THE NAVY

The magazine of

THE NAVY LEAGUE OF AUSTRALIA

- *VIEWPOINT*
- *THE LAST TON*
- *RAIDER SEEADLER*
- *MALAYSIAN FLEET REVIEW*
- *MILITARY SEALIFT COMMAND — 40 YEARS*
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THE NAVY

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FRONT COVER PHOTOGRAPHS

Top: The Soviet ADMIRAL TRIBUTS at the 1990 RMN Fleet Review *(Ross Gillett)*
Bottom right: Ex RAN tug SPRIGHTLY, 1978 *(Ross Gillett)*
Bottom left: USNS CORE of the Military Sealift Transportation Service.

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viewpoint

A major Navy League Initiative

For nearly ninety years the Navy League has been contributing to the Australian community's knowledge of the sea, in the main through its sea cadet organisation and since 1973 as a supporter of the Naval Reserve Cadets. Over the last twenty years the League's interests have widened and now embrace our country's maritime affairs in general.

Despite the efforts made by the Navy League and other organisations and individuals associated with the sea, the community in general has what can only be described as a shallow understanding of just how important the sea is to the nation.

To help increase this understanding, particularly among young people, the League has produced a video entitled "The Sea and Australia". The video consists of six self-contained episodes, each lasting for about 25 minutes, and covers the following topics:

Episode 1

Introduction: The voyage of the First Fleet, and a short maritime heritage tour of Sydney Cove and Port Jackson.

Discovery and Early Settlement by Europeans: The rapid growth in maritime technology and exploration in the 15th Century; the discovery of sea routes to the East; Portuguese expansion; the search for Terra Australis; early sightings; Cook's discoveries; the founding of our colony and early settlement.

Episode 2

The Nature of the Sea: The properties of sea water; tides; currents, weather; under water volcanoes; hurricanes and cyclones; tsunamis; oceanography and hydrography.

Episode 3

The Resources of the Sea: Fish and other marine sources of protein food; pearls; seaweed; plankton; Aquaculture; oil and gas; salt; minerals; winds and tides.

Episode 4

Commercial Shipping, Ports and Facilities: Our economic dependence on sea transport; our shipping industry; our major ports and their facilities.

Episode 5

Finding Our Way and Safety at Sea: Early navigation; the development of the modern science of navigation; charts; navigational aids; ships' safety equipment and safety at sea.

Episode 6

Protection and Conservation: Protecting our maritime heritage; our defence and the role of the Royal Australian Navy; conserving our maritime resources; control of pollution, quarantine, smuggling and illegal immigration.

It is proposed to make the video available to schools throughout Australia and to assist teachers a booklet will be supplied containing ten general recall questions and five further research questions on projects for each of the six episodes.

Contemplated several years ago, the task proved much more difficult, time consuming and expensive than at first anticipated; it is to the credit of the NSW Division of the Navy League, particularly the President (Otto Albert) and a small team who bore the brunt of the exercise, that they persevered and produced a video which in terms of choice of subject matter and technical quality, is first-class measured against any standard.

Geoffrey Evans
Federal President

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"THE NAVY"

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An Unexpected Decision

by GEOFFREY EVANS

The decision by the Chief of Naval Staff, Vice Admiral Michael Hudson, to increase the number of women serving at sea in RAN ships and provided privacy problems can be overcome, to exclude only submarines from the types of ship to which they can be posted, has several interesting implications which must have been considered by the Government before the decision was made.

At present about 40 women are serving at sea in what could be classified as non-combatant ships, a very small proportion of the 1800 or so serving in the RAN.

No one doubts the intellectual talents of women or their capacity to perform extraordinarily well under stress — two major wars, several "undeclared" wars and numerous civil disasters attest to this. Rightly or wrongly however it has been the policy of most democratic governments to refrain from giving women combat roles in their armed forces and Australian governments have not been an exception.

The Chief of Naval Staff has referred to the "peacetime" employment of women at sea; since World War 2 Australia has not been "at war", at least officially, with any nation although its armed forces have been engaged in combat operations on a number of occasions including the Korean War, Confrontation and Vietnam; they could easily have become involved in the Persian Gulf and during the first Fijian coup.

Given the Government's policy of excluding women from combat-related situations (it is also Opposition policy) it must be assumed that female crew members would have to be withdrawn from any ship detailed for duty in an area where it might come under attack. Even if trained male replacements were available, this at the very least would entail a delay in the ship's operational availability. If the ship happened to already be in a potentially hazardous area, as happened in Fiji, the problem would of course be compounded.

While there are advantages in giving women practical experience in warships there are other very debatable issues involved including the desirability of having mixed crews in the limited space available in most Australian naval vessels, conversion costs and so on; the "readiness" factor however would seem of particular importance.

It is understood some other navies are treading the same path or contemplating doing so, the main reason being manpower shortages; if this is so, either conditions of service in the armed forces will have to be greatly improved which would no doubt be expensive, or communities must be prepared to accept their womenfolk in combat roles.

STRADBROKE II

by CAPTAIN M.J. CAROLIN, PORT PHILLIP SEA PILOT

STRADBROKE II was somewhat of an unusual vessel, being one of the few craft to experience both Naval and Military service during the Second World War.

STRADBROKE II as a pilot cutter

The vessel was built in 1928 by Norman Wright at Bulimba on the Brisbane River as a luxurious motor yacht, with schooner rig. She was 104 gross registered tons; 90 tons net and measured 94 feet overall, 80.2 feet at the waterline with a beam of 18.8 feet and draught of 8.9 feet. STRADBROKE II was constructed of wood with the hull, metal sheaved.

STRADBROKE II was registered to Mr. G. Whatmore of Brisbane in 1929, but in 1937 was re-registered in Melbourne to Mr. Lou Abrahams, a well known local yachtsman. As part of a thorough overhaul during the same year, the vessel was fitted with a modern 131 hp Paxman engine for a speed of nine knots. Offered for sale as part of the Abraham estate in 1939 she was described as (sic) "one of the most lavish, finest, modern yachts available".

The Port Phillip Pilot Service bought her in 1940 to act as a relief pilot cutter at Port Phillip Heads. Due to a reduction in shipping and the cost of maintaining a pair of coal fired cutters in service the decision was made to lay up the AKUNA, ex HMAS UNA, and STRADBROKE II became the relief pilot vessel.

As the RAN maintained a naval boarding party onboard whichever pilot vessel was on station STRADBROKE II became a requisitioned examination vessel for the period from 24 April, 1941 to 12 April, 1943, in conjunction with the SS VICTORIA. For this role she is reported to have been armed with a single .303 inch Vickers machine gun. The naval party boarded all inbound vessels, (with the pilot), to clear the vessel for entry to the port. However, because of her size, STRADBROKE II was not the success as a cruising pilot cutter that the service had envisaged. She was too small for the conditions and the numbers of personnel involved.

When shipping picked up again in 1943, AKUNA was re-commissioned and STRADBROKE II transferred to the Australian Army as an Army Seabourne Ambulance, No. AH 163. She was officially purchased by the Commonwealth on 3 February, 1944. Unfortunately no records of her Army service survived the conflict, although she was unsuccessfully auctioned with a number of other Army craft at Williamstown in 1946.

Passed in on 8 May, 1946, STRADBROKE II was eventually sold on 21 May, 1947. Following an overhaul and refitting at Wright's shipyard, Brisbane in late 1947, she began her new role in New Guinea as a commercial vessel.

Owned and operated by Commander Dyson Hore-Lacy, STRADBROKE II serviced his Gaura plantation, on an island one half a mile off the coast at Talasga, in West New Britain. The vessel delivered supplies to the island, returning back to Rabaul, 180 miles away, with copra. STRADBROKE II was eventually wrecked on a reef off Cape Lambert whilst being delivered for sale with the plantation in 1956.

STRADBROKE II, as AH 169, berthed in Chowder Bay, Sydney Harbour, late in the war.

Moored at Williamstown (far right) for auction in 1946. The old colonial auxiliary MARS, (tall funnel), lies at the end of the pier.

Details of STRADBROKE II from the auction leaflet.

LOT 10.

TWO-MASTED MOTOR SCHOONER "STRADBROKE II". Length, 88ft Beam, 19ft. Depth, 9 ft. Fitted with Grey marine diesel, 240 h.p. engine. Grey marine reverse reduction clutch. Aux. generator driven from main engine, shunt wound 110 V 10 Amps. Generator unit four-cylinder driven engine; make and H.P. not known; 110 V. 10 Amps. Nine bunks in Forecastle, 3 bunks in forward cabin, and separate lavatory. Large main cabin, all cedar panelled. Large engine room. Engineers' cabin fitted with 3 bunks. After cabin fitted with 1 bunk, separate lavatory. Also fitted aft are 2 extra bunks. Upper deck, wheelhouse, binnacle, chart room, etc. Two lifeboats hoisted on davits.

CURLEW — *The Last Ton*

Six Tons on exercises in Jervis Bay.

The Navy's oldest commissioned ship, the mine countermeasures vessel HMAS Curlew, ended her 36-year career on 30 April, 38 years to the day after her keel was laid in Scotland.

HMAS Curlew was decommissioned in a ceremony at her base, HMAS Waterhen, at Waverton in Sydney. After sailing down Sydney Harbour, she was farewelled by the RAN Support Command Band and a full naval ceremony. She was the last of the six Ton class ships purchased from the Royal Navy in 1962.

HMAS CURLEW was laid down at Montrose Shipyards, Angus, on 30 April 1952 and was constructed as HMS CHEDISTON.

She was launched on 6 October 1953 and completed on 28 September 1954. She was immediately paid off into the Reserve.

Re-named HMS MONTROSE on 10 December 1954 she was attached as training ship to the Tay Division of the RNVR (DUNDEE).

On 16 October 1957 she was again paid off into the reserve and re-named HMS CHEDISTON.

Following the RAN's decision to purchase six minesweepers in 1961/62 she was taken out of reserve and refitted for the RAN. The refit was completed in August 1962 and the ship was re-named HMAS CURLEW. During the conversion for the RAN she was fitted for minehunting but not with the associated sonar.

In company with HMAS SUPPLY and the five other minesweepers she sailed for Australia on 1 October 1962 arriving on 6 December 1962.

In 1963 HMAS CURLEW was involved in an operation in Tonolei Harbour which had the Minesweeping Squadron sweeping the harbour of war time mines so that the harbour could be used for timber exporters.

On completion of a mid cycle docking in 1964 she carried out Mine Countermeasures Exercises before leaving for her first tour of duty with the strategic reserve during the Malaysian/Indonesian confrontation in May 1964.

HMAS CULREW arrived back in Australia in February 1965 and commenced a major refit. It was during this period in dock that most of the hull planking was replaced.

She sailed from Sydney on 23 September 1965 for her second tour of duty with the strategic reserve. CURLEW was engaged on patrols during the confrontation until August 1966 when hostilities between the two

HMAS CURLEW in 1962, with other Ton class units.

countries ceased. She arrived in Sydney in October 1966 and decommissioned on 19 December 1966 for final conversion to a Minehunter, the task she was originally purchased for.

During the conversion the equipment fitted was the 193 sonar and associated generators, a plotting table, activated rudders and a portable mine disposal weapon bomb room. The equipment removed included the magnetic and acoustic sweeping gear.

On 13 December 1968 HMAS CURLEW was commissioned at HMAS WATERHEN, Waverton, as a Minehunter.

Over the years age has taken its toll of the six ships of the Mine Countermeasures Squadron. HMAS CURLEW was the only remaining vessel of that Squadron still in service with the RAN. At the ripe old age of 36 years she had steamed in excess of 400,000 miles and had been underway in excess of 36,000 hours and was the oldest commissioned vessel in the RAN. With the advent of the new Mine Hunter Catamarans CULREW's years were numbered and with the passing of CURLEW an era in Mine Countermeasures also passed.

Heaving a line to HMAS SNIPE

Disarmed as a trials vessel (John Mortimer)

HMAS CURLEW in 1977 (John Mortimer)

With the new MHCAT HMAS SHOALWATER.

Arriving in Sydney for the final time. She is followed by HMAS FREMANTLE.

The RAN's last wooden warship heads for WATERHEN.

Penang Review — A Wet One

For most RAN personnel at the Royal Malaysian Navy's International Fleet Review it seemed that the clock had been turned back two and for some four years.

by ROSS GILLETT
Navy Public Relations, Sydney

Photos by courtesy of Navy and Marine Corp Museum

Over 800 officers and men, most embarked in six Fleet units plus others ashore with COMAUSNAVSUP and the Naval Support Command Band were representing Australia at the celebrations marking the RMN's 55th Anniversary. The week of events was held on Penang Harbour and ashore at various locations around the island from 16-21 May.

Like the RAN's own 75th and Bicentennial Reviews, the 1990 Malaysian event was highlighted by the presence of a large fleet of ships, including 35 foreign and 25 Malaysian naval units.

From Australia came the FFG HMAS CANBERRA (CMDR G.A. WALPOLE), the DEs HMAS PARRAMATTA (CMDR T.J. SCOTT) and HMAS DERWENT (CMDR J.R. STAPLETON), the oiler HMAS WESTRALIA (CMDR J.S. MOORE) and the patrol boats, HMAS IPSWICH (LCDR R.A. KEHL) and HMAS CESSNOCK (LCDR J.V.P. GOLDRICK).

At 40,870 tonnes displacement, WESTRALIA was the largest ship to attend the review and with six ships, the RAN the third largest naval group represented, after Malaysia and Indonesia.

Representing the Chief of Naval Staff was RADM Tony Horton, AO, RAN, flying his flag from the guided missile frigate HMAS CANBERRA. COMAUSNAVSUP arrived in Penang on Monday 4 May to begin a round of official discussions and ceremonies to mark the Royal Fleet Review.

"The presence of the six Fleet units at the Review emphasises the close relations between the two nations and navies", RADM Horton said. "In fact there has been

Sail Training Ship DEWARUTJI

RAHMAT

Reviewing vessel MUTIARA

SRI INDERA SAKTI

HMAS WESTRALIA

Oman logistic landing ship NASR AL BAHR

32 visits by RAN ships already this year', he added.

'The Malaysian Review has allowed the RAN personnel present to meet the cultures and customs from such navies as the USSR and the middle east'.

Prior to the arrival of the ships, the NSC Band performed at a number of locations, including school concerts near Butterworth. 'We received a tremendous reception at each performance and later for the RAN reception aboard CANBERRA and for the official March through Georgetown on Saturday 19 May', said LEUT Phil Anderson, the band master. 'This was despite the fact that ten other naval bands were present and the Malaysian officials exhausted the number and locations where each national band could play'.

The arrival of the 60 plus ships was heralded by gun salutes from each vessel entering Penang Harbour and was responded by Fort Cornwallis, on the foreshores of the city.

INS KHUKRI

To mark the era of 'glasnost' and 'peristroka' a number of crew from the DE PARRAMATTA got together with the sailors from the Russian destroyer ADMIRAL TRIBUTS, which was anchored only a short distance from the RAN DEs and FFG.

Penang, like Sydney in 1988, soon became an international city, with over 10,000 officers and men from the various world's navies. A large sports programme was available with RAN teams competing in soccer, badminton, tennis and hockey as well as trishaw races and the Dragon Boat Competition on the harbour.

One of the first events attended by COMAUSNAVSUP and other personnel was the opening of the Naval exhibition, a pictorial presentation of the past and present Malaysian Navy.

The streets of the city of Georgetown were transformed into a carnival ground on Saturday 19 May as 3,000 sailors undertook a five kilometre march through the old streets. Unfortunately for the organisers and the participants the weather was unkind to all as the heavens opened up with an almost continuous downpour. The Australian Naval contingent followed after the large Malaysian platoon.

Indonesia's HASANUDDIN ex HMS TARTAR

KRI KAKAP with helicopter embarked

Italian frigate LIBECCIO

The actual Review Day, Sunday 20 May, began well enough, but by 9.00am ominous black clouds were seen threatening from the direction of the mountains, behind the city. His Majesty, the King of Malaysia was embarked on the reviewing vessel KD MUTIARA, and at 9.30am began inspecting the first of three static lines of ships followed by a moving line of small patrol boats from various nations.

'All of our ships in the static and moving lines were in immaculate condition and represented the RAN well', said RADM Horton, who was embarked in CANBERRA.

With the conclusion of the Review many of the ships weighed anchor and sailed for their respective homeports. IPSWICH and CESSNOCK sailed for Singapore, conducting a series of exercises with Malaysian and Singapore patrol boats enroute. Both arrived on the 24th.

Sri Lanka patrol vessel JAYASAGARA

Ex HMS JAGUAR, now the Bangladesh ALI HAIDER

Soviet ADMIRAL TRIBUTS

Turkish Meko 200 frigate, TURGUTREIS

ARMY AND NAVY PROPOSE HELICOPTER SUPPORT SHIP

Navy's plan to modify their training ship JERVIS BAY to enable her to operate a number of larger helicopters has been postponed indefinitely. Insufficient funds were available. More important than that, as details of the modifications were studied it became apparent that there is insufficient headroom in JERVIS BAY to accommodate suitable helicopters in the vehicle deck.

Now, Vice Admiral M.W. Hudson (Chief of Naval Staff) has suggested publicly (in the "Canberra Times") that the Australian Defence Force should buy a helicopter support ship.

NAVY magazine understands that a consensus of support is developing between Army and the RAN in favour of such a ship.

The vessel would be capable of operating (presumably marinised) Blackhawk helicopters — a type already in Army service. She would also be able to operate Navy helicopters.

The Navy helicopters are likely to be either the remaining Sea Kings (the only Navy helicopters fitted with dunking sonars — a capability much needed) or utility helicopters. The S70B2 Seahawks are all required for the FFG7 class frigates.

The need for the acquisition of a helicopter support ship arose *during the Fiji operations to rescue Australian citizens. Similar* circumstances have arisen recently in other parts of our region.

Another important aspect is the need to move our Army about in balanced units.

At present, the ADF's amphibious operations capability are imparted by the heavy landing ship TOBRUK and six heavy landing craft. These are optimised for over the beach operations. Although TOBRUK has a flight deck, she has no hangar and minimal command and communications equipment for helicopters.

The ADF needs a helicopter support ship to provide vertical lift for personnel and supplies in areas where over the beach operations are not feasible or where both vertical and over the beach landings are appropriate.

Contrary to the implications of the headline in the "Canberra Times" article, the proposed helicopter support ship cannot be an aircraft carrier (for Sea Harriers or any other fixed wing aircraft) unless the necessary equipment is built into her.

That special equipment includes command control and communications facilities, fuelling, ammunition, on board maintenance capabilities and flight deck equipment (particularly the ski-jump angled launching ramp).

Equipment for helicopters differs substantially from that required for even STOVL (let alone conventional) fixed wing aircraft.

Another aspect is the extent of the troop lift capability provided by the acquisition of two helicopter support ships. A maximum of one ship would be available in each Ocean (Indian and Pacific) at any one time. One of the two ships would be refitting part of the time.

The heavy landing ship TOBRUK would be available part time — when she was not refitting. The ocean going capabilities of the heavy landing craft are limited to moderate weather conditions.

The acquisition of two helicopter support ships would not provide the ADF with a significant power projection capability in terms of mounting and subsequently supporting an opposed operation landing a balanced force in battalion strength or more.

For a significant power projection capability, a force would be required to be able not only to land the force against opposition, support that force logistically, and provide ground attack and defensive air cover for an extended period after the landing.

The landing capabilities of the proposed helicopter support ships would be sufficient to land a force and rescue Australian citizens.

The Navy League argues that helicopter support ships for the ADF should be fitted for operating Sea Harrier aircraft. This is important because simply having as flight deck for Sea Harriers is not enough for operating Sea Harriers in the combat role.

It is a fact that, unless the helicopter support ships are fitted for Sea Harrier operations when they are built, it would be extremely time consuming and expensive to modify them later.

The design options available are of interest.

The French, British, Italian and US navies operate a number of ships which are basically landing ships dock (LPD, LSD) with a flight deck. However, their helicopter capacity is insufficient for ADF purposes.

Other navies — India, Indonesia — operate ships which are large over the beach landing ships with flight decks. For helicopter operations, these suffer from similar disadvantages to TOBRUK.

The US Navy's IWO JIMA class LPHs — with full length flight decks and "islands" set to starboard — are steam driven, manpower intensive and probably larger than the ADF needs. Although a second hand ship might be attractive superficially, they are already at least twenty years old, steam driven, and manpower intensive (600 ship's company).

Converted merchant ships may be cost effective although this would have to be sufficient to offset such disadvantages as limited tactical manoeuvrability, and deep draught (significant when seeking sheltered water for landing operations). The ships would need to be able to enter Townsville, base of Army's Operational Deployment Force.

