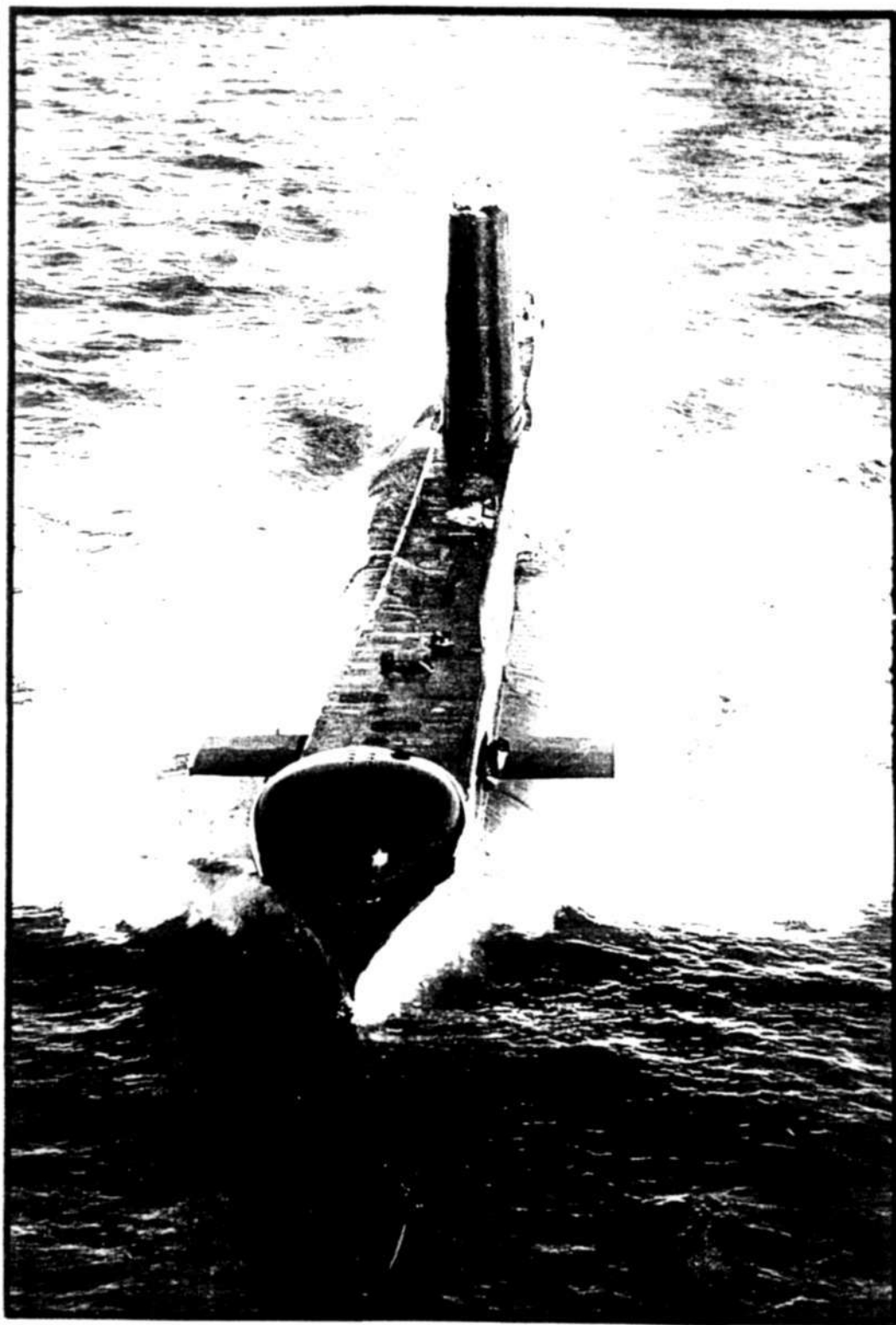


THE NAVY

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SEPTEMBER
1981



The Magazine of The Navy League of Australia

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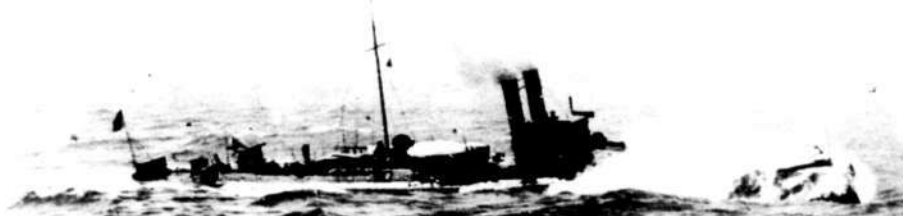
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The magazine of the Navy League of Australia

Vol 43

SEPTEMBER, 1981

No 4



The Victorian first class torpedo boat, HMVS CHILDERS enroute Williamstown to Westernport Bay. CHILDERS is one of 14 craft described in Colonial Torpedo Boats, beginning on page 25. (Photo — Historical Studies Section.)

FRONT COVER
HMAS OXLEY, June, 1981. (Photo — Simon Prior.)

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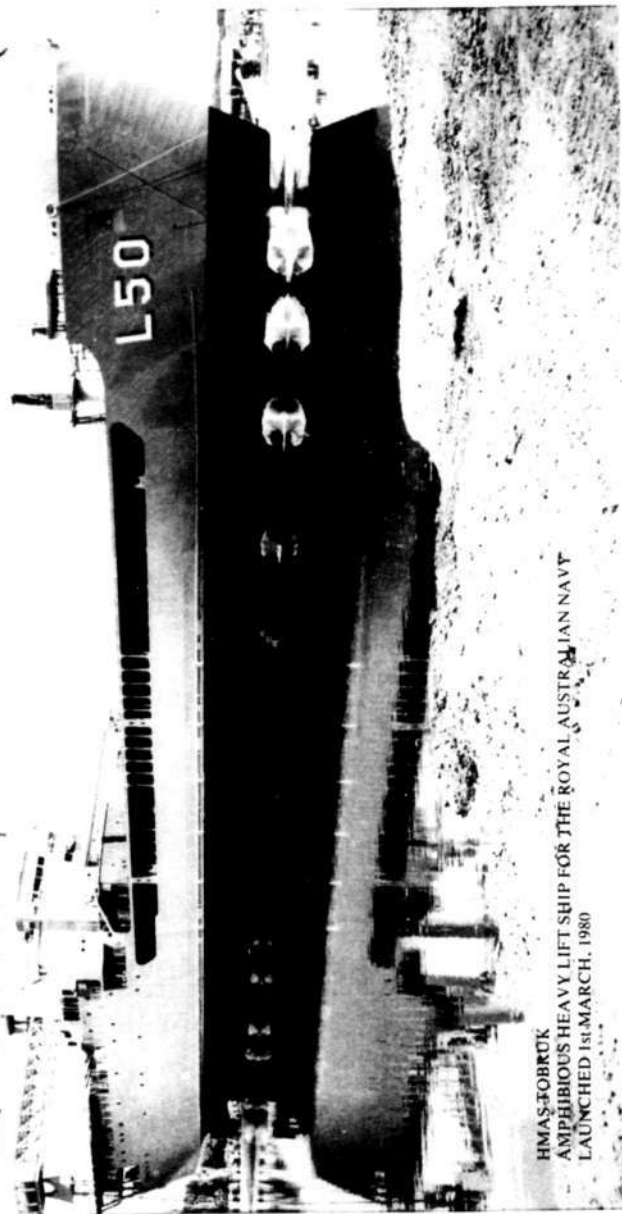
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HMAS TOBRUK
 AMPHIBIOUS HEAVY LIFT SHIP FOR THE ROYAL AUSTRALIAN NAVY
 LAUNCHED 1st MARCH, 1980

Editor's Comments

THIS ISSUE of "The Navy" is the largest for many years. Subjects covered range from the recently commissioned HMAS TOBRUK to Colonial Torpedo Boats of the 19th Century.

September, 1981, also marks the 40th anniversary of the establishment of the RNZN. The event has not been overlooked and a complete step by step pictorial resume of the navy's development is featured. This issue also contains the latest news from Britain and The Continent by well-known naval writer Antony Preston. The recent Royal Navy defence cuts are fully described.

A new series entitled "One of a Kind", begins in this issue of "The Navy", the first ship described being the minelayer USS TERROR. The RAN workhorses of the amphibious warship force — the LCH — are examined and illustrated.

This issue contains the first historical article by Geoff Miller, accompanied by the author's superb drawing of HMS HOGUE and a supplement to "K XII the True Story", this time featuring the World War II Dutch submarines of Western Australia, which never returned home.

As usual, many persons and organisations have helped to produce "The Navy". These include, Harry Adlam, The Australian War Memorial, A. D. Baker III, HMAS Cerberus Museum, Laurie Clarke, David Diment, Geoff Evans, Steve Given, Tony Grazebrook, John Mackenzie, Geoffrey Miller, John Mortimer, "Navy News", Navy Public Relations (Sydney and Canberra), Antony Preston, the Royal Navy and Royal New Zealand Navy, Joe Straczek, Peter Williams and Ron Wright.

"The Navy" next issue will include a report on the coming defence budget plus articles on the USN "four stack" destroyers and the re-activation of the USN's Iowa class battleships. In Warship Pictorial we return to the World War Two era of army water transport squadrons, while "One of a Kind" will feature the most unusual amphibious warfare ship designed and constructed in Australia. A further report from the European scene, plus the regular RNZN article, naval round-up and book reviews will complete the magazine.



Four of the RNZN's newest units are seen in this overhead view of the Calliope Dock at HMNZS PHILOMEL. From the front are HMNZ Ships TARAPUNGA and TAKAPU (both survey tenders) and HMNZ Ships TAUPU and PUKAKI, two of the navies LAKE class patrol boats. All four vessels entered dock for a cleaning and maintenance period on Monday, 13th July, 1981. (Photo — RNZN.)

**Deadline for the
 next issue will be
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NAVY WEEK PROGRAMME, 1981

NEW SOUTH WALES

Monday, 28th September
Command Band and Physical training
displays, Sydney Square, 12.00 noon.

Tuesday, 29th September
As Monday.
Wednesday, 30th September
Command Band & Physical training
displays, Martin Place, 12.00 noon.

Thursday, 1st October
Changing of the Guard, Cenotaph,
Martin Place, 12.00 noon. Fly past by
Fleet Air Arm, 1.00 pm. Navy Week
Reception, HMAS Watson, 6.00 pm.

Friday, 2nd October
Command Band & Physical training
displays, Australia Square, 12.15 pm.
Historical display, No 2 Wharf,
Woolloomooloo, 9.00 am to 5.00 pm.

Saturday, 3rd October
Garden Island Naval Base and range of
ships open to public HMAShips
Melbourne, Perth, Brisbane, Stalwart,
Jervis Bay, Curlew and Ibis. Historical
Display open. Diving, steam truck and
Naval Police guard dog and sailing
displays.

Sunday, 4th October
As Saturday, plus submarine on show.
Church service at St Andrew's Anglican
Cathedral and St Mary's Roman Catholic
Cathedral, 10.30 am

Monday, 5th October
As Saturday. Submarine on show.
Saturday, 3rd October
Fleet Air Arm fly-past over Sydney
Naval establishments in the Sydney area
open to the public.



VICTORIA

Saturday, 3rd October
VRC Race Meeting, Lonsdale,
Flemington.

Sunday, 4th October
Church Service, Naval Association, St
Augustine's at 9.30 am.

Sunday, 4th October
Church Service, Naval Association, St
Luke's, 11.00 am.

Sunday, 4th October
Open Day, CERBERUS, HMAS
CERBERUS.

Monday, 5th October
Golf Day, Comm Comm, Waverley
Golf Club.

Tuesday, 6th October
NOC VIC's Reception, CERBERUS/
LONSDALE, HMAS LONSDALE, 6.30
pm.

Wednesday, 7th October
Bowls Day, Comm Comm, Hampton
Bowling Club.

Wednesday, 7th October
Sailing Race, Navy League, RVYC.

Wednesday, 7th October
Band Concert, VNB/LONSDALE,
Civic Square, Lunchtime.

Thursday, 8th October
Greyhounds, Naval Association,
Sandown Park, evening.

Friday, 9th October
Navy Week Ball, Comm Comm,
LONSDALE, 8.00 pm.

Saturday, 10th October
Open Day — CASTLEMAINE, Mar
Trust, Williamstown.

Sunday, 11th October
Seafarers' Service, Mast, Mariners, St
Paul's, 10.30 am.

Sunday, 11th October
Commemoration Service, Comm
Comm, Shrine, 2.30 pm.

Sunday, 11th October
Re-Assembly, Comm Comm, HMAS
LONSDALE, 3.30 pm.

Saturday, 17th October
Trotting Night, Comm Comm, Moonee
Valley, evening.

SOUTH AUSTRALIA

Sunday, 27th September
Church Service to be held at Christ
Church, North Adelaide, commencing at
7.00 pm. All invited to attend.

Monday, 28th September
Golf Day. (Open to Naval and ex-Naval
personnel only.)

Tuesday, 29th September
Open Night at HMAS ENCOUNTER,
commencing at 7.00 pm. All members and
friends are invited to come along and visit
the Navy at home and see Live and Static
Displays from both RANR and Cadet
personnel. Fire Fighting Displays and the
newly formed RANR Band performing.
During the evening there will be refresh-
ments available for a stall to be run by the
Navy League.

Wednesday, 30th September
Naval Association Reception.
(Invitation only.)

Naval Officers' Club Dinner.
(Invitation only.)

Thursday, 1st October
Navy Week Reception. (Invitation
only.)

Friday, 2nd October
Wreath Laying Service at the War
Memorial on North Terrace, commencing
at 12 noon. All invited to attend.

Committee Lunch.
Saturday, 3rd October
Navy Week Race Day to be held at the
Morphettville Race Course.



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HMAS TOBRUK

Amphibious Heavy Lift Ship

HMAS TOBRUK, June, 1981. (Photo — RAN.)

It is now two months since HMAS TOBRUK commissioned into the Royal Australian Navy at an impressive ceremony at Newcastle, NSW. Since then the new Amphibious Heavy Lift Ship has been involved in First of Class Flying Trials for Navy, Army and Air Force helicopters and has undergone the first Assisted Maintenance period at her homeport, Brisbane.

CONSTRUCTION

The contract to build TOBRUK was awarded to Carrington Slipways Pty Ltd in November, 1977. The first steel for the ship was cut on 1 September, 1978, and 13 days later prefabrication of the first sections of the ship began at Carrington's yard on the Hunter river at Tomago. The prefabricated sections were progressively added to the ship after being assembled using the upside-down method. The building site was a specially constructed side-launch building berth from which the ship was spectacularly launched on 1 March, 1980, by Lady Cowen, wife of the Governor General.

On 16 December, 1980, TOBRUK left

the builder's yard under her own power and proceeded down the Hunter River to Newcastle. After successfully completing

sea trials and final fitting out the ship was handed over to the RAN on 11 April, 1981.



HMAS TOBRUK approaches the beach. (Photo — RAN.)

THE NAVY

September, 1981



Helicopter trials in Jervis Bay. (Photo — HMAS TOBRUK.)

DESIGN

HMAS TOBRUK is an Amphibious Heavy Lift Ship designed for joint amphibious and sea transport operations. The design is an update of the British Sir Bedevere class and has been modified to meet Australian requirements.

A roll-on/roll-off hull with a strengthened deck extending the full length of the ship between the bow and stern ramps enables the carriage of up to 18 Leopard tanks on this one deck. An extending bow ramp is contained behind two horizontally opening bow doors and this ramp can be hydraulically lowered

onto a beach or onto a harbour quay. At the stern a dual purpose stern door/ramp is provided to enable ramp to ramp operations with the RAN's LCH and Army LCM 8's as well as more conventional roll-on/roll-off operations.

