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# JOURNAL OF THE AUSTRALIAN NAVAL INSTITUTE



## AUSTRALIAN NAVAL INSTITUTE

1. The Australian Naval Institute is incorporated in the Australian Capital Territory. The main objects of the Institute are:
  - a. to encourage and promote the advancement of knowledge related to the Navy and the maritime profession,
  - b. to provide a forum for the exchange of ideas concerning subjects related to the Navy and the maritime profession, and
  - c. to publish a journal.
2. The Institute is self supporting and non-profit making. The aim is to encourage discussion, dissemination of information, comment and opinion and the advancement of professional knowledge concerning naval and maritime matters.
3. Membership of the Institute is open to —
  - a. Regular Members — Members of the Permanent Naval Forces of Australia.
  - b. Associate Members —
    - (1) Members of the Reserve Naval Forces of Australia.
    - (2) Members of the Australian Military Forces and the Royal Australian Air Force both permanent and reserve.
    - (3) Ex-members of the Australian Defence Force, both permanent and reserve components, provided that they have been honourably discharged from that Force.
    - (4) Other persons having and professing a special interest in naval and maritime affairs.
  - c. Honorary Members — Persons who have made distinguished contributions to the naval or maritime profession or who have rendered distinguished service to the Institute may be elected by the Council to Honorary Membership.
4. Joining fee for Regular and Associate members is \$5. Annual subscription for both is \$15.
5. Inquiries and application for membership should be directed to:

The Secretary,  
Australian Naval Institute,  
PO Box 80  
CAMPBELL ACT 2601

## CONTRIBUTIONS

In order to achieve the stated aims of the Institute, all readers, both members and non-members, are encouraged to submit articles for publication. Preferably, submissions should be typed, double spaced, on A4 paper; the author's name and address must be shown clearly, even if a pseudonym is required for printing purposes; to be eligible for prizes, original articles must be accompanied by statements that they have been written expressly for the ANI; and short biographies will be welcomed. The Editor reserves the right to reject or amend articles for publication.

## DISCLAIMER

Views expressed in this journal are those of the authors, and not necessarily those of the Department of Defence, the Chief of Naval Staff or the Institute.



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## FROM THE EDITOR

Ten years ago, almost to the day as I write this editorial, I came in from the RAAF Staff College to Russell Offices to attend a meeting which led to the formation of the Australian Naval Institute. To celebrate that foundation meeting, this issue of the *Journal of the Australian Naval Institute* contains a word from the founder, a copy of the first minutes, and a list of all those who subsequently joined before the date of incorporation — thus enabling the Institute to get underway. Only four of the original fifteen are still in the RAN, which may be a comment on possible future directions for the membership of the Institute; the founder president comments on the value of this transience.

Membership has expanded over the ten years and a list of current members, by location, is attached to the membership renewal notice enclosed with this journal. Unfortunately, the list is short by some sixty former members who have been deleted from the rolls for failure to renew their subscriptions. We now have a more efficient and streamlined service which can pick out the recalcitrants quickly — *please ensure your subs are paid promptly, using the proforma provided.* (You may tear off and retain the membership listing, of course). Should you care to pay for more than one year, you may do so: your current financial status will always be shown as the first line on the address label.

If you are not located where the listing says you are, please check the address label attached to the subscription renewal — if that too is incorrect, fill it in and let us know your correct address. If you are currently using a private address, you may wish to change it to a Service address; those overseas may care to pay a little extra and receive their journals by airmail (I will annotate the address label to indicate that the request has been received: the words 'air mail' will appear after the postcode). We are not printing a full address listing of all members as it would take up too much space and cost too much; however, chapter conveners, or anyone interested in forming a chapter, can obtain addresses of those in their area by writing to the Institute.

The next piece of housekeeping is to ask you to note the new Post Office Box address, to note the grand clearance sale of back copies of the journal and Seapower proceedings, to note that copies of the proceedings of Seapower 84 are now available, and finally to note that **the AGM will be on Friday 26 October.** I must persuade the various councillors to write their own notes, as per the notes from the Treasurer in this issue, so that I can reserve this space for editorial matters!

Editorially speaking, this journal contains an article on a natural gas bulk carrier, as foreshadowed in the review of the Centre for Maritime Studies book in Vol 9, No 4, p 52. Readers who might like more details of the ACCOLADE should write to the author directly. There are, in addition, two prizewinning essays, one, I am pleased to see, by a sailor; we would like to see more sailors and junior officers in the Institute and contributing to the journal — readers might care to engage in a recruiting and encouraging campaign? With regard to the Peter Mitchell Essay Competition, I have difficulty understanding how it took seven months after the closing date to assess what were apparently only a handful of entries, thus allowing prospective entrants in this year's competition only five months to research and write. Readers may care to comment on ways and means generally of encouraging more people to put their strongly held views on paper, and ways in which this journal can improve on the stated ANI aim of promoting discussion of maritime affairs. I am ever grateful to our regular contributor Robin Pennock for three pieces in this issue and more in the pipeline, and I hope there are some budding authors out there prepared to lend weight to his efforts. Another regular contributor, Tom Friedmann, has been incapacitated but is hopefully on the mend and preparing to resume his Washington Notes in the next issue.

Finally, the November issue of the journal will have as a theme the subject of mine warfare. Various authors have been invited to contribute and have offered to do so, but there is an open invitation to any of our readers to join the fray — if the editor's dream of a surfeit of material comes true, we will extend the theme to the following issue.

Geoff Cutts  
(062-654673)

## A "NAVAL SOCIETY"

1. A meeting of officers interested in forming a "Naval Society" convened at 1630 Friday 12 July 1974 in Conference Room 2, Navy Office, Canberra. Captain V.A. Parker took the chair and opened the discussion. It was observed that several attempts had been made in the past to start a journal on Naval matters but these had failed for various reasons and was rather like putting the cart before the horse. In the view of some officers who had been discussing the problem the need was for a highly professional group interested in naval/maritime affairs. This body should be a self-supporting, non-profit organisation to promote the advancement and spreading within the service of knowledge relevant to the higher aspects of the naval profession. If this then came into being a journal could well follow. A number of officers then spoke on the subject and related matters. It was pointed out that the U.S.I. would weaken that body. Additionally other groups and persons produced naval flavoured periodicals. It seemed to the majority present that none of these really fulfilled the need for a professional naval "Society".

2. The following officers then present resolved to form a "Naval Society" and became foundation members:-

CAPTAINS N.E. McDONALD, D.H.D. SMYTH, J.D. STEVENS, V.A. PARKER, I.H. NICHOLSON, E.V. STEVENS, W.R. SHARP, L.G. FOX, N.B.B. BERLYN

COMMANDERS I.B. JAMES, J.L. CURTIS, W.B. LOFTUS, M.W. VARLEY

LIEUTENANT COMMANDERS A.M.F. SUMMERS, G. CUTTS

LIEUTENANT K.W. GRIERSON

COMMODORE R.C. SWAN and CAPTAIN J.A. ROBERTSON who had taken part in earlier discussions and COMMANDER B.G. GIBBS who had pledged support were also entered as Foundation Members.

3. A Steering Committee consisting of:-

Captain V.A. PARKER

Captain J.A. ROBERTSON

Captain L.G. FOX

Commander W.B. LOFTUS

Lieutenant Commander A.M.F. SUMMERS

Captain N.E. McDONALD

Lieutenant K.W. GRIERSON

was then nominated by the members to produce a draft constitution, examine the legal aspects and recommend a name. A meeting of all members would then be called to consider the Steering Committee's recommendations.

4. The meeting closed at 1720.

RUSSELL HILL  
12 July 1974

(V.A. PARKER)  
CHAIRMAN PRO TEMPORE

*(A copy of the first minutes of the ANI)*



# RECOLLECTIONS OF THE FOUNDER PRESIDENT

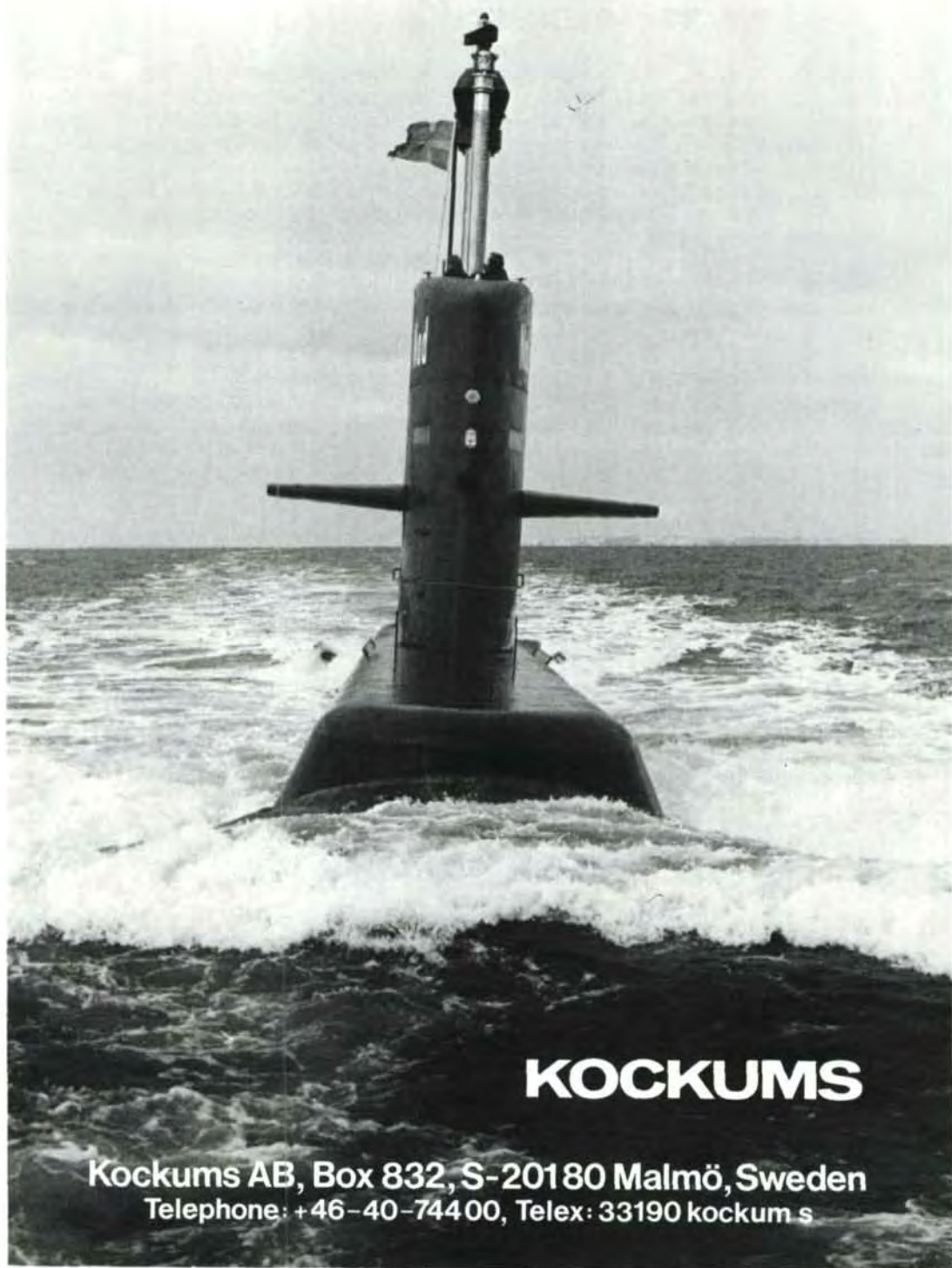
by Commodore V.A. Parker RAN (Rtd)

With a steadily growing membership and three very successful seminars to its credit, the Australian Naval Institute is certainly fulfilling my expectations as to a need for such an organisation, not only for the Navy but for the community as a whole. Having said that, I would like to dwell on several areas which I consider important and worthy of mention.

First of all is our splendid Journal. As I said in the first issue of our Journal in August 1975 'In the years to come many people will write for the Journal and so it is this certainty, and also the belief that the Institute will grow and go from strength to strength, that prompts me to say that at last, we people devoted to the advancement of professional knowledge with respect to maritime affairs from an Australian stand point, have a forum dedicated to expressing such views'. It is well produced and reflects great credit on all concerned with its production. The articles are well written and researched, and are of a high standard. What I see as lacking is the views of dissenters. Surely not everyone agrees with everything being done in naval matters. I do not espouse disagreement for its own sake, but it is our right, more than a right, a duty, to vigorously debate all aspects of naval policy — it is good for the Navy — better for the Nation. This is why the Institute was founded. This is why we have as our forum a Journal to air our views no matter how radical they may be. Well informed debate is the backbone of our democratic system and must be reflected in the Journal. Whilst on this subject of the Journal, I would wish to see more articles from very junior officers and sailors. After all, it was because of the perceived need for a forum where a junior's views could be aired that the ANI was founded.

I am also at a loss to understand why certain people are 'miffed' at the term 'associate member' as if it is second class and implies an inferior status. This aspect was very carefully considered when the constitution was being drafted. The idea was that control of the ANI should always be in the hands of up-to-date, *serving* men and women and not become the private domain of some individual for years and years as in some organisations. As the first casualty of the rules, I still believe the principle is sound. the ANI is a private organisation, legally incorporated and not therefore a part of the RAN as such. Membership therefore should not be measured by the same yardstick as the various categories of PNF, active and inactive Reserves. If tender feelings are still ruffled, then perhaps 'serving member' could be substituted for 'member' and 'member' for 'associate member'. As long as the intent is preserved is all that matters. For the life of me I cannot understand the time and energy being devoted to this aspect when it would be better directed in furthering the aims of the Institute.

All in all, the ANI is progressing magnificently; it has become a prestigious and respected organisation and I have no doubt it will continue to grow as an influence in the maritime affairs of this country. I cannot help but wonder sometimes though, what would have happened if Rocker and I had had that second bottle of port!



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# M.V. ACCOLADE II

## A COMPRESSED NATURAL GAS FIRED SELF-LOADING AND DISCHARGING COASTAL BULK CARRIER

by Commander D.A. Pickford RANR

Adelaide Brighton Cement Ltd. operates its largest works at Birkenhead, adjacent to the Port Adelaide River. The basic raw material for cement production at the Birkenhead works is limestone which is obtained from the Company's two quarries, both adjacent to the coast in the Gulf of St. Vincent. Since the inception of the Birkenhead works raw materials have been brought in from Klein's Point by sea, and the economies of bringing in large quantities of limestone in bulk from across the Gulf had been proven conclusively over the years.

Bulk carriers of a conventional nature became unacceptable for the limestone service since grab discharge did not provide sufficiently good cleanout, so in the mid-1960s it was decided to replace *M.V. MALTARA* with a specially dedicated bulk carrier. *M.V. ACCOLADE* was designed by the then existing Australian Shipbuilding Board to specifications laid down by Adelaide Cement Co Ltd. She was built by Evans Deakin & Co, Brisbane, and delivered into service in April 1966. She had a gross tonnage of 2,241 tonnes and a nett of 963 tonnes for a deadweight tonnage of 3,332 tonnes.

Innovation in design was exercised for *M.V. ACCOLADE*. As it was a limited service situation in protected coastal waters, her cargo holds were quite peculiar to the requirement: cargo was carried in four circular open bins of 13.56 m diameter mounted at deck level, each capable of holding 813 tonnes. 2,032 tonnes of water ballast could be carried, although normal ballast in St. Vincent's Gulf was 1,625 tonnes and the deballasting rate was 762 tonnes per hour.

*ACCOLADE* was a very successful ship for her task, and from going into service in 1966 to being laid up in 1982, she had carried nearly 11,000,000 tonnes of cargo including over half a million tonnes of gypsum. She would travel to Klein's Point once per day, loading in the forenoon and returning in the afternoon to discharge in the evening. She operated seven days a week, one day of which she went to Rapid

Bay to load, carried out surveys and major maintenance on planned lay days, averaging one per month. Docking for the bi-ennial survey was carried out in Melbourne.

After the advent of the suspension preheater kiln and associated equipments in 1977, the installed capacity of the Birkenhead works required a raw material input rate of around 4,500 tonnes per day at full capacity. This was well below *ACCOLADE*'s capacity. Future planning indicated that tonnages even higher than this would be required within the life of a new vessel, albeit in various stages.

### AN INTERIM SOLUTION

In 1978, Senior Management of Adelaide Brighton Cement Ltd. decided on an interim solution to the provision of greater incoming limestone rates. It was proposed to 'jumboise' *ACCOLADE* to enable her to carry 4,500 tonnes of cargo, and hence put off the necessity to purchase a new vessel for some time, at least until the next major expansion of the Birkenhead works. *ACCOLADE* was in excellent condition, and it was considered that hull life was at least another twelve years, if not more, and the main machinery was in top class condition. This was borne out by a very critical examination of the ship at her bi-ennial docking survey in March of 1979, when shell plate thickness tested out within original tolerances. The preliminary study indicated that conversion of the vessel and

#### The Author

Commander D.A. Pickford RANR was born in UK in 1937, and arrived in Australia in 1947. He joined the RAN as a cadet midshipman in 1953, graduated in Marine Engineering from RNEC, was promoted to lieutenant commander in 1968, and resigned in 1970. He served in HMA ships *MELBOURNE*, *QUIBERON*, *VAMPIRE* and *SYDNEY* in addition to postings to Williamstown Dockyard and Navy Office. On resigning from the RAN, he transferred to the RANER, and subsequently to the RANR; he is currently CO (Reserves) Adelaide Port Division. Civilian positions have been with various mining companies, and at present he is Group Chief Engineer of Adelaide Brighton Cement Ltd.



inclusion of self-loading and discharging facility should be possible for less than \$3,000,000.

The circular bins were to be removed and a single open rectangular hold would carry the limestone. The overall length of the vessel was to be increased by the insertion of a mid-body section 23.43 m long making 114.51 m, with the final length between perpendiculars being 109.42 m. The final moulded breadth of *ACCOLADE* was to be increased to 19.9 m with an extreme breadth of 20.1 m, some 2.91 m greater than previously. The latter dimension was to be achieved by the addition of wing sponsons to the hull.

Although this was by no means the first vessel to be jumboised, it was certainly another innovation in sea transport in Australia. Tenders were called for conversion work. Unfortunately, time off the run and the limited service capability of the ship meant the conversion had to be done in Australia. Only one technically acceptable tender was received out of three from Australian firms, but the tendered price was so far in excess of estimates that a new vessel appeared more attractive in the long term. *ACCOLADE*'s increased deadweight to 4,500 tonnes could only cope with existing requirements and had a limited future compared with a vessel capable of larger cargoes that could be used for part cargoes in her early years. Hence, it was decided to look into the construction of a new vessel with a minimum 7,500 D.W.T. covering a planned expansion up to 20 years.

