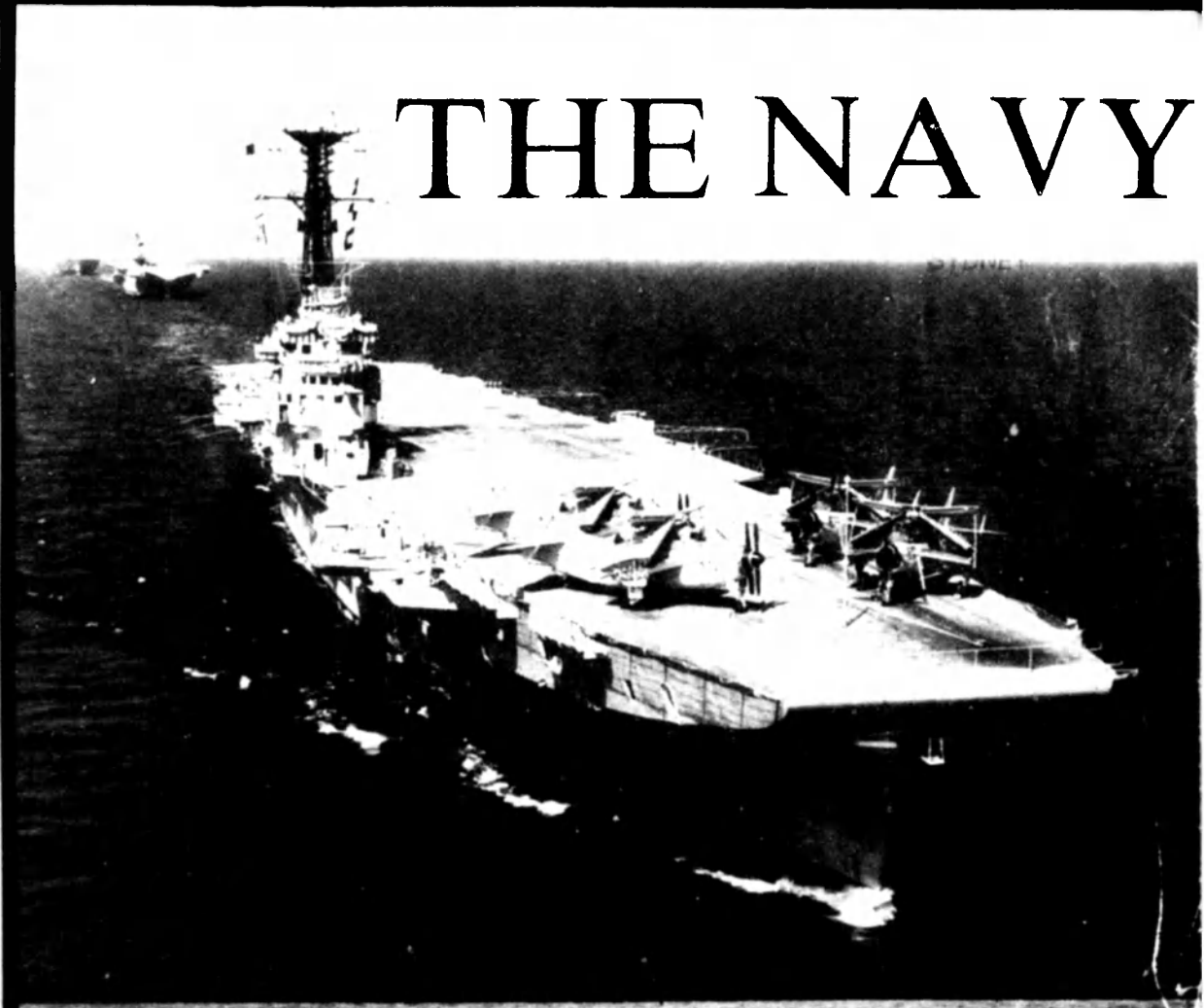


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THE NAVY

FEBRUARY
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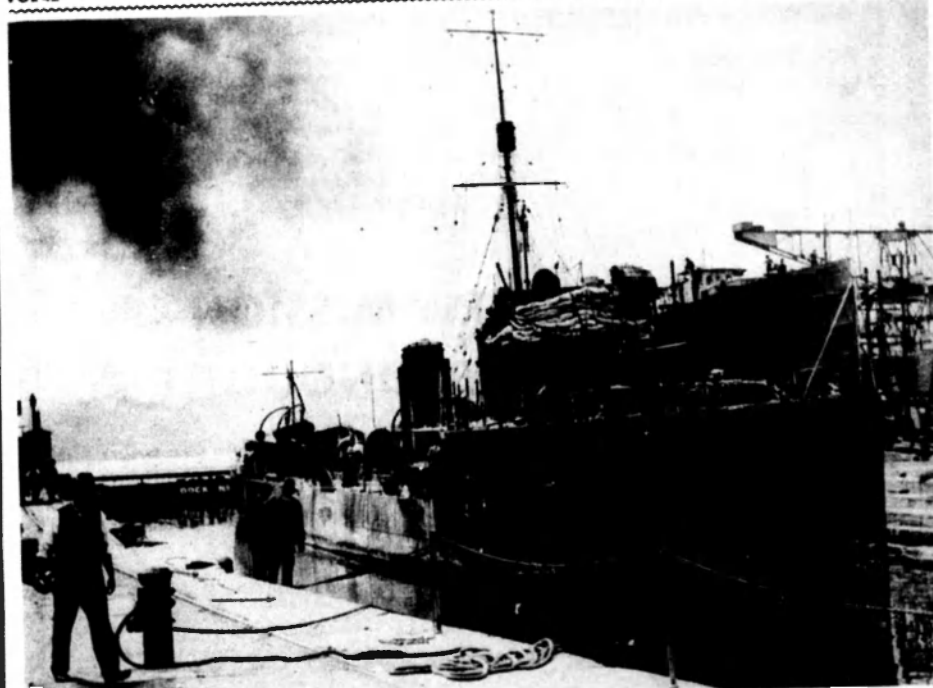
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NO 1

VOL 42



Australia's first locally built torpedo-boat destroyer, HMAS WARREGO in the Fitzroy Dock, 20th November, 1914. Behind her, still to be launched is TORRENS. (Photo — Cockatoo Island).

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Editor's Comments . . .

"THE NAVY" features as its main theme for the first issue of 1980, the Australian Fleet. Tony Grazebrook discusses the outlook for the new decade and the problems the service will have to face in respect to both men and equipment.

Historically, we feature the arrival of HMAS MELBOURNE in 1956 and the River class frigates of World War Two, whilst a ship of more recent times, HMAS VENDETTA is also allotted space to mark her decommissioning in late 1979. The Commander of T. S. GAYUNDAH has provided a brief history of his unit for this issue and news has also been received from the Western Australian Division.

With the continuing crisis in Iran and Afghanistan, much has been said in recent times regarding the capabilities of the Royal Australian Navy and the need for additional ships to bolster the fleet. Newspapers report almost daily the urgent requirement for a new carrier and follow-on destroyers, etc.

Readers are invited to drop a line to the Editor and express their views on the subject.

New contributor in this issue is Mr S. Given, who has provided many fine photographs, as well as the VENDETTA article.

Many thanks are due to him, along with our regular contributors.

In the forthcoming issue North and South American navies will be presented. Particular articles will include; The Arrival of the Great White Fleet by David Dimeni; USS MONITOR — The Ship that Launched a Modern Navy; Tony Grazebrook will also be looking at the United States Navy Today. A much enlarged Warship Pictorial includes the Royal Canadian Navy since World War Two and the fleets of South America. For the students of naval gunnery, Harry Adlam outlines the many types of field guns used by Australian forces during the past century. As well the regular series on New Zealand warships is continued with WAKAKURA.

In the coming year "The Navy" will present a more varied book review service while continuing the present trend of tropical and modern articles with their historical counterparts. This combination of old and new will be achieved through the continued support of league members and contributors. Articles long and short are always welcome, although naturally must be naval or maritime inclined.

ROSS GILLET

OUR COVER PHOTOS

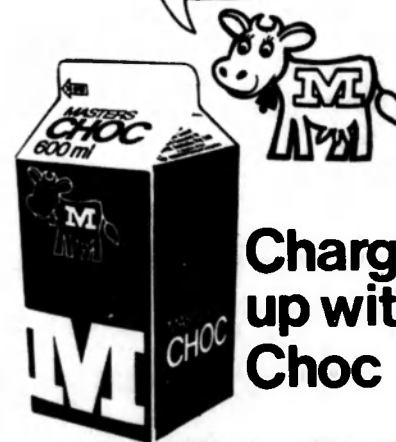
HMAS MELBOURNE leads a United States Navy Essex class aircraft carrier and HMS ARK ROYAL during exercises in the late fifties. (Photo — S. Given).

HMAS MELBOURNE, port quarter serial view. Note Bristol Sycamore helicopter aft of the island structure. (Photo — S. Given).



An impressive photograph of the Daring class destroyer HMAS VENDETTA, taken shortly after her first commissioning. (Photo — S. Given).

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The Arrival of HMAS MELBOURNE, 1955

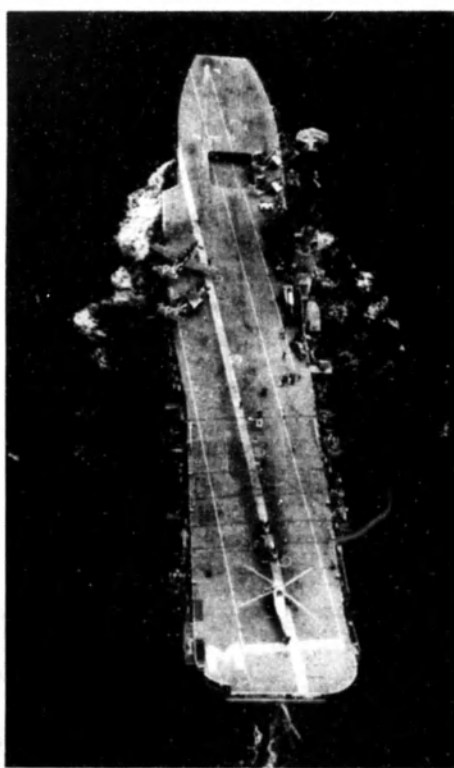
BY DAVID DIMENT

HMAS MELBOURNE was launched on the 28th February, 1945 — 35 years ago this year, (1980). She was not commissioned into the Royal Australian Navy (RAN) until October, 1955. During this 10-year period between launching and commissioning into the RAN, *MELBOURNE* was extensively modernised and completed. Australia was lent the Royal Navy aircraft carrier *HMS VENGEANCE* until *MELBOURNE* was ready for service.

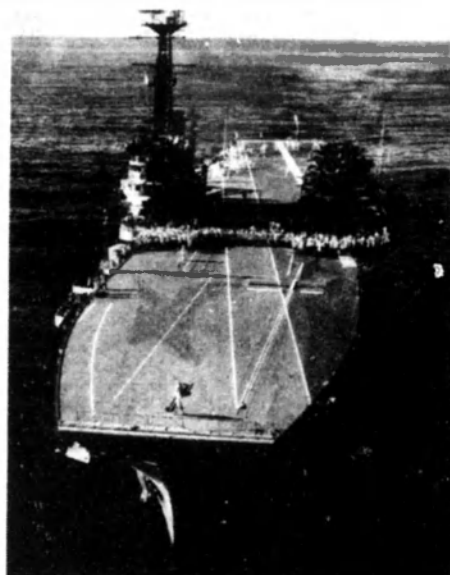
The arrival of *MELBOURNE* in Australia was a spectacular occasion. The mood which greeted the ship had been set in the United Kingdom by the crew of the *MELBOURNE* (who had sailed over in the *VENGEANCE* to "pick-up" the new ship). In fact, the officers and ratings of *MELBOURNE* claimed a "marriage record". 60 crew members were married in England while preparing *MELBOURNE* for the trip home. Understandably, the crew were "very proud of themselves". The *MELBOURNE*, after working-up exercises and commissioning on 28 October, 1955, sailed from Glasgow on 11 March, 1956, and reached Fremantle on Tuesday, April 24, 1956. About 60 aircraft crowded on *MELBOURNE*'s new angled flight deck and also in her hangar. The aircraft were two squadrons of anti-submarine Gannets and one squadron of Sea-Venom fighters. Also included in the complement of aircraft on board was "the first delta-wing jet aircraft in Australia — the Avro 707A" which had been lent by the British defence authorities to the RAAF for testing and

experimental/evaluation work. The report from Fremantle included glowing words about the fact that "the interior and bridge or . . . *MELBOURNE* can be sealed against the fallout from atomic explosion".