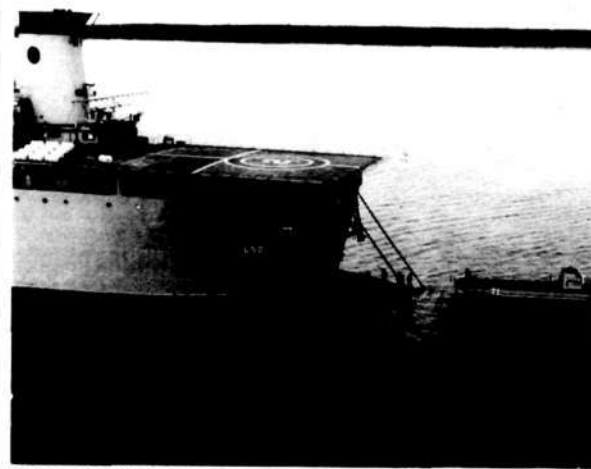
OPERATIONAL CAPABILITY

The upper deck forward of the bridge is equipped to serve as a helicopter flight deck and is the primary helicopter operating position. Helicopters up to the size of the RAAF Chinook C-47A can be landed and refuelled on this deck. Rotary wing aircraft can also be refuelled from facilities on the after flight deck. This fuelling can take place on deck or whilst suitably equipped helicopters remain in the hover. The largest helicopter that can land on the after deck is the RAN's Sea King.

When there is a requirement to carry helicopters, the ship would usually embark a flight of three Wessex 31B helicopters from the Naval Air Station at Nowra, NSW. In these circumstances part of the tank deck would be utilised as a hangar with the aircraft being lowered by derrick down the after hatch.

The upper deck is also designed to serve as a vehicle stowage or landing craft (LCM 8) stowage. Two 8½ tonne cranes are fitted forward and a 70 tonne lift Velle twin derrick aft. This derrick is capable of lifting the 65 tonne LCM 8, two of which can be stowed on cradles immediately forward of the bridge.

Two landing craft vehicle and



HMAS TOBRUK's LCVP T1 approaches the stern gate during recent exercises. (Photo — HMAS TOBRUK.)

September, 1981

THE NAVY

Page Seven

personnel (LCVP's) are carried at davits, one on either side of the superstructure. These 12 metre craft are GRP hulled with water jet propulsion and provide TOBRUK with organic ship to shore movement.

Two pontoons can be carried to help bridge any gap between the ship's bow ramp and the shore when the ship is being used in the beaching role. These 25 metre pontoons, known as Naval Lighterage Equipment (NLE), are carried on the ship's side by means of a hinging arrangement just above the waterline. They are raised by using a specially designed rig with the 70 tonne derrick. These pontoons can also be used as a raft to ferry equipment ashore with each carrying approximately 100 tonnes of cargo.

For joint Navy/Army operations, a joint operations room is used. This has facilities both for an Amphibious Group Commander and for a Landing Force Commander.

A comprehensive array of communications equipment is fitted to support joint operations and the Communications Centre is staffed by both Navy and Army personnel. A Flying Control Centre is situated on the port side below the bridge.

A feature of the ship's equipment is the use of closed circuit TV. TV monitor coverage is available to the Command on the bridge and to the Flying Control and Loading Centre and covers the view ahead



The first "grounding" since commissioning. (Photo — RAN.)

of the stem, activities at bow and stern ramps as well as flying operations on the after flight deck. In addition the Landing Force Commander can brief his troops by television using the display sited in the Troops Assembly area, which doubles as a cafeteria.

PROPULSION

HMAS TOBRUK is fitted with twin screws driven by two 4,800 hp Mirreles Blackstone K Major diesel engines giving a speed in excess of 16 knots. The main machinery and important auxiliaries are controlled from an air-conditioned and sound-proofed control room, the two major machinery spaces being unmanned under normal conditions. To achieve this, a Honeywell surveillance system and Data Logger are installed.

Control of the Main Engines and clutches is by a pneumatic control system exercised from the bridge, or if required, from the Machinery Control Room or local control positions. The bridge also has control of the 400 hp bow thruster fitted to provide improved ship manoeuvrability in confined waters.

ACCOMMODATION

The LSH has a crew of 130, composed of both Army and Navy Personnel. The Army segment of the ship's company is made up of personnel from both the Royal Australian Corps of Transport and Royal Australian Signals. The landing force that can be accommodated varies in size depending upon the length of time troops are to be embarked. A total of 340 troops could live on board for lengthy periods at ship's company standards, or alternatively up to 500 can be embarked for short periods under "overload" conditions.

HISTORICAL BACKGROUND

The name TOBRUK is an apt one for the LSH as it commemorates the close co-operation between the Royal Australian

Navy and the Australian Army units that took place at the port of Tobruk during the siege in 1941. This is reflected in the ship's badge, which depicts a desert fortress (symbolic of Fortress Tobruk) by the sea with the flag of St George flying from the right tower. The cross of St George was shown on the battlements at Tobruk during Operation Crusader, which was an offensive sortie by the garrison to join up with the relief force. A Crusader's flag was also flown from one of the Tobruk forts and although Operation Crusader did not achieve the relief of Tobruk, the flag was then kept until the fortress was relieved after a 242 day siege. The accompanying motto is "Faithful and Strong".

The LSH is not the first RAN ship to proudly carry the name TOBRUK. The first was a Battle class destroyer which was built by the Cockatoo Docks and Engineering Company at Cockatoo Island in Sydney. The keel was laid in August, 1946, and the ship commissioned into the RAN in May, 1950. For the first four years of service, HMAS TOBRUK operated in Korean waters as part of the United Nations Naval Forces engaged in the Korean War. Subsequently, HMAS TOBRUK undertook several tours of duty as a unit of the Commonwealth Far East Strategic Reserve Forces. The ship paid off into reserve in the early 1960s and was declared for disposal in February, 1972.



A repair recovery unit from 10 Terminal Regiment is discharged from the cargo hold. (Photo — RAN.)

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During August 1981, HMAS TOBRUK discharged a varied assortment of Army vehicles onto Iluka Beach, Jervis Bay. (Photo — RAN.)

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NAVAL ROUNDUP

By: GAYUNDAH



HMAS COOK arrives in Sydney for the first time. (Photo — RAN.)

NEW OCEANOGRAPHIC SHIP IN SYDNEY

The Royal Australian Navy's new oceanographic ship, the 2,600 tonne HMAS COOK arrived in Sydney on 30th June, 1981, for the first time, with new capabilities for oceanographic research.

HMAS COOK, commanded by Captain Ian Pullar, is the first ship in the Australian fleet specifically designed and constructed for oceanographic research duties around the Australian coast. Built and commissioned at Williamstown Naval Dockyard, HMAS COOK carries sophisticated equipment including computers for recording and analysing scientific data, one of the world's first narrow beam echo sounders and facilities for carrying-out acoustic and seismic surveys.

COOK will allow Australian oceanographers to survey a much larger area of the oceans around Australia than in the past because of the ship's endurance and her modern equipment. The ship is equipped to make physical oceanographic measurements. Its hydrographic winches allow it to probe water depths up to 5 km to determine temperature, salinity and oxygen.

On board is a marine meteorological laboratory to launch balloons, measure wind speed, solar radiation and evaporation from the ocean. It is also equipped to make measurements of the sea floor — a new capability for any Australian ship. A 13 tonne capacity winch, mounted in the hold, will allow long-cores to be taken from even the deepest ocean basin and at the same time a narrow beam echo sounder, one of the first in the world, will give a more detailed picture of the sea floor than has ever been seen before.

The Royal Australian Navy Research Laboratory has launched an ambitious new programme for COOK that involves



Captain Ian Pullar, Commanding Officer of HMAS TOBRUK. (Photo — RAN.)

University geo-scientists in the task of exploring the ocean around Australia.

The Director of Marine Studies at the University of Sydney, Professor G. M. Philip, said he expects a large increase in marine research as a result of the co-operative programmes drawn up between the RAN Research Laboratory and the universities.

Initial oceanographic research by COOK will involve studying the large hot water eddies that float past Sydney carrying warm water plankton to southern waters.

Scientists will relate their measurements from COOK with satellite pictures from Macquarie and Sydney Universities to keep track of these eddies.

Advice on eddy positions are sent to Naval ships and to commercial shipping companies to allow them to better exploit the oceans.

COOK, with a ship's company of 10 officers and 100 sailors and with extra accommodation for up to 13 marine scientists was launched at Williamstown in 1977 by Mrs D. J. Killen, wife of the Minister for Defence and commissioned late last year.



HMAS FREMANTLE at sea? No, just one of the scale models which were recently on display at TS PERTH. The model was made by a Mr Lemon, who constructed it from photographs and without the aid of plans. (Photo — TS PERTH.)



A port side view of a Soviet OSA class guided missile patrol boat equipped as a radio controlled target. (Photo — USN.)



HMAS SNIPE, January, 1980. (Photo — John Mortimer.)

MINEHUNTER HMAS SNIPE GROUNDED ON CORAL REEF

The 489 tonne wooden-hull mine hunter **HMAS SNIPE** grounded on a coral reef in Nukualofa harbour on 3rd July, 1981, at the start of a three-day goodwill visit to the Tongan Islands.

SNIPE, accompanied by her sister ship **HMAS CURLEW** had just entered the harbour and was firing a 21 gun salute, when she grounded on Monu reef, damaging both propellers. An initial report from the ship indicated that there was no damage to the hull, and there were no casualties. A Naval Board of Inquiry has been convened to investigate the incident.

THIRD FREMANTLE CLASS PATROL BOAT COMMISSIONED

HMAS TOWNSVILLE, the second of the RAN's new Fremantle class patrol boats to be built in Australia, and the third of its class, was commissioned on Saturday, 18th July, 1981, at Cairns, Queensland.

The 42-metre patrol boat was launched on 16th May, 1981, by Lady Ramsay, wife of the Governor of Queensland, Commodore Sir James Ramsay, at North Queensland Engineers and Agents Pty Ltd's shipyard at Cairns.

The commanding officer of the new **HMAS TOWNSVILLE** is Lieutenant Ian Watts, of Wavell Heights, Brisbane.

NEW ANGLO-ITALIAN HELICOPTER

The new Anglo-Italian helicopter designed to meet the growing submarine threat, the EH Industries' EH101, has been given the go-ahead by the British and Italian Governments.

A contract has been given to EH Industries to start a nine-month project definition phase. EHI is the joint company formed by Westland and Agusta to manage work on the EH101. This company will place work immediately on a 50:50 basis with Westland and Agusta who have been working together on the project for the last two years.

The new helicopter will fulfil civil, military and naval roles and will replace the Royal Navy's Westland Sea Kings in UK and the Marina Militare Italiana SH3D helicopters in Italy. Preliminary studies by Westland and Agusta indicate that EH101 will be an advanced 3-engined helicopter in the 26,000 to 28,000 lb class. A comprehensive market survey conducted by the two companies shows the prospective market for the EH101 in its various roles to be 750 helicopters.

CONTRACT AWARDED FOR SUPPLY OF NAVY MINEHUNTER EQUIPMENT

A \$12 million fixed price contract has been awarded to a West German firm for the supply of minehunting weapon systems for two prototype minehunter catamarans for the Royal Australian Navy.

In a joint announcement, the Minister for Defence, Mr D. J. Killen, and the Minister for Administrative Services, Mr Kevin Newman, said a contract for three systems had been awarded to Krupp-Atlas-Elektronik, of Bremen, in the Federal Republic of Germany.

The Ministers said the selection of the West German firm followed evaluation by the Department of Defence and the Department of Administrative Services after proposals had been sought from Australian and overseas companies. No Australian tenders were received.

Mr Killen said: "The minehunter catamaran is a unique and innovative Australian design. The ships' hulls will be constructed from a sandwich of plastic foam encased in fibreglass. This is the first time a catamaran design has been used for a minehunter. Contracts for the construction of the two prototype ships are planned to be awarded to an Australian shipbuilder later this year."

Mr Killen said that the main elements of the Krupp-Atlas minehunting weapon system were an advanced high definition sonar designed for minehunting, and a tactical data system to integrate all the information necessary for the very precise and difficult task of detecting and classifying mines on the seabed.

"Data from the sonar is fed to the tactical data system where the information, together with data from precision navigation equipment, is used to determine the exact geographical location of mines."

"The information is presented to the operator on a tactical display, and may also be recorded for future use."

"Once a mine has been located it can be destroyed by an explosive charge laid by a remotely-controlled submersible vehicle."

Mr Killen said that the new minehunting weapon systems would be containerised for easy handling and maintenance and to allow rapid replacement or removal from the catamarans so that they could perform alternative roles.

Krupp-Atlas had accepted a contractual obligation to achieve a level of Australian industry participation of more than 34 per cent of the value of the contract.

This would be achieved by Australian participation in various aspects of the manufacture and assembly of the weapon systems, together with an offset programme for the manufacture by Australian companies of Krupp-Atlas electronic equipment for world-wide sale.

The minehunter catamaran had been designed in Australia as a replacement for the RAN's British-built TON Class minehunters.

REVISED PROJECT COST FOR NAVY'S FFGs

Updated project costs for the four guided missile frigates being built in the United States for the Royal Australian Navy were recently announced by the Minister for Defence, Mr D. J. Killen.

"The project cost for the four ships at January, 1981, prices is estimated as \$1,063m, compared with \$1,041m at January, 1980, prices — an increase of \$22m," Mr Killen said.

"The increase in the project cost is entirely the result of inflation and exchange variations, and represents no increase in real terms."

"The project cost is made up of the sailaway cost and other

elements such as depot spares, missiles and ammunition, Australian industry participation, training, fares and allowances for Servicemen and their dependents, maintenance and repair capability, contingency and helicopters.

"The amount included in the project estimates for helicopters is \$184m. A team comprising RAN, RAAF and Defence Department officers recently visited the United States and Europe to examine a range of aircraft. The data gathered is currently being assessed."

Mr Killen said one element of the total project cost was the sailaway cost of the ship. This was the cost of the completed ship, with its onboard spares, and its design and project management costs.

"The sailaway cost of the first two ships is expected to be \$143m each," Mr Killen said.

"The sailaway cost of the third ship is estimated at \$154m and the fourth ship \$202m at January, 1981 prices. The fourth ship includes design enhancements made in later ships of the class."

"Payment for the first two ships is expected to be completed later this year, and therefore their sailaway cost will not be affected by future inflation and currency movement. The sailaway cost of the later ships will continue to be affected by these factors until final payment is made."



First Westland Lynx for the German Navy. (Photo — Westland.)

HANDOVER OF FIRST WESTLAND LYNX TO FEDERAL GERMAN NAVY

The first of 12 Westland Lynx helicopters ordered for service with the Federal German Navy was formally handed over at the manufacturer's Yeovil factory on 15th June, 1981.

In service the Lynx helicopters will operate from the new F122 frigates, currently under construction. The Lynx primary role is anti-submarine warfare, for which a new lightweight dipping sonar, the Bendix AN/AQS 18, has been developed under a German Ministry of Defence contract. In addition, the Lynx will be used in the surface surveillance role, and has search and rescue capability.

The Federal German Navy already operates 22 Westland Sea King helicopters in the search and rescue role, based at Kiel.

Letters to the editor

Dear Sir,

The last edition contained a very interesting article on the new large Soviet cruiser, KIROV, that raises a number of points. The article suggests that the KIROV is nuclear powered. This seems unlikely. Close inspection of the excellent MOD photograph of the KIROV taken from the stern quarter will show a prominent mack with two large outlets. These outlets are of a size consistent with boiler uptakes, suggesting that the ship is powered by steam turbines. These uptakes appear to be too small for IR diminished gas turbine uptakes and too large for diesel or diesel turbogenerator exhausts. It seems unlikely that diesels would be used as the main propulsion system for a ship of the KIROV's displacement and speed. At least one other published photograph of the KIROV shows a large plume of dark smoke coming from the mack. (Navy International, November, 1980.) This is also consistent with steam propulsion.

There have been some suggestions that the KIROV may have a small reactor for test purposes. There is considerable evidence that the Soviets are having difficulty with existing nuclear powerplants (eg the icebreaker Leningrad and some submarines), so a trial installation on the KIROV could be likely. This would also be in accord with contemporary Soviet naval practice of trialling future equipments and may represent a seagoing trial of a possible reactor for the fore-shadowed Soviet CVN. Even if such an installation were in the KIROV, it is unlikely that it would be the main power plant.

The use of the term battlescruiser seems questionable. As originally conceived by Jackie Fisher, the term battlescruiser meant a ship with the armament of a battleship and the speed of a cruiser, lacking entirely in armour — speed being her only protection. Thus a battlescruiser could out-run anything that could fight her and out-fight anything that could catch her. As history has demonstrated, this concept was a failure. Therefore, it seems inappropriate to refer to the KIROV as a battlescruiser since the conditions that spawned the term no longer apply; rather, the term large cruiser seems appropriate (or perhaps better still, macro-frigate!)