An advantage of selecting a modern design is the much higher operational availability of modern ships — numbers as high as 85% are mentioned. It can be argued that, with this high operational availability, one helicopter support ship should be enough to provide the ADF with its required capability.

When the type choice is made (in about 1997), the front runner design is likely to be a purpose built ship of the type, size and capability of the Bremem Vulka OPHC, described in detail in a recent issue of NAVY magazine.

There are other similar designs available. Vickers Shipbuilding and Engineering offer one. Carringtons offered an outline design to the RAN in 1982.

Carringtons would be a strong candidate to build whichever design is selected.

HMAS SPRIGHTLY — Naval Service

Type:	Fleet Tug (Diesel Electric)
Displacement:	800 tons (full load) 570 tons (standard)
Length:	143 feet
Beam:	33 feet
Draught:	16 feet (maximum)
Speed:	12 knots (maximum)
Builder:	Levingstone S.B. Co, Orange, Texas, USA
Laid down:	6th June 1942
Launched:	7th August 1942
Completed:	23rd November 1942

HMAS SPRIGHTLY and her sister ships RESERVE and TANCRED were built on behalf of the Commonwealth Government for the Commonwealth Salvage Board which was constituted on 14th March 1942 to organise an effective marine salvage area in Australian waters.

SPRIGHTLY, a steel vessel of all welded construction was designed to maintain a towing speed of 10 knots in fair weather hauling a 10,000 ton vessel. She was taken over by an Australian crew in the USA and hoisted the Australian Red Ensign on 23rd November, 1942 under which she operated as a Salvage Board Tug until 1944.

In February 1944 she was transferred to the control of the Australian Commonwealth Naval Board and on 23rd February 1944 commissioned for service with the Royal Australian Navy under the command of Lieutenant G.S. Duck, RANR(S).

SPRIGHTLY served as a naval tug in New Guinea and northern Australian waters from May 1944 until July 1946 when she returned to Sydney having steamed 50,797 miles. She paid off into the Reserve Fleet on 23rd December 1946.

On 23rd November 1953 SPRIGHTLY re-commissioned at Sydney under the command of Lieutenant-Commander L.N. Morison, RANVR. She remained in service until June 1959 when she was transferred to the Operational Reserve having added a further 75,000 miles to her record of mileage steamed on naval service.

In December 1961 she was to be leased on charter to the Pacific Tug and Salvage Corporation for a period of two years. However she remained under naval control and was placed in Reserve classified as a Submarine Rescue Ship.

On 29th August 1969 SPRIGHTLY was sold to T. Korevaar and Sons Pty Ltd, Williamstown, Victoria for $65,150.

A SHORT HISTORY ON THE COMMERCIAL ACTIVITIES OF THE FORMER R.A.N. TUG SPRIGHTLY

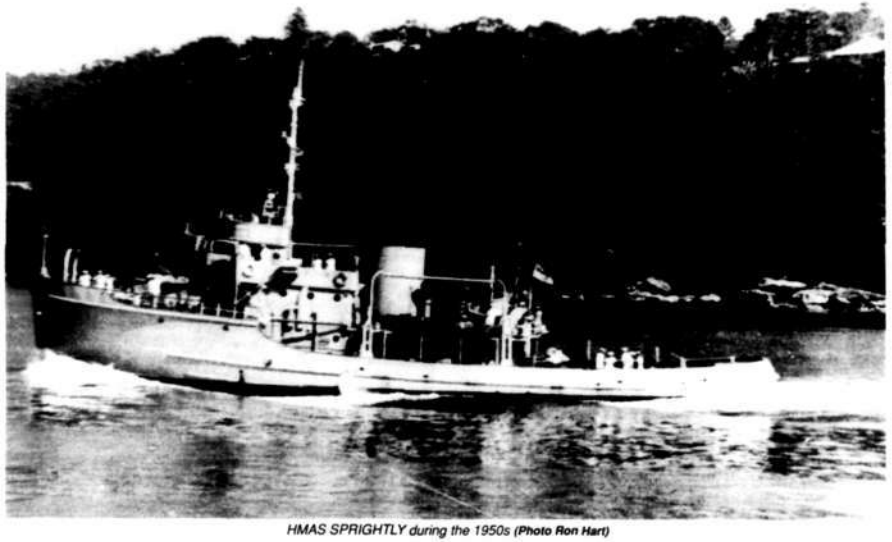
SPRIGHTLY was purchased by T Korevaar & Sons Pty Ltd in 1969 and registered in Melbourne in the name of Pacific Towing Co., a Korevaar subsidiary.

Although the SPRIGHTLY was originally purchased by Korevaar's for towage work it was found that this type of work was not available and SPRIGHTLY was initially contracted to Esso Exploration for approximately 12 months to carry out meteorological work in Bass Strait between Flinders Island, Eden and Lakes Entrance.

Additional work was also found with a 12 week survey around Tasmania for the Bureau of Mineral Resources and a 6 week contract for Shell to act as a Standby vessel for helicopters operating to the drilling rig OCEAN DIGGER which was carrying out drilling operations 30 miles off Port Lincoln.

In 1973 SPRIGHTLY was contracted to the Commonwealth Scientific and Industrial Research Organisation's Division of Fisheries and Oceanography as a research vessel.

To suit SPRIGHTLY to her new role extensive modifications



HMAS SPRIGHTLY during the 1950s **(Photo Ron Hart)**

were made to the vessel at Korevaar's Geelong workshops during May to October 1973. These included removal of the towing winch and conversion of the winch room into a laboratory, the extension of the boat deck aft to provide a sheltered area for a wet laboratory and the installation of a new office for researchers directly behind the wheelhouse.

To enable sampling work to be carried out the rear deck was built up to the level of the bulwarks with a wood deck to provide a clear working area. A twin barrel hydraulic winch was installed on the boat deck for towing of nets and handling mooring equipment for current meters etc. A hydraulic oceanographic winch was installed on the starboard side of the boat deck to handle water sampling equipment. In each case the wires were taken over the stern via a hydraulic A frame. To handle the additional hydraulic load new hydraulic power equipment was located on the boat deck.

Subsequent modifications included the fitting of a bow thruster in 1975 and the addition of airconditioning in 1976. Two 35 KVA alternators were added, one in 1973 and other in 1976, the wet laboratory below the boat deck was enclosed and the hydraulic *equipment updated including enclosing the hydraulic power room* on the boat deck.

SPRIGHTLY was also repainted with a white hull and superstructure and light blue funnel with CSIRO markings replacing the previous scheme of red hull, white superstructure and black funnel with a broad white band.

In her final configuration as a research vessel SPRIGHTLY was equipped with three laboratories (electronics, chemistry and wet) the winching equipment described above, substantial radio, radar, direction finding and depth sounding equipment and accommodation for up to 20 people. The usual complement consisted of 8 to 11 crew and up to 8 scientists and technicians.

During the 12 years SPRIGHTLY was contracted to the CSIRO she carried out a variety of assignments which included 3 ½ years based in Fremantle researching the crayfish industry, 6 months in the Gulf of Carpentaria working on the prawn fishing industry and approximately 7 years based in Sydney carrying out research in coastal waters around NSW, Queensland and Victoria.

SPRIGHTLY did however venture further afield on two occasions when she voyaged to Honiara for the Shearwater Expedition in January/February 1979, whilst she completed the Aurorex Cruise which started from Sydney in March 1982 circumnavigating Australia to finish back in Sydney in July 1982.

SPRIGHTLY, December, 1987 for the Tall Ships arrival in Port Phillip **(Photo L. Rex)**

SPRIGHTLY during her service with the CSIRO

SPRIGHTLY operated under contract to the CSIRO until 1984 returning to Melbourne on the 27 December 1984, laying up in Victoria Dock.

Following this SPRIGHTLY was involved in a number of small site survey contracts for Geomex including: Bass Strait in July 1985, Port Lincoln in October 1985, Bass Strait in November 1985, and off Sydney in January 1987, the last being a survey for a new OTC cable to New Zealand.

It was also at this time that SPRIGHTLY was given her final colour scheme under Korevaar ownership, a royal blue hull, white superstructure and light blue funnel minus the CSIRO markings.

During this period SPRIGHTLY also returned to her original *role, towage and salvage carrying out the salvage of the trawler* CAPE FLINDERS from the beach at Jan Juc near Torquay on 16 February 1987 and towing the vessel back to Melbourne, arriving the following day.

In Melbourne she frequently towed the dumb hopper barge BIG YELLA carrying spoil dredged from the Yarra River out to the dumping ground in Port Phillip Bay as part of a contract Korevaar's held with the Melbourne and Metropolitan Board of Works.

During October 1987, SPRIGHTLY was engaged by Howard Smith Industries to locate an anchor and chain lost tanker near Barwon Heads although *recovery of the anchor was left to an* anchor handling tug/supply vessel.

By the late 1980s work was becoming infrequent and Korevaar's had placed SPRIGHTLY on the market however she was to carry out one more memorable assignment, when on the 31 December 1987 she carried family and friends of the Korevaar's and 60 members of the Victoria Branch of the World Ship Society to view the arrival of the Tall Ships in Melbourne, SPRIGHTLY being granted a certificate to carry up to 100 passengers by the Marine Board of Victoria on this special occasion.

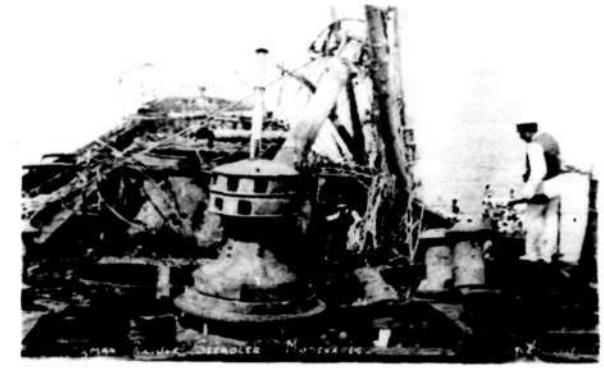
SPRIGHTLY remained laid up for most of 1988 except for a short period when she was used as an accommodation ship for crew working on a dredging project at Corio Quay, Geelong.

On the 21 March 1989 an agreement of sale was signed with the firm Kirung Investments Pty. Ltd., who took delivery of SPRIGHTLY in Victoria Dock, Melbourne on the 31 March 1989 immediately commencing work refurbishing the vessel.

GERMANY'S SEEADLER

SAILING SHIP RAIDER OF THE GREAT WAR

One of the most unusual, yet most successful warships of the 1914-1918 Great War was the sailing ship SEEADLER, herself a war prize and from all records, the oldest vessel to be employed in the role of raider by the German Naval Command.



Constructed in Scotland in 1878 as the PASS OF BELMAHA, the vessel was captured by U-36, while flying the United States flag. She was taken to Germany and converted to the raider SEEADLER. As part of her mission the ship was disguised as the Norwegian IRMA, a merchantman known in European and

Artists impression of the raider SEEADLER

Atlantic waters. To accomplish her new role the 4,500 ton SEEADLER was armed with two 105mm guns, which could be hidden from approaching ships. She carried a crew of 64 officers and men and was powered by an auxiliary diesel for 9 knots. Her three tall masts carried 21 sails.

At the close of 1916 SEEADLER sailed *from the Atlantic with Felix, Graf von* Luckner in command. On 25 December the ship was stopped and searched by the British auxiliary PATIA, but allowed to continue. SEEADLER proceeded south to Brazil, sinking two merchantmen enroute. During the next eight weeks the raider took nine ships and accepted many prisoners. Using a captured French barque, von Luckner rid himself of the unwanted crews, who made their way to Brazil.

On 19 April, 1917 SEEADLER sailed around Cape Horn, to begin cruising along the coast of Chile to latitude 35 degrees

south. Subsequently the raider made for the north-west, crossing the equator in June. During both June and July she captured three American inter-island trading vessels.

Crew health, had by now become critical. Little or no fresh provisions remained and some of the crew were suffering from scurvy. Von Luckner headed towards the Society Islands for some rest from raider activities, a period during which SEEADLER have captured or sunk 16 ships, totalling 30,100 gross tons.

However, after a few days at the island the ship was struck by a storm and grounded on the island's reef. SEEADLER'S crew

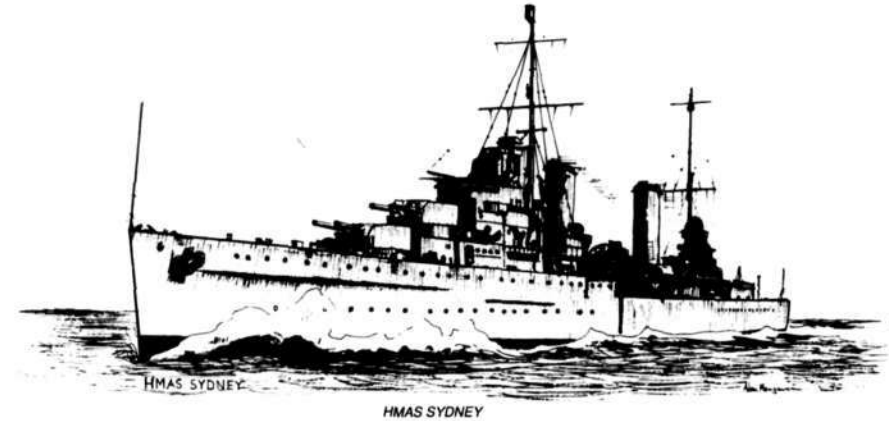
took to the ships' boats and headed for an adjacent island. Later they commandeered an island schooner, but despite their best efforts all personnel were finally captured, being interned for the remainder of the war.

SEEADLER — Ships Data

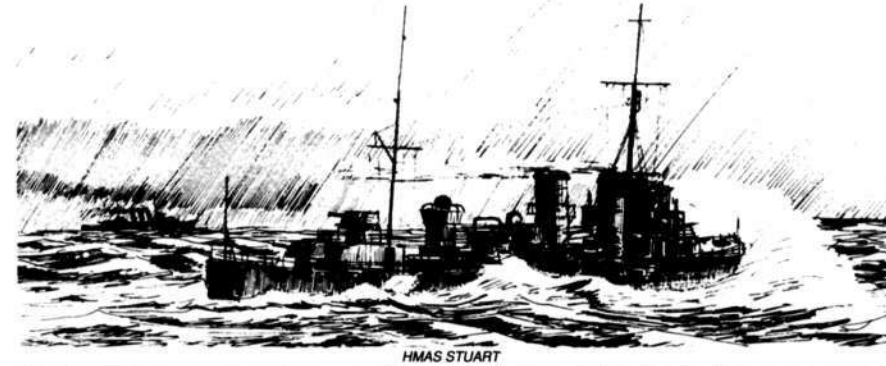
4,500 tons, length 83.5m, beam 11.8m, draught 5.5m, one auxiliary diesel, 900 bhp, single shaft, two 105mm guns.

OUT OF THE PAST

by ALAN J. MORGAN



HMAS SYDNEY



HMAS STUART

Life Begins at 40!

A history of the Military Sealift Command

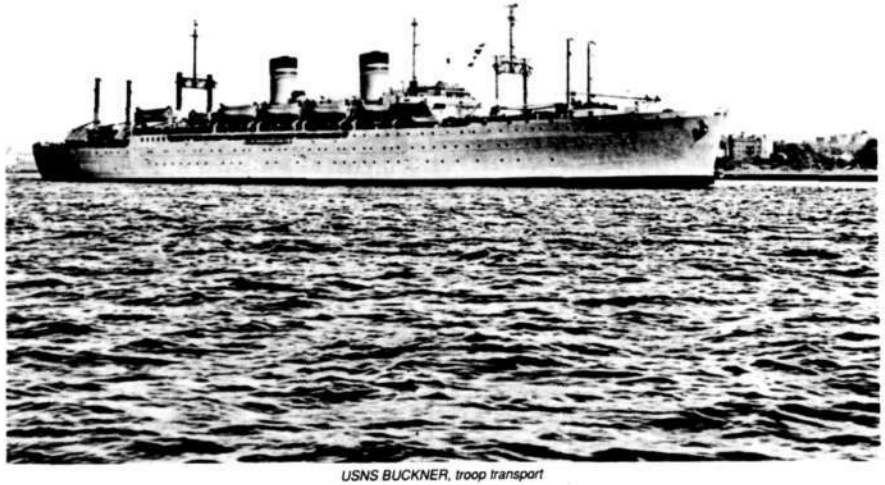
In August of 1949, the United States Secretary of Defense issued a directive making the Secretary of the Navy the single manager for ocean transportation and directing him to establish an operating agency within the Navy. Two months later the Military Sea Transportation service — renamed the Military Sealift Command in 1970 — was established as the operating agency for ocean transportation. *MSTS initially began operations with 223 personnel transports, cargo vessels and tankers from the Naval Transportation Service and the Army Transportation Service. In the 1950s, at the height of the Korean War, MSC had a fleet of 467 ships that operated around the world. They carried United Nations troops from their homelands to Korea; they evacuated wounded and refugees, they provided everything from beans, bullets and black oil, to helicopters and military hardware needed at the battlefront.*

1950s

Barely had MSC come into its own when hostilities erupted in Korea on June 5, 1950.

The command already had received 92 ships from the Navy, but 115 Army ships were in the process of being transferred when the conflict began.

By July 1, MSC had an additional six ships on charter from private companies and the Maritime Administration had been asked to remove 130 more vessels from mothballs to be turned over to commercial firms that would operate them from MSC under government contract.



USNS BUCKNER, troop transport

Purpose was to create a bridge of ships spanning the Pacific from the United States to Korea, to support United Nations troops deployed to Korea.

The mission was achieved. Statistics indicate that 87 per cent of United Nations fighting forces and equipment were moved to Korea by sea. This figure represents 3.5 million passengers and 98.1 million measurement tons of cargo.

In December 1950, MSC ships evacuated 105,000 soldiers, 91,000 civilians, 17,500 vehicles and 350,000 tons of supplies from Hungnam, Korea only hours ahead of an advancing enemy.

And at Inchon, MSC ships were involved in the amphibious landings of UN troops as their crews worked around the clock unloading supplies.

Some 3,000 American prisoners of war in Korea returned to the US aboard MSC ships in June 1954.

In other operations of the 1950s, MSC ships supplied US bases on the west coast of Alaska and together with the US Coast Guard and the Canadian Navy navigated and charted the Northwest Passage for the first time.

And from MSC's Gulf subarea headquarters, flour, grain and fertilizer were shipped to Marshall Plan countries in Europe in 1950 while foodstuff was delivered monthly to Japan, Korea, Germany, Egypt, Libya and Italy.

Throughout the 50s MSC ships were involved in helping the nations of the world — from Europe and the Far East — to ports of the Indian subcontinent, the Mediterranean and Red Sea, the Arab Gulf and the Indian Ocean.

Fleet tug, USS ATAKAPA

And the command also shipped supplies to scientists involved in multinational research in Antarctica as part of the well-known Operation Deep Freeze.

Indeed, in 1958 the MSC charter was expanded to include operation of scientific support ships, vessels that would be involved in oceanographic research, missile tracking, communications and other unusual missions.

Civilian refugees, a tragedy in all wars, were evacuated by MSC ships wherever trouble erupted in the world of the 1950s.

In October 1951, the USNS Rose brought 2,500 aliens from Czechoslovakia, Estonia, Hungary, Poland, Romania and Russia to join the US Army in New York.

And in a foreboding forecast of things to come, the MSC operated aircraft transporter, the Windham Bay, first large ship to navigate the Long Tam River since 1925, tied up in Saigon, French Indochina in February 1951. During its stay, 17 hand grenades were tossed at the ship by terrorists.

From 1954 to 1955, USNS vessels sealifted some 300,000 refugees fleeing from North Vietnam to South Vietnam, a tragedy doomed to repeat itself in 1975.

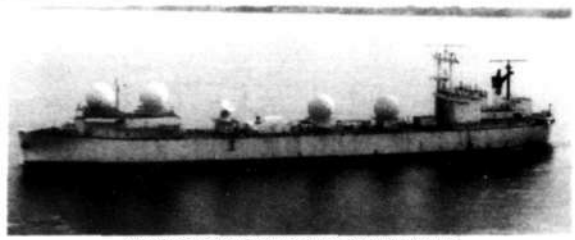
Again, in 1956, following the heroic Hungarian uprising, MSC sealifted 21,500 Hungarian refugees to the United States.

Despite wars, near wars and the beginning of future wars, MSC was involved in other missions of mercy and defense during the 1950s.

In February 1951, USNS Morton and Marine Phoenix rescued 24 passengers and crew from the Swedish ship Christer Salen which broke in half during a typhoon north of Tokyo Bay.

Two years later, at the other end of the world, the USNS Muir rescued 118 passengers and crew from the Italian ship Tripolitania sinking off the coast of Sicily.