Indeed, the *MELBOURNE* was hailed by the Sydney press as "the most modern light fleet carrier in the world" with "its



This fine aerial view of HMAS MELBOURNE was taken in 1965. Two of the new Westland Wessex anti-submarine helicopters are visible. (Photo — S. Given).



Sea Venoms and Gannets share HMAS MELBOURNE's flight deck as the carrier turns into wind. (Photo — S. Given).



The flagship of the Australian fleet leads her older sister ship, HMAS SYDNEY, into Sydney Harbour. (Photo — S. Given).

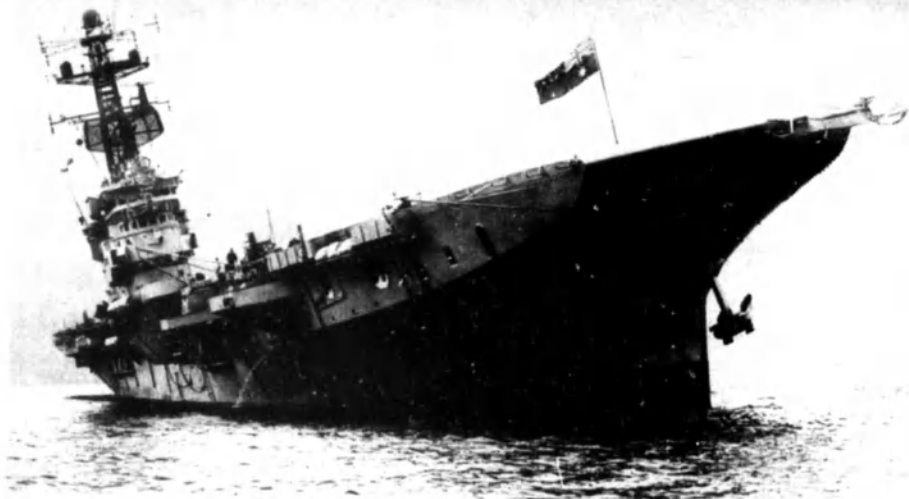
new angled deck, steam catapults, mirror landing aids and the force of hard-hitting aircraft".

On leaving Fremantle, the *MELBOURNE* headed for Sydney with the "hard hitting aircraft" being unloaded at Jervis Bay and taken to Nowra Air Station.

On arrival in Sydney — "right on time at 9.35 am" — *MELBOURNE* experienced "one of the greatest welcomes ever given to an Australian warship", complete with "aircraft overhead, waving crowds on shore, "tooting" ferries and scores of small craft on the harbour". She was escorted by the



October, 1972 — Part of the Australian naval force involved in SEATO exercise Sea Scorpion are depicted in this view. Pictured with HMAS MELBOURNE are from left, HMA Ships DERWENT, SNIPE, VAMPIRE, PERTH, BRISBANE, TEAL, and STALWART. (Photo — RAN).



HMAS MELBOURNE during heeling trials. (Photo — RAN).

aircraft carrier SYDNEY, the frigates QUEENBOROUGH and QUICKMATCH, destroyer ARUNTA and the RN submarine

THOROUGH. Aboard the MELBOURNE, 500 officers and ratings lined the flight deck."

The MELBOURNE was greeted by 3000 people when she drew alongside Garden Island. Among the 3000 who gave MELBOURNE a noisy reception were some of the 60 wives who had travelled ahead of the ship to Australia," as well as wives and children of the crew who had been away for about a year in England. While the happy reunions were going on, the commander of the MELBOURNE, Captain C. G. O. Gatacre held a Press conference on board and praised the new ship as the "most lethal in the Australian fleet!"

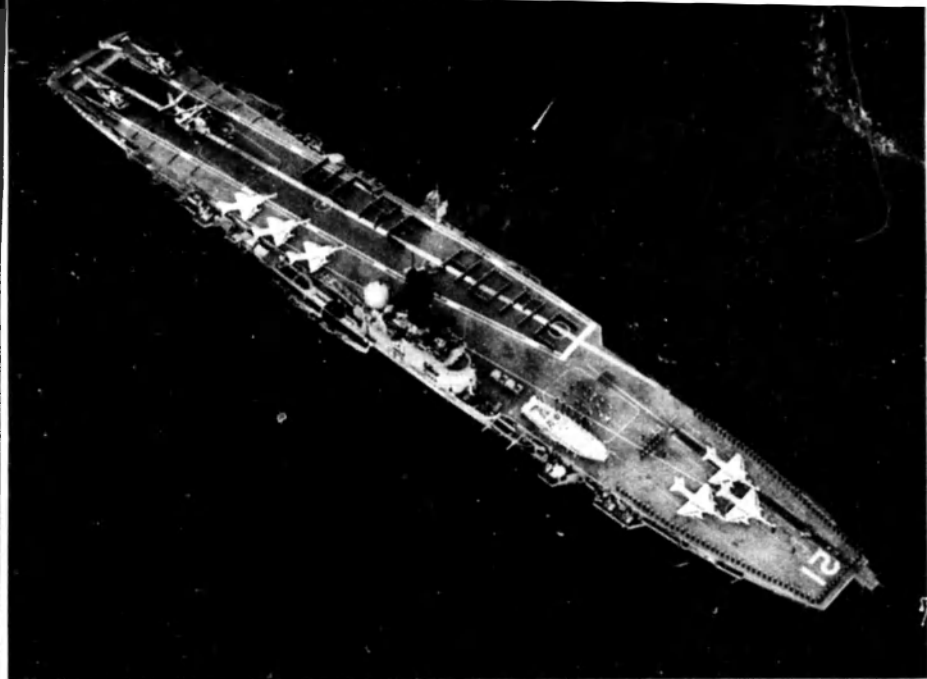
The crew were given immediate leave and a naval spokesman said to the press that the MELBOURNE would not begin exercises, or embark her aircraft, until July."

The last act of arrival occurred on 14 May, 1956 when the MELBOURNE became the flagship of the RAN in a "colourful Garden Island ceremony". More than 800 people watched the flag of Rear-Admiral H. M. Burrell, Flag-Officer Commanding the Australian Fleet, transferred from the carrier SYDNEY to the MELBOURNE. The two carriers were stern to stern at Garden Island and Burrell walked across a plank from one carrier to the other. 1000 officers and ratings from the 2 carriers took part in the ceremony.

With the official transfer and the public welcome behind her, little did MELBOURNE "know" of the full, varied and sometimes tragic career in front of her. MELBOURNE holds the distinction of being the longest serving flagship of the RAN, as well as the more dubious honour, having been in the water for 35 years, of being one of the oldest ships ever in the RAN. Perhaps no other ship of the RAN, past and present, has had such an intensive, busy and long career. And that career is not over yet.

1. See *Sydney Morning Herald (SMH)* 9 May, 1956, p. 7.
2. *SMH* 24 April, 1956, p. 4.
3. *ibid.*
4. *SMH* 9 May, p. 7.
5. *SMH* 10 May, p. 4.
6. *ibid.*, p. 2.
7. *ibid.*
8. *ibid.*
9. *ibid.*
10. *SMH*, 9 May, p. 7.
11. *SMH*, 10 May, p. 4.
12. *ibid.*

A Grummond S2G Tracker is launched by catapult from the carrier's flight deck as a Skyhawk jet fighter bomber awaits her turn during transit to exercise Tasmanex, mid 1979. (Photo — RAN).



The 4th October, 1978. Following an impressive display of naval power, Operation Jubilee Salute off the New South Wales coast, HMAS MELBOURNE enters Sydney Harbour after earlier returning from the Spithead Review to mark the 25th year of reign of Her Majesty Queen Elizabeth II. (Photo — RAN).

Rear Admiral Guy Griffiths Retires

The Navy's former Naval Support Commander, Rear Admiral Guy Griffiths has left the Navy as firmly convinced as ever of the need to maintain an aircraft carrier as part of the nation's maritime force.

"I have always been a firm believer in the need for Naval air support at sea and I see no reason to change that view — nothing has cropped up to change that concept," Rear Admiral Griffiths said.

Rear Admiral Griffiths, AO, DSO, DSC, a former commanding officer of the aircraft carrier, HMAS MELBOURNE, retired late January after 43 years in the Navy, the last 12 months as Flag Officer Naval Support Command based in Sydney.

He handed over to Rear Admiral Andrew J. Robertson, DSC, the former head of the Australian Defence Staff in London and a former commanding officer of the Naval Air Station, HMAS ALBATROSS at Nowra.

Rear Admiral Griffiths said Australia should be in a position to deter anyone from interfering with our interests and should be developing the capability accordingly to meet this need.

"In developing that capability, in terms of money, we are paying a premium for peace, if you like, it is our insurance policy for peace," he added.

Admiral Griffiths said the view had been put "what will a ship be worth when you are shooting at it". The question, he said, should be "what is it worth to prevent the shooting in the first place, how much are we prepared to pay to keep the peace".

"If we didn't have the ships and imports were cut for a specified period, what sort of detrimental effects would this have on our economic conditions," he said.

"In addition to its inherent tactical capability, short of conflict an aircraft carrier is a most useful ship for flag showing, goodwill visits, as a deterrent to people who may be toying with the idea of launching a conflict.

"You can deploy an aircraft carrier at a distance from Australia and, with support, can maintain that presence for long periods.

"If fleet units are beyond the range of shore-based air support it is very necessary to have your own air capability," he said.

Rear Admiral Griffiths said he would like to see a ship of at least 20,000 tons or "larger if we can afford it" as a replacement for HMAS MELBOURNE.

"Again if we could afford it, we should have two of these ships. We should also go for vertical take-off aircraft which would provide a suitable capability, within reasons of budget," he said.

Rear Admiral Griffiths said people have to become more and more aware of the fact that Australia is an island nation dependent on the sea for economic development and therefore, the development of a maritime force was a very important factor.

The Navy of the future, he said, would have to work hard at maintaining its high standards, ensuring that it adapted to change but at the same time retaining sound discipline, and also ensuring "that we are getting best value for our defence dollar."

Moves Towards International Cohesion at Sea

A VERY interesting Paper appeared in the United Kingdom in the closing stages of 1979, which due in no small measure to the efforts of the Navy League has been receiving some attention in Australia.

The Paper entitled "World Shipping at Risk: The Looming Threat to the Lifelines" was prepared by Admiral of the Fleet Lord Hill-Norton, former UK Chief of Defence Staff and Chairman of NATO's Military Committee, and published by the Institute for the Study of Conflict, in London.

In a wide-ranging study of the international scene, Lord Hill-Norton expresses the belief that Russian room for manoeuvre on land is constrained by the cohesion and resolution of NATO, the largely American nuclear umbrella, and the nationalism and numerical strength of the Chinese. The Admiral considers it logical to assume this situation has led to the development of Russia's massive maritime capability — stated by the far-sighted and very able Russian naval Commander-in-Chief, Admiral Gorshkov, to be "the most important element in the Soviet arsenal to prepare the way for a Communist world" — and that the West is at risk at sea more than on land.

