Babcock’s defence related activities go back to the beginnings of steam powered ships when the parent company began making naval vessels at Renfrew, Scotland. The association continues today, with specialist Babcock skills being utilized by the Royal Australian Navy in both traditional and the newer technology areas. One recently completed project was a refit of superheaters for the guided missile destroyer HMAS Perth.

THE NAVY

Vol 47
JANUARY, 1985
No 1

Our Cover Photographs

Two views of HMAS KIMBEA, the top taken in the early 1960s (Photo — Ron Hart) and the bottom in July, 1980 (Photo — Ross Gillett). The obvious change is the new enclosed bridge above the original structure. KIMBEA arrived in Sydney flying her paying-off pennant on 29th December, 1984.
Why 100 Air Forces
Fly Rolls-Royce

Rolls-Royce provides gas turbine power for over 60 types of aircraft flown by more than 100 air forces worldwide — as well as the ships of 25 navies. A record no one types of aircraft flown by more than 100 air forces worldwide.

Plus their combination of reliability, fuel economy and performance, based on Rolls-Royce advanced technology. These engines were chosen for their high versatility.

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THE EDITOR'S COMMENTS

We begin this issue of “The Navy” with details of the Royal Australian Navy’s new S70 Sikorsky Seahawk helicopters, which the Federal Government has decided to purchase (in principle) for the fleet.

Tony Grahame, who prepared the article, also lists the other options that were available to the Government in March, 1983, including type and numbers of attack carriers and local project costs.

On the historical front, Charles H. Mann looks at the life of the famous Fred T. Jane, from his birth in 1865 to death in 1916, and from Wright & Logan, the world-renowned naval photographers, the list of a series of historical chronologies of some of the better known RAN warships from the 1920s to 1940s.

As a tribute to the RAN’s last home defence vessel, HMS RAMRA, we publish a series of photographs illustrating the ship since 1959.

Over the last few years, it has become increasingly apparent that more and more people with an interest in a viable naval defence are proposing a wide range of ideas to equip the Navy with a strong, but economical force of ships. “No Folks’ Wonders” examines the merits of Australia’s offshore industry fleet and their possible use with the grey market line.

The number of articles received for publication in this January, 1985, edition far outweighed the available page numbers. Accordingly, those contributors who don’t see their article in this issue are advised it will appear in the next available issue.

ACKNOWLEDGEMENTS


DEADLINE

The deadline for the next issue is 1st February, 1985.

DIFFERING VIEWS ON DEFENCE

THE Coalition Parties’ brave proposal for a nuclear-powered submarine force understandably caused a stir in the run-up to the recent Federal election, but it has to be said that it was only a call for a study and not a decision to acquire such vessels.

Quite apart from technical and cost considerations, the political and strategic implications of an Australian nuclear-powered submarine force would require a careful and no doubt lengthy study. While its would be sensible to undertake such an examination, it must be separate from the OBERON class conventionally-powered submarine replacement project now well under way.

As well as the Coalition’s policy statement, two other important defence documents appeared in the final weeks of the last Parliament — the 1983/84 Defence Report and the annual record of defence activities and financial statistics, and a report by the Joint Parliamentary Committee on Foreign Affairs and Defence on the structure and capabilities of the Australian Defence Force.

It is impossible to analyse or even summarise the three documents in the space allotted to VIEWPOINT, but it is appropriate to remark that if the recommendations of either the Joint Committee or the Coalition Parties were implemented, there would be a distinct change in direction on the part of the Defence Department.

In the maritime sphere, both the Joint Committee and the Coalition recognise much more clearly than those presently responsible for defence policy appear to do, the severely limited viability of the RAN following the loss of its carrier-based aircraft. While the Committee seems prepared to accept a reduced maritime capability for reasons wide-open to challenge, the Coalition Parties now appear convinced of the need for some form of platform from which aircraft can be operated. It is likely that view will gain wider acceptance as the folly of a maritime nation hamstringing its Navy becomes more apparent.

THE Navy League of Australia

GEOFFREY EVANS
Federal President

C.H.E.S. DIESEL & MARINE SERVICES
10 STACK STREET, FREMANTLE, 6106
WESTERN AUSTRALIA
Telephone: 335 9211 (4 Lines)

CONTRACTORS TO THE DEPARTMENT OF DEFENCE AND RAN

Page Three
IN October, 1984, the Australian Government made the decision in principle to buy an initial eight S70 Sikorsky helicopters for the first four of the Royal Australian Navy's FFG7 Class frigates.

To the project cost of $317 million must be added $51 million for modifying the flight deck and other facilities of the first three FFGs. Of the total of $368 million, about $150 million will be spent with local industry. This will include virtually all the $51 million to be spent in modifying successfully, on Williamstown Dockyard, the first three FFGs. The ship modifications will have to be carried out in yard where it should be giganted where the Navy's 8th and with FFGs will be built.

In addition to the $51 million, a further $80 million will be spent in offset deals and items specified as for local manufacture. The development of the avionics package will absorb some 300,000 Australian manhours. The avionics package is regarded as extremely attractive by the Spaniards whose SH60Bs will have very similar roles to those of our S70s.

The roles planned for the new S70 helicopters are:
- Reconnaissance and surveillance
- Over the horizon targeting for surface to surface guided weapons
- Deploy close range anti-surface ship weapons
- Limited utility functions
- Extend the anti-submarine warfare capability of the Navy's surface ships.

Reconnaissance and surveillance is the primary role for which Navy sought the purchase of helicopters for their FFGs. With the limited radar and search horizon of the FFGs (and any other surface ships), helicopters fly away from the ship and use their sensors to locate and identify approaching surface ships.

These surface ships are identified as hostile, the S70 will relay that information back to the FFG for use in targeting the ship's Harpoon surface to surface guided weapons.

NAVY's new helicopter will also be fitted for air to surface missiles.

These missiles, which will have comparatively short range will be used against small surface ships (such as SSGW armed fast attack craft) and against coastal defense areas. Use of these missiles against larger surface warships would expose the helicopter to unacceptable risk from area surface to air missile systems.

The limited utility functions for which the new S70s are capable include vertical replenishment, personnel transport and similar duties. In normal circumstances, a very capable helicopter such as the S70 could be underemployed on these duties.

It is the role of extending the anti-submarine warfare capability of Navy's surface ships which was the main driver of the choice of the S70, over its competitors the Lynx.

As our table shows, the S70 Seahawk is unquestionably the larger of the two contenders, with a correspondingly larger payload and longer range.

Other TALE A

<table>
<thead>
<tr>
<th>S70 Seahawk</th>
<th>Lynx 3</th>
<th>Sea King</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length (m)</td>
<td>19.76</td>
<td>15.6</td>
</tr>
<tr>
<td>Height (m)</td>
<td>5.18</td>
<td>5.6</td>
</tr>
<tr>
<td>Rotor Diameter (m)</td>
<td>16.26</td>
<td>12.4</td>
</tr>
<tr>
<td>Max Crossing Speed (kts)</td>
<td>130</td>
<td>150</td>
</tr>
<tr>
<td>Endurance</td>
<td>4hr, 45min, 5hr 40min</td>
<td>8hr, 40min</td>
</tr>
<tr>
<td>Take off weight (kg)</td>
<td>9900</td>
<td>5900</td>
</tr>
</tbody>
</table>

The markedly greater size makes the S70 unquestionably the more capable aircraft in the enhanced anti-submarine role that became essential as soon as the Government made its decision not to provide the Navy with a seagoing platform for its eight Sea King anti-submarine helicopters.

These Sea Kings provided long distance targeting information and guidance for the Bera missiles fitted to Navy's DDGs (Hobart, Brisbane and Perth) and DEs (River Class). The Sea Kings are fitted with air launched anti-submarine torpedos and sophisticated sonar systems.

It must be recognised that there is a strong body of professional naval aviation opinion that it is not possible to provide the required extent of helicopter anti-submarine capability covering the area of any existing escort. To provide constant cover, a flat-decked ship capable of operating at least six Sea King/S70 type helicopters is required.
However, in the absence of the necessary ship, Navy has determined that the S70 was the only feasible solution. That helicopter was designed by Sikorsky for the FFG7 class frigates. As such, the S70 is the largest and most capable helicopter that our Navy's FFG7 class ships can carry. The selection by Navy of the S70 exploits to the maximum the potential of the FFG7 ships. Curiously, and specifically in the absence of any other seaborne helicopter, Navy's selection of the S70 was the sound — indeed the only realistic decision.

These facts become inevitable with the Government's decision eighteen months ago to provide the Sea Kings with a seagoing platform. This raises the question of why it has taken eighteen months to make and progress to purchase decision a type selection which became inevitable in March 1983.

SENDING the Sea Kings to sea in the FFG7s was such an obvious solution to the FFG7 helicopter need — if it were feasible — that would have been implemented as soon as the FFG7s joined the fleet. However, the deployment of the Sea Kings to the FFG7s is not feasible. The Sea Kings' rotor blades are too big for the flight decks of the ships. The helicopters are too long for the barges. The S70 is the biggest available helicopter that can operate from the FFG7s.

The key factor in the S70 selection is the Navy's ASW needs which have been multiplied by the decision not to provide a new flat deck platform for the FFG7s. To preserve clarity, the anti-submarine role of the new S70 helicopters in the Australian Defence Force is it necessary to summarise Navy's ASW needs generally:

- Blockading enemy submarines into their bases — so as to be carried by Navy's Oceania class submarines and their successors.
- Deep reconnaissance and some submarine destruction capability provided by the RAN's force of P1 long range maritime patrol aircraft.
- Mid-distance work — search and submarine destruction capability that is left to the task group to require very close co-ordination with surface ship operations. Formerly provided by the McNab's S2 Tracker aircraft, now a major gap in Navy's ASW capability. If there were to be enough of these aircraft there would be the S70 capable of filling this gap.
- Accurate localisation of submarine contacts, the use of airborne (using S3 or S70 helicopters) for the "kill" and the targeting and direction of shipborne anti-submarine weapons to "kill" the submarine. These shipborne weapons are the Bera missiles carried on board the FFG7s and DECs. These roles will be filled by the S70s when they become available for operational service in 1989. Until then the only possible option is to use the helicopter.
- shallower water location, isolation and destruction of enemy submarines. This role is filled by the IDAS, FFGs and DECs using the Mark 34 torpedo fired from the Mark 32 torpedo tubes. Provision of operational command and control, fuel, crew, maintenance and role change facilities will be provided by the four FFGs. All this has been provided constantly. The word "constantly" is the key to understanding the gap that will remain even after the S70s enter operational service in 1989.

There is a strong — very strong — school of RAN professional thought that two helicopters operating from the stem of an ex-service ship cannot provide sufficient anti-submarine warfare coverage. But the absence of the helicopters in other roles as well. One has only to look at the composition of the Japanese, Canadian and British fleets to see that, as well as the RAN, believes this to be so.

To do this — and this is essential for the protected operations unavoidable in our region — we need more S70s and more FFGs. If we need to upgrade our existing Sea Kings to the standards of those India is now buying from Britain, and provide a flat decked ship to operate a minimum of six Sea Kings at a time. Recognising that we have the Sea Kings that, upgrading to Indian standards, is estimated by industry sources to cost only $440 million per aircraft, and that the acquisition and conversion of the flat decked merchant ship would cost only about one third of the cost of only one new FFG, sending the Sea Kings to sea in a flat decked ship is by far the most cost effective solution.

It is not too late to provide Navy with an increased ASW capability after 1989 to take the increased 5S and 5S5 threat as regional forces continue to grow.

One flat decked converted merchant ship with our Sea Kings upgraded to Indian standards is much more cost effective than one. It alone three three FFGs needed to get six more S70s to sea. The Government must open their political minds to provide the flat decked ship we need to get the Fleet's ASW capability up.

This table was obtained from a Thai newspaper and shows the options that were available to Government in March 1983. To consider all options with an open mind, it would be: 

- Acquire eight S70s for four FFGs and modify those FFGs as needed to support the eight S70s.
- Acquire ten Lynx 3s for all six FFGs and send the Sea Kings to sea in a merchant ship such as Australian Venture. The project cost would have been $245 million for disc Lynx 3s and $36 million for the Sea Kings to Indian standards.
- Acquire fourteen Lynx 3s for all six FFGs and send the Sea Kings to sea in a flat decked ship such as Australian Venture. The project cost would have been $245 million for the Lynx 3s, $36 million for the Sea Kings to Indian standards. Enemy submarine capabilities, it is now too late.

The S70s can provide the necessary ASW capability, but they cannot provide the required ASW capability.
THE GENIUS OF FRED T. JANE

Anyone who has ever researched a naval subject has heard of Jane's ALL THE WORLD'S FIGHTING SHIPS . . . HYDROFOILS . . . WEAPONS SYSTEMS or . . . (you name it) . . . a Jane's book covers it. But how many know who Fred T. Jane was? How many know what he did?

John Frederick Thomas Jane was born in Richmond, Surrey, England, on 6th August, 1865. He was the eldest son of Rev John Jane (C.E.) — vicar of Upottery (Devon)

The young Jane attended school at Exeter where he showed many non-conformist and highly original characteristics. Among these was his intense interest in explosives. This interest, which (legend says) nearly blew up the school laboratory, also got him barred therefrom.

