

359-
NA

20 APR 1978

BYOWIT

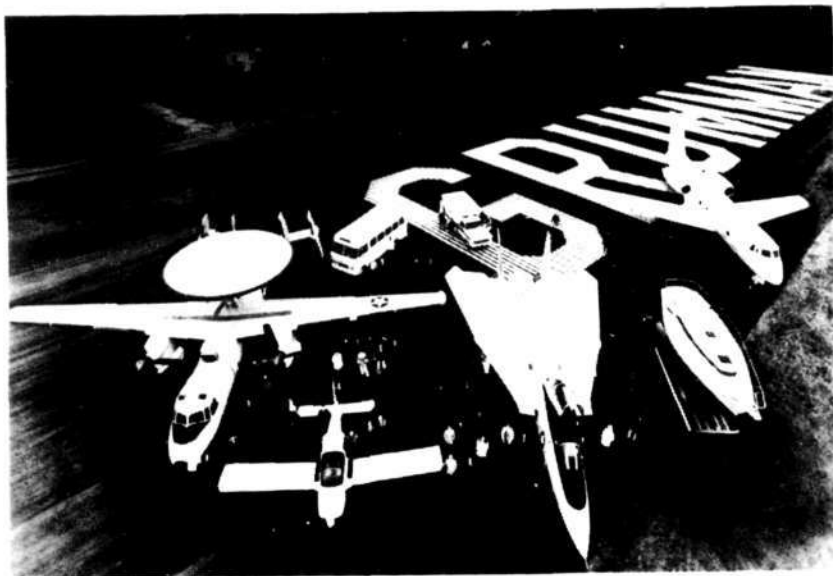
FEBRUARY-MARCH-APRIL, 1978

Registered for posting as a periodical — Category A

50 CENTS

THE Navy





**We're proud of the many products we make.
We're prouder of the people who make them.**

Grumman people have the imagination and talent to take technology from one area and apply it to another, creating something new and something better.

They have the insight to know that what they've accomplished isn't the end of the project but the next step toward another.

Grumman people. Special people. Designing and building the high-quality, high-performance products only Grumman people can make.

Just some of the things Grumman people make (Clockwise from top): Emergency ambulance, Gulfstream II executive jet, Pearson yacht, The F-14 Tomcat fighter, The Tiger, The E2C Hawkeye airborne early warning system, Mini-Bus.

GRUMMAN CORPORATION
BETHPAGE, NEW YORK 11714

For information contact:
P.O. BOX E201, CANBERRA, A.C.T. 2600

THE NAVY

The magazine of the Navy League of Australia
Registered for posting as a publication — Category A

Vol. 40

FEBRUARY-MARCH-APRIL, 1978

No. 1

CONTENTS

	Page		Page
Visit to North America by The Federal President	3	NELSON	33
Letters to the Editor	13	What is the Soviet Navy up to?	37
The Strategic Need for a New Carrier	17	Canadian Ship Building Programme	45
High Speed Oil-Defence Boat	24	Water Fuel Lighters for the Navy	47
Keel of New RAN Ship Laid	25	Contract for New Patrol Boats	48
Book Reviews	27	Ultra Modern Torpedoes for RAN	48

PLUS SUNDRY STORIES AND PHOTOGRAPHS

The views expressed in articles appearing in this publication are those of the authors concerned. They do not necessarily represent the views of the editor, the Navy League, or official opinions or policy.

Photographs appearing in this magazine are obtained from official sources and copies cannot be secured from the Navy League of Australia, Percival Publishing Co Pty Ltd or the Editor.

All correspondence should be directed to the Honorary Editor
26 Wesson Road, West Pennant Hills, NSW, 2120, Australia
Telephone Enquiries — 84 7198 (evenings only)

Published by the Navy League of Australia, Box 1719, GPO, Sydney, NSW, 2001.
15th Floor, Patrick House, Cnr Spring and Gresham Streets, Sydney, NSW, 2000.

ADVERTISING AND PUBLICATION: PERCIVAL PUBLISHING CO PTY LTD

SYDNEY	MELBOURNE	ADELAIDE	BRISBANE	PERTH	HOBART
Mr G. Menteth 862 Elizabeth St Waterloo NSW, 2017 Phone: 699 2600	Mr Bob Smith Greenan Publications Pty Ltd 388 Bourke Street Phone 61 1461	Mr Trevor Winslett 17 Currie St Adelaide, 5000 Phone: 51 6225	Mr Steve Meyers 72 Eagle St Brisbane, 4000 Phone: 31 2531	Mr Tom Dwyer 194 St George's Terrace Perth, 6000 Phone: 22 4072	Mrs Kath Stump 123 Murray St Hobart, 7000 Phone: 34 4096

ADVERTISING RATES: \$155 PER PAGE — \$105 PER HALF PAGE

THE NAVY LEAGUE OF AUSTRALIA

PATRON: His Excellency the Governor-General

FEDERAL COUNCIL

President: Commander F. G. Evans, MBE, VRD, RANR

Vice-President: Commander C. M. Blake, VRD, RANR

Vice-President: Lieut Cmdr A. W. Grazebrook, RD, RANR

Secretary: Lieut Cmdr O. V. Dimmitt, VRD, RANR, Box 227, PO Hawthorn, Victoria, 3122 Telephone 29 6294

New South Wales Division

Patron: His Excellency, the Governor of New South Wales

President: Lieut Cmdr E. Bryden-Brown, VRD, RANR

Honorary Secretary: D. P. Trickett, Esq, Box 1719, GPO Sydney, NSW, 2001

Victorian Division

Patron: His Excellency, the Governor of Victoria

President: B. J. Bird, Esq

Secretary: Lieut Cmdr O. V. Dimmitt, VRD, RANR, Box 227, Post Office, Hawthorn, Victoria, 3122 Telephone 29 6294

Queensland Division

Patron: His Excellency, the Governor of Queensland

President: Surgeon Commander A. H. Robertson, RANR

Hon Secretary: Lieutenant E. W. Crooke, RANR, 780 Gympie Road, Chermside, 4032

Australian Capital Territory Division

President: Commander D. M. Blake, VRD, RANR

Hon Secretary: Lieutenant F. Whetton, 66 Bradford Street, Downer, ACT, 2602

South Australian Division

Patron: His Excellency, the Governor of South Australia

President: Bruce Grey, Esq

Hon Secretary: Miss A. Fitzgerald, Box 1529M, GPO Adelaide, SA, 5001

Tasmanian Division

Patron: Vice-Admiral Sir Guy Wyatt, KBE, CB

President: Senator D. M. Devitt

Hon Secretary: Mrs T. McMeekin, 24 Clementina Street, Launceston, 7250

West Australian Division

Patron: His Excellency, the Governor of Western Australia

President: Lieutenant Commander J. J. Johnson, MBE, RAN (retd.)

Hon Secretary: Mrs P. Paramor, Box 735, PO, Fremantle 6160

Feb/March/April, 1978

THE NAVY

Page One

R. & B. CONCRETES MORANBAH

Ready-Mixed Concrete Specialists

Phone: Moranbah (079) 50 7492

INDUSTRIAL ESTATES
GOONYELLA RD
MORANBAH, QLD

Visit to North America by the Federal President

COMMANDER F. G. EVANS, MBE, VRD, RANR

NORTH AMERICAN JOURNEY

The time: 3 am Saturday 15 October, 1977.

The Place: Travis Air Force Base, California.

At this awkward time, in an unusual setting, the first "Formal" visit by an Australian Navy League president to the Navy Leagues of the United States and Canada commenced.

Strictly speaking it started 48 hours earlier when I departed Richmond RAAF Base near Sydney in a C-141 'Starlifter' of the United States Air Force. The 'Starlifter' is a very large 4-engine jet cargo aircraft which can be configured to take a limited number of "passengers". It is reasonably comfortable but incredibly noisy — a fact of which your president was blissfully unaware before take-off, and therefore the cause of some surprise when he started to eat the ear plugs offered to him, in the belief that the pink, candy-like objects were part of the USAF cabin service. Perhaps it was the reason for the solicitude shown by the American airman for the foreigner in their midst from that time onwards!

THE JOURNEY

Departing Richmond late Thursday afternoon, the east-bound flight was made via New Zealand (Christchurch for an overnight stop), Samoa (Pago Pago to re-fuel), and Hawaii which we reached at 3 o'clock in the morning local time on our second Friday. I was accommodated in a very comfortable suite at Hickam Air Force Base in which I luxuriated between periods exploring the base, until we departed for the mainland later in the day. We passed over the coast at San Francisco just before midnight on Friday, or 3 o'clock Saturday morning after we adjusted our watches again, and shortly afterwards



At Norfolk, Admiral I. C. Kidd Jr (C-in-C Atlantic, C-in-C US Atlantic Fleet, Supreme Allied Commander Atlantic) with President of the Navy League of Australia, Commander F. G. Evans, MBE, VRD, RANR.

landed at Travis. The flight arrived more than twelve hours earlier than expected, and my first hours in North America were spent sleeping in quarters provided by the USAF at the base, the only disturbance being a seemingly endless procession of jets taking off outside my window.

THE UNITED STATES OF AMERICA

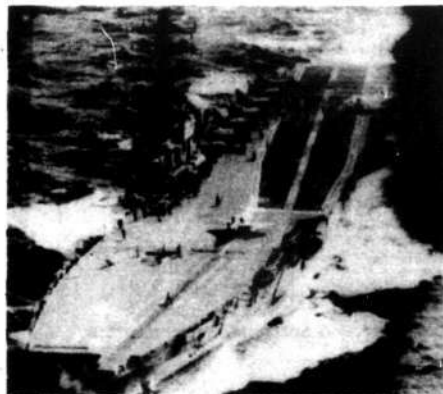
My first host and hostess in North America were Mr Jim Griffin, chairman of the Navy League's National Advisory Council and immediate past national president, and his wife Jean. They drove some 120 miles from their home at Los Gatos, to the south of San Francisco

to recover me from the USAF and to bear me off as a guest for the weekend. In their mountainside home overlooking the San Joaquin Valley, Jim and Jean Griffin demonstrated the courtesy and goodwill which was to be a feature of my visit to North America.

After weekending at Los Gatos and touring the district, I flew south to San Diego on Monday 17 October, and into the 'jurisdiction' of Mr Jack Morse, president of the 11th Region of the USNL. A dinner each night to meet Navy Leaguers; a meeting with the Regional Navy Commandant, Rear Admiral Rogers; an inspection and lunch in the new Spruance class Destroyer "KINCAID"; visits to the naval air station

