# THE NAVY

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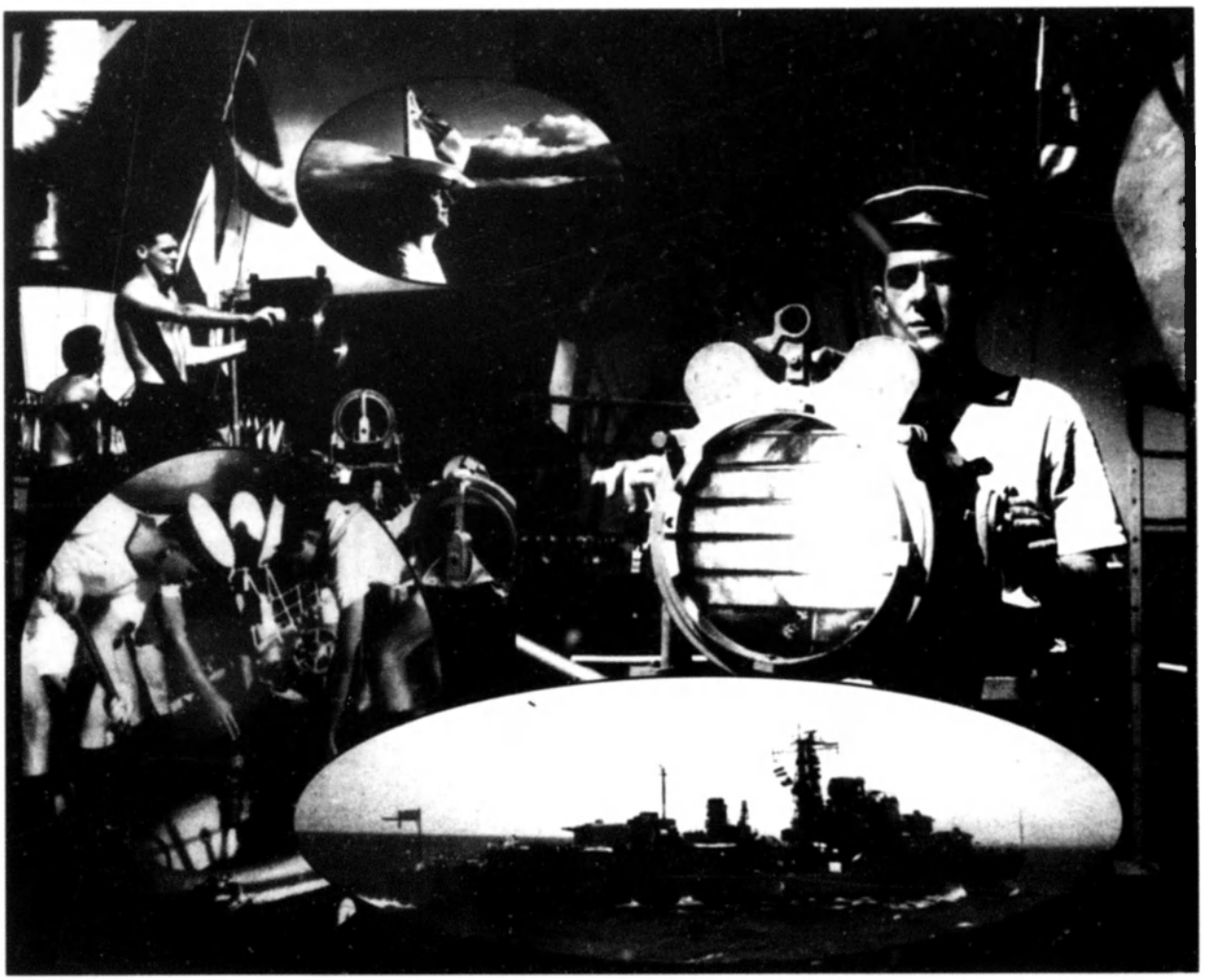

## *In this Issue*



## *Regular Features*



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# viewpoint

## FROM THE PRESIDENT

One does not like to be repetitious, but sometimes it is necessary. The current state of the Royal Australian Navy remains a matter of concern. This concern arises from the relative decline on the strength of the RAN in relation to other navies in the Indian and Pacific Oceans.

Over the last 10 to 15 years most navies in East, South East and South Asia have undergone massive expansion. A number of countries in the region have been increasing their maritime power as their economies have grown.

The RAN is almost alone in having reduced in numbers. Notwithstanding a building programme over the last several years, which has included frigates, submarines and minehunters, the Royal Australian Navy now has just 11 major surface combatants.

These 11 surface combatants include the guided missile destroyers Perth, Hobart and Brisbane. They are still the most powerful units in the fleet, but they are some 30 years old. No replacements have been ordered.

The 11 also includes HMAS Anzac, the first of the Anzac class frigates. All agree that this class are splendid, well built ships. But they are, or will be, lacking in both defensive and offensive power. Much of their planned armament has not been fitted. No helicopters have yet been ordered for these ships.

In due course the RAN will no doubt increase to 14 major surface combatants. After the destroyers go there will be six FFGs and eight Anzacs. But without further armament and helicopters it will be hard to describe the Anzacs as major surface combatants.

The need for the upgrade to the Anzacs seems almost self evident, but will there be the funding? In a previous Viewpoint I congratulated the government on keeping to its election promise to maintain Defence expenditure at $10 billion. But it was also noted that this represented just 1.9% of Gross Domestic Product, the lowest percentage since before the Second World War. I have been told that as a percentage of Federal Government outlays it is actually at its lowest since 1935-36.

If in future budgets the Government holds to its $10 billion figure then, even adjusted for inflation, the percentage of Gross Domestic Product applied to Defence will sink below 1.9%. I suppose there is no magic in any particular percentage. But there must be a basic minimum, the insurance premium, that a nation is prepared to spend on its security.

It ought to be remembered that it is not just Navy that has legitimate spending requirements. For example, the Air Force has recently announced the purchase of new trainers. It is still seeking airborne early warning aircraft. New or additional transports have been mentioned.

Army too has a shopping list. And there is the ongoing expenditure on Defence infrastructure, in particular as the forces move north and west.

The desire of the Government to deal with the budget deficit is acknowledged. It would be unrealistic not to recognise the many other demands on the public purse. No doubt the Defence Minister had to work hard to keep the funds he had been promised. But there is a real need to maintain a steady level of expenditure in Defence. A Defence budget set at 2% of Gross Domestic Product could achieve worthwhile results.

It must be doubted if a Defence budget at present at 1.9% of Gross Domestic Product, but seemingly set to sink lower, will be enough to meet Australia's needs.

Esdaile Lewis


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**OUR FRONT COVER:**
***Four early colour photographs taken aboard the Daring class destroyer HMAS VOYAGER and a starboard quarter view of the ship off the NSW coast. The photographs are believed to date from the early 1960s.***




## THE NAVY

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## FROM OUR READERS

Dear Sir,

In the October-December 1996 issue of The Navy, you published a photo of the launch of MWL 256 with the remark, 'but where'. For readers' information, this vessel was built at the NSW State Dockyard, Newcastle as hull No 33. The vessel was launched on 10 May 1946 and was the last of four sister ships built for the RAN. A fifth vessel was to be built as hull No 34 but construction was cancelled.

While no ships have been built on this site since 1983, the building slip used is still in existence, although it is considerably overgrown. The background scene of the photo features cargo sheds along Lee Wharf, most of these sheds have recently been demolished, presumably in the name of progress or development.

Yours sincerely,
Robert Young
Floraville 2280

* * *

Dear Sir,

I received Vol 58, No 4 *The Navy* in the mail today, and have noted that in the next edition there will be a detailed historical description of the early Australian colonial gunboats of the last 19th century.

You may be interested to know that the two breach-loading, eight inch Armstrong guns from Gayundah and Paluma, one from each ship, are at the Queensland Maritime Museum, South Brisbane.

Very best wishes
Alan Ryman
Wavell Heights 4012

* * *

Dear Sir

I refer to the enquiry from D Ley of Potts Point in the October-December issue of the magazine, regarding the photographs on page 2.

The photo of the crew of TELEMACHUS would have been taken at the wharf at HMAS PENGUIN where the boat was based during her time with the RAN. The terrain in the background is Dobroyd Point. I venture to say that the picture would have been taken immediately after Divisions, as submariners of that period did not usually look so immaculate. The boat was in Australia from/during the early fifties.

I consider that the middle photo is of BARCOO when she was in the survey role. The superstructure tallies with other photos of the period which shows an accommodation ladder stowed against the screen adjacent to where it is shown in the photograph. With her awnings rigged, it would be safe to say that she was in tropical waters at the time. The lack of timber sheathing on the upper deck rules WARREGO out. The jacket worn by the sailor on the upper platform of the ladder appears to be 'non service', but the old surveyors did not take life all that seriously in dress matters. (Look at the other bloke!)

The bottom photo was taken at the State Dockyard, Newcast on the 11th of March 1946 when MWL 256 was launched.

I trust that this info will be of assistance.
Vince Fazio
Petersham 2049

* * *

Dear Sir

While I realise that Naval ratings were drafted onboard JEPARIT and BOONAROO to replace the union-banned civilian deck and engine-room crews, I have always been under the impression that Merchant Navy deck and engineer officers had remained with the ships throughout the Vietnam hostilities.

I should be interested to know if this were, indeed, the case?
Thanking you.
Yours sincerely
Herb Bolles
Kurrajong Heights 2758

* * *





# Australian Colonial Gunboats

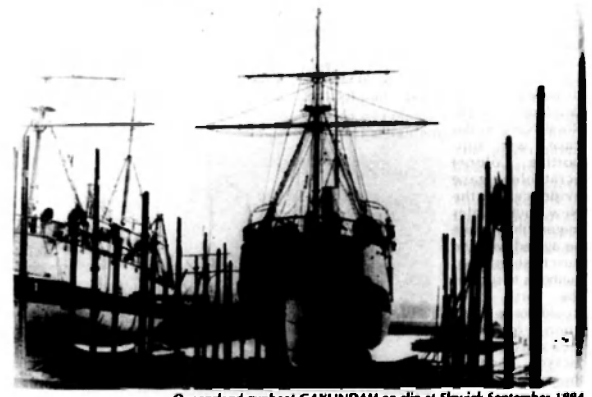
**By Colin Jones**

In 1882 the government of the British colony of Victoria in Australia decided to invest in new gunboats and torpedo boats for its navy, a decision that was the catalyst for the creation of naval forces in other colonies. The vessels were to be of unusual design, and unlike contemporary Royal Naval vessels. The nature of the decision-making process and the way that it affected the type of warships bought is considered here.

Even though the Royal Navy based a squadron in Australia, it comprised only a handful of sloops and corvettes, and Victoria had its own navy. Designed specifically for the defence of Melbourne and Port Phillip Bay, it was a small and largely part-time force. Its principal ship, the monitor *Cerberus*, was supported by a group of old vessels, the razee frigate *Nelson*, the sloop *Victoria* and the gunboat *Pharos*. Captain Thomas Mandeville, a half-pay Royal Navy officer, had been in charge since 1877. From October that year he had been advocating the purchase of a minelaying steamer and a Thornycroft torpedo boat. A minelayer was built locally, but the torpedo boat, although provisionally ordered at a cost of £2,750 late in 1878, was cancelled by the Colonial Office, apparently on the impression that the Victorian Navy lacked the sophistication for such a vessel, a charge which Mandeville angrily refuted.

Then in 1880 he was told by the government to prepare for a budget cut of 35 per cent. Apart from two torpedo boats in Sydney the Victorian Navy was the only local force afloat in the colonies.

In their deliberations on defence, the Australian politicians had the benefit of an expert plan. Major General Sir William Jervois and Lieutenant Colonel Peter Scratchley of the Royal Engineers had arrived in Melbourne in June 1877 to lay down a scheme for the principal Australian colonies. Jervois was a considerable authority in the area, and the opportunity was taken to use his talents when he took the position of Governor of South Australia. The plan, which became the basis for most subsequent development, was predicated on Royal Naval control of the oceans, but foresaw the need for coastal fortifications and local naval defences at the principal ports. It included a small ironclad for both New South Wales and South Australia at a cost of £150,000 each.



*Queensland gunboat GAYUNDAH on slip at Elswick September 1884. Photo – Northumberland County Council*

The plan, brought down finally on 29 November 1879, was widely known before this, but not seriously acted upon until the visit of a Russian squadron to several of the southern capitals in the summer of 1881-82. The corvette *Afrika*, and the sloops *Plastun* and *Vyestnik* were the start of a permanent Russian naval squadron in the Pacific. Based at Nagasaki, their presence was visible proof of the ability of the probable enemy. For Victoria, Jervois had advocated the replacement of the *Nelson* and the *Victoria* by a 'Swift Gun-Vessel',[1] and some by this time must have regretted that nothing had been done.

There was also in the background a general realisation that the Volunteer system of defence was not necessarily adequate in modern times.

An intercolonial conference had been held at Sydney in January 1881, and defence had been on the agenda. There were differing opinions on whether or not the colonies should pay a subsidy to strengthen the Royal Navy squadron on the Station, though all agreed that strengthening was needed, particularly the additional of an armoured flagship. Only South Australia supported the subsidy idea, and the Secretary of State for the Colonies was moved subsequently to deplore the majority decision. South Australia opinion soon swung away from subsidy, on the basis that the Admiralty would be most unlikely to release a vessel just for its own local defence, and might take it away very easily.

There was also in the Colonies the feeling that paying a subsidy towards British armed forces could lead, for instance, to *defacto* Australian support for an irrelevant war against natives somewhere in Africa.

During the first half of 1881 New South Wales held a major inquiry into its defences. Commodore John Wilson, commanding the Australian Station of the Royal Navy, stated that he considered it would in fact be useful for proper warships to be retained by all colonies for the defence of their ports, along with mercantile auxiliaries for 'defence of trade and exposed towns on the sea coast'. He was against ironclads, on the basis that the only enemy likely to steam to distant Australia to threaten the colonies would be a light cruiser, and 'It is necessary to use a Nasmyth's hammer to break a walnut'.[2] Gunboats, he thought, would be appropriate, and he suggested Staunch class, rather than the 'Alpha-Beta' type built for China, on the grounds of their smaller cost, and he recommended their construction in England rather than in Australia, because

of both quality and price.' The gunboat, built according to the Rendel system, would have one to 18 ton 10 inch gun and a speed of 8 knots, and in addition, merchant ships should be selected for arming with four or six 64 pdrs, depending on the size of the ship, along with a 7 inch chase gun. There should also be 'well-designed torpedo boats of great speed', fitted 'for the Whitehead if possible'.

Wilson was adamant that the key officers of all colonial ships should be Royal Navy personnel. He was also hoping for the creation of a nucleus of trained men locally who could be called upon by the regular navy in time of war.

The Admiralty, looking at a not dissimilar strategic background for the development of the Royal Navy in this case, was supportive. Colonel Scratchley gave evidence to the New South Wales inquiry that, while he agreed with the purchase of two gunboats to support the forts, they 'could not be relied upon for service outside Port Jackson',[4] and for this reason, Jervois had also been against them. On the other hand, there was the possibility of 'a powerful steamer' being used to carry small torpedo boats, thus extending the reach of the defence forces against an enemy on blockade offshore. Scratchley spoke in his role as Commissioner of Defences for the colonies. New South Wales, meanwhile, was in the process of acquiring the corvette *Wolverene* from the Royal Navy as a gift. The Premier, Henry Parkes, had first raised the matter of obtaining the ship on 22 July 1881, and she had formally passed to New South Wales at the end of her commission, on 16 January 1882. Her role was to be analogous to that of the *Nelson* in Victoria.

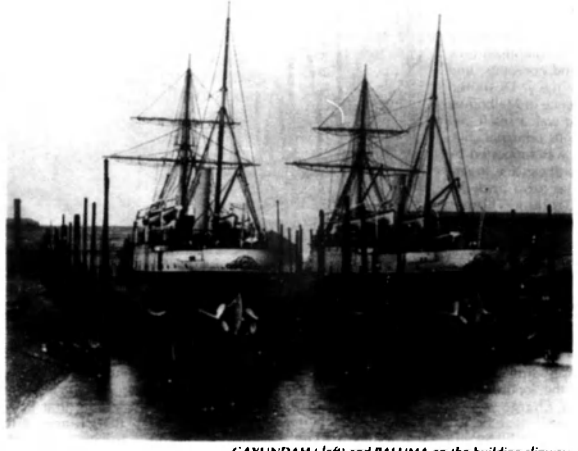
Commodore Wilson was quite damning about his former flagship. She was, he said, fit only to be a depot ship for mining equipment, and for torpedo boats, of which New South Wales at the time had two. She was 'utterly useless for defence purposes, and if she went home she would have been broken up, so that she has been given to the Government of New South Wales to serve as a storeship merely'.[5] In this connection, New South Wales about this time bought a small minelaying steamer, though the Wolverene was maintained as a drill ship for the Naval Brigade. South Australian politicians, considering the need for a cruiser, were wary of being left with 'an old tube should they ask for the supply of a vessel by the Royal Navy.

The *Cerberus* had been modernised in 1879 with a military mast, Nordenfelt guns, searchlights and steam steering gear. In 1881, the prospect of her being laid up for a considerable time for boiler replacement and other work at very great cost caused a request to be sent to the Victorian Agent General in London to contact Sir W.G. Armstrong & Co. for the immediate supply of gunboats. Armstrongs indicated that they had none on hand in view of the demand from other countries, and new vessels would take eight to ten months to build. They forwarded a catalogue of the types available. The catalogue contained a selection of gunboats and cruisers (see Appendix). The cheapest option was the 'alpha' design, a 9 knot boat carrying a 10 inch gun, priced at £25,270. Vessels of this type had been built for China in 1876. Another option was the 'Iota', built for China between 1879 and 1880. This was a 10 knot boat carrying an 11 inch gun, for £37,140. If you continued through to the most expensive options, you came to the design of the Chinese cruiser Chao Yung at £119,700, and the soon-to-be famous Esmeralda at £173,000.[6] The catalogue was accompanied by coloured drawings, and photographs.

Armstrongs felt that little needed to be said about the Rendel gunboats, as the type was well known, but the other types warranted more explanation. They were, in fact, a development aimed at the Australian requirements, that produced a much more versatile craft.

*Where it is not probable that the boats would be called upon to contend against heavily armoured ships, the boats of class II will be found extremely useful. Their 8-inch and 6-inch guns have great range and power.*

It was noted that having one big gun forward and another aft would aid a vessel designed to operate 'amongst island harbours and creeks' to 'keep up an effective fire either when chasing or retreating.' They had a handy size, a fair speed, and made a small target, their guns were protected from rifle fire by steel shields, and the guns were light enough to be landed in time of peace, when the vessel might be used for police or revenue services.



*GAYUNDAH (left) and PALUMA on the building slipway.*
*Photo - Northumberland County Council*

Gunboats had been well discussed in Victoria by this time, and there were those who, seeing the Cerberus as virtually useless, advocated light draught, high speed gunboats in her place. Captain Mandeville reported on the options on 3 March 1882, and Colonel Scratchley supported his recommendations.

Scratchley observed that work had not commenced on the vital fort in the South Channel, covering the main shipping channel inside Port Phillip Heads, and a large loan would probably have to be raised for its construction. In the circumstances, he considered it unwise that the Cerberus be left on her own, and recommended on 20 March 1882 that she be supported by gunboats and torpedo boats. He also stated that Wilson was out of date on his information, and that modern designs were far to be preferred to the obsolete Staunch.

Provided these gun-boats and torpedo boats are of the latest designs, of patterns that have been proved to be successful, and the gun-boats are armed with the most recent type of breech-loading guns,





the proposal should certainly be adopted.[7]

It was noted that the cheapest gunboat (Alpha) had a very low speed, and as it was the intention to have a vessel that could keep the sea sufficiently to protect the ports of the Victorian Western District, a larger vessel (Epsilon) was specified. It was hoped that the two could arrive by July 1883.

In the event, the South Channel Fort proceeded, on a reduced plan that would not require a loan, in the knowledge that the gunboats would be able to act in support.

There intervened the scare story broken by the *Melbourne Age* on 23 March 1882 about the intentions of the Russian visitors in blockading Bass Strait. True or not, it chimed in with some people's ex-pectations. They believed that during the war scare of 1878 the Russians had purchased vessels abroad specifically to operate in Australian waters. Indeed, the *Afrika* was one of these very vessels. Lightly built, she had three 6 in guns and a speed of 13 knots.

Considering the conditions under which they were expected to operate, the Victorian choice from the Armstrong catlogue went to a £39,520 model, capable of 12 knots to give her adequate seakeeping qualities, and a smaller ship at £25,270 capable of knots. Both would carry a 10 inch gun.

The voting of the budget to include the purchase of these vessels took place on 30 May 1882. This was the critical phase, as whatever expert opinion might propose, the people's representatives could, in detail, dispose. There were some who were extremely critical of the various faults of the *Cerberus* and who suggested that naval officers' opinions were not worth having.

*What could be expected when control was placed in the hands of useless tools - of some Tom Noddy whose only recommendation was that he wore the Imperial uniform.*[8]

Some of the politicians worried about the low speed of the smaller gunboat. Experience of the crack intercolonial steamer *Rotomahana* indicated that at 15 1/2 knots, an auxiliary cruiser would be able to run the gunboats down, especially with the full tidal flood at The Rip running at 8 knots. In response, it was pointed out that the shallow draft of the gunboats would assist them in luring an enemy ship among shoals and shallows that might prove fatal.

So the budget was voted, with the ship purchases intact.

Meanwhile, Colonel Scratchley submitted a memorandum at the request of the Queensland government on 24 April 1882, with detailed recommendations based on the Jervois plan of 1878, and with the further recommendation of Commodore Wilson, who had departed from the Station in January 1882, that all of the colonies act in concert.

*HMCS Protector, June 1884.*
*Photo - Northumberland County Council*

The original idea was that Queensland would buy a swift steamer for use on the coast. It would mount two 64 pdr guns training to fire from four gunports under a deck, and cost £25,000. For the defence of the Brisbane River and Moreton Bay there would be a light draught gunboat with one 80 pdr, at a cost of £10,000, and a £3,000 torpedo boat.

In the light of the options on the Armstrong catalogue, changes were made, and by April 1882 the exact specification and cost of the two Queensland gunboats was given. Although slow, they were much larger than the vessels sketched in Jervois' plan. Scratchley stated:

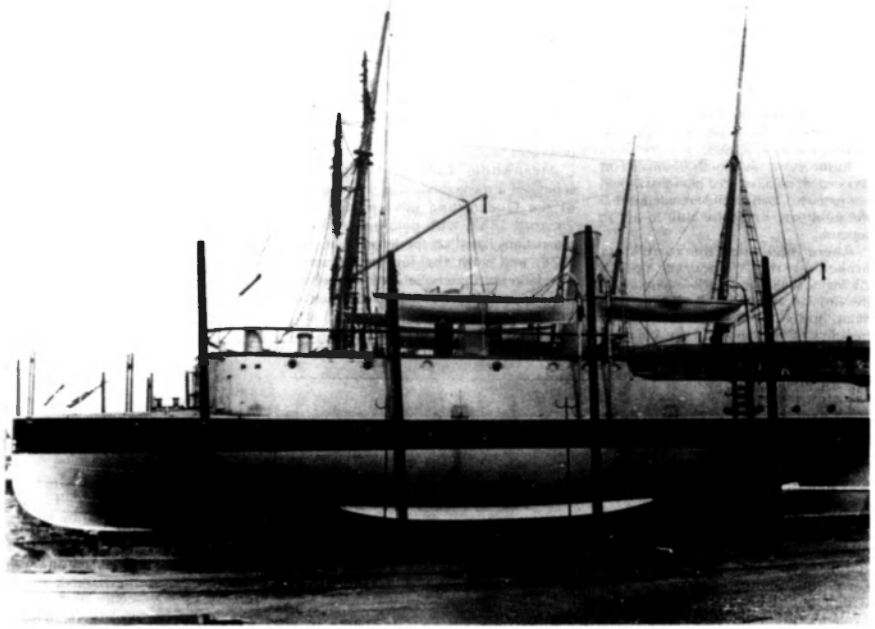
*As to the armament, the Queensland Government will be well satisfied. In the 8-inch and 6-inch guns you have two very powerful guns, and the advantage that you can fight one or the other at a time. They were able to cope with any armour you are likely to have to encounter, for some time to come, in the Southern seas.*[9]

The Victorian government telegraphed the Agent General on 28 June 1882 to order two gunboats and three torpedo boats. Perhaps in light of the discussions with Queensland, the smaller gunboat had by now been changed to a much more satisfactory model, the type recommended for the northern colony, mounting one 8 inch and one 6 inch gun, and costing £27,500. The 8 inch gun was sighted to a range of 7,800 yds, and had a penetration of 12 inch of armour plate at 1,000 yds.

The South Australian order came after firm recommendations from Jervois himself, as Colonial Governor, and a vote in the Parliament on 13 July 1882. The government had stated its intention to place an order, with House approval, on 5 July 1882. There was no real opposition.

The situation was well articulated by Jervois, who stated in his speech at the opening of Parliament I June 1882 that 'In accordance with a wish expressed by my Ministers I have prepared a memorandum on the subject, referring more especially to the desirability of procuring an armed vessel for the defence of the coast.'[10] His argument had been presented to the government on 14 April 1882. He pointed out that he thought an ironclad was the best option, and noted the collapse of negotiations to buy one from Argentina in 1878.[11] Observing that the options were constrained by the cost and the necessity to have a vessel that could be used for general government service, he stated that his second preference went to a pair of fast unarmoured vessels.

*I am informed that the Government of Victoria has ordered two gunboats to aid in the defence of Port Phillip, of a class advocated and constructed by Sir William Armstrong for the Chinese; but the conditions under which those vessels would be required to act are very different from those under which vessels of war in the service of South Australia would be employed. At Port Phillip the gunboats would act in sheltered and*



*GAYUNDAH, August 1884. Her sistership is behind.*
*Photo – Northumberland County Council*

*shallow water, whereas here vessels employed in the defence of the colony must be capable of action in the comparatively rough waters near the entrance to the Gulfs, where gunboats would not be sufficiently steady for efficient service. It should, however, be observed that the Government of Victoria already possesses naval defences (the Cerberus, a two-turreted ironclad, and the Nelson, frigate) to which the gunboats recently ordered are only accessory.*

*I consider that a larger class of vessel than is implied by the term 'gunboat' is required for the service of South Australia. After due consideration of proposals which were submitted to me about four years ago by some of the best ship-building firms in England, the type of vessel which I would recommend is one of light draught, capable of steaming from fourteen to fifteen knots per hour, and carrying amidships one breech-loading 7-ton gun. She should also carry four breech-loading 40 pounders, and two 'machine' guns, either of the Nordenfelt pattern, or such other pattern as is now adopted by the Admiralty. Such a vessel would be admirably adapted for defence against hostile cruisers, at the same time that she would be exceedingly well-suited for local Government purposes in peace time.*[1]

Jervois considered that for torpedo work, a steam launch could be carried aboard the new ship. He had suggested that the Agent General should contact Armstrongs directly to obtain drawings and ascertain prices. The Agent General was quoted £64,150 for a ship delivered at the Tyne, or £72,150 delivered at Port Adelaide. Torpedo equipment would be in addition, at a figure of £1,935.[1] Ammunition to be supplied was 110 rounds per gun.

The design Jervois had in mind was a faster version of contemporary rigged gunvessels. One such, named *Chao Wu*, had been built in China to Western plans at the time of his original inquiries. In fact, the ship as ordered from the Armstrong catalogue was a special type.

At the Armstrong yard at Low Walker on the Tyne, several ships were laid down towards the end of 1882:

| Job no. | Name | Type | Navy |
|---|---|---|---|
| 454 | Albert | Gunboat | Victoria |
| 455 | Victoria | Gunboat | Victoria |
| 457 | Protector | Cruiser | South Australia[1] |

Any question that the new Victorian vessels were not good value was scorned by Major Frederick Sargood, who stated on 28 May 1883 that the *Nelson* 'would have but a poor chance against either of the new gunboats'.[1]

As for torpedo boats, the Thornycroft company of Chiswick on the Thames was in a similar position in this area, as was Armstrong with gunboats. Although a boat from the rival firm Yarrow currently had the world speed record of 22.16 knots, and it had submitted designs and quotes, it was Thornycroft which was successful. Thus the orders went in this way:

| Job No. | Name | Type | Navy |
|---|---|---|---|
| 168 | *Defender* | 2nd class | NZ |
| 169 | *Taiaroa* | 2nd class | NZ |
| 170 | *Waitemata* | 2nd class | NZ |
| 171 | *Poneke* | 2nd class | NZ |
| 172 | *Childers* | 1st class | Victoria |

A slightly later order provided the other boats:

| | | | |
|---|---|---|---|
| 189 | *Nepean* | 2nd class | Victoria |
| 190 | *Londsale* | 2nd class | Victoria |
| 191 | | 2nd class | Tasmania |
| 193 | *Mosquito* | 2nd class | Qld[1] |

The *Childers* was a sister of the Russian *Sookhoum* built by Thornycroft as Job No. 167. It was commonplace for warship builders to use the vessels built for other countries as examples of their skill. The New Zealand and Tasmanian boats were to be operated by the military, in the absence of a naval force.

Sir Henry Parkes sailed for a holiday voyage in December 1881, arriving in Europe in March 1882. He visited the Armstrong works in mid July 1882 in connection with the possible purchase of gunboats for New South Wales. Colonel Scratchley, on the basis of what the other colonies were doing, followed up on 18 September 1882 to the effect that New South Wales should buy a gunboat of the 'Alpha' design.

*All Naval Officers have strongly advocated the purchase of gunboats, in order to further increase the defensive power of the port and secure the inner line of defence, in case the enemy's ships should succeed in passing the batteries and submarine mines.*[3]

He also firmly recommended a cruiser of the type selected by South Australia.

The decision on the purchase was interrupted by the fall of the Parkes government on 4 January 1883, and the disinclination of the subsequent administration to have anything to do with local naval defence, including the *Wolverene*. By the time Parkes regained power the situation was different.

In Queensland, where the vessels were to be bought from excess revenue, the debate on Supply concluded on 1 November 1882, with a motion to delete the gunboats, defeated 27 to 10.[1] There had been some doubt expressed about the adequacy of the designs, in particular the low speed and their generally small size, not to mention the £10,000 just voted to replace the government steamer *Kate*.[1] Some members of Parliament were sceptical of the use of 'cockleshells' on a coast of 1,500 miles, though in this context it was pointed out that they could be used to escort convoys. In the course of the debate, the virtues of gunboats were illustrated by the experience of the *Condor* at *Alexandria* three months previously, and the exploits of the Chilean auxiliary cruiser *Angamos* in bombarding the Peruvian port of Arica for six days with a single heavy Armstrong gun.

Some members worried where the expenditure would stop, and talked of the alternative in the Australian Squadron acquiring fast cruisers. It was noted, however, how rarely Queensland saw ships of the existing Squadron. Albert Norton, the member for Port Curtis, praised the gunboats as being far better than forts, and unselfishly advocated the establishment of the colonial naval station in his own electorate.

The gunboats were laid down in 1883 as Armstrong's Job Nos 469 and 470 and named Paluma and Gayundah. They were marginally more sophisticated than their sister, *Albert*, as they had a proper upper deck and a bullet-proof steering position.

In money terms, it was the biggest single programme of defence hardware acquisition ever undertaken by the colonies. Here is the bottom line, including vessels, guns, ammunition, small arms, spares and stores:

| | |
|---|---|
| Victoria | |
| *Victoria* | £40,093 15s |
| *Albert* | £27,731 15s |
| *Childers* | £11,156 12s 9d |
| *Nepean & Lonsdale* | £7,500 |
| Total | £86,482 2s 9d[1] |
| Queensland | |
| *Gayundah* | £30,904 3s 4d |
| *Paluma* | £30,850 3s 11d |
| *Mosquito* | £3,300 |
| Total | £65,054 7s 3d[4] |
| South Australia | |
| *Protector* | £67,000[1] |

*HMVS VICTORIA, March 1884.*
*Photo – Northumberland County Council*

There were also the New Zealand and Tasmanian torpedo boats.

The *Victoria*, the only true Rendel-type gunboat of the group, proved to be a disappointment. As early as April 1884, while she was still on her delivery voyage, Admiral Tryon confirmed the feeling among Victorian politicians that it would be better for her to have two smaller guns that could be trained, rather than one large gun that could not, especially as she would be expected to manoeuvre among shoals in a tideway. The replacement of her guns was in serious consideration by April 1885, and her 10 inch gun was removed to one of the forts in 1887. She was then given the more balanced weapons fit of the smaller gunboats. The *Protector*, however, was an outstanding success, and carried her guns for possible action in China in 1900. She and the *Gayundah* remained in naval service until after the end of the Great War.

There were to be other purchases of torpedo craft, but one of the main reasons that the colonial navies were not to be further expanded by larger vessels was because of the move, which went hand in hand with efforts towards colonial federation, to create an Australian naval squadron. The matter was under discussion from 1885, and resulted in an agreement of 1887, to provide five cruisers and two torpedo gunboats, jointly funded along with two strategic fortresses. It pointed the way to the future.