One may also question the role that the KIROV might play within the framework of existing Soviet naval doctrine. Soviet shipbuilding capacity, although very large is probably not sufficient to build more than a few very high capability ships like the KIROV, particularly if, as has been suggested, there has been a shift towards providing fully independent fixed-wing blue-water capability for the Soviet fleet using CVNs. Given then, only relatively small numbers of KIROV's, their precise role becomes mysterious. Are they to be a nucleus for units attacking carrier battle groups or hunting submarines and escorts? It is not hard to imagine better ways of achieving these roles, using many smaller purpose-built ships. History is full of examples of the folly of relying on big ships that appear as though they can do everything. In seeking to do everything, one usually ends up with something that does not do anything well. Is the KIROV therefore intended to merely frighten us?

Thank you for continuing to make the readership aware of the threat posed by the expansion of the Soviet navy.

Yours faithfully,
PETER FARR

Television and Defence

The ABC's television programme, "Nationwide", on 29th June, contained a segment on defence which a number of viewers considered to lack balance and invited "on the spot" response — virtually impossible, unfortunately, with television and radio programmes. The print media at least has its "letter" columns where angry readers can vent their feelings and correct what they consider to be misleading statements.

The two speakers on the "Nationwide" programme were well-known ABC commentator Noel Norton, and Andrew Farran, from the Faculty of Law at Monash University in Melbourne.

One of the viewers was the Federal President of the Navy League, Commander Geoff Evans, who disagreed with much of what was said and wrote to "Nationwide" accordingly: He rejected some of the statements made and the letter is quoted in full hereunder:

The Producer,
"Nationwide",
Australian Broadcasting Commission,
Gordon Street, Elsternwick, Vic 3185
Dear Producer,

I refer to the programme on Monday, 29th June, concerning Australian defence and wish to comment on a number of the statements made by the interviewer, Mr Noel Norton, and by Mr Andrew Farran whom he interviewed.

The overall impression conveyed by the programme was that our defence effort should be concentrated on local defence measures and that the present and planned composition of the Australian Defence Force is, with a few exceptions, irrelevant to our needs. I regret that this was the impression gained, not only by me but a number of others interested or involved in defence matters.

Before referring to particular statements, I would like to make several general observations which I believe are relevant to defence planning in this country.

For some time past countries throughout the world have been growing more and more dependent upon one another, whether one thinks in terms of trade, social and economic development, or in terms of national security: Australia is not an exception from the trend, nor for that matter are the two super-powers, the United States of America and the USSR.

Despite increasing inter-dependence, not all people think alike and nations have varying and often opposed social, political, cultural, economic, etc beliefs. Given inter-dependence, it is inevitable that those countries which share some or many common interests will group together and there is hardly a country in the world today that is not, for one reason or another, attached to a particular group of nations. For as long as major differences exist, so will the possibility of war, and the very links which tie countries together make wars harder to contain.

Nations however do not embark upon or become involved in wars they think they might lose — certainly Germany in 1939 and later Italy and Japan did not do so, although there may have been some doubts in the latter. Regrettably perhaps, but fear of the consequences rather than a spread of brotherly love seems likely to be the main factor in the incidence of war in the coming years.

If the "Western" group of nations which includes Australia, wishes to avoid war it will only do so by making sure that any country or group of countries with warlike intentions, is very uncertain about the result. For thirty years and despite many problems, the resolve and cohesion of the NATO countries have dissuaded the USSR from military adventures in Europe, although with the possible exception of the United States, no single NATO country could have had this effect.

What the West needs is an extension of collective-defence efforts to embrace all common-interest countries including our own.

The "Nationwide" programme was disappointing in that, firstly, no recognition was accorded the inter-dependence of nations today — and in the area of defence this includes weapons and weapon technology; secondly, a lack of understanding of what maritime power is all about was evident, and thirdly, I thought too much stress was placed on the influence of the guided missile on modern warfare, important though that weapon is. One might also suggest that if the stage was reached where Australia's survival depended upon patrol boats and locally-based missiles, we might as well surrender and save a lot of lives.

Mr Farran and Mr Norton placed a new aircraft carrier high on their list of "unnecessary" equipment, apparently unmindful of the fact that the Western countries, and not least Australia, are very dependent upon the free flow of trade, much of it across oceans. The major "opposition" group headed by the USSR is not nearly so dependent upon trans-ocean movements in peacetime and even less so in any foreseeable war situation. The extraordinary growth of the Soviet maritime power during the last 25 years is therefore of deep concern to the West and even, I believe, recognised in Australia, which until fairly recently has not paid much attention to maritime affairs.

The great bulk of goods is carried across oceans in merchant ships which in time of war are protected by maritime forces — naval ships, and aircraft — and for part of the time, in the Indian and Pacific Oceans much of the time, the only aircraft available will be those carried in the ships. The most cost-effective way of taking aircraft to sea for any maritime operation beyond the relatively limited range of shore-based aircraft is in a ship designed for the purpose.

An aircraft carrier (or other major warship) is not as vulnerable to missile attack as Messrs Farran and Norton suggested on "Nationwide". No thought seems to have been given to target-identification problems for the attacker; to electronic counter measures (ECM) and other defensive equipment available; nor to the ability of major warships to survive after receiving very heavy damage. Certainly it would be better for Australia to have more than one carrier, but if this is not possible at the moment it would be foolish to throw away our expertise in a field a growing number of countries would like to enter.

Contrary to opinions expressed during the programme, a task force is not required to "protect" aircraft carriers; if needs be they can operate on their own. It is normal however for a carrier to operate

with other ships as it can provide, apart from air support for the force, equipment to co-ordinate and use to best advantage the variety of weapons available in the accompanying ships, either offensively or defensively, to counter under-sea, surface or air threats, or all three together.

Britain has not "chopped a similar (carrier) concept as a crippling expensive" as was said on the programme. On the contrary the previous British Government established a Party committee which found that the Invincible-class ship was markedly more cost-effective than a group of surface escorts. The present Government with all manner of economic troubles is considering a reduction of one ship in the class to partly offset the huge cost of up-dating the country's nuclear submarine force. The vessel reported to be available, ARK ROYAL, has just been launched and is years away from completion; if Britain disposes of this ship it would be fairly easy to get another one under way if and when the economic climate allowed.

Much was made in the programme of the effectiveness of guided missiles and the sinking of the Israeli destroyer EILAT in 1967 by a Syrian missile boat quoted as an example of the vulnerability of warships to these weapons. However, as my colleague Commander A. W. Grazebrook pointed out in an article on the risk to any country of relying on one kind of weapon or weapon-system ("One Weapon Danger", THE NAVY, April, 1981), the Israelis after this loss developed ECM, which over-rode the Syrian missile guidance system and they subsequently thoroughly defeated the Syrians at sea.

Patrol boats of various types have a place in most navies including the RAN. Their importance in the force depends very largely on geographic circumstances and the seas in which they are required to operate. Their effectiveness is greatly influenced by weather conditions, they have limited endurance compared to destroyers, frigates and larger vessels and they are very vulnerable to air attack.

Missile-armed fast attack craft as advocated by Mr Farran are inherently unsuitable for anti-submarine warfare: They are too unstable to carry effective sonar equipment and too small for effective long-range ASW weapons. They cannot therefore cope with the submarine, which poses one of the greatest threats to Australia's well-being.

It is fair to say that patrol boats and small attack craft are most useful when they have aircraft operating as their "eyes", and having regard to their respective capabilities and limitations, it is better to have the missiles in the aircraft rather than in the ships.

I agree with "Nationwide" that submarines are a potent deterrent, and the Australian Oberons are very good. I suggest however, that surveillance is best

carried from the air except when covert intelligence is required. The submarine is then very useful.

To compare, as was attempted on "Nationwide", patrol boats and hovercraft with destroyer-type vessels, and various missile systems with one another, is not I feel a helpful exercise; one might as well compare helicopters with the F111, both of which are excellent in their very different roles. The important thing is to strive for a proper balance of weapons in our national armory.

One cannot let pass without comment the rather surprising remark by Mr Farran that our Defence Department tends to order platforms and to then look for weapons to put on them.

It is well known that weapons and the various supporting "systems" are under constant development; a piece of equipment effective today can be obsolete tomorrow. On the other hand the platforms, or "boxes" in which the equipment is carried change much less rapidly, be they boxes that float, have wings or have wheels. A floating box, let us say a destroyer hull, may last 25 or 30 years and at the end of the period hardly any of the original fittings will remain; they will have been replaced by better equipment at least once and often several times.

When a box eventually has to be replaced, of course a great deal of attention will be given to the new container, its ability to accommodate a range of likely new contents being a major consideration. To suggest that the Defence Department goes about looking for boxes to fill later on does less than justice to the intelligence of our defence personnel.

I conclude this rather long letter — many controversial issues were raised — by expressing the belief that Australian defence planning is basically sound. A country with great oceans on three sides and separated on the fourth by a narrow stretch of water from a potentially turbulent part of the world, needs a particularly well-balanced Defence Force. Certainly an ocean-going navy as well as coastal forces; an air force with over-sea and over-land capabilities including a modern fighter segment; and an army able to assume (limited) overseas peace-keeping tasks and capable of expansion which one assumes would, or could, only be achieved, by concentrating on the leadership potential of the Army Reserve. We appear to be slowly moving towards these objectives.

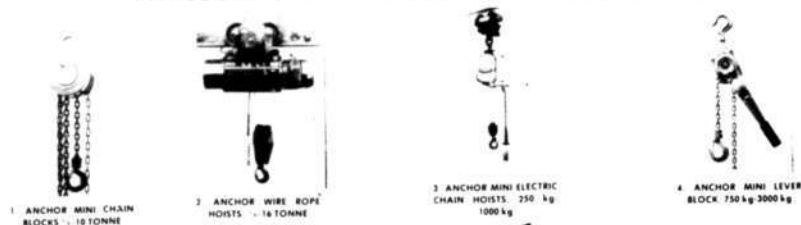
Planners however can plan to their heart's content, but it is Governments which make decisions. In Australia this is usually the unknown quantity.

Yours sincerely,
COMMANDER GEOFFREY EVANS
Federal President

anchor

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The Dutchmen Who Stayed

by VIC JEFFERY

SEVEN Dutch submarines escaped from Java in the Dutch East Indies when it was overrun by the Japanese in March, 1942.

Three K.VIII, K.IX and K.XII escaped to Fremantle and four others — K.XI, K.XIV, K.XV and 0.19 sailed to Colombo in Ceylon. Two of the seven which ended their active days in Fremantle were destined never to leave Western Australian waters. They were the K.VIII and the K.XI.

Of the three which reached Fremantle, K.IX was paid-off for disposal on 27th August, 1942, and was later wrecked at Sugar Loaf Point, after commissioning in the RAN for a brief period. The second, K.XII, after spending most of the war years in WA waters for anti-submarine training by the RAN and the USN paid-off at Sydney on 5th May, 1945, and was scrapped during the 1950s.

The third boat, K.VIII, was a 583-ton coastal submarine which paid-off at Fremantle on 27th August, 1942, as being of no further operation value. She had first commissioned on 15th September, 1922 and sailed for the Netherlands East Indies on 6th September, 1923, in company with K.II, K.VII and the depot ship HNLMS Pelikaan. She was armed with a 3.5 inch gun and four 17.7 inch torpedo tubes.



K.XI being raised in Fremantle Harbour, 1946 by HMAS KARANGI. (Photo — M. Sweetman.)

In 1957, the wreck was declared a navigational hazard because of increasing shipping movements in Cockburn Sound and a decision made to blow the hull up. Divers Jack and Terry Sullivan used 24 cases of plastogel to reduce the submarine into removable sections between July and August, 1957. As a silent memorial the bow of K.VIII lay in the sandhills of Jervoise Bay until quite recently.

The second Dutch submarine destined never to leave was K.XI. This submarine arrived at Fremantle on 22nd March, 1945, after spending most of the war operating from Trincomalee as an asdic training submarine for the Royal and Indian Navies.

K.XI paid-off at Fremantle on 10th April, 1945, and was handed over to the RAN at Fremantle for transfer to the disposal committee on 21st June.

The 660-ton K.XI had commissioned in 1925, with a complement of 31 officers and men. She carried the same armament as the smaller K.VIII apart from two extra 21-inch torpedo tubes. The boat was taken up the Swan River to "Leeuwijn 3", the Royal Freshwater Bay Yacht Club, where she was partially stripped. Her deck gun was donated to the club.



K.VIII founders in Jervoise Bay, 1943.

Her East Indies service was uneventful apart from a voyage from Tarakan to Manila in the Philippines in March, 1926, in company with the submarines K.II, K.VII and K.XI.

Following the outbreak of war with Japan in December, 1941, the K.VIII was lying in reserve in the Surabaya Naval Dockyard in Java. She was re-commissioned on 6th January, 1942, for coastal defence and asdic training duties. Her crew had transferred from the damaged K.XIII, which had suffered a battery explosion in Singapore and been escorted back to Java for repairs.

K.XIII was scuttled at Surabaya on 2nd March, 1942 to avoid capture by the Japanese.

Under the command of Lieut Commander Derksema, K.VIII made several war patrols between Bawean and the north coast of Java. With the Japanese invasion of the Netherlands East Indies, the boat was ordered to proceed to Fremantle on 3rd March, arriving 14 days later.

After inspection by naval authorities, K.VIII was declared unfit for operational use and de-commissioned in Fremantle on 8th May, 1942. On 27th August, she was declared for disposal. Her 220 volt, 2200 amp main electro motor was removed, for installation on the main Fremantle slipway where until the 1970s, it was still in use to provide DC power to ships using the slipway.

K.VIII's conning tower was also removed and erected on the Fremantle pilot boat Lady Forrest. The submarine was then partially stripped.

In 1943, after stripping had been completed, the hull was towed down to Jervoise Bay in Cockburn Sound where it was to be beached and broken-up. However, the K.VIII foundered 100 yards off shore and was abandoned.



Diver Terry Sullivan on the K.VIII. (Photo — Sullivan collection.)

Colonel Boaz of the Australian Disposal Commission desired to remove the vessel as the Royal Netherlands Navy had no further interest in the old submarine while the Fremantle Harbourmaster wanted the K.XI out of harbour.

K.XI was subsequently purchased by a Mr McMinn of New York while stripping continued on the Fremantle slipway. She was subsequently moored alongside another Dutch vessel, but sank on account of a depth gauge being left off the hull.

After six weeks a local diver named Ball sealed up all holes and the torpedo tubes. She was then raised and further dismantled at the North Wharf near the old Fremantle railway bridge. Finally, in September, 1946, K.XI was towed out to a position 12 miles past Rottnest Island, known as the "ship's graveyard" and scuttled.

It seemed that neither of these old warhorses was ever destined to suffer an ignominious end in the hands of the shipbreakers.

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One of a Kind USS TERROR

by ROSS GILLET

(All photos USN, COURTESY A. D. Baker III.)

The 8,640 ton TERROR was the only minelayer built for the purpose by the United States Navy, and as such was the sole vessel suited for mining operations in forward combat conditions during the Second World War.

Authorised in the fiscal year 1938, TERROR was laid down on 3rd September, 1940, launched on 6th June, 1941, and completed by the Philadelphia Navy Yard on 15th July, 1942. For her role, TERROR normally carried over 900 mines, housed in a spacious and fully enclosed mine deck aft. Six mine tracks, holding 648 MkVI weapons, and an additional 478 on tracks accommodated on the first and second platforms, plus a further 70 mines as cargo on tracks amidships provided TERROR with all the "punch" she required. Mine ports were located at the stern.

For self-defence TERROR mounted four 5 inch, 38 calibre guns in single mounts (A and B; X and Y) and eight 0.5 inch machine guns. The smaller weapons were subsequently replaced by sixteen 40mm guns. Both "B" and "X" 5 inch mounts had open roofs.