Looking ahead over the next decade and into the nineties, and referring to likely alliances between the United Kingdom and other countries, Lord Hill-Norton believes NATO, although its composition may change, will remain an effective deterrent to Russian aggression in Europe. In the Pacific he anticipates continuing political and military links with Australia and New Zealand; he stresses the importance of Japan in political, economic, industrial "and very likely military" terms, and assumes that because her interests lie very close to those of the democracies and the risks are similar, Japan will throw in her lot with the democracies well before the end of the eighties.

Lord Hill-Norton declines to speculate on the future actions of China, a potential super-power, but sees no need for that country to seek territorial expansion except perhaps for political reasons.

The Admiral anticipates a continuing United Kingdom association with a fast developing and geographically scattered group of countries including Brazil, Korea, Saudi Arabia and the ASEAN countries.

Page Eight

BY LORD HILL-NORTON

NATO, Japan and the other countries mentioned — potential middle-powers — and of course Australia and New Zealand, are all dependent upon sea-borne trade for their economic survival as are many other friendly countries not



The Russian guided missile cruiser PETROPAVOLOUS. (Photo — RAN).

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specifically mentioned. It is the vulnerability of ships using the trade routes (which are extremely restricted at a number of vital points) which alarms Lord Hill-Norton and causes him to believe stability and peace are at risk at sea rather than on land.

Comparing German submarine strength at the beginning of World War II and present Russian submarine strength, the admiral recalls that Germany started the war with 50 diesel-electric submarines and nearly won the vital Battle of the Atlantic; today, apart from her strategic nuclear-missile underwater fleet, Russia has not less than 350 attack submarines of

which 150 are nuclear powered and in addition to this formidable force has some 650 shore-based combat and reconnaissance aircraft (with the Backfire bomber adding to this airpower), 50 or so vessels deployed world-wide gathering intelligence plus an unknown number of reconnaissance satellites in permanent orbit. Further, Russia has some 400,000 mines in stock and undoubtedly the means to lay them where they would do most harm.

If this frightening capability to destroy and disrupt on a global scale is not enough, in various navies large and small — some potentially hostile and close to the vital trade routes — there are currently more than 750 missile-armed fast patrol boats, not particularly effective on the broad oceans but highly lethal in confined waters through which ships must pass during their voyages.

Lord Hill-Norton states without qualification that neither the United Kingdom nor any other middle-power can stand alone in this day and age, and sees a joint effort by all the countries dependent upon the free flow of trade as the only way to counter Russia's ability to exploit maritime opportunities at will.

The Admiral puts forward a number of proposals designed to reduce if not eliminate the threat of trade dislocation which include the establishment of a global NATO-type organisation to ensure cohesion in the maritime effort of participating nations. He maintains that this is not a Utopian dream and points to the success of NATO in a limited area, and to the international aviation system which has existed for more than twenty years.

Lord Hill-Norton does not believe his proposals would involve nations in massive spending on maritime forces — "the combined strengths of those like-minded sovereign States whose interests are at risk are even now close to adequate for the task if their commitments could be shared, properly co-ordinated and directed..." The Admiral however does not under-estimate the difficulties of establishing a world-wide constabulary force with power to deter a would-be aggressor; chief among the problems is the seeming inability of Western governments to realise that dangers actually exist, a pre-requisite to action of any kind.

Before commenting on the implications of Lord Hill-Norton's proposals for Australia it is desirable to refer to later proposals emanating from the United States and no doubt spurred by events in Iran, Afghanistan and elsewhere.

An American Scheme

It is reported that a group of congressmen have called for the formation of a multi-nation Pacific maritime force, to be under US leadership and to which a number of countries

including Australia, Canada, Japan, New Zealand, South Korea and the ASEAN nations would be asked to contribute.

In that the purpose of this Pacific fleet is to protect the trade routes it has an important element in common with Lord Hill-Norton's world-wide maritime alliance. However, if reported correctly the American proposal appears to involve nations committing part of their armed forces to a foreign (US) command, whereas the Hill-Norton plan calls for co-operation only. This is a very important difference.

Implications for Australia

In its present form, the American proposal for a Pacific-region grouping (it must be assumed it is meant to extend into the Indian Ocean, and to include Indonesia) seems unlikely to be politically acceptable to most countries concerned, including Australia. Even in wartime, countries are generally reluctant to allow control of their armed forces to pass to another nation and it is hard to envisage it happening in peacetime, no matter how threatening the circumstances. The American scheme, as reported in Australia (in January) seems unlikely to succeed in the form proposed by the congressmen.

With regard to the Hill-Norton proposals, the idea of a world-wide maritime alliance is very much in line with the views expressed by the Navy League of Australia to the defence sub-committee of the Parliamentary Foreign Affairs and Defence Committee in 1978.

"Throughout the world there are millions of people in communities large and small who share similar ideals, hopes, fears and aspirations, and who have nothing whatsoever to gain from territorial expansion or war. One sees a great need for these often geographically separated communities to co-operate not only on a regional basis, but on a world-wide scale, the times and circumstances require such co-operation..."

While it is satisfactory to know that so

eminent and experienced a person as Lord Hill-Norton is speaking-out on the need for unity between common-interest countries throughout the world, and backing his call with hard facts, it is doubtful whether his proposals will prosper without a considerable change in attitude on the part of the governments of the countries concerned.

The problem is not so much "technical" as political. Required is a comprehensive surveillance/intelligence system, and a command and control organisation, well within the ability of the various defence departments to provide. Defence departments however can go only so far — national governments must create the climate and set the limits of co-operation, and there is very little evidence to show that Western governments in recent years have looked very far ahead or beyond their own boundaries.

Nevertheless, just as necessity and commonsense resulted in NATO, so eventually will the mutual support principle of that organisation prevail on a wider scale. It is likely that fewer countries than envisaged by Lord Hill-Norton will be involved in the early stages, and it may be that a number of regional groupings will come first — this in fact appears to be the trend now.

So far as Australia is concerned, we have nothing to lose and much to gain by forgetting the unreal "Fortress Australia" idea and embarking on a defence strategy that acknowledges the truth of Lord Hill-Norton's statement, "It has long been accepted that no medium-sized power can stand alone"; indeed it is questionable that any single power can do so in this day and age. It is safe to say our defence leaders are well aware of the realities of life and within the limits dictated by our own and other governments, strive towards mutual co-operation. Not nearly so certain is the awareness of governments or their willingness to face facts and provide leadership even when they are aware of the dangers.

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The "River" class Frigates of World War 2

The Second World War saw the Royal Australian Navy short of ships of all classes, but probably the greatest shortage was in the escort and anti-submarine field. A very successful Australian Mine-Sweeping programme had been put into operation, and most of these AMS's were used as escorts. Before the AMS programme had been completed, another ship-building programme was launched. This was the effort to build anti-submarine frigates.

The class selected for Australian yards was the British "River" class frigate. The choice of the name was odd, but as a new type of ship was being introduced, the old title of frigate was re-introduced. The frigate was a WW2 design, brought about by the lack of range of the "Flower" class corvette which the Royal Navy built in large numbers. The "Flowers" were rather rough riding ships in the North Atlantic, so the Admiralty brought out a design for a larger ship, able to face the heavy weather. The design was based upon the pre-war sloops, but less refined to allow for more rapid construction. When the first frigates were

BY H. ADLAMI
commissioned they were known as "twin screw corvettes", but the title was soon changed to the now well known term of frigate.

Contracts were awarded in Australia to build frigates but although the war finished before the programme was completed, great strides had been made. In all eight "River" class frigates had been launched, most of them completed, and another four altered to the "Bay" design of anti-aircraft frigate. All the Australian vessels received "River" names.

Basically the "River" class was a twin screw ship with an overall length of 301 feet 3 inches, a beam of 36 feet 6 inches and a draught of 9 feet. The displacement was 1370 tons standard, and the machinery consisted of a two shaft set of reciprocating engines. These were four cylinder triple expansion, and had a total ihp of 5,500. This gave them a speed of 20 knots. The machinery was simple and reliable, although the boiler rooms were a

bit cramped. 500 tons of oil fuel was carried, and this gave the frigates a good range.

Designed as A/S frigates, the "Rivers" carried a fair gun armament. Two single 4 inch QF MK XIX HA/LA guns were carried, one on "B" deck and the other on "X" deck. Close range armament was 20 mm to begin with but 40 mm Bofors were added as they became available.

For A/S operations, the "Hedgehog" ahead throwing weapon was carried on the foc'sle with depth charge equipment aft.

They were rather roomy ships, mainly due to the extending of the foc'sle deck to practically the stern. Unlike destroyers, both boiler rooms and the engine room could be entered without going out into the weather. The bridge was quite comfortable, although open in the usual British practice. The 20 mm Oerlikons carried in the bridge wings were upsetting, but at least they were carried high and had good arcs of fire.



HMAS BARWON, 1946, approaches Obelisk Bay in Sydney Harbour as she makes her way to the open sea. (Photo — Australian War Memorial).



The frigate HMAS BARCOO. (Photo — Australian War Memorial).

The first "cab off the rank" was "GASCOYNE", built by Morris Dock in Sydney. It is interesting to note that all the frigates were built by yards that had been engaged in the AMS programme, so if we take "GASCOYNE's" building times we get a fair idea of the general efficiency of the Australian yards during WW2. Laid down on 4th June, 1942, "GASCOYNE" was launched on 20th February, 1943. On 20th December, 1943, "GASCOYNE" commissioned under the command of Commander J. Donovan, RAN. This ship was usually known as "Gaspipe", in keeping with the old habit of the sailor in giving his ship a nickname.

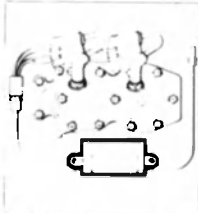
The next frigate to commission was "BARCOO", built by Cockatoo Island. This ship was launched on 26th August, 1943, and commissioned on 17th January,

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1944. "BARCOO" was to become well known as a survey vessel in later years.

"BURDEKIN" was next. Built by Walkers in Maryborough, Queensland, this ship was launched on 30th June, 1943, and commissioned on 27th June, 1944. It is one of those absolutely incomprehensible facts that this frigate was to see less than two years actual service before being paid off into reserve. "E" class reserve on 18th April, 1946, and became the group ship in Corio Bay, Geelong. She never re-commissioned for service.

"HAWKESBURY", another Morits ship was launched on 24th July, 1943, and commissioned on 5th July, 1944. She was followed by "LACHLAN", also from Morits, launched 25th March, 1944 and commissioned 14th February, 1945. The last frigate commissioned before VJ Day was "DIAMANTINA", a ship which is still (1980) in existence. This ship was built by Walkers, launched 6th April, 1944, and commissioned on 27th April, 1945.

Two other "Rivers" were commissioned in 1945, but too late to see war service. They were "BARWON", launched from Cockatoo Island on 3rd August, 1944 and commissioned by Lt Cdr H. L. (Herbie) Gunn, DSC, RAN, and "MACQUARIE", built by Morits, launched 3rd March, 1945 and commissioned 7th December, 1945, by Lieutenant L. M. Hinchliffe, DSC, RAN. This ship was probably the only major Australian warship commissioned new by a lieutenant, in WW2, and illustrates the difference between permanent service officers and reserve officers. Lt Hinchliffe was a lieutenant when war broke out, and was still a lieutenant when it finished. On the other hand there were many reserve lieutenant-commanders who joined up after the war began. Such was



A decommissioned BARWON, under charge of two tugs, including BRONZEWING (left). (Photo — R. Hart).

the way promotions were handled. The permanent navy had to stand by the old "time" system.

Another four ships were laid down in WW2, but the design was modified to the Anti-Aircraft role. The four ships all bore "River" names, but are officially described as "Bay class", after the British "Bay" class anti-aircraft frigates. These four ships were named "CONDAMINE", "CULGOA", "MURCHISON" and "SHOALHAVEN".