### THE ADVENT OF *ACCOLADE II*

During the tendering stages of *ACCOLADE*'s jumboising project, Carrington Shipways Pty. Ltd. of Newcastle, New South Wales, expressed interest in doing the conversion. However, due to the lack of their own dry docking facilities to carry out the "cut and shut" operation, and the fact that the dry dock they could have used belonged to a major competitor in the tender race, Carrington Slipways had to withdraw. Carringtons, however, had suggested construction of a new vessel and when the jumboising project ran into cost troubles, they again approached Adelaide Brighton Cement with proposals for the construction of a new vessel for the limestone carrying requirement. At this time, in early 1980, the Australian Government had changed the regulations concerning the payment of the Shipbuilding Bounty and this put Carrington Shipways in a very good position to compete with overseas shipbuilders for the particular type of vessel proposed.

Discussions started in earnest. The vessel had to have a maximum loaded draught of 6 m to get in and out of Klein's Point, and even this meant Adelaide Brighton Cement had to consult with the South Australian Department of Marine

& Harbours to have the berth dredged at Klein's Point. At the same time, arrangements had to be made to improve the wharf and fendering at Klein's Point to accommodate the berthing forces of a ship likely to be in excess of 11,000 tonnes displacement.

Attempts were made to have the ship with an open rectangular hold as had been designed into a jumboised *ACCOLADE*. This proved impossible, as the optimum length to breadth ratio and loaded draught dictated a deep hold with cargo below the waterline. This in turn dictated a closed hold as a strength deck was required high up in the vessel.

### Natural Gas as an Alternative Fuel

After hull design had begun and powering calculations worked out, the machinery specifications had to be finalised in detail. In early discussions on powering of the ship, the possibility of gas operation was discussed. As Adelaide Brighton Cement are large industrial users of natural gas, supply of this fuel on a contract basis is at much more favourable rates than liquid hydrocarbon fuel, such as marine gas oil or diesel distillate.

The suitable type of engine required was a dual fuelled version of a marine engine. The dual fuelled engine is essentially a modified diesel engine, and as such, retains the ability to run on liquid fuel as a pure compression ignition diesel engine. Running on gaseous fuel, ignition is by pilot injection of between five and seven per cent liquid fuel. Normal fuel injection equipment is retained but the control equipment and governor linkage to permit ready changeover from diesel to gas, or vice versa, are far more elaborate than on straight diesel engines. Dual fuel engines have a higher thermal efficiency than spark ignition engines, but their rating is restricted due to the 'knock' phenomenon with methane fuel.

Use of gas as a fuel was by no means novel in the marine industry, but it can be said to be very rare. Up to this stage, gaseous fuels had only been used in ship applications in Liquefied Natural Gas Carriers. Methane boil off from cargo had been used during passage of ships in the boiler to generate steam for propulsion. More recently a large LNG carrier, the *VENATOR* had been the first to be powered by a large dual fuel internal combustion engine. This engine was specifically adapted version of the Sulzer 7RND90 two stroke design.

During both world wars in this century, producer gas machinery was employed in a considerable number of tugs, barges and other river craft. However, in peace time most of the vessels were converted back to diesel operation. Originally devised and developed for application in sewage treatment works, where engines could





*MV ACCOLADE II being launched at Carrington Shipyard*

Courtesy — Newcastle Herald

be readily adapted to the varying flow rates of methane rich gas given off by the digestion process, dual fuel engines are readily available from most medium speed engine manufacturers.

For manoeuvrability, the new limestone carrier, to be named *ACCOLADE II* at a future date, required twin screws. Twin engines of around 1200 to 1300 kW were required to give a service speed (clean bottom) of 11.5 knots. Due to an increasing availability of imported natural gas in Japan, engine manufacturers there were developing engines in the required range, but mainly for shore installation. A recommendation was made to adopt the Fuji 6LG32X dual fuelled internal combustion engine. From the manufacturer's available information a study was carried out by Adelaide Brighton Cement's engineers to assess the relative operating costs of dual fuel engines against normal marine diesels. On the current and projected prices of natural gas and diesel fuel in 1980, the reduction in operating costs were assessed at around \$250,000 per year.

The additional costs of the dual fuel engine and associated controls over a normal diesel installation were obtained. From figures given by Carrington Slipways on possible on-board gas storage and reticulation system costs, and in-house estimates for shore bunkering facilities, Adelaide Brighton Cement came up with a figure of \$600,000 as the premium for the dual fuel

installation. At this figure, the innovation to attempt the first sea-going installation of its type was commercially justified and the dual fuel engines were written into the specification.

### **The Gas Installation**

Early in the consideration of a gas installation aboard *ACCOLADE II*, the use of liquefied gas was ruled out. As the vessel operates on a very short run in St. Vincent's Gulf on a daily basis, bunkering could be carried out daily, overnight, whilst unloading was in progress at Birkenhead. Gas would be taken from the normal supply to the cement works at 0.79 MPa (100 psi). This could be compressed to some pressure well below liquifaction, hence making the shipboard installation simple and inexpensive. Enough gas could be carried for the round voyage of 80 nautical miles and to run one of two 250 kW alternators on the full sea load of the vessel.

Calculations were made for the round trip at a speed of 10 knots to assume the worst condition of the ship with a foul bottom two years out of dock. Power output from the engines was to be 90% of full continuous rating attendant fuel consumption 2262 kcal/kWh (1700 kcal/bhp). The generator requirement (output) was to be 60% of 250 kW and assumed also to require 2262 kcal/kWh. The LCV of natural gas was taken as 35 kJ/m<sup>3</sup> at 15°C and 1 atmosphere. Fuel requirements were then calculated at 188



GJ for main engines and 12.8 GJ for the generator, a total of 201 GJ for a round trip, or about 4.3 tonnes of gas.

In the early stages of gas system design, Lloyd's Register of Shipping, as the ship's classification Society, were contacted to give directions on the Regulations and Codes under which we were to work, as they would have to approve the installation. The Department of Marine & Harbours were also consulted, particularly in respect to the proposed bunkering installation to be designed and installed by Adelaide Brighton Cement. In the latter respect, the shore installation was again to be designed and constructed to Lloyd's requirements, as well as equipment manufacture to Lloyd's inspection.

### Manning of the Vessel

The high cost of maritime labour, the two crew requirement and the high capital cost of accommodation and domestic services of a sea-going vessel meant that the ship's crew must be kept to a minimum.

Because of the nature of the vessel's operational service, the South Australian Department of Marine & Harbours' Manning Committee laid down a minimum safety crew of nine. Minimum crews such as this are unacceptable to the Maritime Unions and lengthy negotiations were entered into by Adelaide Brighton Cement and the four Maritime Unions involved.

An early indication of a crew of twelve allowed the Shipyard to go ahead with accommodation provide for this number in the construction. However, this had to be changed to fourteen with changeroom and ablutions for an extra shore based engineer to be on duty during bunkering operations.

The crew consists of Master, Chief Officer, Second Officer, Chief Engineer, Second Engineer, Cook, Steward, Boatswain, Greaser/Seamen, four Able Seamen and one Ordinary Seaman.

### GENERAL DESCRIPTION

Length Overall: 108.63 m  
Length between perpendiculars: 105.00 m  
Breadth moulded: 23.00 m  
Depth moulded: 7.17 m  
Draught loaded: 6.00 m  
Gross Register: 5,000 grt  
Deadweight: 8,460 D.W.T.  
Mean Trial Speed: 11.5 knots  
Classification: Lloyd's Register + 100 A1,  
L.M.C. — Extended Protected Water Service  
U.M.S.  
Twin Screw: Controllable Pitch  
Twin Rudder: Independent operation

### Gas Storage

Stowage of the gas on-board is in 21 commercial gas bottles manufactured by Dalmine SpA, Milan Italy, measuring 9 m long and 0.52 m in diameter; total stowage of gas is 4.3 tonnes at 16 MPa. For safety, the bottles are arranged vertically and reach from keel to trunk deck level. The bottles are well protected from impact damage on collision, being located forward, surrounded by cofferdams and behind two transverse bulkheads, including the ship's mandatory collision bulkhead. Located in the same area are the pressure reducing valves, gas heater and gas scrubbers.

Prior to the gas being piped aft along the trunk deck to the engine room, the gas is heated and passed through two pressure reducing valves in series, which drop the pressure from as high as 16 MPa down to 0.4 MPa. The inlet pressure varying with the bottle capacity as gas is used. As low pressure gas, it passes through a scrubber, then to the main engines and one auxiliary alternator. Further gas heaters are located in the engine room and final pressure reduction takes place at the fuel manifolds on the engines.

### Main Engines

Propulsion is by two six cylinder Fuji LG32X dual fuel engines each producing 1238 kW (1650 bhp) at 600 rpm, each driving through hydraulic couplings and Nigata gearboxes to Kamome controllable pitch propellers. The engines are developed from Fuji's standard diesel design of 320 mm bore by 380 mm stroke, 6LG32X turbocharged engines which have been derated for gas operation.

The main engines can operate on diesel fuel in the manoeuvring mode at a constant 500 rpm, or using natural gas, in the gas mode at a constant 600 rpm. Constant steaming in a diesel mode can also be achieved at 600 rpm. Changeover from gas to diesel occurs automatically at low propeller pitch, when engine load falls below thirty per cent, or on engine malfunction. At a normal service speed of 11.5 knots, the engines burn a mixture of about 93% natural gas and the remainder diesel distillate, which has the role of pilot ignition. When manoeuvring, there is an automatic changeover to distillate as the load drops through 30%.

The engines are started on distillate and operation in the diesel mode is similar to that of a normal diesel engine. However, when operating in the gas mode, additional safeguards are incorporated. Automatic changeover from gaseous to liquid fuel takes place without a change of engine output or speed, should the following malfunctions occur:



- Incorrect gas pressure
- High exhaust gas pressure
- C.P. propellor pitch below 13°
- Engine overload
- Low control air pressure
- Engine load falls below 30%
- Gas leak detection
- Failure of engine room supply or exhaust fans

### Electrical Power

To make the cargo gear independent of the vessel, it has its own deck mounted switchboard supplied with shore power by means of twin 200 amp flexible cables. Ship's power generation is met by two Caterpillar powered Kato alternators. A 250 kW gas fuelled G379 unit can supply all port and sea electrical duties. A second Caterpillar D3412 unit operates on distillate alone. There is also an emergency generator set, a Caterpillar D 3004 driving a Kato 80 kW alternator.

### Gas Leak Detection

Considerable attention was paid to detecting gas leaks. A mechanical exhaust system maintains a negative pressure within the gas stowage compartment, the exhaust duct from the space being led to the top of the foremast. In the engine room, two supply and two exhaust fans draw from collector canopies fitted over the main and auxiliary engines, discharging to a safe position

on the port and starboard sides above the accommodation. All extraction fans are flameproof and are monitored for motor failure. If failure does occur, the main engine operating mode changes automatically from gas to diesel.

Both the gas stowage compartment and the engine room are fitted with gas detection equipment designed to give an alarm at 20% of the lower combustible limit. Should the gas level rise to 50% of lower combustible limit, gas to diesel changeover takes place. The latter setting also closes the main gas supply valves.

Additional alarms and shutdowns are also fitted to protect the low pressure pipework from reducing valve failure and low temperature in the case of heater failure. A Halon 1301 fire protection system is fitted to the engine room and gas compartment as well as a water drench system to the latter.

### Ballasting System

Ballasting and deballasting is controlled remotely from a mimic panel on the navigating bridge. All valve and pump operations are controlled from pushbuttons on the console with operational conditions indicated by lights.

### Cargo Facilities

The total cargo is carried in one rectangular hold measuring 55 m x 19 m and is loaded through a single central hatch measuring 2 m



*MV ACCOLADE II arriving at Port Adelaide*

Courtesy — Adelaide Brighton Cement



square. A sophisticated Kvaerner 'Cargo Scooper' system built by Malco Industries Ltd. of Adelaide gives the vessel self-loading and self-discharging capability.

The system has two scraper conveyors working in a longitudinal direction; a scraper conveyor working in the transverse direction; a shuttle belt conveyor positioned over the transverse scraper at the top of the hold; and a bucket elevator working vertically in an enclosed shaft fitted with ten hydraulically operated feeder gates along its length at the ship's side.

The loading system accepts and distributes limestone at rates up to 1,500 tonnes per hour from a shore conveyor delivering to the midships hatch. The reversing shuttle conveyor, positioned by a two speed winch, distributes the cargo transverseley to the two longitudinal scrapers which transport it fore and aft until the hold is full. These reversible longitudinal scrapers are powered and traversed by hydraulic drives built into the scrapers. Power and control signals are fed to these scrapers by independent cable reel systems.

Loading is carried out under automatic control with the operator on shore raising the longitudinal scrapers as directed by a control bot display. Should it be necessary to trim the vessel, the shuttle conveyor and longitudinal scrapers can be positioned manually.

The system discharges limestone over the sides at rates up to 700 tonnes per hour from the head of the bucket elevator located on the starboard gunwale to a shore conveyor.

On unloading, the longitudinal scrapers reverse direction to scrape material to the transverse scraper feeding the elevator through the shutter doors which open progressively as the cargo level falls. During unloading, the longitudinal scrapers traverse the hold from opposite sides to maintain even trim of the vessel. When the scrapers have traversed the hold they are lowered to take a new 'cut' predetermined by the operator to give the optimum unloading rate.

Control of all this equipment, including the scraper hoist winches, is provided by a Texas Instruments 5TI Programmable Logic Controller.

Various protection devices which prevent the system overloading, or indicate malfunctions and allow optimisation of the operating rate are also included in this system.

### Accommodation

All accommodation is located aft in an air conditioned, three tier superstructure, with full private facilities for a crew of five officers and nine ratings. There are three smokersrooms with all modern electronic entertainment devices, two dining messes and a single modern galley serving two pantries.

### Nav aids

Nav aids include echo sounder and radar by AWA Sperry autopilot, Tokyo Keiju gyrocompass and unmanned machinery space control, alarm system and fire detection by Honeywell.

Full steering and machinery control is possible from either the bridge wing or centrally on the navigation bridge.

### Steering

Independent Tenfjord rotary vane steering gears operate two widely spaced spade rudders. The gears can be synchronised for normal steering or operated independently of one another for manoeuvring. The combination of twin controllable pitch propellers and independent spade rudders allows the vessel to berth without bow thrusters or tugs.

### CONCLUSION

The final vessel cost was just over \$11,000,000 and within budgeted estimates, except for the gas system. Daily turn-around of limestone for the present installed capacity of the Birkenhead works is being met with reserve. Service speeds have been maintained well within prediction, considering the ship is well over twelve months out of dock. Fuel consumption is well within predictions and shows signs of being better than anticipated in the gas mode.

The gas installation costs exceeded budgeted figures due to the stringent regulations imposed for safety, because there were no maritime codes of practice for the use of CNG. With *ACCOLADE II* as a forerunner to other such installations in similar duties throughout the world, these regulations will no doubt be relaxed as experience is gained. CNG is by no means the 'bogey man' that LNG and LPG systems are. The increase in cost of the installation for gas on-board and ashore was the order of 80% above prediction. However, fuel cost savings on present prices, including the recent increases in gas costs and on predicted differential between gaseous and liquid fuels, gives a payback period on the system of about four and a half years, still satisfactory.





# THE IMPLICATIONS OF A POLICY OF SELF RELIANCE TO AUSTRALIA'S MARITIME STRATEGY

by Lieutenant Commander S. Rowley RAN

'Australians all let us rejoice  
For we are young and free.  
We've rich red soil and wealth for toil;  
Our home is girt by sea.'  
— Australian National Anthem

Our National Anthem emphasises the fact that our country is surrounded by water, and anything or anyone can approach it only over, on or under the sea. Such a good natural barrier should be augmented by a strong, balanced maritime force as the first line of our defence. We are also dependent on the sea for our trade, and this dependence is no less true in the 1980s than it was when the song was penned in the 1870s.

From earliest times, Australia's military forces had been structured to form parts of larger single Service forces raised by another country. Until World War II, this other country was Great Britain and since then the United States of America has been the guardian. One assumption underlying this structure was that Australia's population was too small to permit it to raise an independent Defence Force. It thus had to look to more powerful allies for its defence but would contribute according to its means. All the actions in which Australian forces have participated since before Federation, except the 1914 attack on German New Guinea, have followed this assumption.

In the late 1960s and early 1970s, Australian involvement in Vietnam was repudiated by a considerable part of the electorate. Australia was seen as being involved purely to pay its dues for future American protection. When the Labor Government was elected in 1972, a new policy of independent foreign attitudes was espoused. One consequence of this was that the Australian Defence Force was restructured to be self reliant in battle.

## SELF RELIANCE

'Self Reliance' means many things to many people. As Minister for Defence, Bill Morrison used the term to mean that 'combat operations were more likely to be in the Australian vicinity than in some forward theatre and that our three Services were much more likely to be operating together than each in support of an allied service.'<sup>1</sup> Such a policy would require 'an adequate defence infra-structure and communication network, a comprehensive intelligence organization and industrial, scientific and technological support.'<sup>2</sup> My concept of self reliance is that it is the ability to complete a mission without enlisting the aid of powerful allies. It includes obtaining all necessary supplies from their sources and delivering them to where they are needed using Australian transport. I do not advocate that we produce everything ourselves for this is patently impossible. We cannot, for example, produce all the oil we need, but must import it. Therefore, one needs to consider the tail as well as the teeth when considering self reliance in maritime strategies.

In 1975, Morrison said of our logistics capacity, 'The most obvious deficiency of our forces is our limited capability in supply and support and particularly in field logistics. Operating as an adjunct to larger allied forces much of the supply and support function was handled for us. Now we have to develop ... our own logistic capability.'<sup>3</sup> Since 1975, the RAN has attained an

### The Author

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amphibious heavy lift capability in *HMAS TOBRUK* and has lost the considerable logistic support provided by *HMAS MELBOURNE*. *HMAS SUCCESS* is being built to replace *HMAS SUPPLY*. The logistic capability of the RAN has not been developed: nor is there any current plan to do so. This logistics limitation has considerable effect on the extent, range and types of maritime missions.

## MARITIME STRATEGIES

Geoffrey Till lists the fleet blockade, the maintenance of a fleet-in-being and the decisive battle as the classic maritime strategies.<sup>4</sup> James Cable would add gunboat diplomacy to these.<sup>5</sup> These four strategies are the means by which a number of desirable ends may be achieved. Six such aims are:

- the projection of power ashore,
- the protection of the off-shore estate,
- the protection of shipping,
- strategic deterrence,
- diplomatic pressure, and
- maintenance of command of the sea.<sup>6</sup>

All the listed aims are relevant to Australia in the 1980s. The question is whether a self reliant Australian Defence Force has the balance to apply the strategies to achieve the aims. To answer this question, one must determine the capabilities needed to apply the strategies.