Following fitting out and a shakedown cruise, TERROR proceeded to New York on 30th October, 1942, to prepare for her initial large-scale operation. Sailing with Task Group 38.3, the mine-layer left for

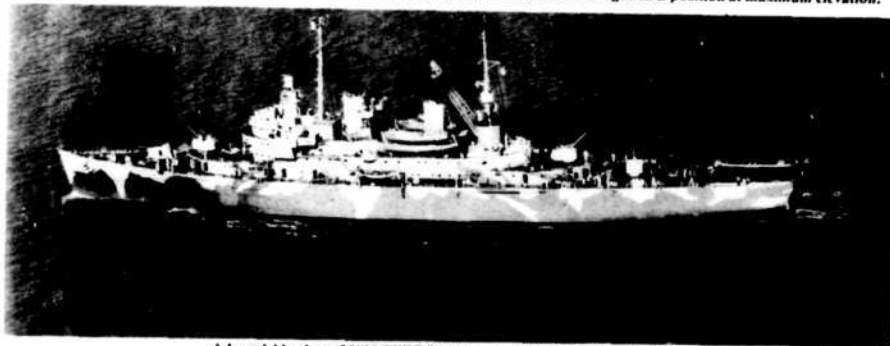
North Africa on 2nd November and after parting company with the convoy reached Casablanca on 14th November. Here the ship laid a defensive minefield stretching seven miles, which would protect any allied ships lying in harbour.

Returning to the United States east coast, TERROR began an overhaul and training period. During May, 1943, she received additional anti-aircraft guns, before participating in tactical exercises through the summer. Late in September, she began loading a cargo of mines in preparation for her departure to the Pacific. Sailing via the Panama Canal, TERROR arrived in San Francisco on 19th October.

TERROR's service in the Pacific



USS TERROR, 8th July, 1942. Note 5 inch gun in B position at maximum elevation.



A broadside view of USS TERROR taken on trials, 24th August, 1942.



The minelayer at Mare Island. A single 3 inch gun has been added between B mount and the bridge.

theatre of war involved duties as a combination transport-cargo ship and as a command and support ship for minesweepers, in addition to her designed role. While operating as a mine force command ship, TERROR embarked up to 165 flag personnel, as well as her normal ship's complement of 481 officers and men.

Early in December, 1943, TERROR proceeded to Tarawa to provide heavy equipment and mines for mining operations. After returning to San Francisco, she sailed to the Marshall Islands for mine-laying operations before drydocking and overhaul in San Francisco. Further modifications to the ship were undertaken at Pearl Harbour to accommodate the staff of Commander, Minecraft Pacific Fleet, between November, 1944 and January, 1945. On 1st May, TERROR was struck by a Japanese Kamikaze aircraft which also dropped two exploding bombs, one into the communications platform and a second penetrating the main deck. The aircraft's engine also tore through the ship's bulkheads to land in the wardroom.

To avoid explosions all magazines were flooded. Although no engineering

damage had occurred, the Kamikaze had cost TERROR 171 casualties.

Repairs to the battle-damage necessitated TERROR's transit to San Francisco where an overhaul was performed between June and August, 1945. During December, TERROR was replaced as flagship for Minecraft Pacific Fleet. Except for one cruise to Pearl Harbour in March, 1946, the minelayer remained on the American west coast until January, 1947, when she departed San Francisco to embark the Commander, Minecraft Atlantic Fleet, in late February. Exercises in the Caribbean ensued, followed by sorties along the eastern seaboard of the USA.

Despite her relative youth, TERROR arrived at the Charleston Naval Yard for inactivation in July, 1947, joining scores of other American warships laid up in the years following the Second World War. She was not re-activated during the Korean War, but placed in service in



Amidships view of USS TERROR, 5th August, 1945, during her refit to repair battle damage inflicted by Kamikazes.

OFFICIAL PHOTOGRAPH

NAVY YARD MARE ISLAND CALIF

reserve. During February, 1955, TERROR's designation symbol was altered to MM and in October to MMF-5. On 6th August, 1956, she decommissioned for the final time. After lying in reserve for over two decades, TERROR was sold on 1st November, 1970, to the Union Minerals & Alloys Corporation of New York for scrapping.

USS TERROR — Cruiser Minelayer

Displacement:
5,875 tons standard
8,640 tons full load
Length (oa):
454 feet 10 inches
Beam:
60 feet 2 inches
Draught:
19 feet 7 inches (full load)
Machinery:
Two shaft General Electric turbines, four
boilers, 11,000 shp.
Oil Fuel:
1,834 tons
Speed:
20.3 knots
Range:
10,000 miles @ 15 knots.

OFFICIAL PHOTOGRAPH

NAVY YARD MARE ISLAND CALIF



Another view of the refit, 5th August, 1945.

USS TERROR's
six mine ports were
located in the stern.

Starboard quarter view
taken in San Francisco
Bay, 9th August, 1945.



At sea after alterations, 9th August, 1945.



Broadside, 9th August, 1945.

WORKHORSES OF THE RAN



HMAS BALIKPAPAN. (Photo — RAN.)

Since the early 1970s, the primary amphibious force of the Royal Australian Navy has been vested in the 323-tonne landing craft heavy of which six are currently in commission. Eight LCH's were ordered in 1969 for the Australian Army Water Transport Squadrons, but only the first, BALIKPAPAN would be army manned.

All eight craft were constructed by Walkers Ltd, Maryborough and commissioned by 1974. In November, BUNA and SALAMAU were transferred to the Papua New Guinea



HMAS LABUAN beached to receive Army equipment. (Photo — RAN.)

Defence Force. The six LCHs remaining in Australian commission, BALIKPAPAN, BETANO, BRUNEL, LABUAN, TARAKAN and WEWAK, form the First Australian Landing Craft Squadron, based at HMAS Moreton on the Brisbane River.

Each LCH is an all welded twin screw vessel, employed to transport cargo and supplies from ships lying offshore to water terminals. As designed each LCH is 44.5 metres in length, with a beam of 10.1 metres. Two General Motors diesels driving twin screws give a top speed of 10 knots. Two 0.5 inch Browning machine guns are carried. The maximum cargo load of the LCH is dependant on the load/fuel balance and varies between 140 to 180 tonnes. With a typical load of 175 tonnes the LCH can steam over 1,300 miles, increasing to 2,280 miles when a load of 150 tonnes is carried.

In respect to Army equipment, a typical load would comprise three battle tanks, or 23 quarter-tonne trucks, or four LARC Vs or 13 M113 armoured personnel carriers. All cargo is received over the bow ramp which is raised while underway.



Army M113 armoured personnel carriers with HMAS BETANO. January, 1981. (Photo — Mal Lancaster.)



HMAS BRUNEL. (Photo — RAN.)



HMAS WEWAK, August, 1980. (Photo — Ross Gillett.)

Following completion in 1971, BALIKPAPAN undertook a series of trials for the Army. In early 1972, a combined Navy and Army crew manned the vessel. Although the first LCH to complete she was actually the last to commission into naval service.

Extended amphibious sorties by the six LCH's are regularly undertaken. With their large freezer spaces and an evaporator to provide an additional 1½ tonnes of water per day, operations around the continent can be achieved. All LCH's are provided

with two spare bunks whilst six berth caravans can also be carried.

The design of the landing craft has resulted in a box-like flat keel which, in any moderate seaway, causes the LCH to roll considerably. Despite this drawback, the Squadron has accomplished tasks from the tropic waters of northern Australia to Adelaide and the Great Australian Bight. Other cruises have sent the craft up Papua New Guinea's Fly River, to Lord Howe Island, Darwin and Indonesia, as well as hydrographic work in the Pacific Ocean.

The versatility of the LCH and their comparative youth should see the majority remain in full commission at least until the late 1980s. Working in conjunction with the large amphibious warfare ship, HMAS TOBRUK, the LCH's provide the RAN with a significant amphibious capability.



Another aspect of HMAS WEWAK, January, 1981. (Photo — Mal Lancaster.)



HMAS TARAKAN leads three Army landing craft into Sydney Harbour after a five day, 1100 kilometre passage from Hobart in December, 1977. (Photo — RAN.)

PLATYPUS



HMA Ships PLATYPUS, BOWEN and AIR CLAN with the Army workboat SOLLUM (AM 1629) lie peacefully at anchor in New Guinea waters during WWII. At this time "PLATS" was designated as a repair and maintenance vessel, having undergone a major refit, including conversion of two of her four boilers to oil burning. This work was performed at Williamstown from June to December, 1944. PLATYPUS returned to Australia in December, 1945, and in May, 1946, was paid off to reserve. (Photo — AWM Neg 109336.)



An interior view of the workshop area taken aboard HMAS PLATYPUS, May, 1943, at Morotai. (Photo — AWM Neg. 109336.)

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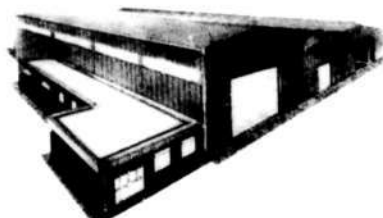
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Colonial Torpedo Boats

by HARRY ADLAM

THE Royal Australian Navy is primarily a small ship navy, the only large fighting unit being the flagship HMAS MELBOURNE. Other large units are in commission, but they are auxilliary (or support) ships.

Indeed, the circle seems to have been completed when we consider that in the days before Federation, the States that maintained naval forces kept small ship fleets. The exception was, of course, South Australia, which provided itself with one small cruiser.

The small ship of those now far off days was the torpedo boat, which corresponds with today's frigate or destroyer-escort. The first torpedo boat, rated as such and to be commissioned into the Royal Navy, was HMS LIGHTNING, a small boat built in 1876 by the well-known Thornycroft yard. In this new era of naval warfare, the torpedo was considered to be the ultimate weapon, and the torpedo-carrying craft thought to be the most important part of the fleet. From

now on, any battleship or cruiser that dared to emerge from her home port was at the mercy of the deadly torpedo boat.

That was the theory, but it was to take the Great War of 1914-1918 to see just how deadly the torpedo could be. In that conflict the torpedo was launched mainly from submarines, but then again, the submarine was first known as the submersible torpedo boat, so the 1876 theory was actually correct.

What is usually overlooked is the fact that in 1879, the New South Wales Government built two of these new craft in Sydney. The Colonials were there right from the start!

The boats were constructed by the Atlas Engineering Works in the Haymarket, Sydney. Both were built to a Thornycroft design and from all accounts were of a

successful type. The names given to the boats were ACHERON and AVERNUS, names linked with ancient mythology. Acheron was the river of Hell, and Avernus a lake in Italy from whence the river was supposed to have begun. As for the boats themselves, they were very "narrow gutted", being 80 feet long with a beam of 10 feet 3 inches. Driven by a single screw, they had a speed of 16 knots. The reciprocating machinery was of the surface condensing type developing 300 ihp.

The armament consisted of two sets of dropping gear for 14 inch Whitehead torpedoes, as well as being fitted to carry the spar torpedo. In April, 1885, both boats were reported as being in a bad state of repair. This seems rather odd, as both were only seven-years-old. In April, 1885, ACHERON and AVERNUS were docked in the Fitzroy Dock at Cockatoo Island, and in May of the same year were taken in hand by Morris Dock for the fitting of the spar torpedo gear.

The spar torpedo had been tested during the American Civil War, and good results obtained. It was a very expensive type of torpedo, as to secure a hit usually meant the loss of the torpedo boat. The spar torpedo was in fact an explosive charge suspended from a long pole, or spar, pushed out over the bow of the torpedo boat. When the charge was pushed against the target ship it could be fired either by percussion or remote operation, (usually by a pull on a long lanyard).

In respect to the dropping gear, the torpedo was of the locomotive type. When the boat's skipper decided he was close enough to the target, he merely dropped the "fish torpedo" into the water and then went hard astern. In both



The New South Wales torpedo boat ACHERON approaches the training ship HMCs WOLVERENE for the arrival of the Governor. Her sistership AVERNUS lies alongside the flagship. (Photo — Ross Gillett collection.)



HMCS NEPEAN, 1905. (Photo — HMAS CERBERUS Museum.)



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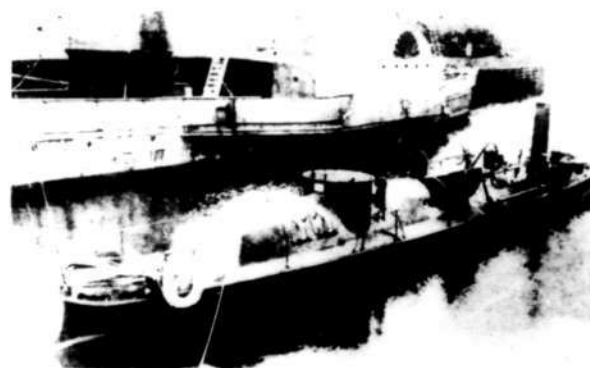
HMCS LONSDALE at speed. (Photo — HMAS CERBERUS Museum.)

cases the boat had to be aimed at the target, although the dropping operation at least gave the boat a sporting chance of survival.

The New South Wales pair were handed over to the Commonwealth Government upon Federation, still in good working order. Despite their condition, both were

sold out of service in 1902, apparently not being used by the new Commonwealth Naval Force. Their ultimate fates are uncertain. We do know that ACHERON was sold for £425.0.0, while AVERNUS fetched £502.0.0. It has been reported that one of the boats was taken over by the Quarantine Service and renamed JENNER. Under this name she was sighted at Drummoyne in 1930, but after that seems to have vanished. In 1922, it was decided to remove the hull of a torpedo boat from the beach at Double Bay and dump it in the Rozelle Bay reclamation area. This may have been carried out, but at a much later date, as this craft was seen in the Bay as late as 1931.

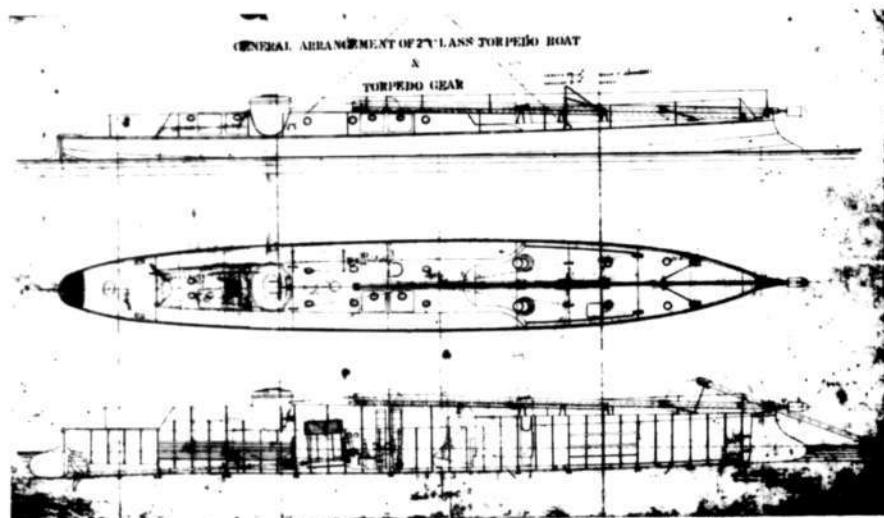
The other colonies also ordered torpedo boats in 1883, but these were not built locally. The largest class comprised eight second class boats constructed by Thornycroft during 1883-84, four to the order of the New Zealand Government and four for the Australian Colonies. The eight boats were identical in dimensions, but differed in their funnel arrangement.



Lying forlorn and neglected in Hobart, the Tasmanian torpedo boat TB No 1. (Photo — Historical Studies Section.)



HMCS LONSDALE at Swan Island, 1905. (Photo — HMAS CERBERUS Museum.)



General arrangement of the New Zealand 2nd class torpedo boats. (Photo — Steve Given.)

Basically they were 63 feet long, with a beam of 7 feet 6 inches. Not much of the boats were actually in the water, the draught forward being only 13 inches, and the draught aft a mere 3 feet 3 inches. The displacement was 12 tons, slightly less than ACHERON and AVERNUS, which displaced 16 tons.

The New Zealand four were ordered as spar torpedo boats, one only being fitted with dropping gear at a later date. Reports concerning the Australian Colonial boats mention dropping gear, but all probably were ordered as spar torpedo boats. The first group ordered were for New Zealand, being given the Thornycroft yard numbers 168, 169, 170

and 171. The names of TAMIOHA (168), TAIAROA (169), ARAI TE URU (170) and JERVOIS (171) were allotted.

These four were followed by yard numbers 189, which became NEPEAN, and 190 LONSDALE, for the Colony of Victoria. Yard number 191 became TB No. 1 for Tasmania and 193 MOSQUITO for the Queensland Maritime Defence Force.

The official test of No. 171, JERVOIS, provides some idea of the boat's operation. With the boiler pressure at 132 psi, the engine turned over at a mean of 631 rpm, giving a speed of 17.342 knots as the mean speed. The highest rpm was 639 and the highest speed attained 17.380

knots. We can expect that the Australian boats would have behaved in much the same manner. It is interesting to note that during the test no indicator diagrams were taken, so naturally no ihp was recorded. The boats are generally accepted to have been capable of 150 ihp. Evidently the tests were less exhaustive than those of modern times. A note at the bottom of 171's test sheet stated: "The machinery and boiler worked in a satisfactory manner. There was no priming or leaky tubes. Total time under way at full speed, about 35 minutes."

