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THE NAVY



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Fairey Fireflies aboard HMAS SYDNEY. HMAS VENGEANCE is in the background with a group of destroyers.

(PHOTO — T. WEAVER)

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The opinions or assertions expressed in articles in "The Navy" are those of the authors and are not necessarily those of the Federal Council of the The Navy League of Australia, the Editor of "The Navy" or The Royal Australian Navy.

Our Cover Photographs

Top: A Grumman Tracker leads several Douglas Skyhawk aircraft over Nowra in April, 1974.
Bottom Left: Fairey Firefly, WD 828, February 1967.
Bottom Right: Naval Air Station HMAS Albatross, Nowra, in October, 1967, with a Westland Scout helicopter and Fairey Gannet aircraft.

(All photographs courtesy Eric Allen)

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RESTORING NAVAL AIRPOWER

In the history of Australia's armed forces no subject has been argued for so long and generated as much heat as the need for Australia to have a carrier-based air capability.

THE subject was first raised during World War II when the importance of the aircraft carrier in maritime warfare had been demonstrated time after time, and appreciated by Australian defence authorities as much as anyone.

It was not, however, until 1947 that the Chifley Government approved a naval aviation plan, which included the acquisition of a carrier, as part of the Government's post-war defence policy. At the end of 1948 HMAS SYDNEY (formerly HMS TERRIBLE) was commissioned and the naval air branch was in business.

In the early stages the question of manning the naval aircraft arose. During the war several RAN ships carried Walrus amphibious aircraft, flown and maintained by RAAF personnel with the Navy as a general rule providing observers and telegraphists, some thought this arrangement should continue in the new branch. The Navy, however, had other ideas and wanted a self-

contained air arm structured along the lines of those which had proved so successful in the Royal Navy and the United States Navy. The RAN had its way.

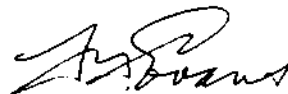
With the development of shore facilities, the acquisition of a second carrier — HMS VENGEANCE on loan in 1952 until relieved by HMAS MELBOURNE in 1955 — and eventually appropriate at-sea support forces, the RAN became a well-balanced and important part of Australia's defence arrangements. Nothing, however, was gained without prolonged and sometimes bitter argument, whether, as time went on, it was about replacing and/or as they became obsolete or anything else that enabled the Fleet Air Arm and the RAN to remain efficient and effective.

Some argument was based on cost, some on the alleged vulnerability of surface ships to air attack and by no means least, a belief that the Air Force could cope with all the requirements of the armed forces whether it be over the land or over the sea.

If equipment modernisation proposals generated warmth, it was nothing compared to the heat that accompanied debate over replacement of the last of the carriers, MELBOURNE, a debate that eventually spread to the Parliament and into the community. After years of procrastination (excluding a short period in 1982 when a replacement carrier was actually on order), on the eve of a "final" decision — which would in all probability have favoured the Navy's case — the Fraser Government was defeated and the incoming Hawke Government immediately ordered disbandment of the fixed-wing element of the Fleet Air Arm and made it clear the RAN would not have a carrier.

It would be foolish to think five years later the Government regretted its no-carrier decision. On the other hand, with the recent experience of Fiji and Vanuata and other similar incidents in our sphere of interest a distinct possibility, the more thoughtful members of the Government and the Defence Department must have realised that an air-capable naval vessel with the capacity to accommodate a large number of people, civilian or military, would be very useful indeed, much more effective in so many ways than requiring the Navy to improvise and adapt support ships for purposes for which they were not intended.

Sooner or later the present or a succeeding government will restore some measure of the capability and flexibility lost by the Navy when forced to dispose of its fixed-wing aircraft, hopefully a substantial measure as our maritime shortcomings are increasingly appreciated. The sooner government and the Australian people face up to the need, the less costly restoration will be.



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MAKING A MUSEUM

by Commander
H. E. CAMPEY, RAN



Artist's impression of the new museum

An historic, inspiring and unique part of our Australian heritage is at risk and needs support. The armed forces, ships, aviation — all have loomed large in the history of our island continent. All three are represented in Naval Aviation.

To operate aircraft from a tiny platform in the midst of a distant, often storm-tossed ocean, demands the highest skills in the aviation world. Indeed, when the RAN's aviation capability, now more than 70 years old, reached its full maturity with fixed wing aircraft carriers at the time of the Korean War, Australia was one of only six nations that could boast such a force.

Naval Aviation was and is powerful, spectacular, dangerous and an inspiration. Since the time during World War I when aircraft were first flown off platforms on the gun turrets of cruisers, the Fleet Air Arm, as it was later to become known, has epitomised the best in Australian know-how, initiative, teamwork and courage.

The Air Arm's highly skilled aircrew and shipboard personnel have been an inspiration to all who have observed them in action. Who could fail to be moved by the awesome sight of a carrier's flight deck crew operating at night in foul weather on a heaving, wet, windy deck surrounded by moving aircraft, swirling steam, the roar of jet engines, the thump of the steam catapult and the scream of arresting wires?

Naval Aviation continues, but the memories of the early years — a unique chapter in this country's history — are fast disappearing. Fortunately however, the opportunity exists to save a significant reminder for posterity. We have that opportunity because examples of almost every type of aircraft flown by the

Fleet Air Arm since 1948 have been saved from extinction.

A small but determined band of volunteers — both serving and former personnel, together with a handful of supporters — have begged, borrowed and donated their resources to preserve and restore not only one of the finest collections of historical naval aircraft in the world, but also equipment, photos, documents and other mementoes that record the history of the Fleet Air Arm.

Some of the many aircraft have been painstakingly rebuilt to flying condition, and now appear at air displays, giving the public around Australia the chance to view and appreciate them.

The whole collection, assembled as "The Australian Naval Aviation Museum" is accommodated adjacent to the Naval Air Station HMAS ALBATROSS at Nowra, on the New South Wales South Coast.

It is a tribute to the imagination of those who have established the museum that it has become a major tourist attraction, drawing more than 70,000 visitors a year. Further, the significance of the collection had begun to win overseas recognition — highlighted by the recent invitation to establish an exchange relationship with the august Smithsonian Institute in Washington DC.

We owe the existence of the Australian Naval Aviation Museum to the extraordinary dedication of individuals who have contributed generously of their time and resources. These resources are, however, not unlimited, and there is an urgent need for support from the community as a whole.



Dakota and Firefly at NAS Nowra.



A selection of the preserved aircraft.

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The museum's collection of smaller items and documents is at present housed in converted prefabricated huts. Some of the aircraft are temporarily accommodated in spare hangar space, but others, including some of the rarest and most valuable aircraft, are standing in the open, exposed to all weathers. Unless action to protect them is taken soon much of the good work of recent years will be undone and the aircraft will be lost to posterity.

In the light of that danger and of the need for an appropriate setting for the collection, the Museum Foundation has formed a Capital Campaign Committee, led by senior retired Naval officers and a number of Australian business leaders — its target, a capital sum of \$2 million to build a permanent home for the museum at Nowra. This sum will provide new hangars and a museum complex, with display, landscaping and ancillary facilities appropriate to a collection of this value and significance. The complex will further establish the Museum as an institution of national importance and enable it to expand its collection. Its stature as a visitor attraction will be enhanced, bringing interest and pleasure to future generations. In years to come naval Aviation will seem as distant and intriguing as the exploits of earlier pioneers and adventurers appear to us today. Plans for the Museum have been drawn up, and the work is ready to begin.

Anation-wide Capital Campaign Committee has been formed under the chairmanship of Rear Admiral Andrew Robertson, with sub-committees in each State under the leadership of high profile business leaders, which plans to raise \$2 million over three years.

It is anticipated that the first \$1 million will be raised within the first year.

Approaches already have been made to major companies and corporations and the response is excellent and most encouraging.

The official launch of the project is planned for September during a naval reunion at HMAS ALBATROSS.

The local community will be invited to make tax-deductible contributions as well as being given an opportunity to take up an offer of foundation membership at \$125 a year.

The fully developed site will include outdoor facilities for family barbecues and a viewing area for the museum's Historic Flight. The major attraction will be the exhibits displayed on the 7500 square metres of ground floor space.

These will include 17 fully restored aircraft ranging in variety from a replica of a Spitfire to a Wessex helicopter and a Douglas Dakota C47 which will create an atmosphere of power from a bygone era.

Museum Curator, Lt Cmdr Bob "Windy" Geale said the con-

struction of the new complex will allow the display of every item so far collected.

"At the moment only about 20 per cent can be seen by the 30-70,000 people who visit us each year," he said.

"There are six caches of memorabilia scattered around the base and we have no space to permanently house them.

"The new hangar will give us all the room we need as well as allowing space on the second floor for a library and elevated viewing platform which will overlook the 17 aircraft."

When completed the pride of the flight will be a Hawker Sea Fury, which in its day was the fastest production piston engine aircraft ever built.

Lt Cmdr Geale said the project would have got off the ground several years ago if an application for a grant from the Steel Industries Assistant scheme was successful.

"Despite all our efforts and the significant support given to us by Shoalhaven City Council, we failed to convince them of our need. Meanwhile our secondhand accommodation is getting older and our aircraft and large static displays are being ravaged by the elements."

The enthusiastic band of unpaid volunteers is determined to raise the necessary funds and does not see it as a pipe-dream.

Complementing the museum is the much higher profile group of professional flyers who formed the Royal Australian Navy's Historic Flight which demonstrates living, breathing history accompanied by the roar of piston-driven engines.

The flight now boasts seven aircraft in airworthy condition, a tribute to the 40 or so men who give up their leisure time to maintain them and get them in the air for open days and any special events.

They are led by Lt Cmdr Ken Alderman who has the responsibility of test flying each aircraft after it is cleared by the Department of Aviation.

Restoration, funded by the museum and private donations, is carried out in a hangar near the airfield. The hangar, to the uninitiated looks as if it contains a collection of scrap metal, some of which remotely resembles bits and pieces of aircraft.

Their tender loving care has breathed life into a Fairey Firefly, Westland Scout, Dakota, Grumman Tracker, Tiger Moth a Harvard and a Sea Fury as well as bringing the occasional tear to the eyes of pilots from bygone eras who travel to HMAS ALBATROSS to see them take to the air.

"The labour component is the highest cost factor in maintaining the flight, and this is provided free by the volunteers, which is just as well because a propeller for the Firefly, for instance, would cost \$10,000," Lt Cmdr Alderman said.

"The RAN has approved the formation of the Historic Flight, and provides financial assistance in the form of fuel and oils sufficient to allow 50 hours of flying training time.

"We are attempting to collect an example of every plane



Fairey Firefly in flight.

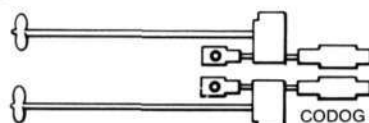
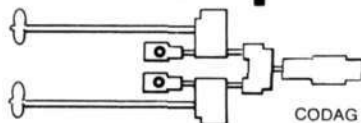


HMAS SYDNEY exhibition.

Which ANZAC ship?

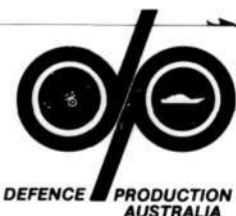


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operated by the Navy since it first took to the air to protect its fighting ships, but as yet we are unable to obtain any model dated before 1940, with the exception of the Tiger Moth.

"Australian Navy pilots have, over the years, been called on to fly a great variety of aircraft mainly constructed in Britain and these should be represented.

"Other planes which form a part of the history of ALBATROSS include those used by the RAAF, British Navy and the Army."

The group has set itself a monumental task as it is simultaneously working on the restoration of a Sea Venom, Bell Sioux helicopter, a fabric-covered Auster and a Bristol Sycamore helicopter as well as the Sea Fury.

The re-union at HMAS ALBATROSS will celebrate 40 years of flying at the base and is a fitting time for the launch of the Capital Campaign Committee's appeal for protection of those aircraft which were such a familiar sight in the skies above the South Coast.

The museum is now open seven days a week from 10 am to 4 pm and can cater for guided tours if required and notified.

College goes mining

The Australian Maritime College in Tasmania has come up with a world-first, a device which turns fishing boats into minesweepers.

It will enable commercial fishing boats to be used in the protection of Australia's vast coastline.

The device has been developed by the Australian Maritime College's research company, AMC Search Ltd, for the Royal Australian Navy.

The design project has included the compilation of a comprehensive computer data base on commercial vessels operating from every port in Australia.

AMC Search manager Mr John Foster said that while half-scale models of the deep wire trawl had been made, full-scale sea trials of the device would be held at undisclosed locations in Tasmanian waters later this year.

Mr Foster said the trawl was basically a mechanical minesweeping device which could be towed behind small, stern-trawl vessels.

The trawl's full capabilities could not be revealed for security reasons but Mr Foster said it would operate deeper and closer to the seabed than existing devices.

The design brief had been a device which could be flown to remote locations, fitted to a chartered commercial vessel, and put into service before a navy vessel could reach the area.

The data base would give the Navy instant information on the vessels in the area and their capability and capacity.

Mr Foster said AMC Search employed a full-time research assistant on the project and used four of the college's academic staff on a part-time basis and a local electronics firm.

"We will be involved in a training programme with the RAN and we hope to win a contract to keep the data base up to date," he said.

Mr Foster said the college did not know whether the Navy would use the trawl in overseas waters such as the troubled Persian Gulf.

However, he said it was not the sort of device to be developed and exported.

"The primary object in developing the device is for the protection of the Australian coastline and ports," he said.