USNS PASSUMPSIC, oiler



Missile Range Instrumentaton Ship, USNS REDSTONE

USNS OBSERVATION ISLAND, missile range support

The nose cone of the first missile fired into space was recovered in August 1960 by the USNS Haiti Victory, now the USNS Longview. In July 1963, Astronaut Gordon Cooper's 22-orbit space flight was monitored by the USNS Range Tracker's stellar inertial navigation system.

Earlier, in July 1961, USNS Eltanin, operated by MSC for the National Science Foundation, became the world's first Antarctic research ship.

The decade ended on an optimistic note scientifically when the MSC "Moonship Fleet," USNS Vanguard, Redstone, Mercury and Huntsville, supported the successful Apollo 11 flight to the moon. MSC had lent *it s sea legs to the American astronauts who* made "one small step for man, one giant leap for mankind."

MSC ships and their crews were involved in major national tragedies during the 1960s, beginning in August 1963 when USNS Mizar located and photographed the sunken submarine USS Thresher.

USNS Marine Fiddler was involved in an unusual mission in September 1968. Together with USNS Towle it hauled hundreds of thousands of gallons of contaminated water for burial in Charleston, S.C. The water had been contaminated when a B-52 carrying an atomic bomb crashed while landing in Thule, Greenland.

In October 1968, Mizar located the USS Scorpion, a submarine that had disappeared with all hands. She was found in the Atlantic 400 miles southwest of the Azores, in 10,000 feet of water.

When the miniature research submarine Alvin sunk early in 1969 in 5,000 feet of water off the New England Coast, Mizar was sent to find her. The Mizar crew again

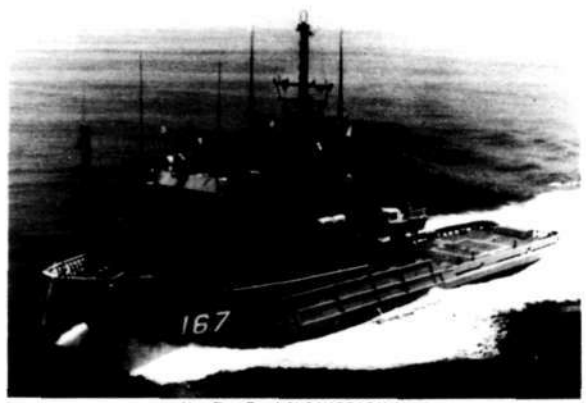
And in four separate incidents in 1953, MSC owned or operated ships were involved in the rescue of 172 persons from sinking ships on the high seas.

In one of the worst sea tragedies of modern times, the sinking of the Andrea Doria following a collision with the Swedish ship Stockholm, the USNS Thomas was credited with rescuing 159 survivors.

MSC ships also continued routine sealift operations during the 1950s. The 4th US Infantry Division sailed to Europe to join NATO forces in May 1951 aboard three MSC ships.

1960s

MSC entered the space age in the 1960s even as wars and other national tragedies continued to occupy its ships around the world.



New Fleet Tug, USNS NARRAGANSETT

accomplished their mission and photographed the Alvin.

MSC ships were involved in national crises and wars whenever and wherever they occurred throughout the 1960s.

In December 1961 and during the first three months of the Berlin buildup, MSC transports sealifted 29,182 troops to Europe.

When the Cuban crisis developed, USNS Upshur was on a routine voyage to Panama via Guantanamo Bay, Cuba. With less than four hours notice, Upshur was diverted to evacuate dependents from Guantanamo. It lifted 1,725 passengers to Norfolk.

In April 1965, after President Lyndon B. Johnson sent US troops to the Dominican Republic to protect American nationals, USNS Laurentia and the SS Santo Cerra were dispatched there to deliver supplies for the armed forces. MSC was involved in far reaching though routine operations between crises but the big story was command support of the war in Vietnam.

Even before the escalation, there was an MSC casualty when the USNS Card was mined and sunk on May 1, 1964 while moored in Saigon.

MSC ships first came on the scene in March 1965 when USNS Mann transported an advance element of 2,000 Republic of Korea soldiers from their homes to South Vietnam.

In June, MSC chartered ships sealifted U.S. Coast Guard Squadron One, composed of 17 patrol craft, to the war zone and in August elements of the Army's 1st Cavalry Division sailed to Vietnam aboard USNS Kula Gulf.

One year later, in August 1966, USNS Patch and Darby completed the longest troop lift in US military history carrying American soldiers 12,500 miles — halfway around the world — from Boston to Vietnam.

Maritime Prepositioning Ship SS 1st LT JACK LUMMUS

In October 1966, two vessels, the SS Meredith Victory operated by American President Lines and the converted Liberty ship Benjamin Chew operated by US Lines, were added to the MSC fleet in Southeast Asia. The Meredith Victory was awarded the Gallant Ship Award for evacuating 14,000 Korean refugees in a single voyage.

The Vietnam war became personal for MSC towards the end of 1967. In November, SS President Buchanan was considerably damaged by gunfire in the Long Tam River. There were no casualties.

In December 1967, the MSC chartered ship SS Seatrain Texas, anchored at Nha Be near Saigon, was hit by a floating explosive device.

From 1960 until the Vietnam buildup in 1965-66, the MSC fleet averaged 85 ships. At one point the chartered fleet was down to two vessels.

But, during the early 1960s, the US Merchant Marine underwent the greatest change since steam replaced sail. The era of the container ship had begun.

With such ships one gang of longshoremen could load as much cargo in 12 hours as six to eight gangs formerly loaded in a week.

MSC customers, Army, Navy, Marine Corps and Air Force soon developed an "appetite" for container service which helped reduce cargo pilferage, limited damage, and lowered cargo handling time. The box which could be delivered from door to door — from factory and field — was attractive to the military shipper and MSC was a pioneer in use of container ships.

MSC also was an industry partner in the continued development of the roll-on, roll-off ships in the 1960s.

Troop transports went out of service during the 1960s although they were used right up to the end of the decade, shuttling US troops in and out of South Vietnam. One result was the merger of the passenger and cargo divisions at MSC headquarters with most troops now moving by air.

During the years the shooting was going on in Southeast Asia — with Americans involved — the MSC fleet remained relatively stable after the buildup. More than 400 ships were controlled by MSC during much of the latter half of the 1960s.

The problem, after US withdrawal, was to reduce MSC assets to a needed level, a process that was completed over a couple of years. During the war years, MSC delivered nearly 181 million measurement tons of dry cargo and almost 198 million long tons of petroleum products to military customers.

Auxiliary Crane Ship SS KEYSTONE STATE

1970s/80s

MSC's expanding role in Navy fleet support began with a single step, in the early 1970s, when the command was assigned USNS Taluga. It was manned by a 105-man civilian crew and a small detachment of Navy communications specialists to determine if Civil Service mariners could replenish fleet ships under way.

The US Transportation Command was established in 1987 with MSC as one of the three component commands, along with the US Army's Military Traffic Management Command and the US Air Force's Military Airlift Command.

MSC is headquartered in Washington, D.C., with area commands in London, England; Bayonne, N.J.; Oakland, Calif., and Yokohama, Japan. Smaller sub-area commands are located in Norfolk, Va.; Naples, Italy, and Subic Bay, Republic of the Philippines.

USNS ALGOL, Fast Sealift Ship

The results justified expectations of the optimistic and overcame objections of the sceptics. Civilian manning of Navy auxiliaries frees highly trained military men for service on warships. Civilian manned ships cost less to operate.

MSC tug and barge operations became routine in the 1970s. Joint MSC-MARAD efforts in the 1970s helped strengthen the Ready Reserve Force.

As MSC moved into the 1980s, the Afloat Prepositioning Force was established. Eight Fast Sealift Ships were brought on line, and new surveillance ships, hospital ships, oilers and crane ships expanded the MSC fleet.

Hospital Ship USNS MERCY, a converted tanker

USNS ZEUS, Cable Repair Ship

With the MSC celebrating 40 years, it has a fleet of 128 ships and more than 9,000 employees.

MSC TODAY

The MSCs primary mission is to supply the sealift required for as long as operational requirements exist. MSC's mission received special impetus in 1984 when the Secretary of the Navy and the Chief of Naval Operations formally designated strategic sealift as one of the US Navy's major functions, together with sea control, power projection and strategic deterrence.

To be able to respond, it must develop procedures and techniques for maintaining the sealift base. It must coordinate with the maritime industry on which the US must rely so heavily for emergency augmentation. A primary means of fulfilling those roles is by peacetime delivery of Department of Defence worldwide cargo.

Though ocean transportation remains its primary mission, MSC has added new dimensions in the past four decades. It now operates 23 Special Mission Support Force ships that are involved in oceanographic surveys and research and in support of the space program and military missile test centres. In addition, MSC has 46 ships that are specifically committed to fleet support missions known as the Naval Fleet Auxiliary Force. Included in NFAF are six T-AO 187-class oilers, with more being built and seven in the construction program for a total of 18 of these new sophisticated oilers.

Another rapidly growing part of NFAF are the T-AGOS or ocean surveillance ships. It has 17 T-AGOS delivered, with 10 ships operational. MCS will have a total of 23 T-AGOS active by 1993. The five year defense plan calls for six additional twin hull — or SWATH — T-AGOS to be awarded by 1994, bringing the total to 28 surveillance ships.

Eight new oceanographic survey ships, and an acoustical research ship will add nine

more vessels to the MSC fleet by 1994. Four new crane ships will give 12 of these vital contingency ships, which are part of the Ready Reserve Force. The RRF, made up mostly of older cargo ships capable of carrying unit equipment now (1989) numbers 93 ships. When activated, the RRF ships are controlled by MSC. The RRF is projected to increase to 142 ships by 1994.

The successful deployment of US military forces depends on the ability to act quickly. Recognising that hostilities can erupt at any time, the Afloat Prepositioning Force was established. The APF is made up of 25 ships loaded with military equipment and prepositioned around the world. Included as a part of the Afloat Prepositioning Force is the Maritime Prepositioning Force consisting of 13 ships divided into three squadrons.

Another change at MSC was the acquisition of eight Fast Sealift Ships for the rapid deployment of a mechanised Army division. These ships are almost as large as an aircraft carrier and can cruise at 33 knots.

Another aspect of MSC's changing face is combat medical support. Two very large hospital ships support the combat forces. Each contains a 1,000-bed treatment facility and 12 operating rooms. The first of these ships, the USNS Mercy, provided humanitarian medical care to more than 70,000 people in the Philippines and the South Pacific in 1987.

Life does indeed begin at 40 as the MSC presses on regardless!

Fleet Oiler USNS ANDREW J. HIGGINS

Surveillance Ship, USNS PREVAIL

NAVAL NEWS

Women in the Navy

The Chief of Naval Staff, Vice Admiral Michael Hudson, has forshadowed an increase in the number of women in the Navy and the opening up of new positions, including more for women at sea.

Admiral Hudson said that the Navy had been actively pursuing a policy of employing more women, and the percentage in the RAN was now 11.5%, a significant improvement on the situation five years ago, when the percentage was only 6.5%.

"This percentage needs to increase even more if the Navy is to capitalise on the talents of women and there is scope for this within existing Government guidance" he said.

Admiral Hudson said that the number of women at sea would build up steadily and he noted that all females who had joined the RAN since 1984 are liable for sea service.

"Presently there are only 40 women at sea, which is hardly more than half of 1% of our seagoing personnel.

"My aim is to achieve the same percentage of women at sea as there are women throughout the Navy overall."

Admiral Hudson said that the only constraint on the employment of women at sea would be the resources needed to provide appropriate accommodation.

"Although the present interpretation of Government policy on the employment of women in combat or combat-related situations imposes some restrictions for sea going employment," he said, "it is my view that at least in peacetime women should be given training and experience in every aspect of naval operations ashore and afloat, with the exception for the present, of submarines."

HMAS STUART returns from a four month South East Asian deployment in March, 1990

It was only through undergoing this training and experience that they could play their full part in the conduct of naval operations.

Admiral Hudson also pointed to the progress made within the RAN to date. He observed that the percentage of women in the RAN is already higher than in the USN and in the Canadian Forces, each of which have a female population of around 10 per cent. The RAN and USN policies for employing women at sea have been similar for a number of years.

"In the UK, during the annual debate on the Royal Navy in February this year, the example of the Australian Navy was quoted in discussions on whether women should go to sea in the Royal Navy," he said.

"As many Australians will have observed in the media, the Royal Navy's First Sea Lord has since announced that seagoing postings will now be available to women in the Royal Navy."

"Although we have certainly had women in certain seagoing billets for some time, I have directed my personnel staff to bring forward detailed plans to increase the range of positions available to women — and that includes more seagoing billets for women."

The Indian Navy training ship TIR arriving in Fremantle for a four day visit in May, 1990.
(Photo V. Jeffery)

Navy to get two more minesweepers

The Government has approved the acquisition of two second-hand tugs to *undertake minesweeping duties for the* Royal Australian Navy. The Minister for Defence, Senator Robert Ray, announced that the contract was signed on April 18, 1990.

The tugs, to be purchased this year, would be used to tow the new 'clip-on' sweeps designed and developed by the Royal Australian Navy Research Laboratories in Sydney and the Material Research Laboratory in Melbourne. The RAN has been using three fishing trawlers, acquired in 1988, to develop the tactics and doctrine to be used in the operation of the new sweeping equipment. These trawlers are not powerful enough to tow the large sweeps, hence the requirement for the tugs.

Senator Ray said that because the waters in which we could need to counter mines vary in their characteristics, we need minesweepers to complement our catamaran minehunters. The two tugs would form an integral part of the Navy's minesweeping force, which is being established by utilising 'craft-of-opportunity', comprising fishing trawlers, tugs and other small craft.

Because of the vast coastline over which our mine countermeasures force could be expected to operate, our minesweepers and minehunters need to be capable of rapid deployment to any mine threat area, Senator Ray said. This would be achieved by using specialist mine warfare support personnel operating from mobile trailers.

The Government afforded a high priority to the development of a capable mine countermeasures force that will ensure that our major ports can be kept open. This latest acquisition of two tugs for use as minesweepers was another step towards achieving a credible mine countermeasure force, Senator Ray said.

The Fremantle-class patrol boat HMAS GERALDTON towing three apprehended Indonesian fishing vessels from the Rowley Shoals area off the northern West Australian coast towards Broome on May 7, 1990.
Commanded by Lieutenant Commander Russ Baker, HMAS GERALDTON intercepted a fourth Indonesian vessel in the area several days later. This vessel, the Sinta Daharim, sank while under tow with 1200 kg of illegally taken Trocus shell aboard.
Of the 58 fishermen taken off the first three vessels taken to Broome, at least 27 were repeat offenders.
(Photo by courtesy of HMAS GERALDTON)

Australians and Americans in Canberra remember Coral Sea Battle

The United States Ambassador joined Australia's Defence Force and Navy *chiefs at the American War Memorial in* Blamey Square, Canberra, on May 3 to commemorate the 48th anniversary of the Battle of the Coral Sea.

A Naval guard from HMAS HARMAN and the Naval Support Command Band came to attention shortly before noon for the arrival of the members of the official party, including the Member for Canberra, Mrs Ros Kelly (representing the Prime Minister and Australian people), the US Ambassador, Mr Melvin Sembler, Chief of the Defence Force, General Peter Gration and Chief of Naval Staff, Vice Admiral Michael Hudson.

During the 45 minute service, an RAN Petty Officer led a catafalque party comprising two US marines and two Australian sailors.

The Service began with a prologue to be delivered by the Navy's Principal Chaplain Jarvis. The prologue was followed by speeches by Mr Sembler and Mrs Kelly, the playing of the last post and reveille, the blessing, and the playing of the Australian and United States anthems.

The Canberra ceremony was one event in a week of ceremonies, celebrations and US ship visits taking place around Australia to mark the Battle of the Coral Sea.

New Assault Boats for Army

***The Army is shortly to take delivery of* the first of its new fleet of assault boats.**

To be built by the Perth-based Australian Boat Manufacturers Pty Ltd at an overall cost of $1.3 million, 159 of the aluminium boats will be delivered during the next 10 months.

They will replace the current fleet which has been in service since the 1960s.

Used mainly by infantry and engineers for inland waterway crossing, the new assault boats can carry 12 fully-equipped soldiers or a cargo of 1200kg. They can also be coupled stern to stern to give greater capacity for load ferrying.

When fitted with a 40hp motor, the flat-bottomed craft travels in excess of 10 knots.

Weighing in at 210kg, five metres long and with a two metre beam, the boat is more robust than its predecessor and, even when fully loaded, will still float when flooded.

After open tenders were called, several boats were extensively trialed by the Army. The assault boat produced by the Australian owned company, ABM Pty Ltd, was found to be the most suitable for Army's needs.

A new life for former RAN Flagship

The former Navy flagship, HMAS Stalwart, has begun a new life as a cruise ship in the Mediterranean.

HMAS Stalwart, a 15,000 tonne destroyer tender, was recently sold to the Cyprus-based shipping firm, Sea Royal Ferries, by the Department of Administrative Services for an undisclosed amount, instead of being sold for scrap as has been the case with many decommissioned naval ships.

The Minister for Defence, Senator Robert Ray, praised AUSSALES, the new disposals group of Administrative Services, for a convincing demonstration of the organisation's commercial prowess.

Senator Ray said it was a competitive sale with 12 offers received from within Australia and overseas. The sale had been conducted efficiently with the whole process, from advertisement to agreement and sale at a satisfactory price, being completed within four months.

By selling Stalwart as a 'going concern', the Defence Minister said that a considerably better price had been realised that if she had been simply sold for scrap.

Preparing a ship for scrap was expensive, involving dry-docking, securing hull openings and removal of equipment and hazardous material. Normally, retired RAN vessels were sold for scrap if other navies were not interested in acquiring them.

In this instance, although Stalwart was a warship, she had been built as a maintenance ship and her size and construction lent itself to commercial use. AUSSALES had recognised this potential, as had Mr Marangopolous, Director for Royal Sea Ferries, who completed handover formalities at Garden Island, Sydney, on Thursday, May 3.

Senator Ray added that the Navy was pleased that the sale had gone so smoothly and that the former flagship was to see further service in a different but perhaps more glamorous role rather than be consigned to an ignominious fate in the wrecker's yard.

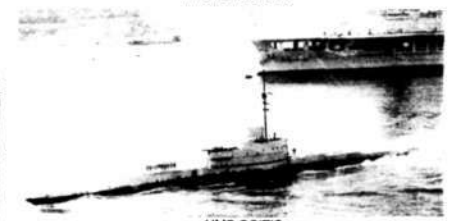
MALTA PICTORIAL

HMS SALMON

HMS ARK ROYAL

HMS ROYAL OAK

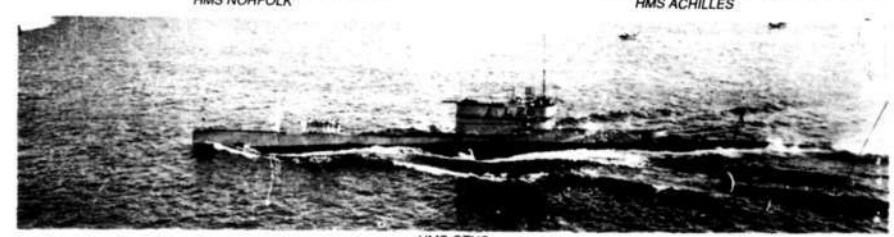
HMS QUEEN ELIZABETH



HMS OSITIS

HMS NORFOLK

HMS ACHILLES



HMS OTUS

BOOK REVIEWS

THE WAR AT SEA
Royal & Dominion Navy Actions in World War 2
by **Gordon Smith**
Published by **Ian Allan, UK**
Review copy from **Thomas C. Lothian Pty. Ltd.**
Price: **$59.95**

This book provides a concise overview of Royal & Dominion naval actions during World War 2 utilising detailed chronological tables covering the various theatres of operation, spanning the Atlantic, Indian and Pacific, Mediterranean, and Europe. Also included are significant events in the military and political spheres to provide a complete picture of events at that time.

Author Gordon Smith sets out with three aims — Detail Royal Navy warship losses, where and in what circumstances; acknowledge the part played by all naval forces (and the other armed forces) in the then British Empire, especially the Royal Australian Navy, Royal Canadian Navy, Royal Indian Navy and the Royal New Zealand Navy; and thirdly, to ensure a more balanced account of the Untied States Navy's operations in World War 2. Mr Smith has achieved his aim admirably.

Containing 192 pages, this book includes 129 black and white photographs with a high quality of reproduction which Ian Allan Publishers are renowned for. The bulk of the photographs come from the Real Photos Co Ltd., with the Imperial War Museum contributing the remainder. Amongst the RAN photographs included is a superb half page shot of the cruiser HMAS PERTH I and an even larger quality view of the destroyer HMAS NESTOR.

