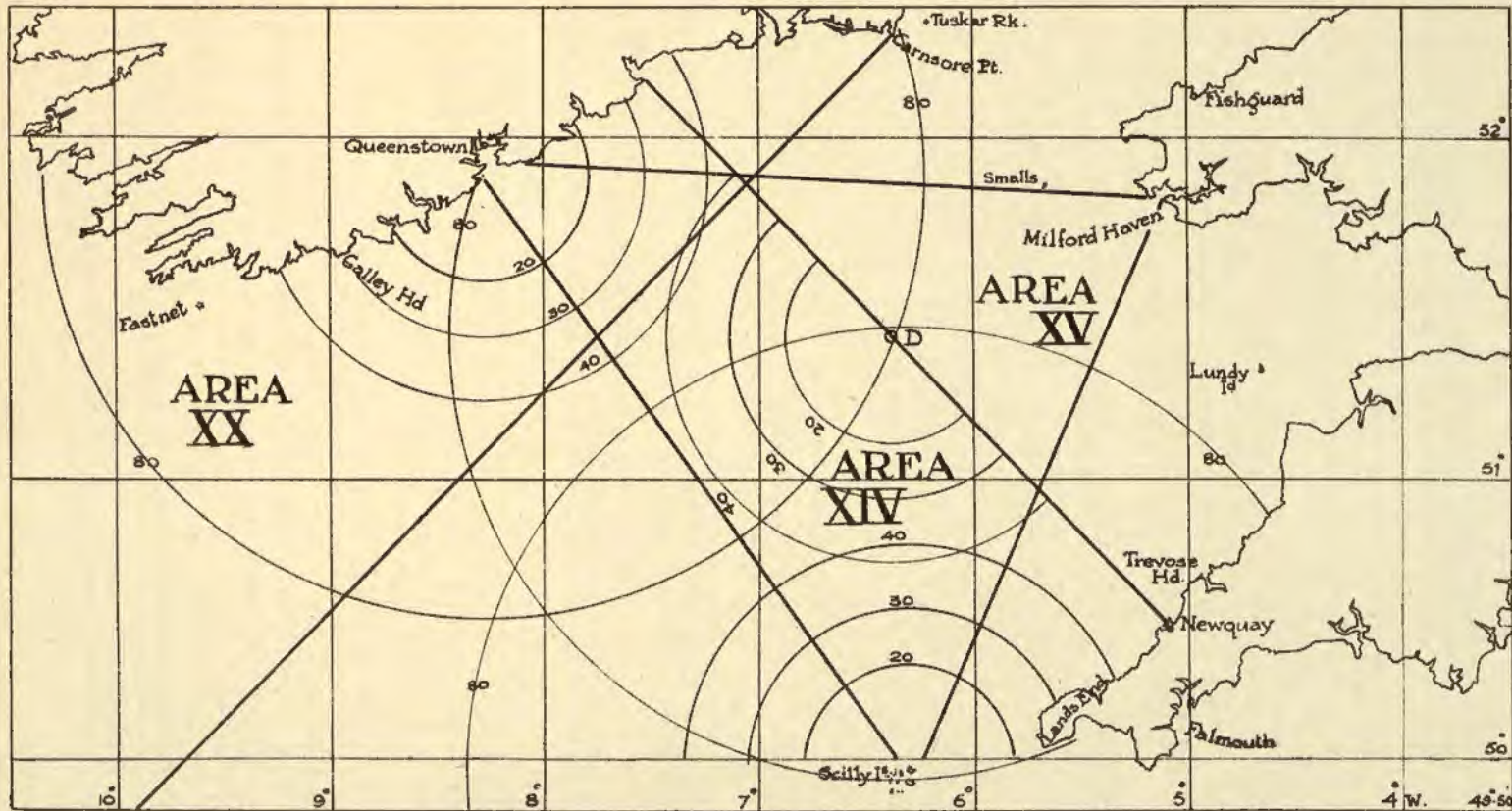
11. The *Triangle* formed by the—

Irish Coast,

South-west line from Carnsore Point,

Prolongation of north-west line from Newquay to the Irish Coast,

will be included in Area XV for the purposes of patrol. By relieving Queenstown of this portion, two units should be available for working from centre "E."



12. *Nets*.—Milford will lay indicator nets so as to completely close the line between the Tuskar and the Smalls. Arrangements are being made to have these nets submerged to a depth of 6 fathoms to enable all vessels to pass over them. Until all nets are so fitted, those now ready will be used in close proximity to the Tuskar and Smalls Lights in order to form gates.

13. Nets will also be laid as necessary between the Smalls and the Welsh Coast.

14. The Scillies will lay nets as ordered in Admiralty Letter M. 04734.

15. By submerging the nets to a depth of 6 fathoms, it is hoped to obtain two results :—

First—to prevent submarines diving under the nets.

Secondly—to enable all vessels to pass over them without fouling.

16. The three bases concerned are to keep each other informed daily of the positions of W/T vessels patrolling in these special areas.

17. The vessels of each unit are to be spread at such distances for signalling purposes as the atmosphere and weather will admit, and only so far as they can render one another rapid assistance. Any patrol sighting a submarine is to call up the others at once, *i.e.*, in their own area and also in the areas of the other two bases with which they are co-operating. A systematic hunt should then be made under the conditions laid down in the Admiralty Letter already quoted.

(Signed) CHAS. H. DARE,
Vice-Admiral.

The Captain-in-Charge, Falmouth.
Officer-in-Charge, Auxiliary Patrol,
Queenstown, and to all others
concerned.

(Copies to C.-in-C., Plymouth Station, and
V.A.C., Queenstown, for information.)

APPENDIX D.

LETTER APPOINTING ADMIRAL BAYLY TO COMMAND OF COAST OF IRELAND STATION.

Admiralty, S.W.,
12th July 1924.

M. 05364.

Confidential.

Sir,

My Lords Commissioners of the Admiralty having selected you to succeed Vice-Admiral Sir Charles H. Coke, K.C.V.O., as Senior Naval Officer on the Coast of Ireland and as Deputy to the Admiral Commanding, Coast Guard and Reserves, for coastguard duty in Ireland, desire me to instruct you to transfer your flag to H.M.S. *Adventure*, Gravesend, on the 20th inst., and proceed to Queenstown to take over the command from Vice-Admiral Sir C. H. Coke, K.C.V.O., on your arrival.

2. The limits of the command of the Senior Naval Officer on the coast of Ireland have been revised, and on your assumption of your appointment, the new limits will be as shown on the attached enclosure. In order to avoid a divided control over the waters of the North Channel, the limits of your command have been extended to touch the coastline of Scotland in certain places, but it is not intended that you should exercise jurisdiction on land in these localities, which will remain under the command of the Admiral Commanding, Coast of Scotland.

3. You will have command of the Auxiliary Patrol Service within the limits of your command, with the object of protecting trade and destroying enemy submarines.

4. You will also have command of such other of H.M. ships as may from time to time be detailed by their Lordships for this purpose.

5. As stated in the enclosure, the Auxiliary Patrol Base at Old Milford will come under your general supervision, together with the Auxiliary Patrol Vessels there and the arrangements connected with them, but the duties of the port and dockyard will be carried out, as hitherto, by the Captain Superintendent, Pembroke Dock, subject, where customary, to the orders of the Commander-in-Chief, Devonport.

6. H.M.S. *Adventure* will be stationed at Queenstown for your use in order to enable you to exercise supervision, where necessary, afloat, and to keep in touch with the various units under your orders.

7. Vice-Admiral Coke has been directed to hand over to you all standing and unexecuted orders relative to the command, furnishing you with all information in his possession relating thereto, and to strike his flag on being relieved by you.

8. On the following day you are to transfer your flag to H.M.S. *Colleen* and proceed to carry out the duties of the command, as well as such instructions as you may from time to time receive from their Lordships or from the Admiral Commanding, Coast Guard and Reserves.

9. This order is to be considered as taking effect from 20th July 1915.

10. I am to state that, in consequence of the alteration of the limits of the command, certain further alterations have been made in the limits of existing Auxiliary Patrol Areas, and in this connection I am to forward you a copy No. 36 dated 7th July 1915, showing the position and movements of armed yachts, trawlers, etc., and the present limits of the Auxiliary Patrol Areas.

11. I am to add that a copy of this letter has been sent to the—

- (1) Commander-in-Chief, Devonport, and Captain-in-Charge, Naval Base, Falmouth.
- (2) Admiral Commanding, Coast of Scotland.
- (3) Rear-Admiral, Stornoway.
- (4) Vice-Admiral Charles H. Dare, M.V.O., Naval Base, Old Milford.
- (5) Rear-Admiral The Hon. R. F. Boyle, M.V.O., Naval Base, Larne Harbour.
- (6) Rear-Admiral Evelyn R. le Marchant, Naval Base, Kingstown.
- (7) Commander-in-Chief, Home Fleets.

12. Vice-Admiral Dare, Rear-Admirals Boyle and le Marchant will continue to communicate direct with the Admiralty, in addition to keeping you informed as necessary.

I am, Sir,

Your obedient Servant,

Admiral Sir Lewis Bayly, K.C.B., C.V.O.,
R.N. College, Greenwich.

New Limits of Coast of Ireland Station.

On the north the parallel of latitude passing through Skerryvore.

On the north-east and east a line joining Skerryvore, Dubh Artach, Rudha Mhail (the North Point of Islay), then along the west coast of Islay to Ardmore Point.

Then a line joining Ardmore Point to Mull of Cantyre, then along the coast to Deas Point.

From Deas Point a line to Sanda Island Lighthouse, the south-west point of Ailsa Craig and Corsewall Point Lighthouse, then along the coast of Scotland to the Mull of Cantyre.

Note.—Port Patrick, Mull of Cantyre and Portrahaeven W.S.S.S., will remain under the Admiral Commanding, Coast of Scotland, but will pass all reports affecting the North Channel to Senior Naval Officer, Larne, in addition to present arrangements.

On the east the limit will be the meridian of $4^{\circ} 51'$ west longitude south to a point on the same meridian 3 miles north of the coast of Wales to the eastward of Strumble Head, thence following a line 3 miles off the coast of Wales to a point on the fifth meridian of west longitude 3 miles south of the Welsh coast. Thence following the fifth meridian to a point 3 miles north of the coast of Cornwall. Then following the 3 mile limit round the coast of Cornwall to a point in lat. $50^{\circ} 4'$ N, long. $5^{\circ} 48'$ W. Then along the meridian of $5^{\circ} 48'$ W to a point in lat. $49^{\circ} 6'$ N, long. $5^{\circ} 48'$ W and thence $S72^{\circ} W$, true.

The Auxiliary Patrol base at Old Milford will come under the general supervision of the Senior Naval Officer, Coast of Ireland, but all other matters concerning the control of the port will remain as at present.

APPENDIX E.

MINUTES *RE* ARMING OF MERCHANT VESSELS FOR DEFENCE.¹

The requests of the mercantile marine appear to be:—

- (a) Adequate protection by patrol vessels in narrow waters.
- (b) That, unless protection from submarines operating on the surface can be provided, the merchant ships should be allowed to keep fairly close to the coast in order to give their crews a chance of safety.
- (c) That every effort should be made to equip merchant ships with guns in order that they may be able to offer resistance when attacked by a submarine on the surface.

The officers of the Mercantile Marine appear to realise that no effective measures can be taken against submerged submarines, and the risk from this cause is accepted as inevitable, but the repeated and successful gun attacks may reasonably be expected to have an ill-effect on morale if matters go on as at present.

Proposals have been made for diverting the slow and unarmed vessels along fixed routes in order to ensure their protection against gun attacks. It is recognised that this may involve extra risk from torpedo attack unless an overwhelmingly strong patrol service is available. It is suggested that the ultimate solution is to be found in the provision of a gun armament for every merchant ship for which a gun can possibly be provided.

Permanently fitted guns have now been placed in 204 merchant vessels. In addition, all the important liners trading to the east carry a gun between British ports and Gibraltar or Port Said, with the result that confidence is enormously increased, and crews sign on without hesitation.

With the exception of the *Atalanta*, no armed merchant vessel has been sunk by submarines, whereas at least eight vessels, to the value of about £1,620,000 inclusive of cargoes, have successfully driven off submarines.

¹ Extract from papers titled: *Foreign Office, 10th July, 1915.*

The conduct of masters of vessels taken as a whole fully justifies the belief that the cowardice of the master of the *Atalanta* is altogether exceptional.

It is argued that the best way to protect merchant ships is to put all the available guns into auxiliary patrol vessels and to employ them to hunt the submarines.

The objection to this plan is that it only leads in practice to the submarines being driven to operate somewhat further afield.

Statistics show that this view is correct. The very great increase in efficiency and numbers of the patrols during the last three months has led to the submarines being driven further out, but has not led to a decrease in casualties, though the number of submarines operating is believed to be about the same.

It is pointed out that if the patrols are sufficiently numerous to drive the submarines away from the narrow waters, no further increase of numbers can increase the safety of the trade, and the only way this can be effected is by arming the ships themselves. In the open sea, with plenty of sea room, the danger to merchant ships from a submerged submarine is comparatively small, and experience has shown that the submarines will not press home a surface attack upon a vessel armed with a gun.

It is suggested that the design of the gun for this purpose should be as simple as possible, and the gun should be fired by percussion. The calibre should be as large as possible consistent with rapid output; the gun should, if possible, be able to compete successfully with any protective plating with which submarines may be fitted.

The wastage of British tonnage due to submarines now exceeds the output, and assuming the war lasts for another year or more, this may prove a deciding factor.

It is submitted, therefore, that the provision of suitable guns as a permanent armament for merchant ships is a matter of the greatest urgency, which would even justify the withdrawal of a proportion of 12-pdr. and 3-pdr. semi-automatic guns from the Fleet, provided that this could be done without seriously impairing the efficiency of the ships affected.

(A list of 594 guns, 12-pdr., 6-pdr., 3-pdr., which could be removed from the Fleet, follows.)

(Signed) RICHARD WEBB,
Director of Trade Division.

19th July 1915.

The question of arming merchant ships instead of the vessels whose work is to protect them has been raised on other papers and decisions on the subject given.

(Signed) H. B. J.

25th July 1915.

The guns in stock and being purchased abroad, etc. (349 + 464 = 813), together with guns on order for new construction, do not meet demands as far as small guns are concerned, and the minesweeping trawlers and drifters (6- and 3-pdrs.) will have to wait for deliveries several months. When these demands have been met it may be possible to arm more merchant ships with light guns. Two 6-pdrs. each would be a fair protection against submarines, but this appears to me the most we can do unless the fighting ships could spare some light guns, say two 12-pdrs. each. I have no objection to asking the Commander-in-Chief if he thinks any light guns can be surrendered from any of the vessels of the Grand Fleet without unduly affecting their power to repel torpedo attack.

(Signed) H. B. J.

11th August 1915.

APPENDIX F.

ORDERS FOR ANTI-SUBMARINE PATROL OFF THE SHETLANDS, 15 JULY 1915.

SAILING ORDERS—"MINESWEEPERS."

"Iron Duke,"
15th July 1915.

H.F.S.O. 164.

All available minesweeping gunboats under the orders of the Officer Commanding H.M.S. *Leda* are to put to sea at 8 p.m. to-day, Thursday, to operate against enemy submarines which are expected to pass from east to west through the Fair Island passages or round Muckle Flugga.

2. The drifters and armed trawlers of the Orkney and Shetland patrols will be working in both these areas.

The Fair Island passage drifters will be disposed on the line from Sumburgh Head to Fair Island and North Ronaldshay, the trawlers probably to the eastward of this line and the yachts from 3 to 5 miles to the eastward of the trawlers. A similar disposition will be in force to the north of Muckle Flugga, but the Officer Commanding H.M.S. *Leda* is to communicate with the Senior Officer of Patrols in order to verify these dispositions and to ascertain the position of the indicator nets.

3. Lieutenant-Commander H. G. Westmore, R.D., R.N.R., in H.M. Yacht *Hecate*, will be the Senior Officer of the Sumburgh Head to Fair Island line, and Captain F. M. Walker, R.N., retd., or Lieutenant Fergusson, in H.M. Yacht *Zaza*, will be the Senior Officer of the Fair Island to North Ronaldshay line. The Senior Officer of the Muckle Flugga patrol will be in H.M. Yacht *Venetia*.

Commanders Nicholson and Alston are in general command of the Fair Island and Muckle Flugga vessels, and these officers may be out on patrol during part of the time.

4. Two gunboats are to patrol five to ten miles to the eastward of the North Fair Island Channel patrol, two a similar distance to the eastward of the South Fair Island passage, and three to the eastward of the Shetland patrols, guarding the Muckle Flugga line, with the object of forcing the submarines to dive towards the nets laid by the drifters in the patrol areas.

They are to be prepared to take up a similar position to the westward of these lines in the event of a submarine being reported as approaching from that direction.

5. If a submarine is sighted all vessels are to endeavour to close the spot, and the Senior Officer present is to organise the search.

The Officer Commanding, H.M.S. *Leda*, is to use his discretion whether to despatch the gunboats to the westward on the submarine route should a submarine be reported. Much will depend on the position in which the submarine is forced to dive.

If a submarine can make a safe course from this position through the Channels or round Muckle Flugga, she will not come to the surface until well clear to the westward, but if she is sighted and dives well to the westward of the patrol line she will probably be obliged to come to the surface again to sight the land, and a concentrated search should then be effective.

Close co-operation between the forces is necessary.

