

# NAVY TODAY



## A growing Navy

The Royal Australian Navy has been going through a period of rapid expansion and modernization with stepped-up operational capability.

During the past decade, the Navy's manpower strength has increased by more than half. The Flagship HMAS *Melbourne* has been re-equipped with a new generation of aircraft for the strike, air defence, anti-submarine and reconnaissance roles. The destroyer force has been modernized and in the 1980s will have added to it powerful new destroyers built for Australian conditions.

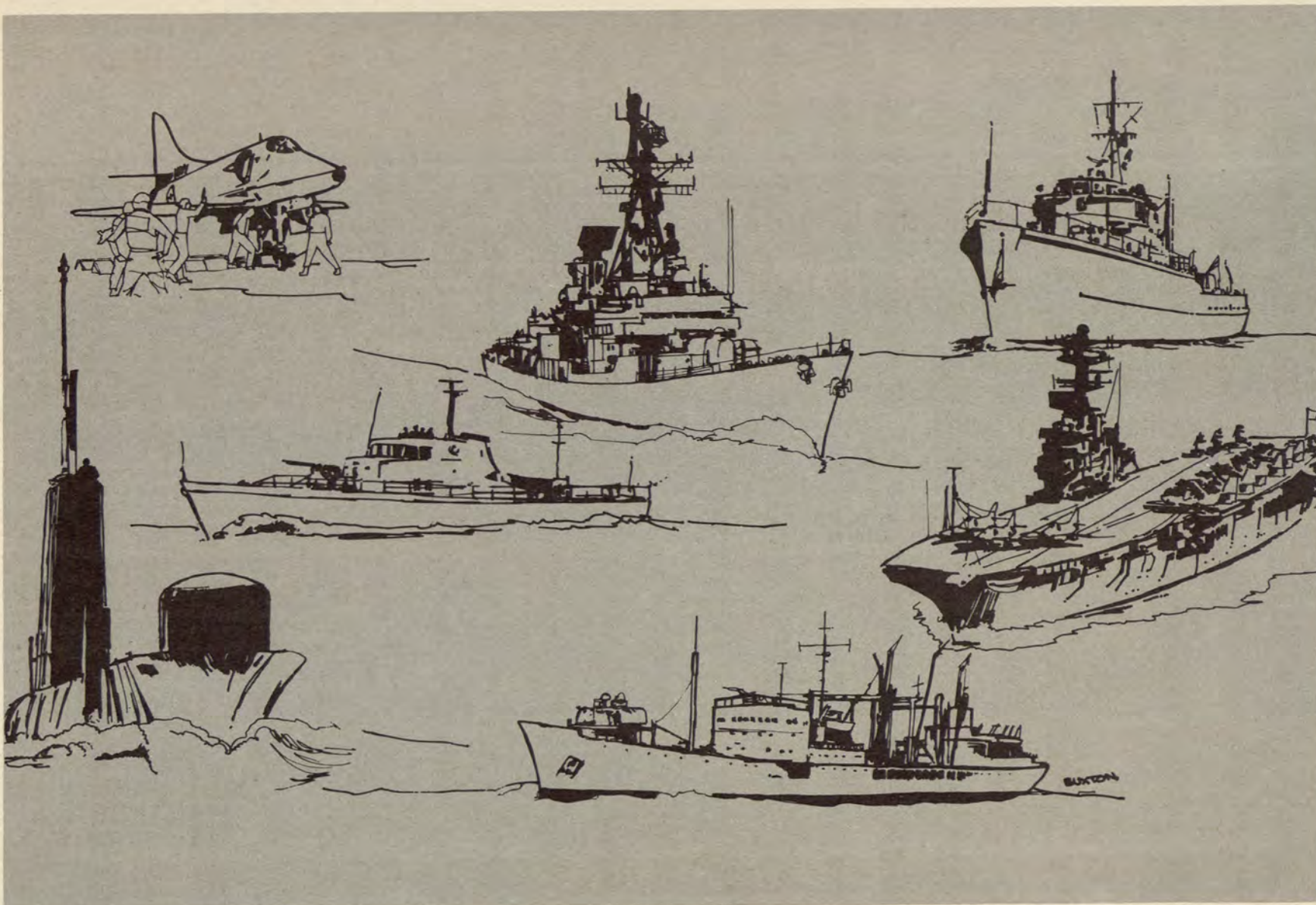
An Australian submarine arm has been re-established with four, soon to be six, of the most efficient conventional submarines in service. Twenty fast patrol boats have joined the Fleet and are on station in Papua-New Guinea and in Australian waters.

A number of support and research ships, as well as the new destroyers, are on the drawing board or under construction.

The Navy needs to build a balanced and viable fighting force if it is to meet its wide commitments to national security in the years ahead. The responsibilities include:

- Building a force capable of timely and sustained combat at sea;
- Establishing superiority in areas needed for naval operations including protection of lines of communication;
- Conducting naval reconnaissance, anti-submarine warfare, shipping protection and hydrographic and oceanographic surveying;
- Providing naval support for land operations;
- Providing sea transport for military operations; and
- Defending ports and anchorages.

The ships and aircraft to perform these tasks are described on the following pages.



## Aircraft carrier

Name	No.	Builder	Laid Down	First Com-Launched	First Commissioned
MELBOURNE	21	Vickers-Armstrong Barrow-in-Furness	15/4/43	28/2/45	28/10/55
Displacement	20,000 tons				
Length	701.5 ft				
Beam	80.2 ft				
Armament	12 (4 twin, 4 single) 40/60 mm Bofors				
Machinery	Parsons single reduction geared turbines, 4 Admiralty 3-drum type boilers				
Speed	More than 20 knots				
Ship's Company	1,335 (includes 347 Carrier Air Group personnel)				
Aircraft	Douglas Skyhawk A4G jet fighter-bombers Grumman Tracker S2E ASW aircraft Westland Wessex ASW helicopters Westland Wessex SAR helicopters				

The light aircraft carrier HMAS *Melbourne* is the Royal Australian Navy's flagship.

With her Skyhawk, Tracker and Wessex aircraft, *Melbourne* combines aerial defence of the Fleet with her anti-submarine role.