As far as the Australian boats were concerned, all four were fitted with torpedo dropping gear. This was simply a



Armed to the teeth, the torpedo launch HMVS GORDON. (Photo — Peter Williams.)

pair of cradles for each torpedo at the level of the deck. When the "fish" was released, the starting mechanism was tripped and the torpedo ran under its own power. There is a report of MOSQUITO actually firing two spar torpedoes. In this instance the target was a pile in the Brisbane River. MOSQUITO approached the pile, went astern to check her speed and neatly touched the target, probably with a reduced charge being used. However the exercise could not allow for the target ship firing at the attacking MOSQUITO with every gun that could be brought to bear.

Just how good the second class torpedo boats were is a matter of opinion. As early as 1885, the Commandant of the New Zealand Military Forces admitted that the spar torpedo was of little value and a report by an inspecting officer in 1893 throws some doubt on the value of the boats themselves as far as the dropping of torpedoes was concerned.

The inspecting officer, stated that the boats could not live in any seaway and if a torpedo was dropped the boat would capsize. It was further added that even in calm weather it would be very risky to drop a torpedo without having men on deck to change sides to counterbalance the loss of weight. Evidently the only way to use the boats was to drop both torpedoes at the same time, a very wasteful operation.

The Australian four enjoyed sedate lives and were transferred to the Commonwealth Naval Forces in 1901. Their fates varied and with the exception of the Tasmanian boat remained in their original ports. TB No. 1 spend most of her time in a boatshed at Hobart seeing little activity. In 1905, the Director of the Commonwealth Naval Forces, Captain W. R. Creswell decided that TB No. 1 should be transferred to Port Adelaide for training duties. Subsequently it appears that the CNF had second thoughts about her employment there being no mention of TB No. 1 in Creswell's 1906 report. TB No. 1 ultimately became a hulk in the Harbour Board's boatyard.

NEPEAN and LONSDALE were evidently regarded as of little use to the CNF and in 1903 were put up for auction. There were no takers. Both finally ended September, 1981

In retrospect it must be said that the eight boats were a costly experiment. Even as early as 1883, there were doubts about their value. The Admiralty informed the New Zealand Government that the boats were not the type which would have been approved had they been informed beforehand. The New Zealand Minister of Defence received a rude shock when told that craft such as these had not been tested by actually firing a torpedo.

All ten boats described to this point were classified as second class torpedo boats, designed for harbour defence. First class boats were designed as sea-going, suitable for attacking ships at sea. With the purchase of their two second class boats, the Victorian Government placed an order for one first class boat. The vessel named CHILDERS would see considerable service under three different owners.



Captain Creswell, Commandant of the Commonwealth Naval Forces on board the "Countess". (Photo — HMAS CERBERUS Museum.)

THE NAVY

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A fine silhouette of the Victorian first class boat, HMVS CHILDERS. Note torpedo in the launching position. (Photo — Latrobe Library.)

THE NAVY

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September, 1981



HMAS COUNTESS OF HOPETOON, 1919. (Photo — Historical Studies Section.)



Exercises completed the torpedo is recovered and secured aboard. (Photo — HMAS CERBERUS Museum.)



The twin revolving torpedo tubes onboard the "Countess". (Photo — HMAS CERBERUS Museum.)

Built by Thornycroft as Yard No 172, CHILDERS was a much larger vessel than NEPEAN or LONSDALE. She was 118 feet long with a beam of 12 feet 2 inches and a draught of 5 feet 8 inches. She displaced 60 tons and her 750 ihp engines would give a speed of 20 knots. CHILDERS carried a torpedo tube in the bows and a single revolving deck mounted tube aft. She also carried four sets of dropping gear and two 1 pounder Hotchkiss guns. CHILDERS saw service with the Victorian Navy, the CNF and the RAN. She was employed in the early part of the Great War until declared obsolete about 1916. Hulked on Swan Island she was eventually sold in August 1918 for a mere £20.0.0.

In 1891 the Victorian Navy took delivery of another first class boat, the largest torpedo boat to be acquired by any of the colonies. Named COUNTESS OF HOPETOON, she was built by Yarrow and launched in 1891. She was larger than CHILDERS, being 130 feet long with a beam of 13 feet 6 inches and a draught of 7 feet 4 inches. A single screw drove her at 23 knots with 1186 ihp. Armament consisted of a bow torpedo tube, a twin revolving deck tube aft, four sets of dropping gear and two 1 inch Nordenfellt guns.

Both CHILDERS and COUNTESS OF HOPETOON made delivery voyages on their own keels while the second class boats arrived as deck cargo. COUNTESS OF HOPETOON was christened on arrival in Victoria in a most unusual manner. Instead of having a bottle of wine smashed against her bows, the bottle was suspended over the stem and shattered by firing the bow torpedo.

The Countess, as she was usually known, served through the changes from the Victorian Navy, the CNF, and the RAN. She saw service in the Great War and was present at the inspection of the Australian Squadron by the Prince of Wales in Port Phillip in 1920. The Countess was retained as a training ship at Williamstown, Victoria until sold in April, 1924, for £299.0.0. Her original cost was £12,500.0 when purchased, so she brought marginally more than CHILDERS when sold as scrap. For many years the Countess's main engine was in use at the Gordon Institute of Technology at Geelong where engine drivers learned how to adjust lap and learn on this historic relic.

Before concluding mention must also be made of GORDON and MIDGE. The former was built for the Victorian fleet by J. S. White of Cowes and was described as a turnabout torpedo launch of wooden construction. A 12 ton boat, 56 feet long with a beam of 10 feet 6 inches, she was armed with two sets of dropping gear. Her end came in November, 1914, when she was rammed and sunk at Williamstown by a picket boat.

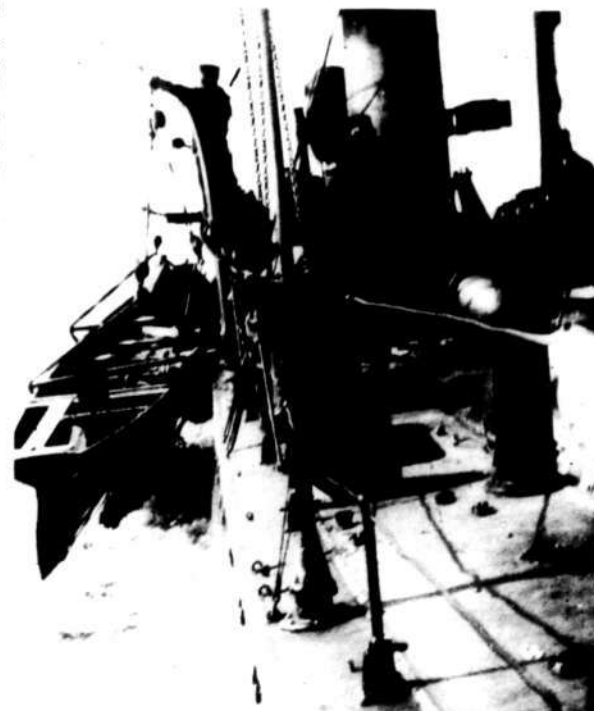
GORDON was raised but evidently found to be too far damaged to merit repairs.

MIDGE was built by order of the Queensland Government, and was described as a picket boat. She carried two sets of dropping gear and could mount machine guns if required. She arrived in Brisbane in 1888, having been launched in the United Kingdom the previous year. On 27th June, 1888, she carried out her steaming trials on the Brisbane River achieving a speed of 15 knots. MIDGE lasted through to the formation of the RAN, being deleted in 1912. She was sold without her machinery which was installed in the RAN's Engineering school at Williamstown, Victoria.

As can be seen by the fleet lists of the various colonial governments, torpedo craft were very much in favour in the pre-federation era. Maybe the choice of boats was not good, but at least there were some far sighted men who were ready to "give it a go" and in the case of New South Wales, they were ready and capable of building the ships themselves. Just how the colonies decided on the Thornycroft boats is not known as there was no great acceptance of this type of warship by the Admiralty. Possibly price vindicated choice. The New South Wales pair cost the colony a total of £8,784.0.0 whilst the Thornycroft boats ran out at £3,300.0.0 each. However, the latter were smaller than the New South Wales pair which were designed to accommodate their crews onboard. The New South Wales boats were warmly received when first built, being well sub-divided with ten watertight compartments. Whatever the reason, the 63 foot Thornycroft boats do not appear to have been a great success, although New Zealand opinion was that there was a use for them in night operations "giving to the defence a great moral effect". They could also be used as fast guard boats.

The colonial torpedo boats were never called upon to engage in actual hostile actions, although CHILDERS was sent to Suakin on her delivery voyage but was not required for operations. One can imagine just how these frail craft would have fared should they have attacked an enemy fleet. Their light hulls would have stood little chance against the gunfire of a battleship or cruiser. It was standard practice to mount an anti-torpedo boat battery in all ships of any size, the torpedo gunboats being armed with four 3 pounders for this very purpose. The third class cruisers mounted eight 3 pounders and the size of the battery increased with the ship.

Despite the boat's limitations, great respect must be held for the Colonial Governments of the day to invest in these small warships. The money could have been put to good use elsewhere, but defence was very important and the Colonials wanted to play their part.



"Countess's" boat is brought aboard. (Photo — HMAS CERBERUS Museum.)



Back at Swan Island COUNTESS OF HOPETOON is secured and the gear off loaded. (Photo — HMAS CERBERUS Museum.)

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THE EUROPEAN REPORT

Naval News from the Continent

by ANTONY PRESTON*

ROYAL NAVY

The news of massive cuts threatened for the Royal Navy has understandably created gloom and despondency over a wide area.

With the British currently providing 70 per cent of the forces in the Eastern Atlantic, both the United States and NATO are alarmed. NATO is already overstretched in the Atlantic and would be unable to replace the multi-role capability provided by the RN.



HMS FEARLESS. (Photo — John Mortimer.)



HMS INVINCIBLE on sea trials. (Photo — Ministry of Defence.)

Having said that, the proposals which leaked out in the British press on May 18 were as follows: To lay up the new support carriers INVINCIBLE and ILLUSTRIOUS, to scrap or sell the third ship ARK ROYAL and to spend no further money on up-dating the surface fleet. The only money spent would be on expanding the nuclear submarine strength. By 1985, this would result in the following:

- 2 support carriers (in reserve)
- 14 DDGs (Type 42)
- 31 frigates (Type 21, LEANDERS, Type 22),
- 4 SSBNs
- 17 SSNs

Politics being unconnected with the truth, the proposals were immediately denied by the UK Secretary of State for Defence, Mr John Nott, but sources close to the Ministry confirm that they were a serious proposal. Back-peddling furiously, the Conservative Government has since given assurances that the surface fleet will not be written off, and Mr Nott has specifically confirmed that the ARK ROYAL (launched on June 2) has an important role to play.

On 25th June, Mr Nott finally presented his proposals to Parliament; they include the closure of Chatham Naval Base and the running down of Portsmouth, scrapping the newly refitted carrier HERMES and the amphibious dock landing ships FEARLESS and INTREPID by 1984, and reducing the escort force from 59 to 'about' 50 ships. On the credit side the ARK ROYAL is to be completed but only two air groups will be maintained, so that one of the three new carriers will be laid up; a new class of Type 23 frigates will be built, and a new class of diesel-electric submarines, the Type 2400.

The Type 23 will be a utility A/S frigate equipped with towed array sonar but omitting the helicopter which has previously been considered vital to the ASW mission. The Type 2400 is a big long-range conventional submarine understood to be the strongest contender for the RAN's OBERON replacement.

What appears to be going on behind the scenes is not

simply the perennial rivalry between the Air Force and the Navy, but a bid by the nuclear submarine lobby to get its hands on the lion's share of the naval budget. The total defence budget is not actually shrinking, but the British, like every other country trying to maintain high-quality defence forces, are faced with massive inflation of costs. Rumours percolating from Whitehall indicate that the nuclear submariners are convinced that their hunter-killers and the RAF's Nimrod maritime patrol aircraft can bar the "GIUK Gap" (Greenland-Iceland-UK Gap in ordinary English) to Soviet submarines and their surface fleet. A leading submariner recently expressed the remarkable opinion that the Cold War role of the Navy could be handled by a few trawlers flying the White Ensign: no Russian cruiser would dare attack them because, lurking nearby would be a nuclear submarine! All this sounds depressingly familiar, and is nothing more than Stephen Roskill's Fallacy of the Dominant Weapon dressed in 1981 verbiage.

What the nuclear submariners conveniently forget to mention are: (1) the total unsuitability of hunter-killer submarines for deterrence or Cold War duties, other than surveillance, (2) the severe limits on big nuclear submarines operating in restricted waters, and (3) the fact that ASW forces find nuclear submarines much easier to track down than diesel-electric boats, because of their noisiness. The diesel-electric boat is at times almost impossible to detect, and its only weakness is the need to snorkel while recharging batteries.

Running in parallel with the discussion on the future of the Royal Navy is the argument over torpedoes. With Stingray in production from May last, the British now have an advanced lightweight torpedo which is likely to replace the American Mk 46 in NATO and elsewhere. Since 1977, work has also been in hand on a heavyweight, known from its Naval Staff Requirement number as NSR 7525. Suddenly this year the American firm Gould announced that it could offer very advantageous terms for its improved Mk 48ADCAP (ADVANCED CAPABILITY), with up to 60 per cent offset contracts placed in the UK. The British torpedo-industry is understandably angry at suggestions that

* Naval Editor of Defence.

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NSR 7525 should be stopped, especially as it has just achieved a record speed of 70½ knots on trials. The American sales effort is backed up by advertising which asks, "Why re-invent the Wheel?", suggesting that the ADCAP is already in service, although it is not expected into service until 1984-85, roughly the same time as NSR 7525. Just why the British should be asked to give up their involvement and write off their previous investment in torpedoes is not clear, and it can only be hoped that the recent 12 per cent rise in the value of the US dollar against sterling has made a big enough dent in the American offer to convince even the most obtuse politician.

CHILEAN ORDER

After years of isolation, Chile has placed orders for warships in Europe.

Two IKL Type 209 submarines have been ordered from German yards and two frigates from Spain. The latter are either standard DESCUBIERTA class or a modified design with enhanced AA defence, possibly the new Italian Aspidel/Albatros point-defence system or the Dardo twin 40mm gun-system.

Although nowhere near Chile in the international unpopularity stakes, Taiwan is sufficiently sensitive for the Dutch Government to be involved in a major row over the supply of military equipment. The Netherlands Shipbuilding Bureau, NEVESBU, is bitterly criticised for accepting an order for two ZWAARDVIS class diesel-electric submarines from Taiwan last December. The People's Republic of China retaliated by withdrawing its embassy, and as a result the Opposition has been given an assurance that no more sales will be permitted. The 2350-ton ZWAARDVIS class are the latest in the Royal Netherlands Navy, and although they are being rearmoured with the same Mk 48 Mod 3 torpedo as used by the Royal Australian Navy, the US Government may not be prepared to allow that torpedo to be sold to Taiwan.

MIDDLE EASTERN DEVELOPMENTS

The Italian shipbuilding Cantieri Navali Riuniti (CNR) are building four Lupo class frigates for Iraq, but it is possible that they will have Rolls-Royce Olympus gas turbines in place of the FIAT-GE LM-2500 fitted in previous ships of this class.

The French have now completed trials and evaluation of the extended-range MM-40 Exocet anti-ship missile, having fired it from the sloop D'ESTIENNE D'ORVES last year. It will be fitted in three new 56-metre fast patrol craft building in Britain for the Sultanate of Oman, and in six new Ecuadorean corvettes, among others. The Omani 'Province' class will be similar to the six Egyptian 'Ramadan' type, also building by Vosper-Thornycroft, a company which has fought its way back into the missile patrol boat market against fierce competition. Starting with a programme to refurbish some Russian-designed KOMARS, known as the 'October' class, Vosper-Thornycroft has been able to re-establish itself in a market that had hitherto been dominated by the French COMBATTANTE type. The

'Ramadan' class are armed with Italian Otomat missiles and guns but have British radar and fire control and German diesels.