"We expect it would be kept under wraps because it improves the RAN's defence capability."

NAVAL AVIATION MUSEUM

A BRIEF HISTORY

IN February, 1974 the Commanding Officer of HMAS ALBATROSS, Captain A. J. Robertson initiated a project to establish the RAN Fleet Air Arm Museum. It was decided to locate the museum in a hangar which at that time was surplus to requirements. Once the site had been selected work progressed rapidly until the museum was ready to be officially opened.

On 2nd December, 1974 the official opening was performed by Admiral Sir Victor Smith KBE, CB, DSC, who had served in the Fleet Air Arm as a Telegraphist Air Gunner and Observer. A few months later the museum was opened to the general public.

After the NAS Nowra H Hangar fire in December, 1979, and following acquisition of replacement Tracker aircraft, the Museum Hangar was required as a replacement for the destroyed hangar. Consequently the Museum aircraft were stored in various other hangars and the static displays were removed to various buildings. As the Museum assets had been dispersed around the Air Station, the decision was made to close the Museum.

This situation remained until late 1981 when work was started on relocating the Museum to a new site. Plans received a significant boost, when, in March 1982 members of the 21st Construction Regiment RAE (SR) arrived at NAS Nowra and relocated an empty building to the area known as the 'Dummy Deck'. Two other buildings were added to the initial building, allowing an enthusiastic band of workers to convert the ancient World War II buildings into a Museum.

On 10th August, 1982 the Heritage Trust of the RAN Fleet Air Arm Charter was raised by the Commanding Officer Commodore T. A. Dadsell AM. The Trust aims to preserve the story of Australian Naval Aviation and the RAN Fleet Air Arm and to present the story of the deeds and sacrifices of many Naval air personnel who have served their sovereign and country both in war and peace.

The Museum was conceived and established by an enthusiastic band of volunteers from the Air Station who have donated much of their spare time and professional skill to restore the aircraft and exhibits.

Since 1982 other vintage buildings have been moved to the Museum site to provide further space for displays and storage of memorabilia. Ex-naval aircraft have been placed on static display outside the buildings and provide a real time link with the rich naval aviation history on display inside the buildings.

In July, 1987 the Heritage Trust agreed that a new museum complex was needed to provide the aircraft on display with protection from the elements and provide correct environment for displays of memorabilia.

A National Capital Campaign to achieve this objective commenced in August, 1987.



Part of the Naval Aviation Museum.

TIGER MOTH

At least three Tigers were used by the RAN: A17-382 acquired on 13th October, 1948, A17-590 struck off from the RAAF on 25th February, 1949, and A17-692 taken on charge on 30th March, 1954. All three were employed at Nowra and Schofields being suitable as instructional airframes and for minor flying duties.



Former RAN Tiger Moth now used for joy flights.

SPITFIRE

Employed as land-based trainers and later for fire-fighting practice. Only 14 were eventually delivered with No 691 failing to transfer into the FAA. All ended their careers in the fireground where the remains were, reportedly, bulldozed into the ground.



Navy Spitfire trainer.

SEA FURY

The last piston engine fighter bomber to be built in the United Kingdom, the Hawker Sea Fury was first flown on 21st February, 1945. Orders were placed in 1948 for 101 RAN Fleet Air Arm examples out of a total of 615 manufactured.

In Royal Navy service the Sea Fury first entered service in August, 1947. During the Korean War, the type was successfully employed aboard the carrier Sydney as ground attack aircraft and as fighters against MiG-15 jets.



Sea Fury after touch-down on HMAS SYDNEY.

FIREFLY

Of 108 Fireflys purchased by the RAN, 86 were delivered aboard Sydney, 19 via Vengeance, one on the SS Sussex, one on the SS Stentor and one from the Royal Navy in Korea.

During RAN service a number of Fireflys were converted to training aircraft (T Mk5) with a raised rear cockpit, whilst others ended their careers as target tugs with the addition of a winch.

In 1950 the specialised AS Mk6 version, designed as an anti-submarine aircraft, began operational duties. The new model lost its four cannons for Sonar Buoys, while a/s indicators were placed into the cockpit. These models remained in use until the arrival of the Gannet in 1955.



A formation of Fireflys from HMAS SYDNEY, early 1950s.

DC-3

Four ex RAAF DC-3 Dakota aircraft were transferred to the RAN on 1st December, 1949 (A65-43), and 11th April, 1950 (A65-23), and on 23rd February, 1968 (A65-90 and A65-123).

A65-23 was converted by the Fairey Aviation Co of Australia at Bankstown, NSW, as a flying classroom for Firefly AS6 observer training. This work involved four stations for navigation instruction and four for anti-submarine detection. Other modifications included sonar buoy racks under the wings and a half-door allowing the use of a hand-held camera. A65-43 was subsequently altered along the same lines.



Dakota, October, 1969.

(PHOTO — ERIC ALLEN)

July/September, 1988

AUTOCAR

Two Autocars were delivered to Australia from the UK on the carrier Sydney on 7th June, 1953. Both were sold through the Department of Supply in October, 1963.



Bristol Sycamore and a friend.

SYCAMORE

Thirteen Bristol Sycamore helicopters were ordered for the RAN to serve in both the ship-borne and land-based roles. All RAN aircraft were export versions of the HR-13 and HT-14 models.



Autocar, A1-300.

(PHOTO — ERIC ALLEN)

VAMPIRE

Five Vampires for the RAN were delivered in 1954. These were followed by another in 1957. These were followed by another in 1957 to replace one machine lost in an accident on 7th August, 1956), and four British built in 1959. The initial six were designated T34As, an equivalent of the RAAF T33 and the four British-built Vampires as T22s. Eventually, 13 of the type were flown.



Vampire jet trainer, XA-167, November, 1966

(PHOTO — ERIC ALLEN)

July/September, 1988

GANNET

In RAN service the Gannet combined its anti-submarine duties with the search role. With a spacious weapons bay each aircraft could carry two homing torpedoes or depth charges. As such the Gannet was the first British-designed and built naval aircraft able to carry all weapons, (except wing mounted rockets) internally. Although Gannets were gradually withdrawn as first-line anti-submarine aircraft in the British fleet from 1958, the RAN aircraft continued in service until 1967, despite attempts in 1959 to run down the entire Fleet Air Arm. During 1962-63 further moves were made to withdraw both Sea Venoms and Gannets from Melbourne and use her solely as an anti-submarine carrier, with Westland Wessex helicopters.



Fairey Gannet aboard HMAS MELBOURNE.

SEA VENOM

The Sea Venom was the first all-weather jet fighter in both the RAN and RN. All RAN aircraft were delivered to Australia aboard the carrier Melbourne during her delivery voyage. A total of 256 Sea Venoms of all types were built.

After arrival Sea Venoms equipped VT 805 and VT 808 all-weather fighter squadrons aboard Melbourne and VC 724 in the operational training role from HMAS Albatross. The aircraft remained in front-line service with the RN until December, 1960, and in the RAN to 1967, when superseded by the US designed Skyhawk.



Above Nowra, October, 1967, a Sea Venom jet fighter.

(PHOTO — ERIC ALLEN)

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WESSEX

Originally produced for the Royal Navy as a replacement for the Whirlwind, the Wessex was developed from the Sikorsky S-58. As such it was the first helicopter ordered by the Royal Navy for the anti-submarine role. Deliveries to the RN commenced in 1960.

The first flight of RAN Wessex took place on 23rd November, 1962, with the first handover to Squadron HT 725 three days later. The remainder were delivered at the rate of three per month. By August 1963, HT 725 boasted nine Wessex and with ten examples in HS 817 Squadron. During the same month the first Wessex was embarked aboard the flagship *Melbourne*.

During May, 1967, four Wessex were detached to the fast troop transport *Sydney* for her voyage to South Vietnam. In 1968 conversion of the Wessex 31A to 31B variant commenced with two helicopters being modified in the United Kingdom to incorporate an increased load-carrying capacity, improved sonar system, communications, and navigational aids and a more powerful engine. Twenty-one other Wessex were subsequently converted to Hawker de Havilland, Australia, the first flying in June, 1968. A few still remain in use. Wessex N7-217 is preserved as a static display at the Naval Aviation Museum.



Westland Wessex after modification to MK 31B configuration
April, 1974.

(PHOTO — ERIC ALLEN)

SCOUT

Two Scouts were purchased in the early 1960s for survey operations from Moresby. N8 101 was preserved at the Naval Aviation Museum from 10th August, 1977. The Scout was replaced by the CAC-built Bell 206B-1.



Scout utility helicopter.

IROQUOIS

RAN Iroquois were delivered from Bell through the US Army and transported to Australia aboard merchant ships. Three examples were ordered in March, 1963, three in December, 1963 and one in February, 1965.

The surviving Iroquois were replaced in the utility role by the French-designed Aerospatiale Squirrel during 1983-84.

The last three UH-1Bs were officially retired on 2nd September, 1987, but were returned to service in 1988.



Iroquois of HC 723 Squadron.

TRACKER

Replacements for the Fairey Gannets, 14 Grumman Trackers were delivered to Australia by the carrier *Melbourne* in 1967.

Of the 32 Trackers held by the RAN since 1967, one was an S-2A model used as an instructional airframe, 15 others were S-2E models, nine of which were destroyed by the fire in "H" hangar at HMAS Albatross on 4th December, 1976. A tenth, 153600 was subsequently written off.

In March, 1977, 16 S-2G models were purchased second-hand from the USN storage facility at Davis Monthan Air Force Base.

Only one Tracker, an S-2E, No. 153608, was lost at sea, off the eastern seaboard on 10th June, 1978.

Nineteen Trackers, comprising 16 S-2Gs and three S-2Es, were scheduled to remain in service until 30th June, 1984 after which the Federal Government was to decide on their use in the role of civil surveillance or disposal by sale. Eventually all were retired and offered for sale, an event still incomplete in 1988.



Grumman Tracker, December, 1977.

(PHOTO — ERIC ALLEN)

SKYHAWK

The RAN ordered eight A-4G and two TA-4G model Skyhawks which were handed over in the USA on 26th July, 1967. These aircraft were the first Skyhawks built for export. A second purchase was subsequently made in November, 1971, (comprising eight A-4Fs and two TA-4Fs), bringing the total strength to 16 A-4 single seat and four TA-4 dual seat aircraft. All F models were modified to A-4G configuration.

Prior to the decommissioning of *Melbourne* on 30th June, 1982, all Skyhawks had been withdrawn from carrier service and transferred to Nowra. The Federal Government announced on 3rd May, 1983, that six of the remaining ten Skyhawks would be withdrawn by 30th June, 1983, and four retained for target towing until 30th June, 1984. All were subsequently sold to the Royal New Zealand Air Force on 28th June for \$28.2 million. The 10 aircraft comprised eight A-4Gs and two TA-4Gs.



Douglas Skyhawk, 155063, April, 1974.

(PHOTO — ERIC ALLEN)



Douglas Skyhawk, two-seat trainer, January, 1973.

(PHOTO — ERIC ALLEN)

MACCHI

Ten late production Macchi aircraft were allotted to the RAN, forming VC-724 training squadron. Two RAN Macchis were lost — A7-073 at Nowra on 7th December, 1972 and A7-078 at Sussex inlet on 28th April, 1971.

Later the surviving Macchis were transferred to the RAAF on 30th June, 1983, following the Federal Government's decision to phase out fixed-wing aircraft from the Fleet Air Arm.



A pair of Macchi jet trainers, April, 1974.

(PHOTO — ERIC ALLEN)

HS-748

The two Fleet Air Arm aircraft, ordered as replacements for the Dakotas, were initially used as navigational trainers flying with VC 851 Squadron.

In 1977, the first RAN HS-748 was flown to the USA to be fitted with electronic warfare training equipment. The second aircraft followed shortly after. Both were re-delivered to the RAN by 1981. On 30th June, 1984, the two aircraft were to be transferred to the RAAF. However, both are still Navy operated.



HS 748, December, 1977.

(PHOTO — ERIC ALLEN)

KIOWA

Four 206B-1s were delivered to the Fleet Air Arm between 1973 and 1978, but No 025 was lost on 28th July, 1977. As a replacement one Army helicopter A17-005 was transferred to the RAN. This Kiowa was returned to Army Aviation in September, 1984.



Bell 206B-1 utility helicopter.

SEA KING

RAN Sea Kings flew for the first time on 30th June, 1974, when their crews began conversion courses. During the second half of 1974 the Sea Kings were operated as a search and rescue flight on the south coast of England. All 10 helicopters were delivered via merchant ships between May and October, 1975. Two additional Sea Kings (a modified Mk 50A configuration) were ordered in 1979 and delivered in 1983. Since their delivery Sea Kings have equipped 817 Squadron.



Three Westland Sea Kings landing aboard HMAS MELBOURNE.

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The Western Australian Government is to establish a Defence Technology Precinct on 25 hectares of land at the Henderson Estate adjacent to the Marine Support Facility now under construction at Cockburn Sound, 30 km south of Perth.

Commercial ventures can obtain freehold land in the new defence precinct to establish a service and manufacturing base for the rapidly expanding armed forces presence in Western Australia.

Construction of the Centre Building is scheduled for completion in October, 1989. This building will house the central services for the precinct and R&D facilities.

Proposed services, for which expressions of interest are invited, include transfer standard calibration, environmental testing and trials.



a CAD/CAM bureau and advanced training courses. Applied research and development programmes include oceanographic and marine sciences.

Large-scale Government Investment.

Within 10 years half of the RAN fleet will be based at HMAS Stirling, the naval base in Cockburn Sound.