This book is supported by eight Theatre Loss maps and nine appendices covering an analysis of Royal & Dominion Navy major warship losses and the Axis Navies losses in total and those due to Royal and Dominion Navies.

Researchers and students of naval history will find this a most valuable reference laid-out in a concise and simplistic easy-to-read manner.

VIC JEFFERY

★ ★ ★

THE AMERICAN STEEL NAVY
by **John D. Alden, Commander, USN (retired)**
Published by **Naval Institute Press**

This writer was only half way The American Steel Navy when I decided to begin this review. The book is a compilation of both narrative and photographs (mostly from glass plates) of the development of the United States naval forces from the introduction of the steel hull in 1883 to the close of the world cruise by the Great White Fleet in 1909.

The author has successfully combined his well researched writings with the best photographs of the era, but unlike the more traditional publications, has divided his efforts into step by step mini chapters. These highlight everything from the new construction, but old design, monitors, dynamite ships, the growth of the American battleship and cruiser, new classes including submarines, torpedo boats and miscellaneous vessels such as enlisted pleasure yachts, war prizes and auxiliaries of the Steel Navy. Within the first section are over 20 sub-chapters.

Forging a Modern Steel Navy, the second section, describes the construction and repair, engineering, communications arms and organisation to name a few. The third section is devoted to the Men and Operations while appendices provide the relevant technical and personnel type data.

All of the photographs in The American Steel Navy have reproduced to the best possible size. Combine this with the excellent reproduction from the glass plates and the use of high quality paper, the result is a wonderful collection of the formative years of the United States Navy.

Each photograph is provided with a detailed caption, linked to the earlier text to allow the reader to trace the growth, successes and failures of the various ships, battles and other developments.

For the technical reader over 20 pages of line drawings prepared by A.D. Baker III are featured in an appendice, all drawn to the same scale. Adjacent to each drawing is a brief history of the units of each class depicted.

An extensive bibliography, highlighting the degree of research by the author is included in the book, as well as a large format index.

The American Steel Navy was first published in 1972 after four years research by the author. This excellent reprint by the United States Naval Institute Press appeared on the bookshelves in 1990 and is strongly recommended to all readers. It is now available direct from the publishers at Annapolis, Maryland, 21402, USA.

ROSS GILLETT

★ ★ ★

WARSHIP 1989
Edited by **Robert Gardiner**
Published by **Conway Maritime Press**

Always devoted to the design, development and service history of the world's fighting ships,* Warship, *in its new annual format, has sharpened its focus on these essential concerns.

The coverage is international in scope and ranges from the introduction of steam in the US Navy to the current projects to reintroduce airships into naval strategy. Amongst other articles are *USS Olympia, The First Flowers, Ships with Steel Skirts, Soviet Submarine Cruisers, The Sinking of the Yamato* and *The Pegasus Programme.*

There are two features geared to the new annual frequency: a listing of the important naval books published in the year with reviews of the most significant, and a review of the principal developments of the naval year — in both cases a convenient way of keeping up to date without recourse to the expensive naval annuals and the myriad of defence journals and magazines.

270 x 200mm (10½" x 7¾"), 256 pages, 200 photographs, 85 line drawings.

★ ★ ★

HMS GANGES
by **John Douglas**
Published by **The Roundwood Press, Kineton**

The name "GANGES" conjures up many images in the minds of most who hear it. To some the sharpest image will be that of the 150 ft mast which every boy at GANGES had to climb. To others the name conjures up images of shouting GIs who made those at GANGES wish they were somewhere else. Alas, or fortunately, there will be no new generations of Boy Seamen who will be able to experience the delights of GANGES. The closest anyone will be able to get is by reading John Douglas' book.

John Douglas, an ex-GANGES nozzer, has recountered his trials and tribulations at the hands of the GIs, PTIs and KR and AIs. In doing so he has not only written a very enjoyable account of his time at GANGES but has also provided an insight into the life of a new entry in the Royal Navy at a time when corporal punishment was still part of the naval disciplinary system. These tales, recountered by John Douglas, highlight the fact that whilst life was tough for those at GANGES it filled those that completed the training with a sense of pride and loyalty. It was this loyalty that saw the return to GANGES of so many ex-GANGES boys for the final parade that there was not enough room in GANGES' 150 acres to accommodate them.

HMS GANGES is a book that fills the need of many people, those interested in naval history, those interested in the social structure of the navy or those who are just interested in a good yarn. All of these will find HMS GANGES a worthwhile and enjoyable book to read.

JOE STRACZEK

SHIPPING AND WATERFRONT REFORM

It has always been popular to link shipping and the waterfront in the public mind as if they were one and the same industry, whose problems should be addressed as such.

Of course both are fundamental parts of the maritime scene but in many ways they, and the problems of those who work in them, are as different as chalk and cheese.

It is perfectly possible to have a highly efficient shipping industry trading world-wide while also having poorly organised inefficient local waterfronts, and vice-versa. Clearly the nation is in the most advantageous position when both the Aust-shipping industry and the waterfront which services shipping of all nations, are highly efficient.

In many ways the differences between these two different but inter-related industries were highlighted at the conference on Shipping and Waterfront reform held at Darling Harbour, Sydney on 19/20 February, 1990. This conference, arranged by Aust. Investment Conferences and endorsed by the Aust. National Maritime Association was well attended by representatives of virtually all interested parties from all corners of the continent.

Apart from a short attendance by the Hon. Ralph Willis MP Minister for Trade and Communications who delivered an address covering the Government update of the various reform packages. Representatives from both sides of Parliament were noticeable by their absence — an unfortunate omission given the national importance and relevance of reform measures in the current economic climate.

There seemed to be widespread agreement that there has been much improvement in the general international competitiveness of our shipping industry. Indeed it was claimed, with some justification, that shipping was the clear leader among all our industries in structural adjustment, internal re-organisation, and improved productivity and efficiency.

With generally close co-operation between owners, management, unions and Government following a series of inquiries and agreements, much has been achieved in the last 7 years.

The benefits of the establishment of the Australian Maritime College at Launceston, with its many training courses including those for 'integrated ratings', are now being felt.

Along with re-organisation in new ships, the introduction of new manpower replacement technology, retraining, and restructuring, amalgamations have reduced the number of unions in Australian flag ships from 7 to 3, and hopefully this will reduce to 2 (officers and ratings) in the near future. With these changes have gone changes in social relationships and conditions aboard ships, thus allowing major reductions in crew sizes and greater feelings of 'all of one company'.

Manning levels have already been reduced considerably and within 3 years will be down to 17 or 18 people with the possibility of further reductions to about 14. This compares with an average of 26 to 36 of a few years ago, and will be comparable to OECD levels.

In parallel with the many changes has been a remarkable fall in industrial disputation and an increasing record of reliability.

There is still some way to go, particularly in the ratio of crews needed for each ship, (to allow for leave, sickness etc) which is still well above European levels. Nevertheless crew costs are no longer as significant as they used to be in the overall running costs of ships.

One remarkable development is that the car ships 'Australian Searoad' has a crew of 21, which is one less than similar Japanese-manned vessels. Indeed Japanese crew costs are now sometimes higher than those of Australian manned vessels.

Together with the above major developments Diesel Fuel taxes have been adjusted to allow fairer competition with foreign vessels.

Indicative of the growing competitiveness of the Australian merchant fleet is the gradual increase in its size as ship owners gain confidence and find the revitalised industry more rewarding. Additions of new ships have grown gradually each year from 2 in 1987-88 to a projected 10 in 1990-91. While older ships will drop off the list, the overall numbers of ships and the total fleet cargo capacity are growing steadily.

While much remains to be done, the industry seems on course for an expanding and bright future with all the advantages this should bring to the nation. There is a huge and immediate opportunity to increase the proportion of our seaborne trade carried in Australian ships from its current low level of 4%.

Cargo carried in Australian ships 'value-adds' to the export concerned, earns foreign exchange, reducing our balance of payments deficit, creates national wealth and employment and with the consequent expansion of our merchant fleet, supports our defence capability.

The waterfront however, is a different story.

While there is no denying that some reforms have been achieved such as gradual rejuvenation of the workforce; improved training; improved incentives; a reduction in industrial disputes and hours lost; reduction in manning at some grain loading terminals; removal of 200 redundant gangway watchmen; and some reductions in tug crew sizes, a great deal remains to be done.

There was some trenchant criticism at the conference of the snails pace of reform despite the plethora of investigations, reports and recommendations of recent years.

These appeared to be much ammunition to support this general disenchantment.

Waterfront reform is urgent for irrespective of whose ships carry our goods, freight charges, a significant proportion of which are our own port handling charges, affect our international competiveness, the return to our producers of all exports and the cost of imports.

It was stated for instance that no less than 60% of the freight charges for Trans Tasman shipments was due to port handling charges in Australia and New Zealand — a staggering percentage by any standards, and a significant load on our economy.

While stevedoring charges are the most significant elements, there are other areas where our ports are not competitive with many overseas. Towage charges, berthing dues, and linesmen/mooring charges are often several times those of foreign ports such as Hong Kong.

The waterfront is of course a much more complicated and fragmented industry than shipping. There are many participants with differing interests: Federal and State Governments and instrumentalities; port authorities; shippers; ship owners; stevedoring firms and personnel; many unions; agents; transport organisations; pilots; tugs; repair and maintenance organisations; and others.

Nevertheless it seems clear that the overall problem of speeding up ship turnaround times and cargo distribution, reducing costs, increasing security of cargoes and equipment and greatly improving efficiency must be tackled, and quickly.

It was refreshing to hear that some steps are being taken to introduce E.D.I. (Electronic Data Interchange) systems which will reduce costs by as much as 5%. Many other measures will be needed to improve organisation, training labour productivity.

Fundamentally, however, a new spirit of endeavour is needed on the waterfront, with all organisations concerned working together for the nation's good and the necessary recovery of our economy.

ANDREW ROBERTSON
Rear Admiral (Retired)

TS Coral Sea lives up to its motto "Second to None" by being awarded the Navy League Efficiency Award for being the most Efficient Unit in Australia for 1989. Pictured here with the award (Left to Right) The Commanding Officer TS Coral Sea LTCDR I.R.M. McDougall NRC, Seaman A. Jansen, Recruit M. Brown, Able Seaman R. Crofft and Chief of Naval Staff VADM M. Hudson AC.

(Photograph by courtesy of Townsville Bulletin).

The President of the Townsville Branch of the Navy League Mr. Ed Bowen (Left) receives a cheque for $10,000 from Mr. Hal Slaney (Right) representing the Sheraton Breakwater Island Casino Community Benefit Trust. The money is being used to help pay for the recently completed Boat Deck and Bosuns Store for TS Coral Sea.

(photograph courtesy Townsville Bulletin).

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OCTOBER-DECEMBER, 1990

THE NAVY

The magazine of

THE NAVY LEAGUE OF AUSTRALIA

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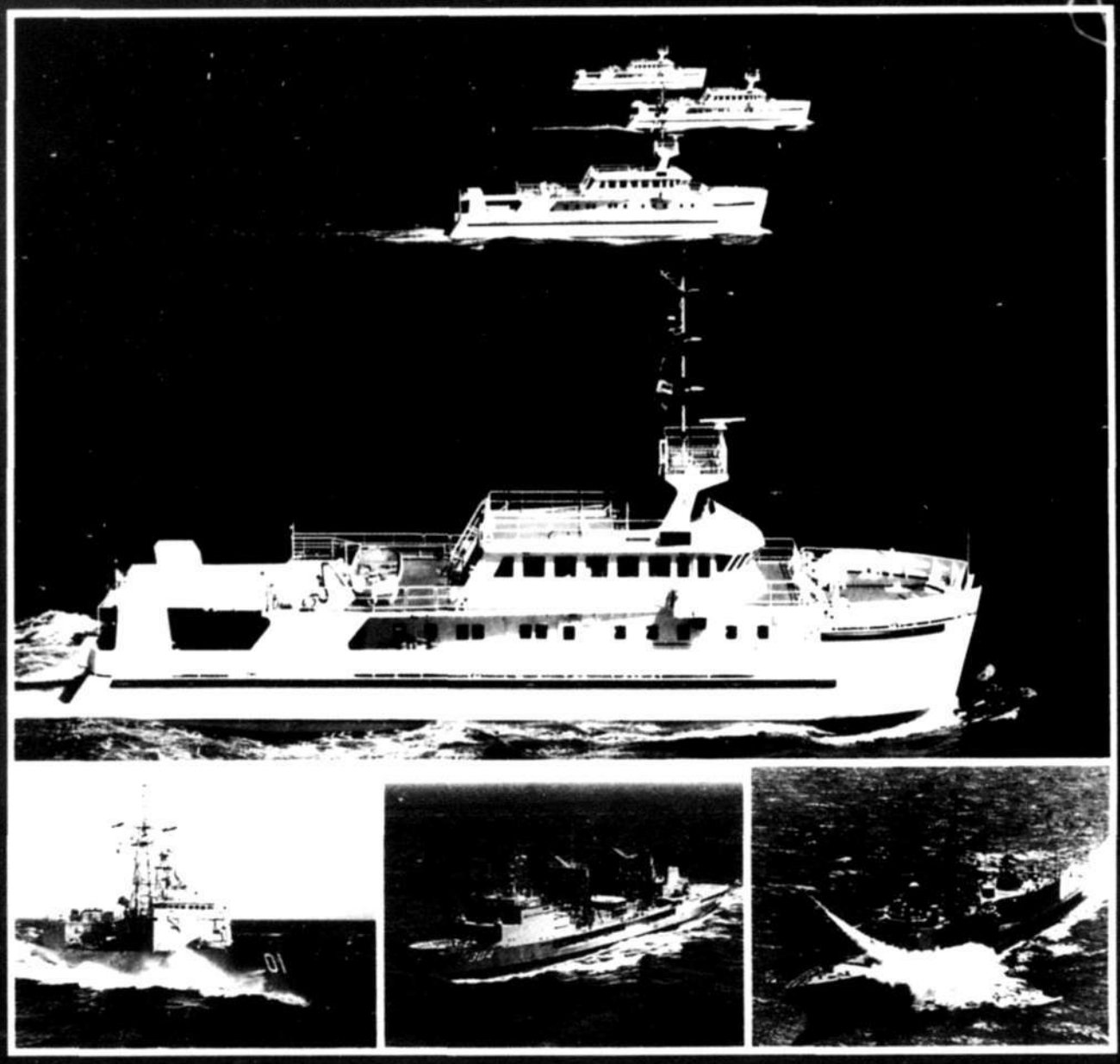

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OUR FRONT COVER PHOTOGRAPHS

Top: Four Survey Motor Launches, HMA Ships SHEPPARTON, BENALLA, PALUMA and MERMAID in June 1990.
Bottom left: HMAS ADELAIDE.
Bottom centre: HMAS SUCCESS.
Bottom right: HMAS DARWIN.

CONTENTS

viewpoint

THE DEFENCE FORCE and THE COMMUNITY
THE WRIGLEY REPORT

The following comments are not to be taken as a review of the recently issued report by Mr Alan Wrigley entitled *"The Defence Force and the Community"*, a report commissioned by former Defence Minister Beazley in May 1989. To review a 600-page document containing a host of recommendations in the space available to Viewpoint is impossible and unfortunately publishing deadlines preclude a detailed review in this issue of *THE NAVY*.

THE Wrigley Report is an important document as it deals with an important subject – the relationship between the Defence Force and the community and is written by an official experienced in the defence decision-making process and who's recommendations, if accepted by government, would quite drastically change Australia's defence organisation.

In brief, the object of author Wrigley is to create in the Australian community an understanding of the country's security problems and to do so by involving the community to a much greater extent in defence activities. Involvement would be in several ways but principally through a greatly increased Reserve Force component and the replacement by civilians of regular ADF personnel engaged in support functions ranging from communications to catering. A smaller number of civilians would be directly employed by the Defence Department but a vastly increased number would be involved in functions contracted out to industry.

The report is highly critical of the proponents of a militarily self-sufficient Defence Force; this the Report maintains is wasteful, makes timely expansion difficult to achieve in an emergency and tends to separate the armed forces from the wider community.

The Report acknowledges that attitudes in some areas, not least in the ADF, would have to change if a "total", ie, community-based, defence effort is to be achieved: Change may require firm and bipartisan political pressure or direction.

Political attitudes to defence over the years are discussed in the Report and the author notes the change from a forward defence posture to the present more regionally-orientated stance. Opposition to major overseas commitments by the ADF is strongly expressed although lesser involvement in Australia's neighbourhood is not ruled out.

One cannot quarrel with the objective of the Wrigley Report – better community understanding of, and involvement in, national defence but the writer of Viewpoint is of the opinion that a number of assertions are arguable and some proposals unreal stic; for example, to almost double the size of the Reserve (and use Reservists to replace regular personnel) is surely impracticable given existing recruiting/retention difficulties.

TO preclude the deployment of ADF units overseas, thus removing an important option available to governments, is a proposal unlikely to be accepted by political leaders; the recent decision to send a naval force to the Middle East bears this out.

The Report's direct and implied criticism of Service leadership is harsh and mostly misdirected; after all, political leaders make the important defence decisions albeit on the advice provided by a composite team of civilians and servicemen in the Defence Department, a team which for a time included Mr Wrigley.

While there would appear to be scope for change and increased civilian participation in some support functions, for example, stores and victualling, author Wrigley appears to be rather optimistic about the ability of governments to ensure industrial harmony at all times; the Navy in particular has had some unfortunate experiences in this regard.

Mr Wrigley correctly regards the lack of understanding and disinterest of far too many Australians in their Defence Force as a weakness in our country's security and wants to bridge the gap (in passing, one might add that the role of the media, supposedly a bridge between government and people, receives very little attention in the Report). Whether or not the Wrigley proposals are acceptable or practicable, at least a major attempt has been made to remedy a serious deficiency and his Report warrants wide attention.

Federal President

"THE NAVY"

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

The Hon. Secretary, NSW Division
NAVY LEAGUE of AUSTRALIA
GPO Box 1719, SYDNEY, NSW, 2001

viewpoint

AKUNA

Dear Sir,

Following on from the article on STRADBROKE II (July/Sept 1990 issue); it is interesting to note that the Port Phillip Sea Pilots had a further connection with the RAN in two of their other vessels: both named AKUNA, and both with long, varied careers.

The first AKUNA was purchased from the RAN on 6 January 1925 as the ex-HMAS UNA. This twin screw, coal fired steamer of 953 tons gross, 210' LOA, and 15 knots; was originally built in 1911 by Bremer Vulcan as the KOMET and used by the colonial administration of the German Imperial Govt in New Guinea. By July 1914 she was part of the German Navy. When captured by the RAN in October, she was converted to a sloop, and used as a patrol vessel, renamed HMAS UNA.

On purchase by the PPSP, she was registered in Melbourne, 12 May 1925 and named AKUNA (meaning 'flowing waters'). She was fitted out as a cruising pilot cutter to operate off Port Phillip Heads, in conjunction with the SS VICTORIA. The internal fittings were described as luxurious; and she served the PPSP very well until WYUNA commissioned in 1953 (except for two years laid up during the war 1941-43 whilst STRADBROKE II operated).

AKUNA was sold on 23 March 1954, to J. Dent for demolition in the Maribymong River. This work proceeded slowly till 1957.

The Navy sold HMAS GLADSTONE to the PPSP in July '56 to become the second AKUNA. Built by Walkers, Maryborough, in 1943 as one of the 56 Bathurst class minesweepers. After conversion at Williamstown 1956-8 to a cruising pilot cutter, she was registered as AKUNA on 22 April 1958, and served as such, in conjunction with WYUNA, till 1974 when the PPSP commenced operating 'fast launches' as a means of shipping pilots.

AKUNA was sold in March 1974 to S. Bevan-Davies, but remained laid up in Melbourne. Sold to B. Holoham in September 1977, she sailed to Brisbane; where I remember her laid up at Borthwicks Wharf reportedly under arrest, and bankrupt. I understood both owners intended to operate her as a private yacht, but failed. When sold again on 7 September 1978, to B. Baron, she sailed to Singapore to be fitted out as a hospital/relief ship for service in the South China Seas assisting Vietnamese boat people, from December 1978.

AKUNA as a pilot vessel.

AKUNA in 1975. (Photo – G. Andrews)

In Singapore Harbour.

Singapore, 1980, as AKUNA II.

Whilst unofficially referred to as the 'Bamboo Cross', she was the cause of some official embarrassment: refugees were a diplomatic headache by this time!

On 3 September 1979 the ship was reported anchored 55 NE of Singapore with 135 refugees onboard waiting Australian Government approval to land them.

