• VIEWPOINT • STALWART PAYS OFF • HMAS PROTECTOR
• SEAHAWK ROLL OUT • SOVIET NAVAL DEVELOPMENTS
• NEWS UPDATE • BOOK REVIEWS
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The Ada Specialists

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for scrapping. Instead, on 28 May 1949 she was handed back to the New Zealand Navy for training.

June 1937. Adelaide SSCo about 1930. ST. UABYN was laid up at Hong Kong after being out of commission 12 years, In never used by Waratah. She was sold to Hollers of funnels. Brown's also had another Royal Navy Australasian Line had the A0RAN01 18,000 tons building.

To cope with these new ships the tug company J ROLLICKER proved to be uneconomic and after a short time Browns sold her. Browns sold their tugs to Waratah a subsidiary of Adelaide SSCo about 1930. ST. MARY was laid up at the Waterstown depot of Adelaide SSCo and was never used by Waratah. She was sold to Mollers of Hong Kong after being out of commission 12 years, in June 1937.

Fenwicks used ERROS quite a lot but LINFIELD was idle for several years until being recommissioned January 1930. HEROs had her bow built up January 1899 for the RAW. St. GILES was prepared for naval work the same month by G. White.

It might be worth noting that a Wellington tug TOGA ex ST. BONIFACE ex ST. FERGUS of the class was due for scrapping, too. On 8 May 1949 she was handed back to the New Zealand Navy for training ashore in coal firing.

Dimensions of ST. Class
- Length 138 ft
- Bread 29 ft
- Depth 18’ 6”
- Length of forecastle 36 ft

Trevor W. Jenkin
Holden Hill. South Australia 5088

Dear Sir,

Some 46 of the Admiralty Saint Class tugs were built in Scotland, England, Belfast and Hong Kong in the years 1918, 1919 and 1920. Some were retained by the Royal Navy for target towing, hard work etc but many were sold to private companies.

The situation in Australia between 1929 and 1931 was that overseas passenger companies were planning much larger ships. The F & O Company had the 18,000 tons NALDORA and NARKUNGA and the 21,000 tons MOILAN and MALOYA entering service and the Orient Line was planning a series of 20,000 tons of the ORAMA class. The Canadian - Australian Line had the A0RAN01 18,000 tons building.

To cope with these new ships the tug company J GILES, ST. MABYN and ST. OLAVES, while Kenwicks (a New Zealand company) had the A0RAN01 18,000 tons building.

The situation in Australia between 1980 and 1928 by a Departmental Committee (DFDC) had agreed in May last year that the ship should be withdrawn from operational service late in 1989.

"This was to coincide with the resumption of service of our other training ship, HMAS JERVIS RAY, which is nearing the end of a major refit at the Garden Island facility," he said.

Admiral Doolan said the decision to decommission STALWART, flagship of the RAN fleet for the past seven years, was made reluctantly against the background of financial restraints in Defence funding.

The Chief of the Naval Staff, Vice Admiral Michael Hudson had thoroughly reviewed options for the future of STALWART since the DFDC decision to withdraw her from operational service.

"Admiral Hudson came to the reluctant conclusion that retention of STALWART beyond 1989 in the condition where she could be offered for sale as a 'going concern'."

"Admiral Hudson set the cost for a major refit of STALWART and funding for the decommissioning of STALWART.

Admiral Doolan said the Navy also considered the possibility of allocating sufficient funds to continue STALWART to a condition where she could be offered for sale as a 'going concern'.

"Unfortunately there is little demand for such specialised vessels and not are funds available for this purpose," he said.

"This uncertainty had forced the decision to decommission the ship, which will be arranged as soon as possible after decommissioning - probably early next year."

STALWART left Sydney on October 9 on her last overseas deployment. She will visit Singapore, Indonesia and New Caledonia before returning to Sydney. The new auxiliary tanker is currently undergoing a workup in UK waters and will arrive in Australia just before Christmas.

HMAS STALWART

STALWART was planned and built for the purpose of maintaining the Fleet's destroyers and frigates as fighting units between major refits.

For this purpose she was fitted as a mobile base facility which allowed vessels coming alongside to shut down and have repairs carried out in a shore base. STALWART was able to supply such services as fresh water, steam, electricity and telephone services.

After trials and a working period, STALWART began duty as a maintenance ship in March 1968. Since then she has served in Australia and Far Eastern waters as well as Papua New Guinea and New Zealand. Later in her career she was to serve as Fleet Flagship and a training ship.

Highlights of STALWART's career include deployment to Darwin in January 1975 as part of the Navy's contribution to relief efforts in the aftermath of Cyclone Tracy. She was present at the celebrations to mark the granting of independence to PNG in September 1975. She has again involved in disaster relief in June 1986 in Honiara. In September 1986 she hosted a Cabinet meeting at sea.

STALWART also took part in two precautionary deployments in the South Pacific following the outbreak of civil disturbances in Fiji in May 1987 and Vanuatu in May 1988.

Length: 165 metres
Beam: 20 metres
Draft: 6 metres
Displacement: 15,000 tonnes (design)
Speed: exceeding 20 knots
Armament: Two 40 mm Bofors AA
Laid down: June 23, 1964
Launched: October 7, 1966 by Lady Casey, wife of the Governor General
Commissioned: February 9, 1968

Builders: Cockatoo Docks and Engineering Co. Ltd., Sydney
Propulsion: Two 6 cylinder Scott-Sulzer diesels of 7,000 hp driving twin screws
Complement: 331 (including trainers)

HMAS STALWART under construction

At Sea, 1968
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Kinhill, Australia's largest independent engineering and planning services company, has joined the Navy on many important projects:

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- the armament depot and fleet base facilities — cost estimate studies
- sailors' accommodation units at HMAS Stirling — engineering design.

Many other significant Defence Industry assignments have been undertaken by Kinhill for the Department of Defence and for private defence contractors.

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- engineering design and documentation
- quality assurance services
- environmental studies.

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TELEPHONE: (02) 936 1566 — FAX: (02) 938 1467
The steel used in the Navy’s new Guided Missile applications in Australia. A brief description was completed in August, 1989.

The vessel was required to undertake patrol work in Thailand’s 200nm EEZ. The vessel was to have a long, medium and short range surveillance radar, two fire control channels with radar, one with optronics capability, and ESM. A five inch Mark 45 gun would provide surface warfare capability. There would be electronic counter measures, decoy launchers (SRBOC), a 40mm gun, 2 FC radar channels, one FC optronic channel, and a hull mounted sonar.

The helicopters, equipped with dipping sonar or Sonobuoys, ASW torpedoes and data and communications links with the ship, would provide the main anti-submarine warfare capability.

It remains to be seen whether Thailand proceeds with the acquisition of this or another larger true offshore patrol helicopter.

However, it raises once again the RAN’s need for a vessel of similar capability. The Bremer Vulkan proposal is remarkably similar in size and capability to the ship developed by Carrington Slipways and offered to the Australian Government for the RAN shortly after Australia refused Britain’s offer of HMS HERMES (or 50 million pounds) – the ship now in service with the Royal Navy in our region.

The Carringtons proposal was not accepted by the Government.

More recently, a proposal to modify the training ship HMAS JERVIS BAY to operate up to six helicopters has been turned down. The reported cost of this, about $30 million, is not large by defence equipment standards and cannot have been the primary obstacle.

The case for such a ship is very strong.

The Sea Kings, fitted with dipping sonar, provide the long range targeting capability for the Ikara anti submarine weapons fitted to our three DDGs and five River class Destroyer escorts. Without the Sea Kings, the Ikara is limited to close range operations.

The commissioning of the Seahawk S70B2 helicopters will not fill this serious gap in the RAN’s ASW capability. Initially at least, the Seahawks will not have dipping sonars.

The case for an ASW helicopter platform for the RAN is clear and strong. It has been strong since 1983. It is now even stronger.

More recently, the planned civilian rescue operation following the military coup d’état in Fiji demonstrated again the vital need for a helicopter platform capable of vertical delivery of personnel. Reportedly, this need was supported strongly by Army Field Force Command.

This need lay behind the proposal to modify HMAS JERVIS BAY.

Even this very strong case has been rejected by Government.

Recent political commentary suggests that the basic reason for rejection is a fear that the acquisition of a helicopter platform ship would be interpreted as signalling an aggressive intent towards our neighbours.

It is ludicrous to suggest that such a ship, equipped with ASW helicopters, is aggressive in nature. ASW is essentially defensive.

Even if the ship were equipped with vertical assault helicopters (of which Australia has none fitted for seaborne service), it would be ludicrous to suggest that 270 troops, with minimal vehicles accompanying the force, and with minimal follow up support, would be capable of any but a very limited way. On occasion, one operated from HMAS STALWART until that ship was paid off. Now, the Sea Kings must operate from airfields ashore. This effectively limits Sea King Operations to 250nm from an airfield capable of supporting that type of helicopter.

The Royal Thai Navy is examining the acquisition of an offshore patrol helicopter carrier.

They commissioned Bremer Vulkan Schiffablauf and Maschinenfabrik to develop a proposed vessel.

A brief description was completed in August, 1989.

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The Royal Thai Navy is examining the acquisition of an offshore patrol helicopter carrier.
Australian industry would receive work worth $100 million to build 16 Sikorsky S-70-B2 Seahawk anti-submarine warfare (ASW) helicopters, the Defence Science and Personnel Minister, David Simmons, has announced.

Speaking at a Rollout at Naval Air Station Nowra to mark the entry of the first Seahawk into the Royal Australian Navy, Mr Simmons said Australian industry participation represented 40 per cent of the main contract with Sikorsky.

The new Seahawks will provide surveillance and weapon targeting from ships, adding a new dimension to Australia's ability to counter submarine threats to our international trade routes.

As the Government's 1987 Defence White Paper foretold, the Seahawks will provide coastal and choke point ASW operations from land bases. The S-70s will also be capable of deploying in the new ANZAC-class frigates.

The total project cost of more than $620 million includes $250 million for the main contract with Sikorsky for 16 aircraft and an Aircraft Weapons Software Support Centre and about $370 million for spares, logistic support and facilities.

Eight of the 16 Seahawks will be assembled by Aerospace Technologies of Australia (ASTA) at the Avalon plant in Victoria, which assembled 75 FA-18 fighters for the Air Force.

The first Australian-assembled Seahawk is expected to roll off the ASTA production line next August.

Other companies expected to benefit from either direct participation or offsets from the Seahawk program include Computer Sciences of Australia in Sydney, Rockwell Electronics Australia in Melbourne, Hawker de Havilland in Victoria and Hawker de Havilland in Bankstown.

The Aircraft Weapons Software Support Centre, developed by Computer Sciences of Australia in partnership with Collins and Sikorsky, would allow the Navy to maintain and modify the tactical data system software through the life of the helicopters.

It would also provide a mission replay/reconstruction capability for analysis of training and operational exercises in the aircraft.

BACKGROUND

The Australian S-70-B2 is developed from the very successful Sikorsky SH60-B Seahawk helicopter designed for the US Navy. The USN has 140 of these aircraft in service.