6. The gunboats are to remain on patrol until recalled or when necessary to leave to coal.

7. In the event of bad weather, the Muckle Flugga patrol gunboats are to shelter in Balta Sound and the Fair Island patrol in the most convenient sheltered anchorage.

8. Senior Officers of groups are to report their movements on and off patrol to the Commander-in-Chief.

9. High speed is essential at all times.

10. The *Campania* will anchor in Pierowall Road and co-operate. A copy of her orders is attached.

(Signed) J. R. JELlicOE,
Admiral.

The Senior Officer of Minesweepers.
(Copy to Admiral Commanding, Orkneys
* and Shetlands, and *Campania*.)
(Copy also to the Vice-Admiral Com-
manding 4th Battle Squadron.)

(Addition to H.F.S.O. 164 dated 15th July 1915.)

The *Gossamer*, *Circe* and *Speedwell*, under the orders of the Officer Commanding the *Gossamer*, are to proceed to Muckle Flugga as soon as ready for sea, at 15 knots; these vessels will form the Muckle Flugga patrol.

"Iron Duke,"
15th July 1915.

SAILING ORDERS—"CAMPANIA."

"Iron Duke,"
15th July 1915.

H.F.S.O. 165.

Being in all respects ready, you are to put to sea in H.M.S. *Campania* at 9.30 p.m. to-day, Thursday, and proceed to the westward, anchoring in Pierowall Road.

2. Arrangements are to be made for seaplanes to co-operate with the gunboat and trawler patrols, as detailed in the attached orders, in endeavouring to locate and attack submarines attempting to pass the Fair Island Channels from the eastward.

The seaplanes are to act as scouts for the surface vessels, and are to carry bombs for attacking submarines if opportunity occurs. If submarines are expected from the westward you will be informed.

3. Occasional wireless messages should be exchanged with the Senior Officer of the Minesweeping Gunboats in *Leda*, in order to ensure that information as to the sighting of submarines may be rapidly communicated.

(Signed) J. R. JELlicOE,
Admiral.

Captain Oliver Schwann,
H.M.S. *Campania*.

Copy to:—

Captain-in-Charge, Fleet Minesweepers (2 copies).
Admiral Commanding, Orkneys and Shetlands.

SAILING ORDERS—MINESWEEPING SLOOPS.

"Iron Duke,"
15th July 1915.

H.F.S.O. 166. Memorandum.

All available sloops under your orders are to sail at 10 p.m. to-day, Thursday, to search with sweeps the sector between the bearings 80° and 135° from Pentland Skerries as far east as longitude 0° 30' W, with the exception of that part of the area which is periodically swept by the minesweeping trawlers (*vide* Secret Fleet Order No. 5).

(Signed) J. R. JELlicOE,
Admiral.

The Captain-in-Charge of Fleet Mine-
sweepers.

(Copy to Admiral Commanding, Orkneys
and Shetlands, and Vice-Admiral
Commanding, 4th Battle Squadron.)

APPENDIX G.

ORDERS FOR OPERATION "C."

(Enclosure to Memorandum H.F. 0022/114 of 25th July 1915.)

"Iron Duke,"
25th July 1915.

OPERATION "C."

Objective.

(1) The German freighters passing from Hamburg to Christiania and Gothenburg.

(2) The large German trawlers said to be patrolling on the Naze-Hanstholm line. It has been reported that a line of German trawlers has been established across the Skagerrak which, though not necessarily armed, are nevertheless employed on Military Service.

2. Composition of Forces.

(a) *Force A*.—A force of light cruisers and destroyers from Harwich.

(b) *Force B*.—Two light cruisers of 1st Light Cruiser Squadron and four destroyers of 1st Flotilla from the Forth.

(c) *Force C*.—Two light cruisers and four destroyers from Scapa.

(d) *Supporting Force*.—2nd Battle Cruiser Squadron and 2nd Light Cruiser Squadron with a screen of six destroyers from the 1st Flotilla.

Force C is to consist of H.M. ships *Comus* and *Royalist*, and the destroyers are to be provided by the 4th Flotilla.

3. *For Force A* as start from Yarmouth and on the supporting force in Position I (lat. 54° 45' N, long. 2° 40' E) at 6 p.m. on 29th July and proceed with them to Position II (lat. 56° 30' N, long. 3° 10' E). *Force A* will then part company and proceed thence to cruise in the vicinity of Jutland Bank, to intercept the trade between Christiania and Hamburg. Any enemy vessels captured or suspicious neutral vessels intercepted are to be sent to the Tyne with an armed guard.

Force B is to sail at such a time as to make Hanstholm at 3 a.m. on the 30th July.

Force C is to leave Scapa at such a time as to arrive off the Naze at 3 a.m. on 30th July.

4. Forces B and C are to proceed at a speed consistent with safety from submarine attack and with due regard to fuel endurance of the destroyers to their 3 a.m. positions.

At 3 a.m. on 30th July they are to sweep into the Skagerrak as far east as long. 9° E, and then work towards one another and sink any enemy trawlers fallen in with which are suspected of acting as scouts or employed on any Military Service. These craft are to be sunk by means of gun-cotton charges which are to be of sufficient size to sink the vessels rapidly. All naval ratings and reservists found on board are to be made prisoners, and the remainder of the crew may be allowed to leave in their boats.

5. The Supporting Force is to leave Rosyth at midnight 28th-29th to sweep east of Newcastle mine area and west and south of Dogger Bank, and are to meet Force A at Position No. I (lat. 54° 45' N, long. 2° 40' E) at 6 p.m., 29th July.

Thence both forces are to proceed in company and arrive at Position No. II (lat. 56° 30' N, long. 3° 10' E) at midnight 29th-30th, at which time Force A will part company. The Supporting Force is then to pass through Position No. III (lat. 57° 40' N, long. 6° 15' E) and Position No. IV (lat. 57° 10' N, long. 7° 10' E) en route to Position No. V (56° 45' N, long. 6° 20' E) arriving at the latter at noon 30th, and thence proceeding to Rosyth if the Forces A, B and C have safely withdrawn from the Skagerrak.

The 2nd Light Cruiser Squadron is to be extended as considered necessary at a distance of about 20 miles to the south-eastward of the Battle Cruiser Squadron and, in conjunction with Force A, is to cover Forces B and C from the approach of enemy vessels from the Heligoland Bight or Sylt.

6. Zeppelins may discover the presence of the operating forces, and the latter are to concentrate at once on the Battle Cruiser Squadron should there be indications of a hostile force proceeding north to attack them.

The entire force is to withdraw to the north-westward if news or indications should be received of the German battle cruisers putting to sea.

7. Any weaker forces encountered are to be brought to action, but it is undesirable that this should occur in the late afternoon south of latitude 56° 30' N.

8. The Forces B and C are to be to the westward of the line Naze-Hanstholm by noon, 30th July, and together with Force A are to concentrate in Position No. VI (lat. 57° N, long. 6° 15' E), arriving there at 3 p.m., 30th July. Forces A, B and C are then to retire in company until reaching the position lat. 56° 30' N, long. 2° 30' E, when each will proceed for its base, spreading to visibility distances and boarding any suspicious vessels met, if fuel conditions admit.

9. When not employed in boarding and sinking vessels, the destroyers of the operating forces are to screen the light cruisers.

10. The German fishing craft, if met, will probably hoist neutral colours, and, with a view to establishing their nationality, a German or Dutch interpreter, if available, should be embarked in each destroyer of the Forces A, B and C.

11. The following information has been received from Esbjerg. Similar action on the part of German trawlers and submarines is possible in the Skagerrak.

"A steamer from Hantlepodl has arrived with reports of a fleet of 15 German trawlers at Horn Reef Light Vessel. Steamer when passing through the aforesaid fleet was detected and searched by German submarine U712 which was lurking under water in the centre of the fleet. It is evidently there for the purpose of decoying the British."

12. Submarines E.17, D.3 and EA are operating in the Skagerrak and off the Danish Coast independently of Operation "C," as follows:—

One submarine (EA 7) left Yarmouth 3 a.m. Saturday, 24th July, to cruise seven days inside the Naze and in the Skagerrak, east of long. 9° 30' E.

Two submarines (D.3 and EA) left Harwich 9 a.m. Saturday, 24th July, to cruise seven days between lat. 55° N and 57° N to eastward of long. 6° E.

These submarines have been warned that a sweep towards entrance to Skagerrak may be carried out, while they are cruising, by British cruisers and destroyers.

13. During the course of these operations the Battle Fleet and Battle Cruiser Fleet will be held ready for sea, with steam at two hours' notice.

APPENDIX H. ORDERS FOR OPERATION "P.1."

"Iron Duke,"
4th August 1915.
4th August 1915.

H.F. 0022/123. Memorandum.

The attached orders (Operation "P.1.") are issued for circulation to the various units concerned, and are to be brought into force in accordance with the instructions contained therein.

2. Enemy submarines are expected to pass round Muckle Flugga any time after midnight, 5th-6th August 1915, or through the Fair Island passages any time after 6 p.m. Thursday, 5th August 1915, and the following forces are to sail at noon Thursday, 5th August 1915, and proceed to the positions detailed, gunboats and sloops at 15 knots; torpedo boat destroyers at 17 knots.

(b) Broke and eight torpedo-boat destroyers of 2nd Flotilla to occupy areas D.19 to 26 inclusive; the Half Flotilla Leader in areas F.4 and F.3.

(b) All available gunboats and sloops (10), to occupy areas S.19 to S.28 inclusive.

3. No trawlers will take part in the operation, and the only trawler areas occupied will be the two detailed to the Half Flotilla Leader.

4. The forces are to proceed to sea under their respective Senior Officers, in time to be in position at the time specified.

5. The minesweepers are to proceed to the westward and, as far as possible, approach their 3 a.m. patrol areas on the probable course of an enemy submarine proceeding to or returning from the west coast via Muckle Flugga; they are to be in their areas by midnight 5th-6th August 1915.

(Signed) J. R. JELlicoe,
Admiral.

The Captain (D), 2nd Flotilla.
The Captain-in-Charge, Fleet Minesweepers.

(Copies to: The Admiral Commanding,
Orkneys and Shetlands, The Vice-
Admiral Commanding, 1st Battle Squadron.)

(Enclosure No. 1 to H.F. 0022/123 of 11th August 1915.)

OPERATION "P.1."

Combined submarine hunt by destroyers, gunboats, and sloop sweepers and trawler units.

The order to commence the operation will be given on receipt of reliable information of an enemy submarine proceeding north about to or returning from the West Coast of Ireland and approaches to the Channel.

2. The executive order will be as follows:—

"Carry out Operation 'P.1.' Submarine expected from the east (or west). Vessels indicated to be in position by time named."

For present operations, fleet sweepers are to be in position by Midnight 5/6th August; destroyers by 6 p.m. 5th August.

Note.—Trawlers are not taking part in the search on 5/6th August.

3. Forces required:—

- (a) Eight destroyers and Half Flotilla Leader.
- (b) All available gunboats and sloops.

4. The object of the operation is to watch a large area on the probable route of the submarine, so as to force her to submerge and eventually exhaust her batteries and so necessitate her coming to the surface, when she can be engaged.

5. The distance at which a submarine will be seen on the surface is assumed to be six miles, the speed of destroyers and fleet sweepers whilst on patrol to be not less than 15 knots, and the speed of patrol trawlers to be 8 knots.

6. The destroyers and fleet sweepers are allotted areas on the most probable track of the submarine.

The trawlers will patrol areas on the flanks of the faster forces and their efforts will be devoted chiefly to:—

- (a) Watching for and reporting the movements of a submarine to the destroyers and sweepers.
- (b) Forcing the submarine to dive when, owing to the position of the trawler areas, she must probably proceed into the areas occupied by faster craft.

The attached diagram shows the probable allotment of the areas.¹

When destroyers, sweepers and trawlers are available, those lettered—

- D.1, D.2, etc., will be occupied by destroyers.
- S.1, S.2, etc., will be occupied by fleet sweepers.
- T.1, T.2, etc., will be occupied by patrol trawlers.

7. Unless otherwise ordered, the areas first to be occupied by the destroyers and fleet sweepers are to be those nearest the position and the direction from which the submarine is expected.

Thus a submarine is reported off the West Coast of Ireland, proceeding north; areas D.36, D.35, D.34, etc., and S.48, S.47, S.46, etc., will be occupied according to the number of vessels available.

All trawler areas are to be occupied during the operation, unless it is obvious that they are no longer of any use, when they are to be recalled.

Patrolling is to be so conducted that every point in each area is approached within six miles every hour; to effect this, two trawlers will have to be detailed to each of the trawler patrol areas.

8. The destroyers and fleet sweepers will remain in their initial areas until ordered to move on by the Commander-in-Chief or until a submarine is sighted. In the latter case the Senior Officers of destroyers and sweepers will each direct the vessels under his orders to move on a number of areas,

¹ See p. 74.

allow the majority of those areas in rear of the reported submarine being abandoned; *etc.*

Submarine expected from south-eastward. It is first reported in area DD199, proceeding west. All destroyers are moved on by Senior Officer to cover this area and as many more as possible to the westward. Similarly, all fleet sweepers are moved to cover S.25, 26 and 27, and as many more to westward as possible.

The trawlers remain in their allotted areas.

9. Whilst submerged, the speed of the submarine may be taken as about five knots and the length of an area being 20 miles, the destroyers and sweepers should be moved on one rectangle every four hours, once the submarine has been sighted, her probable course being known.

10. The available trawlers that can be spared from Area I are to extend three area systems down the west coast of the Hebrides on the route most likely to be taken by the submarine, the Rear-Admiral, Stornoway, issuing the necessary instructions.

11. Close co-operation and inter-communication between the various forces is essential.

12. The operations will cease on receipt of the signal "Negative Operation 'P.1.'" from the Commander-in-Chief.

APPENDIX J.

ORDERS FOR CRUISE OF DECOY PRINCE CHARLES,
25th JULY 1915.

Extract from M. 05782/15.

Enclosure No. II in Submission from Admiral Commanding, Orkneys and Shetlands, No. 563, dated 25th July 1915.

NOT TO FALL INTO THE HANDS OF THE ENEMY.

"Cyclops."

20th July 1915.

No. 009.

Memorandum to Lieutenant W. P. Mark-Wardlaw, R.N.

You are to proceed on a cruise as follows:—

From Scapa to—

- (a) Lat. 59.0 N, long. 0.0.
- (b) Lat. 60.15 N, long. 1.20 E.
- (c) Lat. 61.15 N, long. 0.50 W.
- (d) Lat. 61.10 N, long. 2.40 W.
- (e) Lat. 58.50 N, long. 7.0 W.

and then to Stornoway to complete with coal, provisions and report arrival, asking for further orders before proceeding.

2. Unless you receive orders to the contrary you will return through the same positions except that you will keep 110 further to the SE between (c) and (d).

3. If when between (b) and (c) you require to enter Balta Sound so as to communicate, you are to do so either on—

- (f) The course between Balta Sound and Bergen.
- (g) The course between Balta Sound and Trondheim.

(C8104)

4. Speed during voyage should be 8½ to 9 knots.

5. The above routes have been selected, as on certain points on them submarines have been seen several times on passage, and also certain of these routes are followed by steamers from the west and east coast ports of Great Britain to Archangel.

6. The object of the cruise is to use the *Prince Charles* as a decoy, so that an enemy submarine should attack her with gun fire. It is not considered probable, owing to her small size, that a torpedo would be wasted on her.

7. In view of this, I wish to impress you to strictly observe the rôle of decoy. If an enemy's submarine is sighted make every effort to escape, if she closes and fires, immediately stop your engines, and with the ship's company (except the guns' crews, who should most carefully be kept out of sight behind the bulwarks alongside their gun, and one engineer at the engines) commence to abandon ship. It is very important, if you can do so, to try and place your ship so that the enemy approaches you from the beam.

8. Allow the submarine to come as close as possible, and then open fire by order on whistle, hoisting your colours (red ensign).

9. It is quite possible that a submarine may be observing you through her periscope unseen by you, and therefore on no account should the guns' crews on watch be standing about near their guns.

10. If by luck you should succeed in sinking a submarine, on no account are you to allow the information to leak out of your ship, the strictest precautions are to be taken on arrival in a harbour, or meeting a ship at sea, that none of the officers or men give away the information.

(Signed) S. C. COLVILLE,
Admiral.

Lieutenant W. P. Mark-Wardlaw, R.N.

APPENDIX K.

ORDERS FOR PATROLS IN MORAY FIRTH, 5TH AUGUST 1915.

Admiral's Office, Invergordon,
5th August 1915.

No. 020/051. *Memorandum.*

The limits of the Auxiliary Patrol Areas III, IV and V, have been altered by the Admiralty. In future :—

Area IV.—Eastern limit is to be a line joining Wick and Kinnaird Head. Area IV will include the whole of the Moray Firth to the westward of this line.

Areas III and V.—The western limit of these areas will be the line joining Wick and Kinnaird Head. Parallel 58° N will be the dividing line between Area III and Area V.

2. Commencing on 7th August the patrols in the Moray Firth will be disposed as follows: three Auxiliary Patrol Units being always on duty, in addition to destroyers, motor drifters and motor boats.

(a) *At night or in thick weather.*—One Auxiliary Patrol Unit is to be on each of the lines—

L-B	..	..	..	Lybster-Banff.
H-L	..	..	..	Helmsdale-Lossiemouth.
T-B	..	..	..	Tarbet Ness-Burghead.

One local defence destroyer and two destroyers from the Grand Fleet Flotilla based on Cromarty are to patrol the southern 40 miles of the N-R line.