ITALIAN SUCCESSES CONTINUE

The shipbuilders CNR have yards at Ancona and Muggiano working on a large contract for Ecuador.

Six 660-ton corvettes were ordered in 1979, to be armed with 76mm guns and the French MM-40 missile already mentioned. The design is basically similar to the WADI MRAGH class built for Libya in 1974-81, but they have an uprated powerplant and are fitted to operate a light helicopter. This alone stamps them as an unusual design, for although there have been attempts to design smaller helo-capable ships, these 660-tonners are the first warships to attempt to fly and recover a helicopter from such a small platform. There is some scepticism about this capability as it is known that the Italian Navy has banned helicopter operations from frigates below 1200 tons, and in anything but a flat calm the recovery is bound to be a highly hazardous operation.

Four of these handsome craft are now afloat, the ESMERALDAS, MANABY, EL ORO and LOS RIOS, with the GALAPAGOS and LOJA still under construction. In appearance they resemble blown-up patrol boats, with a single mast, single block of bridgework but no funnel. The 76mm OTO-Melara gun is mounted forward and the six MM-40 canisters are amidships, ahead of the helo-platform. Despite their small dimensions a full outfit of sensors is carried, surveillance and fire-control radars and a hull-mounted sonar. There are two air-defence systems, the Aspidel point-defence missile system and the Breda Compact twin 40 mm with its associated Dardo fire-control system. In addition triple ASW torpedo-tubes are fitted on deck.

As always with Italian designs, high speed is emphasised and the uprated MTU 20V956 TB92 diesel with its 20,400 bhp is claimed to give 37 knots in light conditions. In service this is more likely to drop to about 30 knots, and full load displacement may also affect the claimed endurance of 4000 nm at 18 knots, as only 126 tons of fuel are carried.

There is no confirmation that the new helicopter carrier GIUSEPPE GARIBALDI has been laid down yet, although claims have been made to that effect since 1978. A ship of that size and complexity must put an almost intolerable strain on Italian finances, and there are rumours that the Italian Navy was hoping to sell her to Australia as a way of raising money to build a second ship. However, the RAN definitely decided against that design, largely because of the lack of workshop and support space. The claimed complement of 16 Sea Kings could not be accommodated, and even if a smaller complement is carried the lack of workshops would make them a wasting asset. However, the adverse reaction of the RAN may cause the Italians to revise the design. Certainly the design is ingenious, particularly as regards propulsion, with four LM-2500 gas turbines and the revolutionary Franco-Tosi fluid reversing coupling.

The point about the new coupling is that it permits reversing without a massive gearbox, although at a cost of some 25 per cent efficiency when running ahead and 50 per cent when running astern. To offset this it is paired with a conventional SSS coupling, which is used in normal steaming, leaving the Franco-Tosi coupling to be used when manoeuvring.

The same arrangement will appear much sooner when the New Zealand frigate TARANAKI emerges from her re-engining in 1984. She is to have two Rolls-Royce Tynes gas turbines installed at Auckland Dockyard, with technical assistance and procurement provided by Vosper Thornycroft from the UK. It is an ingenious solution to meet the special needs of the RNZN but one that is unlikely to be repeated. Schemes have been prepared by Rolls-Royce to re-engine similar frigates with the new Marine Spey, and two new classes of frigate will soon receive Speys: the Indian Navy's 'stretched' LEANDER and the Royal Navy's 'stretched' BROADSWORD class. It has also been announced that the latest Japanese DDGs will be Spey-driven.



RAMADAN. (Photo — Ron Wright.)

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THE NAVY AND THE NAVY LEAGUE

by COMMANDER GEOFFREY EVANS

**"The Bulletin" in a Defence Supplement on 7 July, 1981,
referring to the part various organisations play in the Australian
Defence scene, had the following to say about the Navy League
of Australia:**

"... The forces themselves always have had an unofficial voice or two. Strongest among these has been the Navy League, which has campaigned ceaselessly for more ships and resources for the navy, even if this means demolishing the air force or the army. In various position papers over the years the league has argued for cutting back on the procurement of the new tactical fighter in favour of a sea-platform force and also for a minimal army (which is what the army believes it is now) . . ."

Disregarding the "demolition" aspects of the comment — the League believes all arms of the Defence Force have a part to play in Australian defence; the important thing is to get the right balance — by coincidence the supplement appeared at the same time moves to further strengthen Navy-Navy League links were under way.

The association between Navy Leagues and Navies in Britain, Australia, Canada, New Zealand, the United States and a number of other countries goes back a long way in time. The Navy League in Britain was just ten-years-old when the page from the famous "Pear's Annual" appeared in 1905.

The wording makes an interesting contrast with a recently summarised version of the Navy League of Australia's objectives, but even if the style has changed the basic aims have not; but then, neither has the basic dependence of Britain, Australia and their allies on maritime power changed.

(The same edition of Pears' Annual, which was supplied by courtesy of Mrs B. Nelson of Melbourne, contains an abridged edition of "Nelson and His Times" by Vice Admiral Lord Charles Beresford and H. W. Wilson. Permission has been sought to reproduce this fascinating, illustrated book-length account of Nelson, and any person interested in obtaining a copy — if permission to publish is granted — is invited to notify the Honorary Federal

Secretary of the League, Post Office Box 47, Balwyn, Victoria 3103, who will forward further information when it becomes available.)

Naval Reserve Cadets

It is expected that the League's ability to assist the Navy and the NRC will be increased as a result of a recent meeting in Melbourne between the Chief of Naval Personnel (Rear Admiral D. W. Leach) and the Director of Naval Reserves and Cadets (Captain E. T. Keane), and the League's Federal President, Vice-Presidents and Secretary.

Since the NRC was formed from the Navy League's Sea Cadet Corps in 1973, the extent of Navy League assistance has varied from State to State and for a number of reasons ranged from "considerable" to "not much". The purpose of the meeting was to identify the areas where aid is needed and to define the form it should take.

To enable the League to be kept fully informed of NRC requirements it was decided to re-introduce the practice of having a "permanent" Federal Council representative to liaise with the Naval Staff on appropriate cadet matters. It is expected that a similar arrangement will be made in local Commands and that a better appreciation of what NRC units need, and what the Navy League can provide, will result.

New Trophy for the RAN

The Melbourne meeting between representatives of the RAN and Navy League also finalised a number of details concerning the recently announced Navy League offer, and Navy acceptance, of an award to be made annually to the HMA Ship or Establishment (including RANR Divisions) judged to be most deserving of recognition for service rendered to the civil community.

Service to the community could range from aid rendered in a great natural disaster to assistance in fighting bushfires; and include a fund-raising effort for a charitable cause, a rescue at sea or a project to assist a foreign community.

It is expected that the first award, which will take the form of a perpetual shield and a small replica which will be retained by the winning ship or establishment, will cover the twelve months to 30th June, 1981, and be announced at the general meeting of the League in Sydney on 6th November.

It is pleasing to think that the "unofficial voice" referred to by "The Bulletin" and first heard in Britain 76 years ago, has in Australia not diminished with age but if anything, grown stronger: Navies have been all the better for their civilian associations and arrangements such as those mentioned above can only add to the strength of the links between the RAN and the Navy League of Australia.

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LIFE BEGINS AT FORTY

by ROSS GILLET

Suppose somebody gave a party and no-one came. Well, that's what happened Thursday, 13th August. The occasion was the fortieth birthday of one of the fleet's longest serving units. To the majority of people the event passed without much notice, but to her thirteen-man crew the anniversary was reason enough to invite "The Navy" aboard.

The ship was originally laid down in Sydney during World War Two, being launched on 13th August, 1941. Trooping duties kept her busy through 1942 and early 1943, before she began convoy escort work to New Guinea. In April and May, 1945, with some of her sister ships, the vessel carried out shore bombardments of enemy strongholds around Wewak, as a prelude to the capture of the area by Australian troops on 11th May.

Damage was sustained at Bougainville following two direct hits

from Japanese artillery. Two crew members were killed and a further two wounded. With her engine-room flooded, she made to the Treasury Islands for repairs. Makeshift work allowed towing to Sydney by HMAS SWAN, and it was there she remained, still under repair, until the close of war in August, 1945.

After spending some time in reserve, the nine and a half year old veteran recommissioned in February, 1951, for two years duty as a national serviceman's training ship, based on Port Melbourne.

In 1962, she was deleted from the Navy List, disarmed, and her upper-works removed. Painted black, but with her funnel still in place, the vessel began operations on 3rd January, 1963. As well as being one of the fleet's oldest units, the ship can boast of being one of the best maintained, showing little evidence of her forty years afloat. Much of the vessel's original equipment remains

onboard, including the holding-down ring for her aft gun mounting, emergency steering gear, two boilers and many cabins, since converted for alternative uses.

Her crew of twelve engineers, firemen and shipkeepers are led by Chief Engineer Les Laundry, who has "skipped" the vessel since 1963. One of the vessel's unique characteristics is her ability to reclaim oil from ships alongside and then re-use the precious fluid in her own boilers. Since 1963, she has reclaimed a staggering 7,000 tons of oil. Besides being in great demand for alongside tank cleaning work throughout the length and breadth of Sydney Harbour, the ship has also assisted in oil spillage operations, the most recent being in Berry's Bay, west of the Harbour Bridge.

So it's Many Happy Returns for four decades of service to the fleet ... and if you're still guessing which old lady just turned forty, then turn to page 55.

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HARPOON

THE FIRST Australian Defence Force firing of its new anti-ship weapon, took place on 26 July, 1981, when a Harpoon missile was launched from HMAS Canberra off the Californian coast.

CANBERRA, the RAN's second guided missile frigate, successfully fired the Harpoon at the end of its weapons system acceptance trials, and demonstrated the lethal capability of the new missile system which has a range in excess of 60 nautical miles.

Early in the morning a destroyer-sized target was engaged at a range beyond the visual horizon. Target information was provided to CANBERRA by land-based range control, but under operational conditions this could be provided either by the ship's electronic sensors or helicopter, or by other co-operating units.

The missile flies at high sub-sonic speed just above the wave tops and is very difficult to detect or shoot down. It is highly accurate, its fire-and-forget computerised guidance system enabling it to seek out and attack targets without further direction from the launch platform. The warhead has demonstrated its high effectiveness against ships of up to destroyer size.

CANBERRA will arrive in Australia early next year. Her Commanding Officer, Commander Bryan Wilson, said the introduction of Harpoon added a very powerful and exciting dimension to the capabilities of the fleet. He said for those closely involved with Harpoon firings the time of flight from ship to target, over four minutes on this occasion, seemed to take forever.

Australia as an island continent has a long, and in many parts isolated, coastline to defend.

This naturally occurring environment places a demand on the Australian Defence Force to be capable of patrolling and protecting vast areas against the incursions of conventional and high performance submarines and surface shipping.

With this requirement in mind, the Australian Defence Force embarked on its Harpoon missile programme.

The Australian Defence Force took their first delivery of a Harpoon missile in December, 1980, and the acquisition



The first harpoon leaves HMAS CANBERRA. (Photo — RAN.)



Harpoon entry point on the target ship. (Photo — RAN.)

programme over the years to come will provide the maritime elements of the force with a modern, efficient missile weapon system.

A universal, all-weather anti-ship missile, the McDonnell Douglas Harpoon is capable of being launched from the RAAF P3C Orion Long Range Maritime Patrol aircraft, the RAN's new FFG07 class ships and from the Oberon Class submarines against presently known sea targets at ranges of more than 60 nautical miles.

The addition of Harpoon to the RAN's new FFG07 class ships provides over the horizon attack capabilities from a safe distance. Following launch, no further missile contact is required allowing the ship to perform other assigned operations or prepare for additional target engagements.

For launch from Oberon Class submarines, the Harpoon missile and solid-propellant booster are enclosed in an unpowered, buoyant capsule for firing from the torpedo tubes. The buoyant capsule provides the necessary underwater protection before it is jettisoned and the booster ignited to take the missile to its cruising velocity. Once this speed is reached the missile engine takes over and the booster is jettisoned.

In all its applications, the Harpoon is programmed for targeting by computer equipment aboard the aircraft, ship or submarine, though there is the capability for manual operation as well. It cruises at a high subsonic cruise speed provided by its turbo-jet engine at a low level and can perform manoeuvres including a final pop-up to match those of fast, manoeuvring targets.

Included in the Harpoon missile system acquisition programme is the establishment of a missile maintenance facility at Kingswood, NSW, which will provide essential intermediate level servicing of the weapon.

BASIC SPECIFICATIONS OF HARPOON

The basic missile can be configured to suit the firing platform — either air launch configured (AGM-84A); surface ship launch configured (RGM-84A); or submarine launch configured (UGM-84A).

Dimensions:	
Overall length RGM/UGM-84A	— 4.6 m
AGM84A	— 3.8 m
Weight RGM/UGM	— 667 kg
AGM84A	— 522 kg
Warhead	— 230 kg approx
Flight Performance:	
Max operational range	— 60 nm (110 kms)
Cruise altitude	— low level
Cruise speed	— high subsonic
Terminal flight programme	— pop-up or sea skimming.

MAJOR CHARACTERISTICS

Harpoon's major characteristics include:

- (a) it has a wide platform versatility;
- (b) it has extended stand off range;
- (c) it has a unique attack profile;
- (d) it has a high kill probability;
- (e) it has post flight autonomy (fire and forget).

ATTACK FLIGHT PATH PROFILE

After being launched from any of the three platform types, ie aircraft, surface ship or submarine, the Harpoon missile travels at a relatively low altitude for the major portion of its flight path. On approaching the target the missile descends further until it is skimming the water surface. It then either rises to attack the target from above, or continues at the same height to impact the target just above the water line.

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FLEET WEEK, 1938

In 1938, Sydney was the focal point in Australia's 150th Anniversary Celebrations — the 150th anniversary of British settlement in Australia. Celebrations occurred throughout Sydney and included sporting events — especially the Empire Games, music festivals and exhibitions of various kinds. Appropriately, though, Sydney Harbour was the centre of the celebrations.

In 1938, Garden Island was still an island while the "great bridge" was still new. Australia was just recovering from

by DAVID DIMENT

Louisville, Memphis and Milwaukee. The presence of such a powerful force was hailed in the press as a "compliment that was thoroughly appreciated throughout Australia". And it was indeed a powerful force: USS Louisville, a heavy cruiser of the Northampton class was launched in September, 1930, and not scrapped until 1960. Of 12,150 tons (full load), Louisville's armament included 9 8-inch guns and 8 5-inch and could make 32+ knots. Louisville served throughout the coming war and underwent extensive war modifications.

The three other US cruisers — the four-funnelled cruisers of the Omaha class — were of 9,150 tons (full load) with a main armament of 12 6-inch guns. USS Trenton was launched in 1923 while the USS Milwaukee was launched a year later. Both ships served throughout the Second World War but the design of the Omaha class — the first light cruisers built by the USA after World War I — was not, according to all reports, entirely satisfactory.

The USS Memphis was the oldest of the three, launched in March, 1921. The Memphis was lent to the Russians from 1944 to 1949 and was scrapped in 1949.

The visit of the US ships was taken as a reassuring token of friendship and allied intent by the Australian people and government.

Other ships present during Fleet Week

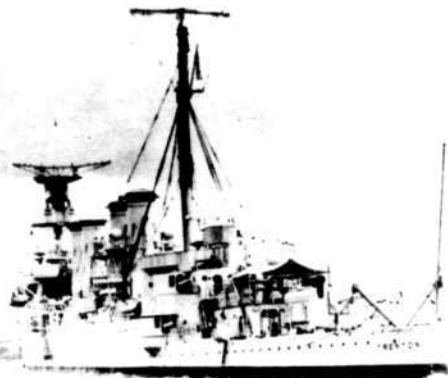


HMS DEVONSHIRE. (Photo — Wright and Logan.)

the Great Depression. War clouds too, were once again on the horizon. Possibly in view of the international tension of the time, patriotism and military display were in the forefront of the 1938 celebrations.

The naval aspect of the 1938 150th anniversary celebrations was very impressive. Warships from 6 nations — the United States of America, New Zealand, France, Holland, Italy and Great Britain — took part in the celebrations. A "Fleet Week" was proclaimed from Australia Day on the 26th January to the following Wednesday. Fleet Week and the warships gathered huge crowds and also gave the Australian population a new awareness of the Australian fleet. On Tuesday, 25th January, as the New Zealand, USA, French, Italian and Dutch ships entered the harbour, each national flagship saluted the port and the military station at Georges Head gave a salute in reply.