The basic "River" design was modified in these four ships to mount two twin 4 inch MK XVI mountings, probably the best all round gun fitted in British ships in WW2. It was a dual purpose weapon with a fast rate of fire, and was a more powerful gun than the MK XIX fitted in the A/S frigates. The actual siting of the twin mounts was a much better arrangement than in the British "Bay" type. By

removing "B" deck, and mounting the twin mount in a bandstand on the foc'sle, 16 tons in weight could be carried lower, the same was done with the after mounting, and the stability of the ships was improved.

The bridge wings were omitted, and the 20 mm mounts were carried on the lower wings at "B" deck level. Three single 40 mm's were mounted at the break off the boat deck, and a "Hedgehog" was carried on the foc'sle. The ships were still well equipped to fight submarines, but had a much improved AA potential.

With the commissioning of the four "Bays", some of the "River's" were taken in hand for conversion to "Squid" ahead throwing weapons. This entailed siting the fore-gun on a bandstand close to the stem, and mounting a pair of three barrel "Squids" on "B" deck.

Two of the "River's" were fully converted to surveying. These were "LACHLAN" and "BARCOO". Extra charthouse accommodation was provided, and arrangements were made to carry extra boats, including a specially built 34 foot survey motor boat. The survey ships were given a new colour scheme of grey hull, white upperworks with buff funnel and masts. They were very pretty looking ships in this guise.

"LACHLAN" did not last long as a survey ship, and in 1947 she was paid off. She was not to remain idle for very long, as the Royal New Zealand Navy requested the loan of "LACHLAN" to carry out survey work in New Zealand waters. On the 8th October, 1948, "LACHLAN" was transferred on loan to New Zealand. She was well liked by the New Zealanders, who eventually purchased her. She paid off in Auckland on 14th December, 1974, and is still in use as an accommodation ship.

The Australian frigates had a varied existence, but only one, "DIAMANTINA" remains today, and her days are numbered.



HMAS DIAMANTINA. (Photo — RAN).

Some of these ships had very little use and were practically new ships when sold as scrap. In 1962, "BARWON", "BURDEKIN", "CONDAMINE", "MACQUARIE", "HAWKESBURY", "MURCHISON" and "SHOALHAVEN" were all broken up in Japan. "BARCOO" and "GASCOYNE" lasted another ten years due to their employment as survey ships but in 1972, they too went to the wreckers.

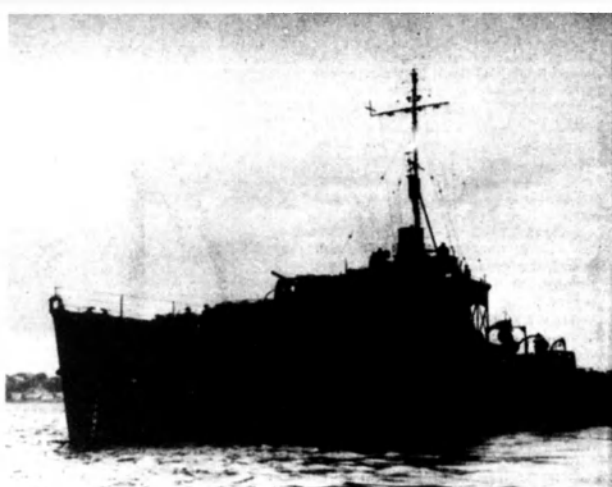
"CULGOA" was utilised as an accommodation ship at Waverton, Sydney. She was condemned for living purposes, and was scrapped.

That leaves only two, one in Australia and one in New Zealand still afloat. They will not last very long, but there are hopes that "DIAMANTINA" may be preserved. Let us hope so.

Ten other "River" class frigates had been ordered, but they were cancelled at the cessation of hostilities. They would have been named, "BALMAIN", "BOGAM", "CAMPASPE", "MURRUMBIDGE", "NAMOI", "NEPEAN", "WARBURTON", "WILLIAMSTOWN" and "WOLLON-DILLY".

An odd point arises when we find that during construction it was decided to change some of the names. "MACQUARIE" was laid down at "CULGOA", but the name was changed with the ship building at Williamstown. This ship had been laid down as "MACQUARIE" so it changed names with the ship being built in Sydney. Why this took place I for one cannot understand, but it happened.

The four "Bay's" were given a facelift



A wartime view of HMAS HAWKESBURY. (Photo — RAN).

in the 1950's. They received a lattice foremast, and ended up with five 40 mm MK VII Bofors guns as close range armament, and the 20 mm mounts were landed. The eight "River's" retained their original tripod mast, but grew all sorts of buildings on their upper decks. "DIAMANTINA" received a new roofed-in bridge. She also carried a single 40 mm forward of the bridge possibly to give her warship status, but there was no ammunition supply to this gun. All ammunition had to be sent up by "Armstrongs Patent Purchase".

"BARCOO" carried an after

charthouse in her surveying days, and this seemed to give her a graceful appearance.

"GASCOYNE" had gone into reserve in 1946, but this was a fully maintained state designed to allow for re-commissioning in 14 days. In June, 1958, she re-commissioned for survey work, so it would appear that the conversion to "Squid" was wasted.

"HAWKESBURY" went out of commission soon after the war but was brought back into harness in May, 1952, and was present at the Atomic Test at Monte Bello that same year.

"BARWON" went out of commission on 31st March, 1947, and was replaced by "CULGOA". She had served a grand total of 15 months in commission.

"MACQUARIE" re-commissioned in August 1952, but ten years later she had been scrapped in Japan.

The "Bay" class have been dealt with because they were basically a "River" class modified for AA duties. No attempt has been made to cover war histories, but the "Bay's" did go to Korea, where they received warm praise for their work. "MURCHISON", in particular, made quite a name for herself with her exploits in the Hann River during that conflict. The surprising thing was that "MURCHISON" had been the day running training ship for the A/S school in Sydney, and had been steaming with a much reduced complement. She got away on time, still short of crew members and received her final draft whilst off Moreton Bay, delivered by the pilot steamer "John Oxley".

The builders of the four "Bay's" were State Dockyard, Newcastle, for "CONDAMINE", Williamstown Dockyard for "CULGOA", Evans,

Deakin, Brisbane, for "MURCHISON" and Walkers, Maryborough, for "SHOALHAVEN".

Although the four "Bay's" were regarded as being the more modern of the whole programme, it is one of those quirks of fate that the last two Australian built frigates in commission were "River" class ships.

Summing up, the "River" class frigate was a well built, comfortable ship with a fair turn of speed, able to face any weather. They were fine anti-submarine ships, but usually did all other duties. The extended foc'sle was well received as it made the ships very dry. The machinery was simple and efficient, and the gunnery arrangement was quite good for ships of that type. It is a pity that they were scrapped, but the fact remains that they were ageing. "DIAMANTINA" is still in good order but she is now thirty-four years old, so we must leave sentiment behind and look at things clearly. The "River" class frigates were built for the Second World War, and would certainly be obsolete if required to fight the type of ship that is being built in these missile age times.

They were good ships. They were well built ships. They were built in Australian yards. Let us not forget them.



With pendant flying, HMAS DIAMANTINA sails down harbour at the close of her career. Proposals are now in hand to preserve the frigate in Brisbane. (Photo — RAN).

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HMAS MACQUARIE. (Photo — Australian War Memorial).

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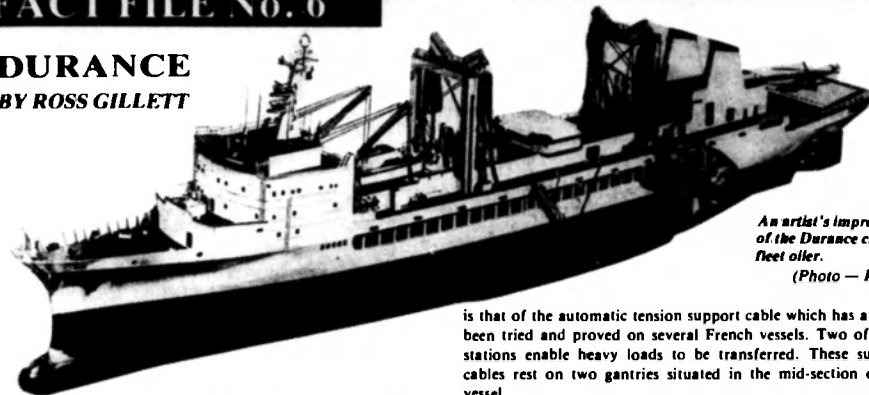
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FACT FILE No. 6

DURANCE BY ROSS GILLETT



An artist's impression
of the Durance class
fleet oiler.

(Photo — RAN).

is that of the automatic tension support cable which has already been tried and proved on several French vessels. Two of these stations enable heavy loads to be transferred. These support cables rest on two gantries situated in the mid-section of the vessel.

In addition, the Durance class tanker is equipped with a helicopter also enabling heavy loads to be transferred. Wide clear spaces provide ready access to the helicopter pad and transfer stations, from the victuals and munitions lifts and freight holds.

AT SEA REPLENISHMENT

- Distance between vessels: 25 to 100 metres
- Time needed to jettison lines in the event of danger: 30 to 60 seconds.
- Transfer capacity for solid loads: 11 tons in 30 minutes.
- Total time needed to secure and release the support cable: 3 to 6 minutes.

State of the sea: the satisfactory operation of the system depends entirely on the tonnage, type and manoeuvrability of the vessel supplied.

PUMPING FACILITIES

The Durance class is equipped with hydraulic cargo pumps flooded in the tanks. With this system, very high pumping rates can be obtained, coupled at the same time with flexible and perfectly reliable use of the pumping facilities.

The cargo pumps are started up and controlled from the Cargo Control Centre, which is located at the centre of the ship, between the two gantries.

The following are also controlled from the Centre, which constitutes one of the novel features of this vessel:

- remote-control of the cargo collector valves
- implementation of the replenishment installations, and execution of the corresponding operations at sea.

PRINCIPAL CHARACTERISTICS OF THE VESSEL

Length	157 m
Breadth	21 m
Draft	8.7 m
Displacement at Full Load	17,800 tons
Speed	19 knots
Propulsion	2 SEMT-PIELSTICK 16 PC 2.5 V engines
Maximum power at 520 rpm	20,000 HP
	2 variable-pitch propellers, diameter 4.2 m

CONCLUSION

All of the above facts and figures relate to the French Navy version and may, of course, differ slightly to the finished RAN ship. Work at Vickers Cockatoo Dockyard is scheduled to commence in late 1980, with delivery set down for 1983. As yet no name has been chosen for the new ship, although the possibilities include BILOELA, KURUMBA, SIRIUS and SUPPLY.

On 23rd August, 1979, the Minister for Defence, Mr D. J. Killen, announced that a new and more capable underway replenishment ship would be built for the Royal Australian Navy, at the Cockatoo Island Dockyard in Sydney.

The new ship, as yet unnamed, will be similar to the Durance class, of which one, LA DURANCE, is serving in the French Navy, with a second, MEUSE, to be commissioned in the 1980-81 period. The following article should provide readers with a greater insight into the ship and its capabilities.

MISSION

The mission of the Durance class Underway Replenishment Tanker is essentially to refuel flotillas of medium-tonnage vessels (frigates, destroyers, etc), both at sea and in harbour. One of the leading features of the tanker is its simplicity and endurance, being able to operate in all climates and carry out 30-day missions without returning to harbour.

DESIGN

The general structure of the ship bears witness to the care taken to make it both effective and reliable. Its hold capacity is 10,000 tons of freight, distributed as follows:

Fuel oil	7500 metric tons
Diesel oil	1500 metric tons
AVCAT	500 metric tons
Feed water	130 metric tons
Victuals	170 metric tons
Munitions	150 metric tons
Spares	30 metric tons

PROPULSION

Propulsion is via two semi-fast diesel engines (16 PC 2.5V) 10,000 HP each. These engines are independent and drive two variable-pitch propellers through two gear boxes.