### *References*

1 *Defences of Victoria*, Victorian Parliamentary Papers, 1882-83, No.34.

2 *Military Defences Inquiry Commission*, Journal of the New South Wales Legislative Council, 1881. Commodore Wilson's evidence, 7 June 1881.

3 *Ibid*., Commodore Wilson was using as a reference the book *The War Ships of Europe* (1878).

4 *Ibid*., Colonel Scratchley's evidence, 13 June 1881.

5 South Australian Debates, 13 July 1882. The value of the gift, nevertheless, was recorded at £8,700.

6 *Ibid*.

7 *Defences - Papers relating to Unarmoured References Gun-boats, Cruisers, and Guns*, New South Wales Legislative Assembly, Votes & Proceedings, 1882, vol. 4 (see Appendix).

8 *Ibid*., Letter from Armstrongs to Sir Henry Parkes, 25 July 1882.

9 *Defences of Victoria* (see above).

10 Entitled *Russian Designs on Melbourne, Important Disclosures*, the report included purported orders from the Russian Minister of Marine to Admiral Aslanbegoff to ascertain 'which parts of the coast of New South Wales and Victoria and Tasmania are susceptible to be used as lurking places for privateers as well as for the vessels of the squadron'.

11 A.T. Clark (Williamstown), in Committee of Supply 6 December 1881, Victorian Debates. Williamstown was the base of the Victorian Navy.

12 Queensland Debates, 1 November 1882.

13 South Australian Debates, 1 June 1882.

14 Negotiations to purchase a *La Plata* type monitor ended when tensions between Argentina and Chile demanded the retention of the ship.

15 South Australia, Proceedings of Parliament, 1881, No.30.

16 South Australian Debates, 5 July 1882 and 13July 1882.

17 *Warship International*, 1992, p.202.

18 *Defence Reorganization Scheme*, Victorian Parliamentary Papers 1883 (2nd session), No.18. Sargood became Defence Minister on the creation of that Department later the same year.

19 K.C. Barnaby, *100 Years of Specialised Shipbuilding - Engineering* (Hutchinson, London, 1964), 214.

20 *Defences - Papers relating to Unarmoured Gun-boats, Cruisers, and Guns* (see above), letter from Colonel Scratchley.

21 Queensland Debates, 1 November 1882.

22 The new vessel was the paddle yacht *Lucinda*.

23 *Victorian Yearbook 1884-5*, 591. A 15 in., 19 ft torpedo valued at £420 was an Admiralty gift for the Childers.

24 *Annual [Report of the Auditor General 1885-86*, Appendix G, Queensland, Votes & Proceedings of the Legislative Assembly, 1887. 25 Estimate. A loan of £83,800 was approved in 1882 for 'Defences, War Vessel &c'. A sum of £6,000 was spent on ten Whitehead torpedoes, even though there was no steam launch available to use them.

*Colin Jones* has worked for most of his career in the administration of broadcasting in Australia for the Commonwealth Government. Published works include *Australian Colonial Navies* (1986),'The Voyage of the Colonial Ship *Victoria*' (M.M., May, 1986), and *Watch for Trams* (1993).

*Appendix*
Armstrong Catalogue

| | | | | | |
|---|---|---|---|---|---|
| A | 9kts | 118'6" x 27' x 7'6" | 180ihp | 1-10",2-13pd., 2 Gat | £25,270 |
| B | 10kts | 125' x 29' x 10'3" | 450 ihp | 1-10", 2-13pUr, 2 Gat | £33,152 |
| B1 | 10kts | 115'x25'x9'6" | 400ihp | 1-8", 1-6",2-9pUr,1Gat | £27,150 |
| C | 10kts | 125' x29' x 10'3" | 450ihp | 1-11", 2-13pdr,2 Gat | £37,140 |
| D | 12kts | 140' x 27' x 11' | 800ihp | 1-10", 2-13pdr, 2 Gat | £39,512 |
| E | 12kts | 140' x 27' x 11' | 800ihp | 1-11", 2-13pdr, 2 Gat | £43,500 |
| F | 14kts | 180' x 30' x 12' | 1,500ihp | 1-10", 4-13pdr, 4 Gat | £61,800 |
| F1 | 14kts | 180'x 30' x 12' | 1,500ihp | 1-8", 5-6", 5 MG | £63,400 |
| G | 14kts | 180' x 30' x 12' | 1,500ihp | 1-11 ", 4-13pdr,4 Gat | £65,800 |
| H | 16kts | 220 x35 x15' | 3,200ihp | 2-10",4-40pdr,2-9pdr, 4 MG | £119,700 |
| I | 17kts | 270' x 42' x 18'6" | 5,500ihp | 2-10", 6-6",2-9pdr, 4 MG | £170,000 |

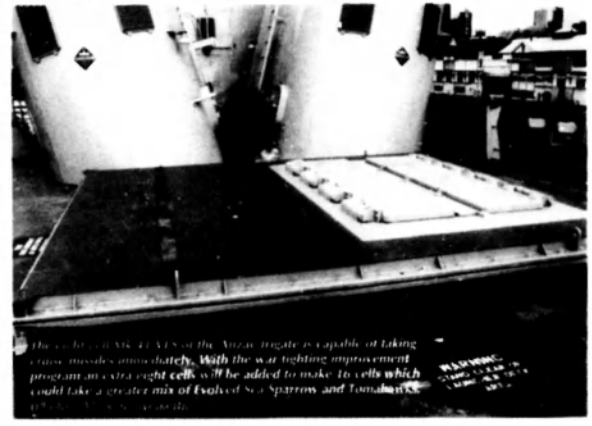
Types C, E, G, H & I have hydraulic working of guns
A, B, C, D, E, F & F1,, deduct £770 if not to have 1'/2" steel shield at bow
G if not for torpedo service - £65,300
H @ 230' and for torpedo service - £121,700
I @ 280' and for torpedo service - £173,000
B1 with extra decking & accommodation before bridge, £27,750
F1 with extra decking & accommodation before bridge, £64,150
Guns are 11" 35ton ML
10" 25ton BL
8 " 11.5ton BL
6" 4ton BL



# The Double Edged Tomahawk

**By Mark Schweikert**

***Is Tomahawk the 'magic bullet' that many are claiming it to be, propelling the RAN into the next century, or will it be a liability rather than an asset?***



Since debate on the use of cruise missiles on the Collins class submarines was first ignited in Australia there has been a propensity by the Australian defence media to only extol the virtues of cruise. The idea of comparing the US experience with cruise missiles in the Gulf War with our potential use is flawed as each situation is unique. Although many have claimed that its purchase would benefit the ADF none have explained how, nor spoken about the very expensive infrastructure needed to use the missile or the potential danger presented to a Collins class submarine firing in patrolled hostile waters.

If one examines the possible scenario for RAN use of cruise from a Collins class diesel/electric submarine against a target in our region then it becomes clear that our requirement is unique from the United States Navy (USN) experience in the Gulf War and the Royal Navy's (RN) perceived requirement. Their needs should not be an excuse for ours.

### *Cruise Missiles and The US Gulf War Experience*

In July of 1996 the US General Accounting Office released a report entitled *"OPERATION DESERT STORM", "EVALUATION OF THE AIR WAR"*. In it were a number of findings which place a cloud over many Precision Guided Munitions (PGM's), including the Tomahawk Land Attack Missile (TLAM), their cost, suitability, accuracy and required systems.

During the Gulf War the US fired 288 TLAM's from surface ships and two submarines at targets deep inside Iraq. Of those 288 missiles only 85% reached their target despite coalition air forces having complete air superiority. That means that 43 missiles did not. Accuracy is dependant on the weapon, the user, weather, enemy action, Murphy's law and the target. TLAM uses terrain features such as mountains, buildings and bridges etc. to navigate its way to the target. During the Gulf War some of these features were destroyed by coalition attacks and thus some TLAMs simply lost their way. Others were shot down by Iraqi Anti-Aircraft Artillery (AAA), despite the US destroying the Iraqi air defence command, as TLAM flies at a constant height, speed and direction (not including navigational way points) and can present an easy target. Particularly if the Iraqi Air Force had been operational with its MIG-29's in the look-down shoot-down mode.

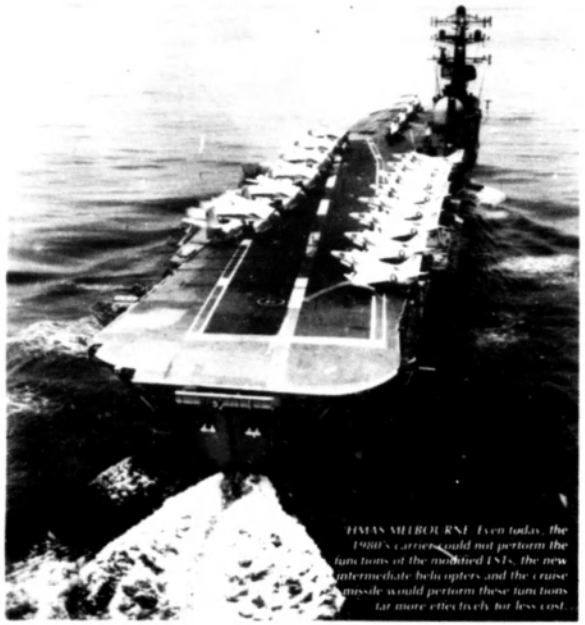
Another concern regarding TLAM is the Weight Of Effort (WOE) required against a target to destroy it. TLAMs 1000 lb warhead was found to be inadequate. For example it took ten TLAMs to damage the Iraqi Ministry of Defence and army HQ buildings. In another example six TLAM's were fired at three Iraqi Air Force MIG-21's on the ground set up as pilot less drones to carry chemical weapons (a favoured tactic during the Iran-Iraq war). Five arrived on target with the sixth shot down and landing in a residential area causing civilian casualties. It is estimated, neutralising a small air base (being one target) would take up to 36 TLAM's.

After the war it was realised that the 'One target, One bomb' theory of PGMs, such as TLAM, was incorrect and not achieved. Further the US government report stated that manufacturer claims on weapon system performance, including TLAM, *"were overstated, misleading, inconstant with the best available data, or unverifiable"*. Is this the magic stick we intend to exercise our sole strike capability with?

Another concern regarding WOE of TLAM was the cost. The more TLAMs needed to destroy a target the more expensive that target becomes. Half way through the air war General Schwarzkopf ordered that no more Tomahawks be fired at Iraq as each one cost around $2 million (1991 prices US dollars not counting the added cost of the submarine launched version). These figures indicate that the Tomahawk war effort cost approximately $576 million US, not counting other systems requirements. If the use of the missile was continued through out the war the cost would be in the order of $1152 million US or well over $1 billion Australian for 576 one shot disposable missiles with no guarantee of hitting the target or destroying it.

On the figure of an 85% hit rate 488 TLAMs should reach their target, roughly the same load of 20 F-111s with cheap iron bombs. It must be remembered that TLAM was used in conjunction with other weapons particularly fixed wing aircraft from airbases and aircraft carriers which were far more vital and effective than TLAM attacks. In fact the US report comes down in favour of using more 'dumb' ordnance than expensive 'smart' weapons.

A less visible and seldom considered problem associated with the use of Cruise missiles is the required reconnaissance, targeting and Bomb Damage Assessment (BDA) data. During the war the US military had great problems with targeting the Tomahawk as collection systems were affected by weather, enemy or assigned other tasks. Although the missiles have an advanced computer navigation system they still require someone to find the target and an operator to program them on where to go and how to get there. During the Gulf War the US relied on six spy satellites and 23 different types of reconnaissance aircraft for targeting and BDA. Rain, fog, smoke, high humidity and enemy deception measures all affected these assets from producing accurate information on targets and the



HMAS MELBOURNE. Even today, the 1980's carriers could not perform the functions of the modified LSTs, the new intermediate helicopters and the cruise missile would perform these functions far more effectively for less cost.

damage sustained after an attack. This sometimes prompted costly repeat attacks on targets which were unnecessary and in some cases no repeat attacks when it was actually required.

As Australia has no spy satellites and only four reconnaissance aircraft how do we intend to target TLAM from a submerged submarine? Acquisition of TLAM without the required data collection systems (which will cost more than the missiles) would be like issuing a sniper rifle with no sights to a blind man. In Australia's case if you can put an aircraft over the target to conduct reconnaissance and or BDA in the first place then why use a valuable submarine and TLAM's?

### *The Vulnerabilities of a Collins/Cruise Mix*

Submarines survive and manoeuvre by stealth. Launching a TLAM from a submarine robs it of its stealth characteristics. When a TLAM is fired from the torpedo tube of a submarine it is propelled to the surface by its rocket motor. The underwater noise created is described as 'simply amazing'. This noise has the potential to travel hundreds of miles depending on salinity, temperature and depth. As more than one missile will be fired at a time this makes the launching submarine extremely vulnerable to defending enemy submarines. An enemy expecting a TLAM attack, and knowing the characteristics of the weapon, can deploy their forces in order to deter the attack from the launching submarine or be near enough to destroy the launch platform quickly.

Once the TLAM leaves the water it rises to a height of approximately 2000 ft before its jet engine starts and wings deploy for the cruise phase. This launch stage is the most dangerous for the submarine as the rocket motor emits a long white smoke cloud which indicates to an enemy where the submarine is. Conversely at night the bright glow of the motor lights up the sky in the vicinity of the submarine, much like a massive distress flare.

With the submarine no longer invisible, and given the limited submerged range and speed of a diesel/electric submarine, the chances of destruction by the enemy are increased. With a nuclear powered submarine, used by the USN and RN, the risk is reduced. An SSN can dive deep and exit the area at high speed for an indefinite period but this is a situation unique from our potential application.

One way of protecting a TLAM firing Collins is to have complete sea control at the launch site, such as the US TLAM firing submarines enjoyed during the Gulf War. Given the range from Australian shores that our submarines may be operating, sea control is beyond our current capabilities and thus may negate the use of TLAM for fear of losing the submarine.

Carrying TLAM in a Collins class submarine, unlike a USN 688I Improved Los Angeles class SSN, reduces the torpedo/Sub Harpoon load of the submarine and thus the submarines prime mission's of anti submarine warfare (ASW) and surface interdiction. In the USN 688I class a Vertical Launch System for 12 Tomahawks is located in the bow and does not affect the torpedo/Sub Harpoon load. Given the fact that it took six TLAM's to destroy three aircraft on the ground and potentially 16 TLAM's to neutralise an air base the load carrying capacity of Collins will be a major factor to TLAM effectiveness.

USN submarines fitted with a bow VLS for TLAM also carry eight TLAM's amongst their load of 26 torpedoes/Sub Harpoons. Thus each 688I carries 20 TLAM's and 18 torpedo/ Sub Harpoons. As Collins's total weapon capacity is only 22 how many TLAM's would it carry as standard and could this achieve the destruction of many vital enemy installations? The answer is no unless the Captain and the Minister for Defence feel confident enough to conduct offensive operations in patrolled enemy waters with only two torpedoes for self defence.

One possible solution to some of the problems associated from a Collins/cruise mix can be overcome by using TLAM from an Anzac frigate. The advantages are:

- The surface ship launched version is cheaper per shot;
- The Anzac is much faster in its transit speed than a Collins meaning that each ship will have a faster turn around time and thus be able to produce more firepower onto the target;
- We will have eight Anzacs as opposed to six Collins and each Anzac is roughly half the cost of Collins;
- An Anzac represents a visible threat to an enemy, unlike a submerged submarine, and thus can act as a deterrent;
- An Anzac, unlike a submarine, can fully defend itself.

If the RAN is permitted to acquire new destroyers then these ships will also have the ability to fire TLAM but carry far more than the 8-16 of the Anzac frigates and can thus produce a greater concentration of firepower not only on one target but potentially many more.

The makers of the cruise missile have addressed the proven inadequacies of the current missile and are staring to produce a new TLAM. The new missile is said to have a greater range, which will mean the submarine/ship can stand further off an enemy's coast, free from enemy action to fire its missiles. It will have a GPS back up in case terrain cues are missing. The warhead is to be replaced with a new 'penetrator' type warhead, probably a shaped charge of some description, which should hopefully reduce the WOE required to destroy a target and thus the total attack cost. But the launch vulnerabilities and load carrying capacity of the Collins class cannot be rectified so easily and still represent a thorn in the submarines side. At this stage there are no plans to fit a VLS to Collins or a new booster rocket to the TLAM.

### *Conclusion*

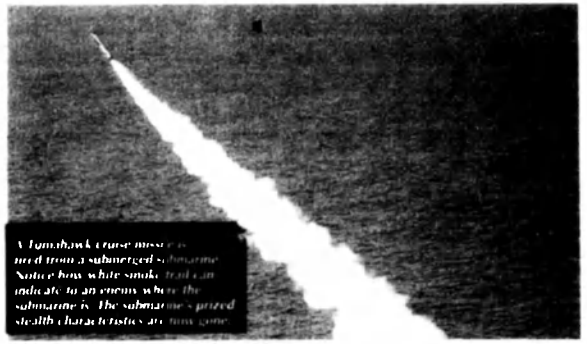
Firing TLAM from a surface ship is far more preferable than a diesel/electric submarine. When the USN use TLAM it is usually from surface ships fitted with Mk 41 VLSs. One of the main disadvantages of weapons such as TLAM is the cost. Only 8% of the total delivered munitions in the Gulf War were guided but at a price that represented 84% of the total cost. Figures such as these are beyond Australia's peacetime training budget and could prove debilitating during conflict. The US report on Desert Storm found that fixed wing aircraft with 'dumb' bombs were far more effective and cheaper than the expensive 'smart' weapons. This lesson should be heeded by Australia.

The acquisition of two ex-USN Newport class LSTs to carry helicopters for the army or navy represents the capability and desire to conduct a mild form of sea control/sea denial and power projection. The new helicopters for the Anzac frigates and OzCs will provide the RAN with the ability to conduct its own anti-shipping operations whilst at sea. The acquisition of TLAM would represent the capability to strike at land targets from a sea borne platform.

What type of capability is the RAN trying to gain from these three programs, sea control? Only one type of vessel can conduct sea control. Seen together the capabilities represented by these three programs amounts to an aircraft carrier capability by proxy. These actions highlight Australia's need for an aircraft carrier and the stupidity exhibited by the decision not to replace the aircraft carrier HMAS MELBOURNE, which could still, even today, conduct all the functions of the capabilities we now seek in the LSTs, the new helicopters and TLAMs.



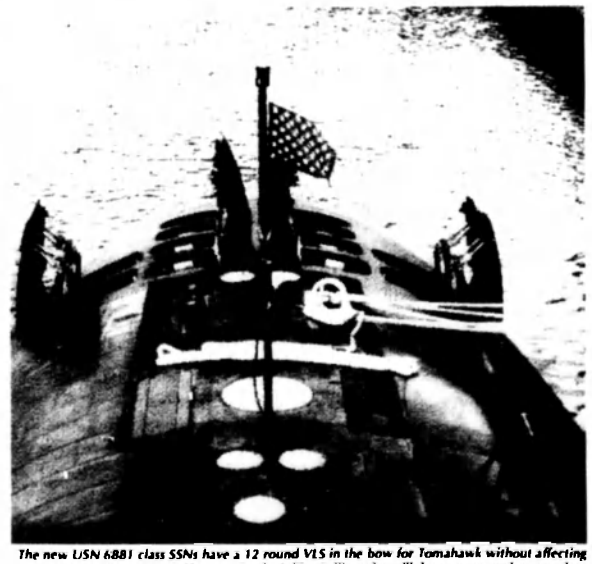




A Tomahawk cruise missile is fired from a submerged submarine. Notice how white smoke trail can indicate to an enemy where the submarine is. The submarine's prized stealth characteristics are now gone.

Australia seems set to display its military illiteracy by reinventing the concept of the aircraft carrier in a time consuming, fragmented, ineffective and costly manner. If we are to participate in the region and promote stability without impinging the sovereign rights of our neighbours by using their airbases, then we are going to have to combine the obvious historical benefits of air power with the accomplished reputation of sea power. Organic tactical air power at sea represents the greatest deterrent to an aggressor with designs on a sparsely populated large island nation and its neighbours. An aircraft carrier, with the new Harrier II plus, could certainly replace the RAAF's F-111 long range strike capability.

In a recent press statement, the Minister For Defence, The Hon. Ian McLachlan AO MP, stated that the purchase of cruise is not imminent and that a full study will be conducted into the advantages, disadvantages, suitability of platforms i.e. Collins, Anzac or F-111, and cost of acquisition before any decision is made.



*The new USN 688I class SSNs have a 12 round VLS in the bow for Tomahawk without affecting the internal torpedo/Sub Harpoon load. Unlike Collins who will have to surrender torpedoes and Sub Harpoons to fit Tomahawks.*

# HMAS Voyager – 40 Years On

***AUSTRALIA LAUNCHES FIRST BRITISH WARSHIP IN REIGN OF QUEEN ELIZABETH II.***
***Australia's first prefabricated, all-welded ship, the large fleet destroyer HMAS VOYAGER, was launched at Cockatoo Island, Sydney on March 1, 1952. More than 1,000 dockyard workers and visitors cheered as the sleek hull slid down the slip into the harbour. The launching ceremony was performed by Mrs RG Menzies, wife of the Prime Minister and witnessed by senior parliamentarians and service chiefs. The new ship inherits a name made famous by one of the memorable 'Scrap Iron Flotilla' in World War II. Dockyard workmen watch tensely as the graceful hull of VOYAGER takes to the water for the first time and a naval band (right) plays a stirring 'Rule Britannia'. One construction team worked through the preceding night to finish the ship for the launching.***
*Australian Official Photograph by J Sneytham*

***February 12, 1997 marks the 40th anniversary of the commissioning of the Australian Daring class destroyer HMAS VOYAGER.***

The destroyer was built at Sydney's Cockatoo Island Dockyard as Ship No 188, the first of four Daring class to serve in the Royal Australian Navy.

### Programme

VOYAGER was ordered on 3 December 1946. Although fabrication was originally due to begin in September 1947, the keel was laid on 10 October 1949. VOYAGER was launched on 1 March 1952 and completed on 11 February 1957. Original dates for the keel laying March 1948, launching March 1949 and completion June 1950 were delayed by one, three and more than six and a half years respectively.

### Type of Ship

The Daring class destroyers displaced 4500 tons. Eight similar ships had been built for Royal Navy, with the first RN Ship ordered on 29 March 1945. IS White of Cowes prepared working drawings for the class - these drawings were also to be supplied to Australia for the RAN ships. The first RN ship, HMS DARING was laid down on 29 September 1945, launched 10 August 1949 and completed 8 March 1952. Design of RAN ships was modified to suit Australian requirements. The first all-welded ships to be built in Australia, and the first to be constructed in pre-fabricated sections, the RAN units used aluminium extensively as a structural material.

### Type of Contract

The Department of the Treasury in placing the orders for the Daring Class destroyers specified - "The approval in principle given by Cabinet to the building of 4 additional destroyers of an advanced type may be regarded as authority to proceed with the placement of orders to ensure the maintenance of shipbuilding capacity in Australia".

By January 1948 the programme was experiencing delays due to the lead time required for the supply of turbine forgings, and by June 1948, the Navy was advised that the programme had to be extended due to:

a) The failure to obtain increased manpower in the numbers anticipated;
b) The strike at Cockatoo Island in February/March 1948, which involved all adult employees in a stoppage of one month and caused two months disruption;
c) Protracted deliveries of structural materials;
d) Delay in receiving vital working drawings from Great Britain; and
E) Extended deliveries of important forgings and castings for machinery.

By March 1950, further serious delays in receipt of drawings, materials and equipment, together with industrial disturbances and shortages of manpower extended the programme by a further year. The Company was finding it hard to retain, let alone increase skilled tradesmen as many engineering firms in the Sydney area were paying considerably more than Cockatoo. Serious losses were also being experienced in key trades. Delays to drawings were so bad that it had been suggested that the drawings being prepared by IS White be taken over and completed in Australia.

In January 1951, it was apparent that the delays would be felt for some time. Manpower was still a problem and only one satisfactory steel casting, for the HP turbine casing, had been received. The manpower of the dockyard was now also needed for the re-conversion of KANIMBLA, the modernisation of ARUNTA, and the conversion of QUEENBOROUGH and QUIBERON. The dockyard was having considerable difficulty maintaining an adequate balance of trades.

By 1953, financial limitations were having a major influence on the speed of the programme, particularly for the second ship VAMPIRE, and the program was being determined principally by the availability of funds.

By 1954 the programme was close to that finally achieved. Recurrent shortages of manpower were eased by the transfer of QUIBERON to Garden Island for completion. The nature of the contract, with the rules therefore applying to wage rates paid by the Dockyard, aggravated the position of Cockatoo in attracting labour. Similar difficulties were experienced in Williamstown, where attempts to sub-contract on a cost plus basis were frustrated by limitations on wage rates that could be paid. Fixed price sub-contracts were not possible as detailed specifications could not be prepared.

### Multi-Purpose

The armament for the Darings was largely made by the Department of Defence production at Bendigo and in 1954 there was still some doubt that all equipment would be available to suit VOYAGER's programme.

Multi-purpose ships originally described as 'Light Cruisers', the Darings were the largest conventional destroyers to be built for the RN. Four units, modified to suit Australian requirements, were ordered for the RAN in the late 1940s. However, one unit, to be named WATERHEN, was soon cancelled, although work had commenced on her at the Williamstown Naval Dockyard.

When first considered for the RAN, the armament planned for the new destroyers included six 4.5 inch HA/LA guns in three twin mountings, six 40 millimetre Bofors (twin mounts), two sets of 21 inch torpedo tubes (pentad), four depth charge throwers and two depth charge rails. A total of seventy depth charges were to be carried. By November 1949, a Squid mortar had replaced the




*HMAS VOYAGER, about to berth at Garden Island.*

*The new destroyer on trials.*

outfit of depth charges and two twin STAAG Mklll and one twin MkV40 millimetre mounting had been selected as the secondary gun armament.

Three Daring class ships were completed after rather lengthy periods at the builders' yards. In each case the ship was built in sections, upside down from the centre, then rolled onto the slipway for welding. Like the previous Battle class, good ventilation was given high priority, including air-conditioning.

VOYAGER, the first ship to complete, mounted three twin 40 millimetre Bofors, one on either side of the bridge superstructure and the third abaft the second funnel. Both VAMPIRE and VENDETTA were completed with two single mounts abreast the superstructure and two twin mounts tone on each beam abaft the funnel.

### *Career*

After commissioning VOYAGER spent the first eleven months of her career in Australian waters. Following a refit lasting from mid-October 1957 to January 1958 she proceeded to Singapore. Service as a unit of the Far East Strategic Reserve followed until August 1958 when she returned to Sydney.

Following a refit which kept her in dockyard hands until late January 1959, VOYAGER departed Sydney on 3 March 1959 for further Far East service. In April 1959 she proceeded to Hong Kong for boiler repairs and thence back to Sydney, arriving on 29 June 1959.

VOYAGER remained at Sydney and in Australian waters until 10 November 1959 when she sailed in company of HMAS MELBOURNE to New Zealand returning to Australia in early December 1959.

After service in east Australian waters VOYAGER departed Sydney for the Far East on 28 March 1960, returning to Sydney on 22 June for refit. After the refit she spent the last two months of the year working up in the Sydney area.

The beginning of 1961 found the destroyer again en route for the Far East. She returned to Sydney in June and remained in Australian waters until November 1961 when she again visited New Zealand.

In February 1962 VOYAGER departed Sydney for further service with the Strategic Reserve lasting until June. She returned to Sydney via Guam and Papua New Guinea. From July to September she was refitting and from October to the end of the year she was engaged in working up and exercises.

On 31 January 1963 VOYAGER sailed from Sydney for what was to be her final tour of duty in the Far East, lasting from February to July. On return to Australian she proceeded to Williamstown Dockyard to commence a long refit which was completed in January 1964.

To the end of January VOYAGER had steamed a total of 218,800.4 miles since commissioning.

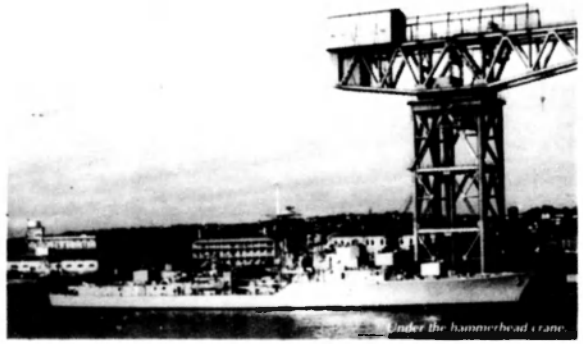
### *Tragedy*

On the night of 10 February 1964 HMAS MELBOURNE was engaged in night flying exercises off the New South Wales coast. VOYAGER was acting in the role of 'plane guard' involving the rescue, if necessary, of aircrew personnel from the sea. At approximately 8.56 PM some twenty miles south-east of Jervis Bay, she collided with HMAS MELBOURNE.

VOYAGER was lost 28 miles south-east of Jervis Bay. The destroyer was cut in two by the impact. Her forward section sank quickly and the after section some time later. The disaster resulted in the loss of 82 lives (14 officers, including the commanding officer, 67 sailors and one civilian dockyard employee). There were 232 survivors. MELBOURNE was damaged but sustained no casualties.

### *Commanding Officers*

Captain G.J.B. Crabb, DSC, RAN
12/02/57 to 07/01/59
Captain W.I. Dovers, DSC, RAN
07/01/59 to 18/01/60
A/Captain R.A.H. Millar, RAN
18/01/60 to 21/09/60
Captain D.C. Wells, RAN
21/09/60 to 31/07/62
Commander A.A. Willis, RAN
31/07/62 to 02/01/63
Captain D.H. Stevens, RAN
02/01/63 to 10/02/64



*Under the hammerhead crane.*





# Bell Bottoms To Go

On Friday, 1 October, the Royal Australian Navy celebrated its 85th birthday at a ceremony aboard the guided missile frigate HMAS MELBOURNE at the Fleet Base East in Sydney.

As part of the event, the Chief of Naval Staff, Vice Admiral Rod Taylor officially 'launched' a new range of uniforms for junior sailors. The announcement of the new 'rig' followed two years of consideration to achieve a greater level of uniformity between the genders in the senior service.

Bell bottoms and the white front flannels will go, to be replaced by conventional straight legged trousers and a buttoned shirt with soft rank insignia.

VADM Taylor said the change to a standardised uniform for junior sailors would begin on 21 April 1997 with all Permanent Naval Force and Active Reserve junior sailors to receive a gratuitous issue of the new kit....

"Uppermost in my mind during my determinations has been the fact that the changes I have approved were most favoured by those personnel who responded to the 1994 uniform survey," VADM Taylor said. "I stress that the changes made in regard to our uniforms have not been made lightly, nor without consultation of those most affected ... our serving personnel."

# SYDNEY COMMEMORATED

On Tuesday, 19 November, RADM David Campbell (FONSC) attended the annual commemorative service in memory of personnel who lost their lives aboard the Second World War light cruiser HMAS SYDNEY.

The 54th anniversary service was conducted at the Cenotaph, Martin Place, Sydney, in conjunction with members of the HMAS SYDNEY Association. More than 300 persons viewed the ceremony, along with the RAN Band and the Sydney Area Standing Guard.

Guest of Honour was the Minister for Veterans Affairs, the Honourable Bruce Scott MP, who was joined by FONSC, community leaders and numerous naval veterans.

The RAN's most famous warship of the Second World War, SYDNEY achieved her most notable victories in the Mediterranean Sea during 1939-41. On 19 November 1941 the ship was tragically lost with all hands off Carnarvon, Western Australia, after sinking the German raider KORMORAN.

From 1911 to the present day, four SYDNEYs have served in the RAN. The first, a light cruiser, won the Navy's initial battle honour of the Great War when she destroyed the German raider EMDEN on 9 November 1914. Her mast now rests on Bradleys Head in Sydney Harbour. The third ship of the name was an aircraft carrier that operated off Korea and later as a troop transport to Vietnam. The present SYDNEY, a guided missile frigate, was commissioned in 1984 and served during the Gulf War in 1990-91.

# MORESBY's Final Sydney Visit

*Views of the veteran HMAS MORESBY, arriving in Sydney in November 1996. (Photos - Brian Morrison)*

For more than 32 years and nine months, the name MORESBY has been synonymous with the RAN and especially, the Hydrographic Branch.

Commissioned in March 1964, the ship is now the oldest in commission, with the distinction of being the only RAN unit to have ever steamed more than one million nautical miles.

Commanded by CMDR Paul Spencer RAN,MORESBY is now undertaking her final major cruise, circumnavigating Australia performing survey tasks along the West Australian, Northern Territory and Queensland coasts, as well as in the Coral Sea.

"Although the final cruise is now half-way through, we will still be operating in WA waters until the formal decommissioning, planned at HMAS Stirling in late 1997," Commander Spencer said.

"A rare visitor to the eastern seaboard, MORESBY normally operates in western and northern waters with mixed gender crew of 130 officers and sailors," he said.

"MORESBY is scheduled to be replaced in the fleet by the new construction survey ship LEEUWIN in 1998. A second survey ship, MELVILLE, will then join her sistership."