He was, additionally, an invertebrate practical joker. His pranks against his masters kept him continually in strife and eventually got him barred from the school magazine. As a result, he ran his own publication (TOBY) in opposition to the establishment periodical. This rebellion eventually yielded to pressure but not before the magazine had shown its own independence.

After Exeter, Jane led a confused life. He tried, first, to join the army, then the navy and even considered going to "the colonies" to become a farmer. But none of these notions bore fruit. He failed the physical of both the army and the RN and rejected the land as being too boring.

Thus it was that he went to "the city" and concentrated on improving his skills as a sketch artist and journalistic writer. He eventually began work for the Birmingham Times.

He was not an immediate success by any stroke of the imagination. His struggles in this period (1880-1890) were severe. Recognition was not the easiest of achievements. Most of his biographers believe that this period caused him later, to continually assist anyone who appeared to need help.

He finally went to sea in 1889 as an artist/reporter for the periodical "Pictorial World". Later, he sketched for "Illustrated Pictorial", "Black and White", the "Illustrated London News", the "Daily Chronicle" and the "Standard". His sketches of the manoeuvres of 1890 and subs finally brought him the recognition he desired.

ABOIT this time, however, he had the opportunity to let his vivid imagination soar to work for him. The Balmaceda revolution, in Chile, was in full swing. Jane, while resting in Devonshire, concocted some sketches of the revolution that were so vivid that many people thought he had taken part in it. He suppressed the truth until after his death, however.

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FRED T. JANE

fiction in 1899, these ended Jane's fictional period. His technical era is what brought his genius to the attention of the world. His first issue of "All the World's Fighting Ships (1898)" appeared in 1899 (Samson & Lowe — publishers) This work, which was the first of the massive series that has continued for more than 68 years after his death, was the third in what Jane termed his trilogy of needs of the naval man.

I or about 1890 Jane began to realise that naval men the world over needed a reference work that would enable them to quickly determine the characteristics of any warship. This work had to be a one page (at most) outline that would "tell all there was to know." Thus he began sketching every warship he could see.

It did not require a vast amount of time before he realised the similarities between structures, the significance of armour, the importance of gun type or the value of speed. Nor was F. T. Jane slow to realise the value of manoeuvrability. Turning radius at speed or response to the helm. Thus it was that he developed his trilogy of requisites of the efficient naval officer. These were (and still are):

(i) An understanding of what the ships of the competition (or potential enemy) can do and what your own vessel can do.

(ii) A quick identification method that also informs one of the armament and armament of the "other" ship.

(iii) A means to test one's theories under realistic conditions but without actually "shooting up" the other ship.

The first two of the trilogy were to result in the publication of "Fighting Ships". These works alone would have qualified Fred T. Jane for greatness. The massive amount of detail he had to mentally retain is a tribute to his magnificent intellect and memory. However, "Fighting Ships" although his best known work, was not his most important work.

Jane believed that only by handling a ship could the naval officer understand the ship. Nonetheless, he readily understood that this might not always be possible. He, therefore, set about producing a simulation technique similar to the army's "Kriegspiel". He called this the "Jane Naval Wargame". He introduced this game to the world in a seminar paper at the United Services Institution (Whitehall) on Friday, June 17th, 1898 Success was instantaneous. Publication by Samson & Lowe — 1898.

By 1900 the Jane Naval Wargame had been adopted by the Norwegian Navy, the United States Coast Artillery for testing harbour defense, the Imperial Russian Navy, and the Imperial Japanese Navy. The last two mentioned expanded the game to include studies in logistics as well.

Throughout 1898, 1899 and most of 1900, it was a rare event when either "The Engineer" "Scientific American" magazine or the United Services Institute did not see Mr. Jane stirring a wargame with a seemingly insoluble naval dilemma — usually solved by the test — and which often contradicted accepted naval theory and practice. He furthermore organised a group of young naval officers to form the Portsmouth Naval Wargame Club. This group went even further than did their founder in developing modern theory and practice.

Also in 1900, Mr. Jane took his first step towards entering politics. He published an extremely well done article in "The Engineer" entitled "The Classification of Warships". In this piece he antagonised the British public by showing the bulk of the RN designs to be of little fighting value. Though he had no way to predict the attitudes of "Jacky" Fisher, nor the advent of HMS DREADNOUGHT, he did believe that only with a very radical attitude change could the RN avoid becoming a paper tiger.

Additionally, in 1900, he published his famous critique of the Imperial Russian Navy. The work showed up the very weaknesses which Admiral Rozhestvensky informed the Grand Duke Alexander about prior to Tsu Shima (1905).

Jane, though, was not a mystic. He was a very practical prophet. He had the knack of examining events and correctly translating the events into consequences. Still, many of his
How we will keep peace in our region.
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latest technology. Less time in dock results in
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PERFORMANCE
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operation and shock resistance, while offering
maximum crew comfort.

AUSTRALIAN INDUSTRY
PARTICIPATION
RDM is committed to maximising
Australian Industry Participation, and
construction of 'WALRUS' in Australia
will ensure effective through-life support.

INDUSTRY OPPORTUNITY
The Netherlands' commitment to transfer
the 'WALRUS' latest technology offers
Australian Industry an excellent opportunity
to develop skills for the future.

RDM NAVAL ENGINEERING
P.O. Box 913, 3000 AX Rotterdam, the Netherlands.
Fred Jane was also a dedicated opponent of "Faddists and Jingoists." He consistently advocated an economically sound naval policy and the idea of testing theories by simulation before going onboard on them. He "tried the Admiralty's" speeches continually advocated silence as a preferable alternative to the danger of criticism based on half-knowledge. His speaking tours, which continued until his death, always advocated the political interest of the navy.

That Jane was no ordinary writer-politician is most readily shown by his role in the unravelling of the German Spy System in England (1913-1915). Once again, his simulation techniques played a vital role.

But the greatest compliment to his genius was paid him by the Imperial German Government. On 23rd November 1915, the "London Times" carried a German news story which in para 41 stated, "the standard work by the British naval officer, Fred T. Jane, says..." and goes on to quote him (out of context). The German Government of Wilhelm II gave Jane the only honour he received by the Imperial German Government. The Japanese are said to have paid him by the Imperial Japanese Government a 100,000 yen cheque. Fred T. Jane died on 9th February 1916. It is thought the cause may have been a heart attack. This, though, is only a guess. The newspapers of the day do not specifically state the cause. They only say it was suddenly. The "London Times" stated "Mr Fred T. Jane, the writer on naval strategy who understood the value of simulation planning in naval affairs, has died.

But Fred Jane was a modern genius. His Tragedy has provided for an annual publication in multiple areas for 90 years. His simulation techniques are equally valid today as they were in 1908 when he produced "Aircraft; a World War Game" and introduced aerial attack into his procedures. In 1912, he published "How to Play the Jane Naval Wargame." On pages 58-61 of the book, he actually produces rules governing submarine and aerial warfare techniques which held valid (in principle) even as late as 1930. Only a small modification is required to upgrade them to the present day. It is also humorous to consider the Christmas Day (1914) Zeppelin attack on HMS Ensign. The procedure was published in the Proceedings on page 60.

Fred Jane never ceased to be a practicalpler - even to the end of his life. But he did set his muckish ambitions aside to join Lord Baden-Powell in the early development of the Boy Scout movement. In this, he contributed much personal effort.

A phonograph from the British Museum collection is available in the National Library, Canberra.

The Admiralty issued a Manual to "All Serving Ships" (published in 1917) carries a full page of "The Secretaries and Pilots of the Queensland Coast & Torres Strait Pilot Service." This is something Mr. Jane would have understood. But Fred Jane did not and need the Fred for Jane techniques. They were upgraded continually and continued as a training aid until 1939, when war precipitated the time required for use.

Churchill used these methods in his "War Room." The Japanese are said to have upgraded Jane methods in planning "Pearl Harbor." But time, speed, and loss of people who understood the value of simulation planning in naval affairs have caused the Jane theories to be forgotten.

Still, by the Jane theories, ideas can be tested before not until millions of dollars have been wasted. They allow theories and equipment to be tested for practicality and provide a result the same afternoon. A test is made, not a theory. The German Government of Wilhelm II gave Jane the only honour he received by the Imperial German Government.

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Telephone: (02) 807-0400. Telex: 21471.

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50th anniversary: Templecombe, Somerset, UK.

THE NAVY
January, 1985
Page Fourteen

Dear Sir,

I really enjoyed reading Charles H. Mann's excellent article "The Seaplane Tender" in the October 1984 edition of "The Navy", but was disappointed to see no reference to Australia's contribution, namely HMS "NAIRANA".

She was under construction in Denny's Yard at Dumbarton, Scotland, for Huddart Parker's Bass Haulferry service. When needed for merchant ship convoy, she was rechristened in 1915 as HMS "NAIRANA".

She was launched on 29 June 1915 and laid up until taken over by the British Admiralty, commissioned as a seaplane tender in 1917, along with English Cross Channel and Isle of Man Ferries, then commissioned under the name "NAIRANA", a name quite in keeping with her new role, as it means "Golden Eagle" in Tasmanian Aboriginal language. It was assigned to the battle cruiser squadron at Scapa Flow and was employed in the White Sea, 1916-1918. Flying the flag of Admiral Kemp, she was involved in August. HMS "ATTENTIVE", a light cruiser, and the French cruiser "ADRIATIC" were in Archangel, where there was a concentration of allied war stores and coal.

Their mission was to safeguard the stores and lives of the anti-Bolshevist Russians and the British residents, and to regain control of the Port, so as to prevent its use by German U-Boats. HMS "ATTENTIVE" opened fire on the fort, which replied, causing some damage to the ship. HMS "NAIRANA" sent up her seaplanes to drop bombs on the fort, thus silencing it. By that night, July 31, the Port and Archangel were in allied hands, after 600 French infantry were landed from the two ships.

The "NAIRANA" then chased and sank the ship in which the Bolshevik Exchequer was escaping. She reached a speed of 26.6 knots "NAIRANA" was returned to her owners on January 22, 1921 after refitting at the Devonport Naval Dockyard. The British Navy thought so highly of her war effort, that when they converted merchant ships for aircraft carriers in 1942, the "PORT VICTOR" was renamed "NAIRANA" in honour of her service. Thanking you again.

Yours faithfully,
ROBERT D BROOKES

THE NAVY
January, 1985
Page Fifteen

Sub detectors on the stern of HMAS FORESTER in Bridport Harbour, 1918. Taken from HMAS TORRENS.

HMS YARRA towing a kite balloon in the Adriatic on anti-submarine patrol 1918.

I was interested to read in the article "HMAS YARRA" (July 84) the modifications carried out on some of the Australian destroyers.

I include a photo of HMAS FORESTER, a near sister to HMAS TORRENS at Bridport, showing sub-detectors on the stern. Are these the hydrophone suspension gear and directional hydrophones as mentioned in the article?

Can anyone identify the ships in the background?

I also enclose for interest a photo of TORRENS in line astern of HMAS YARRA which is towing a kite balloon on an anti-submarine patrol in 1918.

Finally, can anyone explain the purpose of the five black shapes on the stern of HMAS YARRA shown being worked on page fifteen. Are they part of a gunnery target?

Yours sincerely,

A. J. LEE

105 Arajuna Ave.
Gymea Bay, NSW 2227
October 8th, 1984.

Dear Sir,

I must comment on the October issue of "The Navy". At the end of the article "The Seaplane Tender" it is inferred that, with the exception of the Japanese, the other nations had little use of seaplane tenders — perhaps with the exception of the Japanese. I enclose for interest a photo of HMS FORESTER, a 19'7'64 of the modifications carried out on some of the Australian destroyers.

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Dear Sir,

I was interested to read in the article "HMAS YARRA" (July 84) the modifications carried out on some of the Australian destroyers.

I include a photo of HMAS FORESTER, a near sister to HMAS TORRENS at Bridport, showing sub-detectors on the stern. Are these the hydrophone suspension gear and directional hydrophones as mentioned in the article?

Can anyone identify the ships in the background?

I also enclose for interest a photo of TORRENS in line astern of HMAS YARRA which is towing a kite balloon on an anti-submarine patrol in 1918.

Finally, can anyone explain the purpose of the five black shapes on the stern of HMAS YARRA shown being worked on page fifteen. Are they part of a gunnery target?

Yours sincerely,

A. J. LEE

October 8th, 1984.
No Frills' WARSHIPS?

The case for Australia's offshore oil industry fleet

by CAPTAIN ROB RAE

A recent report that the Navy planned to convert a merchant ship, the UNION ROTOITI to a helicopter carrier at a cost of $25 million, prompts the thought that Australia has other merchant ships extremely suitable for use as effective and economical fleet auxiliaries. In time of emergency there is the fleet of the offshore oil industry.

These versatile ships, which we have over thirty in Australia, can and have been used for the widest range of services of any vessel ever designed. When they serve as a deepwater supply vessel, they can be converted to carry on the port side at anchor, and hold an effective cargo of about 10,000 tonnes without distillation. Boilers at their disposal are capable of producing even more steam than is needed. With this production facility the emergency use of the vessel is multiplied many fold.