### The Fleet Blockade

The fleet blockade involves one force bottling an opposing force in its ports or at choke points usually near the enemy territory. This clearly requires the ability to maintain a fairly strong force on station for as long as the blockade is to be maintained. The force could be submarine in nature or a surface fleet. Our submarines are suited to this role and we have enough to provide a continuous presence at a location anywhere in our region if necessary. If the opposing force had a weak anti-submarine capability, they might not attempt to break the blockade. Any ships which did challenge the blockade successfully, however, could then outrun the submarines and pose a threat to the remainder of our fleet. If the opposing force had ships in a number of areas, they would know that our submarines would be thinly spread to guard them all, so a number of ships challenging at once would almost guarantee success for some.

Our surface fleet could not maintain a blockade for three reasons. Firstly, it lacks organic defensive air cover and to operate continuously off enemy territory without this would be foolhardy. Most such places are beyond the range of FA-18 aircraft so they could not provide this cover. Secondly, it lacks a credible defence

against submarine attack if operating without P3 cover. To patrol with P3s continuously in a hostile air environment would also be stupid, even if the blockade were within the P3 range of about 2500 km. Thirdly there is the problem of resupply. Our one replenishment ship would be a prime target, for with its demise the blockade would wither. Also, as our ships can carry fuel for only four to eight days' steaming, this the most time the replenishment ship could leave them unattended while it replenished its own stocks when they ran low. Thus there would be the dual problems of finding a suitable resupply port within two or three days' steaming or 2000 km from the blockade area and ensuring the safety of the supply ship at all times. If two or more areas were being blockaded, the supply ship would have the extra hazard of regularly transiting from one force to another in the danger area.

### The Fleet-in-Being

The fleet-in-being is a strategy of deterrence. An enemy is constrained from taking certain action because he knows one has the power to retaliate. Australia's maritime force is certainly very capable when operating with FA-18 or F-111 air cover and within range of anti-submarine P3 aircraft. For reasonable defence against a submarine, a surface ship needs to know of its presence at a range of about 60 km, which requires remote sensors such as sonobuoys. At the moment, the only maritime agents that Australia has with these sensors are the P3 aircraft. Therefore, our Fleet has a reasonable anti submarine self defence capability only while under the umbrella of these aircraft; that is, to a range of about 2500 km from the coast. Beyond that region, the ships will not know of a submarine presence until their on-board sensors detect it. The range of these sensors is much less than the range at which a submarine can accurately aim a guided weapon at the ships, so if the submarine is close enough to be detected by the ships they have little hope against it unless it has unguided weapons only.

Another weakness is the lack of over-the-horizon surveillance capability of Fleet units unless again supplied by P3 aircraft. This means that ships are limited to engaging targets within radar range of a major Fleet unit, wasting much of the range of our guided surface to surface weapons. The unit in contact is itself in danger of attack, compounding the problems. Finally, the lack of early warning means that the Fleet could be vulnerable to a hostile air attack with guided weapons. By the time the Fleet was aware of an attack, it might be too late for it to defend itself.

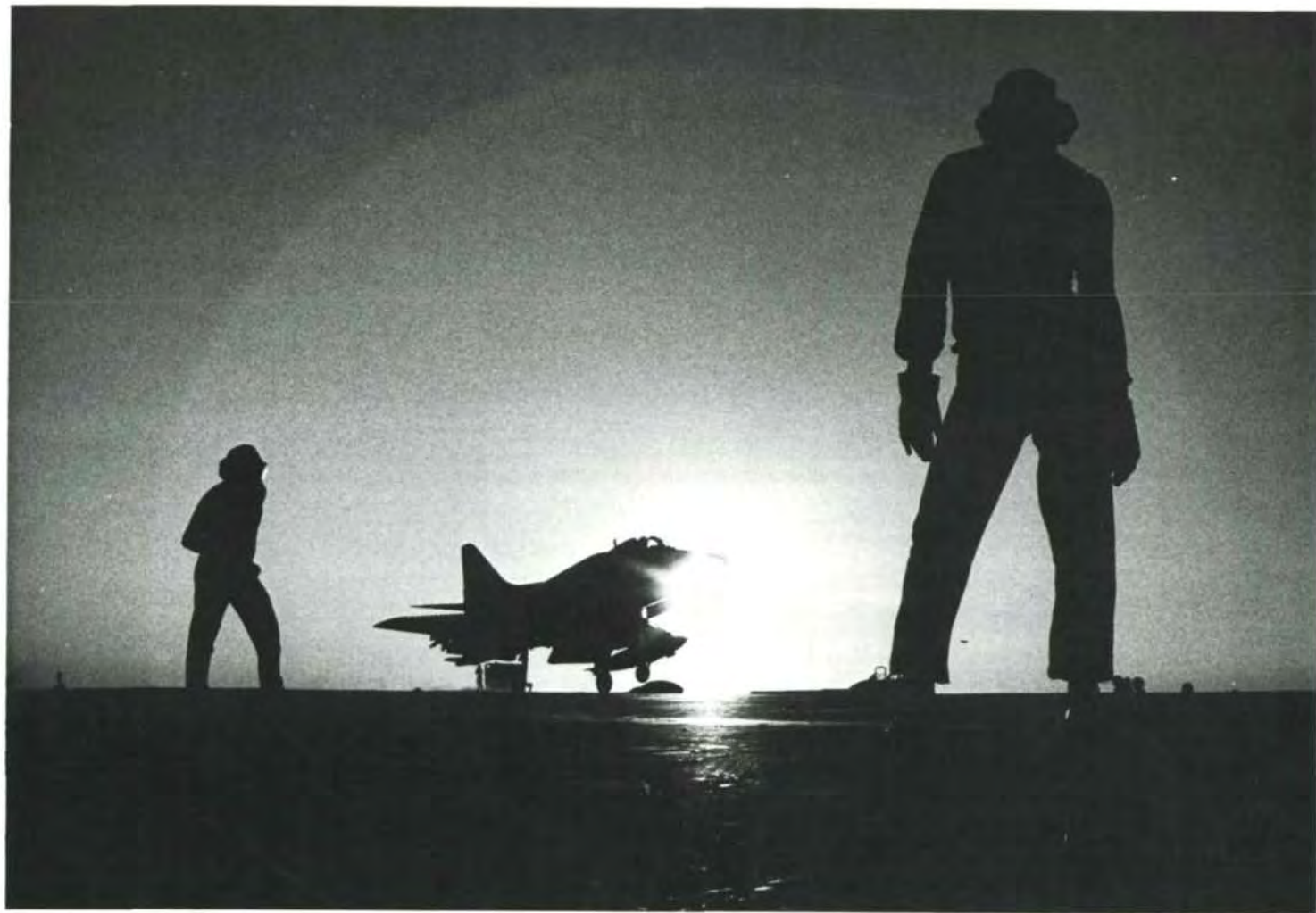
All of these deficiencies lessen the effectiveness of the fleet-in-being as a deterrent force.





*Air and Sea*

Courtesy — Westland Helicopters



*What Australia Needs?*



Within range of land based aircraft, there is no doubt that the Fleet would be a formidable opponent, especially as few potential opponents could project offensive air cover that close to the Australian coast. Beyond this range, though, an opposing force could operate with a much lower threat of Australian intervention.

This is important because shipping across the Indian Ocean becomes unambiguously bound for Australia at least 4000 km from our shores. This gives an opponent a stretch of some 1500 km of shipping route in which to harass or destroy Australia-bound shipping with little danger from our maritime forces. The shipping includes our oil imports — vital for our country and a prime target for an opponent.

### The Decisive Battle

The decisive battle is the meeting of the opponents in mortal combat. In a way, it is the result of the failure of the fleet-in-being strategy and any weakness of a fleet for that strategy is equally a weakness in the decisive battle. Australia's maritime force is thus well prepared for a battle under the cover of land based aircraft, but is vulnerable to submarine, surface and air threats once outside that range. We are thus limited in our choice of battle areas and would want to avoid a decisive battle unless against an equally weak opponent.

### Gunboat Diplomacy

Gunboat diplomacy is defined by Cable as 'the threat or use of limited naval force, otherwise than as an act of war, in order to secure advantage, or to avert loss, either in the furtherance of an international dispute or against foreign nationals within the territory or the jurisdiction of their own state.'<sup>7</sup> Cable goes on to define 'limited naval force' as that which meets the following criteria:

- It possesses a definite purpose of which the extent is apparent to both sides.<sup>8</sup>
- The purpose of the force must be both limited and tolerable to the victim.<sup>9</sup>
- The probability of immediate military victory of the aggressor should be equally apparent to the victim.<sup>10</sup>
- The action does not take place between countries at war and is not intended to create a state of war between them.<sup>11</sup>

These conditions are such that 'the options of the victim are confined to acquiescence of retaliation which can only follow, and not prevent, the achievement of the desired result.'<sup>12</sup> Cable spends a considerable part of his book looking in much greater detail at the conditions under which an action may be termed 'gunboat diplomacy' but the listed criteria provide the definition. The exercise could be in support of a

number of aims; Cable includes examples where gunboat diplomacy has been used recently in support of diplomatic efforts and to project power ashore.

When one considers Australia's neighbours, especially to the east, the scope for using gunboat diplomacy becomes obvious. Most of the Pacific countries are so small and weak that Australian naval forces could undertake the sort of limited operation described with impunity. The country would have no choice but to acquiesce at the time if faced with a task force of, say, six or seven major warships.

Gunboat diplomacy is a swift strategy which Australia has the logistics capability to support. Few of our neighbours have the capacity to apply an air or submarine threat to the raiding force. In any case, the strategy normally creates a *fait accompli*, giving the victim no time in which to act. This means that the strategy could also be used against countries that have the capability to respond, but not in the spot where we choose to act. A small country can even apply this strategy against a strong one if it has the necessary superiority at the appropriate time and place. Cable cites the capture of *USS PUEBLO* by North Korea as an example.<sup>13</sup>

### WHAT AUSTRALIA NEEDS

Australia's favourable self-reliant maritime options are gunboat diplomacy and limited deterrence by a fleet-in-being. There is a clear lack of ability to adopt the blockade posture for a number of reasons and the decisive battle could only be fought to Australia's advantage in our own waters, where an opponent would probably not venture anyway. There is a doubt about our ability to protect our shipping en route to or from Australia, hence about our ability to resupply ourselves and our forces.

This weakness stems from our lack of:

- aircraft capable of providing continuous early warning against air, surface and submarine threats to a fleet operating in mid ocean
- aircraft capable of providing air cover for vessels operating well away from the Australian coast
- a second underway replenishment vessel to ensure a capability for sustained operations at a distance.

### Early Warning

There is an intention to embark on the FFG class ships, helicopters which will be capable of the surveillance tasks currently missing. The FFG is not our main ASW class, however, and there is no way of embarking helicopter flights on



the DEs to enable them to use their weapons to best effect without relying on other ships for support. DEs will therefore be fully effective only in company with helicopter equipped FFGs.

### Air Cover

Air cover for the Fleet is supposed to be provided by RAAF F-111 or FA-18 aircraft but the range of these aircraft precludes their providing continuous cover for a fleet operating near an enemy coast. As they would take an hour or more to reach a fleet operating in these areas, it is not acceptable merely to have them on standby in Australia. The Fleet would get much less than an hour's warning of any air attack. The only way to provide a satisfactory cover under these conditions would be to embark air defence fighters in the ships. There is no plan to do this in the foreseeable future.

### Resupply

A second supply ship would allow a range of options. At present our having only one replenishment ship limits our radius of extended operations to about 2000 km. Each supply ship has fuel for the Fleet for about 30 days and victuals for about 25 days. If we had two supply ships, then while one was reprovisioning, the other would be on station supplying the Fleet. In this case, the turnaround time is about 25 days, so the Fleet could operate at about ten days steaming or about 6000 km from the replenishment port. This would give Australia the logistics capability to operate anywhere in the Indian Ocean, specifically to protect any vital shipping.

A second supply ship would also provide a redundancy in case one were inoperative for any reason. Although our options under this circumstance would only be as good as they are today, they are better than if we had no remaining replenishment capability at all.

### CONCLUSION

In the present situation, Australia has the maritime capacity to defend Australian waters using her Fleet and maritime reconnaissance and strike aircraft but could neither defend her offshore possessions and shipping, nor carry the battle into the aggressor's domain. It has been said that one does not win a battle by only defending. At some stage one must go on the offensive and this the self reliant maritime force cannot do.

To provide the ability to carry the fight to an enemy, Australia needs the ability to operate well away from her own shores. This requires a second underway replenishment vessel and

shipborne early warning aircraft to warn against air, surface and submarine threats. If the blockade strategy is to be used and ships are to operate near enemy bases, then shipborne air defence aircraft will be needed to provide an early defence against air attack.

While there is a plan to supply some Australian ships with helicopters which may have the necessary warning capabilities, there is no plan to provide either a second underway replenishment ship or to provide a shipborne air defence aircraft. For the next ten years at least, Australia seems destined not to be able to operate in a hostile environment outside her own territorial waters. She will not have the capability to go from defensive action to offensive action without outside aid. The self reliant maritime force is nearly toothless.

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# OVERSEAS STAFF COLLEGES

by Captain J.S. Merrillees, RAN

I thought members of the ANI and readers of the ANI Journal may be interested in some aspects of a recent visit I made to overseas staff colleges. The aim of the visit, the first by a Director, RANSC, since the College was established in 1979, was to examine at first hand and in some detail, the conduct, content, development and facilities of overseas staff colleges, with a view to gaining greater knowledge of how other countries are going about the middle management training and development of their officers.

## Colleges and Schools Visited

I visited staff colleges and schools in Malaysia, France, United Kingdom, Canada and the United States. Colleges visited were at all levels of staff training, from the highest level (National Defence College, Canada) to the junior level (Canadian Forces Staff School). Most of the visits, however, were to colleges at the intermediate level, that is, at an equivalent level to RANSC. I also visited the USN Post Graduate School, Monterey, which is not a staff college per se, but plays an important part in the educational development of US naval officers at the mid-career level.

At all colleges, without exception, I was welcomed enthusiastically and feted with hospitality. As a general rule, discussions at colleges were preceded by a formal briefing by a senior member of the Directing Staff or Faculty. A tour of the College and facilities followed and the visits usually ended with a discussion period with the Commandant or equivalent.

## General Impressions

The importance of staff training to officers' development was stressed at every college I visited; not just attendance at an intermediate level staff course, but continuing educational and professional development training throughout an officer's career. The need for naval officers to understand all aspects of the maritime environment and to have a good grasp of maritime strategy and naval warfare was also stressed.

One could not help but be impressed with the facilities at the Naval War College and the USN Post Graduate School, and with the approach to officer development taken by the USN. The personal interest in these two training institutions shown both by the present Chief of Naval Operations (CNO) and by his predecessor, has given these schools increased status and impetus. I envied the relative autonomy in financial administration of USN Colleges, and also the experience and talent in their academic faculties.

I was impressed with the Malaysian and Canadian joint approach to staff training. This seems to be a most sensible and economical approach by countries with relatively small Defence forces, tasked primarily with national security and defence. The increased interest in and emphasis on joint planning and operations in all countries I visited, also commends this approach.

## CURRICULA AND COURSE CONTENT

### Basic Staff Skills Studies

Only in Malaysia where there is no junior level of staff training, and at the Royal Naval Staff College (RNSC), where completion of the Lieutenant's Greenwich Course is not a prerequisite for selection, is any emphasis placed on basic staff skills training. Generally, basic staff training is conducted at a junior or basic staff course. At the Royal Air Force Staff College (RAFSC), however, a great deal of effort is put into improving and developing students' oral skills. These skills are perceived to be lacking in the average GD RAF officer because of the small amount of contact junior RAF officers have with other ranks.

A number of colleges, including the United States Armed Forces Staff College (USAFSC), Canadian Forces Command and Staff College (CFCSC) and RNSC expressed concern at the standard of students' English grammar and expression, particularly in the written mode. At the USAFSC, students are tested on joining and



assigned to English remedial tuition if they fail to satisfy the standard. Two English 'professors' are employed, almost solely for this task and, as the number of students requiring remedial teaching appears to be increasing, the College is contemplating employing another 'professor'. Eighty out of 280 students were undergoing remedial English on course when I visited USAFSC.

### **Management Studies**

Although some time is devoted to the study of management principles, aids to decision making and problem solving techniques at the Malaysian Armed Forces Staff College (MTAT), Ecole Supérieur de Guerre Interarmées (ESGI) and RNSC, this is generally regarded as being within the province of junior staff colleges or specialised management institutions, such as the RMC of Science, Shrivenham. Most colleges at the intermediate level do, however, spend some time looking at leadership and command concepts and principles. This is a particularly strong element in the CFCSC curriculum and to a lesser extent at RAFSC.

A two week seminar on management is conducted at the Malaysian Defence Forces Staff College (MTAP); a team from the Government Institute of Management is seconded to MTAP to conduct this seminar. At the US Naval War College (USNWC), the first study is regarded as the management phase and includes the study of analytical techniques and decision making strategies; this is a very well conceived and dynamic study which benefits from having a very strong and dedicated academic staff on campus.

### **Maritime Strategy and Naval Studies**

At advanced and intermediate level naval colleges, and at joint Service colleges which conduct single Service phases/terms, such as ESGI, CFCSC and MTAT naval studies, including maritime strategy, naval capabilities, the maritime environment, naval warfare, naval operations and planning, get by far the greatest emphasis, and are generally regarded as the most important part of the course.

At CFCSC during the 17½ weeks Environmental Phase, a very well structured and balanced programme of naval studies is conducted. At MTAT, during the single Service term, the RMN officer is given a thorough grounding in the capabilities of the RMN; the capabilities of navies in the region; different weapons systems; sensors; platforms; some naval tactics, eg, planning and laying minefields; amphibious operations, and all forms of maritime war and operations. Little time is devoted to the study of maritime history or strategy.

One third of the Course at ESGI is devoted to operational studies which include maritime strategy, submarine operations, surface warfare, carrier operations, anti-submarine warfare, air defence and blue water navy operations.

As one would expect, strategy and policy are important ingredients of the USNWC. A study of maritime history and strategy is part of the curriculum, but the College stresses that the study of current operations and the present maritime environment is as important as the historical and case study perspective.

Both the RNSC and the CFCSC studies of maritime strategy are enhanced by having well known and well respected maritime strategic thinkers and authors to lecture and advise on the subject. Geoffrey Till is on the faculty of the Department of History and International Affairs at RNSC Greenwich, and Barry Hunt is the Associate Professor of History at the Royal Military College in Kingston, Ontario.

### **Joint Services Studies**

Joint Services Colleges such as MTAT, ESGI and CFCSC obviously have the advantage over single Service staff colleges with regard to studies of joint Service operations and activities. Students from all the Services get together for the final phase of the courses at MTAT and CFCSC and joint operations and planning are significant parts of this phase.

The USNWC has an integrated warfare study in the final phase of their course and, with Air Force, Army and Marine faculty members, and with a strong contingent of officers from other Services on course, this is regarded as a successful part of the course curriculum.