"We expect to return to HMAS Stirling late 1996 prior to the Christmas leave break", CMDR Spencer said.

# KOREAN VISIT

Several hundred members of the local Korean community, waving Australian and South Korean flags, turned out to welcome three ships from the Republic of Korea Navy when they arrived in Sydney on Tuesday, 12 November.

The Ulsan Class frigates CHUNG-NAM and CHON-NAM with the replenishment ship CHEON-JI berthed at the Fleet Base, Woolloomooloo at the start of a three day good-will visit.

Under clear blue skies, the welcome ceremony for the ships was a colourful event, with flowers presented to the senior officers by women in traditional Korean dress. Adding to the spectacle, numerous brightly patterned umbrellas shaded many of the ladies present, a rare sight today in Sydney.

A small contingent of Australian Korean War veterans, proudly wearing their medals, were also on hand.

Prior to their entry into Sydney Harbour, the ships fired a 13 gun salute at 9.00 am, which was returned by Sirius Battery at HMAS WATSON on South Head.

In total, 639 Korean naval personnel were embarked in the three ships under the command of Rear Admiral Oh Seung-Yull, including 165 cadets from the Korean Naval Academy.

While in Sydney the cadets, as part of their training, toured the guided missile frigate HMAS MELBOURNE at the Fleet Base and visited the facilities at HMAS WATSON. Currently on a Pacific training cruise for the embarked cadets, all three ships were built in Korea from the mid 1980s to 1990, designed for the general escort role.

The visit was only the third by ROK ships to Sydney in recent times, two destroyers having called in 1984, with two Ulsan Class frigates and the replenishment CHEON-JI visiting briefly during November 1993.

*The three South Korean naval ships which visited Australia in late 1996. These included the frigates CHUNG-NAM and CHON-NAM (Photo - Brian Morrison) and the support unit, CHEON-JI (Photo - ABPH Simon Metcalfe)*

*The former general purpose vessel HMAS BANKS, which was severely damaged by fire in Port Macquarie is now in Ulladulla, being rebuilt as a passenger vessel for her new owners.*





# Flying Agreement Between Australia and New Zealand

Australian and New Zealand Defence Ministers have signed an agreement providing support flying by the Royal New Zealand Air Force for the Australian Defence Force for a further five years.

The New Zealand Minister of Defence, Mr Paul East, signed the agreement in Wellington and Australia's Minister for Defence Industry, Science and Personnel, Mrs Bronwyn Bishop, signed for the Australian Government. This means a continuation of the RNZAF presence at Naval Air Station Nowra, near the RAN's east coast exercise area.

"This five-year renewal in the Enhanced Nowra Agreement reaffirms and strengthens the Close Defence Relations policy between the Governments of Australia and New Zealand," Mrs Bishop said. "It is a continuation of the agreement providing for support flying for the ADF by the RNZAF which was signed in Canberra on July 13, 1990."

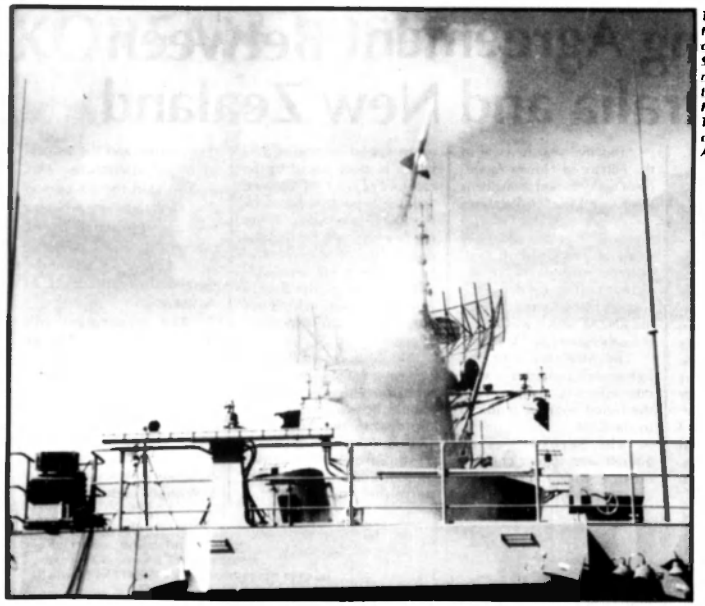
The Minister said the agreement provides a very cost-effective way to meet the flying support required by the RAN.

"The Skyhawk, as an aircraft with fighter characteristics, with a small radar cross section and a maximum speed of about 550 knots, is more suited to the category of Fleet Air Defence Training Support required by the RAN," she said. "These requirements are beyond the capability of Macchi and Learjet aircraft but well below those of the RAAFs F/A 18 Hornets which are very much more expensive to operate."

Mrs Bishop said the cost of having the RNZAF detachment provide the training should be weighed against the cost to the Australian Defence Force of maintaining a squadron of Skyhawk aircraft and the supporting personnel, stores, aircraft engineering and the associated infrastructure. Mrs Bishop said the 53-person RNZAF detachment at Nowra will provide 1070 flying hours per annum of flying support for the RAN on the east and west coasts of Australia.

"The detachment will train up to six RNZAF Skyhawk pilots per year," she said, "and the Australian Government will provide opportunities for the New Zealand squadron to train with other elements of the ADF when it is cost neutral to Australia to do so."

*An impressive photograph of HMAS SYDNEY'S Seahawk helicopter, taken in November. (Photo - ABPH Steve Garnett)*



*The first test firing of a RIM-7P Sea Sparrow missile from the new frigate HMAS ANZAC. The firing was conducted in August.*

*A helping hand. An RAN Sea King helicopter lifts an RNZN Wasp after the latter suffered engine problems.*





# Former Naval Establishment to be Sold

The Minister for Defence, Ian McLachlan, has announced that the naval establishment in Tasmania, formerly known as HMAS HUON, will remain closed.

The Naval establishment in Hobart, as well as others in Brisbane and Adelaide, was closed in 1994 by the former Labor Government when it reduced funding to Defence in 1993/94 and subsequent years. The decision to close HUON arose from the need to achieve economies through the continued rationalisation of support activities to preserve the operational effectiveness of the Australian Defence Force as well as reflecting changes to the Navy's Reserve structure.

Mr McLachlan said he had reviewed in detail the decision to close HUON, and had examined a number of submissions seeking the re-opening of the former establishment.

"The Federal Government is satisfied that the decision to close HUON was economically sound and justified by the changing focus of activities for the permanent and reserve Naval Forces throughout Australia", he said.

"The Commonwealth and Marine Board of Hobart have signed a contract for sale of the site on which the establishment is situated and settlement is likely to take place in September. "The contract of sale provides for the lease back of the boatshed at the former establishment to allow continued use by the Navy Reserve Diving Team and for priority use of the jetty by Defence in Hobart."

The Minister added that the contract required the Marine Board also to manage the property in accordance with the direction and recommendations of the conservation and management plan for the site, originally prepared for Defence. "Tasmania has made and continues to make a significant contribution to the Navy. There will continue to be regular visits by RAN ships, aircraft and display teams to ensure that the presence of the contemporary Navy remains in Tasmania where our heritage is so valued by the community", Mr McLachlan said.

# New Hydrographic Ships

Two new hydrographic ships being built for the Navy will be named LEEUWIN and MELVILLE, the Chief of Naval Staff, Vice Admiral Rod Taylor has announced.

He said the Governor-General had approved the names for the two 2550 tonne ships being built in Cairns by NQEA Australia Ltd.

"Both names have a proud history in the RAN and are also names of prominent Australian coastal features - Cape Leeuwin in south-west Western Australia and Melville Island off the Northern Territory," he said.

"LEEUWIN was also the name of a wartime shore establishment and later junior Recruit training establishment in Fremantle which closed nearly 10 years ago. MELVILLE was the name of the Navy's main shore depot in Darwin from 1940 until it was decom-missioned in August 1975."

The keel of LEEUWIN was laid in Cairns on August 30 and the ship is expected to enter RAN service in mid 1998. MELVILLE is expected to follow in early 1999.

The contract for the $214 million project includes a 78 per cent requirement for Australian industry involvement.

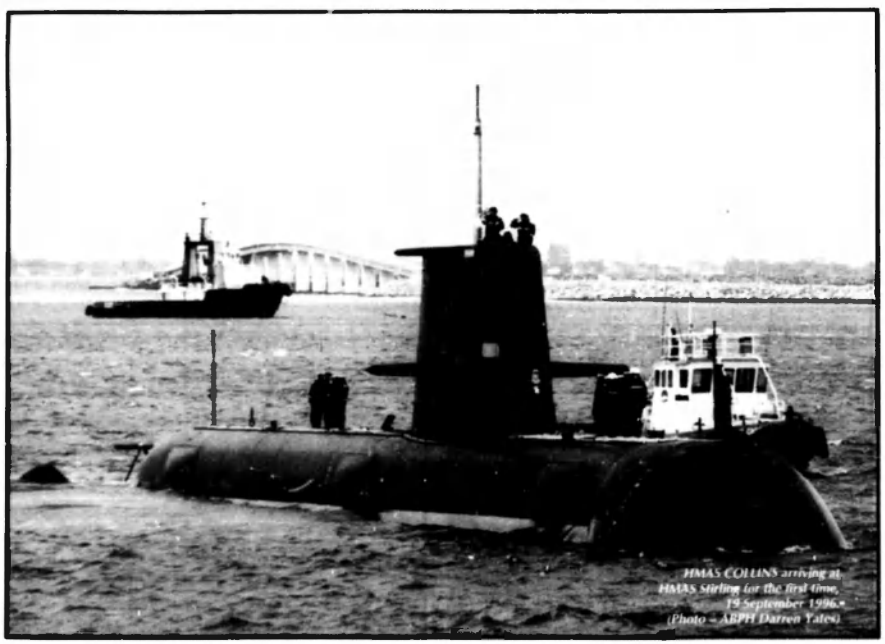
"The construction of these ships highlights the Government's commitment to the development and maintenance of these important skills in Australia," VADM Taylor said. "The charts produced by Australian hydrographic vessels and aircraft are vital to the safe passage of ships through our waters. We couldn't trade without them.

"These two new ships will ensure that this vital work continues. I look forward to seeing them commissioned as HMAS LEEUWIN and HMAS MELVILLE."

*Scheduled to visit Australian ports in January will be the Italian warships BERSAGLIERE (Above) and DURAND DE LA PENNE (right).*

Outboard of the training submarine OVENS, the White Ensign is lowered aboard ORION for the last time at HMAS STIRLING. (Photo – ABPH Stuart Farrow, RAN)

LCDR Steve O'Hearn, HMAS ORION's last Commanding Officer reads the decommissioning order. (Photo – LSPH Darren Yates, RAN)



HMAS COLLINS arriving at HMAS Stirling for the first time, 19 September 1996. (Photo – ABPH Darren Yates)





# Changing of the Guard

*By Vic Jeffrey, Navy Public Affairs (WA)*

***Recent months have seen the Australian Submarine Squadron experience moments of great pleasure and also sadness in Western Australia.***

The arrival of Australia's first Collins-class submarine, HMAS Collins, at its home port, HMAS Stirling on 19 September was a joyous occasion for the Squadron, while only 15 days later the Oberon-class HMAS Orion was decommissioned at the same base.

HMAS Collins, commanded by CMDR Peter Sinclair, presented a memorable sight as she rounded Colpoys Point with three media helicopters hovering overhead as she glided into Fleet Base West with old submarines HMAS Orion and the training submarine TSM Ovens in the foreground, both alongside Oxley Wharf.

Collins' mettle was tested as she berthed at the Diamantina Pier for the first time with a strong south westerly wind and light drizzly rain falling. Beneath the gaze of the large welcoming crowd Collins glided into her berth without incident.

It was also a day of pride and nostalgia for the Sinclair family as Peter (Snr), better known as retired RADM Sinclair, former NSW Governor, some 21 years before had the honour of bringing his command alongside as the first surface ship to berth at the yet to be commissioned Stirling naval support facility. This occurred on 11 August, 1975 when he brought the guided-missle destroyer HMAS Hobart alongside for a trial berthing.

Only 15 days later HMAS Orion was decommissioned at Fleet base West after a distinguished 19 years during which time she clocked up more than 320,000 nautical miles. During her three commissions it is estimated more than 2000 men served in her.

First commissioned on a wet and blustery day in Greenock, Scotland on 15 June, 1977, Orion was described by the Commander of the Australian Submarine Squadron, Captain Denis Mole as 'probably our most successful submarine since AE2 in the Gallipoli campaign in World War One' in his decommissioning address.

Captain Mole also mentioned how 4 October was a special date also for submariners as 'that was the date in 1963 that the Australian Government ordered the first of the four Oberon-class submarines. That order was quite significant back in 1963 as it signified to the world that Australia was back in the submarine business after some 30 years.'

He concluded by saying that Orion's success was due to the quality of the people which served in it and mentioned the fact that she holds the record for the longest time at sea by one of our Oberons, more than eight weeks, most of the time submerged.

In his Decommissioning address, Orion's last CO, LCDR Steve O'Hearn said Orion 'had that special quality' that has borne with a little secrecy and had a lot of success.

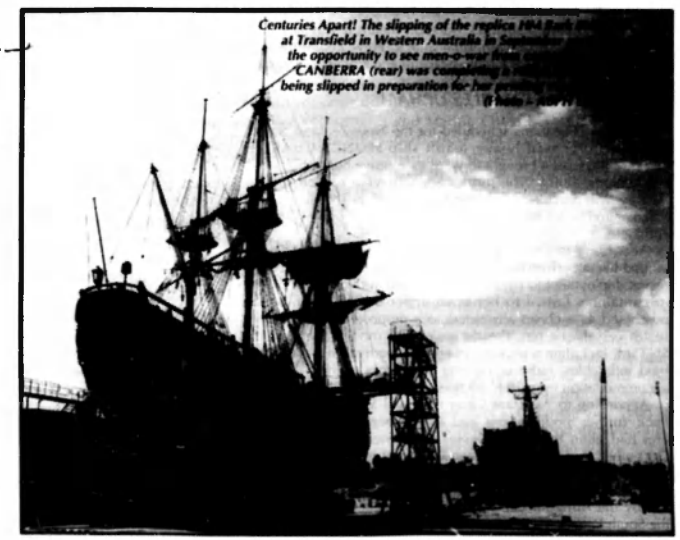
"Submarine service is very much a family affair in the Royal Australian Navy. It demands an extraordinary level of tolerance by girlfriends, wives and children with absent fathers, husbands and boyfriends on long deployments. On behalf of previous COs of Orion and myself, I sincerely thank you for your tolerance and patience.

There's a well worn trail in the South China Sea which won't be the same without Orion gently silently sliding by," he said.

LCDR O'Hearn also spoke of moments of great triumph and great sadness, such as when the boat won the 1985 Gloucester Cup and the accidental death of a young sailor during an Open Day in New Zealand in 1986. He also recalled the time she was on deployment and ran out of food, the crew surviving on chicken noodle soup and meringues made out of powdered egg whites and water.

It was with a touch of irony as the White Ensign was lowered for the last time with the final tribute, a low pass by a RAAF P3-C Orion maritime aircraft failing to materialise until two minutes after the ceremony concluded.

An impressive sight, when it finally did arrive coming from the south and flying over in salute to Orion, the departing CO LCDR Steve O'Hearn quipped: "They always did have a lot of trouble finding us, why should today be any different?"



Centuries Apart! The slipping of the replica HM[illegible] at Transfield in Western Australia [illegible] the opportunity to see men-o-war [illegible] CANBERRA (rear) was completing [illegible] being slipped in preparation for her [illegible]

# New Zealand Update

### POLL THREATENS ANZACs

The New Zealand Navy's hopes of a fleet of four new ANZAC class frigates has suffered a setback with the release of Labour's defence policy. The party has given a thumbs down to ordering the third and fourth frigates and has guaranteed a defence review which would do away with the Navy's fleet of frigates.

"We query the continuation of a small frigate force in our Navy. It is our intention to limited New Zealand's participation in the Australian frigate project to the existing two vessels and to look again at the future purchasing requirements for and direction of the New Zealand Navy", declared Labour leader Helen Clark.

In an interview Ms Clark said "... we don't see the frigate as the most appropriate for the blue water South Pacific role that the Navy focuses on."

"I don't think we would sell them necessarily but I'm not ruling that out as an option either" she said, saying a review was needed first on the future purpose and direction of the Navy.

However, she promised to ensure a minimum fleet of four vessels to perform essential South Pacific blue water navy roles "... at a more appropriate level of sophistication and technology". "These two ANZAC frigates are coming on stream and the Navy is built around frigates. If you flagged away the two frigates coming on now you would be left with nothing coherent and that's got to be worked through."

Asked about the likely effect on relations with Australia, she said the situation was very different from 1987 when Australia put a lot of pressure on the Lange Labour Government to order the first two.

The frigates had been sent to the Middle East to police sanctions against Iraq and as far as the UN was concerned that was 'neither here nor there'.

Mrs Clark said there was a small constituency for defence spending and New Zealand's isolation meant it was not even remotely at risk of conventional attack. New Zealand's best defence was to work for a more peaceful and sustainable world.

### CHARLES UPHAM

Major modifications scheduled for the New Zealand Navy's recently purchased heavy sealift ship HMNZS CHARLES UPHAM have been brought forward to improve her stability and sea keeping ability. The former Scandinavian roll-on roll-off freighter was purchased last year for $14 million. The ship is now inactive and is not expected to take to sea again until works are complete.

According to Defence sources, CHARLES UPHAM "bobs around like a cork on top of the water" when lightly laden. On a recent deployment to Fiji the vessel carried 500 tonnes of ballast in containers lashed to her open upper deck. The ship was purchased as a cheap alternative to a purpose designed heavy sealift vessel. She has already undergone modifications worth $NZ5M, including a repaint, an engine overhaul, installation of rigid inflatables, radio equipment and bunks to increase crew accommodation from 28 to 65 persons.

According to Assistant Chief of Naval Staff, Captain Alan Peck, further modifications had always been planned but the aim had been to use the vessel on limited operations until December. A decision has been taken not to put to sea again unless she is carrying a minimum 3500 tonnes. Other work planned for later will see the ship modified to make her fit for use by the Army for deployment or emergency relief duties in the South Pacific.

### OLD TENACIOUS / NEW RESOLUTION

In a media release made public in mid September, the New Zealand Minister of Defence formally announced the Government's approval to purchase the former USN Towed Array General Oceanographic Surveillance (T-AGOS) ship TENACIOUS.

The ship is seven years old, is 2300 tonnes and will have a company of about 22. She will, in due course, replace both MONOWAI and TUI and will be re-activated in Portland, Oregon (USA) between October-December 1996. TENACIOUS will be commissioned into RNZN service prior to commencing her delivery to New Zealand in January 1997 via Hawaii arriving in Auckland mid February 1997. A conversion period will be undertaken July-December 1997 which will include the fitting of a swathe multi-beam echosounder.

Her primary role will be hydrography with a secondary role (for about 60 days per year) of acoustic research. As part of the overall project, MANAWANUI will also be fitted out with some additional oceanographic equipment including a U frame gantry, cargo handling captains and general purpose winches to enable her to undertake general oceanography research such as MCM Trials.

The ship will be named HMNZS RESOLUTION. The name is synonymous with CAPT James Cook as the vessel in which he conducted his second and third voyages to the Pacific in 1772-1779. RESOLUTION's association with NZ began in 1773 when she put into Dusky Sound undertaking surveys of the area including Pickersgill Harbour which remains on the chart today and the large island forming the northern arm of the sound was named after the ship. Thus there is a significant connection with the very early history of NZ and the association with the Hydrographic Survey, which will be the primary role of the new ship.

HMS RESOLUTION was the vessel in which Captain Cook made his second and third voyages to the Pacific, 1772-1775 and 1776-1779 respectively. He personally selected the vessel, which like HMS ENDEAVOUR, was built at Fishburn's shipyard. At the time of selection the vessel was named the 'Marquis of Granby' and was of 464 tons.

Although some initial difficulties were experienced with RESOLUTION, due to the extensive modifications insisted upon by the influential Sir Joseph Banks, at the end of the second voyage Cook was able to write of the ship "she was found to answer on all occasions even beyond my expectation and is so little injured by the voyage that she will soon be sent out again". This voyage had included months skirting the Antarctic Circle in 1773 in search of the 'Southern Continent'.

Cook again chose RESOLUTION for his third voyage and, although the refit she had received at the Deptford dockyard "proved disappointing, he pressed on with his quest to find the elusive North West Passage. Whilst pursuing this objective Cook was killed during a scuffle with armed warriors at Kealakekua Bay, Hawaii on 14 February 1779.

RESOLUTION's association with New Zealand began on March 23 1773 when she put into Dusky Sound after 122 days at sea to provide some respite after the extended foray into Antarctic waters.



# Navy Saves Queensland Coast

**By Brian Alsop**

A port bow view of HMAS RUSHCUTTER.

***Exercise SHORTSCOPE/ DUGONG '96, the Royal Australian Navy's annual combined mine countermeasures and explosive ordnance disposal exercise was held recently in the Mackay - Hay Point area between 11 and 26 November.***

The scenario for the exercise saw Orangeland, a mythical neighbour to our north, in dispute with Australia over coal production and marketing. An ultimatum issued in late October stated that unless Orangeland's demands were met, coal shipments from Hay Point would be crippled.

Hay Point is one of the largest coal export complexes in Australia, capable of handling in excess of 53 million tonnes of coal per year; earning about 5 per cent of the national GDP. The port currently accommodates more than 600 visits by bulk carriers annually. Consequently any disruption to its operation would seriously affect the Australian economy. Mackay is an important port for the export of wheat and sugar.

RAN mine countermeasures (MCM) and clearance diving (CD) forces were sent to Mackay and Hay Point just in case, the MCM vessels being ready to start operations from 11 November. Their arrival was only just in time, with suspicious activity noted the following day that suggested mining activity had taken place.

The first mine, a Manta, was located in relatively shallow water near Hay Point Tug Harbour on Thursday, 14 November. After over pressurisation, the mine was dragged ashore for exploitation; a long and potentially dangerous operation.

At Mackay for SHORTSCOPE/ DUGONG '96 were the minehunter HMAS RUSHCUTTER, plus the auxiliary minesweepers BANDICOOT, KORAAGA and BROLGA. The MCM Drone Boat Unit, Australian Clearance Diving Teams One (Sydney based) and Four (Perth based) plus United States Navy (USN) and Marine Corps personnel also took part. RAAF and USN P3 Orion aircraft participated, laying simulated Orangeland Mark 36 Destructor mines.

The ships along with 164 RAN, USN and Army personnel, operated from Mackay Harbour where a Forward Support Unit camp site was established near the northern breakwater and grain silos with a sub-camp, for maintenance of the exercise mines, sited on the breakwater adjacent to the Grain Wharf.

A total of 220 people, including ships' companies, were fed daily by the four cooks at the FSU. The quality of food served was excellent, prompting one American diver to comment that "Food at home is rarely this good aboard ship. More people would want to deploy to the field if they knew the food was like this!"

Another camp at Hay Point housed a further 50 RAN and USN divers and explosive ordnance specialists.

The forward Support Base Camp site.

Among the exercise participants were the US Navy's Explosive Ordnance Disposal Mobile Unit Five (EODMU5) from Guam and the Very Shallow Water Mine Countermeasures Test Detachment (VSW MCM Test Det) based in San Diego.

EODMU5 combined with RAN explosive ordnance disposal experts to exercise against nefarious Orangeland saboteurs who had infiltrated the Hay Point area.

VSW MCM Test Det, composed of US Navy SEALS, explosive ordnance specialists and reconnaissance marines, was formed on 31 January this year. With a complement of four officers and 24 enlisted men, the unit's formation was a CNO initiative that grew out of experience gained during the 1991 Gulf War. They are tasked to test equipment, develop tactics and practice for mine reconnaissance and obstacle clearance in very shallow water, that is, water of 10 to 40 foot depth.

Employed on amphibious reconnaissance and beach survey duties with Australian clearance divers during the exercise, VSW MCM Test Det took part in recognition of the RAN's position among the world leaders in this difficult and often dangerous field. Indeed, half the tactics employed by this American unit were received from the RAN Clearance Diving Branch.

With the MCM vessels already at Mackay when Orangeland's mining campaign began, activities started with efforts to clear the 'Q routes' to seaward from Mackay and Hay Point. To this end, precursor sweeping using the minesweeping drone boats began immediately from Mackay while divers were employed to clear the shallow water approaches to Hay Point.

First priority was influence sweeping (magnetic and acoustic) to make the area safe for the larger auxiliary minesweepers and minehunter. This was undertaken by the drone boats and the small auxiliary minesweeper KORAAGA towing 'Rig Bravo' mini-dvads. Only then was the large 'Rig Mike' maxi dvad sweep deployed from BANDICOOT to make the shipping lanes safe for the large merchant ships that frequent the ports.

The minehunter, RUSHCUTTER, came into her own once precursor sweeping was complete, her forte being to find, with her sonar and PAP 104, the pressure actuated mines that the auxiliary minesweepers were unable to sweep.

As local area security was stepped up, soldiers from 42 Battalion, Royal Queensland Regiment arrived to assist at both Mackay and Hay Point.

The bulk of diving activities during the exercise were carried out by RAN and USN divers from the Hay Point camp (nicknamed 'Camp Krusty' after the Simpsons TV program), however some AUSCDT ONE Maritime Tactical Operations personnel operated from the FSU at Mackay.

Those at Hay Point were primarily employed on two task types, mine countermeasures (MCM) and explosive ordnance/improvised explosive device disposal (EOD/IEDD).

MCM diving was concentrated in the vicinity of the Hay Point coal berths and the inshore approaches to them from sea where the seabed was methodically searched by the jackstay method. This method involves the laying of two lines on the seabed along which two divers slowly swim, dragging a line between them. If anything snags the line, they stop and investigate. Such diving was undertaken by the MCM task elements of both AUSCDTs ONE and FOUR.

The CDs may also operate from the inshore minehunters such as HMAS RUSHCUTTER in the MCM role, diving on mine-like objects detected by sonar in order to confirm identification, place counter mine charges or recover mines for exploitation.

With the active cooperation of local authorities and the Dalrymple Bay Coal Terminal Pty Ltd, EOD and IEDD incidents took place over a wide area. They ranged from a bomb in the semi-dark and wet interior of the Dalrymple Bay Coal Terminal's coal loader, an IED aboard a tug at the Hay Point Tug Harbour, to a hostage with a body bomb at the FSU and parcel bomb received at the Hay Point camp. Some explosive ordnance was 'discovered' by patrolling soldiers from 42RQR, who called in the experts from Hay Point to respond. Reaction to EOD and IEDD incidents was by the remaining elements of the AUSCDTs plus the US Navy's EODMU5 at Hay Point.

All elements within both RAN teams maintain an explosive ordnance disposal and improvised explosive device disposal capability.

HMAS GLADSTONE and MSA BROLGA acted as insertion craft for






*Launching the mine sweeping drone boat.*

*Auxiliary minesweeper BANDICOOT exercising the maxi-dvad sweep.*

Maritime Tactical Operations personnel from both AUSCDTs and the VSW MCM Test Det during the exercise. Amphibious reconnaissance and beach surveys were undertaken at Grasstree, Campwin and Sarina Beaches in preparation for troop landings anticipated by the exercise scenario.

While all the above was going on during SHORTSCOPE/DUGONG '96, AUSCDT ONE also successfully underwent its Operational Readiness Evaluation.

Mine countermeasures, clearance diving and explosive ordnance disposal activities were integrated for the first time at such an RAN exercise. A common scenario and control organisation added realism as the different exercise activities impacted on one another.

Another exercise first was the establishment of a dedicated analysis cell to assist 'Blue' MCM operations. It was also the first time such an exercise has been held entirely outside a military gazetted area, both sea and air.

Such exercises are rotated over a five year period between major Australian ports or choke points, with Newcastle, Port Kembla, Geelong, Townsville, Cairns, Weipa, Darwin and the Torres Strait among previous training locations. It is essential that the many differences in environmental conditions between areas be experienced under realistic exercise scenarios in order to be prepared to re-open these ports in time of real conflict. With its large tidal range, strong tidal streams and unfamiliar bottom types, Hay Point displays unique and challenging features not present in other ports.

All exercise activities were conducted in close consultation with the Queensland Department of Environment and local environmental groups. Stringent procedures, such as the banning of any underwater explosives and strict guidelines for the occasional beach operation, were in force throughout the exercise to ensure that dugongs, turtles, their habitats, turtle nests and sea grasses were fully protected.

During the fortnight, those skills necessary to keep ports such as Hay Point and its maritime approaches open in times of conflict were practised. All was achieved in an atmosphere of constant threat from IEDs placed by Orangeland saboteurs to disrupt commercial and military activities.

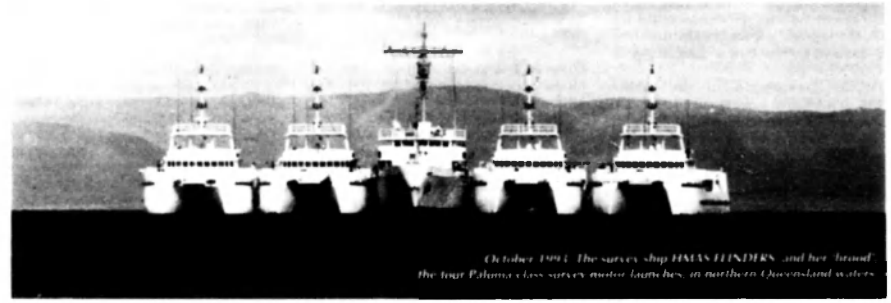
Was the exercise worth all the effort that went into it? Undoubtedly yes. Familiarity with the unique conditions present at Hay Point and Mackay, means that the RAN's Mine Warfare and Clearance Diving Forces would find the protection of these vital ports much easier in the event of a threat than would otherwise be the case.

March 1986. HMAS PERTH heads a group of RAN warships off Sydney. These include the destroyer HMAS HOBART, HMAS SYDNEY (left) and HMAS ADELAIDE (left).





A sonar photograph of the former HMAS SWAN, now lying in 40 feet of water in the Hawkesbury River, north of Sydney. The old torpedo-boat destroyer's rounded stern is visible to the right. SWAN's bow was blown off prior to sinking.



October 1994. The survey ship HMAS FLINDERS and her 'brood': the four Paluma-class survey motor launches, in northern Queensland waters.

August 1995. HMAS ODIN departs HMAS Platypus in Sydney. The other boats are HMAS OXLEY (centre) and HMAS OVENS (right).

# In Brief

By Geoffrey Evans

### *Re-naming Ships*

A rather confusing aspect of the modern shipping world is the custom of re-naming ships, not once but often several times. Of particular interest to many Australians is P&O's proposal to name the replacement for CANBERRA, which is to be withdrawn from service at the end of September 1997 (reported in the UK SHIPS MONTHLY in August 1996) - ARCADIA, the third P&O ship to bear that name.

Named after a Greek province, the first ARCADIA was a steamer built in 1888. ARCADIA (2) was built at John Brown's shipyard on the Clyde in 1953 and at the time was the largest vessel launched from that yard: of 29,871 GRT the handsome liner spent most of her life on the regular UK-Australian run until withdrawn from service and broken up in 1979.

The background of the future ARCADIA (3) is somewhat less British. The 63,547 GRT vessel was built at St. Nazaire (France) and completed in 1989 with the name SITMAR FAIRMAJESTY. Subsequently re-named STAR PRINCESS the ship is essentially a state-of-the-art cruising vessel and as such is known to many Australians. A member of the 'Love Boat' family, STAR PRINCESS/ARCADIA-to-be is manned by a mixed nationality crew, is registered in Liberia and operated by an American based off-spring of P&O: All very multicultural.

For many years the author of 'In Brief' believed the name of a new ship was a closely guarded secret until the actual launch - the breaking of the bottle and "I name this ship —".

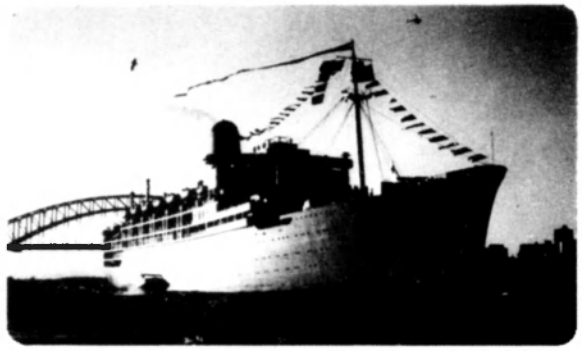
Changing the name of a ship was thought to result in bad luck.

Sadly so far as the RAN is concerned, these harmless customs have disappeared and ships are named or names reserved, years before keels are laid or even before current holders of a name are paid-off.

On the other hand the early announcement that two new 'Anzac' frigates would be named ARRERNTE and WARUMUNGU, a new spelling of the original Tribal class destroyers named ARUNTA and WARRAMUNGA, caused such a fuss that a decision was made to retain the old names - an excellent decision in the opinion of the writer who was a member of WARRAMUNGA's commissioning crew.

### *HMVS CERBERUS*

In a letter to the editor of THE NAVY, October-December issue, John Whitelaw



*ARCADIA leaving Sydney for the last time. (Photo - Ross Gillett)*

of the ACT suggested the guns of the old monitor could be removed and mounted ashore.