She also has a formidable strike capacity which was strengthened with the recent purchase of additional Skyhawk aircraft.

When carrying extra Skyhawks the carrier will control a significant strike force which can be directed against either maritime or shore targets and can give ground support to the Army.

*Melbourne* embarked her present generation of aircraft in 1969 after an extended refit which included modifications to aid flying and aircraft handling.

In 1971 the ship received a rebuilt catapult, strengthened flight deck and other changes.

*Melbourne* was laid down in 1943 as HMS *Majestic*, at the same time as HMS *Terrible* (now HMAS *Sydney*) and was launched in 1945.

With the end of World War II, work on *Majestic* stopped pending a decision on future requirements. Arrangements were then made for the ship to be taken over by the RAN and renamed HMAS *Melbourne*.

Construction resumed in 1949 with modifications including increasing the size of the flight deck lifts to handle larger aircraft and later fitting an angled flight deck, steam catapult and mirror landing system.

*Melbourne* was commissioned into the RAN on 28 October 1955 and after working up in British waters with her Sea Venom and Gannet aircraft she sailed for Australia, arriving in Sydney on 9 May 1956.



## Guided missile destroyers

Name	No.	Builder	Laid Down	First Com-Launched	First Com-missioned
PERTH	38	Defoe Shipbuilding Co Bay City Mich	21/9/62	26/9/63	17/7/65
HOBART	39	Defoe Shipbuilding Co Bay City Mich	26/10/62	9/1/64	18/12/65
BRISBANE	41	Defoe Shipbuilding Co Bay City Mich	15/2/65	5/5/66	16/12/67
Displacement	4,500 tons				
Length	437 ft				
Beam	47 ft				
Armament	Two 5-in automatic rapid fire guns. Tartar anti-aircraft guided missile system. Two Ikara anti-submarine missile systems. Two sets triple mounted anti-submarine homing torpedoes				
Machinery	Two GE geared steam turbines driving two shafts				
Speed	More than 30 knots				
Ship's Company	333				

The three guided missile destroyers—HMA Ships *Perth*, *Hobart* and *Brisbane*—make up the RAN's First Destroyer Squadron.

The US-built ships are similar to the US Navy's DDG-15 class and their design is particularly versatile.

Their main task is air defence of the Fleet, but they also have formidable anti-submarine and surface gunnery capabilities.

The principal aircraft defence weapon is the Tartar guided missile system which is mounted near the stern.

The DDG's are also fitted with two Ikara missile launchers. This long-range anti-submarine system is Australian-designed and developed. The missile is automatically guided to the vicinity of a hostile submarine where a torpedo is released by parachute to home on the target.

The ships are fitted with modern long-range sonar, radar, communications and electronic equipment to provide the command with comprehensive information.

Living spaces are air conditioned.

All three ships saw action in Vietnam where they served with distinction with ships of the US Navy's 7th Fleet.

From 1972 the ships (beginning with *Hobart*) are scheduled to return to the United States in turn for gun-mount modernization.

*Perth*, *Hobart* and *Brisbane* are the names of former RAN cruisers.



## Destroyers

Name	No.	Builder	Laid Down	Launched	First Commissioned
VENDETTA	08	HMA Naval Dockyard Williamstown	4/7/49	3/5/54	26/11/58
VAMPIRE	11	Cockatoo Island Dockyard Sydney	1/7/52	27/10/56	23/6/59
DUCHESS	154	John I. Thornycroft and Co Southampton	2/7/48	9/4/51	8/5/64 (RAN) 23/10/52 (RN)
Displacement	3,600 tons				
Length	390 ft				
Beam	43 ft				
Armament	Six 4.5 in dual purpose guns in twin turrets, two forward, one aft. Six 40/60 mm Bofors guns. Triple - barrel anti - submarine mortar.				
Machinery	Parsons double reduction geared turbine, driving two shafts				
Speed	More than 30 knots				
Ship's Company	321				

The Royal Australian Navy's Second Destroyer Squadron is made up of the Daring Class destroyers HMA Ships *Vendetta*, *Vampire* and *Duchess*.

These all-purpose warships have main gunnery armament comparable to a light cruiser, giving them formidable surface gunnery as well as anti-aircraft capabilities.

Anti-submarine detection equipment and weapons increase their versatility.

Though based on the same general design, *Vampire* and *Vendetta* were built in Australia, while *Duchess* was built in Britain.