LONG ENDURANCE

The essential water supply vessels have performed in past emergencies support the concept of their possible naval use. For instance, in late ’71 the United Nations had a fleet of some fifteen chartered steamships immobilised in Chittagong roadstead, in Bangladesh. They had brought grain and relief supplies but due to the civil war there had been months at anchor. The Chittagong river was blocked with sunken ships and those at anchor could not go to sea. The UN ship was provided with a 10,000 tonne capacity coal bunker. This was used to support the population and, when it was used, the ship could return to Singapore for fuel. The second ship was loaded with fresh water and when it was unable to return to Singapore, the third ship was loaded with fresh water and coal. When it arrived, the fourth ship was loaded with fresh water and coal and the fifth ship was loaded with fresh water. This was continued until the ships at anchor were able to get away and the UN ships were able to return to Singapore.


In Singapore I was assigned the job of collecting fresh water from the wells and putting it in a large steel tank. This was done by a small team of sailors who were able to reach the second ship and put it in a large steel tank. The third ship was able to take on board a large steel tank and put it in another large steel tank. This was continued until the ships at anchor were able to get away and the UN ships were able to return to Singapore.

These versatile ships, which we have over thirty in Australia, can and have been used for the widest range of services of any vessel ever designed. When they serve as a deepwater supply vessel, they can be converted to carry on the port side at anchor, and hold an effective cargo of about 10,000 tonnes without distillation. Boilers at their disposal are capable of producing even more steam than is needed. With this production facility the emergency use of the vessel is multiplied many fold.


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A concept for the future

Minehunting involves the detection of enemy mines by very accurate sonar. The mines are then destroyed with an explosive charge.

A simplified version of the role this new style vessel will take in today's navy.

The prototypes, currently under construction, are not quite so simple, built mainly of fibreglass with a catamaran hull our minehunters will be the first of their type in the world.

**Specifications**
- Displacement: 170 tonnes approx.
- Length (O.A.): 31 metres
- Beam (Max): 9 metres
- Speed: 10 knots approx.
- Complement: 2 Officers, 3 Senior Sailors, 9 Junior Sailors. Total 14.

**Military Application**
- Complement 2 Officers,
- 9 Junior Sailors
- Total 14.
- Length (O.A.) 31 metres
- Beam (Max) 9 metres
- Displacement 170 tonnes approx.
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**Military Personnel**
- 2 Officers
- 3 Senior Sailors
- 9 Junior Sailors
- Total 14.

**Military Operation**
- Minehunters will be the first of their type in the world.
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**Military Deployment**
- Complement 2 Officers,
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DFLP SPECIAL!
SAVE UP TO 50% ON HOTELS.

Under the Defence Forces Leave Plant (DFLP) full time members of the Services and those retired for pension are offered very special rates at all participating Travelodge Parkroyal Beachcomber and Crowne Plaza Hotels throughout Australia, New Zealand, Fiji, Tahiti, Tonga, Samoa and Singapore.

Even greater savings this year.

This year at many locations there are even greater real savings because there has been little, if any, increase in rates for this high standard accommodation.
The Plan also covers families and friends accompanying the serving member, and retired service personnel who are certified as retired for pension.

The Membership Fee which makes you eligible for DFLP rates and other administration costs is payable at any of the hotels listed. You will need proof of service identity.

The cost of staining has been held at 1982 prices. There are extra savings if you join for more than one year.
- 1 year = $150
- 2 years = $280
- 3 years = $400

Guaranteed Rates.

To give members maximum benefit and flexibility in terms and planning for future travel, the special low rates under the Plan are fixed from March 1, 1984 to February 28, 1985.

Special weekend rates

- Friday, Saturday: $45.00
- Single Twin Double: $65.00

Extra people sharing the same room:
- Dependents under 19: $15.00 each per night
- Over 19: $25.00 each per night

High quality service.

It is the pledge of the Southern Pacific Hotels Corporation that even though the rates are reduced, it will maintain the same service and service will be at the same quality and standards of the international recognised members-only membership only.

Now Membership for spouses.

The spouses of Southern Pacific Hotels Corporation members are eligible for the following rates:
- 1 year = $150
- 2 years = $280
- 3 years = $400

Guaranteed Rates.

For the first time a guarantee can be obtained to save by purchasing the DFLP card at the time of booking. The two new cards will have a validity equal to the residual time on the card, but the cards are valid for one year only. After that time, the card will not be used.

KIMBLA commissioned on 26th March, 1956 under the command of Lieutenant-Commander Arthur R. Pearson, RANVR.

From this time until her return to Sydney for conversion to a Troops Vessel KIMBLA operated on the Australian coast, and in New Guinea waters looking for submarines. On her return to Sydney, she was used as a training vessel.

For further details contact the Southern Pacific Hotels Corporation Ltd.

KIMBLA when designated as an Oceanographic Research Ship, carried out considerable oceanographic research both for naval and scientific purposes, including programmes for the Commonwealth Scientific Research Organisation and universities and museums.

KIMBLA also participated in several salvage operations, including:
- June 1960 Assisted HMAS WARRIGO in salvaging a TAA
- May 1962 Salvaged the yacht OENONE off Montague Island
- December 1961 Assisted in operations to salvage a Viscount aircraft off Jervis Bay
- November 1962 Salvaged a wrecked RAN Sea Venom aircraft off Jervis Bay
- June 1963 Salvaged the yacht OENONE off Montague Island
- April 1971 She carried out surveys in the Northern Territories and New Caledonia areas.

HMAS KIMBLA in November, 1961. She carries the pendant number 2222 and a chart house has replaced the Bofors gun. The church spire has also been raised.
ATTENTION!

Good news for all West Australian NAVY FAMILIES

The Police Credit Society now offers excellent savings and investment rates, and loan rates.

PERSONAL LOANS
- Speedy loans for any purpose including current loan payout.
- Join today, apply same day!

FREE BILL PAYING
- Bills paid free of keeping fees, stamp duty, F.I.D. and B.A.D. Taxes.
- Deposit in your savings account, service loan repayments automatically from your salary.

NAVY PAY ALLOTMENTS
- Agency buttets and auto-mated tellers to remove the hassle from withdrawing your money any time.

CONVENIENT FACILITIES
- Our Travel Service, Real Estate and Settlement Service, Insurance and Discount purchasing services are all available and work for you as a member.

ROCKINGHAM
Read Street Chemist
Rockingham City Shopping Centre
(Opp. Coles)
Hrs. 9am-6pm Mon-Fri. 9am-2pm Sat.
ALSO
24 Hour/7 Day Week Red Teller, 25 Adelaide Street, Fremantle.

FREMANTLE
223 High Street
(Rear Teachers Credit Building)
Hrs. 9am-4pm Mon-Fri.

Police Credit Society
Head Office: 246 Adelaide Terrace, Perth, W.A.
CALL 325 4400 NOW

Wishing All Personnel A Merry Christmas And A Happy New Year

More recently KIMBLA’s experimental cruises have included cold front research for the Department of Meteorology in the oceans south of Australia and research into the Bass Strait overflow into the Tasman Sea. Although already underwater the overflow forms the largest waterfall in the world as the colder Bass Strait waters plummet into the Tasman.

As one of her final duties the ship monitored sea surface conditions to assist in the calibration of the Shuttle Imaging Radar B (SIR-B) carried onboard the space shuttle COLUMBIA. KIMBLA began her final cruise flying her paying off pendant on Thursday, 20th December.

HMAS KIMBLA in 1980. A new enclosed bridge has been added atop the original.

Early, 1970's. The ship is now numbered G00011 and the original lifeboat supervised by containers for inflatable lifeboats.

Framed in Sydney Harbour in July, 1983. HMAS KIMBLA proceeds to sea with the harbour tug HTS502 in close company, after assisting her from the berth.

Framed in Sydney Harbour in July, 1983. HMAS KIMBLA proceeds to sea with the harbour tug HTS502 in close company, after assisting her from the berth.
NEW NAVY YACHTS

The first of five yachts to be constructed in Western Australia for the RAN handed over in a naming ceremony recently.

The ceremony was at the HMAS LEEDUN boathouse in East Fremantle.

Mrs Paddy Hornsby, wife of HMAS LEEDUN’s Commanding Officer, Commodore John Hornsby, christened the yacht in the traditional way, after LEEDUN’s RC Chaplain, Father Max Daines, named it.

Built for sail training, the yacht has been designed by Kim Swarbrick. Associated with the yacht in the traditional way after LEEDUN’s RC Chaplain is Commander John Hornsby, who christened the boat in last Fremantle Wharf. The ceremony was at the HMAS LEEUWIN boatshed under the supervision of Mr Swarbrick. The boat carried the sail number 3908 and was followed by “Charlotte of Cerberus” (3810) and “Lady 13810). “Scarborough of Cerberus” (3811).

The yachts’ names were selected to honour the RAN’s Deputy Fleet Commander, Commodore M. D. Jackson was in overall control of the exercise, working with members from the Fleet Staffs of both Navies at the Darwin Naval Headquarters.

In November, 1972, while serving as the Commanding Officer of the destroyer escort HMAS DERWENT, Commodore Jackson participated in the first Australian Indonesian naval exercises in the Java Sea.

The aim of NEW HORIZON was to exercise the two navies in maritime procedures, to enhance proficiency, and most importantly, to exchange experience in the conduct of naval operations.

Australian ships taking part included the River Class destroyer escorts HMAS TOBERN, HMAS STUART and HMAS VARRA, the mine hunter HMAS CURLEW and the Fremantle class fast patrol boats HMAS BENDIGO, HMAS GAULER and HMAS GERALDTON. Indonesia was represented by two corvettes KRI MALAHAYATI and KRI NGURIH RAJ and the fast missile boats KRI KERS and KRI RENCONG.

For the first time in the NEW HORIZON series RAAF Mirage fighters from No 75 Squadron participated.

After two weeks at sea the participating ships conducted a combined Task Group fleet entry into Darwin on November 1976.

EXERISE SANDGROPER ‘84

Australia, New Zealand, the United Kingdom and the United States began a maritime exercise in the Indian Ocean on 12th October. 1984.

The exercise, named SANDGROPER 84, continued until 27th October. In the north-western Indian Ocean and off the western Australian coast between North West Cape and Fremantle. It was the eighth exercise in the SANDGROPER series which began in 1978.

RAN units taking part included HMAS Ships STUART, SUPPLY, BRISBANE, SYDNEY, VARRA, STUART and TOBERN, together with HMAS Submarine OXLEY and an HS-748 electronic warfare aircraft. The RAAF contributed F111 strike aircraft. Mirage interceptors and P3 Orion maritime patrol aircraft, supported by C130 Hercules and Boeing 707 transports.

New Zealand was represented by the frigate HMNZS WAIKATO and an RNZAF P3 Ocean aircraft.

The United Kingdom provided a Nimrod maritime patrol aircraft and the United States a Spruance class destroyer and F-16 fighter aircraft.

KEEL LAYING FOR NEW NAVY MINEHUNTERS

The Chief of Naval Material, Rear Admiral W. J. Rourke, laid the keel of the first of a new class of naval vessels at Tamagoo, near Newcastle, on Thursday, 16th August.

The ship is a glass reinforced plastic minehunter (a small boat) being built by Rassas, Lithgow Engineers, Australia, a division of Carrington Shipyard.

Because of the unconventional nature of the ship, the keel laying was in fact the final application of ballast to the mould.

The Minister for Defence, Mr Gordon Scholes, and the new class of ships, designed by the Department of Defence, was the first of its type in the world.

This project is particularly important to Australian industry as it introduces new technology and construction methods. Mr Scholes said.

"The prototypes prove successful the construction of further ships will be authorised."

The minehunter carpenters will be known collectively in the Bay class. The lead ship will be named HMAS RUSHCUTTER after the bay in Sydney Harbour. RUSHCUTTER was also the name of a former RAN shore establishment which was closely associated with mine warfare until it was decommissioned in 1968. The second of the class will be named HMAS SHALWATER, after the Queensland bay, where many defence exercises have been conducted.

Construction of HMAS RUSHCUTTER is due for completion in 1986, with HMAS SHALWATER following some seven months later.

LAUNCHING OF HMAS BUNBURY

HMAS BUNBURY, the last of 14 Fremantle class patrol boats to be built for the Royal Australian Navy by North Queensland Engineers and Agents (NQEA) Pty Ltd, was launched on Saturday, 1st November, at Cairns, Queensland.

The patrol boat was launched by Mrs Mary Beasley, whose husband Kim is the Minister Assisting the Minister for Defence.

Fremantle class boats are armed with an updated 80mm gun and have a patrol range of more than 2,000 nautical miles. The first of the class was launched in the United Kingdom in 1979 and the remainder have been built by NQEA.

After being commissioned in December, the new HMAS BUNBURY will be based at HMAS Stirling in Western Australia. The patrol boat will have a complement of 22 under the command of Lieutenant Commander David Oliver.
VSEL Type 2400

Far from a "paper boat", the experience, technology and in-service Type 2400 will be available and proven in 1987, ready for Australia.
The second of the KIROV class nuclear ‘battlerscours’, the FRUNZE appeared in the Baltic in the spring. Surprisingly it shows several differences from her sister from 130mm guns in place of the single 106mm guns aft; no SS-N-14 AAMs (anti-aircraft missiles) forward and SS-N-1 SAMs added. So far there is no news of any further units of the class, but their appearance will undoubtedly be linked to any future plans for building nuclear attack carriers (CNNs). Satellite photographs recently published in Jane’s Defence Weekly support the view that they possess, in fact, a large hull approximately 1000ft long, the Black Sea Shipyard in Nikolai II correctly interpreted, they suggest a ship of 40,000 or 50,000 tons, at least halfway to launch.