Greetings to the Royal Australian Navy from

DILLINGHAM SHIPYARDS (WA) PTY LTD



- SHIP BUILDERS
- SHIP REPAIRERS
- ENGINEERS

~~~~~  
CURRENTLY REFITTING  
"HMAS DIAMANTINA"  
in  
Fremantle, WA

9 Corkhill Street, North Fremantle, WA  
PO Box 50, North Fremantle, 6159

Telegraphic Address: "South Slips", Perth  
Telephone: 335 4622 — Telex 92 6655

## DILLINGHAM

The Shipyard on the Western Coast



Department of National Defence Offices, Ottawa, Canada: L to R: Captain (N) Darroch MacFillivray, CAF, Director of Maritime Operations, Plans and Reserves, Canadian Armed Forces.

on North Island and to the Maritime Museum, and a tour of San Diego and the surrounding districts, fully occupied the two days I spent in this very Spanish-looking and sounding part of the world.

Then north to Santa Ana by rail, a two hour journey along the Pacific Coast — almost on the beach at times — past San Clemente, home of former President Nixon, and the great Marine Corps training centre, Camp Pendleton, to the outskirts of Los Angeles. Jack Rau, a national director of the League, met me at the station ("depot") and settled me in to the VIP cottage at El Toro Marine Corps Air Station, my "home" for the next two nights.

An afternoon at the Aeronautic Division of Ford Aerospace & Communications Corporation at Newport Beach provided a very interesting experience, and gave one some idea of the complexity (and cost) of modern weapons. Fortunately, my visit to Southern California coincided with the start of the Naval Reserve Association's four-day annual convention at Anaheim. This was held at the Disneyland Hotel — quite a splendid establishment situated alongside famous "Disneyland" in which, to my sorrow, I had no time to indulge.

The Naval Reserve Association is, in essentials, a mix of serving

Reserve and former Reserve officers, and has a membership of about 17,000. Although it's charter is fairly wide, the main purpose of the NRA is to promote the interests of the Naval Reserve, which appears to me to face many of the problems our RANR has to face. It is for consideration whether an NRA-type organisation would be useful in Australia — perhaps, in view of our comparatively small navy and large number of extra-naval organisations, it would be preferable to develop a section within the Navy League to bring Reservists together and advance the interests of our Reserve forces.

The principal guest at the Naval Reserve Association convention was Vice Admiral Pierre Charbonnet, USN Chief of Naval Reserve and Commandant of the 8th Naval District based in New Orleans. As the Admiral and I had been invited to meet each other at a dinner in that city two days later, he very kindly transported me from California to Louisiana in his personal jet ... an interesting experience! The Admiral piloted the machine, his flag-secretary acted as co-pilot. I offered encouragement from the jumpseat, while the two crew members occupied the passenger accommodation. One gained a new respect for Service pilots, especially their ability to bring an aeroplane from thirty-

thousand feet to ground level within a matter of seconds — or so it seemed.

New Orleans for my second weekend in the United States, and it was a pleasure to meet once again Mr. and Mrs. Ernest Carrere, whose visit to Australia in 1975 when Ernest was national president of the USNL, was mainly responsible for my "return" visit.

Looking back, it is difficult to remember precisely what happened in New Orleans as the programme was virtually continuous. One recalls however dinner at a fascinating restaurant (Antoine's) in the French Quarter to meet members of the League; the great Mississippi River; balconies and tons of cast iron; trumpeter Alvin Alcorn and his band playing "Waltzing Matilda" in my honour at "The Commander's" to the surprise of patrons; the award of Honorary Citizenship of New Orleans; appointment to the Governor's staff (as a 4-star Admiral — CNS please take note); a visit to the Charbonnets in Quarter "A", a plantation home built in the 1840s and used by the local Flag Officer for the last thirty years, and many other experiences.

The next stop was Washington, which I reached on Monday 14 October after travelling by air via Atlanta. I was met at National Airport by Captain Vincent Thomas, executive director of the Navy League who arranged my American itinerary, no mean feat — as he did not know the actual date of my arrival until after I had left Australia; but that is another story. In Washington I was accommodated at Wardman Tower, a part of the Sheraton Park Hotel in a suite provided by the USNL. It was at one time used, I believe, by former Vice President Spiro Agnew, but be that as it may the most striking feature to my mind was a bed so large that it would easily hold four people with room to spare — alone, I felt lost.

At a dinner shortly after my arrival the national president of the United States Navy League, Mr Vincent Hirsch, presented me with The Patriots Pitcher, a Lenox china piece depicting in detailed bas-relief, vignettes of America's history from 1620 to 1776: I felt greatly honoured to receive such a gift. Also present



# WROUGHT IRON STEEL WORKS

**BERRIMAH ROAD, BERRIMAH  
DARWIN, NT**

General Steel Fabrications, Balustrading, Galvanising, Trusses, Building Fabrication,  
General Welding, Wrought Iron Work including Handrails and Fancy Work.

**Phone: Darwin (089) 84 4027**

# THE PAINT SHOPPE

*Full Range of Vinyls, Vinyl-Coated and Ready  
Pasted Wallpapers*

- **Wilson**
- **A.W.M. Molytex Wallpapers**
  - Expert Customer Paper Hanging Service
  - Free Advisory Service
  - Borrow Our Pattern Books After Hours
  - Large Stock Available for Ready Purchase
- Friendly Service and Advice on Application of Paper

**2 HARRIET PLACE, DARWIN, NT**  
**Phone: Darwin 81 8760**

on this occasion were Mrs Hirsch, and League representatives and their wives from Washington and Puerto Rico.

Washington was a succession of meetings and "calls" — at the Navy League and Sea Cadet headquarters, the Pentagon, the Senate Offices — and lunches and dinners attended by members of the Navy League. It was particularly interesting to meet Navy Under-Secretary James Woolsey who, at 36, must surely be one of the youngest men to hold such an important post in the American defence hierarchy. At the Senate Offices one realised afresh the great influence Senate committees have on American affairs, not least on defence — the USN Senate team alone is headed by an obviously very capable Rear Admiral with an equally capable staff to match. One learned a good deal in the American capital — and I hope they learned something about us.

On Thursday evening 27 October, after three dull days in Washington, I flew 185 miles south-east to Norfolk, headquarters of the US Atlantic Fleet and centre of a naval complex of quite staggering dimensions — the largest naval establishment in fact in the free world. I was accommodated very comfortably by the USN in what could only be "admiral's quarters" and spent the following day visiting ships of the Fleet, including the carrier "INDEPENDENCE" and nuclear cruiser "SOUTH CAROLINA", in the care of Captain Frederick Ellis, staff officer to the Commander-in-Chief, Admiral "Ike" Kidd.

Apart from his Fleet responsibilities, Admiral Kidd is also Commander-in-Chief Atlantic (a unified command with a joint staff of US Army, Navy, Air Force, Marine Corps and Coast Guard personnel) and Supreme Allied Commander Atlantic (a NATO appointment). In carrying out his various tasks the Admiral controls the operations of some 300 ships, 1,800 aircraft, and nearly a quarter of a million men and women. It was certainly a great privilege to be able to meet Admiral Kidd, and I have never known an hour and more to pass so quickly as the time spent talking with him.

Whilst in Norfolk I was able to attend a Turkish National Day

ceremony and reception. This was a NATO occasion and similar ceremonies take place on the National Day of each country represented on Admiral Kidd's staff — so they are quite frequent events.

I left Norfolk on Saturday morning, the 15th day of the journey, by air for Boston. My hosts in this city were Tom Morris, a national director of the League, and Ray Couture, Boston council president. Later on during my stay their wives assumed responsibility for me and this was very pleasant indeed.

Fortunately the Navy League was celebrating Navy Day while I was in Boston, and a dinner dance attended by about 160 people provided an excellent opportunity to meet many League members as well as other guests. I also attended a football game at the Schaefer Stadium — or rather a strange version of football which involved about one hour of activity and two of handling consultation on the field. Marching girls performed continuously and provided a decorative background to the scene: all in all, an interesting and unusual afternoon.

On to Portland, Maine, on Monday 31 October for an overnight stay and a meeting with national director Charles Stickney, and Mrs Stickney. On the following morning Mr James Harvie of the Bath Iron Works Corporation called for me and we drove forty or so miles to Bath to see the brand new "OLIVER HAZARD PERRY" — lead ship of the FFG-7 guided missile frigates of which Australia has ordered three. Although not the most graceful-looking ship in the world, "PERRY" is nevertheless quite impressive with a very heavily raked stem (about 45°) and clean lines: Perhaps our ships could be improved by replacing the existing buttonlike stack and housing with a small funnel. Internally "PERRY" is surprisingly roomy and the layout indicates care in design to ensure simplicity and practicability. "PERRY" was carrying out her builders' trials during my visit and there is every expectation that this will be a successful class.

## CANADA

From Bath I returned to Boston and went straight on to Toronto, arriving on Wednesday 2 November.

The president of the Navy League of Canada, Commodore Bob Hendy, RCNR, met me at the airport and bore me off to his home which was to be my 'headquarters' for the next five days. Mrs Hendy was a truly delightful hostess.

Thursday was a busy day, meeting people and comparing notes on our respective Navy Leagues with Bob Hendy, and in the evening we flew to Ottawa for a series of meetings at the Department of National Defence commencing early the following day. These meetings included talks with Defence Minister "Barney" Danson; Personnel Chief Rear Admiral J. A. Fulton; and Captain (N) Don MacGillivray (in the unified Canadian armed forces, naval Captains are distinguished by an 'N' after the rank). A busy morning was followed by a lunch hosted by the United Kingdom Naval Attaché, Captain A. Henschel, RN, and a press interview which subsequently caused Bob Hendy a lot of trouble; in commenting on delays in getting an escort replacement programme under way Bob suggested that Canada would have to think about ordering ships abroad, a quite sensible remark: the shipbuilders and unions were very upset and have been attacking him ever since. It is all rather reminiscent of our DDL problems.

From Ottawa back to Toronto and a pleasant weekend at the Hendy ski lodge in the Caledon Hills — and much Navy League talk. Partly because of the difficulties of promoting naval interests in a country which does not have a Navy as such — Bob Hendy has been an outspoken critic of unification — the Canadian Navy League tends to be sea cadet-orientated, and very successfully so. The League has clearly defined responsibilities towards the Royal Canadian Sea Cadet Corps — something we have been unsuccessfully seeking in Australia — and the net result is a cadet organisation of some 12,000 members — more than four times the size of the Australian NRC and twice that of the US Naval Sea Cadet Corps which is supported mainly by the Navy League. The contribution of our Canadian colleagues to the sea cadet organisation is valued at about a million dollars annually — an exceptional contribution by any standards, and it must relieve the

Greetings to RAN

# JOYCE-TROJAN Winners of the..



A Good Design Award  
by the Industrial Design  
Council of Australia

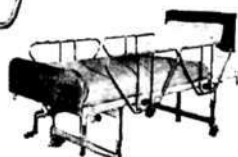
The 1973 Major Hoover  
Marketing Award

A Prince Philip Prize  
for Australian Design



Joyce  
Fold-a-Bed.

Joyce  
Hospital Bed  
& Equipment.



Commercial Furniture, Garages,  
Pre-fab Buildings

# JOYCE-TROJAN

6-8 Forsyth St, O'Connor, WA. Phone 337 4400

defence department quite considerably.

I must say that I felt a strange sense of kinship with the Canadians, and attribute this to the fact that Canada and Australia both belong to the Commonwealth and share a Head-of-State. We also share a few problems — large countries with small populations, but I am glad that in Australia we have a common language.

## BACK TO AMERICA

I left Toronto on Monday 7 November, 24th day of the North American visit, and flew to Chicago — one hour on the way and almost the same time circling around waiting to land at the busy O'Hare Airport: it was fascinating to see several planes arriving simultaneously on parallel runways, and behind them others on the way down.

I had several hosts in Chicago, where I stayed at the Chicago Athletic Association's hotel-like clubrooms on Madison Avenue as the guest of NL council member, Art Conrad. Vice-President Frank Allston "organised" my stay, and Bob Sander and George Wendt drove me for many miles.

I don't know what I expected to find in Chicago — burly policemen and maybe meat processing works ... but I did not expect a city of such great beauty, and so "alive". Chicago on a misty day with the tops of some of its taller buildings up in the clouds somewhere; Chicago at night, unbelievably spectacular. I am glad I did not miss this call.

The whole of the first day was spent at the USN's Great Lakes Training Centre, which takes in about 16,000 recruits and advanced-training naval personnel a year. It was interesting to see in one of the schools a complete steam plant — boiler and engine rooms lifted out of a destroyer and transplanted: all the sounds and smells and noises were there, the only thing missing was the "ship's" movements!

On the following day I visited an establishment with a difference — the Fermilab National Accelerator Laboratory at Batavia, about an hour's drive from Chicago. Fermilab is operated by a consortium of 52 American and one Canadian research-oriented universities. It

engages in "high energy physics" and its purpose is to further understanding of the nature of matter. It would be hopeless to describe this extraordinary place here, but one thing that impressed me greatly was the fact that they inject protons into an accelerator ring four miles in circumference, and the protons travel around this ring 50,000 times in one second. After undergoing this experience the protons are recovered and transported to experimental areas. The laboratory's linear accelerator (one of the stages on the way to the accelerator I have mentioned) is also used to produce neutrons for a facility investigating the value of neutron irradiations as a treatment for certain types of cancer.

After emerging somewhat bemused from Fermilab I was taken to the Naval Air Station at Glenview and then back to Chicago to the Museum of Science and Industry: One of the exhibits at the Museum is a complete German submarine, U-505 which was captured during the Second World War, and "sailed" to Chicago when the St. Lawrence Seaway was opened. After this I attended a Navy League dinner and at about 10 p.m. was piled into the "North Coast Hiawatha" at Union Station, bound for Seattle some 2,200 miles away.

## BACK TO THE WEST COAST OF AMERICA

A trip across America by rail is very worthwhile. On the first morning out from Chicago I awakened and to my surprise looked out on an all-white landscape. Apparently there had been an unexpected and severe snowstorm during the night and while the train was not affected the road traffic was certainly in a awful mess from what I could see. Your president is not used to snow, at least not so much of it, and so, except for one venture the whole day was spent in a 'dome' carriage gazing out over this new world. The exception was rather regrettable as, at a wayside stop, I left the cosy cocoon of the train and found myself looking up at the sky as my feet became uncontrollable on the surprisingly hard snow, or rather, ice.

Dawn of the second day found us a Butte, where one almost expected to see Indians attacking the train; over the Rockies; across the plains

to Spokane; the spectacular Cascade Mountains and more snow, and the final run into Seattle on the West Coast which we reached at about 9 pm local time. I gained a better idea of the vastness of North America and its similarities to Australia during this 51-hour rail journey than from all the previous plane miles. Contrary to what I had been told I found the train comfortable and the service was excellent.

In Seattle my principal host was Carl Swenson and he was supported by Darrel Taylor; both are national League office-bearers. Dawn on the morning following my arrival found me 'at sea' on a small vessel used by the USNR and on this occasion partly manned by Sea Cadets, exploring the Seattle Harbour and Lake Washington: Later on I saw more of the extensive harbour facilities in the course of a land tour. I also spent some time with John Garbutt of the Australian Defence Department who is overseeing construction of our frigates — the first two to be named "ADELAIDE" and "CANBERRA" — at the Todd shipbuilding yard. There is not much to be seen of them at the moment, and difficult to link a few frames and plates and boxes of equipment with the completed frigate I had seen in Bath a few days previously.

The Swensons tendered a reception to their guest, and I was introduced to a new form of refreshment — a kind of alcoholic icecream which one 'drank' through a straw and which is rather insidious in its effects. It was a splendid party and I met many League members from the area. The Olympic Hotel in Seattle is to be the venue of the USNL's 1978 annual convention, and the management kindly invited me to sample the standard of accommodation to be provided; I found it very acceptable.

From Seattle I moved on to San Francisco and on the 32nd day of the tour returned to my original mainland starting point. A varied programme had been arranged which included two days on Treasure Island, a part of the San Francisco naval complex; visits to the Naval Air Station at Alameda (including an inspection of the carrier — "ENTERPRISE") and to Moffat ASW Base; a comprehensive tour of the whole Bay area; a number of

## BOAT FITTERS AND FASTENERS

# SEA FLEET PTY LTD

## MARINE CENTRE

Distributors for:

Full Range of Epicraft Marine Products • Marine Paints • Fibreglass • Resins  
• Safety Equipment • Galvanised and Stainless Steel Wire • Talurit Swaging

Distributors for:

Seagull Outboards • Boat Kits and Plans — Power and Sail

**PHONE: DARWIN (089) 81 5880**

**31 Stuart Hwy, Darwin. PO Box 1737  
Darwin, NT**

# MAZCARS CROYDON

**44 PARRAMATTA ROAD  
CROYDON, NSW**

**74 1889 — 74 8287 — 74 2337**

**MAZDA Specialist  
New & Used Cars**

**SALES — SERVICE — SPARES**

social events at one of which I met Vice-Admiral Wagner, head of the US Coast Guard, which enabled me to learn something about that organisation; and one day on which I was allowed to go shopping — mostly spent at a place called "Gump's", rather like Georges in Melbourne, and designed to encourage a steady cash outflow.

I spent the final two days on the mainland with Jim and Jean Griffin at Los Gatos and on Saturday 19 November, exactly five weeks after I arrived, they returned me to the care of the US Air Force for the flight home.

## HAWAII

We left Travis at 6.45 am on Sunday 20 November and arrived in Hawaii at 9.45 am the same day. As we were not due to take off until 2 am Monday I was able to spend the day with the State President of the Navy League, Harold Estes, and his wife who live in a 17th floor Honolulu penthouse with a rather spectacular outlook over ocean, mountains and the city itself.

I was taken to Pearl Harbour and visited the "ARIZONA" Memorial which is built over the sunken but visible hull of the battleship, destroyed in December 1941 at the outbreak of war with Japan. "ARIZONA'S" captain and crew lie in their ship below the Memorial and it is a saddening experience to go to this quiet spot in the otherwise busy harbour.

Later we drove across Oahu to Kaneohe Bay and eventually back to Hickam Air Base at midnight. Soon after take-off however a radar defect developed and we returned to Hickam, landing at about 3 am. Shortly afterwards it was decided to delay the flight for 24 hours and we had some traumatic moments finding a place to sleep at that hour of the night. Fortunately the Air Force

VOQ staff never sleeps and most, if not all, of us were settled-in soon after dawn — a rather lovely one but not altogether appreciated on this occasion.

One cannot complain too much about being delayed in Honolulu and we made our second departure at 1.30 am Tuesday, arriving at Pago Pago six hours later to refuel, and then another five hours to Christchurch: Deducting several hours and adding a day, it was then 11 am local time Wednesday 23 November.

We left Christchurch at eight o'clock the following morning and at 9.15 ESST the big 'Starliner' was on the ground at Richmond — six weeks exactly from the day I left Australia.

## THE NAVY LEAGUE IN THE UNITED STATES

The American Navy League consists of some 40,000 members who subscribe from \$41.00 pa (husband/wife membership) to \$1,500 pa (corporate membership), with different classes of membership between these lower and upper limits.

The affairs of the League are controlled by a National Board of Directors which is elected annually by the members. From Board members the Directors elect the National President, who is chief executive of the League, Vice-Presidents, regional and State Presidents and certain other national office-bearers.

The National President, who virtually gives up his normal occupation or profession while in office, is assisted by all the aforementioned officers; personal representatives for various oceanic areas; a salaried national headquarter staff (headed by an Executive Director); by a National Advisory Council composed of all past National Presidents and a number of other promi-

nent citizens; and a Maritime Advisory Committee made up of recognised leaders in industry and government which advises him how best the Navy League can serve the nation.

The League itself is divided into Regions which generally coincide with the US Naval Districts and consists of groups of States. The basic unit of the Navy League is the Council and there can be any number of these in each State. There are certain minimum requirements and the Councils vary quite a lot in size; the largest ones have over 1,000 members.

The Councils elect their own President and office-bearers and they usually have a judge-advocate to advise on legal matters and quite often a chaplain. Generally the Councils or their representatives meet at least once a year on a regional basis and similarly on a State basis.

Although the USNL has substantial financial responsibilities to the Naval Sea Cadet Corps, consisting of about 6,000 boys and an increasing number of girls, it is essentially an educational organisation dedicated — and I think this is the right word — to bringing maritime affairs before the attention of the American public. It does this in a number of ways which I hope soon to explain to our own Navy League committees.

One thing the Americans try hard to avoid is the "what's in it for me" attitude when approaching prospective League members. It is accepted that many people join organisations for the benefits to be gained by doing so (obviously one would not join, say, an automobile association for any other purpose) but the League's whole approach is based on the nation's interests, and not those of the individual. It is to the credit of the American citizen that it works.

## OUR COVER

CONSTITUCIAO, third of four Vosper Thornycroft Mark 10 frigates building at Woolston, Southampton, for the Brazilian Navy under a £150 million contract, seen on sea trials. She is the first of the general-purpose version of this 3500-ton frigate design, the earlier ships NITEROI and DEFENSORA being anti-submarine frigates. Main differences between the versions are in the armament, the general-purpose ships having Exocet anti-ship missile launchers amidships and a second Vickers Mk 8, 4.5-in gun aft.



**T  
H  
I  
N  
K  
I  
N  
G**



## PRIESTHOOD

### as your VOCATION IN LIFE?

"Special" courses available  
for men between 25-50  
years old

If you wish to find out more about  
the Priesthood and the qualities  
needed, send in the coupon below

Rev. Father Kerry Bayada,  
The Diocesan Vocation Centre,  
154 Elizabeth Street, Sydney.  
Phone: 61 7573.  
(PO Box 34, Brickfield Hill, NSW 2000.)

Could you please send me information on  
the Priesthood and the requirements  
needed?

Name .....

Address .....

Age .....



Sail away  
with pride in  
an AUSTRAL 20  
from

AUSTRAL YACHTS PTY LTD  
GRAVES ST. NEWTON 5074 Ph. (08) 317 4050

## AUSTRAL 20 TRAILER SAILER or KEELER

The Superb Racing-Cruising  
yacht — with family comfort in  
mind!

### Design Features —

Hull and Deck are constructed using hand  
lay up methods to create a hull and deck  
combination of exceptional strength  
The Hull is MULTI-LAYER with extra  
glass in areas of maximum strength plus  
built-in buoyancy

The Deck is reinforced throughout with  
integrally bonded Balsa-Core to give  
added buoyancy, strength and insulation  
All deck and working surfaces are  
moulded in non-skid for crew safety

## Letters To The Editor



'Rothlyn',  
Monaro Highway,  
Via Cooma, NSW.  
9.1.78

Dear Sir,

In your December 1977 issue Captain Scarlett writes that he would be interested in my views on the structure and roles which I considered appropriate for the Army in the late 1970's.

The questions are perhaps outside the normal scope of "The Navy" but in the hope of stimulating thought, debate and even action on the defence requirements of Australia, you may consider it worthwhile to publish these, my personal views firstly on the continuing roles of the Army for as far ahead as one can see and secondly on the sort of structure which seems appropriate to carry out these roles.

There are five possible roles which the Army may be called on to perform and in the order in which I think they may be required in the next few years they are:

1. Disaster relief within Australia.
2. Forming part of a UN peacekeeping force.
3. Aid to civil authority in Australia.
4. Defending Australia from external attack.
5. Assisting our friends and allies to defend their own countries by supplying combat land forces.

It would be foolish for me to try to attach a degree of probability as to the possibility of having to carry out any of these roles but it is fair to say that the community pays its defence taxes with the main aim of having maritime, ground and air defence forces available to carry out role 4.

If this contention is accepted, it follows, I think, that the other four roles should be met by those forces supplied by the taxpayer for role 4 — defence against external attack —

and that the structure of the Army should be aimed at carrying out this role.

But let me look briefly at the other four roles — disaster relief, UN peacekeeping forces, aid to civil authority, and land combat assistance to our friends — and suggest what might be required in the way of structure to carry these out.

On our experience over the last thirty years it is reasonable to assume that Australia would not commit, at most, more than a task force of three battalions on a continuing basis to any of these roles. Indeed if the Vietnam or Korean campaigns are any guide our Army would be hard pressed to provide a task force on a continuing basis without using national service or specially recruited troops in excess of their present numbers of 32,000.

I cannot see that any of these four ancillary roles requires a divisional structure and believe that a task force structure, administered by, either an operational command or Army headquarters would meet any task that Australia was called on and willing to undertake.

It is perhaps worth noting that except for role 5 — land combat assistance to our friends — the ancillary roles do not require sophisticated military hardware; what they need is trained and disciplined men.

### ROLE 4 — DEFENDING AUSTRALIA AGAINST EXTERNAL ATTACK

To make a judgement on the role and structure of the Army to meet an external attack on Australia it is necessary to consider the conceivable forms of attack which might be made. Indeed one would hope that such a catalogue would be the starting point of all Defence thinking and planning. Such planning would then move on to the likelihood of the various forms of attack, before recommending to Government the allocation of defence funds and resources to the three arms of the Defence Force; the maritime, the air defence and the land forces. Unfortunately this logical process does not seem to take place.

The conceivable forms of external attack are:

- (a) Missile attacks on our cities.

Such attacks would use mass destruction missiles.

- (b) Bomber attacks using either mass destruction or conventional weapons.
- (c) Attacks on our trade.
- (d) 'Peaceful' invasion by unarmed men, women and children.
- (e) Small raids on mining, industrial or administrative targets with the aim of disrupting our economy or weakening our will to resist.

and  
(f) Invasion with the aim of conquering Australia by ground forces.

The role of the Army in (a) and (b) would be disaster relief, while in (c) I can see no role for the Army.

If 'peaceful' invasion was ever attempted it does not seem to me that it could be met by military action of any kind. I do not believe that any Australian government would order military action against unarmed civilians.

Dealing with small raids seems to be the principal role for the Army. No matter how numerous and efficient our maritime forces are, it would not be possible for them to have such complete control of the sea around our vast continent that they could prevent small landing parties attacking selected targets, although they should be such that they can guarantee stopping, on the sea, anything larger than a raid. To meet such attacks a very highly mobile Army force, perhaps as large as a battalion would be necessary. Such a force would not require the weapons or infrastructure needed to fight a major land campaign; what it would need is the ability to move within hours to the site of the raid carrying the light weapons needed to deal with it. There could be more than one such raid at a time but it is difficult to imagine more than three such raids simultaneously evading our maritime forces, so that I believe the task force suggested for roles 1, 2, 3 and 5 would meet the requirement, provided it was able to move and fight within hours.

My views on the role and structure of the Army to meet the ultimate — the invasion of Australia — while logical to me, will prove contentious.

But before starting let me make two definitions. In this letter when I

# CENTRE CYCLE SHOP

Local Agents for the Famous SPEEDWELL CYCLES  
All Types of Accessories Carried  
Repairs — Top Quality Cycles Sold  
Backed by our Full After Sales Service

REAR OF BUFFALO HALL  
LEICHHARDT TCE, ALICE SPRINGS

Phone: 52 1238

# W. C. PRONGER & SONS PTY LTD

• Aluminium • Timber Joinery • Glass Supplied — Cut to Size • Builders' Hardware • Cabinet Makers • Built-in Furniture Specialists • Steel Fabricators • Shop Fronts

*Head Office and Factory:*

35 NASH ST, GYMPIE, QLD

Phone: Gympie 82 2133

NOOSAVILLE STORE: Eumundi Road. Phone: Twntn 47 1696  
CALOUNDRA STORE: Bowman Road. Phone: Cindra 91 1927

CALOUNDRA ALUMINIUM WINDOW FACTORY:  
Caloundra Road. Phone Cindra 91 3165

refer to Maritime Forces I mean naval and air forces, both land and sea based, which can operate and fight at long distances from our coasts. They are very mobile and are available for operations within hours; and when I refer to Control of the Sea I mean the ability to use the oceans around Australia and the air above them for our own purposes and generally to deny their use to an enemy. Control of the sea can never be absolute. It will always be possible, no matter how large our maritime forces, for an enemy to have temporary or limited control of an area.

While we have control of the sea, invasion is not possible. Conversely, once we have lost control of the sea, we cannot, by our own efforts regain it because of the lack of a sufficient industrial base to build maritime equipment and because of the very long time it takes to build or acquire such equipment.

I believe therefore that, provided our maritime forces can control the sea around Australia, there is no requirement for a regular army structured to fight an invading force. The implications of this view on our defence planning are widespread but I do not think that this letter is the appropriate place to detail them.

If Australia is not prepared to re-apportion its defence expenditure to acquire and maintain sufficient maritime forces to retain control of the sea, the ability of the Army to repel a large scale invasion and therefore the structure and role of the permanent army is a matter for debate.

Taking into account the fact that an enemy with control of the sea would be able to choose the place or places where an invasion would occur, the very long coastline of Australia, the lack of roads, railways, ports or aerodromes around much of this coastline, and our comparatively small population, I do not believe that we can possibly maintain a regular army large enough to repel an invader once he has been able to land in force. Such an invader, with control of the sea, could resupply his forces with ease and could make other landings at other places. Conversely, I reiterate, without control of the sea, an enemy would be limited to landing very small raiding parties.

Is there any other way that we could repel an invader? Would a very large citizen military force, trained by the regular army, have any more chance of success than a regular army? I do not think so,

because once we have lost the ability to move equipment by sea (a consequence of losing control of the sea) there is so much of our country that is almost inaccessible to the Army and its necessary administrative and logistic tail.

As I see it, if Australia is ever successfully invaded the only way by which we would force an enemy to withdraw would be to harass him by means of guerilla land forces until the cost of the invasion was more than its successful completion was worth. The guerilla land forces I have in mind would be the men and women of Australia trained by a small regular Army, issued with the weapons needed for guerilla warfare and prepared to fight and if necessary die for our country.

It is a desperate concept which would be unnecessary if sufficient people understood the realities of defending our country and insisted that our Government provided enough maritime forces to ensure that Australia maintained control of our seas.

Yours sincerely,  
(Sgd) RICHARD PEEK  
VICE ADMIRAL  
SIR RICHARD PEEK.

Dear Sir,

I would draw your attention to the third paragraph of the article August-September-October, 1977 Edition, "Navy Week in Australia" — p. 15 and in particular, the last two sentences: "The 21st October commemorates the 172nd anniversary of the victory of the Battle of Trafalgar. Fought in the Atlantic, off the southern coast of Spain, it was the last great Naval battle to be fought under sail alone."

As the ex fleet Air, Arm and Naval Historian from 1970-73 and author of a number of naval books may I point out that the last major fleet action under sail was the Battle of Navarino in 1827, when a combined British-French-Russian fleet under the command of Admiral Sir Edward Codrington attacked the Turkish fleet which was proposing to quell a rebellion in Greece. With very small losses the Allied fleet sank some fifty Turkish vessels causing 4000 casualties, and effectively prevented the Turks from crushing the rebellion.

Yours faithfully,  
LT. CMDR.  
MICHAEL APPS, RAN.

## SUBSCRIPTION FORM

To "The Navy",  
26 Wesson Road, West Pennant Hills,  
NSW, 2120, Australia.

I enclose \$5.25 being a subscription to "The Navy" magazine within Australia for 1½ years (refer notes below).

Name .....

Street .....

Suburb .....

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

Date .....

(Please Print Clearly)

Please make cheques, postal orders or money orders payable to "The Navy League".

Subscriptions commence in January of each year and a subscription reminder notice is forwarded to current subscribers — Annual Subscription (Australian Dollars) within Australia \$3.00 — Beyond Australia \$6.00 (sea mail) — \$9.00 (air mail).

\* Persons within Australia commencing subscriptions to "The Navy" magazine during the quarter commencing APRIL (ie, sub for 1½ years) should remit \$5.25; JULY (sub for 1½ years) \$4.50; and OCTOBER (sub for 1½ years) \$3.75.



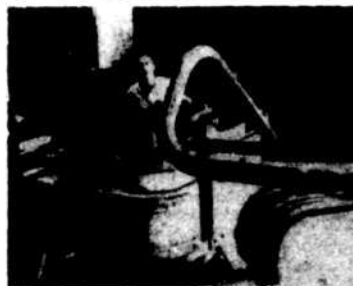
With the Compliments of

## RINNAI (WA) PTY LTD

Contractors and Suppliers to the Royal Australian Navy, Garden Island, West Australia. Distributors of Commercial Kitchen, Catering and Bar Equipment



**RINNAI (WA) PTY LTD**  
163 High Road, Willetton, WA  
Telephone: 457 1166



*A view of our HYDRAULIC PIPE BENDER used on the replacement of the SEA WATER COOLING SYSTEM for HMAS MORESBY using Copper-Nickel Alloy Piping and installed to the exacting revised RAN Specifications.*

We have recently completed the conversion of a Naval Oil Fueling installation, including pumps and 300 mm pipeline (X-rayed joints).

## LYONS & PEIRCE

4 COLLINGWOOD STREET, OSBORNE PARK, WA, 6017  
PHONE 446 4222  
PO BOX 110, MT HAWTHORN, WA, 6016

### CONTRACTORS & CONSULTANTS

Design and Installation of all types PIPING SYSTEMS

*Contractors to Departments of Construction and Defence (Navy)*

# The Strategic Need for a New Carrier

*Recently, the RAN issued an Invitation to Register Interest in Assisting in the Project Investigation of Possible Aircraft Carriers for the Royal Australian Navy. This is available for anyone to read and, no doubt, has been seen by many Members of the Navy League.*

The ITR is of great interest in so far as it sets out the various types and sizes of ships and aircraft that will be examined by the RAN in its search for a new carrier.

However, the ITR does not seek to explain the broader strategic and practical factors that lie behind the search. It is this that the writer of this article seeks to do for members of the Navy League.

As is well known, the life of HMAS MELBOURNE cannot economically be extended beyond 1985.

Of course, MELBOURNE herself is only part of a system to deliver to an operational area, and use a number of weapons systems. The ship carries and controls the weapons:

- SKYHAWK A4 ground support, air defence and anti-ship strike aircraft.
- TRACKER S2E and S2G medium range anti-submarine aircraft.
- SEA KING Mark 50 ASW helicopters.
- WESSEX 31B general duty helicopters.

Not the least of the advantages of MELBOURNE is the way in which an Operational Authority can select her aircraft complement to suit the task of individual operations. There are sufficient aircraft of each type in service with the Fleet Air Arm to provide a complement for either the ASW, or the strike, or the multi-role operation.

When considering whether MELBOURNE is to be replaced, the basic questions are:

- Will we continue to need the carrier's combat capabilities — her aircraft?
- If yes, how do we deliver them to the combat area, and control them when we get them there?

Unquestionably, we need and will continue to need aircraft with not only current but more capabilities, to the end of this century and beyond.

The armed threat Australia is most likely to face is from submarines. Nor is this a threat from which we can count on receiving several years' notice. Regional powers — not only potentially hostile super powers — have submarines and weapons now. Were

By:

**A. W. GRAZEBROOK**



*HMAS MELBOURNE, flagship of the RAN leading units of the Fleet into Sydney Harbour. Following Melbourne is the Daring class destroyer HMAS VAMPIRE and the Charles F. Adams class destroyers HA Ships PERTH and BRISBANE.*

# Macmillans Transport Pty Ltd

## LIVESTOCK AND GENERAL TRANSPORT

Local, Intrastate and Interstate  
Safe, reliable transport of your goods assured

**Augusta Street, Surat, Qld**  
**Enquiries: Phone Surat 28**

## DUNLITE

Contract Suppliers to Telecom Australia

- ★ DIESEL GENERATING EQUIPMENT
- ★ PORTABLE POWER PACKS
- ★ ALTERNATORS
- ★ DC MOTORS AND BATTERY CHARGERS

For Further Details, Supplies and Quotes, Contact ...  
**DUNLITE**

**79 Carnarvon St, Auburn, NSW**  
**Phone: 648 4388**

**Head Office: Dunlite, Osmond Street, Hindmarsh, SA**  
**Phone: 46 3832**

those regional powers so inclined, we could receive weeks, not years, of notice.

Furthermore, this threat is not confined to our northern approaches. It can be applied to any of Australia's maritime trade routes — coastal or international, both on the broad oceans and in the confined approaches to Australia's north.

In these circumstances, the need is undoubted for aircraft to fill the following roles:

- Short and medium range ASW.
- Defence for our war and merchant ships against LRMP, reconnaissance, and the relatively low performance antiship strike aircraft that regional powers either have now or whose technological capability will allow them to operate.
- Aircraft to strike hostile surface craft — both the ocean going warships and surface-to-surface guided weapon and torpedo armed fast attack craft in the possession of regional powers.
- The provision of ground support for the relatively small bodies of Australian troops that would have to fight ashore in the remote parts of Australia or our islands.

In theory, aircraft with these three capabilities could be delivered to the combat area, and controlled there, in one of three ways:

- Working from, and controlled tactically by, bases ashore.
- Working from, and controlled tactically by, a relatively few larger ships.

- Working from, and controlled tactically by, a larger number of smaller ships.

A number of factors will influence the choice. As is usual with most options in almost every aspect of life — personal, business or military — the advantages of each option will be offset to varying degrees by disadvantages. It is the balance of these factors that will be decisive:

- Cost
- Freedom of Deployment.
- Vulnerability of the Base.
- Effectiveness of tactical control.
- Effectiveness of the aircraft and their weapons.

### SHORE BASED AIR?

Firstly, it is highly unlikely that anyone now holding a senior posi-

tion in Maritime Defence would claim that there is no place in Australia's maritime defence for shore based aircraft. The RAAF's ORION P3B and P3C long range maritime patrol aircraft make invaluable contributions to the anti-submarine warfare team. But they cannot do the whole job. Smaller more manoeuvrable aircraft, in very close tactical co-ordination with surface ships, are needed.

Types of aircraft available (from any source) to fill the shorter ranged ASW roles are relatively small in size. Their range is relatively limited. As a result, if they were to be based ashore, there would have to be a far greater number of fully equipped airfields around Australia. This is not simply a matter of length and strength of runway — a very limiting factor in itself.

Whilst there are a number of airfields with runways suitable for handling TRACKERS (probably the most versatile ASW aircraft in this regard), much would have to be done to operate in the ASW role even the TRACKER from these small airfields. Equipment and buildings would be needed for maintenance, fuel, ammunition and living accommodation.

To provide sufficient airfields of the right capability, very substantial sums would have to be spent even to bring them up to the standards needed for the operation and maintenance of the TRACKERS.

This would be much more significant in the case of the RAAF's



*A Sea Harrier VSTOL aircraft.*



*A flight of Skyhawks from HMAS MELBOURNE.*

# WORMALD

INTERNATIONAL (AUST) PTY LIMITED  
FIRE PROTECTION ENGINEERS SINCE 1889

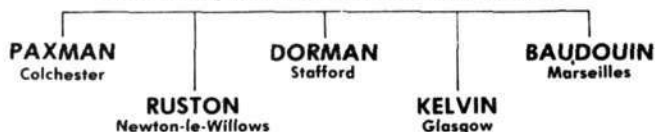
Complete protection against every fire risk  
Wormald Automatic Sprinkler and Fire Alarm Systems  
Water Spray — Foam CO2 and Halon System  
Dry Chemical and Foam Systems  
Fire Trucks — Tenders — Pumps  
Wormald Fire Extinguishers  
Fire Hose & Fittings  
Security Services • Thermal Alarm Systems

647 0111

447 WILLIAMSTOWN ROAD  
PORT MELBOURNE, VIC



Suppliers of Propulsion & Auxiliary High Performance  
Diesel Engines to Navies of the World



Sold and Serviced in Australia by



MELBOURNE: 544 8344 PERTH: 65 4844  
SYDNEY: 43 3114 ADELAIDE: 71 7971  
BRISBANE: 52 4421 DARWIN: 84 3520



A Sea King Mk 50 helicopter of the RAN. These submarine hunter choppers were acquired during 1975 to replace the Westland Wessex machines one of which is in the background.

MIRAGES — even if they were to be available in sufficient numbers and with suitable weapons to provide aircover for Australia's war and merchant ships in our maritime approaches. A number of new first class fully equipped airfields would be needed. Much the same must be said of any potential replacement for the MIRAGES.

The 22 F111s in service with the RAAF have markedly greater range than the MIRAGES. To provide the Fleet with the type of cover necessary to meet threats, the armament of the F111s would have to be modified. The first class airfields at Learmonth, Pearce and Darwin would have to be fully equipped for operating F111s — a major investment.

Furthermore, both the MIRAGES and F111s were purchased to fill certain roles for the RAAF. Air cover for the Australian Fleet and maritime trade were not amongst these roles. If either type were to be suitable for these roles, more would be needed if sufficient aircraft were to be available for the extra tasks. Operational and tactical control arrangements would have to be reviewed to ensure the tactical integration and reaction times necessary to ensure the safety of maritime trade and warships.

## TACTICAL INTEGRATION AND REACTION TIME

One of the great advantages of the TRACKER and SKYHAWK aircraft is

the very high degree of tactical integration that can be achieved between these two types of seaborne aircraft and submarines and maritime surface units.

Practical experience in Britain has shown that it is extremely difficult, if not impossible, to achieve an acceptable degree of tactical integration between shore based aircraft, controlled by another Service, and maritime surface and undersea units. It was this very factor that finally convinced the British Government that the RAF could not provide the British Fleet with satisfactory tactical air cover. It is reliably reported that the decision to go ahead with the SEA HARRIER VSTOL aircraft project was the direct result of a major NATO exercise in the North Sea, during which RAF F4s failed to locate the maritime surface forces in need of air cover.

Whilst it may well be relevant, British experience is not necessarily conclusive. There is a major difference between the British North Sea NATO Environment and the Australian scene — distance. It is this aspect that highlights the importance of reaction time and the advantages of a mobile base. Even if our Fleet were to be within range of a major air base, the time taken for aircraft to get to the scene of action would exceed substantially the time taken for ship-borne aircraft to arrive on the scene. A mobile base can be moved to the scene of the action, whereas a fixed base cannot.

## VULNERABILITY OF BASES

In some circles, much has been made of the so called vulnerability of the aircraft carrier. Clearly, no base is totally invulnerable, whether that base be floating, on land or in the air — even tanker aircraft require cover or they are in danger of being destroyed before they can refuel combat aircraft.

In this context, certain general points are relevant to the Australian scene:

- An airfield base is necessarily of fixed position — an enemy knows where to hit you to destroy your base.
- Before striking at a carrier, an enemy must ascertain the position of his target. Even when located, a carrier can take evasive action.
- In general, the larger the ship, the more effective damage control measures that can be built into her.

## THE AIRCRAFT ARE AVAILABLE

As has been mentioned earlier, it is manifestly necessary to ensure that aircraft, capable both of operating from a carrier and performing the roles envisaged, will be available for the new ship both when she enters service and during later periods of her life.

Whatever type of carrier Australia gets, it is unlikely she will be able to operate the TRACKERS. It is possible that she will be able to operate the SKYHAWKS, and virtually certain that she will be able to operate the SEA KING ASW helicopters.

Thus, initially some, but not all, the new ship's aircraft would be available after MELBOURNE'S retirement. In later years, SEA HARRIERS would be available from Britain (or similar types from the US) to fill the role now played by the SKYHAWKS.

Looking further ahead, the US Navy has embarked on a VSTOL aircraft development programme. This will embody both strike aircraft and ASW aircraft.

Thus, whilst proven aircraft are available in the short term, future generations are under development by our allies.

# NYLANDER BODY WORKS

**For All Expert Spray Painting and  
Panel Beating**

**Phone Ross or Dennis  
on Darwin 81 5173**

**3 NYLANDER ST, DARWIN, NT  
PO Box 818**

*CANNON POOL TABLES MANUFACTURED BY*

# MILLS BILLIARD SUPPLIES

Table Manufacturers and Importers to the Trade and Public

**122 GIBSON ST, AYR, QLD  
Phone: Ayr 83 2065**

## DEPLOYMENT OPTIONS — BIG SHIPS OR LITTLE SHIPS?

We read much of the "advantages of cheaper smaller ships". There are certain manifest advantages of a number of smaller ships — they can be each in different places at a given time, whereas one larger ship can be in only one place at one time.

However, it is substantially erroneous to assume that smaller ships are necessarily the cheapest way to fill a given role. The well known advantages of the economy of scale operate to the advantage of the bigger ship. It is manifest that a ship does not need twice the size of hull, engines, crew etc to carry twice the number of aircraft. This point also applies to tactical control equipment.

Initially at least, the Navy is seeking the smallest size of the ship that can achieve a reasonable economy of scale. If the Navy is denied a new carrier, a number of new large escorts will be needed to deploy the ASW helicopters essential to effective defence of trade against submarine attack.

## COST

In some sections of the general media, we read that the cost of a new carrier would be unacceptably high and that it could not be accommodated within the defence budget.

Whilst it is undeniable that the cost of a carrier is a large sum, there are certain other factors that should be taken into account:

- We need the operational aircraft capability.
- If we have no carrier, we will need either more aircraft, or longer ranged aircraft, or many

more fully equipped shore airfields or, much more likely, a costly combination of the three.

The cost of a new carrier would be spread over five or more years.

Very little money was spent on naval construction during the decade ending in 1977. Failure to ensure an ongoing balanced naval construction programme has necessitated a relatively large construction programme during the period 1978-81. However, the majority of this programme will be paid for by the time the major costs of the new carrier programme are incurred.

There is one further very significant aspect of the cost of a new carrier in particular and of defence in general. In some circles, it is assumed that there is an upper limit to defence expenditure, and that this upper limit cannot be exceeded in any circumstances.

It is clearly very dangerous to assume that defence expenditure cannot be allowed to rise above its present level, particularly at the end of a ten year virtual holiday in naval construction. There are many who would argue that money must be found to meet threats, if necessary at the expense of other budgets.

## NEED RECOGNISED

The need for the continued availability of seaborne maritime airpower, fully integrated tactically with the rest of our maritime forces, is widely recognised in maritime defence circles, not least amongst the Navy's Senior Officers.

In this context, it is appropriate to incorporate extracts from an address given by Admiral Sir Victor Smith to the Fleet Air Arm Association

of Western Australia on 30th September, 1977:

"I read in yesterday's *FINANCIAL REVIEW* in an article headed *NAVY BATTLES CARRIERS' DEMISE* where the inference is made that, when I was Chairman of the Chiefs of Staff Committee, I supported the idea of transferring the *TRACKERS* and *SKYHAWKS* to the RAAF and mentioned the relatively large portion of naval personnel involved in the Fleet Air Arm. The statements attributed to me do not by any means tell the full story of that meeting of the Defence Force Development Committee. The minutes of these meetings are quite rightly classified; however, in view of what has been published, I feel that in justice I should tell you that at this meeting I did say, following up suggestions which were being floated, there might be certain advantages in transferring the *SKYHAWKS*, etc, but I believed the whole matter required very careful objective study.

"My view has always been, as I have stated tonight, that I have seen no argument to date which convinces me that the Navy should not continue to have its organic airpower, but I would not imply that a future seaborne air platform should necessarily have the same functions as *MELBOURNE*."

Later in the same address, Admiral Smith said, "Obviously Australia's defence needs change with time and although the lessons of history should never be neglected, nothing is more fatal than to try and make history repeat itself. But the Fleet Air Arm for which we believe there is a continuing need has I think as important a part to play in the future as ever it had in the past."

# R. & G. M. & D. R. EDWARDS

**GENERAL CARRIERS**

Sand, Soil and Gravel Supplies — Read Mixed Concrete

**ANZAC STREET, SARINA, QLD  
Phone: Sarina  
56 1271, 56 1578 (all hours)**



# High Speed Oil-defence Boat

A new oil-defence boat — The Vator 18T — developed by Vator Oy, of Helsinki, in association with the Finnish Board of Navigation, can be driven at 30 knots to the scene of an oil spill and quickly surround the polluted area, or protect a nearby beach or harbour, with a floating plastic barrier known as a "Spillboom". The boat carries 200 metres of boom which can be launched at 10 metres per minute.

Nokia SUP Spillbooms, produced by The Cable Works Division of OY NOKIA AB, are made of a PVC-coated fabric enclosing floats of polythene foam and either galvanised chain ballast or iron sinkers. The SUP 90 x 25 Rapid Spillboom provides a single-wall barrier, while the SUP 75 x 25 Super Spillboom opens out into a tube of triangular cross-section, point down, the latter shape works particularly well in fast-flowing water. The SUP Permanent Spillboom, intended for continuous service in oil berths and harbours, has additional floats and detachable sinkers, making it easier to haul ashore for maintenance.

The VATOR 18T (OAL 564cm,

Beam 212cm, Draft with outboard motor down 55cm, Maximum load 500kg) carries a crew of 3 or 4. She has a trimaran GRP hull with a cockpit floor of water-resistant plywood. The 120 hp or 140 hp MerCruiser remotely-controlled electric/hydraulic stern drive engine, with Prop-Jet exhaust through the propeller hub, is built up from corrosion-resistant "XK" aluminium castings. The engine is fitted to a through-bolted transom plate, with waterline working platforms on either side. The propeller has a shock absorbing rubber hub (with splined connection to the drive shaft) which protects the transmission from damage by underwater impacts.



Fig 1



Fig 2



Fig 3



Fig 4



Fig 5

## Keel of New RAN Ship Laid

The RAN's first guided missile frigate, to be named HMAS Adelaide (FFG-17), began taking shape at the Todd Shipyards Corporation shipbuilding yard in Seattle, USA. In the modern day equivalent of a keel laying ceremony the first prefabricated 40 tonne section of the ship was lifted into place on the building slipway. Several other sections of the ship are nearing completion and will shortly be lifted into place alongside the first section and welded together.

At a ceremony to mark the occasion the Australian Naval Attache in Washington, Commodore R. G. Loosli, said the occasion was very significant for the RAN. "It is nearly 12 years since the Australian Navy has had the keel of a destroyer or a frigate laid for us," he said.

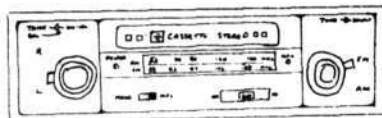
HMAS Adelaide is scheduled to be handed over to the RAN in August, 1980, and will arrive in Australia to join the Fleet the following year.



A crane lifts the first 40 tonne section of HMAS ADELAIDE into place on the building slipway.



For the  
BEST  
in  
MOBILE  
MUSIC ...



A TEN BAND CAR RADIO CASSETTE  
From

**WESMAC** #

269 Alma St, Rockhampton, Qld

Phone: 2 3959

For really fast service on SPARE PARTS

GET ON THE PHONE TO AUGATHELLA 37 (AH 111)  
and speak to Phil Salmon

**Augathella Motors**  
AUGATHELLA, QLD

GMH Dealers for Augathella and District

New Holden, all vehicle repairs, panel beating, spray painting, BP products, Castrol  
oils and greases

Windscreen service — all popular makes stocked and fitted

COMPLETE RANGE OF EVEREADY BATTERIES ON HAND

District agent for Dunlop IBC Tyres and batteries and Olympic batteries — agents  
for all good electrical appliances — Flick agents

24-HOUR TOWING SERVICE

## book reviews

### JANES FIGHTING SHIPS 1977/78

Edited by Captain John E. Moore

Published by Janes Yearbooks, London

UK Price £27.50 (= A\$44.00)

Australian Price A\$80 approx.

Reviewed by: A. W. GRAZEBROOK

Now in the editorial chair for some five years, John Moore has established firmly his independent reputation as a major (if not the major) independent authority in naval matters and as editor of the world's premier naval reference work. The 1977/78 edition further consolidates John Moore's reputation and position.

As we have come to expect, Janes foreword is an informative summary of world naval developments during the past year.

Although the past year has seen him named personally by Moscow as "imperialist lackey", the editor once again draws attention to the growing maritime strength of the world's major totalitarian power, supplementing these remarks with an objective assessment of Russian naval personnel problems (basically those disadvantages of manning by conscription), deployment matters, bases, etc.

The present editor has imparted a human touch to a book whose subject tends naturally to be somewhat dry. Thus, this year's edition includes a spirited defence (perhaps one should say counter attack upon critics) of reference to political matters. We find some devastating quotations from Winston Churchill, and the caption of the photo of HMS "BLAKE with friends" — the latter a clearly identifiable KRIVAK replenishing from astern of a (civilian clad) AOR.

Australia is described as having "emerged from a period of belief in man's good nature to plan a navy capable of defending their 16,000 miles of coastline." A plan we may have but the Australian Section of the book shows disappointingly little progress towards implementing that plan with firm orders. The two new frigates feature, as does TOBRUK. Details of other plans are given. Australian readers will, no doubt, wish the editor — ably assisted by Sydney's Graeme Andrews — had been able to record firm orders. All too frequently, delays are obvious. Thus HMAS COOK, the first ship launched for the RAN for five years, is listed as "launched 1976" whereas she did not actually take the water until August 1977. TOBRUK is shown as "work planned to start in mid 1977" but, according to the Minister for Defence in the Parliament in September 1977, his Department was "still examining tenders".

Apart from extensive revision, updating of the text, and numerous new photographs, the editor has incorporated a very useful new feature — a "Major Surface Ships Pennant List" in international numerical order. Thus HMAS YARRA (45) is listed alongside USS DEWEY (DDG45), the British frigate MINERVA (F45) and the new Brazilian DDH LIBERAL (F45). This is a very practical aid to recognition by pennant number, and a significant improvement for the practical user of the book.

John Moore has assumed responsibility for editing the US Section. It remains to be seen whether he intends continuing to shoulder this major additional burden, which was previously borne by Norman Polmar. Improvements in the US Section include a "bar chart" illustrating the anticipated life of US CVs, and a final standardisation of the format of US Section with those of the rest of the world.

A plan and elevation of the projected new US DDG47 type are of particular interest. In spite of their much greater displacement — a colossal 9055 tons full load — these ships bear more than a superficial resemblance to the SPRUANCE Class. The key recognition point is the height of the funnels. Those of the DDG47 are much shorter than those of SPRUANCE. DDG47 funnels reach only to the top of the superstructure, a difference from the SPRUANCE which may well not survive the practicalities of the first period of sea trials.

There is a launch view of OLIVER HAZARD PERRY — due to commission on 28 October, 1977.

In smaller craft, the US Navy continues a steady decline. MCM forces dwindle, whilst there is no identifiable progress over new MCM craft. The number of ASHEVILLE Class PGs in service is down from 16 to 11.

The Indian Navy continues to grow, as is evidenced by the commissioning of the first two NANUCHKA type SSGW and point defence anti-aircraft missile armed 850 ton 30 knot corvettes, more OSA (improved type II) SSGW armed fast attack craft, and landing craft. There is a most informative photo of the Type 12 frigate TALWAR with three STYX SSN 2 launchers fitted in place of the 4.5 inch gun mounting. The advertisement section of the book includes a photo of the new AOE SHAKTI, fitted with the new extendable hangar similar to that shown in the Indian built LEANDERS. The editor records "India's refusal to admit to any increase in her Fleet". For two years running India's Defence Minister (Bansi Lal last year and the new Government's Jagjivan Ram this year) have proclaimed greatly increased naval budgets and the need for a stronger Navy. This year, Jagjivan Ram advocated local construction of



The first of a new class of ship, guided missile frigates, commissioned last December. The ship was 07, the USS OLIVER HAZARD PERRY, lead ship of the class of frigates to be introduced into the RAN. The PERRY is the prototype and in recent trials has tested new systems such as the single controllable pitch propeller and complex gas turbines. The ships will be armed with anti-aircraft and anti-ship missiles, a 76 mm gun and armed gas helicopters. Work on Australia's first two guided missile frigates — HMA Ships ADELAIDE and CANBERRA has already commenced in Seattle, USA, with delivery expected late in 1980. Work on a third ship for the RAN to cost \$250 m will begin in 1979 with delivery expected during late 1982.

submarines, the acquisition of carrier borne VSTOL aircraft, and so on.

Few details are available of the 1500 ton CODAG driven fast frigates the Dutch are building for the Indonesians. The new submarines building in Germany are noted, as are the 250 ton 50 knot SSGW armed fast attack craft under construction in South Korea.

There is substantial new information in the Japanese Section, including first details of the new types of frigates, the big new improved UZUSHIO Class submarines and the AOE — the last another indication of growing JMSDF interest in oceangoing support ships.

For decades, regular users of Janes have argued for and against fewer photos and more plans and elevations of ships. The ideal would be both — but cost must limit space. In this reviewer's view, plans and elevations are preferable to blurred photos or photos taken from unrevealing angles. However, there is nothing to beat a good broadside photograph.

This is perhaps best exemplified by the page in this year's book devoted to the new British anti-submarine cruisers INVINCIBLE and ILLUSTRIOUS. There is a (fine on the port bow) launch view of INVINCIBLE, an artist's impression which we have seen before, and a photo of a model. A plan and elevation would be far more informative.

The advertisements in the front of the book can be very informative — thus the photo of the new Indian AOE SHAKTI (which does not appear in the Indian Section), views of a number of newer craft, and details of types offered on a commercial basis. Ing. Lubeck's advertisement illustrates superbly the world submarine boom. Lubeck alone has designed no less than 76 submarines for 13 navies, in recent years.

The advertisements are the only source of informa-

tion on one aspect of naval development which offers an opportunity for an improvement next year — an aspect of particular appeal to journalists. That is, new designs of commercial origin for which no orders have yet been placed.

Thus there is no mention of the Vosper Thornycroft HARRIER CARRIER, or the Vickers Vedette, and the numerous other designs that are being promoted by warship builders from many nations. A journalist needs to be able to look up (say) the Vickers Vedette, and not rely on having to collect a mass of promotional brochures.

All in all, a very good Janes indeed with several major improvements and a mass of new information. The book continues to be of absorbing interest to professionals and enthusiasts, a necessity to journalists and essential not only to naval but also to other service personnel.

### TALWOOD HOTEL (CHARLES COOPER — Licensee)

MAIN STREET,  
TALWOOD, QLD 4322.

- Good homely accommodation • Excellent dining room • Icy cold beer on tap • Full range of wines and spirits stocked in our bottle dept
- Tasty counter lunches served daily, 12 noon to 1.30 pm — teas, 6 pm to 7.30 pm

Phone: Talwood 5

## WARSHIPS OF AUSTRALIA

By: ROSS GILLET

Illustrations by: COLIN GRAHAM

Review by Shamotord

Published by Rigby Ltd

296 Pages including Index of Ships

After having read some of this author's earlier articles I awaited his first full-size book with more than mild anticipation. As it turned out, I was not to be disappointed. I can however say that, taken overall, this is one of the finest and most complete works on this subject that I have encountered.

Mr Gillett has covered the entire spectrum of Australia's naval endeavours from the earliest days of the fledgling colonies to the present day when, in qualitative terms, we now have ships and men that are second to none. Whilst the book quite properly devotes a vast amount of its content to photographs and illustrations (of which more later); the remaining historical and narrative text is succinctly very accurate, informative and easy to read. These qualities are more important than ever nowadays when big and glossy coffee-table "histories" on any given subject are plentiful, with their written contents often incomplete, or, at the worst, promoting saleability at the expense of accuracy.

The illustrative content of the book is excellent and consists mainly of high quality black and white photo-

graphs interspersed with many five colour studies. A large percentage of both categories have been chosen from private collections and I believe, have not previously been published. Interest is further enhanced by the inclusion of some very accurate coloured ship-profile drawings of a standard seldom seen in this type of book. Scale live drawings of principal vessels abound on many pages along with several reproductions of marine paintings.

I can find very little fault with this book. Those few criticisms I could make are very minor and do not detract from its obvious worth, so they will remain unmentioned. It is a small point, perhaps, and one that is mostly ignored when reviewing a book; but the fact remains that this book is very pleasant to actually handle. It is solidly and well bound and makes use of fine quality paper that is eminently suitable for good photographic reproduction and which feels good as well.

In these days of uncertain national economies, the publishers are to be commended for printing this fine book in Australia and not overseas; a situation which, unfortunately, has become more the rule than the exception. This has, no doubt, been partly responsible for the not inconsiderable price being asked for this work.

Nevertheless, I heartily commend the book to anyone, be they mariner, landsman or student, whose interest in the history and present day activities of our Navy would only be rewarded by having this volume readily available in their library.

With the Compliments of:—

## CRYSTAL WATERS

Radio Controlled, North & South of the River

One of Perth's Longest Established & Most Reliable Specialists in

- AUTOMATIC OR MANUAL SYSTEMS FROM WELLS, BORES OR SCHEME IN HYDRAULIC OR ELECTRIC • SOLE WA DISTRIBUTORS OF TORO AND AMES TURF WATERING EQUIPMENT AND AUTOMATIC TIMING EQUIPMENT • CONSULTANTS AND PLANNERS FOR DO-IT-YOURSELF INSTALLERS

Engineers — Architects — Developers — Domestic Reticulation

HIRE DIVISION — WELL SINKING EQUIPMENT — TRENCHING MACHINES

Member National Well Association of WA

Contractors to the RAN

46 SHORT STREET, PERTH. 328 1277

With our Compliments to the Royal Australian Navy

**J. & W. Bateman Ltd**  
47 HENRY STREET, FREMANTLE, WA

Phone: 335 4444

West Australian Distributors of Ainslies Scotch Whisky

# RAYCHEM

**THE RECOGNISED SUPPLIER OF MILITARY SPECIFICATION  
HEATSHRINKABLE MATERIALS, HIGH TEMPERATURE INSULATION  
& HIGH PERFORMANCE WIRE & CABLE**

If you have a requirement, RAYCHEM are the experts in this field

A full range of these materials is currently being used by the Australian Defence Forces and are identified and available on Defence microfiche. For expert attention by RAYCHEM engineers and for Specifications with Defence Stock Indent, Number Cross Reference, please contact your local RAYCHEM office

**Head Office:**

**RAYCHEM PTY LIMITED**

**25 EUSTON STREET, RYDALMERE, NSW 2116  
(02) 638 6363-7997**

**Branch Offices:**

Rear 2020 Logan Road, Upper Mount Gravatt, Qld 4122 — (07) 343 1078  
Suite 16, 219-221 Balaclava Road, Caulfield North, Vic 3161 — (03) 528 3955

## Tents & Camping Gear

**A Complete Range of Army Surplus Goods, Firearms and  
Accessories**

**Homewares and General Hardware, Power Tools  
For All Your Camping Requirements**

## WALKER'S HARDWARE

**Phone: Alice Springs 52 1233**

**After Hours: Alice Springs 2 1516  
PO Box 113, Alice Springs**



**7 LEICHHARDT TERRACE  
ALICE SPRINGS, NT**



## "The Civilian Arm of the Navy"

The principal objective of the Navy League of Australia is to stress the vital importance of Sea Power to the Commonwealth of Nations and the important role played by the Royal Australian Navy.

The League supports the Naval Reserve Cadets who are administered by the Royal Australian Navy, which Service provides technical sea training for boys who intend to serve in the Naval or Merchant Services, also to those sea-minded boys, who do not intend to follow a sea career, but who given

this knowledge will form a valuable reserve for the Naval Service.

We invite you to swell our ranks and so keep up to date with Maritime Affairs to help to build an ever-increasing weight of informed public opinion. The Navy League will then become widely known and exercise an important influence in the life of the Australian Nation.

The League consists of Fellows and Associates. All British subjects who support the objectives of the League are eligible for membership. Members receive copies of the League's magazine "The Navy".

### DIVISIONS

New South Wales — Box 1719, GPO, Sydney, 2001.  
Victoria — Box 227, Post Office, Hawthorn, 3122.  
Queensland — 780 Gympie Road, Chermide, 4032.  
Tasmania — 24 Clementina Street, Launceston, 7250.  
South Australia — 9 Albert Place, Camden Park, 5038.  
Western Australia — Box 735, PO, Fremantle, 6160.  
Australian Capital Territory — 66 Bradfield Street, Downer, ACT, 2602.

### THE NAVY LEAGUE OF AUSTRALIA Application for Membership

To: The Secretary,  
The Navy League of Australia,  
(..... Division).

Sir,

I am desirous of becoming a Member of the Navy League of Australia with whose objects I am in sympathy.

(Mr)  
Name (Mrs).....  
(Miss)  
(Rank)

Please Print Clearly.

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

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

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

Enclosed is a remittance for \$6.00 being my first annual subscription.

AFTER COMPLETION, THIS FORM SHOULD BE DISPATCHED TO YOUR DIVISIONAL  
SECRETARY — NOTE LIST OF ADDRESSES ABOVE

For that man size meal that really fills that man ...

## CUP 'N' SAUCER SNACK BAR

**Winnellie Road, Winnellie NT 5789**

**Telephone: 84 3171 (STD 089)**

• ALL TAKE-AWAY FOODS • HOME STYLE COOKING • HOT DOGS, PIES, PASTIES AND FRESHLY CUT SANDWICHES.

All milk bar facilities featuring cold drinks, cigarettes, confectionery, etc

**CUP 'N' SAUCER SNACK BAR For Food that Fills the Inner Man!**

Our Compliments to Navy Personnel

## S. S. ENGINEERING & FOUNDRY PTY LTD

Manufacturing Engineers and Suppliers to the R.A.N.

10 BALLANTYNE ROAD, KEWDALE, WA  
Phone: 458 8577



## ICI AUSTRALIA LIMITED

51 RULE STREET, NORTH FREMANTLE, WA — Phone: 335 4044

Explosives and Accessories, "Amex" and "Molanite"  
TECHNICAL SERVICE

### DISTRIBUTION CENTRES

Port Hedland — North West Coastal Hwy, Port Headland 72 1497 (091)  
Kalgoorlie — Palace Chambers, Kal 21 4036 (090)  
Woodman Point — Explosives Reserve, Woodman Pt 418 1361  
Geraldton — Sunshine Crooks & Broker, Geraldton 21 1864 (099)  
Southern Cross — W. A. Mincham & Co, Southern Cross 66  
Midland — Midland Surplus Stores Pty Ltd, 274 1300  
Northam — Holtfreters, Northam 22 1577 (096)

With the Compliments of:

## MOTHERS PRIDE BAKERIES

Queens Park & Fremantle, WA

Contractors & Suppliers to RAN WA

Phone: Queens Park 458 2311  
Fremantle 335 5999

# NELSON

by ROSS GILLET

*"This beautiful ship was built in His Majesty's Dock Yard at Woolwich and is to be launched from thence on Monday June 20, 1814 ... The ship is one of the most magnificent ever seen, and so far excels our abilities to describe, that we presume to suppose, it will not be excelled, if ever equalled, by any in England."*

This description of the line-of-battleship NELSON was published on the occasion of her launching amid the presence of the Prince Regent, part of the Royal Family, Emperor Alexander and the King of Prussia. Nelson began building in December, 1809, four years after the death of her namesake Vice-Admiral Horatio Nelson.

After being laid up for most of her career NELSON was chosen for conversion to screw propulsion in 1854. The work involved the removal of her upper deck and accordingly she carried seventy-four guns less. When completed the Royal Navy was still unable to use the ship and NELSON remained laid up until 7 February, 1860, when finally undocked. Six years passed before the Victorian Colonial Government approached England for a vessel suitable for the training role. The admiralty selected NELSON and she was officially transferred on loan on 7 February, 1867. NELSON remained the property of the Admiralty, but Victoria was to pay for the conversion and maintenance thereafter.

After fitting out had been com-

pleted Captain Charles Payne assumed command for the voyage to Melbourne. In October, 1867, the ship set forth from Portsmouth and arrived in Williamstown on 4 February, 1868, 107 days later. The delivery voyage was the only occasion NELSON went to sea under sail.

NELSON's armament comprised two 68 pounder and twenty 64 pounder guns plus various small calibre weapons. For the statistically minded she displaced 2,617-4/64 tons and was 205 feet 3/4 inch in length on the range of the lower gun deck from the rabbit of the stern post. Extreme breadth was 53 feet 8 inches, depth of hold 24 feet and draught 24 feet afore and 25 feet abaft. Her foremast was 118 feet in length, 3 feet 2 inches in diameter, the mainmast 127 feet 2 inches and 3 feet 3 inches, and the main yard 109 feet 3 inches and 2 feet and 2 inches, respectively. Top speed was about 8 or 9 knots. By way of crew numbers NELSON was built to carry 875 officers and men but in the training role only a permanent crew of 30 was embarked.

NELSON began her service initially as a reformatory boat, the average number of boys carried on board being 350 annually. In 1869 she greeted the Royal Navy Flying Squadron upon their arrival in Port Phillip. The squadron headed by the flagship HMS LIVERPOOL, included HM Ships LIFFEY, ENDYMION, PHOEBE BARROSA and SCYLLA and were on a special global flag-showing cruise.

The Russian scares of the late 1870s prompted the decision to reconvert NELSON to a fighting ship with the removal of another deck. Her original masts, save one, were all removed and she boasted a reduced gun armament.

NELSON was placed in reserve in 1891. On 28 April, 1898, she was sold at auction by Messrs Buchan of Queen Street, Melbourne, to Mr Bernard Emerson of Sydney for £2,400. In mid 1898 she was towed to Sydney and her hull converted into two lighters. Later she was again taken in tow, this time to Hobart in July, 1908, and used subsequently as a coal hulk. NELSON was finally broken up on the Tamar River in 1928, 114 years after launching.

Two anchors from Nelson have been preserved at Williamstown and a bust of the admiral, Lord Nelson can be seen at HMAS RUSHCUTTER in Sydney. The Victorian navy was served well by NELSON and confirmed the views of the English press when they described her as "super and stupendous and of immense magnitude".

## BOWEN BLACKSMITHING & WELDING WORKS

1 ARTHUR STREET, BOWEN, QLD

Phone: (077) 86 1125



# Adelaide Steamship Industries Pty Ltd Engineering Division

also

**SLIPWAY PROPRIETORS**

1180 OLD PORT ROAD  
ROYAL PARK, SA 5014

Phone: 47 5144

# UNIQUE TOWING & SALVAGE

\* Anysize \* Anywhere \* Anytime  
Fitted with QRTT and Extendable  
Jibs

24-Hour Towing — 7 Days a Week

Phone: Canberra 95 3420  
AH: 88 5460 or 88 3759

16 GEELONG STREET  
FYSHWICK, ACT

# SAMKO

For Carpets

Distributors for

CARPET &  
FLOORING SALES  
CONTRACTING DISTRIBUTORS



Armstrong  
Nylex



**Samko Floor Coverings  
PTY LTD**

Phone: Darwin 84 3402  
After Hours: 85 2830

1622 COONAWARRA ROAD  
WINNELLIE, NT

# Join the NAVAL RESERVE CADETS

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

The Naval Reserve Cadets are administered by the Australian Naval Board.

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

Uniforms are supplied free of charge.

Cadets are required to produce a certificate from their doctor to confirm they are capable of carrying out

the normal duties and activities of the Cadet Corps. If injured while on duty, Cadets are considered for payment of compensation.

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

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

general sporting activities and other varied subjects.

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

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

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

**SENIOR OFFICERS, NAVAL RESERVE CADETS:**  
NEW SOUTH WALES: Staff Office Cadets, HMAS Watson, Watsons Bay, NSW, 2030.

QUEENSLAND: Staff Office Cadets, HMAS Morton, Box 1416T, GPO Brisbane, 4001.

WESTERN AUSTRALIA: Staff Office Cadets, HMAS Leeuwin, PO Box 58, Fremantle, 6160.

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

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

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

**AUSTRALIAN CAPITAL TERRITORY:** Staff Office Cadets, HMAS Watson, Watsons Bay, NSW, 2030.

TO: The Senior Officer,  
Naval Reserve Cadets.  
I am interested in joining the Naval Reserve Cadets and would be pleased to receive further information.