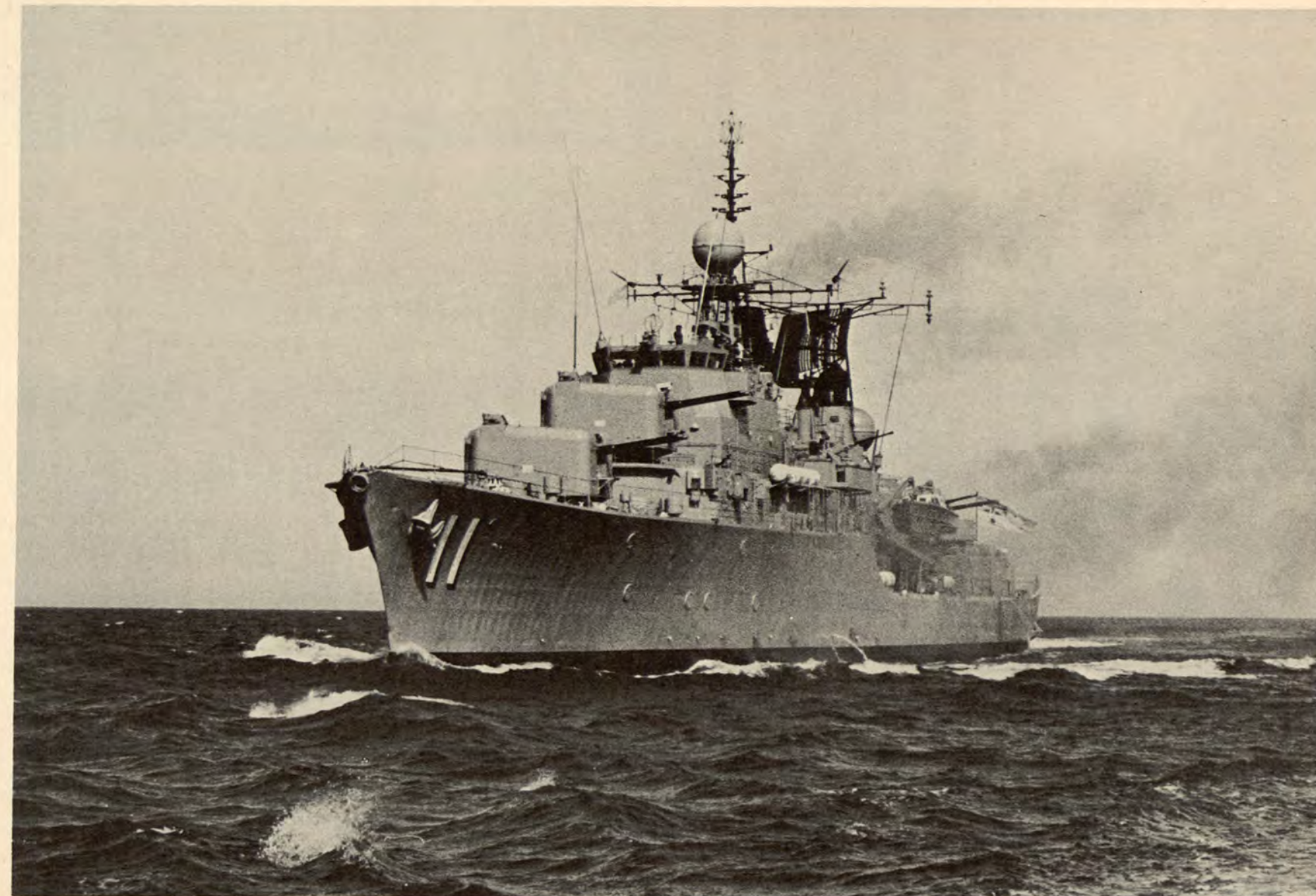
The three ships are all-welded and light alloys have been used extensively in their construction to reduce weight.

In 1969, *Vendetta* became the first Australian-built warship to serve in Vietnam. She had the distinction, as a result, of being the first Daring Class destroyer to engage in the role for which the ships were primarily built—naval gunfire support.

Half-life modernization of *Vampire* and *Vendetta*, which began in 1970, included fitting new gun turrets, fire control systems, new aircraft warning and navigation radar, re-equipping the operations centre, enclosing the bridge and replacing a major part of the superstructure.

Communications equipment was renewed and living conditions on board considerably improved.

The original *Vampire* and *Vendetta* served with distinction in the 10th Destroyer Flotilla, known as the "Scrap Iron Flotilla", in World War II.



## Destroyer escorts

Name	No.	Builder	Laid Down	First Com- Launched	missioned
YARRA	45	Williamstown Dockyard	9/4/57	30/9/58	27/7/61
PARRAMATTA	46	Cockatoo Island Dockyard	3/1/57	31/1/59	4/7/61
STUART	48	Cockatoo Island Dockyard	20/3/59	8/4/61	28/6/63
DERWENT	49	Williamstown Dockyard	16/6/58	17/4/61	30/4/64
SWAN	50	Williamstown Dockyard	18/8/65	16/12/67	20/1/70
TORRENS	53	Cockatoo Island Dockyard	18/8/65	28/9/68	19/1/71
Displacement	2,700 tons				
Length	370 ft				
Beam	41 ft				
Armament	Two 4.5 in guns in twin turret controlled by digital fire control radar and computer. Seacat anti-aircraft missile system. Ikara anti-submarine missile system. Triple-barrel anti-submarine mortar				
Machinery	Geared steam turbines 30,000 shaft horsepower				
Speed	More than 30 knots				
Ship's Company	250				

The Royal Australian Navy has six Australian-built destroyer escorts forming the Third Australian Destroyer Squadron.

The newest ship *Torrens* and her sister ship *Swan* incorporate many design changes made in the four earlier River Class ships *Derwent*, *Stuart*, *Yarra* and *Parramatta*.

All the ships are armed with twin 4.5 inch guns which are used with digital fire control radar and computer.

The guns can be used for shore bombardment or can provide fire power against air or surface targets.

Close-range air and surface defence is provided by the Seacat missile system which is controlled by a separate radar and computer.

The Seacat missile system was developed in Britain and has been adopted by a number of navies.

A submarine threat can be met by using either the Australian-designed and built Ikara anti-submarine missile system, or the triple-barrelled mortars carried on all the escorts.

Ikara is a rocket-propelled guided missile which carries a homing torpedo towards its submarine target. The torpedo is dropped into the sea by parachute and is then acoustically homed on the submarine target.

All the ships in the squadron except *Derwent* carry the names of former RAN destroyers and sloops.



## Submarines

Name	No.	Builder	Laid Down	Launched	First Commissioned
OXLEY	57	Scotts' Shipbuilding Greenock	2/7/64	24/9/65	27/3/67
OTWAY	59	Scotts' Shipbuilding Greenock	29/6/65	29/11/66	22/4/68
ONSLOW	60	Scotts' Shipbuilding Greenock	26/5/67	3/12/68	22/12/69
OVENS	70	Scotts' Shipbuilding Greenock	17/6/66	4/12/67	18/4/69
Displacement	2,030 tons				
Length	295 ft				
Beam	26½ ft				
Armament	Six bow and two stern anti-surface ship and anti-submarine torpedo tubes				
Machinery	Two English Electric main propulsion motors, with two Admiralty standard range diesel generators				
Speed	Submerged speed, more than 15 knots				
Ship's Company	62				

Four Oberon Class submarines form the First Australian Submarine Squadron. Two more are on order.

Their value as an offensive weapons system is enhanced by their ability to operate in enemy-dominated waters for extended periods, without logistic support and without air cover.

The Oberons are long-range diesel-electric submarines which can move against surface ships or other submarines.

They are one of the most effective conventional types of submarines available today, and their quietness of operation makes them particularly difficult for an enemy to detect.