Her Melbourne register was closed on 21 April 1980. AKUNA was re-registered earlier under the Panamanian flag on 4 February 1980 as AKUNA 11; the first time the II had been officially used. Mr B. Baron sold her on 14 April 1980 to the 'Food for the Hungry International' of Arizona, USA, under whom she continued refugee rescues.

The vessel developed boiler troubles about this time, and eventually operated only on one boiler, at a speed of five knots. By 1981 AKUNA had rescued 365 refugees for the new owners, who sold her late 1981. After shifting her to Song Khla, Thailand, the

VIEWPOINT - READERS (CONTINUED)

purchaser defaulted on payments, and 'Food for the Hungry' had to repossess the ship. AKUNA ex GLADSTONE was sold in 1983 to be broken up in Thailand. The name AKUNA is continued today in a current PPSP pilot launch.

Yours faithfully,
CAPT M. J. CAROLIN
Port Phillip Sea Pilot.

• • •

SUBMARINES AT MALTA

Dear Sir,

I was surprised to see in the July-September 1990 issue of *The Navy* on page 35 an illustration of submarine L 26 with caption underneath reading HMS OTUS.

HMS OTUS was a sister to HMS OSIRIS (not spelt OSITIS as shown) which is illustrated on the same page. Both were sisters to OTWAY and OXLEY. Other sisters were ODIN, OLYMPUS, ORPHEUS and OSWALD, OBERON of same class differed in having a blunt bow.

L 26 was one of 33 – L class submarines built for the Royal Navy under the Emergency War Programme 1917-1922. The L class followed the K class steam driven submarines and were an improved H class. Early Ls appeared similar to the H class but some were given a 4in. gun mounted on a fair water in front of the conning-tower. Later Ls were also given a 4in aft of the conning-tower and some were converted for mine laying.

Only 3 Ls served during WWII; L 23, L 26 and L 27. All three were built by Vickers Armstrong, Barrow and completed at Chatham. L23 lost off Nova Scotia while under tow to shipbreakers 1946. L 26 broken up Canada 1946. L 27 broken up Canada 1947.

The Ls were 236ft x 23.5ft x 13.5ft. 760/1080 tons. 17.5 knots on surface. 10.5 knots submerged. 4 bow tubes 1 or 2, 4in guns.

The photo of HMS QUEEN ELIZABETH was taken after the trunking of her two funnels about 1933. Just prior to WWII QUEEN ELIZABETH was again rebuilt with NELSON type bridge, single funnel hanger and crane.

Hope this is of interest.

Yours faithfully,
TREVOR JENKIN
Holden Hill, SA 5008

• • •

STRADBROKE I

Dear Sir,

Captain Carolin's article on STRADBROKE II, brought a query to my mind if the STRADBROKE II was in fact wrecked off Cape Lambert in 1956.

A vessel named the Stradbroke and registered in Gladstone was used in the 60s and 70s by a Mr Tim Robinson in Brisbane.

The vessel was exactly the same as the one as in the photographs in the article, however the wheel house was a little different.

The square parts also visible, were identical to the Stradbroke operated by Tim Robertson.

STRADBROKE was used to carry provisions, laundry, etc, to Ampol Tankers especially the P.J. ADAMS.

The last time I saw STRADBROKE she was moored at a private jetty past the Jindalee Bridge a good way upstream from the city.

I enjoyed the article and wondered if the STRADBROKE II was not destroyed and that this was the same vessel which was operated by Mr Tim Robinson.

Yours faithfully,
JOHN GATES
Ascot, Qld 4007

The vessel mentioned by John Gates was the STRADBROKE I, a similar but smaller vessel to the one depicted in the last issue of The Navy – Editor.

NAVY TO GULF

by Lieutenant TOM FRAME

The silent service proves Australia's most swift

As an RAN detachment of three ships arrives in the Persian Gulf, Tom Frame shows that Australia's navy has had a long tradition of being constantly ready for war.

IT HAS surprised many people that Australia has already become directly involved in the current Gulf crisis. Yet as a nation that relies upon the oil the Gulf produces, it was inevitable.

What is perhaps even more amazing was that when the Prime Minister, Bob Hawke, spoke with President Bush he was able to offer an Australian naval task force of three ships which would sail in just three days.

So while there was a delay of one week while a military force was prepared for possible involvement in neighbouring Fiji during 1987, the navy has shown itself ready for combat, and not just a minor police action, in half the time.

There are many reasons for this, but principal is that warships must be at a high level of operational readiness if they are to be at sea at all. Other than those ships undergoing refit or in self- or assisted-maintenance periods, Australian warships are at eight hours' notice for sea and this often means eight hours' notice for war.

The attitude produced by such standards of operational readiness is a product of the Navy's history and means that in the opening moves of every conflict in which Australia has been involved, the RAN has played the dominant role.

World War I was declared at 10 am on August 5, 1914. The immediate fear was German activity in New Guinea and the whereabouts of the East Asiatic Squadron under Admiral von Spee.

At that very moment, the battlecruiser and flagship, HMAS AUSTRALIA, was hurrying north up the eastern coast to a prearranged rendezvous having departed Port Jackson the previous evening at 9.45 in anticipation of war starting. She would join with the SYDNEY, the WARREGO and the YARRA which had sailed from Townsville on August 3.

The cruiser MELBOURNE had sailed from Sydney just over an hour later steaming south about the continent to take up her patrol off the West Australian coast. The refitting of the two Australian submarines, AE 1 and AE 2, at Williamstown was cut short and they were both ready for service on August 10, sailing with the cruiser ENCOUNTER the next day. The cruiser had also been refitting. HMAS PROTECTOR sailed from Port Jackson as the submarine parent ship.

Within a week of war being declared, the Australian Fleet had arrived at its assigned war station and began to take action against the Germans. It was because this action was so swift and the enemy given so little time to prepare or reinforce that von Spee was driven out of the Pacific. German New Guinea was captured by mid-September and the raider SMS EMDEN had been hunted down and sunk. By mid-November 1914, the RAN had removed any direct threat to Australia or its interest.

The outbreak of World War II saw the RAN just a well prepared for hostilities. In fact, the navy was the only service that was ready. The fact that war was about to be declared and as it was Sunday had no bearing on the Navy's mobilisation for war.

The heavy cruiser CANBERRA was at sea patrolling the coast of NSW. The light cruiser HOBART and the destroyer VOYAGER were off Gabo Island in search of enemy raiders while VAMPIRE was off Cape Otway searching for the Italian merchantmen ROMOLO and VENDETTA was patrolling the coast off Port Stephens. VOYAGER and VAMPIRE then sailed to reinforce HMAS SYDNEY based in Fremantle. Australian ports were sealed and enemy merchantmen either captured or pursued. Some were able to escape given that they had around nine days' notice of the outbreak of war.

Although the war was then a long distance from Australia, the fleet was immediately at sea securing and protecting Australia's vital sea lines of communication.

The Korean War saw the RAN directly involved again within the first week of hostilities. The frigate HMAS SHOALHAVEN had been in Japanese waters for five months as part of the occupation force when North Korea invaded South Korea on June 25, 1950. The destroyer BATAAN was on its way to Hong Kong to relieve SHOALHAVEN.

Less than three days later, Prime Minister Bob Menzies was able to place the two RAN ships at the disposal of the United Nations.

Australia's first two submarines alongside HMAS SYDNEY enroute to New Guinea in early World War One.

HMAS SHOALHAVEN during the Korean War.

SHOALHAVEN immediately sailed from Sasebo for Pusan as part of an Allied convoy escort, a task she would continue to perform until August 31 when relieved by the destroyer WARRAMUNGA.

The early availability of the Australian ships assisted in the vital resupply of the Korean Peninsula, the blockading of the western coast and highlighted Australia's commitment to the UN.

Although the RAN was not altogether unprepared for some participation in the war in South Vietnam, the timing of the announcement that Australia would commit ground forces did cause some problems.

Considering the strategic circumstances of the early 1960s made it likely that Australia would need a troopship, the ageing aircraft carrier HMAS SYDNEY was saved from the scrapyard and converted for such a role. Until specifically required for that purpose, the navy operated her as a training ship.

HMAS SYDNEY, sails for South Vietnam with a full load of army equipment.

Menzies' decision to send Australian troops to Vietnam depended to some degree on their transportation to South Vietnam, together with their equipment and supplies. This vital support would undoubtedly come from the Navy.

Information that Australia was to be involved on the ground in Vietnam was passed to the captain of HMAS DUCHESS before Menzies' announcement in Parliament.

Commander Ian Burnside was told to prepare his ship for service off Vietnam, including the escort of SYDNEY. However, the "troopship" was then refitting at Garden Island Dockyard in Sydney. On May 4, 1965, its captain was informed the ship was required to sail for Vietnam.

In a Herculean effort, the refit was curtailed and painting completed. 153 sailors were recalled from leave to make up her full peacetime complement. They prepared for sea trials and storing of the ship began.

By May 26, cargo and military vehicles were loaded, and the soldiers of the 1st Battalion, Royal Australian Regiment, were embarked. Sydney sailed for Vung Tau, South Vietnam, at 1 am on May 27.

Since the end of Australia's involvement in the Vietnam conflict,

HMAS SUPPLY.

the Navy has been called upon with short notice to play a leading role in Australian diplomacy.

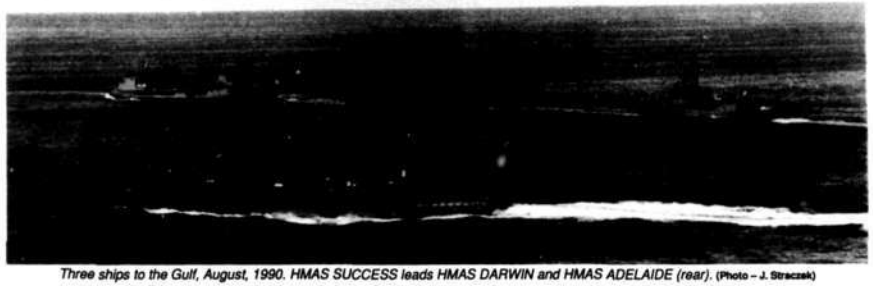
The demands placed on the Navy have been diverse. There was the impromptu decision to send HMAS SUPPLY to Mururoa in 1973 to protest against French atomic testing. After the Soviet invasion of Afghanistan on the early 1980s the Navy was involved in Persian Gulf patrols. Five RAN ships were sent to Fiji for the purpose of evacuating Australian nationals within two days of the first military coup.

There are two reasons for the Navy usually being the first on the scene.

First, the Navy's ships are maintained at a high level of operational readiness or can be brought to that state in very little time. This has meant they are available for deployment almost immediately.

Second, because the navy is the most mobile of the armed forces and has units deployed continuously in South-East Asia and the Pacific, it is often very close to the scene of activity and in the best position to demonstrate Australia's interests and resolve. This was certainly the case during the Malayan Emergency and "confrontation" when the presence of RAN units throughout the region saw them immediately thrust into action. There was not a ship or a single life lost in that period.

The fact that this level of readiness is maintained in peacetime means that Australia has some flexibility in its diplomacy and can select from a range of options, including the prompt despatch of the three ships. The characteristics of the ships also allows plenty of freedom of action.



Three ships to the Gulf, August, 1990. HMAS SUCCESS leads HMAS DARWIN and HMAS ADELAIDE (rear). (Photo – J. Straczek)

Whereas in the past RAN units often had to rely upon fuel of dubious quality from foreign supply ships or ports, the tanker SUCCESS, which sailed recently, will provide fuel of guaranteed quality throughout the long passage and reduce Australia's dependence upon any other nation.

The two frigates ADELAIDE and DARWIN – being of American design and construction, are fully compatible with US Navy vessels already in the Gulf and possess a good mix of defensive and offensive weapons and sensors.

As the RAN has developed a deep understanding of the US Navy and its operating procedures from ANZUS exercises over the last 40 years, the Australians should have little trouble in becoming an integral part of the vast naval armada assembling in the Gulf.

The long passage across the Indian Ocean provided an extended opportunity for exercises and the fine tuning of the ships' organisation, particularly the command teams.

The rapid response from nations such as Australia and Canada to the Gulf crisis should leave Iraq in no doubt as to the determination of a large part of the world to resist its aggression. The arrival of this vast international fleet will hopefully deter President Saddam Hussain from aggression against Saudi Arabia and force him to withdraw from Kuwait.

Iraq is vulnerable to attack from naval forces, which have the capacity for a sustained presence and opposition to any further developments. Iraq's experience and ability to repel this type of force is limited.

Certainly there is no chance of any of the fruit of this incursion, passing through the Gulf, which has only recently been completely cleared after Iraq's protracted war with Iran.

The outcome of the current crisis is by no means clear and is impossible to predict. But whatever happens, it has already shown that the prolonged period of peace since Vietnam has not diminished the readiness of the RAN to respond to an international crisis or the Government's confidence in the ability to perform in a tough situation.

HMAS DARWIN leaves the Fleet Base for the Gulf.

Lieutenant Frame is with the Department of History at the Australian Defence Force Academy.

Farewell to family and friends, August, 1990.

School Ship SOBRAON

Beginning in 1866 the Colonial Government of New South Wales moored the old school ship *Vernon* in Sydney Harbour as accommodation for the child offenders of the colony. In 1890 the twenty-four-year-old composite sailing ship *Sobraon* was purchased as a replacement for *Vernon*. The new ship remained in this capacity until joining the Royal Australian Navy in 1911 as a training vessel for the 'lower deck'. Fred Hanger, a former incumbent of the ship, wrote of his experiences aboard *Sobraon:*

LIFE aboard her began each day when "rise and shine" was piped at four bells. It was a lively turn-out: hammocks were lashed, ready for stowing in the nettings, and then there was a mad rush up to the large washhouse under the fo'c'sle head.

Soon afterwards, washdown parties were piped – the starboard watch on deck, the port to clean the mess deck and lower sleeping deck, which was almost at water level. Then the drones, such as pump boys, gangway boys etc, were sorted out, and the rest were herded together with "bruges", each being half a coconut husk, which was wielded from side to side on the wet and sanded deck.

This occupied over an hour. The scrubbing party started aft on the poop deck, and, oh! what a relief, to stand for a couple of minutes while we walked down the ladder to the main deck; for all this scrubbing was done by crouching on our haunches and slowly moving along on the toes. And wasn't that lovely on a cold morning; for sometimes great care was NOT taken by the hose boys, so that we were copiously splashed with the cold sea water, pumped up from the harbour by a large steam Worthington pump!

The mate was in charge of this party. He walked among the boys, and woe betide any malingerer, for the mate had a large thick cane and was not afraid to use it.

By eight bells the poop, fo'c'sle and main decks had been thoroughly washed down; all halliards and cutters' falls were coiled in their respective places, the decks squeezed nearly dry and all gear put away. "All hands to breakfast" was then piped.

The staff and boy officers onboard the NSS SOBRAON.

The mess deck, just below the main deck, had many mess tables, each seating 16 boys. Two peggies from each mess collected a dixie of porridge and another of coffee as well as a kid of bread, one slice to a boy. The second officer went the rounds as the captain of each mess reported "All correct, sir". Then the boys sat down to wolf half the amount they could have eaten!

After breakfast, each boy had his allotted task cleaning and polishing cutlery, etc. These had to be all laid out on the mess tables ready for captain's inspection at nine o'clock. Before that it was a case of away to the sleeping deck to change into No 1 ducks, ready for Divisions.

Commander's reception room.

In their hammocks.

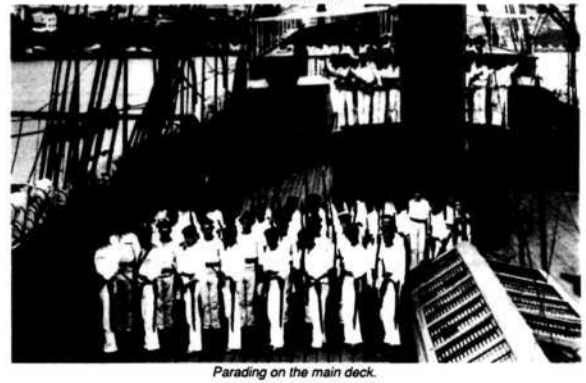
Divisions sounded at two bells. All hands, about 300, then mustered on the main deck in a double row on each side of the main deck. After the roll had been called, the mate went to the captain's office on the poop and reported all correct. The captain now came out in all his glory, and, with the mate and second officer trailing behind the bugler and doctor, made an inspection of every man and each part of the ship.

After the inspection, the captain's "Carry on, Mr Mate" was the signal for several pipes – to muster the pinnace crew, the school party and the various working parties.

All the positions aboard ship were assumed by boys under the eyes of the supervisors. The crew for the pinnace, a 12-oared barge, brought her alongside the port side ladder, and she took on the working party who were being taught carpentry over at Cockatoo Island. Other boys onboard were distributed to their various classes, including school for the younger and backward ones. Others went to classes in seamanship, the compass or knotting and splicing. All these activities continued until seven bells.

Then the pinnace crew had again to run out along the boom and down the lizard into the pinnace, which they pulled over to Cockatoo to bring the carpenters aboard for their lunch. Another job for the pinnace was to go over to the Balmain Colliery for a punt load of coal for the donkey boiler, which generated the day's steam for the pumps and generator. The chief engineroom boy ran the dynamo all day, charging batteries for the lights at night.

Recreation hall.



Parading on the main deck.

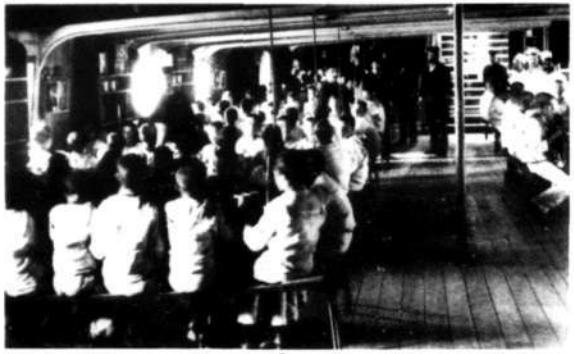
On coal ship days it was quite a day's work. The boys brought the punt alongside on the port fore side. A few boys got on the punt to fill the coal bags, which then were hoisted by a whip from the fore topsail yard, the tail being led to a leading block on the fo'c'sle bulwark and tailed on to by a couple of dozen boys who ran across the deck, hauling a bag at a time up to be emptied into the bunkers on the fo'c'sle head. It was a dirty job and always hurried, so as to get washed in time for eight bells (four o'clock).

All hands were then piped to wash clothes, which were hung on lines rigged between the fore and main shrouds. Everything was done at the double, since tea was piped at two bells. This consisted of a mug of tea and a slice of bread, and as soon at it was over we could spend the remainder of the first dog watch on deck.

At four bells, recreation was piped. All strippers and good conduct boys then went either to the library (under the poop) or to the large recreation hall in the 'tween decks, from abaft the mainmast to the mizzen. The remainder of the boys were divided between the physical culture and sword drill classes on the main deck, or the crowd which squatted on the forward part of the mess deck to hear a story read by one of the boys.

At three bells (7.30) all hands were piped

Recreation ground ashore.



Dinner.

next wharf. The visitors marvelled at the cutter's speed and ordered a case of fruit to be sent aboard for us next day.

The *Dart* was a small tender, brigantine-rigged, I think. She had steam as well as sail propulsion and took only a limited number of boys, those who were anxious to go to sea. Each year she sailed for a few months around the north of Australia.

Captain Thompson, the *Dart*'s skipper, lived at Long Nose Point, and whenever the *Dart* was going out, he always blew a few long blasts on the whistle as his wife came to the front of the house to wave goodbye. The boys, of course, said he had to stop the engines in order to blow the whistle.

In conclusion let me say I have none but very happy memories of the *Sobraon*. Although she was a tight ship, she gave me the happiest years of my boyhood.

The laundry.

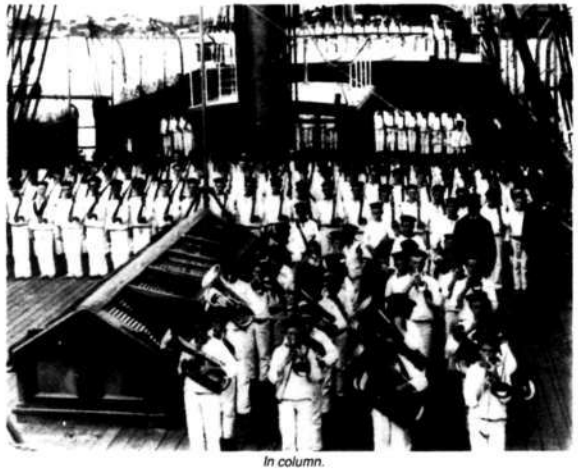
Boys recreation hall.

below to the sleeping deck. After prayers and muster, hammocks were slung and woe betide the boy last in his hammock as eight bells were struck.