ELECTRICAL

All electric power used for replenishment operations at sea is generated in two alternators, each of 2000 kW, driven by the main engines. The ship's own requirements are met by three 480 kW diesel-alternators.

ACCOMMODATION

Particular care has been taken with accommodation on board the Durance class, enabling a crew of 150 officers and men to work, relax and live in excellent conditions. As well, accommodation is provided for 45 passengers.

REPLENISHMENT EQUIPMENT

The new vessel will be equipped with four lateral hydrocarbon stations and one stern station. The system adopted

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THE RAN:

Outlook for the Eighties

BY A. W. GRAZEBROOK

AS we move into the 1980's, a number of senior politicians, and serving and retired Officers have made statements which give us the opportunity to consider the issues which are paramount from the Navy's point of view.

However, before we do this, it is appropriate to review, in a few lines, developments in the 1970's:

- The 1971-77 dearth of new construction orders, and delays in modernisation projects, has come to an end, but has left a back log of new work that must be overcome.
 - Whilst some new orders have now been placed, mainly with local builders, a number of very important procurement and construction decisions are very seriously overdue:
 - The New Aircraft Carrier
 - The Follow On Destroyer
 - New Mine Counter Measures Vessels
 - Helicopters for HMAS Ships ADELAIDE, CANBERRA and SYDNEY
- The consequences of the failure to make these decisions earlier will be very costly indeed in budgetary terms.
- Perhaps most important of all, the six valuable years from 1971-77 — years of relatively low threat — were not used to best advantage to build-up long lead equipment items.

Now the international situation has deteriorated substantially. This destabilisation is now recognised not only by the more far-seeing observers, but also by a number of very senior Australian leaders.

THE STRATEGIC SCENE

Not only have relations between the two major maritime super powers deteriorated, but we have also seen unmistakable proof that serious consequences in our region are unavoidable:

- Deployment of some of Russia's biggest, most powerful and most modern ships — the aircraft carrier MINSK, the LPD IVAN ROGOV

and the "Kara" Class guided missile armed cruiser PETROPAVLOVSK — in our region signifies a profound change in Russia's maritime warfare policy for the Indian Ocean — Western Pacific Region. Their Fleet in this region is no longer the "poor relation". It includes some of their newest and most powerful ships.

- These same ships signify major Russian "technology jumps" in maritime warfare — fixed wing VSTOL aircraft operating from aircraft carriers, a major step forward in amphibious warfare technology and so on. We must expect these technology breakthroughs to be available to regional client powers in the next ten to twenty years — the period in which MELBOURNE's successor, the Follow On Destroyers and other new ships the RAN needs will be entering service.
- The readiness of Russia to transfer technology to regional powers has already been proved by Russia's transfer of OSAL Class SSGW armed fast attack craft and PETYA Class 35 knot frigates to Vietnam — a nation whose Navy had been moribund from 1975.
- Russia is now (at the time of writing) providing Vietnam with over A\$2 million per diem in military aid. Heavy construction work, of a type often associated with major rocket installations, is known to be going on at Da Nang, in Vietnam.
- Perhaps in part from an understandable fear resulting from Russia's much increased military support of Vietnam, Indonesia has embarked on a major naval improvement programme, including the acquisition of new SSGW armed and helicopter armed 1200 ton 30 knot corvettes, submarines, tank loading ships and large SSGW armed fast attack craft.
- Similarly perhaps, the People's Republic of China is now seeking modern weapons and sensors for her Navy — with some 80 submarines, this is already no mere small coastal force by regional standards.

As agreed in November, by the League's Federal Council, which includes some of Australia's foremost defence thinkers, it may be that the Warning Time of a threat to Australia has already started.



IVAN ROGOV, Russia's new missile ship. (Photo — RAN).

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In this context, Australia is faced with a need in the 1980's not only to catch up on the backlog in new construction orders, in themselves essential to maintain the maritime strength needed to cope with the maritime threats which could be posed now, but also to increase that strength substantially. Such an increase is needed to respond to the new strategic deterioration referred to earlier.

PRIORITY NEEDS

An examination of public statements by recent Chiefs of the Naval Staff shows that they regard the availability of fixed wing seaborne airpower — a new aircraft carrier — as of the highest priority and as absolutely indispensable. As the present Chief of the Naval Staff told the Navy League's Annual General Meeting in Canberra in November, "Tactical airpower at sea is essential, and in our area a ship with appropriate aircraft is the only practical solution to this need".

Whilst some progress is at last being made in that three potential designs of new aircraft carrier are being examined in detail, a definite selection of type and firm new construction order are urgently needed.

Closely allied to, but not contingent upon, the urgent need for a new carrier is the need for provision of new helicopters. The RAN's present six SEA KING helicopters are insufficient to provide the anti-submarine warfare capability (for which ten SEA KING's were accepted as the minimum necessary when the original procurement decision was made in 1972).

Furthermore, although the first FFG (HMAS ADELAIDE) will be commissioned later this year, the helicopters for that ship and her two later



ADELAIDE at launching (Photo — RAN).

sisters, have not yet even been ordered. The proposal to embark small Army helicopters will provide the FFG's with a service and limited reconnaissance capability only. Full helicopter capability a major part of the new ships' fighting potential against submarines and SSGW armed fast attack craft — cannot now be available until 1985.

Another urgent priority need is that for new destroyers, needed to replace initially the "River" Class ships starting in 1988 when YARRA, the eldest of these, reaches retirement age.

Although the need for this Follow On Destroyer Class was accepted as long ago as April, 1974, (by the then Minister for Defence, Hon L. H. Barnard), no decision has yet been accepted on the type of ship that should be built. However, it can be speculated (from statements made about the subject) that Navy's preference is for a locally produced version of the



The new heavy landing ship TOBRUK is gradually taking shape as this photograph shows. In the above view, the bow door is open as are the two vehicle ramps. (Photo — RAN).

guided missile frigates now building in the United States. It is suggested that the cost of maintenance facilities and training activities is much lower for one large class of ship than for two classes of ship of different types, and that this saving would more than outweigh the savings achieved by replacing the "River's" by ships smaller than the FFG's. It is noteworthy that, by the time the four early "River" replacement programme is completed, the first of the RAN's DDG's (HMAS

PERTH) will be due for retirement. An updated FFG type might well be a suitable replacement.

Thus, whilst some progress is at last being made on new ships — the three FFG's, the underway replenishment ship, the heavy landing ship and the patrol boats — further decisions are needed urgently.

Of course, new ships and aircraft do not alone make a Navy. They need bases and men to man them.

BASES

Although progress on new ships has been inadequate to ensure the availability of the necessary maritime strength in the 1980's, there has been significant expenditure on new bases and operating facilities:

Work Completed	Cost in 1979 \$ millions
Williamstown Dockyard — modernisation to standard for building new destroyers	
Stage 1	16
HMAS STIRLING — Cockburn Sound, WA	70
New berthing facilities — Garden Island	2
Work Underway or Approved	
Williamstown Dockyard modernisation Stage 2	19
Darwin patrol boat base improvements	19
Cairns patrol boat base improvements	11
Brisbane facilities for amphibious warfare squadron	1
Garden Island facilities for FFG's et al	7
Proposals for Further Expenditure	
Garden Island — Fleet Base and Dockyard Modernisation	190
Williamstown Dockyard Modernisation Stage 3 — weapons and electronics workshops	na

As can be seen from the details given, some \$A145 million has already been spent, or approved for expenditure. The great majority of this money has been, or will be, spent within Australia. This money has achieved some improvement in deployment times (resulting from the Cairns, Darwin and Cockburn Sound facilities) as well as provided the new facilities needed to maintain new types of ships with new weapons, sensors and propulsion systems.

The area of apparent difficulty is at Williamstown Dockyard, where it has taken some six years from the date of laying of her keel to build the oceanographic ship HMAS COOK. It took that same yard less than five years to complete (in 1970) the much more complex destroyer escort HMAS SWAN. It is difficult to avoid the conclusion that something has gone wrong.

Many reports, from reliable sources, attribute the delays almost wholly to cumbersome procurement procedures applied by the Department of



FREMANTLE, seen here fitting out, has suffered over-weight problems and her commissioning has now been delayed. (Photo — RAN).



Navy work boat (NWB) U1230 at Cairns, 11th July, 1979. (Photo — S. Given).



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COOK at launch, Williamstown Dockyard in August, 1977. (Photo - RAN).

Administrative Services to the purchasing of components for ships in hand at Williamstown. Whether or not these reports are wholly correct, they lend some force to the suggestion that the Follow On Destroyers should not be built at Williamstown unless the problems of the type that have delayed the completion of COOK are eliminated. Delays in the modernisation of the destroyer escort HMAS PARRAMATTA suggest that the problems referred to have not been overcome yet.

A further potential problem at Williamstown is the provision of skilled labour, of which there is already a shortage in the western suburbs of Melbourne. An increase of some 25% would have been required in Williamstown's production labour force to build the DDL's, and it must be assumed that something similar would be required to build the Follow On Destroyers at that Yard.

Not only civil but also uniformed personnel present the Navy with further challenges in the 1980's.

PERSONNEL

It is public knowledge that the Government is keeping an extremely tight reign on the personnel level of all three Services, in an endeavour to free funds for major equipment items with long lead times.

In this context, only very small increases in naval personnel numbers have been permitted to man the new patrol boats, the heavy landing ship, etc. At its 30 June, 1979, permitted maximum of 16,582, the total authorised number of full time uniformed men and women are still some 3 per cent below the 17,128 figure of 1st January, 1973.

It says much for the Naval Personnel part of DEFNAV that the Fleet has been manned without major operational dislocation in a climate of increasing

technology and accentuated Officer wastage at LCDR and CMDR level (due in part at least to the early date at which an Officer can leave the Service with an immediate pension entitlement).

Whilst some 35% of uniformed naval personnel are manning the operational forces (ships, submarines and aircraft), as many as 30% of naval uniformed personnel are involved in training at any one time — a much higher percentage than in major civilian industrial undertakings. In recognition of the high percentage of naval personnel involved in training, Navy planners have achieved much in maximising training efficiency and improving initial selection procedures to minimise the number of Officer and Sailor entries who drop out at an early stage. Service dropouts are extremely expensive, as their uniforms and selection and induction procedures are all paid for without any return on the investment.

The number of candidates for entry into the WRANS far exceeds vacancies, a fact which reinforces the case of those who argue that the full potential of the WRANS in the Navy is far from achieved — although they are now manning an ever increasing diversity and number of billets. If one area of concern over personnel matters had to be nominated, it would

probably be that of submarines, where a lack of volunteers has forced the laying up of one of the RAN's submarines. This lack of volunteers is alleged to be due to inadequate money recognition of the discomforts of submarine life. This lack of money recognition is largely out of the hands of Senior Service Officers, being governed by non-Service near-arbitration procedures. Some changes have been announced in remuneration recently. It remains to be seen whether these have the desired effect.

Thus, there are those who argue that, with the exception of submarines, substantially increased remuneration is not the main answer to those (relatively few) personnel problems which exist. Navy as a whole is on target strength, although there are imbalances between ranks and specialisations. The number of candidates for entry is extremely high but retention needs improvement.

Thus, whilst money for personnel in general is not a major difficulty, more money must be found for equipment.

MORE MONEY MUST BE FOUND

The Governmental failure to order the new ships needed during the period 1971-77, and delays in the modernisation programme, will result inescapably in exceptional demands for funds during the 1980's.

This need coincides with a deteriorating strategic situation. Put simply, the potential threat is much greater now than it was in 1972. The potential threat will grow further in the 1980's. Further complacency would be inexcusable.