They are designed for silent running, and underwater equipment includes sensitive listening apparatus and an electronic fire control system.

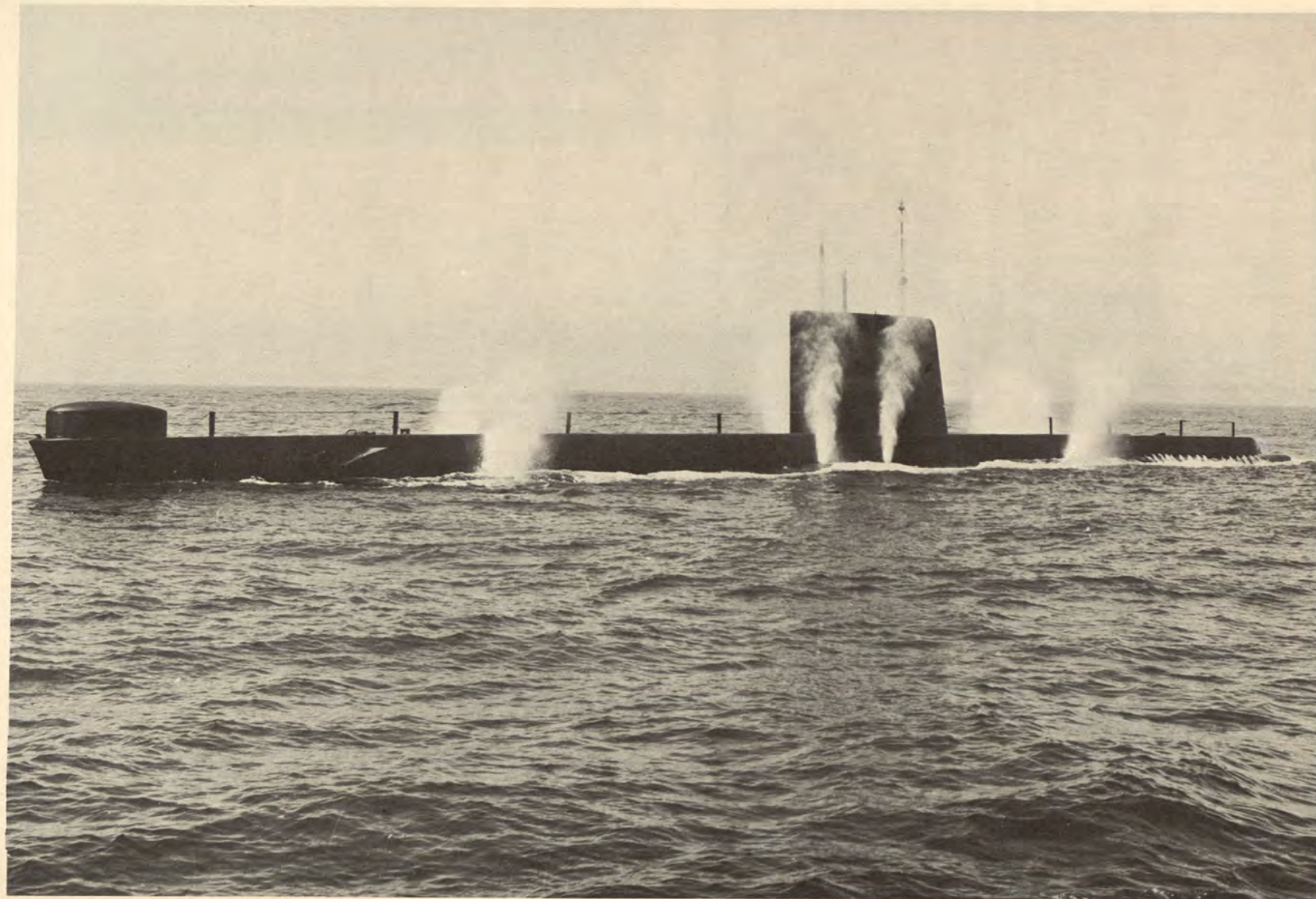
All are fitted with a 'snort' system which enables batteries to be recharged while the submarine remains submerged.

They can dive to more than 400 ft and have a submerged speed of more than 15 knots.

The four craft are based at HMAS *Platypus*, Neutral Bay, Sydney.

The *Oxley* and *Otway* are named after two earlier RAN submarines. The first of the new submarines on order will be named *Orion* to preserve long established links with the Royal Navy and because the constellation Orion is visible in the Southern Hemisphere.

The second new Oberon will be named *Otama* after the Queensland aboriginal word meaning dolphin—the submarines' symbol.



## Mine warfare ships

Name	No.	Builder	Laid Down	Launched	First Commissioned in RAN
SNIFE	1102	Thornycroft, UK	Jul. 51	5/1/53	11/9/62
CURLEW	1121	Montrose, UK	April 53	6/10/53	21/8/62
HAWK	1139	I. W. Richards, UK	June 53	17/9/55	18/7/62
TEAL	1152	Philip, UK	Jan. 53	28/2/55	30/8/62
IBIS	1183	Montrose, UK	Oct. 53	18/11/55	7/9/62
GULL	1185	Doig, UK	Aug. 54	1/7/54	19/7/62

Displacement	480 tons
Length	153 ft
Beam	28 ft
Armament	Two 40/60 mm Bofors gun (one on minehunters)
Machinery	Napier diesel engines developing 3,000 hp
Speed	More than 15 knots
Ship's Company	34 (minesweeper) 38 (minehunter)

The First Australian Mine Countermeasures Squadron is made up of six Ton Class mine countermeasure ships.

Of British design and construction, the ships were modified in the UK before joining the Australian Fleet in 1962.

Originally all six ships were fitted as minesweepers, but *Curlew* and *Snipe* have been converted to minehunters.

The other four are fitted for mine sweeping.

They carry devices to explode acoustic and magnetic as well as contact mines. They can also detect and destroy other underwater obstructions which would be hazardous to shipping.

The wooden-hulled minesweepers are themselves non-magnetic and are sufficiently silent not to actuate acoustic mines.