In addition Western Australia will experience an upgrading of other defence facilities such as the Pearce RAAF training base, the Geraldton satellite communications station and the Army's counter insurgency programme.

Over the next 10 years, some \$330 million will be spent on capital works and equipment at the naval base. Within 20 years it is projected that defence and infrastructure work in Western Australia will gross \$3 billion and employ 3,000 people.

Those companies interested in establishing in the new precinct can make further enquiries by contacting Mr Denis Pickett, Senior Project Officer, TIDA.



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SQUIRREL

Six Squirrel helicopters were authorised in 1982 for service with HC 723. The first helicopter flew to NAS Nowra in May, 1984, with all operational by mid year.

As well as utility work, the Squirrel is flown from HMAS Moresby to assist in the survey role from 1987 and from the FFGs until arrival of the Seahawk in the late 1980s. Each Squirrel can carry two passengers in addition to the pilot and navigator.



Squirrel helicopter aboard HMAS STALWART.

SEAHAWK

Eight Seahawks were ordered in October, 1984, and another eight in May, 1986. Cost of first order was \$317 million (1984).

One Seahawk will be attached to each RAN FFG, with the capability for two helicopters in wartime. Deliveries are scheduled from mid 1988. The helicopters will become operational about May, 1989, and are expected to remain in use for some 25 years.

The Seahawk was developed from the US Army's Black Hawk for use aboard the US Navy's FFGs as the SH-60. The 16 RAN S-70B-2 versions will carry a different avionics fit than the US helicopters.



The first RAN Sikorsky Seahawk helicopter during flight trials in the USA, 1988.



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NEW CALEDONIA (NOUMEA)	Tahiti Vanuatu
GUAM	Marshall Islands (Majuro) *Northern Marianas (Saipan) *Palau

*Opening 1988



Shell Marine Service Worldwide



NAVAL BICENTENNIAL SALUTE

THE greatest peacetime gathering of warships ever seen in Australian waters will take place in the Bicentennial Naval Salute on Sydney Harbour from September 26th to October 4th.

Announcing this, the Minister for Defence, Mr Kim Beazley, said: "The highlight of the Bicentennial Naval Salute will be a review of the ships by the Duke of York on October 1 followed by a spectacular fireworks display.

"Replies to invitations by the Australian Government indicate that at least 32 warships will join 15 Australian ships for the event creating the most exciting Naval presence ever seen in Sydney," Mr Beazley added.

France, Greece, Italy, Japan, Malaysia, the Netherlands, New Zealand, Pakistan, Papua New Guinea, the United Kingdom and the United States have confirmed that they will take part.

India plans to be represented, a small contingent of naval personnel will represent Nigeria and six other countries have still to indicate whether they can join the celebrations.

As well as being a major activity of the Bicentennial, the Salute is being organised by the RAN to commemorate Australia's naval history and reinforce international bonds.

The Navy has prepared a comprehensive programme of social, sporting and ceremonial events including a public band concert and recitals, an international march, a hospitality programme and public inspection of the ships.

"While the celebrations will not be confined to Sydney, it will be the focus. Many of the ships will call at other ports before and after the Sydney visit and State and local Bicentennial Committees in conjunction with local Naval Authorities will develop programmes for these visits," Mr Beazley said.

"The Bicentennial Naval Salute will offer a golden opportunity for Australians to meet and give international visitors a traditional Australian welcome," Mr Beazley concluded.

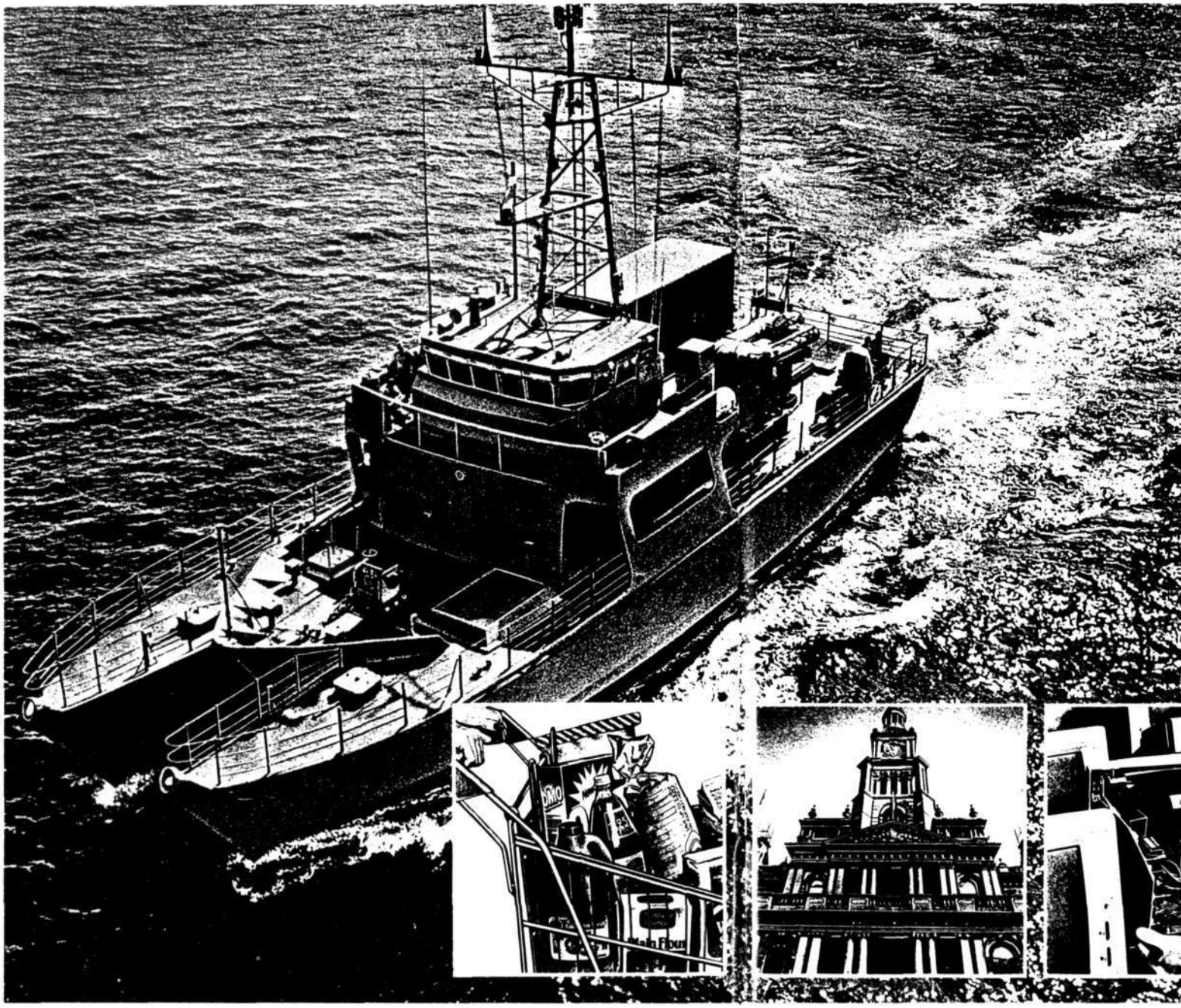
EXPECTED NAVAL SALUTE VISITORS TO DATE

France	FNS COLBERT FNS AMIRAL CHARNER	Cruiser Frigate
Greece	HS ARIS	Training Ship
India	GODAVARI	Frigate
Italy	CAIO DUILIO	Training Cruiser
Japan	JDS KATORI JDS SETOYUKI JDS SHIMAYUKI KD KASTURI KD SRI INDERA SAKTI	Training Cruiser Destroyer Destroyer Frigate Support Ship
Malaysia	HNLMs WITTE DE WITH HNLMs KORTENAER HNLMs JAN VAN BRAKEL	Frigate Frigate Frigate
Netherlands	HNLMs ZUIDERKRUIS HMNZS ENDEAVOUR HMNZS WELLINGTON HMNZS WAIKATO	Support Ship Support Ship Frigate Frigate
New Zealand	To be Confirmed To be Confirmed	Destroyer Support Ship
Pakistan	HMS ARK ROYAL HMS EDINBURGH HMS SIRIUS	Light A-Carrier Destroyer Frigate
PNG	RFA FORT GRANGE RFA OLWEN RFA ORANGELEAF	Support Ship Support Ship Support Ship
United Kingdom	USS NEW JERSEY plus three other ships	Battleship
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July/September, 1988

THE NAVY

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SEAHAWK UPDATE

by MAX HAWKINS

The first of the Royal Australian Navy's new S-70B-2 Seahawk helicopters is expected to be accepted about September or October of this year, with the first machine going into service at the Navy's Naval Air Station at Nowra on the NSW South Coast early in 1989.

THE Australian Defence Forces to date have ordered 39 Black Hawks and 16 Seahawks with total project costs, if we roughly translate 1985 and 1986 prices to current dollar values, climbing past \$1 billion.

The RAN Helicopter Project Director is Captain Vic Battese, who was the RAN's resident project manager in the US, before becoming overall Project Director. With the project now geared up to make deliveries later this year, Captain Battese has again been living in the US, where, as has Group Captain Wilson, he has been involved in one of the regular programme management reviews. Commander Paul Fothergill is the Deputy Director of the submarine warfare/targeting surveillance Seahawks operating from the six FFG frigates, the last two of which are being built at Williamstown Dockyard, Vic.

The first contract for eight S-70B-2 Seahawks was signed on July 30, 1985, with a project cost of \$US159m. This deal included an option to buy additional aircraft. This was taken up in May, 1986 under a new contract worth \$US240m. Given currency changes and other costs due to the inflation rate, the project today is probably worth \$600m or so in Australian dollars. The overall project costs include an allowance of around \$50m to progressively modify the flight decks of three of the four FFG-7 frigates and include the RAST system (Rapid Assist Secure and Traverse) which 'hooks' the descending helicopter and hauls it down to the flight deck and secures it. The RAN's fourth FFG, HMAS Darwin, was modified for Seahawk operations before delivery in the US. To date the modifications have been carried out on HMAS Sydney at Garden Island Dockyard in Sydney and the remaining two, HMAS Canberra and HMAS Adelaide, will be modified during normal refits. The two Australian frigates being built at Wil-



Sikorsky S-70B-2 Seahawk.

liamstown will incorporate the required changes.

While the Seahawk was developed around a Black Hawk Airframe, it is significantly different. This 'marinisation' programme included higher quality rivetting, a stronger undercarriage, partly to meet the RAST requirement, and the tail wheel moved forward to suit deck landings. The Seahawk has different weapons pylons and a different internal cabin configuration. It has entirely different avionics to meet its different roles and these required structural changes. The Seahawk also has a different rotor head designed to meet operations at sea. The avionics system meets the basic primary roles of ASW and ASST (Anti-Ship Surveillance and Targeting).

THE RAN Seahawk will be operated differently to those used by the US Navy which follow the LAMPS Mk3 concept of providing a data link for processing raw sensor data back on the ship. The RAN philosophy is more in line with making the helicopter an aerial eyes-in-the-sky and thus providing an extension of the ship's capabilities. The RAN has embedded the raw data processing in the aircraft, but still links tactical information.

Navy experts believe the S-70B-2's sensor and tactical systems will be about the best available in the Western World and provide greater capability in the air. However getting the new systems right has caused some delay. The original acceptance by the RAN of the first Seahawk was planned for the end of 1987. But the research and development of the systems and integration of the tactical data system's sub-sensors took longer than originally anticipated.

So the first of the two US manufactured Seahawks did not make its maiden flight of 17 minutes until December 4 last year. The two aircraft, after more testing, will be shipped to Australia later in the year, possibly about October. Their acceptance by the Navy in Australia could depend on shipping timetables and it is possible the first Australian-assembled Seahawk could

come off the Bankstown production line before the US built machines get here. HDH and Sikorsky are trying to have the first roll-out by the end of September. By late March, HDH had received two kits from Sikorsky and had started modification work. Like the Black Hawk, there is significant Australian industry involvement in the Seahawk programme, although most components are being built in the US. The Seahawk delivery programme, although also running slightly late, should end in late 1989.

Air and ground crew training is due to start in the US by July. An Australian-based training programme will start up at Nowra in early 1989. About 60 personnel, of which one-third will be aircrew, are involved in the early training which is diverse. Aircrews are away about a month and the technical people undertaking the maintenance course are away for more than four months. As presently planned, the Navy Seahawk will have a crew of three — pilot, tactical operator and sensor operator.

The first Seahawk is not expected to be permanently embarked on an FFG frigate until early 1990. The programme thus allows about a year through 1989 for full operational development. But this will include Seahawks flying out to ships at sea to practice landings and takeoffs. Although the FFGs have a capability to embark two Seahawks, the RAN intends to equip each of the six FFGs with only one machine for normal peacetime operations. Two per ship may be used during major exercises or other special occasions. So the split-up of the 16 Seahawks, once all are delivered, will see six regularly embarked at sea, four used in training support at Nowra, two for maintenance support, and four as the attrition reserve aircraft.

The RAN will recommission No 816 Squadron to be the training and parenting air group squadron for the new Seahawks. The squadron has been flying Wessex helicopters and earlier flew the Fleet Air Arm's front-line ASW Trackers.

USS WASP PICTORIAL

Courtesy A. D. Baker III



Starboard-quarter view of USS WASP. Note the aircraft elevator and dock gate, both in a lowered position.



Superstructure is lifted into place during construction.



USS WASP (LHD-1) sits on a floating drydock prior to her launching on 4th August, 1987.