Each of the new Australian ASW helicopters, however, will be able to process its own mission sensor information and operate independently of its parent ship. Sensors available for surface ship and submarine hunting include radar, a sonobuoy acoustic processing system that includes the Australian Barra system and a magnetic anomaly detection (MAD) system.

Processed information on surface and subsurface activity will be available to the ship via a secure data link to provide targeting for both the helicopter's and ship's weapons systems.

S-70B-2 PARTICULARS

<table>
<thead>
<tr>
<th>Speed</th>
<th>Range</th>
<th>Weapons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum 180 knots</td>
<td>Endurance for ASW surveillance at 60 nautical miles - 2.7 hours</td>
<td>can carry two Mk 46 torpedoes</td>
</tr>
<tr>
<td>Cruise 135 knots</td>
<td>Mission Sensor Information</td>
<td></td>
</tr>
</tbody>
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Weapon Systems:
- Collins Tactical Data System
- Collins Tactical Management System
- Collins Communications and Navigation Subsystems
- MEL Supersearcher Radar
- CDC Acoustic Sonobuoy and Barra Processors

CAE Magnetic Anomaly Detector
- Collins Tactical Data Link

Crew:
- one pilot
- one tactical co-ordination officer
- one sensor operator

Weight:
- Maximum gross-9454 kg (20,800 lb)
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**SOVIET NAVAL DEVELOPMENTS**

**Soviet Naval Shield Reflects WW11 Experience**

by Steven Zaloga

Naval doctrine is inevitably shaped by the history of past combat experiences. The Soviet Navy's historical experience is dramatically different from the US Navy's experiences, with the resulting naval doctrines display substantial dissimilarities. One of the most notable differences is the Soviet Navy's emphasis on surface warship air defense. This has led to differences in the design of the two navies, resulting in the sizeable land-based naval air force of the Soviet fleet.

In World War II, geography and the German Luftwaffe conspired against Soviet surface fleet deployments. The major ports were within easy striking range of German units, and the Soviet fleet took a huge pounding at their hands. To counter the threat of air attack against surface combatants, the Soviet Fleet and coastal convoys were equipped with three major systems: one for surface warship air defense, another for surface warship defense, and a third for submarine air defense.

Over the past decade, the Soviet Navy has pursued a very active program of surface warfare development to modernize their fleet. The Soviet fleet today is larger and more powerful than it was earlier in 1989. Although still lacking a NATO code name, the Kalinin class of cruisers is a formidable force. The Kalinin is designed to operate in both the open ocean and coastal waters, and is one of the first such combined operations cruisers. The Kalinin is armed with a complement of surface-to-surface missiles, anti-aircraft missiles, and a substantial anti-submarine warfare capability. It is a key component of the Soviet Navy's overall naval strategy.

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The Soviets have publicly stated that they view the principal role of their carriers as air defense. In recent Indo-Pakistan wars, Soviet carrier air defense missiles have proven to be vulnerable to sophisticated electronic warfare tactics. The Soviets appreciate that missiles alone are inadequate to provide air defense security for blue-water operations. A combination of combat air patrols and surface missile defense is needed for any blue-water operations away from Soviet land-based air cover. This viewpoint has shaped the current priorities in the development of the Tbilisi's air group.

Nevertheless, the eventual development of strike capability seems likely. The Soviets will probably employ the Tbilisi and her sister ship as part of the so-called "blue-water" defense force providing air cover for other surface fleet elements. However, as the Soviet fleet gains more experience in carrier operations, the strike capability of the carrier force will be increased to permit the Tbilisi class carriers to become the centerpiece of Soviet naval intervention forces. These forces currently lack credible power projection capability for many types of missions, a capability that could be eventually acquired by a patient program of air group enhancement in the carrier force.

A second carrier of the Tbilisi class was launched late in 1989 and will become operational in 1993 if the current pace of construction continues. There is only one yard in the Soviet Union large enough to handle this class of ship, the Chernozyemsk Yard No. 444 in Nikolayev on the Black Sea. So the launch of the second Tbilisi-class carrier permitted the yard to begin work on a third carrier in late 1988. The third carrier does not appear to be of the Tbilisi class, but about 10,000 tons larger.

What remains to be seen is whether the Soviet carrier program will weather the promised cuts in Soviet defense procurement recently announced by Gorbachev. The Soviets have stated that in 1989-90, they would reduce procurement spending by 15%. In the case of the carrier program, it is unclear whether this will result in the cancellation of the recently started third carrier, or merely lead to a stretch-out in the program's construction pace. The surface fleet has been a traditional victim of past Soviet defense belt-tightening. The fact that the USSR has initiated a third carrier project seems to indicate that there is a high level of commitment to adding this capability to the fleet, even in a time of fiscal austerity.

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That's the shot!

**Kangaroo '89**

-A piece of cake

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**HMAS NIRIMBA TO BE RETAINED**

The Navy training establishment, HMAS NIRIMBA, at Quakers Hill in Sydney's outer Western Suburbs, is to be retained. During a visit to NIRIMBA, the Minister for Defence Science and Personnel, Mr David Simmons put an end to speculation that the training centre would be handed back to Townsville, with the assistance of a RAN clearance diving team to lay and recover moorings at the trial site and to carry out an underwater explosive work simulation exercise.

**Defence trials were conducted by the DSTO (Directorate of Trials) with support from Sydney and Melbourne scientists from DSTO and NAFTECH,**

The successful trial represents another significant milestone in the re-establishment of a mine clearance capability for the Royal Australian Navy.

**KEEL-LAYING OF FFG 06**

**MELBOURNE** (July 21): A significant milestone in the Royal Australian Navy's new guided missile frigate (FFG 06) was marked on Saturday when construction work began in Adelaide.

Full assembly of the hull and superstructure will then take place at AMECO's Williamstown shipyard leading up to the launching and naming on Friday, 16 October, 1990, on the second FFG to be built in Australia.

"Instead of fabricating 40-odd individual sections and lifting up to some five meters, each, AMECO will construct some of the ship in much larger modules likely to be two times the size and hence four times the weight of the standard unit," the Assistant Chief of Naval Staff - Material RADM (FFG 06) said.

Mr White told Victoria's Premier Mr John Cain, he was confident that full involvement of Australian industry and other Australian capabilities would provide superior solutions that would be more cost effective overall.

"We must have the confidence to change the plans of overseas designers and builders in order to make best use of our own Australian capabilities and to suit our own needs," Mr White said.

Dr White believed both AMECO and the Navy would experience the benefits of establishing an integrated approach to construction of future warships.

"The real benefits of establishing an integrated approach to construction of future warships will be experienced in future programs," he said.

**NEW MINESWEEPING DEVICE SUCCESSFULLY TESTED**

A new DSTO-designed mine countermeasures device has been successfully shock tested in a recent trial off Townsville.

**Developed by DSTO's Materials Research Laboratory, the magnetic device called the 'CERBERUS' was designed for towing behind suitable vessels to safely detonate magnetic mines intended for use against ships.**

The trial was conducted on the RAAF Wyndham runway using a realistic and rigorous test scenario, conducted over a number of days, and covering all phases of underwater operations.

Austal Navy Minehunter BROLGA was employed as the target support vessel in Townsville.

Brightly painted, the CERBERUS successfully shock tested in a recent trial off Townsville, with the assistance of a RAN clearance diving team to lay and recover moorings at the trial site and to carry out an underwater explosive work simulation exercise.

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NAVY RESERVE COMES TO TORRES STRAIT

The northernmost unit of the Royal Australian Navy Reserve entered service at Thursday Island on November 11, 1989.

The Torres Strait Naval Reserve Unit is now part of the Cairns Port Division, which was opened in July 1988.

The Unit will share new premises with the Army Reserve Unit, the Army Reserve Unit Command, Rear Admiral Mansford, and the Commanding Officer. Representing the Army will be the Far North Queensland Regiment, Lieutenant Colonel Langler, and the Commanding Officer, Captain McQueen.

TORRES STRAIT NAVY RESERVE COMES TO AUSTRALIA

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TRV TAILOR, transferred to HMAS STIRLING from Sydney, arrived in her new homeport in October, 1989.

The design of the AOE was developed in Navy Office, with close assistance. Initially, the ship was intended to be similar in size to HMAS STALWART, the Destroyer Tender designed by Navy Office and built by Cockatoo between 1963 and 1968. As the design developed, the ship was lengthened, principally to accommodate three replenishment stations each side, and space for two large helicopters.

The AOE was to have weight and space for underway replenishment (CONREP) capability and a VERTREP capability. A VERTREP capability was to be provided by two helicopters of Sea King size, operating from a flight deck capable of maximum take off weight of 50,000 lbs. Movement of cargo from stowages to transfer stations was to be by fork lift track. Four cargo lifts were to be provided to cargo spaces with a fifth lift between the main cargo handling deck (1 Deck) and the flight deck on 01 Deck.

Electrical power at 440 volts 60 Hz 3 phase was to be provided by seven 1 megawatt alternators driven by Paxman Ventura diesel units, three of which would be used for underway replenishment (CONREP) and two for VERTREP.

The ship was to be fitted with four Ruston and Hornsby 12 AO diesel engines, two to be geared to shafts, driving controllable pitch propellers. For noise reduction, each shaft set of main engines was to be provided with acoustic insulation to HMAS standards.

Cabin crew of 335, fully air-conditioned and fitted out to Naval standards. The General Particulars of the AOE are given in the Table.

HMAS PROTECTOR - Fast Combat Support Ship

by JOHN JEREMY

(Courtesy The Royal Institution of Naval Architects - Australian Division)

In a Naval Staff Requirement of 2 June 1964, the RAN set out its plans for a major replenishment ship capable of providing all logistic items needed by RAN combatant units at sea. Cabinet approval to proceed with the acquisition of Fleet Replenishment Ship (AOR) was given in November 1964, however, due to the needs of higher priority projects the ship was removed from the programme in October 1965.

The RAN again sought approval for the construction of a Fast Combat Support Ship in May 1969. Two ships were then planned, one for delivery by 1977, and a second ship to replace the existing Tide class fleet oiler HMAS SUPPLY after 1980. When it was expected that a ship would need to have reached end of life.

The Design Development of the AOE

The design of the AOE was developed in Navy Office, with close assistance. At first, the ship was intended to be similar in size to HMAS STALWART, the Destroyer Tender designed by Navy Office and built by Cockatoo between 1963 and 1968. As the design developed, the ship was lengthened, principally to accommodate three replenishment stations each side, and space for two large helicopters.

Description of the Ship

The ship was to be fitted with four Ruston and Hornsby 12 AO diesel engines, two to be geared to shafts, driving controllable pitch propellers. For noise reduction, each shaft set of main engines was to be provided with acoustic insulation to HMAS standards.

Cabin crew of 335, fully air-conditioned and fitted out to Naval standards. The General Particulars of the AOE are given in the Table.
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T.V. TURTLE

"TORTOISE" was launched in 1945 as ONS-55 as RAN 015 type supply craft for service in the Second World War. Built by Slingshottin Australia Pty Ltd on the Cooks River. Sydney, she saw extensive service in the south-west Pacific travelling between the islands with stores for RAN bases.