NAME .....  
STREET ..... SUBURB .....  
STATE OR TERRITORY ..... POSTCODE .....  
PHONE No. .... AGE AND DATE OF BIRTH .....  
(Please Print Clearly)

Please address your envelope to the Senior Officer, Naval Reserve Cadets, in your State or Territory — see list of addresses above.



Eric Pratt Pty Ltd, Wholesale Distributors of Ampol Products, supply the following resellers in the Shoalhaven district

|                                                                        |         |
|------------------------------------------------------------------------|---------|
| Berry: (Burt's Service Stn), Queen Street .....                        | 64 1041 |
| Bomaderry: (Highway Service Stn), Princes Highway .....                | 2 3933  |
| Cudmirrah: Post Office Store .....                                     | 41 2101 |
| Huskisson: (Curumbene Service Stn), Tomerong Road .....                | 41 5079 |
| Milton: (Ken Mansfield Pty Ltd), Princes Highway .....                 | 55 1666 |
| Nowra: (Cooks Tyre Service), Kinghorn Street .....                     | 2 3198  |
| Nowra: (Fleet Service Station), Kinghorn Street .....                  | 2 2843  |
| Nowra South: (South Nowra Bakery), Princes Highway .....               | 2 3332  |
| St Georges Basin (Bob Gaffrey's Serv Stn)<br>St Georges Basin Rd ..... | 43 4358 |
| Sussex Inlet: (Totempole Service Stn), Jacobs Drive .....              | 41 2207 |
| Tomerong: (Parnell's Service Stn), Princes Highway .....               | 43 4326 |
| Ulladulla: (Blue Fin Service Stn), Princes Highway .....               | 55 1437 |

CAMBEWARRA ROAD, BOMADERY  
Telephone: (044) 2 3016

## JOHN CRANE MAURI PTY LIMITED

### Manufacturers and Suppliers of

1. John Crane Mechanical Seals and Packings
2. "Chemlon" PTFE Products
3. Robot Boiler Pumps
4. Long Lok Fasteners
5. Contract Lapping Service
6. Lapmaster Lapping Machines

### Contractors to Royal Australian Navy

For Further Details Enquire

JOHN CRANE MAURI PTY LIMITED  
166 ELDRIDGE RD, BANKSTOWN, NSW 2200  
Phone: 709 2288

# WHAT IS THE SOVIET NAVY UP TO?

By Vice-Admiral

Julien J. LeBourgeois

President of the US Naval War  
College

## The following article looks at the present and possible future tasks of the Soviet Navy.

The burgeoning naval capabilities of the Soviet Union raise a fundamental question: for what purposes are these forces being developed? By way of an answer, I propose to outline the capability of the Soviet Navy to carry out the various tasks which the Navy of a great power might be called upon to perform in wartime; to assess the priority which the Soviet Union currently assigns to each of these tasks; and, then, to discuss how Soviet naval forces — sized and configured for the stern tests of conflict — are now or could be employed to support national policy in time of peace. Because substantial uncertainties inhibit precise and confident forecasts about the Soviet Navy, I will conclude by listing these uncertainties, discussing their significance, and venturing a projection as to the course the Soviet Union will follow in further development of her maritime capabilities.

### Wartime Tasks

The wartime tasks against which to assess Soviet maritime capabilities and intentions are:

1. Protection of Soviet ballistic missile submarines (pro-SSBN);
2. Operations against allied ballistic missile submarines (anti-SSBN);
3. Operations against allied aircraft carrier and amphibious forces (anti-Projection);
4. Establishment and protection of distant sea lines of communications (SLOC);
5. Projection of power from the Soviet Union to distant areas (power projection overseas);
6. Operations against allied sea lines of communications (anti-SLOC);
7. Securing and extending the flanks of Soviet land forces in North

Norway, the Baltic exits and the Turkish Straits.

Of special importance in this assessment of Soviet naval power is the likelihood that the relative priority of these tasks will change with the length of the conflict, the flow of military operations, and the Soviet perception of the risk of nuclear escalation.

### 1. Pro-SSBN

Since deciding to create a sea-based strategic deterrent force, the Soviet Union has sought to improve the survival potential of its ballistic missile submarines (SSBN). For example, successive classes of these submarines have been quieter than their predecessors. Moreover, missiles of substantially longer range have been introduced, now making it possible for these submarines to remain in remote sea areas and still target the US, thereby increasing greatly the sea area of necessary interest to allied anti-submarine forces.

In addition to these technical improvements, the Soviets probably would employ air, surface and subsurface forces — particularly their nuclear attack submarines — to enhance SSBN survival potential. This would be especially true in the initial stages of conventional hostilities, and would remain a high priority task so long as Soviet leaders considered the risk of nuclear war to be high. If a conflict were perceived as unlikely to escalate, some forces assigned to the pro-SSBN task could perform alternative missions. The ability of the Soviets to protect their SSBN is good.

### 2. Anti-SSBN

The purpose of anti-SSBN operations would be to limit damage to the Soviet Union by reducing the

secure second strike potential of the Western allies. They undoubtedly recognise this as a hazardous and destabilising endeavour that could produce preemptive escalation. Thus, they must evaluate the trade-off between the high benefit and high risk of such operations.

Nevertheless, because of the threat to the Soviet homeland posed by allied ballistic missile submarines, it is likely that the Soviets would, especially in the early stages of combat and so long as the risk of escalation was substantial, assign air, surface and subsurface forces to locate and track allied SSBN forces even if destruction of these forces were not actively pursued.

The ability of the Soviet Navy to carry out this task is considered poor for two reasons: the inadequacy of Soviet anti-submarine capabilities, and the significant measures taken by allied navies to enhance submarine survival potential. Because of the high priority which the Soviets assign to this task, one must expect Soviet anti-submarine capabilities to improve in the future.

### 3. Anti-Projection

US Carrier aviation and amphibious striking forces create a significant threat to the Soviet homeland. So long as the carriers are perceived as posing a nuclear threat, the Soviet Union will obviously place a high priority on their destruction. Soviet air, surface and subsurface forces are admirably configured for this purpose equipped as they are with their long-range anti-ship missiles. These same forces pose an even greater threat to US amphibious forces, which are less able than

# E. & C. ENGINEERING WORKS

(C. C. ETWELL, Prop.)

**WALKERSTON 59 2307**

(also after hours)

- General Engineering and Steel Fabricating
- Fitting, Turning, Welding
  - Profile Cutting
- Shearing — Punching
  - MIG Welding
- Agricultural Implements
  - Fertilizer Distributors
  - Cultivators, etc.

**11 HIGH ST, WALKERSTON, QLD**

# CITY MOTORS PTY LTD

**Lutz Frankenfeld**  
**PRESTIGE USED CARS**

**50 SMITH STREET  
DARWIN, NT**  
**Phone: Darwin 81 3406**

carrier groups to protect themselves unless supported by tactical aircraft, either carrier or shore based. Especially in the early stages of conflict, substantial and highly capable Soviet forces will be assigned to the anti-Projection task.

#### 4. Distant Sea Lines of Communication (SLOC)

The ability of the free nations to move essential materials to and from allies, to forward bases and to distant areas for at-sea replenishment of combat forces — all in the face of enemy opposition — requires the establishment and protection of distant sea lines of communication. The capability to maintain such sea lines is requisite to overseas power projection and to the effective conduct of distant naval operations in wartime in the face of substantial opposition.

Despite its large merchant fleet, fishing fleet and ocean resource exploitation programme, the Soviet Union has not yet produced a credible wartime capability to protect distant sea lines of communication.

Creation of open-ocean convoy protection does not appear to be an element in current Soviet programmes. Up to the present, the capability to resupply naval combatant forces underway in distant areas is not receiving enough attention to be classed as a major effort. Although some modern Soviet underway replenishment forces do exist, their building rate and the development of operational expertise are insufficient in the absence of secure overseas bases to support naval operations in wartime, far removed from the Soviet Union, over an extended period of time.

The Soviet Union apparently places low priority on the capability to establish and protect distant sea lines of communication in time of war. This priority will probably remain low for the near term.

#### 5. Power Projection Overseas

Overseas power projection requires forces capable of defending themselves, with additional power to accomplish the projection mission and the necessary logistic support to sustain operations in the overseas area.

An intention to project power with naval forces is, with increasing frequency, ascribed to the Soviets. In such evaluations one must be careful not to confuse Soviet use of naval units in peacetime to expand political and economic influence with current Soviet wartime naval offensive capabilities. The Soviets clearly have as a prime objective the enhancement of their political and economic influence throughout the world. Naval ship deployments to distant areas not only support ship and aircraft deployments in those areas; they also support political and economic initiatives which the Soviets may wish to undertake.

The KIEV-class aircraft carrier will provide some air power projection capability beyond Soviet vital land and sea areas. The survival potential of the KIEV class beyond a few days would be low, however, in areas where allied forces could bring to bear their submarine and air forces.

The Soviet amphibious force was designed principally for operations to extend and protect the flanks. There has been a slow but steady increase in amphibious assault lift capability as larger, longer range ships enter the Soviet navy; however, the naval infantry remains relatively small. There is little evidence of an effort on their part to expand their amphibious force significantly.

Although the Soviets do not presently have the force structure required for power projection in distant areas during a major war, their force is adequate for many third world situations. There is inconclusive evidence that they aspire to have or require the capability to project power against substantial opposition. For the near term, this task probably has low priority.

#### 6. Anti-SLOC

By virtue of its substantial nuclear attack and diesel submarine fleet, the Soviet Union possesses an excellent capability to interdict allied sea lines of communication. The availability of anti-ship missiles in these submarines enhances this capability. Soviet long-range air forces, together with the anti-ship capabilities of the Soviet surface fleet, would also be employed against allied shipping. The

question for allied planners is: Would the Soviets employ the preponderance of their air, surface and sub-surface capabilities in an anti-SLOC campaign; and if so, at what stage of the conflict? As suggested above, defence of the homeland would require emphasis (so long as the real threat of nuclear escalation exists) on the pro-SSBN, anti-SSBN, and anti-Projection tasks.

Thus, in the initial stages of conflict, the Soviets could be expected to mount an anti-shipping campaign of less than maximum intensity. Although the problem would be serious for maritime planners, it need not have a decisive effect on the outcome of the land battle, if sensible and timely use were made of warning time.

#### 7. Extending and Securing the Flanks

Using amphibious forces and naval infantry in concert with ground and air forces, the Soviet Union has an excellent capability to extend the flanks in Norway, the Baltic Approaches, and in Greek and Turkish Thrace. Soviet amphibious capabilities create an omnidirectional threat that tends to thin out allied defences and increases the likelihood that attacks against particular objectives would be successful. The Soviet Union clearly assigns a high priority to the task of extending and securing the flanks.

#### Peacetime Tasks

The major peacetime tasks of Soviet naval forces are to:

1. Gather intelligence.
2. Constrain the Western allies' freedom of action at sea.
3. Protect Soviet maritime resources.
4. Extend and enhance the political and economic influence of the USSR.
5. Support allied states.

#### 1. Gathering Intelligence

The Soviets devote extensive resources to gathering intelligence on allied naval forces — particularly information having to do with US sea-based strategic systems. Intelligence trawlers stand off the entrance to ports from which US

## BOB WHITE ELECTRIX

• ELECTRICAL ENGINEERS

Head Office:

79 ST GEORGES ROAD, CORIO, VIC

Phone: (052) 75 1017

Also at:

GANTON COURT, WILLIAMSTOWN, VIC

Phone: 391 5346

## REGAL TAXIS LTD

82 2261 — 82 2222

For Taxi Service All Suburbs  
7 Days a Week — 24 Hours a Day

For Tours and Weddings Ring Office  
82 3229 from 9 am to 5 pm  
Weekdays Only

REGAL TAXIS LTD  
180 CAMBERWELL ROAD  
EAST HAWTHORN, VIC.

## THOMAS BORTHWICK & SONS (AUSTRALASIA) LTD

MEAT PACKERS — MEAT WORK  
PROPRIETORS — EXPORTERS  
WHOLESALE OF MEATS — HIDES  
SKINS — TALLOW AND CASINGS

60 MARKET STREET  
MELBOURNE, VIC

Telephone: 62 2921

Best Wishes from ...

Thomas Borthwick & Sons (A'asia) Ltd  
FRANCIS STREET, BROOKLYN, VIC 3025  
Telephone: 314 0277

Approved Contractors to RAN

ballistic missile submarines operate. Missile-firing exercises are closely observed. Soviet intelligence trawlers and men-of-war with supporting air reconnaissance provide thorough coverage of allied naval operations. Through these and other activities, the Soviet Union has a clear perception of US and allied naval capabilities, along with a substantial ability to provide early warning to Soviet authorities.

### 2. Constraining Freedom of Action at Sea

Admiral Gorshkov has been abundantly clear on the point that Soviet naval capabilities are intended to constrain allied freedom of action at sea, especially in crisis situations. Experience during various Middle East crises clearly demonstrates that the Soviet Mediterranean Fleet has this task as a major responsibility. The performance of Soviet ships in the proximity of major US naval units during the course of these crises in the Mediterranean suggests that Soviet leaders do not yet feel compelled to have a direct confrontation with the American Sixth Fleet. Nevertheless, the presence of these highly capable Soviet forces in the Mediterranean adds an important new dimension to the power equation in that area. The extent to which the Soviet naval presence around the world does in fact act as a constraint is, of course, a function of US resolution and the appreciation by Soviet leaders as to the extent of that resolution.

### 3. Protecting Soviet Maritime Resources

The emergence of a substantial Soviet merchant fleet, together with the creation of the world's largest fishing fleet, impels the Soviet Union to protect these maritime assets. In time of peace, the Soviet Navy is in a position to provide adequate protection for their merchant and fishing fleets and can demonstrate Soviet interest in maritime resource and Law of the Sea issues.

### 4. Political and Economic Influences

The Table portrays the extent to which Soviet ship-days in various areas have increased since 1965.

Admiral Gorshkov has pointed out that in a recent three-year period, some 1000 Soviet men-of-war visited ports in 60 countries. Thus, Soviet naval forces are being used in the traditional way to show the flag, to enhance Soviet prestige in various parts of the world, to counter-balance similar efforts on the part of Western navies, to encourage friendly factions in other nations, and to support the economic and political penetration of developing countries.

### 5. Supporting Allied States

During the recent Angola episode, Soviet naval forces were positioned both to lend moral and military support to the MPLA and to protect the ship and aircraft carrying materials and supplies to Angola. A Kotlin guided-missile destroyer, a landing ship transport (LST) with Soviet naval infantry embarked, and the largest Soviet underway replenishment ship were hovering in the Gulf of Guinea during the crucial days of this operation. Further to the north, a Kresta II cruiser and a Soviet oiler were in the vicinity of the coast of Guinea. TU-95 aircraft were at Conakry. Intelligence collectors were also present in the area. Additionally, a Sverdlov cruiser, and two guided missile destroyers were in the Straits of Gibraltar area — an unusual deployment probably related to events in Angola.

The Soviet forces listed above would have been vulnerable to destruction by Western attack submarines or by airpower from allied carriers in the event hostilities had broken out. In the military sense, Soviet forces involved in the Angola affair served much the same purposes as is intended for the NATO Standing Naval Forces Atlantic (STANAVFORLANT), although the Soviet ships with surface to surface missiles have more offensive capability than do those currently assigned to STANAVFORLANT. The presence of these ships off Angola was clearly intended to demonstrate Soviet determination and to increase the risk and problems associated with possible counterattacks by the United States or its allies.

As the Soviet naval capability

matures, as their confidence grows, and as suitable opportunities present themselves, this example will probably be repeated in other parts of the world.

### Uncertainties

Uncertainties concerning the development of Soviet sea power in the future can be summed up in these questions:

What will be the future Soviet need for long-range sea lines of communication and for the ability to project power overseas in times of peace and war?

Will the Soviets continue to develop the capability to take attack aviation to sea and to employ this capability in tasks not directly related to defence of the homeland? If so, what will be the scale of such an effort?

To what extent will the Soviet Union continue to develop overseas bases — and with what success? To what extent will host nations support Soviet naval forces in peace, in crisis situations and in time of war?

What are the prospects for a Soviet technological breakthrough in anti-submarine warfare which would substantially increase their capabilities against the nuclear powered submarines of the Western alliance?

To what extent will the Soviets develop full-scale underway replenishment capability for naval forces operating far from home waters?

These questions are closely related; they also combine subjective and objective criteria from which it is possible to project the future of Soviet sea power.

### Long-range SLOC and Power Projection Capabilities

From an economic standpoint, there would appear to be little need in the next 10 years or so for the Soviets to build naval forces capable of supporting distant sea lines of communication or of projecting their power overseas. The basis for creating such capabilities would be political in character and would result from the determination on their part to support wars of national liberation or to keep in power governments favourable to Moscow. The

## NOWRA MOTEL

FOR EXCELLENT ACCOMMODATION

• 34 Units • Colour TV • Tea-making Facilities • Excellent Cuisine • Friendly Atmosphere in our Fully Renovated Licensed Restaurant

For Bookings Telephone your Hosts Peter and Desi Shroder at Nowra

(044) 2 2883 — 2 5180  
Nowra, NSW

## MANNING

### CAMPER & TRAILER MANUFACTURERS

- LARGE ON-SITE VANS
- MOBILE AMENITIES
- Tool — Toilet — Office Vans
- CUSTOM-BUILT CARAVANS
- DOMESTIC & INDUSTRIAL

Phone:  
Cooperook (065) 56 3187  
PACIFIC HIGHWAY  
MOORLAND, NSW

## SUTTONS MOTORS (DARWIN) NT

GMH DEALERS

New Cars, Used Cars, Trucks, Service, Panel and Paint Dept, Spare Parts.

Sales:

MITCHELL ST OR  
STUART HWY

Service:

McMINN ST

Telephone:  
Darwin (089) 81 6501

Sponsored for local families

## FARMERS ARMS HOTEL

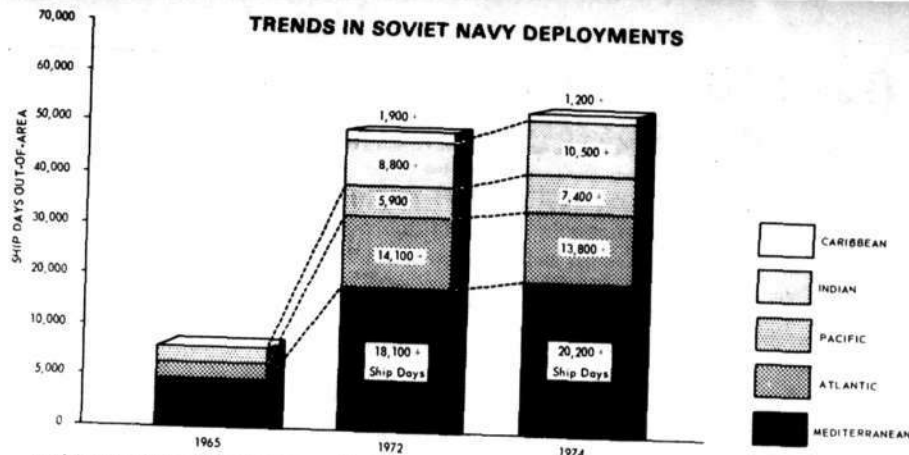
Licensees: Greg and Pam Hay

Ex Balmain and Western Division  
Rugby League Player

Tooheys New or Tooheys Old on Tap

Vale Road, Bathurst, NSW

(063) 31 3742



usefulness of such states in time of crisis or war would be problematic for the Soviets — that is, if their recent experience with Egypt provides a useful example. Before relying on allied states and overseas bases, the Soviet Union must have greater assurance in the future than it has had in the past that, in the event of crisis, the host nation will not say, "this is not my affair!" This issue poses a real uncertainty for the Soviet Union and would require the development of a capable underway replenishment force as a satisfactory back-up, no matter how many bases were available.

### Sea-based Airpower

The LENINGRAD and MOSKVA represent the first tentative effort on the part of the Soviet Union to take air power to sea. These ships augment Soviet anti-submarine forces but they are not ships of extraordinary significance. The KIEV — despite her relatively small size — is another matter. VTOL aircraft will operate from her deck. To be sure, the range of such aircraft would be limited in the near term. Moreover, the small size of her aircraft handling and operating areas will severely limit the number of aircraft which could be brought to bear — this factor being of special significance should the Soviets choose to operate this class of ship in distant waters.

If the Soviets limit their KIEV programme to about five ships

without a follow-on class of larger carriers, a change in strategy from a defensive to an offensive orientation would not be practical. If, on the other hand, there were a follow-on class of larger carriers — in more than token numbers — a clear signal would have been given to the West. My own view is that the construction of four or five KIEVs will be followed in the 1980s with larger carriers of perhaps 50 to 60,000 tons — a programme clearly within Soviet capabilities.

### Overseas Bases

Overseas bases — or facilities extended by nations friendly to the Soviet Union — would be of most value in peace and in the early days of conflict. Based on recent experience, it would make sense for the Soviet Union to focus on base development in areas in which indigenous military forces were so insignificant that Soviet leaders need not be excessively concerned with an order to "get out".

### Underway Replenishment Capability

In the absence of projection forces requiring underway replenishment, the Soviet Union is unlikely to devote substantial effort to further expansion and development of underway replenishment forces. With only a limited combat underway replenishment capability, the development of a Soviet carrier force for projection of power would be meaningless against substantial

opposition. Thus, although further development of underway replenishment capabilities would not be definite in the absence of other indicators, such a development would provide objective evidence of a change in Soviet naval strategy.

### Conclusion

Despite an impressive growth in combatant capabilities, objective evidence does not at this moment demonstrate conclusively that the Soviet Union has opted for a maritime capability which could support the establishment and defence of distant sea lines of communication and the overseas projection of power against significant opposition. There are, however, substantial uncertainties about the future which remain to be resolved.

An increase in the number of wars of national liberation or of Soviet allied states, a continuation of aircraft carrier construction — particularly of a larger class — an expansion of the Soviet overseas base structure and underway replenishment forces, would signal a Soviet decision to add a credible power projection force to their offensive capability and further expand their maritime strategic concept.

My judgement is that such indications will emerge with sufficient clarity in 10 years' time to present the West with an extraordinary challenge.



## Rare Quality Fine Flavoured Elmhurst No 1 Tea

Specially selected choicest quality Ceylon tea, packed in Ceylon in foil lined 1 kg and 2.5 kg wooden chests and imported direct by Dalgety to give you a luxury you can afford. And your guests will compliment you for your fine taste when you serve Elmhurst No.1.

Available from

### DALGETY MERCHANDISE Dalgety Australia Limited (Incorporated in Victoria)

Merchandise Dept, Basement DALGETY HOUSE  
41-47 CURRIE STREET, ADELAIDE, SA 5000  
Also Branches — Phone Adelaide 51 0251 for orders

## WALCHA MOTEL

*Accommodation at its Best*

Twin, Double and Family Rooms with All Modern Facilities Available at Modest Rates — the Attractions of the New England Area, Trout Streams, Waterfalls, Scenic Drives and Historical Properties are All Within Easy Reach of Walcha Motel  
For Family and Group Bookings Call your Hosts Allan and Judy Carter

(067) 77 2599

31/33 WEST FITZROY ST  
WALCHA, NSW

## ROBERT STEELE

MOTOR ENGINEER

For Cylinder head modifications,  
extractor exhaust systems and inlet  
manifolds.

AGENTS FOR WAGGOTT AND WADE  
CAMSHAFTS

39 Owen St, Innisfail, Qld  
4860

Telephone: (070) 61 2213

## BELCONNEN ELECTRICS

Licensed Electrical Contractors ACT and NSW  
EXHAUST FANS & ELECTRIC HEATING SPECIALISTS

FOR PERSONAL, RELIABLE SERVICE AND INSTALLATION OF • EXHAUST FANS  
• ELECTRIC HEATING • POWER POINTS • LIGHT FITTINGS • ROOM AIR  
CONDITIONERS

STRIP HEATERS, FLOODLIGHTS, ETC, WIRING HOUSES, GARAGES, FLATS  
EXTENSIONS AND COMMERCIAL PREMISES

RADIO-CONTROLLED VEHICLES

79 VERBRUGGHEN ST, MELBA, ACT. Phone: Canberra 58 1184



# CANADIAN SHIP BUILDING PROGRAMME

*The Federal Cabinet has approved an expenditure of \$63 million in 1977 dollars for the Department of National Defence to proceed with the first stage of a program leading to the acquisition of new fighting ships for the Canadian Navy, Defence Minister Barney Danson has announced.*

This stage, known as the project definition, will take about four years to complete and will allow the Department of National Defence, in concert with shipbuilders, to finalize the design and detailed costing of the first of a new series of six Canadian patrol frigates.

"The ship replacement program will show Canada's determination to maintain her sovereignty and defence roles, and support commitments to the NATO Alliance with a continuing contribution to credible naval deterrent forces," Mr Danson said.

Government decision to proceed with building the frigates, which would replace the six ageing St Laurent-Class destroyers on the Atlantic coast, will not be taken until 1981 when assessment of the first stage is completed.

Mr Danson said that the plan calls for the first ships to be completed by 1985 and the sixth ready for delivery by 1989. Total cost for the six ships is estimated at \$1.5 billion in today's dollars.

The phasing of government expenditures is in keeping with the government's economic restraint program and will not necessitate major government spending in the early stages of the program.

### EMPLOYMENT GENERATED

In his announcement Mr Danson said, "A Canadian shipbuilding programme to replace the six St Laurent-Class ships will have a significant impact upon the Canadian economy. The expected related benefits will be considerable, and because the proposed building activity, which will begin in 1981, is labor-intensive, employment will be generated throughout the shipbuilding and related industries."

The programme could eventually produce, directly and indirectly, about 4,500 man-years of employment annually for eight years after the initial project definition stage is completed, he stated.

There also would be a major impact on Canadian industry at large since each ship will incorporate several thousand pieces of equipment, many provided by smaller manufacturers, he added.

DND has been preparing operational and technical requirements for the design and construction phases which will be ready early in 1978. A formal approach to industry then will be made and procurement options investigated. The options include designing and building the ships in Canada or buying an off-shore design to modify and build in Canada.

### DESIGN AND PRODUCTION CAPABILITY

"The shipbuilding program will optimize utilization of Canadian industrial capability. There is available in Canada a large number of capable firms engaged in the design and manufacture of mechanical and electronic systems for ships. Such firms, in concert with Canadian shipyards and ship design agencies, could provide the expertise required for the design and production phase of this shipbuilding program."

Government would expect industry to join forces to assume responsibility for the design, management and implementation of a shipbuilding program," the Defence Minister said.

Canadian shipyards have developed a high degree of technical expertise and ability to construct warships. Since 1950, they and related industries have built, with high Canadian industrial content,

many ships which have given excellent service. By virtue of their Canadian design they have been particularly well suited to national requirements.

Maritime Command's current fleet consists of 20 operational destroyers and three destroyers held in reserve. The oldest class, the St Laurent, will have completed 30 years' service in the 1985-1990 period — 10 years beyond their designed life expectancy.

"As a maritime nation, Canada has a wide range of maritime interests and hence has a major stake in the free use of the seas," Mr Danson said. "When these interests are challenged by the ever-increasing competition among the nations to exploit the resources of the seas, or threatened as they can be by the growing capability of the Soviet navy, Canada, with her allies, need to provide for their protection."

The Defence Minister added that Canada must continue to have the capability for the surveillance and protection of her coastline, which is the longest in the world. Of particular importance is the national policy to protect our offshore economic resources within the 200-mile zone.

### FRIGATE-TYPE SHIPS

Studies of the capabilities required for a modern replacement warship to meet the Canadian Forces' peace and wartime operational roles point to a frigate-type helicopter-equipped ship in the order of 3500-4000 tons.

The latest Canadian destroyers are the 4,800-ton DDH-280 helicopter-equipped warships — IROQUOIS, HURON, ATHABASKAN and ALGONQUIN — commissioned in 1972-73. In comparison, the St Laurent-Class ships have a 2,858 ton displacement.

A program management office will be established in Ottawa. It will be headed by a Canadian Forces



With the Compliments of:

## A.C.B. MARINE SANDBLASTERS

*Rust Proofing & Coating Processors  
Specialising in All Marine Work*

Associated with the Shipping Industry  
Corrosion Protection Contractors to  
the Royal Australian Navy



H.M.A.S. STUART

49 Scribbly Gum Square  
Willeton, WA  
Telephone 457 4236

### 24-HOUR BUNKERING SERVICE

Riverside Oil Bunkering are proud to be associated in servicing the Royal  
Australian Navy Ships when in the Port of Brisbane  
Bunkering Services available round the clock  
We work in conjunction with all major oil companies



**RIVERSIDE OIL  
BUNKERING CO. Pty. Ltd.**

MACQUARIE STREET, NEW FARM  
MISBANE, QUEENSLAND, AUSTRALIA  
Phone: Brisbane 368 2122

Kindly Sponsored by:—

## HUTCHINSON'S POOLS

**Specializing in the building of Sprayed  
Concrete Swimming Pools**

See Barry Hutchinson for Free  
Quotations and On Site Inspection  
Call and See our Display Pool at

**235 EKIBIN ROAD  
ANNERLEY, QLD**

**Phone: 48 7395**  
Friendly Service

SUPPORT THE

## RED CROSS

By Becoming A  
Blood Donor

officer who will be assisted by  
representatives of the Department  
of Supply and Services and In-  
dustry, Trade and Commerce to  
ensure the necessary contracting  
expertise and the realization of  
maximum industrial benefits. The  
management group also will work  
closely with other government de-  
partments and agencies and Cana-  
dian industry.

Mr Danson emphasized that the  
initial expenditure of \$63 million for  
the project definition stage would  
not only permit Canadian industry  
and shipyards to plan their  
participation in the program but  
would provide the government with  
the best options to decide in 1981  
on the type of ship to be built.

### Current Maritime Surface and Sub-Surface Forces

#### ATLANTIC COAST

- 4 TRIBAL CLASS DESTROYERS  
(DDH 280) each equipped with  
two helicopters — IROQUOIS,  
HURON, ATHABASKAN and  
ALGONQUIN.
- 6 ST LAURENT CLASS DESTROYER  
ESCORTS (DDH 205) each  
equipped with one helicopter —  
HMCS SKEENA, MARGAREE,  
ASSINIBOINE, OTTAWA,  
SAGUENAY and FRASER. (ST  
LAURENT is decommissioned).
- 2 ANNAPOLIS CLASS DESTROYER  
ESCORTS (DDH 265) — HMCS  
ANNAPOLIS and NIPIGON.
- 3 OBERON CLASS SUBMARINES —  
HMCS OJIBWA, ONONDAGA,  
OKANAGAN.
- 2 UNDERWAY REPLENISHMENT  
SHIPS — HMCS PROTECTEUR,  
PRESERVER.
- 3 RESERVE TRAWLER-TYPE SHIPS  
— HMCS PORTE ST JEAN,

PORTE DAUPHINE and PORTE  
ST LOUIS.

- 1 RESERVE PATROL CUTTER —  
HMCS FORT STEELE.
- 1 DESTROYER ESCORT (DDE)  
HMCS ST CROIX (operational  
reserve status).

#### PACIFIC COAST

- 4 MODERNIZED RESTIGOUCHE  
CLASS DESTROYER ESCORTS  
(DDE-257) — HMCS  
RESTIGOUCHE, KOOTENAY,  
TERRA NOVA and GATINEAU.
- 4 MACKENZIE CLASS DESTROYER

ESCORTS (DDE-261) — HMCS  
YUKON, MACKENZIE, SAS-  
KATCHEWAN and QU'APPELLE.  
1 UNDERWAY REPLENISHMENT  
SHIP — HMCS PROVIDER.  
6 BAY CLASS TRAINING SHIPS —  
HMCS CHIGNECTO, COWICHAN,  
CHALEUR, MIRAMICHI, FUNDY  
and THUNDER.

- 2 RESERVE TRAWLER-TYPE SHIPS  
— HMCS PORTE DE LA REINE,  
PORTE QUEBEC.
- 2 DESTROYER ESCORTS (DDE) —  
HMCS CHAUDIERE, HMCS  
COLUMBIA (operational reserve  
status).

## Water Fuel Lighters for the Navy

The Royal Australian Navy's most  
manoeuvrable vessel in a couple  
of years' time will not be a sleek  
destroyer or a fast patrol boat, but a  
squat, grey lighter, which has been  
designed by the Navy's team of  
designers at Canberra.

Called a self-propelled combined  
water fuel lighter, the new craft will  
have swivelling propellers,  
resembling outboard motors fitted  
at each end, which will enable the  
craft to move ahead, astern or  
sideways and to turn in its own  
length.

The steel hull is also unusual in  
that it is self-supporting and  
requires no internal struts. This  
makes it cheaper to build and easier  
to maintain.

Four of the lighters will be built at  
a cost of about \$7m. The first vessel  
is expected to be delivered by  
Williamstown Naval Dockyard early  
in 1979.

The lighters, which will be 38  
metres in length and displace 1100  
tonnes, will be used to supply Naval  
ships with fuel and fresh water  
when berths are not available.

### EMERALD BODY WORKS

(Bill & Betty Loch)

• Panel Beating • Radiator Repairs • Spray  
Painting • Oxy Welding

Phone: Emerald 136. AH: 1

OPAL LANE, EMERALD, QLD

## ALICE SPRINGS TIMBER & JOINERY

Crispe Street, Alice Springs 5750.  
FOR CUSTOM CABINETS

Your complete supplies of Timber, Plywood, Panelboard, Cupboards, Doors, Built-in Furniture and Hardware,  
etc.

Phone: Alice Springs 52 1360  
After Hours: Alice Springs 52 1038

## Contract for NEW PATROL BOATS

Senior naval officers and a representative of the Department of Administrative Services watch the signing of a \$52.6 m contract for the construction of 14 patrol boats to the Brooke Marine PCF 420 design.



The signing ceremony, held in Canberra, is being carried out by Mr D. G. Fry (seated left), Director of the North Queensland Engineers and Agents Pty Ltd, which was awarded the contract, and Mr F. B. Long (seated right), an Assistant Secretary of the Department of Administrative Services.

Pictured watching the ceremony are (standing, from left) Rear Admiral P. H. Doyle, Chief of Naval Material; Mr A. R. Palmer, Deputy Secretary, Department of Administrative Services; and Captain R. G. Harris, project Director.

Australia-wide tenders were called for the building of the 14 vessels. Four Australian firms submitted tenders. Based on an evaluation of the tenders this was reduced to two firms: North Queensland Engineers and Agents, and Vickers Cockatoo Dockyard Pty Ltd.

The PCF 420 patrol craft has a length of 42 metres, a top speed of about 30 knots, a displacement of

some 220 tonnes, and a range well in excess of the Navy's current Attack class boats.

It has been selected as being appropriate for the task of patrolling Australia's coastline, and will increase substantially the surveillance and control capability of the Defence Force.

The lead craft of the new PCF 420 patrol boat class is already being constructed by the designers, Brooke Marine Ltd, at Lowestoft in the United Kingdom.

Work on the first Australian-built craft is expected to start in about nine months at the North Queensland Engineers and Agents yard in Cairns. The 14 Australian-built patrol boats will be delivered to the RAN between the second half of 1980 and 1985.

Australian equipment will be fitted where possible, resulting in a lesser reliance on overseas sources of supply and greater participation by Australian industry.

## Ultra Modern Torpedoes for RAN

The First Australian Submarine Squadron of the Royal Australian Navy is to be fitted with ultra-modern torpedoes which will give the six Oberon-class submarines an underwater fighting capability at least equal to the most advanced conventionally-powered submarines in the world.

The Minister for Defence, The Honourable D. J. Killen, has stated that the project cost for the torpedoes, associated spares, training, support facilities and test equipment would be approximately \$16 million.

Of this amount \$3 million would be spent in Australia on training, ship installation and maintenance facilities, including special buildings at the RAN Armament Depot at Kingswood, NSW.

The torpedoes are essentially underwater guided missiles of much greater accuracy than early types and it is expected that the new torpedoes known as the Mk 48 Mod 3 torpedo, in time completely replace the present obsolescent torpedoes which were either pre-World War II vintage, or designed just after that war.

The new torpedoes, together with the submarine weapons system update programme, to be carried out over a period of eight years, will provide the boats with an outstanding capability. The up-date programme will include new fire control systems and the installation of modern sonar systems, both of which are presently being fitted into HMAS OXLEY now undergoing an extended refit at Vickers Cockatoo in Sydney.

The new class of torpedoes and associated equipment are expected to have a life span of approximately 30 years.

## NEARING COMPLETION IN CANBERRA NEW RANGE



Superb individually styled new home designs including

- Sun decks
- Internal stairs
- Inge quality features
- Rumpus Rooms
- Two storey versions
- Double garages

**PLUS** Homes currently being planned  
Limited number of breath-taking sites  
Clients preferences can still be incorporated



# INGE BROS

(Canberra) PTY. LTD.

15 Paragon Mall, Gladstone Street, Fyshwick, 2609. A.C.T.  
Phone 80 4381, 80 4091 — Ah 54 6646 Keith Griffiths

ECA 132

# MACLIS



# Sweets

## TRADITIONAL CONTINENTAL CONFECTIONERY

- Turkish Delight • Halva • Sugar Coated Almonds
- Tahini • Glacé Cherries • Natural Food Sweet Bars
- Sunflower Bar • Fruit & Honey Bar • Coconut Bar
- Sesame Bar • Chick Peas • Grecian Delight



359  
NA

FITCHELL LIBRARY

21 JUL 1978

SYDNEY

MAY-JUNE-JULY, 1978

Registered for posting as a publication — Category A

50 CENTS

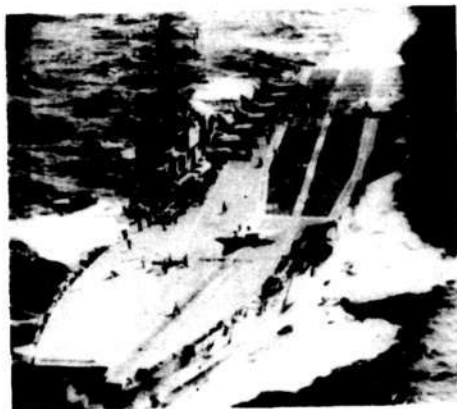
# THE Navy





Greetings to the Royal Australian Navy from

# DILLINGHAM SHIPYARDS (WA) PTY LTD



- SHIP BUILDERS
- SHIP REPAIRERS
- ENGINEERS