After the Falklands conflict, greater emphasis has been placed on joint operations and planning by the British. RNSC devotes ten days per course to joint Service activities: 4 days are spent visiting RAFSC and 5 days visiting Camberley for joint planning exercises with the other Service staff colleges. Because of the length of the RN Staff Course compared with the Course at RAFSC and Camberley, (6 months compared to 10 months), the RAFSC and Camberley have been obliged to conduct the same joint planning exercise twice a year to satisfy RNSC requirement.

### **War Gaming**

War gaming is conducted at a number of the colleges I visited. Some, like the UNSWC attach considerable importance to gaming while others, like MTAT, run simple mini-war gaming type exercises.

The Naval War Gaming Centre at Newport, is a most impressive facility and provides war



gaming services at the highest levels of strategy. As well as support for the NWC and the USN, the Centre conducts a game for the CFCSC and for the Federal German War College. In support of USN activities, the War Gaming Centre plays games for both Atlantic and Pacific Fleet Commanders and is used to test actual contingency and war plans. Futuristic games to test weapon effectiveness and rules of engagement are also conducted. For the past five years, a three week global war game has been played, using current intelligence and with experts in all fields participating. This war game is set in the NATO environment and proceeds through the long conventional war to an all out nuclear war transition.

At Camberley, where great importance is attached to basic tactics and principles of war, a major war game is used to consolidate instruction in these subjects.

### STUDENTS/COURSE MEMBERS

At Single Service/Joint Service Staff Colleges at the intermediate level, experience and qualification criteria for attendance vary very little. With the exception of the CFCSC, all other colleges require students to have attended and completed successfully a junior staff course. The type of course varies: at ESGI, the naval students do a correspondence course; at RAFSC, students complete a correspondence course and a Basic Staff Course; at Camberley, before attending, students are required to have completed either a 10 month or 2 month course at the Royal Military College of Science, Shrivenham (engineer/science graduates and officers with some technical background do the 10 months course and the remainder do a two months course or a comprehensive language training course). Also students must have attended a junior command and staff course and passed a written examination in military studies and international affairs. Although RN officers are required to have attended the Lieutenants Greenwich Course, (LGC), it does not always work out that way.

Students at these intermediate level colleges are invariably LCDR or very junior CMDR, aged 36-38. Only at RNSC was there a smattering of Lieutenants; but this is very much the exception. At ESGI, the overseas students' ranks varied from Captain to LCDR.

At the advanced level of staff training, ie USNWC, MPAT, and UKJSDC, there is no requirement for students to have attended an intermediate level of training; in fact if you attend the intermediate course at NWC, you are disqualified from attending the advanced level course. Command experience is an important

factor in being selected for the NWC advanced course. (The percentage of officers with command experience attending has been lifted from 25% to 64% in the past few years). At present, the RAF will not send to the UKJSDC officers who have attended RAFSC; however there is feeling that this attitude may change. With respect to junior staff training courses, most Colleges I visited would like to see as many officers as possible attending. Only about 40% of officers are able to attend the CFSS because of facilities and staff limitations.

It is the RN's intention that all GL officers attend the LGC; it is considered to be a natural lead-in to PWO training. It is an eight week course and 11 courses every two years are conducted for 40 students per course. At RAFSC, 9 Basic Staff Courses are conducted each year over a 23 working day period. A review of staff training in the RAF in 1970 concluded that more officers should be trained at the lower level and fewer at the intermediate level.

### Selection Methods/Importance to Career

With the exception of MTAT, entry into intermediate and advanced staff colleges is by selection; all Malaysian officers at LCDR(E) level are expected to attend a staff course at home or overseas. Attendance at colleges is considered to be career enhancing with selection at all levels being very competitive. Only the top 20% of RAF Officers go to RAFSC. Camberley students require a recommendation by their CO and Formation Commander, and must be considered to have the potential to command the regiment. Students are then chosen by an Army selection board.

The RN has a target of training 72 officers per year; this number is based theoretically on the number of selections for promotion to Commander each year. At present, only about 50% of officers selected for promotion are staff trained; there is now a conscious effort being made to send only those officers with promotion potential to the course.

Only about one in four French naval officers is accepted for staff training; 35 out of 120 applicants were the numbers quoted. It is essential to have attended the intermediate level staff course to gain command and promotion. At ESG (Navale) it is important to do well; good marks count towards good appointments and thus enhance future careers. At Camberley, the Military Secretary gives the Commandant a list of jobs available and the College nominates students to fill positions. Thus, good performance on course can have a very real effect on an officer's career.



The USNWC would like to see the advanced course as a prerequisite for promotion; the present CNO has shown a particular interest in the College and this is seen to have had a marked effect on the standard and attitude of students. Both the US Army and the USAF are keen to get more students on course at NWC because of its reputation. At the USAFSC, students are particularly keen to attend because of the joint nature of the College and the condensed training. (It is a substitute for the single Service Colleges).

#### OTHER MATTERS OF INTEREST

I have not gone into any detail in this article on course design, curriculum development, directing staff, facilities or administration of overseas staff colleges. Needless to say there were a number of matters in these areas which were of interest to me as the Director of RANSC, but possibly of passing interest only to ANI Journal readers.

There were, however, several other matters which may interest readers; the use of academic instructors was one. At a number of Colleges visited, DS were assisted in their duties by academic experts. At MPAT, there is a Director of Strategic Studies who has a doctorate in Political Science; he lectures as well as comments on student papers. The RN Staff College has the Department of History and International Affairs within its confines, and uses its expertise for lecturing, tutorials, assistance in finding expert lecturers and commenting on student papers.

The Faculty at USNWC is completely

integrated; there are 11 military and 11 civilian staff in the Policy and Strategy Study; 6 military and 2 civilians in the Naval Operations Study. These civilians are all experts in their fields and, in some instances, nationally and internationally recognised. They offer continuity of service, get on particularly well with the uniformed members and are extremely well paid.

I was also particularly interested in the activities of a team at the USNWC College called the Strategic Studies Group which was formed to carry out specific strategic studies for CNO. The Group comprises four naval officers and four marines at the junior captain/senior commander level who stay together for about a year. Although supported by the NWC, the Group has direct access to CNO. Last year the Group was tasked with 'developing and describing US maritime strategy in the Pacific and Atlantic Oceans'. It presented its report to CNO and both Atlantic and Pacific Fleet Commanders; many of its recommendations were adopted.

#### BENEFITS OF THE VISIT

As well as satisfying the aim and objectives of the visit, I now have a good feel for what we should be trying to achieve at RANSC and hopefully, changes can be made in due course which will enhance our course curriculum and improve the quality of our staff training. There were also a number of intangible benefits, not the least of which was the establishment of mutually beneficial relationships with other staff colleges around the world. Personally, it was a most interesting and educational experience which I thoroughly enjoyed.



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# SOUTH AUSTRALIA'S NAVY

## Part II — 1900 to 1946

by Commander R.J.R. Pennock ADC RAN

Part I of this article covered the early days of South Australia, the purchase of *HMCS PROTECTOR*, and formation of the Naval Brigade in 1884. Before continuing with the naval story in South Australia, it is necessary to cover in some detail the problems and changes that came about with Federation. The Commonwealth of Australia came into existence on 1 January 1901 and two months later all States transferred their naval forces to Commonwealth control, allowing the newly formed government to assume responsibility for defence. Assets included 9 ships, the Naval Brigades and a number of Queensland Naval Cadets. Until 1904, there was no overall naval commander, the Federal Government using the existing State Acts to control its naval forces and nominating a Naval Commandant to administer and exercise control in each state. Total dependence for defence was placed on the Royal Navy and nothing was done towards creating a strong local (Australian) naval force. Regular and citizen forces suffered under these uncertain policies, and by 1905 the citizen naval forces had been reduced in numbers from 1,864 to about 850.

On 1 March 1904 the control vested in local Naval Commandants was reduced when the post of Naval Officer Commanding Commonwealth Naval Forces was created. By December the same year, the post had been re-titled Director of Naval Forces (DNF) and a Board of Naval Administration set up with Captain W.R. Creswell CMG as Director. The Commonwealth Naval Force consisted of:

- Personnel: 1,000 men, of which approximately 196 were permanent service and 804 in the naval militia
- Ships: 9 ships totalling 5,154 tons acquired from:  
Victoria — *CERBERUS*, *COUNTESS OF HOPETOUN*, *CHILDERS*, *NEPEAN*, *LONSDALE*  
Queensland — *GAYUNDA*, *PALUMA*, *MOSQUITO*  
South Australia — *PROTECTOR*
- Miscellaneous: 2 motor launches

We must diverge at this point to give a little of the background of William Rooke Creswell who resigned his commission in 1878 whilst serving as a Lieutenant in the Royal Navy. Appointed a senior lieutenant (lieutenant commander) in the SA Naval Forces in October 1885, he succeeded Captain Walcot as Naval Commandant in 1893. Creswell left the SANF in 1900, moving to Queensland as the Naval Commandant and was appointed in command of *PROTECTOR* (temporarily *HMS*) for the period of her duty in the Far East. In 1904 Creswell again resigned and moved, this time taking up the position of Naval Commandant, Victoria. He was both local Naval Commandant and Naval Officer Commanding CNF before his appointment as Director, Commonwealth Naval Forces. Creswell was a strong advocate that Australia should have a navy of its own and he worked tirelessly towards that end. Although his initial ideas had a set-back in 1902 when the Commonwealth accepted the British Government offer of a larger (subsidised) fleet of RN ships, subsequent events proved him right.

In 1911, compulsory training was introduced under the name 'Universal Training Scheme'. In essence, this called for six years elementary training for boys under military age followed by seven years intensive training as adults, broken up as follows (for the Naval Militia):

- Junior Cadets — 12 years old. Two years service carried out mainly in schools.
- Senior Cadets — 14 years old. Four years service (with the provision that those reaching 15, 16 and 17 in 1911 served for 3, 2 and 1 years respectively).
- Adult Service — 18 years old. Seven years' service.

During the years 1911 to 1929, the system was revised, suspended and resumed many times and on its first reading is quite complex. Should any reader wish to study the changes in depth, I would recommend the explanations given at pages 63 to 66 of *An Outline of Australian Naval History*.

Now we can continue with the story of South Australia's Navy. The 12 torpedoes (fate un-



known) and the Second-rate *TB No 1* were not handed over on Federation, the local contribution to the newly formed CNF being the cruiser *PROTECTOR*, a small number of permanent naval personnel, the Naval Brigade and a Naval Reserve Depot in the suburb of Largs Bay. The Naval Commandant was Captain C.J. Clare who continued in that post until 30 June 1911, being relieved by Commander O.L.A. Burford.

Visitors to the state were not numerous, but an early highlight on 9 July 1901 was the visit of HRH The Duke of Cornwall and York in *HM Y OPHIR* (Commodore Winsloe) in company with HM Ships *ROYAL ARTHUR*, *MILDURA* and *RINGAROOMA*. Another visitor that year was the German warship *COROMORAN*. 1903 brought more international visitors in the form of HE Rear Admiral Hikono Kamimira and the Japanese warships *HASHIDATE*, *ITSUKUSHIMA* and *MATSUSHIMA*.

Recalling that the early 1900s were a period of uncertainty for the CNF, activities by the local naval contingent and the Naval Militia were at a low level. However, one well recorded highlight came in February 1914 when Rear Admiral Sir George Patey RN (then commanding the infant RAN) visited the Largs Bay Naval Depot. The following HMA Ships accompanied the visit: *AUSTRALIA*, *MELBOURNE*, *SYDNEY*, *PARRAMATTA*, *YARRA* and *WARREGO* (the larger vessels anchoring in Holdfast Bay off the suburb of Glenelg).

The declaration of war on 4 August 1914 served to stir the pace of naval life. The navy's first act (next day) was to seize the German liner *SCHARZFELS* (later *ARALUEN*) berthed at Port Adelaide on behalf of the Commonwealth. On 14 October, Captain C.S. Elliot became the District Naval Officer. By now the RAN and its Naval Brigade (the reserve forces) had defined local tasks including operating Port War Signal Stations, the Examination Service, minesweeping harbour patrols and as Naval lookouts. 1915 also saw changes around the Port Adelaide naval scene. The Largs Bay Naval Depot was closed down and all activities were transferred to the present site at Birkenhead. Commander O.L.A. Burford RAN again assumed duties as the DNO on 21st March.

On 31 May 1915, the Commonwealth purchased one of the prettiest locally owned vessels in Port Adelaide, the 289 ton steel steam yacht *ADELE*. She was built by Hawthorn and Company of Leith, Scotland in 1906 for the South Australian landowner Henry Dutton of Kapunda. After purchase, she was renamed *FRANKLIN* and commissioned as a tender to the RAN College, Jervis Bay. In 1926 she was sold to the Territory of Papua and New Guinea reverting to the original name. After other various owners,

*ADELE* was re-commissioned into the RAN as *HMAS ADELE* in September 1939 and employed as an examination steamer at Port Kembla NSW. Regrettably, she was wrecked on the breakwater on 7 May 1943:

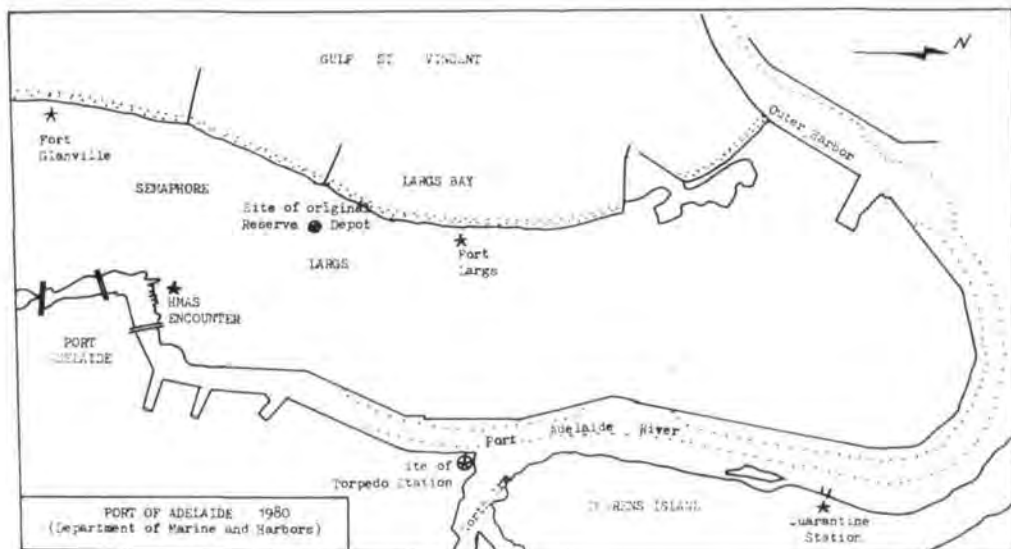
Later in the war, another task was found for the Naval Brigade, that of the RANB Naval Guard Section. Set up on 22 February 1918, the RANBNGS had local involvement with 3 officers, 24 senior and 101 junior sailors at Port Adelaide and Outer Harbor; and 1 officer, 2 senior and 16 junior sailors stationed at Port Pirie.

Life in the South Australian Navy returned to a slower pace with the coming of peace, and Reserve activity continued with the Universal Training Scheme. The District Naval Officer was caught up in the uncertainties of the times with the rank of that gentleman wavering between Captain and Lieutenant before being stabilised at Commander. The term District Naval Officer may not be correctly stated in a chronological sense in this article, but I'm sure that critics will allow a little journalistic licence. As far as can be ascertained, various titles have been used including Naval Commandant, District Naval Officer, Resident Naval Officer, Naval Officer In Charge and lately Naval Officer Commanding.

During the in-between years, the Navy and the state saw many visitors, innovations and changes. Ships of the Australian Squadron were frequent visitors along with foreign warships. RAN vessels paid their visits with the entire squadron descending on this outpost of Empire and creating gala occasions. In chronological order, some of the more important visitors and naval events were:

- 1918 Captain C.J. Clare CMG RAN resumed duty as the DNO on 15 October 1918. Armistice Day 11 November.
- 1920 Visit by HRH The Prince of Wales. *HMS RENOWN* and HMA Ships *AUSTRALIA*, *MELBOURNE*, *TORRENS*, *HUON* and *TASMANIA* visited.
- 1922 The first permanent (brick) building constructed within the depot. Lt Cdr F.J. Young assumed duty as the DNO on 1 November. His two predecessors were Commander L.S. Bracegirdle DSO (1919-1921) and Lieutenant Commander J. White (1921-1922).
- 1923 Visit by *FNS VICTOR HUGO*.
- 1924 Visit in March by an RN Squadron consisting of HM Ships *HOOD*, *REPULSE*, *DELHI*, *DRAGON*, *DANAE*, *DUNEDIN* and *DAUNTLESS*, the larger ships, as usual, anchoring in Holdfast Bay.





1925 The Marchess de Pinedo and Ernesto Campanelli arrived by seaplane landing at Outer Harbor on 8 June. Although this was not a Naval event, subsequent years were to see much activity with flying-boats at Outer Harbor. The Port Adelaide Ex-Navalmen's Association (now a subsection of the Naval Association of Australia) was formed.

1926 Commander H.J. Loudon-Shand assumed duty as the DNO on 24 February. A committee comprising Captain W. Spooner RAN and Lt Colonel H.B.G. Gibbs selected a site near Port Wakefield as a Proof Range. (The full story of the Range appears in Vol 9 No 3 of the *Journal of the ANI*). HMIJS IWATE visited Port Adelaide.

1928 Four RAF Supermarine flying-boats arrived at Outer Harbor on 23 June on a goodwill visit, mooring after arrival at the Quarantine Station on Torrens Island (23 June). A similar aircraft of the RAAF piloted by Wing Commander S.J. Goble which was to have joined in the flypast was hit by a gust of wind whilst at her moorings and upended. The naval boatshed (still in use) erected on land adjacent to the Port River completed.

1929 First 18pdr QF rounds fired at Port Wakefield on 5 December. The only depot residence erected. (This building is now the combined NRC Headquarters and RANR sickbay).

1930 Visit by Hr Ms (Netherland) ships *JAVA*, *DE RUYTER* and *EVERTSEN*. The present drill-hall extended and the workshops erected.

1932 Lieutenant H.P. Jarrett assumed duties as the DNO on 30 January. Relieved by Commander S.R. Symonds on 17 September. He was subsequently relieved by Commander A.S. Rosenthal on 1 July 1937.

1934 *FNS ADMIRAL CHARNER* and *HMIS INDUSTAN* visited Port Adelaide.

1936 Centenary of South Australia's foundation celebrated on 28 December. Visit to mark the occasion by HMA Ships *CANBERRA*, *VENDETTA*, *STUART* and *YARRA*, and by *HMS DANAE*.

1937 *FNS RIGAULT DE GENOUILLY* visited.