Mine hunting is the latest advance in mine countermeasures and the re-equipped *Curlew* and *Snipe* are significant additions to the Australian Fleet.

Mine hunting is complementary to mine sweeping and is carried out in a different way.

Using a high definition sonar set, the minehunter locates mines ahead of the ship.

When a mine is located, clearance divers go into the water to identify it and decide whether to render it safe and remove it, or to blow it up with an explosive charge.





## Patrol boats

Name	No.	Builder	Laid Down	Launched	First Commissioned
ACUTE	81	Evans Deakin Ltd	Apr. 67	26/8/67	26/4/68
ADROIT	82	Evans Deakin Ltd	Aug. 67	3/2/68	17/8/68
ADVANCE	83	Walkers Ltd	Mar. 67	16/8/67	24/1/68
AITAPE	84	Walkers Ltd	Nov. 66	6/7/67	13/11/67
SAMARAI	85	Evans Deakin Ltd	Dec. 66	14/7/67	1/3/68
ARCHER	86	Walkers Ltd	Jul. 67	2/12/67	15/5/68
ARDENT	87	Evans Deakin Ltd	Oct. 67	27/4/68	26/10/68
ARROW	88	Walkers Ltd	Sep. 67	17/2/68	3/7/68
ASSAIL	89	Evans Deakin Ltd	Aug. 67	18/11/67	12/7/68
ATTACK	90	Evans Deakin Ltd	Sep. 66	8/4/67	17/11/67
AWARE	91	Evans Deakin Ltd	Jul. 67	7/10/67	21/6/68
LADAVA	92	Walkers Ltd	Feb. 68	11/5/68	21/10/68
LAE	93	Walkers Ltd	May 67	5/10/67	3/4/68
MADANG	94	Evans Deakin Ltd	Mar. 68	10/8/68	29/11/68
BANDOLIER	95	Walkers Ltd	Jul. 68	2/10/68	14/12/68
BARBETTE	97	Walkers Ltd	Nov. 67	10/4/68	16/8/68
BARRICADE	98	Evans Deakin Ltd	Dec. 67	29/6/68	26/10/68
BOMBARD	99	Walkers Ltd	Apr. 68	6/7/68	5/11/68
BUCCANEER	100	Evans Deakin Ltd	Jun. 68	14/9/68	11/1/69
BAYONET	101	Walkers Ltd	Oct. 68	6/11/68	22/2/69
Displacement	146 tons				
Length	107 ft				
Beam	20 ft				
Armament	40/60 mm Bofors gun, machine gun and a variety of light arms				
Machinery	Two 16-cylinder diesels, producing more than 3,000 hp				
Speed	More than 20 knots				
Ship's Company	19				

Twenty patrol boats have been built in Australian shipyards for patrol and survey work in waters around Australia and Papua-New Guinea.

They are units of the First Australian Patrol Boat Squadron.

These all-weather, ocean-going ships have a variety of tasks, including the patrol of fishing grounds close to the coastline.

They also assist RAN survey ships in sounding and survey work.

The 107 ft patrol boats are used for Reserve training and for training Papua-New Guinea officers and sailors who will eventually assume full responsibility for operating a Papua-New Guinea patrol boat squadron.

The speed and versatility of the patrol boats have made them useful for helping disabled craft, for use as sea-air rescue boats and for transporting patients from remote shallow ports.

Major excursions have been made deep into Papua-New Guinea river systems.

Included in the ships' equipment is high definition navigation radar, high and ultra-high frequency radio transmitters and receivers, gyro and magnetic compasses and echo sounders.

All the patrol boats are fully air conditioned, and all were built in Queensland shipyards.



## Troop transport

Name	No.	Builder	Laid Down	First Com- Launched	missioned
SYDNEY	214	HM Dockyard, Devonport	19/4/43	30/9/44	16/12/48
Displacement	17,233 tons				
Length	698 ft				
Beam	80 ft				
Armament	Four 40/60 mm Bofors guns				
Machinery	Parsons single reduction geared turbines				
Speed	More than 20 knots				
Ship's Company	607				

HMAS *Sydney*, which first saw service in the Royal Australian Navy as a light aircraft carrier, was converted in 1961-62 to a fast troop transport carrier.

*Sydney* was recommissioned in her present role on 7 March 1962. With her flight deck and ample below-deck capacity she is capable of transporting a large body of men with their equipment anywhere in the world.

The ship has demonstrated her troop carrying effectiveness on many occasions, notably on the many return trips she made to Vietnam, which earned her the nickname "Vung Tau Ferry".

*Sydney* has visited the United States to pick up new aircraft for the Fleet Air Arm, represented Australia at the British Columbia centenary celebrations and has made many other overseas courtesy visits and training cruises.