~~~~~  
CURRENTLY REFITTING
"HMAS MORESBY"
in
Fremantle, WA

9 Corkhill Street, North Fremantle, WA
PO Box 50, North Fremantle, 6159

Telegraphic Address: "South Slips", Perth
Telephone: 335 4622 — Telex 92 6655

DILLINGHAM

The Shipyard on the Western Coast

THE NAVY

The magazine of the Navy League of Australia
Registered for posting as a publication — Category A

Vol 40

MAY-JUNE-JULY, 1978

No 2

CONTENTS

	Page		Page
AOE, AOR — But When?	3	An air-operated grapnel-throwing gun	
An Assessment of The Navy	7	simplifies the mooring of	
Letters to the Editor	10	large vessels	22
The Royal Canadian Navy —		Australia's First Naval Battle	
A Short History	14	Honour	24
Federal President Visits Tasmania ..	15	Minehunting Catamaran	27
Naval Reserve Cadet News	16	The White Paper on Restructuring	
The Navy League — A Conspectus ..	19	the Italian Armed Forces	29
		Ships of the Canadian Pacific Fleet	
		Visit Sydney	32

PLUS SUNDY STORIES AND PHOTOGRAPHS

The views expressed in articles appearing in this publication are those of the authors concerned. They do not necessarily represent the views of the editor, the Navy League, or official opinions or policy.

Photographs appearing in this magazine are obtained from official sources and copies cannot be secured from the Navy League of Australia, Percival Publishing Co Pty Ltd or the Editor.

All correspondence should be directed to the Honorary Editor
Box W34, PO West Pennant Hills, NSW, 2120, Australia

Published by the Navy League of Australia, Box 1719, GPO, Sydney, NSW, 2001.
15th Floor, Patrick House, Cnr Spring and Gresham Streets, Sydney, NSW, 2000.

ADVERTISING AND PUBLICATION: PERCIVAL PUBLISHING CO PTY LTD

SYDNEY	MELBOURNE	ADELAIDE	BRISBANE	PERTH	HOBART
Mrs K. Harrington 862 Elizabeth St Waterloo NSW, 2017 Phone: 699 2600	Mr Bob Smith Greenan Publications Pty Ltd 388 Bourke Street Phone 61 1461	Mr Trevor Winklett 17 Currie St Adelaide, 5000 Phone: 51 6225	Mr Steve Meyers 72 Eagle St Brisbane, 4000 Phone: 31 2531	Mr Tom Dwyer 194 St George's Tce Perth, 6000 Phone: 22 4072	Mrs Kath Stump 123 Murray St Hobart, 7000 Phone: 34 4086

ADVERTISING RATES: \$195 PER PAGE — \$105 PER HALF PAGE

THE NAVY LEAGUE OF AUSTRALIA

PATRON: His Excellency the Governor-General.

FEDERAL COUNCIL

President: Commander F. G. Evans, MBE, VRD, RANR.

Vice-President: Commander D. M. Blake, VRD, RANR.

Vice-President: Lieut Cmdr A. W. Grazebrook, RD, RANR.

Secretary: Lieut Cmdr O. V. Dimmitt, VRD, RANR, Box 227, PO Hawthorn, Victoria, 3122. Telephone 29 6294.

New South Wales Division

Patron: His Excellency, the Governor of New South Wales.

President: Lieut Cmdr E. Bryden-Brown, VRD, RANR.

Honorary Secretary: D. P. Trickett, Esq, Box 1715, GPO Sydney, NSW, 2001.

Victorian Division

Patron: His Excellency, the Governor of Victoria.

President: B. J. Bird, Esq.

Secretary: Lieut Cmdr O. V. Dimmitt, VRD, RANR, Box 227, Post Office, Hawthorn, Victoria, 3122. Telephone 29 6294.

Queensland Division

Patron: His Excellency, the Governor of Queensland.

President: Surgeon Commander A. H. Robertson, RANR.

Hon Secretary: Lieutenant E. W. Crooke, RANR, 780 Gympie Road, Chermside, 4032.

Australian Capital Territory Division

President: Commander D. M. Blake, VRD, RANR.

Hon Secretary: Lieutenant F. Whetton, 66 Bradfield Street, Downer, ACT, 2602.

South Australian Division

Patron: His Excellency, the Governor of South Australia.

President: Bruce Grey, Esq.

Hon Secretary: Mrs A. Fitzgerald, Box 1529M, GPO Adelaide, SA, 5001.

Tasmanian Division

Patron: Vice-Admiral Sir Guy Wyatt, KBE, CB.

President: Senator D. M. Devitt.

Hon Secretary: Mrs T. McMeekin, 24 Clementine Street, Launceston, 7250.

West Australian Division

Patron: His Excellency, the Governor of Western Australia.

President: Lieutenant Commander J. J. Johnson, MBE, RAN (retd.).

Hon Secretary: Mrs P. Paramor, Box 735, PO, Fremantle 6160.

May/June/July, 1978

THE NAVY

Page One

you'd be surprised

AT THE THINGS WE DO...

AND WE CAN DO THEM FOR YOU!

Design and development....electronics...hydraulics...fibreglass... sheet metal fabrication...laboratory....gathered together under one roof we have Australia's greatest concentration of specialists and skilled workers in all of these operations. This fusion of many abilities is available to you in your business. If you have problems that need specialized design and manufacture, try us... the gathered skills.



COMMONWEALTH AIRCRAFT CORPORATION LIMITED

(A Privately Owned Consortium)

304 Lorimer St., Pt. Meib., Vic., 3207. Ph. 64-0771. Cables: Comaircor

AOE, AOR — BUT WHEN?

by: A. W. Grazebrook

On April 14, the Minister for Defence (Hon D. J. Killen) announced that Vickers Cockatoo Dockyard Pty Ltd is being invited to tender for a fleet underway replenishment ship (AOR) for the Australian Navy. In making the announcement, the Minister said that the Government would make no decision on where the ship would be built until Cockatoo's tender has been evaluated against a competitive tender from the French.

Thus began yet another step in the seemingly unending struggle to get a new underway replenishment ship for the RAN. Navy is right back where it was in 1971 — a design has been selected and suitable builders are tendering for the job.

Nearly 10 years ago, in 1969, the RAN conceived a need for a fast combat support ship (AOE) capable of steaming with the carrier task group or with escorts. The ship would be able to replenish other warships at sea with fuel for the ships, aircraft, fuel, ammunition, and naval, victualling and air stores.

The plan was that, on completion of the new ship (to have been named PROTECTOR), the Navy's existing

replenishment ship (HMAS SUPPLY) would have been taken out of regular operational service. She would have been available to replace PROTECTOR whilst that ship was under refit. In the intervals, SUPPLY would have been maintained in reserve.

With modern preservation methods, and recognising that a ship of this type is not sensitive to the weapons and electronics obsolescence that often forces withdrawal from service of warships proper, SUPPLY could have been maintained in reserve for some years.

Thus PROTECTOR was not envisaged as a replacement for SUPPLY — an AOR. SUPPLY can replenish other ships with ship and air-

craft fuel only. SUPPLY is not a "one-stop" ship — she does not carry ammunition, naval, air and victualling stores.

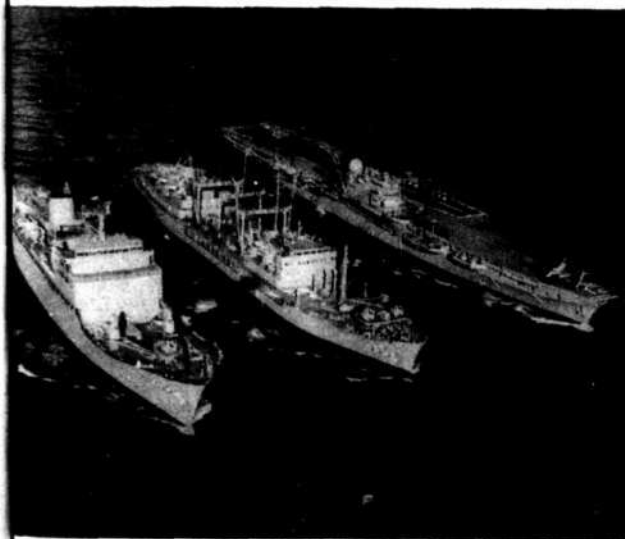
Following on completion of the highly successful Cockatoo designed and built destroyer tender HMAS STALWART, Navy planned to order the new AOE from Vickers Cockatoo. It was planned that the keel would be laid in 1972 and that the ship would join the fleet in late 1975.

Plans and design work proceeded. Although difficulties in obtaining the desired diesel engines delayed the laying of the ship's keel during 1972, the ordering and delivery of other long items proceeded. By the end of 1972, several million dollars worth of materials and equipment had been accumulated at Cockatoo. Work had commenced on the preparation of materials.

At the time, it was estimated that the total project cost would be A\$69 million, of which the ship herself would account for some A\$33 million.

Soon after the December 1972 election, the new Minister for Defence (Hon L. H. Barnard) announced (in August 1973) that he had "decided that there is no need to proceed at the present time with the construction of a fast combat support ship capable of underway replenishment of the fleet. It has been assessed that such a ship would not be required until about 1980, when HMAS SUPPLY is expected to be retired. I believe that a less sophisticated and less costly ship than that originally proposed at a cost now estimated at around A\$69 million might be more suitable. This is being further examined."

Mr Barnard's decision involved the Navy (and the taxpayer) in the payment of many millions of dollars in cancellation charges. It will involve the payment of much higher costs for the ship that is eventually built. Ultimately, Navy will get a less sophisticated ship for which a much higher price must be paid than would have been paid for PROTECTOR. Unofficial estimates give a total AOR project cost of A\$100 million — compared with only A\$69



HMA Ships STALWART (215), SUPPLY (195) and MELBOURNE (21).

million that would have been paid had Mr Barnard not cancelled the AOE.

The Barnard decision also involved the abandonment of the concept of two underway replenishment ships — an AOE and an AOR. Quite apart from the peace-time cost advantages of the new ship in service and the older SUPPLY in reserve, the availability of two ships for wartime operations would give our carrier group and escorts significantly longer endurance time at sea.

In terms of both operating, maintenance and capital costs, an AOR or AOE costs less than an escort. Therefore, it is more economic to keep a smaller number of escorts at sea longer by replenishing from an AOR than it is to achieve the same number of "escort sea days" by operating more escorts.

It was not until 1975 that Mr Barnard implemented his August 1973 pledge to further examine the acquisition of a less sophisticated ship to replace HMAS SUPPLY. For reasons that are not clear, and in spite of Cockatoo's successful building of HMAS STALWART of much the same size as an AOR, Mr Barnard specified that the new ship must be to an existing design. The advertisement, placed in January 1975, produced design and/or building proposals from 27 overseas companies and interest in building the ship from four Australian companies.

Eventually, Navy selected two types for detailed study. These were the Dutch ZUIDERKRUIS and the French DURANCE.

Although not commissioned until June 1975, the Dutch ZUIDERKRUIS incorporated the lessons learned in the building and operation of her elder half-sister POOLSTER. The Dutch design reflected the fact that their Navy included no carrier task group. Thus extra "payload capacity" was allocated to anti-submarine helicopters. ZUIDERKRUIS carries five such aircraft to operate from a hangar and flight deck aft.

Perhaps with their continued operation of aircraft carriers in mind, the French designed DURANCE — much the same size as ZUIDERKRUIS and the first purpose-built AOR to join the French Navy — to operate only one helicopter (a LYNX WG13).

By early 1977, when Navy's final choice of type of ship was made, both DURANCE and ZUIDERKRUIS had been at sea long enough with their



A Westland Wessex HAS 31B of the Royal Australian Navy.

respective navies for both to have proven their designs at sea. No doubt, in making their final choice, Navy considered the usual combination of cost, payload, compatibility etc.

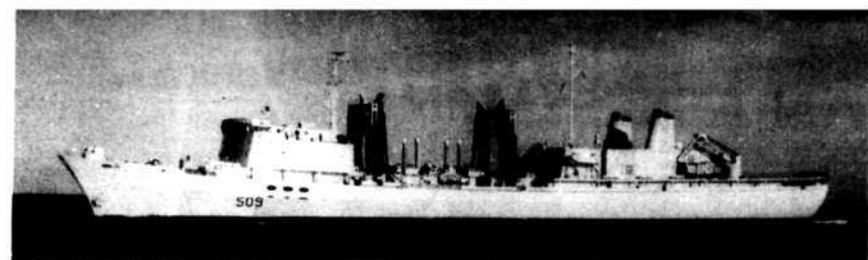
In the event, Navy chose DURANCE as being the type most suited to Australia's needs. The design will be slightly modified to allow for some differences between the RAN and the French Navy's requirements. The RAN will be using almost exclusively diesel fuel by the time the new ship joins the fleet, whereas the French Navy uses furnace fuel oil (FFO). The RAN ship will carry a WESSEX 31B helicopter modified for service duties, whereas the French ship operates a LYNX WG13 helicopter. The RAN ship will carry the new

general purpose short range gun (yet to be chosen) that will also be fitted in the new patrol boats and LSH TOBRUK. The French ship carries two 40 mm guns.

AOE OR AOR?

Unfortunately, details of cargo that would have been carried by the AOE PROTECTOR are not available. However, figures for the Canadian ship HMCS PRESERVER are published in JANE'S FIGHTING SHIPS, which also publishes those for the French ship DURANCE. Whilst these figures do not represent an accurate comparison for PROTECTOR and DURANCE, they do illustrate the enormous increase in payload obtained for a relatively small increase in standard displacement:

	HMCS PRESERVER	FS DURANCE
Displacement		
standard	8,380 tons	7,500 tons
full load	24,700 tons	17,800 tons
Cargo		
FFO	13,100 tons	7,550 tons
diesel	600 tons	1,500 tons
aviation fuel	400 tons	500 tons
dry stores	1,048 tons	220 tons
ammunition	1,250 tons	150 tons
distilled water	nil	130 tons



HMCS PROTECTOR, a Replenishment Ship commissioned into the Royal Canadian Navy on August 30, 1969. She carries spare anti-submarine helicopters, military vehicles and bulk equipment for sealift purposes. 14,122 tonnes of fuel, 1,048 tonnes of dry cargo and 1,250 tonnes of ammunition.

Thus for an increase of some 15 per cent in standard displacement, an extra 65 per cent payload can be carried. This is a classic illustration of the advantages of the economy of scale — a concept which some politicians have no difficulty in grasping in general but a concept which totally eludes them when it comes to the size of ships for the RAN. We see the same reluctance to accept the argument of the economy of scale when a new aircraft carrier or the FFG or the patrol boats are discussed.

With the advantages in favour of a larger ship so clear, the question is being asked in some quarters whether the RAN should not now revert to the original plan and build PROTECTOR. It is reliably reported that those in authority are not in favour of this plan for reasons which include the following:

- Whilst the cost advantages of building PROTECTOR in 1972-75 instead of a DURANCE now are undoubted, it would be much more costly now to build PROTECTOR (AOE).
- This would involve diversion of funds from other projects for maritime defence — projects without which Australia would not have a viable maritime defence force.
- Reversion to the PROTECTOR concept would involve even further delays. With the inordinate delays already suffered, this delay is unacceptable.

For these reasons, it is likely that Navy will proceed with the construction of a DURANCE type AOR.

FURTHER SHIPS?

The November 1976 White Paper on Defence revived the two underway replenishment ship concept when it said "consideration is being given to the later acquisition of a second ship to provide added capacity for deployment and to permit operations in both eastern and western ocean areas."

Navy's plan until the last few weeks

had been to take advantage of the more advantageous prices for which ships can be built overseas for the first ship, but to construct the second ship here in Australia.

Some Navy sources use a guideline of 40 per cent as the extra cost involved in building in Australia instead of in Europe. It remains to be seen just how much extra cost would be involved in building the AOR in Australia. A factor in this is the bounty (up to 31 per cent) paid by the Government to Australian shipbuilders and whether this bounty would come out of the Defence vote.