Thus the major challenge for the Navy League in the 1980's lies in ensuring that successive Governments spend the money on equipment that is absolutely essential to ensure viable maritime defences. It is for Navy to see that money is not only well spent but is seen by the taxpayer to be well spent.

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VINDICO

BY S. GIVEN

ON the 9th October, 1979, after nearly 21 years' service to the Royal Australian Navy, the "Daring" Class destroyer, HMAS VENDETTA, officially paid off and was towed to join her sister, DUCHESS, at Athol Bight in Sydney Harbour.

Of all-welded construction, VENDETTA was ordered in October, 1947, and laid down at the Williamstown Naval Dockyard on 4th July, 1949. Her sisters, VAMPIRE, commissioned in 1959, and VOYAGER, commissioned in 1957, were both built at the Cockatoo Island Dockyard, Sydney. Another ship, DUCHESS, was of British build and was commissioned into the RAN in 1964.

VENDETTA's launch took place on 3rd May, 1954, and the 2800 ton warship was embarked on her career by Mrs Nancy Waller, wife of the late Captain Hec Waller, RAN.

During trials on 18th July, 1958, VENDETTA accidentally rammed the Albert Dock caisson and damage to her bows caused her completion to be put back by some three months. On completion, she was commissioned on 26th November, 1958, and put under the Command of Captain R. J. Robertson.

April 1959, saw VENDETTA on an operational visit to New Zealand, from which she returned in May of that year.

Sailing from Sydney in December, 1959, she headed for the Far East to relieve HMAS Anzac in the Strategic Reserve. VENDETTA's job was taken over by VAMPIRE and she returned to Sydney in July, 1960.

The ship attended the Hobart regatta in February, 1961, and on her return was dispatched to evacuate passengers from the freighter "Runic" which had run aground on Middleton Reef, on the NSW Coast.

Another tour of duty in the Far East in April, 1961, saw VENDETTA in exercises with SEATO forces, and also a representative of the RAN for the Philippine Independence celebrations in July. She returned to Australia for a refit in August, 1961.

Again, VENDETTA sailed for the Far East in March 1962, and after Easter she joined with SEATO forces in exercise "Sea Devil". She returned in June, and visited Noumea during



VENDETTA — Ship's badge. (Photo — S. Given).

August. The next month the ship arrived for the Commonwealth Games held in Fremantle.

For the last six months of 1962, and the first two months of 1963, VENDETTA was in the Far East and took part in a further SEATO exercise "Sea Dove-tail".

Mid 1964 saw VENDETTA yet again on her way to the Far East, from which she returned to Sydney on 12th December.

The first half of 1965 was spent in refit, and on 11th August, the destroyer sailed on her sixth trip "up top". During this voyage VENDETTA escorted the troop carrier, SYDNEY to Viet Nam.

November and December of 1965 saw her on anti-infiltration patrols during the Indonesian confrontation of Malaysia.



On the slipway at Williamstown, 3rd May, 1954. (Photo — RAN).



Fitting out, 9th April, 1957. (Photo — RAN).

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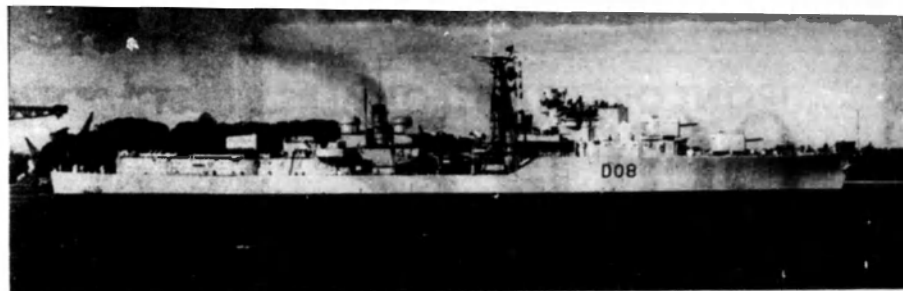
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An early broadside view of HMAS VENDETTA. Note the gointopole torpedo tube mounting structure. (Photo — S. Given).

On 20th May, 1966, word came that the dredge "W. D. ATLAS" had sank off Jervis Bay. VENDETTA searched for two days and recovered four bodies.

In July, the same year she again escorted the SYDNEY to Viet Nam.

VENDETTA's next assignment was to aid the United States Navy Submarine "TIRU" which had gone aground on Fredericks Reef, North Queensland, on 3rd November, 1966. After refloating, the submarine was escorted by VENDETTA to Brisbane.

The "Daring" again headed for the Far East on 5th March, 1968, after much time on routine duties in Australian waters. She returned to Australia in October, that year, and in May 1969, went to New Zealand. VENDETTA then sailed back to Sydney for a refit.

She was deployed to Viet Nam on 15th September, 1969, relieving BRISBANE. On 3rd October, that year, VENDETTA joined the US Seventh Fleet in the role for which she was designed — Naval Gunfire Support. HOBART replaced her on 30th March, 1970 and VENDETTA returned to Sydney on 11th April.

Prior to her detachment to the Seventh Fleet, VENDETTA had her torpedo tubes removed and was modified to enable her to work with the American warships.

VENDETTA sailed for her eighth trip to the Far East in September, 1970, and returned to Sydney on 20th April, 1971.

In September, the same year, she paid off at Williamstown Naval Dockyard for half-life refit and modernisation and recommissioned on 2nd May, 1973. During her modernisation, VENDETTA was given an aluminium alloy superstructure and



HMAS VENDETTA at speed. Her "B" turret guns are elevated to maximum. (Photo — S. Given)

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Heeling trials, either 1958 or 1959. (Photo — RAN).

an enclosed bridge. An Air Warning Radar and a new Fire Control System were also fitted.

On 26th February, 1974, she sailed to join the ANZUK forces in the Far East and to escort the Royal Yacht "Britannia" from Darwin to Indonesian waters.

Enroute to Darwin, on 6th March, to take over escort duties, VENDETTA rescued a boatful of survivors from the coastal steamer "WARAWI" that floundered and sank in heavy seas in the Arafura Sea, north of the Arnhem Land coast.

VENDETTA returned from four and a half months "up top" on 12th July, 1974. In October, of the same year, she represented the RAN in the 100th Anniversary of Fiji's cessation from Britain, her main role at this time being a communications ship for the then Prime Minister, Mr Whitlam.

Cyclone Tracy struck Darwin on Christmas Day, 1975, and VENDETTA sailed with other major fleet units, for "Operation Navy Help Darwin". She returned in February, 1975.

VENDETTA then spend some time in Australian waters where she sailed to Western Australia for exercises. While in the "West", she operated around Timor during the civil war disputes.

In mid September, 1975, the destroyer sailed from Darwin, again for the Far East and returned to Sydney in November.

Proceeding to Melbourne, she spent a further ten months in the hands of Williamstown Naval Dockyard, but was back in Sydney by 10th October, 1976.

On 7th January, 1977, she again left for the Far East. After receiving an SOS on 10th May, VENDETTA gave aid to a Vietnamese Refugee Boat lost in the South China Sea off the coast of Malaysia.

VENDETTA arrived back in Australia, and during November, 1977, sailed for New Zealand and AUCKEX '77. On her return, she was awarded the Otranto Shield for efficient gunnery during 1977.

The next six months were spent on the usual duties and on 27th June, 1978, she headed for the Solomon Islands Independence Celebrations, arriving at Honiara on 6th July.

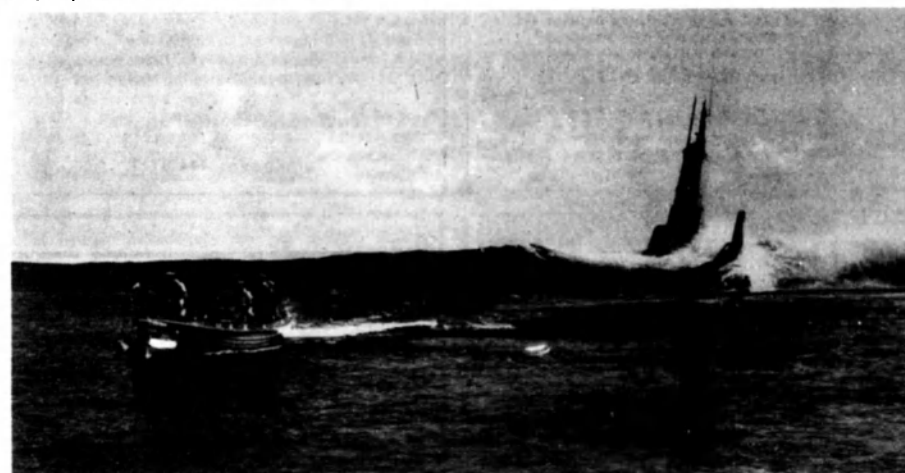
VENDETTA was at Christmas Island in November and then returned to Singapore. She was back in Sydney at the end of 1978.

She sailed once again, this time to Western Australia for the state's 150th Anniversary Celebrations and while in the "West", participated in exercise "Dirk Hartog", with the Royal Netherlands Navy.

VENDETTA, under the command of Commander Mike Freeman, sailed sadly into Sydney Harbour on 28th June, 1979, flying a 366 ft paying-off pennant. During her life she had steamed 671,000 miles both at home and abroad, in peace and at war. With the US Seventh Fleet, VENDETTA had been assigned 189 separate missions. What is to become of her is to be left up to the owners, the Royal Australian Navy. Already her life blood is being fed to her replacement, a sparkling new FFG.

If it means nothing to anybody else, the essence of the VENDETTA's life can be summed up on one sailor's words.

"THEY PAID OFF THE WRONG SHIP."



HMAS VENDETTA's ships boat takes depth readings as they assist the submarine USS TIRU off Fredericks Reef. (Photo — S. Given).

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"OUT OF THE PAST"



PENGUIN at anchor and laid up in Sydney Harbour before her conversion to a stationary depot ship. (Photo — RAN).

Between the years 1913 and 1923, the Royal Australian Navy employed at Garden Island as an alongside depot ship, the thirty-seven year old former composite screw sloop, HMS PENGUIN.

Originally designed by Nathaniel Barnaby and built for the Royal Navy by Napier of Glasgow, PENGUIN was launched on 25th March, 1876. She comprised one of fourteen ships of the Osprey and Doterel Classes and as originally built was classified as a survey ship. The vessel was 170 feet in length, 36 feet across the beam and drew 15 feet 9 inches. With a displacement of 1,130 tons, she was driven by a one shaft horizontal compound expansion engine, manufactured by R. & W. Hawthorn. Maximum speed rated was 9.87 knots at 666 IHP. Bunker capacity measured 150 tons of coal and radius of action with continuous use of engines was judged to be 1,500 miles. To complete the technical features of the ship, PENGUIN mounted two 7 inch MLR and three 64 pdr MLR guns, as well as four machine guns. Her all-up cost reached £52,111 when commissioned for service on 23rd August, 1877.

Much of PENGUIN's early career was spent in the Pacific where she enjoyed four years prior to returning to Plymouth to pay off in late 1881. Along with her large number of sister ships, PENGUIN was re-engined at the Devonport Dockyard and at the same time lost her 64 pdr stern chase gun, which was replaced by two 5 inch BL guns mounted on the poop. After a long period in reserve, she recommissioned in 1886 for service in the East Indies. Her second commission also took the sloop to the East African waters where she was deployed in the suppression of the slave trade on the African Station. During 1888, PENGUIN participated in the blockade of Zanzibar, capturing several dhows in the process.

PENGUIN returned to England in 1889. Her armament was again reduced and now comprised only two 64 pdr ML guns, which were retained to provide an insurance against native attacks. Conversion was completed in December, 1889. The following month, January, 1890, PENGUIN sailed for the Pacific to undertake a series of surveys which were to span a period exceeding sixteen years. The space left vacant with the removal of her two largest guns was now used for the cartography and instrument rooms. At the same time, ship's boats were increased to nine, including two steam cutters.