The current plan is to raise CERBERUS sufficiently to present the vessel in normal trim, i.e. not partly submerged in order to offer a smaller target when in action. The guns are part and parcel of the plan but should it not prove possible one might expect removal of the guns to be considered.

### *Sea Lanes*

The Indonesian Government's reported proposal to restrict the number of sea lanes available to international shipping wishing to transit its region is obviously a matter of concern to Australia. The following extract from the *1996 Annual Review of the Australian Shipowners Association* explains the situation and is reprinted with the Association's permission:

"The Indonesian Government has advanced a proposal to designate three north-south sea lanes through its region. The recent United Nations Convention on the Law of the Sea, (UNCLOS) enables archipelagic States such as Indonesia, to designate archipelagic sea lanes within States' regions, in consultation with the international community. Indonesia is a signatory to the Convention.

Under the Convention, vessels traversing in these designated sea lanes will continue to enjoy the right of 'archipelagic sea lane passage' (equivalent to 'transit passage') while the archipelagic state has some sovereignty over these areas, and can legislate to give effect to applicable international conventions. The State is also able to introduce fishing, customs, fiscal, immigration and sanitary regulations.

ASA expressed concern to the Federal Department of Transport on some aspects of the Indonesian proposal, which are not in conformity to provisions contained in the Convention. Under the Indonesian proposal, only three lanes are to be designated, yet the Convention is specific that if a State wishes to designate archipelagic sea lanes it can do so provided that all sea lanes normally used for international trade are designated. ASA is of the view that there are some 15 sea lanes normally used for international trade in this region.

The sea lanes being advanced by the Indonesian Government are the north-south sea lanes which cover Sunda, Lombok, and Ombal/Wetar Straits with the two points of access to the eastern most lane, one through the Ombai and the other through the Wetar Straits. Under the Indonesian proposal, there would be no east-west lane, which presently is one of the most important sea lanes for Australian Trade. The absence of an east-west sea lane would impact severely on sailing distances between the East coast of Australia and the West coast of Australia to Asia markets. Initial indications reveal an increase between 8% and 20% in sailing distances, translating into higher freight costs.

The Australian Government is presently holding talks with the Indonesian Government on its proposal. The Indonesian Government has indicated that it intends to submit its designation proposal to the International Maritime Organisation within the next six months."

It is hoped that this matter can be successfully resolved.



# Indonesian Naval Profile


### *Expanding into new roles.*

Established in 1945 with the declaration of an independent Indonesia, the Tentara Nasional, or Indonesian Navy, has grown from modest beginnings to a force of more than fifty combatants, supported by another three score auxiliaries and support ships. Developed originally to support the Army in maintaining internal security throughout the Indonesian archipelago, the Navy is today shifting it's focus from such brown-water roles to that of a true blue-water navy.

This focus is partly attributable to the decline in the various insurgencies that once plagued the nation, allowing the navy to look further afield, however the potential for maritime instability within the region is another. The greatest such threat that faces Indonesia, as it does other South East Asian countries, is the bellicose territorial claims of China who have laid title to vast tracts of the South China Sea. These sovereignty disputes involve Indonesia, China and several other nations including Malaysia, Vietnam, the Philippines and Brunei. Given China's increasing propensity to throw it's weight around, witness the heavy handed "missile tests" off Taiwan in April 1996, it would seem prudent for the Navy to focus on its ability to give weight to Indonesia's territorial claims.

Having celebrated its half century with a major fleet review last year, and facing up to new challenges as it enters its second half century, it seems a good time to take a closer look at the Indonesian Navy.

### *SUBMARINES*

Two Type 1300 submarines are in service, CAKRA and NANGGALA. Variants of the popular German-designed Type 209 series, sister boats are in service with more than a dozen navies around the world. Displacing 1390 tonnes, each is armed with eight torpedo tubes and 14 torpedoes and can replace each torpedo with a number of mines. Ordered in 1977, both boats were delivered from HDW's Kiel yard in Germany in 1981. The Indonesian Navy's experience with submarines has not been a particularly happy one, with both submarines returning to Kiel in 1986-89 for refits that turned out to be both lengthy and expensive. It is believed that the cost involved was such that it discouraged the placing of further orders. Another major refit of CAKRA took place in 1993-96, this time undertaken locally at Surabaya. The success of this refit will have a major impact on the decision to order new submarines however it is generally acknowledged that funds are tight, and will remain so for some time to come.

### *ERIGATES*

The frigate force is made up of a grab-bag of ships, reflecting the diverse procurement policies that have been followed over the years. New build vessels from the Netherlands and Yugoslavia serve alongside second hand ships from the United States, the United Kingdom and the Netherlands, further complicating the maintenance of the fleet. Many are nearing, or have reached, the end of their service lives and will require replacement in the near future. Plans existed in the early 1990's to acquire frigates of modern design however the acquisition of the former East German ships seems to have postponed those plans indefinitely.

The most potent ships are the six AHMAD YANI class frigates formerly operated as the VAN SPEJIK class by the Netherlands Navy. Dutch-built variants of the popular LEANDER class, they were transferred over the period 1986-90 at approximately yearly intervals. Displacing 2850 tonnes, with a crew of 180 and capable of 29 knots they are armed with eight Harpoon surface to surface missiles (SSM), two quad launchers for the Seacat surface to air missile (SAM), two triple anti-submarine (ASW) torpedo tubes and a 76 mm gun capable against both air and surface targets. A single Westland Wasp or NBO 105 utility helicopter is also carried. While generally well regarded ships they must be considered in the twilight of their service lives, having entered Dutch service in 1967 and operated in the harsh North Atlantic environment for much of their careers.

The three ships of the FATAHILLAH class were ordered from the Netherlands in 1975, and commissioned in 1979-80. At only 1450 tonnes with a crew of 89 they are small but considerable effort went into packing substantial firepower into comparatively small hulls. The first two ships, FATAHILLAH and MALAHAYATI, are armed with four Exocet SSM, one Bofors 120 mm and one 40 mm gun together with two 20 mm cannon, two triple ASW torpedo tubes and a Bofors ASW mortar, firing depth bombs up to 3600 m in front of the ship. The third ship, NALA, replaces the ASW torpedo tubes with a flight deck and hangar for a single Westland Wasp helicopter. Crew numbers have been kept down to 89 through automation, especially in the engineering plant, a diesel and gas turbine arrangement which can drive the ships at up to 30 knots.

The three TRIBAL class frigates were originally commissioned into the Royal Navy in the early 1960's and were purchased by Indonesia in 1985-86. Generally obsolescent, TIYAHAHU, YOHANNES and HASANUDDIN are armed with two quad launchers for the Seacat SAM, a twin 4.5 inch gun mounting, two Oerlikon 20 mm cannon and a Limbo ASW mortar. A single Wasp or NBO 105 helicopter is carried. Originally capable of some 25 knots, crew is a substantial 270 and all three must be considered near the end or their service lives.

The oldest members of the frigate force are the four SAMADIKUN class frigates. Originally commissioned as members of the US Navy's CLAUD JONES class in 1960, all were transferred in the early 1970's. They are armed with a single 3 inch gun and a number of 37 mm and 25 mm cannon in addition to two depth charge throwers and the usual two triple ASW torpedo tubes. Lacking modern missiles or air defences and only capable of a modest 22 knots, they must be considered useful only for training and patrol duties. It was originally expected that they would decommission upon the arrival of the former VAN SPEJIK class frigates from the Netherlands but they have been kept on, perhaps to train

crews for the recently acquired former East German ships. Complement is some 170.

While rated as a frigate, the 2050 tonne Yugoslavian-built KI HAJAR DEWANTARA serves mainly in the training role. Delivered in 1981, she is armed with four Exocet SSM, a Bofors 57 mm gun, two 20 mm cannon, two ASW torpedo tubes and a depth charge launcher. A platform but no hangar for a single helicopter is fitted. Complement is 76 with facilities for the embarkation of some 100 students and 14 instructors fitted. To aid in her secondary role of troop transport, she is fitted with two landing craft (vehicle and personnel).

### *CORVETTES*

The Indonesian Navy corvette force comprises the sixteen ex East German Navy PARCHIM class ships acquired as part of a major deal brokered in 1993. The background to this deal is confusing, as the Indonesian Navy was reported at the time as not wanting the ships. Some thirty nine vessels formerly belonging to the German Democratic Republic (GDR) became available after the reunification of Germany in 1990. The Federal German Navy did not want them and they were placed on the market in 1991. It is reported that the influential Indonesian Minister for Technology, Professor Habibie, brokered the deal during a visit to Germany over the objections of the Indonesian Navy, who felt that the ships were not suitable for their needs. It was further felt that introducing a completely new set of weapons and machinery into an already diverse spares inventory would only prove to be a further drain on the Navy's tight resources. Reports have already surfaced of major difficulties in supporting the main engineering plants of the PARCHIM's. Nonetheless, despite the Navy's opposition the deal went through and the ships were acquired in 1993 for a reported $12.7US, with deliveries beginning in October 1993.

The sixteen ships of the PARCHIM class, now known as the KAPITAN PATIMURA class, underwent a basic refit in Germany prior to sailing from Germany in small groups commencing in late 1993. Modifications were required in the areas of accommodation, communications, air-conditioning plant and increases to the ships range, with further modifications carried out upon arrival in Indonesia before they entered service. Displacing some 800 tonnes at full load with a complement of 62, they are armed with a twin 57 mm gun mount aft and a twin 30 mm cannon mount forward. Designed for ASW work in the shallow waters of the Baltic, a heavy ASW armament is fitted, comprising two twin ASW torpedo tubes, two RBU 6000 ASW mortars and two depth charge racks. Maximum speed is listed as 28 knots.

### *PATROL CRAFT*

The nature of the Indonesian archipelago is almost perfect for the use of small gun and missile armed strike craft. Numerous small islands and large fleets of small fishing boats offer many opportunities for a well handled fast attack craft (FAC) to strike at unsuspecting enemy ships, ensuring that a number of these craft are operated by the Indonesian navy. Unfortunately, these same conditions are perfect for the operations of groups opposed to the government in Jakarta, several of whom are still engaged in campaigns against the government, notably in Aceh province and in the territories invaded by Indonesia since independence, East Timor and Irian Jaya. To support the Army's counter-insurgency operations a large number of smaller patrol craft are also in service.

Probably the most potent FAC in service are the four DAGGER class missile boats commissioned on 1979-80. Displacing 270 tonnes and armed with four Exocet SSM, a Bofors 57mm gun and a Bofors 40mm cannon, they are capable of more than 40 knots from their gas turbine engines. Built in Korea, they have a complement of 43.

A number of locally built gunboats are in service, all generally similar of which the oldest are the four SINGA class, built to a German design between 1988-93. Displacing some 150 tonnes at full load with a crew of 42, they are capable of some 27 knots. Armament is a single Bofors 57mm gun, backed up by one 40mm and (in the last two boats) two 20mm cannon. Two torpedo tubes are also fitted in the first two vessels.

Completed during the same period were the four KAKAB class gunboats. Built to a generally similar design, they carry a lighter armament of a single 40mm cannon and two 12.7mm machine guns, the space thus freed up being used to support a helicopter platform for a single NBO 105 or Wasp. Displacing only 423 tonnes and barely 57 metres long, they are probably approaching the smallest size possible for helicopter operations, with flying almost certainly restricted to calm weather. One feature of the design is that they have accommodation for an additional 17 personnel over and above the complement of 40, allowing the transport of two rifle platoons.

The usefulness of these gunboats has led to an order being placed for a further four 450 tonne boats. With a designed speed of 27 knots and a crew of 42 they will be armed with a Bofors 57mm gun, one 40mm and two 20mm cannon. Basically an improved version of the earlier SINGA class, they are expected to enter service from late 1997.

A number of other patrol craft are in service, including a number of ex-Australian ATTACK craft patrol boats. Eight were transferred to the Indonesian Navy between 1973 and 1986 where they were operated as large patrol craft. Displacing 150 tonnes with a crew of 19, they are armed with a 40mm cannon however most are in poor repair and are likely to pay off soon. To deal with the problems of smugglers and insurgents using high speed motorboats, the navy investigated the use of hydrofoil patrol boats, with a 117 tonne Boeing Jetfoil ordered for evaluation in 1981. Initial trials were followed by an order for an additional four vessels, known as the BIMA SAMUDERA class, however they have proved somewhat of a disappointment in service, despite their 48 knot top speed. Armed with a 40mm and 20mm cannon, they can carry some 100 troops in addition to their crew of 12. Reports indicate that they will soon suffer the same fate as the first, sold into civilian service.

For use as inshore patrol boats, the Indonesian Navy operates some 25 KAL KANGEAN class coastal patrol craft. They displace some 45 tonnes and are armed with twin mounts for two 25mm cannon and two 14.5mm machine guns.

### *NAVAL AVIATION*

The Indonesian Navy operates a number of helicopters from frigates, amphibious ships, survey vessels and from shore bases. Aircraft operated include twelve NBO 105 helicopters for utility duties, four aging Westland Wasps that are normally based on the AHMAD YANI class frigates, four equally ancient Bell 47 helicopters operated from the survey ships and four Super Puma transport helicopters that operate from the amphibious ships. Current Indonesian plans are to purchase a new helicopter type to replace both the Wasp's and Bell 47's. Competing for the order are the Kaman Super Seasprite and the Westland Super Lynx, with an order expected in 1997.


*TELUK CLEUKAN BAWANG, 1 of 12 Frosch class landing ship tanks.*


*Former East German Parchim class corvette SUTANO.*


*AHMAD YANI class frig. KI HAJAR DEWANTARA operating with HAWK MK.53 [illegible]*

Name ship of the FATAHILLA class of small frigates.

### AMPHIBIOUS AND ARMY SUPPORT SHIPS

The need to shift Indonesian Army forces between the islands that make up the Indonesian archipelago, and to support forces deployed in Irian Jaya and East Timor requires a substantial amphibious capability, with some 20 such ships in service.

Transferred in August 1993, the 12 ships of the former East German FROSCH class Landing Ship (Mechanised) make up the majority of the amphibious force, allowing the paying off of a number of older ships. Displacing some 1950 tonnes, these ships can beach to disgorge some 600 tonnes of vehicles and stores via bow doors. Supplied unarmed, they now mount four 37mm cannon however in East German service they mounted rather heavier 57mm guns, raising the possibility that they may be further rearmed.

The next most common type are the six TACOMA class Landing Ship (Tanks), built in Korea in the early 1980's. Displacing some 3750 tonnes at full load, they are capable of delivering some 1800 tonnes of cargo across the beach via their bow doors, including up to 17 main battle tanks. If no tanks are carried several hundred additional troops can be accommodated. Armed with three 40mm and two 20mm cannon, all are fitted with a helicopter platform. Three of the class have hangar facilities for a single Wasp or NBO 105 utility helicopter while the last two ships have a different hangar arrangement to allow up to three Super Puma helicopters to be operated.

Two former US Navy Landing Ship (Tanks) are in service. The 4200 tonne TELUK AMBOINA was transferred new in 1961. Capable of beaching with some 2100 tonnes of cargo, including 200 troops, she is armed with six 37mm cannon. The TELUK BONE, commissioned into the US Navy in 1944 and transferred in 1961, is the survivor of a class of five LST 512-1152 class that have progressively paid off from active service as replacements have entered service. It has a similar lift capacity to TELUK AMBOINA but is armed with seven 20mm cannon. To support the larger ships, a fleet of some sixty small landing craft are in service, including Landing Craft (Vehicle), (Mechanised) and (Utility).

Additional support is provided by three TISZA class support ships. Built in Hungary and transferred in the early 1960's, these 2400 ton vessels provide cargo transport amongst the islands in aid of both the Army and detachments of Navy patrol craft. To transfer larger numbers of troops a former passenger liner, the PRINCESS IRENE was acquired in 1978. As TANJUNG OISINA the 8450 tonne ship carries several hundred personnel between the various island garrisons.

### MINE WARFARE CRAFT

The mine warfare forces of the Indonesian navy were small for the scope of the task that faced it, with all international and most internal trade carried by sea, however the acquisition of the former East German ships has provided a major boost to the mine countermeasures force.

The most capable vessels are the two Tripartite minehunters ordered from Europe in 1985. Equipped to act as minehunters or minesweepers as required, these 570 tonne fibreglass hulled ships are armed with two 20mm cannon and equipped with a PAP 104 remote controlled submersible for mine disposal. Originally up to 12 were to have been acquired but funding was not available. Sister ships serve in the navies of France, Belgium and the Netherlands.

The nine ex-East German KONDOR II coastal minesweepers acquired in 1993 are equipped for minesweeping only, and are being fitted with the ADI Dyad magnetic influence sweep. Displacing 310 tonnes and capable of 17 knots, they are more usually tasked for patrol duties than their mine countermeasures role. They are armed with six 25mm cannon in three twin mounts and have a complement of 31. The remainder of the mine warfare force is made up of two ex-Soviet T 43 class ocean minesweepers left over from the brief Indonesian flirtation with Russia in the 1960's. Displacing 580 tonnes and armed with four 37mm cannon and eight 12.7mm machine guns, they too are commonly utilised as patrol craft.





### HYDROGRAPHIC SHIPS

With so much maritime traffic passing through Indonesian waters, accurate charts are essential. To this end a diverse range of oceanographic, hydrographic and survey ships are operated. Largest is the 2733 tonne survey ship DEWA KEMBAR, formerly the Royal Navy survey ship HYDRA. Transferred in 1986 and operated by a crew of 123 she is fitted out to conduct surveys and chart the sea bed. Two survey launches are embarked to carry out inshore operations.

Two ships are dedicated to naval research, the 2165 tonne BURUJULASAD and the 980 tonne JALANIDHI. The German built BURUJULASAD was commissioned in 1967 and conducts research in a number of areas, including meteorology and current flows. A complement of 28 scientists supplements the 108 crew members. To assist in her work a hangar is fitted for a Bell 47 helicopter and three survey motor launches and a small landing craft are carried. The Korean built JALANIDHI, commissioned in 1963 and understakes similar duties to BURUJULASAD. Complement is 87 crew and 26 scientific staff.


For oceanographic and hydrographic work four ships of the BARUNA JAYA class are in service, with another under construction. Designed and built by the French shipyard CMN in Cherbourg, these 1425 tonne ships are fitted out to specialise in one or other role while the fourth in service is assigned to assist the Indonesian Ministry of Technology in conducting research and development. They have a complement of 37 plus up to 30 scientists, depending on the task in hand.

### AUXILIARIES

To support the diverse range of ships operated by the Indonesian Navy requires a substantial support network. Given the large area over which the Navy operates, some 3000 kilometres of coastline and more than 14,000 islands, some form of mobile support was necessary. To provide this afloat support the Indonesian navy operates a number of support ships, in addition to several tankers. The largest of these is the command ship MULTATULI. Displacing some 6750 tonnes, she provides fresh water, provisions, ammunition, stores and replacement crew for smaller vessels, as well as providing the medical facilities often lacking in small patrol craft. A number of workshops allow repairs to smaller craft to be undertaken. Armed with six 37mm cannon and equipped with a helicopter platform MULTATULI has a complement of 130 and can support a flag staff if necessary for major operations, being fitted with an extensive communications facility.

Other support ships include a former US Navy 1945 vintage LS(T), the JAYA WIJAYA, used as a repair vessel. Displacing some 4350 tonnes, she was transferred in 1971 following service supporting small craft during the Vietnam War. She has continued in this role under her new ensign ever since but is due to be retired now that replacements are available. Those replacements are two FROSCH II support ships, sisters to the FROSCH Landing Ship (Tanks) acquired from Germany in 1993. Displacing some 1700 tonnes, they are to be fitted out for use as support and repair ships, taking over from the JAYA WIJAYA.

The Indonesian navy operates two replenishment tankers, allowing operations by task forces away from port facilities. The older of the two, the 5100 tonne SORONG, was commissioned in 1965 and has a limited capability to supply fuel and fresh water underway on both sides and over the stern. With a speed of only 15 knots she is rather too slow to operate with a task group and is nearing the end of her operational life. To supplement SORONG the Indonesian navy acquired the former Royal Navy tanker GREEN ROVER in 1992. Christened ARUN, the 11520 tonne tanker can supply fuel, fresh water, dry cargo and refrigerated store to other ships, and is fitted with a helicopter platform to allow cargo to be transferred via vertical replenishment by helicopters up to Super Puma size. Compared to the 110 crew of SORONG, ARUN requires a complement of only 49 and is somewhat faster at 20 knots. Two 1500 tonne tankers of the KHOBI class are used to ship fuel between naval bases. A number of tugs are in service, the largest of which is a 1942 vintage 1600 tonne ex-US Navy CHEROKEE class ocean tug RAKATA, acquired in 1961, which is now mostly used for patrol duties. The 1470 tonne ocean tug SOPUTAN was built in 1995 at a South Korean yard and has generally replaced RAKATA for ocean towing duties. A number of much smaller tugs are in service at the major naval bases.

### CONCLUSION

The Indonesian Navy operates a diverse collection of vessels, acquired from a wide range of suppliers. The acquisition of the former East German ships has allowed a rapid expansion of the Navy's surface fleet but has exacerbated the already existing maintenance problems. In addition, the majority of the fleet is more than twenty years old, with some frigates and auxiliaries having seen more than thirty years service. The East German purchase, while enhancing the patrol and amphibious capabilities of the Navy, has only delayed the decisions that will have to be made on new construction.

Despite the limitations imposed by the older vessels in service, the Indonesian Navy is developing a capability for extended deployments out of home waters, with task forces venturing as far afield as Southern Australian waters. The acquisition of the ex-East German ships has given the Navy a breathing space, allowing the shape of the future fleet to be determined. The 50 years since formation have seen the growth of the Indonesian Navy from nothing to a formidable brown-water fleet. The next 50 should see it stand clear of the land and into the deep blue of the open ocean.

# Too Much Centralisation Imperils Balanced Judgement

By Navy Leaguer

***Centralisation in the Department of Defence and of the three uniformed services has been underway steadily since the Tange Report on the Reorganisation of the Defence Group of Departments was implemented beginning in 1974.***

At that time, there was much talk of an alleged uniformed service inability to agree with one another and to alleged interservice disputes and bureaucratic infighting. It was implied that the public service part of Defence would be better placed to resolve such disputes. This criticism ignored the fact that there is a difference between bureaucratic quarrelling and professional debate. The former is highly undesirable whilst well balanced professional debate is absolutely essential.

In the event, the years following the Tange Report saw much more dispute between the uniformed services and some parts of Defence public service than it did between the three services.

To assess where we are now, it is necessary to review the development of the current organisation and decision making methods.

In 1973, just prior to the Tange Report, the individual Service departments were abolished and their roles and civilian staffs subsumed by one Department of Defence. Shortly afterwards, the Chairman of the Chiefs of Staff Committee became Chief of the Defence Force Staff. That Officer assumed some authority over the three Chiefs of the Air, General and Naval Staffs.

A significantly greater, and necessary, balance of judgment was applied to force development (ie capital equipment and facilities) decisions. This balanced judgment was applied to recommendations prepared by the individual services.

Another consequence of the Tange Report was the abolition of the traditional service boards and the collective responsibility held by those Boards. Instead, the Chief of the Naval Staff hoisted his Vice Admiral's Flag and assumed command of the Royal Australian Navy.

However, since that time, there has been a continuing process of centralisation. Often this has been insidous. Sometimes there have been substantial formal changes.

Allegedly, this has been in the interests of improved decision making and staff economies.

In the ADF today, there are one full General, two Vice Admirals, one Lieutenant General, one Air Marshal, seven Rear Admirals, Sixteen Major Generals and eleven Air Vice-Marshals.

Before the Tange Report was first implemented, in June 1972, in the RAN there were one full Admiral (the Chairman of the Chiefs of Staff Committee), one Vice Admiral and nine Rear Admirals.

Although there has been a reduction in the number of flag officers, there has been a significant increase in the number of two star officers in the other two services. In fairness, it must be recognised that the balance between the services changes as tri-service ('purple-suited') appointments rotate. However, it must be recognised that Army has five two star commands compared with Navy's two and Air Force's three.

Nevertheless, it is difficult to avoid the conclusion that centralisation has not produced economies of senior uniformed personnel.

Public knowledge of numbers in each rank of public servant is obscured by the inclusion of several levels within some ranks (for example, there are several levels of assistant secretary). However, there is little evidence that centralisation has produced a reduction in numbers of very senior public servants.

There has, however, been a very substantial reduction in the number of more junior uniformed service and civilian personnel. In part this has been as a result of promises achieved through the commerical support programme and other forms of contracting out.

Significant efficiencies have been achieved both in individual services and through centralisation of some functions (such as distribution of parts etc). Further significant efficiencies have been achieved through devolving (ie decentralisation) of some functions from Canberra to individual service commands.

In summary, there is little evidence that significant efficiencies have been achieved through centralisation in Canberra.

Turning to decision making, it can be argued that one balanced nature and degree of centralisation implemented to date has produced a number of sound decisions on capital equipment and facilities.

A very important factor in this has been the balance of input from the centralised Headquarters Australian Defence Force, the civilian analysis and aquisition groups and the three services.





The process requires major proposals to be prepared by sometimes relatively junior individual service groups within HQ ADF. Above this relatively junior level, all proposals are inevitably passed through one officer who will often be from a service other than that primiarily affected by the proposal.

The options are analysed by civilian personnel in Force Development and studied by the acquisition group.

The resulting recommendations are considered by the Chiefs of Staff Committee, who provide the balance of input with the authority of three star officers - in Navy's case by the Chief of the Naval Staff. The maintenance of senior individual service input at this level is absolutely vital. That will not be achieved at lower than three star level.

Although the CNS (and the CGS and CAS) have only small staffs to advise them in this, the system of 'two hattedness' provides them both with access to more specialist advice and an input to major decisions at an earlier stage in the process.

Two hattedness is an organisational principle whereby individuals have responsibility to two more senior people. Thus, in the RAN, the Assistant Chief of Naval Staff – Materiel (ACMAT-N) is responsible to both the Chief of Naval Staff and to the Deputy Secretary Acquisition. On the staff side, the Director General Force Development (SEA) is responsible to the Assistant Chief of Defence Force (Capability Development) and responsive to the Chief of Naval Staff.

The continuation of this balance of input is absolutely vital to the ability to the ADF to fight in the event of a military emergency. This is currently in danger.

There are areas, such as the provision of service requirements common to all services, where centalisation can achieve economies while continuing to provide that service. However, it is essential the providers of that service always remember that they are there to do just that – provide a service. This can best be achieved by two hatted organisations.

There are other areas where more centralisation carries a real risk of damaging counterproductivity. Both are vitally important.

The first is force structure development (including capital equipment and facilities) and the second is personnel.

It is no fault of individual appointees, but it must be recognised that personnel is currently the area of the ADF's greatest difficulty. This is due in major part to some outdated principles of industrial relations that have continued to apply in the public sector generally long after they have become obsolete in free enterprise.

The Glen Report has identified a number of major changes required to rectify the ADF's personnel problems. These will be difficult for all three services, but markedly more so for Army than for the RAN and RAAF.

This greater difficulty for Army emphasises once again the major differences between the operational circumstances of the three services – Navy at sea in ships, Army on the battlefield and Air Force operating primarily from major bases.

The ADF's personnel difficulties would be aggravated by organisational changes which failed to recognise that the services will perform best when led and administered by professionals in their own field, who have themselves experienced life at the fighting end.

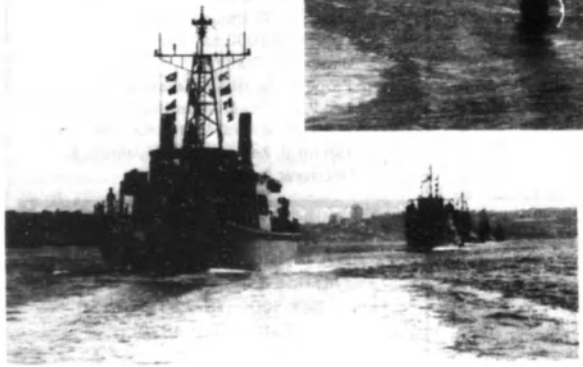
Obviously, at a very high command level, there must be common decision making. The recent appointment of a Comander Australian Theatre recognises this and the importance of having ADF commanders who concentrate on command in a military emergency.

The current Defence Efficiency Review provides an opportunity for centralists, more interested perhaps in the aggrandisement of their own positions and careers, to press for more centralisation than is prudent. The paramount requirement is for an ADF able to fight optimally in all levels of military emergency.

# Mine Warfare Xmas


*The auxiliary minesweeper BERMAGUI sailed into Sydney Harbour in true XMAS spirit on 4 December. The boat had met up with the five other mine warfare ships, returning from their recent Queensland exercises. To mark the occasion all vessels mounted a XMAS tree near their bridge. BERMAGUI went a bit further and embarked a Santa ton the bridge wing! for the voyage up harbour to HMAS Waterhen.*
*(Photo – ABPH Simon Metcalf)*

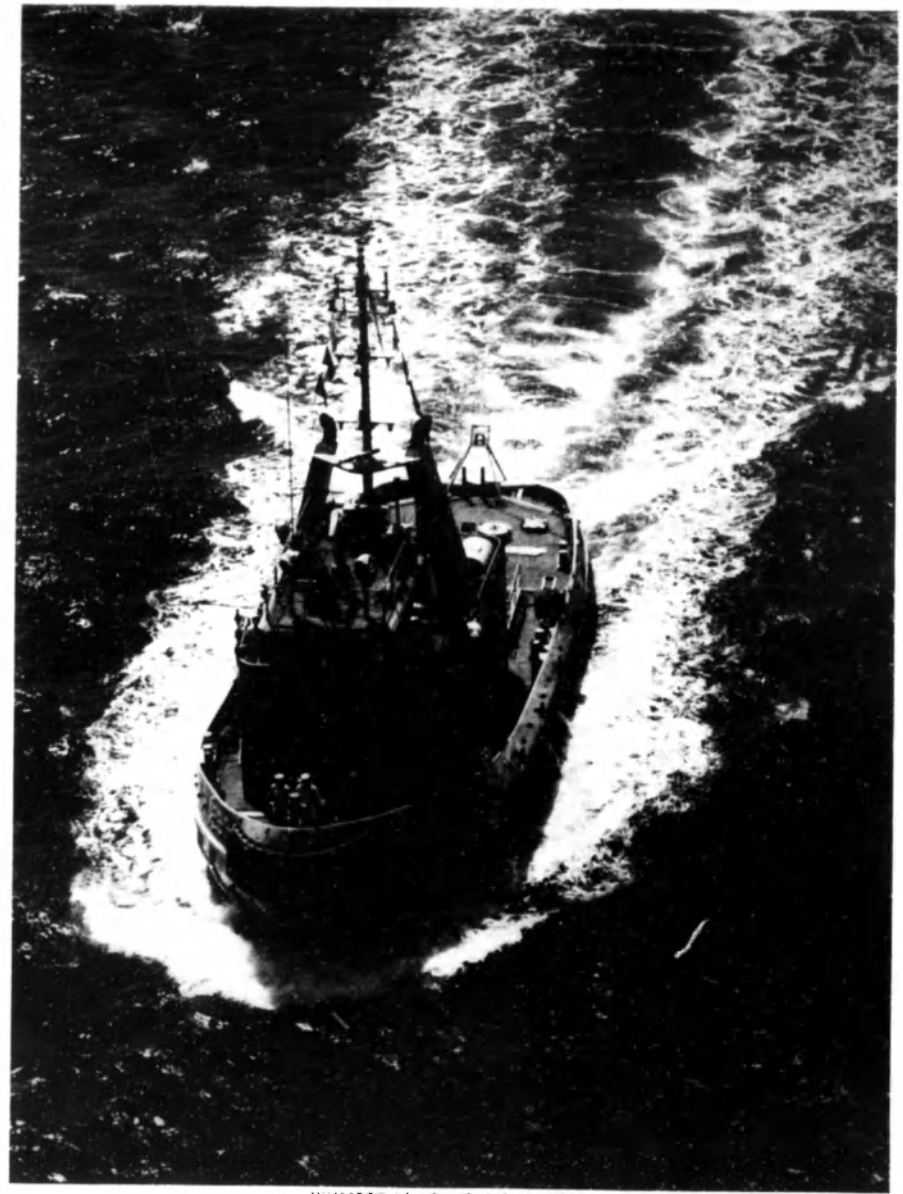
*The sailing ship BOUNTY provides a stark contrast to the six MCM vessels as they pass Fort Denison.*
*(Photo – Dean McCorkelle)*



*Five of the six MCM vessels to arrive in Sydney on 4 December are depicted just after arriving in Harbour. HMAS RUSHCUTTER leads BROLGA, WALLAROO, BANDICOOT and KORAAGA.*
*(Photo – ABPH Simon Metcalf)*







*WALLAROO, taken from the Sydney Harbour Bridge on 4 December. (Photo- Dean McCorkelle)*

# LPA Update

The Royal Australian Navy's ex-US Navy tank landing ships HMAS KANIMBLA and HMAS MANOORA are now at the Newcastle yard of Forgacs dockyard for conversion to their new roles. The ships have also been reclassified as attack transports (LPA), not training and helicopter support ships (LHSS) as when originally purchased.