SHIPBUILDING INDUSTRY

When the Project Definition Study contract was awarded, the Government carefully kept its options open to permit local construction of the ship. However, it was generally assumed that the ship would be built in France. Cockatoo was expected to build either the Heavy Landing Ship TOBRUK or at least some of the new patrol boats. In the event, Cockatoo won neither the LSH nor the patrol boat orders — a development which involved expectations of no naval building work at Cockatoo for some years.

Now, perhaps because of a wish to provide Cockatoo (in the maintenance of which the Government has a defence interest) with work, perhaps because of Government concern for the Australian balance of payments, and perhaps because of a Government wish to show the EEC that we mean business in the dispute over beef exports to the Common Market, Vickers Cockatoo have been invited to tender.

Judgement on the validity of these reasons lies without the scope of NAVY'S columns. However, the last two are clearly non-defence reasons. It is this argument upon which those who contend that any extra cost incurred by building the ship locally should not come out of the defence budget base their case.

THE FUTURE

It is likely that the new tendering process will take some months, thus imposing yet another delay. Most objective shipbuilding industry observers would agree that it is highly unlikely that the new AOR will be completed before the end of 1981 at the very earliest.

HMAS SUPPLY, now at the least economic and highest maintenance cost stage of her life, will have to be again refitted to ensure the viability of the Fleet for the years 1980-82.

A BAD DECISION

Many would agree that Mr Barnard's 1973 cancellation decision has resulted in Navy getting a smaller, less effective ship for much more money than would have been paid for a 1975 completed AOE. Further, many would agree that Mr Barnard's decision was erroneous — erroneous to the extent of tens of millions of dollars in directly identifiable additional costs, much less the significant additional indirect costs.

The 1973 cancellation decision is an excellent illustration of the highly disadvantageous long term consequences that can be involved in allowing short term political and economic advantages to outweigh better judgement.

However, Mr Barnard's 1973 cancellation decision did allow seven years for the procurement (by 1980) of the smaller, less effective ship he considered Navy needed. Five years later, no ship has been ordered. There is now no way that the Navy can have a newly constructed ship by the time Mr Barnard considered it necessary — by 1980.

As Mr Barnard left office in June 1975, some credence must be placed on the arguments of those who contend that some blame for the current situation must be laid at the door of our defence equipment procurement system.

AN ASSESSMENT OF THE NAVY

BY VICE ADMIRAL A. M. SYNNOT, AO, CBE CHIEF OF NAVAL STAFF

It is necessary to set the scene by making a brief reference to strategy as it is from here that our defence policies must flow. The recent White Paper on Australian Defence discussed in some detail Australia's strategic circumstances. This must be the starting point for any discussion of our Navy.

There has been a fundamental transformation of the strategic circumstances that governed Australia's security throughout most of its history. In particular it should be noted that it is no longer practicable to pursue the earlier policy often termed "Forward Defence". The first call upon our Defence Force must now be in respect of our own national security. The ANZUS alliance gives us substantial grounds for confidence in the event of a fundamental threat to our security, but short of this it is clear that our Defence Force must have greater self-reliance. It must be capable of deterring the development of situations that would be harmful to our interests, and of handling a range of lesser situations on its own.

It is not therefore surprising that in the days of Forward Defence no particular emphasis was given to maritime forces. But now the whole thrust of our strategy strongly suggests that more emphasis should be given to our maritime capabilities.

In assessing maritime capabilities I am thinking of something more broad

than purely Naval forces. I include in particular RAAF aircraft with maritime patrol and strike capabilities which form an essential part of maritime forces.

In some people's minds the defence of Australia and its interests conjures up the thought of a major assault and invasion. This I believe is most unlikely, and in our changing world is difficult even to conceive. The enormous build-up and effort that would be required by any nation to launch a Normandy-style invasion over the large distances in this part of the world could not be expected to go unchallenged by the Super Powers.

There are many other threats which seem less frightening but which could be extremely damaging, or even crippling, to our country and its economy. In this respect one should not overlook the fact that we are a trading nation with 99 per cent of our trade coming and going by sea — trade which is vulnerable to various forms of indirect and direct threat. We need the ability to counter quickly any threat to our offshore resources or island terri-

ories, and to deal with lesser scale activities which are aimed at interfering with our peaceful pursuits.

Assuming that you accept my contention that the defence of Australia and its interests is largely dependent on a maritime strategy, I will go on to discuss the Navy today.

As a generalisation I would agree with what Professor Michael McGwire said at a recent ANU conference concerning our Navy:

"This is a well balanced fleet with a true distant water capability, which can operate effectively in a hostile maritime environment on its own, or as a component of a larger force."

While some years ago our maritime forces concentrated largely on anti-submarine warfare, we now have a wider range of capabilities and our forces are more broadly trained. I believe I can say with confidence that we achieve high professional standards in a range of comprehensive capabilities using relatively modern technologies.

In support of this contention I point out that in recent times our maritime forces have exercised with many friendly countries. This has given us a good chance to measure our professional standards. In exercises in the central Pacific and in the North Atlantic with our major allies, our forces have conducted themselves with some distinction. At home in the Kangaroo series of exercises our ability to operate with the Army and Air Force has been well demonstrated.

These examples of course are no reason for us to become complacent. While the principles of war at sea do not change quickly, the tactics which need to be employed are continually changing to deal with new technologies. To keep maritime forces efficient these days is no easy matter. As Michael Howard, Professor of the History of War at Oxford, recently observed:

"Ships and their armament have to be serviced, deployed and, if need be, fought by highly trained, highly skilled, and highly disciplined officers and men, and these do not come in the normal flow of the

arms traffic... countries may buy the vessels and the weapons and have men trained in their use, but the building up of an efficient, reliable, operational navy, especially an ocean going navy, is a very long, hard slog indeed."

The characteristics and capabilities of our present maritime forces are well known. However they were structured to meet requirements existing before the recent fundamental change to our strategic circumstances.

What should be the implications of this new strategy for our maritime forces?

We need to have a force capable of deterring, in our neighbourhood, the development of a situation leading to instability or a threat to our interests. For this we need ocean-going maritime forces which are recognised by others to have an offensive capability — one to be reckoned with. The forces also need to be structured so as to be able to deal swiftly with lower level contingencies. In particular we need versatile forces with a range of capabilities. Overemphasis on any one aspect of capability is likely to leave gaps in other important areas.

The necessity for Australia's mari-

time forces to act in a deterrent role places more emphasis than ever before on the need for the RAN to be able to operate independently.

What kind of forces are needed as our nucleus?

Maritime air forces are needed for off-shore surveillance, tactical reconnaissance and strike against ships. They also have valuable anti-submarine, long range air defence and command capabilities.

General-purpose forces consisting of versatile destroyers with afloat support are needed to undertake peacetime and operational tasks. These range

from sovereignty control to protection of shipping and offensive naval operations, supported where necessary by tactical aircraft.

Below the surface, submarines are necessary for independent operations, often at long range and without air cover. These operations could include covert surveillance, disruption to our enemy's lines of sea-communications, and attack on his sub-surface and surface warships.

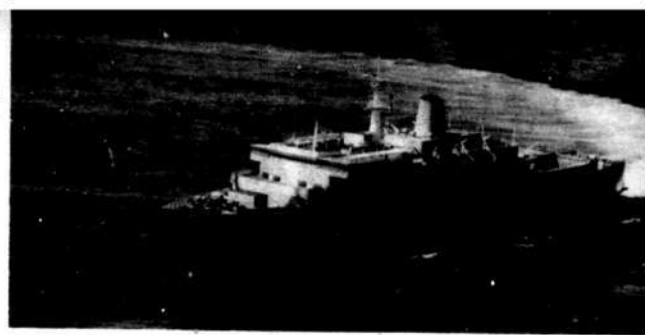
In short, the main elements of our maritime forces should be air power, both shore-based and carrier borne, general-purpose destroyers and submarines.

In order to make such forces effective, a large support organisation including forward bases and dockyards is necessary.

Other units such as patrol boats, mine countermeasures vessels and hydrographic ships, which do not form part of the nucleus, are also clearly required but space does not allow me to discuss them in detail.

The high cost of acquiring warships is often questioned. As the emphasis in the new strategy is on the development of improved maritime capability, it seems to me that there is a strong case for increasing the percentage of the defence outlay to be spent on maritime forces. Given an increase on the present small proportion, it would then be practicable to acquire the major items of capital equipment so necessary for an effective Navy. Though individually expensive, they are few in number and of long life.

An important factor is that new warships take many years to bring into service. For this reason, in the past, the Navy has been limited to relatively slow expansion even in war time, and I see no reason why this will not be the case in the future. There is some truth



HMAS JERVIS BAY.



HMAS HOBART, one of three American built guided missile destroyers of the Perth Class.



One of Australia's four (shortly six) submarines of the Oberon class.

in the saying that the Navy will have to fight a war with the forces it has at the outbreak.

In a time of little evident threat, I therefore maintain that it is important for the Defence Force to obtain versatile weapon systems (eg warships) with long procurement times — systems which we could not expect to obtain in the warning time before a direct threat developed. This could be described as insurance against future uncertainty. Systems with short procurement times should not be ordered until a need for them can be foreseen.

I would like to deal now with some commonly held misconceptions.

It is clear to me that there is a continuing need into the future for tactical air-power at sea. Quick reaction is even more important nowadays than

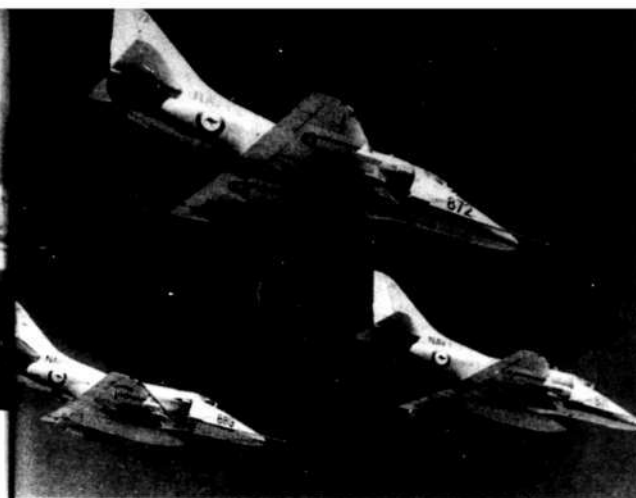


HMAS STUART, one of six River Class frigates.

it used to be. This can be provided in our ocean expanses only by tactical aircraft which are part of the force concerned.

The type of aircraft carrier and its aircraft to provide this tactical air power are changing. I see in the future a smaller ship with fewer aircraft. The fixed-wing aircraft would be of the short-take-off and vertical-landing type which are simple to operate from ships. They would be armed with modern precision guided weapons which would enable them to be more effective than larger numbers of conventionally armed aircraft.

A task group with such tactical aircraft is capable of providing reconnaissance information to its own



A formation of the McDonnell-Douglas Skyhawk attack bombers of the Royal Australian Navy.

ships, of denying information to the enemy force and of striking the enemy beyond the range of his missile armament.

It is sometimes argued that we should concentrate on submarines because of their unique qualities. While it is true that submarines can operate in distant areas without any form of air support, and while in a highly intensive war situation their attack capabilities can be telling, in many lesser situations submarines cannot be used effectively. This can be expected to apply generally in the future as it has in the past, for instance in both the Korean and Vietnam campaigns. I therefore argue that we need a proportion of submarines in our fleet, but not too high a proportion.

There is sometimes the misconception that missile armed small craft would be adequate for our needs. It is certainly true that missile armed craft have an important place in coastal navies which operate in confined and sheltered waters.

For us, such craft are relatively short procurement items; it would be wasteful to buy such obviously defensive craft at a time of no perceived need and of low threat.

Moving from missile armed craft to the more simple patrol boats, there is certainly a Defence Force need for them now. They provide in an economical way, capabilities for patrol, apprehension, intelligence collection, sovereignty visits and for support of

law enforcement by civil authorities. They are also used for hydrographic surveying, fleet support, search and rescue, and Naval Reserve training. With the likely increase to 200 nautical miles of the Exclusive Economic Zone, we are about to enter into the production of larger patrol boats, more suited to off-shore work. Just what the future requirement will be is unpredictable but in the short term the numbers we have in mind should be adequate.

No article on the Navy would be complete without mention of the men and women, Service and Civilian, who make up the team. Much is expected of them nowadays but their calibre is high. Good material is coming along to cope with the challenges of the future.

We are necessarily subject to a manpower ceiling which currently stands at 16,380 Service personnel. Our training programmes and posting patterns are under critical review to ensure that we get the best return from this, our most important and expensive resource. While losses of skilled personnel through resignation or retirement bear careful watching, the level of these losses is not such as to cause alarm about the ability of our Navy to operate efficiently.

In conclusion I believe that our maritime forces, although many of the ships are ageing, are generally adequate for today's needs. They are well respected in this part of the world and act as a deterrent to actions inimical to our interests.

The worries I have are whether our maritime forces will be adequate in the more distant future. I believe it will be of the greatest importance for the defence of Australia and its interests to maintain our relatively high standing as a maritime power in the region well into the next century.



HMAS FLINDERS, an oceanographic and survey ship, she is similar in design to the Philippine vessel ATYIMBA.

OUR COVER

The Swedish fast attack class craft-missile, Jagaren, name-craft of the class (P151), carrying the 57 mm L/70 gun system developed by A. B. Bofors.

A new 57 mm gun and ammunition system has recently been developed. This gun, in naval mounting, is now in series production at the workshops, and has been adopted by several navies.

This 57 mm L/70 automatic gun system has primarily been designed for small and medium-sized ships. It is a dual-purpose weapon, which is highly effective against aerial targets, including sea-skimming missiles. It also has good effect against surface targets and is an excellent complement to anti-missile or torpedo weapon systems. The 57 mm gun has a low weight, in order to facilitate installation on board very small ships. Further, it has been designed with a view to achieving easy handling and simple maintenance.

The anti-aircraft ammunition is fully developed, and in service, and is of exactly the same design as the ammunition for the 40 mm gun.

In order to achieve a high effect against surface targets, a special surface-target shell has been designed, for combating ships. For this shell, a fuse with post-impact delay is used, ie the shell bursts inside the target, after having penetrated the hull.

With Bofors' 57 mm all-purpose gun system, it has been possible to achieve a weapon that has a close-range anti-aircraft capacity comparable to that of a gun system strictly intended for anti-aircraft use. At the same time, however, it has a high effect against naval targets, equal to that of guns of a considerably larger calibre.

**JOHN F. COGLAN
& CO PTY. LTD.**
SHIPPING & CUSTOM AGENTS

53 QUEEN STREET, MELBOURNE, VIC 3000
TELEPHONE 61 2755

Letters To The Editor



DEFENCE PRIORITIES

I refer to the correspondence between Admiral Peek and Captain Scarlett regarding lack of realism in defence spending.

In December 1973 I was retained by the Defence Department to lead its first (and last) Management Development Course in Canberra.

My job was to lead off every morning with management by objectives and toward the end of the week to deal with the participants' individual management plans.

One-third of the people attending were naval officers, one-third were professional engineers or naval architects and the remainder defence bureaucrats. Attendance totalled 25.

The course was titled "Managing by Knowing Your Objectives" and the department had produced a booklet which contained a forward from the permanent head informing the participants that they needed the management training to meet the department's objectives.

On that first morning I stood before the roomful of people (and they were good people, one should add) and asked:

"What are the objectives of your department?"

I was met with stunned silence. Every morning I asked. Four years later I still don't know the answer.

You see, we accidentally uncovered the simple truth that there are no management objectives. The Defence Department stumbles along without really knowing where it is going.

One story which came out of my week with the department, and which I earnestly hope is untrue, though I fear otherwise, goes as follows: Senior naval engineer bails up the permanent head and explains that I am embarrassing them every morning by asking for the department's objectives and could he please have a copy to shut me up. Permanent head retorts "I don't know what they are but if the big bastard

writes them down make sure you get a copy for me."

The really sad thing about defence planning at the moment is that it is in the hands of bureaucrats who really wouldn't know the sharp end from the blunt end of a ship.

They would say perhaps that the military business is too important to be put in the hands of military minds and there is some truth in that except that one must ask a very straightforward question:

"Since the department has no management objectives it obviously does not know where it is going. How the hell can it then decide spending priorities for the armed services?"

The answer is, of course, that it can't but not to worry because it is only taxpayers' money and when the test comes it will not be the shiny bums who will have to front up.

Suggested management objectives for the Defence Department.

MUST

- have 90 per cent of the fleet operational and ready for sea at all times;
- have constant availability to deploy at least one division at all times;
- have portable air defence capability for ready deployment at any major city at short notice.

WANT

- minimum bureaucracy;
- minimum costs;
- maximum efficiency;
- maximum equipment for the defence dollar;
- maximum cost reduction on internal costs;
- maximum forward planning.

Now, if we linked the bureaucrats' pay system to those objectives and made them work on pay for performance we might just be able to afford some decent equipment for all three services.

Otherwise we shall just have to teach the servicemen the old gladiatorial salute

"We, who are about to die, salute YOU!"

LARRY HOINS
47 Smith Street
North Cairns, Qld 4870

OUR NAVY GOVERNOR-GENERAL

Lieutenant James Cook, RN (a naval officer), "discovered" the Australia which he duly claimed for the

Crown of Britain, and most of Australia's early Governors were naval officers.

And now our new Governor-General, Sir Zelman Cowen, can be claimed by the Navy as one of its own sons.

In 1939, Sir Zelman, as a young RAN Reserveman, was mobilised for war service in HMAS CERBERUS III at Port Melbourne; known, since August 1, 1940, as HMAS LONSDALE.

Early in 1940 the present writer — as Sir Zelman's Commanding Officer — congratulated the 20 year old RANR Writer who had become the Victorian Rhodes Scholar for that year.

As the war wore on the young RANR Writer progressed in the Service and eventually became Lieutenant Z. Cowen, RANR, and joined the staff of the then Director of Naval Intelligence, Commander R. B. "Cocky" Long, RAN.

From that duty Lieutenant Cowen was lent to General Douglas Macarthur, where he was assigned to Intelligence duty.

The war ended, Rhodes Scholar Cowen proceeded to Oxford University for two years. On completion of a distinguished course at Oxford Mr Cowen joined the British Military Government in Germany where he was assigned to an appointment which gave him precedence relative to that of an Army Brigadier. After some years in that job Mr Cowen returned to Australia to become, successively, Dean of the Faculty of Law at Melbourne University, Vice-Chancellor of New England University, Armidale, NSW and Vice-Chancellor of Brisbane University.

Sir Zelman was knighted on January 1, 1976.

When his appointment as Governor-General (designate) was announced by the Prime Minister, the Navy, particularly the RANR, was pleased and proud that one of its "youngsters" had been appointed to the highest office in the land; ie His Excellency The Governor-General, representing Her Majesty The Queen, as Commander-in-Chief in and over the Commonwealth of Australia, and its Dependencies, etc, etc.

All Navy-types congratulate Sir Zelman and Lady Cowen, and wish them good health and prosperity in their exalted offices.

COMMANDER R. S. VEALE
RANR (Retired)

The following might "start" something.

One has often had to answer the question: "Who was 'The Father' of the Royal Australian Navy?"

My answer is: Prime Minister Alfred Deakin, who, before he went to a Federal election in December 1908, set aside £108,000 for the building of the first vessels of the new RAN.

The money was later used by the new Fisher Labor Government — which came to office early in 1909 — as part payment for the TBDs PARRA-MATTA and YARRA, which arrived in Australian waters in November 1910, and the TBD WARREGO, which was dismantled and shipped out from England and rebuilt at Cockatoo Dockyard by 1912.

Pages 28 and 29 of "THE OFFICIAL HISTORY OF AUSTRALIA IN THE WAR OF 1914-18", Volume IX, "The Royal Australian Navy", are relevant.

R. S. VEALE
Commander RANR Ret
7 Joyce Street
Elwood 3184

SUBSCRIPTION FORM

To "The Navy",
Box W34, PO, West Pennant Hills
NSW 2120 Australia
I enclose \$4.50 being *subscription to "The Navy" magazine within Australia for 1½ years (refer notes below).

Name

Street

Suburb

State Postcode

Date

(Please Print Clearly)

Please make cheques, postal orders or money orders payable to "The Navy League".

Subscriptions commence in January of each year and a subscription reminder notice is forwarded to current subscribers — Annual Subscription (Australian Dollars) within Australia \$3.00 — Beyond Australia \$6.00 (see mail) — \$9.00 (air mail).

*Persons within Australia commencing subscriptions to "The Navy" magazine during the quarter commencing APRIL (ie, sub for 1½ years) should remit \$5.25; JULY (sub for 1½ years) \$4.50; and OCTOBER (sub for 1½ years) \$3.75.

PHILLIPS ANTHONY MART

GENERAL STOREKEEPER

BOUNDARY STREET

CHARTERS TOWERS, QLD, 4820

Telephone: 97 or 402



Wherever you live you can
depend on
HIGH SPEED GAS
THE GO-ANYWHERE GAS

For cooking and hot water at work, in the home or
outdoors — caravanning, camping, boating and
forklift fuel

For supplies contact any **SPEED-E-GAS** dealer or

BORAL GAS (QLD)
PTY LIMITED

CULLEN AVENUE, WHINSTANES,
QLD

Telephone 268 6999

Branches at:
WARWICK, GYMPIE, MARYBOROUGH, BUNDABERG, GLADSTONE,
ROCKHAMPTON, MACKAY, TOWNSVILLE, MT ISA and CAIRNS



"The Civilian Arm of the Navy"

The principal objective of the Navy League of Australia is to stress the vital importance of Sea Power to the Commonwealth of Nations and the important role played by the Royal Australian Navy.

The League supports the Naval Reserve Cadets who are administered by the Royal Australian Navy, which Service provides technical sea training for boys who intend to serve in the Naval or Merchant Services, also to those seaman-minded boys, who do not intend to follow a sea career, but who given

this knowledge will form a valuable reserve for the Naval Service.

We invite you to swell our ranks and so keep up to date with Maritime Affairs to help to build an ever-increasing weight of informed public opinion. The Navy League will then become widely known and exercise an important influence in the life of the Australian Nation.

The League consists of Fellows and Associates. All British subjects who support the objectives of the League are eligible for membership. Members receive copies of the League's magazine "The Navy".

DIVISIONS

New South Wales — Box 1719,
GPO, Sydney, 2001.
Victoria — Box 227, Post Office,
Hawthorn, 3122.
Queensland — 780 Gympie Road,
Chermside, 4032.
Tasmania — 24 Clementina
Street, Launceston, 7250.
South Australia — Box 1529M,
GPO, Adelaide, 5001.
Western Australia — Box 735, PO,
Fremantle, 6160.
Australian Capital Territory — 66
Bradfield Street, Downer, ACT,
2602.

THE NAVY LEAGUE OF AUSTRALIA Application for Membership

To: The Secretary,

The Navy League of Australia,
(..... Division).

Sir,

I am desirous of becoming a Member of the Navy League of Australia with whose objects I am in sympathy.

(Mr)

Name (Mrs)

(Miss)

(Rank)

Please Print Clearly.

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

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

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

Enclosed is a remittance for \$6.00 being my first annual subscription.

AFTER COMPLETION, THIS FORM SHOULD BE DISPATCHED TO YOUR DIVISIONAL
SECRETARY — NOTE LIST OF ADDRESSES ABOVE

Compliments of

J & H CARPET SERVICE PTY LTD
PRINCES HIGHWAY, SOUTH NOWRA, NSW

Complete Carpet and Lino Service for
HOMES — CLUBS — OFFICES — SHOPS

Call at our Showroom to see a Full Range of Carpets and Vinyls

Phone Nowra 2 4182, 2 2946

The Royal Canadian Navy

— A SHORT HISTORY

The Naval Service of Canada was officially established on May 4, 1910. Like the new Australian Fleet, which included former British ships, Canada also acquired the old cruisers NIOBE and RAINBOW from the Royal Navy.

The former was constructed in 1897, and transferred to Canadian control in 1913. She was outmoded by newer vessels and her top speed was only 18 knots. RAINBOW was completed in 1891 and purchased outright by the new naval force. Both cruisers were disarmed and employed in the training role. NIOBE displaced 11,000 tons and RAINBOW 3,600 tons. During World War I the navy acquired two submarines, but for the most part its duties were of an escorting nature in the North Atlantic Ocean.

Both submarines were constructed by the Electric Boat Company, USA, for the Chilean Navy. During a controversy between the builder and prospective owners, the submarines were taken from Seattle, Washington, to Canadian waters, after only narrowly missing a United States ship sent to intercept them. America was at this stage of the war still remaining neutral and unable to transfer or build warships for any of the belligerent nations.

By 1919 overall strength of the force was 16 vessels. The fleet included the two cruisers and two submarines; two torpedo boats, GRILSE (225 tons, 2 x 12 pdr, 1 x torpedo tube, 30 knots) and TUNA (150 tons, 1 x 3 pdr, 2 x torpedo tubes, 24 knots); one sloop named ALGERINE (1,050 tons, 4 x 3 pdr, 3 x MG, 13½ knots); eight patrol vessels; and the SHEARWATER, an ex-sloop classified as a submarine depot ship.

Two additional submarines were presented by Britain in January 1919. The pair was commissioned in June and thereafter known as CH14 and CH15. The former light cruiser HMS GLASGOW arrived in Canadian waters during 1920, as did two war-built destroyers, PATRIOT and PATRACIAN. GLASGOW was completed by Devonport Dockyard in October 1914, and saw war service with the Grand Fleet. Like the earlier NIOBE and RAINBOW, she carried no armament. After a very brief career,

by ROSS GILLET

GLASGOW (renamed AURORA for Canadian service) was laid up in July 1922. The destroyers were also used for training purposes but retained their original armament of 3 x 4 inch, 1 x 2 pdr, and 4 x 21 inch torpedo tubes. By 1924 two depot ships had joined the fleet as had four minesweeping trawlers. In 1925 CH14 and CH15 were broken up.

Two destroyers, CHAMPLAIN and VANCOUVER, were transferred from the Royal Navy in 1928. They displaced 1,075 tons and mounted a similar armament to the earlier PATRIOT and PATRACIAN.

During World War II the Royal Canadian Navy was primarily responsible for the safe escort of merchant ship convoys across the Atlantic. In all 378 Canadian warships escorted 25,879 merchant vessels to Britain and 16,823 in the opposite direction. The largest single convoy escorted was during August 1944, when 167 merchantmen were safely conveyed to European waters.

Eight Tribal class destroyers joined the fleet from 1942, as did seven old flush-deckers from surplus stocks of the US Navy, plus several British built vessels. Over 100 ships participated in the Normandy landings on June 6, 1944. Four Tribal class raided Axis shipping in the English Channel, while destroyer escorts, frigates, corvettes, minesweepers, torpedo boats and assault craft assisted in the extensive mine-sweeping of the coastal inlets and protected the seaward flanks of the convoys.

Canada was also represented in the southern France invasion and at the landing of British troops in Greece in October 1944. Following the outbreak of conflict in the Pacific, the Royal Canadian Navy dispatched 60 warships to the new theatre of operations. By war's end the Navy had sunk 17 German

U-Boats and received credit for damaging several others.

In 1946 the Navy received the aircraft carriers WARRIOR and MAGNIFICENT. Both flattops were constructed in Britain, having been laid down during 1943. The former was returned to the Royal Navy in 1948 and the latter on June 14, 1957. Over 30 aircraft were normally embarked on each carrier.