PENGUIN BY ROSS GILLET

In 1895, PENGUIN sounded to a depth of 4,900 fathoms, (without touching bottom) in the Tonga Trough, exceeding the record, made by HMS CHALLENGER, of 4,575 fathoms in 1875. The ensuing year (February, 1896), she beat her own record when a sounding of 5,155 fathoms was achieved in the Kermadec Deep. During the time in Australian coastal waters, PENGUIN performed exhaustive surveys of the Great Barrier Reef. In January, 1907, she arrived in Port Jackson to pay off and finally ended her sea-going career on 31st March, her place being taken by HMS FANTOME.

The grand sum of £650 was allotted by the Admiralty on 17th February, 1908, to convert PENGUIN to a depot and receiving ship. Dismantling commenced in June, 1908, and was completed before the new year. In her new guise, PENGUIN recommissioned on 1st January, 1909. Admiralty control of Garden Island and PENGUIN was relinquished on 27th June, 1913, when the whole base was sold for £2,000.

PENGUIN remained as the island depot ship until September, 1923, when she was sold to private interests. Her new owners converted the sloop to a floating crane and in this guise she operated on Sydney Harbour until 1960. Finally on 13th December, 1960, her hull was set on fire in Kerosene Bay.



Heavy components of a 50 tonne crane to be employed in the construction of the Royal Australian Navy's new AOR are offloaded from the MV IRON CAPRICORN which carried it from Port Kembla as deck cargo. This ship building crane will supplement the present lifting capacity on Cockatoo Island. (Photo — Cockatoo Island).

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T. S. "GAYUNDAH" A Short History

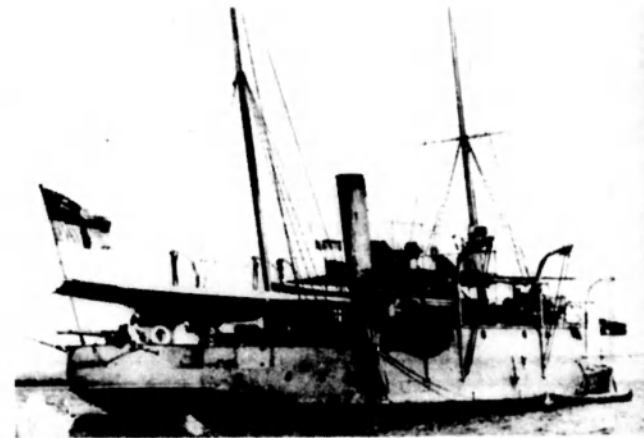
MANY units of the Naval Reserve Cadets have gone through the various changes of status from the time the sea cadets were first raised as part of the Navy League. Others have been formed more recently and have been Naval Reserve Cadets from the start. A short history of the Brisbane Unit, T. S. "GAYUNDAH" is recorded here to give an overall comparison with the cadets in general.

The Navy League had been trying for some time to have a unit formed in Brisbane and when approval was given by the Director of Naval Reserves on the 20th August, 1954, to allow T. S. "GAYUNDAH" to function as a recognised unit, their efforts were rewarded. The unit was given approval to raise a 65 member unit, known as Corvette strength, and on 24th August, 1954, the first parade was held in the old Alice Street Depot of HMAS "MORETON". The first intake comprised 55 boys and in January, 1955 the first Annual Continuous Training session was held at the Boom Defence Depot at Pinkenba.

After the 1955 camp, the unit moved to the old Kangaroo Point Depot, a very historic location. Kangaroo Point had been the home of the Queensland Maritime Defence Force, and the buildings had been completed in 1884. Quite a fitting training area for the cadets. To add a bit more naval flavour, the RAN brought the AMS vessel HMAS "MILDURA" to Brisbane to fill the role of a training ship. Evidently the site was quite acceptable for training and as interest grew, approval was given to bring the approved strength up to 120 members, known as Destroyer strength. The unit enjoyed a good relationship with the RAN, and indeed the Annual Continuous Training was held aboard "MILDURA" where the cadets could enjoy as near as possible ship routine. "MILDURA" was a static training ship, but at least she was a naval vessel and had all the cramped accommodation that gave reality to a training camp.

In 1959, there was a dramatic re-organisation of the RAN establishments in Brisbane. Kangaroo Point being one of the sites that was to be closed down. In September, 1959, the Kangaroo Point Depot was handed over to the Army's Water Transport, and T. S. "GAYUNDAH" shifted ship to a little used naval establishment at New Farm.

New Farm was a very bare home when the cadets arrived, but it was not long before it was in full working order. Some structural work was done by the Commonwealth, but the bulk of the work was done by the Unit itself. The third home still bore the title of T. S.



Flagship and pride of the Queensland Marine Defence Force, GAYUNDAH, (shown here as HMAS). (Photo — S. Given)

"GAYUNDAH", and that is what counted.

In 1961, the unit became the largest in Australia, with a strength of 5 officers, 11 instructors and 160 cadets. In the same year, T. S. "GAYUNDAH" was judged to be the most efficient unit in Queensland and was given the honour to be the first to receive the Sea Cadet Colour for Queensland. Commander N. S. Pixley, CMG, MBE, VRD, RANVR, presented the Colour on behalf of the Queensland Division of the Navy League.

After "MILDURA" was removed from the Navy List, the cadets carried out the Annual Continuous Training at HMAS "MORETON", where they received "on the job" training working with the men of the RAN including such tasks as providing berthing parties for visiting warships.

One memorable occasion was when T. S. "GAYUNDAH" combined with T. S. "PALUMA" to provide a guard of 100 for Lord Casey, the then Governor General, for the opening of the Royal National Exhibition in August, 1966. This was the first time that such a guard had

been mounted by the Sea Cadets in Australia.

The unit has always been an efficient one, and has gained the most efficient unit in Queensland trophy no less than eight times, and in 1961, was awarded the Navy League Trophy for the most efficient unit in Australia.

On the lighter side, the unit has collected museum items which must be considered to be of national importance, the most treasured relic being the bell from HMQS "GAYUNDAH" which was presented to the unit by the Royal Australian Navy in 1955.

In 1973, the Australian Sea Cadet Corps was taken under naval control, with the title of Naval Reserve Cadets. The unit retained the title of T. S. "GAYUNDAH", and it would appear that with the general state of efficiency that the unit has attained, the unit has only just commenced its life. For 25 years, T. S. "GAYUNDAH" has been part of the Brisbane scene, and there is no reason why it will not last for another 25 years at least. Queensland can be very proud of this cadet unit, just as it was proud of the little gunboat that first carried the name.

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BOOK REVIEWS

THE BRITISH DESTROYER

BY T. D. MANNING

Published by Godfrey Cave Associates.
Reviewed by "The Dustman"

I have had *The British Destroyer* for over fifteen years, being lucky enough to have picked up one of the original issues, and I am very pleased to see Manning's wonderful book back in print. I make no bones of the fact that this is one of my favourite books, and must have read my copy over one hundred times already.

Captain Manning's book is by no means the complete work on the subject but is a delightful book all the same. The photographs are excellent, covering the full range of ships that carry the title of destroyer. A brief history is given of each class giving the year of launch and the year of disposal, and many other interesting features of interest. Of course not all ships are shown in individual photographs, but each class is well represented just the same.

The American four stack destroyers that joined the Royal Navy in 1940 are covered, and in this instance, goes a bit further than Edgar March's great volume, but this is a very much smaller book than March's so naturally does not carry as much information.

In the case of Australian ships that were obtained from the Royal Navy, Manning seems to have done his homework better than a lot of other writers of naval subjects. For once we find a British writer who knows that "NEPAL" was first commissioned into the RAN. Most other writers make a point of saying that "NEPAL" was the only N to be commissioned in the Royal Navy. By an odd chance, Manning gets mixed up with "NOBLE" and "NERISSA". "NOBLE" was commissioned into the Dutch Navy and "NERISSA" was commissioned by the Polish Navy. "NERISSA" came back to the RN at the end of WW2 and was renamed "NOBLE". Manning gets these two ships a bit mixed up and so only mentions seven instead of eight N class boats. He also misses "QUIBERON" and "QUICKMATCH" being in the RAN, being commissioned as HMA Ships in 1942. These are minor points only. The book itself has become a regular "chestnut" as far as I am concerned, and

in this case I am quite prepared to accept a few minor errors.

I love this book, and I am sure you will too. (The facsimile edition is now available in many bookshops.)

MODERN WARSHIP DESIGN & DEVELOPMENT

BY NORMAN FRIEDMAN

Published by: Conway Maritime Press
Price: £9.50

Reviewed by: ROSS GILLET

Very little information concerning modern warship design and development has been published in recent years. However, with the release of Norman Friedman's latest work, this important sphere of naval thinking has been

presented in most readable and interesting format. A highly original work, the author outlines the dramatic changes in warship design since 1945, together with shifts in strategy and tactics that have accompanied them. Much of the work is given over to the effects of new technology on combat ships and throughout the book, Norman Friedman continues the trend established in his earlier publication "Battleship — Design & Development".

"Modern Warship — Design & Development" spans 192 pages and measures 10" x 8". Photographs and line drawings number 167 and 65 respectively. The book concentrates primarily on the developments affecting the United States Navy and throughout comparison is made to the other allied fleets as well as those of



This is the way torpedoed ships will probably sink in the future. The American light cruiser WILKES-BARNE was destroyed in tests by an under-the-keel explosion which broke the ship's back. This photograph was taken from "Modern Warship — Design & Development". (Photo — Conway Marine Press).

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The possible shape of the future warships, the US prototype SWAT (Small Waterplane Twin Hull), which operates on twin hulls like a catamaran, but at speed the ship rises out of the water like a hydrofoil. From "Modern Warship — Design & Development". (Photo — Conway Maritime Press).

the Soviet. The statement is made that "Soviet warships do not look like western ones; they look a great deal tougher and they seem to carry many more weapons per ton or per square foot of deck space". Bearing in mind the exaggerated pre-war respect for Japanese men-of-war, the book asks whether this attitude is justified and if not why it persists.

These questions and many others are well answered by "Modern Warships — Design & Development". The book provides the reader with a well balanced appreciation of the capabilities and qualities of today's warships through its very understandable text and well captioned photographs. In the section dealing with anti-submarine weapons, the use of helicopters at sea, the American ASROC, French Malafox and naturally Australian Ikara are described. Scale drawings also depict the relative size of each anti-submarine weapon, with Ikara being the smallest.

In these days when most naval publications tend to concentrate on the ships only, it is heartening to see a book appear which goes beyond the weapon platform itself and describes the qualities and capabilities of today's modern

warship. This book will undoubtedly prove an asset to "Navy" readers' libraries.

THE SHIPS & AIRCRAFT OF THE US FLEET — by Norman Polmar
Published by: Brassey's Publishers Ltd
Reviewed by: "Gayundah"

This, the latest edition of "The Ships & Aircraft of the US Fleet", provides a comprehensive guide to the present status of the United States Navy. Proposed ships, ships in commission and in reserve are all presented in typical "Jane's" fashion by the author, Norman Polmar, who was in fact editor of the United States section of "Jane's Fighting Ships" between 1967 and 1976.

The book is divided into 26 chapters covering each warship type, eg submarines, aircraft carriers, destroyers, mine warfare ships and support vessels, etc. Each particular class or ship is illustrated by a selection of black and white photographs, although some of these date as far back as the early seventies, which seems odd for a publication released in 1979. At the

beginning of most chapters, a brief discussion precedes the actual ships and a table is included listing each class, providing the reader with: class/ship, number active, number building, number in reserve, period commissioned, and types of armament carried, ie, AA W, ASW, helicopters and guns. The individual class or ship descriptions contain the usual technical data, as well as special notes on classification, cost design armament and conversion (if applicable).