As she is guided from the drydock, USS WASP passes the cruiser SAN JACINTO en-route to her fitting-out berth. The new ship, which was christened on 19th September, 1987, set a world record as the heaviest man-made object ever rolled over land.

WESTERN SAMOA PATROL BOAT

Western Samoa received a new Australian-designed and built Pacific Patrol boat from the Chief of Naval Staff, Vice-Admiral Michael Hudson, at an official hand-over ceremony near Fremantle, Western Australia on March 19th.

The \$3 million MV *Nafanua* was presented to the Secretary to Government, Western Samoa, Mr Maiava Iula, during a ceremony at the Australian Shipbuilding Industries (ASI) shipyards where up to 12 of the new patrol boats are being built under the largest Defence Co-operation project ever undertaken by Australia.

The MV *Nafanua* brings to four the number of Pacific Patrol Boats presented to Pacific countries to assist them in policing their vital 200 nautical miles Exclusive Economic Zones (EEZs).

Announcing the hand-over, the Minister for Defence, Mr Kim Beazley, said he was particularly pleased by the way the boats had been received and by the way they were being put into service. "As more boats are brought into service by regional countries, opportunities will be taken by the Royal Australian Navy to exercise with the Pacific Patrol Boats."

The first boat, HMPNGS *Tarangau*, was presented to Papua New Guinea in May last year. A second boat, RVS *Tukoro*, was handed over to Vanuatu one month later and Papua New Guinea received its second patrol boat, HMPNGS *Dreger*, the following October. Two more patrol boats will be presented to the Solomon Islands and Papua New Guinea later this year.

The Pacific Patrol Boat is 31.5 metres long, displaces 165 tonnes and has an operating range of some 2,500 nautical miles.

The boats already handed over are now patrolling their country's EEZs carrying out fisheries, customs and quarantine surveillance tasks. They are also designed and equipped to conduct relief, search and rescue and medical evacuation tasks.

An important feature of the \$61.7 million patrol boat project is the intensive crew training provided in Australia by both the RAN and ASI for each boat's complement of three



West Samoan patrol boat NAFANUA.

officers, two senior and nine junior sailors. As part of the project Australia also provided a support package for each boat including advisers and regional maintenance support facilities. New Zealand is contributing by providing initial training and one of the three advisers.

Mr Beazley said the Pacific Patrol Boat project was a major component of Australia's co-operation with South Pacific countries to improve surveillance of territorial and regional waters. The project complemented RAN ship visits, RAAF P3 Orion flights and other related activities under the Defence Co-operation Programme.

"The excellent progress of the patrol boat project puts us closer to the realisation of our objective to assist regional maritime co-operation and to establish a network of regional maritime surveillance based on co-operation and compatible national efforts," Mr Beazley said.

"This year the government has budgeted \$16 million for defence co-operation in the South-West Pacific."

SUBMARINE ESCAPE AT HMAS STIRLING

The Minister for Defence, Mr Kim Beazley, on April 22nd, opened the Navy's new \$17.5 million submarine escape training facility at HMAS Stirling, south of Perth, Western Australia.

"This project reflects our determination to maintain and enhance the RAN's place among the world's foremost submarine operators," Mr Beazley said.

At a ceremony attended by the Minister for Administrative Services, Mr Stuart West, and the Chief of the Naval Staff, Vice Admiral Michael Hudson, Mr Beazley said the purpose of the new facility was to train submariners in the safe method of abandoning a disabled submarine lying on the seabed at a depth less than its crush depth.

The escape trainer is one of only six facilities in the world and includes:

- a steel tank providing a 20 metre deep water column,
- two six-man recompression chambers,
- a diving bell,
- a work platform suspended above the tank,
- a control officer's console with closed circuit TV monitors, and
- solar panels supplemented by LP gas boilers for heating water.

"About 400 members of the Australian Submarine Squadron from both the east and west coasts will train here each year rather than overseas at what will become Australia's premier submarine base," Mr Beazley said.

"The best form of submarine escape is prevention achieved by thoroughly training submarine crews in the art of submarining. However, if an accident does occur for whatever reason and all or part of the submarine remains intact but unable to surface then the crew must have the opportunity to survive."

Mr Beazley said there would be two Oberon-class submarines based at HMAS Stirling from early 1990, with three to four of the new submarines replacing them eventually.

ANZAC SHIP (CONTRACTS)

The Australian Minister for Defence, Mr Kim Beazley, and the New Zealand Minister of Defence, Mr Bob Tizard, recently announced the award of Documentation Development Contracts (DDCs) in the next phase of ANZAC Ship Project.

The two partners have entered into contracts worth \$A8/\$NZ9 million each with the Australian Marine Engineering Corporation (AMEC) Consolidated and Australian Warships Systems (AWS-DDC) to undertake specified tasks such as design development, development of contract specifications, production of data for evaluation and development of proposals for Australian and New Zealand industry participation.

This important contractual milestone has been achieved following development by the consortia of arrangements acceptable to both the Australian and New Zealand Governments.

The Ministers noted that AMEC,

NZI Corporation Ltd in conjunction with Brierley Investments Ltd and Blohm and Voos (Australia) Pty Ltd — with the German MEKO 200 PN design — agreed on 25th March, 1988 to join together in a joint venture for this next phase and for Phase 2 construction.

AWA Ltd, Carrington Shipways Pty Ltd, McConnell Dowell Corporation and Koninklijke Maatschappij de Schelde (Royal Schelde) — with the Dutch M design — agreed on 20th April, 1988 to establish a consortium known as 'AWS-DDC' for this next phase.

The Request for Tender for Phase 2 Construction were issued to each of the consortia. It was still planned that tenders would close on 29th December, 1988.

Briefings to Australian and New Zealand industry were to commence in mid-May rather than as earlier planned and advertised recently in the Australian national press.

IROQUOIS RETURN TO SHOALHAVEN SKIES

Three Iroquois helicopters were taken out of mothballs recently and assigned regular squadron work at HMAS Albatross.

The 24-year-old aircraft will form part of 723 Squadron at the Naval Air Station to be used for pilot training, search and rescue and VIP transportation.

The Iroquois is the fifth type of aircraft operated by the "bits and pieces squadron" while the Royal Australian Navy awaits delivery of the American Sea Hawk helicopters.

Sixteen Sea Hawks will form the new 816 Squadron in 1989.

Squadron 723, with 19 aircraft and 250 personnel, is at its greatest strength but the rest of the Navy has only seven other aircraft in service.

The Squadron also operates Squirrel, Wessex and Bell Kiowa helicopters and two Hawker Sidley 748 fixed wing aircraft which perform a variety of functions from electronic warfare to fleet support.

The Iroquois were taken out of service in September when the Defence Department ruled they were surplus to requirements.

Because of a "perceived operational change" the Directorate of Naval Air Warfare decided to reintroduce them to perform their original role.

The Iroquois have undertaken thousands of medivacs for the Shoalhaven District Hospital as well as taking part in bushfire and flood support.

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BANJO PATERSON MOTOR INN Jerrabomberra Ave. Narabundah, A.C.T. Set in pleasant garden environs only 7 km to the City Centre	\$110	\$70	\$80
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PHOTO: KALZ

NAVAL POLICE — 75 Years Strong

by PETER MANGAN

BACKGROUND

THE transfer of the Royal Navy Stores Depots at Garden Island, Spectacle Island and Darling Island to the Royal Australian Navy on the 1st July, 1913, brought about the formation of a special police force to take over the security functions of the Royal Marines. This force was originally titled the NAVAL DOCKYARD POLICE and survives 75 years later as the NAVAL POLICE.

Throughout its 75 years of service to the Royal Australian Navy, the Naval Dockyard Police and subsequently the Naval Police, have had a proud and unique history and still performs tasks that can be traced, unbroken, to the very beginning of European settlement of Australia in 1789 when Governor Arthur Phillip formed the Row Boat Guard.

The Row Boat Guard carried out a policing role and was made up of men who were formerly members of the Royal Navy. The Row Boats were located at Watson's Bay, Goat Island, Garden Island

and Cockatoo Island and were established to patrol the harbour and foreshores of Sydney Cove, and for the detection and prevention of smuggling and to prevent the passing of letters between convicts and the crews of ships laying at anchor and the prevention of convicts escaping the colony. These were the first 'Naval Police'.

In 1840 the Row Boat Guard was replaced by the New South Wales Water Police which had been created by an Act of Parliament and was under the supervision of a Water Police Magistrate. With the amalgamation of the other police forces, the Water Police became part of the New South Wales Police Force in 1862 but continued to patrol Sydney Harbour and man areas such as Garden Island, Spectacle Island and Darling Island.

With the arrival of the Royal Marine Light Infantry in 1867, the security and police functions of the Water Police were taken over at the various Royal Navy Establishments. The Royal Marines continued in this role until relieved by the Naval Dockyard Police when Garden Island, Darling Island, Spectacle Island

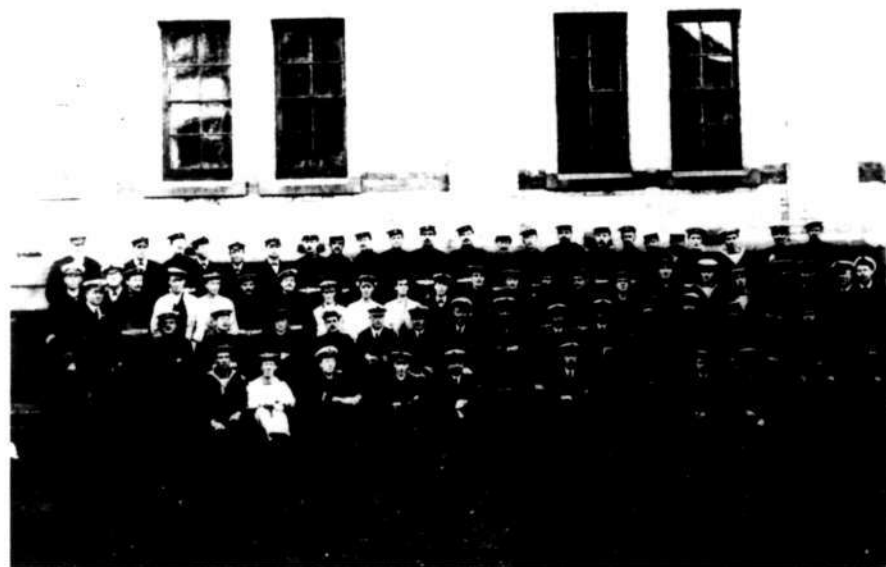
and Cockatoo Island were handed over to the Royal Australian Navy on the 1st July, 1913.

FORMATION OF THE NAVAL DOCKYARD POLICE

THE concept of a 'special police force' in the employ of the Royal Australian Navy was first developed in 1911 when preparations were being made for the historic 1911 Imperial Conference. In a letter outlining matters likely to be discussed by the Minister for Defence at the conference, Paymaster H.W.E. Manisty, Secretary to the Commonwealth Naval Forces, wrote:

"Amongst the subjects which will probably come before Senator Pearce for discussion while in England will be the policing arrangements."

"Generally the policing arrangements of all three establishments are carried out by Imperial Marines, but as it is not proposed to have Royal Marines in the Commonwealth Forces and it will be necessary probably to have a Special Police Force to carry out this duty. The Force could be



Royal Marines guarded the Naval Establishments in Sydney between 1867 and 1913 when relieved by the Naval Dockyard Police.

(PHOTO — NAVAL POLICE HISTORICAL COLLECTION)

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recruited from the Permanent Naval Forces and so provide occupation as a reward to men who have completed say 15 or 20 years in the Commonwealth Naval Forces."

Senator Pearce considered the concept of a 'special police force' acceptable and after his success of the Imperial Conference which led to the formation of the Royal Australian Navy, he instructed the inaugural Naval Board to investigate those matters and procedures necessary to effect the take-over of the Naval Establishments in Sydney when these were ultimately handed over to the Australian Government.

However, on the 14th December 1911, the Naval Secretary wrote to the Admiralty Secretary saying: "The question raised in the enclosed report as regards the policing of the Naval Establishments will be dealt with later."

Nothing more was done to set up this 'special police force' until March, 1913 when the Director of Naval Accounts, Paymaster Martin, was sent to Sydney to negotiate the transfer of Cockatoo Island staff. In his recommendations, on the 10th April, 1913, Paymaster Martin outlined his proposed complement, rates of pay, conditions of appointment and a recommendation that the uniform of the NSW Water Police be utilised.

The Naval Board met on the 1st May, 1913 and endorsed Paymaster Martin's recommendations. They also determined that applicants should be advertised for, appointments to Sergeant be limited to applicants who had reached at least Petty Officer level in the Naval or Military service and that members of the Force should not be liable for service afloat even in time of war or emergency. On the 8th May, 1913, Senator Pearce approved the conditions of service, rates of pay, uniform and complement for the Naval Police.

On the 13th May, 1913, the first of a series of advertisements appeared in all the major daily newspapers throughout Australia, inviting ex-members of the Royal Navy, Royal Marines and the Royal Australian Navy to apply for the new 'Force' and as a result, 310 applications were received to fill the 39 vacancies.

Before the enrolment of the successful applicants the title of the Force was changed to that of "Naval Dockyard Police". This came about at the request of the Captain-in-Charge HM Establishments, Sydney, Captain C. F. Henderson, RN, who stated that: "In view of the fact that the Active Service Police employed onboard HM Ships are termed 'Naval Police', it would appear to be more suitable to class the newly formed corps under some other name, such as 'Dockyard Police'." At the Naval Board meeting on the 4th June, 1913, Admiral Creswell personally stated he had "the strongest objection to anything that savours of the



The Garden Island complement of Naval Dockyard Police in summer uniform, 1913.
(PHOTO — NAVAL POLICE HISTORICAL COLLECTION)

ships police"; so the title Naval Dockyard Police was approved.