Another newcomer is the Sierra class nuclear hunter-killer submarine which was snapped off Norway for the first time in August. She appears similar to the Victor III with what may be a fairing for a towed array, or possibly a helicopter. She has twin reactors, which are reported to produce a submerging speed of 32 knots. The role of the new class would appear to be the classic hunter-killer mission. They are almost certainly intended to replace the November class, which came into service between 1965 and 1968. The 12 boats still in service are noisy and of limited military value.

The Photographs

USS CUSHING arrived Sydney in mid-October after participating in Exercise SANDGROPER.

Three RAN participants in “New Horizons”. HMAS Ships YARRA (inboard), STUART and PERTH are at Stokes Hill Wharf, Darwin.

KRI MALAHAYATI. KRI NGURAH RAI, formerly USS MCMORRIS.

The Indonesian frigate KRI MALAHAYATI

KRI RENCONG.

The first three of the RAN’s sail training yachts, FRIENDSHIP of Leeuwin, CHARLOTTE OF CERBERUS and SCARBOROUGH OF CERBERUS, pictured at HMAS Leeuwin anchored on the Swan River in Western Australia. CHARLOTTE and SCARBOROUGH are awaiting delivery to HMAS Cerberus via road transport. (Photo – ABPH F. Pinson, RAN)

Conspicuous with its high superstructure, the United States Navy oiler USS CIMARRON (AO-177) is arriving in the Port of Fremantle in WA on 28th September. Accompanied by the destroyers USS WADDELL and USS CUSHING, CIMARRON was alongside for seven days for a rest-and-recreation visit. (Photo – ABPH F. Pinson, RAN)

The 40-year-old United States Navy submarine depot ship USS PROTEUS visited the Port of Fremantle between 13th and 19th September. One of the oldest ships in the US fleet, PROTEUS is pictured entering Fremantle harbour. (Photo – ABPH F. Pinson, RAN)

Departing from HMAS Stirling in Western Australia on 25th September, after a seven day rest-and-recreation visit, the United States Navy Los Angeles class submarine, USS CITY OF CORPUS CHRISTI. This was the fourth US submarine to visit HMAS Stirling this year. (Photo – ABPH F. Pinson, RAN)
In case of fire, our system is the best defence.

The new Wormald automatic fire sensing and suppression system combines a fast response dual spectrum dual threshold infra-red sensing system with high speed Halon suppression and essential security for all enclosed compartments.

No false alarms

The dual spectrum fire sensor can distinguish instantly between kinetic and explosive energy. It is capable of being tested in direct sunlight without false alarming yet, in the identical environment, it will detect a small fire or mini-explosion.

A decade of successful development

The system is installed, supplied and serviced by Wormald Fire Systems. For more than 30 years the fire sensing and suppression system has been successfully field-tested by the U.S. Marine Corps and the U.S. Army Tank Automotive Command. Tests have also been conducted in cooperation with the West German Ministry of Defence, the French Army and the British Royal Aircraft Establishment.

PICTURE 1 Just prior to testing. An armoured personnel carrier has been loaded with fuel preheated to 209 degrees F.

PICTURE 2 A High Energy Anti-Tank projectile has been fired into the fuel tank. Explosion has been detected and Halon is being released by the automatic fire suppression system. The fire inside the vehicle is out in less than 100 milliseconds.

PICTURE 3 The Halon is still escaping as the fire subsides on the outside of the vehicle.

PICTURE 4 A minute after the explosion. There is a small amount of residual fire externally.

From Wright & Logan

HMAS SHROPSHIRE, May, 1946. (Photo - Wright & Logan)

9.11.29 Left the UK for service in CS1. Med Fleet.

4.4.32 Arr Chatham and paid off. Recmd next day for CS1. Med Fleet.

29.4.32 Arr Gibraltar for the Med Fleet.

28.11.34 Arr Chatham and paid off. Back in Med in 12.34.

8.35 At Alexandria for the Abyssinian Crisis.

Early with EXETER carried troops from 36 Malta to Alex.

22.3.36 Relieved LONDON at Barcelona controlling evacuation of refugees from the Spanish Civil War. Relieved by LONDON on 15.9.36.

37 At Chatham for a 4-month refit. 10.11.37 Chatham for further service in CS1.

23.7.38 Relocated survivors of the Danish freighter "Boo" sunk by A/C off Barcelona.


6.9.38 With CS1 at Alexandria.

11.3.39 At Malta, leaving same day for Gibraltar; left there on 13th and ar Marseilles on 15th.

16.3.39 At Malta for a quick docking. Left on 19th and ar Alex on 20th.

21.8.39 Left Alex. Left Suda on 3rd and attached to 5 Atlantic CMD.

14.10.39 At Simonstown. With SUSSEX (trader hunting group Force H) operating off the Cape searching for GERALD FIS.

23.10.39 Left Capetown, returning on 24th.

27.10.39 To 7.11. operating from Capetown.

11.11.39 Left the Cape for the Med area; returned 23.11.39.

12.12.39 Arr Simonstown leaving later same day and with SUSSEX proceeded to the Capetown-St Helena trade route.

4.1.39 Intercepted the blockade runner 'Adolf Leopold' which was scuttled to avoid capture in the S Atlantic.

15.11.39 Arr Capetown, leaving same day for Port area. Diverted to Rio de Janeiro on 18th.


21.1.40 Left Falklands in company with DORSETSHIRE as escort to the battle-damaged EXETER from Port Stanley to Plymouth. Later, ships of the Home Fleet took over.

2.4.40 Relocated Simonstown, completed 16.4.40.

25.4.40 SHROPSHIRE replaced CANBERRA (RA) as one of the escorts to troop convoy US 3 in the Indian Ocean en route from Australia & New Zealand to the UK. US 3 arr Capetown on 26th and on 31.5 left with CUMBERLAND & SHROPSHIRE as escorts, arriving Fremantle on 7.6.40.

8.6.40 US 3 and the cruisers left Fremantle escorted in addition by HERMES until 10.6 and from 12.6 to 14.6 by DEVONSHIRE. On 14.6 convoy and escorts were out west of Gib. by HOOD, ARGUS and 6 destroyers. Two more destroyers joined the convoy next day.

16.6.40 Convoy and escorts ar Clyde. 19.6.40 7.F.4 at Clyde. 16.7.40 Web SUSSEX, SOUTHAMPTON, GLASGOW and E destroyers left Scapa to intercept German ships believed to be making a sortie in the North Sea. The German ships returned to harbour in the afternoon. In the return to Scapa, GLASGOW accidently rammed and sank the destroyers IMOGIN in thick fog. Above ships, less GLASGOW & IMOGIN, art Scapa late 16th.

28.8.40 Art Simonstown for East Indies Command.

9.9.40 Left art Colombo.


2.4.41 Left Force T.

2.2.41 With CERES & COLOMBO blockaded Kish.

10.2.41 to 25.2 With HERMES, HAWKINS, CAPETOWN, CERES, KANDAHAR formed Force T supporting the advance into Italian Somaliland.

14.2.41 Shelled Italian positions at Mogadishu in support of the entry of UK troops into that town. SHROPSHIRE caused heavy casualties in the Brava area and sank the tanker 'Prontosvita' in Mogadishu harbour.

22.2.41 to 26.2 SHROPSHIRE, AUSTRALIA, CANBERRA, GLASGOW, EMERALD & ENTERPRISE formed a radar hunting group searching for ADMIRAL SCHEER.

3.4.41 to 15.4.41 Reth at Simonstown.

20.4.41 Relieved by MAURITUS in the E Indies at Colombo.

6.4.41 CS1, Home Fleet.
29.6.44 to 3.4.45 On passage to Sydney, stowed with US ships of TF 75 to 2.44 and the Admiralty. She had been damaged by an underwater mine off Guadalcanal in 1943.

29.6.44 to 1.9.44 On passage to Sydney, stowed with US ships of TF 74 to 2.44 and the Admiralty. She had been damaged by an underwater mine off Guadalcanal in 1943.

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The Seahawk, with its General Electric T700 engines, has the power, reliability, and survivability to take on any mission. The advanced technology T700 is the only proven engine that does everything the Royal Australian Navy needs.

- Anti-ship surveillance and targeting
- Anti-submarine warfare and anti-surface-ship operations.

No engine is tougher, more reliable, more cost-effective than the T700.

- Proven the most reliable turboshaft engine ever, 1,500 engines delivered, 1/2 million flight hours
- T700-GE-401 designed specifically for naval operations; corrosion resistance - the best ever in U.S. Navy testing; no unscheduled maintenance after 1,000 flight hours and 1,000 deck landings; 10% contingency power for safer operations.
- 4,500 hours between engine-caused removals in extreme military environments
- 30% better fuel economy and 50% longer endurance
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- 30% better fuel economy and 50% longer endurance
- One-third fewer parts for reduced support inventories

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- 4,500 hours between engine-caused removals in extreme military environments
- 30% better fuel economy and 50% longer endurance
- One-third fewer parts for reduced support inventories

The T700 is the toughest, most economical helicopter engine ever built.

**GENERAL ELECTRIC**
Jobs for Australia. Access to the U.S. helicopter market.

With Sikorsky's Australian Industrial Participation Program (AIP), Australian industry will have a unique opportunity to become a partner with the world's largest helicopter manufacturer, Sikorsky. And with AIP, Australia will gain immediate access to the U.S. helicopter market, the world's biggest. AIP is more than a contract to build helicopters. It's a commitment to Australia's industry today and tomorrow. A long-term partnership that will generate thousands of man-years in high quality technical, engineering, and manufacturing jobs, as well as introduce advanced technologies and open new opportunities for aerospace exports.

At the same time, Sikorsky's AIP will guarantee Australian self-sufficiency in manufacturing the S-70i for the RAN and will provide a common base for meeting future requirements such as the RAAF helicopter.

The Sikorsky SEAHAWK and AIP: Proven capabilities for Australia's Navy and jobs for Australians. Plus a vital transfer of technology for Australia's future.

Sikorsky. The Leader.
JOHN CRANE AUSTRALIA PTY LTD
Manufacturers & Suppliers of:
JOHN CRANE MECHANICAL SEALS & PACKINGS
DEEP SEA SEALS, Stern Shaft & Rudder Seals (20mm to 1500mm)
CHEMLON & PTFE PRODUCTS
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LAPMASTER LAPPING MACHINES
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For Further Details Contact
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166 ELDRIDGE ROAD, BANKSTOWN
NSW, 2200
Phone: 709 2288 — Telex: AA24273
BRANCH OFFICES IN ALL STATES

The NSW Division of the Navy League held a well-attended seminar on 'Shipbuilding in Australia' at Tattersall's Club, Sydney, on the evening of Wednesday, 3rd October. In addition to Navy League members, representatives of industry, the press, and some politicians were present.

Rear Admiral Andrew Robertson, National Vice-President of the League opened the seminar, outlining the major decline in Australia's shipbuilding and weapons construction capacity over the last 30 years and the serious effect this has had on Australia's defence capacity.

Papers were then presented as follows:

- Shipbuilding in the defence of Australia - A Shipbuilder's View - Mr J C Jeremy, BEC, Eng, FRINA, Managing Director, Vickers Cockatoo Dockyard Pty Ltd
- Shipbuilding in the defence of Australia - A Naval View - Rear Admiral W J Rourke, AO, RAN, Chief of Naval Material, Department of Defence (NAVY)
- Commercial Shipbuilding - Its future in Australia - Mr D J Lavery, AM, Managing Director, Cammell's Slipways Pty Ltd

There were many questions raised, particularly during the open forum which concluded the evening. These seemed to be a general consensus on the following points:

- A vibrant and extensive Australian shipbuilding industry is essential for defence purposes to ensure efficient and timely ship repair in war and construction of such smaller vessels as may be possible during the timescale of the conflict.
- Australia can afford to pay a premium above overseas building costs for all ships built in Australia noting:
  - About 60% of the cost (more if there is a reasonable run of ships) is spent in Australia and of this a not inconsiderable proportion returns to Government in the form of income tax, company tax, sales tax, etc.
  - Foreign exchange is saved.
  - Employment is created, not only in the shipyard concerned but in hundreds of firms involved in sub contracts.
  - Unemployment benefits are consequently saved.
  - Defence capability is enhanced.

A steady and continuous flow of orders is essential to maintain employment, technical skills, competitiveness and efficiency in our shipbuilding yards.

Consideration should be given to installing in merchant ships during building, design features which will enable them to be readily converted for war use, eg. helicopter platforms, degaussing runs, deck strengthening to take guns or tanks where appropriate, etc. Such additional cost should be a charge in Government funds.

Ordering of warships should be for the total number of a class at the one time. Such a larger run gives Australian firms a much greater chance to tender for equipments and contracts, reduces costs, improves labour stability, and tends to ensure more timely delivery. Ordering say two then a further one later, and so on — such as occurred with the Perth Class Guided Missile Destroyers and the Adelaide Class of Frigates, works against Australian industry participation and often results in a lack of commonality in equipments fitted in a class.

The aim should be to build all our warship needs in Australia and to encourage by every reasonable means the construction of merchant vessels here.