In 1962, she was transferred to the RAN, named "TORTOISE" and converted to a Diver Tender Vessel, wearing the pennant number Y 292.

Sold in 1974 to private enterprise. She was converted again to a salvage vessel, and worked around the Philippines and up and down the coast of Australia. At the finish of her salvage work, she was left laying at anchor in Ben and Chicken Bay near Concord, NSW. During her stay in this bay she was badly vandalised, used by marine bird life as a nesting and nesting site. With all her portholes/windows/electronics/fixtures ruined her decks were inches thick in birds excreta/chicken bones/empty beer bottles/cans etc.

Purchased by her present owner Mr FJ. Hewett of Umina NSW, on the 11th March, 1983 she has since been restored and refurbished by the cadets of T.S. HAWKESBURY under the supervision of CPO (NCR) R.J. Timick and with the assistance provided by the personnel of HMAS STIRLING, Waverley NSW. "TORTOISE" is presently on loan to T.S. HAWKESBURY and has been since 1st May, 1988.

She is maintained and crewed by members of the NRC unit and carries four (4) Officers/Instructors and fourteen (14) Cadets on training cruises on the Hawkesbury River, Broken Bay and Bronte waters.

In 1988, T.V. TURTLE participated, with a Cadet crew, in the Bi-Centennial Naval Review on Sydney Harbour and was complemented for her appearance and that of her crew by many senior Officer of the RAN. During October 1989 she was on view in Darling Harbour during Navy Week 1989.

Current Contractors to the Department of Defence...

NAVAL BOOKS IN AUSTRALIA

For ten years Maritime Books of Liskeard, England have produced a wide range of naval books - and nothing else except a magazine called "Warship World".

Customers in Australia and New Zealand have ordered from UK by post - with the consequent delays in getting their books (see sea mail).

Maritime are pleased to announce that their books can be found on the shelf of two specialist book sellers in Australia.

Technical Book Co, 239-239 Swanston St, Melbourne Vic 3000 and Abbeys Bookshop, 131 York St, Sydney NSW 2000.

Details of these books appears elsewhere within this issue of the magazine - if the bookshops above haven't got them, you'll have to get your order in the post.

Maritime Books produce a quarterly catalogue of all the Naval books in print today that they are able to supply and quite happy to send a copy to our readers - write to them at Maritime Books, Lodge Hill, Liskeard PL 14 4EL England. Once a customer you will receive regular copies of the catalogue.

RN BOOKS NOW IN AUSTRALIA

Maritime Books of UK have long produced a range of high quality books at the lowest possible prices...

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Ship series. The major difference between this book and previous volumes in the Anatomy of the Ship series is that unlike the other titles this volume was not commissioned specifically for the series but was translated from an Italian publication. This however, in no way detracts from the high quality of the work which compares more than favourably with the other volumes in the series.

Like its predecessor the object of The Royal Yacht CAROLINE 1749 is to provide detailed technical and historical information on a specific ship. The authors have done to excess. Contained within its 120 pages is a wealth of historical and technical information. This information is supported by a large number of detailed diagrams showing every aspect of the ship and her fittings. The extent to which the authors have researched their topic is clearly illustrated by photographs of the excellently detailed model of the Royal Yacht CAROLINE built by Sergio Bellabarba.

The subject of the book, King George II's Royal Yacht the ROYAL CAROLINE, popularly known as the CAROLINE, was selected not only because of the extensive and ornate decorations on the vessel but also because of her importance in warship design generally. The ship's lines were scaled up for some of the Royal Navy's frigates and sloops that were built in the 1750s.

For anybody interested in the development of British sailing ships or ship crime, crash boats, export small combatants and weapons are contained in a number of annexes at the back of the book. The final annex provides details of construction and disposal date of US small combatants.

BEFORE THE AIRCRAFT CARRIER - The Development of Aviation Vessels 1849-1922

Published by Conway Maritime Press

The author of this book should already be known to readers of The Navy magazine through his series of articles on air capable ships a number of years ago.

In his current work, Mr. Layman has successfully collected the details, both historically and technically, of the numerous surface craft that were adapted to aviation duties.

The period covered spans 73 years and includes both experimental and operational vessels from eleven nations' navies. Ships such as those described in "Before the Aircraft Carrier" were the actual beginnings of carrier aviation and from them grew the first traditional carriers of the Great War and after.

Photographically, the book is illustrated by a wonderful collection of rare prints, most of which show the early aircraft embarked or aircraft operations on or near the ships. For their age, the photos have reproduced well enough for the average naval historian, to gain an excellent view of this early naval aviation era.

Some of the more unusual vessels included in the book include the Royal Navy's aircraft-equipped submarines, the photos depicting half submerged boats with the aircraft riding upon the water. Australia's own merchant aircraft carrier, NARAINA in commission as HMS; early Russian experiments and numerous balloon vessels.

As is usual with most recent Conway books, the designer has decided to place many photos a page away from the actual information on the ship. This ragging problem of many Conway books should be investigated. 

'Before the Aircraft Carrier' is a collection of well written and researched narrative, illustrated by 120 rare photographs. The 128 page book measures 210mm by 140mm and printed on top quality paper. For anyone with an interest in carrier aviation, it is essential reading.

I strongly recommend the book as an addition to all readers' libraries or as an adjunct to the earlier Conway's All the Worlds' Warships series of books.

OUT OF THE PAST
TRANSPORTING A FLEET AIR ARM SEA FURY, 1956

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Proud suppliers of TOP QUALITY AVIATION FUEL TO THE ROYAL AUSTRALIAN NAVY IN WA.
The RAN's two Ham class diving tenders which were paid off in 1988 were sold by the Department of Administrative Services on 29 November, 1989.

Together, HMAS PORPOISE and HMAS SEAL fetched $140,000 with the former to be retained by her new owner and the latter to be converted to a cruise vessel for work in the Whitsundays. Work is expected to take about 12 months. PORPOISE is in tack but SEAL requires extensive repairs after a collision with a wharf at Garden Island in July, this year.

A spokesman for the department said that each of the diving tenders was well suited for charter work, due to their size and wide beam plus a long range of 1500 nautical miles at 14 knots.

At the time of sale both vessels were laid up in Sydney Harbour at Pyrmont. PORPOISE remained laid up at Garden Island until 1972.

Of the first pair, (costing £26,000 each) WINTRINGHAM was converted by Horsens. Renamed SEAL and entered service in December 1966. NEASHAM remained laid up at Garden Island until 1972 before being taken in hand for conversion by Storey and Keers of Balmain, Sydney. Renamed PORPOISE, she was handed over to Seaworld Pty. Ltd. Surfers Paradise, Queensland, on 17 February 1976.

Conversion costs for both vessels proved substantially higher than originally expected. Accordingly, POPHAM was not converted or renamed and was sold as such to Seaworld Pty. Ltd. SURFERS PARADISE, Queensland, on 17 February 1976. PORPOISE and SEAL were based at HMAS Watchman in Sydney Harbour, with one boat active for alternate periods.

Each tender retained its open bridge sited above the small deck cabin with accommodation for fourteen embarked divers provided aft. Both boats were also fitted to carry a recompression chamber.

Ninety-four Ham Class Inshore Minesweepers were originally built for the RN, of which thirty-six were transferred to other navies. During the 1970s and 1980s PORPOISE and SEAL were manned for personnel from each country - has been agreement a joint project office - with Australia/New Zealand cooperation on the ANZAC ship project. Under the agreement a joint project office - with Australia and New Zealand to build ANZAC frigates specifically to meet the strategic needs and industrial capabilities of both Australia and New Zealand.

The ANZAC Frigate Project is vital both to Australia and New Zealand's strategic security and to the two nations' industrial prosperity.

The ANZAC Frigate Project will last for more than a decade, and it will create over 7,000 jobs directly and 5,000 indirectly. In the process it will help transform the heavy engineering and high technology industries of both Australia and New Zealand.

The ANZAC Frigate Project has been officially launched.

ANZAC SHIP PROJECT CONTRACT SIGNING

The multi-billion dollar ANZAC Ship Project has been officially launched.

A ceremony in Canberra on 10 October the New Zealand Minister for Defence, Mr Tizard and the Australian Minister for Defence Mr Beasley signed the agreement under which Australia and New Zealand to build the ANZAC class frigates for the RAN and the RNZN.

This Prime Contract covers the construction of up to 12 ships, eight for Australia and two with an option of a further two for New Zealand, over the next fifteen years. The contract price is A$3807 million (April 1988 prices).

This is the largest naval construction program ever undertaken for the RAN or the RNZN.

The ANZAC Frigate is expected to be delivered to the RAN in 1995-96, the second will be delivered to the RNZN in 1997. The rest of the ships will be delivered at a rate of about one each year after that.

The first ANZAC frigate is expected to be delivered to the RNZ in 1995-96, the second will be delivered to the RNZN in 1997. The rest of the ships will be delivered at a rate of about one each year after that.

The design of the ANZAC frigate has been adopted from the German MEKO 200 frigate specifically to meet the strategic needs and industrial capabilities of Australia and New Zealand.

The ships will be fitted with a gun, missiles and surveillance equipment including radars and sonar and are capable of operating the RAN's Seahawk anti-submarine helicopter. Their weapons and sensors can be enhanced should strategic circumstances require.

Australian and New Zealand industry will receive some 80 per cent of the work on the ships, including offsets. Australian will receive some 80 per cent of the work on the ships, including offsets. Australian will receive some 80 per cent of the work on the ship, including offsets. In Australia, all states will benefit, especially NSW and Victoria. Each will receive about 40 per cent of the work in Australia on the project.

New Zealand will receive work amounting to at least 80% of the New Zealand share of the contract price.
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RCW3006
The Navy League of Australia

APPLICATION FOR MEMBERSHIP

HISTORICAL

In 1950, encouraged by the Australian Commonwealth Naval Board, the Navy League of Australia was established as a means of facilitating the development of the Australian Sea Cadet Corps.

Since that time, Divisions have been formed in every State, the Australian Capital Territory and the Northern Territory.

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

The Navy League of Australia cordially invites you to join us in what we believe to be an important national task.
MEMBERSHIP
Any person with an interest in maritime affairs, or who wishes to acquire an interest in or knowledge of, maritime affairs and who wishes to support the objectives of the League, is invited to join.

OBJECTIVES
The principal objectives of The Navy League of Australia are:
• 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.
• To promote, sponsor and encourage the interest of Australian youth in the sea and sea-services, and support practical sea-training measures.
• To co-operate with other Navy Leagues and sponsor the exchange of cadets for training purposes.

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

Member participation is encouraged in all these activities.