Boys performed even the duties of watchmen and lookouts. The latter were on duty on the fo'c'sle all day, while the lookout boy on the poop not only had to strike the bell on time, but also to hoist signal flags, keep a lookout for shore signals indicating a launch or gig was wanted at Balmain, and to watch the craft on the harbour. Saturdays were always busy for the cutter crews, who went out to the assistance of overturned yachts.

I remember a shore party came aboard one night to give us a concert. They sang and acted on the poop, with the boys squatted on the main deck. At the end we were all given a bun and a cup of lemonade, but were interrupted by the bosun's pipe "Away third cutter's crew".

Some of the concert party lived up the Parramatta River and their last ferry was already passing ahead of us, making for Cockatoo. As soon as all were safely aboard the cutter, the crew gave way with a will and chased the ferry, catching up with it at the



In column.

Practical instruction.

SOBRAON's library.

In 1911 *Sobraon* was purchased by the Royal Australian Navy, renamed *Tingira* (the open sea) and anchored usually in Rose Bay. She remained in the naval ranks until decommissioning on 30 June 1927.

In 1933, moves were made by the newly formed Australian Nautical Exhibition and Museum Company Limited, to refit *Tingira* as a show ship to accommodate meetings, fetes, lectures and other entertainments. She was to be moored in Circular Quay.

The estimated cost for the venture was £10,000. A total of 10,000 shares were to be offered. The plan did not draw sufficient public support and, after changing ownership a number of times, *Tingira*, ex *Sobraon*, was broken up in Berrys Bay in 1941.

School Room.

On 5 April 1990, a surprising signal from the Chief of the Australian Naval Staff to numerous authorities stated "... and accordingly I have directed that, subject to the provision of suitable accommodation, women shall be permitted to serve in peacetime in all ships except submarines". Clearly someone had given the Chief of Naval Staff permission to make this statement. Who was it?

Women At Sea

by Vice Admiral Sir Richard Peek

THE new Federal Cabinet was sworn in on 4 April 1990. It seems unlikely that either the new Minister for Defence (Mr Ray) or new Minister for Defence, Science and Personnel (Mr Bilney) would have the time to study and make a decision on such a complex and controversial matter in the few hours before the Chief of Naval Staff's signal was released. There can be little doubt the decision had been taken by the previous Ministers (Mr Beazley and Mrs Kelly) prior to the Federal election on 24 March although no mention was made of it during the election campaign.Nearly two months later, on 30 May, Mr Bilney announced in a press statement "Women will serve in combat-related positions"; he went on to say, inter alia:

- "I have taken this decision on the advice of the Chiefs of Staff Committee". It will be noted that the Minister used the word "advice" rather than "recommendation" and this is hardly surprising when the Chief of the Defence Force, General Peter Gration, was subsequently quoted in several newspapers as saying "I don't think the country is ready to put women into combat, I don't know if it ever will".

- "The Services will no longer use the exemption under the Sex Discrimination Act which allows women to be excluded from combat-related duties. At this stage the exemption for combat-related duties will remain alongside the exemption for combat duties". Can an individual Chief of Staff, a junior Minister or indeed Cabinet disregard or alter a regulation made under an Act of Parliament without first explaining or tabling the proposed amendment in the Senate and the House of Representatives?

- "Having regard to the particular nature of their operations each of the Services have examined their activities to determine how women will move into combat-related roles. This has been done with the clear understanding that they will not be withdrawn should a conflict arise. The Royal Australian Navy has decided that women can serve in all Navy ships with the exception of submarines ...". In other words it would appear that both "combat" and "combat-related" exemptions are to be discarded.

Do Australian parents really want their daughters and grand-daughters to be engaged in combat? Although war of 1939-45 dimensions may seem a remote possibility, it should be remembered that in the last 45 years of "peace" our armed forces have been in action or at risk on numerous occasions while fulfilling United Nations or Treaty obligations; the Korean War, Malaysia, Vietnam, Kashmir, Namibia and the Sinai come to mind, near-involvement in the Persian Gulf and during the first Fijian coup, and more recently our ships were deployed to the Persian Gulf. The pattern of events is unlikely to change.

It has been suggested that, as women are reported to fight alongside men in places such as Nicaragua, Sri Lanka and the Phillipines, Australian women should be able to do likewise. Even if the reports are correct do we want to follow these few countries and not the overwhelming majority of countries which do **not** allow their women in to combat? Should we be leading the way in this matter as it has been claimed we are doing?

It is widely believed in the defence community that the real and compelling reason for the ministerial decision is the inability of the Defence Force to recruit and retain sufficient male personnel to man RAN ships, including combat ships, and to man the combat-related units of the Army and Air Force. So far as the Navy is concerned the current male naval establishment is about 14,000. If we cannot attract and retain this very small percentage of a male population in excess of seven millions, there is something desperately wrong with our young men, the Defence/Treasury administration of pay, allowances and conditions of service, or our political leadership. To my knowledge, there is nothing the matter with our young men.

Perhaps Ministers should devote more of their abilities and energy to attacking the real problems and forget about the "quality career opportunities" for talented women.

NAVAL MATTERS

by A. W. GRAZEBROOK

REGIONAL STABILITY AND DEFENCE

Detente in Europe, the Soviet Union's withdrawal from Eastern Europe, the end of Communist domination of some Eastern European nations and claimed reductions in Soviet armaments are leading some European and North American democracies to reduce their defence budgets.

Some Australian disarmament advocates have suggested that Australia should also reduce her defence expenditure.

The Australian Government has pointed out that other regional powers have not reduced their armed forces and that there are a number of causes for concern over regional stability.

It can be demonstrated that the Australian Government is understating the position.

A number of regional nations are modernising and/or expanding their maritime forces. In most cases, they have good strategic and defence reasons for this.

Taiwan is replacing her surface combatant force and expanding her submarine force. The new frigates will be more modern and capable editions than our own FFG7 class frigates. The design for tier II frigates has not yet been finalised, but they will be similar in capability to our own Anzacs. Taiwan's primary concern is the People's Republic of China. She also claims resource-rich islands.

Indonesian fast attack craft.

Thailand is enlarging her surface combatant force with new ships and modern weapons. She has plans for submarines and an ASW helicopter carrier. Her primary concern is Cambodia, but the situation in Myanmar (Burma) must also be worrying.

Indonesia's expansion programme with second hand ships, to be replaced eventually by frigates built under a programme nearly three times the size of our own Anzac frigates, is clearly justified in the light of her geostrategic position and dependence on internal sea communications.

Malaysia's new corvettes and modern submarines with the latest capabilities will further enlarge her fleet. A glance at the map justifies her concern at communications between east and west and through the Malacca Straits.

Singapore's naval modernisation continues to be directly applicable to her situation and dependence upon merchant shipping.

Japan's Navy, being steadily modernised with ships and aircraft capable of more distant operations in the protection of trade, clearly considers the Soviet Union remains a threat. Japan rightly emphasises that the Soviet naval scrappings are merely the disposal of obsolete and worn out ships and submarines. Production of new, larger and more capable ships, submarines and aircrafts continues without sign of cutbacks.

Although the Chinese Navy is having to struggle very hard to modernise her naval forces, which lag behind technologically, there is increasing evidence that she plans an aircraft carrier. Her nuclear submarine programme continues. Clearly, her primary concern is the Soviet Union.

Only India's naval expansion programme is unjustified by her strategic circumstances. She already has a massive superiority of naval power over all other Indian Ocean littoral states including Australia (who, in any case, must consider the South Pacific and northern approaches as well). It is time for Australia to take seriously some of the national ambitions being advocated in India.

All this is before the effect is felt of the availability of surplus weapons from disarming Warsaw Pact and NATO nations and competing hungry defence equipment suppliers.

Already, we hear of Thailand negotiating towards the acquisition of some 650 surplus US Army tanks. Speculative comment has suggested Indonesia as a recipient of Charles F. Adams class guided missile destroyers.

Malaysian (left) and Singapore naval units.

With other regional powers of similar size clearly concerned at the strategic outlook, and spending more to develop the forces they need, the Australian Government is right to be concerned. We would be unwise to assume that our outlook is much better than that of our neighbours.

In our region, there are five populous countries which have internal stability problems. There are others with latent internal stability problems. There are several areas of potential international conflict.

Internal instability in a nation is at best unsettling and potentially very damaging to that nation's neighbours. At the very least, there is a risk that neighbouring nations will become havens for supporters of insurgents.

All too easily, this can grow into the use of neighbouring territory for bases or as a route for arms, to armed incursions in hot pursuit of insurgents and to the use of force to eliminate bases.

Australia has already been involved in some ways.

The Indonesian annexation of East Timor led to East Timorese setting up in Australia to advocate their cause to the discomfiture of Indonesia.

More recently, Australia was used as a transit point to ship arms to opponents of the current Fijian Government.

Faced with Hobson's choice over Papua New Guinea's troubles in Bougainville, we have opted for the lesser of two evils and supplied equipment to the PNG Defence Force. This has been used against armed secessionists who have forced the closure of a significant Australian owned mining operation which is also vital to the PNG economy.

Populous regional nations with internal stability problems include Myanmar, Sri Lanka, Cambodia, The Philippines and Papua New Guinea. Those with latent problems include Fiji, the New Hebrides and Vanuatu.

The most optimistic outcome of the current negotiations in Cambodia are almost certain to see a government in which a brutal tyrant, with an horrendous record of mass killings, recovers major influence. Small wonder that Thailand is strengthening her defence forces.

The long running civil war in The Philippines has weakened her economically. Her defence forces are now almost wholly equipped for the civil war and would be unable to resist a seizure of outlying possessions with important economic potential.

Myanmar is in a state of turmoil. There seems little prospect of a long term peaceful solution to Sri Lanka's racial fighting.

It is reported in Jane's Defence Weekly that the Japanese Defence Agency study of the future composition of the Soviet Pacific Fleet is illuminating. They forecast that, of 141 submarines and 103 major surface combatants, 114 will be withdrawn and 49 new ships and submarines will be assigned. However, the deletions will be obsolete types including the last of the Sverdlov class cruisers and Whiskey class submarines. Moreover, the average age of the Pacific Fleet units will drop from 19 to 15, average displacement of submarines will increase to 7000 tons (compared with 4000 tons) and of surface ships from 3400 tonnes to 5400 tonnes.

Clearly, reductions in numbers are offset by increases in size and capability of individual ships and submarines.

The time has come for Australia to face up to regional developments realistically. We must be prepared to spend what is necessary to defend our interests.

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DEFENCE SPENDING LEVELS MAINTAINED

Defence Minister Senator Robert Ray stated in late August that the 1990-91 Defence budget of $8970 million would maintain the current level of Defence outlays.

The Defence budget restores the 0.5% reduction in Defence real growth which was implemented as a temporary measure in 1989-90. In addition, revised arrangements for the sale of property will allow Defence to retain net revenue up to the value of an additional 1% of Defence outlays.

"The retention of Defence spending at current levels will allow us to continue to work towards the self-reliance objectives of the Defence White Paper, while still meeting other high priority objectives", Senator Ray said.

"While Defence spending levels have been preserved, Defence has had to bear its share of the need for overall budgetary restraint," Senator Ray said.

"Some reductions in Defence Force capabilities have been required so that funds could be made available for higher priority requirements, including the capital equipment investment program and measures such as improved living-in accommodation and enhanced individual equipment levels."

HMAS COOK and HMAS STUART will be paid off earlier than was anticipated and there will be an overall 7.5% reduction in F/A-18 and F-111 operational flying hours. These capability and operational reductions will yield some $9 million during 1990-91, as well as continuing savings across the Forward Estimates period. Another Destroyer escort will replace HMAS STUART in Western Australia before the end of the financial year.

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TWO RAN SHIPS TO BE PAID OFF

The Federal Government decision to pay off two Naval ships early will reduce pressure on finances and personnel in the RAN. However, there will be no reduction in the level of support for Australia's ships assigned to Persian Gulf operations.

The Chief of Naval Staff, Vice Admiral Michael Hudson, said it had been decided to withdraw the oceanographic research vessel, HMAS COOK, and destroyer-escort HMAS STUART, from operational service on August 31 and to pay off both vessels later this year.

In the case of HMAS STUART, it was a matter of advancing the date she was due to decommission by about 20 months and replacing her in Western Australia with the destroyer-escort HMAS TORRENS early next year.

Admiral Hudson said other measures being taken to constrain expenditure by the Navy as a result of the financial year 90/91 Federal Budget include:

- further reductions in administrative staff in Canberra, and
- reductions in the allocations to ship repair and overhaul, weapons, other equipment, stores and fuel.

"While implementation of these measures will mean a further review, among other things, of the ship repair program," he said, "there will be no reduction in the level of support to HMA ships assigned to Persian Gulf operations.

"They will continue to receive the highest priority".

Admiral Hudson said that while the Navy's allocation of $2.6 billion was less than that for which the Service had bid, the allocation represents an actual increase of $260 million.

"The measures taken to accommodate this allocation recognise the importance of containing the stretch on our people and dollars," he said.

"The paying off of any ship is always a source of regret, as is the paying off of these two ships which have made such outstanding contributions."

"Navy's budget is, however, consistent with the Government's wider commitment to reduced expenditure from which we could not hope to be exempt."

The Chief of Naval Staff said the measures, including paying off two ships, also mean that the Navy will achieve the necessary savings this financial year to pursue higher priority activities.

These include Seahawk helicopters, two new guided missile frigates under construction at Williamstown, Collins Class submarines and ANZAC frigates.

Admiral Hudson said the paying off of COOK and STUART would also mean immediate relief to the Navy's manpower shortage.

"Their ships' companies will be redeployed to guided missile destroyers and frigate technical training to meet the requirements to man HMA Ships HOBART, CANBERRA and MELBOURNE," he said.

"It will relieve other sailors due or overdue for shore postings, and it will fill vacant billets ashore in east Australia."

Annual General Meeting 1990

NOTICE is hereby given that the ANNUAL GENERAL MEETING OF THE NAVY LEAGUE OF AUSTRALIA will be held at the National Press Club, Canberra, ACT, on Friday, 16th November, 1990, at 8.00 pm

BUSINESS

1. To confirm the Minutes of the Annual General Meeting held in Perth on Friday, 17th November, 1989.
2. To receive the report of the Federal Council, and to consider matters raised therefrom.
3. To receive the financial statements for the year ended 30th June, 1990.
4. To elect office bearers for 1990/91 as follows:
   (a) Federal President
   (b) Federal Vice-President (3)
   (c) Auditor.
   Nominations for these positions are to be lodged with the Honorary Secretary prior to the meeting.
5. General Business: To deal with any matter notified in writing to the Honorary Secretary by 30th October, 1990.

By Order of the Federal Council

PO Box 269
Burwood, Vic 3125
Telephone: (03) 805 2559
Facsimile: (03) 888 8075

R. M. BLYTHMAN,
Honorary Federal Secretary.

DEFENCE INDUSTRY

P. D. Scott-Maxwell

In most, if not all the developed countries, the defence industry is big business. Although there have been no major conflicts since World War II, there have been some serious localised wars, which sustain a state of tension and general readiness to defend one's rights, or those of others.

IN spite of the dramatic changes which are taking place in the USSR and Eastern Europe, it would obviously be most unwise to relax our vigilance unduly. There can always be an unexpected flare-up as occurred in the Falklands. Britain dealt with it in a most expeditious manner, because she was prepared and knew what to do. Her preparedness was partly fortuitous, as there were pressures at the time to reduce the aircraft complement of the Royal Navy. In the event their presence was essential to success.

Perhaps the most remarkable contribution came from the merchants navy, where major vessels were commandeered and converted to a wartime role in very quick time. There are obvious lessons to be learnt here! The US were so impressed that they lent a hand too.

Whether we like it or not, defence industry will always be an essential part of Australia's scientific and engineering endeavours.

The total defence spending in the United States is so huge, that it has become an essential part of their economy, whilst in the USSR, its defence spending has all but brought the economy to its knees. Between these two extremes there are large spenders and small spenders, amongst the latter we must count Australia.

The aspects mentioned hereafter are not given in any particular order of importance as they are all equally relevant to the national well being, and I refer particularly to the private enterprise sector of the economy. The various government agencies referred to below have yet to prove whether they are in fact viable without the large subsidies they received in the past, said to be in the order of some $200,000,000! This is the magnitude of total savings which must be made under the new managements. Quite a daunting task to turn what is in effect a huge trading loss into an acceptable commercial profit and a dividend for the sole owner, the Government!

For those who are not familiar with the current trend, away from subsidised government defence factories, and dockyards, to private enterprise and government owned agencies, the following changes have taken place to date.

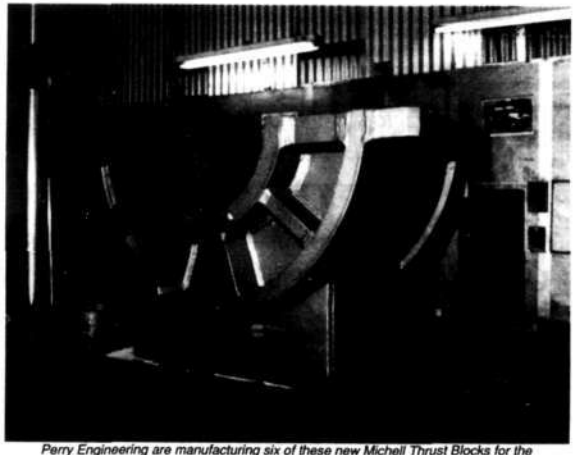
Aerospace Technologies of Australia P/L (ASTA) has taken over the old government aircraft factory. Australian Defence Industries P/L (ADI) has in effect taken over the old ammunition factories, the ordnance works and the naval dockyard at Garden Island.

The Williamstown Dockyard has been sold to a private company AMECON and they have been awarded the Anzac frigate building contract.

The type 471 submarine replacement contract went to another private consortium in Adelaide, Australian Submarine Corporation P/L.

For some years, the Commonwealth Government have encouraged local participation in manufacture of defence equipment. Indeed a level of 30% was until a few years ago the aim, but more recently it has been much higher and on the ANZAC Frigate contract suppliers from overseas have had to find Australian and New Zealand manufacturing partners and achieve a 70% Australian and New Zealand industry participation (ANZIP).

Of course, if equipment meets the criterion of 70% ANZIP, the Commonwealth will not pay a premium for the equipment in excess of 20% over the overseas suppliers price unless it is of major strategic importance to Australia.



Perry Engineering are manufacturing six of these new Michell Thrust Blocks for the Collins class submarines.

Cockatoo Dockyard P/L is a bit in limbo until the future of the remaining Oberon refits has been decided by Dept of Defence, which decision is imminent.

Cockatoo Dockyard is actually owned by the government, but has been leased to private enterprise companies for over fifty years.

A key feature of the current invesiment programme in defence equipment, is the involvement of local industries as much as possible. In other words, we must become self-reliant in defence.

As a measure of participation of industry in defence, there are about 600 Companies, or their subsidiaries of divisions now listed in the latest edition of Defence Reference Book 29.

The trend is obviously away from grossly inefficient bureaucratic control towards profit responsible organisations, of one sort and another. A classical example of better late than never.

The opportunities are there, more than ever before for private firms to get involved in the defence industry, its back-up support and associated development work. It is still an industry worth being part of for the following reasons:

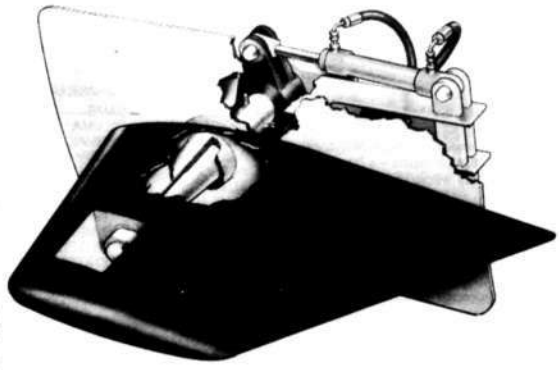
(a) It broadens the productive base and encourages investment in more advanced technologies; this is a challenge to management to be more adventurous. There are also opportunities to obtain contracts for overseas offset work.

(b) Alternatively, a repair and maintenance facility for military equipment, whether made in Australia or overseas, provides a firm base on which to build the production on components and complete units.