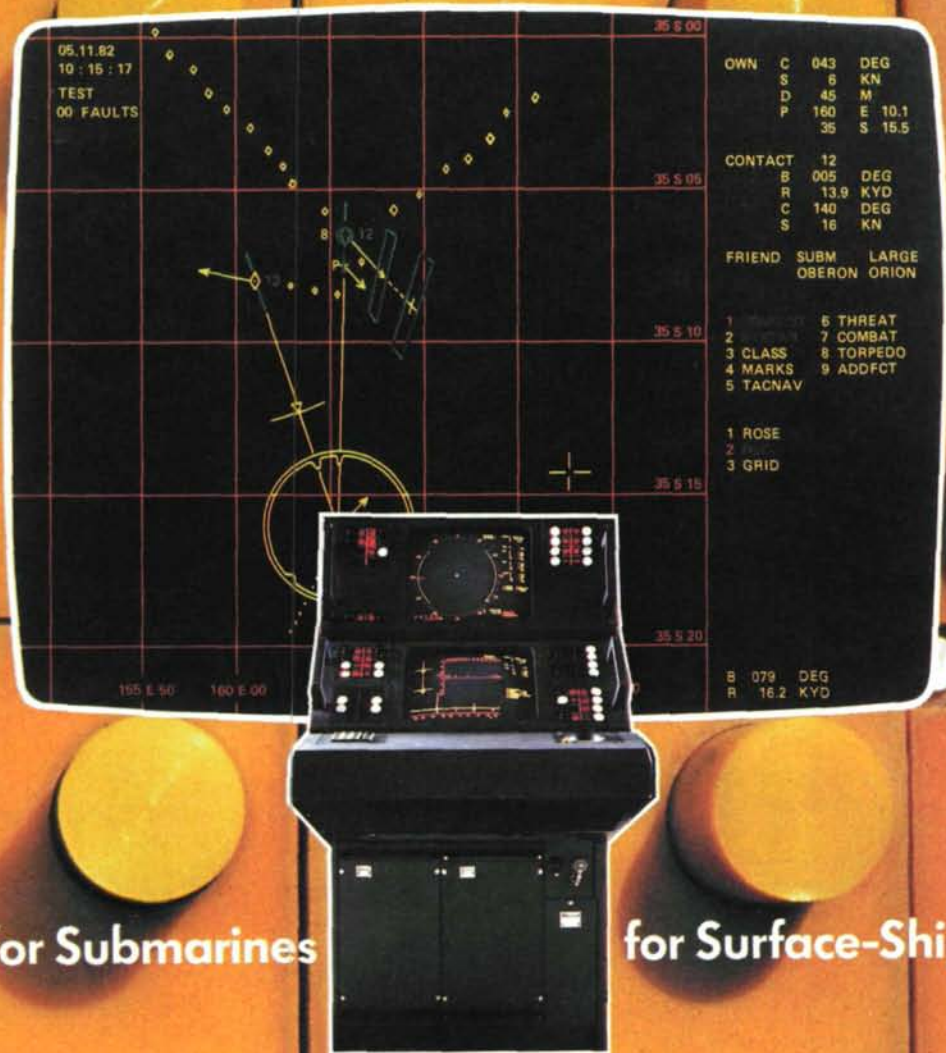
1938 Lieutenant A.M. Greening assumed the duty as DNO on 3 September, but Commander A.S. Rosenthal resumed the duty as DNO on 1 December.

The onset of WWII brought a much higher level of activity than ever before, including RANR volunteer guards being placed on vulnerable naval points (the Naval Reserve Depot and Boat Shed) on 25 August 1939. In addition, numbers of Reserve officers and sailors were being despatched to the eastern states for War Appropriations and for service in RAN ships. Although war was declared on 3 September, this date also brought a significant change in the



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*Drill Hall at HMAS ENCOUNTER. Erected 1930, still in use.*

▲  
 Courtesy: R. Pennock  
 ▼



*Naval HQ and Admin Building, HMAS ENCOUNTER. Erected 1943.*



naval depot. Commissioned as *HMAS CERBERUS IV* on 13 September, Commander S.R. Symonds was recalled from the Emergency List and assumed command on 22 September 1939 serving as DNO for the total period of hostilities.

The early months of the war also saw the start of requisitioning local vessels to set up the Naval Examination Service. As far as can be ascertained, the first South Australian vessel to be taken over was the local trader *WONGALA*. Built by Bolsones Shipyard Norway in 1919, she was a 402 ton wooden auxiliary ketch used in South Australian and Tasmanian waters. Taken over on 14 November 1939 as a stores carrier, *WONGALA* was commissioned as an examination vessel on 15 July 1940. Paid off in July 1944, *WONGALA* was handed over to the Boy Scouts Association on 3 March of the following year. Requisitioned once again in February 1947, the elderly ketch was commissioned as *HMAS WYATT EARP* for service as an Antarctic support ship. Paid off, she was sold to the Anglo Shipping Co of Victoria on 30 June 1948 and under the name of *NATONE* eventually wrecked off the Queensland coast.

The next vessel to be taken over by the RAN for service in SA waters was the eastern states owned coaster *COOLEBAR*. Of 479 tons and built in 1911, this vessel was to commission as a minesweeper and to see service as a member of the 63rd Group of AS minesweepers serving in

local (SA) waters from 18 January 1941 until transferred to Western Australian command on 23 December that year. Her minesweeping consort in these early days was another ex-coaster *HMAS NAMBUCCA*. *COOLEBAR* was later converted to a stores carrier (June 1943) and finally paid off on 7 December 1945.

As can be imagined, there was a violent change of pace within the Navy in South Australia: minesweeping, the Examination Service, naval patrols in Gulf waters, recruiting, and the constant need to requisition all types of vessels for warlike use. Two other new areas were set up: the DEMS (Defensively Equipped Merchant Ships) and RMS (Rendering Mines Safe) sections, although the special building for DEMS personnel and stores was not built until 1943.

One of the many vessels requisitioned in 1940 was another trading ketch. Possibly not well known outside the state, *FALIE* is a steel auxiliary ketch of 215 tons. Built in Holland in 1919 she had been used in local waters until requisitioned in 1940. Commissioned on 4 October 1940 as an Examination vessel, she was later converted to a stores carrier. Paid off in October 1945, *FALIE* was returned to her owners and went back to the peaceful business of the Gulf trade. Still afloat, she is presently being restored to her original condition and will play an important part in the South Australian Jubilee 150 Celebrations.



*Steam yacht ADELE in the Port River* — From the A.D. Edwardes Collection,  
State Library of SA.



In the early days of the war, a minefield had been laid across the western end of Investigator Strait by a German vessel and this was to cause much work for the RMS party and the locally based minesweepers. First casualty to a mine was a merchant ship *SS HERTFORD*. Mined off Spencer's Gulf in December 1940, she made Port Lincoln and in March 1941 was towed to Port Adelaide for temporary repairs departing for Sydney on 16 June. According to the records all the mines were German Type Y\*.

Having been a commissioned naval establishment for only 10 months, *HMAS CERBERUS IV* was paid off on 31 July 1940, re-commissioning as *HMAS TORRENS* the next day. It would retain that name for the next 25 years. The building of Australian Minesweepers (AMS) at Whyalla certainly added extra work to the administration. Of the 57 corvettes built for the RN/RAN, only 4 were built at Whyalla with *HMAS WHYALLA*, the lead vessel from BHP's shipyard, being launched on 12 May 1941.

Throughout 1941, the 63rd A/S Minesweeper Group continued their sweeping in Investigator Strait and Backstairs Passage. Mines were continually being washed ashore at various places along the coast, all being rendered safe or demolished by the RMS party. On 12 July 1941, a mine was reported off-shore near Beachport and subsequently landed on the beach by an RMS party. It self-detonated, killing

Able Seamen Todd and Danswan. *HMAS TORRENS* War Diary records the accident as follows:

'Note: It is believe that these two ratings are the first men killed on Australian soil as a result of enemy action.'

Domestic and other accommodation was improved within *TORRENS* with brick buildings under construction. Concurrently, the accommodation at Outer Harbor was being improved. Whilst the Outer Harbor facilities are now a thing of the past, the red-brick buildings of *TORRENS* remain. With crews for the Whyalla-built AMS coming forward, the establishment was over-taxed for living space. Temporary huts erected to ease the congestion remained in use until the mid 1960s.

December 1941 saw changes to the local Minesweeping Group. *HMAS COOLEBAR* was transferred to the WA Command being replaced by *HMAS WARRAWEE* and *HMAS TOORIE*, both from the Victoria Command. Thumbnail sketches of these A/S Minesweepers are:

*WARRAWEE* Requisitioned at Port Adelaide on 15 May 1941 and despatched to Melbourne for conversion. Industrial troubles with the Seamen and Stokers necessitated RAN personnel being used to steam her to Melbourne. A 423 ton coaster built in 1909, *WARRAWEE* was commissioned on 24 September 1941 and paid off on 24 September 1945.



*HMAS WONGALA (later HMAS WYATT EARP)* — Australian War Memorial Negative





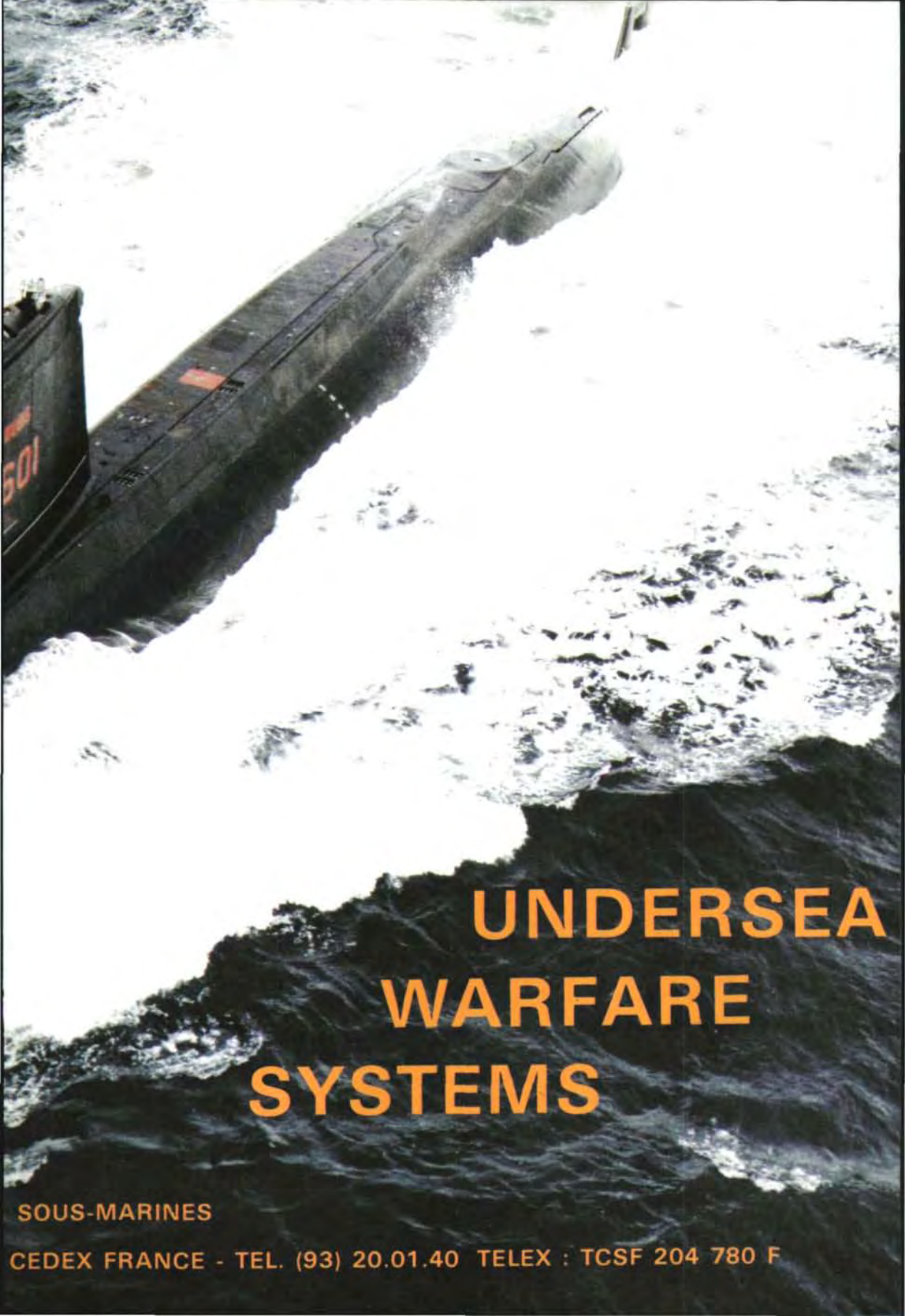
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**TOORIE** 414 ton coaster built in 1925. Commissioned 14 January 1941, paid off 1 January 1943.

Early in 1942, Lieutenant Commander Greening assumed the duty of Commanding Officer *HMAS TORRENS*, and as Maintenance Commander. For a short time in its long history, South Australia's Navy now had a separate District Naval Officer. In January, the Searched Channel Motor Patrol Boat *CYGNUS* arrived at Whyalla, with *HMAS MORESBY* assuming duty of Guard Ship in that port in the February. The RN battleship *WARSPITE* arrived at Aldinga Bay (south of Adelaide) for fuel on 7 March 1942, sailing for Colombo the following day. HMA ships *WHYALLA* and *MORESBY* provided the A/S screen for the brief visit. March also saw approximately 22 troop-ships arrive at Outer harbor with their escorts which included *HMAS HOBART* and *HMAS MANUNDA*.

The Hospital ship *ORANJE* called twice during the first quarter of the year and the same period saw the start of many visits to Outer Harbor by Dutch and USN flying-boats, using it as a fuelling point in their long flights between the eastern states and Western Australia. One very welcome visitor on 7 April 1942 was *HMAS VENDETTA*, under tow by the *ISLANDER* from Batavia and en route to Melbourne for repairs.

To cope with the increasing number of troops arriving by sea, the US Army set up headquarters in Adelaide on 27 April. The next day, the position of Naval Officer In Charge, Whyalla, was established with Lieutenant Commander A.R. Banks RN becoming the first incumbent. This position was later re-titled Naval Liaison Officer (11 September 1943) and it appears that at about this time the DNO was retitled NOIC South Australia. A US Naval Liaison Office was also established to cope with the various aspects of troops arriving.

Visiting ships are too numerous to mention but included HMA Ships *ST GILES*, *BENDIGO*, *STUART* and *WOLLONGONG*; and USN Ships *BULNER*, *BARKER* and *WEST CRESSY*; Dutch warship *ABRAHAM CRYNSEN* and submarines K9 and K12. A number of USN submarines also visited. To give an indication of how busy the wharver were at the Port, some 69 troopships and stores vessels discharged cargo during the quarter ending 30 June 1942.

The next quarter of 1942 was no less hectic and *HMAS BERMAGUI* relieved as the Whyalla guardship on 20 July. Refitting of various AMS vessels was being undertaken at local yards, ships came and went, flying boats refuelled at Outer Harbor and mines were still being washed ashore on the coastline.

1943 was much like previous years. *HMAS BERYL II* assumed duties as the Whyalla

guardship in February. Minesweeping operations in Investigator Strait and Backstairs Passage continued and the occasional mine was still being washed ashore. Flying-boat operations at Outer Harbor were on the increase but shipping movements for the year showed a decline. Marine casualties increased with three merchant ships touching bottom, *HMAS GRELKA* a Naval Auxiliary Patrol (NAP) craft sinking at her moorings and two warships *HMAS MARY CAM* and *USS HENRY BALDWIN* needing repairs at Port Adelaide.

An RDF pilot was established and the NAP commenced duties at Port Pirie. Highlights of the year appeared to have been the Japanese midget submarine exhibition (March to June) and naval participation in the Port Adelaide War Loans appeal on 19 March. Recruiting was still very active and the movement of officers, sailors and wrans continued apace. It is very interesting to note that official social activities were on the upswing: NOIC and his Secretary were in great demand both for Vice-Regal and other VIP functions.

New Year's Day 1944 opened what looked to be a hectic year. A mine was washed ashore at Cape Jaffa, 400 recruits were dispatched to Flinders Naval Depot and 5 Catalina flying-boats arrived or departed Outer Harbor. January also saw the transfer of HMA Ships *GRELKA* and *NYROKA* to the WA Naval Command. In all, it was a very busy year, not so much with visiting ships but with builders' trials of *HDMLs* 1323 and 1324, 8 AMS vessels refitted at local yards and paravane and DEMS trials being conducted on merchant ships built at Whyalla.

Two merchant ships are noted in the Diary as having serious problems amongst their crew, with *STRAAT SOENDA* appearing to have been the most troublesome. VIP visitors to *TORRENS* included the Minister of the Navy (April), and lesser visitors appeared at the constant rate of two or more per day. Flying-boats were extremely active, the average was 2 to 3 per day throughout the year. Strangely enough, the RAN Outer Harbor facilities was closed down on 25 September 1944.

And so to 1945. There was a dramatic change in pace early in the year. Few ships visited and only 3 flying-boats passed through. *ML* 1328 continued building and 11 AMS were refitted in local yards. VIP visits increased slightly over previous years and included The Director WRANS, Admiral of the Fleet The Lord Keys, Their Royal Highnesses the Duke and Duchess of Gloucester, First Naval Member and HE The Governor of SA. Demobilisation of personnel commenced early in March in a small way, but recruiting continued. VE Day (8 May 1945) passed without much comment in the War



Diary whereas the Japanese Surrender elicited the following comments:

- 15 August 1945 — Piped down, held Divine Service at 0920, gave leave to two watches
- 16 August 1945 — CO, 11 Officers and 420 Ratings marched to Parliament House for Governor's Proclamation in a.m.

Although few RAN ships visited Port Adelaide during the year, the RN was well represented with six ships, five arriving after the peace declaration: HM Ships *BARFLEUR*, *URCHIN* and *ARGONAUT* and HM Submarines *TACITURN* and *TRUMP*. The final four months of the year passed very quietly. Demobilisation was stepped up and the RN Air Movements Office at Parafield Airport closed (27 September 1945). This was possibly the quietest period that *TORRENS* had experienced in many years.

In 1946, it was business as usual for the local naval authorities. Many vessels requisitioned in the early years of the war were being paid-off and refitted prior to return to their owners, including such vessels as *GERARD*, *YANORA* and *GEORGE DINSDALE*. Similarly, work was afoot to repair and refit the smaller private motor launches used for the patrol service. Ships arrived on goodwill visits, called for fuel and stores and generally kept the port busy. Commander N.R. Read RAN assumed the duty of Resident Naval Officer (RNO) in January 1946. Also in January the Sea Transport and Air Liaison Office was closed down and duties handed over to the Naval Rail Transport Officer (RTO). There was a constant flow (at times of flood) of officers, sailors and Wrens arriving at *TORRENS* for leave and demobilisation, yet

recruiting appeared to be continuing at a high level. To top all this off, both the Victorian and South Australian Railways had protracted strikes, causing, one would imagine, the RTO to grow more than a few grey hairs. The use of civil air travel was increasing, but only for VIPs and the more senior officers.