(b) *During daylight when the visibility is good.*—The L-B and T-B lines are to be patrolled by Auxiliary Patrol Vessels as in (a); the unit from the H-L line is to cruise between the L-B and T-B lines.

One destroyer of the Cromarty Local Defence Flotilla will patrol the southern portion of the N-R line, being reinforced, when destroyers of the Grand Fleet are based on Cromarty, by one of these vessels which will patrol the northern half of the N-R line.

These two destroyers will maintain their station during daylight whatever the visibility.

A second destroyer of the Local Defence Flotilla will patrol between the T-B and H-L lines. This destroyer will take charge of any local search for submarines.

3. Previous orders remain in force as regards :—

- (i) "Guard destroyers" being on duty inside the inner boom at night.
- (ii) Armed trawler to patrol off Whistle Buoy.

4. No change will be made in the disposition and orders of the mine-sweepers or the motor drifters and motor boats which patrol the north and south shores of the Moray Firth.

5. The necessary amendments to the Cromarty Defence Orders will be issued shortly.

E. R. PEARS,
Rear-Admiral.

The Extended Defence Officer, Cromarty.
The Captain-in-Charge, Auxiliary Patrols, Cromarty.
The Officer-in-Charge, Naval Centre, Cromarty.
The Senior Officer, 4th Destroyer Flotilla (H.M.S. *Faulknor*).
The Commanding Officers, Local Defence Destroyers (*Flyingfish*, *Fairy*, *Bat*, *Star* and *Osprey*).
The Lieutenant-Commander-in-Charge of Minesweepers, Invergordon.

Copies to—

Admiral Commanding, Coast of Scotland.
Commander-in-Chief, Grand Fleet.
Vice-Admiral Commanding, 4th Battle Squadron.
Vice-Admiral Commanding, 2nd Cruiser Squadron.
Garrison Commander, Cromarty.
Rear-Admiral, Peterhead.
Colonel Commanding, Royal Marine Garrison, Cromarty.
Lieutenant-Commander Tennyson, Wick.

APPENDIX L.

ORDERS FOR OPERATION "B.Y."

Bearings are Magnetic. Times are G.M.T. except when stated.

Admiralty,

15th August 1915.

MEMORANDUM.

OPERATION "B.Y."

- Princess Margaret* to leave the Nore at 5 p.m. on 16th August, and proceed up the swept channel and through G Channel.
- She is to be met in Black Deep by two divisions of destroyers from Harwich. The S.N.O. of destroyers should be sent to Sheerness to arrive by 2 p.m., to confer with the C.E.M.L.
- After leaving the buoy in lat. $54^{\circ} 2' N$, long. $2^{\circ} 34' E$, the following positions should be passed through:—
(A) Lat. $54^{\circ} 39' N$, long. $2^{\circ} 42' E$.
(B) Lat. $55^{\circ} 43' N$, long. $3^{\circ} 5' E$.
(C) Lat. $56^{\circ} 4' N$, long. $4^{\circ} 25' E$.
- From position "C" a course should be steered towards Horn Reefs Light Vessel, and the speed adjusted so as to arrive off it shortly after dark.
- The object of the detour made in crossing the North Sea is to avoid being sighted during daylight by aircraft.
- After fixing the position off Horn Reefs, speed should be increased to the maximum steady speed possible, avoiding flaming from funnels. Course should be steered for "D"—lat. $54^{\circ} 49' N$, long. $7^{\circ} 45' E$.
- The destroyers should keep station astern from off Horn Reefs until position "D" is reached.
- On reaching position "D," *Princess Margaret* will alter course to SW $\frac{1}{2}$ S, run five miles and commence to lay mines. When *Princess Margaret* alters course, the destroyers will alter course to SW by W $\frac{1}{2}$ W, and pass through the points X, Y, Z on the Chart, arranging their speed so as to arrive at Z at 2.50 a.m. German time.
- Princess Margaret* will lay mines along the track on the Chart joining positions "D" and "T" at a speed which is to be previously communicated to the destroyers.
- After reaching "T," *Princess Margaret* will steer NW at 20 knots for position "S," where *Aurora* and light cruisers will be met with.
- Course on the Chart.—After passing through "Z," the destroyers should continue their course until its intersection with *Princess Margaret's* course, joining her as soon as she is sighted, either before or after reaching position "S."
- In the event of attack by enemy vessels during the night, *Princess Margaret* should take the course which offers the best chance of escape, and the destroyers should come to her assistance and make a running fight. Once discovery has taken place, no time must be lost in pursuit of enemy vessels, as it is to be anticipated that they will soon be supported by superior numbers.

13. *Aurora* with all available light cruisers (except *Arethusa*) and one division of destroyers, all under the orders of Captain Wilmot Nicholson, R.N., will leave Harwich in time to reach position "S" at 3 a.m. on 18th August and will then cruise in that vicinity to meet *Princess Margaret* and her destroyers. Should the meeting not be effected by 5 a.m. the light cruisers should draw off to the NW and return to Harwich by way of G Channel.

14. After passing through position "S," *Princess Margaret* and her destroyers should proceed direct for G Channel as fast as circumstances permit, and return to their bases.

15. *Princess Margaret* should set the mines for a depth of 15 ft. (pistol) below L.W.O.S.S. It is desired to distribute the mines along the track shown on the Chart commencing five miles after passing position "D," and ceasing at position "T." The mines may be in groups or continuous line, or an admixture of both systems.

16. The enemy have directive wireless which enables the position of any of our ships at sea to be instantly detected should they use wireless. Wireless telegraphy must not be used except in circumstances of the greatest necessity. Its use renders a secret operation futile.

17. The Admiralty will use the following procedure to send messages to *Princess Margaret* or *Aurora*:—

"S" Wave using the F procedure. Opportunity will be taken of sending at one of the times mentioned in Grand Fleet W/T orders Art. XII., para. 3 (i.e., "S" Wave for 5 minutes and 45 minutes past each hour). Such messages will also be repeated from Cleethorpes at the next detached ship time.

18. Armed patrol vessels may be met with near the Dogger Bank. They have not been warned of your intended passage.

19. The 6th Light Cruiser Squadron from the Humber will be cruising between G Channel and position "A" on the night of the 16th. They have been warned.

A Light Cruiser Squadron from Rosyth will be cruising in the direction of Little Fisher Bank.

20. Arranged verbally with Captain Litchfield.—A destroyer is to be cruising off the entrance to G Channel from 8 a.m., 16th, onward, to point out the Buoy to returning ships.

(Initd.) H. F. O.
16th August 1915.

LIST OF POSITIONS.

Mark Buoy G Channel	Lat. $54^{\circ} 2' N$, long. $2^{\circ} 34' E$.
Position "A"	Lat. $54^{\circ} 39' N$, long. $2^{\circ} 42' E$.
"B"	Lat. $55^{\circ} 43' N$, long. $3^{\circ} 5' E$.
"C"	Lat. $56^{\circ} 4' N$, long. $4^{\circ} 25' E$.
"D"	Lat. $54^{\circ} 49' N$, long. $7^{\circ} 45' E$.
"X"	Lat. $54^{\circ} 39' N$, long. $7^{\circ} 26' E$.
"Y"	Lat. $54^{\circ} 31' N$, long. $7^{\circ} 26' E$.
"Z"	Lat. $54^{\circ} 32' N$, long. $7^{\circ} 1' E$.
"T"	Lat. $54^{\circ} 28' N$, long. $6^{\circ} 59' E$.
"S"	Lat. $54^{\circ} 39' N$, long. $6^{\circ} 30' E$.

* Both 3 a.m. and 5 a.m. are German time.

APPENDIX M.

OPERATION "B.Y."—
SIGNALS, 17TH AND 18TH AUGUST 1915.

17th August.

M1. C.C.M.L. to Destroyers.

By Visual.

In case of separation, rendezvous at daylight, 18th, position "S": 54° 39' N, 6° 30' E, proceeding from there to Harwich via G Channel in absence of other orders. *Aurora* with light cruisers and destroyers should be at above rendezvous from 2.0 to 4.0 a.m., 18th. Repeat rendezvous to leaders of divisions. (6806.)

M2. Adty. to Commodore T. (F. Message and
via Cleethorpes, 159).By W/T.
Sent 6.35 p.m.

448. Nine German destroyers are going NW from Heligoland, position at 0.30 p.m., lat. 54.27 N, long. 6.23 E approximate. After meeting *Princess Margaret* to-morrow you may intercept them returning.

M3. *Mentor* to *Princess Margaret*.

By Visual.

Will you please make following general to destroyers. Just before dark, destroyers will form division in line ahead disposed abeam 4 cables apart, take stations 2 cables astern of *Princess Margaret*. On arriving at a position 34° 49' N, 7° 45' E, 1st Division will alter course 1 point to starboard in succession and reduce to 12 knots, 2nd Division drop back to single line. All without signal. Various courses will be steered, *Mentor* leading. Exactly 3 hours 5 minutes later, destroyers will increase to 20 knots, boats must be well closed up during the night and at daylight ready for instant action and well darkened. It is essential that the operations remain secret. *Minos* pass to *Moorson*. *Morris* pass to *Manty* when they rejoin. (Signal is not to be logged, Commanding Officers to retain chit. The rendezvous signal made this morning is also to be blacked out in log, a copy being retained by Commanding Officer. All chits with positions are to be destroyed.) (1835.)

Note.—Words in brackets added by *Princess Margaret* when making the signal general.

M4. *Mentor* to C.C.M.L.

By Visual.

Trawler is German and appears to have wireless. (1753.)

M5. C.C.M.L. to *Miranda*.

By Visual.

Board trawler ahead of you reported to be German. If she is, put prize crew on board and proceed to Harwich. If trawler is not German, rejoin immediately. (1756.)

Reply.

Trawler is German. Shall I take off crew and sink her? (1805.)

Further reply.

Yes. If possible by opening Kingstons. Bring off W/T and all papers, use utmost despatch. Prisoners to be locked up below during operations. If you cannot rejoin us by dark, proceed to rendezvous "S" by 3 a.m. Do your utmost to rejoin before dark. (1815.)

M6. C.C.M.L. to *Mentor*.

By Visual.

Have ordered *Miranda* to take off crew as prisoners and sink her. (1808.)

M77. C.C.M.L. to *Mentor*.

By Visual.

Miranda has orders to rejoin if possible before dark, if not to proceed to position "S" before 3 a.m. (1830.)

M88. C.C.M.L. to *Mentor*.

By Visual.

I don't think we have time to go much out of our way to examine any trawler we do not pass close to, so long as they do not W/T our presence, they cannot know where exactly we are going. (1830.)

M99. *Miranda* to C.C.M.L.

By Visual.

Could find no wireless or anything of any interest. Trawler has sunk. (1845.)

M100. *Minos* to C.C.M.L.

By Visual.

Following W/T made by small smack, begins:—V.E. G.A.L. G.A. A.L.T. W.E. O.U.Y.L.A. (1850.)

Reply.

Which one do you think made it? (1852.)

Further reply.

That was made at 6.31 appears to be quite close. More is being made now which we are intercepting. (1858.)

M11. C.C.M.L. to *Mentor*.

By Visual.

Minos reports some vessel in vicinity is making wireless which she is intercepting now. Which destroyer is most suitable to investigate those in sight to the southward. (1858.)

Reply.

Medusa. Please give her rendezvous. (1859.)

M12. *Minos* to C.C.M.L.

By Visual.

Following just intercepted:—EIGHT SEVEN. L. TLT. VE. LOUY. OXB. VE. ALTVELOUYOITY. OBBA. ALTVELOUYX. VE. GNOUY. OGOUY. DENINETY. SEVEN. K. 8 NVE. Gr. EIGHTY EIGHT. 99 DEOXB. GN. NINETY SEVEN. BAN. (1900.)

M13. C.C.M.L. to *Medusa*.

By Visual.

Some vessel in the vicinity is making wireless. I think probable it is steam trawler bearing WSW from me steering SE. She has altered course since we passed her. Proceed at full speed to investigate her. If she is German or if she is a neutral and has wireless and cannot satisfactorily explain its use, take crew and papers off and sink her, and then proceed to position "S." Arrive there by 3 a.m.; afterwards proceeding to Harwich if you do not meet anyone at "S." If you could possibly rejoin me before it is quite dark, do so. She is now bearing WSW. Is all clear? Do not get to "S" before 3 a.m. (1906.)

Note.—Repeated by C.C.M.L. to *Mentor*. (1920.)

M14. C.C.M.L. to *Minos*.

By Visual.

Was it in a Telefunken note? (1910.)

Reply.

No, made by coil.

M15. C.C.M.L. to Destroyers.

By Visual.

Speed will be increased to 19 without signal as we alter course to about 155E for position "D." (1922.)

M16. C.C.M.L. to Destroyers.

By Visual.

Engage destroyers to south-east, pass under my stem. (2050.)

M 17. C.C.M.L. to Destroyers (Starboard Hand). By Visual.
Form astern of 2nd Division and engage enemy south-east. (2052.)

M 18. C.C.M.L. to Destroyers. By Visual.
Take station astern from single-line ahead in sequence of Fleet numbers
C.C.M.L. intends to proceed at 19 knots. (2058.)

M 19. C.C.M.L. to Destroyers (Starboard Hand). By Visual.
Get in single line at once. (2100.)

M 20. C.C.M.L. to unknown ship. By Visual.
Is that *Mentor*? (2103.)

Reply.
No, *Morris*.

M 21. C.C.M.L. to *Morris*. By Visual.
Where is *Mentor*? Get astern quickly, keep in single line, follow me until
D is made. (2108.)

Reply.
I am *Morris*. I am taking over and forming astern of you. (2108.)

M 22. C.C.M.L. to *Morris*. By Visual.
Where is *Mentor*? (2114.)

Reply.
I think *Mentor* is torpedoed by ---- I am inquiring from destroyers.
(2125.)

M 23. C.C.M.L. to *Aurora* and Adty. Recd. *Arethusa*, 2141.
Urgent. My position, etc., 55° 30' N, 6° 52' E, west 20 knots. Have been
observed by enemy destroyers, operations abandoned. (2130.)

M 24. C.C.M.L. to *Aurora*. By W/T.
Position of enemy last seen 55° 30', 7° 4'. Believed to be in chase consisting
of destroyers and cruisers. (2140.)

M 25. C.C.M.L. to *Medusa*. By W/T.
Proceed direct to Harwich with despatch. (2150.)

M 26. Comm. (T) to C.C.M.L. By W/T.
Do you intend crossing minefield? My position 10 p.m., 54° 34' N, 4° 28' E,
882E, 18 knots. (2200.)

Reply.
No. My position midnight will be 55° 22' N, 5° 26' W, speed 20 knots for
G Channel. *Medusa* detached proceeding to Harwich. (2252255.)

M 27. C.C.M.L. to Destroyers. By W/T.
Previous rendezvous cancelled. Rendezvous Harwich. (22122212.)

M 28. Comm. (T) to C.C.M.L. By W/T.
Our course is N48E, 20 knots. (2215.)

M 29. C.C.M.L. to *Minos*. By W/T.
What happened to *Mentor*? Reply very briefly, very small buzzer spark.
(2225.)

Reply.
Thought she crossed your bow when you altered to NW. Have not seen
her since. (2305.)

M 30. C.C.M.L. to Comm. (T). By W/T.
Princess Margaret will switch on her lights only at midnight. (2230.)

M 31. Adty. to Comm. (T). By W/T.
449. 4th Battle Squadron, eight light cruisers and also destroyers are
coming out of Jade at dawn. (2352.)

M 32. C.C.M.L. to *Morris*. By W/T.
Have you any information about *Mentor*? I am switching on bow lights
only, destroyers remain darkened. (0000.)

18th August.

M 33. C.C.M.L. to Destroyers. By W/T.
Expect to meet *Aurora* shortly, look out for easing down. If any destroyers
know where *Mentor* is, haul out of line and report by visual. (0022.)

M 34. C.C.M.L. to *Morris*. By W/T.
How many destroyers are astern of you? (0030.)

M 35. Comm. (T) to C.C.M.L. By W/T.
My position and course at 0030, 55° 16' N, E, (*sic*) S66W, 20 knots.
What is your position? (0035.)

Reply.
C.C.M.L. to Comm. (T) and Adty. My position, course and speed at
1.15 are 55° 8' N, S65W, 20 knots. Fear *Mentor* was torpedoed at 8.30
when enemy first sighted 4.48 E. Unable to ascertain details yet. *Mentor*
was off Horn Reefs. (0130.)

M 36. *Manly* to C.C.M.L. By Visual.
Mentor was torpedoed at 8.30 p.m. by three hostile destroyers. (0115.)

M 37. C.C.M.L. to *Manly*. By Visual.
Where is *Morris*? (0122.)

Reply.
Astern of you. (0123.)

M 38. C.C.M.L. to *Manly*. By Visual.
Did anyone go to *Mentor*'s assistance? (0124.)

Reply.
I was not in her division and I saw nothing after the explosion. (0125.)

Further reply.
Resume your station in the line. (0126.)

M 39. Comm. (T) to C.C.M.L. By W/T.
Have you any destroyers in company? What is the matter with *Medusa*?
(0220.)

Reply.
Believe six destroyers are astern of me. *Medusa* detached 7.15 to
investigate trawler making wireless. (0240.)

M 40. C.C.M.L. to Destroyers. By W/T.
Report at once if you saw *Mentor* torpedoed and if she sank. (0208.)

Replies.
Minos to C.C.M.L. *Mentor* was seen after explosion and did not seem
sinking. (0230.)