Australia has shown that it can produce excellent small warships to cost and time (eg. Fremantle Class of patrol boats) and should aim for export markets, particularly in South East Asia and the South Pacific. In this regard the Pacific Patrol Boat is an excellent initiative.

Subsidies should apply to ships for export as well as for use in our merchant fleet.

Queensland

Members of the Royal Australian Naval Reserve Cadets and the RAN joined with regular members of the Congregation of St Mary's Anglican Church, Redcliffe in August... to perform an impressive ceremony linking the cadets with the Church.

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Page Thirty-Nine
THE NAVY
January, 1985
The occasion was the laying up of the old Colours of the Queensland division of the cadets following the presentation of new ones last September. The old Colours were originally presented to the division's seniors as they were offered at that time on behalf of the Navy League by its then president, Commander N. A. Pixley, RANR (retired), in 1946, cadets then being under the aegis of the league. However, with sponsorship for the cadets assumed by the RAN in 1973, the Colours were retained and the old ones were called to be laid up.

CMdR Ian Fraser, RAN, Senior Officer for the cadets in Queensland, explained that the Colours had been consecrated on their original presentation, which was a gesture that they be laid up in a place of worship. And as the Rector of St Mary's, Rev. Bill Pearson, is the Senior Naval Chaplain for Brisbane, and as one of our cadet units, St Mary's has been given the Freedom of The City of Redcliffe, the venue of St Mary's was most appropriate.

For the ceremony, the Colours were paraded at the church for the dedication of the regular Holy Communion service and at the end of it, it were marched to the altar by the Colour Guard. There it were received, by CMdR Fraser and passed to Rev. Pearson who then offered a prayer and laid them up.

During the service, cadets from the division's Redcliffe unit, TS Moreton Bay assisted by taking up the collection and forming a guard of Honour. The unit's commanding officer, LEUT R. T. Marshall, NRC, read a lesson, as also did Commander Fraser.

Present at the service were the Redcliffe Mayor, Mr. Ray Rawley. During the service, cadets from the division's Redcliffe unit, TS Moreton Bay assisted by taking up the collection and forming a guard of Honour. The unit's commanding officer, LEUT R. T. Marshall, NRC, read a lesson, as also did Commander Fraser.

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

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SOUTH AUSTRALIA: Staff Office Cadets, HMAS Encounter, PO Box 117, Port Adelaide, South Australia, 5015.

VICTORIA: Staff Office Cadets, HMAS Lonsdale, Rouse Street, Port Melbourne, Vic, 3207.

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AUSTRALIAN CAPITAL TERRITORY: Staff Office Cadets, HMAS Watson, Watsons Bay, NSW, 2030.
All enquiries regarding receipt of The Navy magazine, new subscriptions and renewals should be sent to:
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THE NAVY LEAGUE OF AUSTRALIA
Application for Membership

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

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The Objectives of The Navy League of Australia:

(1) To keep 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.

(2) To promote, sponsor and encourage the interest of Australian youth in the sea and sea-services, and support practical sea-training measures.

(3) To co-operate with other Navy Leagues and sponsor the exchange of cadets for training purposes.

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**OH! WHAT A MESS**

WHATEVER way one looks at it, the Government's decision to seek an external assessment of Australia's defence needs for the foreseeable future is a good deal less than complimentary to the Defence Department's capacity to provide advice, or at least acceptable advice.

The process of determining threats to Australian security and by extension the structure of the defence force has been the subject of generally 'in house' criticism for a long time. Some have felt that military input has been insufficient, and informed external opinions either not sought or its value discounted; others that only those officials in possession of the confidential reports and information governments and their agencies alone receive can make reliable assessments. Some consider the present process cumbersome.

In fact the existing problem is not so much a matter of assessing threats — it is already agreed there is no obvious direct challenge to Australian sovereignty — but rather of deciding the form this defence force should take when the only certain thing about the future is uncertainty itself and a wide range of possible difficulties.

Important factors bedevilling defence planning include an expansion of the "fortress Australia" or go it alone kind of thinking as opposed to alliances and mutual aid) and the ever increasing cost of defence equipment which results in intense rivalry between the proponents of particular arms, weapons, or available funds, and coordinate delays in making vital the line and final decisions. The letter of course being the responsibility of government.

It is hard to believe one man, and it is interesting to recall that the present defence organisation was largely the creation of a single individual, could solve the very complex threat structure problem in the comparatively short period of twelve months. The assessor's final report will presumably be debated in the Parliament at least, but even so the risks of miscalculation or misjudgement seem unacceptably high, and it is probable that future administrations will be compelled to re-examine this process, which will presumably be considered a matter of some considerable urgency.

The functions transferred included management of the defence production factories, the dockyards, most research and scientific facilities, and defence industry development. Threats it is already agreed there is no obvious, direct challenge to Australian sovereignty.

The decision marked yet another change in Australia's defence organisation and in the administration of a number of the Defence Force's supporting elements.

Soon after the 1984 Federal Election the Government decreed that the Department of Defence Support would be abolished and its functions moved to the Department of Defence. The decision marked yet another change in Australia's defence organisation and in the administration of a number of the Defence Force's supporting elements.

There is much to be said for having all defence functions in a single department, and it was one of the recommendations of the Navy League in its submission to the Defence Review Committee (the Uw Committee) established by the Fraser Government in 1981. The Uw Committee thought otherwise however and following the presentation of an interim report in 1982 the Government created a Department of Defence Support to assume responsibility for a number of support functions that were spread over several departments, notably Administrative Services and Defence.

The functions transferred included management of the defence production factories, the dockyards, most research and scientific facilities (with some subsequent re-arrangement), part of the procurement arrangements and not the least important, defence industry development. The objective of the transfer was to ease the recognised burden on the Minister for Defence and his department and to provide a sound basis for an expansion of effort in a defence emergency or war.

Under an energetic Minister for Defence Support and departmental Secretary the arrangements worked quite well, defence industry in particular appreciating a new level of consultation and cooperation. The Department of Defence Support soon arose and continued until the election. It is fair to say the Secretary of the Defence Department believed the difficulties would be resolved.

If the businesslike approach to support functions adopted in the abolished department can survive in Defence the move might prove to be a good one. Expediency rather than increased efficiency however appears to have caused the Government to make the decision and this is so its sincerity in seeking to achieve the most effective Defence Force possibly becomes questionable.

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**DEADLINE**

The Deadline for the next issue is 1st May, 1985

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**ACKNOWLEDGEMENTS**


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**PHILIPS**
THE CHINESE NAVY TODAY

Story and Photos by ROSS GILLET

Luda class DDG

THE People's Republic of China, the world's most populous nation, now boasts the world's largest armed forces. The People's Liberation Army Navy (PLAN) possesses large numbers of combat ships but, despite recent advances, remains basically a coastal defence force. A modernisation programme was introduced in 1978 to remedy these deficiencies. Traditional People's War doctrines were to be revised in accordance with modern battlefield conditions. Equipment would be upgraded through a combination of indigenous research and development and the purchase of foreign state-of-the-art technology.

The PLAN has in recent years acquired ocean-going support vessels to sustain its warships at sea, thus enabling expansion from an almost exclusively coastal force to a fleet with a blue water capacity. During 1980 an Luda ship task force undertook a 35-day, 8,000 nautical mile mission into the South Pacific, patrolled the target area for the PRC's 1CBM test, and recovered the rocket's instrument modules.

According to the latest 1984-85 volumes of both 'Combat Fleets of the World' and 'Jane's Fighting Ships', the Chinese PLAN is a force comprising over 2,400 vessels of all types and sizes, manned by 240,000 officers and men. Supporting this naval force are 28,000 marines and some 30,000 personnel attached to the naval air force.

In an effort to provide a modern oceangoing force, the Navy embarked on a building programme for surface combatants, a plan which has realized to date 14 Luda class anti-ship missile destroyers (DDGs) since 1971, a similar number of Jianghui class anti-ship missile frigates from 1976 and in 1977-78 two Jiangdong missile frigates, the first Chinese ships with a surface-to-surface point defence missile capability.

Despite this programme, many of the ships still lack modern weapons, command and control equipment and sensors and modern CODOG propulsion is nonexistent. Lack of reloading facilities for the surface-to-surface missiles aboard the surface ships allows only a limited operational role before having to return to base for rearming.

In an effort to develop a blue water navy as distinct from a purely coastal defence role, there are plans to expand the fleet to include a large fleet of small combatants which remain in service.

Construction of a variety of naval vessels continues, but at rates much below those of recent years. A contract was signed with British firms in November, 1982, involving the refitting of six Luda class destroyers with Sea Dart missiles and advanced electronics, but this was cancelled in early 1983, supposedly for budgetary reasons. The influence of various PRC leaders who favour the development of indigenous systems rather than the purchase of foreign technology could also have played a part in the cancellation. Domestic research into shipboard electronics and propulsion continues, however Western military experts consider that significant technological advances in naval ship designs and weapons are still many years away.

It is in the area of light forces that the Chinese have built up large numbers of craft, from missile attack boats to patrol and torpedo boats, satisfying oceangoing, coastal and river-oriented operations.

Luda class destroyer with two T43 class ocean minesweepers at Shanghai's Wusong Naval Base. April, 1985

KAIFENG, a Jianghu class missile frigate, was built at Shanghai between 1974 and 1976.

This Soviet Whiskey class patrol submarine is one of 20 such boats still operated by the Chinese Navy. April, 1985

Page Four

THE NAVY

Port broadside view of a Jianghu class missile frigate at the mouth of the Huangpu River.
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As well as the large patrol force the PLAN is heavily involved in amphibious operations, a point plainly validated by the existence of some 570 vessels from the large locally-built Yukan class tank landing ships (LSTs) down to small Landing Craft Mechanised (LCMs) and including many former US Navy LSTs and LSMs.

In terms of overall numbers, the Shanghai class fast attack craft still boasts over 300 units in service, despite transfers and deletions since the first was completed in 1961. Construction of about a dozen per annum continues, and the type has been produced to three slightly different versions.

Four Anshan class destroyers, built for the Soviet Union as units of the Gordy class during 1940-42, remain in service with the Northern Fleet. All four ships were transferred between December, 1954, and July, 1955, and from 1971 to 1974 were fitted with two pairs of surface-to-surface Hai Ying missile launchers and twin 37 mm mounts in lieu of their original singles.

From the Australian point of view, one of the more interesting Chinese warships is the LUOYANG, originally commissioned by the RAN in May, 1941, as HMAS BENDIGO. The ship now boasts a greatly altered profile and has been re-armed to carry two 3.9 inch and four 37 mm guns. She is now based in the Eastern Sea Fleet.

In the submarine field, China continues to rely primarily on the Soviet-designed Romeo class patrol submarines, over 90 in use, supported by 20 ageing Soviet Whiskey class boats. An effort to build a new design, the Ming class, in the early 1970s was apparently unsatisfactory and it is considered unlikely that a new class will appear until the end of the 1980s.
A fast missile boat No 3115 moves down the Yangtze for the open sea.

Zoushan type tank landing ship of the Yukon class, in service since the early 1980s.

A former United States medium landing ship (LSM) of the East Sea Fleet. Seven LSMs operate from Shanghai.

Yuling class LSM, seen here, is able to transport three tanks.

Yunnan class utility landing craft (LCU); 300 tons, built since 1968.

On the nuclear front, the PLAN boasts six Han class SSNs in service and a small number of Xia class nuclear propelled ballistic missile type submarines in commission. In 1982, China claimed to have launched a SLBM from a submerged Golf class submarine, although rumours circulated soon after that the missile had actually been ground-launched; since the PLAN's four Golf class submarines were heavily damaged in a failed attempt at a similar launch the previous year.

A new class of submarine, the Xia, has been developed and can fire 16 nuclear missiles at targets 1,800 miles away. Although this represents a significant advance for the PRC, the boat's nearest foreign counterparts are the USN's George Washington class, the first of which commissioned in 1959, and the Soviet Union's Yankee class, which dates from 1966.

Backing up the main offensive units is the naval air force of 700 aircraft and a support fleet of submarine tenders, survey and salvage ships as well as supply ships and tankers.

Like the RAN's old Naval Auxiliary, Patrol the Chinese have, since the early 1950s utilised ships of the deep sea and coastal fishing fleets into the Maritime Militia. When required these craft support naval forces concentrating on reconnaissance and surveillance missions, armed with machine guns and depth charges.
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BOOK REVIEWS

AUSTRALIA'S MARITIME HERITAGE
by GRAEME ANDREWS
Published by Crematary Press, Sydney 1984

Over the years, Mr. Graeme Andrews has been the author of numerous books dealing with Australia's naval and maritime history. In the process of researching these books, he has built up a wealth of knowledge concerning the location and status of the various Maritime Museums and projects that have developed over the last few years. The latest offering from Mr. Andrews is an obvious result of this acquired knowledge.

Australia's Maritime Heritage is a directory of the various maritime museums, collections, and projects around Australia, and as such, will be an invaluable guide to anyone planning a maritime tour of Australia. Unfortunately, the lack of organization will make it difficult for people to just pick up the book and use it. Ideally, the book should have been organized with each entry listed under individual states.

Being as it is the first time a book of this type has been published on a purely maritime topic, there are bound to have been omissions. Three, which spring to mind are: the collection at Snapper Island, the naval museums at HMAS Cerberus and HMAS Albatross. Mr. Andrews also appears to have confused the Naval Historical Society with the Royal Australian Navy's Spectacle Island Repository.