From the inception of the Force there were many concerns that affected the development of the force in its early years and were to have far reaching ramifications in its later history. Among these was the dubious legal status of the Force. As civilian employees of the Royal Australian Navy, the Naval Dockyard Police had no legal authority to detain or search any personnel employed in the various establishments. This was soon brought to the attention of the Naval Board, for on the 22nd July, 1913, the Executive of the Ironworkers Union lodged a complaint about their members being searched by Naval Dockyard Policemen.

As the Force had no legislated powers whatsoever, these early complaints were resolved by the Naval Board entering into an agreement with the Union that searches would be conducted only of a person suspected of having committed an offence and that the search should be conducted in a private area out of the public gaze. Although this measure enabled the Force to administer local orders and instructions applicable to each establishment, it offered no real police powers to arrest an offender or any power that was recognised by law.

The First World War

The First World War also presented several problems that would change the direction of the Force in years to come. The most immediate of these was the need to provide additional guards at an increasing number of Naval Establishments and associated works and, at the same time, provide a counter-espionage service that could carry out secret investi-

gations into such concerns as sabotage and the location of alien agents. Hence, the Naval Board determined that the additional guarding services would be provided by Royal Australian Naval Brigade members who were unfit for active service. The task of counter-espionage investigations fell on the Naval Dockyard Police, in the main, because the OIC, Sub-Inspector Merry was an experienced Detective formerly of the Metropolitan Police. Since these very early investigations, the Force has been responsible for the investigation of offences in the RAN.

Because of the lack of any 'contractual' arrangement in their conditions of employment and because the Force was only a civilian unit, many of the early members who were anxious to 'do their bit for the Empire' simply walked out and enlisted in either the AIF or the RAN. As some of these members had not sought permission to enlist for active service, they were posted as deserters. When a number of them attempted to re-enter the Naval Dockyard Police after the war, it highlighted the need to formalise the Force's Conditions of Service.

Post-War Problems

After WW1, when the nation was settling back into a more stable existence the Naval Board determined that the investigational functions performed by the Naval Dockyard Police throughout the war had been of great benefit to the nation and should continue as a normal function of the Force.

The Naval Board also sought to resolve the lack of legal status of the Force and made a number of approaches to the Attorney General for a remedy. Yet no

effective resolution was found until the Naval Dockyard Police were appointed to the then Flinders Naval Depot, in 1921.

Before its commissioning on the 1st April, 1921, over 800 rowdy workmen had been employed at the Base and the Victoria Police established a permanent Police Station there. When the Victoria Policemen were relieved by Naval Dockyard Policemen, an arrangement was entered into between the Naval Board and the Chief Commissioner whereby the three members of the NDP all became supernumerary members of the Victoria Police.

THE Commodore-in-Charge, Sydney, believed the Victoria Government's initiative would resolve his problems and made application to the Commissioner of the NSW Police Department to have all members in Sydney made Special Constables of the NSW Police. On the 2nd November, 1921, all members in the Sydney area were sworn in and issued their Warrant Card as members of the State Police.

In 1923, Mr A. Nicholson, the new Chief Commissioner, was not willing to maintain the three NDP members at Cerberus as supernumeraries and on the 30th June, 1923, they were discharged from the Victorian Police. It probably had a lot to do with the fact that the Victoria Government had been required to pay the wages of the three Naval Dockyard Policemen.



Senior Constable Thomas Blake photographed at HMAS Cerberus, 1922. (PHOTO — NAVAL POLICE HISTORICAL COLLECTION)

Because of the breakdown in this arrangement, Commander C. Spurgeon, Head of Navy Branch, was directed by the Naval Board to investigate an alternative. His proposal was to enter the Force into the Permanent Naval Forces (Auxiliary Services) which would not only establish the Force on a permanent footing with more equitable conditions of service, but would also give them authority under the Naval Defence Act. The proposal was approved by the Naval Board and the Force ceased to be a civilian organisation on the 31st August, 1923, when they entered the Auxiliary Services of the RAN.

With the entry into the PNF, it was proposed the Force be given its own Statutory powers of arrest, search and detention. And after the matter had been given some considerable debate by the Attorney General's Department, the Naval Establishment Regulation 101 received Royal Assent on the 26th July, 1934. This Regulation literally made the Naval Dockyard Police a Statutory Force with powers that remain as effective today as they were 50 years ago.

The changing faces of personnel coming and going, the introduction of Naval Dockyard Police to Swan Island or Port Phillip Bay, and some minor financial changes to rates of pay etc., were the only variations to occur until the outbreak of World War II, when changes occurred at an imperceptible rate. It also prompted the resignation of Sub-Inspector B.W. Farr who had relieved the inaugural Sub-Inspector on the 1st July, 1916, and probably felt 26 years in the one job without promotion was enough.

The Naval Board decided that, as a war time measure, they would recruit a replacement Sub-Inspector from the NSW Police. The man chosen was an ex-Inspector, Thomas Elliot, who was entered in 1939 for a two-year engagement and in 1941 was replaced by another ex-NSW Police Inspector, H.G.E. Garlick. Mr Garlick proved a very energetic and inspiring leader and so effective that the Naval Board not only promoted him to the newly created rank of Inspector, but renewed his engagement until the 7th August, 1948, when he was retired at the age of 67 years.

As the responsibility for guarding Naval Establishments during WWI had fallen on the Reserves, the same task was given to the RANR and the RANVR at the outbreak of WWII. However, it soon became apparent that these personnel, who were, in most cases, young seamen, were a misuse of fit potential fighting manpower. So on the 10th February, 1940, the Minister for the Navy placed a proposal before the War Cabinet that the existing Naval Dockyard Police should be temporarily expanded to form a Guard Section for the provision of security protection to Naval Establishments and vulnerable points whilst under war conditions.

The Guard Section

On the 21st March, 1940, the War Cabinet approved the formation of the Naval Dockyard Police (Guard Section) with an initial complement of 169 to serve in all States except South Australia. The Guard Section recruits had to have served on Active Service, and not to be less than 40 years of age or more than 58 years of age. All members were recruited within the State they were to serve in and were subject to the Naval Discipline Act and Regulations for the Auxiliary Services.

As Australia's war effort accelerated, so did the development of the Force. Within 18 months of the war's commencement the Naval Dockyard Police complement had risen to 472 with the following distribution:

Sydney and Newcastle — 254
Western Australia — 160
Victoria — 31
Queensland — 20
Tasmania — 7

At the peak of the war effort, the Force had a strength exceeding 600 members.

Interim Force

Prior to the disbandment of the Guard Section, an "Interim Force" was established on the 29th July, 1946. This force was established to replenish the Permanent Force which had fallen to a total of nine members at the war's end. The Interim Force had an approved complement of 272 and its members were recruited from ex-RAN personnel of the Seagoing Forces who were aged between 21 and 45 years of age, and was intended to create a more virile and active deterrent.

The excellent result of the Interim Force personnel effectively meant the continuance of the Naval Dockyard Police as part of the RAN and established a standard of protection of Naval Establishments and Installations that the Government could ill-afford to lose. Hence, the reorganised Permanent Force of the Naval Dockyard Police was approved on the 1st March, 1949, with a complement of:

1 Superintendent, — (NSW)
1 Inspector, — (NSW)
3 Sub-Inspectors, — (1 NSW, 1 WA, 1 VIC)
47 Sergeants, and
256 Constables.

The interesting point here is that the Superintendent's position was filled by Commander N.H. Shaw, RAN Commander who had been Commanding Officer of HMAS Kuttabul and had headed the Naval Board Committee on the "Reorganisation of Naval Dockyard Police" and recommended the establishment of the Superintendent position. He was, and remains, the only 'gold ring' officer to have been appointed directly to the Naval Dockyard Police or the Naval Police officer ranks.

When Superintendent Shaw, OBE, retired in 1958, the rank of Superintendent lapsed and was replaced by that of Chief Inspector. Promotion to this rank was made from Naval Dockyard Policemen, who had risen through the ranks. Inspector W.R. Buhler, a former Guard Section Constable, was the first member of the Naval Dockyard Police to be promoted to Chief Inspector, and was succeeded on his retirement in 1961 by Chief Inspector W.D. Mossop, MBE, who was the first Permanent Naval Dockyard Policeman to attain the rank.

From its beginnings, the uniform of the Naval Dockyard Police had been almost identical to that of the NSW Police. However, with the vastly increased numbers recruited during World War II, the NSW Police Department had difficulty in providing the items of uniform and protested their use. The NSW Commissioner stated on several occasions that it was desirable that the uniform of the Naval Dockyard Police be distinctly different from the Civil Police Force. So, on the 21st April 1949, the high collar uniform was replaced by double breasted jacket as worn by CPOs and POs but with silver NDP buttons rather than gold.

The metal cap badge, silver anchor insignia and collar numbers, which were identical in design to the NSW Water Police insignia were retained and remained in use until the middle of 1968. Naval Board approval was given on the 18th January, 1967 to replace the old metal cap badge with a silver wire woven cap badges of the same design as the CPO and PO badges and the lapel anchors and identification numbers with a single metal brooch comprising an anchor and the letters NDP.

Riding breeches were another unusual item of Naval Dockyard Police uniform and were used by members of the mounted sections in New South Wales, Western Australia and Victoria who were in all probability the Royal Australian Navy's last horse-borne unit. The last Naval Dockyard Police horse was withdrawn from active service in 1952 and was transferred to a less exciting task.



The first Naval Dockyard Police course after reorganisation in 1949. Photograph features CMDR N. H. Shaw, who became the first Superintendent in July, 1949. (PHOTO — NAVAL POLICE HISTORICAL COLLECTION)

towing a lawn roller around the HMAS Leeuwin sports oval.

NAVAL POLICE

BY the early 1970s the Naval Dockyard Police was being employed in more and more establishments, including a number of commissioned establishments, and the nature of their employment was also changing. To more accurately reflect these expanding roles and function, the title of Naval Dockyard Police was shortened to Naval Police on the 21st January 1972. At the same time,


Naval Police were removed from the Auxiliary Services of the Permanent Naval Forces and made a Branch of the Royal Australian Navy.

The primary roles of the Naval Police in today's Naval community remain the same as they were in 1913. That is, the prevention and detection of crime and the protection of life and property. Today's Naval Police have, however, entered the technological age with the use of computers and electronic surveillance systems to more effectively carry out their responsibilities.



Crowd control is an important role of today's Naval Police. This was sorely tested when 250,000 people arrived for the USS MISSOURI Open Day on 5th October, 1986.

(PHOTO — US NAVY)



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BOOK REVIEWS

by J. STRACZEK

JAPANESE NAVAL VESSELS OF WORLD WAR TWO AS SEEN BY US NAVAL INTELLIGENCE

Introduction by: A. D. Baker III
Published by: Arms and Armour Press
Cost: \$39.95

From December, 1941 to Japan's surrender in 1945 the United States and Allied Navies waged a desperate and costly war for control of the vast Pacific Ocean against the might of the Imperial Japanese Navy. The price for failure would have been ultimate defeat; however the prize for success was final victory. *Japanese Naval Vessels of World War Two* details the ships of the Imperial Japanese Navy whilst that navy was still very much at its peak and is a unique publication which will be of use to all those interested in the Imperial Japanese Navy and the war in the Pacific.

Japanese Naval Vessels of World War Two is in fact a reprint of four publications from the United States Division of Naval Intelligence. These books are:

- ONI 41-42 Index To All Japanese Naval Vessels;
- ONI 41-42 Japanese Naval Vessels;
- ONI 220J Japanese Submarines; and
- ONI 225J Japanese Landing Operations and Tactics.

The major function of the first three publications was as recognition manuals whilst the fourth is more in the vein of an intelligence publication detailing tactics and equipment used by the Japanese during their rapid advances in the early part of the Pacific war.

As these books were originally published during the war the authors did not have access to Japanese technical documentation and so some of the detail is not as accurate as is currently available in other publications. However this does not detract from the usefulness of these books particularly as they are well illustrated by both photographs and drawings of ships from many angles. This makes *Japanese Naval Vessels of World War Two* a virtual encyclopaedia on the Imperial Japanese Navy and very useful for identifying photographs of the various ships in the Navy. A task which can not be readily achieved using other sources.

THE BRITISH ASSAULT ON FINLAND 1854-1855

A Forgotten Naval War

by: Basil Greenhill and Ann Giffard
Published by: Conway Maritime Press

Conway Maritime Press have earned a reputation for being publishers of books of distinction on naval and maritime topics. *The British Assault on Finland* can only help to enhance that reputation. This is a well researched and written book dealing with the activities of the British Baltic Fleet under the command of Vice Admiral Sir Charles Napier during the 1850s war with Russia (generally known as the Crimean War).

Basil Greenhill and his wife Ann Giffard, who is related to one of the participants in the events portrayed in this book, have a very scholarly, and readable, history of events in the Baltic between 1854 and 1855. The book details in great depth the background to geo-political circumstances in the Baltic as well as the organisation and despatch of the fleet. In many ways *The British Assault on Finland* is also an interesting insight into a navy that has yet to come to grips with the military application of some of the scientific and technological advances that had been made. A navy that is torn between the safe past and the unknown tomorrow.

The despatch by Britain of a fleet to the Baltic had an impact on the conduct of the war in the Crimea which may not have been apparent when the plan was first formulated. That was the retention by the Russians of some 200,000 of their best troops for the defence of the capital, St Petersburg. Had these troops been sent to the Crimea then undoubtedly the outcome could have been different.