Moorsom to C.C.M.L. There was an explosion in her directly, but she
steamed alright afterwards. (0250.)

M41. C.C.M.L. to *Mornis*.

By Visual.

How many destroyers are astern of you? You were asked this question two hours ago by W/T. (0330.)

Reply.

Five. (0335.)

Further reply.

Who is away? (0336.)

Reply.

Mentor and *Medusa*. (0338.)

M42. C.C.M.L. to Comm. (T).

By W/T.

Speed reduced to 18 knots. (0340.)

M43. C.C.M.L. to Comm. (T).

By W/T.

According to *Moorson* and *Minos* it is not certain whether *Mentor* did sink, but she is not here, and has not been seen since 8.45 p.m. off Horn Reefs. I doubt whether my destroyers would have enough fuel to return to look for *Mentor*. (0350.)

M44. Comm. (T) to C.C.M.L.

By W/T.

What is your position 0400? (0355.)

Reply.

My position 4 a.m., 54° 33' N, 3° 42' E, S67W, 18 knots. (0410.)

M45. C.C.M.L. to Adty.

By W/T.

According to reports from other destroyers, *Mentor* was seen after explosion of supposed torpedo steaming and not apparently sinking. I was not aware she had been torpedoed until considerable time after. The position was 7 miles WSW from Horn Reefs Light Vessel, 8.45 p.m., when four enemy destroyers sighted 2 miles SE. Commodore (T) informed. Am returning with six destroyers in company. *Medusa* was detached, 7.15 p.m. 17th, to investigate suspicious trawler and ordered rendezvous position "S" and subsequently Harwich. (0540.)

M46. C-in-C., Grand Fleet to C.C.M.L.

By W/T.

Your message (0130) has been received but is not understood. Repeat message. (0630.)

Note—C.C.M.L. repeated his (0130), adding: It has just been reported that a signal from *Mentor* has been intercepted. (0845.)

M47. *Morris* to C.C.M.L.

By Visual.

Mentor is safe. *Aurora* has a signal from him. (0820.)

Note.—This was subsequently found to be incorrect.

APPENDIX N.

REPORT FROM M.F.A. *BARAILONG*.

M.F.A. *Barailong*,

At Sea. 20th August 1915.

Sir,

1. I have the then honour to report that at 3 p.m. on 19th August, in lat. 50.22 N, long. 8.7 W, I was steering east (Mag) in hopes of falling in with enemy submarine reported in that area during the forenoon.

My attention was called to a large steamer about 9 miles off bearing SW, making a large alteration of course. Almost immediately I received by W/T "S O S S, being chased by enemy submarine, lat. 50.22 N, long. 8.12 W," and altered course accordingly to SWIS, flying neutral colours. Between now and 3.25 p.m., the signals attached were exchanged.

After steering SWIS for 2 miles the submarine hove in sight about a point and half on my port bow, approximately 7 miles distant, heading towards the *Nicosian*, both appeared to be stopped. When within 3 miles of the submarine I hoisted the International signal VIC-QRA, meaning "Save life."

The submarine now commenced to shell the *Nicosian* at a range of about 1,000 yards, approaching her victim all the time at slow speed, until at Position 2 on attached diagram,¹ when she called in her guns' crew, "Trimmed down" a few feet, altered course towards me at a high speed for a few hundred yards. I then turned towards the *Nicosian*'s boats, which were four points on the starboard bow, and stopped my engines.

The submarine now gave herself a little more buoyancy, manned her gun again, and altered course as shown on diagram at 3, apparently with the idea of preventing me effecting a rescue. The moment she was out of sight behind *Nicosian* I struck the neutral colours and hoisted the White Ensign, and trained two guns just in front of that vessel's bow ready for the next appearance of the submarine, which I knew would be at close range. In a few seconds she appeared 600 yards off and Sub-lieutenant G. C. Steele, R.N.R., in charge of the guns and their disguise, carried out his duties admirably; and I consider it largely due to his smartness that we received no shot from the enemy, and I respectfully submit his name for consideration.

The Marines kept up an incessant rifle fire from the start, and accounted for several of the guns' crew before it was possible for them to retaliate. Thirty-four 12-pdr. shell were fired, mostly taking effect, the second and third being hits on the water line under the conning tower; she heeled over about 20 deg. towards us, and the crew could be seen making every effort to save themselves by jumping overboard. She disappeared in a little over a minute, and shortly afterwards two large volumes of air escaped to the surface, indicating that she had submerged for the last time.

2. The *Nicosian*'s boats were now called alongside, and while clearing the boats I observed about a dozen Germans who had swum from their boat, swarming up ropes ends, and the pilot ladder which had been left hanging down from *Nicosian*. Fearing they might scuttle or set fire to the ship with her valuable cargo of mules and fodder, I ordered them to be shot away, the majority were prevented from getting on board, but six succeeded.

As soon as possible I placed my ship alongside and put a party of marines on board under Corporal F. G. Collins, R.M.L.I., warning him to be careful of snipers in case they had found the rifles which I was informed by *Nicosian*'s Captain, had been left in the charthouse.

¹ Diagram not produced here. It will be found with the original of this report in H.S. 385.

A thorough search was made which resulted in six of the enemy being found, but they succumbed to the injuries they had received from lyddite shell shortly afterwards, and were buried at once.

3. The *Nicosian* had at least two shot holes in No. 1 hold below water line, and several above water line further aft, also one boiler damaged.

I took her in tow at 6.20 p.m., and as she made no more water, though No. 1 hold was flooded, headed for Avonmouth, for which port she was bound, reporting same to Admiralty via Land's End. H.M. Yacht *Valiant* came up at 7 p.m., and accompanied us to Lundy Island, but as the tow rope parted during the night and the *Nicosian* was able to steam herself, I left her when she could no longer benefit from the lee I was able to afford her from the slight sea which was occasionally finding its way into the holes above water on the weather side.

4. During the whole operations, and since April I have been cruising 12,000 miles; Lieutenant G. Swinney, R.N.R., the master of this ship has been invaluable, and with his careful navigation coupled with the use of W/T, I have been able to destroy an enemy's submarine, and save a valuable ship. In addition to the names mentioned in this despatch, I beg to submit for Their Lordships' consideration the conduct of Corporal Frederick G. Collins, R.M.L.I., No. 17036, in charge of Marine Detachment, for his good leading and the expeditious manner in which he cleared the ship of the Germans with his men, an awkward job in an unknown ship.

The marksmanship of his detachment was most telling, and accurate when first engaging the submarine, as mentioned in my para. 1.

5. The enclosed cap ribbon is all that I could pick up.

I have the honour to be, Sir,
GODFREY HERBERT,
Lieutenant-Commander.

Captain H. W. Grant, R.N.
For the Secretary of the Admiralty.

Note.—The submarine had no number but was apparently similar to *U 29*.

APPENDIX O.

EMPLOYMENT OF GRAND FLEET DESTROYERS.¹

First Sea Lord.

1. It has to be admitted that our force of destroyers, sloops and other small craft, is at present inadequate for dealing satisfactorily with the submarine menace. I am not, however, convinced that we are using such resources as we possess to the best advantage.

2. The three main purposes for which destroyers are used are fleet protection, escort duty, and patrol duty, including in the latter the hunting of submarines. We cannot satisfy the requirements of all three until the destroyers now building are actually in commission. The problem is to distribute an inadequate force to the best advantage; and it is a problem which the Board alone can solve, since every responsible officer from the Commander-in-Chief downwards naturally desires that his own legitimate claims shall be satisfied and that—as the old Scotch motto has it—“Others must starve ere he goes hungry.”

3. There appear at this moment to be between 70 and 80 destroyers with the Grand Fleet who do nothing whatever to hamper the movements of submarines. Every German submarine going northabout passes (one

¹ Extract from M. 010114/15.

would suppose) within striking distance of Scapa Flow twice on its outward journey and twice on its homeward journey; but for reasons which from the point of view of the Grand Fleet may be quite sufficient, this large force is, broadly speaking, always kept as an integral portion of the Grand Fleet ready to play its part in a first class naval battle.

4. Now I quite agree that the safety and efficiency of the Grand Fleet should be our first consideration; if these fail, everything fails. But it is also true that from every point of view, moral as well as material, it is of the first importance to increase the effectiveness of our anti-submarine campaign. I quite grant that much has been done and that much is being done; yet nobody can look at the map on which last week's losses are plotted without being very dissatisfied with the result. Twenty-two ships were destroyed in the area which includes the southern half of the Irish Channel, the British Channel and the seas between the Scilly Islands and Queenstown. All the submarines that effected this work of destruction had come round the Orkneys and down the west coast of Scotland and of Ireland. Only one has been destroyed.

5. In the Orkneys there are abundant destroyers, but they are all being used for the Grand Fleet. In the south of Ireland the Admiral Commanding has no destroyers at all; the result of which is that the submarines reach the scene of their depredations without difficulty and effect them with little risk.

6. The specific question which, in these circumstances, I should like to put to my naval advisers is whether it would not be worth while at this particular juncture, while the days are still long and before our resources in small craft are greatly augmented, to diminish in some small degree the number of destroyers now absorbed in attendance on the Grand Fleet, and to divert a few to anti-submarine work, either under the direction of the Commander-in-Chief in the North Sea or under the direction of the Admiral at Cork where the great trade routes of the world converge. The risk seems inconsiderable. The gain might be great.

26th August 1915.

a. J. B.

First Lord.

Remarks on Distribution of Destroyers.

1. If submarine hunting and destruction, as distinct from protection against submarine attack, was the only duty our destroyers, sloops and other small craft had to carry out at present they could probably be organised and employed differently, and with advantage as far as our Maritime trade is concerned.

2. Concur that the three duties you mention are at present the principal work of our flotillas, and that the problem is indeed a difficult one, since we do not at present possess a sufficiency of T.B.D.s even for the role they were primarily designed to carry out. Our past naval shipbuilding policy had not taken into account the excessive demands for fast armed small craft which have since proved to be necessary for—

- (a) Escorting a prodigious number of transports.
 - (b) Escorting munition and other ships carrying valuable government stores.
 - (c) Escorting of our own valuable men-of-war on single passage.
 - (d) For screening against submarine attack, to the extent now considered necessary, our squadrons when they put to sea.
- As far as destroyers are concerned the numbers supplied have been hardly adequate for their primary role:—
- (e) Operating offensively against enemy fleets and flotillas.

With reference to (d) I can understand there must be a tendency to think, because our Grand Fleet have not yet been called upon to meet the enemy, and may never get the opportunity of doing so, that there is the

less need to conserve our destroyers for battlefleet work. If this argument is pushed home to its logical conclusion our battleships and cruisers had better retire to the safe shelter of our most protected ports at home or abroad. By this resort our Grand Fleet T.B.D.s, sloops and light craft would be freed to deal solely with submarines.

It is quite proper that each responsible officer from the Commander-in-Chief downwards should desire and press that his particular claims should be satisfied. Emphatically worded letters advocating strenuous measures to be taken to deal with the submarine menace are constantly being received. As a rule the Senior Officer concerned fails to comprehend what enormous demands are being made in other directions, and does not possess sufficient knowledge of the limitations of personnel and material at the Admiralty command. Neither can they grasp the situation as a whole; each is so absorbed in his own particular area that a broad comprehensive outlook is impossible to him.

3 At the present moment the Commander-in-Chief of the Grand Fleet has some 58 oversea T.B.D.s under his command. One flotilla of 20 boats (1st Flotilla) is based at Rosyth and serves the battle cruisers (10), the 3rd Battle Cruiser Squadron (10), and the 3rd Cruiser Squadron (4). Two flotillas (2nd and 4th) of 19 boats each serve the 1st, 2nd, 4th, 5th Battle Squadrons, 1st, 2nd, 6th and 7th Cruiser Squadrons (over 40 ships). The other 15 T.B.D.s are old and, not being sufficiently seaworthy, are only used for the local defence of Scapa and Cromarty.

During the month of July a considerable force of destroyers were on two or three occasions utilised by the Commander-in-Chief in the endeavour to waylay submarines during their passage through the Faw Island Channel and off Muckle Flugga. The sloops were constantly used for the same purpose. That they were unsuccessful is unfortunate but not surprising, since a submarine will very naturally dive at the sight of any craft which is likely to be armed.

An analysis of the work done by the three Grand Fleet flotillas during July shows that out of 58 T.B.D.s the average number available for work (after deducting those away docking, refitting, or hors de combat through defects) was 49. The average number out each day engaged in screening single ships or squadrons, patrolling, or submarine hunting was 26. To the duties of screening, patrolling, and submarine hunting must be added those of minesweeping and scrutinising suspicious vessels, two additional functions brought home by the *Meteor* incident. It can, in fact, be stated that the Grand Fleet flotillas were employed in anti-submarine work to the full extent of their capabilities and, at the same time—which it is important to note—they were ready if necessary to play their part in accompanying the Fleet should there be a prospect of a battle, provided a day's notice had been given so that all destroyers could be recalled to complete with fuel. This essential necessity of refuelling is too often lost sight of in paper arguments. The seagoing flotillas must be complete with fuel when they leave their bases with the fleet if fighting is in view, on account of their very limited fuel endurance.

With regard to the other oversea flotillas (3rd and 10th), the Table (A) appended shows the anti-submarine work which they have been engaged on. It speaks for itself. Each vessel requires a minimum of two T.B.D.s which frequently have had to wait 24 hours at a rendezvous till their homeward-bound convoy arrived. All men-of-war, except light cruisers and smaller craft, are also escorted by destroyers to and from their northern bases and their dockyard refitting ports. This work is continuous but not realised except by those whose business it is to try and find the vessels to do it.

4 If the safety and efficiency of the Grand Fleet is always assumed to be, our first consideration, I do not see how we could, for

1 Table (A) is omitted here. It will be found in M. 010114/15.

instance, reduce the number of destroyers which safeguard it, because if the Grand Fleet was kept stagnant in harbour its efficiency would quickly disappear. Consequently, it cannot also be of the first importance to increase the effectiveness of our anti-submarine campaign if, by so doing, we undermine the safety of the Grand Fleet and its efficiency. The two desiderata appear incompatible.

The true answer to these conflicting questions can only be reached when it is known whether we shall win through quickest by attempting to give increased protection to our Mercantile Marine, with the certainty of less protection and at the expense of offensive power to our Grand Fleet. One thing is at least certain. The Germans are conserving their destroyers, presumably for the day of battle, and they will number about 100, if not more. At the present moment we could only put 85 against them, and this assumes that about 35 Harwich T.B.D.s will be available, which is never the case.

I fully concur that our Mercantile Marine losses last week were appalling. At the same time, our own submarines have done some very useful fighting work, which, in a military sense, may recompense us to some extent for our mercantile losses.

We have at any rate been successful up to the present in guarding our fighting ships and transports, whenever escorted, from submarine attacks. But to do the same for our Mercantile Marine would require over 2,000 small, fast, armed craft.

5. I have endeavoured to show that it is by no means correct to state that the destroyers up north are all being used for the Grand Fleet alone. They may be near the Grand Fleet, but they have also been used against submarines, though they have failed (with one exception—that of the *Ariel*) to destroy any. They have also been patrolling and screening, and it would of course be difficult to say how many submarines they have, by this service, kept off from making a successful attack on our most valuable ships. They are, as a matter of fact, showing signs of wear and tear due to such constant work, and this increases the time they are hors de combat having their defects made good. This defensive work also eats away the time which is required to keep up their efficiency in their offensive role.

There is at present, in the process of assemblage at Devonport, the 2nd Flotilla. They are being sent there to assist in escort and anti-submarine work. Four have already arrived and the remaining 15 will join as new T.B.D.s are delivered. In the meantime, the force of sloops at Queenstown is being augmented as fast as new ones are delivered. In addition, 25 drifters are being sent to reinforce the Irish Channel Patrol.

The Harwich Force has been very considerably reduced by having to divert half of them to the western home waters for escort and anti-submarine work. Unless we have definite information that the Germans have not got more than five flotillas (55 vessels) available for North Sea work I am unable to concur in reducing the number of the Grand Fleet flotillas in the north where they are strategically better situated for dealing with submarines on passage to Ireland than elsewhere. Their failure to destroy submarines may be due to their strength, since submarines dive away on sighting them and dare not make a surface attack.

I concur with Sir A. Wilson's remarks which I attach.

10th August 1915.

H. B. J.

It is hardly the case that the 70 or 80 destroyers with the Grand Fleet do nothing whatever to hamper the movements of submarines.

I understand that the Commander-in-Chief uses them to a considerable extent on patrol when submarines are expected to be passing the Shetlands though I do not know the exact particulars.

That the submarines have passed the Shetlands in spite of the destroyers shows that they are not really a very efficient antidote for submarines. The advantage of having destroyers always available in the South of Ireland, Scilly and Milford would be that they could reach the neighbourhood where a submarine is operating so much quicker after the news is received and when sighted the submarine cannot get away on the surface. She must dive.

On the other hand, a destroyer is a costly vessel to lose, and she is very likely to fall a prey to the submarine sooner or later.

It would be a very great advantage if six destroyers could be placed under the orders of the Vice-Admiral, Queenstown, and stationed normally two at Queenstown, two at Scilly, and two at Milford ready to move quickly to any spot where a submarine is operating.

28th August 1915.

A. K. W.

APPENDIX P.

"Iron Duke,"
2nd September 1915.

H.F. 0022/155. Memorandum.

ORDERS FOR "E" CLASS SUBMARINE OPERATING FROM ABERDEEN.