Providing the lists of museums etc. is a list of some of the various historical ships around Australia. However, the old CERBERUS only gets her name mentioned right at the end of the book whilst the GAYUNDAH, which is barely recognizable, warrants a reasonable write-up.

One of the more pleasing aspects of this excellent book is that contact addresses and telephone numbers have been provided for all entries.

Overall, Australia's Maritime Heritage is a publication containing a wealth of information and will be of immense value to anyone conducting a tour of Maritime Australia.

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by PHILLIP MACDOUGALL ($19.95)
Available in Australia from Australia & New Zealand Book Co Pty Ltd., 10 Aquatic Drive, Frenchs Forest, NSW

Maritime mysteries abound through history and have always held a fascination for those who have a love of the sea. Carefully researched, Mr. MacDougall's fascinating book is the latest in a long list of titles which have looked into the subject of missing ships, crews, and sudden disasters.

The author has managed to add new, relatively unknown mysteries, including the series of events that surround the "Gaul", a British trawler that simply disappeared in the Arctic. Was she on a spy mission and deliberately destroyed by a submarine? Compiling 15 chapters with 24 illustrations, this 192-page book clearly goes to great lengths to avoid rehashing stories that have been printed over and over again.

One interesting point the author makes is that maritime mysteries are not a thing of the past: one ship is lost every two days, and a great number still provide mystery and intrigue.

Some of the chapters included are: Without Trace, Accident or Sabotage, Two Post-War Disappearances, Submarines, and Disaster Ships.

The book is complemented by a superb jacket painting of the last minutes of the Blue Anchor Line steamer WARATAH.

There is little doubt that "Mysteries of the High Seas" is truly one of those intriguing books that one finds hard to put down. Written in an easy, yet authoritative style, it is recommended reading.

VIC JEFFERY
**The place to build submarines...**

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**THE NAVY**

April, 1985

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**State Dockyard Newcastle**

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**THE NAVY**

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rebuilding takes far too long to permit fighters to reach our ships in the very short times allowed between the detection of the threat and the start of the fighting.

In the case of the Australian Defence Force this time is even shorter than in the case of many other nation's maritime forces. This is because the ADF has no airborne early warning aircraft. This lack of AEW capability means we have even less time to detect a threat and move the FA18s from their bases ashore to the scene of operations.

Although the FA18s will have two theoretical roles in the ADF (fighter and strike), much emphasis is laid by navy professionals on fighter role. This is because Navy considers it unlikely that there will be much opportunity or need for the FA18 to operate in the maritime strike role. Other aircraft, with much greater range than the FA18 will also be equipped for the maritime strike role.

These are the P3Cs (already armed with Harpoons) and the F111Cs (expected to be armed with Harpoons). It is clear that in the FA18 the Australian Defence Force is not investing in what is vitally needed for maritime defence. The formation of Maritime Command is a step in the right direction, but it is not enough. We need to do more.

The formation of Maritime Command is a step, a very welcome and vitally important step, towards making the best use of the qualitatively inadequate FA18s in the essential fighter protection role. However, there is no way the formation of Maritime Command can overcome the serious fighter gap in our maritime defence.

How was this gap allowed to develop? Now, a year or so after the event, the factors and influences responsible have become known publicly.

It was not a matter of straightforward negligence.

The gap has developed because of two major errors of judgement, both made in the Department of Defence.

1. An unwillingness to recognise the current capability and, particularly, the potential capability, of the short take-off and vertical landing (STOVL) aircraft in the air defence role.

2. A major imbalance in the strategic perception of Australia's defensive position.

The answer is unquestionably "yes". Not only have the anti-Sumo arguments been wrong — which it clearly is — we will get an improbable and therefore ineffective and inadequate defence force. That is what we now have. That is what we will have in the 1990s. There is another spurious remark that must be recognised for its invalidity. That is that the Government has decided that there shall be no aircraft carrier. Therefore, we are told, we should keep silent.

Now it is unquestionably true that the Navy and the Air Force — the operating parts of these Services — should organise themselves to do the best they can with what they have; woefully inadequate though that may be.

However, it is the duty of the Navy League, and others who have both the freedom to express their opinions and the defence of the country at heart, to speak out publicly, to put the case. To expose the danger for as long as it is necessary to get this grievous error recognised and the Defence Force developed to the level of capability we clearly need.
LYING on a shingle bank in Shakespeare Bay near Picton in the north of New Zealand’s South Island, is the battered but still intact hull of the last Australian convict ship.

This full-rigged bark vessel was built in Bengal in 1853. She made a single voyage to the United Kingdom with tea and was then chartered for use as a troopship during the Crimean War. It was here that she is said to have been the only ship in the Allied forces to escape damage during a great storm.

Between 1856 and 1873 she made various voyages between Britain and the Far East. On one of these voyages she carried convicts to Fremantle.

Under command of Captain J. Ferguson, she left Plymouth, England on August 26, 1858, arriving at Gage Roads on November 20, 1858, 86 days out and with no deaths among the 280 males on board. It is likely that there are many Western and other Australians who can trace their ancestors to this ship.

In 1873 Edwin Fox was chartered to Shaw Savill and Company and carried immigrants to New Zealand (up to 260 at a time) until 1885 when she was converted into a stationary refrigeration ship to store meat. Her final port for this duty was at Picton where she arrived in 1897. In 1901 the machinery was removed and the old ship was used as a coal hulk. By the 1950s she was in use as a breakwater but still afloat.

A number of New Zealand groups have been formed to try to preserve or restore the ship but their efforts have come to nothing for several reasons, mainly cost and the relatively few inhabitants and possible tourist interest of the Picton area. An adverse survey by the Royal New Zealand Navy, combined with the ship’s lesser historic interest for New Zealand, also made the project less attractive.

Edwin Fox still floats on high tide. Her upper decks have been severely cut back for firewood and furniture. However, modern water-ballasted heavy lift ships could pick her up and take to Western Australia where she could complement that State’s defence of the America’s Cup and contribution to the Bicentenary.

More recently, a member of the Western Australian Museum visited the hulk and evaluated favourably the possibility of restoring the ship, Australia’s first convict ship.

Graeme Andrews’ latest book, Australia’s Maritime Heritage is described in the book review section.

April, 1985
When the Great War erupted in August 1914 British cruisers were representative of a number of different type, armoured, light and broadside. The latter type included the "Bristol", "Weymouth", "Chatham", "Birmingham" and "Birkenhead" classes, similar in size and power and all designed for long range trade protection, screening the Fleet from TBD attack and probing the enemy's strength. There were 21 ships in the five classes. Before the war the broadside type had given way to the light cruiser type which had developed similar lighting power on 25% reduction in speed. The basic form of the broadside cruiser was that of a long hull carrying up to nine guns, with a good rate of action and a speed sufficient to enable them to work with the battle fleet. Able to fire up to six guns on each broadside, hence the name, these ships could give a good account of themselves in a close range engagement. With a light scale of horizontal protection it was not envisaged that they would trade ships with an enemy force at long range, that was left to armoured cruisers In the view of the end to end main belt it was not considered necessary to arm the cruiser with any form of protection against the need for the ship to act as a fighter, its main armament. With the increasing range at which actions were fought and later were totally unsuitable for long range, that was left to armoured cruisers In the view of the end to end main belt it was not considered necessary to arm the cruiser with any form of protection against the need for the ship to act as a fighter, its main armament. 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HMAS ADELAIDE

When the RAN already had three of the "Hamphire" class (HMS "Chatham", "Dunedin" and "Abingdon"), the Government began to "look to their moat" and after the second period of war clouds in the late 1930s, it became clear that the cruiser class was no longer adequate to meet the threat presented by any mercantile conversion raiders that would come her way. It was not felt that the four funnels be reduced to two forward and one aft of the bridge. The ship's construction proceeded quite well and the ship was commissioned for trials, reverting to 4.25 Service on China Station.

HMAS ADELAIDE (Photo - Wrigg & Logan)

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The most advanced lightweight torpedo in the world is now available on board your combat ship. Sting Ray is the intelligent anti-submarine torpedo in service with the Royal Navy. Sting Ray’s exceptional performance in all water depths and in the most demanding underwater environments has been proven conclusively. A rigorous trial programme has been completed to verify its effective acquisition and destruction of submarines.

Sting Ray can be launched by ships, aircraft or helicopters. It can be carried on the smallest patrol craft. Once fired, Sting Ray acquires its own power, fires the weapon in seconds, escaping the counter to seek out its target independently. And, Sting Ray is the first to arrive at the scene of the attack, first to seek out and strike the enemy.

If your present contract expires, the most advanced weapon of its kind will be available to you. Sting Ray is a powerful weapon, built to exacting standards of quality and reliability. This is the weapon you can count on.

The Sting Ray weapon system is designed and manufactured in the United Kingdom. It is a complete system, including the weapon, torpedo and sonar equipment. Sting Ray is a complete weapon system, designed specifically for your needs.

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Page Twenty-One

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April, 1985

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THE NAVY
September 21st 1984. After a major refit at Cockatoo, HMAS Onslow returns to service on time and on cost.

A major refit to something as complex as a submarine is a demanding task. To complete such a project on time and on cost requires a combination of knowledge and skill that comes only with experience. The experience that Cockatoo enjoys after completing nine refits and five submarine weapons system updates since 1971 includes a working understanding of the latest in mechanical and electronic hardware. Experience which includes the capability to manage the intricate dependencies of sophisticated programmes. Experience which makes Cockatoo Australia's experts in submarine technology.

Cockatoo Dockyard Pty Ltd
Cockatoo Island NSW 2000
A member of the Comsteel Vickers Group

Whatever Happened to?

After valuable service to the RAN in the Second World War, eight of the 56 unit Bathurst class Australian Minesweepers were acquired by the Netherlands. Some were later transferred to Indonesia.

The accompanying photographs, courtesy of the Royal Netherlands Navy, show two of the minesweepers not long after their transfer, as well as a pre-war view of the submarine K9, (HMAS during 1943-44), and post-war photo of ABRAHAM CRIJNSSEN which was commissioned into the RAN from September 1942 to May 1943.
The case for Mercedes-Benz defence vehicles is backed by very convincing arguments.

Armed Services around the world, including 44 armies and NATO forces, have chosen Mercedes-Benz vehicles to ensure reliable, fast tactical mobility regardless of the conditions they must operate in. Despite challenges of terrain, weather or ground extremes, Mercedes-Benz all-wheel drive defence vehicles are proving unsurpassed in accomplishing "get in and get out" missions with men and materials.

In order to achieve such critical objectives, these high performance vehicles, developed from series production commercial models, provide the following significant benefits:

- In country logistic support from an established Mercedes-Benz parts and service network.
- Commonality of major components, that in times of emergency, could be sourced from commercial fleets.
- Uncomplicated driver and mechanic training.
- Overall, Mercedes-Benz all-wheel drive vehicles assure user acceptance through high performance diesel engines, easy to operate fully synchronised gearboxes, safety of stabilizer controlled suspensions, high clearance axles, low centre of gravity and high side angle stability.

Mercedes-Benz is today's answer to defence needs for all terrain Armed Services vehicles which can be relied on for ground movement of personnel, support equipment and essential supplies.

A visit to HMS Challenger

The Royal Navy's new seabed operations vessel HMS CHALLENGER is designed to enhance the Navy's capability to search for, work on and recover objects from the seabed. In the early 1970s, there were a number of design studies for a replacement for the old diving ship HMS RECLAIM. These studies all took the form of simple platforms for the Royal Navy's saturation diving system, and had very few other facilities. In 1975, however, a more realistic role was defined, marking the point at which design of a specialized seabed operations vessel (SOV) began in earnest.

Evolution of Requirement

The basic requirement was for a ship capable of undertaking four tasks:

1. To search shallow depths with bottom search sonars, or deeper waters using a towed, steered, submerged submersible (TUMS).
2. Inspection, using an atmospheric observation chamber or a manned, free-swimming submersible.
3. To work on the seabed with a pressurized diving bell or manned submersible fitted with divers lock-out facilities, supported by a full saturation diving system.
4. Recovery, with a crane, winches and a suitable expense of clean deck for storing salvaged material.

The SOV would have to be able to search the seabed systematically and thoroughly, and record images and positions, so that the ship could return to the scene later with the minimum of further search. This can be done by laying a pattern of acoustic beacons on the seabed, and tactics the signals from them to determine the ship's relative position. For this purpose, the SOV would need an array of hydrophones and advanced data processing. The vessel would also be provided with a comprehensive suite of radio navigation aids including HCCS and SAR.

Reliability of the ship and her equipment was of paramount importance. Early studies established a safety target of one serious diving accident, one mild accident in a diver's life in 100 years of operation. This would involve a high degree of redundancy, but the requirement that higher rate of such stringent targets did not prove to be excessive.

The choice of ship

At the start the designers were faced with four options for an SOV. The first was to split the functions between two hulls, second was a multi-purpose design such as a catamaran, third and most superficially the most attractive, was to convert an existing vessel, and fourth was to rely solely on a submersible.