JOINING THE LEAGUE
To become a Member of The League, simply complete the Application Form below, and post it, together with your first annual subscription of $12.00 (twelve dollars) (which includes the 4 quarterly editions of "The Navy"), to the Hon Secretary of the Division of the Navy League in the State or Territory in which you reside, the addresses of which are as follows:

VICTORIAN DIVISION: C/O 4 Eleanor Court, Donvale, Vic. 3111.
QUEENSLAND DIVISION: C/O 42 Gilligandra Street, Indooroopilly, Qld, 4068.
AUSTRALIAN CAPITAL TERRITORY DIVISION: C/O 45 Skinner Street, Cook, ACT, 2614.
SOUTH AUSTRALIAN DIVISION: GPO Box 1529, Adelaide, SA, 5001.
TASMANIAN DIVISION: C/O 43 Amy Road, Launceston, Tas. 7250.
WEST AUSTRALIAN DIVISION: C/O 22 Lawler Road, Attadale, WA, 6156.
NORTHERN TERRITORY DIVISION: GPO Box 2612, Darwin, NT, 5794.

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

THE NAVY LEAGUE OF AUSTRALIA
Application for Membership

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The Navy League of Australia
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Sir or Madam,

I wish to join the Navy League of Australia, the objectives of which I support, and I enclose a remittance for $12.00 being my first annual subscription to 30th June next.

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(Mr) (Mrs) (Ms)
(Rank) ____________________________

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Signature: _________________________
Date: _____________________________

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

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

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

Uniforms are supplied free of charge.

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

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

The interesting syllabus of training covers a wide sphere and includes seamanship, handling of boats under sail and power, navigation, physical training, rifle shooting, signalling, splicing of wire and ropes, general sporting activities and other varied subjects.

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

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

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

NEW SOUTH WALES: Staff Office Cadets, HMAS Watson, Watsons Bay, NSW, 2030.

QUEENSLAND: Staff Office Cadets, HMAS Moreton, Merthyr Road, New Farm, Queensland, 4005.

WESTERN AUSTRALIA: Staff Office Cadets, HMAS Stirling, PO Box 228, Rockingham, WA, 6168.

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.

TASMANIA: Staff Office Cadets, HMAS Huon, Hobart, Tas, 7000.

AUSTRALIAN CAPITAL TERRITORY: Commanding Officer, TS Canberra, PO Box E52, Queen Victoria Terrace, Canberra, ACT, 2600.

"THE NAVY"

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

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Dear Sir,
Re ANZAC frigate 5" gun debate. The ANZAC frigates are not designed or expected to be the "best" or first tier units. Indeed New Zealand appears to be going to use the ships for EEZ and "showing the flag" (Gunboat Diplomacy) with minimal armament, therefore, I believe the 5" gun is not needed.

If the 5" gun is to be fitted the extra cost and weight will probably do nothing for the downgrading of the overall weapon system. Since the ships are not first tier units could not money be saved by:

1) Fitting a 3" gun (which would allow first standardisation and a better anti-aircraft/missile capability)

2) Omitting Harpoon SSM’s (perhaps fitting for but not with).

3) Having only basic helicopter facilities. This would allow the fitting of a CIWS and FOMES which would be more than adequate for peacetime duties. The ships would still have a wartime role as escorts or guaxkeepers to the FFG’s (which would provide Harpoon SIM’s).

If a heavier gun is necessary in the fleet, the DDG’s and River class escorts will still be available for the foreseeable future. Since the DDG replacement is to be a more capable first tier unit a 5" gun could be included in those ships. (They should still have room for a complete armament since they will be larger than the ANZAC’s). The only role I can see a 5" gun being used is for shore bombardment. Since neither Australia or New Zealand have adequate amphibious forces this does seem to be a waste. Fitting the ANZAC’s with a 5" gun seems to be an example of the forces concentrating on one part of a weapons platform, to the detriment of the system and the forces as a whole.

Examples include our FFG’s equipped with "iron" bombs until recently and Leopard MBT’s with inadequate transporters, no mobile air-defence and little perceived role. Perhaps if enough money could be saved we could afford some of the things we really need, such as the retention of the Stalwart and a Helicopter Platform.

Yours faithfully,
MARK MEREDITH
Berkeley Vale, 2260

Dear Sir,
I am writing to you in relation to your quest in relation to the identifying of the N.A.P vessel just off the port bow of the USS Saratoga along side Ocean Pier and her escort Fletcher class destroyer on the outside. I am almost certain it is the Arcadia which was commanded at the outbreak of the 2nd WW. I think from the Weatherly Monarch coalitions of Hobart.

Even though I was not at the harbour at the time, I was as member of the crew serving in HMAS writes an auxiliary minesweeper along with HMAS Goonoo which made up our flotilla which helped keep the sea channels open to entrance of Hobart out out Storm Bay and beyond into the Southern Ocean and the Tasman Sea.

Yours faithfully,
HMS Sydney departs for Galleipi

Dear Sir,
As a member of a few years standing, and an ardend follower of all things naval, I am writing to you for a little assistance.

I have been a member of the "ALCORRENE ASSOCIATION" now for a number of years. This is an association of ex ships companies of those five minesweepers who served well during World War 2, and shortly after, based of course (Being R.N.) in the UK

My role now (purely voluntary) is of 'Australian Representative', and am very keen to recruit new members of which I am sure there must be many "down under" in Australia. Perhaps you could mention this fact in your next edition or possibly give me a few addresses of potential members, so that I may communicate and create a little interest.

Many thanks to you in anticipation.

Yours sincerely,
MARK LOWE
Keysborough 2173

Dear Sir,
In the December-October 1989 issue of "The Navy", A. W. Grazerbrock’s report of AMECON’s success on winning the ANZAC Frigate contract made very good reading.

In the 8th and 9th last paragraph there was mention that DDG’s - HMAS Fish Bobart and Rappine, could be replaced by "strengthened" and a "up-shell" version of the Melo 300 Frigate (Argentina operates four of this type).

Perhaps another solution to the D.D.O. replacement problem can be found in the past. - A revived and modified version of the early 1970’s proposal - the DD2.

In "Australian and New Zealand warships since 1944", there is almost a full page dedicated to the class.

Yours faithfully,
MARK MERRIETH
Berkeley Vale, 2260

The picture of the model shows a MK13 launcher APT, forward of a double Helo hangar. A MK 45 51nch forward of the bridge, with 6 ASW TT (3 x 3) beside the large funnel. Perhaps a modified design could feature:

- A vertical launch system for standard SAM’s and Harpoon SSM’s forward of the bridge.
- 1 x MK 45 51nch forward of the VLS (as like in CO 47 Baseline 2).
- 2 x Helo’s with dipping sonar (eg, modified seahawks).
- 6 x box launched Ikara could be another possibility.

Perhaps two such ships could be built with names such as HMAS Australia. The ships could be fitted out as flagships.

The RAN has always had destroyers in commission since its formation in 1911 - let’s keep the tradition alive!

Yours sincerely,
MARK LOWE
Glymes 2269

Dear Sir,
I have been following with interest letters in "The Navy" re Saint Class tugs.

It would be interesting to know where all these Saint names originated (all some 46 of them).

I know that St Giles was the patron saint of cripples but there is another possible reference.

On another matter I have long wondered where the expression "In the Andrew" referring to being in the Royal Navy originated. Perhaps another solution to the D.D.O. replacement problem can be found in the past. - A revived and modified version of the early 1970’s proposal - the DD2.

The RAN has always had destroyers in commission since its formation in 1911 - let’s keep the tradition alive!

Yours faithfully,
DOUGLAS S. TAYLOR
Gladstone 2111

The RAN has always had destroyers in commission since its formation in 1911 - let’s keep the tradition alive!

Yours faithfully,
DOUGLAS S. TAYLOR
Gladstone 2111

Page Three
MORE PRESSURE ON THE DEFENCE DEPARTMENT

A writer in a Sydney newspaper recently stated that a survey by Australian National University researchers indicated that defence spending was a declining priority for most Australians. The writer was querying the need to increase the number of submarines currently on order for the RAN from six to eight, a decision which will have to be made by 30 June this year.

Unfortunately the kind of thinking expressed in the article is likely to gains currency as time passes without a glaringly obvious threat to Australia's extensive geographical and economic interests; it seems not to matter that, despite a welcome reduction in tension between the two nuclear superpowers, many of the 'lesser' powers show no sign at all of reducing their armed forces - indeed in our area they are tending to grow and no-one can be sure they will not be used for some purpose or another. It would be very helpful of course if we did know, but we don't.

The present Australian Government - or at least its more thoughtful members - is well aware that despite the unexpected turn of events in Europe, the consequences of which are as yet unknown, the Utopia is not yet in sight and that a credible defence force is part and parcel of our national structure. Spending money on defence however seldom meets with popular acclaim in peacetime and it is an area in which governments must provide leadership, never using perceived public attitudes as an excuse for neglecting responsibility.

There have been some rather wild claims in recent times that Australia is seeking to become a military 'power' in our region because a higher than usual proportion of the defence vote is being spent on new equipment. People forget that for many years new equipment expenditure was very low and a cause of much concern in the armed forces; money was being spent - wasted - in an effort to keep equipment rapidly becoming obsolete in service, with no replacement in sight. We are now in a 'catch-up' phase and the Hawke Government deserves credit for this despite it's initial mistake of disposing of the fixed-wing element of the fleet air arm without thinking through the consequences. Before critics hold forth on Australia as a military power they should have a look at the growing inventories of other Indian/Pacific Ocean nations, including Japan, Taiwan, China and India, not to mention the substantial forces in existence in a number of other regional countries.

Regrettably, the media by-and-large does not help government to mould, or even guide, public thinking about national security: Government and Opposition are seen to be more or less in accord and it is not a political issue, therefore not newsworthy. It is fair to say though that if one or other of the services failed in a task allocated to it because it lacked the resources to deal with the situation, lack of publicity would cease to be a problem.

As Australia heads for the 21st century, one has some sympathy for those given the task of maintaining a credible defence force in the face of public apathy and wishful thinking.

GEOFFREY EVANS, Federal President

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FIRST IN, LAST OUT!
THE RAN AT GALLIPOLI

by T. R. FRAME & G. J. SWINDEN

Tom Frame and Greg Swinden are the authors of a soon to be released account of the RAN’s involvement in the Gallipoli campaign.

The 75th Anniversary of the first troop landings on the Gallipoli Peninsula is an important time for the RAN. Every since news of the failed campaign reached Australia in 1915 and the extent of the tragedy fully known, the digger and the name Anzac, have become synonymous with the Australian military tradition and have relegated the RAN to the fringes of public interest and the footnotes of Australia’s national history.

It is remarkable that Australia, as a remote but prosperous island country, should build its national identity on the defeat of a military force in a distant land campaign. The myths of Gallipoli deserve to be challenged not only on their relevance but also on their truth. In 1990 the RAN has a wonderful chance to recast the popular perception of one of the principal events in our national development. The story of the RAN is rich with potential for the RAN to broaden the public’s understanding of the 1915 campaign, focus attention on the success of its participation in the midst of a devastating failure, and highlight the role of ships and the place of naval power in history and in contemporary defence planning.

The involvement of the RAN in the Dardanelles Campaign was not large but it was nonetheless significant in determining the final outcome of the operation. By a strange turn of history, the RAN was to be tested in the most hard of training grounds - war at sea. The extent of the conflict in the Balkans was evident in August 1914 when Austria-Hungary declared war on Serbia and Germany declared war on Russia. Within a few days Britain and thus Australia, as part of the British Empire, were also at war. Australia had pledged to “Stand beside the mother country to help and defend her to our last man and our last shilling.”