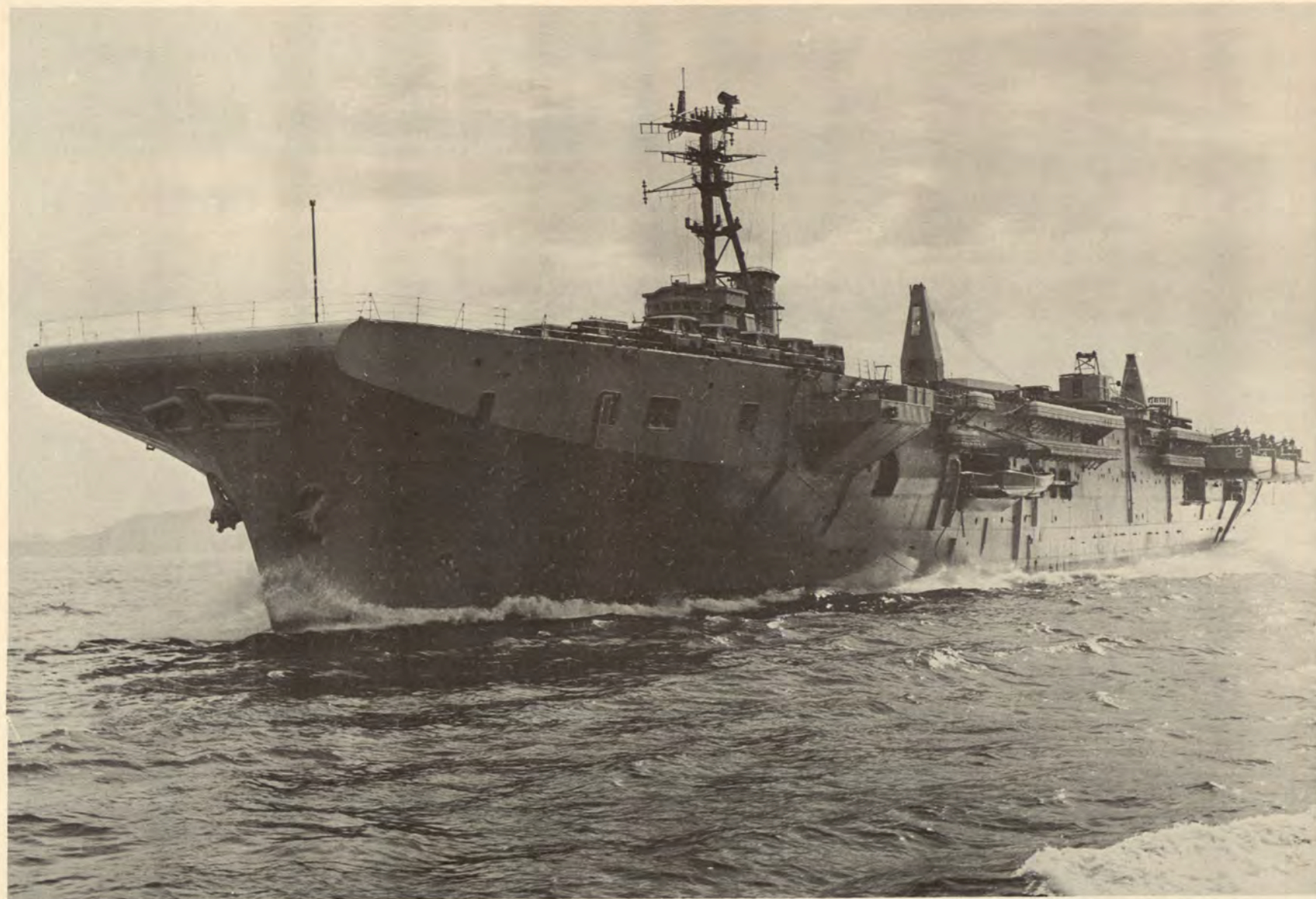
The present *Sydney* is the third RAN ship to carry the name. The first and second *Sydneys* were famous light cruisers in the two World Wars. The third *Sydney* was laid down in 1943 as HMS *Terrible*. She was renamed and commissioned into the RAN on 16 December 1948.

She reached Sydney on 28 May 1949 and returned to Britain the following year to bring back the 21st Carrier Air Group. The Group operated Sea Furies, then the fastest piston engine fighter in the world, and the all-purpose Fairey Fireflies.

In 1951-52 and 1953-54 *Sydney* served with distinction in Korean waters where she mounted aerial strikes against tanks, trains, bridges, supply depots and troop concentrations.

In May 1955 *Sydney* landed her aircraft and began her roles as a training ship.

Today, as well as being a fast transport, she shares with the destroyer *Anzac* the task of training men for the Royal Australian Navy.



## Training ships

Name	No.	Builder	Laid Down	Launched	First Commissioned
ANZAC	59	Williamstown Dockyard	23/9/46	20/8/48	14/3/51
Displacement	3,450 tons				
Length	379 ft				
Beam	41 ft				
Armament	One 4.5 in gun				
Machinery	Parsons geared turbines 50,000 shp, 2 shafts				
Speed	More than 30 knots				
Ship's Company	270				

The troop transport *Sydney* and the Battle Class destroyer *Anzac*, both Korean War veterans, are the Royal Australian Navy's training ships.

The first *Anzac* was a destroyer built for the Royal Navy in 1917 and commissioned into the Royal Australian Navy in 1920.

The present *Anzac* was built at the Williamstown Naval Dockyard, Melbourne, and commissioned on 14 March 1951.

The ship spent the greater part of the following two years in Korean waters supporting United Nations forces. Her other periods in northern waters included four tours of duty with the Strategic Reserve based at Singapore.

During the Royal Tour of Australia in 1953-54 *Anzac* carried Her Majesty the Queen, the Duke of Edinburgh and the Royal party on visits to several north Queensland ports.

In 1961 *Anzac* became a Fleet Training ship with the important task of preparing young officers and sailors for careers at sea.

Much of the ship's original armament was removed and replaced by classrooms and other training facilities. Trainees include young sailors, cadet midshipmen from the Royal Australian Naval College, midshipmen from the Papua-New Guinea division of the Royal Australian Navy and officer cadets from overseas countries.

Trainees normally spend several months on *Anzac* learning navigation, seamanship, engineering, communications and other aspects of naval life.

The period spent on *Anzac* is a good initiation into life at sea and for many of the young men it's a chance to see ports of the South Pacific for the first time.



Name	No.	Builder	Laid Down	Launched	First Com-missioned
STALWART	215	Cockatoo Island Dockyard	23/6/64	7/10/66	9/2/68
SUPPLY	195	Harland and Wolff Belfast	5/8/52	1/9/54	15/8/62

	STALWART	SUPPLY
Displacement	10,500 tons	26,000 tons
Length	515 ft	583 ft
Beam	67 ft	71 ft
Armament	Two 40/60 mm Bofors guns twin mountings. Provision for Seacat close-range missiles	Two twin, two single mountings, 40/60 mm Bofors guns
Machinery	Two six-cylinder diesel engines developing 14,400 bhp	Double reduction geared turbines developing 15,000 shaft hp
Speed	More than 20 knots	More than 16 knots
Ship's Company	396	205

## Destroyer tender

The destroyer tender *Stalwart* is the largest naval vessel wholly designed and built in Australia.

Her role is to provide destroyers with repair and maintenance facilities on a mobile basis so the ships can spend the maximum time on duty in their operational areas.

For this job the ship is equipped with extensive engineering, electrical, electronic, weapons, shipwright and other workshops, staffed by experts in a wide variety of trades and professions.