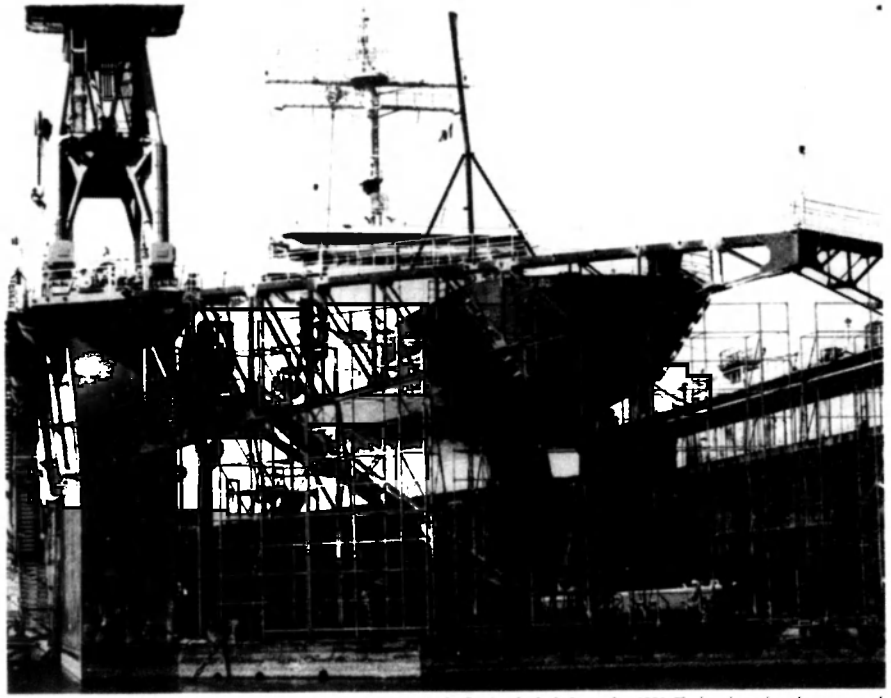
About 12 months is expected to elapse before work is completed and the ships return to their permanent base at Sydney. More time has been allocated for the work because of the inclusion of accommodation improvements which were not in the original conversion plans. The modifications will enable each ship to operate in either the training and army helicopter support roles. The training role will include both general naval personnel and the substantial number of additional Fleet Air Arm personnel required for the naval helicopters for the ANZAC class frigates.

Specific modifications to KANIMBLA and MANOORA include the removal of the bow arms and machinery for the bow ramps - the latter have already been removed. Three helicopter landing spots for simultaneous operations will be provided - one forward of the bridge and two on a flight deck abaft of the hangar.

Although all three landing spots will be suitable for both day and night operations, the weather conditions under which operations will be feasible for the forward spot will be limited to occasions when the LCM Mk 8s are not embarked. A 70-tonne crane is being installed to handle the LCMs. The hangar itself is to be built aft of the funnels, with space for four Army Black Hawks or three RAN Sea Kings and is described as an 'aircraft shelter', reflecting the minimal maintenance facilities to be installed. The flight deck aft will be strong enough for an Australian Army CH-47D Chinook.

Tanks are being provided for 250 tonnes of aviation fuel, for which distribution arrangements are being installed, as will also be new boilers and additional portable water capacity. Bilge keels will reduce rolling. Kelvin Hughes 1007 navigation radars will also be fitted. The standard of accommodation is to be improved considerably, with provision being made for additional messdecks and mixed-general crewing, both by Army and RAN personnel. Dual-use compartments will be built for training purposes (in the training role) and as command control rooms for the land force commander when the ships operate in the amphibious role. Communications equipment will include that in general use by the Australian Army.

Budget shortages have limited the installation of improved medical facilities to one ship, but she will, however, have more facilities for initial surgery of wounded troops and sick civilians. The latter feature will be particularly important, given the ship's disaster relief role. Other desired facilities for which insufficient funds were available include a training bridge and roll-on/roll-off facilities for military vehicles. However, the design provides for both these facilities should funds become available later.



*HMAS KANIMBLA in the floating drydock, September 1996. The bow horns have been removed.*



# MOSTLY SAILORS

**By Carla Evans**
**Reviewed by Geoffrey Evans**

*MOSTLY SAILORS* is a series of anecdotes - 17 in all - written in the main, as the title implies, by naval personnel concerning their experiences in the Vietnam War.

The strongest message to come through so far as this reviewer is concerned - and all the more convincing because of the clear lack of collusion between the various writers - was the anger and bitterness felt by many Vietnam veterans when they returned to Australia; a community that had originally supported Australia's intervention had changed its collective mind and now opposed involvement. Fair enough that perceptions of the war should change but to criticise or 'take it out' on the Service personnel involved was grossly unfair.

Written by sailors and soldiers who served in vessels ranging from the guided-missile destroyers to Army-manned landing craft; by personnel who flew and maintained our helicopters attached to American units, *MOSTLY SAILORS* does not pretend to be a great literary work but it does enable the reader to glimpse the Vietnam war through eyes of participants who would not normally have the opportunity to commit their thoughts to paper.

Some of the stories are quite moving and caused the reviewer to reflect, by no means for the first time, on the absolute futility and waste of war.

Carla Evans (not related to the reviewer) is also the author of *TRAUMA TEARS AND TIME*, The soldiers' view of the Vietnam war; she is to be congratulated on completing the picture by adding a maritime element.

*MOSTLY SAILORS* may be obtained from Carla Evans. Her address is:

Younger Street, Wangaratta, Victoria 3677. The price is $15.00 plus $2.50 packaging and postage.

# THE CORFU INCIDENT

**By Eric Leggett**
**Published by Maritime Books**
**Reviewed by Joe Straczek**

To many Australians the name 'Corfu' conjures up images of expensive Mediterranean holidays. But in 1946 the name had a completely different meaning.


During the Second World War a minefield had been laid in the channel that separates the small island of Corfu and the Albanian coast. A cleared channel was maintained in this field for ships to use. After the war the channel was verified but the minefield was not immediately cleared. British warships using the channel had to navigate very close to the Albanian shore.

On 15 May 1946 two British cruisers enroute to Corfu were fired upon by Albanian shore batteries. Neither cruiser was hit and Britain registered a diplomatic complaint to Albania. This action was taken against a background of delicate diplomatic negotiations between Albania and Britain.

In October 1946 HM Ships MAURITIUS, LEANDER, SAUMAREZ and VOLAGE visited Corfu. On completion of the visit the ships sailed for exercises with the rest of the Fleet. The Captains of the ships were instructed to exit via the North Corfu Channel, and if fired upon, to return fire. As a precaution to this, the ships went to action stations. While transiting the channel SAUMAREZ and VOLAGE hit mines which had been laid in the swept channel. Both ships were extensively damaged, VOLAGE loosing her bows and SAUMAREZ's forecastle being severely damaged.

In his fine book *The Corfu Incident*, Eric Leggett details the background and events surrounding this 'incident'. In crisp, clear and readable prose the story is told of how, as many times in the past, sailors became the casualties of international politics.

What unfolds in the pages of Mr Leggett's book is a story of professionalism, bravery and international conspiracy. What the reader is left with after finishing Mr Leggett's book is the belief that the mines which took the lives of so many seamen and damaged their ships were laid as a consequence of overt nationalism and collusion between the Yugoslavs and Albanians at that time. That the international justice system was, and still is, incapable of dealing with such actions, is an indictment of those concerned.

*The Corfu Incident* is the perfect example of the type of incident that is likely to occur when ships are exercising the right of innocent passage through, or close to, waters of a nation which is overly nationalistic and feels that it has something to prove to the world. It highlights the dangerous role played by navies during the so-called 'Cold War'.

Though written against the backdrop of international politics, *The Corfu Incident* is in many ways the story of the sailors and their ships. The bravery and skill of individuals is clearly demonstrated in the manner in which VOLAGE, with her bows blown off, managed to come to the aid of her stricken companion.

Mr Leggett's book, *The Corfu Incident*, is recommended reading for anybody with an interest in international affairs at the start of the Cold War or the roles of navies in peacetime.

# IMPERIAL GIFT

## British Aeroplanes Which Formed the RAAF in 1921

**By John Bennett**
**Published by Banner Books**
**Reviewed by Ross Gillett**

The RAAF celebrated its 75th anniversary in 1996. One of the many books produced to mark the occasion, *Imperial Gift* is by far the most unusual, covering a very specific period when Great Britain offered to the new air arm, a selection of combat and support aircraft.

In naval terms the offer and acceptance of the aircraft, was the contemporary of the 'gift fleet' when one leader, five destroyers, three sloops and six submarines were transferred to the post Great War Royal Australian Navy.

For the aircraft enthusiast, *Imperial Gift* is a blow by blow technical and career history of the three plane types, the 58 De Havilland DH.9 and 9A bombers, 35 RAF SE.5A fighters and the 35 Avro 504K trainers. All types are covered in full, with individual potted histories of the three aircraft.

Photographically, the author has managed to secure an unbelievable number of unseen images of the historic aircraft, including aerial, ground, personnel and the many mishaps, which dogged the early aircraft.

Highly recommended. The book is available from the publisher, Banner Books on 071 23 02 55.

# Navy Week Yacht Race 1996

***The Navy League of Australia, Victoria Division's Trophy Race was conducted by the Royal Yacht Club of Victoria, (RYCV) on Saturday 12 October 1996 with 23 Yachts competing.***

Weather conditions in Port Phillip were blustery with strong winds and rough sea conditions, however the race was carried out using the Victorian Yacht Club Rules so that every participating yacht had a fair chance of competing evenly on handicap.

One of the yachting season's first major open competitive olympic course races for the 1996 season, it is listed in the yachting calendar as a Navy League trophy race in support of Navy Week.

Winner of the trophy for 1996 was RYCV Yacht R122 'Zardos'. Skipper RB Markham.

Admiral Briggs represented the Royal Australian Navy and CMDR John Wilkins RFD* RANR RET'D, repesented The Navy League of Australia, Victoria Divison together with his committee members Tom and Shirley Kilburn, Arch Waters and Alan Roberts.

RYCV Commodore Peter Bedggood opened the trophy presentation proceedings and CMDR Wilkins presented him with a full length copy of The Navy League's 'Sea and Australia' video for use in the RYCV's Cadet Training programme. The Navy League also supplied two extra copies for award to the second and third yacht race placegetters.

Commodore Peter Bedggood thanked the league for its gift and also for its liasion work with the RYCV to stage this 16th Annual Navy League Navy Week Yacht Race. He expressed the pleasure of The Royal Yacht Club of Victoria in being able to continue supporting the Annual Navy Week Yacht Race and gave a special welcome to Rear Admiral Peter Briggs RAN, who had participated in the race and was to officially present the Navy League Cup and prizes to the first three placegetters.

Admiral Briggs on *'Scarborough of Cerberus'* en route to Port Phillip via Bass Strait was forced to return to *Cerberus* on Friday Evening when a fault developed in the rigging reducing them from three to two yachts at the last minute. He quickly transferred his flat to *'Just Add Water'* at The Royal Yacht Club of Victoria but had limited time before the start of the race to familiarise the navy crew with the new yacht. The Navy's two previous wins and two seconds over the last 16 years clearly indicated that next year will see them seriously challenge all comers for the Navy League's 'Geoffrey Evans' Cup.

Competing skippers and crews attended the presentation of The Navy League's trophy, the 'Geoffrey Evans' Cup to the winner on the front lawns of the clubhouse. Admiral Briggs made the presentations.

Vice Commodore Bob McGregor, Royal Yacht Club of Victoria then hosted the official RAYCV/Navy League Dinner after the race. They were joined by the navy crews of the two yachts hosted by the navy league.

| Winners | Sail No | Yacht | Skipper | H'Cap | Corrected Time |
|---|---|---|---|---|---|
| 1 | R122 | Zardos | PB Markham | 730 | 97.248 |
| 2 | R4 | Circe | II Johnston | 835 | 98.071 |
| 3 | R51 | Sideshow Bob | P Clark | 880P | 98.941 |

*Rear Admiral Briggs (right) presents the Navy League's 'Geoffrey Evans' trophy and engraved pewter tankard to Peter Markham.*

*An excellent colour photograph of the large auxiliary minesweeper BROLGA. Note the YAGI's tree before the bridge. The vessel has twin tunnels aft and between them, two small boats to assist in the mine sweeping operations. (Photo - Dean McCorkelle)*

*HMAS COLLINS running on the surface off the Western Australian coast in September, 1996. (Photo – LSPH Peter Lewis)*


# The Navy League of Australia

## APPLICATION FOR MEMBERSHIP

## *HISTORICAL*

*The Navy League was established in Australia in 1901, initially in the form of small branches of the United Kingdom Navy League (established in 1897) and since 1950 as an autonomous national body headed by a Federal Council consisting of a Federal President and representatives of the six States, the Australian Capital Territory and the Northern Territory.*

*The Navy League of Australia is now one of a number of independent Navy Leagues formed in countries of the free world to influence public thinking on maritime matters and create interest in the sea.*

*The Navy League of Australia cordially invites you to join us in what we believe to be an important national task.*

## MEMBERSHIP

Any person with an interest in maritime affairs, or who wishes to acquire an interest in, or knowledge of, maritime affairs and who wishes to support the objectives of the League, is invited to join.

### OBJECTIVES

The principal objective of the Navy League of Australia is "The maintenance of the maritime well-being of the Nation" by:

- Keeping before the Australian people the fact that we are a maritime nation and that a strong Navy and a sound maritime industry are indispensable elements of our national well-being and vital to the freedom of Australia.
- Promoting defence self reliance by actively supporting manufacturing, shipping and transport industries.
- Promoting, sponsoring and encouraging the interest of Australian youth in the sea and sea-services, and supporting practical sea-training measures.
- Co-operating with other Navy Leagues and sponsoring the exchange of cadets for training purposes.

### ACTIVITIES

The Navy League of Australia works towards its objectives in a number of ways:

- By including in its membership leading representatives of the many elements which form the maritime community.
- Through soundly-based contributions by members to journals and newspapers, and other media comment.
- By supporting the Naval Reserve Cadets, and assisting in the provision of training facilities.
- By encouraging and supporting visits by recognised world figures such as former United States Chiefs of Naval Operations and Britain's First Sea Lords.
- By publishing *The Navy*, a quarterly journal reporting on local and overseas maritime happenings, past, present and projected.
- By maintaining contact with serving naval personnel through activities arranged during visits to Australian ports of ships of the Royal Australian and Allied Navies.
- By organising symposia, ship visits and various other functions of maritime interest throughout the year.

Member participation is encouraged in all these activities.

## JOINING THE LEAGUE

To become a Member of The League, simply complete the Application Form below, and post it, together with your first annual subscription of $22 (which includes the four quarterly editions of *The Navy*), to the Hon Secretary of the Division of the Navy League in the State in which you reside, the address of which are as follows:

**NEW SOUTH WALES DIVISION: GPO BOX 1719, Sydney, NSW 2001.**
**VICTORIAN DIVISION: PO Box 1303, Box Hill Delivery Centre, Vic 3128.**
**QUEENSLAND DIVISION: C/- PO Box 170, Cleveland, Qld 4163.**
**SOUTH AUSTRALIAN DIVISION: GPO Box 1529, Adelaide, SA 5001.**
**TASMANIAN DIVISION: C/- 42 Army Road, Launceston, Tas 7250.**
**WEST AUSTRALIAN DIVISION: C/- 23 Lawlor Road, Attadale, WA 6156.**

**If you live in the Australian Capital Territory or the Northern Territory, please post the form to the Hon Secretary of the New South Wales or South Australian Division respectively.**

**Subscriptions are due on 1 July in each year, and your membership will be current to 30 June immediately following the date on which you join the League, except that if your first subscription is received during the period 1 April to 30 June in any year, your initial membership will be extended to 30 June in the following year.**

### THE NAVY LEAGUE OF AUSTRALIA

***Application for Membership***

To: The Hon. Secretary
The Navy League of Australia

.....Division

Sir or Madam,

I wish to join the Navy League of Australia, the objectives of which I support, and I enclose a remittance for $22 being my first annual subscription to 30 June next.

Name:
(Mr)
(Mrs).....
(Ms) PLEASE PRINT CLEARLY
(Rank)

Street .....Suburb .....

State.....Postcode .....

Signature .....Date .....

**Subscriptions are due on 1 July in each year and your membership will be current to 30 June immediately following the date on which you join the League, except that if your first subscription is received during the period 1 April to 30 June in any year, your initial membership will be extended to 30 June in the following year.**

# 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 girls and help to develop them in 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 normally held during a weekend day or on Friday evening.

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 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 or Mercantile Marine, 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:***

**NEW SOUTH WALES: Cadet Liaison Officer, HMAS Watson, Watsons Bay NSW 2030. Telephone: (02) 9337 0560.**

**QUEENSLAND: Senior Officer NRC, Naval Support Office, Bullimba Barracks, PO Box 549 Bullimba QLD 4171. Telephone: (07) 3215 3512.**

**WESTERN AUSTRALIA: Cadet Liaison Officer, HMAS Stirling, PO Box 228, Rockingham WA 6168. Telephone: (08) 9550 0488.**

**SOUTH AUSTRALIA: Cadet Liaison Officer, Naval Support Office, Keswick Barracks, Anzac Highway, Keswick SA 5035. Telephone (08) 8305 6706.**

**VICTORIA: Cadet Liaison Officer, Naval Boatshed, Nelson Place, Williamstown VIC 3016. Telepnone: (03) 9399 9926.**

**TASMANIA: Cadet Liaison Officer, Naval Support Office, Anglesea Barracks, Locked Bag 3, Hobart TAS 7001. Telephone (03) 6237 7240**

**AUSTRALIAN CAPITAL TERRITORY: Commanding Officer, TS Canberra, HMAS Harman, Canberra ACT 2600. Telephone: (02) 6280 2762**

**NORTHERN TERRITORY: Cadet Liaison Officer, HMAS Coonawarra, PMB 11, Winnellie NT 0821. Telephone: (08) 8980 4446.**

## *THE NAVY*

*All enquiries regarding the Navy Magazine, subscriptions and editorial matters should be sent to:*

**The Hon. Secretary, NSW Division**
**NAVY LEAGUE OF AUSTRALIA**
**GPO Box 1719, Sydney NSW 2001**

# THE NAVY

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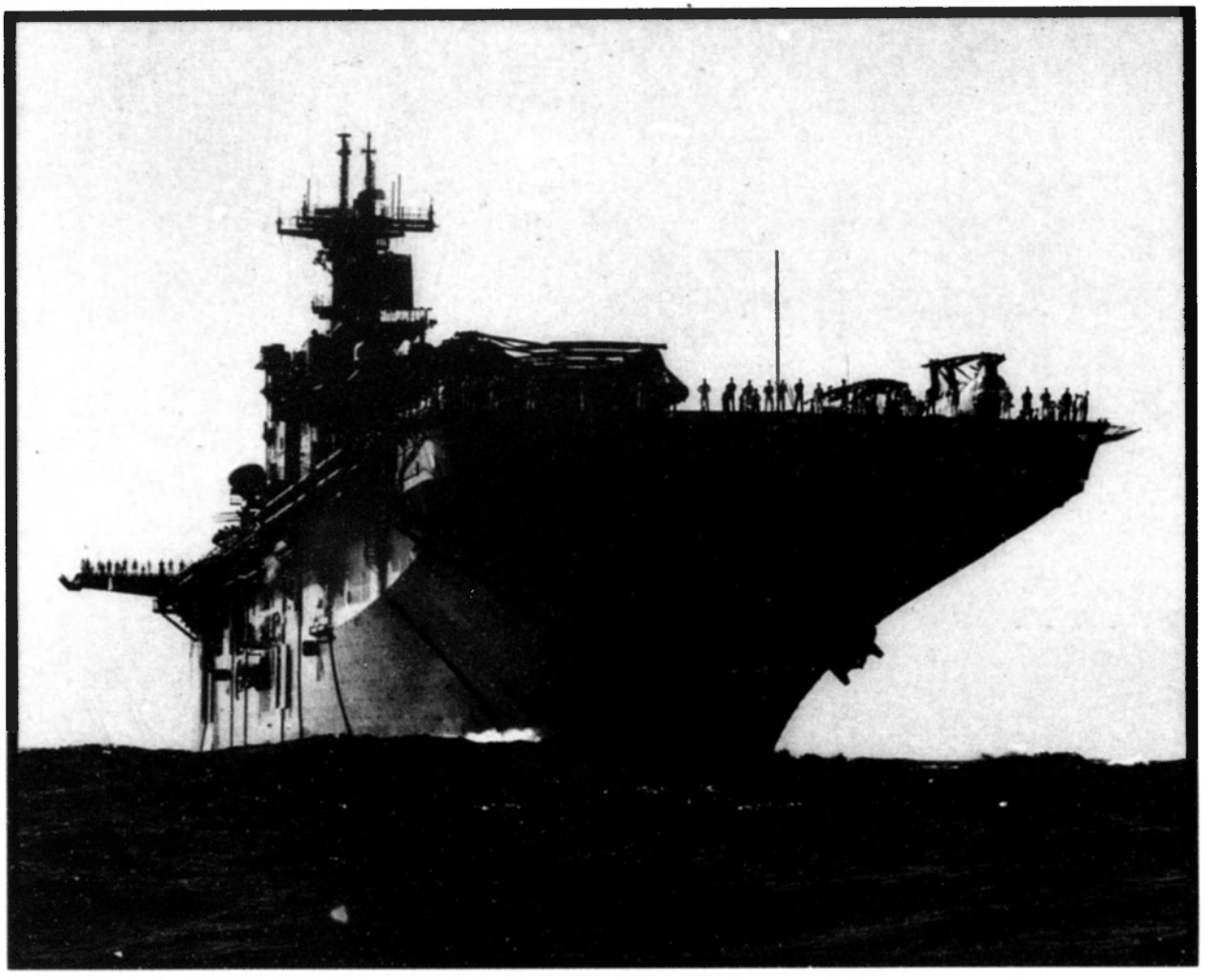

## *In this Issue*



## *Regular Features*



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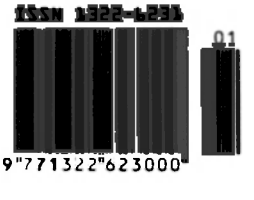
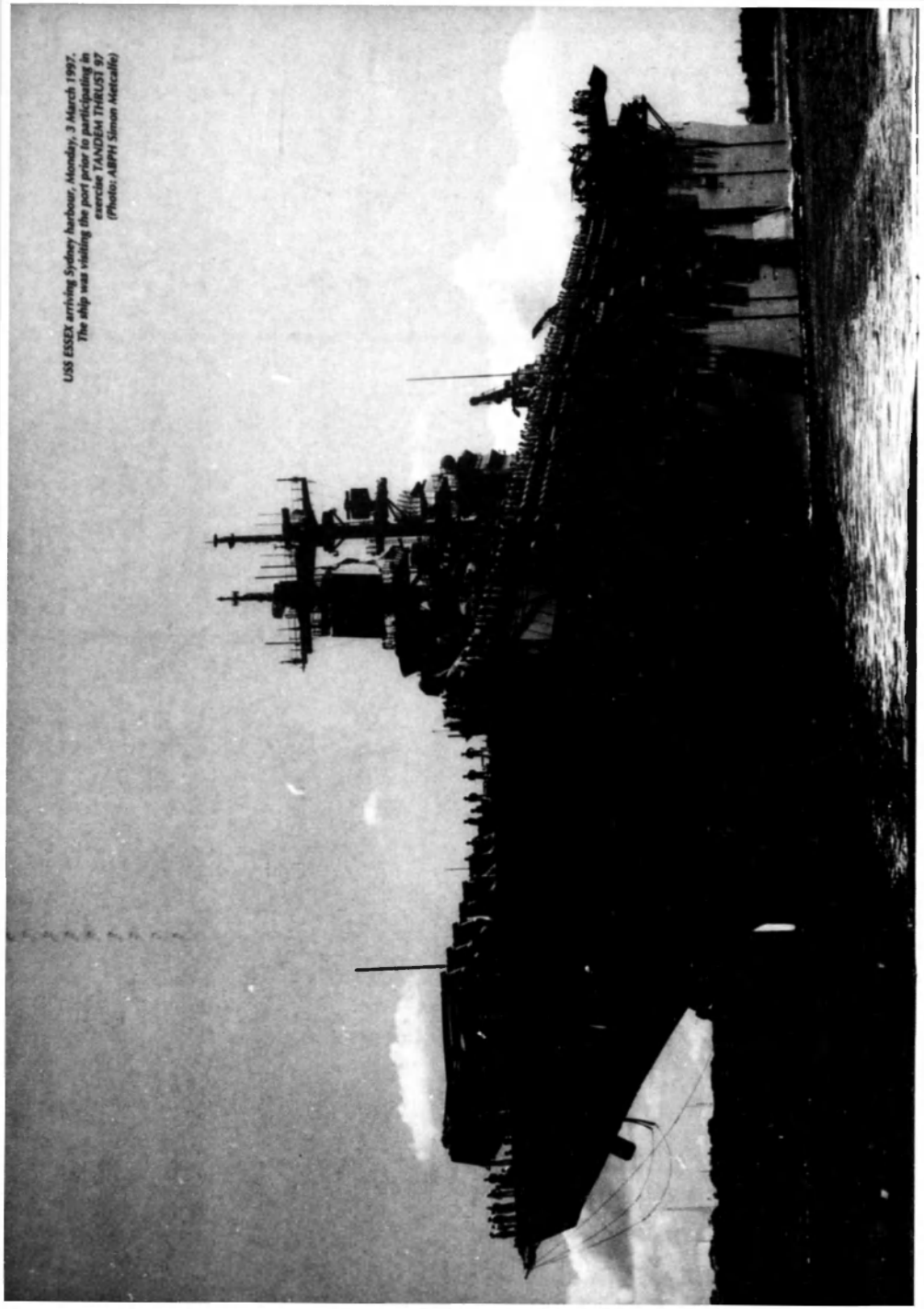




USS ESSEX arriving Sydney harbour, Monday, 3 March 1997. The ship was visiting the port prior to participating in exercise TANDEM THRUST 97 (Photo: ABPH Simon Metcalfe)

# viewpoint

## FROM OUR READERS

**Australian Colonial Gunboats**

Dear Sir,

I am aware that both you and Colin Jones have done considerable research in this area and wonder if you are able to assist me in seeking information in respect to the armament on the HMVS VICTORIA.

I am a member of the Royal Australian Artillery Historical Society of Western Australia. We are preparing a register of display ordnance held in this State, wherever possible at the same time, recording any historical facets concerning the weapons. At TS PERTH, at East Fremantle, there are two Armstrong 3-inch BL guns on a Vasasseur Sliding Mounting, which appear to be of naval origin. The Navy League has been unable to identify from where these guns were acquired and although enquiries have been made by the League, nothing has come to light as to their past. I have made enquiries through a contact at Woolwich, England, and have not been able to learn anything from that source.

It has occurred to me that these two guns were the quarterdeck 12/13 pounders on the VICTORIA. I have noted them as 12/13 pdrs as there is conflict in various publications. The nomenclature is not that important as guns of this calibre appear to have fired projectiles approximating these weights.

Details on the trunnions of the guns is as follows:

No. 1 Gun
Left hand – Sir William Armstrong, No. 3888, 1881
Right hand – Wt.940 lb, 3in, Prep 29 lb

No. 2 Gun
Left hand – Sir William Armstrong, No. 3889, 1881
Right hand – Wt.940 lb, 3in, Prep 33 lb

It has occurred to me that, during the research by Mr Jones and yourself, you may have seen or noted details of the guns with which the VICTORIA was fitted. Unfortunately none of the photographs I have seen of the ship are clear enough to show the guns mounted on the quarterdeck so not even the type can be identified. The guns' manufactured dates recorded are very close to the commissioning date of the ship and that they are Armstrong guns, has some significance.

The ship being sold to the Western Australian Government in 1896 may throw some light on the matter but then as it was again sold in 1902, may point to the vessel never having been modified by the WA Government. That the ship was not disarmed prior to its sale to WA would have been very doubtful.

The details of just how and from what source the Naval League acquired these guns, the details have been lost over the years. However I am sure our Society would be interested if some historical facts can be located about them.

Yours faithfully,
RK Clyde
Como, WA, 6152

☆☆☆

**More on VOYAGER**

Dear Sir,

Imagine my surprise and, indeed, delight when I



**OUR FRONT COVER:**
*USS ESSEX (LHD 2) an Amphibious Assault Ship, arriving in Sydney, 3 March 1997.* (Photo – ABPH Simon Metcalfe)




**THE NAVY**

Editorial enquiries to:
The Editor, Ross Gillett
4 Dela Close
Dee Why NSW 2099

All Navy League magazine subscription and membership enquiries to
The Hon. Secretary, NSW Division
NAVY LEAGUE of AUSTRALIA
GPO Box 1719 Sydney NSW 2001

**Copy Deadline for next issue: 9th May 1997**

## FROM OUR READERS

received the last edition of *The Navy*.

There I was, and on the front cover, captured in time all those years ago, as a young signalman serving in HMAS VOYAGER.

I think the photograph was taken in February, 1959, just prior to our second trip to the Far East (as it was then described). We had a day at sea for the families of our NSW crewmen. Actually the cap I am wearing helps me date the photograph. It was purchased from RN 'slops' in Singapore the year before. Unlike the Australian issue it was made from a water resistant plastic type material. Whilst easier to clean they didn't hold their shape and, as a consequence, were to become unpopular with the Australians.

After VOYAGER returned to Sydney in 1959 I was drafted to Flinders Naval Depot and spent 12 months there in the Main Signal Office before returning to sea in one of VOYAGER's sister ships, HMAS VENDETTA. Once again I served 'up top' for another 9 months tour of duty. I was also duty signalman onboard HMAS VAMPIRE on her working up trials, when she was still in dockyard hands, and flying the red ensign. So my attachment to the Darings was very close.

The article on VOYAGER mentions she was fitted with air-conditioning. Regrettably the air-conditioning fitted up forward constantly broke down. Conditions below decks, particularly in the tropics, were such that our medical officer was very concerned about the effect they were having on the crew's health and fitness.

The photograph on the front cover of the other two signalmen doesn't appear to have been taken on a Daring class destroyer. It could be the flag deck of one of the Tribal or Battle class destroyers.

Thank you for the VOYAGER story. The aftermath was a very sad business. I lost a couple of ship mates in the sinking but as tragic as the loss of life was, it was the terrible way the dependents and survivors were treated that did little credit to the Naval Board and successive governments. Along with many others I kept up a written campaign to politicians and the press to get justice for those involved.

Once again thanks for the VOYAGER story.

Yours sincerely,
Gavin W. Ryan
City Beach, 6015

**Editor: We are pleased to include in this issue of *The Navy* a report and photographs from Gavin, describing his first trip 'up top' in HMAS VOYAGER.**

# LATE NEWS

### KAMAN SELECTED

BLOOMFIELD, CONNECTICUT (March 11, 1997): The New Zealand Ministry of Defence has notified Kaman Aerospace International that it has been selected as the 'preferred tenderer' in the competition to supply maritime helicopters to the Royal New Zealand Navy (RNZN). Kaman proposed its SH-2G 'Super Seasprite'.

The contract requirement is for four multi-mission helicopters to go aboard New Zealand's ANZAC and Leander class frigates. Formal contract negotiations will begin soon. The total contract value and deliveries are to be determined during negotiations, which will start shortly.

The SH-2G, the latest configuration of the SH-2, is equipped with powerful GE T700 engines, advanced electronics and enhanced mission capabilities. The SH-2G gives navy vessels increased surveillance capability, provides over-the-horizon warning and targeting of potential threats, and contributes to the ships' combat capabilities through its anti-ship missiles and torpedoes.

The selection by New Zealand marks the third opportunity for sale of the retrofit SH-2G helicopter to international customers. Kaman also recently was selected by the Australian Government as the 'preferred tenderer' for 11 SH-2G helicopters to the Royal Australian Navy. The Arab Republic of Egypt is currently procuring 10 SH-2G(E) models for Anti-Submarine Warfare (ASW) use with deliveries scheduled to begin late this year.

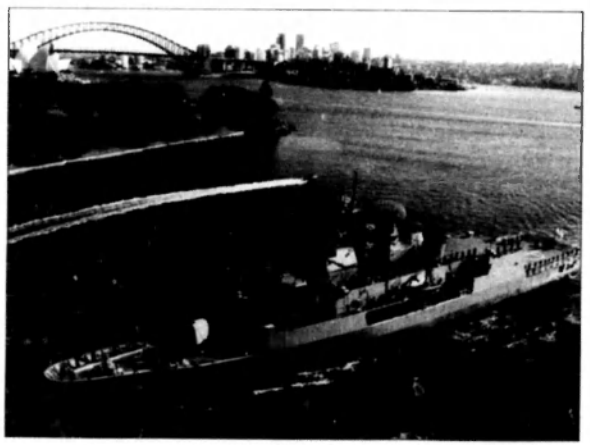
### HELICOPTER DECISION

The Minister for Defence, Mr McLachlan, has welcomed New Zealand's decision to acquire Kaman Super Seasprite helicopters for its ANZAC ships, which he said afforded considerable potential for both countries to capitalise from this exciting and challenging program.