The British Assault On Finland makes use of both British and Finnish records to present a complete and detailed account of the campaign. Period and current illustrations are sparingly but effectively used to details of the fleet and aspects of the campaign.

This book will be of great value to those interested in the Royal Navy at a time when it was embarking on a period of social and technological change.

SHIPS OF THE VICTORIAN NAVY

by: Conrad Dixon
Published by: Ashford Press Publishing, Southampton, 1987

The latter part of the 19th Century represented an era of technical change and innovation for the Royal Navy the likes of which has not been repeated nor is likely to be. The results of these changes were some of the most graceful and some of the ugliest ships to hoist the White Ensign. A number of these ships are illus-

trated and described in *Ships of the Victorian Navy*.

The centre-piece of the book are 48 period prints by William Fredrick 'Fred' Mitchell covering such ships as the *Captain*, *Duke of Wellington*, *Warrior* and *Medina*. Of the ships illustrated there is one ring-in and that is the immortal HMS *Victory*. Her inclusion does allow the reader to compare how little the basic design of ships changed until the late 1800s. Each of the illustrations is accompanied by a brief technical description of the ship and a narrative detailing its history.

The first section of the book briefly describes the technical changes that took place during the last 50 years of the 19th century and the impact these changes had on the design of ships of the Royal Navy during these years.

Ships of the Victorian Navy is a very readable and interesting book and one which any enthusiast of 19th century warships, or warships generally, would find interesting and informative.

NATO AND WARSAW PACT SUBMARINES SINCE 1955

by: Eugene M. Kolesnik
Published: Blandford Press, London, 1987

NATO and Warsaw Pact Submarines Since 1955 represents one of a growing number of 'photographic' books dealing with a very limited subject. The major appeal of these books is the large number of photographs that illustrate the subject. There is no technical information provided nor is there any attempt to explain why submarine development has progressed the way it has.

The title of this publication is somewhat misleading as of the total of 217 photographs only 51 deal with Warsaw Pact submarines, 50 Soviet and one Polish. Obviously Bulgarian, East German and Romanian submarines are camera-shy! Having said that it should be acknowledged that there are a number of interesting and unusual photographs in this publication, particularly the internal photographs of the Soviet submarine.

All in all *NATO and Warsaw Pact Submarines Since 1955* is a book that will have limited appeal mainly to naval photographic and submarine enthusiasts.

WINGS ACROSS THE SEA

by: Ross Gillett
Published by: Aerospace Publications Pty Ltd

Since the early 1950s until the paying off of HMAS Melbourne the Royal Australian Navy's Fleet Air Arm represented the cutting edge of the Navy's offensive capability. However, with the loss of Melbourne the future of the Fleet Air Arm

seemed very limited. However, this has now changed with the introduction of new ships and aircraft to operate from them. Against this background *Wings Across The Sea*, the first history of Australian naval aviation has been published.

Wings Across The Sea traces the story of Australian naval aviation from its humble beginnings in World War I to the present. Each chapter of the book deals with a specific period in the development of Australian naval aviation and is interspersed throughout with tables and lists that give the technical details of the various aircraft and ship types of the period. In view of the small numbers of aircraft that have operated with the Navy it has been possible to detail the fate of each one. This coupled with the wealth of photographs results in a book that is not only readable but also informative.

One problem faced by a book of this nature is that earlier generations of naval aviators will pore over it and compare their memories with what is published, unfortunately the two don't always turn out to be the same. So before "hands to flying stations" is piped it should be noted that the official records, the source of a lot of the information contained in this book, are not always as accurate as they should be. Notwithstanding this *Wings Across The Sea* will bring back a lot of memories and pleasure to naval aviators or those interested in military aviation.

An interesting aspect that comes out when reading this book is the great debt that the RAAF owes the RAN. This debt becomes obvious when it is realised that people of the calibre of Wackett and Hewitt were transferred to the RAAF in the 1920s after the first RAN Fleet Air Arm was disbanded. One wonders whether there is a Wackett or a Hewitt in the recent group of Naval Aviators that became Air Force pilots?

Not only are the regular aircraft carrying ships covered but also a number of unusual and less known ships with aviation connections. Included in this group are HMA Ships *Una*, *Wyatt Earp* (now there's a good name for an aircraft carrier!) and *LST 3501*. Each of these ships have contributed to Australia's naval aviation history in their own way.

One of two items that were not included in *Wings Across The Sea*, which could be of use to aircraft enthusiasts, was a table showing the various aircraft tail and ship's flight deck letterings and their period of use. The other omitted item was detailing the various aircraft colour schemes. This however is partly overcome by the large range of colour photographs that help illustrate the book.

One particular table that may surprise a number of people is the list of aircraft preserved at the RAN Naval Aviation

Museum. This institute is staffed and run by volunteers, many of whom use their initiative, and currently has some 24 aircraft on its register. Many of these aircraft have or are in the process of being restored to flying standards, though they may not necessarily fly. In a number of cases the aircraft held cannot be viewed anywhere else in Australia. Examples of these aircraft are Bristol Sycamore, Westland Scout and a CAC Boomerang, one of only about three left in the world. The Naval Aviation Museum must surely be viewed as an important national asset and a tribute to the dedication of naval aviators to their profession.

The production of any publication is a complex process during which there is the possibility for a number of errors, particularly at the editorial stage, to occur. Unfortunately this has happened with *Wings Across The Sea* where two photographs have been printed in reverse and a few spelling mistakes, such as 'Stutter' instead of Strutter or Fairey ID as opposed to Fairey IID, have also crept through. These minor errors however do not detract from the overall publication.

All in all *Wings Across The Sea* is a highly recommended book which details the history of Australian naval aviation and at the same time fills a void in the published works on the naval history of this great island nation of ours.

THE ROYAL NEW ZEALAND NAVY POST ANZUS FUTURE

SINCE the suspension of the ANZUS Treaty Alliance between New Zealand and the United States, New Zealand has conducted a wide ranging review of its defence priorities. The review's recommendations were incorporated into the annual defence report to parliament.

Two significant policies have emerged. The first has been a move towards closer military relations with New Zealand's Tasman neighbour, Australia. The two countries have increased the number of joint exercises and are examining the possibility of introducing joint training programmes. To improve force inter-operability and equipment commonality, New Zealand began purchasing more equipment through Australia.

The second major new policy direction has been a focusing of New Zealand's defence planning firmly upon the South Pacific region. Several recent developments have caused both Canberra and Wellington to pay closer attention to the region. Alarm and consternation have arisen from reports of external and potentially hostile nations involving themselves in the affairs of some South Pacific islands. Internally the political upheaval in Fiji has made people look again at a region previously regarded as safe and democratically stable. New Zealand already takes responsibility for the defence of Tokelau, Niue and Cook Islands, the former being over 3000km from Auckland.

New Naval Programme

The Royal New Zealand Navy is obviously essential to the pursuance of this new defence strategy and has consequently found its *raison d'être* fully rejuvenated. In July 1987, Prime Minister Lange announced plans for the expansion and modernisation of the Royal New Zealand Navy (RNZN). In announcing the new naval programme, Mr Lange noted that:

"We are at the centre of a hemisphere which is largely water."

The Prime Minister went on to acknowledge that:

"New Zealand and the islands for which we have defence responsibilities are surrounded by large expanses of ocean. The



The new support ship HMNZS ENDEAVOUR in Fremantle, May, 1988.

(PHOTO — LSPH W. McBRIDE, RAN)

ability of our navy to operate over these distances is a basic requirement."

New Zealand with only four Leander class frigates, has one of the world's smallest blue water fleets. The RNZN is, however, tasked with the protection of a country slightly larger than the United Kingdom and one of the world's largest Economic Exclusion Zones (EEZ), encompassing 1.4 sq million miles. New Zealand's area of strategic concern covers almost 16% of the earth's surface, from the Equator to Antarctica and from the Cook Islands in the east as far west as Western Australia and the Southern Ocean.

Fleet Tanker

New Zealand's present complement of Leander frigates were designed for operations in the North Atlantic with an unsupported range of 2500 miles and so are not ideally suited to the vast South Pacific expanses. The government's immediate priority was therefore to provide an ocean going replenishment at sea (RAS) support for the RNZN. In 1986, a 12,000t Fleet Tanker to be named HMNZS Endeavour

was ordered from a South Korean yard. HMNZS Endeavour will carry 7,500t of diesel and 100t of Avcat and will be equipped with three British type RAS stations and be fitted with a helicopter platform. The new ship was due for delivery in April, 1988 and will for the first time give the RNZN an independent ability to deploy over extended distances. The tanker was ordered at a time when the defence review was still in progress, an indication of the urgency to fill this gap in the navy's capabilities.

Logistic Support Ship

The government has stated that the next priority for the navy was the acquisition of a multipurpose transport ship for logistical support of the army and other naval vessels. The ship will be designed to primarily support the army's new Rapid Reaction Force (RRF). The ship will also be an invaluable asset for the disaster relief operations in a region plagued by seasonal cyclones. New Zealand forces have in the last year alone, assisted in cyclone and flood relief work in Fiji, Tokelau, Vanuatu, Solomon and Cook Islands.

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The Ministry of Defence has invited design submissions with the following operational requirements

- A ship capable of carrying and deploying a company of 120 soldiers, together with equipment and stores and supporting them for up to a month. Alternatively, carrying the heavy equipment, vehicles and logistic support for a battalion size force such as the RRF, which could be deployed by air.
- The ship should be capable of operating two medium sized helicopters simultaneously. Interestingly the government has specified a Blackhawk type helicopter for purposes of design work.
- For added ship-to-shore capability, the vessel will also carry and operate landing craft and be fitted with a vehicle ramp and crane. The government has stated that the ship will not be designed for a beach landing, pointing out that many South Pacific coastlines were unsuitable for such types of operations. Such an omission will also help to contain the design costs, a fact that will not have escaped the government's attention.
- The ship will be rigged to receive or supply fuel and supplies while under way. This feature will give the RNZN added RAS support if required.
- Provision will be made for extensive communication and control facilities enabling the ship to co-ordinate the units, whether land, sea or air, involved in the operation.
- Additional specifications include a range of 8000 miles at 15 knots and an endurance of up to 40 days with an embarked force.

A decision has yet to be made on whether to convert an existing vessel or to build a new ship to the required design. In the case of HMNZS *Endeavour* it was found to be more economical to build a new merchant ship hull to fit RAS gear. The government expects to have the new logistic support ship in service within the next three years. The new ship, together with the creation of a battalion sized Rapid Reaction Force, will give New Zealand an independent intervention ability in the south Pacific Region. The RNZN logistic support ship will also be a useful addition to Australian amphibious ships in any joint 'ANZAC' force.

New Surface Combatant

The Prime Minister's July announcement reaffirmed New Zealand's intention to work closely with Australia in the selection of a new surface combatant for the 1990s and beyond. The Royal New Zealand Navy's four Leander class frigates were built between 1963 and 1971. The oldest of these vessels, HMNZS *Waikato* and the *Ikara* armed HMNZS *Southland* (Ex-HMS *Dido*), will need replacing by 1995. The two broad beamed Leander class frigates, HMNZS *Canterbury* and HMNZS *Wellington* (Ex-HMS *Bacchante*)

can be expected to remain in service until the year 2000. The former HMS *Bacchante* was modernised shortly after her transfer to the RNZN. This work included the installation of the new RCA 76 computerised weapon control system. HMNZS *Canterbury* is due to have the RCA 76 system fitted during her current refit.

The Royal Australian Navy in the early 1980s began to look for a replacement for their ageing 'River' class frigates. In 1986, the New Surface Combatant Project (NSC) was established to examine the various proposed frigate types. In March, 1987, New Zealand signed a memorandum of understanding covering New Zealand's participation in the NSC project up to the stage of design selection and shipbuilder evaluation. New Zealand's involvement has subsequently been extended to an agreement placing New Zealand industry on an equal basis with Australia in the project. It is planned to build a total of 12 warships, eight for Australia and four to go to New Zealand, the first two entering service in the mid 1990s.

The Australian and New Zealand governments have both expressed confidence that there are sufficient common requirements for a joint single design procurement. The RAN and RNZN have specified they want a vessel designed for operations over the extended distances of the South Pacific with a range of 6,000 nautical miles at 18 knots. Other baseline requirements include

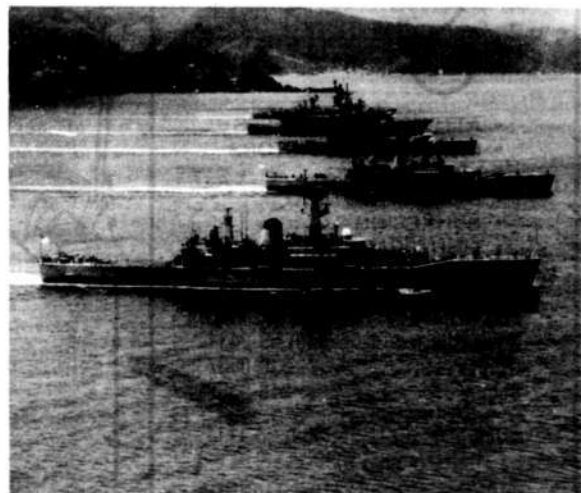
- A multi purpose medium calibre gun, 76mm or larger.

• Provision for a point defence missile system for defence against aircraft and missiles.

• Capable of operating, maintaining and hanging a medium sized helicopter.