(c) Generally speaking – defence equipment requires to be manufactured to higher design standards than commercial equivalents. One may ask why? This is a very vexed issue where the customer tends to err on the safe side. This is more costly, and puts the contractor at additional risk. In many cases commercial design standards would be adequate, as overall quality standards are tending to improve as we progress, but, warships and aircraft are subject to very severe stresses during manoeuvres at high speeds, and submarines at great depths; where the power to weight ratio is a a premium, higher design standards are a must.
Also, because of the higher performance ratings, fatigue stresses play a more vital part in the design.
For warships, designing for high shock accelerations cannot be avoided, due to direct hits and near misses. All these factors must impose additional costs.

(d) There are substantial spin-offs from defence work to commercial applications.
To sight some classical examples. The German V2 rocket, with its hydrogen peroxide oxygen/fuel turbo pump system, was the precursor of all the post war developments in space.
First by the Russians then the US. Now, space is cluttered with spent rockets and their payloads, telecommunication and spy satellites galore. Micro electronics, and a host of other developments established completely new industries. The entire nuclear industry derived from the allied atom bomb project. This has become an enormous industry in many countries, except Australia which chose to ignore it, and this will be to our ultimate cost.

(e) One does not have to be a manufacturer to be in the defence industry because a lot of defence equipment will always be imported from the US and Europe. So there are many representative agencies who are licensed to sell overseas products to the Dept of Defence and can arrange for their manufacture and after sales service in Australia.



Non-retractable fin stabiliser.

But we must be fair to newcomers, it is a risky business with plenty of grey areas. The biggest grey area at this very moment is – what effect will the changes in the USSR and Eastern Europe have on world demand for defence equipment?

It could produce a glut, or even a shortage, it is too early to tell. There are reports that the USSR are disposing of their older outmoded equipment in favour of more technological sophistication, a case of quality rather than quantity.

To confuse the issue further, the US have always tended to overrate and exaggerate Russian defence performance for the sake of their own budget justification!

Defence work attracts higher overhead costs and this must not be allowed to affect the true costs and profits. If your business is largely defence work (like ASTA and ADI), it will be very difficult to attract profitable commercial work because of the cost structures.

In both cases a comprehensive balance must be sought, one tends to be inimical to the other.

Dealing with the bureaucracy can be a very disenchanting and frustrating business and patience is essential. Even when you finally secure an order, it may be a long time before you get paid, unless of course you can get a substantial down payment with the order.

A very wise precaution for those considering entering the defence industries would be to find out as much as you can about the modus operandi, before you start.

One could well start with the Australian Institute of Management Intensive Courses, where the key topics are covered.

1. Selling to the Dept of Defence both services and hardware.
2. The tendering and contractural process.
3. The advantages and disadvantages of doing defence business.

Give Stephen Bond a ring on (062) 82 1914 about the next course.

In conclusion, the only advice I can give you after many years of experience in the defence industry is to

– GET IT RIGHT FIRST TIME –

from the quotation to the delivery of the finished product, otherwise you will be in big troubles financially.

Survey Motor Launch Pictorial

The science of hydrography originated in the need for the production of maps specially designed for the use of the mariner. Nothing has been more important to the foundation and expansion of seaborne trade among the nations than the production of such charts – the end result of the hydrographic surveyor's work.

By any standards the task facing the Royal Australian Navy's Hydrographic Service is a daunting one. The Australian area of charting responsibility covers some 11.5 million square nautical miles of oceans and seas, including the waters of Papua New Guinea. Between 1945 and 1987 only 30% of the area within the continental shelf had been surveyed to an adequate standard, with a further 20% to a temporarily adequate standard. The remaining area accounts for much of the Navy's current survey work.

For some years the Hydrographer has been attempting to improve the Navy's survey resources in order to make the huge task easier to accomplish. HMS Ships PALUMA, MERMAID, BENALLA and SHEPPARTON are fine examples of such resources. All four vessels were first commissioned 1989-90.

In November 1987 a contract was signed with Eglo Engineering of Adelaide, South Australia, for the building of four catamaran hulled vessels based upon the "Prince" class of Ro-Ro passenger ferries. The twin hulls with bulbous bows and raked transom provide good stability in heavy conditions, concurrent with good living room and space below the main deck. In addition, the catamaran hull sits well out of the water, the ship drawing only 1.9 metres – a favourable characteristic in shoaling and reef waters where the ships will be required to operate.

Each SML carries the very latest in survey equipment onboard. The heart of the survey outfit onboard is the Hydrographic Data Logging and Processing System (HYDLAPS). The system collects and logs all information obtained on the survey ground as soon as it is received. This is a large step from the procedure not so long ago when all information was manually processed after the day's work. HYDLAPS has post-processing abilities that enable the surveyor to see the finished product of a day's work at the press of a button.

All data collected by the ship is stored on computer data cassettes that are forwarded to the RAN's Hydrographic Office to allow comprehensive checking of the survey results. The SMLs are the first ships in the RAN Marine Science and Hydrographic Force to be installed with the HYDLAPS system; the remaining vessels are progressively being fitted out.

The class is fitted with the latest aids to navigation as in all RAN ships. Each vessel is capable of conducting most seamanship evolutions at sea, an ability of particular importance to a survey vessel where lowering boats into the water, taking bottom samples, laying danbuoys and erecting shore stations are part of everyday life.

There are 12 billeted positions onboard each SML. The crew includes two surveying officers, four ship's engineers/technicians, four seaman/survey recorders, a radio operator and a cook. In order to provide the required level of technical expertise the ships will operate in pairs and members of crew will be interchangeable. For example one vessel of a pair will have a senior mechanical engineer, while the other will have a senior electrical engineer. This pooling of expertise is important for operations in remote areas.

SHIPS' DATA

No.	NAME
AGSCO1	PALUMA
AGSCO2	MERMAID
AGSCO3	SHEPPARTON
AGSCO4	BENALLA
BUILDERS	EGLO ENGINEERING, SA
DISPLACEMENT	310 TONNES
LENGTH	36.6m OVERALL
BEAM	13.7 METRES
PROPULSION	TWIN DETROIT V12 DIESELS
SPEED	12 KNOTS
SHIP'S COMPANY	12

Above: HMAS SHEPPARTON.

At left: HMAS PALUMA.

America's Underwater Navy

by ANTONY PRESTON

Since the 1960s the US Navy's submarine force has been responsible for the sea-launched element of the nation's strategic triad, in the form of submarine-launched ballistic missile (SLBM) systems. These are deployed on board nuclear-powered missile submarines (SSBNs), while the attack submarine force is largely comprised of nuclear-powered hunter-killer boats (SSNs) and a handful of ageing diesel-electric craft (SSKs).

THE USN is now so committed to nuclear propulsion for submarines that American shipyards have dropped out of the SSK business altogether. Today, only two yards undertake the building of SSBNs and SSNs: Newport News Shipbuilding at Newport News, Virginia; and the Electric Boat Division of General Dynamics at Groton, Connecticut. It is not an ideal position for the Navy and the DoD, but one made inevitable by the contraction of the American shipbuilding industry and the complexity of SSNs.

Starting with strategic forces, the venerable A3 Polaris SLBM system has been phased out, leaving 14 of the surviving 25 BENJAMIN FRANKLIN (SSBN-640) and LAFAYETTE (SSBN-616) class SSBNs armed with the C3 Poseidon system, but the 12 JAMES MADISON (SSBN-627) class have been rearmed with the C4 Trident I missile. This system was introduced to improve terminal accuracy – its warheads have a CEP of only 500m – and to increase range to 4000n.m. Each missile carries eight 100kT MIRV warheads. Its successor is the D5 Trident II, an even more fearsome weapon, carrying 14 150kT MIRVs or seven 300kT or 475kT MARVs out to 6000n.m. The missile is 44ft (13.4m) long and weighs 130,000lbs (59t), almost twice as much as Trident I.

The D5 Trident II trials programme was dogged by some spectacular failures, notably the first attempt by the USS TENNESSEE (SSBN-734) to launch a Trident II in March last year. Redesign work on the nozzle controls cured the turbulence problems and the TENNESSEE succeeded in firing three rounds in 11 days in December, followed by two more in January. This reversal of fortune freed $950 million 'frozen' by Congress for completion of the programme, and the TENNESSEE started her first operational patrol in March, this year.

To deploy Trident I and Trident II, the US Navy is building 20 OHIO (SSBN-726) class SSBNs. Each 18,000t boat is armed with 24 missiles, but the first eight went to sea with the Trident I system on board. Now that the TENNESSEE has completed her trials programme, these eight will being a retrofit cycle to replace their missile systems with Trident II.

The OHIO class are designed to spend less time in harbour between Blue and Gold patrols (exchanging crews each time), and to deploy as economically as possible the total strategic deterrent force of MARV warheads permitted under the SALT I Treaty. The SCB 304 design also introduced a new nuclear reactor, the General Electric S8G. Rated at 60,000hp, the twin turbines and single reactor plant develops nearly twice the power of the S6G reactor in the LOS ANGELES class SSNs. It has a core-life of nine years, an important factor in achieving cheaper life-cycle costs for the Trident system.

Since 1981, 10 OHIO class have been commissioned and the WEST VIRGINIA (SSBN-736) and the Kentucky (SSBN-737) will join the fleet this year. As the programme progresses towards completion in the late 1990s, the older SSBNs will be decommissioned to keep within the terms of SALT I. Two old SSBNs, the SAM HOUSTON and JOHN MARSHALL are now rated as SSNs after a conversions to amphibious transports at Puget Sound Naval Shipyard in 1983-85. The carry swimmer-delivery vehicles (SDVs) and up to 67 SEALs can be accommodated in the space formerly taken up by missile tubes.

There are now only three SSKs in the USN, the BLUEBACK (SS-581), and the deactivated DARTER (SS-576) and the experimental DOLPHIN (AGSS-555). The BLUEBACK was damaged by an electrical fire off San Diego last May and is schedule for deactivation in FY'91. Despite repeated pleas to return to the SSK business to provide the Navy with submarines which are cheaper than SSNs and, more importantly, capable of missions denied to SSNs, no change of policy is planned., The submarine command is too worried that scarce dollars will be diverted from the SSN programme and, in time of growing

financial stringency, it is hard to fault that judgement.

Under the new budget announced in January, six of the PERMIT (SSN-594) class will be retired this year, leaving six to run on. Two of the STURGEON (SSN-637) class will also be retired, cutting the class to 35 units. Another casualty of the budget cuts is the one-of-a-kind GLENARD P. LIPSCOMB (SSN-685), which adopted turbo-electric drive to reduce noise. Another one-of-a-kind is the NARWHAL (SSN-671), which was the testbed for the S5G natural circulation reactor.

The backbone of the SSN force is the 47-strong LOS ANGELES (SSN-688) class, which has been in production since the early 1970s. Three more are to be delivered this year, four next year and four more in 1992. Ten were approved in FY 1987-1990, the HARTFORD, TOLEDO, TUCSON and the unnamed SSN-771/777, but the last two projected in FY91 were dropped last year to release funds for more modern construction. The last of the class is SSN-773, ordered last December from Newport News Shipbuilding.

The original SCB 303 design has been superseded by two major upgrades. From the PROVIDENCE (SSN-719) the armament is increased by the provision of 12 vertical-launch tubes for Tomahawk submarine-launched cruise missiles (SLCMs). Siting the VL tubes forward of the dome bulkhead allows the designers space to increase stowage of Subroc ASW missiles and Mk48 Torpedoes.

Further redesign resulted in the ISSN-688 or Improved LOS ANGELES class. From the SAN JUAN (SSN-751) onwards, the forward diving planes were moved from the sail to the forward part of the hull, and were made retractable to improve handling under ice. Anechoic tiling has been fitted for the first time, as part of the continuing search for silent running. Much greater attention is paid to silencing of main machinery, when compared to earlier SSNs – one reason for the greater size of the LOS ANGELES class boats. The new BSY-1 SUBACS has encountered some problems, but promises to give these SSNs and their successors greatly enhanced combat effectiveness (see below).

Embodying all state-of-the-art submarine technology and the latest tactical thinking, is the SEAWOLF (SSN-21) class. The design emphasises higher speed and a greater weapon load, but considerably lower noise signature, better sonars and an integrated overall mission effectiveness. Over $1 billion has been invested in development, including $365 million for the S6W nuclear reactor. Anechoic tiling of the hull will reduce the sonar profile and a pumpjet propulsor will replace the conventional skew-bladed propeller.

Sturgeon class submarine USS GUITARRO.

The command system will be the new BSY-2(V) and the sensor fit includes the BQQ-5A(V)1 passive bow sonar and new TB-16 and TB-23 towed arrays. A dozen VL Tomahawk SLCMs will be installed but, unlike the LOS ANGELES class, the missile tubes will be inside the pressurised hull. An additional 50 tube-launched weapons will be embarked, including Mk48 Mod (ADCAP) torpedoes but the Sea Lance ASW missile has just been cancelled. The number of tubes is reported to be doubled, from four to eight, and reports suggest that diameter may be increased to 30in (762mm) to allow for the development of ultra-long range torpedoes or missiles in the future. For the foreseeable future, however, the tubes would be fitted with liners to permit standard 21in (533mm) Mk48 torpedoes to be fired.

The SEAWOLF was ordered in January, last year, at a cost (inclusive of R&D) of $1.5 billion. A second was approved in FY90 and two more are planned under FY91 funding, at an estimated cost of $1 billion each. The inescapable escalation of cost will make it very hard for the USN to achieve its goal of 30 new SSNs, while the decommissioning of older SSNs threatens the desired force-level of 100 SSNs. By the end of this year the total will be:

2	ETHAN ALLEN
6	PERMIT
35	STURGEON
1	NARWHAL
39	LOS ANGELES
8	Improved LOS ANGELES
+ 16	under construction or ordered
107	

The effective lives of the ex-SSBNs cannot justify their retention for much longer and the lives of the remaining PERMIT class are also drawing to a close. Two factors determine the life of nuclear submarines: the age of the reactor; and the number of deep dives the boat has carried out. Both govern safety factors. An old reactor runs the risk of radiation leaks and a high number of dives increases the risk of metal fatigue in the pressure hull.

Despite scaremongering about advances in Soviet SSNs' performance, the standard of design of US nuclear submarines is very high. The US Navy has led the world since it introduced nuclear propulsion 35 years ago and there is little sign that it is about to surrender that technical lead. Despite intensive operations, only two SSNs have been lost, the THRESHER and the SCORPION and neither accident resulted in any detectable radiation hazard.

The tests with the experimental ALBACORE and advances in reactor design led to the remarkable SKIPJACK SCB 154 design, establishing a benchmark not only for the USN but all other navies.

Although two experimental submarines were built with electric drive, US nuclear engineers have remained largely wedded to the pressurised water reactor (PWR). For many years the Westinghouse S5W and its derivatives were standard. Not even the massive resources of the US Navy permitted the luxury of a dedicated reactor plant for each new class, and it took many years before any major increase in power could be funded.

The US Navy's SSNs have a number of missions. In peacetime their main role is reconnaissance, with a secondary task of

escorting SSBNs to and from their patrol areas. In wartime, their main targets would be enemy SSNs and SSBNs as first priority, with any enemy surface ships as a second priority. Other peacetime roles include intelligence gathering and ASW training for air and surface forces, as well as other submarines. An unusual tactic developed is close co-operation with carrier battle groups, stationing an SSN ahead of the main battle group to ward off the risk of attack by a hostile SSN.

The addition of Tomahawk SLCMs has given SSNs a new capability to attack land targets, using nuclear warheads or conventional warheads for purposes such as airfield denial. ASW tactics are likely to take the form of 'barrier patrols' across 'chokepoints' through which enemy submarines must pass to reach their hunting grounds.

Contemporary US sonars owe much to the large German passive arrays under development at the end of the Second World War. They have a series of fixed transducers forming beams in various directions by electrical phasing of the transducer inputs. In recent years towed arrays of passive transducers have been shipped. Unlike the surface ship arrays from which they are derived, they are of the 'clip-on' type, shipped on leaving harbour and unshipped when returning.

Los Angeles class submarine USS LOS ANGELES.

After the breakthrough with the SKIPJACK, succeeding design improvements to hulls and weapon systems were evolutionary rather than revolutionary. The SUBACS advanced sonar/fire control system was perceived, therefore as the first major improvement in mission effectiveness for many years. It was intended to be fitted in the ISSN-688 or Improved LOS ANGELES class, from the SAN JUAN (SSN-751) onwards. In 1986, when it was renamed BSY-1, Congress was told that it employed advanced computer hardware and software, and would exploit advanced acoustic sensors such as wide aperture arrays to analyse acoustic detection data, identify targets and make fire-control calculations. There were to be three variants, Basic SUBACS for SSN-751/759, SUBACS-B for SSN-760 and the rest of the class, and SUBACS-B prime for the SSN-21 class.

Unfortunately, the project ran into considerable technical difficulties and, by the end of 1985, Congress knew that SUBACS had overrun on cost and time without achieving the desired level of performance. Various reviews concluded that further R&D would run to $2.4 billion and shipbuilding costs for the submarines already authorised would be 40% greater than the sum budgeted.

The Navy took over management of the project and restructured it to allow a two – track approach. Under the new arrangement BSY-1 is being developed by IBM for the SAN JUAN and her sisters, while BSY-2 was won by General Electric and RCA. The Navy's troubles were not over, for when the first BSY-1 was installed in the SAN JUAN, the cabling did not fit into the submarine. Rectifying that problem resulted in further cost overruns, but all reports suggest that the project is now back on course.

The problems encountered with SUBACS should not blind us to the achievements of the US Navy and industry in tackling the tactical problems to be faced in the next century. As with other naval designs in the past the SEAWOLF looks expensive now, but only on comparison with older designs. Such a huge jump in combat capability never came cheaply, and Rep. Les Aspin, Chairman of the House Armed Forces Committee, has recently spoken out in favour of the SEAWOLF programme, saying that existing US submarines can no longer physically accommodate the improvements necessary to match the latest Soviet submarines.

A final word on submarine rescue resources is appropriate. The US Navy has two purpose-built rescue ships, the twin-hulled PIGEON (ASR-21) and ORTOLAN (ASR-22). They were built 20 years ago to support the Deep Submergence Rescue Vehicles (DSRVs) MYSTIC and AVALON. These two 37t submersibles were developed after the loss of the SSN THRESHER in 1963, and provide the only rescue vehicles designed to operate with submarines lying at maximum depths. They have the particular advantage of being air-transportable, and have carried out tests with the Royal Navy SSBN REPULSE on two separate occasions.

FFG 05 – Floating Free

by JOHN FILLER

On 3 June, in almost perfect conditions, the Navy's latest guided missile frigate, FFG 05, MELBOURNE, took to the waters of Port Phillip, undocked and for the first time since her launch was floating free!

Not quite thirteen months after her launch by Mrs Hazel Hawke on 5 May, 1989, MELBOURNE was towed from her building dock with no fuss, no bands, no assembled media and most importantly, no problems. The frigate has now been fitted with her gas turbine propulsion, the funnel and mast are in place and the missile launcher installed before the bridge structure. Also fitted are her sonar dome, auxiliary propulsion units, active fin stabilisers controllable pitch propeller system and the rudder.

Now berthed alongside Nelson Pier for the installation of navigational and fire control radars, MELBOURNE will also receive the important command and control equipments and the remainder of her major armament.

FFG 06 Update

Progress with the sixth FFG, NEWCASTLE, proceeds to schedule. The basic unit of the aluminium superstructure is being built upside down at EGLO in South Australia and when completed will be shipped to Williamstown to be joined to the hull, when the latter is ready. In Newcastle, hull sections for the FFG 06 are now taking shape.

In early 1991 the completed hull sections will be barged to Williamstown to be placed on the ramp. Subsequently the whole sections will start assuming the shape of the new ship in quick time.

Floating free for the first time.

Hands to the capstain as FFG 05 takes another step towards her commissioning.

The 60 tonnes GMLS Mk 13 Mod 4 missile launcher is lowered into place.

NAVAL NEWS

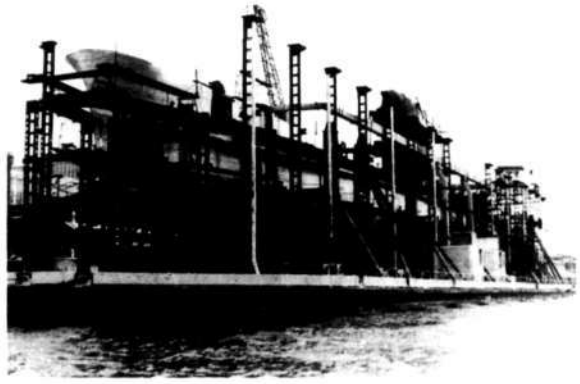
RAN OBERON Class Submarine Refits

"Australian Defence Industries Naval Engineering Division has been selected as the preferred tenderer for the remaining two refits of Navy's Oberon Class Submarines", the Minister for Defence, Robert Ray, has announced.