The most impressive component of the visiting fleet was the US cruisers Trenton,



USS TRENTON. (Photo — Ross Gillett collection.)

THE NAVY

September, 1981

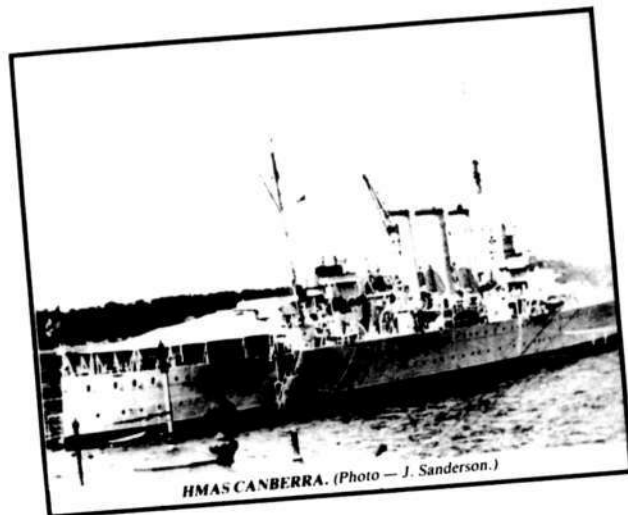
in Sydney Harbour were the French light cruiser Rigault de Genouilly, a light cruiser of the La Galissoniere class, and the French training cruiser Jeanne d'Arc. Ironically, the Rigault de Genouilly was present in Oran when the Royal Navy tried to "neutralise" the French fleet. Rigault de Genouilly was attacked by British ships — including the battlecruiser HMS Hood and the battleship HMS Valiant — when attempting to flee from Oran with the French battlecruiser Strasbourg. She was finally sunk off Algiers in July, 1940, by the British submarine Pandora.

The Dutch gunboat Flores was also a visitor to Sydney during Fleet Week. Flores, with a main armament of 3 5.9-inch guns was to be active in the coming war, for example, off the Normandy beaches on D-Day, 1944.

Another ship to win renown in the war, present during Fleet Week was the New Zealand - manned cruiser Achilles. Another guest was the Italian cruiser Raimondo Montecuccoli, while the British heavy cruiser HMS Devonshire, arrived in April.

Of course, the Australian warships were also present in Sydney, acting as host ships to the visitors. All the ships — Australian and overseas — were open for inspection to the public at various times. The officers of the Australian host ships entertained the officers of the visiting ships at, amongst other occasions, a dance for officers at the Rushcutters Bay Naval Depot and at a Squadron Ball on HMAS CANBERRA on Monday, 31st January, 1938. On Thursday, 27th January, 1938, His Excellency the Governor-General and Lady Gowrie gave an "official dinner" to senior officers of visiting warships while at the other end of the social spectrum the Sergeants Mess at Military HQ gave a "Smoke Social" to Chief Petty Officers and Petty Officers of the visiting warships.

The aim of Fleet Week was proclaimed as "giving citizens a more complete idea than they have ever had before of the activity of the navy". Furthermore, it was stated by a "Defence spokesman": "If we



HMAS CANBERRA. (Photo — J. Sanderson.)

had the time, there ought to be a Fleet Week like this in every Australian port in order that our people should become more defence conscious".

The people of Sydney certainly responded to Fleet Week. Signs of "ships full — no more visitors" had to be hung on the wharves. Thousands of latecomers had to be refused admission to the ships. The west side of Circular Quay — where the Overseas Terminal is today — was the chief inspection area.

On Saturday, 29th January, 1938 — the first "big" day of Fleet Week, the cruiser HMAS SYDNEY, the sloop HMAS SWAN and the destroyer HMAS WATERHEN were on display at the Quay along with an American cruiser and the Dutch gunboat Flores. Nearly 10,000 visited HMAS SYDNEY — the population of Sydney obviously felt an identification with this namesake ship.

On Sunday, 30th January, these ships were replaced by the AUSTRALIA, YARRA and VENETTA and the French ship Rigault de Genouilly. Other Australian naval vessels at anchor in the harbour, also could be inspected by launch from the Man O'War Steps. The arrangement to deal with the public visits to the ships were remembered in the press as "quietly efficient".

Fleet Week was a success as indeed were the whole of the 1938 150th Anniversary celebrations. The Royal Australian Navy was "shown off" to the public as future allies and enemies joined in the 150th Anniversary festivities. With Australia's 200th Anniversary not too far away, let us hope that once again, Sydney Harbour is the focal point of the celebrations and that the RAN has something to show off to the public, with the support of visiting navies.

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September, 1981

THE NAVY

Page Forty-Three

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BOOK REVIEWS

"BELOW THE BELT"

BY JOHN WINTON

Published by
CONWAY MARITIME PRESS
REVIEWED BY GAYUNDAH

Chivalry in combat is a thing of the past! A fair comment indeed, especially when one considers the age of modern naval warfare, missiles, electronics, counter measures, counter-counter measures and the power of many of today's combatants. However, when one looks into the pages of naval history "underhanded" or unfair weapons have been a feature of naval warfare from the earliest of times.

The Greeks, for example, renowned for their skill in the Mediterranean, employed the "dastardly" fireship, some 1,700 years before their use by Drake against the Spanish Armada. The Byzantine Navy's supremacy depended upon Greek Fire — a mixture of "naphtha" (a crude oil), with saltpetre (an oxygen carrier), to produce a spontaneous combustion, which was catapulted in clay pots onto the enemy's deck. Later, in the Napoleonic era, poison gas was advocated.

In more recent times, the submarine or underway torpedo boat, as it was originally known, was thought by most British Officers of the late nineteenth and early twentieth centuries, to be the most underhanded weapon of war, and the most un-British weapon yet devised. At the same time as the submarine, development continued with the torpedo. The Confederate leaders during the American Civil War "deployed the use of concealed lethal mechanisms against which there was at the time practically no defence". But with the tide of battle going against the South, these unfair tactics were implemented, albeit in many cases unsuccessfully.

For the first time, all recorded strands of innovative warfare have been woven together to form a marvellous new publication, entitled "Below the Belt". This book is certain to become a much sought after publication, tracing as it does the unusual, unfair and underhanded weapons of the World's navies up to the close of the Second World War. From the latter, mention is made of the suicide boats and midget submarines, while from

the Great War a most unusual device, a boom climbing amphibious "tank", used in an attack on Pola Harbour, Austria, in 1918, is fully described and illustrated.

The devices described in "Below the Belt" had a dramatic effect on many naval actions. The book is a fitting tribute to their influence. Recommended.

"THE ROYAL AUSTRALIAN NAVY IN VIETNAM"

BY DENIS FAIRFAX

Published by
AUSTRALIAN GOVERNMENT
PUBLISHING
SERVICE, CANBERRA
REVIEWED BY HARRY ADLAM

The War in Vietnam was very controversial, and it would be quite fair to say that a great many Australians know very little about the conflict or of Australia's participation. For the most part, the war was a jungle fighting affair, although the Royal Australian Navy was engaged in many types of operations, all important and with a definite purpose in mind. This publication is as complete a history of the naval side of the conflict as is possible in a book of 232 pages.

Denis Fairfax has compiled his book in an extremely workmanlike manner. First the reader is given a geographical study of the area, then a rundown on the history of Vietnam, followed by a political resume with the events leading up to the war itself. The Royal Australian Navy's work is covered ship by ship, on a day to day basis. All ships which served in Vietnam are given full coverage, as are other naval units, such as the clearance divers and helicopter flight. Vessels such as JEPARIT and BOONAROO, which were used to supply Australian forces in the troubled area are described in the same manner as fighting units.

Apart from describing the day to day activities of the ships, a full list is given of the men participating. This in itself would have been quite a task as a number of the ships were deployed to Vietnam more than once. The DDGs HOBART and PERTH, both served three deployments on station, and for each deployment the full crew list is given (complete with official numbers in the case of sailors).

The same treatment is given the clearance divers and naval air personnel.

"The Royal Australian Navy in Vietnam" is strongly recommended. For students of naval and political science this book will be invaluable. The general reader will receive a detailed insight into the naval operations that were carried out. The illustrations appearing in the book are first class, and the text is very readable. Recommended to all.

"AN ILLUSTRATED GUIDE TO MODERN WARSHIPS"

BY HUGH LYON

Published by
LANDSDOWNE PRESS
Price \$6.95

REVIEWED BY ROSS GILLET

In 160 pages, Hugh Lyon has presented his guide to today's modern warships. A readable text is supported by colour and black and white photographs, and in many cases by a small, but informative, line drawing. Although the majority of photographs are previously unpublished, many have been spoilt when spread across two pages.

Each warship or class is briefly described via a table of specifications, followed by the main part of the book. The development, acquisition and subsequent service of the ships is then discussed to give an impression of a small pocket sized "Jones Fighting Ships".

The largest sections of "Modern Warships" are devoted to the USA, US and Soviet Union. In total, 71 warship classes are featured from the early Russian cruisers of the Sverdlov class, to the Nimitz class aircraft carriers of the United States Navy. The choice of the former seems illogical for a book entitled "Modern Warships", as the Sverdlov class were designed during the 1940s and commissioned in the 1950s.

"Modern Warships" is one of a number of pocket books recently published to illustrate and describe the major armaments of the early 1980s. A subsequent series describing World War II equipment has just appeared. A good hard cover protects "Modern Warships", which is printed on a good grade paper for excellent colour reproduction.

HMS HOGUE — British Armoured Cruiser

by GEOFFREY MILLER

Built By: Vickers Ltd, Barrow-in-Furness.

Laid Down: July, 1898. *Launched:* August, 1900. *Completed:* 1902.

Length, OA: 472 feet. *Waterline:* 454 ft. *Breadth:* 69 ft 6 in. *Draught:* 29 ft max.

Displacement: 11,700 tons. *Bunkers:* Coal, 800 tons normal; 1,600 tons max.

Machinery: Twin screw, Two 4-cylinder triple-expansion engines. Thirty Belleville type boilers. IHP (forced draught, trials) = 21,065 = 22.1 knots.

Armament: 2 x 9.2 inch (one forward, one aft) 12 x 6 inch QF (side casements) 14 x 12-pounder QF, 3 x 3-pounders, 8 machine-guns, 2 x 18 inch torpedo tubes (submerged). *Alterations 1903:* 4 x 6 inch QF added.

Armour: KRUPP. Belt: 6 inch (230 ft long x 11 ft 6 in wide).

Deck: 3 in-1½ in. *Barbettes:* 6 in. *Casements:* 5 in.

The HOGUE and her sister ships CRESSY, ABOUKIR, BACCHANTE, SUTLEJ and EURYALUS were ordered under the 1897-8 supplementary Naval Estimates, being the first British armoured cruisers since the ORLANDO class of 1886. They were essentially armoured versions of the Diadem class protected cruisers of 1896, but with more powerful machinery. A re-adoption of side-armour was made possible by the development of hard faced steel armour. This in turn allowed a comparatively large area of the side to be protected without an excessive increase in displacement. Indeed they were only 1,000 tons heavier than the Diadems, with a fuller hull form which improved stability. The class's finer lines forward tended to increase their pitching motion. The six cruisers initiated several subsequent classes of similar but improved ships which were to form the backbone of British cruiser squadrons for the next 15 years.

HOGUE commissioned with the Channel fleet in November, 1902, having cost £790,000 to build. She was the fastest of her class, achieving 22.4 knots on full power trials and burning 17 tons of coal per hour to do so. As with her sister ships, HOGUE had a varied peacetime career. In March, 1904, she collided with the steamship MEURITHE, then returned to Devonport in May to refit. Late that year she sailed east to the China Station where she remained till May, 1906. She then commissioned as a training ship for boy seamen with the 4th cruiser squadron on the North America and West Indies station. Returning to Devonport in May, 1908, she paid off into reserve until 1909, when she joined the 3rd division of the Home fleet at the Nore. During 1912-1913, she refitted at Chatham before rejoining the Home fleet in September, 1913. At the outbreak of World War I, HOGUE was a unit of the 7th cruiser squadron, under the command of Rear-Admiral A. H. Christian.

On 28th August, 1914, Christian's squadron, with the battleships LION, QUEEN MARY, PRINCESS ROYAL, INDOMITABLE and NEW ZEALAND, carried out a sortie in the North Sea in an attempt to draw the German fleet into a major battle. However, the indecisive action which followed, known as the battle of the Heligoland Bight, was mainly fought by the cruisers on both sides. Three German light cruisers, MAINZ, KOLN and ARIADNE, were lost, the last two being sunk by the battleships that appeared in the early afternoon after being summoned by Commodore Reginald Tyrwhitt in the badly damaged light cruiser ARETHUSA. By early evening the speed of Tyrwhitt's ship was about 6 knots; the fires were drawn in all but two boilers, and assistance was called for. This arrived in the form of the HOGUE. Commodore Tyrwhitt mentioned the meeting of the two ships in his dispatch:

"At 9.30 pm, Captain Wilmot S. Nicholson, of the HOGUE, took my ship in tow in a most seamanlike manner, and, observing that the night was pitch-dark and the only lights



The armoured cruiser HMS HOGUE, 1912. (Drawing — Geoffrey Miller.)

showing were two small hand lanterns, I consider his action was one which deserves special notice from Their Lordships."

Less than a month later, on 22nd September, 1914, HOGUE and her sister ships ABOUKIR and CRESSY were torpedoed and sunk by the old German submarine U9.

The task of the cruisers was to screen the destroyers of the 1st and 3rd flotillas as they swept the southern North Sea free of German minelayers and torpedo craft. On 17th September, bad weather forced the destroyers back to port thus eliminating much of the need for the now elderly cruisers to remain on patrol. However, a British presence was thought desirable in the area, especially round the mouth of the Scheldt river to fulfil a pre-War guarantee to Belgium, and the cruisers remained.

At about this time Winston Churchill, First Lord of the Admiralty, was visiting the Grand Fleet at Scapa Flow. While there he overheard the Fleet's nickname for the 7th cruiser squadron: the "livebait squadron". Infuriated, Churchill now recognised the danger the cruisers faced. The following day, on his return to London, he recommended to the First Sea Lord (Lord Louis Battenberg), that they should be removed to the western entrance of the Channel. Battenberg concurred. Two days later (19th September), Admiral Sturdee, Chief of the Admiralty's War staff, persuaded Battenberg to approve an order moving the cruisers to an area known as the Broad Fourteens, off the coast of Holland. This, with the Dogger Bank, was one of the cruisers' normal patrol areas. On 20th September, the four cruisers left their Dogger Bank patrol and sailed south to the Broad Fourteens. Upon arrival, the flagship, EURYALUS,

was found to be in need of coal and repairs to her wireless and returned to port. The weather was still bad, too rough for Admiral Christian to transfer his flag. The Senior Officer, Captain John Drummond of the ABOUKIR was left in command.

The weather finally moderated on the night of 21-22 September, allowing the destroyers to leave port, but by dawn on the morning of the 22nd they had still not reached the cruisers. Lieutenant Otto Weddigen, commanding the German submarine U9, surfaced at dawn to recharge his batteries and soon sighted the masts of the cruisers to the south. Weddigen immediately submerged. The cruisers were steaming on a steady course of about 9 knots in line abreast, two miles apart.

U9 carried six torpedoes (two bow, two stern tubes with reloads for the bow tubes). At 6.20 am she fired the first torpedo at the ABOUKIR from a range of 500 yards. The torpedo struck and the ship began to sink immediately. Captain Drummond believing she had hit a mine, signalled HOGUE and CRESSY to close in and pick up survivors. Weddigen now fired two torpedoes at the stationary HOGUE from a distance of 300 yards. CRESSY was still stopped when the periscope of U9 was sighted. Despite ordering full speed, U9 fired two additional torpedoes, one of which struck the cruiser. The bow tube was quickly reloaded and with his last torpedo, Weddigen sank the remaining cruiser.

From a total complement of the three ships of 2,200, 62 officers and 1,397 men were lost, a fact made more tragic as most of the crews were naval reservists. The subsequent Court of Enquiry blamed Captain Drummond for failing to zig-zag when the weather moderated and for ordering the other two ships to close when ABOUKIR was hit. The captains of HOGUE and CRESSY were blamed for stopping their ships, and all three for not anticipating submarine attack and failing to post sufficient lookouts. The Admiralty was also criticised for placing the



HM Ships BACCHANTE and M32. (Photo — Phillip Ratcliffe.)

cruisers in a hazardous position. The Court was also unable to ascertain the object of the patrol and why the ships were so positioned.