Full construction dates comprise their own table with builder, fiscal year approved and present status (Pacific Active or Pacific Reserve) complementing this superb presentation.

The problem of rising costs affecting most, if not all, US construction programmes is borne out in "The Ships & Aircraft of the US Fleet". The proposed modernisations to be carried out on all the Charles F. Adams class has now been reduced to only a few of the ships originally intended, whilst the five ship LSD 41 Class of amphibious warship vessels which gains mention in the book has since publication been deleted entirely.

"The Ships & Aircraft of the US Fleet" measures approximately 9 1/4" x 10" and spans 350 pages from front to back. The quality of paper used is not as high as some British or local publications but most photographs seem to reproduce well enough. An attractive dust jacket featuring a "bow on" view of the USS ENTERPRISE protects the covers.

As well as every size and type of craft in the United States Navy, the aircraft serving the fleet, ashore and afloat are described with the usual technical data and general discussion. Naval weaponry and sonars are also devoted their own chapter, as are the Coast Guard, National Oceanic & Atmospheric Administration and addenda

"The Ships & Aircraft of the US Fleet" should appeal to most naval types whose interest is the USN. At approximately \$25.00, the book represents only a small outlay for such a detailed description of the present day American naval forces and as such is strongly recommended.

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Light Forces:	4 Lake Class	PAEA KUPARU KOURA HAKU MANGA MONOWAI TAKAPU TARAPUNGA (TAKAPU) (TARAPUNGA) TUJ MANAWANUI ARATAKI
Survey Vessels:	1 ex mercantile 2 HDML Type 2 New Construction	
Miscellaneous:	1 Research vessel 1 Diving Tender 1 Dockyard Tug	

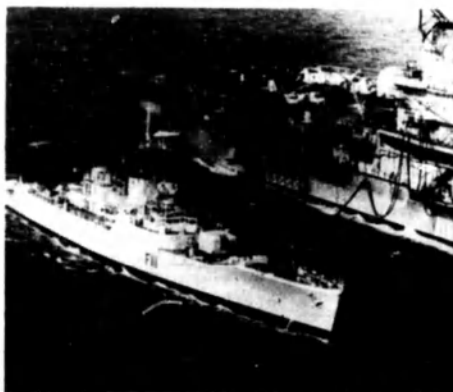
Personnel

January, 1979: 2,825 officers and ratings (RNZN)

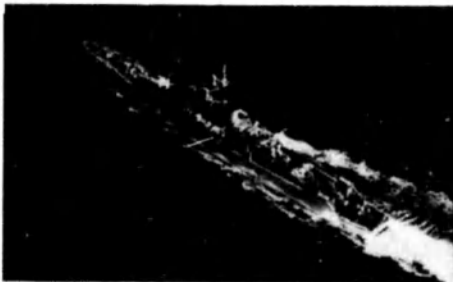
January, 1979: 347 (RNZNVR).



HMNZS WAIKATO, shown here with her Wasp helicopter airborne, has been in commission since 1966. She retains her anti-submarine mortar in the well aft, but mounts no torpedoes. (Photo — Royal New Zealand Navy).



The *F111* of the high seas, HMNZS OTAGO, was completed in 1961. In recent years she has been converted to a fishery research vessel with the removal of her two limbo motors. The aircraft carrier USS BENNINGTON is in the process of replenishing the frigate's bunkers. (Photo — Royal New Zealand Navy).



Although no longer in service with the RNZN, HMNZS BLACKPOOL was one of four type 12 frigates in use in the late sixties and early seventies. She was replaced in the fleet by CANTERBURY and returned to Great Britain where she was laid up and eventually deleted in 1976. (Photo — Royal New Zealand Navy.)



HMNZS MONOWAI arriving at Auckland, from the United Kingdom, 2nd February, 1978, after her conversion to the navy's survey ship. In the centre left of the photograph is HMNZS OTAGO and behind her the former RAN frigate LACHLAN, laid up. Note the telescopic hanger fitted to HMNZS MONOWAI. (Photo — Royal New Zealand Navy).



Originally constructed as the CHARLES H. DAVIS for the United States Navy, TUJ was transferred to New Zealand on loan in September, 1970. This period was later extended to 1975, but it is now intended that she will remain in the RNZN until the early 1980's. TUJ is crewed by 24 and carries 15 scientists. (Photo — J. Mortimer).



The second of the Brooke Marine patrol craft to complete sea trials was TAUPO, shown here being lifted aboard the STARMAN for delivery to Auckland. The vessel is crewed by 3 officers and 18 men and can achieve 25 knots maximum. (Photo — Royal New Zealand Navy).



One of four new patrol craft, HMNZS ROTUITI was built by Brooke Marine and completed in 1975. She carries one twin 50 calibre machine gun forward of the bridge, and one combination 81 mm mortar 50 calibre machine gun aft, plus numerous small arms. The craft have not proved a great success operationally and with limited funds available to the Navy, will need to see out many more years of service. (Photo — Royal New Zealand Navy).

NAVY LEAGUE DIVISIONAL NEWS WESTERN AUSTRALIA

One of the many visits made in conjunction with the state's 150th Anniversary Celebrations was the re-union of the American Submarine Veterans. Several since WWII had settled in Western Australia with families, and on this occasion some thirty others arrived from the United States.

In 1968, a memorial was mounted to commemorate the fifty-two US Submarines operating out of Western Australia; a twenty-one inch torpedo, near the Fremantle War Memorial. On that occasion many Veterans from the US and Australia attended the opening ceremony.

A long-serving council member of the Western Australian Division is Arthur Bancroft, a survivor of the sinking of HMAS PERTH on 1st March, 1942, in which action the USS HOUSTON was also sunk. He was being transported as a POW in a Japanese ship which was then sunk by the US Submarine QUEENFISH. Picked up by the submarine he spent seven days on board, then to be landed at base and eventually returned to Australia.

Arthur kept in touch with the survivors of the USS HOUSTON and in 1976, was a special guest in the US for the Bicentenary Celebrations. Arthur was made an Honorary Member of the US Submarine Veterans and it was in keeping for his busy part of this re-union that the Western Australian Division was able to assist and support him for a most enjoyable get-together with the Veterans and their families at our Navy League Headquarters.

The Girls Australian Sea Cadet Corps of the T. S. SWAN also played their part by forming a Guard of Honour at a very impressive wreath laying ceremony at the US Submarine Memorial. The visit created many friendships locally and in particular with the Navy League.



HMNZS CANTERBURY was the last major combat unit to be delivered to the Royal New Zealand Navy. She carries no limbo mortar but instead has been fitted with two triple torpedo tube mountings. As well, she mounts the customary twin 4.5 inch mount forward, Wasp helicopter and Seacat atop the hangar. Two single 20 mm guns complement the armament. (Photo — J. Mortimer).



HMNZS TARANAKI, was originally laid down in 1958 and completed for service on 28th March, 1961. (Photo — J. Mortimer).

Join the NAVAL RESERVE CADETS

If you are between the ages of 13 and 18 years:

The Naval Reserve Cadets provide for the spiritual, social and educational welfare of boys and to develop in them character, a sense of patriotism, self-reliance, citizenship and discipline.

Uniforms are supplied free of charge.

Cadets are required to produce a certificate from their doctor to confirm they are capable of carrying out the normal duties and activities of the Cadet Corps. If injured while on duty, Cadets are considered for payment of compensation.

Parades are held on Saturday afternoon and certain Units hold an additional parade one night a week.

The interesting syllabus of training covers a wide sphere and includes:

seamanship, handling of boats under sail and power, navigation, physical training, rifle shooting, signalling, splicing of wire and ropes, general sporting activities and other varied subjects.

Instructional camps are arranged for Cadets and they are also given opportunities whenever possible to undertake training at sea in ships of the Royal Australian Navy.

Cadets, if considering a sea career, are given every assistance to join the Royal Australian Navy, the Mercantile Marine or the Royal Australian Naval Reserve, but there is no compulsion to join these Services.

For further information, please contact the Senior Officer in your State, using the addresses provided below.

SENIOR OFFICERS NAVAL RESERVE CADETS:

NEW SOUTH WALES: StaH OHico Cadets, HMAS Watson, Watsons Bay, NSW, 2030.

QUEENSLAND: StaH OHico Cadets, HMAS Morten, Box 14167, GPO Brisbane, 4001.

WESTERN AUSTRALIA: StaH OHico Cadets, HMAS Louwin, PO Box 58, Fremantle, 6160.

SOUTH AUSTRALIA: StaH OHico Cadets, HMAS Encounter, PO Box 117, Port Adelaide, 5015.

VICTORIA: StaH OHico Cadets, HMAS Lonsdale, Rouse Street, Port Melbourne, 3207.

TASMANIA: StaH OHico Cadets, HMAS Huan, Hobart, 7000.

AUSTRALIAN CAPITAL TERRITORY: StaH OHico Cadets, HMAS Watson, Watsons Bay, NSW, 2030.



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AN INVITATION

The people who read The Navy magazine will already have an interest in the sea or some aspect of maritime affairs; some will be interested in the Royal Australian Navy and naval events in general, others in sea cadet training and activities. A minority of readers will be members of the Navy League of Australia, which is very much involved with the maritime world.

To the majority of The Navy's readers — the non-members — we in the Navy League extend an invitation to join us in actively promoting the wellbeing of our country. You will be joining a sizeable group of citizens, a mix of young and not-so-young people, of highly qualified professionals and imaginative "amateurs", all keen to contribute in one way or another to the maritime strength of Australia — essential to the survival of our country in these turbulent times.

Don't just read about the activities of the Navy League and be a spectator of events — join us and contribute your knowledge, experience or simply enthusiasm, and be a "player" yourself.

THE NAVY LEAGUE OF AUSTRALIA

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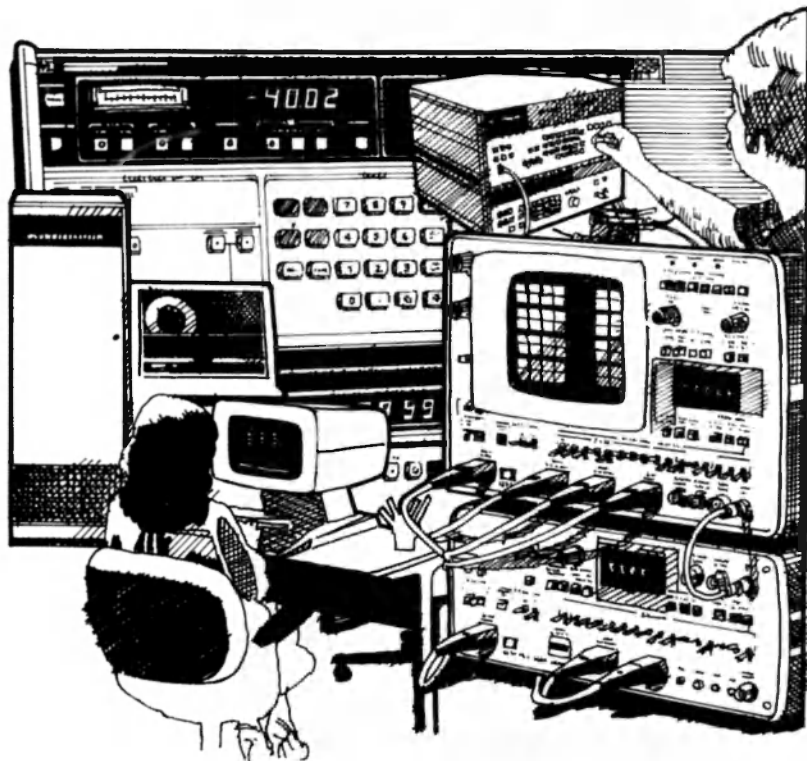
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