The cruisers ONTARIO and QUEBEC, acquired during the war years, were relegated to training during the late 40s. By 1952 frigate strength stood at 14 River class (1,570 tons, 2 x 4", 6 x 40 mm, 19 knots); with 11 destroyers, including seven Tribals. Twenty-one Bangor class fleet minesweepers (590 tons, 1 x 40 mm, 2 x 20 mm, 16 knots); 17 smaller sweepers; a minelayer; 10 launches; an icebreaker; and 49 auxiliaries were also in service. In addition nine Algerine class ocean minesweepers (1,040 tons, 1 x 4", 4-8 x 20 mm, 4 x DCTs, 16 knots), built for the Royal Navy during World War II, were active within the fleet.

The first major post-war new construction was the seven-ship St Laurent class anti-submarine frigates. Each of the new vessels displaced 2,000 tons standard and were armed with 4 x 3 inch 50 calibre guns housed in twin mounts, homing torpedoes and two limbo mortars.

The aircraft carrier BONAVENTURE joined the fleet in 1957, having been originally laid down as HMS POWERFUL, in November 1943. She was the first carrier owned by Canada and was purchased in July 1952. BONAVENTURE carried 21 aircraft, her final complement comprising Trackers and Sea Kings. ONTARIO and QUEBEC were declared surplus to requirements in 1958 and sold to the shipbreakers in 1959.

Following on from the St Laurent frigates were seven Restigouche class, four Mackenzie class and two Annapolis class. With the exception of the final

pair, each ship was armed with four 3-inch guns and two Limbo mortars. ANNAPOLIS, with her sister NIPIGON, mounted only one twin 3-inch gun and one Limbo, but carried a helicopter platform and hanger with one Sea King helicopter embarked. Top speed of each class was 28 knots.

In May 1961, the former US submarine BURRFISH was transferred, and renamed GRILSE, for anti-submarine warfare training duties on the Pacific coast. A further three submarines were ordered in April 1962, all of the Oberon class, built in Great Britain. The first boat, OJIBWA, joined the Canadian fleet in 1965, and was followed by ONONDAGA in 1967, and OKANAGAN in 1968. From 1963 to 1966 a comprehensive modernisation programme was instituted, including the rebuilding of the St Laurent class frigates with a helicopter capacity.

In 1968 the overall strength of the Navy comprised one aircraft carrier, four submarines, 23 destroyer escorts, an ocean escort, the supply ship PROVIDER, two maintenance ships, five research ships, six coastal minesweepers, five gate vessels and four patrol craft. The BRAS D'OR, an anti-submarine hydrofoil, was under construction. Another US submarine, ARGONAUT, was purchased in December 1968 as a replacement for the GRILSE. Renamed RAINBOW, she was based at Esquimalt for anti-submarine training. Four Restigouche frigates received the Asroc anti-submarine missile capacity from 1968-72, thereafter being known as the Improved Restigouche class.

During 1969 construction began on four DDH 280 Iroquois class helicopter destroyers. Each ship was designed to accommodate two Sea King helicopters and fire Sea Sparrow anti-aircraft missiles from a quadruple launcher forward of the bridge.

BONAVENTURE paid off on April 1, 1970, and was towed to Taiwan for demolition, leaving Halifax on October 27. Joining the fleet during 1969 and 1970 were two additional replenishment ships, PRESERVER and PROTECTOR, built like the earlier PROVIDER to carry three helicopters. The first post-war frigate to be laid up was the ST LAURENT, in 1974, while three of the Restigouche class, COLUMBIA, ST CROIX and CHAUDIERE, were declared surplus and paid off into category "C" reserve during the same year. RAINBOW was

Canadian Defence Minister Barney Danson announced on February 16, 1978, the decision to purchase two Canadian made de Havilland DHC-7s (DASH-7s) for the Canadian Armed Forces.

The 50-seat, four-engined Short Take Off and Landing (STOL) aircraft being produced by the Toronto company will be used in a passenger and freight transport role by the Canadian Forces in West Germany.

The new aircraft will replace a Canadian CC-109 Cosmopolitan, a twin-engined turboprop transport assigned to Canadian Forces Europe on a regular rotating basis from Canada. The "Cosmo" entered service in 1960.

and the integration of all operations and services.

The Canadian Forces of today are a far cry from the separate former services from whence they came. Among the more tangible results as the unification process has evolved are the five functional commands where there were 11, the training schools reduced from 91 to 32 and the military trades streamlined from 346 to 98. And, most visible of all, the common, dark-green uniform.

Born in acrimonious debate 10 years ago, unification is not even a memory for half of the military people who have joined the Canadian Armed Forces since that memorable milestone.

broken up in 1974 and the last World War II River class frigate, GRANBY, was also disposed of.

Today the Royal Canadian Navy is primarily anti-submarine orientated and since the withdrawal of BONAVENTURE has relied solely on its destroyers and frigates. The Navy currently operates 20 such vessels, backed up by the Oberon submarines and support ships. Total manpower is about 14,000.

Ten years ago, Canada embarked on an experiment unique in military annals — the unification of its three Services.

It was on February 1, 1968, that legislation to abolish the Royal Canadian Navy, the Canadian Army and the Royal Canadian Air Force was proclaimed, and the Canadian Armed Forces — a single unified military service — was created.

Unification was the third and last step in a process which began in 1964 with the appointment of a single Chief of the Defence Staff, followed in 1965 by the reorganisation of the navy, army and air force command structure

The Federal President of The Navy League of Australia (Commander F. G. Evans) visited Northern Tasmania during April for discussions with the State President of the League (Senator D. M. Devitt) and Branch office-bearers.

Commander Evans stayed with Senator and Mrs Devitt in Devonport, and visits were made to Burnie, Ulverstone, George Town and Launceston.

At Burnie the visitors were shown the new NRC Unit headquarters in course of erection on the Burnie foreshore, and at Ulverstone and George Town plans for new NRC buildings were explained.

Commander Evans and Senator and Mrs Devitt were guests at TS LEVEN'S 25th Birthday dinner-dance, a very successful event, attended by Officers and Instructors from other Tasmanian cadet units, and by many friends and supporters of the flourishing Ulverstone unit.

Kindly Sponsored by...

BLEAKHOUSE HOTEL

97 BEACONSFIELD PDE ALBERT PARK, VIC

• Cold Beer always on tap • Full range of Wines & Spirits • Friendly atmosphere and service

Telephone: 69 1388

Naval Reserve Cadet News

Around the Tasmanian
Division

Compiled by A. J. Lee

All northern units participated in "Operation Jubilee Salute" which took the form of a combined march with bands, Army Reserve, Naval Reserve Cadets and Air Training Cadets. The march raised favourable comment from the crowds who gathered to watch.

Cadets from the far northwest had to muster by 0630 hours at local Army Depots for transport to the march. The units participating were YORK, TAMAR, MERSEY, LEVEN and EMU while in the Hobart March cadets from TS DERWENT filled the ranks.

After the march TS TAMAR held an Open Day for the public to see the NRC in action. MERSEY, LEVEN and EMU opened their Depots on the following day. TS LEVEN entered a float in the local Christmas Parade in the form of a boat, decorated with flags, lights, and ship's wheel and binnacle. For their efforts they were awarded a \$50 prize which will help swell the funds for their rebuilding which they expect to commence this year. Lieutenant Doug Baillie has resigned from DERWENT and his place as commanding officer has been filled by Lieutenant Max (Spider) Webb. Several new officers have been proposed for DERWENT and MACQUARIE, including a new CO for the latter.

In January the Division mustered for its Annual Continuous Training at Fort Direction, commanded by the Senior Officer, Tasmania, Lieutenant Commander Heath. Officers and cadets from all units took part. As is now the general trend with NRC training, no sea time was included. Four 14-foot RNSAs were available for the 120 cadets in camp. This camp marked the 25th year since the first ACT was held in Tasmania, though it is not the 25th camp. For some years no ACT was held. To celebrate the occasion, the Wardroom held a commemorative dinner. The results of the competitions at the camp were: Best Division, Quarterdeck, Lieutenant Beasley; Runner-up, Main Top, Lieutenant Beard; Senior Officer's Trophy for Merkmanship, TS LEVEN; A. J. William's prize for sailing, TS YORK.

The Petty Officers defeated the Officers in their annual race. Units YORK and TAMAR joined in the celebration of BATMAN WEEK in the Tamar Valley. Cadets from Tamar, with their band led by P/O M. Wheldon, headed a large parade of period vehicles, horses and drays, marching girls and bands through the City of Launceston. Ex-POPTI Darryl Cullen played the part of "Town Crier". It was a hot morning and after the parade was over the performers had developed a large thirst. At Georgetown, cadets from YORK with ship's company from HMAS BETANO led the parade through that town. YORK has also received the good news that the local council are preparing to build their new headquarters as a project for unemployment and will rent the premises to the unit when it is finished. L/S David Cox of YORK was awarded the PIER HOTEL TROPHY as the most improved cadet of the year.

On March 18, LEVEN celebrated the 25th year of recognition with the dinner-dance at the local rowing club. It was quite a hectic weekend with many visitors and guests who were associated with LEVEN in past years and serving NRC personnel from all Tasmanian units. Among guests were the Federal President of The Navy League, Commander F. G. Evans, and the State President, Senator Devitt.

RCSCC RAINBOW Marks Tenth Anniversary

It's their 60th anniversary this year and the Royal Canadian Sea Cadets' Rainbow Corps in Victoria, BC, is planning a homecoming reunion June 3-4.

The Victoria Branch of the Navy League of Canada is sponsoring the event in conjunction with the corps' annual inspection, and preliminary arrangements include a reception and dance on the evening of June 3 and an open house the next afternoon.

Former cadets from RAINBOW, Wrenettes from the PATRICIA DUFOR Corps, officers and instructors from these corps and former Navy League members from Victoria are invited.



Cadets from T. S. MERSEY prepare to hoist a welcome signal at the annual break-up. From left to right: A/Bs Fisher and Lucas, PO Kunta and L/S Prior.

Multi-nation exercise for RAN Reservists

Almost 150 Royal Australian Naval Reserve personnel were mobilised during April to take part in a multi-nation exercise designed to test plans and procedures for the control and protection of merchant shipping in the Pacific and Indian Oceans in the event of hostilities.

This latest routine allied naval exercise, nicknamed Roll Call, began on Monday, April 3, and continued until Friday, April 14. Participating countries besides Australia were Canada, New Zealand, the United Kingdom and the United States.

Exercise Director for Roll Call was the RAN Chief of Naval Staff, Vice Admiral A. M. Synnot.

In Australia, where more than 50 WRAN Reservists were called up in addition to male reservists, headquarters were activated in Canberra and at major ports to operate around the clock. Reservists were supported by staffs of RAN and RAAF officers.

Join the

NAVAL RESERVE CADETS

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

The Naval Reserve Cadets are administered by the Australian Naval Board.

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

Uniforms are supplied free of charge.

Cadets are required to produce a certificate from their doctor to confirm they are capable of carrying out

the normal duties and activities of the Cadet Corps. If injured while on duty, Cadets are considered for payment of compensation.

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

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

general sporting activities and other varied subjects.

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

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

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

SENIOR OFFICERS, NAVAL RESERVE CADETS:
NEW SOUTH WALES: Staff Office Cadets, HMAS Watson, Watsons Bay, NSW, 2030.

QUEENSLAND: Staff Office Cadets, HMAS Morton, Box 1416T, GPO Brisbane, 4001.

WESTERN AUSTRALIA: Staff Office Cadets, HMAS Leeuwin, PO Box 58, Fremantle, 6160.

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

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

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

AUSTRALIAN CAPITAL TERRITORY: Staff Office Cadets, HMAS Watson, Watsons Bay, NSW, 2030.

TO: The Senior Officer,
Naval Reserve Cadets,
I am interested in joining the Naval Reserve Cadets and would be pleased to receive further information.

NAME

STREET SUBURB

STATE OR TERRITORY POSTCODE

PHONE No. AGE AND DATE OF BIRTH

(Please Print Clearly)

Please address your envelope to the Senior Officer, Naval Reserve Cadets, in your State or Territory — see list of addresses above.

JONES

FOR
FOOTWEAR

55 Gill Street
Charters Towers, Qld
Telephone: 403

IN MACKAY — 24 HOUR TOWING 7 DAYS A WEEK
RADIO CONTROLLED VEHICLES

Mackay Towing Service

SPECIALISTS IN HEAVY SALVAGE

Smash — Breakdown recoveries — Storage — Boats — Caravans — Cars — Trucks
— Tractors, etc — For Fast, Efficient Service

Phone: MACKAY 57 7477
57 4275 (Night)

For personal service ask for SLIM JONES

O'LOUGHLIN ST, NORTH MACKAY, QLD

THE NAVY LEAGUE: A CONSPECTUS

TEXT OF MY ADDRESS TO THE NAVAL HISTORICAL SOCIETY VICTORIAN CHAPTER
by COMMANDER F. G. EVANS, Federal President of The Navy League of Australia

When the Secretary, Wendy Coxhead, asked me some time ago to address the Society on the subject of The Navy League, I thought this might sound a rather dreary title and suggested it might be more interesting if I spoke about a visit I made to North America at the end of last year.

However the list of speakers arrived in due course and I saw that my subject was "The Navy League — A Conspectus".

My first action was to look up the dictionary to see what "Conspectus" meant. You are no doubt more learned than I am and will know that it means — "A general sketch or survey — a synopsis".

Having established what I was expected to speak about, I noted that the subject was not "The Navy League of Australia" but just "The Navy League". I realised then that my subject was very broad indeed because there are many navy leagues in the world, and so I could bring in the United States and Canadian navy leagues, and therefore at least mention my travels.

It is in fact quite proper to talk about navy leagues outside Australia, as we in the League in Australia are part of a quite large international family. Navy leagues exist in most European countries, in North and South America, in South Africa and in New Zealand.

The Australian Navy League, and indeed most British Commonwealth leagues, had its origin in the United Kingdom.

Referring once again to my dictionary — to me this is an absolutely essential publication — it will be seen (in the Concise Oxford edition at least) that under the word "Navy" there is a sub-heading "Navy-League" and the following description:

— A body formed in 1895 with the object of arousing interest in the British Navy —

Deleting the word "British" this is still the basic aim of all navy leagues, although they pursue their aims in different ways.

The main channels of activity are:

The training of youngsters in sea lore (L-O-R-E — the aim is not to produce sea-lawyers or that well known character, the lower deck lawyer). This training is carried out through the well-known Sea Cadet movement.

The other major activity could perhaps be described as:

"Taking an active interest in maritime affairs, particularly in Naval defence"; in a sense this is an educational activity aimed at the com-

munity as a whole. (When I use the word "maritime", I mean it to include not only the Navy and Naval Air, but the merchant shipping industry and everything to do with the sea.)

The early history of The Navy League in Australia is very sketchy, as far as I can determine branches of The United Kingdom Navy League were formed in Melbourne in 1915 and Sydney at about the same time. Rather later than this a sub-branch was formed in Northern Tasmania.

From the start, the activities of the league appear to have been concentrated on Sea Cadets — in those days known as "Navy League Cadets". Eventually there were at least 12 companies (as they were called) of these cadets in the 12/13-18 age group — about 300 or so



Commander F. G. Evans, MBE, VRD, RANR, Federal President of the Navy League of Australia.

lads in all. There was also a similar group of boys who trained on Snapper Island in Sydney Harbour, but this group, although it eventually became affiliated with the Navy League, was never a part of the League. The guiding star of Snapper Island was the redoubtable Len Forsythe, who you will no doubt have heard of, and whose friendship I have enjoyed for many years — even though I often disagreed with his fierce desire for autonomy for his cadet unit.

These branches of The United Kingdom League continued quietly enough (as far as I can judge) until 1946, when approaches were made to the Australian Naval Board for formal recognition of the cadets by the RAN and some form of assistance.

My own connection with The Navy League and the Sea Cadet movement began at about this time as, pending the formation of the Naval Reserve after World War II, as a recently demobilised lieutenant I was asked by the late Commander Ron Nettlefold, who at the time had the imposing title of "State Commandant of Navy League Cadets", to help with the instruction of the youngsters. Unfortunately Commander Nettlefold became ill soon after this and I found myself acting in his place. There can be few people who started and finished at the top of an organisation!

Be that as it may, the Naval Board quite rightly said that it would not deal with a collection of state branches belonging to a United Kingdom organisation, and so a rather loose federal council of the branches was formed: very soon afterwards The Navy League of Australia was formed, quite separate from the United Kingdom body, but affiliated to it. "Recognition" of the Navy League Cadets was granted by ACNB in 1949.

The Australian Navy League's preoccupation with Cadet training continued. The "Navy League Cadets" were renamed and they became members of the Australian Sea Cadet Corps: in 1952 The Naval Defence Act was amended to allow the Navy to provide assistance for the ASCC.

While the Navy League continued to "own" the Cadet Corps, provided the buildings and administered the corps, the Navy assumed responsibility for the supply of uniforms and equipment, and for training.

Divisions of the Navy League were formed in all states and in the ACT, and an Australian Sea Cadet Council, headed by the Director of Naval

Reserves and consisting of members of both the Navy and Navy League, was formed to advise the Naval Board, and the Federal Council of The Navy League, on Sea Cadet matters.

The fact that the Sea Cadet Council was an advisory body only, and had no executive authority — Navy and Navy League were each responsible for their own spheres of interest — was a weakness, as in effect the Sea Cadet Corps had two masters (which is never very satisfactory) and decision making was a dreadfully protracted business. Looking at the Defence Department today, I don't think things have changed very much!

However the Australian Sea Cadet Corps (ASCC) grew rapidly — from nine units and about 430 members in 1948-49, 18 units and 883 cadets in 1953, to 38 units and 2,500 cadets in 1963. At this stage a halt was called by the Commonwealth, which had not bargained for such an expansion, and it is fair to say also that the cadets had outstripped the Navy League's ability to provide the buildings and handle the administration.

I propose to say very little more about the cadet side of the League. In 1966 the Director of Naval Reserves and I put in separate reports on the future of the ASCC, and following very long drawn-out negotiations, the Navy League relinquished control of the ASCC, which became the Naval Reserve Cadets, on January 1, 1973.

In retrospect, the change of name was a mistake; the cadets are not members of the Naval Reserve, nor in any sense are they members of the Armed Forces, and we are the only country so far as I know which has abandoned the traditional title of "Sea Cadet" used to identify youngsters in this particular sea-training movement.

Although I have spoken of the Navy League's preoccupation with cadet training, this is not to say that its maritime objectives were completely ignored: I think the League was able to help Sir John Collins (when he was CNS) with the Fleet Air Arm in the late 40s. However it was not until the mid-60s, when the RAN was receiving very bad publicity following a series of accidents, including the loss of VOYAGER, that a number of us felt that the Navy League would have to give much more attention to its naval interests.

I think it could be said that the League's priorities started to change in 1968, when the then Chief of Naval

Staff, Sir Victor Smith, initiated moves to rally support for the Navy among the many extra-Naval groups, including the Navy League. This was very much in line with our own thinking.

One of the problems, though, was that we did not know what was happening in the Navy, or what the Navy wanted or expected of us. To cut a long story short, we agreed to help provided we were "put in the picture" — at the same time we reserved the right to be critical, and made it clear that we had no intention of becoming an unpaid public relations organisation.

In the event, starting in 1968-69, The Australian Navy League began to take a very close interest in maritime defence, and in the wellbeing of the RAN and, if I may say so, has become quite knowledgeable on the subject. This has only been made possible by the excellent "working" association which developed between members of the federal council and successive chiefs of Naval Staff, namely Admirals Smith, Peek, Stevenson, and, I am happy to say, it continues with the present CNS, Vice Admiral Synnot.

And so, as I speak to you in 1978, in a federal sense at least, the Navy League in Australia is quite deeply involved in defence issues, and evidence of this can be seen in a great many newspaper cuttings and magazine articles, and in quite a few metres of television film. In a way, we are back at the original starting point of the Navy League in the United Kingdom — "a body formed with the object of arousing interest in the Navy".

Time is running out, and I doubt I will be able to say much about my North American travels at all!

But I will take a quick look at the Navy Leagues of the United States and Canada, as they provide an interesting comparison with our own.

I visited these two countries at the invitation of their navy leagues in October and November last year, and in the space of six weeks — five of them on the mainland — visited some 15 cities and naval centres in the two countries.

The Canadian Navy League also had its origin in the United Kingdom, and a Canadian branch was formed right at the start — in 1895. The Navy League of Canada, in its present national form, came into being in 1918. It is essentially a sea cadet organisation and controls some 12,000 cadets in partnership with the Department of Naval Defence (this is more than four times the size of the

present NRC). Altogether the Canadian Navy League and branches contribute something like a million dollars annually to the Royal Canadian Sea Cadet Corps, as it is still known, despite unification of the Canadian armed forces — but for how much longer one does not know.

So far as maritime defence is concerned, our Canadian colleagues have trouble in finding a navy to support in the unified forces, and they have a rather frustrating time in this regard. It is, I think, worth recording that the Canadian Navy League provided us in Australia with a great deal of information which was very useful when we were criticising some aspects of defence integration in Australia some years ago. At least we were able to avoid some of the pitfalls.

Turning to the United States Navy League, we find an organisation which, although it was founded (in 1902) for the same reason as the United Kingdom League, has developed along different lines to those followed by the British Commonwealth leagues (except, perhaps, by The Australian Navy League in recent years). The Navy League of the United States has about

38,000 members in some 300 councils, and it is very much a maritime affairs orientated body. It does have a sea cadet corps of 6,000 members, which, by Australian and Canadian standards, receives minimal US Navy support. There are legislative restrictions on the USN which prevent it from providing direct financial aid, but the Navy does help where it can, and many units operate in naval establishments.

The United States Navy League's considerable contribution to American thinking is made in many forms, but notably through the magazine "Seapower" which is almost required reading by members of Congress, and by a number of programmes both educational and service in nature. The former includes a speakers' bureau (to provide speakers to local community groups); sea power seminars (conducted in all major cities); a "Shipmate" programme, which involves educational tours of maritime installations and ships for young people; Navy Day celebrations, and so on.

The service activities include:

- assistance with recruiting
- AND
- Highline — an operation to assist

discharged members of the USN, Marine Corps and Coastguard in the transition from service to civil life.

Our American colleagues throw themselves into these activities with tremendous enthusiasm, but then they do this in almost every sphere of activity.

I must say it, but Americans in the main do not bother to hide their love of country: they are proud of America and not ashamed to show it. Perhaps Australians feel the same way about Australia, but except on rare occasions one would never know — it certainly makes life rather frustrating for the office-bearers of organisations such as The Navy League of Australia, and perhaps the Naval Historical Society.

Thank you very much for inviting me to address you tonight, and the opportunity to record a little piece of Navy League history. The person with a knowledge of past events — of history — has many advantages over his fellows. Provided he does not become immersed and lost in the past, but can apply what he has learned from it to the present, he has the opportunity to contribute the kind of leadership our country needs.

6 of Perth's most exciting homes are on display in Rockingham

Greendale

\$23,633 including carport

WE BUILD IN THE METRO AREA, MANDURAH AND PINJARRA!

Summit Homes Pty Ltd
The Quality Builder

House & Land Packages From \$28,484

DISPLAY CENTRE OPEN:
10 am - 5 pm Weekend & Public Holidays.
2 pm - 5 pm, 6:30 pm - 9 pm Wed.
2 pm - 5 pm Weekdays.

Ph. 095/273677
A/H 3647651

An air-operated grapnel-throwing gun simplifies the mooring of large vessels in open waters

The "Ti-Fast" system can grapple a 30-mm messenger line at a range of 100 metres . . . completely safe in hazardous environments

A pneumatic grapnel-throwing gun with a range of 100 metres (Fig 1), which greatly simplifies the mooring of shuttle tankers to oil terminals, or to production and storage vessels at buoys in the open sea, has been developed by **Flight Refuelling Ltd**, of Wimborne, Dorset. The gun is mounted in gimbals on the tanker's bow, giving it an arc of fire of 300 degrees. It fires a projectile consisting of a canister loaded with 100 metres of 5-mm polyester line, which is paid out in flight, allowing the canister to splash down on the other side of a messenger line floated out from the terminal. Spring-loaded hooks on the canister (Fig 2) form a grapnel designed to engage lines up to 30 mm in diameter.



FIG 1



FIG 2

Conventional methods of making first contact between tanker and terminal, by taking a line from a boat or hanging a grapnel from the tanker's bow to pick up a floating messenger, are both very difficult to carry out in strong winds with high seas or surface currents. Under such conditions, the exact position of the messenger is hard

to determine, and a large vessel becomes almost uncontrollable at slow speeds.

Three-minute operation

Using the "Ti-Fast" system, the tanker can approach at a reasonable speed to anywhere within 70 metres on either side of the messenger and be sure of picking it up, taking two-three minutes to complete the operation. Trials on board the 85,000 ton dwt **ESSO WARWICKSHIRE**, serving Brent Spar Terminal in the North Sea (Fig 3), have shown that the system is fully effective, by day or by night, in winds up to Force 8 and sea-state 6 conditions. Even in calm weather mooring is speeded up — especially at slack water, when the messenger can lie in tortuous curves on the water.

When used to make first contact between a moored storage vessel and a shuttle tanker, the "Ti-Fast" gun is mounted near the stern of the moored vessel. As the shuttle tanker approaches, the projectile is fired across her fore-deck and falls into the sea beyond. The 5-mm line is used to haul over a 25-mm messenger, followed by warps which are secured to the bow and stern of the tanker. The moored vessel can then winch her alongside.



FIG 3

The "Ti-Fast" gun has a guaranteed range of 100 metres in still air, when fired from a height of 20 metres above the water line with an air supply pressure of 85 psi (6 kg/cm²). The air is first admitted to a storage chamber, whence it is released by press-button

with explosive violence. Sights are so arranged that when the gun is aimed at the floating messenger, the projectile will fall about 15 metres beyond it. All parts of the projectile are reusable; reloading with 5-mm line takes approximately 20 minutes.

Clyde Engineering (Q'land) Pty Ltd

Specialists in:

* GENERAL ENGINEERING

- * Roller Bearing Axle Boxes and Cane Bin Couplers
- * Complete Range of Canefield Locomotive Spares

Links Avenue, Eagle Farm, Brisbane, Qld

Phone: (07) 268 0151

With compliments from . . .

Jack Dyson Pty Ltd

3 McDONALD STREET
OSBORNE PARK, WA
Phone: 444 7999

Suppliers of Quality Ingredients to the Baking and Pastry Cooking Industry

Contractors to the RAN

JACKSONS CORIO MEAT PACKING

A Division of Canada Packers
• Exporters • Wholesalers
• Broken Meats • Cry-O-Vac

MIDLAND ABATTOIRS
Military Rd, Midland, WA

Postal Address: PO Box 35
Midland, 6056
Telephone: 274 3577

Australia's first naval battle honour

THE SYDNEY- EMDEN BATTLE

The ROYAL AUSTRALIAN NAVY came of age during November 1914 when the light cruiser HMAS SYDNEY pulverised a fighting German ship in 10 minutes. The SMS EMDEN, a light cruiser, gave away her short career as a raider when off Port Refuge as she transmitted a message to her oiler, BURESK.