The Australian ships will operate a Sikorsky Seahawk helicopter, which will also equip the FFG7s and are being built under licence together with army Blackhawks by Hawker de Havilland Australia. The RNZN has as yet made no decision about its choice of naval helicopter, but in view of the New Zealand Army's need for a Iroquois replacement and the desire for commonality of equipment, the purchase of Australian Seahawk/Blackhawk helicopters would be logical. In addition to the basic self defence armament, the ship will also be equipped with a ship launched torpedo system, and will be fitted with a hull mounted sonar and surveillance radar.

Despite a common requirement for a NSC, the two countries appear to differ on the perceived role for the new class of warship. The New Zealand Government has stated that it's highly unlikely that these vessels will ever be used in a war, but rather they will expend their lives employed in a patrol surveillance capacity in support of New Zealand's interests around the South Pacific. Particular design emphasis will therefore be placed upon the ship's range, endurance, sea keeping and surveillance ability. The ship's armament will be kept relatively basic, though in the event of a more demanding situation, provision will be made for additional systems to be fitted.



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The Australian Government has specified that their NSC will be equipped for more intensive types of operation with a primary ASW role. In addition to the equipment outlined above, the RAN vessel will have provision to carry a lightweight towed array sonar, eight Harpoon SSM, a CIWS such as Phalanx already fitted in FFG7s and the indigenous 'WINNIN' hovering anti-missile decoy system. The capacity for a possibly enhanced air surveillance radar has also been stipulated. The NSC will be built to a modular design concept. This should allow a common class of vessel to be optimised by either navy to their slightly differing needs.

Around 20 design submissions were originally made and by September, 1987, the selection had been narrowed down to just three proposals.

- The MEKO 200 PN from the German Blom and Voss/TNSW group.
- The Dutch 'M' class from Royal Scheide.
- Yarrow's mini T23 frigate.

In early 1988, the British T23 design was dropped from the shortlist and of the remaining two, the MEKO 200 PN appears the favourite. The TNSW designers already have considerable experience in overseas building and have already sold the MEKO 200 variant to Turkey and Portugal.

The New Zealand Government has yet to commit itself to the final construction phase of the project. In March of this year, during his now regular meetings with his Australian counterpart, the New Zealand Minister for Defence, Mr Bob Tizard, stated that "he had yet to be totally convinced of the merits of modernising the RNZN through a joint project with Australia." Some political doubts remain, particularly concerning the cost of the programme. The government has budgeted on a sail-away price of no more than \$NZ300 million a ship (1986 dollars). One critic has labelled this price as 'ridiculous' and estimates that \$NZ450 million per ship is more realistic, which would add an additional \$NZ600 million to the total project cost. The government is hoping to make relative savings in the running costs of these vessels through lower manning levels as a result of increased automation. The NSC will have a crew of around 140, almost half that of the present frigates. The use of diesel engines and lower fuel consumption will also produce savings in running and maintenance costs. A factor that might affect the project budget significantly is the performance of the yet to be selected Australian shipyard. Australian naval construction has had a history of poor industrial relations, extensive delays and massive cost overruns.

The Australian decision to build a European designed frigate in Australia, has presented New Zealand with a unique opportunity to participate in a project that



RNZN patrol boat, HMNZS ROTOTI.

will be of considerable economic and industrial benefit to New Zealand. The Australian Government has stipulated that at least 70% of the work content be manufactured locally, of which New Zealand can expect to get about one third. The \$A5,000 million project will help to significantly expand the two countries industrial and engineering base. The RNZN will for the first time receive four frigates specifically designed for their own use and provide inter-operability with Australia.

Other Vessels

In the early 1990s the RNZN will have to begin to give consideration to the replacement of their four 'Lake' class patrol boat. The British built Lake class boats are employed in the demanding task of patrolling New Zealand's EEZ. The Lake class boats have been found not to be totally suitable for work in heavy seas. A slower and more robust design has been recommended. The RAN has had a similar experience with their 'Fremantle' class patrol boats, particularly in the demanding Bass Strait. These boats will also need replacing in the 1990s. Trans Tasman co-operation in these areas is at present only conjecture and any replacement programme is subject to an accommodating defence budget. This type of vessel could be built in New Zealand. Local shipbuilders have already produced a design that is employed by the navy in the role of inshore patrol, coastal survey and as a diving tender.

The RNZN diving capabilities will be significantly enhanced with the recent acquisition of the surplus North Sea oil support diving ship, *Perseus Star*. The 900t vessel, to be named *Manawani*, is equipped with a diving bell and decompression chamber. The present much smaller diving tender will be rolled as a navigation and seaman training vessel.

A crucial gap in RNZN capability that does remain, is that of mine countermeasure. The Defence Service Establishment (DSE) has conducted some trials with remotely operated vehicles, but at present the RNZN remains unequipped to deal with a threat that is causing an increasing amount of damage to shipping in the Arabian Gulf. Last minute makeshift conversions of trawlers and yachts are totally inadequate for dealing with modern highly complex bottom mines. Most Western navies have recognised this and are putting an increasing amount of resources into creating sophisticated mine countermeasure forces. Included in this is the RAN who have recently put into service two new catamaran minehunters and are building more. The RNZN has watched this project with interest but as yet has not joined in an area of obvious co-operation. As with all defence decisions it is a matter of cost, but for a country so dependent on seaborne trade, can New Zealand afford to ignore such a danger?

Manpower and Support

In terms of equipment, the future of the RNZN appears healthy. However in common with the other two services, the navy is facing a critical shortage of trained and experienced personnel. A combination of factors have caused an exodus of servicemen. Civilian employment offers are becoming increasingly attractive together with the appeal of regular hours. In the wake of the ANZUS row, service morale slumped and there was considerable disillusionment with government policy. With an increasing shortage of personnel, the RNZN has been forced to second large numbers of shore based servicemen for sea duty away from families and home comforts, which in turn has caused more dissatisfaction.

A number of measures are being considered to help alleviate this shortage including the possibility of women permanently serving at sea on non combat ships. A recent fifteen month experiment with women serving on the hydrographic survey ship *Monowai*, has been hailed as a success. This practice could be extended to other ships such as the new tanker *Endeavour* and the oceanographic research vessel *Tui*. Another partial solution could be an expansion of the RNZN volunteer reserve and increasing the number of vessels they serve on, such as some of the 'Lake' patrol boats. This measure would certainly appeal to the government's more budget conscious members. The RNZNVR already operate four inshore patrol craft with divisions in Auckland, Wellington, Christchurch and Dunedin. In 1986 they spent a total of over 300 days at sea.

In the long term shortages should ease with the introduction of the NSC which will have a crew of around 140, nearly half that of the present Leander frigates.

Another area of concern for the RNZN is the inability of the Devonport naval dockyard to cope with the fleet's present workload. The problem of limited dockyard capacity has been compounded by a shortage of skilled tradesmen. The completion of HMNZS *Wellington's* refit was over two and a half years late. This delay has had a knock-on effect with other refits.

Commercially, built-ships, such as HMNZS *Monowai*, have in recent years refitted at private yards, and this has now been extended to front line warships, starting with HMNZS *Southland's* 1988 refit. With a planned increase in the actual number of RNZN ships over the next few years, the problem of a shortage of support facilities will need to be urgently attended to. The government has stated that it's preparing a development plan for the Devonport Dockyard and is considering a fuller development of the training establishment, HMNZS *Tamaki*. With extensive retrenchment in the British Royal Dockyards, New Zealand has had some success in recruiting UK personnel to help relieve the tradesmen shortage.

Maritime Air Support

An examination of the RNZN and its future plans would not be complete without considering maritime air support. The RNZN presently operate Westland Wasp helicopters from their Leander frigates and the survey ship *Monowai* in the capacity of ASW and Liaison duties. As previously stated the RNZN has yet to choose its next generation of shipboard helicopter, but the NSC will be able to accommodate a medium size helicopter and the Seahawk appears the obvious candidate. The Sikorsky/Hawker de Havilland Seahawk would offer a gigantic leap in capability and performance over the obsolete Wasp. It remains to be seen



HMNZS WELLINGTON.

(PHOTO — NAVAL PHOTOGRAPHIC UNIT)

whether New Zealand will want or need the sophistication and capability the Seahawk offers for the stated role of the RNZN's planned frigates.

In addition to frigate based helicopters, the RNZN enjoys very close co-operation and support from RNZAF maritime patrol and strike aircraft. The RNZAF P3K Orion patrol aircraft have recently undergone a \$NZ60 million revamp including improved radar and infra-red sensors, navigation, data handling and tactical displays. Phase two of this modernisation, including the acquisition of new underwater weapons and possibly Harpoon ASM is still under review. The purchase of Harpoon missiles would give the RNZAF considerably more punch and provide further commonality with Australian forces.

The RNZAF force of 22 Skyhawk A4G/K will during 1988/89 undergo a \$NZ148 million modernisation. Project 'Kahu' involves new avionics, weapon delivery system, sea search/target ranging radar and the fitting of new wings. The effectiveness of the Skyhawk will be furthered by the fitting of modern Sidewinder AAM and Maverick Laser guided bombs.

Consideration is being given to the RNZAF acquiring tanker aircraft. This would certainly be a logical move for a country the size of New Zealand, with the vastness of the surrounding ocean and the small number of RNZAF aircraft. Maritime air support operations could be mounted over larger distances and for longer durations.

CONCLUSION

Politically the ANZUS row has not been settled and if anything, both the United States and New Zealand are more firmly

entrenched than ever. New Zealand has passed into law legislation that specifically forbade the entry of nuclear armed or powered vessels into its ports. This measure is publicly popular and the National Party opposition have even adopted it as party policy. The United States seems determined not to compromise its policy of neither confirming or denying the presence of nuclear weapons and continues to adopt a tough approach to New Zealand, keen not to see similar moves by other more crucial allies.

Militarily, New Zealand forces have found themselves excluded from major US Pacific exercises such as RIMPAC and with the purchase of equipment they are no longer treated on an equal top priority basis with NATO, Australia or Japan. New Zealand has sought to overcome these problems by adopting a policy of both co-operating closer with Australia and developing a greater ability for independent military operation.

The Royal New Zealand Navy has emerged from the confusion and gloom of the anti nuclear ANZUS row, on a positively plotted course for the future that will provide for a continued blue water role. The decision to participate in the NSC project will enable the RNZN to re-equip with new frigates specifically designed for their own use. The purchase of a fleet tanker and the planned acquisition of a logistic support ship will give the RNZN added new capabilities. These new ships will allow New Zealand to independently or in unison with Australia, deploy a naval presence into an area of increasing importance and world attention. The RNZN can for the first time in many years, look to the future with a positive degree of optimism.

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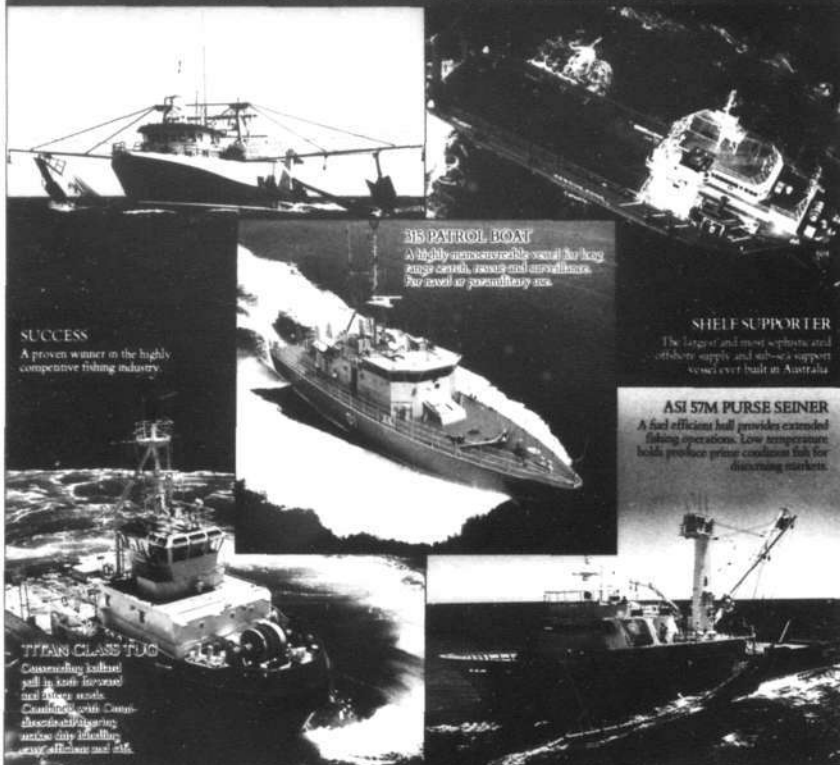


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French cruiser COLBERT, a visitor to the Bicentennial Naval Salute.

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Some thoughts on Naval Reviews

A Naval Review in which foreign warships participate, such as that to be held on Sydney Harbour on 1st October, is a traditional method of celebrating a special national event or occasion.

Apart from providing a grand spectacle for those fortunate enough to be present, an international Review serves a number of useful purposes.

- In the past, but not so much nowadays, Reviews enabled nations to display their naval might — as countries usually send their best ships, or certainly ships in first class condition, it remains an occasion to create a good impression.
- A Review demonstrates, for all to see, the good relations existing between the Government of the host country and those that accept invitations to take part.
- Passage to or from a Review — and so far as Australia is concerned it will generally be a lengthy one, whether the RAN participates abroad or is at home — provides opportunities to "show the flag" in many ports, some out of the usual way, and to exercise with other naval forces.