The AE 2 returned to Australia in late 1914. The RAN had declared war on Russia. Within a few days Britain and thus Australia, as part of the British Empire, were also at war. Australia had pledged to “Stand beside the mother country to help and defend her to our last man and our last shilling.”

Able Seaman W. G. V. Williams becoming the first Australian to die in combat during World War I. Three days later AE I was mysteriously lost without a reason for her loss was established.

The AE 2 and her sister ship the AE 1 were built by Vickers in Barrow-in-Furness and commissioned into the RAN in early 1914. AE 2 was under the command of Lieutenant Harry Gordon Dacre Stoker RN, an Irishman, and had a complement of 33 officers and men.

On 10 February 1914 the two Australian submarines began their passage to Australia after 12,000 miles and very few failures. The AE 1 would be under her own power. It was not an altogether smooth trip. While transiting through the Mediterranean AE 2 suffered the failure of several propeller blades due to poor manufacture and was almost rammed by AE 1 which had a steering gear failure.

Following visits to Malta, Colombo, Singapore, Darwin and Cairns the two submarines arrived off Sydney Heads in the early hours of 24 May 1914. The successful passage of the two Australian submarines was hailed as a magnificent feat of seamanship and engineering. The submarine rose in esteem and it was not to be long before the RAN was to be tested in the hardest of training grounds - war at sea.

The involvement of the RAN in the Dardanelles Campaign was not large but it was nonetheless significant in determining the final outcome of the operation. By a strange turn of history, the RAN was to be tested in the most hard of training grounds - war at sea.
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First in, Last out: The run at Gallipoli - Continued

HMA Submarine AE 2 at Portsmouth, prior to her voyage to Australia.

Dardanelles, it was decided to give Stoker and the AE 2 a chance.

Just after midnight on 24 April 1915 the AE 2 began her attempt to penetrate the Dardanelles. She evaded several Turkish searchlights and gun batteries before being forced to dive to avoid detection. As she did the shaft to the foremost hydroplane broke - reducing her maneuverability and forcing her to break off the attack. The damage was quickly repaired and the AE 2 was ordered to try again on the 25th.

At midnight the AE 2 began her second attempt. After passing several searchlights she was spotted and forced to dive and run the gauntlet of a Turkish minefield. It was at this time than the first Australians began to land at ANZAC Cove. AE 2 continued on her way, occasionally surfacing to get her bearings. However, a compass malfunction caused her to run aground and she was fired upon by Turkish guns. Luckily the submarine was not hit and managed to get back into deep water.

By 8 am on 25 April 1915 the AE 2 has entered the Sea of Marmara, becoming the first Allied submarine to achieve this enormous feat. For the next five days the AE 2 carried out her orders "to run amok generally" and Turkish shipping was severely disrupted. The great tragedy for the Australian submarine was the failure of her torpedoes to function depriving them of several successes.

AE 2 did, however, make a vital contribution to the Gallipoli campaign. After penetrating the Dardanelles, Stoker sent a signal to de Roebuck to inform him of AE 2's success. This signal arrived at a crucial moment in the history of the campaign. de Roebuck and General Hamilton had just received reports on the position ashore from General Birdwood who wanted the whole force evacuated from ANZAC Cove. General Hamilton was deciding on his course of action when AE 2's signal arrived. Hamilton made up his mind and sent a message to Birdwood:

"Your news is indeed serious, but dig yourselves right in and stick it out .... Meanwhile the Australian submarine has got up through the Narrows and torpedoed a gunboat a Chanak. Make an appeal to your men to make the supreme effort to hold their ground."

Ideas of evacuating were forgotten and the ANZAC's dug in for what would be an 8 month stay.

Stoker and his men in the AE 2 had no conception of their effect on the campaign. Four days later, on 30 April, the AE 2 was attacked and sunk. All were taken prisoner and placed in Turkish prisons, where they languished for the next three years. This period was to be equally as hazardous as their time in the Marmara. Several of AE 2's men attempted to escape but all failed. Stoker narrowly avoided being executed following his attempt. Four of the AE 2's crew died in captivity from disease and ill treatment.
300 man horse drawn Naval engineering unit was made and effectively employed. An offer to the British Government of a RAN was back again in a role that was just as unlikely and just as unexpected.

With the AE 2 gone it appeared that the RAN's role at Gallipoli (RANBT) begins in Melbourne in late February 1915. The story of the Royal Australian Naval Bridging Train Navy had a large number of Naval Reservists who could not participate in the seizure of the German territories there in September 1914.

Men enlisted in the RANBT were given the rank of Able Seaman Driver and wore Light Horse uniforms with anchor badges gratefully accepted. Thus the RANBT was born. It was commanded by Lieutenant Commander (later Rear Admiral) Leighton Seymour gratefully accepted. Thus the RANBT was born. It was commanded by Lieutenant Commander (later Rear Admiral) Leighton Seymour.

The Train was encamped at the Domain (now the site of the Victorian War Memorial) and began its training in horsemanship and bridge construction. Its job there was to construct and maintain piers over which troops would land and wounded would be evacuated. This was a task they were untrained for, but they undertook it willingly and were to prove later what they lacked in knowledge they made up for in sheer common sense and a refusal to admit to failure.

On 7 August 1915 the RANBT landed at Suvla Bay, and within a few hours had begun their work of pier construction. On the 8th they constructed a 120 yard pier for the evacuation of wounded in twenty minutes, and it was in use five minutes later. All this was done under intense Turkish shell fire. As each day passed the Bridging Train was given more and more work to do. It took over control of the water supply, was responsible for unloading stores from lighters, the storage and control of engineering stores, the salvaging of grounded vessels, and even set up a blacksmiths forge and carpenters shop. Within a few weeks the reputation of the Train had grown immensely. It was described by one British General as a highly organised and efficient unit. Another described their workshops as able to produce anything from a needle to an anchor. The Bridging Train base was set up at a small cove in the northern sector of Suvla Bay and became known as Kangaroo Beach.

The fighting at Suvla Bay soon bogged down into the trench warfare that had persisted at ANZAC Cove and Cape Helles since May 1915. The Bridging trains work was away from the front line but still received a great deal of Turkish shell fire, casualties were light with only four killed and some 60 men wounded for the five months they spent on the Peninsula. Many more men suffered from illnesses such as jaundice, malaria, paratyphoid and blood poisoning from infected cuts and scratches. Towards the end of November, the weather took a turn for the worst and it was not long before snow began to fall, the first experience of it for many Australians. The novelty soon wore off as men began to suffer from frostbite and the snow turned to driving rain. Trenches were flooded, men and animals washed away and the temperature continued to fall. The men from the Bridging Train were sent out to rescue any men they could find suffering from frostbite, hundreds were saved but many died on the backs of RANBT men on their way to the beaches.

In December the Bridging Train began to prepare for the evacuation of the Peninsula. Men were evacuated and not replaced, unnecessary stores were destroyed. Piers for evacuating troops were built, one such pier was built at a beach near the small mountain Lala Baba, by Sub Lieutenant Hicks and a fifty man detachment. They were also to act as a bodyguard for the British General and his staff. These last few days at Gallipoli were very tense days indeed. As each day passed more and more men left the Peninsula and soon only a few hundred men held the front line. If the Turks had known they could have easily attacked and slaughtered those on the beaches.

Hicks and his men spent the last few hours repairing the pier which had been damaged by Turkish shell fire. At 4.30 am on 20 December 1915, Sub Lieutenant Charles Hicks and his fifty man detachment stood waiting in the dark on a beach below the heights of Lala Baba at Suvla Bay, Gallipoli.

A few minutes later, General Maude commanding the British
forces in the southern sector of Suvla Bay, and his staff appeared. After a few brief words they all filed over the pier that the Bridging Train detachment had built, into a waiting lighter and were shushed away to a waiting transport vessel.

As the lighter pulled away from the pier a glow of flame could be seen to the north as the petrol soaked stores at Suvla Cove were ignited. Thus ended the Royal Australian Navy's role in the Gallipoli campaign.

The Bridging Train was sent to the Greek Island of Lemnos where they spent Christmas. Lieutenant Commander Braggirdle was sent to hospital and Lieutenant Bond DSO assumed command of the unit. In early January 1916 the unit rusticated as they had not been paid in two months. This problem was eventually solved, but Bond's failure to effectively deal with it cost him to be removed from the unit. For the remainder of 1916 the Bridging Train controlled the swing bridges over the Suez Canal. These bridges were designed to swing to allow ships to pass along the canal and then be refitted to allow road traffic to pass over the canal.

This was far from interesting work and many of the men became bored and requested to be transferred to fighting units of the Australian Imperial Force (AIF), over 100 men succeeded in doing this. In December 1916, the unit was asked to provide fifty men to take part in an amphibious assault on the Turkish held town of El Arish on the northern coast of the Sinai.

Detachment waded ashore at El Arish to find the Turks gone, but the beach was still mined. Fortunately they suffered no casualties. Here they began to construct a pier over which supplies for the Australian Light Horse advancing into Palestine, could be landed. Whilst at El Arish they were subject to Turkish artillery fire and machine gun fire from German aircraft. This detachment remained at El Arish until late March 1917 when it was returned to the Suez Canal area and the whole unit disbanded.

The last activity of note for the RANBT occurred on 25 March 1917 when the El Arish detachment was sent to assist in what became the first Battle of Gaza. Embarked in two ships they were responsible for unloading stores into small boats which were then rowed ashore to resupply the attacking forces at Gaza. Whilst they were doing this a British aircraft ditched in the water near one of the vessels. The Bridging Train men quickly swam into action rescued the pilot and salvaged the aircraft. Following their disembarkation, some 190 members of the unit, returned to Australia for discharge, the remainder enlisting in the AIF and seeing service in Palestine and on the Western Front.

For most Australians the word ANZAC conjures up images of the dramatic landing on 25 April and the vicious battles at Lone Pine and the Nek. Few knew that the RAN was also involved.

The RAN's contribution at Gallipoli was not large; less than four hundred men involved while their casualties were very light when compared to those of the ANZAC forces. Yet these should never be factors to determine their worth in the campaign.

If the AE 2 had failed in her attempt to penetrate the Dardanelles then the ANZAC's may have been evacuated on 26 April and the Legend of ANZAC would have been stillborn. At Suvla Cove the stalwart work of the Bridging Train was often the only bright spot in what was to become a pitiful episode of the Gallipoli campaign. The RAN's activities at Gallipoli were successful and that is perhaps why they are virtually unknown as Australian's are nurtured on the myth that the whole campaign was an unwarranted failure.

It is 75 years since that fateful day in April 1915 when the ANZAC's first stepped ashore at Gallipoli and the AE 2 penetrated the Dardanelles. The actions are now legendary and the men involved are immortal. The role of the RAN at Gallipoli has been severely underestimated, even the Official Historian of the RAN in the Great War, Arthur Jose, describes it as seeming to have "its share of Gallipoli honour". The actions of the men of the AE 2 and the RANBT are in the finest traditions of the service, bravery under fire and a determination to succeed in the face of adversity.