SMS EMDEN, a cruiser of 3,650 tons, was laid down in June 1906 at the Danzig Dockyard and completed in 1909 — she was commissioned the following year. EMDEN was some 387 feet length by 43 feet in width with 10 four-inch guns, carrying a crew of 360 men in wartime. SMS EMDEN was commanded by Captain von Muller when news of the declaration of war was received. The cruiser had served at Tsingtao (China) — war had been expected with Japan as she headed for the Far Eastern Squadron in the Marianas commanded by Admiral von Spee. The cruiser reached Pagan Harbour on August 12, tying up alongside Von Spee's flagship SCHARNOST.

On August 13 EMDEN recoiled and at a meeting Von Muller put forward a suggestion that one ship stay behind and divert attention away from

the fleeing German fleet. The following day she was anchored and steamed out preparing for action and a fourth dummy funnel was built to change her appearance into that of a British cruiser. On September 7 a victim was the neutral Greek vessel PONTOPOROS, loaded with British coal; the following day SSINDUS was taken; prisoners were placed on board the German ship MARKOMANNIA. On September 11 a further two merchantmen fell victim, they were KOVAT and KABINGAH; KOVAT was sunk just before a further two fell, KILLAN and DIPLOMAT.

SS KABINGAH, with an overabundance of POWs, was set free to sail to freedom after the collier TRABOCK was struck. EMDEN and her two charges took off and they captured CLAN MATHERSON and

by HAROLD CLIFF

once more MARKOMANNIA was forced to carry prisoners. A total of seven victims in seven days — the Germans prowled on. Madras was the main port of the south eastern Indian coast and Von Muller knew if he hit the port he would disrupt the shipping, that passed through the Bay of Bengal. Thus, EMDEN steamed on and with great audacity one night hurled 125 shells into the port. Two warships took chase, one Japanese and the other the British cruiser HMS HAMPSHIRE.

On September 25, the vessel KING LUD fell, followed that night by the capture of the steamer TYMERIC, and the Germans learnt of the chaos that had been left behind. September 27 saw the collier BURESK quickly followed by RIBERA and FOYLE. The crewmen were then put on board GRYFEVALE and set free. EMDEN and her mini-fleet turned south to the Maldiv Islands to recalc; BURESK refuelled the cruiser and MARKOMANNIA took mail for home.

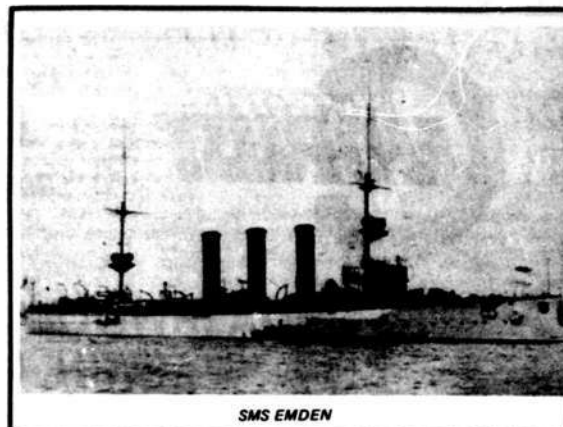
The first days of October were spent cleaning up, on October 9 EMDEN and BURESK sailed into Diego Garcia harbour to refuel; the cruiser was combat ready on the 10th. Five days later CLAN GRANT and a barge were taken — the BEN MOHR was also captured that night. The 19th saw quite a procession of victims — TROILUS, EXFORD, CHILBURN and ST EGBERT. HMS HAMPSHIRE was sighted in the distance that night.

Von Muller decided on another raid, this time it was to be Penang Harbour; the cruiser moved in and attacked on October 28, torpedoing the Russian cruiser JEMTCHUNG, and outside the port she took CLAN TURRENT. She also took on the French torpedo boat destroyer MOSQUETON, sinking it. Two days later she took the NEW BURN and turned it into a hospital ship. The dummy funnel was put in place on the 9th of that month. The disguised cruiser boldly steamed into Port Refuge where the British expected

her. A party of 48 men were landed, the radio equipment was busted ashore but a wireless operator was quick enough to get out a signal before the Germans could act.

The message was received — HMAS SYDNEY was coming — fast! The cruiser of the RAN was capable of 25 knots at speed. Four hundred and fifty-seven feet long and 50 feet wide, carrying eight six-inch guns, the sleek cruiser was built in Scotland, being laid down in 1911 and launched in 1912. The 48 men were left behind on Direction Island as the EMDEN pulled out and SYDNEY moved in on her target at full speed. Smoke was sighted at 9.15 am and at 9.40 am SYDNEY opened up; EMDEN retaliated and some minor damage was suffered, the rangefinder was destroyed and SYDNEY, under Captain John Glossop, struck back, hitting EMDEN'S bridge, forefunnel and wireless room. The EMDEN looked like shredded cheese, with great holes in her superstructure, her steering was gone and the rangefinders broken — the 100-pound shells from SYDNEY had done their job well.

At 10.45 EMDEN'S guns ceased to fire and Von Muller realised the end



SMS EMDEN

was near — as he was heading for the North Keeling Island, the ship ran aground at 11.15. The seacocks were opened up, SYDNEY once more opened up and a gallant enemy ship was pulverised. BURESK was eventually chased and overtaken, her crew were quick enough to scuttle her and they were picked up by other naval vessels. In just six months some 70,000 tons of shipping was taken before one fighting Australian warship came of age.

Eric Pratt Pty Ltd, Wholesale Distributors of Ampol Products, supply the following resellers in the Shoalhaven district

Berry: (Burt's Service Stn), Queen Street	64 1041
Bomaderry: (Highway Service Stn), Princes Highway	2 3933
Cudmirrah: Post Office Store	41 2101
Huskisson: (Currumbene Service Stn), Tomerong Road	41 5079
Milton: (Ken Mansfield Pty Ltd), Princes Highway	55 1066
Nowra: (Cokes Tyre Service), Kinghorn Street	2 3198
Nowra: (Fleet Service Station), Kinghorn Street	2 2643
Nowra South: (South Nowra Bakery), Princes Highway	2 3332
St Georges Basin (Bob Gaffrey's Serv Stn) St Georges Basin Rd	43 4358
Sussex Inlet: (Totempole Service Stn), Jacobs Drive	41 2287
Tomerong: (Parnell's Service Stn), Princes Highway	43 4336
Ulladulla: (Blue Fin Service Stn), Princes Highway	55 1437

CAMBEWARRA ROAD, BOMADERY, NSW
Telephone: (044) 2 3016



HMAS SYDNEY at Dunedin, New Zealand.



*For Professional
Car & Truck
Rust Prevention*

**3 DASHWOOD PLACE
DARWIN, NT**

(Behind Dunlop Tyres)

Phone: Darwin 81 3241

WAYNE BRITAIN MOTORS

PRESTIGE USED CARS

50 SMITH ST, DARWIN, NT

Northern Territory Agents for

"MASERATI" — Have been successfully dealing with Navy for 2½ years — From FJs to Maserati's we have a special deal for you — Cars available on 10% deposit

Telephone: (089) 81 3406

MINEHUNTING CATAMARAN

An artist's impression of the MHCAT, selected to replace the ageing Ton-class minehunters MHA Ships SNIPE and CURLEW.

At 30 metres length and 160 tonnes displacement, these vessels are not intended to have an all weather, long distance or deep ocean capability. They are designed to be inexpensive, but highly capable minehunters for the inshore waters environment in limiting weather conditions.

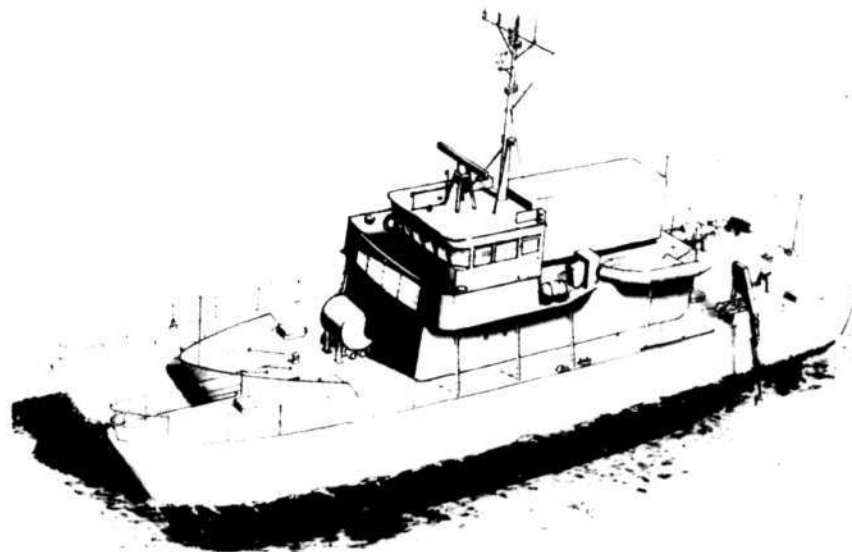
The MHCAT will have the minehunting system containerised and this sea, road, air-transportable control centre will ride piggy-back on the catamaran hull.

The mine disposal system also will be modularised for

easy removal. The advantages seen in such a concept are:

- centralised repair and maintenance of the removable, containerised minehunting system
- maximum flexibility of the basic vessel to provide multi-role capability
- minimum crew size, and
- a much cheaper craft than conventional minehunting vessels.

The prototype MHCATs will be available for evaluation in the early 1980s and should they prove successful, further production vessels are planned to enter service in the mid to late 1980s.



Best Wishes from ...

**MACSON MACHINE TOOLS
PTY LTD**

**PO BOX 126, ALEXANDRIA
NSW 2015**

Approved Contractors to RAN
Recent Contract: Supply of 350 Churchill
Numerically Controlled Lathe

**FANMASTER
CO PTY LTD**

Suppliers of
**FAN PEDESTALS TO THE
ROYAL AUSTRALIAN NAVY**

**408 BOTANY ROAD
ALEXANDRIA, NSW
Telephone: 699 4172**

THOMAS BORTHWICK & SONS (AUSTRALASIA) LTD

MEAT PACKERS — MEAT WORK
PROPRIETORS — EXPORTERS
WHOLESALE OF MEATS — HIDES
SKINS — TALLOW AND CASINGS

60 MARKET STREET
MELBOURNE, VIC

Telephone: 62 2921



To all visiting
Navy personnel
**West End
Bootmakers**

for Souvenirs

Come and see Perth's largest range of sheepskin car seat covers, ugg boots, souvenirs, gemstone and opal jewellery, wild flowers, bark paintings and Aboriginal artefacts, plus hundreds of other items

We also have the best selection of suede and sheepskin jackets, all popular colours and latest styles, kangaroo coats and slippers, kangaroo and sheepskin mats and ranch rugs

**Souvenir Shops at
897 HAY STREET, PERTH**

Phone: 321 4966

THORNIE SQUARE, THORNIE

Phone: 459 2271

FLORENT FORUM

Phone: 387 5650

DIANELLA PLAZA

Phone: 276 7550

CAROUSEL SHOPPING CENTRE

ALBANY H'WAY, CANNINGTON

CLOISTERS SQUARE

ST GEORGES TERRACE, PERTH

WESLEY CENTRE, OFF HAY ST, PERTH

NOWRA MOTEL

FOR EXCELLENT ACCOMMODATION

- 34 Units • Colour TV • Tea-making Facilities • Excellent Cuisine
- Friendly Atmosphere in our Fully Renovated Licensed Restaurant

UNITS AIR CONDITIONED

For Bookings Telephone your Hosts
Peter and Desi Shroder at Nowra

(044) 2 5180 — 2 2883
Nowra, NSW

EAST INGHAM HOTEL

(Prop: JIM CRAWFORD)

For Accommodation at its best — Self-contained Air Conditioned Units — Tropical Garden Lounge — Fine Food — Friendly Service



49 Herbert Street

Ingham, Qld

Phone: Ingham 76 2377

The White Paper on Restructuring the Italian Armed Forces

A far-reaching process of renewal has been taking place throughout the Italian Armed Forces for about three years.

It started with a study of the influence exerted on the government's security policy by a number of external and internal factors. These include: trends in defence expenditure — the imbalance within the defence budget between excessive expenditure on staff and inadequate expenditure on the army itself and the updating of equipment; the moral, operational and technical need to give an impetus not only to the concepts and principles underlying the armed services but also, whenever possible, the integration within them of commands and units; last, the need for "military society" to adapt to the more valid, and thus acceptable reasons behind the rapid changes in the state of society, not in a passive manner but by setting an example, and, where possible, constituting a driving force.

The analyses carried out revealed the need for "qualitative advance" which must also constitute a stabilising element. This constant, though now accentuated, search for maximum output (which may be compared with a mechanical output, ie with the relationship between efficiency, or the energy released by the machine, and cost, or the energy put into it) is the Armed Forces' duty both to Italy and to Nato. Internally, it is a duty to the taxpayer and one which is particularly apparent during the present time of economic crisis; in the Nato context, it is the Armed Forces' duty to make the greatest possible contribution toward common defence measures. This brings us to the restructuring of the Italian Armed Forces in order to achieve the desired qualitative advance, either by improving the operational potential of each of the services or by setting the whole problem in a single framework combining all the Armed Forces, or even by means of a radical renewal of equipment and by paying realistic

attention to the most deep-felt motivations and aspirations of the men involved.

Using practical criteria, and taking into account forecasts of future financial resources, the studies aimed at defining a practicable military instrument; its ability to carry out the tasks assigned were then checked; last, parliament and public opinion were informed of the risks inherent in the limitations of the Armed Forces as revealed by the studies.

The need for more widespread and regular information as part of the process of renewal led to the publication of the Italian White Paper on Defence in 1977. The first in our military history, it was recently issued in an English translation. Its aim, as stated in the Minister of Defence's introduction, is to show the Italian Armed Forces as they really are, in other words, without pretence or excuses, describing their material features, their rules and structures, their deep-rooted problems and future prospects; this was done in order to invite comments or suggestions and to continue a dialogue with the general public.

ITALIAN SECURITY POLICY

If the analyses and conclusions are put in the context of the general security policy and the military strategy which derives from it, the basic concepts of Italian defence policy are immediately apparent: this definition is of fundamental importance, since it indicates the guidelines followed by the Italian government in its military activities. Having outlined the aim of the Italian Armed Forces, the analysis of the international situation takes as a starting point the need to stabilise detente, which is not only an essential prerequisite in the search for peace but a deep-felt desire on the part of the Italian public and of the world as a whole. Italy, which is constantly



Admiral
FRANCO MICALI BARATELLI
was Chairman of the recent
Joint Working Group
to restructure
the Italian Armed Forces

seeking stabilising instruments in order to build a lasting peace, is taking an active part in all spheres. Against this background, the aims of Italian security policy must take into account a two-fold need — on the one hand, that of improving East-West relations in balanced and mutually advantageous terms; on the other, that of dealing with any attempt to distort the state of security.

With regard to numerous underlying causes of tension and conflict which although regarded as "marginal" or "local", are none the less painful, the White Paper is extremely explicit in stating that Italian security objectives can only be achieved in a framework of Western and Atlantic solidarity. Italy's choice of Europe fits very clearly into this context, since its main political objective is the construction of an increasingly integrated Europe and thus one which is also integrated as regards security.

Having stated the basic characteristics of the Atlantic Alliance — founded on the equality of the member countries, the two complementary and interacting aspects of defence and detente, the two most characteristic institutional aspects is the continuous process of political consultation and that of military integration — the White Paper on Defence could not but stress to the Italian public the results obtained by the Alliance in its 28 years of existence. They are the maintenance of peace in Europe; the safeguarding of

political independence and the opening of the way to integration between the member countries (which, despite the difficulties encountered, would not even have been possible unless the Alliance had ensured their security); the promotion of better and more rational East-West relations, and the stabilising effect of the Alliance within the Treaty area.

The results so far achieved should not allow one to forget the seriousness of unknown factors in the world scene: this calls not only for the ability to deal with such factors, but for the political will for defence. In this connection, the White Paper sums up the general military situation with Tacitus-like precision: the USSR is now on a par with the USA in the sphere of strategic nuclear weapons; it would appear to be able to make good the differences which still exist in the sphere of advanced tactical nuclear arms; it has, together with the other countries in the Eastern bloc, a distinct advantage — which has been explicitly expressed in figures — over the Nato countries in the sphere of conventional armaments, although certain reservations should be expressed as regards the possibility of making a rational comparison, since there are factors involved which are difficult to quantify.

In this general context, Italy's political and strategic situation arises from the fact that, for many reasons, it has equal ties with continental Europe, on the one hand, and the Mediterranean countries, on the other. Its security policy must, therefore, take into account the two complementary and interlinked results of this. In the Mediterranean, there are objective reasons for concern about the state of uncertainty and instability, a certain reduction in Nato's military potential in the south, the massive presence of Soviet naval forces, which is more important from a political than from a military standpoint. The Atlantic and European choices are complementary both on the political and economic level, and as regards security. Italian political and strategic policy is, in fact, based on the conviction that southern and Mediterranean Europe constitutes a single unit and that, therefore, the active participation of the European Community in the Mediterranean is an essential prerequisite for a more stable situation in this area, in which a joint Atlantic and European strategy can only be one of peace.

Let us now move on from an analysis of the international situation to a

summary of the guidelines of Italian security policy: development and stabilisation of detente; active participation in the Atlantic Alliance by means of a military contribution in keeping with Italy's role in southern Europe and the Mediterranean area and compatible with national resources; an intensification of military co-operation with the European allies and between them and the North American allies in order to bring about a balanced development in cross-Atlantic relations; the assumption of a valid position in the EEC in order to promote a stable situation in the Mediterranean; participation in the objectives and activities of the UN in dealing with conflicts, checking armaments, striving toward peace and disarmament; and, last, political support for military defence activities.

The line of military action, that is to say the operational concept which the government ascribes to the Armed Forces, is directly derived from the political tendencies outlined above. It requires the Italian Armed Forces to be in a position: to intervene effectively to defend Italy independently as a nation when, for reasons of time and place, direct and intermediate assistance from Nato is neither possible nor probable; to ensure that the tasks assigned to us by Nato are carried out by means of integrating our units into the alliance's defence as a whole; last, to deal with international tension and crises and carry out administrative tasks in times of peace. The best way to achieve the listed objectives in an effective manner is for Italy's Armed Forces to be of the necessary quality and quantity to carry out the tasks involved and basically have the necessary flexibility and mobility — in a word, they must be totally credible. This objective leads us to the major questions of equipment and personnel.

PROBLEMS OF PERSONNEL

Although military organisation takes the material form of men, equipment and training — which is the link between the men and the equipment and which conditions the efficiency of both — all three factors are conditioned by the financial resources available. The analysis of expenditure, which cannot but be technical, is backed up by figures, comparisons and diagrams. This shows, without any shadow of a doubt, that in the last decade the Italian socio-economic crisis has caused the defence budget to be reduced by

15.5 per cent to 9 per cent of the total budget and that, as a proportion of the gross national product, Italy is in 12th place amongst the 14 countries of Nato,¹ with 2.8 per cent. Expenditure on staff (including pay, the cost of recruiting, clothing, equipment, victualling conscripts) varies from one year to another between 60 and 62 per cent of the total defence budget.

The Armed Forces depend on men. The preface to the White Paper states: "the first and most important factor of defence and the attainment of security is the man — even if it must at once be added that the best men, if not equipped with the best weapons, can easily be at the mercy of cheap rhetoric, and in an emergency become victims of a sterile sacrifice".² A multifarious balance must be found between men and arms, between the complex requirements of the organisation as such and those of the individuals of whom it is made up; between the stable values of tradition and the changing demands of progress. The motivation and requirements of the personnel are, therefore, stressed, and form a complex problem, geared as they are toward the two complementary aims of obtaining a military instrument which is more efficient, and a military life which is more satisfying for the individual.

The laws governing fulltime personnel are, generally speaking, good and stable. However, the problems surrounding the basic functions and career prospects of staff, such as those involving pay, are undoubtedly conditioned by the well known atypical nature of the job compared with other public services — slower careers, drastic selectivity, lower age limits, a prolonged demand for special physical fitness requirements, and very frequent transfers. Thus, in order to satisfy demands for reasonable improvements in career prospects, plans have been drawn up to unify various officers' staffs and to improve the status of others, with a view to giving officers with similar qualifications and comparable job descriptions the same career prospects. A draft law has now also been prepared for non-commissioned officers; involving drastic changes and covering all branches of the Armed Forces, it is designed to create a more rapid and stabilised system of

1. This total of member countries excludes France which does not participate in the integrated defence system.
2. Official translation.

promotion without depriving the better servicemen of incentives.

Civilian staff, who are closely associated with military staff, carry out vital logistic and administrative tasks. There are 29,000 clerical staff and 37,000 manual workers, which already represents a considerable drop in numbers; but the staff in question are getting older and those who leave are not being replaced. As part of the restructuring, in addition to the need for more qualified technical staff, there is also a need to prevent any further reduction in this section of the Defence personnel.

UPDATING WEAPONS

Moving on from staff to equipment, there is a clear requirement for a 10-year technical plan, and detailed five-year plans, both of which should be constantly updated. Uncertainty each year regarding appropriations can only be avoided by insisting on a rational renewal of weapons, which must be achieved on a multi-annual basis. Special laws to promote and modernise the three Armed Forces thus came into being as a sort of "shock treatment", with the "naval law" leading the way. These are valid examples of planning designed to promote the various industrial activities of the sector, in addition to the principal objective of updating weapons, which form our second line of defence in the international context as a whole. This is another Italian contribution to the common defence policy, which, in view of its industrial repercussions, goes beyond the figures shown in the budget.

Directly linked to the previous topic is that of military research and development. In terms of figures, Italy was able to devote only 2.1 per cent of the Defence budget to this compared with about 10.5 per cent in the USA, 4.9 per cent in the Federal Republic of

Germany, 4 per cent in France and 2.5 per cent in Great Britain, but it should also be pointed out that the percentages quoted for these countries refer to defence budgets which are much larger than the Italian one. Supplies are, wherever possible, obtained from our own industries — which are geared toward quality — or through international collaboration, of which Italy is an active exponent, toward standardised production by multi-national companies — and we regard this as a valid and balanced example of European partnership to offer the United States.

PROSPECTS AND PROJECTS

What is the future outlook for Italy? The last part of the White Paper is devoted to this topic and deals mainly with various aspects of the problems of the soldier as a citizen and the relationship between the Armed Forces and the country as a whole. This involves: revising the Penal Code and the Italian legal system; studying the possibility of reducing Naval conscription to 12 months; the possibility of introducing a voluntary women's service; reforming the military health service as part of the state health service; revision of "military discipline"; planning and updating civil defence measures for sections of the population hit by disasters; last, but not most important of all, promoting responsible participation by military personnel in the life of the organisation for which they work (basic law on military discipline).

The principles of military discipline deserve a few words by way of conclusion. The demand for participation and a share in the task of running society are a characteristic feature of modern systems of democracy and one greatly felt by young people; under the Italian state system the constitution ensures this as far as possible. As part of the process of renewal and adaptation to the changing state of society des-

cribed above, the most essential requirement was to provide military personnel with a link between the pursuit of their civic duties as laid down by the constitution and the need for soldiers to accept certain limitations and the extra duties connected with running the Armed Forces, a factor which affects the entire population. The basic law on military discipline approved by the

Chamber of Deputies at the end of last July, and now awaiting discussion by the Senate, takes inspiration from this search for some way of combining military discipline with the constitutional system. The major feature of this law is the introduction of a system of "military representation", which is entirely new for Italy. Its aim is to bring to the political and military leaders the collective demands and proposals of military personnel in the administrative field (in the broad sense) through a system of representatives at various echelons, appointed by the military personnel themselves.

It should be borne in mind that when the system enters into force, with its inherent guarantees and checks, it will meet the individual demands for participation and shared responsibility in the administration of what, in human terms, we have called the "military body", by increasing its efficiency through a more readily accepted discipline.

Thus the Italian Armed Forces, by avoiding any lack of mobility, base their actions on "a spirit of innovation", i.e. a distinct readiness to take heed of the demands and contributions of the society in which they live; but they are nonetheless careful to maintain "a sense of reality", i.e. to act with a clear understanding of the objective limitations imposed by the need to maintain maximum efficiency; this efficiency is essential to the security of the people of Italy in the framework of faithful and active participation in the Alliance.

Adelaide Steamship Industries Pty Ltd Engineering Division

also

SLIPWAY PROPRIETORS

1180 OLD PORT ROAD ROYAL PARK, SA 5014

Phone: 47 5144

Ships of the Canadian Pacific Fleet visit Sydney

The Royal Australian Navy played host to three units of the Royal Canadian Navy from Thursday, March 9, to Tuesday, March 21, 1978.

The vessels included the fleet supply ship PROVIDER, and the two Improved Restigouche class destroyers KOOTENAY and RESTIGOUCHE. Before their arrival in Sydney the three warships participated in exercises with the aircraft carrier MELBOURNE and other units of the Australian Fleet, as well as the New Zealand frigate WAIKATO. The destroyer KOOTENAY was opened for inspection to members of the Navy League on Saturday, March 18. A complete tour of the warship was provided in small groups.

The KOOTENAY was laid down at the Burrard Dry Dock, North Vancouver, on August 21, 1952, and launched from there on June 15, 1954.

She began her career with the Atlantic Fleet and saw service with the First, Third and Fifth Destroyer Squadrons. KOOTENAY paid off during May 1970 to undergo conversion and modernisation. The process involved her being lengthened by seven feet, replacement of the original mast with a cage mast and installation of electronic warfare equipment. Her second twin three inch gun mount was also removed, as was one of the limbo mortars. In their place an eight-celled Asroc launcher was substituted. A reload capacity was provided, with 18 spare missiles being housed in the magazine.

The remodelled vessel recommissioned in January 1972 and joined the Atlantic force in September. In February 1973 she transferred to the Pacific and was based at Esquimalt. KOOTENAY is now 373 feet long and displaces 2,900 tons. Her armament includes a twin three inch 70 calibre

gun mounted before the bridge and aft the Asroc and limbo anti-submarine weapons. Sited amidships is a rocket flare launcher. KOOTENAY is manned by 12 officers and 210 men and her top speed is 28 knots. KOOTENAY and her three modernised sister ships carry variable depth sonar located in a special stern aperture.

After leaving Sydney KOOTENAY proceeded to Hobart, after which she returned to the Canadian western seaboard.

KOOTENAY was the second ship of her name to serve with the Canadian Navy. The first was originally built for the Royal Navy as HMS DECOY in 1933, and was presented to Canada in November 1942. The destroyer commissioned on April 12, 1943, and spent the war years on Atlantic convoy duties. She paid off on October 26, 1945, and was ordered for disposal in March 1945.

With the Compliments of

PHAEDRA

TRADING AS

ROCKINGHAM MASTER BUILDERS



DIXON ROAD, ROCKINGHAM, WA

Members of the Master Builders' Association
Contractors to the Royal Australian Navy



Omni Aviation Pty Ltd

Hangar 102, Essendon Airport, 3041

Phone: 379 7855 — AH: 435 6625

Telex: 31473



Department of Transport Approved Organisation No

Airborne Target Towing Specialists

Aerial Photography Survey and Surveillance

Charter and Aerial Work



WROUGHT IRON
With International Design

Structural Steel Fabrication

Contact BERNY

**35 PILKINGTON STREET
GARBUTT, QLD**

Phone: 79 9706 — 74 1442

After Hours: (077) 79 8582