"Contract negotiations with ADI will commence shortly to enable the refit of HMAS ONSLOW to begin as soon as possible at ADI's Garden Island Facility in Sydney".

The decision follows the Minister's announcement on 20 June 1990 that the Government had reaffirmed its decision to proceed with the sale of Cockatoo Island, the present venue for Oberon Class refits, and that the Island would be sold at the completion of refit work on HMAS ORION now in progress.

As part of the Governments examination of the possible benefits of the early closure of the dockyard on Cockatoo Island, tenders for the remaining refits were invited from ADI and two Western Australian Companies, Australian Shipbuilding Industries and Clough Engineering Companies, in July 1989.



"The decision to select ADI follows an exhaustive evaluation of the tenders which was conducted in accordance with the strict probity conventions required for Commonwealth contracts, and involved the thorough and impartial Department of Defence procedures normally applied only to major capital equipment projects.

"The tenders received were of high quality and reflected the high capabilities of industry in both the Sydney and Fremantle areas. ADI has been selected as its tender was judged as giving the best value for money", Senator Ray said.

HMAS OXLEY – Home from Gallipoli

The HMAS STIRLING-based submarine HMAS OXLEY arrived home on 24 July as the last participating Australian Defence Force unit in the ANZAC 75th anniversary celebrations. Despite appalling weather conditions the submarine was met by a large crowd of family and friends with the Band of the 5th Military District providing the music for the occasion. HMAS OXLEY deployed on 19 March and after emulating the voyage of her predecessor AE2 visited Taranto before deploying to south-east Asia where she took part in the Five Power Defence Arrangement 'Starfish' exercise.

Photo: LSPH W. McBride, RAN.

Submarine Rededication – HMAS OVENS to resume service

The Oberon class submarine, HMAS OVENS, re-entered Naval service on 4 July after a two-year refit.

In a ceremony at the Submarine Base HMAS Platypus at Neutral Bay, the Minister for Defence, Science and Personnel, Mr Gordon Bilney, rededicated OVENS on her return from a $64 million refit at Cockatoo Island dockyard.

"The refit included updating of her communications and machinery as well as replacement or refurbishment of almost every fitting onboard," the Minister said.

"The ceremony will mark the beginning of OVEN's fourth commission in the RAN and this will probably be her last."

Mr Bilney explained that the

introduction of the new Collins Class submarines, now under construction in South Australia, should be well under way by the time OVENS' new operational term expires.

A British-designed and built submarine, OVENS was the third of the six Oberon class boats bought by the RAN.

First commissioned in 1969, OVENS will complete operational preparations in September and resume her role in the front line of Australia's maritime defence.

50th Anniversary of Cape Spada Action

The Navy has presented a uniform of its most famous hero, Vice Admiral Sir John Collins, to the Australian War Memorial in Canberra on 19 July.

The presentation marked the 50th anniversary of the sinking of the Italian cruiser, BARTOLOMEO COLLEONI, the RAN's most successful engagement of World War II.

The uniform to be presented has the rank insignia of a Captain – the same rank as Sir John wore when he led the attack by HMAS SYDNEY off Cape Spada, Crete, 50 years ago.

HMAS SYDNEY returns to Alexandria after her victory over the Italian ships at the Battle of Cape Spada.

The presentation of the uniform – on loan to the memorial for its Naval gallery for 18 months from the RAN College – was made by the Deputy Chief of Naval Staff, Rear Admiral Ian McDougall, to the Acting Director of the Memorial, Mr Brendon Kelson.

The Kingdom of Tonga patrol boat VOEA PANGAI departing from the HMAS STIRLING fleet support facility in Western Australia on 13 August, 1990, as part of her work-up. VOEA PANGAI was handed over and commissioned in Fremantle on 30 June as the eleventh patrol boat of the Pacific Patrol Boat Project and the second to go to Tonga.

Photo: Navy Public Relations (WA).

New Life Saving Device for Navy

Sailors of the Royal Australian Navy will have a much better chance of surviving fires in ships using an Australian-made breathing device.

The RAN has ordered 8000 of the emergency life support respiratory devices (ELSRDs) from MSA (Aust) Pty Limited in a contract worth about $1.8 million.

MSA (Aust) Pty Limited had competed against international rivals for the right to develop their 'MSA Lifeguard' for the RAN.

The 'MSA Lifeguard' consists of a small rechargeable storage bottle for compressed air, flame resistant hood and flame resistant fittings.

The device gives a minimum of eight minutes of breathable air when activated – allowing personnel to escape to the upper deck and clean air.

The 8000 units on order for the RAN would be delivered at a rate of 1000 a month.

First Regional Maritime Exercise

Vanuatu has hosted its first regional maritime surveillance exercise involving the Australian Defence Force. The exercise was held over the week during the country's 10th Anniversary of Independence.

The exercise, called Mantas 90, took place between August 1 and 8. Other nations participating in the exercise, included New Zealand, Solomon Islands and Tonga.

RAN staff assisted in the planning of the exercise and RAN participation included the patrol boat HMAS CESSNOCK and two instructors/exercise co-ordinators. A RAAF P3C Orion long-range maritime patrol aircraft also took part in the exercise.

Naval Personnel to Face Charges

Four naval officers from the guided missile frigate (FFG) HMAS DARWIN are to face court martial because their ship ran aground near the northern tip of Oahu in the Hawaiian Islands on May 7.

Commanding Officer of Darwin, Commander B. G. J. Nye, the Executive Officer, Lieutenant Commander G. D James, the (then) Navigating Officer, Lieutenant B. R. Victor and the Principal Warfare Officer, Lieutenant W. F. Lloyd will appear before a joint General Court Martial at HMAS PENGUIN.

Seen preparing to berth at the HMAS STIRLING fleet support facility in Western Australia on 12 June, the United States Navy nuclear-powered guided-missile cruiser USS TRUXTUN was making a historic fourth visit to the base. USS TRUXTUN is the only foreign warship to have made four visits, having previously visited in 1978, 1982 and 1986. This was almost certainly her last visit to the west as TRUXTUN seems certain to de-commission in 1991 as part of the USA's defence cutbacks.

Photo: GATANO SALMERI, RAN PUBLICATIONS

BOOK REVIEWS

WARSHIPS FOTOFAX

German Battleships 1897-1945 and Japanese Battleships 1897-1945

by **R. A. Burt**

Published by **Arms and Armour Press**

Review copies from **Capricorn Link, Australia**

This series has now been expanded to cover the period from 1897 to 1945 with the latest booklets illustrating and describing German and Japanese Battleships.

Eighty plus photographs, all captioned, allow the reader to follow the development of the two navies principal capital ships from pre-dreadnoughts to the massive BISMARCK and TIRPITZ in Nazi service and YAMATO and MUSASHI, commissioned by the Imperial Japanese Navy.

A feature of both booklets is the inclusion of additional technical and historical data plus line drawings of the largest units in the centre of each booklet.

Note: Other recently released Fotofax titles include British Submarines of World War One and from the Vintage Aviation Fotofax series, The Fleet Air Arm (Royal Navy-Editor), 1920-1939.

The former highlights the numerous wartime activities in the North and Mediterranean Seas as well as around Turkey and the Gallipoli Peninsula. Included in the booklet are photographs of HMAS AE1 and HMAS AE2 plus the six J class submarines, transferred to the RAN after the armistice.

★ ★ ★

GERMAN WARSHIPS

1815-1945

by **Erich Groner**

Revised and Expanded by **Dieter Jung and Martin Maass**

Published by **Conway Maritime Press**

This book was first published in 1965, shortly after the death of its author. In the years since, two naval writers, Dieter Jung and Martin Maass have updated the volume and by adding new information where appropriate, have now re-released the book with Conway Maritime Press.

German Warships covers the period from the earliest recorded naval vessels, from tiny oared and sail powered gunboats to the end of the Third Reich and its beleaguered naval forces in 1945. The book details design, construction, dimensions, machinery and armament and provides commentary on careers, seakeeping and performance.

With only a few exceptions, mostly very old or very small, all classes of warships in the period are illustrated via an impressive selection of scale line drawings. For many of the ships and classes the vessels are depicted through several drawings, to represent different phases of service careers. Altogether 10,000 ships and craft are described.

For readers searching for a definitive work on the German Navy from inception to 1945, one has to look no further than the book currently on offer. Three additional volumes are expected to be published for the remaining warship types; submarines, mine warfare craft, auxiliary warships (raiders), amphibious ships and support vessels to mention but a few.

German Warships is published by Conway and should be available in most of the larger or specialist military bookshops across Australia.

★ ★ ★

BRITISH NAVAL AVIATION

The Fleet Air Arm, 1917-1990

by **Ray Sturtivant**

Published by **Arms and Armour Press**

Review Copy from **Capricorn Link, Australia**

The age of military aviation had barely dawned when it was realised that the power and influence of the warplane would be multiplied it it were able to operate closer to the heart of the battlefield. Unless a landbase was first secured in the vicinity, this could only be done by devising a floating airstrip and thus, via evolutionary stages, the aircraft carrier was born and naval aviation came of age.

If it was the Second World War that first saw extended use of seaborne air power, it was the Falklands conflict that most succinctly demonstrated the effect of fixed- and rotary-wing aircraft when delivered to the war zone by carrier vessels far from home territory.

In this first substantial history of British naval aviation for many years, Ray Sturtivant takes the reader back through the infant days of the first deck landings, into the years of improvisation and experiment, the dramas of the Second World War and the first jet-powered naval aircraft, to the advances offered by the helicopter and the test of modern naval air strategies in the South Atlantic.

If the giant carrier has had its day, the smaller, faster craft with its helicopter support and awesome firepower has ensured naval aviation a role into the 21st century. And, if drawing-board theories overcome budgetary restraints to reach manufacture, a fresh breed of warplane, operating from new-style carriers, will have major influence on military defence for the foreseeable future.

Having been at the forefront of naval air development from its inception, the Fleet Air Arm is a vital constituent of world military history and merits the study this volume will encourage amongst serving officers, professional historians and laymen.

★ ★ ★

ALLIED SUBMARINES

of World War Two

by **Kenneth Poolman**

Published by **Arms and Armour Press, London**

Reviewed by **VIC JEFFERY**

Highly respected maritime author Kenneth Poolman has made a concise and commendable effort in his endeavour to describe the war effort of Allied submarine fleets in World War Two with this book.

Including the submarines of Great Britain, France, United States of America, Soviet Union, The Netherlands, Greece, Norway, Poland and Yugoslavia, this reference works packs an enormous amount of information into 160 pages.

The author looks at the principal theatres of action in the Atlantic and Pacific Oceans, the Mediterranean Sea and lesser waters also. The inclusion of many first-hand accounts of actions along with a descriptive easy-to-read format supported by 163 black and white photographs, 10 maps and four line drawings make this a most enjoyable book.

There are some superb photographs included in ALLIED SUBMARINES including an excellent shot of HMS TAKU riding the turbulent waters of the Bay of Biscay, a fine view of the former RAN HMS OXLEY and of a personal interest, a full page shot of the Netherlands K XI which was scuttled west of Rottnest Island in Western Australia in September, 1946.

One realises just how far submarines have progressed after studying a photo of the after torpedo compartment in HMS PARTHIAN showing the emergency hand controlled hydroplane position – driven by what looks like a cumbersome giant bicycle chain!

Clearly captured in this book is the feeling of utter helplessness and terror of submarine crews under attack, submarines being the hunted as well as the hunters. The undersea war was renowned for its heroic deeds and tragedies.

Comprising 14 chapters, it includes titles like The Thin Grey Line – when the Royal Navy had only 21 submarines immediately available in home waters at the outbreak of war, Shallow Waters, Springtime for Stukas and Defence and Offence in the Pacific, the chapters are divided into many interesting sub-sections.

A sample of the sub-sections of this book include: Escape of the Scharnhorst and Gneisenau, The Poles arrive, In the minefields, US Wolfpacks, 'Unlucky Boat', Chasing the Cavours, Syrian Patrol and Rogue torpedo. This account gives an indication of quality of the text of ALLIED SUBMARINES.

A most enjoyable reference book, ALLIED SUBMARINES of World War Two retails at $65.00 and is distributed in Australia by Capricorn Link (Australia) Pty Ltd of Lane Cove, NSW. Recommended reading.

★ ★ ★

WARSHIPS OF THE CIVIL NAVIES

by **Paul H. Silverstone**

Published by the **Naval Institute Press, Annapolis Maryland, USA 21402**

Reviewed by **'ACHERON'**

This is an unusual book, describing as it does the combatants of the American Civil War. The author states that it is the first ever publication to list and describe all of the participating vessels.

Supporting the narrative is a unique collection of photographs of the 1861-65 period, with sections devoted to US Navy, the Revenue and Coast Survey organisations and naturally, the Confederate States Navy.

The Mississippi River fleets of both sides provides a detailed insight into the riverine armoured craft including monitors, ironclads, timberclads, tinclads, gunboats and rams. Side-whellers and stern-whellers, traditional river ferries were also taken up for war duties and outfitted with various types and degrees of armament.

MONITOR and VIRGINIA (ex MERRIMACK), the two most famous civil war vessels are described with their respective fleets. Details of hundreds of craft are included in the book, giving the reader a total picture of this important era of naval warfare and ship construction.

The quality of the old photographs in Warships of the Civil War Navies provides an excellent visual account of the numerous types of men-o-war and includes many onboard scenes depicting both the personnel and equipment.

As far as this writer is aware, no photos have survived of the famous USS *MONITOR*, completed in 1862. In the book the vessel is shown via an onboard view with her two 11 inch guns protruding from the battle damaged turret. Other interesting ships illustrated include the early Spar torpedo boats of both sides, many sail powered warships and a selection of the acquired vessels, formerly tugs, ferries plus some warships from other navies.

The Confederate 'commerce raiders' including ALABAMA, FLORIDA and SHENANDOAH were outfitted or built in Great Britain to menace the Union's merchant ships and accordingly tied up their naval forces. The SHENANDOAH is depicted in Melbourne undergoing refit in February, 1865, her Confederate flag aloft.

Warships of the Civil War Navies is highly recommended to all readers and can be obtained direct from the publishers at the above address for $44.95 (US).

NAVY LEAGUE AND CADET NEWS

NAVY LEAGUE MARITIME VIDEO LAUNCHED

The Navy League's two and a half hour six-episode educational video, The Sea and Australia, which was featured in VIEWPOINT last edition (The Navy, July-September 1990), was launched by the Federal President on 26 July at a special function at the University and Schools Club in Sydney.

The series has since been launched in Melbourne, and separate functions will follow in other States and Territories.

The video, which has already been enthusiastically endorsed by the NSW Director-General of School Education and by the RAN, is being sent free by the League to all Australian secondary schools. Copies are available for purchase by using the order form on this page.

In producing the series, the Navy League gratefully acknowledges the support of the following: Australian National Maritime Association, ANL Limited, Commonwealth Bank, Albert Recording Studios, Australian Radio Network and the Sydney Maritime Museum.

Pictured at the handing over of the master video-tape to the Federal President are (left to right): Script-writers John Grover and Federal Vice-President Andrew Robertson, Federal President Geoffrey Evans, Executive Producer and NSW State President, Otto Albert, and Series Producer Rob McAuley.

THE SEA AND AUSTRALIA

ORDER FORM

To: **The Secretary**
The Navy League of Australia (NSW Division)
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A Background to the League

The Navy League of Australia is incorporated in the Australian Capital Territory as a company limited by guarantee.

Principal objects of the League include:

- To keep before the Australian people the fact that we are a maritime nation and that a sound maritime industry is an indispensable element of our national well-being
- To promote, sponsor and encourage the interest of Australian youth in the sea, and sea-services, and to support practical sea-training measures.

Members of the League for the most part are people who have an interest in maritime affairs, or who wish to broaden their knowledge of maritime matters and who otherwise support the objects of the League.

The League had its origin in the Navy League established in Britain towards the end of the 19th century. From a simple beginning, a world-wide organisation of independent, national Navy Leagues emerged which over the years have influenced public thinking on maritime affairs and through a remarkable youth training scheme, created in tens of thousands of youngsters an interest in the sea and ships.

An Australian branch of the British League was first formed in 1901, in Tasmania, followed by others on the mainland; all had "Navy League Cadet" units which were then the main reason for their existence. After World War II the branches amalgamated, separated from the British parent and formed the Navy League of Australia. At this time the cadet units received limited assistance from the RAN, mainly in the form of uniforms.

By 1952 the League had become an Australia-wide organisation, the cadets had been re-named "Sea Cadets" and an Australian Sea Cadet Corps (ASCC) formed. Following amendments to the Naval Defence Act, the ASCC received greatly increased naval assistance and a Sea Cadet Council consisting of League and RAN representatives was established to oversee the ASCC's activities.

Expansion of the ASCC, and especially the expense of providing accommodation, then a Navy League responsibility, caused a further change in 1973. ASCC cadets became "Naval Reserve Cadets" (NRC) which, although not a part of the Defence Force, were now a naval responsibility in all respects. The League however continued to support NRC units in a number of ways, such as providing equipment unavailable from naval sources and acting as the link with local communities.

Although no longer responsible for the cadets, the Naval League of Australia still plays an active part in supporting the cadet movement, but its activities have been expanded to embrace maritime affairs in general. A consequence has been a larger membership more representative of the maritime community.

Seminars are arranged; articles written by members appear regularly in the print media; the League's quarterly magazine THE NAVY has been expanded and circulation increased; submissions are made by appropriately qualified members to parliamentary and public inquiries into the maritime industry, and so on.

"THE SEA AND AUSTRALIA" is the Navy League of Australia's most ambitious project to date, and perhaps the most important, as it is designed primarily for the oncoming generation on which our country's future depends.

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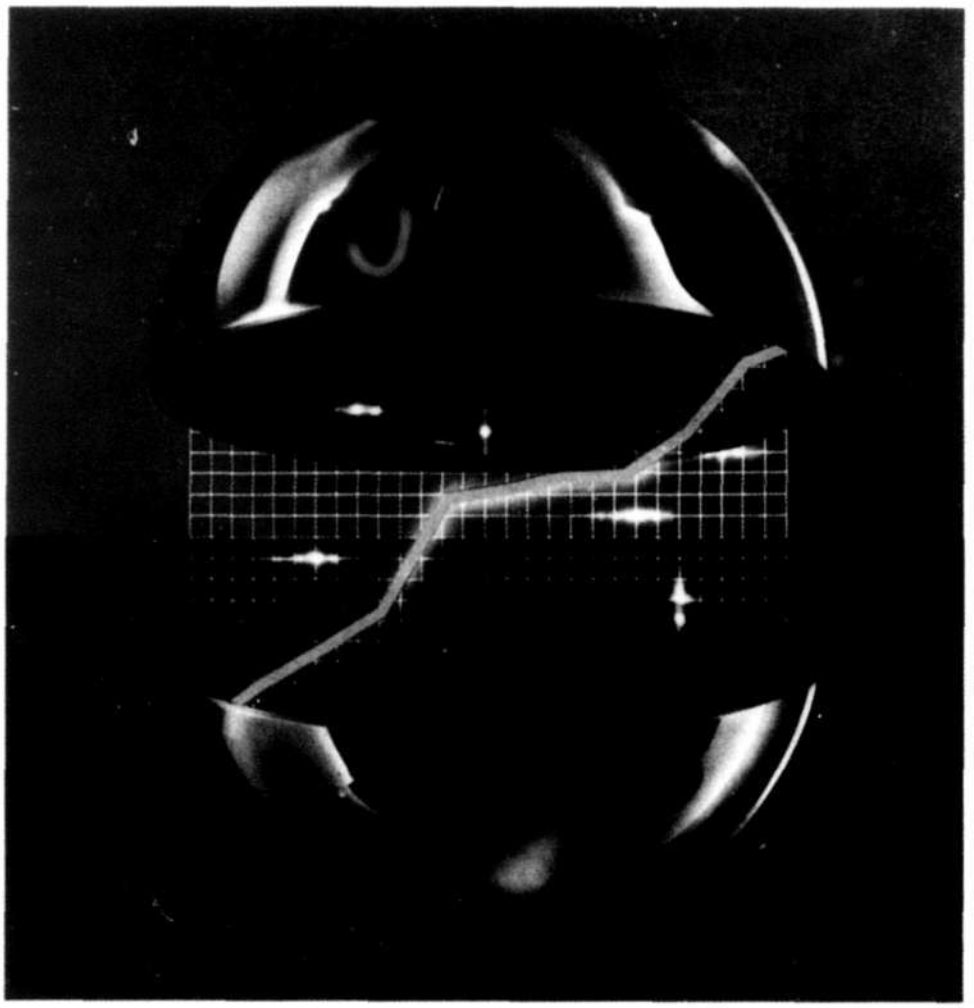

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