In 1976, while feasibility studies progressed, the British Shipbuilding Research Association (BSRA) carried out a survey of all vessels such as drilling ships and diving tenders which had some of the features desired for the SOV requirement. It was clear from the survey that none of these vessels could meet the requirements, even with modification. Most were too slow, had insufficient accommodation or inadequate stability, had the wrong capabilities or even lacked certain basic capabilities entirely. Splitting the facilities between two ships, one with the sonar and submersible to fulfill the search role, and the other operating a saturation diving system, and recovering facilities was considered, but no existing ships could be used without major modification. It was in any case not possible to buy suitable ships at reasonable prices at the time.

The design of two new ships was looked at but the combination would have been more expensive to build and would have required more manpower to run. Although the concept was by no means dead, and continued to seem to be the conclusion was that a single ship would be the most economic long term solution— one that has yet to be provided.

A semi-submersible catamaran seemed attractive but on closer consideration several disadvantages emerged. It would have been bigger, heavier and more costly to build. It would also have been difficult to dock, and the choice would have to be made between a hull being controlled by the size of existing docks, and a semi-submersible in a new dock at one of HM Naval Bases. The platform would have been slightly less suitable for the operation of manned submersible because it would not follow wave motion as closely as a conventional vessel. Finally, the structural problems associated with a semi-submersible catamaran were unfamiliar and solving them would require a much greater design effort.

Two options for conversions were examined in detail, a refrigerated cargo vessel and a roll-on/roll-off ferry. In both cases British-designed and -built ships less than five years old were favoured, to minimize maintenance problems with foreign equipment and to ensure some
years' useful life. Although both conversions appeared feasible and both hulls were available for purchase, the solution to the requirement had several disadvantages which ultimately outweighed any cost advantages.

The greatest drawback was that performance and freedom of arrangement were limited by poor performance at slow speed, position and size of main engines, etc. Another drawback was that the slow speed diesels were unfamiliar to the RN and the naval dockyards, so the spares back-up for both main engines and auxiliaries might eventually have proved difficult and expensive to obtain. The conversions were also likely to be larger, more cumbersome and have deeper draught than the smallest new design on the drawing board at the time. While they would therefore suffer some undesirable operational restrictions, converted ships would also have substantially shorter service lives than a new design.

An early choice had to be made between a saturation diving system (using a bell to convey men to the seabed) and a submersible fitted with a lock-out facility. One school of thought maintained that a diver lock-out submersible would have greater operational flexibility and would eliminate the need for accurate position fixing. This view was not allowed to prevail on three counts: first, the time taken for divers to change shifts is increased by the need for a submersible to be recovered on board, mated to the saturation diving system, and then launched with a new team of divers; second, it was anticipated that the launch and recovery of submersibles would be more sensitive to sea states and weather conditions than a diving bell, therefore encroaching further on divers' working time; and third, the advantage of dispensing with position fixing is illusory, as the ship would need similar equipment for accurate course keeping during slow searches of the seabed. However, the ship was to be designed to enable her to operate a manned submersible should the need arise and LHR is now part of CHALLENGER's equipment.

Design

All these arguments were considered in some depth before the team embarked on detailed design, and were reconsidered from time to time. The option finally chosen was the most sophisticated of the designs prepared, the feeling being that once the hull and machinery were settled, quite substantial changes could be made to the embarked equipment without having much impact on total cost.

The Saturation Diving System, designed by Cray Electronics, is sited near to amidships, where ship motions have the least effect on the handling gear for the diving bell. Also, it keeps the surface divers (needed at times in support of saturation diving) as far as possible from propellers and provides the most comfortable...
Reliability. To Isuzu owners it's an everyday thing.

There is a philosophy on which all Isuzu trucks are built. Reliability is everything.

You can't run a reliable business without a reliable truck. That's why Isuzu trucks are designed and built the way they are. To keep your business on the road more of the time.

For over 40 years Isuzu has developed diesel-engined trucks that have achieved amazing levels of economy and performance. Features such as swirl inlet ports, cylindrical bores and direct fuel injection have kept Isuzu in the forefront of diesel development.

Everyday Isuzu reliability covers all weight categories through 16 models, from 2 tonne nominal payload to 38 tonne GCM.

Building
The order was placed with Scott Lithgow of Greenock, Scotland, in September 1979. The ship was laid down in January 1980, launched on 10 May 1981, and finally handed over on 26 July 1984, after more than a year's delay.

Much of the delay is attributable to faulty cabling, which has had to be replaced. Exactly where the blame lies is a mystery to be cleared up by litigation, for allegations by the UK MoD are rebutted by counter claims that the specification was incorrect but other sources suggest that a large part of the problem can be traced back to the decision to build to Lloyd's rules. The choice of supplier was left to the builders, and Lloyd's rules did not permit any room for deviation from the main specification.

On 29th August, just over a month after being handed over, the ship was open to visitors. Her remarkable manoeuvrability was demonstrated, and the ship proved she could stop in her own length and move astern and then sideways, at will. The diving complex is dedicated to providing the most beneficial environment for divers working at depths down to 300 m with accommodation chambers connected to the diving bell. The engine rooms are quite different to the normal navy vessel, with no shafting or gear-boxes, and like the rest of the ship, sparseness gives a hint of the oddity, belied by the advanced equipment on board. Her capabilities put her in a category of her own and Captain Wright assessed her as being equivalent to three of the navy's current diving ships. SEAFORTH CLANSMAN. The later ship will continue for some time, giving CHALLENGER time to develop the new techniques possible with her unique range of gear.

No figures have been released on cost, but in 1980 CHALLENGER'S cost was estimated at £60 million, and so today it cannot be less than £100 million without taking account of any change resulting from the settlement of the legal action between the MoD and the contractors.

Reference

Specifications of HMS CHALLENGER

Displacement: 7000 tons standard; 11000 tons full load
Dimensions: 139 m by 19.4 m by 7.6 m
Main propulsion: 3 x 16200 bhp; 3 x 3 1/2 kW LM12 engine
Generators: 3 x 360 kw; 4 x 150 kw; 3 x 60 kw; 5 x 42 kw; 3 x 10 kw; 2 x 5 kw; 3 x 5 kw; 2 x 2 kw; 2 x 1 kw
Machinery: Turbines and two 1500 bhp motors
Additional power: 1 x 250 kw; 1 x 90 kw
Sensors: Type 996 radar
Armament: 3 x 40 mm; 2 x 20 mm; 1 x 5.5 cm; 1 x 3 inch; 1 x 1 inch; 1 x 40 mm; 1 x 30 mm; 1 x 20 mm; 1 x 12.7 mm

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April, 1985

Reliability is everything.
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The Australian National Line carries the Australian flag to South East and East Asia, Taiwan, Korea, Japan, Europe, United Kingdom, North America and New Zealand, with vessels operating in seven liner trades. Since 1956, ANL's fleet of container ships and bulk carriers has taken Australian products to the world and brought the world to Australia.

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Drama Off The WA Coast

by VIC JEFFREY, Navy Public Relations Officer (WA)

ON 14th February, 1985, the two Fremantle-based RAN corvette/minesweepers, Her Majesty's Australian ships FREMANTLE and JUNEE snatched 17 fishermen from rough seas in one of the largest postwar rescue operations off Australia's west coast.

The dramatic rescue attempt began when the large foundering crayfish fishing and processing boat, "SHELLEY BOY", radioed Fremantle at 6.45 am that warning that it was taking water and could stay afloat only until between 11.00 am and 12.00 noon.

A wooden hulled, diesel-powered vessel of comparatively recent construction, the 33 metre, 120 tonne SHELLEY BOY had been built in Singapore. When the SHELLEY BOY first sent an SOS it was located about 30 miles west south-west of Wedge Island near Jureren Bay. It is believed the vessel's hull became contaminated with water when the boat was shipping water over the decks.

At the time of the SOS, FREMANTLE and JUNEE were acting as attendant boats in the annual Perth-Bunbury and Return yacht race. Employed as training ships for National Servicemen, HMAS FREMANTLE was anchored in Gage Roads off the Port of Fremantle and HMAS JUNEE was standing off Rottnest Island awaiting for the last of the racing yachts to come home.

Several people were caught aboard the corvettes when they sailed. They included three yacht club officials, a newspaper photographer and an ABC announcer. They had all intended to see the yacht race out - not view an ocean rescue mission.

Navy headquarters at HMCS LEEDOW in Fremantle were co-ordinating the rescue operation, dispatching HMAS JUNEE at 3.30 am for the search area. This was followed by HMAS FREMANTLE which sailed at 9.00 am.

At 11.00 am the SHELLEY BOY radioed her position as 26°77'S. 116°04'E. 16 miles from Green Island.

Thirty minutes later HMCS LEEDOW received a message from the skipper stating that she had almost two metres of water in her engine room.

A N RAAF Dakota from RAAF Pearce and a civilian Dowse aircraft had been called into the search and once overhead of the SHELLEY BOY the Dakota directed the two corvettes to the area using direction finding radio.

At 12.07 am the Dakota requested the two corvettes to the area would soon round attention ship.

At 12.07 pm the Dakota reported that it was preparing to drop lifesaving equipment including two inflatable dinghies. Six minutes later two hundred of survivors cast from the SHELLEY BOY with great difficulty, eight in each lifeboat.

Still adrift was the skipper who remained on the stricken vessel until 1.40 pm to operate the radio and maintain radio contact with the rescue boat JONJIM. When foundering appeared imminent, he was left by RAAF inflatable dinghy.

At approximately 2.00 pm the SHELLEY BOY finally succumbed to the heavy seas, heading over on her port quarter and sinking stern first.

The SHELLEY BOY sank in 500 fathoms and although fully insured was a blow to the owners, Graypak Ply Ltd with heavy loss of stores and fuel destination for the fishing fleet.

Soon after the two corvettes arrived on the scene, HMAS JUNEE first with HMAS FREMANTLE following. By 3.30 pm the 17 sudden survivors had been picked up by the ships, nine by JUNEE and the others by FREMANTLE. With the limited visibility, driving rain and heavy seas the rescue was conducted remarkably quickly. In no time the survivors were covered in blankets and sipping hot cocoa.

At 3.42 pm HMAS FREMANTLE reported that the lifeboats had been recovered and the corvettes were steering at nine knots for Fremantle. The survivors were all injury-free and comfortable.

The two corvettes berthed in Fremantle at 2.55 am in the morning of 15th February and were greeted by wives and members of the media.

"Without the RAAF Dakota we would not have had a chance", the SHELLEY BOY's skipper Mr Line said. "When the Navy arrived our troubles were over."
PATROL BOAT FOR INDONESIA

Indonesia has taken delivery of its sixth Attack class patrol boat under the Australian/Indonesian Defence Co-operation Programme.

The Indonesian Defence Attaché, Colonel T. T. D. Sutarmady, accepted the new Navy patrol boat, HMAS BARBETTE, from Rear Admiral W. H. Nash, RAN, in a ceremony in Jakarta on 23rd February. The ceremony was witnessed by Rear Admiral Geoffrey Woorrych, Australian Fleet Commander.

BARBETTE is the second Australian-built Attack class patrol boat to be delivered to the Indonesian Navy, and the fourth for the Royal Australian Navy. The two previous Australian-built patrol boats, HMAS YORK and HMAS TOBRUK, were delivered in 1980 and 1981 respectively. BARBETTE will replace two further former RAN Attack class patrol boats previously provided to Indonesia to deal with smuggling, illegal entry and protection of fishing rights and search and rescue within Indonesia's archipelagic waters.

BARBETTE, which was commissioned into the RAN on 4th August, 1986, will be renamed RI SIAPA when it enters service with the Indonesian Navy. RAN Attack class patrol boats have been superceded by the new Fremantle class patrol boats, 15 of which have been commissioned into service with the RAN. Provision of two more Attack class vessels to the Indonesian Navy under the Defence Cooperation Programme, is currently planned in May of this year, and January, 1986.

The successful tests had followed nine weeks of weapons alignment and 'shakedown' training.

The Chief of Naval Staff, Vice-Admiral D. W. Leach, said on 17th December that two missiles were fired against drone targets over the Pacific Missile Test Range off the Californian coast to test fire control systems.

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The United States Navy Los Angeles class submarine USS DALLAS, arrived at HMAs Darwin in April, 1985. The Royal Navy has formed the world's first helicopter airborne early warning squadron, 849 Squadron, formed at RNAS Culdrose, Cornwall, uses the Westland Sea King Mk 2 AEW helicopter. The Sea King Mk 2 AEW helicopter was developed in 11 weeks during the Falklands campaign to fill the Royal Navy's lack of AEW cover which had been exposed in the campaign by the sinking of HMS SHEFFIELD. The helicopter uses a development of the Thales-EMI Searchwater maritime search radar and provides naval task forces with long-range airborne early warning of threats from low-flying aircraft or surface vessels.

HMAS STALWART, the ships included two guided missile destroyers (DDG) HMAS HAMILTON, the RAN's Jindivik target aircraft programmed against Lear Jet towed targets and FTGs of their Vulcan Phalanx close-in weapon-systems through a testing series of exercises to attain maximum efficiency for the coming year.

The Fleet Concentration Period (FCP) for this year includes the majority of the ships. The FCP ended on Friday, 3rd March when the ships returned to Sydney for an extensive two weeks of training, as part of the initial Fleet Concentration Period (FCP) for 1985.