Wider perceptions prompted by this anniversary will redefine and give fresh meaning to the sacred legends and from the enlightened writings of history greater understanding will undoubtedly come.
The Royal Australian Navy's west coast operational capabilities received a tremendous boost with the arrival of HMAS WESTRALIA at HMAS STIRLING on its delivery voyage from the UK on December 20.

The latest addition to the Australian Fleet, WESTRALIA proudly carries the former RAN oiler HMAS SUPPLY'S hull number. 0195.

WESTRALIA was met at sea the previous day by the WA-based DE HMAS DERWENT which had the distinction of being the first RAN unit to carry out a RAS with the Navy's second replenishment ship. The meeting also saw CNS, VADM Michael Hudson transfer across to HMAS WESTRALIA to welcome and join the new arrival whilst the Minister for Defence, Mr Kim Beazley joined in Gage Roads off Fremantle the following morning for the run down to STIRLING. HMAS WESTRALIA was met by a large crowd of VIPs, families and friends whilst music for the joyous occasion was provided by a large segment of the RAN Band of the Fremantle Port Division.

Crew members were quickly down the brow to be united with loved ones after months away in the colder English climes.

In a welcoming ceremony conducted on the wharf, Minister for Defence Mr Beazley, CNS VADM Hudson and NOCWA, CDRE Graham Stubington addressed the gathering. Mr Beazley described how WESTRALIA's acquisition advanced the phasing-in of the two ocean navy policy.

"This ship has the capacity to ensure that military and political objectives of the two ocean policy will be carried out," he said. "In peacetime it will provide fuel services for RAN vessels and in wartime it has the capacity to deploy effectively from the WA coast.

"WESTRALIA can carry more than 20,000 tonnes of fuel, allowing it to support a fleet of ships in naval exercises.

"It multiplies the effectiveness of our destroyers over here by a very considerable amount," Mr Beazley said. "Without it, you become terribly dependent on northern ports and in a wartime situation that would be most unsatisfactory.

"I think the two-ocean Navy is a reality now.

"We are a maritime nation and we depend on our Navy for protection and freedom of our sailors."

VADM Hudson congratulated CMDR John Moore and his crew for the enormous amount of work carried out on WESTRALIA over the past four months.

"There is still much work to do and if it is done with the degree of professionalism that has so far been displayed, each sailor will have completed his job exceptionally well," he said.

CDRE Stubington said the arrival of HMAS WESTRALIA was a memorable and significant occasion in the history of the RAN.

"This ship, which is the RAN's largest vessel, will better enable the Navy to carry out its patriotic mission," he said.

"The first WESTRALIA did 121,000 nautical miles and was claimed to have been sunk by the Japanese three times and narrowly missed by a Japanese kamikaze aircraft on one occasion.

"The new WESTRALIA will undoubtedly be as faithful and bold as its predecessor. Foreshadowed in the 1987 Defence White Paper, WESTRALIA is being leased from its owners for $200,000 a month with an option to buy the ship for 59m in 1992."
In October, 1989 the RAAF, Victoria accepted the new search and rescue vessel AIR HAWK. The new craft is now on call for any sea emergency - even though it has been designed for air crews forced to ditch in Port Phillip bay.

The builder of the 11-metre craft, Alan Stéber, said Air Hawk would be one of the best rescue boats in Australia. "It took eight months to build in New South Wales and is made from specially reinforced materials that will withstand a lot of pressure," Mr. Stéber said.

"Air Hawk replaces the eight metre Shark Cat that sank in the bay about two years ago."

The craft cost about $360,000 and is powered by twin 375 hp diesel engines. "It will be based at Point Cook and carries a crew of five."

AIR HAWK has a range of 350 nautical miles and a top speed of 30 knots. She was launched by Ailcen Reed, wife of the state's highest-ranking RAAF officer, Air Vice Marshal Alan Reed.

The internal layout is similar to Stéber's private market 36ft cruiser with all the comforts of home. The main saloon has been altered to take stretchers and sophisticated electronic equipment needed for specialized patrol work.

The radio equipment consists of a Cofan HF marine band transceiver and GME 27MHZ and VHF, as well as ICM VHF/UHF radio direction finder. A mixer allows all signals to be piped to a JRC loud hailer system.

The cabin is fitted with air conditioner and heater. Cooking is by gas stove and oven, with a 12-volt microwave as well. Seating for the crew consisting of skipper, navigator and radio operator is in three Bostrom adjustable swivel seats. The electrical system is 12/24 volt DC with shoreside 240V input connected to an automatic battery charger.

Power is supplied by two 375hp Caterpillar's turbo-charged with after cooling.
NAVAL MATTERS

by A. W. GRAZEBROOK

RESTORING A NAVY


For over six years, from early 1981 to April 1987, John Lehman was Secretary of the Navy in the Reagan Administration.

Lehman held immediate political responsibility for implementing the Reagan policy of re-building the United States Navy and Marine Corps following the years of decline during the 1970s. This followed the Vietnam war, when available funds were diverted from new equipment to funding the wars.

Former Secretary Lehman has written a book ("Command of the Seas - Building the 600 Ship Navy") describing his period as Secretary. The book makes very interesting reading for all with a serious interest in naval and defence matters.

Some parts of the book have little relevance to Australian defence, but other parts suffer an affliction common to memoirs - they are imbalance in favour of the author. Nevertheless, there is much to be learned that is relevant to Australian defence and the RAN.

Amongst these are:

- The most important pre-requisite for successful defence is to get the strategy right.
- A strong Navy (or Defence Force) may appear to cost a lot. It may well be a lot cheaper than the alternative.
- The dangers of bloated defence organisational structures.
- The arguments for, and against bigger more capable ships, submarines, aircraft.
- The advantages of maintaining a strong competitive position amongst suppliers of defence equipment and services.
- The campaign for his first term as President of the United States, Ronald Reagan undertook to re-build the United States Navy after it had declined from 950 ships in 1969 to 479 ships in 1979. At the same time, the Soviet Navy had been built up to become the world's second largest. Once again, there was a danger that our defence community will give up putting the right case - that defence in Europe is almost as relevant to our region and that arms spending is growing, not declining, in the Indian and Western Pacific areas.

Into this environment came Lehman, the first Secretary of the Navy for decades to have a specific programme at his own disposal. He was determined to achieve. Not everything he did was sound. He made mistakes. However, his broad thrust of action was correct.

Although the US Navy had been fortunate in their Chiefs of Naval Operations, they were less so in their political leaders. Lehman, with his background as an F/A18 pilot in the US Naval Reserve and the Washington defence community, started right where he should have done. Lehman set about rebalancing the naval strategy - the role of the US Navy and Marine Corps in defence of their nation's interests. The US Navy and Marine Corps were to feel the full benefit of a competent Minister, someone who knew what was needed and how to get about setting it.

STRATEGY

Have we in Australia got our strategy right?

There are those who argue that we have too much emphasis on defence against armed invasion when we could be seriously harmed or even defeated without invasion. It can be argued that we have not recognised the growing naval build-up and the projection capability of India, that we have looked too much to our north, and that we have failed to recognise the growing military influence of the Indian Ocean and South Pacific.

More recently, as more perceptive political leaders of both persuasions have come to realise the threat that we face and not detente in Europe, that matters. However, there is a group of persons who argue simply that European detente means detente in our region, and that a possible super-power reduction in the Western Pacific will benefit our region. These arguments people's deliberating ability greatly exceeds their objectivity and perceptivity.

It will be very much to our long term disadvantage if we allow the wishful thinking to go unchecked.

THE COST

When Lehman became Secretary of the Navy, it was clear that the cost of rectifying the block obsolescence problem would be very high. That cost would be exacerbated by the cost of rectifying the personnel problems.

However, the cost of building the new ships and aircraft was often to a substantial extent by applying much more vigorously the principle of competition in letting naval shipbuilding tenders.

The Australian Government has applied this principle vigorously to the Submarine and Austol Frigate Programme. However, no one thought it was worth the effort and the cost would be much higher.

The debate will be no better for this purpose on this scale for many years. When more business does become available, perhaps for the DDG (100) destroyers, Defence will have to develop a new strategy to gain for the taxpayer the advantages of competition.

A key to success is keeping the two together on a level footing. Both must have products that are equally acceptable to the buyer. Australia has not always done this, particularly in the case of aircraft.

BUYING THE BEST IS WISEST

It is often said, both here and in the US, that more expensive ships or aircraft are a better investment than fewer bigger ones.

Lehman re-examined this view, which is widely held in the US Navy. In the case of aircraft carriers, it is argued that the large deck carrier suffers fewer aircraft accidents, and can sustain greater combat damage and continue operating due to built-in redundancy and superior damage limiting capabilities. These are in addition to the basic cost effectiveness argument that one big ship requires fewer personnel per than several smaller ships.

The argument in favour of re-activating the USS IOWA class battleships was that, although built in the 1940s, they had seen little service and were in excellent condition, and that their armour and electronics were excellent against future threats and were not outdated.

In the context of critics' claims that the battleships are vulnerable to modern naval warfare, it is of interest to note that the Soviet Navy has built four KROV class battlecruisers which, when models built to the same scale are compared, are almost as large as the IOWA class.

Regarding nuclear powered submarines, Lehman states that the reason the USN does not have diesel-electric submarines is that their suppliers can rely on boats of this type in the navies of France and Japan, where there is a requirement for both types.

NOTES


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HMS GORGON in action in the Dvina River during operation against the Bolsheviks, 1919.

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HMS GENERAL CRAUFORD, 1915.

HM Submarine M2. THE NAVY April - June, 1990

HMS GENERAL WOLFE. Note the 18 inch single gun aft and the twin 12 inch forward.

HMS MARSHALL SOULT. THE NAVY April - June, 1990

Page Twenty

Page Twenty One
India’s two aircraft carriers, VIRAAT and VIKRANT, at sea. Both ships are fitted with a ski-jump for Sea Harrier operations. The carrier in the foreground is the former HMS HERMES.
New Survey Motor Launch Enters Service

The second of four new hydrographic survey ships was named and commissioned into the Royal Australian Navy in Adelaide on 4 December, 1989.

The new ship, HMAS Mermaid, is Australian designed and built by Eglo Engineering Pty Ltd of South Australia as part of a contract worth $18.7 million. During the ceremony Defence Minister Kim Beazley said Eglo had demonstrated with Mermaid its ability to construct high quality ships for the Navy, on time and within budget.

The 1987 Defence White Paper highlighted the basic importance of mapping, charting and environmental infrastructure to the development of Australian self-reliance. Australia's commercial interests and maritime operations - particularly those involving navigation in mine-countermeasures, submarine and anti-submarine operations - rely on accurate charts of the Australian continental shelf.

The ability of launches to negotiate shallow water also makes them ideal for their first task - to update charts of the Great Barrier Reef and Northern Australia.

HMAS Mermaid was named after HM Cutter Mermaid, the ship used by Australia's first hydrographic surveyor - Lieutenant Philip Parker King - who opened up the inner route of the Great Barrier Reef in the early 1820s.