Mr McLachlan noted that the selection of a common helicopter, and at least some of the sensors and core weapons systems, opened up the opportunity for savings through the acquisition and support phases of the program.

"Both countries will now look to work together to develop arrangements to maximise the benefits across a wide range of activities," Mr McLachlan said.

"Australia and New Zealand industry will clearly benefit in both the short and long term from a larger overall buy and the new generation equipment and technology which will be introduced with the acquisition of the Super Seasprite."



*ANZAC class frigate*



# Super Seasprite for RAN

The Minister for Defence, Mr Ian McLachlan, has announced that Kaman Aerospace International has been selected as the preferred tenderer to supply 11 helicopters for Australia's new ANZAC class frigates.

The selected helicopter, the Kaman Super Seasprite, is a multi-purpose helicopter designed to operate from the ANZAC frigate as well as other Australian Naval vessels.

"The total value of the contract is yet to be determined due to continuing negotiations," Mr McLachlan said.

"Kaman was assessed as offering the best all round proposal for meeting Defence's demanding requirements with its Seasprite/Penguin combination of sensor and weapon systems as well as support through the life of the helicopter."

The primary role of the helicopter will be to increase the combat effectiveness of the ANZAC frigate by providing over-the-horizon surveillance and targeting ability. The helicopter will also be fitted with the advanced Norwegian 'Konsberg Penguin' anti-ship missile.

The production of the helicopters, including the integration of avionics, sensor and weapons suite will be carried out partly in the United States and partly in Australia.

"Australian industry will be significantly involved in the acquisition phase," Mr McLachlan said. "The bulk of the work done in Australia will be associated with integrating the helicopter's weapons systems, designing the helicopter flight simulator and creating a software support centre. As well, Australian industry will substantially participate in through life support of the helicopters."

The helicopters are planned to start being introduced into service early next century. Further orders of the helicopter will be considered to take account of possible future needs and to support the prospective Offshore Patrol Combatant (OPC).

### Aim of the Project

Phase 1 of the ANZAC Ship Helicopter project aims to provide helicopters, equipped with anti-ship missiles, and associated support, to operate from Australia's ANZAC class frigates. The as yet unapproved Phase 2 of the Project plans to provide for additional helicopters to take into account likely attrition and to acquire further helicopters to operate off both the ANZAC frigate and the much smaller OPC, in the event that OPCs are approved by Government.

The primary roles of the helicopter are to increase the ANZAC frigates effectiveness, by significantly increasing the ANZAC's surveillance capability and providing over-the-horizon warning and targeting of potential threats, as well as contributing to the ship's combat capabilities through being armed with anti-ship missiles.

### Kaman the Company

Kaman Aerospace was established in 1945 by Mr Charles Kaman the current Chairman of the Kaman Corporation.

From its humble beginnings Mr Kaman has built the company from a dedicated helicopter production house into a diversified Fortune 500 company with annual sales of $US900m annually.

One of the unique aspects of the company is that it has had several 'firsts' in terms of helicopter developments and achievements.

| Year | Event |
|---|---|
| 1947 | First servo controlled rotor |
| 1951 | First gas turbine powered helicopter |
| 1953 | First remotely controlled helicopter |
| 1954 | First twin turbine powered helicopter |
| 1958 | First production turbine powered helicopter |
| 1978 | First production all composite rotor blade |
| | Numerous helicopter altitude, TIME-to-climb and other records |
| | First helicopter, H-43A/B/F to go through its service life with no aircraft attributable loss of life or accidents |

*An SH-2F Seasprite of the United States Navy*

1993 First commercial helicopter, K-Max aerial truck, specifically designed and certified for heavy external lift application

Although helicopter production is now only a part of the total company, Kaman Aerospace have proven to be a niche player in a very competitive world wide aircraft manufacture market. By positioning themselves in this way the company has been able to adapt to individual customer needs, be it in the design and manufacture of components for Boeing 767 and 777 aircraft, the production of the K-Max aerial truck or in the planned production of Seasprite helicopters tailored to meet Australia's requirement.

## Australian Industry Involvement

The level of local industry content is approximately 15% of contract value, with other longer term benefits arising from the through life support requirements. The major areas of local content will cover helicopter software development and the establishment of the associated Software Support Centre, the design and construction of the helicopter Flight Simulator, and through life logistics support services. In addition to these major components, Australian and New Zealand firms can be expected to be involved in a range of relatively smaller activities associated with areas such as Weapon System Integration software, avionics, airframe restoration and minor manufacture and the installation of propulsion and electrical systems.

It is intended to build the first four helicopters overseas with the remaining helicopters being assembled in Australia.

## SH-2G(A) Capability

The following is a summary of the Seasprite helicopter capability:

| | |
|---|---|
| Maximum all up weight (MAUW) | 6,166kg |
| Maximum Take off weight (MTOW) | 6,123kg |
| Useful load | 1,832kg |
| Fuel capacity | 1,429kg |
| Cabin volume | 5.1cu m |
| Rescue hoist capacity | 272kg |
| Store station load capacity | 363kg |
| Performance (13,500 lbs, Sea level ISA, 20 minutes fuel reserve | |
| Range | 684km |
| Endurance | about 3.8 hours |
| Maximum speed | about 140 knots |
| Rate of climb dual engine | 9.1m/s |
| single engine | 5.5m/s |
| Service ceiling dual engine | 3,171m |
| single engine | 2,592m |

The Seasprite helicopter, fitted with the General Electric T-700 engine, is an extremely capable helicopter in its normal configuration at maximum all up weight and also has significant single engine power for flight at this weight.

The SH-2G(A) is the next step forward for the very successful and proven SH-2G Seasprite helicopter currently in service with the USN Reserve. As with other recent aviation developments the Kaman proposal uses refurbished airframes, which are completely overhauled and brought to an as new condition, in which to build a state of the art integrated weapons system.

## Penguin Air to Surface Missile

Kaman offered the Kongsberg Penguin Mk2 Mod7 Air to Surface Missile as the baseline ASM for the helicopter. The missile which is a 'fire and forget' weapon was first fired in 1990 and is integrated to USN and Greek Seahawk helicopters.

The Penguin equipped Seasprite helicopter will significantly enhance the combat effectiveness as well as contributing to the self protection capability of the ANZAC ship.

The Mk2 Mod7 has a dual chamber rocket motor with a range of approximately 34 kilometres. The 120kg semi-armour piercing warhead with delayed action impact fuse contains 50kg of high explosive. The missile has an on board digital inertial navigation system (INS) for in-flight guidance and the capability to approach the target via a designated way point. The missile uses an infra-red seeker head for guidance during the final phase of the flight.

Kongsberg Gruppen ASA (KONGSBERG) is 51% owned by the Government of Norway. Kongsberg is Norway's largest manufacturer of defence equipment and a leading high-technology company. Kongsberg's main plant is located in the town of Kongsberg, 80km due west of Oslo.


*February, 1981, an SH-2F armed with a Mk 46 torpedo*





## Integrated Weapon System

The integrated weapon system offered by Kaman is truly state of the art. The Seasprite will have a fully integrated cockpit designed for operation by a crew of two; the pilot and tactical operator (TACCO). The integration will be conducted by Litton the manufacturer of the current SH-2G 1553B integrated system.

Gone are all the dials and gauges of older aircraft, to be replaced by four flax panel colour displays that are each capable of displaying aircraft instruments, or tactical displays such as radar, ESM, FLIR and tactical plot.

## Way Ahead

The Department of Defence began contract negotiations with Kaman early in February, leading to contract signature towards mid 1997. Kaman offered alternative sensors in the company's tender and one of the aims of the contract negotiation will be to determine which of the offered sensors offers the greater value for money.

Commonality of FLIR and ESM Equipment with Project(Sea) 1405 (Seahawk Upgrade Program)

As identified in the initial Request for Tender the Commonwealth is seeking commonality where possible with the FLIR and Electronic Support Measures equipment proposed in Project (Sea) 1405. The decision on 1405 is due in the foreseeable future and when that decision is made more information will then be available on selection of complete helicopter system equipment baseline.

## Radar

With regard to the selection of the radar, Kaman have offered two very capable systems, the Telephonics APS-143 and a derivative of the ELTA 2022 planned for the PC-3 upgrade program. Further work is required with Kaman and the radar manufacturers before the Defence Department can determine which system provides better value for money.

## Delivery Schedule

The helicopters are planned to commence delivery in Australia in 2001. By this stage Transfield Defence Systems will have delivered the third Australian ANZAC frigate. At this time it is expected that the first two ANZAC frigates (HMAS ANZAC and HMAS ARUNTA) will have a Seahawk helicopter flight embarked, with subsequent ANZAC ship flights using the Seasprite helicopter.

*Kaman Supersea Sprite*

## Anzac Class Frigates (FFH)

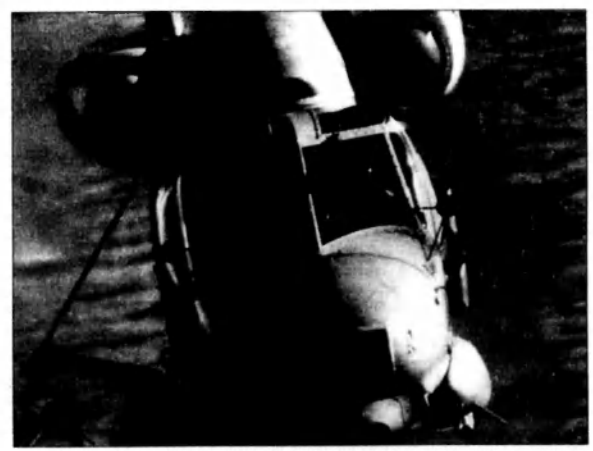
Eight Anzac Class frigates are being constructed in Australia as part of the overall plan to upgrade the Royal Australian Navy in the 1990s and as replacements for the remaining River class destroyer escorts. A further two ships of the class are being built for the Royal New Zealand Navy.

Selected in 1989, the Anzac ship is based on the German Meko 200 frigate design. Modular construction methods are employed with sections for the ships fabricated in three locations - Williamstown in Victoria, Newcastle in New South Wales and Whangarei in New Zealand - prior to final assemble at Williamstown, Victoria.

HMAS ANZAC, the lead ship, entered service in 1996 with follow-on vessels to be delivered at the rate of approximately one per year. A 'combined diesel or gas' (CODOG) propulsion plant enables the ship to sustain speeds of 27 knots and allows an operational range in excess of 6,000 nautical miles.

Each Anzac frigate is fitted with an advanced package of air surveillance radars, omni-directional mounted sonar and electronic support systems which interface with a state-of-the-art combat system.

The ships' main armament comprises one five inch (127mm) gun capable of firing 20 rounds per minute, ship launched torpedoes and a Mk41 vertical launch system for the Sea Sparrow point defence missile.



*SH-2G Super Seasprite offered to the RAN*

# REVY – 90 Years

**By Brian Alsop**

*The Royal Edward Victualling Yard (REVY) in the 1950s*

Most former RAN personnel will remember The Royal Edward Victualling Yard (REVY), located at Sydney's Pyrmont, as the supplier of victuals and stores for their ships while in Sydney. Others will possibly recall it as the place where they received their first issue of naval uniforms.

REVY has now been used by the Navy for 90 years.

The story of the Navy at Pyrmont began in 1905 when the site of the present Naval Support Command Headquarters (NSCHQ) was chosen for a victualling yard for the ships homeported in Sydney as units of the Royal Navy's Australia Station.

Designed by Walter Liberty Vernon, the NSW Government Architect, the two main buildings were completed in early 1907. The design paid special attention to the storage, expeditious movement and convenient landing of all stores, combined with natural lighting and ventilation. Also included on the site were a receiving shed and a cooperage. Half of the land required for the four and five level stores buildings was reclaimed from the harbour, with extensive piling necessary to support the foundations. As agreed between the Federal and State governments, the project was funded by the NSW Government and on completion, loaned to the British Admiralty.

Following a July 1906 recommendation the stores complex was officially named The Royal Edward Victualling Yard from January 22, 1907. The first naval yard in the southern hemisphere to be granted the 'Royal' title, it began operations on February 23, 1907.

REVY assumed greater responsibilities in 1913, becoming the source of supplies for the Royal Navy's China and East Indies Stations. A third multi-story building was added to the complex in the period 1915-17. This third building was converted to office space in 1984 and is currently occupied by the Defence Science and Technology Organisation (DSTO).

REVY'S role as a victualling store had virtually ceased by the mid-1970s, with its Edwardian buildings used by the RAN and DSTO for *ad hoc* storage of special project materials. By this time only one goods lift remained in operating order.

During the early 1990s the decision was taken to re-utilise the historic buildings at REVY as the home of Naval Support Command Headquarters. While retaining the charm and many fittings from their former role, the buildings have been completely refurbished for duties in the 1990s and beyond. Conservation work included the removal of building alterations and the reconstruction of numerous original characteristics of the two buildings.

As part of this process a number of historic machines used in the victualling yard were restored for display. These include derricks, lift motors, cloth folding machines and the original timber boat landing.

Following the restoration and conversion of buildings one and two, the original store buildings, the headquarters moved in on May 1,1995. With the majority of Naval Support Command Headquarters' staff now resident at Pyrmont almost 400 people work in the harbourside complex.

The headquarters is responsible nationally for overseeing the logistic support of the fleet via five logistic offices, as well as the provision of support services such as transport and port services. It also directs 12 commissioned establishments, three Naval support offices and Naval Communications Station *Harold E. Holt*.

*A recent, 1996 view of the newly refurbished REVY buildings, now the headquarters of the Naval Support Command*



# Warship by Ferrari

**By Mark Schweikert**

***In a rare visit to Australia, two ships of the Italian Navy have completed major visits to Darwin, Sydney and Fremantle.***

*DURAND DE LA PENNE (Photo - Brian Morrison)*

The guided missile destroyer DURAND DE LA PENNE and frigate BERSAGLIERE berthed at Fleet Base East, becoming the first Italian ships to visit since the cruiser and training ship CAIO DUILIO for the 1988 Bicentennial Naval Salute. Previous Italian warship visits to Australia included Melbourne in 1956 and Sydney in 1938.

Several local fishing trawlers, all flying the Italian flag, escorted the ships into Sydney, while a warm welcome from several hundred members of Sydney's Italian community awaited their companies at Fleet Base. An unusual aspect of the Sydney visit was a recital by acclaimed Italian pianist Carlo Benedetti aboard the destroyer at the start of his Australian tour.

DURAND DE LA PENNE and BERSAGLIERE visited five Australian ports by the time they left on February 5, the greatest number of port visits to any country during their current deployment. Having left Taranto, Italy, in July last year, the two ships which form the 27th Naval Group were on a nine-month world training cruise that will see them call at 32 ports in 24 countries by the time they return home.

"The ships had combined companies of more than 560 officers and sailors under the command of Rear Admiral Claudio Maria De Polo. The deployment aimed to evaluate the group's operational capabilities in different environmental conditions and areas from those in which the Italians normally deploy.

RADM De Polo, said "the opportunity to test Italian interoperability with other navies was also significant given recent experience of United Nations duties".

After departing Sydney, the two ships undertook a range of exercises with RAN units on their way to Fremantle via Melbourne and Adelaide.

RADM De Polo said the RAN and Italian Navy had much in common including technology levels, inter-operable combat data systems, use of NATO standards and recent experience of naval operations in support of UN sanctions in the Persian Gulf.

Given that Australia hosts the second largest Italian community outside Italy, the visits to Australian ports were also significant from a cultural and social perspective.

*Frigate BERSAGLIERE (Photo: Brian Morrison)*

*Located atop the helicopter hangar is one of the three 76 mm super rapid guns with the Mk-13 launcher for the Standard missiles behind. Also visible are one of the two sets of triple torpedo tubes, the two SPG-51 fire control radars and one of the four 'Dardo' fire control radars*

## Durand de la Penne

Many budding naval enthusiasts could have mistaken the Italian warship DURAND DE LA PENNE for a Russian destroyer when she recently entered Sydney Harbour. Like the Russians, the ship is very heavily armed, a rather unusual characteristic for a Western destroyer given the 'disposable' nature of many modern warship designs. Possessing the weapon fit that would make the Russians happy, DURAND DE LA PENNE displays the best of modern Italian styling, almost Ferrari in nature.

The ship is designed to be truly multi-roled. Her weapons, sensors, systems and design give it the ability to either stand alone or fight in conjunction with other units against any threat. The ship has enough anti-air/missile weapon systems to establish its own defence layers i.e. long to medium range missiles, medium to short range missiles and medium to short range guns. Her anti-ship missiles (ASMs) have a range of 180 kms with mid course guidance from one of its two helicopters. Her Anti-Submarine Warfare (ASW) system consists of a hull mounted sonar, a variable depth sonar, two sets of triple torpedo tubes, the ability to take the Milas ASW rocket and two ASW helicopters either Augusta Bell AB-212 or the EH-101.

DURAND DE LA PENNE's visit to Sydney, with the accompanying frigate BERSAGLIERE, was part of a world circumnavigation tour to ascertain if the Italian Navy could operate;

- out of its own region with other navies, such as the RAN;
- function effectively and properly away from Italian Navy logistical support and;
- to support the diplomatic missions in the countries visited.

During the tour the two ships have conducted exercises with the navies of Brazil, Argentina, USA, Philippines, China, Japan, Vietnam and the RAN. As the Italian Navy's Area of Operations is the Mediterranean, and part of the purpose of the world tour is assessing the ability to conduct operations away from the Mediterranean with other navies, this may indicate Italy's intention or desire to become more involved in UN naval operations.

So far the ships have performed excellently. Integration with the naval logistical systems of the US and Australia has been very smooth as the Italian ship's weapons, sensors and machinery are very similar to our own and the USN's.

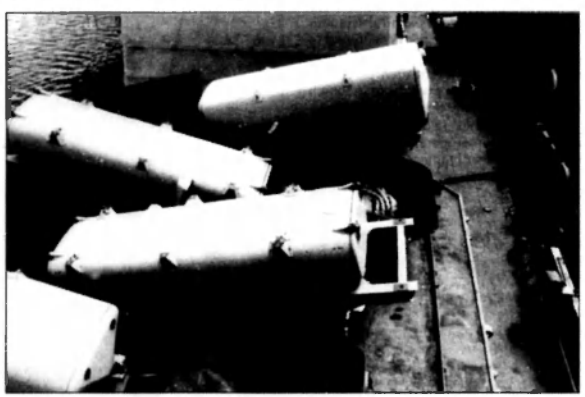
The ship is relatively new, being commissioned in 1993 and has most of the standard recognised stealth characteristics of modern naval ships. She is the lead unit of a class of two ships originally known as the Animoso class. The two ships are named in honour of Italian war heroes, Luigi Durand de la Penne and Francesco Mimbelli.

## Anti-Air/Missile Defence

Although DURAND DE LA PENNE is designed to be multi roled there is a visible leaning towards the anti-air/missile role. Accordingly, the ship is somewhat remarkable for its combat information gathering systems in that data from three different air search radars can be utilised.

The main radar is the US designed AN/SPS-52C three dimensional (3D) radar, virtually identical to our DDG's and sometimes referred to as a height finder. This radar provides long range data on air contacts out to approximately 440 kms. The second air search radar is an Italian SPS-768 2D air search radar with a range of approximately 220 kms. The third air search radar, the SPS-774, which can also provide surface search data against other ships, is a short range radar designed to detect fast missile sized targets in a heavy sea clutter environment. All three radars can provide data to any of the ships anti-air or anti-missile weapons. The beauty of having three radars is combat redundancy. If one radar or even two were destroyed by enemy action then there would still be at least one left to provide radar coverage.

The anti-air/missile weapons of the DURAND DE LA PENNE are structured in such a way as to establish defensive layers around the ship, or escorted group, against all airborne threats. The main anti-air system consists of an American MK 13 Mod 4 launcher for 40 Standard SM-1MR anti aircraft missiles, (the same as the RAN FFGs), located at the rear of the helicopter hanger. These missiles have a range of approximately 46 km. There are two SPG-51D fire control radars to illuminate targets for the standard missiles.



*Four Otomat ASMs. The box launcher at the top of the photo houses the Mk-1 missile, notice the smaller box launcher next to it which fires the Mk-2. Using the Mk-2 allows for an extra missile to be carried on top of the box increasing the ship's load to eight. The Milas ASW missile also uses the same box as the Mk-2 Otomat*





The next layer consists of an Albatross octuple launcher for 8 Aspide missiles mounted just forward of the bridge in 'B' position. Similar to the American Sea Sparrow, these missiles can engage aircraft and/or ASM's at a range of 13 km at Mach 2.5. The ship carries 16 reloads which are loaded into the launcher automatically. The Aspide is the ships principle point defence missile system.

The next layer consists of three OTO-Melara 76 mm super rapid guns and a single 127 mm gun. Although some may criticise the ship for having no 'Phalanx' type system, i.e. close in gun defence, the OTO-Melara 76 mm super rapid is indeed an impressive system which is employed under a different philosophy to that of the 'Phalanx' users. Each gun is capable of firing nearly 130 rpm at a missile sized target at 8 kms. The idea being to destroy the missile as far away as possible so as to minimise any residual damage effect the warhead may have if it were detonated closer to the ship, such as Phalanx would. The super rapid guns use a proximity fused prefragmentated round that is designed to detonate near the incoming threat and destroy it by the shrapnel created. The guns range and rate of fire enable it engage and destroy four missile sized targets simultaneously from four different directions.

The three 76 mm guns, and the Aspide missiles, receive fire control data via four SPG-76 'Dardo' fire control radars, two mounted on either side of the bridge and the other two either side of the helicopter hanger. These fire control radar's provide a full 360 degree coverage of the ships arcs and give it the ability to engage four targets simultaneously with either guns or Aspides. With the additional SPG-51D fire control radars, for the SM-1MR, the ship has the ability to engage six targets simultaneously. The ships weapons can also be placed on an automatic mode. The system will detect the threat, ascertain the scale of threat and assign an appropriate weapon or weapons to the threat until it is destroyed.

## Anti Submarine Warfare

As part of its multi-role nature the ship is equipped with a Raytheon DE-1164 LF-VDS integrated bow and Variable Depth Sonar (VDS), the latter being similar to a towed array. The onboard ASW weapons consist of two sets of triple torpedo tubes for Mk-46 torpedoes and the Milas ASW rocket system. The Milas is launched from the same box launcher as the Otomat Mk 2 and is essentially a cross between the US ASROC and the old Australia Ikara system. Milas is rocket propelled, with a range of 55 km and a mid course command update facility.

*Looking forward from the bridge. Visible is the port side 76 mm super rapid gun, also the rear of the octuple launcher for the Aspide missiles and the rear of the 127 mm main gun*

*Just visible behind the main gun is the octuple launcher for the Aspide missiles. Notice the two 'Dardo' fire control radars atop the bridge which can guide either the Aspide missile, the 76 mm super rapid gun or the main 127 mm gun*

The ships helicopter hangers can house two helicopters either the smaller Augusta AB-212 or the larger and new EH-101 which is far better at ASW than the smaller Augusta. To aid in helicopter operations the ship is fitted with four sets of fin stabilisers.

Contributing to the ships ASW role is a Prairie masker noise suppression system. This system forms tiny air bubbles on the hull to mask any noise that may radiate into the water. It has the effect of making the ship quieter and thus harder for submarines to detect as well as enhancing the onboard sonar performance.

## Anti-Surface

In the surface search role the ship demonstrates its dual radar redundancy by having the SPS-774 air and surface search radar, as mentioned above, and a separate surface search radar, the SPS-702. The main anti-ship weapon is the long range OTO-Melera/Matra Otomat, either Mk 1 or Mk 2. This missile has a range of 180 kms and a 210 kg warhead with an active radar seeker. Much like Harpoon this missile comes in a launch tube with the Mk 2 variant being smaller than the Mk 1 (the Mk 2 has folding wings). Otherwise the missiles are virtually identical. The advantage of the Mk 2 over the Mk 1 is that eight missiles can be carried as opposed to four for the Mk 1. Both missiles are made in Italy.

The advantage of the Otomat over the more popular Harpoon and Exocet is its range and mid course guidance. In Western navies only the US anti-ship Tomahawk has a greater range than Otomat. Thus the Italian Navy's ASM can outrange nearly all other navies and affords it a distinct advantage in a ship on ship surface action.

Other anti-surface weapons consist of the 127 mm main gun in 'A' position, for shore bombardment with a range of 16 kms at 45 rpm, and the three 76 mm super rapid guns. The latter are also exceptional against small high speed craft such as torpedo boats or armed speed boats.

## Machinery

The propulsion system consists of two diesels, for cruising speeds, and two Fiat/GE LM 2500 gas turbines, for high speed, but in an unusual configuration. One diesel and one gas turbine provide power to one shaft only via a reduction gearbox. The ship's two shafts are separate and not connected by any gear box arrangement. This means that one shaft can be powered by gas and the other diesel. It also means that one gas turbine or diesel engine cannot power both shafts or that the port side gas turbine and diesel cannot power both shafts or starboard shaft. Two opposing engines will always be required to power both shafts. This could present problems for damage control or in the event of two engines on the same side failing, the ship could then only be propelled by one shaft.

All four engines are raft mounted and sound proofed for added quietness but mounted below the water line making masking the sound that much harder. Some ships, such as the RN Type 23, mount the diesels above the water line to reduce radiated noise. DURAND DE LA PENNE has a top speed of 31 knots and a range of 7,000 nautical miles at 17 knots.

*Note the angled sides of the destroyer as compared to the straight sides of the nearby Australian FFG*

### Damage Control

The ship is sub-divided vertically in order to contain fire. Another interesting feature is the addition of kevlar armour on the ships bulkheads to contain an explosion. This armour is also located around the combat information centre. All engine modules have a halon gas fire suppression system and the engine control room can also double as the damage control centre.

### Stealth

Like most new warship designs stealth has had a part to play in DURAND DE LA PENNE's construction. As previously mentioned, the ship is fitted with a Prairie masker noise suppression system to contain acoustic emissions for its ASW role. The vertical sides of the ship are all sloped at around 7 degrees. This slope has the effect of reflecting the radar energy of searching ships, aircraft or missiles in different directions other than the direction in which it emanated. The reduced RCS (Radar Cross Section) aids in ship survivability as an ASM may not find the ship and if it did it could be lured away far more easily with chaff etc.

Another stealth feature is the cooling of heat exhaust emissions from the ships smoke stacks. As the exhaust emissions rise out of the ship they are automatically cooled in order to reduce the Infra Red (IR) signature of the ship against IR ASMs such as Penguin.

### Conclusion

An interesting feature of this very capable destroyer is that it is not designed with any fleet wide or large group command and control facilities such as Admiral's quarters etc. The reason for this is that the Italian Navy is divided into two flotillas with the head of each flotilla possessing all the command and control facilities required. Thus, DURAND DE LA PENNE, although having data links to exchange information with other ships, is mainly an escort vessel for the flotilla leader. Alternatively it can act independently as a single unit leading only a small group, two or three ships.

Another interesting feature of the destroyer is its large ships company, approximately 400. This seems excessive given that a USN Ticonderoga class cruiser has a crew of 358 and an Arleigh Burke class destroyer 303. The large crew is required to man all the ships weapons which, if required, have manual overrides. It also means that the ship has more personnel to call on for damage control or for duty watchs.

The only criticism of DURAND DE LA PENNE would be its inability to run both propeller shafts off one or two engines on the same side and its inability to conduct fleet wide command and control functions. As a single unit, group escort or goal keeper, DURAND DE LA PENNE has virtually no equal. Its ability to call upon two types of anti-air missiles, its three 76 mm super rapid guns, three air-search radars, two surface-search radars, six fire control radars, integrated sonar system, stealth technology, Otomat ASMs and helicopters make it a very powerful fleet destroyer.

*The Italian destroyer sails from Sydney (Photo: Brian Morrison)*





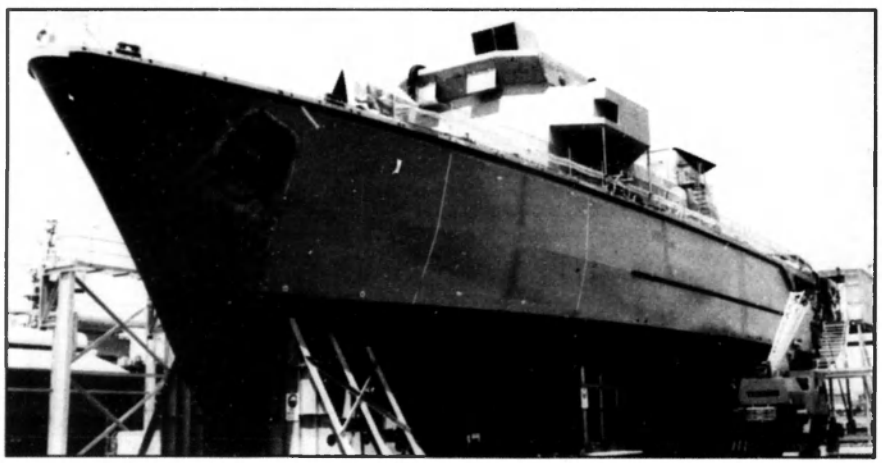
*HMAS PERTH leads other Australian fleet units to the Fleet Concentration Period (FCP) held off the NSW coast in February, 1997*
*(Photo: ABPH Simon Metcalfe)*

*Normally homeported at HMAS Stirling in Western Australia, the guided missile frigate HMAS CANBERRA operated off the east coast for the FCP and later exercise Tandem Thrust, the latter with units from the United States Navy*
*(Photo: ABPH Simon Metcalfe)*


*HMAS Manoora under conversion to an amphibious transport (LPA) at Forgacs in Newcastle, January, 1997*
*(Photo: Brian Morrison)*

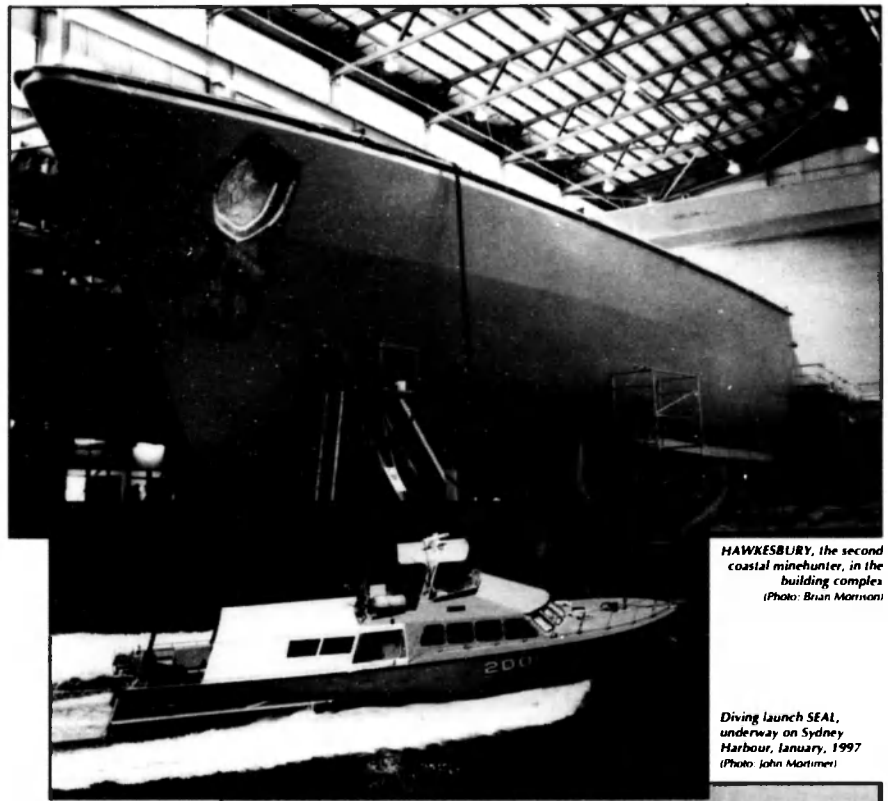
*Mine warfare vessels return to Sydney on 1 February after exercises*
*(Photo: ABPH Simon Metcalfe)*

*The first coastal minehunter HUON, under construction in Newcastle. HUON is due to be launched in June*
*(Photo: Brian Morrison)*









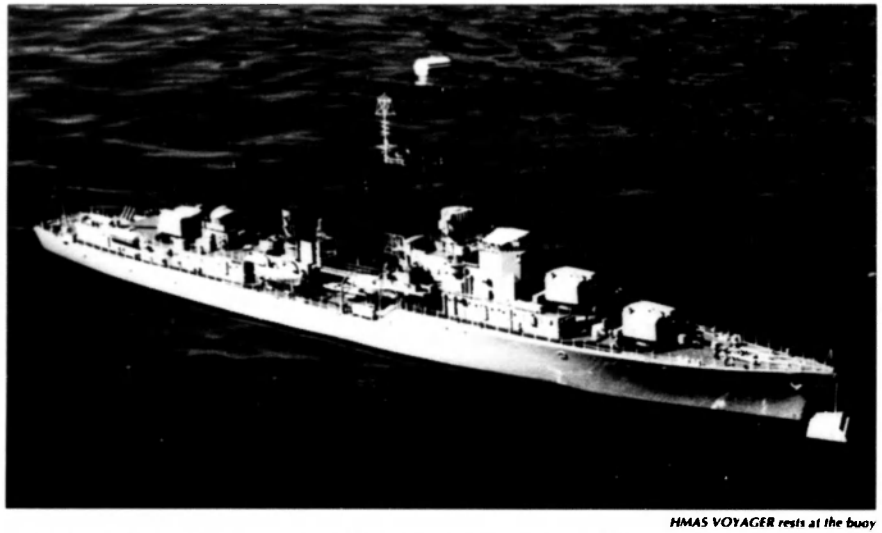

*HAWKESBURY, the second coastal minehunter, in the building complex*
*(Photo: Brian Morrison)*

*Diving launch SEAL, underway on Sydney Harbour, January, 1997*
*(Photo: John Mortimer)*


*The former Attack class patrol boat ARDENT is now employed for navigational training, homeported to HMAS Waterhen. All armament has been removed*
*(Photo: ABPH Simon Metcalfe)*

# TASK FORCE 72
## Australia's Other Navy

By Mike James



HMAS VOYAGER rests at the buoy

***The still water reflects the early morning calm. A light fog drifting across the water parts to reveal a number of warships riding at anchor.***

An Anzac class frigate is flanked by HMA Ships BRISBANE and ADELAIDE. Riding quietly beyond them is the grey form of the Type 42 destroyer HMS MANCHESTER and, looming out of the gloom, the great grey shape of the USS GETTYSBURG, an Aegis cruiser. A scene from another multinational exercise? One could be forgiven for thinking so, until the unlikely form of the Second World War Flower class corvette HMS BLUEBELL is spotted moving into view, passing HMAS VAMPIRE and HMS CLEOPATRA, before disappearing from view behind the great looming shapes of the battlecruiser HMS HOOD and the battleship BISMARCK.