Several destroyers can be maintained by *Stalwart* at a time and three quarters of *Stalwart's* ship's company of nearly 400 are available for repair and maintenance duties.

## Fleet oiler

HMAS *Supply*, the largest ship in the RAN, has the important task of refuelling fleet units to give ships greater range and mobility.

She supplies furnace fuel, aviation gasoline, diesel oil and water to other ships while they are underway.

In a typical operation a destroyer will steam alongside *Supply* at about 15 knots. With only about 100 ft between ships, lines are shot across, hoses are run across and connected, and pumping begins. A destroyer can be refuelled in this way in less than half an hour.



## Survey ships

Name	No.	Builder	Laid Down	First Com- Launched	First Com- missioned
MORESBY	73	Newcastle State Dockyard	May 62	7/9/63	6/3/64
PALUMA	337	NSW State Dockyard	1943	5/2/46	18/3/57
DIAMANTINA	266	Walkers Ltd, Maryborough	12/4/43	6/4/44	27/4/45
KIMBLA	314	Walkers Ltd, Maryborough	4/11/53	23/3/55	26/3/56

	MORESBY	PALUMA
Displacement	2,300 tons	336 tons
Length	314 ft	120 ft
Beam	42 ft	24 ft
Armament	Two 40/60 mm Bofors guns	
Machinery	Diesel electric main engines	Diesel main engines
Speed	More than 18 knots	More than 9 knots
Ship's Company	146	29

	DIAMANTINA	KIMBLA
Displacement	2,000 tons	750 tons
Length	301 ft	179 ft
Beam	36.7 ft	32 ft
Armament	One 40/60 mm Bofors gun	
Machinery	Triple expansion; two Admiralty 3-drum boilers	Triple expansion steam engine
Speed	More than 19 knots	More than 10 knots
Ship's Company	121	40

Surveying of Australian and Papua-New Guinea waters, which combined involve 16,500 miles of coastline and cover about one eighth of the earth's surface, is the mammoth task entrusted to the RAN Hydrographic Service.

The stepped-up exploitation of Australia's vast mineral resources in recent years based on bulk handling methods has led to the development of new ports such as Gove, Weipa, Spring Bay, Dampier and Port Hedland.

The largest bulk carriers in the world now call at Australian ports and there is a continuing need for new and more accurate surveys of shipping routes and harbour approaches.

Four RAN ships are engaged full time in this work and on oceanographic research. They are HMA Ships *Moresby*, *Paluma*, *Diamantina* and *Kimbla*, helped at times by other Fleet units.

*Moresby* is a large modern survey ship. She operates her own helicopter and carries advanced electronic surveying equipment.

A new hydrographic ship, the 800 tons *Flinders*, will shortly replace the 336 ton *Paluma*, which was commissioned in 1957.

The two other ships *Diamantina*, a converted frigate, and *Kimbla* are mainly engaged on oceanographic research for the CSIRO, universities and museums.

*Diamantina* will soon be replaced by another new hydrographic ship, HMAS *Cook*, similar to *Moresby* but slightly larger, and fitted with the most up-to-date oceanographic and survey equipment.



## Future ships

The RAN's wide-ranging area of operations and the introduction of new and specialised techniques means the Navy must keep building new and better ships.

Several different types are on the drawing board or under construction for the Fleet of the 1980s.

The biggest project is the designing and building in Australia of a number of new destroyers designed specially for Australian conditions.

These ships will have a long cruising range, a high top speed and will be armed with a wide variety of weapons.

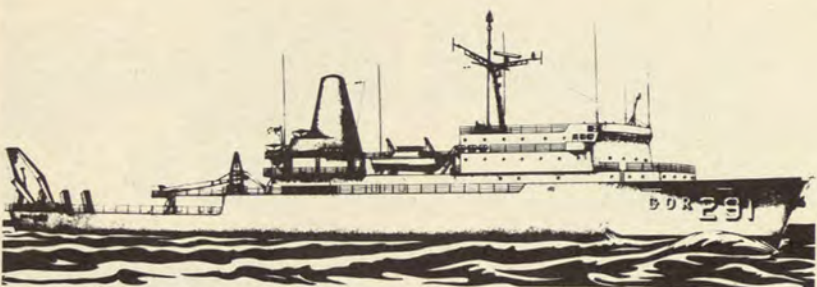
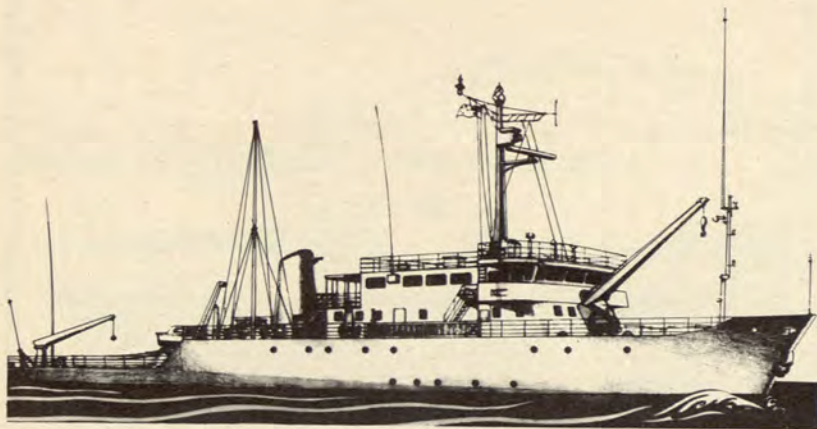
Another major project is the construction of the largest naval ship ever built in Australia, the 20,000 ton, 600 ft, fast combat support ship, HMAS *Protector*.

This vessel, part tanker and part cargo ship, will support Fleet units away from bases. She will carry a wide variety of dry and liquid stores including diesel oil, aviation fuel, missiles, ammunition, food and clothing. She will also operate her own helicopters and will be fitted with the latest equipment for quick replenishment at sea.