Mrs Angela Compton, wife of the Royal Australian Navy's hydrographer, Commodore John Compton, officially launched the Mermaid at today's ceremony attended by the Chief of Naval Staff, Vice Admiral Mike Hudson.

HMAS Adelaide has been docked for 19 months for modifications worth more than $30 million.

These modifications include the complete replacement of the stern section of the hull, the flight deck and portions of the hangar decks, installing a helicopter handling system as well as adding computer controlled fin stabilisers.

HMAS Perth has undergone 30 months of modification at a cost of about $65 million which involves an updated combat system.

With the completion of HMAS Canberra in 1991, Garden Island will have completed the modernisation, modification and general upgrade of six of the Royal Australian Navy's seven front line ships.

All FFGs will be capable of deploying Seahawk helicopters: HMAS Ships Adelaide, Sydney, Canberra, Darwin, Melbourne and Newcastle.

In 1987 HMAS Brisbane was the first DDG to undergo a major update at ADI for $60 million, while the FFG HMAS Sydney was completed for $15 million in February this year.

HMAS Shepparton was commissioned into service with the Navy's Hydrographic Service on 24 January, 1990.

Speaking at the naming ceremony, the Minister for Defence Science and Personnel, Mr David Simmons said that the Government's 1987 Defence White Paper highlighted the basic importance to Australian

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The keel-laying at the Australian Submarine Corporation (ASC) – the only submarine construction facility south of the Equator – was also attended by the South Australian Premier, Mr John Bannon, and the Chief of Naval Staff, Vice Admiral Michael Hudson.

The boats will operate from both east and west coasts as a vital plank of the two Navy policy outlined in the Government's 1987 Defence White Paper.

In terms of benefits to industry, the submarine project sets the baseline for all the other major Defence projects to follow and is already reflected in the industry objectives for the $3.5 billion ANZAC ship project.

Seventy per cent of the platform work on the new submarines will be built in Australia representing about $2 billion to local industry.

Forty-five per cent of the Rockwell combat system will also be carried out in Australia and imported elements of the system will bring a further 30 per cent offsets obligations worth more than $130 million to Australian industry.

The project would mean about 2000 new jobs, ASC now employs more than 400 people and is still growing.

It will also mean technology transfer to Australia including skills in micro-electronic, computer software development, battery technology and information systems.

Directly flowing from the project is the opportunity for Australia to develop its own centres of excellence in areas such as computer software development, battery technology and information systems.

The new boats will progressively replace the six Oberon-class submarines now in service at a total project cost of $4.5 billion (April 89 prices).

The keel-laying ceremony at HMBS Stirling, south of Fremantle.

Crews of the Royal Australian Navy's (RAN) next generation of submarines – known as the Collins Class which will enter service throughout the 1990s – will train at school.

The contract was awarded to Western Australian firm, SABEMO (WA) Pty Ltd, which was also chosen to construct the submarine escape training facility on the base.

The school is the first major facility to be built as part of HMBS Stirling's further development programme needed to support more than half the naval fleet.

Approximately $50 million will be spent by the time the school is finally constructed and equipped by June next year.

In contrast, training for the current Oberon Class submarines was conducted in the UK until the 1980s when a school was set up at HMBS Pyramus in Sydney.

Crew training trials for the Collins Class boats are expected to start in July 1992.

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THE SOUTH AFRICAN NAVY

The South African Navy – Today

SAS PRESIDENT PRETORIUS prior to modernisation.

Strategically, South Africa has been lucky up to now in having no real maritime threat to her flanks. None of her neighbours can mount any sort of naval operation which is outside the South African Navy's (SAN) capabilities. However, this may not be the case for ever. The Navy looks at the history of South Africa's Navy, its present capabilities and its future needs.

BY ANTONY PRESTON

The South African Navy has a long pedigree. In the 1880s the first naval volunteer unit was formed in Natal for the defence of Durban. A South African Division of the RNVR was founded in 1912, and its personnel served in the Royal Navy in virtually every theatre of war in 1914–1918.

Although there was no separate naval force in 1914, a number of minor vessels, such as trawlers, were pressed into service by the RN for the campaign in South West Africa. The first true naval force was not created until 1922, when the fledgling South African Naval Service received two trawlers and a survey ship from the RN. The fate of this was sad, financial stringency allowed it to wither away, and in the mid-1930s the ships were returned or sold.

In 1940, a new organisation came into being, the SA Seaward Defence Force, known to some as the 'Seaweed Defence Force'. Although a motley collection of 15 trawlers, whalercatchers and tugs, the force shouldered the burden of escorting Allied merchant ships around the Cape of Good Hope and also swept mines. It expanded enormously as the war progressed, and provided a series of escort and minesweeping groups in the Mediterranean.

The British C-in-C of the Mediterranean Fleet regarded the work of the salvage ship Ganges as invaluable, and as important as the rest of the Seaward Defence Force.

In the closing months of the war the RN transferred three new 'Loch' class anti-submarine frigates. With two fleet minesweepers, these frigates became the backbone of the post-war fleet, whose name changed to the South African Naval Forces, in 1947.

The strength of the SANF was now 17 ships, including auxiliaries and a survey ship.

Yet another remaining in 1951 created the South African Navy (SAN). A period of growth now started, with the RN transferring two 'W' class destroyers and a Type 15 frigate. In addition, the minesweeping capability was increased by the purchase of ten 'Toni' class coastal minesweepers. The role of the SAN as a Commonwealth Navy was seen as the defence of the Cape route, with technical assistance and training provided by the RN.

The British orientation continued to the end of the 1950s, with the 1955 Simon's Town Agreement binding Great Britain to provide aid in exchange for base rights. Three President class frigates were bought from Britain, virtually identical to the contemporary Romney class in the RN, and the destroyers Simon van der Stel and J分别是 were converted to Type 16 frigate standard.

Then came South Africa's decision to declare itself a republic, which led to her leaving the Commonwealth in 1961. To reduce reliance on Britain as the sole source of equipment, an order was placed with France, in 1967, to buy three Sapin class submarines. In the early 1970s there was a
further blow to Anglo-South African naval co-operation, when the South African Government declared that it no longer felt bound to defend the Cape sea route without help from so-called allies. In this case, this meant deferring a decision to modernise or replace the ‘President’ class, and to opt instead for a purely coastal defence role.

The visible sign of this was the order for three missile boats placed in Israel - capable only of defending the coast. In 1975 the British Government reopened the Simon’s Town Agreement, a formal admission of the Labour Government’s deep distrust of South Africa. It marked a sad end to the long association between the SAN and the RN, but times had changed. The RN had turned its back on out-of-area commitments and had no real need for Simon’s Town. It is doubtful if the SA would have afforded the sort of frigate which the British wanted to sell them.

Today, the role of the SAN can be summarised as the need to protect territorial waters, to help control the 300,000 square miles of the EEZ and to deter subversion or direct naval attack on the Republic. To achieve these aims, the SA is divided into two area commands. Naval Command East has its HQ in Durban. Major bases are Simon’s Town in the Western Cape and Salisbury Island in Durban. Saldanha Bay is used for training and there are minor bases and command centres of East London, Port Elizabeth and Walvis Bay.

THE SUBMARINE FORCE

The Submarine Flotilla, the main striking force of the SAN, is based at SAG Hase Brannem at Simon’s Town. The Emily Hobhouse has been modernised with new sonars and electronics; the Johannes van der Merwe is currently on hand and the Maria van Riebeck will follow. They retain the French LA, L5 and E15 torpedoes supplied in 1970-71.

As other navies have discovered, there is a difficult number of submarines to run. The SAN gets remarkably high availability rates out of its three, but five would be a better number to guarantee two boats on patrol at all times. An attempt to buy more Daphnes from Portugal fell through, and as the French Government embarked the delivery of the two Agosta class in 1978, The survey. Rumours persist of a clandestine purchase of Type 209 drawings from Germany, but no evidence has been produced to justify the wild speculation in the media. South African contacts with Israel provide a more plausible explanation, but the fact remains that the SAN has a requirement for two more SSKs.

THE SURFACE FLEET

The former frigate force is now reduced to a nominal total of two ships. But the President Prentor and President Steyn are laid up without armament or stores. In theory, they can be refurbished and given some sort of service life extension programme, but the hulls are now a quarter of a century old. The steam turbines might be worth salvaging, but new construction would be far more cost-effective.

The requirement is for three 1,500t light frigates or large corvettes. Plans to buy two A69 corvettes from France were aborted by the French Government in 1978, along with the two submarines. The decision to buy the Israeli Sa’ar 4 class frigate can now be seen as less than satisfactory. Given the steep seas off the South African coast, a large corvette might be better suited than a 62m fast patrol boat.

The first three ‘Minister’ class missile boats were built in the Haifa Shipyards but the next six were built by Sandock Austad in Durban (now Dorbly Shipbuilders). Plans to build three more have been shelved, further proof that they do not entirely meet SAN needs.

The Strike Craft Flotilla is based at SAS Scorpio in Salisbury Island, where full maintenance facilities exist. A second squadron has been established at Simon’s Town, and a mobile logistics system enables the strike craft to be deployed to other harbours when needed.

The Skerpio anti-ship missile, a locally manufactured variant of the Israeli Gabriel II, adapted to meet local industrial capabilities. Each ‘Minister’ class FAC has six missiles with an option for two more missiles. The two L/62 OTO Melara Compacts, backed up by two single 20mm and two 12.7mm machine guns.

Only four of the British-built ‘Tos’ class coastal minesweepers are now in service, but there is a need to be able to strike home with the Cine Countermeasures Flotilla. There are a few signs that it is being built up again. Four ‘River’ class coastal minelayers have been built in Durban. The design owes a lot to the West German Navy Schutz class, with wooden built.

The Umsongwane and her sister are equipped with a hull equipped mine-hunting sonar, and two mine disposal vehicles. Reports suggest that more may be built and surprisingly the Turkish Navy has expressed an interest in the design.

THE SUPPORT FLEET

For a navy which has no out-of-the-ordinary role, the SAN is well provided with auxiliaries. The 30-year-old replenishment ship Tafelberg has been thoroughly overhauled and modernised. She is a converted tanker, built in 1951 in the Haifa Shipyard. She was built in 1951 and transferred to the SAN in 1959. She now operates Super Freton helicopters.

The Marine Brigade was established in 1979 to undertake harbour defence and protection of naval bases. Harbour Protection Units have been set up for each major harbour and naval base, and they operate the ‘Namacuru’ and Delta landing craft. There are also ‘Vendetta’ type patrol craft, based on a West Coast fishing vessel design, fast-bottomed craft powered by inboard motors.

The future

The SAN has always been the junior partner in the Armed Forces, and in the absence of close naval associations it has had to secure the necessary funds. Moreover, the end of the war in Angola and Namibia will inevitably lead to a cutback of military funds. However, the long-term need for a balanced and capable navy remains.

Strengthening the submarine force remains a priority, but there is also a need for a light frigate, which can serve as an offshore patrol vessel in peacetime. Mine countermeasures is also a priority, with an ever-present threat of sabotage and clandestine mining against shipping. More of the ‘River’ class may replace the four remaining coastal minesweepers.