BISMARCK and HOOD? Welcome to Task Force 72, a group of radio control modelling enthusiasts dedicated to recreating the look and feel of ships of the past and present. Many of the group have no connection with the navy or the sea, others are current or former navy personnel, who come from all walks of life and all ages, united by a love of ships. The ships riding at anchor are the expression of their enthusiasm and skill.

Task Force 72 was formed by two radio control ship modellers, Russ French and Alan Pew, in 1994. Both had been building ship models for many years but were not really aware of others building in the same scale until a chance meeting at the Vietnam Veterans/Naval Association Conference at Coffs Harbour in October 1994 led to the idea of searching out more 1/72 scale model builders Over the next few months Alan and Russ became aware of other modellers building in 1/72 scale, most members of various model clubs across Australia. Task Force 72 was thus born.

Why 1/72 scale? When asked, Russ French replied that it was a common scale for aircraft models, making the job of acquiring the shipborne helicopters and aircraft that much easier. In addition it was a reasonable compromise, well suited to detail but still small enough to be transported, a 1/72 scale destroyer model is about 1.76 metres in length, large enough to incorporate detail but small enough to transport in the back of a station wagon. Smaller ships such as patrol boats and submarines can easily be transported in the back seat or boot of quite small cars.

The idea of a club dedicated to the building and display of 1/72 scale ships found an enthusiastic audience, culminating in the first Task Force 72 gathering at Wentworth Falls to the west of Sydney in February 1995 with 30 modellers and their ships from NSW and interstate. The club continued to enjoy strong growth, with the first Annual Regatta held in November 1995. The Regatta attracted some 45 ship builders from across Australia displaying more than 60 ships. Today, Task Force 72 has more than 100 members, including one in new Zealand, who own or have building more than 200 ships and submarines.





HMS HOOD with COLAC alongside at Darling Harbour

The club's members operate a wide variety of ships, from corvettes to massive battleships. The Daring class are well represented, with VAMPIRE, VENDETTA, and the ill-fated VOYAGER, several of them more than once and at different times of their careers. Also popular are the RAN's destroyer escorts, with TORRENS, PARRAMATTA, SWAN and STUART all faithfully recreated. The new Anzac frigates are also popular, so much so that their construction rate is outstripping that of the real ships, with at least nine building or 'in the water'. The latest building boom seems to be the American Ticonderoga class of Aegis cruisers, with almost a dozen cruisers under construction.

The 'Silent Service' has not been forgotten, with several submarines counted amongst the TF 72 fleet. The operation of a radio control submarine has its own intricacies, making them rather more complicated than their surface brethren. On the other hand the amount of detail required is somewhat less and the paint job (basic black) substantially easier! Included in the club's roster are the USS POGY, a Sturgeon class SSN, USS SEAWOLF name SSN of the class, and the Collins class boat HMAS SHEEAN.

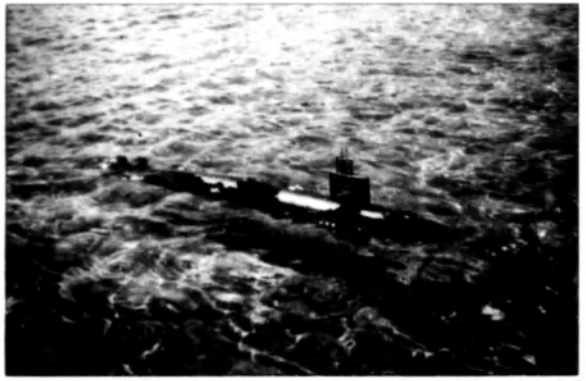
When Russ and Alan began building models in the 1980's, there was little in the way of parts and fittings available, requiring most items to be made by hand. Fortunately for other modellers, Alan was a professional patternmaker, and made moulds of his work, allowing easy reproduction if required in the future. After several other model builders approached him about getting copies of hulls or fittings, APS Models was formed to supply the hobby with 1/72 scale hulls and fittings. Today APS offers more than 40 kits, ranging from the ships of World War 2 such as HOOD and QUIBERON, through to the brand new ANZAC frigates.

So what goes into one of these marvellous replicas. Many are built completely from scratch, using a combination of materials including wood and metal, although this is more common when building a particularly unusual or uncommon ship. The more usual method is to build a ship for which fittings and a hull are already available, commonly called a semi-kit.

An APS Models semi-kit of HMAS VAMPIRE as she appears today at the Australian National Maritime Museum is available. The kit comprises a set of plans, the 1.7 metre (67 inches) hull, the armament of three 4.5 inch twin turrets, two single and two twin 40mm Bofors guns and the Limbo anti-submarine mortar. Also included are the funnels, two anchors and their associated windlass', bollards, doors, life raft canisters, bulkhead lights, fire hose racks, gooseneck and mushroom vents, ammunition lockers and the ships' boats.

Additionally, the modeller will need to acquire the following parts. Two electric motors, a radio control transmitter / receiver and associated servo-motors for the rudders, a speed controller, a rechargeable battery to power the systems, and a supply of sheets of modellers styrene to build the superstructure, masts, radar's and decks. The plans will guide the model maker in building the superstructure and decks and attaching the fittings, while any hobby shop will be able to advise on the most suitable size engines to propel

HMA Ships ADELAIDE and ARUNTA manoeuvre together



*USS POGY runs on the surface*

VAMPIRE at a scale 30 knots, as will other members of Task Force 72 who are only too willing to help a new ship builder out. The time required to get a ship up to a perfect replica can be months, although the model may be ready for 'sea trials' in a quite short space of time.

The building of a submarine is carried out rather differently, with the hull usually purchased as a kit, often direct from the United States. To allow the sub to submerge and surface, a 'plug' containing the motor, radio control gear and ballast tanks, is built to fit inside the hull. This plug can be ordered from Model Submarine Systems Australia in Brisbane, who will build it to the specifications of the modeller's submarine. The ballast tanks are powered by compressed air which can be easily refilled, allowing the model to submerge and surface on queue.

While many Task Force 72 members enjoy the 'hands on' experience of building their models, all look forward to the chance to get together and display their handywork. To this end the club runs several meetings a year, with club members also taking part in meetings organised by other clubs. TF 72 has also attended several community events such as the Newcastle Harbour Festival and the 'Modelmania' exhibition at the Australian National Maritime Museum. One major event on the clubs calendar for 1996 was an appearance at the Royal Australian Navy's Navy Week – Sydney, where club members got a close look at what they jokingly describe as "the 1/1 scale navy".

One indication of the high regard that the club and its members are held, is the invitation extended by Transfield Defence Systems, builders of the Anzac class frigates for Russ French to attend the launch of HMAS ARUNTA as their guest. Russ' model of ARUNTA drew much favourable comment, so much so that he had to keep a close eye on it to see that it did not end up as a centrepiece of Transfield's board room or ARUNTA's wardroom!

*HMAS Moresby during the 1996 Annual Regatta*

*Aerial view of HMS CLEOPATRA with HMS MANCHESTER beyond*

Task Force 72 is a group of people dedicated to keeping alive the memory of those ships of yesterday and of replicating the warships of today. The craftsmanship obvious in their attention to detail and accuracy is undeniable, but above all they are committed to having fun. To them, building the ship is only part of the enjoyment, the ability to bring their hobby to the public and perhaps encourage others to join in is the real joy.

Drop them a line, they would love to hear from you.

TASK FORCE 72 can be contacted at: PO Box 840, Sutherland NSW 2232 or via e-mail at glpack@hutch.com.au.

TASK FORCE 72 can also be found on the Internet's World Wide Web at www.healy.com.au/~mkeat/taskforce72.html



# Navy and the Defence Budget

***By Navy Leaguer***

Speaking recently to the ACT Branch of the United Services Institute, Air Marshal Les Fisher (Chief of the Air Staff) stated that "with over half the RAAF's current airframes purchased before 1980, the size of the current projects indicates that the next 10 years can be truly described in defence acquisitions as the decade of the RAAF."

There is little doubt that the RAAF (or, more accurately, the Australian Defence Force's) aircraft fleet requires substantial updating.

This is not only because an unduly large proportion of them will reach the end of their life of type at about the same time.

It is because the advance of technology imposes a need to ensure that all our fighting aircraft (and all our fighting equipment) is kept capable of filling their roles in the forecast hostile environment and meeting the established threat standards.

In the case of aircraft, the ADF has long needed airborne early warning and control aircraft, and plans are in hand to have these in service by early in the next century. New lead-in fighters are required and have been ordered. New helicopters have been ordered for the Anzac frigates. New Hercules transports have been ordered.

There are proposals for Hercules with air to air refuelling capability and for new light tactical transports to succeed the Caribous. Two more Chinook CH-47D helicopters are being ordered for the Army. There is a need (and proposals are being prepared) for reconnaissance, fire support and more troop lift helicopters for the Army – up to 100 additional helicopters are forecast.

Most of these are high profile projects, with project costs up to $A1 billion and more. Of lower profile, but still at very substantial cost (in some cases more than the smaller new aircraft projects), are the major aircraft upgrade programmes. The larger of these involve the F-111Cs, F/A-18s and P-3C Orions, all of which should be capable of fighting until 2020 and beyond.

At a lower level, but still at substantial cost, are projects to acquire new air to air and air to ground missiles. It is argued, not unreasonably, that there is no point in upgrading fighters if they are not armed with effective missiles.

We do not suggest that any of these programmes are unnecessary. On the contrary, they are necessary. In the case of AEW & C at least, the programme is long overdue.

Nor do we imply that the RAAF (or, more accurately, ADF) aircraft are getting an imprudently high percentage of the defence vote. Over the past decade, the RAN has been funded for new Anzac frigates, new submarines, new coastal minehunters and other vessels. At least the first 2 projects are now past their funding peak. Looking ahead, the Adelaide class FFGs and Anzac class frigates are to be substantially upgraded.

As with ADF aircraft, the RAN needs, and is being funded for, a number of lower profile, but still expensive projects. These include more modern anti-submarine torpedoes, more surface to air missiles, more Phalanx close in weapons systems, the mine

*RAAF F/A-18A fighter-bombers (Photo: RAAF)*

warfare systems centre, new hydrographic ships and so on.

There are a number of expensive joint service projects. These include the Jindalee over the horizon radar project, new joint force headquarters, the new offices at Russell Hill and the high frequency communications modernisation project.

All this is not to suggest that the total funding for the RAAF or RAN is sufficient. For example, funding is insufficient to provide enough missiles. Stocks of Harpoon anti-ship missiles are insufficient. The air to ground missiles being bought under project Air 5398 are sufficient for initial training only.

It is argued by the Army that they have been starved of equipment funds and that their need is fast becoming desperate. Although they are receiving new vehicles, these are insufficiently numerous. For example, the available infantry mobility vehicles for reserve brigades are allocated in turn to each brigade for exercises. In the event of mobilisation ot all brigades, there would be insufficient vehicles.

There are enough ASLAVs for one brigade only. Although being modernised, Army's M113 armoured personnel carriers are old.

The Army 21 programme, with its recognition of the role of the modern Australian Army, involves new methods of operations and will require a range of new equipment (in addition to the helicopters mentioned earlier).

Navy Leaguer has heard Army people say "the last decade was the decade of the Navy, the one before was the decade of the RAAF (for the F/A-18s and P-3s) so the this time it is Army's turn".

The looming problem is that the decade 2005 - 2015 will bring with it massive demands on the Defence capital equipment budget. The RAAF will want replacements for the F/A-18s, F-111s, C-130Hs and P-3s.

The RAN will need successors for the FFGs, major upgrades for the Collins class submarines, successors for the underway replenishment ships and the amphibious transports KANIMBLA and MANOORA. Earlier than than these there will be pressure for two more submarines.

Army too will have its needs. This major block obsolesence problem will come at a time when many of Australia's most capable strategists forecast a risk of a significant deterioration in the regional strategic situation.

In his lecture to the USI, Air Marshal Fisher had some interesting observations to make on types of threat. "As the RAAF has been shaped to primarily conduct operations for a large scale conflict, our future planning needs to question the weight given to such provocative models of conflict". The Air Marshal went on to suggest that the ADF should have a role in countering illegal migration, terrorism and drug traffic.

Major new equipment platforms – ships and aircraft – have lead times of ten years or more. It is impossible to forecast accurately the roles that will be required of a defence force 15 or 20 years ahead. It is even more difficult to forecast the strategic situation.

Navy Leaguer concludes that the current ADF policy of maintaining a balanced force, capable of meeting many levels and types of threat in a wide range of geographic areas, is sound. Australia must not neglect one major capability to strengthen another. There should be no "decades of the Navy", no "decades of the RAAF" and "no decades of the Army".

If the essential balanced force cannot be achieved within current budgetary limits, the defence budget must be increased.

It should be recognised that, if such an increase is necessary, a gradual increase should begin well in advance of the impending block obsolesence problem.

To leave the increase until 2005 will not only be too late in military terms. It would be infinitely more expensive in the longer term. All this is not to say that the ADF should accept the "replacement syndrome" principle where under each piece of equipment is almost automatically replaced by a more modern version of itself.

Fundamentally different options should be studied positively.

Examples include a much greater role for unmanned aerial vehicles, replacing the F-111s with long range sea launched precision guided cruise missiles and acquiring a comprehensive range of defensive sea mines.

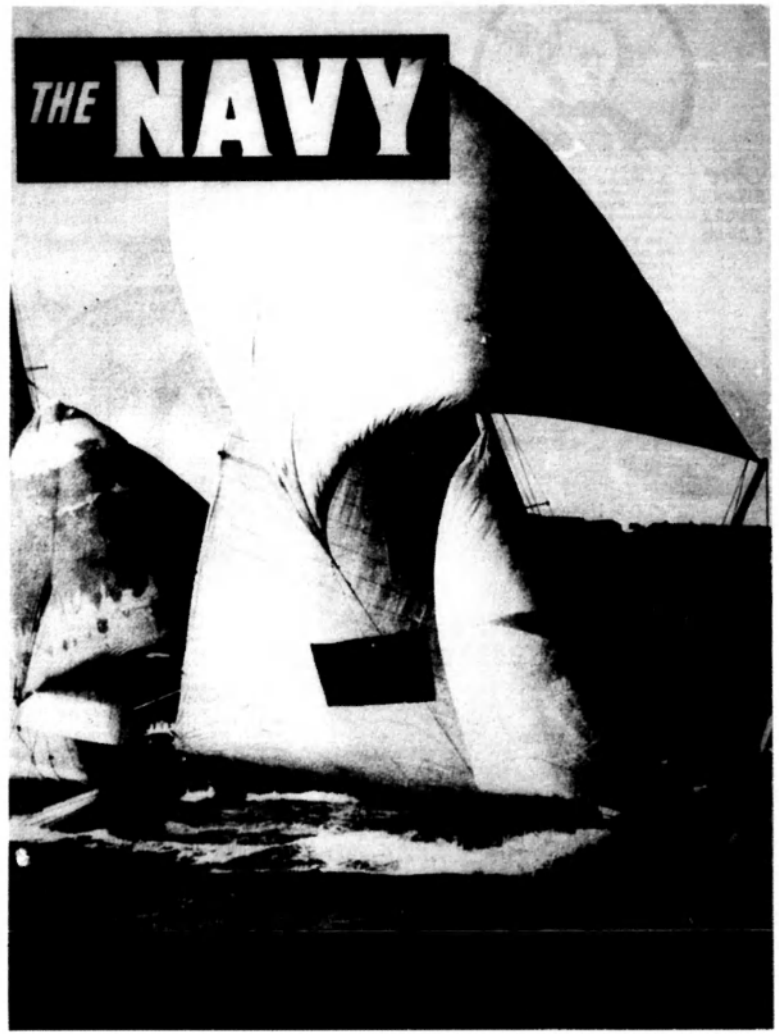




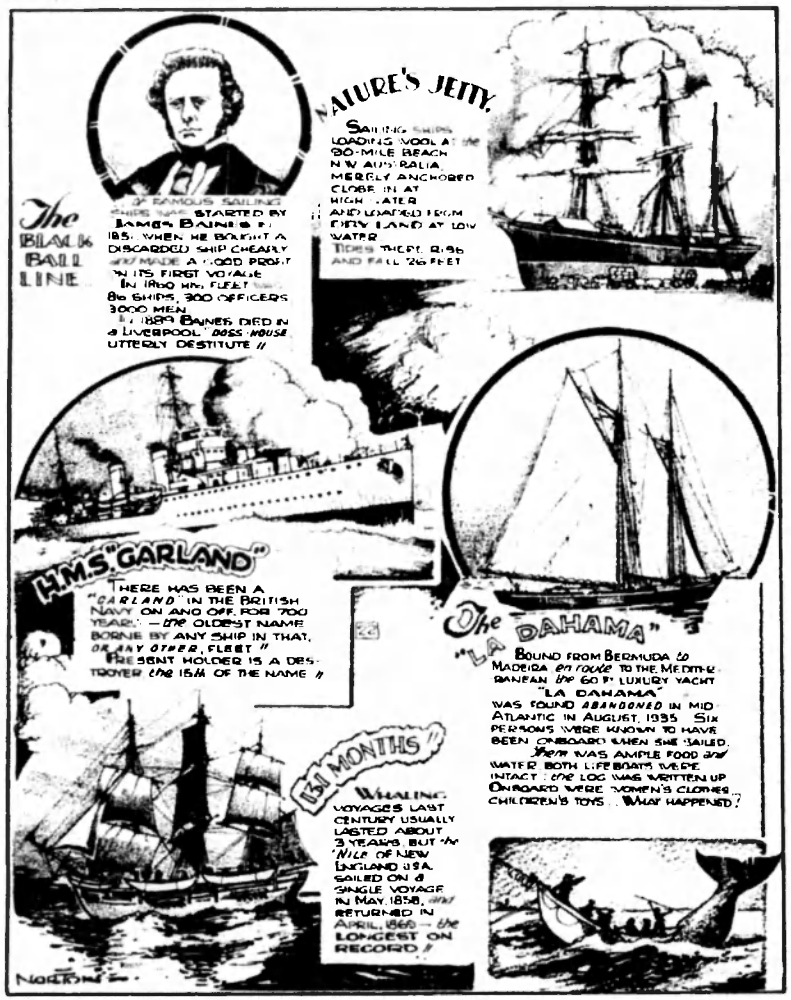
# 'The Navy' Revisited

In 1998, *The Navy*, the Magazine of the Navy League of Australia, will celebrate its 60th year of publication. For the remainder of 1997 we will feature pages from various earlier editions, in this issue, April 1949, April-May 1962 and February-March-April 1967. The 1949 magazine featured well known wartime artist Frank Norton who provided a regular series titled 'Seas, Ships and Sailors'. In the 1967 edition, the new Australian White Ensign (AWE) was described to readers. The AWE was introduced to the RAN on 1st March 1967 and recently celebrated its 30th anniversary.

(The editor would be keen to hear from readers and members of the Navy League who possess copies of the magazine from 1938 for possible inclusion in this new section.)



# SEAS, SHIPS AND SAILORS — by NORTON —










# Navy

## NEW ENSIGN FOR R.A.N.

**From 1st March, 1967, the new Ensign for the Royal Australian Navy was flown in all H.M.A. Ships and Establishments.**

The new ensign conforms to two important principles — it is a recognisably Australian flag which fits neatly into the general group of Australian flags, such as the National Flag and the Australian Red Ensign.

It is an ensign which embodies the main features of the traditional British White Ensign — the Union Flag in the upper corner and the white background.

In place of the Red St. George's Cross, which was added to distinguish the Royal Navy's Ensign as an English Flag, the Australian Ensign carries the Australian stars to distinguish it as an Australian Flag.

### HISTORICAL BACKGROUND ON THE WHITE ENSIGN

In 1625 it was considered necessary to distinguish for tactical reasons, the centre, van and rear squadrons of English battle fleets. Accordingly, the ships serving in each squadron flew an ensign either red white or blue. The ensigns were all similar in basic design, having a plain field with a small red St George's Cross in the top corner. In 1702 it was found that the white ensign of the three was apt to be confused with the French National Colours which at that time also had a white field, and with the Flag of Dunkirk, which in fact was identical with the White Ensign. Accordingly, a large red St. George's Cross was added to the White Ensign to remove the source of confusion. As the other countries of the British Isles came into union with England, so their crosses were added to the small St. George's Cross until the Union Flag in its present form evolved. These modifications were incorporated in the Navy's ensigns and so these flags now bear the Union Flag in the upper corner.

As with squadrons, so with Admirals, who were appointed Rear Admiral, Vice Admiral or Admiral of the Red, or of the White, or of the Blue. The individual ships of the Admiral's Squadron or division wore a coloured ensign of the same colour as the Admiral. Ships on independent service wore the red, which was the senior ensign.

In the course of time the need to distinguish the different squadrons for tactical reasons disappeared and the complication of the various units in one fleet wearing different ensigns itself became a hindrance. Moreover the French Revolution brought a change in that country's flag — the tricolour — and this was now sometimes confused in the smoke of battle with both the red and blue ensigns. It therefore became the practice for the Commander to order only one ensign to be worn, and the white was normally selected. Thus, at the Battle of the Nile in 1798 the British ships wore White Ensigns, although Sir Horatio Nelson was in fact Rear Admiral of the Blue. At the Battle of Trafalgar Lord Nelson was Vice Admiral of the White and all ships were the White Ensign even though those in Lord Collingwood's Squadron would normally have worn the Blue Ensign.

In 1864, just over a century ago, it was decided that three ensigns were unnecessary and the white was selected for the exclusive use of the Royal Navy. The Blue Ensign was allocated for use by Merchant ships commanded by officers of the Naval Reserve, and the Red Ensign for use by other British Merchant ships.

When the Royal Australian Navy was founded in 1909 the question of the selection of the ensign to be flown by Australian ships was raised during the Imperial Defence Conferences. The Admiralty view was that Dominion warships should fly the White Ensign, because this "would foster and maintain a feeling of union between the Dominion naval forces and the Royal Navy, and would show that it is desired to offer the new Dominion ships a full share in the heritage of the British Navy". Australian Ministers considered that Australian ships should fly either the White Ensign defaced with a seven-pointed blue star or the Australian Flag. After some months of discussion it was finally agreed that Australian ships would fly the White Ensign at the stern at all times, with the Australian Flag on the jackstaff on the bow when in harbour.

The new Australian White Ensign preserves two features of the British White Ensign — the Union Flag in the upper canton at the hoist and the white background. In place of the St. George's Cross, which was added in 1707 to distinguish it as an English Flag, the blue Australian stars denote an Australian ensign.





# HMAS VOYAGER, Her First Far East Tour of Duty

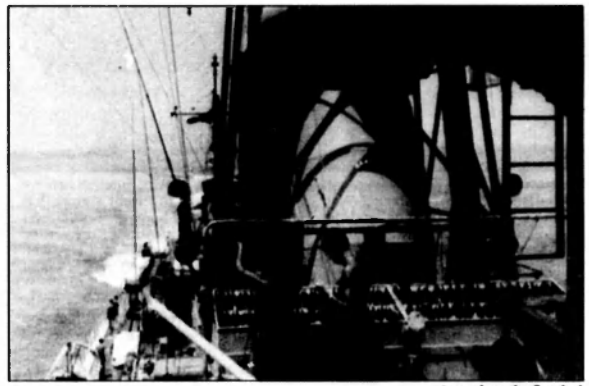
## A recollection from the flag deck

**By Gavin Ryan**

Very early on a bleak morning in September 1957, along with other fellow ordinary Signalmen fresh out of the Communication School in HMAS CERBERUS, I watched a ship's boat pull away from the side of a stately warship at anchor in Jervis Bay, and head for shore. My companions and I had been travelling for two days and nights by train from Cerberus in Victoria, and although tired, were excited and a little apprehensive.

The boat coming ashore to pick up fresh milk, belonged to the Daring class destroyer HMAS VOYAGER. We had been instructed to be on the wharf in time to hitch a ride back to VOYAGER, the newest ship in the RAN at the time, and a ship that was to be our home for just short of two years.

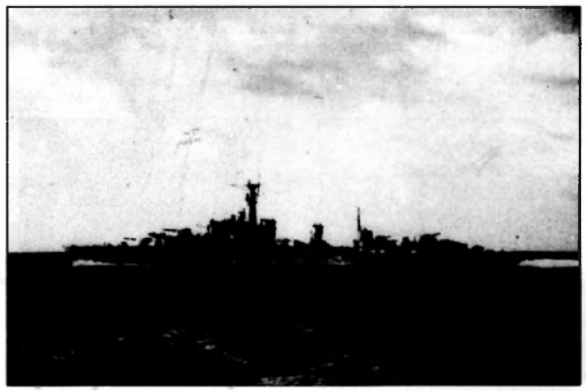
It was, as could be expected, all a little daunting at first. But with the confidence, and also the arrogance of youth, we went about completing the joining ship's company procedures and finding our way around a ship. That to me signified many of the reasons why I had joined the Navy in the first place. Later that morning, standing on the flag deck as the ship weighed anchor and got under way for exercises, those reasons were reinforced.



*At work on the flag deck*

VOYAGER was the first of three Daring class destroyers to be built in Australia, and at the time, was a technological marvel. Even the old hands admitted they were impressed with the ship's offensive strength in main armament and anti submarine capabilities. The operations room alone was, to a new chum like me, something out of the Wizard of Oz.

The only feature not liked by the 'old salts' was the cafeteria type messing for the ratings (as we were then described!).



*Our companion, HMAS WARRAMUNGA*

Other ships of the Navy at the time (with the exception of the carriers MELBOURNE and SYDNEY) had facilities for eating in the mess decks themselves, and as a consequence, carried certain victuals in the mess decks, like bread, milk, tea and coffee. VOYAGER was also different in that it was fitted out with bunks, and accordingly our hammocks (at the time issued to all ratings) were stowed ashore and not carried on draft with one's seabag.

VOYAGER's captain at the time was Captain 'Buster' Crabb, a big man in every sense of the word. He was immensely proud of his new ship and of his ship's company. As a signalman I spent a great deal of time on the bridge, and I got to know our 'skipper' very well. I doubt the Navy could have appointed a better captain to command its new pride and joy. Captain Crabb was a fierce and enthusiastic representative for a new Daring class, as many a journalist of the time will confirm.

After a series of work up exercises in the Jervis Bay area, the ship returned to Sydney for a refit, prior to leaving for an eight month tour of duty with the Far East Strategic Reserve in January 1958. She was in company with the Tribal class destroyer WARRAMUNGA, a WWII veteran.

After a very hard week storing and ammunitioning ship, we said our

*Jackstay transfer with HMAS WARRAMUNGA*

*Signallers on the bridge*

farewells and then with cries of 'let go forward and aft!' sailed at last, for what promised to be a great adventure.

VOYAGER and WARRAMUNGA must have presented a fine sight sailing from Garden Island that January morning. With both ships 'neat as new pins' and the ships' companies 'cleared lower deck for leaving harbour', we left Sydney Harbour in column, with VOYAGER in the van. We made a turn to port after we had gained some seaway, and then up the east coast enroute for Singapore, our base for the next nine months. The cruise schedule was to take us two weeks, with refuelling stops at Cairns and Darwin.

That first trip up the east coast of Australia left many fond memories. Everything was, of course, new to me. To be going overseas in 1958 was an adventure that really was only in the province of those with means. It was certainly one that my mates from civilian life could then only dream of.

The passage through the Whitsunday Island stood out as one of the highlights of the journey up the east coast. It was carried out on a day that must have been especially ordered. The colour of the land, sea and sky were true picture postcard material.

Halfway through the passage the Yeoman of Signals (almost God to a your Ordinary Signalman), called the flag deck from the bridge and instructed me to focus a telescope on an island in the group. The island was the habitat of a certain retired naval officer whose penchant for signalling passing naval ships was well known. Sure enough we received a flashing light signal that simply said 'Good hunting'. I never ever did find out the identity of the retired naval type, but I gathered he was well known to the skipper and certain senior officers.

From Cairns the cruise was quite wonderful. We were in the tropics and the Great Barrier Reef, truly the stuff of dreams. Flying fish became common sight as they flew across the water, skipping off our bow and stern wakes. Water snakes and turtles were also seen in some numbers, along with the occasional manta ray and shark. The colour of the sea changed from a dark inky blue into more turquoise, and then even green as we proceeded further north.

At the very top of Australia we rounded Cape York. I remember thinking at the time that I had come a long way away from my home town of Adelaide, not only in a physical sense, but emotionally and intellectually as well.

On then, across the Arafura Sea to Darwin, both ships leaving mile long wakes in the beautifully calm sea. Darwin Harbour in January 1958 still bore witness to the air attacks on it in 1942, and later in 1943, with several hulks of sunken ships dotting the harbour.

As I was to quickly learn, refuelling points like Cairns and Darwin, whilst not affording the opportunity of shore leave, did mean mail. Mail was essential for the morale of people serving away from families and loved ones for any length of time. My time at seas demonstrated time and time again, the effort put in by the Navy and Post Office to ensure ships received mail at every opportunity.

From Darwin it was on to Singapore. The passage took us across the Timor Sea and then through the beautiful Lombok Straits in the Flores Sea. At that time our relationship with Indonesia was somewhat uncertain, and, as a precaution, VOYAGER and WARRAMUNGA went to 'cruising stations' for the passage. As the ships passed through the straits, the island of Bali was on our port side, Lombok on the starboard. Now, Bali is a popular holiday destination for many Australians, an inconceivable notion on that sunny morning, all those years ago.

We were nearing the Equator when WARRAMUNGA requested permission to stop, to correct problems with one of her engines. Both ships sat abreast of each other for about two hours, until the problem was fixed. Through binoculars, it was plain that WARRAMUNGA's skipper (a favourite with our skipper) was getting agitated and began pacing the bridge. In his great team style, 'Buster' Crabb sent a signal of comfort and made light of the delay.

The real fun however, started when WARRAMUNGA signalled she was ready to proceed. With both ships abreast of each other, they were basically on the starting line, stopped dead in the water. Then VOYAGER hoisted the flag signal to proceed at 14 knots. Like a couple of dragsters at the stop lights, both skippers now wanted to prove who had the best 'pick up'. The 'Munga', as she was fondly known, might have been of another era and not equipped with anything like the technology of VOYAGER, was however, built for speed - a feature typical of the Tribal class. Despite the enthusiastic

*King Neptune's Court. Crossing the line ceremony on the passage to Singapore, 26 January, 1958*

*Captain Crabb being sentenced*

*Captain Crabb receiving punishment*



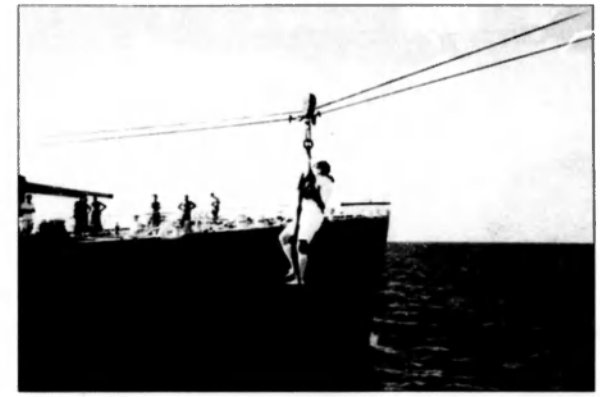


urging of all of us on the bridge, it was Munga's day by a mile! She was a fast ship with beautiful lines, and that moment of her working up to speed is forever etched in my memory.