Object of the Operations.

To attack and sink German submarines which are operating against shipping in the approaches to Norwegian fiords and harbours.

2. The date of sailing will be communicated by telegram, also the name of the ship through which W/T communication is to be maintained.

3. The submarine is to leave Aberdeen on a south-easterly course until out of sight of land, at such a time and speed as to arrive off Oberstad Light (lat. $58^{\circ} 40' N$, long. $5^{\circ} 33' E$) about 10 p.m.

After fixing her position she is to proceed to a position off Karmo Island, arriving there by daylight and then cruise in the vicinity of Udsire Island and 30 miles to the southward for 48 hours.

She is then to proceed to cruise off the southern entrance to Bergensfjord, south of Sotro Island (lat. $60^{\circ} 09' N$, long. $5^{\circ} E$), and she is to return to Aberdeen when necessary to refuel, store or refit.

German submarines have been active recently between Oberstad and Udsire and off Marsten Light.

4. It is of the utmost importance that her presence off the coast does not become known, or the information will be communicated to the German submarines through their agents ashore.

5. The submarine is to stand off shore sufficiently during the night to be in a safe position to receive W/T messages between the hours of midnight and 1 a.m.; when any information of the movements of enemy submarines will be communicated to her.

6. She is on no account to acknowledge the signals and is not to call up any vessel unless in need of assistance when she should communicate with the ship ordered in para. 2, or the armed trawlers *Tenby Castle* and *Newlands* on the long commercial wavelength.

7. The departure of the submarine from Aberdeen is to be communicated by land wire in cypher "X" to the Commander-in-Chief (telegraphic address "Afloat—Aberdeen") and also to Admiral Commanding, Orkneys and Shetlands (telegraphic address "Admiral, Longhope") for transmission to the Rear-Admiral Commanding, 10th Cruiser Squadron, for the information of ships and trawlers on "G" patrol.

(Signed) J. R. JELlicoe,
Admiral.

The S.N.O., Aberdeen (for the Officer in Command of the "E" class Submarine operating for Aberdeen).

(Copy to the Admiral Commanding, Orkneys and Shetlands.)

APPENDIX Q.

ORDERS FOR OPERATION "C.Y."

(Courses and bearings are Magnetic. Times are G.M.T. unless otherwise stated.)

1. The minelayers *Princess Margaret*, *Angora* and *Orvioto* will leave the Humber in time to arrive at position "A" (lat. $54^{\circ} 14\frac{1}{2}' N$, long. $4^{\circ} 38' E$) at 6 p.m. on Friday, 10th September.

2. Speed will then be increased so as to arrive at position "B" (lat. $54^{\circ} 22' N$, long. $6^{\circ} 0' E$) at 9 p.m.

3. Position "A" will be previously marked by a dan buoy laid by a light cruiser. The Commodore (T) will make all arrangements as to this.

4. At 9 p.m. *Princess Margaret* will increase speed so as to arrive at position "E" (lat. $54^{\circ} 31' N$, long. $7^{\circ} 36' E$) at midnight.

Angora will arrange her speed so as to arrive at position "D" (lat. $54^{\circ} 27' N$, long. $6^{\circ} 56' E$) at 11 p.m., pass through it and proceed to position "D.1," lat. $54^{\circ} 29' N$, long. $7^{\circ} 3' E$.

Orvioto will arrange her course and speed so as to arrive at position "C" (lat. $54^{\circ} 29' N$, long. $6^{\circ} 46' E$), at 11 p.m.

5. *Princess Margaret*, *Angora* and *Orvioto* will lay their mines in accordance with the plan. C.C.M.L. will issue detailed orders.

5 (a). (b) Mines are to be adjusted so that the top of the mine is 12 ft below L.W.O.S.

6. *Princess Margaret*, commencing at midnight, is to cease laying at 3 a.m. and then proceed as necessary for G Channel.

If unable to lay her mines on the track shown on the plan she should endeavour to lay them so as to foul the ground between her plan track and the British minefield laid in May.

The *Angora* should commence laying at "D.1" and follow the plan track to "D.2" (lat. $54^{\circ} 34\frac{1}{2}' N$, long. $7^{\circ} 27' E$), where she will stop laying and proceed as necessary for G Channel.

The *Orvioto* is to commence laying at "C" and follow the plan track to "C.1," where she will stop laying and proceed as necessary to return to G Channel.

7. The Commodore (T) will arrange for a destroyer to cruise in the vicinity of E Buoy, to point it out to returning ships, for as long as may be necessary.

8. Six destroyers will escort the minelayers.

Should the weather be suitable for destroyers and should the C.C.M.L. require them, two destroyers will remain with each minelayer during the night in readiness for any emergency.

The C.C.M.L. will issue orders respecting these destroyers and will furnish the Commodore (T) with a copy. Commodore (T) should arrange for the destroyers to arrive in the Humber in good time to afford C.C.M.L. an opportunity of seeing their Commanding Officers.

9. Should the destroyers remain for the night with the minelayers and should nothing occur to disarrange the plan the destroyers will escort their respective minelayers back to Sheerness.

10. No W/T signals are to be made or answered except for reporting the presence of the enemy or if attacked, or in case of serious mishap such as striking a mine.

11. Should the Admiralty require to communicate by W/T the following method will be used :-

"S" wave using the "F" procedure. Opportunity will be taken of sending at one of the times mentioned in Grand Fleet W/T Orders, Art. XI, para. 3 (i.e.—"S" wave for 5 minutes and 45 minutes past each hour). Such messages will also be repeated from Cleethorpes and at the next detached ship time.

12. The 5th Light Cruiser Squadron, *Aurora*, *Undaunted* and the remainder of the destroyers of the 9th and 10th Flotillas will leave Harwich in time to pass through position "A" at 9 p.m. on Friday, 10th September, and then steer N 62° E, 15 knots until 3 a.m. on Saturday. Course will then be altered for E Buoy in G Channel and at daylight speed will be increased and position taken in rear of the minelayers.

13. By dawn on 11th September, two groups, each consisting of three submarines, should be spread on a line north from the east end of Terschelling Island. The southern boat should be 8 miles from the land and the vessels should be spread 4 miles apart from her, the object being to attack any enemy vessels leaving the German ports to intercept the returning minelayers.

Firedrake or *Lurker* should accompany them for W/T duties. These will leave their stations at noon and return to their base should nothing have occurred.

14. The Vice-Admiral, Battle Cruiser Fleet, with the 1st Battle Cruiser Squadron, and either the 2nd or 3rd Battle Cruiser Squadron, with two light cruiser squadrons and destroyers as necessary for screening them should leave their base in time to enable them to reach a position "G" in lat. 55° 18' N, long. 5° 46' E at 3 a.m. on Saturday, 11th September 1915.

This force will act as a support for the Harwich Force should it become necessary. It should cruise in the neighbourhood of position "G" until 5 a.m.; and if nothing has occurred by then it should return to its base.

Admiralty.

11th September 1915.

From—Captain-in-Charge of Minelayers.

To—General.

Date—10th September 1915 (4.10 p.m.).

As we are so late, following modification of orders is necessary :-

Cancel para. 4 of my orders.

Modify paras. 2, 3 and 4 of Admiralty orders as follows : Ships remain in company at present speed until position "A" marked by a lighted dan buoy. About 7 p.m. when MK is made escort to return through "A" to meet Commodore. *Princess Margaret* will go on at 20 knots, *Angora* and *Orveto* to proceed independently at best speed without flaming to pass through Admiralty position "B" to positions "D" and "C" respectively, and lay their field in accordance with plan. Assume marking of position "A" as correct for departure point. Laying must be completed by 3 a.m.

Is all clear ?

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City of Edinburgh (Br. s.s.). Escapes from *U.39* in S.W. Approach, 2.
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City of Liverpool (Br. s.s.). Rescued from German s/m by *Spider*, 18 Aug., 43.
Clan Leslie (Br. s.s.). Escapes from *U.38S*, 22 Aug., 46.
Clintonia (Br. s.s.). Sunk 30 miles S.W. of Ushant, 1 Aug., 9; by *U.28*, 47.
Clover Bank (net drifter). Reward for destruction of supposed s/m, 19 July, 36.
Cobler (Br. collier). Sunk, 21 Aug., 46; by *U.38*, 47.
Coke, Vice-Admiral Sir Charles H., K.C.V.O. (Vice-Adl. Commanding on the Coast of Ireland, etc.). Considers armed trawlers unsuitable for acting out of touch with shore, 5; suggests strengthening patrol in Blacksea Area, 7; relieved by Adl. Bayly, 22 July, 8.
Columbella (armed merchant cruiser). Encounters *U.36*, 22 July, 30; in Bear Island Expedition, July, 23.
Cobville, Admiral the Hon. Sir Stanley, C. J., K.C.B., C.V.O. (Adl. Commanding Orkneys and Shetlands). Instructions *re* s/ms working with trawlers, 12 July, 18; orders to *Prince Charles*, 20 July, 19.
Commander-in-Chief, Devonport. See under Egerton.
Commander-in-Chief, Grand Fleet. See under Jellicoe.
Commander-in-Chief, High Sea Fleet. See under Pohl.
Commander-in-Chief, Plymouth. See under Egerton.
Commander-in-Chief, Portsmouth. See under Meux.
Commander-in-Chief, The Nore. See under Callaghan.
Commodore (Br. transport). Making nightly passages between Dublin and Liverpool, 10.
Commodore (T). See under Tyrwhitt.
Conquest (l.e.). In sweep for *Meteor*, 9 Aug., 75; in sweep of the Hoofden, 4 Aug., 84; in Operation B.Y., 17 Aug., 94; on Zeppelin patrol, 15 Sept., 109.
Constance (fishing smack). Sunk by German s/m, 7 Sept., 57.
Conway (Br. armed tr.). Engages *Z.14*, 8 Sept., 106.
Coriander (fishing smack). Sunk by German s/m, 30 July, 39.
Corsican (Br. transport). Carries munition workers from Canada, 10.
Costello (Br. s.s.). Sunk in S.W. Approach, 3 Aug., 9; by *U.28*, 47.
Cotsmuir (Br. armed tr.). Escorting *Batoum*, fires at periscope, 18 July, 37.
Craigard (Br. s.s.). Sunk in S.W. Approach by *U.39*, 2.

Cruiser Squadrons.

1st Cruiser Squadron. Exercising with Grand Fleet, 11-13 July, at Cromarty, 14 July, 12; proceeds from Cromarty to Scapa, 2 Aug., 67.
2nd Cruiser Squadron. Exercising with Grand Fleet, 11-13 July, 12; proceeds to Cromarty, 2 Aug., 67.
3rd Cruiser Squadron. Changes base with 7th Cruiser Squadron, 24 Aug., 102; sweep by, 7 Sept., 112.
1th Cruiser Squadron. Exercising with Grand Fleet, 11-13 July, 12; Changes base with 3rd Cruiser Squadron, 24 Aug., 102; sweep by, 7 Sept., 112.
10/A Cruiser Squadron. Armed guard from, captured in Pass of Balmaha, 24 July, 20; armed guard from, in Trondhjemsfjord, 28 July, 21; need of nearer examination ports for, 21; maintains patrol off Norwegian coast after 11 April, 24; warned to look out for *Meteor*, 6 Aug., 73.
Cymbeline (Br. oiler). Sunk by *U.33*, 4 Sept., 118.
D.3 (Br. s/m.). Cruising in Skagerrak, July, 24, 25; in the Bight, 20-21 Aug., 103; in the Bight, 14 Sept., 109.
DA (Br. s/m.). In Operation G., 4 July, 26; in the Bight, 20-25 Aug., 103.
D.7 (Br. s/m.). Cruise off Horn Reefs, 9 July, 29; bombed by seaplanes during Operation C.Y., 111.
D.8 (Br. s/m.). In Operation G., 4 July, 26.
Daghestan (Belg. s.s.). Sunk, 20 Aug., 46; by *U.38*, 47.
Dahlia (sloop). Mined in Moray Firth, 2 Sept., 82.
Daisy (Br. tr.). Explodes sweep over supposed s/m, 7 Aug., 50.
Danae (Fr. s.s.). Sunk by *U.36*, 23 July, 20.
Dane (Br. armed tr.). Mined near Aldborough Napes, 28 Aug., 61, 65.
Dane, Rear-Admiral C. H., M.V.O. (Commanding Milford Auxiliary Patrol), 1; remarks on loss of s.v. *Dumfriesshire*, 3; in command of 100 net drifters, 7; not convinced that *Amadavat* sank s/m, 14 Aug., 43.
Deseado (Br. s.s.). Sights German s/m, 18 Aug., 43.
Destroyer Flotillas.
1st Destroyer Flotilla. In Operation C., 28 July, 24; division of, in anti-s/m sweep, 102; four divisions of, in Operation C.Y., 11 Sept., 111.
2nd Destroyer Flotilla. Search for *U.25*, 1 July, 11; half of, in anti-s/m cruise, 102.
3rd Destroyer Flotilla. Relieves 10th Flot., mid-July, 10, 27.
4th Destroyer Flotilla. Two destroyers of, escort *Alfax*, 25 July, 21; four destroyers of, in Operation C., 28 July, 24; two divisions of, proceed to Cromarty, 2 Aug., 67; four destroyers of, in s/m hunt, 8 Aug., 70.
9th Destroyer Flotilla. In Operation C.Y., 11 Sept., 111.
10th Destroyer Flotilla. Based on Devonport, 2; operating from Devonport, 6; relieved by 3rd Flot., mid-July, 10, 27; divisions of, in Operation B.Y., 17 Aug., 94; in Operation C.Y., 11 Sept., 111.
Destroyer Flotillas (German).
2nd Destroyer Flotilla. Ordered to attack British forces, 9 Aug., 80; reconnoitring N. of Heligoland, 17 Aug., 95; search for British s/ms, 17 Aug., 96; ordered to hunt *E.6.*, 4 Sept., 104.
9th Destroyer Flotilla. Ordered to hunt *E.6.*, 4 Sept., 104.
Diana (l.e.). Escorts *Raglan* towards Gibraltar, 29 June, 10; leaves Devonport to join Mediterranean Squadron, 11 July, 10.
Dictator (Br. s.s.). Accosted by *U.20*, 5 Sept., 118.
Diomed (Br. s.s.). Sunk, 22 Aug., 46; by *U.38*, 47.
Director of the Intelligence Division. See under Oliver.
Director of Naval Ordnance. See under Singer.
Director of Navigation. See under Nelson-Ward.

Disa (Swed. s.s.): Mined near Aldborough Napes, 25 Aug., 61.
Division, 10th (Ulster). Transport of, 1-6 July, 6.
Dobson, Lieutenant-Commander, C. C. Commanding C.27, sinks U7.23, 20 July, 18.
Douro (Br. s.s.). Accosted by U7.20, 5 Sept., 118.
Dumfriesshire (Br. s.v.). Torpedoed in S.W. Approach by U7.24, 28 June 1, 3.
Dunsley (Br. s.s.). Sunk in S.W. Approach, 19 Aug., 44; by U.24, 47.
E.1 (Br. s/m.). Operating in Baltic, 20 July, 103.
E.4 (Br. s/m.). Cruising in Skagerrak, 24 July, torpedoes German armed trawler, 28 July, 25; stalks enemy s/m, 24 July, 39; anti-Zeppelin operation, 1-5 Sept., 104; anti-Zeppelin operation, 14-21 Sept., 109.
E.5 (Br. s/m.). In the Bight, 20-25 Aug., 103.
E.6 (Br. s/m.). Anti-Zeppelin Operation, 1-5 Sept., 104; Anti-Zeppelin Operation, 14 Sept., 109.
E.8 (Br. s/m.). In Operation G., 4 July, 26; leaves Harwich for Reval, 15 Aug., 103.
E.9 (Br. s/m.). Operating in Baltic, 29 July, 103.
E.13 (Br. s/m.). Cruise off Horn Reefs, 9 July, 29; crew of, intermed, 103.
E.16 (Br. s/m.). Detailed for cruise in the Bight, 23 July, 25; torpedoes K.188, 26 July, 30; in the Bight, 20-25 Aug., 103; off Norwegian coast, 11-15 Sept., 124; sinks U7.6, 15 Sept., 125.
E.17 (Br. s/m.). Cruising in Skagerrak, July, 24, 25; in the Bight, 14 Sept., 109.
E.18 (Br. s/m.). Imagines that she is being bombed, 14 July, 29; proceeds for Reval, 4 Sept., 103.
E.19 (Br. s/m.). Proceeds for Reval, 4 Sept., 103.
Edith (Br. s.v.). Sunk in S.W. Approach by U7.24, 27 June, 1.
Egerton, Admiral Sir George Le C., K.C.B. (Commander-in-Chief, Plymouth). Ordered to send destroyers to Adl. Bayly, 116.
Eleonora Marsk (Dan. s.s.). Stopped by U7.24 off Muckle Flugga, 8 Aug., 42.
Ellen (Dan. s.v.). Sunk in N. Sea by U7.24, 6 July, 1.
Ellesmere (Br. s.s.). Sunk by U7.20, 9 July, 5.
Ellison, Captain Alfred A. (Capt.-in-charge, Lowestoft). Reorganisation of patrols, 40; sends net drifters to Haisborough Lightship, 1 Aug, 48; commissions four sailing smacks as s/m decoys, 52; success of decoy smack, 14 Aug., 54; considers that German s/m was sunk by *Pet*, 23 Aug., 55; suggests raising wreck of U.C.2, July, 59; closes Stanford Channel, 13 Aug., 61.
Emblem (fishing smack). Sunk by German s/m, 7 Sept., 57.
Emerald (fishing smack). Attacked by U.B.6, 12 July, 33.
Emma (Swed. s.s.). Sunk in N. Sea by U7.6, 26 July, 17.
Emmanuel (fishing smack). Sunk by German s/m, 7 Sept., 57.
Empress (seaplane carrier). Based at Queenstown, July, 8; rescues survivors of *Hesperian*, 4 Sept., 118.
Empress of Britain (Br. s.s.). Escorted through Irish Channel, 2 July, 6.
E.M.W. (fishing smack). Sunk by German s/m, 13 Aug., 53.
Engadine (seaplane carrier). In Operation G., 4 July, 26.
Esteburg (Ger. tr.). Captured by E.4, 5 Sept., 104.
Evan-Thomas, Rear-Admiral Hugh, M.V.O. Appointed to command of new 5th Battle Squadron, 112.
Falkenhayn, General von. Agrees that London should be bombarded, 87.
Faulknor (flot. leader). Capt. (D) 4th Flotilla, sweeping for s/m, 1 July, 11; proceeds to Cromarty, 2 Aug., 67, 68.
Favereau, Vice-Admiral. His restrictions on traffic owing to mines, 13 July, 34.
Fearless (I.e.). Screening 3rd Battle Squadron, 17 Aug., 92; in Operation C.Y., 11 Sept., 111.
Fichandel (Ger. tr.). Captured during Operation C.Y., 11 Sept., 111
Fiery Cross (Nor. s.v.). Sunk in S.W. Approach by U7.39, 3 July, 2.