Leading the flagship and destroyer tender HMAS STALWART, the ships included two guided missile destroyers (DDG) HMAS HAMILTON and HMAS BRISBANE, two guided missile frigates (FFG) HMAS MACQUARY and HMAS SYDNEY, two destructor escorts (DE) HMAS VENDA and HMAS TUBBIA, the heavy landing ship (LHS) HMAS VAMPIRE, the fleet oiler HMAS ONSLOW, the majority of the ships returned to Sydney for an extensive two weeks of training, as part of the initial Fleet Concentration Period (FCP) for 1985.

During the Fleet Concentration Period, the Australian Fleet Commander, Rear Admiral Geoffrey Woodby, put his ships and men through a series of exercises to attain maximum efficiency for the coming year. These included ordnance of the watch maneuvers, anti-aircraft exercises with RAAF Mirage, F111 and Hunt aircraft and replenishment at sea.

There was also electronic warfare training with Fleet Air Arm HSS-748 aircraft. Helicopter deck landing trials and the firing by the two FFGs of their Vulcan Phalanx close-in weapon-systems.

A full range of gunnery and missile firings was programmed into the initial training period, including live weapon firings against a drone target off the coast of New South Wales.

The successful tests had followed nine weeks of weapons alignment and 'shakedown' training.

One of the main units of the Royal Australian Navy sailed south from Sydney on Monday, February 26 for an extensive two weeks of training, as part of the initial Fleet Concentration Period (FCP) for 1985.

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Once launched, Harpoon relies on the target on internal computerized escape to detect a computer through the onboard radar to escape detection, before being launched from the onboard radar to escape detection. Before being launched from onboard radar to escape detection, before being launched from onboard radar to escape detection.

Harpoon missile systems are built on a single, economical arid eftaid assemblar through (he onboard radar to escape detection. Still more attacks. The Harpoon, from McDonnell Douglas.

New Command and Control Arrangements for Joint Maritime Operations

A new Maritime Headquarters (MHQ) to command joint maritime operations and activities is to be established in Sydney early next year. Announcing this on 27th December, the Minister for Defence said the new MHQ would be formed from the existing Fleet Headquarters at Garden Island and would ensure maximum co-operation between naval and air force units engaged in maritime activities.

Present arrangements for joint maritime activities had been of concern within the Australian Defence Force for some time, given that a maritime contingency requiring a joint force response could arise with relatively short notice. There was an obvious need for continuous coordination of Defence Force maritime assets at the command and control level for specified joint operations and activities.

Mr Beazley said that as a result of the review he had approved the establishment of a permanent MHQ by 1st March, 1985. The Maritime Commander would be appointed early in the New Year. He added that forces to be used for joint maritime operations would include naval and air elements appropriate to the task.

RUSHCUTTER turns to the upright position. (Photo: ABP/Army)
**A Brief History**

A recent casualty report detailed the loss of the wooden diesel-engined sailing ship **ARTIC ENDEAVOUR**, owned by the Mayhaven Shipping Company of Halifax, Nova Scotia, Canada. The **ARTIC ENDEAVOUR** sank at Catalina, a small port on the north-east coast of Newfoundland on 11th November, 1982 after springing a leak at her moorings. She was later declared a constructive total loss. This 900-ton ship had a particularly varied career of 38 years since her construction in 1944, and the following are the more pertinent dates.

1st May, 1942: Laid down at the American Car & Foundry Co Inc's yard at Wilmington, Delaware as an Atlantis class net layer for the US Navy and designated VN-99.
17th January, 1944: Redesignated AN-76 with the designation name USS SATINWOOD.
23rd May, 1944: Launched.
5th August, 1944: Completed and handed over to the US Navy and immediately commissioned into the Royal Navy as HMS PRETEC under the provisions of Lease-Lend. Sponsored No Z284. She was intended to be named HMS PROTECT, but this was not proceeded with. Employed as a boom defense vessel.
22nd November, 1945: Arrived at Norfolk, Virginia and later in the month handed back to US Naval authorities
20th July, 1947: Sold to the Government of the Colony of the Falkland Islands (British Government) Proceeded to Southport for conversion by Thomas's to research vessel
13th November, 1948: Sailed from Southampton after conversion and sailed for Port Stanley in the Falkland Islands. Being renamed JOHN BISCOE.
1953: Designated Royal Research Ship JOHN BISCOE.
1956: Renamed IRRS PRETEC.
June, 1956: Returned IRRS PRETEC.
June, 1956: Arrived in Auckland via Panama Canal.
Mid-December, 1956: Left Auckland on the first of her five voyages to McMurdo Sound. The Navy had undertaken to transport the members of the Trans-Antarctic Expedition together with their equipment to the ice, and to serve in the construction of Scott Base, and this was the main reason for the ship being purchased. On this voyage Sir Edmund Hillary and other members of the expedition were on board, and she was accompanied to the edge of the pack ice by the two Loch Class Igers, HINZI PUNA and HAWEA.
1957: Her second summer in the south, and on her return she brought Sir Victor Fuchs, Sir Edmund Hillary and other members of the expedition back to civilization.
21st May, 1958: While at anchor in Whangaparaoa Passage, north of Auckland, the **ENDAUVOUR** was rammed at 11 pm by the small 56 foot tug MONA'S ISLE II. The tug was towing a 100 foot barge and the helmsman had fallen asleep at the wheel. Watchkeepers on the vessel watched the tug approaching but could do nothing to avoid the inevitable collision. The tug sank in 100 feet of water but was refloated three days later and, after repairs, returned to service. Her crew of four, awakened by the impact, were rescued unharmed from the barge in which they had barely escaped.
16th February, 1961: Sailed north from McMurdo Sound at the end of her fifth and final voyage to Antarctica.
March, June, 1961: Underwent refit at Auckland; only essential work being carried out. She then carried out supply runs to the Navy, carrying stores, dumping ammunition and acting as a diving tender, as well as making two voyages to Ross Island.
7th November, 1961: Returned to Auckland and transferred to reserve, de-scavened and advertised for sale later in the month.
21st September, 1962: Re-named in new owners' representative, Capt. M. Shaw and re-named the vessel to the **ARTIC SEALER**.
12th November, 1962: Sailed from Auckland and was later reported to have arrived at Halifa at late January, 1963, where she was being fitted out for sealing work in the Arctic.

**SAF** as far as can be ascertained she was renamed **ARCTIC ENDEAVOUR** before sailing from Auckland. At various times in recent years changes of owner have been members of the Shaw family. The registered owners at the time of her loss, the Mayhaven Shipping Company, are a subsidiary of the Shaw Steamship Co. These owners had two other sealing ships, the **ARCTIC SEALER** and **ARCTIC PRINCE**, both former Albatross class net layers. 38 years is a good life for any ship, and this little wooden ship, built under wartime conditions, certainly gave good value to her various owners, spending much of her time in waters normally avoided by most ships because of the isolation and violent weather conditions. With a gross tonnage of only 900, our pioneer Antarctic supply ship was only 148 ft long, with an extreme breadth of 37 ft. Though strongly built, she was not an icebreaker, and her voyages south from New Zealand were dependent on assistance from US icebreakers in reaching the ice.

The purchase of this ship in 1956 caused another naval ship, the fleet auxiliary **ENDAUVOUR**, to be renamed **HAURAKI** in March of that year. She was a former vessel of 712 tons gross, built in 1904 and acquired by the Navy in 1942 and retained in the service after the war. She was sold in 1963, renamed **ENDAUVOUR**, and is now working as an oyster dredger at Bluff.
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NAVY LEAGUE
DIVISIONAL
& CADET NEWS

SUCCESSFUL FEDERAL COUNCIL MEETING IN CANBERRA

The Federal Council of the Navy League discussed a wide range of issues at a two-day meeting held in Canberra at the end of 1984.

The Council, which consists of the Federal President and Vice-President, and the Presidents and representatives of the State and ACT Divisions of the League, was augmented on this occasion by a number of eminent Navy League members including Admirals L. F. Smith and Sir Anthony, Symons, Vice-Admiral Sir Richard Park, Captain H. A. Josephs, Rear Admiral P. G. N. Kennedy, RAN (CNOPS) and Captain H. M. M. Leeon, RAN (CDS). The Council discussed proposals for the introduction of nuclear powered submarines into the RAN with particular reference to the paper by members RADM Robertson and Messrs Scon Maxwell and Grazebrook, recently printed in this magazine. The paper has received a good deal of attention and has attracted considerable interest. The League will continue to promote discussion on the subject as opportunities arise.

Maritime Air received much attention and discussions took place on a paper introduced by a League study group. The group will develop the paper placing particular emphasis on maritime strategy in general and air matters in particular.

The Council noted reports that the number of destroyer-type ships needed in the Australian Maritime Force is increasing. The Council agreed that the only unit to enter the International Cadet Rifle Shooting Competition, and disappointment was expressed at the lack of interest shown by the many other units that have taken part previously.

New South Wales and Victorian Divisions have been working with the Australian Federal Police, but since many of the funds will be used to provide information in relation to maritime matters. There was some variance of opinion on the best method of conveying the message and the two Divisions are considering the alternatives.

The Federal President is currently in touch with Admiral Thomas B Hayward, formerly USN Chief of Naval Operations, with a view to a possible visit as a guest speaker sponsored by the League and the Australian Naval Institute.

The coming year will see much activity by Federal Executives and others in pursuit of many of the above subjects in an effort to create a greater public awareness in matters affecting the future of this nation.

The Conference was rounded off with a dinner at the National Press Club, with guests included the Chief of Naval Staff and a number of his senior assistants.

TS VANCOUVER, ALBANY

Several months ago the annual sailing regatta for WA units was held in Geraldton and attended by TS Vancouver.

The competition was fast and furious with a blistering standard being set by all units.

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The first day was set aside for setting in and tuning boats on the harbour. From the very first day, it was obvious that it would be very difficult to win a race with such strong opposition. In addition to these races, open sailing events were held. These races included boats as well as cruisers and boats with spinnakers.

A marathon race was held during the week consisting of three triangles and a voyage: the race was meant to take five hours but a fresh breeze sprang up and the race finished in 2½ hours, with the last 100 metres being strongly contested by TS Carrington and TS Vancouver. Both boats were more than 7 metres apart. Finally TS Vancouver took line honours.

number 745 belonging to TS Paluma. Second and third were numbers 728 and 773 both of TS Onslow. Sad to say however, the Onslow Commandos had a lesson to learn: to sign on before and after each race. Because they were unaware of this necessity they were unfortunately disqualified with their places going to 853 (second) and 740 (third) both of TS Tugboat.

With the boats themselves getting underway, events became rather hectic. The conditions for the start of heat one were good, with clear visibility and winds of about 10 knots. With only a third of the course left to sail however — and with 728 of Onslow enjoying a good lead — a bearing cap square cased in, bringing high winds and closing visibility down to approximately 100 metres. The result was the abandonment of the heat, with one Cadet boat suffering a broken rudder. Conditions for the remaining heats were good, with winds varying from 7 to 20 knots throughout. Placings however developed into a very interesting situation with boat 728 (TS Onslow) accumulating three first places and 745 (Paluma) two out of three heat wins. Heat 7 was therefore most important and turned out to be a most exciting race. With all interest focused on 728 and 745, no one quite expected the dark horse 864 skippered by TS Paluma’s coxswain Herkes to take the lead after the second windward turning and maintain it after the third. However 728 managed to keep Kim at the finish by 17 seconds with 745 coming in third 91 seconds further behind.

The overall results saw 728 (TS Onslow—Coxswain Chris Herkes) take out first place. 745 (Paluma Tony Pullen) gain second and 740 (Tyalgum David Trotter) third.

Naturally tension became quite high as the heats progressed but in heat one, Peter fought against all odds for twelve months before overcoming his injury and his courage was suitably rewarded by the presentation of the colours that had been replaced by a new flag.

The 8th Medium Regiment and 12th field regiment both served in Vietnam and after the war the two regiments combined to make up the 8th/12th Medium regiment in The Royal Regiment of Artillery. Peter serves with the 8th/12th Medium Regiment in The Royal Regiment of Artillery.

On Sunday, 6th January 1985, former Naval Reserve Cadet, Peter David Stevens, presented a Training Ship Vancouver flag representing his present regimental colours. This was a very special event in the life of Peter and his family, and it was an honour to see the flag presented to him as a symbol of his service to his country.

Peter is very proud to be serving with this regiment and it is very pleasing to see our former TS Vancouver Naval Reserve Cadet performing so admirably.

Queensland

The 16th Caroys National Titles were held on Bramble Bay at Woody Point near Brisbane from 29th December to 8th January last, hosted by the Humpy Bong Yacht Club. The competition was divided into two categories, one for the Senior Fleet and the other for the Cadets. This was a very significant innovation in that it was the first time the Cadets had been invited to National titles.

Boats in both categories covered a full Olympic course with the senior fleet starting ten minutes ahead of the Cadet’s section in each race to prevent confusion. There were eight races in all, an invitation event and seven heats. Of these, the best five heats counted towards the title. In the Invitation Race the first raced boat across the line bore sail number 745 belonging to TS Paluma. Second and third were numbers 728 and 773 both of TS Onslow. Sad to say however, the Onslow Commandos had a lesson to learn: to sign on before and after each race. Because they were unaware of this necessity they were unfortunately disqualified with their places going to 853 (second) and 740 (third) both of TS Tugboat.

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