Reports suggest that the ‘Minister’ class fast attack craft are showing signs of wear and tear. Two are reported to have been laid up after severe corrosion; they may have been sunk as targets or merely scrapped. It is unlikely that they will be replaced as opinion seems to have come round to a need for a ship displacing at least 1,500t. Local sea conditions are very wearing for small craft.

Strategically, South Africa has been lucky up to now in having no real maritime threat to her waters. However, the growing Indian Navy is matched by a sense of adventurism, and it is not too far-fetched to imagine a time when an Indian carrier task force might be ordered to make a demonstration against the South African regime.

Such a scenario might be over-imaginative in the short term, and the distances involved might impose unbearable strains on the Indian Navy, but it would call for some counter-action by the SAN. The submarine force would need to be much more powerful, but it would need back-up from a significant surface action group. There is, of course, still the Soviet Navy to consider. The impact of perestroika may have little relevance to South Africa, but one risk is that a disarmament-minded West might call for less about intervening to stop Soviet action against South Africa. The risk is small for the moment, but the future trend of Soviet policies is unclear. Whatever happens, the case for spending money on the South African Navy needs to be made. The arguments may not be obvious to everyone, but they are nonetheless valid.
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BOOK REVIEWS

NEW ZEALAND NAVAL VESSELS
By R. J. McDougall
Published by Government Printing Office, New Zealand
Price $39.95
The recently published New Zealand Naval Vessels, is an A4 landscape book, spanning 156 pages. Like all good naval reference works, the author has presented the development of the Navy in New Zealand in a most sensitive and informative style.

A brief introduction covering the political and naval developments of the Navy is followed by the first major section, the New Zealand Division, from before WWI to the formation of the RNZN in 1941. Some famous ships to be featured include the battlecruiser HMAS NEW ZEALAND, the long serving PHILOMEL and 1950 battleship HMS TORCH.

Despite the lack of an officially created force, New Zealand charted three mine-sweepers and instituted a brief examination service during the Great War.

Nowever and more powerful ships joined the NZ Division from 1921 with the arrival of the name ship of the Chatham class of light cruisers. She was followed by two modern D class cruisers and during the mid-war period, two Flower and then two Grimsby class destroyers. The Division's first tanker, NUCULA supported the force from 1924 to 1937.

The RNZN was officially formed in September, 1941, but even before this, various new construction was implemented and a scheme to requisition a wide variety of civilian vessels was implemented. Like the RAN, the RNZN quickly expanded with these ad hoc ships fulfilling numerous roles, both in the front line and support.

New Zealand Naval Vessels provides extensive and well researched descriptions of the technical and historical careers of the Kiwi warships. The RNZN is presented via entries for cruisers, frigates, corvettes, minesweepers, patrol craft, supply ships and tankers, research and survey ships, port fixed defence ships, dockyard and auxiliary craft, launches, barges and lighters, bases and non-naval vessels. Separate appendices describe the war vessels of the Maori wars, submarine mining steamers, torpedoes boats, the examination service and Army and Air Force craft.

Last but not least, details are included of the Westland Wasp helicopters flown from the present day frigates.

Photographically, New Zealand Naval Vessels, provides the most detailed pictorial coverage yet published on the Kiwi warships, just the present. The author has gone to great lengths to illustrate every possible unit, with modifications and post Navy profiles, if sold by the RNZN.

Many naval authors are contented to end the careers of the ships being described when they leave naval ranks. This book is an exception with detailed eventual fates, to provide a proper finale for all vessels.

In summary, New Zealand Naval Vessels, is highly recommended to the libraries of those who read this review. It has a few errors, including when the RAN is mentioned, but overall has provided this writer with many hours of interesting and enjoyable reading.

The book can be purchased from the Government Printing Office. Publications Division, Private Bag, WELington 1, New Zealand for NZ $39.95.

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SOVIET SUBMARINES
1945 to the present
By John Jordan
Published by Arms and Armour Press
Review copy from Capricorn Link, Australia.
Cost $65.00

The history of the Soviet Submarine arm is one which has been surrounded by mystery and intrigue. Very few foreigners, if any, have embarked in the boats, leaving it to the intelligence officers of the allied nations to surmise what their roles, and capabilities were and are currently.

This book is the first popular attempt to place on record, both in narrative and photographs, the growth and development of the Soviet Submarine arm. Like his earlier book, Soviet Surface Warships Since 1945, the author has presented the reader with an easy to read, chronological description of the various submarine classes, supported by an extensive collection of black and white photographs with numerous line drawings.

Attack boats, ballistic missile and even trial and special purpose submarines are included. Data tables for all are attached to each boat or class and to conclude, specifications for missiles and maps depicting operating areas are throughout the book.


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NAVY LEAGUE COMMUNITY AWARD
The Federal Council of the Navy League selected the Naval Communications Station HAROLD E HOLT as winner of the 1989 Community Service trophy. The award is made annually to the RAN ship or establishment considered "most worthy of recognition for service to the civilian community" The citation reads:

The harmonious co-operation between the RAN and the USN at NAVCOMMSTA Harold E Holt has always extended to the local community at Exmouth. The close knit, isolated community on the North West Cape depends on the unselfish acts of committed people who freely give their time, attention and skills to benefit the community's welfare and quality of life. The commitment to those tasks shown by the Station's personnel has never been greater than during the past twelve months.

Through the wholehearted efforts of the military and civilian personnel at NAVCOMMSTA Harold E Holt, the Station's Command has been able to support and initiate worthwhile community programmes in the areas of safety, health, youth, the aged, recreation, entertainment, education, parks and the environment.

Through the generous gestures and helping hands provided by the Station's personnel to the local community throughout the past year, the Station is awarded the Navy League of Australia Perpetual Trophy for 1989.

The amount of "spare time" devoted by naval personnel to aiding civilian causes is not generally realised: foreign as well as Australian communities benefit from these voluntary activities which do much to enhance the reputation and standing of the Navy in the areas in which it operates.

Commodore Graham Stubington AM RAN, Naval Officer Commanding West Australia Area, presented the trophy on behalf of the Navy League to the Communications Station at Exmouth in December.

NORTHERN TERRITORY
During February 1986, the NT Division of the Navy League sponsored and formed a Unit of the Australian Sea Cadet Corps. The Unit was named TS Darwin.
On 1 October 1988, the Unit was recognised as a Naval Reserve Cadet Unit and on 30 July 1989, a Commissioning Parade was held on board HMAS Coonawarra.
In his handover address, the President of the NT Division, Mr Colin On thanked all who had been involved in setting up the Unit. He also made reference to the importance of the month of July in RAN history.
RAN Ships, Perth, Townsville, Whyalla and Darwin all being commissioned in various years, during that month. Now in July 1989, TS Darwin was being commissioned as a Unit of the Naval Reserve Cadets.
Chief of Naval Staff, Vice Admiral M Hudson, inspected the Unit and handed over the Commissioning Certificate to the Commanding Officer of TS Darwin Lt S. Martin.

April - June, 1990
Finally, Vice Admiral M. Hudson took the salute at a march-past of Officers, Instructors and Cadets of TS Darwin.

The Unit is accommodated on board HMAS Darwin and the recognition must be given to the Commanding Office CMDR. R. Evans RAN and his staff for all the assistance given in establishing the Unit.

Cadet activities include:-
- Camps at Lake Bennett
- Parading for Anzac Day
- Visits to various ships including the Unit's namesake HMAS Darwin
- Assisting in the freedom of the City march through Darwin by contingents from RAN and USN ships, in port for the exercise K59.

The Unit is supported by an active Unit Committee led by Chairperson Mrs B. Kilver.

FEDERAL COUNCIL MEETING
The Hon Sir Francis Bun, AC, KCMG, Governor at WA. The Hon Sir Francis Bun, AC, KCMG.

Perth, Western Australia 1989. Text of speech by Lieutenant Governor at WA. The Hon Sir Francis Bun, AC, KCMG.

As this is the first occasion that the Navy League of Australia has held its annual conference in Western Australia, may I firstly welcome all of you a very warm welcome to Fremantle. In future years you will surely come more often as Fremantle and Fremantle Sound are destined to become the home port for a significant Australian Naval Force, or more particularly for a significant Australian submarine facility.

I served in the Royal Australian Navy for the first two years of the war and later I renewed my contact with the service when for a year I was counsel assisting the Royal Commission into the Voyager disaster. With that experience, limited as it was, I am very conscious of the importance of the navy in the protection of our Island Continent - the largest in the world - a nation "sea by sea". And I am very conscious of the limited resources which in times past were available to the navy to discharge its responsibility. By way of example in the early days of the war the naval presence in Fremantle consisted of three small minesweepers augmented from time to time by HMAS Adelaide. Nevertheless, these difficulties were overcome and the Royal Australian Navy has served the nation with efficiency, valour and with great distinction in two world wars, in Vietnam and in Korea.

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I am sure that the great tradition is today in good hands and that the Royal Australian Navy will continue to be a strong energetic and effective arm of the defence forces. It must be so because our future as an island nation may well depend upon it.

To me, the remarkable thing is that although all that is transparently obvious it appears not be generally appreciated. That it is a pity and it should be a disaster. As a people we appear to be attracted to the sea. We live by the sea and we find our recreation in and on the sea but no doubt because our survival in the first hundred years or so was dependent upon the discovery and the development of our continuous and hard land mass we seem now as a people to relate emotionally more to the land than we do to the sea. Australian as a people are related to the coast but their folk lore is land based - Waltzing Matilda, the man from Snowy River, Ned Kelly and the great island explorers. It is a strange paradox.

As it seems to me the Navy League of Australia is concerned to balance this up. The League's parent organisation was formed in Britain in 1905 by a group of citizen concerned about the state of the Royal Navy. Branches of the League were soon thereafter formed in many parts of the world. In Australia the first branch was formed in Tasmania in 1901 and thereafter in each of the Australian states and in New Zealand, South Africa, in Canada and in the United States. They all flourish today and I express the hope that they will continue to do so.

The League appreciates that the future of the country may well depend upon the navy and it also appreciates that the future of the navy is in the last analysis dependent upon the enthusiasm and upon the dedication of young people. They must be introduced to the sea and so acquire an understanding of it and a love for it and, most importantly, the discipline which is necessary for all who operate upon it. The League has laboured hard and long in this area. In its work in introducing young people to service upon the sea has gone on for many years and with great and to a large extent unrecognised success.

I am pleased to have this opportunity to congratulate the Navy League in creating and preserving a broad base of support for the Royal Australian Navy in its important work. It is no doubt true to say that the creation and the maintenance of political and popular support for a country's defence forces is not easy to achieve in times of peace but to say that it is only to point up and to emphasise the importance of the work which you are doing. It may at times appear to be a rather thankless task but I can assure you that it is neither unnoticed nor unappreciated by those who give the matter any thought.

Lady Burt joins with me in thanking and encouraging each of you in the important work which you are doing. We wish you all a productive conference and an enjoyable stay.

It gives me much pleasure to now declare the 23rd Annual Conference of the Navy League of Australia to be officially open.

Naval League 1989 Conference representative.

Page Thirty Six
THE NAVY
April - June, 1990
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