Amongst the visitors to *HMAS TORRENS* in 1946 were HE The Governor General, the First Naval Member (on 26 August 1946), the State Premier, and numerous technical officers of the RAN. Visiting RN Ships included *MANXMAN*, *GLORY* and HM S/M *TAURUS*, whilst the RAN was well represented by HMA Ships *BATAAN*, *HAWESBURY*, *SHROPSHIRE*, *AUSTRALIA*, *HOBART* and *QUADRANT*, to name but a few. *HMAS LACHLAN* was in the area for several months on survey duties but also showing the flag in the outposts.

Possibly the biggest concentration of RAN ships ever to visit Port Adelaide arrived in March 1946 when the 20th Minesweeping Group arrived. The eleven vessels were HMA Ships *SWAN*, *KATOOMBA*, *WARRNAMBOOL*, *TOWNSVILLE*, *LITHGOW*, *DUBBO*, *MILDURA*, *ROCKHAMPTON*, *BUNBURY*, *COWRA* and *ARARAT*.

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An early photograph of the ketch *FALIE* — From the A.D. Edwardes Collection, State Library of SA.



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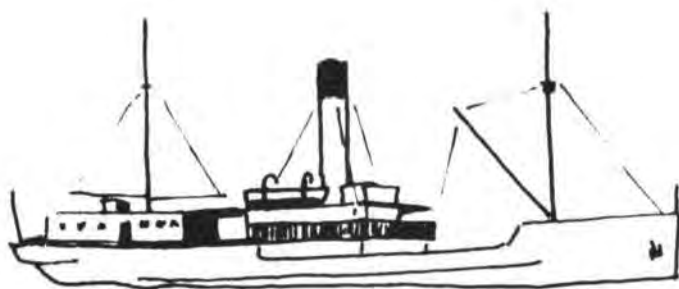
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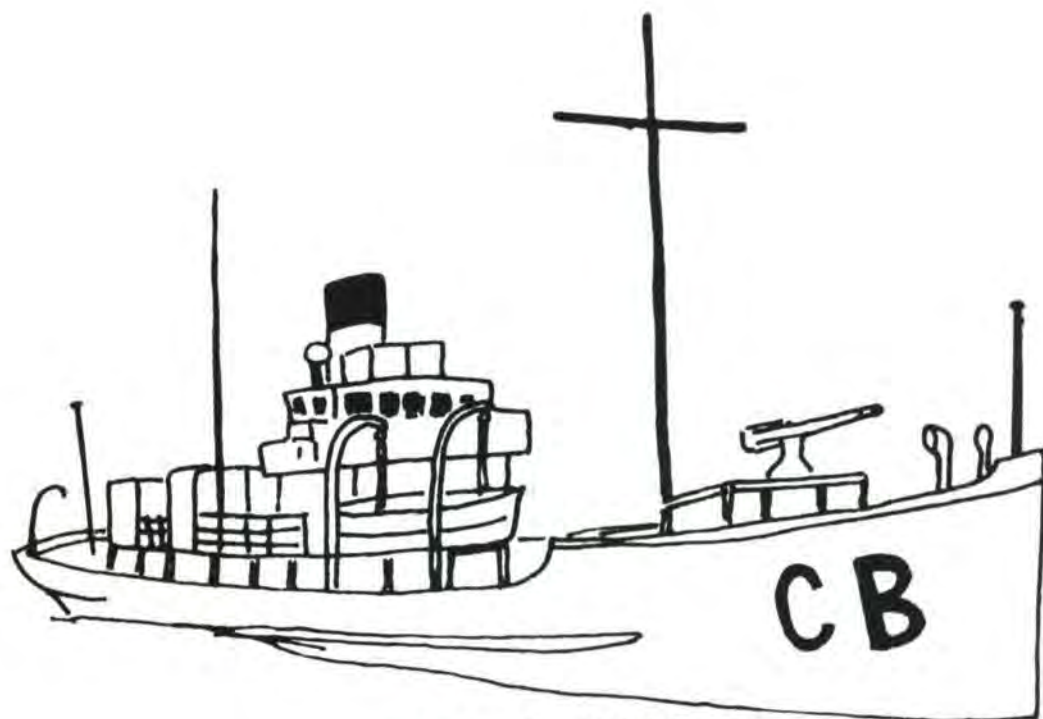
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HMAS WARRAWEE  
1939 - 1946



HMAS COOLEBAR  
1939 - 1945



## HMCS PROTECTOR

On 30 September 1984, South Australia celebrates the centenary of the arrival of its first warship *HMCS PROTECTOR*

The following is an extract from the shipping movements reported in the *South Australian Register* of Wednesday 1 October 1884:

### Arrivals

Tuesday, September 30

*PROTECTOR*, gunboat, 1000 tons, 1580 horsepower indicated, from Newcastle June 27, Gibraltar July 7, Malta July 19, Aden August 7, Colombo August 25, Albany September 4. Complement: Commander, J.C.P. Walcot RN; senior lieutenant, Harold O.C. Lundh RN; chief engineer, Thomas B. Jordon RN; engineer, William Clarkson; gunner, Henry Huison RN; boatswain, James Martin RN; surgeon, John Reid; and fifty blue jackets.



*HMCS PROTECTOR*

Courtesy — State Library of SA



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Marine surveying and hydrography.

Persons nominated for this Award must be of Australian nationality by birth or by naturalisation. In the case of expeditions or groups, the leader or officer-in-charge must be an Australian. Only work done during the period from January 1, 1982 to December 31, 1985 will be considered.

All enquiries should be addressed to:-

The Secretary, Paul McGuire Maritime Award

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# PAUL McGUIRE MARITIME LIBRARY

Australia as an island continent has, since its settlement, depended upon sea transport for its trade with other countries, and even today this dependency continues. The development of shipping over the 192 years since the first white settlers came to this country is a chapter in our history which should be readily available to the community. Many significant developments, such as off-shore drilling for oil and gas, are occurring around the Australian coast, and information about them should also be preserved for future generations.

The State Library of South Australia has had for many years a particular interest in the literature of the sea and ships. As well as a basic collection of books, magazines and maps on maritime matters, it has a world-renowned collection of over 5700 photographs relating to early shipping in South Australian waters, the A.D. Edwardes collection. Other special collections still being developed include the R.R. Le Maistre and A.L. Arbon collections of photographs and publications about shipping.

The Paul McGuire Maritime Library will help to make the State Library of South Australia one of the leading repositories of maritime information in the world.

## *The Paul McGuire Maritime Library*

In memory of her husband, the late Paul McGuire, Mrs F.M. McGuire has donated to the Libraries Board of South Australia a considerable sum of money to develop a special Maritime Library.

The Paul McGuire Maritime Library, established within the reference collection of the State Library of South Australia, contains publications from all over the world relating to the sea and shipping. It is available for everyone to use — businessmen, holidaymakers, naturalists, fishermen, model-builders, seafarers, students, and others.

## *Who was Paul McGuire?*

Paul McGuire was a distinguished South Australian. Born at Peterborough, he died in Adelaide in 1978, aged 75. Writer of more than 30 works of fiction, verse, history, travel and politics, Paul McGuire was particularly interested in ships and the sea. Of his books, *Westward the Course*, written to engage American interest in the Western Pacific, went to press the week Pearl Harbor was attacked, and was a best-seller.

During World War II Paul McGuire served with naval intelligence and reached the rank of commander.

For five years from 1954 he served as the Australian Minister (later Ambassador) to Italy. He was twice a member of the Australian delegation to the United Nations.

Among his other achievements, Paul McGuire went to London as advisor to the Prime Minister for the Prime Ministers' Conference of 1951, and represented the Australian Government at the Coronation of the Pope in 1959. He was a former president of the S.A. Branch of the Australian American Association, and a founding member of the S.A. Branch of the Naval Historical Society.



*HMCS PROTECTOR*

Courtesy — State Library of SA





*North Arm graveyard.*



*Barque SANTIAGO 1984 (starboard side).*



*Six masted schooner DOROTHY H. STIRLING.*

Courtesy: All photos R. Pennock



# SHIPS AND THE SEA



## GARTHNEILL

*'They mark our passage as a race of men, Earth  
shall not see such ships as these again.'*

*John Masfield.*

In the North Arm of the Port Adelaide river, virtually under the shadow of one of the State's electric-power generating stations are the sadly neglected rotting remains of what were once fine vessels. A list provided by the Department of Marine and Harbours (DMH) is entitled 'Ships in the North Arm Graveyard'. According to the DMH there are 14 wrecks in the area, of which 4 were three masted barques. An Adelaide street directory for the particular areas states quite simply "Ships' Graveyard". The wrecks are inside a designated area for water-skiers and at weekends they power up and down the inlet with scarcely a glance at the rusted and rotting bones of history. One vessel, *SANTIAGO*, built in Scotland in 1856, is possibly the oldest intact identified vessel in Australia and appears to be in reasonable condition. Perhaps it could be moved and restored as a museum piece. Regrettably, the others are only ribs, stemposts and sternframes. One such vessel is *GARTHNEILL* (ex *INVERNEILL*).

Originally owned as *INVERNEILL* by George Milne and Co of Aberdeen, she was one of the Inver Line's fourteen vessels. Their first, *INVERURIE* was built in 1889 and the last *INVERNESS* in 1902. The Inver Line was not long lived, but to quote Basil Lubbock 'It was undoubtedly one of the finest fleets of windjammers sailing the seas in the twentieth century'. *INVERNEILL*, a 3 masted barque, built in 1895 by Wm Russell and Co of Glasgow, was the twelfth vessel of the Inver Line, of 1470 tons gross with the dimensions 238 ft long, 36 ft beam and 21.7 ft depth. Contemporary accounts of these vessels describe them as well maintained, well found and victualled, and popular amongst seamen, large carriers with good sail plans, but not fast. Visually too, they were quite pleasing; the hull colour was French Grey with a white

stripe below the bulwarks, white deck-houses and teak coloured masts and yards.

For the uninitiated, French Grey was the paint colour made popular on sailing vessels' hulls by the French ship owner Ant. Dom et fils. It does not refer to that layer of paint between the yellow-chromate and the ships-side grey.

Little seems to have been recorded about *INVERNEILL* when owned by George Milne and Co. She only seemed to have come to notice after the sale to Mr (later Sir) William Garthwaite's Marine Navigation Company of London for £13,000 whilst at Bilbao, Spain in July 1916. Rather than detail her career on a year by year basis it is perhaps better to follow the events through each series of 'Articles'. The 'Articles of Agreement' between owner and officers and crew were usually for three years and expired on a given date rather than in a geographic location. Officers and crew could, and did, pay-off in the interim and replacements were signed on as they were required.

### First set of Articles to 19 April 1918.

From Bilbao, *INVERNEILL* visited New York, Melbourne, Bordeaux, Pt Arthur (Texas) and Sydney, arriving there on 19 April 1918. Various cargoes were carried and many crew changes took place. Without detailing all the changes, readers may be interested in the various Masters. Captain H. Aviss, a 32 year old with his Extra Masters Certificate, was in command for all this period and was accompanied by his 22 year old wife and small son.

### Second set of Articles to 6 March 1921.

From Sydney to St Johns New Brunswick, Melbourne, Bunbury, Cape Town, Bunbury, Durban, Pt Louis, Bunbury, Cape Town and Bunbury. Captain Aviss remained in command until 22 November 1918. His departure at St Johns, New Brunswick was the result of a family tragedy. Captain and Mrs Aviss' second child (Ruth Neill) was born on 27 August 1918 during the passage to St Johns. After arrival, Mrs Aviss



and fourteen of the crew contracted Spanish influenza and she and one crewman died. Captain Aviss with a 3 year old son and 3 month old baby had no option but to leave *INVERNEILL* and return to his home in Coventry. Captain J.H. Shippen who had once been Mate in the ship assumed command. The passage to Melbourne was without incident and after discharging her cargo, *INVERNEILL* was ordered to Bunbury to load jarrah railway sleepers for Cape Town. Leaving Melbourne on Sunday 6 July 1919, the ship set out for what should have been a 2,000 mile voyage. In fact, they covered 14,563 miles (by the log)! Strong winds were encountered off Cape Otway and *INVERNEILL* was forced south of Tasmania and northwards to Sydney. After a 16 day spell in Double Bay and more gales, Captain Shippen decided to follow the roaring forties *around the world to the eastward*. They arrived at Bunbury on 29 October, some 114 days out of Melbourne and 77 days from Sydney.

Captain David Thomson assumed command at Cape Town on 7 March 1921: he was to be her last captain. Thomson was a very experienced sailing ship master, having been given his first command in 1895 at the age of 29. When he joined *INVERNEILL*, he was 55 years old and she was his sixth command. His father, Captain James Thomson had spent fifty years in sailing ships and had handed over command of *EUPHROSYNE* to his son in 1895.

### Third set of Articles, to 13 February 1923.

New articles were opened at Bunbury on 9 May 1921 and soon after, the vessel's name and port of registry were changed to *GARTHNEILL* of Montreal. At last Sir William Garthwaite's policy of renaming his fleet had caught up with this particular vessel. From Bunbury, passages were made to Dunedin, Geelong, Durban, Pt Adelaide, Newcastle (NSW), Callao, Mazorea Isl (Peru) and Hull. The visit to Callao was not without incident. After discharging her cargo of coal, *GARTHNEILL* was to be towed 80 miles to Marzurk Island to lead guano for a European port. The tug *EL PASO* was towing amidships as an engine tug when the barque was blown down onto the breakwater. *EL PASO* acted as a fender and was badly damaged, forcing it to return into Callao. The next attempt was a tow by two small launches. Unfortunately the small craft towing on the port bow had an engine failure and, not thinking to slip the tow, was rolled over and sunk. All three crew lost their lives. With the help of her headsails and the other launch, the ship eventually reached the island.

It took a month to load 2,000 tons of guano from barges and *GARTHNEILL* berthed at Hull at

6.00 pm on 12 February 1923. Ironically, the port anchor had been dropped to prevent the ship falling heavily onto her berth, and as the tide ebbed the fluke of the anchor pierced the forepeak.

### Fourth set of Articles, to 2 April 1925.

With Captain Thomas still in command, this voyage was from Hull, Middlesborough, Pt Louis, Cape Borda (for orders), Newcastle (NSW), Taltal, Iquique and London. Apart from the usual bad weather problems, the entire voyage only seemed to have one incident worth recording. On the passage from Pt Louis, *GARTHNEILL* was to speak with the lighthouse at Cape Borda on the western end of Kangaroo Island. Poor visibility and bad weather made it impossible to contact the lighthouse-keeper and get his orders. Orders to proceed to Newcastle (NSW) came eventually from the Cape Willoughby light at the opposite end of the island. To get close enough to Cape Willoughby, Captain Thomson had some tricky sailing to do. His own report to an Adelaide newspaper best describes this:

'We sailed through the passage between the Scraper and Cape St Albans without a particle of danger. My ship *GARTHNEILL* drawing only 11 ft 6 inches and there was 30 feet of water under her. The channel was about a quarter of a mile wide and we were running before the wind with topsails and topgallant sails set. It was necessary to approach close to Cape Willoughby so that our signal could be read by the lighthouse keeper.'

The remainder of the voyage was uneventful but slow. After two trips with coal to South American ports, *GARTHNEILL* loaded nitrate for London berthing in the Millwall Docks on 1 April 1925. She discharged her cargo and the crew paid off.

### Fifth set of Articles, to 8 August 1926.

The new crew were signed on at Tilbury on 25 May 1925. How times had changed. At this time, *GARTHNEILL* was one of only four British windjammers still trading, the others being *GARTHPOOL*, *MONKBARNES* and *WILLIAM MITCHELL*. This fifth and final voyage was to Grangemouth, Melbourne and Adelaide. A cargo of coke was loaded at Grangemouth, the weather was bad and the passage slow. It took *GARTHNEILL* 121 days to reach Melbourne and it is said that the owners lost money on this charter.

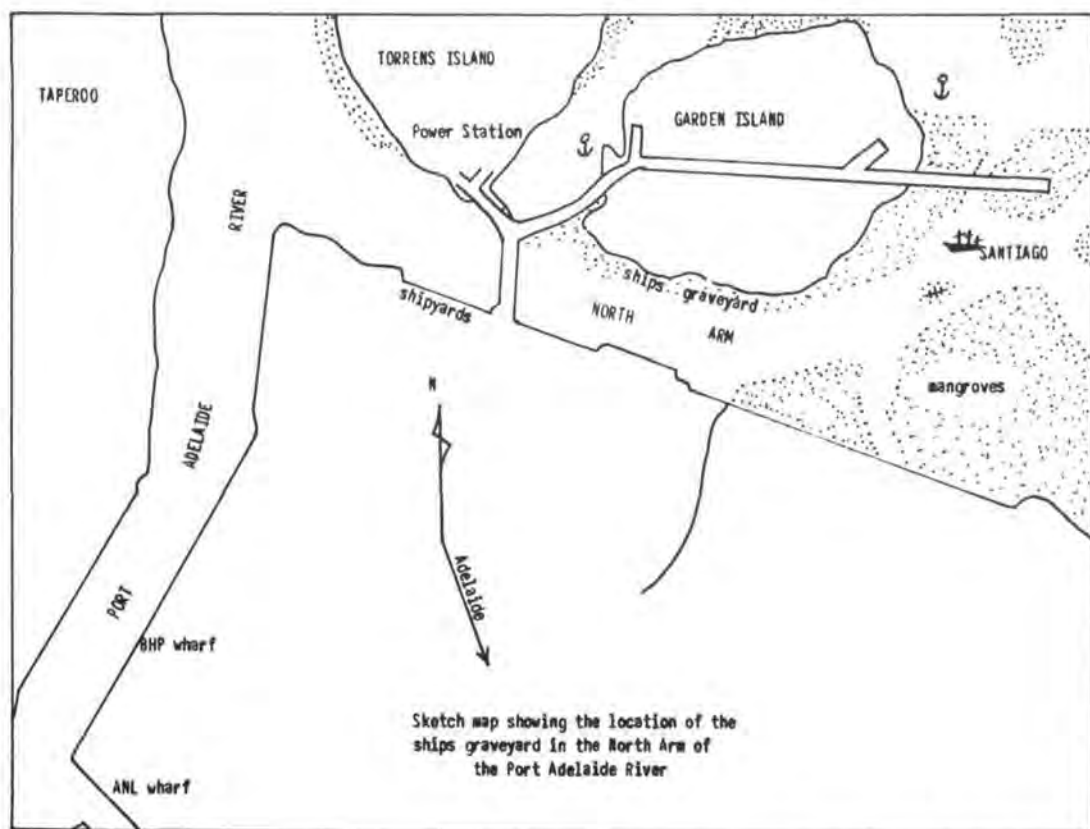
No cargoes were offering at Melbourne so *GARTHNEILL* sailed for Adelaide on 25 July and was sold on 10 August 1926 to the Yorke Peninsula Company who used her as a hulk to store wheat, salt and other products. Although the officers and crew were paid-off, the Bosun

(Mr J. de Vos) remained with the ship as shipkeeper. Mr de Vos joined *GARTHNEILL* on 9 May 1921 and had remained with her. He, his wife and family moved into the captain's quarters and from all accounts were there until the early thirties.