By now I had settled well in the ship's daily 'at sea' routine. A lot of it was hard work and long days. Up at 0555 every morning, with the first task of the day to scrub the wooden deck of the bridge and then to polish the brightwork. I was one of two 'daymen' - many a day we were still on deck at 2200 hours. To top it off, as one of the most junior members of the ship's communication branch, it seemed like I was to blame for anything and everything that went wrong! I was to learn later, that this was the lot of Ordinary Rates in all departments on board, there was little we could do about it. I later realised it was Navy's way of making sailors out of us.

It was inconceivable that a brand new ship like VOYAGER, with so many new chums in the crew, was going to cross the Equator quietly. With great fanfare and the sounding of portable foghorns, King Neptune's messengers arrived on board a day or so before we were due to cross the 'line'. They advised the ship's company of certain ceremonies that were to be carried out to appease King Neptune, and if performed in accordance with all the ancient traditions and the King's pleasure, the ship's good passage would be allowed to continue. We were informed the alternatives would be just too terrible to contemplate!

When the day of the crossing arrived, a canvas pool was rigged in the waist, and Neptune's court assembled close by. Those of us who had never crossed the line before were 'duly initiated' by being thrown somewhat unceremoniously into the pool after being presented to King Neptune and his terrifying, motley gang of assistants.



*The destroyer's medical officer being transferred to the Kiwi cruiser BLACK PRINCE*

Actually, we Ordinary Sailors got off pretty lightly. The real fun was when certain senior officers and the chief coxswain received their sentences and subsequent punishment. This included the Engineering Officer and the Captain, but the highlight was seeing the Communications Officer receive his 'punishment'. This was real justice in my mind!

The way everyone joined in on the fun and accepted the fiendish indignities some had to bear, was testament to the high morale and comradeship that had developed in the ship since we had left Sydney almost two weeks before. But that was not all. Apart from being a happy ship, we were now an efficient one as well, and looking forward to showing the Poms a thing or two when we joined them in Singapore.

Our arrival in the Singapore Naval Dockyard was one marked by a splendid Naval Ceremony. A Royal Marine bank greeted us on the wharf, as did several senior Royal Naval officers keen to see at first hand the latest addition to the Australian Navy.

*Transfer of stores from RFA FORT CHARLOTTE*

My first impression of the Naval Dockyard was it's size. Alongside various wharves were an aircraft carrier, two cruisers, three destroyers and several smart looking frigates. From memory, I think there was also a selection of Royal Fleet Auxiliary vessels including a tanker.

We were to spend some time in this dockyard in our eight months tour of duty, but as ratings, we never really felt close to those of the RN, so we kept to ourselves quite a bit, particularly when ashore on leave.

Relieving the two Australian destroyers due to return home (I think they were the Battle class ANZAC and TOBRUK), VOYAGER and WARRAMUNGA were now part of the Far East Strategic Reserve. Our immediate boss was the RN's Flag Officer Number Two Far East Station (FO2 FES) who at the time flew his flag in one of the cruisers.

As part of the FESR it was important that we were fully worked up and ready for any job that may be asked of us. We found ourselves at sea again after only a week alongside. We were aware of the then political sensitivity of the region and understood that we could be called upon to provide hostile support at any time. 'Buster' Crabb was determine we would not be found lacking if this event were ever to arise, so all exercises were carried out in a very professional and enthusiastic way.

After only a few weeks on the station, VOYAGER was a very efficient ship. The communications branch had received several 'well dones' from our counterparts in the RN, whilst gunnery and other parts of ship had also demonstrated their

*HMAS VOYAGER in rough weather*

high levels of efficiency and effectiveness.

We spent two glorious days at Tioman with WARRAMUNGA. Both ships' companies took advantage of the break in the exercise routines and went ashore to swim and relax on the beach. The ships' cooks set up a great barbecue ashore, and with our beer issue, we made the most of it, before we were due to get into the real hard business of the coming SEATO exercises due to commence in a couple of weeks.

HMAS MELBOURNE and other units of the Australian fleet, including VOYAGER and WARRAMUNGA, together with ships from the UK, USA, New Zealand, Thailand, Pakistan and France were assembled in the Bay of Manila prior to the commencement of the SEATO exercises. Shore leave, granted prior to the commencement of the exercises, gave us the opportunity of experiencing the hospitality of the people of Manila.

The SEATO exercise was very demanding, and we signallers had to work long, hard hours for two weeks. Working with the United States Navy for the first time was very exciting. My first impression of the US Navy, and it's one that stays with me today, was the awesome amount of armament their ships carried and of the design of their ships.

The facilities at their big naval base in Subic Bay were without comparison to anything I had previously experienced. It was here that many of us tried our first pizza, a then unheard of dish in Australia. Here too, we could indulge ourselves with fresh milk flown in daily from the US.

By now we had been away from home for about three months, with most of that time spent at sea on exercises. Although there had been little time for shore leave, we ODs reckoned we knew the Far East pretty well. We were to find out soon just how wrong we were.

The old hands kept telling us to wait till to Hong Kong because we really hadn't seen the Far East. Nothing they said prepared me for the first visit to this fascinating, exciting place, it's bustling harbour, the towering hills, the smells, and above all, the people. As a young sailor ashore in Hong Kong for the first time, it was sensational. Here were things never seen in Australia - transistor radios, long playing records of the very latest shows, and books that were unavailable or even banned back home. Of course everything was also duty free.

After Hong Kong, we were involved in more exercises and then visited several ports in Japan. I enjoyed our limited time ashore, sightseeing and purchasing souvenirs. I felt more of a stranger in Japan than anywhere else in Asia we had visited. The people treated us kindly enough, but I felt they lacked the spontaneity of the Chinese. Our currency at the time was very strong – one Australian Pound ($2.00) bought 800 Yen, today two Australian Dollars will buy about 180 Yen. As a consequence, everything ashore was fairly inexpensive. We also thought the local beers were very good.

By now we were becoming anxious to return home to Australia. Conditions below decks, particularly in the forward mess decks, were intolerable due to the breakdown of the air conditioning shortly after leaving Sydney. It was exacerbated due to the inability to open any part of the ship's hull to allow fresh air to circulate. The ship's medical officer had expressed his concern of the effect on health and morale these conditions were having. We also had been working hard, and it was almost seven months since we had left home. The married men on board were understandably keen to be reunited with their wives and children.

For the first time in the cruise I sensed the morale of the ship's company had come off the boil. This was probably to be expected, as thoughts were now more on our return to Australia.

On our way to Japan from Hong Kong, and on the return journey, we made passage through the Formosa Strait. We went to action stations on both occasions. The relationships between China and Taiwan, while never friendly, had become quite hostile, with both sides making threats against each other. There had even been an exchange of artillery fire between the Chinese mainland and the Taiwan island of Quemoy and Matsu.

Our passage through the Strait was made in full daylight. Both VOYAGER and WARRAMUNGA flew large British White Ensigns - there was no Australian White Ensign in those days - and had Australian flags draped over the top of the B gun turrets.

As senior officer responsible for the two ships, 'Buster' Crabb wasn't taking any chances on a mistaken identity, and was prepared to retaliate if we were taken on. Being closed up for action stations for long hours in the tropics, dressed in long trousers, boots, shirts with sleeves rolled down and the balaclava and gloves of anti flash gear, was very uncomfortable.

The atmosphere was tense, and made more so with the appearance of an unmarked military observation aircraft, that decided to check us out during our southern passage of the Strait. The pilot perhaps never realised, that any move on his part, could have been interpreted as unfriendly and would have resulted in us opening fire. By that time, after all the exercises we had been in, both ships were pretty good in the gunnery department.

In fact by now, both ships had worked up to be very effective fighting units. We had cruised in and about the Indonesian Archipelago on a few occasions to show the flag, and were always either at action stations or in a state of high alert in case an incident occurred. We were prepared if necessary, to demand our rights to go about our 'lawful occasion'.

After a few days in Hong Kong we set sail again for Singapore, the first leg of our journey home.

More time in Singapore, then exercises followed. To all our reliefs, we finally set sail for home. This time through the Sunda Strait, once again at full alert with the ship at cruising stations. The story of the courageous battle fought by USS HOUSTON and HMAS PERTH, and the fight for survival of those crew members who were subsequently captured by the Japanese, was in my mind as we proceeded through the strait.





*HMAS VOYAGER in rough weather*

Now another love affair was about to occur in my life. This time it was Fremantle and Perth that enchanted me. We had a marvellous time in this, our first port of call back in Australia. The locals couldn't have been friendlier. I made up my mind, that when the time came, I would live in Perth, a promise I kept in 1966 when I came to the West to open a branch for a large international insurance company. I have never wanted to live anywhere else since.

We said farewell to our Western Australian shipmates who were taking leave, and after two wonderful days in the West, set sail for Adelaide.

The passage across the Great Australian Bight was very rough. It was a cold, overcast morning, when the ship moved up the Port Adelaide river to berth at an oil refuelling wharf to refuel before moving on to the berth allocated further up river. I was due for seven weeks leave, and not wanting to delay things any longer, took my leave of the ship at the oil wharf, only to find when I returned home, that my mother and sister had gone to meet me in Port Adelaide at the allocated berth!

Although the eight month tour of duty was over, it was not the end for me and VOYAGER. I was to serve in her for another cruise to the Far East and in her sister ship VENDETTA, and also the Q class frigate QUEENBOROUGH, before I paid off. But that's another story.

## A postscript

When VOYAGER and WARRAMUNGA sailed for the Far East to represent Australia's commitment in the Commonwealth Strategic Reserve, they carried with them the fine traditions of the Royal Australian Navy. A Navy then just on fifty years old. I believe we did our country and that tradition proud. We had operated with some of the world's finest navies and were never found wanting. Indeed, we were often an example in seamanship and efficiency. We were well trained and ready for any eventuality that could have presented itself to us. On many occasions we found ourselves in situations that put us at a very real risk and ready for battle if need be. We accepted that, because it was our job. We were also, after all, volunteers!

It remains a disgrace that the politicians of the time, and I suspect some of their senor public service advisers, didn't appreciate, or indeed recognise, the importance of the RANs role in the region or the personal sacrifice and commitment sailors gave willingly to serving their ships and country.

Only in recent times has service in the Commonwealth Strategic Reserve finally been recognised with the issue of the Australian Service Medal to members of the RAN. The Army and RAAF personnel who served in the Reserve were recognised from the outset.

Regrettably, the ex Navy personnel who served their country so well in those years, are still denied access to the repatriation benefits available to the Army and RAAF personnel for their service. A campaign is now under way to get justice for those who served in the RAN during those times and now find themselves in need of help.

# UNITED STATES NAVY HELICOPTERS 1997

The United States Navy (USN) and United States Marine Corps (USMC) operate a large number of fixed and rotary wing aircraft. As part of their plan to upgrade the rotary component and satisfy the services' needs in the new century, new helicopters are being secured and current models upgraded to meet the diverse requirements.

Part of this plan is to reduce the overall numbers of different models and the acquisition of the versatile V-22 Osprey VSTOL (Vertical Short Take Off and Landing) aircraft from 1999. This report is re-produced courtesy of the American magazine Rotary and Wing.

### SH-60R Seahawk

Central to the United States Navy's new helicopter master plan is the modernisation of all Seahawks, the SH-60Bs, SH-60Fs and HH-60Hs to one standard model, the SH-60R. The Navy will eventually convert 157 SH-60Bs, 78 SH-60Fs and 25 HH-60Hs to the R model.

When finalised, the master plan will detail the SH-60R's configuration and tactical utility. The consolidation is to incorporate the Block II upgrade plan, which was proposed years ago for the SH-60B, then altered to reflect new fleet needs.

These priorities shifted from open-water pursuit of submarines and surface vessels to operations within the more confined, littoral waterways. The submarine threat to carrier battle groups has receded, so the SH-60R program aims to create a multipurpose, digitally smart helicopter, capable of operating with carrier or surface-action groups and, at times, outside of combat air patrol fighter coverage.

The Block II upgrade calls for re-engineering the SH-60's avionics; installing an advanced low-frequency sonar, an inverted synthetic aperture radar, a FLIR, and an advanced electronic countermeasures suite; and making other growth improvements. SH-60Rs will have the digital datalink capability now in SH-60Bs and be optimised for sea-reconnaissance, anti-surface and anti-submarine warfare missions.

Block II re-manufacture is to begin with low-rate initial production in 1998, with all SH-60Rs delivered between 2001 and 2012. Existing SH-60s will also get a Service Life Extension Program upgrade to airframe and dynamic components.

### HH-60H

The USN now has 25 HH-60H carrier-based strike/combat search-and-rescue (CSAR) helicopters (two were lost in 1996). The Navy is assigning two HH-60Hs per four-helicopter squadron of SH-60Fs. It also supports various Special Operations activities.

No plans exist to increase the HH-60H inventory. Instead, the concept is to roll its mission into those performed by the upcoming SH-60R version. Under the Navy's new helicopter master plan, the move to the SH-60R means consolidating the vertical replenishment (HC), anti-submarine warfare (HS) and CSAR communities.

### V-22 Osprey

As 1996 ended, the first of four new engineering, manufacturing and development (EMD) 'production representative' V-22 Ospreys was poised to fly at Bell. Progress in 1996 followed weight and cost goals, with unit recurring cost now below $30 million. The first V-22 delivery – to the USMC for training – is set for 1999.

This past June, the Navy and Bell Boeing signed a $1.35 billion contract for low-rate initial production. This allowed early purchase of parts for four aircraft, with options for follow-on lots of five and seven aircraft. In the FY97 budget, Congress added one aircraft to the first production lot, raising it to five aircraft.

In 1995, the Air Force became the sponsor of a Special Operations Command (SOCOM) plan to acquire 50 CV-22s. The Air Force is sharing costs of the CV-22's fuselage development, while SOCOM will fund its mission avionics. These V-22s are additional to the 425 for the Marines.

### SH-2G Sea Sprite

Only two squadrons of eight SH-2Gs remain in the Navy, both with Reserve units.

The SH-2Gs are used for anti-submarine warfare, but one squadron has added a mine detection role. The Sea Sprites will carry the KAMAN Magic Lantern laser-based mien detector.

Kaman SH-2Gs are entrants in a number of overseas naval helicopter competitions. At our presstime, word was awaited on the helicopter's chances in New Zealand, Australia having ordered eleven SH-2G(A)s in early 1996.

### CH-46D/E Sea Knight

The USMC have 240 (now veteran) CH-46Es and nine HH-46Ds; the Navy another 27 CH-46Ds and 43 HH-46Ds. Both branches share 13 utility UH-46Ds.

The CH-46D/E Sea Knight began receiving its long-awaited dynamics upgrade kits in 1996; the first verification kits are at the Navy's rework facility at Cherry Point, NC. The upgrade will refurbish and replace most components, shafts, and transmission parts of the CH-46s dynamics train to increase service life to 2015.

But even while the 'Phrogs' await their dynamic upgrade, the Navy's new helicopter Master Plan aims to retire them. The plan would replace all Navy CH-46s with Sikorsky CH-60s. The plan also calls for the Military Sealift Command to use private contractors for inshore and ship-to-ship vertrep.

### MH/CH-53E

The Navy now has 48 minesweeping MH-53Es and the Marine Corps has 155 heavy-lift/transport CH-53Es out of the total of 178 required. The fleet is slowly returning to flight status following a grounding after a fatal crash at Sikorsky during a pre-delivery flight in 1996.

The model is receiving the uprated General Electric T64-GE-419 and modifications to its transmission, tail-rotor gearbox and dynamics components affected by the more powerful engine. It is also to receive avionics upgrades, a night-vision-compatible cockpit and crashworthy seats. Studies continue on a mid life upgrade that would include digital avionics and new mission equipment.

*SH-60B Seahawk*





*UH-46D Sea Knight*

### AH-1W Super Cobra

Last year the Marine Corps got the nod to modernise its AH-1W SuperCobras to a four-bladed Whiskey (4BW) configuration. An engineering, manufacturing and development contract with Bell was signed late last year.

Besides the new rotor, the modernisation include: two more missile stores stations two for air-to-air and four for air-to-ground anti-armour weapons such as Hellfire and TOW; a night-vision-compatible glass cockpit with upgraded sensors; a longer tailboom for increased elevator authority; and a beefier, 2,625-shp transmission.

The four-bladed main rotor is to be a composite, bearingless design with a flexbeam hub. It will have a 10,000-hour, on-condition, service life.

The USMC's policy is driven by a need to fund the modernisation before a large funding wedge – covering all its helicopter needs – is encountered in around 2010-2020. Meanwhile, Marines AH-1Ws continue to receive the Night Targeting System (NTS). It will eventually be fitted to most of the 225 AH-1Ws on order for the Marines. Fleet strength is currently about 210.

The AH-1W is doing well on the export market. Turkey, Taiwan and several unidentified Mideast countries have ordered it. Romania is to buy 96 of a variant, the AH-1RO, a basic AH-1W airframe with Romanian weapons and avionics. Taiwan and Turkey ordered the NTS for their AH-1Ws. Taiwan is taking 52 and Turkey wants 13.

### Commercial Vertrep

The Navy's Military Sealift Command (MSC) is seeking an off-the-shelf, contractor-supplied Fleet Combat Support Helicopter. The contractor would support vertrep, medevac, search and rescue, airhead operations and, possibly, Navy SEAL operations.

The only company to participate so far is Kaman Aerospace, which has demonstrated its single-seat K-Max on two occasions, the latest being a 1996 tour of duty in the Persian Gulf. MSC is preparing for a third demonstration, to begin in April, this time to include passenger carrying variant.

*MH-53E Sea Dragon*

# In Brief

*By Geoffrey Evans*

## Marine Accidents

In the past several years the writer has received reports of investigations by the Marine Incident Investigation Unit of the Department of Transport into "marine casualties occurring within the Commonwealth's jurisdiction".

The reports have involved an extremely wide range of mishaps – some at sea others in harbour, some involving a single ship (e.g. a fire on board) while others involve two or more ships (e.g. an anchor not holding, causing a ship to drift and collide with others at anchor in the same area). When the report is completed the Minister for Transport is first cab off the rank and his staff usually organises a media release; this may or may not receive publicity in the mainstream media depending upon a number of factors including perceived newsworthiness.

Whatever happens in the media, the Unit's investigations always receive attention in maritime circles as the care with which the investigations are carried out is recognised and as usually there are lessons to be learnt or re-learned.

The limits of the Commonwealth's jurisdiction and authority to investigate are far from precise and stem from the Navigation Act of 1912 and subsequent amendments. There are all manner of exemptions and qualifications effecting the status of vessels and the circumstances in which mishaps can be investigated no matter where they occur while those effecting foreign flagged ships require careful judgements to be made before action can be taken.

Fortunately the quality of the Australian Investigating Unit's examinations and the good relationships it has established with similar organisations in other countries, plus a good measure of commonsense obviate many of the problems which may otherwise arise.

## Recognition

In the January-March 1996 issue of *The Navy* reference was made in this column to the quest for recognition by naval personnel who served in ships involved with the Malaya Emergency in the fifties and in the Vietnam War prior to the arrival in that country of the main body of Australian soldiers. A later issue mentioned the ever-increasing number of authorities becoming enmeshed in a quest that had so far proved fruitless.

'In Brief' understands that some progress has been made, albeit slight, in the form of an issue of the Australian Service Medal to the Malaya veterans but otherwise the paper battle continues.

At the time of writing (late February) a decision is believed imminent, but in the light of previous experience no-one seems optimistic.

## FAIRSTAR

Among publications read by your scribe is the UK journal *Ship's Monthly*, a very useful source of information concerning maritime happenings throughout the world (including reports on navies).

The January issue contained a five page article on the liner FAIRSTAR, stated to be Australia's favourite cruise ship and about to be withdrawn by her final owners, P&O, due to wear and tear – 'old age' in other words. The following information is extracted from the *Ship's Monthly* article.

FAIRSTAR, commenced her career in 1957 as the purpose-built troopship OXFORDSHIRE; of 20,586 gross tons, she had accommodation for 1000 troops and 500 dependants. Britain's contracting overseas commitments together with advances in air travel resulted in a very short career for OXFORDSHIRE as a trooper and she was laid up in 1962 and placed on the market.

In the following year the Italian Sitmar line acquired the ship on a six-year charter with the option of purchase and after an extensive refit-rebuild might be a more appropriate word – she was purchased outright by Sitmar, renamed FAIRSTAR and placed on the UK-Australian run; she had accommodation for 1868 passengers in one class and was manned by a crew of 460.

Until 1970 a majority of FAIRSTAR'S UK-Australian passengers were British migrants (Sitmar had an Australian government contract), the ship occasionally cruising out of Sydney between line voyages 'Homeward Bound' – a term usually used in the heyday of liner travel – the ship carried Australians 'doing' Europe.

Displacement of sea by air travel resulted in FAIRSTAR departing the UK for Australia in 1974 and for the next 23 years cruising out of Sydney – in the later years as a P&O owned ship, although retaining her name and Italian officers and dining room staff.

A remarkable record and reputation for any ship.

## Unification/Integration

When the Whitlam government embarked on re-organisation of the armed forces in the seventies the fashionable word was 'integration' but not 'unification' as applied to Canada where defence reorganisation had started earlier and was not meeting with many problems.

Over the twenty or so years the RAN, Army and RAAF have been 'integrating' – a virtually continuous process – the structure of the individual Services has naturally changed considerably as more and more authority has moved to the central headquarters.

Of concern to many is what appears to be the diminished status of the Service Chiefs. For example, in the past the Chief of Naval Staff ("First Naval Member and Chief of Naval Staff" in pre-integration days) was apart from seniority in rank, the unquestioned lord and master of the RAN – at least to everyone in uniform – and his influence on governments was not to be disregarded.

Nowadays, with officers of equal rank in defence headquarters, numerous other flag officers and reduced facilities at his disposal, the Chief of Naval Staff (or Chief of Navy as he is now titled) is not nearly so prominent as his predecessors were no matter how able he may be.

One wonders how close to the once discredited unification we have come.

## New Zealand

The reported statement of the Prime Minister while in New Zealand earlier this year, that the defence budget would be 'quarantined' from expenditure cuts in the forthcoming Federal Budget, is open to various interpretations.

One view is that if factors such as inflation are not taken into account, in real terms funds already allocated will have to be stretched further to achieve the same results. In effect, a reduction in defence spending.

***Well deck of the USS ESSEX*** *(Photo: ABPH Simon Metcalfe)*




**THE FIRST DESTROYERS**
By David Lyon
Published by Chatham Publishing,
The Old Piano Factory,
48 Hoxton Square, London N1 6PB,
United Kingdom
Reviewed by Ross Gillett

Chatham, the recently formed London based naval publishers, has released the first book in its new 'Ship Shape' warship series.

The 128 page hardcover book covers the Royal Navy's turtleback torpedo boat destroyers (TBDs) of the 1890s. From the outset, author David Lyon states "this book is not a complete history of these early destroyers, though it is, I hope, a step in that direction". According to him, the book is a story told by quotation from the main series of technical documents of the Royal Navy, and supplemented by the records of the Thornycroft building company and the National Maritime Museum.

The resultant book, *The First Destroyers*, is a combination of in-depth narrative, data tables, detailed perspective and cutaway drawings and technical appendices. David Lyon has presented all of this information via a development chapter and separate sections devoted to all of the builders of the TBDs in the United Kingdom. Additional chapters are devoted to the boats in service and finally, comparisons with contemporaries in foreign naval service.

Most of the illustrations come from original or even glass plate negatives and have reproduced very well. An unusual bonus with the book is the set of folding plans for HMTBD VELOX in 1904, safely attached to the inside back cover.

The First Destroyers is a professionally produced book from a growing maritime publishing house. Highly recommended.

**THE NAVY – DAY BY DAY**
**Historic Naval Events in Australia and Abroad**
By Lew Lind
Reviewed by Greg Swinden

Shortly before his death in 1994, Lew Lind submitted his revised manuscript for *The Navy – Day by Day* to Kangaroo Press. This book is essentially an updated version, including events up to 1994, of Lew Lind's 1982 Historic Naval Events of Australia Day by Day (published by Reed Books) and the revised edition The RAN – Historic Naval Events Year by Year, published again by Reed Books in 1986.

The Chief of Naval Staff, Vice Admiral Taylor states quite correctly in the Foreword that the work is a 'meticulous and painstaking research' and that 'many Australians, not least those in the Navy, have found cause to refer to Lew Lind's book in the cause of their work or in moments of reflection'. The Navy Day by Day, and its predecessors have become the standard text of Australian Naval history. Most people who wish to know about Australia's Naval history will turn to Lew Lind's books rather than wade through the lengthy pages of the Official Histories.

In many cases the information in *The Navy – Day by Day* has been gleaned from dozens of other books and hundreds of magazines and journals. As a general history of the Royal Australian Navy it has no equal.

The final manuscript was checked by Mr Vic Cassells (author of *For Those in Peril*, also published by Kangaroo Press). The book is a hardcover, is well illustrated with several black and white photographs and reasonably inexpensive at $49.95. The book is set out in an easy to read style with the events listed on a day by day basis rather than year by year as the 1986 version was. Both styles have distinct advantages and disadvantages and perhaps in the future this text could become a two volume affair with one listing events on a daily basis and another by year. There is also an extensive index to assist the reader or researcher find the event or personality they are looking for.

Lew Lind's book is not meant to be a comprehensive history of the RAN. If you want that then go to the Official Histories, individual ship histories or wait until 2001 when the history of the RAN in the Twentieth Century should be published. Instead it is an excellent general guide to the history of the RAN and Naval events involving Australia. Many a Naval historian has used Lew Lind's books as the first step on their road to further research.

The only problem I have with the book is some quite poor proofreading which allowed several spelling errors to creep in as well as a few errors of fact (ie page 20 HMAS CANBERRA is a Guided Missile Frigate not a Destroyer). Apart from this *The Navy – Day by Day* is an excellent book and a worthy tribute to the late Lew Lind.

It is a must have for the Naval Historian and those interested in our Naval history. Hopefully in a few years time someone will take it upon themselves to further update this excellent book.

**AUSTRALIAN SEAPOWER**
**Destroyers**
Photofile No. 5
Published by Topmill Pty Ltd, 102 Victoria Road, Marrickville, NSW, 2204
Pages 72, 145 photographs including 16 in colour
Reviewed by Joe Straczek

The latest in the series of Seapower booklets from the Sydney publisher Topmill is *Destroyers*, a pictorial history of the torpedo boats and destroyers to have served in the Royal Australian Navy.

The story begins in the late 19th century when both Australia and New Zealand manned small torpedo boats. Two first class and six second class craft were active with the Australian colonies and a further four second class boats in New Zealand.

After the formation of the RAN in 1911, the service would acquire eleven classes of destroyers, with 39 ships flying the White Ensign. During these nine decades, the size and role of the successive classes changed as each new type was commissioned.

Destroyers describes and illustrates all of the ships, from the first 700 ton River class, completed 1910 to 1916, up to the 4,500 ton Perth class missile destroyers of 1965-67. Of the 53 Australian and New Zealand destroyer type warships, the book covers the 14 built in Sydney, three in the United States of America and 36 in various shipyards in England and Scotland.

Dependant upon the era of Australian naval history the destroyer force sailed through many highs and lows of effectiveness, numbers in commission and total war service. From a busy birth and subsequent global duties during the Great War 1914-18, the RAN destroyers began a low period of activity from the mid twenties until the late thirties. The most active eras were between 1939 and 1946 (18 ships) and from the late 1950s, with both the Battle and Daring class (five ships) in service. Numbers remained fairly constant after the retirement of the two Battles, then remained at six after the delivery of the three Perth class in 1965 and 1967.

A highlight of the book is the quality of the photographic sections, with many new views of the ships published for the first time. Each of the classes is presented in a chronological format, describing the historical highlights and principal technical aspects of the ships, with a table of overall data at the close of the book.

Like the earlier books in the series, Destroyers is highly recommended to all readers. The book is available from most

newsagencies or can be ordered direct from the publisher, phone (02) 9565 1266.

**NAVAL AVIATION IN THE FIRST WORLD WAR – ITS IMPACT AND INFLUENCE**

By R. D. Layman

Published by Chatham Publishing

Reviewed by Ross Gillett

First released in the United Kingdom in late 1996, the well respected naval aviation historian R. D. Layman has produced a very detailed account of all aspects of naval aviation during the world war between 1914 and 1918.

The detailed index at the rear of the book provides enough evidence of the degree to which Layman has researched his topic. The current work follows other studies by the author, including Shipboard Aviation 1783-1914, The Amalgamation of Big Guns and Aircraft and The Development of Aviation Vessels 1849-1922.

In the current work, the author provides detailed descriptions of the many notable aircraft events at sea together with some of the lesser known aspects including, Russian seaplane operations in the Black Sea the world's first 'carrier strike force' and the role played at Gallipoli by naval aviation. Unfortunately for the Royal Australian Navy, the book only gives scant attention to the deeds of the Fleet's adventures with the variety of Sopwith bi-planes in HMA Ships AUSTRALIA, BRISBANE, SYDNEY and MELBOURNE.

Naval Aviation in the First World War provides a detailed origin of those forces which up to the current day, still dominate sea warfare upon the world's oceans. Recommended, but especially for the naval aviation enthusiast.

# ??"What is an ... Admiral"??

**The 'What is a ... ' navy people series and the follow-on articles to be published in subsequent issues of *The Navy* Magazine were originally written in late 1950s. The set of eight were re-discovered in Canberra by the Naval Historian, Mr Joe Straczek and forwarded onto the Navy League for the enjoyment of all readers of *The Navy*.**

Admirals come in four distinct classes – REAR, VICE, FULL and even FULLER. The REAR class, of course, is at the bottom. Following this is the VICE Admiral. FULL Admirals are those who have got passed the stage of having a few Pink Gins before dinner. The FULLER Admiral is Higher than a FULL Admiral. The FULLER Admiral towers. He sees all. HE is absolute. HE is all powerful. He is All Mighty. It is only the weight of his braid that holds him on earth.

The word 'Admiral' is Arabic (amir al) and means 'Commander of the Sea'. What is an Admiral? Well, this is hard to say. An Admiral is many things. But above all he is never wrong, but always right.

Some Admirals are unusual. Example. The Admiral's barge came alongside the ship. There was something of a lop on the water and, as the Admiral stepped on to the gangway, the barge gave a lurch, and he was almost jerked into the sea. A young seaman standing on the lower platform put out a hand and steadied the Admiral. The Admiral hurried up the gangway, returned the salute awaiting him on the quarterdeck, and rushed up to the Captain. His face white with range, his whole being bristling with ire, the Admiral could barely gasp the words "*That man*" – pointing down the gangway to the young seaman – "*He touched* me"!

And then, of course, there is the story about the ship that had been rigorously cleaned for Rounds. Whilst a cavalcade of Departmental Heads well dressed in their very best waited on the Quarterdeck, the Captain called on the Admiral to let him know all was ready for Rounds. The Captain was amazed to find the Admiral waiting in his shooting clothes.

"I thought you were going Rounds, sir" – stammered the Captain.

"So I am", growled the Admiral. "The ship's like a snipe marsh"!

But the best story – telling what an Admiral really is dates back some 30 years. On Christmas Day, 1929, the REVENGE, flying the flag of a Vice Admiral, lay at her buoy in the Grand Harbour at Malta. The order had gone out that Officers' wives and families could join their menfolk at church; and, so it came about that the younger son of the Staff Officer (Operations) was sitting with his elder brother and his mother on REVENGE's quarterdeck waiting for church to start.

It had been a wonderful morning for the boys. First, the opening of their presents, and now the excitement, not only of going on board the spotless battleship, but of taking part with the ship's company in their Devotions.

The mass of humanity tightly wedged together in a hollow square on the quarterdeck suddenly hushed as the Admiral's head appeared at deck level, followed by his tall, stately body garbed in glittering uniform – rising from below. Children hold their breath as the superb apparition walked to his place.

On hoisting his flag, the Admiral had summoned the Chaplain and given him a list of six Hymns. "I dislike these Hymns", he said, "they are never to be sung while my flag is flying".

On this morning, by some mischance, one of the 'banned' Hymns was announced. The Admiral instantly and irretrievably lost his Christmas spirit. He flung his Hymn book on the deck with a resounding thump and looked, as only he could look, as if a nasty smell had risen under his nose.

After the Service, wives and children were suitably entertained in the Wardroom and eventually the boys made their way home, where the Staff Officer's Nannie was all agog to hear how the children had enjoyed themselves.

"And do you know, Nannie", the little three-year old boy said, "at church today on the big ship, God threw his Hymn book away"!



*Close up of the starboard bow with Sea Knight helicopters Navy and Marine Corps personnel lining the deck for the arrival in Sydney. Photo: ABPH Simon Metcalfe*

*Sydney's magnificent Opera House is neatly framed by the bow of the USS ESSEX. (Photo: ABPH Simon Metcalfe)*

*View of the forward deck of the USS ESSEX. Eleven CH-46 Sea Knights are parked on the starboard side with three Cobra attack helicopters and two UH-1N Iroquois. On the far left is one CH-53E and another CH-46 helicopter. Some of the Marine's vehicles are also visible.*
*(Photo: MSgt Dean McCorkelle)*