Finnelite (Nor. s.s.). Sunk by U7.36, British armed guard escape, 23 July, 20.
Finedrake (t.b.d.). Picks up crews of two smacks, 6 Aug., 49; searches for C.33, 6 Aug., 83; escort for British s/ms, 84.
First Lord of the Admiralty. See under Balfour.
First Sea Lord. See under Jackson.
Firth (Br. s.s.). Torpedoed in swept channel, 25 July, 39.
Fitzgerald (fishing smack). Sunk by U7.B.10, 30 July, 39.
Foster, Lieutenant-Commander W. J. Commanding E.6, engages L.9, 4 Sept., 104.
Francois (Fr. s.v.). Sunk in S.W. Approach, 10 Aug., 42; by U7.35, 47.
Frode (Dan. s.s.). Torpedoed without warning, 3 Sept., 118.
Fulgens (Br. s.s.). Blown up near Haisborough Lightship, 1 Aug., 48.
Fury (t.b.d.). In s/m hunt off the Fastnet, 8-9 Aug., 42.
G.103 (Ger. t.b.d.). Attacks British force, 17 Aug., 96.
G.104 (Ger. t.b.d.). Attacks British force, 17 Aug., 96.
G.196 (Ger. t.b.d.). Damaged by mine, 12 Sept., 114.
Gadsby (Br. s.s.). Sunk in S.W. Approach by U7.39, 2.
Galatea (I.e.). Broad pendant of Commodore Alexander-Sinclair, in Operation C., 28 July, 24.
Galicia (Br. s.s.). Mined in the Downs, 31 July, 36.
"G" and *"E"* (decoy smack). Encounter with German s/m, 11 Aug., 52, 53, 55; paid off, end of September, 58.
Gaunt, Rear-Admiral, E. F. A., C.M.G. Relieves Adl. Evan-Thomas in 1st Battle Squadron, 25 Aug., 112.
Gayer, Captain. German naval historian, 18.
Geiranger (Nor. s.s.). Attacked by U7.24 and abandoned, 7 Aug., 42; derelict of, sighted by 4th L.C.S., 8 Aug., 74.
General Radetsky (Russ. s.s.). Sunk by U7.41, 16 July, 14.
George Baker (Br. s.s.). Sunk in Irish Channel, 17 Aug., 43; by U.38, 47.
German Army Command. Urgent request that import of munitions into Russia should be stopped, 22.
Germania (Swed. s.s.). Taken into List by U7.6, 21 July, 17.
Gibbon, Sub-Lieutenant C. J., R.N.R. Commanding *Ariadne II*, encounters U.25, 11 July, 11.
Gibraltar (cruiser). Detailed to destroy German W/T station W. Spitzbergen, Oct. 1914, 23.
Gladiator (Br. s.s.). Sunk in S.W. Approach, 19 Aug., 45; by U.27, 47.
Glenby (Br. collier). Sunk off the Tuskar, 17 Aug., 43; by U7.38, 47.
Glenravel (Br. s.s.). Sunk 8 Aug., 70; by U7.17, 83.
Glimt (Nor. s.v.). Sunk by U7.20, 4 Sept., 118.
Gloria (Br. tr.). Sunk by U7.17, Aug., 83.
Goodenough, Captain William E., M.V.O., A.-d.-C., G.S.P. (Commodore 2nd Class). In command of sweep for *Meteor*, 9 Aug., 75.
Goshawk (t.b.d.). Sinks *Hanseat* during Operation C., 29 July, 24.
Gossamer (torpedo-gun-boat). Encounter with U7.41, 16 July, 14.
Gotaland (Swed. s.s.). Captured by U7.17, Aug., 83.
Grand Fleet. See under Jellicoe. To sail though short of destroyers, July, 13; defence of bases of, 118; Operation T, confined to, 27; mine-sweepers from, ordered to Harwich, 20 July, 31; at short notice, 9 Aug., 82; at short notice, 16 Aug., 90; armed whalers for use with, 91; not s/m objective, Aug., 102; in exercise cruise, 2-5 Sept., 112; undesirable to take destroyers from, 116.
Graeff, Lieutenant-Commander. Commanding U7.36, sunk by *Prince Charles*, 24 July, 19.
Grangeirood (Br. s.s.). Sunk off Muckle Flugga by U7.41, 24 July, 21.
Greatheart (Br. armed tr.). Mined off South Foreland, 24 Sept., 123.
Groningen (Br. s.s.). Mined off Sunk Head, 22 Sept., 122.
Gross, Lieutenant. Commanding U.B.4, sunk by *Inverlyon*, 15 Aug., 54.
Guatemala (Fr. s.s.). Sunk by U7.20, 6 Sept., 118.
Guido (Br. s.s.). Torpedoed by U7.25, 8 July, 11.

Gunner (Br. armed tr.). Encounter with U.16, 20 July, 16; no chance of meeting U.6, 11 Sept., 124.

Hainton (Br. f.v.). Destroyed by U.25, 11 July, 11.

Halahan, Lieutenant-Commander, R. C. Commanding E.18, July, 29.

Hamond, Lieutenant C. E. Commanding G. and E., encounters German s/m, 11 Aug., 52.

Hampshire (cruiser). Attacked by U.25, off Noss Head, 1 July, 11.

Hanseat (Ger. tr.). Sunk by *Goshawk* and *Phoenix* during Operation C., 29 July, 24.

Hansen, Lieutenant-Commander. Commanding U.41, July, 21; sunk by *Baralong*, 24 Sept., 119.

Hardy, Captain S. T. See under Capt. of Patrols (Queenstown).

Harwich Auxiliary Patrol. Disposition of, 110.

Harwich Force. No part in Operation T., 27; called upon to provide escort for minelayers, 5 July, 28; in sweep for *Meteor*, 9 Aug., 75; sweep of the Hoofden, 4-5 Aug., 84; Channels used by, 115; supplies S.W. Approach with destroyers, 116.

Havelock (monitor). Left England for Dardanelles, 1 July, 10.

Hazel (armed boarding steamer). Convoys *Havelock* to Mediterranean, 1 July, 10.

Heliotrope (fishing smack). Sunk by German s/m, 4 Aug., 48.

Henniker-Heaton, Commander R. Commanding *Morris* in Operation B.Y., 17 Aug., 94; encounters German destroyers, 17 Aug., 97.

Henry Charles (fishing smack). Sunk by German s/m, 24 July, 39.

Herbert, Lieutenant-Commander Godfrey. Commanding *Baralong*, 9; sinks U.27, 19 Aug., 45; relieved by Lieut.-Comm. Wilmot-Smith, 119.

Hermione (Br. tr.). Sunk by U.36, 23 July, 20.

Hesione (Br. s.s.). Sunk by U.41, 23 Sept., 119.

Hesperian (Br. s.s.). Blown up, 4 Sept., 118.

Highland Corrie (Br. s.s.). Mined near Elbow Buoy, 14 Aug., 62.

High Sea Fleet. Exercising, 6 July, 13; takes no action to interfere with Operation G., 4 July, 26; prepares for exercise cruise, 6 July, 28; carries out an operation, 12 Sept., 112, 113; narrowly avoids a minefield, 12 Sept., 114.

Hillebrand, Lieutenant. Commanding U.16, 20 July, 16.

Hipper, Admiral. In minelaying operations, 12 Sept., 113.

Hinondelle (Fr. s.v.). Sunk in S.W. Approach by U.39, 2.

Holtendorf, Admiral von. Decides that air raids should cease, 109; relieves Adl. Bachmann as Chief of the Staff, 3 Sept., 117.

Honiton (Br. s.s.). Mined near Longsand Lightship, 30 Aug., 65.

Honorina (Br. tr.). Sunk by U.36, 23 July, 20.

Hope (t.b.d.). Escorting *Aquitania*, 30 July, 10.

Horde (Br. s.s.). Mined near Aldborough Napes Buoy, 20 Sept., 122.

Howth Head (Br. s.s.). Escapes from U.27 in S.W. Approach, 19 Aug., 45.

Hudson, Sub-Lieutenant C. H., R.N.R. Awarded D.C.S., July, 16.

Humphrey (fishing smack). Sunk by German s/m, 11 Aug., 51.

Hutchings, Lieutenant J. F. Commanding C.34, 18.

Iberian (Br. s.s.). Sunk in S.W. Approach by U.28, 30 July, 9.

Ieeni (fishing smack). Sunk by German s/m, 27 July, 39.

Inconstant (I.e.). In Operation C., 28 July, 24.

Indefatigable (battle cruiser). Sighted by U.19, 16 July, 15.

Indrani (Br. s.s.). Torpedoed in S.W. Approach by U.24, 27 June, 1.

Inglemoor (Br. s.s.). Sunk in S.W. Approach by U.39, 2.

Imman, Commander E. T. Commanding *Mentor*, in Operation B.Y., 17 Aug., 94; encounter with German destroyers, 17 Aug., 97, 98.

Integrity (fishing smack). Sunk by German s/m, 23 Aug., 55.

Inverlyon (decoy smack). Sinks U.B.A., 15 Sept., 54; encounters German s/m, 7 Sept., 57; paid off, end of Sept., 58.

Iron Duke (battleship). Flagship of Adl. Jellicoe. Proceeds from Cromarty to Scapa, 2 Aug., 67; returns to Cromarty, 70.

Isidor (Spanish s.s.). Sunk, 17 Aug., 43; by U.38, 47.

Jackson, Admiral Sir Henry Bradwardine, K.C.B., K.C.V.O., F.R.S. (1st Sea Lord). Opinion of, re Folkestone-Grimsby boom, 64; his remarks re destroyers, 116.

Jajjan (minesweeper). Mined near S. Shipwash Buoy, 16 Aug., 62.

Jason (Dan. barque). Burnt by *Meteor*, 9 Aug., 75, 79; crew of, transferred to Danish craft, 10 Aug., 80.

Jay (Br. tr.). Explodes sweep over s/m, 7 Aug., 50.

Jehan, Gunner Ernest M. Commanding *Inverlyon*, sinks U.B.A., 15 Aug., 54; encounters German s/m, 7 Sept., 57.

Jellicoe, Admiral Sir John Rushworth, G.C.B., K.C.V.O. (C.-in-C., Grand Fleet). Proposal for Operation T approved, 11 July, 12; special effort to intercept enemy s/ms, 4-10 July, 13; asks for two C-class s/ms, 18; warning to, re U.A.1, 23 July, 21; suggested new route for Archangel traffic adopted, 21; suggested sending expedition to reconnoitre Bear Island, June, 23; efforts to stop transport of iron ore to Germany, 24; suggests relaying Dover minefield, May, 28; information re H.S.F., passed to, 6 July, 28; warning to, re German s/ms, 4 Aug., 41; failure of his s/m hunt to hinder U.24, 8 Aug., 42; suggests laying deep minefield at Aldborough Napes, 61; proceeds from Cromarty to Scapa, 2 Aug., 57; returns to Cromarty, 70; conference with Prime Minister, 8 Aug., 70; receives report of mines in Moray Firth, 8 Aug., 71; warning to, re *Meteor*, 6 Aug., 73; orders 4th L.C.S. to Horn Reefs, 9 Aug., 74; his opinion re Moray Firth Patrols, 9 Aug., 81; lays down new steamer track to Pentland Firth from the S., 10 Aug., 82; proposes west side of the Blight for minefield, 89; ordered to stand by at short notice, 16 Aug., 80; his anti-minelaying precautions, 91, 92; considers *Boreas* should have to be sunk, 100; requests Admiralty to cancel orders re German trawlers, 100; request for more decoy ships, 20 Aug., 102; suggests s/ms should cruise off Norway, 103; suggestion to use his destroyers for s/m hunting, 116; request re Archangel traffic, 118; sends E.16 to hunt s/ms off Norwegian coast, 11 Sept., 124; orders to E.16, 2 Sept., 125.

Juno (I.e.). Accompanies *Havelock* to Mediterranean, 1 July, 10.

J.W.F.T. (fishing smack). Sunk by German s/m, 13 Aug., 53.

Kaiser (Ger. battleship). In minelaying operation, 12 Sept., 114.

Kaiser, The. Renews his embargo on bombardment of London, 87; finally sanctions bombardment of London, 20 July, 87; his orders re s/m campaign, 27-30 Aug., 117; effect of orders, 123.

Kalmia (Br. armed tr.). Encounter with U.25, 11 July, 11.

Kapetta (Swed. s.s.). Sunk in N. Sea by U.6, 18 July, 17.

Kathleen (fishing smack). Sunk by German s/m, 24 July, 39.

Kempensfeldt (flot. leader). Sights periscope whilst running trials, 43, 47.

King Athelstan (Br. tr.). Sunk by U.36, 22 July, 20.

Kirkby (Br. s.s.). Sunk in Irish Channel, 17 Aug., 43; by U.38, 47.

Knorr, Commander von. Commanding *Meteor*, starts for Moray Firth, 6 Aug., 72; reports progress, 74; makes further W/T signals, 9 Aug., 76; his great courtesy, 78; his visit to the Moray Firth, 8 Aug., 79.

Kock, Vice-Admiral Reinhard. Relieves Adl. Behncke as Deputy Chief of the Staff, 3 Sept., 117.

Kolbe, Lieutenant-Commander, Constantin. Commanding U.19, 16 July, 15.

Koningin Emma (Dutch s.s.). Mined off Sunk Head, 22 Sept., 122.

Koophandel (Belg. s.s.). Sunk, 1 Aug., 9; by U.28, 47.

Kotka (Nor. s.v.). Shelled by U.39; abandoned, and subsequently towed in to Queenstown, 2.

L.6 (Ger. airship). Discovers mines in the Bight, 14 July, 30.

L.7 (Ger. airship). Sighted by Harwich force, 9 Aug., 75; reports presence of British cruisers to *Meteor*, 9 Aug., 77; looks for *Meteor*, 9 Aug., 79; sights British forces, 9 Aug., 80.

L.9 (Ger. airship). In air raid, 9-10 Aug., 87; in air raid, 12-13 Aug., 88; engaged by E.6, 4 Sept., 104; in air raid, 8-9 Sept., 106.