It was not *GARTHNEILL*'S condition that caused her to be hulked, rather it was the financial situation. There were no cargoes

available that would pay British windjammers to carry. The last 'Garth', *GARTHPOOL*, lasted only until 11 November 1929 when she was wrecked on the Cape Verde Islands. Captain David Thomson who had transferred to *GARTHPOOL* was in command, age 64.

Robin Pennock



Courtesy — R. Pennock



# The brain behind the bite



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# IF I WERE RUNNING MY NAVY

by Leading Writer G.J. Watson RAN

Able Seaman 'Whitey' Marsh struggled up the after ladder and out on to the Quarter Deck burdened with a plastic bag bursting with gash. Angrily he threw it over the stern and wished it was the Leading Hand of the mess that he hated so much. Everything and everybody was getting on his nerves lately. It was all this talk of war. Would they have to fight or would it all blow over? Nobody he knew could say for sure. He turned around to go back to his mess when his eyes were caught by a flash of white on the starboard wing of the bridge. It was the Captain. Looking straight at him. He'd know, Whitey thought. Why doesn't he tell us? 'Christ' he said to no one in particular. 'If I were running my Navy, things would be different. A lot different.'

Commander C.P. Lokam idly watched the black bag sink into the wake of his DDG. That would be the last lot of rubbish they'd ditch for a while. It could be a long time before they were back in friendly waters. He walked back into the cool quiet of the bridge. 'Exercise Action Stations' came the command. As the alarms rang throughout the ship, he sat in his chair and contemplated his position. Yesterday, he had had a happy ship, going home after a rewarding five month deployment through South East Asia. Now, he was low on fuel, low on supplies and his crew were extremely short on morale. There were several disturbing factors evidenced by the latest signals. Clearly, the international situation was deteriorating, but why had he been sent back to the Indian Ocean when he had been practically in sight of Fremantle? Surely someone in Canberra must know that his ship is long overdue for refit. That last thought almost made him laugh. They'd know alright, but did they care? If I were running my Navy, he thought to himself, I'd make sure they cared.

Vice Admiral Hale looked at the map again then quickly looked away. It wasn't telling him anything new. All of a sudden he was starting to feel every second of his 54 years. War was coming now, on seven league boots. Every fibre of his being told him so. The decisions that would be taken in the immediate future could well determine the lives of every man, woman and child in the country. Then why was he finding it so desperately difficult to convince the Minister and the Cabinet of the urgency of getting more ships at sea? Their attitudes astounded him. It was becoming clear that the Nation's leaders felt no real sense of responsibility to the men of the Navy who would be doing the fighting and probably dying. It is not the politicians who worry about out of date weapons or training programs cut short. Spencer Hale started to feel his blood pressure rising to a dangerous level. His men deserve at least the advantage of concentration of force. It should be within his power to give it to them. But it won't be. If I were running my Navy the way I know it can run, he was thinking to himself, we might have had a better chance.

Whitey lay on his bunk and tried to concentrate on the letter he was writing to his girl friend. If only those idiots watching the video

## The Author

LSWTR Greg Watson joined the Navy on the 24 August 1977 from the Melbourne suburb of East Doncaster. He was educated at Xavier College and worked at various jobs for short periods before signing up for Navy life. Career highlight, apart from winning the essay competition, would be a 6 month posting to RMIT to fully qualify educationally for commissioned rank. Previous postings include CERBERUS, NIRIMBA, MELBOURNE, RAAF School of Languages, LONSDALE (for RMIT) and presently HARMAN (Navy Office) working at DSP.



would shut up it would be easier. At times like this his mess mates reminded him of small children. Everyone trying to say something funnier than the person before them. He'd often thought of getting a tape of their stupidity and playing it back when they were trying to sleep. But what good would that do? He could hear them now, 'Whitey Marsh? Moodiest bloke on the ship. Did you hear what he did last night?...' Whingeing Whitey, that's what they'd call him. No, better to keep it to yourself and be labelled 'a loner'. That way no-one else's feelings get hurt. His thoughts returned to the letter, and to his girl. How great it had been to see her in Hong Kong. That was one thing about the Navy he wouldn't change. That trip for the wives while the ship was in Hong Kong was so well organised. He had never seen his shipmates so happy. But that was then. Now they were heading towards danger unknown. 'An area of high threat' the skipper had said. What the hell did that mean? Whitey had read all the news reports when they came into the ship and he still couldn't make any sense out of what was going on. Something about Vietnam and Thailand and every other country taking sides. Suddenly Whitey had a thought. He'd ask his Divisional Officer to explain it all to him. After all, that's what he was there for and if the discussion dissolved Whitey's feeling of uncertainty and isolation it will have been worthwhile.

Commander Lokam pushed away his dinner plate, stood up and stretched out. He had to try and relax. He was wandering around his sea cabin when his eyes came to rest on his commission, framed, on the bulkhead. It brought back memories of his early days in the Service. He had joined the Navy simultaneously with the winding down of the Vietnam war. As a result he had never really seen a shot fired in anger. He'd chased the odd trawler around but that was more like police work than war. So why did he feel so nervous? Was this operation leaving him in fear of his life? His immediate reaction was yes, to a certain degree. He was always moderately nervous before a big exercise. However, his performance at operations must have been more than acceptable or he wouldn't be where he was today. No, there was still something else that was making him uneasy. Peter Wilson the Captain's steward had just brought coffee and cleared away the dinner plates. Chris Lokam stared at the cup and the coffee that had slopped over into the saucer. That wasn't like Peter. All of a sudden, like a thunderbolt it hit him. The crew were tired, dog tired. They'd been deployed for five months on their own, then he'd drilled them hard when this Thai emergency eventuated. But they weren't up to it. Events were all fitting together. The starboard lookout reporting an

object off the starboard bow at RED 45. The extraordinary length of time it was taking the men to close up to action stations. Not only was his ship worn out, but so was his crew.

Spencer Hale braced himself for the blast of cold air that greeted him as the automatic doors opened. A Sydney boy born and bred, he could never get used to Canberra's winter chill. He stepped lightly into the car and was pressed hard back into the seat as his PO driver accelerated away. For the first time since the Thai emergency had started (as it was now being dubbed by the media), he was starting to feel as if he'd earned his pay. The Vietnamese were starting to show their hand. They had refused point blank to withdraw their troops from Thailand and above all, had given up trying to justify their actions to the world. As a result, some of our more socialist parliamentarians could no longer argue that the 'intervention' was for peaceful purposes. After a slow start, public opinion was entrenching firmly behind the Thais and now the politicians were beginning to take notice. This, he assumed was the reason he was being summoned to the Lodge. He was anticipating being closely grilled on the state of the Navy.

Whitey knocked on the cabin door once again. No answer. This was the second time in two days he'd organised to meet with his Divisional Officer. It was also the second time his Divisional Officer hadn't turned up. Whitey couldn't understand it. Nothing was more important to a man than his immediate future. Obviously a sailor doesn't mean much to his Divisional Officer. Well, if the Navy didn't care about him, then he sure as hell didn't care about the Navy. That was the trouble with the Navy, no one cared. He started wondering what the people at home were doing, his old school friends and other 'normal' people. All of a sudden his old life had enormous appeal. How good it would be to have a 'sickie' every now and then. What luxury to have every week-end off work. That was the life! He'd go down to the Personnel Office first thing tomorrow and get an application for discharge. Signing a request form wouldn't take up too much of his Divisional Officer's time.

Commander Lokam stared at his WEEO and couldn't believe his eyes. The officer who was normally in snow white overalls was filthy with grease. He was almost as black as the news he was delivering. The forward 5 inch turret was useless. Worn out. No hope of repair this side of Garden Island Dockyard. Another casualty of the merciless rate at which he was exercising both men and machine. It had to be done, his ship was nearly 20 years old. Tomorrow they could be up against a cruiser that was twice their size, three times more powerful and much faster and



more manoeuvrable. What a horrible thought. He summoned his yeoman. He'd send off a signal to Canberra about the turret and hope for the best. Although he doubted very much whether they'd call him home now that he was only one day away from Vietnam.

Vice Admiral Hale directed his driver to take him back to the office. Normally he would make some comment or other about the meeting, but tonight he could not trust himself to speak. He found himself in a barely suppressed rage, engineered by the civilians who were his masters. The enormity, not to mention the futility of the task staggered him. The Prime Minister, Minister of Defence and Minister of Foreign Affairs had calmly sat there and ordered the annihilation of his destroyer force. The entry of the USSR into the Thai conflict was imminent. Therefore they would probably deploy some of their submarines from the enormous naval facility at Cam Ranh Bay. They wanted one of our ships to locate and follow the first submarine out, then if war is declared, to destroy it immediately. Thereby signalling our willingness to support our allies and our resolve to fight fire with fire. To Vice Admiral Hale it defied description. Sane, responsible men ordering this particular mission be carried out when it was so obviously suicidal were grasping at shadows. Their responsibility seemed to extend no further than issuing the orders. They seemed not to hear when he explained to them that the first submarine out could well be a *TYPHOON* class. Twenty-six thousand tons, and with the very latest of missiles and torpedoes. That it is much faster under water than our destroyers are on the surface. And if they find out there are no helicopters in the area, it will be a case of survival; for the solitary DDG that we have in the zone, not the Russian submarine. To Spencer Hale the situation defied all possibilities. All that was left for the Admirals to do now was to kneel down and pray, for the American 7th Fleet and their timely deployment off the coast of Vietnam. But most of all, for Commander Lokam and his crew.

Whitey was on watch when the Captain's announcement was piped through the ship. It was hard to believe at first, but eventually he came to the realisation that sometime in the next few hours he could well be fighting for his life. Whitey couldn't say that he hated anybody enough to kill them. Also he didn't seriously moralise over who was right or wrong in the conflict. Whitey was however, certain of one thing, that if he became any more frightened, he would be a cringing, cowering wreck.

Commander Lokam sat in his operations room and listened. In exactly the same way he had sat in his operations room and listened

through the last false contact. And the false contact before that. Trying to find a submarine out here without helicopters was like a blind man chasing a black cat in a dark room. You might get it first time, but if you don't, the bloody thing knows you're looking, then who is chasing whom becomes a matter of conjecture. One positive aspect to emerge from all these false alarms was that he knew whom and on what he could rely. Exercises were good, but action was the ultimate test. He made mental notes of points he would raise when the ship returned to normal routine.

Vice Admiral Hale signed his name to the signal that would 'officially' bring to an end the Navy's aggressive role. It had been a couple of hours since the Minister of Defence had rung, informing him that the Vietnamese were calling off their 'fact finding' mission into Thailand. Fact finding mission indeed! Intelligence informed him that this so called 'fact finding' mission had been nothing but the systematic extermination of the strongest anti-communists. To Spencer Hale this meant one thing. One day the Navy would have to go through all this again. There would be one difference however, that he could guarantee. Vice Admiral Spencer Hale would not be in charge. He couldn't go through this amount of stress again. He made a promise to himself, that before he retires, he would tell everyone how the Navy should be running.

Whitey carefully examined the questionnaire his Divisional Officer had casually tossed across the desk. So this was it. No interview. No one cares. His Divisional Officer couldn't even wait and talk to him while he filled the damned thing out! 'Yes Whitey, just fill this out mate. Can't say as I blame you. Being outside has got to be better than this.' And then he was gone. Well, to hell with the YES/NO answers, Whitey thought to himself. He turned straight to the section labelled 'Comments (other)'.

If I were running my Navy, this is the way it would be:

- Recruiting Staff would be instructed to tell the truth. There are many aspects of Navy life that should be fully explained at the Recruiting Centre. Incidentals such as watchkeeping and duties are either glossed over or completely ignored. Ridiculous promises are made about overseas postings to people who have no hope of ever getting one.
- The promotion and advancement system would be completely overhauled. The present system is entirely too subjective. In quite a number of cases a sailor's position on the promotion list is determined not by his professional knowledge or efficiency but more by the social circle in which he moves.



- Many officers and senior sailors would need to re-examine their level of commitment to the Navy. These people seem more concerned with their own personal glory rather than the more important objective of fitting into and therefore helping to run a large and multi-faceted organisation. In my experience, in an inefficient department or sub-department one only has to look at the management. One will normally find people filled with their own self-importance. These people need to be shown how to re-divert their energies in a more positive direction.
- Officers that need it would be given a course on how to speak to sailors. This would enable everybody to get work done more efficiently. Only last week they had been winching a very heavy armature through a hatch. A senior Lieutenant said 'Excuse me men, can I squeeze past?' Before anybody could move the 1st Lieutenant bellowed, 'They are NOT men they are sailors and you will address them as such!' Unnecessary. Made the whole scene ugly and killed the good humour and morale that had been brought to this rather unpleasant task.

Commander Lokam read through the 'Hot Wash Up' report he had drafted for the Fleet Commander. He couldn't make up his mind whether it was a report or a list of defects of personnel and equipment.

The Executive Officer and himself had covered in great detail every event that had taken place during the emergency, but there were a few things that really stood out. If I were running my Navy, he thought to himself, these points would warrant immediate attention:

- There would be more time spent on exercising men and machine. At one stage during the conflict a possible double firing of TARTAR missiles was called for. By the time the missiles were ready to go, the contacts had been lost. This in my view is because the men don't have enough practice in launching missiles. The same holds true for the IKARA launchers. At one stage both IKARA launchers were down for 72 hours owing to a radar malfunction. Of course no one can predict when an electronic device will malfunction, but with sustained practice, we could increase reliability by eliminating weak spots.
- More sea billets would be opened up for training. Before the forward 5 inch turret had broken down, an exercise had been conducted which involved manually targetting the gun because of a simulated

radar breakdown. The bows of the ship had very nearly been blown off! This was because the only practice the Chief Fire Control rating had been given was on the cliff face at West Head. A vastly different proposition to a ship pitching and rolling through 45 degrees.

- Maintenance of RAN ships would be turned over to uniformed personnel. Dockyard jobs are invariably inferior in every respect. To aggravate matters further they are never finished on time.
- Complement proposals need to be given a more sympathetic hearing in Canberra. The officers on this ship are so fully committed that divisional work invariably suffers. Therefore morale suffers. What was it Napoleon had said? 'Morale is to all other factors as four is to one'. It takes time and work to keep morale high and the senior sailors don't always have the ability or the inclination to help out.

Vice Admiral Hale slowly sealed the envelope that would in effect bring the curtain down on what had been his 'raison d'être' for the last 40 years. It wasn't his resignation, though that would soon follow. It was a press release detailing some of the more glaring inconsistencies that had been thrust upon him being the Navy's most senior officer. This press release wasn't something he enjoyed doing. Forty years of service and all that it entailed was not easy to erase. However when he thought about what suicidal missions he had been forced to order his strength of purpose returned. What the general public would make of his statement he couldn't be sure. Although he thought apathy would be fairly widespread. That didn't matter. What was important was that the people heard and understood that politicians who are ignorant in all things, but especially naval operations, were making decisions of the gravest importance regarding the nation's security.

When he was campaigning against the mission at Cam Ranh Bay, there was one argument that the politicians continually threw at him and it never ceased to amaze him. 'Well if our ships aren't up to it, what has the Navy been doing with all the money we give it every year?' Then of course he could only politely shake his head and try another tack, but now what he was saying is: 'If I were running my Navy, without your interference, this is the way it would be . . .'

- Large equipment decisions would be made by the Navy and purchased by the Navy. One wouldn't ask a lawyer or an economist how to conduct anti-submarine operations, so why should they tell us which weapons are best for the job?



- A Naval Information Bureau would be set up. Its function would be to inform the general public of the day to day operation of the Fleet. It would also include such things as the numbers and names of the Soviet ships following our ships around on their various deployments.

Spencer Hale shook his head in disgust. What good would it all do? The average Australian is only interested in his football, his

mortgage and his barbecue pit. He doesn't care that the USSR keeps one and a half million men under arms during peace time. He hasn't learned the lesson that history has taught us since the time of the Romans. That large forces will be used to try and dominate others. Spencer Hale started to feel very old indeed. Something he had read the other day had haunted him ever since. It was something the Pope had said and had rung chillingly true:- 'We have now moved out of a post war period, into a pre-war period.'



## ADDITIONS TO THE LIBRARY FEBRUARY-JUNE 1984

1. Make Another Signal  
Captain Jack Broome — William Kimber 1973
2. On Watch  
Elmo Zumwalt — New York Times Book Co 1976
3. Aircraft and Seapower  
Vice Admiral Sir Arthur Hezlet KBE CB DSO DSC — Peter Davies 1970  
(1-3 presented by Cmdr H. Julian RAN)
4. A History of Port Melbourne  
Nancy U'Ren and Noel Turnbull — Oxford University Press 1983
5. Compendium of War Histories  
Presented by Mrs B.E. Coles from the library of LTCOL R.L. Coles RAE
6. The Griffen Cove Wreck  
Paul F. Hundley — Australian Institute for Maritime Archaeology 1984  
(7-21 donated by LCDR W. Scott)
7. British Warships' Names  
Capt T.D. Manning Cdr C.F. Walker — Putnam 1959
8. The Strategy of Sea Power  
Capt S.W. Roskill RN — Collins 1962
9. History of the Second World War  
The War at Sea Vol III Pt I — 1960  
Vol III Pt II — 1961  
Capt S.W. Roskill — HMSO
10. British Naval Aircraft since 1912  
Owen Hetford — Putnam 1962
11. New Zealand's Naval Story  
T.D. Taylor — Reed 1948
12. The British Destroyer  
T.D. Manning — Putnam 1961
13. Royal New Zealand Navy  
S.D. Waters — Dept of Internal Affairs NZ 1956
14. British Battle Ships  
Oscar Parkes — Seeley 1956
15. Warships of the British and Commonwealth Navies  
H.T. Lenton — Allen 1969
16. Japanese Battleships and Cruisers  
(Pocket Pictorial) — MacDonald and Co 1963
17. Ships of the Royal Navies  
Oscar Parkes — Sampson Low Marston 1937
18. The Times Book of the Navy  
The Times 1914
19. Warships of World War I  
H.M. Le Fleming — Allen —
20. Japanese Aircraft Carriers and Destroyers  
Pocket Pictorial — MacDonald 1964
21. The Navy List of 1897
22. Shipping — Arrivals and Departures  
Tasmania 1803-1833  
Nicholson I.H. — Roebuck 1983. Presented by Author





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## BOOK REVIEWS



### DOES KHAKI BECOME YOU? THE MILITARISATION OF WOMEN'S LIVES. By Cynthia Enloe. London, Pluto Press, 1983. 255pp. \$12.95.