The Navy's oceanographic and hydrographic service is to get two new ships. The converted frigate *Diamantina* will be replaced by a new oceanographic ship *Cook*, which will be of the same general design as *Moresby* but larger; and the *Paluma* is being replaced by the 800 ton *Flinders*, a faster ship with better sea keeping qualities.

Both of these vessels will use the latest survey techniques including satellite navigation.

Also on order for the submarine arm are two new Oberon Class submarines, which are due to enter service in the mid 1970s. With the four present Oberons, they will give the RAN a formidable underwater striking force.





## Aircraft

The Skyhawk jet fighter-bomber (top left) is the air defence and strike aircraft of the Fleet Air Arm.

These transonic aircraft are ideal for high pay load/wide radius operations in tactical air support and they have increased the versatility of the aircraft carrier HMAS *Melbourne*.

The Douglas A4-G Skyhawk is a relatively small aircraft (weight empty—9,800 lbs) but it is capable of carrying an extensive and varied war load (maximum all-up weight—24,500 lbs) over a considerable distance.

Its armaments include combinations of air-to-air missiles, a variety of 250, 500 and 1,000 lb bombs, 20mm cannon and rockets.

Embarked on *Melbourne* with the Skyhawks are anti-submarine Tracker aircraft and Wessex helicopters.

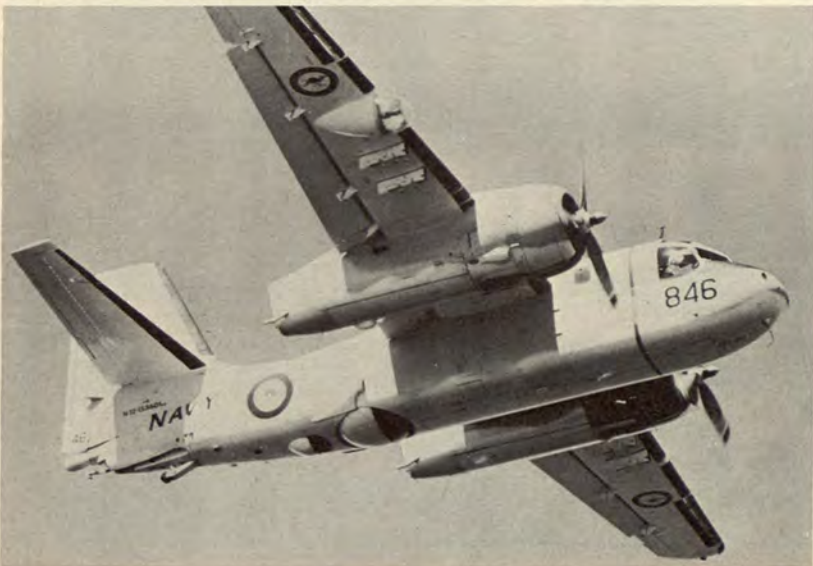
The Grumman S2E Tracker (below left) is an all-weather, twin-engine aircraft. It can remain on patrol for up to 10 hours and each carries a crew of two pilots, an observer and an aircrewman.

The Tracker is fitted with electronic devices for submarine detection and can be armed with homing torpedoes or depth charges.

The Westland Wessex 31B helicopter, which doubles in a search and rescue role, is equipped with sonar for its anti-submarine duties and can also be armed with homing torpedoes or depth charges.

The Wessex carries a crew of two pilots, an observer and an aircrewman.

Training and support aircraft of the Royal Australian Navy include Iroquois utility and search and rescue helicopters, Macchi jet trainers and Dakota aircraft. The Dakotas are due to be phased out soon and will be replaced by Hawker Siddeley 748 training aircraft.



• Above left—Scout Helicopter • Above right— Wessex Helicopters • Left—Macchi Jets • Right—Iroquois Helicopters

# SHIPS OF THE ROYAL AUSTRALIAN NAVY

## Flagship



MELBOURNE

## First Australian Destroyer Squadron



PERTH

HOBART

BRISBANE

## Second Australian Destroyer Squadron



VENDETTA

VAMPIRE

DUCHESS

## Third Australian Destroyer Squadron



YARRA

PARRAMATTA

STUART

DERWENT

SWAN

TORRENS

## First Australian Submarine Squadron



OXLEY

OTWAY

ONLOW

OVENS

## First Australian Mine Countermeasures Squadron



SNIPE

CURLEW

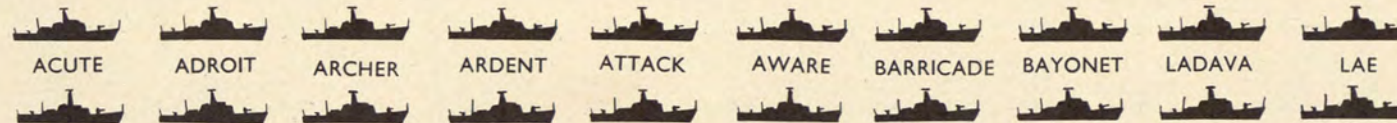
HAWK

TEAL

GULL

IBIS

## First Australian Patrol Boat Squadron



ACUTE

ADROIT

ARCHER

ARDENT

ATTACK

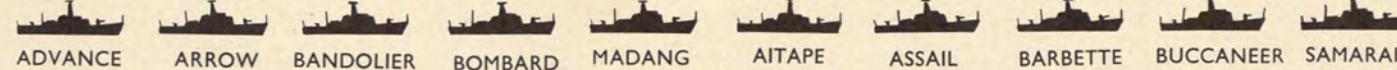
AWARE

BARRICADE

BAYONET

LADAVA

LAE



ADVANCE

ARROW

BANDOLIER

BOMBARD

MADANG

AITAPE

ASSAIL

BARBETTE

BUCCANEER

SAMARAI

## First Australian Training Squadron



SYDNEY

ANZAC

## Support ships



STALWART

SUPPLY

MORESBY

PALUMA

DIAMANTINA

KIMBLA

BASS

BANKS



*Further general information on the Royal Australian Navy may be obtained from the Director of Public Relations, Navy Office, Canberra, ACT 2600.*

*Information on Naval careers may be obtained from Recruiting Officers in all capital cities, or from the Director of Naval Recruiting, Navy Office, Canberra, ACT 2600.*