- Z.10 (Ger. airship). In air raid, 9-10 Aug., 87; in air raid, 12-13 Aug., 88; in air raid, 17-18 Aug., 101; destroyed by lightning, 3 Sept., 104.
- Z.11 (Ger. airship). In air raid, 9-10 Aug., 87; in air raid, 12-13 Aug., 88; in air raid, 17-18 Aug., 101; breaks down, 8 Sept., 106; reports encounter with British force, 15 Sept., 108; encounter not with Harwich cruisers, 109.
- Z.12 (Ger. airship). Destroyed, 10 Aug., 86, 88; in air raid, 9-10 Aug., 87.
- Z.13 (Ger. airship). In air raid, 9-10 Aug., 87; in air raid, 12-13 Aug., 88; in air raid, 17-18 Aug., 101; in air raid, 8-9 Sept., 106; damaged in air raid, 13 Sept., 108.
- Z.14 (Ger. airship). In air raid, 9-10 Aug., 87; in air raid, 17-18 Aug., 101; in air raid, 8-9 Sept., 106.
- Laburnum* (sloop). Hears SOS call from *Hesperian*, 4 Sept., 118.
- Lady Wolseley* (defensively armed s.s.). Drives off German s/m, 18 Aug., 43; s/m was U7.24, 47.
- Laforey* (t.b.d.). Sent to Mediterranean, 13 Sept., 112.
- Landrail* (t.b.d.). In s/m hunt, off the Fastnet, 8-9 Aug., 42.
- Larchmore* (Br. s.s.). Sunk in S.W. Approach by U7.39, 2.
- Lark* (fishing smack). Sunk by German s/m, 1 Aug., 48.
- Laurel* (t.b.d.). Patrols off the Texel, 11-12 July, 27; in s/m hunt off the Fastnet, 8-9 Aug., 42; patrols at N. Hinder, 30 Aug., 65.
- Laverock* (t.b.d.). In s/m hunt, off the Fastnet, 8-9 Aug., 42.
- Lawford* (t.b.d.). Sent to Mediterranean, 13 Sept., 112.
- L.C. Tower* (Br. s.v.). Destroyed in S.W. Approach by U7.24, 1 July, 1.
- Leader* (fishing smack). Sunk by German s/m, 11 Aug., 51, 52, 53.
- Leandros* (minesweeping tr.). Blown up near N. Knock Buoy, 6 Aug., 60.
- Learmonth, Captain Frederic C.* (President of the Committee on Anti-submarine Defences). His report on Folkstone-Grisez boom, 64.
- Lee, Petty Officer George M.* Commanding *Pet*, encounters German s/m, 23 Aug., 55.
- Leelanaw* (U.S.A. s.s.). Sunk by U7.41, 24 July, 21.
- Legion* (t.b.d.). In s/m hunt off the Fastnet, 8-9 Aug., 42.
- Leir, Commander Ernest W.* Commanding *E4*, torpedoes large German armed trawler, 28 July, 25.
- Le Mesurier, Captain Charles E.* (Commodore 2nd Class). Commanding 4th L.C.S., Aug., 73; receives intelligence re *Meteor*, 9 Aug., 74; uses his discretion, 75; intercepts Admiralty's recall signal, 9 Aug., 77.
- Lennok* (Russ. s.s.). Sunk by U7.20 N. of Shetlands, 13 July, 5, 13.
- Leo* (Russ. s.s.). Sunk by U7.20, 9 July, 5.
- Leonidas* (t.b.d.). Patrols off the Texel, 11-12 July, 27; in s/m hunt off the Fastnet, 8-9 Aug., 42.
- Lepsius, Lieutenant.* Commanding U7.6, 18 July, 17; operating off the Skagerrak, 10 Sept., 124; not saved, 15 Sept., 125.
- Liberty* (t.b.d.). Escorting *Aquitania*, 30 July, 10; patrols off the Texel, 11-12 July, 27; in s/m hunt off the Fastnet, 8-9 Aug., 42.
- Light Cruiser Squadrons.**
- 1st *Light Cruiser Squadron.* In sweep for *Meteor*, 9 Aug., 75; recalled by Admiralty, 9 Aug., 77; sighted by *L.7*, 9 Aug., 80; returns to Rosyth, 10 Aug., 83; anti-minelaying cruise of, 17 Aug., 92; in Operation C.Y., 11 Sept., 111.
- 2nd *Light Cruiser Squadron.* In Operation C., 28 July, 24; in sweep for *Meteor*, 9 Aug., 75; recalled by Admiralty, 9 Aug., 77; returns to Rosyth, 10 Aug., 83; in exercise cruise, August, 92; in Operation C.Y., 11 Sept., 111; cruises, 1-2 Sept., 112.
- 4th *Light Cruiser Squadron.* Exercising with Grand Fleet, 11-13 July, 12; patrols off Norwegian coast, 6-8 Aug., 73; ordered to Horn Reefs, 9 Aug., 74; anti-minelaying cruise of, 17 Aug., 92.
- 5th *Light Cruiser Squadron.* To cover retreat of minelayers, 13 Aug., 89; in Operation B.Y., 17 Aug., 94; in Operation C.Y., 11 Sept., 111.

Light Cruiser Squadrons—continued.

- 6th *Light Cruiser Squadron.* In Operation G., 4 July, 26; at short notice, 10 Aug., 85; anti-minelaying cruise of, 92; four vessels of, ordered to Mediterranean, 6 Sept., 112.
- Lilac* (sloop). Damaged by mine in Moray Firth, 18 Aug., 82.
- Linnet* (t.b.d.). Patrols at N. Hinder, 30 Aug., 65.
- Lion* (battle cruiser). Flagship of Admiral Beatty. In exercise cruise, Aug., 92.
- Litchfield, Captain F. Shirley* (Capt.-in-Charge of Minelayers). In *Princess Margaret*, Commanding Operation B.Y., 94; sights four German destroyers, 17 Aug., 95; encounter with German destroyers, 17 Aug., 97; abandons Operation B.Y., 98; his order criticised, 99; in Operation C.Y., 11 Sept., 111.
- Lomas* (Br. s.s.). Sunk in S.W. Approach by U7.39, 30 June, 2.
- Lookout* (t.b.d.). Patrols at N. Hinder, 30 Aug., 65.
- Lord Henega* (Br. armed tr.). Encounter with U7.20 west of Ireland, 8 July, 5.
- Lord Percy* (Br. armed tr.). Picks up crew of *Castello*, 3 Aug., 9.
- Louis* (t.b.d.). In s/m hunt off the Fastnet, 8-9 Aug., 42; sent to Mediterranean, 13 Sept., 112.
- Lowry, Admiral Sir Robert S., K.C.B.* (Adl. Commanding on the Coast of Scotland). Protests against withdrawal of s/ms, 18; his anti-s/m policy, 69.
- Loyalty* (Br. hospital ship). Picks up crew of *Benvorlick*, 1 Aug., 9.
- Lucena* (Br. s.s.). Sunk in S.W. Approach by U7.24, 27 June, 1.
- Lucifer* (t.b.d.). Patrols off the Texel, 11-12 July, 27.
- Luneda* (Br. armed tr.). Encounter with U7.24 in S.W. Approach, 1 July, 1.
- Lawcher* (t.b.d.). Escort for British s/ms, 84.
- Lusitania* (Br. s.s.). Effect of sinking of, 117.
- Lydian* (Br. armed tr.). Mined near South Goodwin Lightship, 19 Sept., 123.
- Lydiard* (t.b.d.). Sent to Mediterranean, 13 Sept., 112.
- Lynx* (t.b.d.). In s/m hunt, 8 Aug., 70; mined in Moray Firth, 9 Aug., 71.
- Lyons* (decoy ship). In S.W. Approach, Aug., 9; paid off, 45.
- Lysander* (t.b.d.). Ordered to escort *Cito* to Humber during Operation C., 29 July, 24; patrols at N. Hinder, 30 Aug., 65.
- Mafeking* (Br. armed tr.). In Bear Island Expedition, July, 23.
- Magda* (Nor. s.s.). Torpedoed off Travose Head, 18 Aug., 43; by U7.38, 47.
- Maggie* (Br. s.s.). Sunk in Irish Channel, 17 Aug., 43; by U7.24, 47.
- Magnolia* (sloop). Hears SOS call from *Hesperian*, 4 Sept., 118.
- Majestic* (Br. fishing tr.). Attempt to ram s/m saves *Matje*, 17 Aug., 43.
- Malmland* (Swed. s.s.). Sunk off Kinnaird Head, 8 Aug., 70; by U7.17, 83.
- Malta* (Br. armed tr.). Mined near N. Shipwash buoy, 1 Sept., 65; see under Weelsby.
- Mangara* (Br. s.s.). Blown up near Sizewell Bank buoy, 28 July, 39.
- Manly* (t.b.d.). Escort duties of, 6; ashore off Queenstown, 2 July, 6; in Operation B.Y., 17 Aug., 94; attacked by German destroyers, 17 Aug., 97.
- Mansfield* (t.b.d.). In sweep of the Hoofden, 4 Aug., 84.
- Manx Queen* (Br. armed tr.). Engages L.13, 8 Sept., 106.
- Marian Lightbody* (Russ. s.v.). Sunk by U7.20, 50 miles S. of Cape Clear, 8 July, 5.
- Marie* (Dan. s.v.). Destroyed by U7.17, 15 Aug., 83.
- Mark-Wardlaw, Lieutenant, W. P.* Commanding *Prince Charles*, sinks U7.36, 24 July, 19.
- Mars* (Nor. s.s.). Escapes from U7.38, 20 Aug., 46.
- Martha Edmunds* (Br. s.s.). Sunk by U7.38, 20 Aug., 46.
- Matchless* (t.b.d.). In Operation B.Y., 17 Aug., 94; attacked by German destroyers, 17 August, 97.
- Matje* (Br. collier). Rescued by fishing trawler *Majestic*, 17 Aug., 43; from U7.24, 47.

Mauretania (Br. transport). Leaves Liverpool, 9 July, 6.
Maxton (late s.s.; *Start Point*). Rescued from German s/m by *Amadavat*, 14 Aug., 43.
Meadowfield (Br. s.s.). Sunk 50 miles S.W. of Tuskar by U.20, 9 July, 5.
Medea (t.b.d.). In sweep of the Hoofden, 4 Aug., 84.
Medusa (t.b.d.). In sweep of the Hoofden, 4 August, 84; in Operation B.Y., 17 Aug., 94; searches *Boneas*, 16 Aug., 94, 100.
Mentor (t.b.d.). Rescues of *Anglo-Californian*, 4 July, 2; escort duties of, 4 July, 6; in sweep of the Hoofden, 4 Aug., 84; in Operation B.Y., 17 Aug., 94; encounter with German destroyers, 17 Aug., 97; torpedoed, 98; reaches Harwich, 18 Aug., 98.
Merlin (fishing smack). Sunk by U.L.B.6, 12 July, 33.
Meteor (Ger. auxiliary minelayer). Suspected of laying White Sea minefield, 22; sinks *Ramsey*, 8 Aug., 71; starts for Moray Firth, 6 Aug., 72, 73; reports progress, 74; is scuttled by her own crew, 9 Aug., 76, 77; lays mines in Moray Firth, 8 Aug., 78, 79; crew of, found by U.28, 10 Aug., 80; challenged by *Agatha*, 9 Aug., 81; effect of mines laid in Moray Firth by, 82; loss of, shock to H.S.F. authorities, 96.
Meux, *Admiral of the Fleet*, the Hon. Sir *Hedworth*, G.C.B., K.C.V.O. (C-in-C., Portsmouth). Warned, re German mines, 9 Sept., 120.
Midge (t.b.d.). In s/m hunt, 8 Aug., 70, 71.
Midland Queen (Br. s.s.). Sunk in S.W. Approach, 4 Aug., 9; by U.28, 47.
Mimosa (Br. oiler). Sunk by U.33, 4 Sept., 118.
Mimos (t.b.d.). In Operation B.Y., 17 Aug., 94; hears W/T signals, 16 Aug., 94; attacked by German destroyers, 17 Aug., 97.
Miranda (t.b.d.). Rescues of *Anglo Californian*, 4 July, 2; escort duties of, 4 July, 6; in Operation B.Y., 17 Aug., 94; sinks *Roland Bx.* 40, 16 Aug., 94; attacked by German destroyers, 17 Aug., 97.
Miura (Br. armed tr.). Mined near Middle Cross Sand Buoy, 23 Aug., 61.
Monarch (Br. cable ship). Mined off Folkestone, 8 Sept., 120.
Monsoon (Br. armed yacht). Encounter with U.17, Aug., 83.
Moorsom (t.b.d.). On escort duty, 7 July, 6; in Operation B.Y., 17 Aug., 94; attacked by German destroyers, 17 Aug., 97.
Mora (Br. s.s.). Sunk by U.20, 8 Sept., 118.
Morna (Nor. s.v.). Sunk in S.W. Approach, 10 Aug., 42; by U.35, 47.
Morris (t.b.d.). In Operation B.Y., 17 Aug., 94; attacked by German destroyers, 17 Aug., 97.
Morton, *Lieutenant L.*, R.N.R. Commanding *Princess Marie José*, at sinking of U.23, 20 July, 18.
Muller, *Admiral von*. Related to Adl. von Holtzendorff, 117.
Muncken (Ger. l.e.). Reports minefield, 12 Sept., 114.
Mund (Ger. tr.). Captured during sweep for *Meteor*, 9 Aug., 77.
Murray (t.b.d.). On escort duty, 7 July, 6.
Nadine (Br. armed tr.). Mined near N. Shipwash Buoy, 1 Sept., 65.
Narcissus (Br. armed yacht). Encounter with U.24 in S.W. Approach, 27 June, 1.
Nelson-Ward, *Captain Philip*, M.V.O. (Director of Navigation). Comments on suggestion to move light vessels, 32.
New York City (Br. s.s.). Sunk in S.W. Approach, 19 Aug., 44, by U.24, 47.
Nicholson, *Captain Wilmot S.* Commanding *Aurora*, in Operation B.Y., 17 Aug., 93; considers *Boreas* should have been sunk, 100.
Nicosian (Br. s.s.). Rescued from U.27 by *Baralong*, 19 Aug., 45.
Nigretian (Br. s.s.). Mined near South Goodwin Lightship, 19 Sept., 123.
Nimrod (t.b.d.). In Operation C.Y., 11 Sept., 111.
Nimrod (fishing smack). Sunk by two German s/ms, 10 Sept., 58.
Nogill (Dan. s.s.). Sunk by German destroyers in N. Sea, 25 July, 16.
Nordaas (Nor. s.s.). Sunk by U.25, 8 July, 11.
Norddeich (Ger. W/T station). Communication with s/ms at sea, 15; intercepted signal from, 24 Aug., 117, 118.
Nordlyset (Nor. s.v.). Burned by U.36, 19 July, 20.

Nugget (Br. s.s.). Sunk in S.W. Approach by U.28, 31 July, 9.
Oakwood (Br. s.s.). Sunk in S.W. Approach, 11 Aug., 43, by U.27, 47.
Ocean Queen (Br. tr.). Sunk by U.38, 6 Aug., 41.
Oceans Gift (fishing smack). Sunk by German s/m., presumably U.B.10, 10 Aug., 51.
Oliver, *Rear-Admiral Henry*, F., C.B., M.V.O. (Director of the Intelligence Division, Oct. 1914). Suggestion to destroy German W/T station in West Spitzbergen, 10 Oct., 1914, 23. (Chief of Admiralty War Staff, Nov., 1914, see Vol. III, 33.) Considers deep minefields not justified by results, Aug., 61; receives decodes of signals sent by *Meteor*, 8 Aug., 74; receives *Meteor's* last signal, 9 Aug., 77.
Orduna (Br. s.s.). Attacked in S.W. Approach by U.24, 27 June, 1; escapes from U.20 in S.W. Approach, 9 July, 5.
Orvieto (Minelayer). New Dover minefield laid, 9 July, 28; in Operation C.Y., 11 Sept., 111.
Osprey (Br. s.s.). Sunk in S.W. Approach, 12 Aug., 43; by U.27, 47.
Pakenham, *Rear-Admiral William*, C., C.B., M.V.O. (Rear-Adl. 2nd Battle Cruiser Squadron). In command of Operation C, 28 July, 24.
Palmgrove (Br. s.s.). Sunk, 22 Aug., 46; by U.38, 47.
Paros (Br. s.s.). Sunk in Irish Channel, 17 Aug., 43; by U.38, 47.
Parslow, *Captain F.* (Master, *Anglo-Californian*). Killed by U.39, 4 July, 2.
Pass of Balmaha (U.S. s.v.). Captured by U.36, 24 July, and converted into *Seeadler*, 20.
Patrol (L.e.). Based on Humber, 112.
Pearl (Br. armed tr.). Encounter with U.41, 27 July, 21.
Pears, *Rear-Admiral Edmund*, R. (Commanding the Cromarty Base), 68. Asks for inquiry into Moray Firth patrol arrangements, 81.
Peik (Nor. s.s.). Mined off Longsand Light Vessel, 5 July, 31.
Pena Castillo (Spanish s.s.). Sunk, 19 Aug., 46; by U.38, 47.
Penelope (I.e.). In exercise cruise, 15 July, 27; in Operation B.Y., 17 Aug., 94; on Zeppelin patrol, 13 Sept., 109.
Pet (decoy smack). Encounter with German s/m, 23 Aug., 55; paid off, end of September, 58.
Peterson, *Lieutenant F. H.*, R.N.R. Commanding *Taranaki*, 26 July, 17.
Phaeton (I.e.). Patrols off Norwegian coast, 6-8 Aug., 73; returns to Scapa, 9 Aug., 75.
Phoenix (t.b.d.). Sinks *Hanseat* during Operation C, 29 July, 24.
P.L.25. (Ger. airship). Looks for *Meteor*, 9 Aug., 79.
Pohl, *Admiral von* (Commander-in-Chief, High Seas Fleet). His desire to use submarines against British Fleet, 1; *Meteor's* "en clair" signal to, 9 Aug., 77; too late to save *Meteor*, 9 Aug., 80; makes no attempt to entice British Fleet over *Meteor's* minefield, 82; prepares for British air attack, 15 Aug., 90; decides to lay new minefield, 113; narrowly avoids a minefield, 12 Sept., 114.
Portia (Br. s.s.). Sunk in S.W. Approach, 2 Aug., 9; by U.28, 47.
President of the Committee on Anti-submarine Defence. See under Learmonth.
Price, *Lieutenant T. E.*, R.N.R. Awarded D.S.C., July, 16.
Prince Albert (Bel. s.s.). Blown up near Shipwash Lighthouse, 30 July, 39.
Prince Charles (decoy ship). Sinks U.36, 24 July, 19.
Princess Ena (decoy ship). Encounter with U.39 in S.W. Approach, 4 July, 2; at Southampton, 31 July, 9; paid off, 45.
Princess Louise. See under *Princess Marie José* (Br. armed tr.).
Princess Margaret (minelayer). In Operation B.Y., 17 Aug., 93, 94, 95; attacked by German destroyers, 17 Aug., 97; returns to harbour, 98; in Operation C.Y., 11 Sept., 111.
Princess Marie José (Br. armed tr.). Temporarily renamed *Princess Louise*, at sinking of U.23, 20 July, 18; operating with C.27, Aug., 83.
Princess Marie José (Belg. s.s.). Blown up near Shipwash Lightship, 29 July, 39.