Cynthia Enloe teaches at Clark University and is the author of many books with a socio-military flavour including *Ethnic Soldiers*, and *Police, Military and Ethnicity*. Involved as she is in social and feminist issues, it is not surprising that she should tackle the issue of women and militarisation. She states in the preface that much military history and current commentary on military matters is written as though women did not exist 'as though the Second World War (or the Falklands war or the Vietnam war) depended solely on men in war rooms and in the trenches'. When she came to realise, however, that the armed forces both 'thought about women and tried to control and use women' she set out to reveal how this was and is done and to work out why they are afraid to admit it.

In order to do this Ms Enloe starts well back in history and works up to the present day, examining the roles of mothers, wives, nurses, women soldiers, defence workers, and prostitutes in relation to the military. She has interviewed many women from a broad spectrum of social strata connected with the military, and women employed in the armed forces and in defence industry. For the most part, examples have been drawn from Britain and the United States, though women's roles in liberation armies are also examined.

The book has been very thoroughly researched and contains a wealth of interesting material drawn from historical records, diaries and personal interviews, all of which is used with the object of proving that women are being deliberately used and abused by the military. The author believes that conscious policy decisions are taken to this end.

As this is a feminist book which casts the military as villains intent on fostering militarisation (ie, the process of making society more dependent on and subject to the control of the military) one feels that it will not find a great deal of favour with the readers of the journal. It is nevertheless worth reading for an insight into the

experiences of people, mainly women, connected with the military, for an historical background to the employment of women in the Services and for a view of how the military is perceived by an anti-militarisation feminist.

N.D. Uhlmann  
Commander WRANS

### CONWAY'S ALL THE WORLD'S FIGHTING SHIPS 1947-1982. PART II: THE WARSAW PACT AND NON-ALIGNED NATIONS. London, Conway Maritime Press, 1984. pp 252, ill, \$79.95.

This book is the second half of the volume which covers every significant warship built since the end of World War Two. Part I published in early 1983 covered the Western Powers (reviewed ANI Journal Vol 10 No 1 p 65). Volume II is divided into six sections — Africa, which covers 36 nations from Algeria to Zambia; Asia, 31 nations from Bangladesh to Vietnam North; Europe (Neutral), eight nations from Albania to Yugoslavia; Latin America, 31 nations from Argentina to Venezuela; Middle East, 14 nations from Bahrain to Yemen, and finally the seven Warsaw Pact nations. Be it Bjibouti with its 20 man naval force, Mali — the landlocked desert republic — with three small river patrol craft operating on the River Niger, or the massive Soviet armada, each navy receives an informative and detailed analysis of warship designs and the development of each navy. This book clearly gives a retrospective review of the postwar period, enabling the reader to clearly identify significant trends in warship design and procurement.

Volume II consists of 252 pages and is lavishly illustrated with 224 high quality and obviously carefully chosen black and white photographs. These are superbly supported by 229 highly detailed excellent line drawings which were specially commissioned for this book. They are mostly reproduced to 1/1250 scale



with the exception of a few large ships which were reproduced to 1/1750 scale to allow them to fit horizontally onto a page, and quite a few small ships which were reproduced also to this scale to allow a greater amount of detail to be included.

Although the period of the title of this book ends in 1982, information is included as late into 1983 as time permitted. The Addenda also covers Part I as well as Part II, with photographs relevant to both sections. Conway's have been very successful in their bid to include as much information as possible in this up-to-date reference book for the many thousands of warships for this period. In order to attain this objective it was necessary to divide this volume into the two parts.

The section covering the Soviet Union is fascinating reading, covering such areas as the Postwar Strategy to 1953, Khrushchev's 'Revolution in Military Affairs', Postwar Completion of Prewar-design submarines, War Prizes and a large section on postwar Soviet Naval Weapons and Sensors. Ranging from their postwar Fleet of 1947 through till 1983, approximately 20 per cent of this book is devoted to the Soviet Union. It is ably supported by an excellent selection of United States Navy and Ministry of Defence photographs of USSR ships.

This, the second part of the third volume of Conway's series of *All The World's Fighting Ships* maintains the high standard layout and design format of the previously published 1860-1905 and 1922-1946 volumes. Currently in preparation is the 1906-21 volume which will complete this first reference series to extensively cover the whole history of the iron and steel warship, from the first ironclad to the present day.

Destined to become a standard reference work, this book, and others in the series, is available in Australia from Princeton Books, Cnr Mills & Herald Streets, Cheltenham, Victoria.

Vic Jeffery.

#### AUSTRALIA'S COLONIAL NAVIES.

Ross Gillett. Naval Historical Society of Australia.  
143 pages, illustrated. \$5 post paid.

*Australia's Colonial Navies* is a publication long overdue for the Australian market. Well researched and comprehensive, it will serve to dispel most, if not all of the conjecture and argument that has surrounded the vessels of the various navies established by the colonies of pre-Federation Australia.

In his introduction, Ross Gillett states that he has spent many years researching this, his latest book. To have done so with obvious dedication and in quest of all the facts does him much credit. Australian history has been sadly lacking in a comprehensive listing of its pre-Federation ships-of-war, especially of those states not on the eastern seaboard. The 75th birthday of the RAN is fast approaching and it is most important that the community at large realise that our maritime defence, such as it is, extends back to the colonial days and was not entirely dependent upon the Royal Navy.

A separate section deals with each colony that owned a navy and it is of interest to follow the history of each force, the reasons for its formation and the fact that each vessel was purchased or built for a specific purpose. This is irrespective of whether the tasks were undertaken. The most forward thinking and dedicated colony was Victoria, and this fact comes across very clearly. Victoria, Queensland and South Australia had viable sea-going naval forces, with New South Wales coming a poor fourth. On this basis, it would be reasonable to assume that Victoria should still be the centre of naval activities, yet it is not. Perhaps it should be explained why the subsequent activities of the RAN have centred on, and grown in, New South Wales.

The section of great interest to this reviewer is that dealing with South Australia. Ross Gillett's version of the acquisition of *TB No 1* (or *TB 191* as the case may be) is at variance with that given in my recent article in the *ANI Journal* Vol 10, No 2. I stand corrected on this point and it serves to illustrate the long overdue need for *Australia's Colonial Navies*. At this point it would be appropriate to argue the point of the non-inclusion of the schooner *BEATRICE*. Jointly owned by the Colony in 1880, she gets no mention, yet the Tasmanian brig *ELIZA* and others do.

Completing the book is a chapter devoted to Colonial Naval Ordnance. Like the various railway gauges, each Colony went its separate way on the various agreements. One cannot comment on this too much as our present fleet seems to have a similar collection of non-compatible items.

*Australia's Colonial Navies* contains some very rare photographs. With at least one photograph per page, it could be described as profusely illustrated. Certainly the number and quality of the photographs adds to the presentation. At \$5 per copy (post paid) I am surprised that there was one remaining to review! For the wealth of information available at the price and the need for us all to realise that our heritage is maritime based, there should be a copy in every home!

*Australia's Colonial Navies* is available from The Naval Historical Society of Australia, PO Box 3, Garden Island, NSW 2000.

Robin Pennock

#### SHIPPING ARRIVALS AND DEPARTURES TASMANIA Volume I 1803-1833

By Ian Hawkins Nicholson CBE. Published  
by I.H. Nicholson via Roebuck Press, 1983, 318pp.  
\$15.

This is the third book of this type authored by Commodore Ian Hawkins Nicholson CBE RAN Retired and it is published via the Roebuck series which provides an outlet for books of merit on studies of Australian history.

The book consists of three parts. The first and major part of the book lists the shipping arrivals and departures for Tasmania. The entries are in chronological order and contain details on the vessel, the master and owner, the port of departure and the destination, and remarks including cargo and passengers if relevant.



Part II is an index of ships and vessels. Each ship is listed in alphabetical order and matched to the dates of arrival and departure, and previous port and destination. This allows a researcher who knows the name of a ship to quickly ascertain the relevant dates which will then allow the more complete entry in Part I to be found.

The final section again facilitates reference to the contents of Part I should you be researching a person. This index lists all the names in Part I and identifies them with a ship and at least one date. In the introduction, the author states that he intends to publish a further volume which will extend the arrivals and departures to 1842 and also will contain a geographical index for the complete period 1803-1842.

There are a number of illustrations throughout the book; paintings, sketches and charts. Some of the reproductions are a bit small to pick up the detail but they are a valuable addition to the book from the historical perspective. Included also are other interesting facts pertinent to the maritime history of Tasmania. I won't mention them here but a thumb through the book will be rewarding in this respect.

Some readers may wonder why the author would write such a book on Tasmania. Shipping arrivals to the first colony, New South Wales, have been covered in earlier published works. Tasmania was the next colony to be settled after New South Wales. Many

ships making for Sydney came via Tasmania. Victoria was colonized from Tasmania. Tasmania has always been dependent on the sea, more so and for longer than other Australian colonies.

Well what use is this publication? Any historian or family history researcher interested in Tasmania doesn't need me to indicate the value of it. It is an interesting source in its own right but it also directs the reader to where the original information can be found. One value of the book to the casual reader is the reinforcement of the tremendous importance of sea traffic to the lives of the early settlers and the realization that it still must be so for Tasmania.

There are some annoying aspects to these types of books. They relate to the code or shorthand that must be mastered before you can make complete sense of the entries. I would have found it useful to have a sample entry decoded at the beginning to make this exercise easier.

I am well aware of the amount of research and tremendous effort that is required to compile a publication of this type and the value it can be, particularly when it contains the amount of information this one does. It is for libraries, genealogical and historical societies, and may be of value to members who are Tasmanians or those who have an interest in its history.

Haydn L. Daw



## FROM THE TREASURER

Many members have suggested the use of a separate subscription reminder notice and I totally agree. So please use the form forwarded with this journal:

- ✧ to pay your subscription promptly
- ✧ to help us weed out any remaining errors.

I must point out that the Assistant Treasurer does not respond sympathetically to those members who place responsibility for late payment of subs on the shoulders of their wives! Accordingly, I will not blame her nor the computer, in offering my apologies to those few members whose record of payment may not have been made properly in our new system.

Please note that details of your current status are included on the first line of your address label, a copy of which is attached to the subscription reminder note. **The number '84' means that you are financial until the 30 September 1984** — ie, your subs are now due; those forward planners who see '85' on the label are financial for the next ANI year which runs from 1 Oct 84 to 30 Sep 85. We do not issue receipts, but the next issue of the journal will be delivered with an address label showing the new financial status. Watch that space and ensure that *you* do not fall behind.

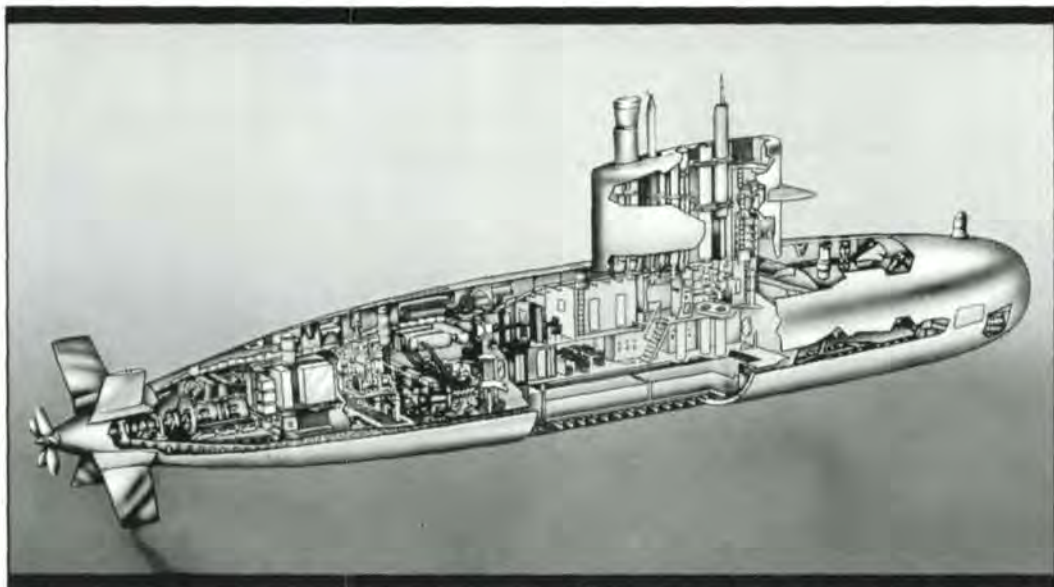
Two further items of interest are:

- ✧ our new address is:

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- ✧ overseas members and other subscribers can now have their journals delivered by airmail — for an extra charge, unfortunately. Details are on the subscription renewal notice and in the journal.





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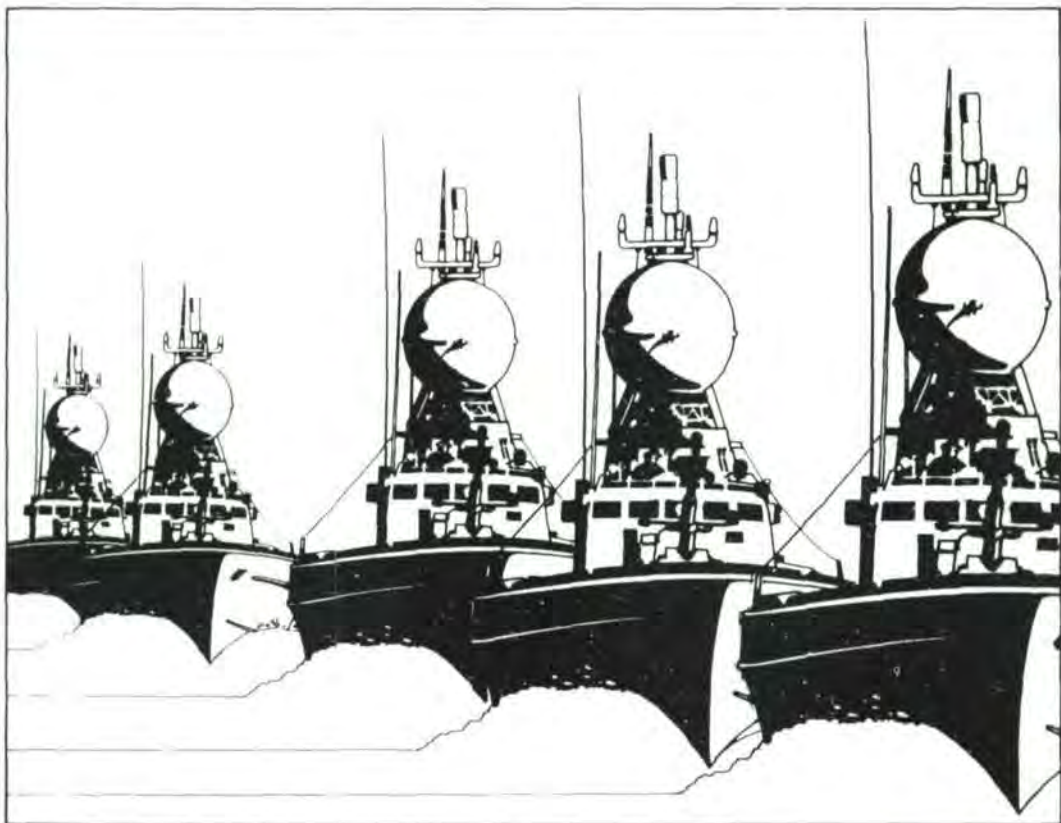
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The ANI Council has decided to clean out its cupboards, and as a once only offer, readers can purchase back issues of the Journal for the reduced price of only \$2 per copy, including postage. Copies of *Seapower 79* and *Seapower 81* are also available for only \$2 per copy including postage.

Members can take this opportunity to complete their collections and fill in the gaps. Libraries can do the same or use the offer to buy spare or replacement copies of popular issues. We have copies of all issues *except*:

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### MELBOURNE CHAPTER

A meeting of the Melbourne Chapter will be held at 1800 on the 27 August 1984 at the Royal Melbourne Yacht Club in St Kilda.





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## NOTICE OF ANNUAL GENERAL MEETING

The Annual General Meeting will be held at 2000 on Friday 26 October 1984 at RSL National Headquarters, Constitution Avenue, Campbell, Canberra, ACT.

### AGENDA

1. Confirmation of Minutes of the Annual General Meeting held on 28 October 1983.
2. Business arising from the Minutes.
3. President's Report.
4. Auditor's Report.
5. Election of the officers of the Institute and the Ordinary Councillors.
6. Appoint an Auditor and fix his remuneration.
7. Special Business:
  - a. Amend Article 31 of the Constitution to change the financial year to 1 Jan to 31 Dec with effect 1 Jan 1987.
  - b. Approve financial year 1985-86 to be 01 October 1985-31 December 1986.
  - c. Increase the annual subscription to \$20 with effect 1 Oct 1985.
8. Other Business.

### ELECTIONS

#### Office Bearers

The Office Bearers of the Institute are:

- |                          |                   |
|--------------------------|-------------------|
| a. President             | d. Treasurer      |
| b. Senior Vice President | e. Secretary      |
| c. Junior Vice President | f. Journal Editor |

#### Council

The Council of the Institute consists of:

- a. The Office Bearers
- b. Ten regular members known as Ordinary Councillors.

#### Qualifications

Only regular members may hold office.

#### Nominations

Nominations of candidates for election are to be signed by two members (regular or associate) of the Institute and forwarded to reach the Secretary no later than 16 October. Nomination forms are available from the Secretary.

#### Voting

Only regular members may vote and voting must be in person at the Annual General Meeting.

#### Notes on Special Business for the AGM:

Aligning the financial year with the calendar year will make it easier for members to remember when subscriptions fall due and will provide a full volume of journals in each subscription year (journals running in calendar years). AGMs would be held in late Feb early March; councillors would be elected after the end of year postings, thus avoiding the hiatus which sometimes occurs now when elected councillors do not arrive in Canberra for a couple of months after the election.

If annual subscriptions were increased, the first \$20 would give 15 months membership and 5 journals between 1 Oct 1985 and 31 Dec 1986. The real increase in subscription rates would not occur until Jan 1987 — several years since the last increase.

## CANBERRA CHAPTER MEETING

Following the AGM, there will be a meeting of the Canberra Chapter — speaker to be advised.





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[\* Can be deleted if alternative means of carriage are arranged]



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Rear Admiral R.C. Swan AO CBE



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• AA guns and missiles • Field artillery • Combat vehicles • Special ammunition • Anti-tank guns and missiles

## Army weapons

Know-how and advanced technology have made Bofors front runners in the development and manufacture of army weapons.

Our anti-tank missile BILL is just the latest example of our ability to find new and unconventional methods of solving customer problems.

Being manufacturers of both weapons and ammunition gives Bofors unique resources to develop complete weapon systems.



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