Weddigen returned to Kiel, to a jubilant welcome and the Iron Cross. Within weeks he would sink the old protected cruiser HAWKE. Then, in March, 1915, in command of U29, his submarine would be rammed and sunk by the battleship DREADNOUGHT.

As all three cruisers had their watertight doors closed, it demonstrated the vulnerability of the older warships to torpedo attack, and the action was reported to have stimulated German determination to develop submarine warfare. Although the loss of the cruisers did not affect the material balance the action was a severe blow to the public's morale, especially when considering the heavy loss of life. The remaining three ships of the class survived the war and were sold for scrapping in 1920-21.

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THE ROYAL NEW ZEALAND NAVY —

Forty Years of Service

IN September, 1941, HM King George VI granted the title of Royal New Zealand Navy to the force that since 1921 had been known as the New Zealand Division of the Royal Navy.

Two years of war service had shown that the small New Zealand Division was a force to be reckoned with and now it would be a Navy in its own right. A small service when compared to the RN, the Royal New Zealand Navy had many less recruits to draw from to man its new ships. Most of the officers as well as senior ratings were on loan from the RN and in 1939, the majority of ships manned by the division were also on loan.

by HARRY ADLAM

(All Photographs courtesy RNZN unless otherwise indicated.)

Wartime expansion witnessed additional ships commissioning in New Zealand, the usual practice of drawing from the trade being pursued. Many different types came into service, ranging in size from the MONOWAI, a well known cross Tasman passenger liner which commissioned as an armed merchant cruiser down to small motor boats for harbour patrol work. As far as "pusser" naval ships were concerned, most were new construction, being primarily small trawler type vessels. Many New Zealanders were to serve in ships of the RN, 100 Kiwis being lost aboard the British cruiser NEPTUNE when she was mined in the Mediterranean Sea. Others were to lose their lives in the Solomon Islands and in the Atlantic.



PHILOMEL had served since 1914, when originally allocated to New Zealand. The ship's New Zealand service was spent alongside the training jetty at the entrance to the Calliope Drydock as a depot ship. With the completion of the new barracks ashore the need for the old hulk lessened and her hull was subsequently scuttled in 1949. HMNZS PHILOMEL is proudly known as the cradle of the RNZN.



Well-known in both Australia and New Zealand, the Union liner MONOWAI commissioned as an armed merchant cruiser in August, 1940, thus becoming one of the original units of the RNZN. The conversion to AMC was carried out at the Devonport naval base in Auckland. HMNZS MONOWAI returned to her owners in July, 1946, and was not scrapped until 1960.

New Zealand had always been a cruiser station and in 1939, two ships bearing the names ACHILLES and LEANDER were the major units of the division. Both were to suffer heavy damage from war service, accompanied by loss of life. The victory of ACHILLES had the same effect in New Zealand as did SYDNEY in Australia, a brilliant cruiser action that proved the colonials were every bit as good as their Imperial counterparts.

As the war progressed more ships were commissioned, including Isles class trawlers, Flower class corvettes from British yards, MLs locally built, and HDMLs from the USA. Castle class trawlers were also built locally.

PHILOMEL, the stationary depot and training ship in Auckland, became too small to handle the wartime influx. New barracks were built ashore and a new training depot opened on Motuihe Island. Personnel expansion grew from 724 in 1939 to almost 9,000 in 1944, of whom some 3,200 officers and men were serving in the Royal Navy.

The main units of the RNZN at its formation were the two Leander class cruisers HMS ACHILLES and HMS LEANDER. Each ship saw extensive war service, including the Solomons campaign. Both reverted back to the Royal Navy between 1944 and 1946, ACHILLES eventually becoming the Royal Indian Navy Ship DELHI.

With peace in 1945, scaling down commenced. The region was still a two cruiser station, but normally only one ship was retained in commission. Later the RNZN would become a frigate navy, with four "fast frigates" as the main units. Personnel levels have been held at around the 3,000 mark, including 100 WRENS serving on full-time duties. Today the Royal New Zealand Navy is a compact, efficient fighting service, officered and manned by New Zealanders.

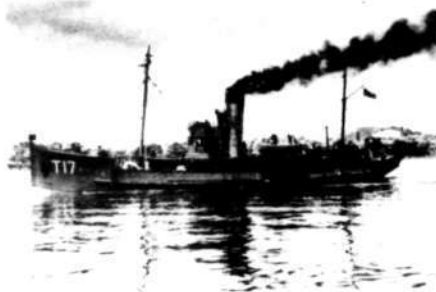
The growth and development of the RNZN can be seen through the acquisition of its front line and support units from 1941 up to the present day.



Four of the renowned Isles class trawlers joined the RNZN at its inception, but were paid off after the end of World War Two. The four HMNZ ships, INCHKEITH, KILLEGRAY, SANDA and SCABA were slightly smaller than the Bird class and mounted a lighter main armament. They reduced to reserve in 1946 and were sold in 1958.



The Bird class minesweeping trawlers HMNZShips KIWI, MOA and TUI were 600 ton ships with a speed of 14 knots, built in Scotland in 1941. In January, 1943, KIWI and MOA created a naval epic when they fought a spirited action off Guadalcanal which resulted in the Japanese submarine I1 being driven ashore and destroyed. TUI later destroyed another Japanese submarine, but MOA was lost by enemy air action in April, 1943. The two survivors were to see peacetime service, KIWI being sold in 1964 and TUI in 1969.



Locally-built Castle class trawlers came in two distinct groups. The first type were conventional steel-built ships, whilst the second type used the old composite steel frames with wood skins. The latter were specially designed for sweeping magnetic mines. Although seventeen vessels of the Castle class were ordered, only thirteen were built. Many were sold out commercially after the war, HMNZS WAIHO becoming well-known in Australian waters as the trawler MATONG. The above view shows HMNZS HINAU.



HMS GAMBIA, one of the heavily-armed Fiji class, six-inch gunned light cruisers, was commissioned into the RNZN on 22nd September, 1943, as a replacement for ACHILLES, which was under repair. GAMBIA served in the RNZN until July, 1946, when she reverted to the Royal Navy. The cruiser remains the heaviest unit to have served in the RNZN.



From 1943, the Fairmile B type motor launch began to enter New Zealand service. Twelve would be locally built and commissioned. They were extensively used on A/S and patrol duties in the Solomons, but most were sold soon after the cessation of hostilities. No Q404 (above) is seen in the Cook Strait in company with LEANDER.



HMNZShips ARABIS and ARBUTUS were long-fore'sled Flower class corvettes which entered New Zealand service in 1944. They returned to the United Kingdom in 1948 carrying crews for six Loch class frigates, and were scrapped in the UK. The Flowers, much larger than the Isles class, were faster and carried an improved armament.



Sixteen HDML's were received from the United States during the Second World War. A number remain in commission and until quite recently they were being used for training and surveying duties. The HDML's have seen much re-naming and re-numbering and a certain amount of re-building, but the graceful hull lines have never been altered.



In 1946, two improved Dido class cruisers, HMNZS BLACK PRINCE and HMNZS BELLONA, replaced ACHILLES and GAMBIA. The new ships were armed with the dual-purpose 5.25 inch gun and were good for speeds of up to 32 knots. Normally only one ship was kept in commission. BELLONA returned to the United Kingdom in 1956, where her crew took over ROYALIST, another Improved Dido, although greatly modified. BLACK PRINCE remained in New Zealand, where she was sold in 1961. ROYALIST was sold in 1968 and broken up in Japan.



Six Loch class anti-submarine frigates came into service during 1948-49. All saw service during the Korean War. Each frigate was renamed when taken over, being given the names of well-known New Zealand lakes. All six were broken up in Hong Kong from 1962 to 1966.



LACHLAN was built for the RAN as a River class anti-submarine frigate, but subsequently converted to surveying. Completed in February, 1945, the ship was loaned to New Zealand in 1949 and purchased outright in 1962. HMNZS LACHLAN served as a survey vessel until she paid off in 1975. The vessel remains in use as an alongside tender at Devonport. (See later photograph.)



In 1952, the Australian Government presented the RNZN with four Australian minesweeping vessels, KIAMA, INVERELL, ECHUCA and STAWELL. By 1966, HMNZS KIAMA was being employed as a fisheries protection vessel, whilst HMNZS INVERELL became a new entries training ship. HMNZS ECHUCA saw only a few months service and spent most of her time in reserve. After disposal all four were scrapped in New Zealand. A number of fittings were brought to Melbourne to assist in the restoration of the museum ship CASTLEMAINE, an original sister.



HMNZS ENDEAVOUR (I), was built in the USA in 1944, as the net-layer PRETEXT. In 1947, she was sold to the Falkland Islands as the JOHN BRISCOE, but in 1956 was purchased by the RNZN and renamed ENDEAVOUR. Following six years service as an Antarctic support ship, ENDEAVOUR was sold out of service to Canadian buyers.



As replacements for the old Loch class, two new Type 12 anti-submarine frigates entered service during 1960-61, with the names HMNZS OTAGO and HMNZS TARANAKI. The latter is presently undergoing modernisation. Later two improved frigates of the Leander type were to be ordered. (Photo — RAN.)



As a replacement for the first ENDEAVOUR, the small tanker NAMAKAGON was obtained from the United States Navy. This ship was also renamed HMNZS ENDEAVOUR and used on the Antarctic run until her return to the United States in 1971. Only a small ship with an overall length of 310 feet, she possessed a full load displacement of 4335 tons.



BLACKPOOL, an anti-submarine frigate of the Whiteby class, was completed in August, 1958, and loaned to New Zealand from June, 1966, to June, 1971, during the construction of CANTERBURY.



HMNZShips CANTERBURY and WAIKATO represent the most modern of the "Kiwi" frigates, WAIKATO having been in service since 1966, and completely refitted in 1975-77. Like many current RNZN units, she is a regular visitor to Australian shores.



The research vessel HMNZS TUI (II) was constructed in the USA during 1961-63, and was acquired on loan by New Zealand in 1970. Her original name of CHARLES H. DAVIS was changed to TUI to carry on the well-known name of the old Bird class trawler. TUI is manned by 8 officers, 16 ratings and 15 scientists. (Photo — John Mortimer.)



HMNZS CANTERBURY, the last major combat unit to be accepted, commissioned in October, 1971. During 1981, she was undergoing refit. (Photo — John Mortimer.)



HMNZS MONOWAI (II) was formerly the cargo-passenger carrier MOANA ROA, built in 1960. She was taken over for conversion to survey duties in 1974 and following an extensive refit commissioned in 1977. MONOWAI has been fully employed ever since.



HMNZS PAEA was one of a number of HDML's used in the survey role since World War II. She was painted white and carried no armament.

Taken in May, 1981, the old frigate LACHLAN lies opposite Canterbury under refit at the Devonport Dockyard, Auckland. Painted a dark grey and with most of her fittings removed, LACHLAN now serves as a tender. (Photo — Ross Gillett.)

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NAVY LEAGUE DIVISIONAL & CADET NEWS

WA DIVISION NOTES

by VIC JEFFERY,
Publicity Officer

Saturday, 27th June, saw the Christening of the GASC unit
TS SWAN's new four-metre rescue boat at the Navy League's
headquarters, TS PERTH. The boat was appropriately named
"Mam's Lamb".

A social get-together was held on Friday, 17th July, at TS
PERTH to allow the Navy League to explain its objectives to the
parents and friends of the NRC unit TS PERTH and the GASC
unit TS SWAN.

The Navy League's WA Division President, Captain Len
Vickridge, OBE, VRD, RANR (Retd) spoke on behalf of the
League.

In a recent colourful ceremony the Geraldton Sub-Branch of
the RSL presented the NRC unit TS MORROW with new
colours.

Friday, 26th June, saw the CO of TS PRTH, Lieutenant
Commander Steve Hawkes officially pay-off from the cadet unit,
TS PERTH. Steve joined the unit 16 years ago and in a record of
distinguished service rose from a recruit to command the unit. He
has also tendered his resignation from the WA Executive Council
of Navy League.

The position of Commanding Officer is yet to be filled and
Lieutenant Commander Richard Twiss is carrying out the duties
of acting CO until such an appointment is made.



Pictured above are the section of the complement of TS Perth
which attended a camp on Garden Island, WA, during May. The
party was commanded by Perth's training officer, Sub-
Lieutenant John Ashworth.

Custodian of TS PERTH, Lieutenant Merv Munro, was
honoured at the June meeting of the WA Executive Council when
he was made a Life Member of Navy League in honour of his
long and conscientious service in this role.

HMAS Stirling celebrated its third birthday on 28th July.
During its brief history, since commissioning, 52 different
warships, comprising 30 surface vessels, 18 nuclear-submarines
and four conventional submarines have berthed at the facility.
They have totalled 230,000 tonnes (standard load).

SOUTH AUSTRALIAN DIVISIONAL NEWS ANNUAL GENERAL MEETING

This year we have set the date of Monday, 1st September, for
our Annual General Meeting and we hope that the members will
keep this date free to join us.

The meeting will be held in the office of Matters and Co,
First Floor, 91 Grenfell Street, Adelaide, at 8.00 pm.

CHRISTMAS CABARET

We want members to mark the date of Saturday, 28th
November, 1981, in their diary, so that they will be able to join
with other members and friends of the Navy League for an
enjoyable evening at HMAS ENCOUNTER.

We are holding a Christmas Cabaret, which promises to be
an excellent night, dancing to the music of the ever popular
"Little Rubber Band".

The Cost of Tickets will be \$9.00 per head all inclusive,
which covers supper and all drinks (spirits, beer, wine and soft
drinks). The tickets will be available for sale from the end of July
and we hope that you will all make up a party to bring your
friends along to this very popular function.



Forty Years of Service — HMAS/TCV COLAC. (Photo — Ross
Gillett.)

THE NAVY LEAGUE OF AUSTRALIA

Notice is hereby given that the Annual General Meeting of the Navy League of Australia will be held at the Imperial Service Club, Ltd, 33 York Street, Sydney, NSW 2001, in the Conference Room, at 8.00 pm on Friday, 6th November, 1981.

BUSINESS

- (1) To receive the report of the Federal Council and to consider matters arising therefrom.
- (2) To receive the financial statements for the year ended 30th June, 1981.
- (3) To elect office-bearers for 1981/82 as follows:
 - (a) Federal President
 - (b) Federal Vice-Presidents (2)
 - (c) Federal Council Members
 - (d) Auditor.Nominations for the above to be lodged with the Honorary Secretary prior to the meeting.
- (4) General Business.

By Order of the Council

J. H. H. PATERSON
Honorary Federal Secretary

8 Knutsford Street, Balwyn, Victoria 3103

THE NAVY LEAGUE OF AUSTRALIA

(NSW DIVISION)

Notice is hereby given that the Annual General Meeting of the NSW Division of The Navy League of Australia will be held in the Conference Room, 2nd Floor, P&O Building, 2 Castlereach Street, Sydney, NSW 2000, at 5.30 pm on Wednesday, 30th September, 1981.

BUSINESS

- (1) To receive the report of the Executive Committee of The Victorian Division for the year ended 30th June, 1981.
- (2) To receive the accounts for the Division for the year ended 30th June, 1981.
- (3) To elect the Executive Committee for 1981/82.
- (4) To appoint an Auditor.
- (5) General Business.

By Order of the Executive Committee.

B. C. ROWLAND
Honorary Secretary

26 Waratah Road, Turramurra, NSW 2074.

THE NAVY LEAGUE OF AUSTRALIA

(VICTORIAN DIVISION)

Notice is hereby given that the Annual General Meeting of the Victorian Division of the Navy League of Australia will be held at the Melbourne State College, 757 Swanston Street, Carlton, in Conference Room S 820, Level 8, Science Education Building at 7.45 pm, on Monday, 14th September, 1981.

BUSINESS

- (1) To receive the report of the Executive Committee of the Victorian Division for the year ended 30th June, 1981.
- (2) To receive the accounts of the Division for the year ended 30th June, 1981.
- (3) To elect the Executive Committee for 1981/82.
- (4) To appoint an Auditor.
- (5) General Business: To deal with any matter notified in writing to the Honorary Secretary by 7th September, 1981.

By Order of the Executive Committee.

J. H. H. PATERSON
Honorary Secretary

13 Malvern Road, Mont Albert, Victoria 3127.

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