Prospector (fishing smack). Sunk by *U.B.10*, 30 July, 39.
Prosper (fishing smack). Sunk by German s/m, 24 July, 39.
Purple Heath (fishing smack). Sunk by *U.B.6*, 12 July, 39.
Queen (Br. collier). Sunk by German s/m, 17 Aug., 43.
Queen Elizabeth (battleship). Joins new 5th B.S., 112.
Quest (fishing smack). Sunk by *U.B.10*, 30 July, 39.
Quickly (decoy ship). Encounter with *U.16*, 20 July, 16, 21; cruising 13-15 Sept., 126.
Raby, Captain Arthur R. Appointed to new Patrol Area XXII, with base at Holyhead, 8.
Raglan (monitor). Left Pembroke for Dardanelles, 29 June, 10.
Ramsey (armed boarding steamer). Sunk by *Meteor*, 8 Aug., 71, 74, 79; crew of, rescued, 9 Aug., 76; report of survivors, 78.
Ranza (Br. collier). Sunk, 1 Aug., 9; by *U.28*, 47.
Ratapiko (Br. armed tr.). With *C.23*, encounters *U.17*, 11 Aug., 83.
Ready (decoy ship). Commanded by Adl. Startin, Sept., 124; cruising, 13-15 Sept., 126.
Rear-Admiral, 2nd Battle Cruiser Squadron. See under Pakenham.
Regensburg (Ger. l.e.). Lays mines off Swarte Bank, 12 Sept., 113.
Renfrew (Br. s.s.). Sunk in S.W. Approach by *U.39*, 2.
Rea, Mr. J. (W/T Operator, *Anglo-Californian*). Reward of, 2.
Repeat (Br. s.s.). Sunk in Irish Channel, 17 Aug., 43; by *U.38*, 47.
Restormel (Br. s.s.). Sunk off Bishop Rock, 19 Aug., 46; by *U.38*, 47.
Retake (Br. armed tr.). Fires at periscope, 29 July, 39.
Rhea (Russ. s.v.). Accosted by *U.20*, 5 Sept., 118.
Rhiannon (armed yacht). Mined off Longsand Light Vessel, 20 July, 31.
Richmond (Adty. collier). Sunk in S.W. Approach, by *U.39*, 2.
Riviera (seaplane carrier). In Operation G., 4 July, 26.
Robinson, Mr. F. H. (Master, *Caucasian*). His deposition, 2.
Rodney (Br. armed tr.). Attacks *U.24* and rescues crew of *Lucena*, 27 June, 1; engages s/m, 18 Aug., 43; s/m was *U.27*, 47.
Roland Bx. 40 (Ger. tr.). Sunk by *Miranda*, 16 Aug., 94.
Remulus (Nor. s.s.). Sunk by *U.17*, 16 Aug., 83.
Rosalie (Br. s.s.). Torpedoed off Blakeney, 10 Aug., 51.
Roslin (Br. tr.). Sunk by *U.36*, 24 July, 20.
Roumanie (Br. s.s.). Torpedoed between Faeroes and Butt of Lewis, 2 Sept., 118.
Rovenska (Br. armed yacht). Fires at *U.38*, 19 Aug., 46, 47.
Royal George (Br. transport). Leaves for Mediterranean, 9 Sept., 118.
Rubonia (Russ. collier). Sunk by *U.36*, 22 July, 20.
Ruck-Keene, Captain William G. E., M.V.O. (Adty., War Staff). Inquiry into methods of Lowestoft Patrol, 40.
Ruel (Br. s.s.). Sunk, 21 Aug., 46; by *U.38*, 47.
Rym (Nor. s.s.). Mined off Shipwash Light Vessel, 13 July, 32.
Sabrina (Br. armed yacht). Fires at German s/m, 43.
Sagitta (Br. armed yacht). Flagship of Adl. of Mine Sweepers, 65.
Salacia (fishing smack). Sunk by German s/m, 27 July, 39.
Samara (Br. s.s.). Sunk, 20 Aug., 46; by *U.38*, 47.
Sam Richards (Br. net drifter). S/m in nets of, 29 July, 39.
San Melito (Br. oil tank s.s.). Saved by *Rovenska*, 21 Aug., 46; from *U.38*, 47.
San Zeserino (Br. oiler). Mined near S. Goodwin Lightship, 18 Sept., 123.
Sappho (l.e.). To work from Peterhead with armed whalers, 91.
Sardomene (It. s.v.). Torpedoed in S.W. Approach by *U.24*, 1 July, 1.
Saturn P.G. 78 (Ger. tr.). Sunk during sweep for *Meteor*, 9 Aug., 77.
Savona (Br. s.s.). Mined near N. Shipwash Buoy, 1 Sept., 65.
Schneider, Lieutenant-Commander. Commanding *U.24*, Aug., 41, 44.
Schuur, Captain. Commanding *E.98*, attacks British force, 17 Aug., 96.
Schweiger, Lieutenant-Commander. Commanding *U.20*, 5; operating in the west, 29 Aug. to 15 Sept., 118.
Scotia (armed boarding steamer). Escorts a distilling ship to Dardanelles, July, 10.

Scott, Admiral Sir Percy, M., Bt., K.C.B., K.C.V.O., LL.D. Appointment of, 13 Sept., 109.
Scottish Monarch (Br. s.s.). Sunk in S.W. Approach by *U.24*, 29 June, 1; sights *U.39*, 29 June, 2.
Scouting, 2nd Scouting Group (German). In minelaying operation, 12 Sept., 113.
Seagull (minesweeping gunboat). Arrives at Harwich, 22 July, 32; sweeps at Shipwash Lightship, 30 July, 39; sweeps at Sunk Lightship, 6 Aug., 60.
Seeadler (Ger. auxiliary cruiser). See under *Pass of Balmaha*.
Senior Naval Officer, Granton. See under Startin.
Senior Naval Officer, Great Yarmouth. See under Sherbrooke.
Senior Naval Officer, Harwich. See under Cayley.
Senior Naval Officer, Lowestoft. See under Ellison.
Senior Naval Officers, East Coast Areas. Warned against s/m minelayers, 32; instructed to avoid delays in relieving escorts, 37.
Sherbrooke, Commander Henry G. (S.N.O., Gt. Yarmouth). Advises against detailed orders, re anti-s/m measures, 40.
Silvia (Br. s.s.). Sunk in S.W. Approach, 23 Aug., 46, by *U.38*, 47.
Simpson, Rear-Admiral Cortland, H. (Admiral, Peterhead). Ordered to concentrate patrols on s/m, 8 Aug., 70.
Singer, Rear-Admiral Morgan (Director of Naval Ordnance and Torpedoes). Objects to suggested laying of observation mines near light vessels, 32.
Sir William Stephenson (Br. s.s.). Mined near Cockle Lightship, 29 Aug., 65.
S.L.2 (Ger. airship). Damaged returning from air raid, 7-8 Sept., 105.
S.L.3 (Ger. airship). Failure of, as scout for *Meteor*, 6 Aug., 72; in air raid, 9-10 Aug., 87.
S.L.A (Ger. airship). In air raid, 9-10 Aug., 87.
Snaefell (armed boarding steamer). Accompanies *Raglan*, 29 June, 10.
Southampton (l.e.). In company with Battle Cruiser Fleet, 12 July, 12.
Spanker (minesweeping gunboat). Arrives at Harwich, 22 July, 32; sweeps at Shipwash Lightship, 30 July, 39; sweeps at Sunk Lightship, 6 Aug., 60.
Speedwell (torpedo-gun-boat). Rams *U.41*, 16 July, 14.
Speedwell (fishing smack). Sunk by *U.B.6*, 12 July, 33.
Spencer, Lieutenant J. G., R.N.R. On board *Prince Charles*, at sinking of *U.36*, 24 July, 19.
Spider (Br. armed tr.). Encounter with s/m, 18 Aug., 43; s/m was *U.38*, 47.
Star of Peace (Br. tr.). Sunk by *U.36*, 22 July, 20.
Startin, Admiral James, C.B. (Captain, R.N.R.). Senior Naval Officer, Granton, 11; on board *Quickly*, 20 July, 16; commanding *Ready*, Sept., 124.
Start Point (Br. s.s.). See under Maxton.
St. Diamond (Fr. s.s.). Mined near Longsand Lightship, 3 Sept., 65.
St. Olaf (Br. s.v.). Sunk in S.W. Approach, 19 Aug., 44; by *U.24*, 47.
Storesand (Nor. s.v.). Sunk by *U.33*, 4 Sept., 118.
Story, Mr. Henry. Master of *Ruel*, sunk by *U.38*, 21 Aug., 46.
Stralsund (Ger. l.e.). Lays mines off Swarte Bank, 12 Sept., 113.
Strathmore (Br. tr.). Sunk by *U.36*, 24 July, 20.
Striking Force (Harwich). In Operation C, 28 July, 24.
Strive (fishing smack). Sunk by *U.B.10*, 30 July, 39.
Supreme War Lord. See under Kaiser.
Summerfield (Br. s.s.). Mined off Lowestoft, 13 Aug., 61.
Sunbeam (Br. s.v.). Sunk off Wick, by *U.25*, 4 July, 11.
Sunflower (sloop). Picks up survivors of *Iberian*, 30 July, 9.
Sunflower (fishing smack). Sunk by Ger. s/m marked *U.2*, 12 Aug., 53.
Sutton (Br. tr.). Sunk by *U.36*, 23 July, 20.
Sverige (Swed. s.s.). Mined in Stanford Channel, 13 Aug., 61.

- Sverresborg* (Nor. s.s.). Torpedoed off Trevose Head, 18 Aug., 43; by U.38, 47.
- Swift* (Flotilla leader). To work from Peterhead with armed whalers, 91.
- Syrian* (Br. f.v.). Destroyed by U.25, 11 July, 11.
- Talbot*, Commander Cecil P. Commanding E.16. Torpedoed K18, 26 July, 30; sent to Norwegian coast, 11 Sept., 124; sinks U.6, 15 Sept., 125.
- Taranaki* (Br. armed tr.). Operating with C.24, encounters U.6, 26 July, 17; U.40 sunk, 23 June, 18; encounter with s/m, 25 Aug., 102.
- Tarver*, Lieutenant A. M., R.N.R. At sinking of U.23, 20 July, 18.
- Taylor*, Lieutenant Frederic H. Commanding C.24, 26 July, 17.
- Teutonic* (armed merchant cruiser). Suggested for Bear Island Expedition by C. in C., 23.
- The Queen* (Br. s.s.). Sunk in Milford Area by U.24, 17 Aug., 47.
- Thulebank* (Nor. s.v.). Destroyed in S.W. Approach by U.24, 30 June, 1.
- Thornfield* (Br. s.s.). Sunk in Irish Channel, 17 Aug., 43; by U.38, 47.
- Thrash* (Br. tr.). Sunk, 9 Aug., 41; by U.38, 47.
- Tiptopary* (flotilla leader). Leader of three divisions of Third Flotilla, 10; with Commodore (T), 17 July, 15; in exercise cruise, 15 July, 27; in s/m hunt S.W. Approach, 8-9 Aug., 42.
- Tirpitz*, Admiral von. His resignation refused, 117.
- Tord* (Swed. s.s.). Mined off Folkestone, 19 Sept., 123.
- Trafalgar* (Br. s.s.). Sunk in S.W. Approach, 23 Aug., 46; by U.38, 47.
- Transylvania* (Br. transport). Escorted through Irish Channel, 7 July, 6.
- Trickey*, Mr. James (Master of *Armenian*). Attempts to ram U.24 in S.W. Approach, 28 June, 1.
- Trondjemsfjord* (Nor. s.s.). Sunk by U.41, 28 July, 31.
- Turquoise* (Br. s.s.). Sunk in S.W. Approach by U.28, 31 July, 9.
- Tyrwhitt*, Captain Reginald Yorke, C.B. (Commodore, 1st Class). Sweep to meet U.19, 17 July, 15; proposes Operation G, 26; proposal for destroyer patrol off Dutch coast approved, 27; exercise cruise, 15 July, 27; provides escort for minelayers, 5 July, 28; minesweepers to sweep ahead of, 32; ordered to intercept *Meteor*, 8 Aug., 74; approaching Horn Reefs, 9 Aug., 75; disregards report of *Meteor*'s position, 9 Aug., 76; recalled by Admiralty, 9 Aug., 77; his force reported as armoured cruisers, 9 Aug., 80; avoids s/m, 5 Aug., 84; returns to Harwich, 10 Aug., 88; sends destroyers to Sheerness for Operation A.Z., 89, to go on leave, 16 Aug., 93; leave postponed, 93; in command of Harwich Force in Operation B.Y., 17 Aug., 93; searches for *Mentor*, 17 Aug., 98; criticises Capt. Litchfield's orders, 99; considers that *Boreas* should have been sunk, 100; in Operation C.Y., 11 Sept., 111, 113; ordered to send four destroyers to Mediterranean, 112; channels used by, 115.
- U.76 (Ger. s/m). Operating off the Forth, 18 July, 16, 17; operating off the Staggerak, 10 Sept., 124; sunk by E.16, 15 Sept., 125; result of destruction of, 126.
- U.06 (Ger. s/m). Cruise, 17-22 July, encounter with *Quickly*, 20 July, 16, 21; operating in North Sea, 20 Sept. to 1 Oct., 126.
- U.717 (Ger. s/m). Scouts for *Meteor*, 7 and 8 Aug., 72; rendezvous with *Meteor*, 7 Aug., 79; operations in North Sea, 8 Aug., 83; encounters C.23 and *Rutapiko*, 11 Aug., 83.
- U.719 (Ger. s/m). Engaged by *Cameo*, 16 July, 15; search for, 17 July, 15.
- U.20 (Ger. s/m). Operations on south coast of Ireland, 8-10 July, 5; passes Shetlands, 13 July, 13; leaves for west coast of British Isles, 29 Aug., 102; operations in the west, 29 Aug. to 15 Sept., 118.
- U.24 (Ger. s/m). Operations in S.W. Approach, 27 June to 1 July, 1; leaves for S.W. Approach, 5 Aug., 41, 42, 44, 47.
- U.25 (Ger. s/m). Attack on *Hampshire*, 11 July, operations in North Sea, 1-11 July, 11; preliminary reconnaissance of Fifth Patrols, 72; off Norway and Denmark, 17-20 Aug., 102.

- U.27 (Ger. s/m). Leaves for S.W. Approach, 4 August, 41, 42; sunk by *Baralong*, 19 Aug., 45, 47.
- U.28 (Ger. s/m). Operations in S.W. Approach, 30 July to 4 Aug., 9, 41, 47; tows *Meteor*'s survivors into List, 10 Aug., 80; operating in North Sea, Sept., 126.
- U.32 (Ger. s/m). Fails to find British forces, 9 Aug., 80; breaks down *en route* for west coast of British Isles, 21 Aug., 102; signal to, 24 Aug., 116.
- U.33 (Ger. s/m). Operations while *en route* to Mediterranean, 1 Sept., 118.
- U.34 (Ger. s/m). *En route* for Mediterranean, Aug., 42.
- U.35 (Ger. s/m). Operations off the Fastnet whilst *en route* for Mediterranean, 10 Aug., 42, 47.
- U.36 (Ger. s/m). Operating in North Sea, 18 July, 16; sunk by *Prince Charles*, 24 July, 19; last cruise of, 20; *Grangewood* warned against, 24 July, 21.
- U.38 (Ger. s/m). Incorrectly reported in S.W. Approach, 28 June, 1; operations in S.W. Approach, Aug., 41, 42, 46, 47.
- U.39 (Ger. s/m). Operations in S.W. Approach, 28 June to 4 July, 2, 13; operations while *en route* to Mediterranean, 2 Sept., 118.
- U.41 (Ger. s/m). Rammed by *Speedwell*, 16 July, 14; operations in Faeroes-Hebrides area, 24-28 July, 21; crosses tracks of British forces, 30 July, 24; sunk by *Baralong*, 24 Sept., 119.
- U.43 (Ger. s/m). In minelaying operation, 12 Sept., 113; operating in North Sea, Sept., 126.
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- U.48 (Ger. s/m). Highest numbered German s/m in commission, 20 July, 18.
- U.54 (Ger. s/m). Building, 20 July, 18.
- U.68 (Ger. s/m). Incorrectly reported in S.W. Approach, 1 Aug., 9.
- U.B.2 (Ger. s/m). Unaccounted for, 23 Aug., 55.
- U.B.4 (Ger. s/m). Encounter with four paddle sweepers, 14 Aug., 53; sunk by *Inverlyon*, 15 Aug., 54.
- U.B.5 (Ger. s/m). Sinks *White City*, 14 Aug., 53; off Zeebrugge, 23 Aug., 55.
- U.B.6 (Ger. s/m). Raid on Lowestoft fishing fleet, 12 July, 33; unaccounted for, 23 Aug., 55; damaged by air bomb, 24 Sept., 58.
- U.B.9 (Ger. s/m). At Kiel, 23 Aug., 55.
- U.B.10 (Ger. s/m). Attack on *Brussels*, 20 July, encounter with *Brigadier*, 21 July, 38; visit to the Downs, 39; raid on Lowestoft fishing fleet, 30 July, 39; raid in Lowestoft Area, 10 Aug., 51; off Zeebrugge, 23 Aug., 55.
- U.B.12 (Ger. s/m). Unaccounted for, 23 Aug., 55.
- U.B.17 (Ger. s/m). Off Zeebrugge, 23 Aug., 55.
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