In the long run, the success or otherwise of a Review (and the en route calls) will depend upon the human element, the officers and sailors who comprise the Ships' Companies. For the most part young, highly skilled and with a keen appreciation of the value of discipline, sailors (using the word in a broad sense) are usually very good representatives of their country and have more opportunity than most people to influence attitudes in local communities when they are ashore on leave or acting as hosts to visitors on "open days".

As well as the display on Sydney Harbour, many other Australian ports will be visited by foreign and RAN ships in the coming weeks. If visiting sailors create impressions in local communities, by the same token, the visitors will carry away impressions gained in the course of their stay.

The success of the Bicentennial Review and port visits will, I believe, be assured by the good planning of the RAN in the first place and after that, by the natural friendliness and good nature of the Australian people.

'SHOWING THE FLAG'

FROM time to time Australian representatives abroad have expressed to the writer appreciation of visits by RAN ships to countries where they are posted and the beneficial effect on Australia's reputation in the local community. Showing the flag, sometimes disparaged as an out-of-date custom by people who should know better, is practised by virtually every country with an ocean-going navy.

Over the years, RAN ships have visited scores of ports throughout the world, often enabling people to meet an Australian for the first time in their lives.

The custom continues to be practised by the RAN, although now priority is given to our own very extensive region.

Geoffrey Evans

Federal President

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The 75th Anniversary.

**SYDNEY
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by ROSS GILLET

WHEN the average Australian thinks of a naval review they will, because of the events of 1986, cast their minds back to the Royal Australian Navy's 75th Anniversary celebrations.

In that year, more than any other 12 months since the creation of the Australian Fleet, has the focus of public and national attention been directed at things both naval and maritime.

During the Bicentennial Year, public interest has again been heightened by Australia's maritime history, including the re-enactment of the First Fleet Voyage and the visit to numerous ports by a fleet of both local and foreign Tall Ships.

Undoubtedly the highlight of the latter half of 1988 is today's International Naval Review, the culmination of the Bicenten-

nial Naval Salute. For the Royal Australian Navy a number of Fleet Reviews have been held since its inception in 1911.

In Port Phillip in 1920, His Royal Highness, The Prince of Wales, reviewed a massed Australian Fleet of some 30 warships and auxiliaries, while in 1938 an impressive naval demonstration entitled "Fleet Week" was staged. Later, in 1961, for the Navy's Golden Jubilee, Fleet units sailed into Sydney Harbour in an impressive display of the naval tradition.

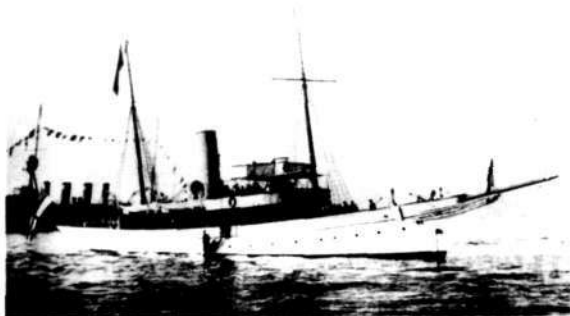
Then, in 1986, for the 75th Anniversary, His Royal Highness, Prince Philip, The Duke of Edinburgh, was the Reviewing Officer for the ships of the Royal Australian and six Allied Navies.

It was said, in 1913, that perhaps no event in Australia's naval history was more calculated or impressive than the entry of the first Royal Australian Navy Fleet into Sydney Harbour on 4th October. That claim has only been superseded by the naval events of 1986 and again in October, 1988.

The International Naval Review is a combination of both mobile and static Review Lines from Bradleys Head and Point Piper in the east, to the Sydney Harbour Bridge in the west.

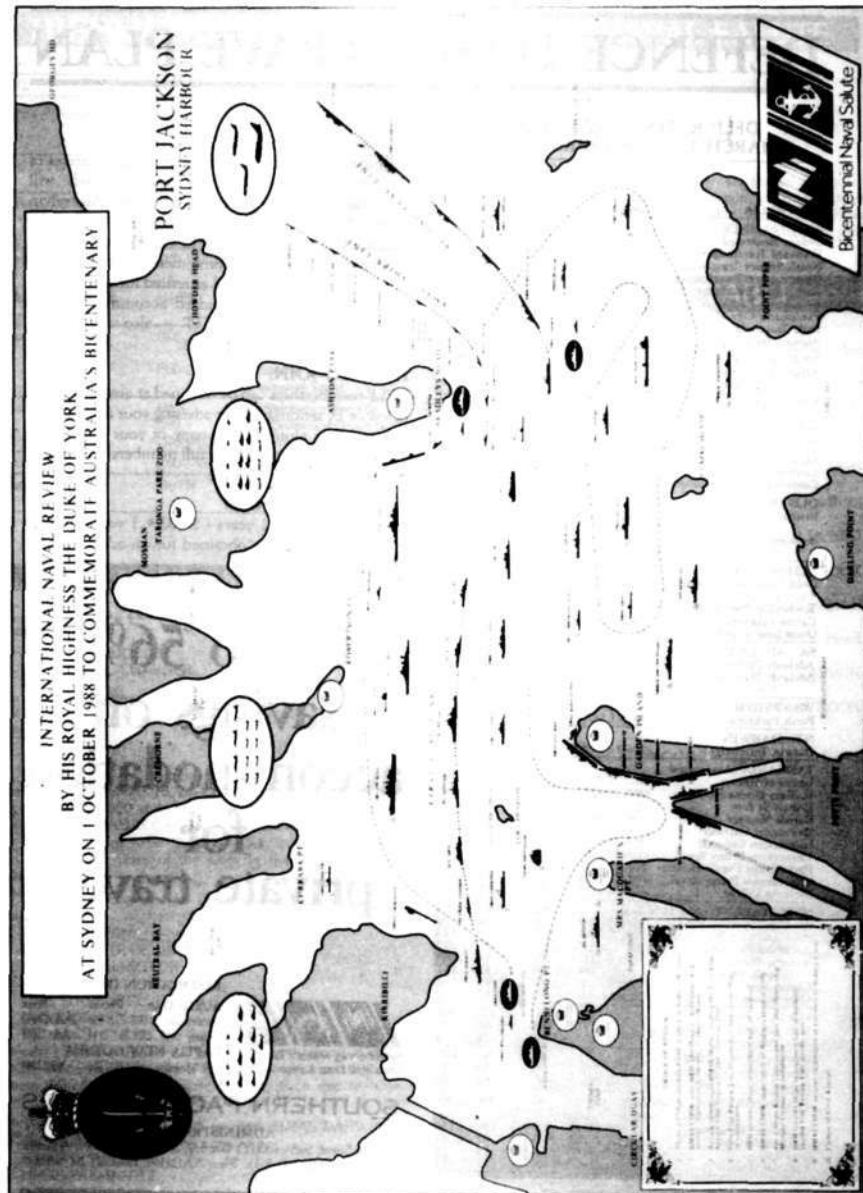
Highlight of the day will be the three Mobile Review Lines of naval ships from 15 participating nations and the static

The International Naval Review will formally conclude at about 1450 when *HMAS COOK* proceeds to the Sydney Cove Passenger Terminal to disembark His Royal Highness, The Duke of York.



HMAS FRANKLIN during the 1920 Fleet Review

IN CASE OF DOUBT CONSULT YOUR LAWYER



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	(From 30.4.88 to 31.10.88)		85 85
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HIGHLIGHTS OF THE BICENTENNIAL NAVAL SALUTE

DATE	TIME	EVENT
Monday 26th September	AM-PM	Warships enter Sydney Harbour
	PM	Battleship Firepower Demonstration
Tuesday, 27th September	AM	Remaining warships enter Sydney Harbour
Wednesday, 28th September	AM/PM	Inter-ship sports knock-out competition
Thursday, 29th September	1200-1300	Combined Navies March through Sydney
Friday, 30th September	AM-PM	Ships move to Review positions Inter-Navy sports challenge
Saturday, 1st October	1300-1500	Naval Review on Sydney Harbour Aircraft flypast Major fireworks display, Beat Retreat, and Ceremonial Sunset
Sunday, 2nd October	AM	Review Ships return alongside Christian Ecumenical Church Service Ships open to visitors
Monday, 3rd October	1000-1700	Ships open to visitors
Tuesday, 4th October	AM-PM	Majority of visiting ships depart Sydney

THE FLAG LINE STEAMPASTS

The First Flag Line for the Naval Review consists of the following units:

HMAS HOBART,
FNS AMIRAL CHARNER,
HS ARIS,
INS GODAVARI,
ITS CAIO DUILIO,
JDS KATORI,
KD LEKIR.

The ships will enter Sydney Harbour in column at 500 yard intervals, so that HMAS HOBART is in position to fire a 21-gun Royal Salute at 1300 and continue at 10 knots to pass north of and abeam of HMAS COOK. Each ship "Cheers Ship" on passing His Royal Highness, The Duke of York, embarked in HMAS COOK. The port sides of the ships in the Flag Line are all manned.

The Second Flag Line for the Naval Review consists of the following units:

HMAS DARWIN,
HNLMs WITTE DE WIT,
HMNZs WELLINGTON,
PNS TUGHPIL,
HMS EDINBURGH,
USS INGERSOLL.

All ships will enter the harbour in column at 500 yard intervals. HMAS DARWIN will be in a position abeam of HMAS COOK 30-seconds after HMAS COOK stops at 1400. The column will continue at 10 knots, allowing each ship to "Cheers Ship" to port as they pass HMAS COOK.

The Small Ships Line which precedes HMAS DARWIN and her group will consist of the following units:

HMAS DUBBO,
HMAS FREMANTLE,
HMAS AWARE.

HMAS GEELONG (Nigerian contingent embarked);

HMPNGS AITAPE;

RSIPV LATA

RVS TUKORO

DTV SEAL.

TRV TREVALLY.

HMAS DUBBO will lead the column for the salute abeam HMAS COOK. Each small ship in succession will then "Cheers Ship" to starboard. DTV SEAL will "Man Ship" with divers dressed in wet suits, face masks and fins and cheer ship with face masks extended in lieu of caps.

REVIEW TIMETABLE

TIME	EVENT
1245	All hands in all ships are to be fallen in for "Man and Cheer Ship".
1250	HMAS COOK casts off
1300	HMAS COOK in position 065 Bennelong Point Light 250 metres
1300	Review commences — HMAS HOBART fires 21-gun salute and leads Salute Steampast.
1310	First Flag Line review complete. HMAS COOK commences Review route (speed six knots).
1330	HMAS COOK in position 140 metres south of Bradley's Head Light.
1330	Small Ships Review Line led by HMAS DUBBO commences steam past HMAS COOK.
1335	Small Ships Review Line complete. HMAS COOK resumes review route.
1345	RAN helicopter squadrons and visiting naval aircraft flypast.
1407	HMAS COOK in position 200 Bradley's Head Light 500 metres.
1407	Second Flag Line led by HMAS DARWIN commences steam past HMAS COOK.
1415	Second Flag Line review complete. HMAS COOK resumes review route.
	Civil flypast.
1440	HMAS WOLLONGONG steams past HMAS COOK and "Cheers Ship".
1445	Review completes.
1450 approx	Hands fall out.
1500	



The 75th Anniversary Fleet Review.

ORDER OF SALUTE

APPROX TIME OF SALUTE	UNIT	SALUTING SIDE
1300-1310	First Flag Line Steampast	Port
1312	CANBERRA	Starboard
1313	ENDEAVOUR	Port
1315	ONSLow	Port
1317	ARK ROYAL	Starboard
1319	LABUAN	Starboard
1320	COLBERT	Starboard
1322	TARANGAU	Starboard
1324	NEW JERSEY	Starboard
1326	NASR	Starboard
1327	SHOALWATER	Starboard
1330-1335	Small Ships Salute Steampast	Starboard
1339	TORRENS	Port
1344	SIRIUS	Port
1345	RAN and Visiting FAA Flypast	
1347	ORANGELEAF	Port
1348	ZUIDERKRUIS	Starboard
1351	SUCCESS	Port
1353	BERKELEY	Starboard
1355	JAN VAN BRAKEL	Starboard
1356	OXLEY	Starboard
1357	COMMANDANT BORY	Port
1359	BREWTON	Port
1402	PARRAMATTA	Starboard
1404	MORESBY	Port
1407-1415	Second Flag Line Steampast	Port
1416	ORION	Port
1418	SRI INDERA SAKTI	Port
1420	SHIMAYUKI	Port
1422	KORTENAER	Port
1423	RUSHCUTTER	Starboard
1424	STUART	Port
1425	Fort Denison	South East
1426	STALWART	Starboard
1427	WAIKATO	Starboard
1428	BRISBANE	Starboard
1429	SYDNEY	Starboard
1430	FORT GRANGE	Starboard
1435	YOUNG ENDEAVOUR	Port
1437	SETOYUKI	Starboard
1440	WOLLONGONG	Port
1445	Civilian Aircraft Flypast	
1450	Review Completes	



The 75th Anniversary Fleet Review Fireworks.

SHIPS OF THE REVIEW

by ROSS GILLETT

THE VISITORS

FRANCE

Commander in Chief French Naval Forces Pacific

— RADM J. B. BERGOT

(Embarked in FNS AMIRAL CHARNER for the Flag Salute Steampast, otherwise embarked in FNS COLBERT)

FNS COLBERT	C 611	CAPT B. MOYSAN
FNS AMIRAL CHARNER	F 727	CMDR T. D'ARBOIS
FNS COMMANDANT BORY	F 726	CMDR A. DUMONTET

France is represented at the Bicentennial Naval Salute by three ships, including the impressive 11,300 tonne cruiser FNS COLBERT and the frigates FNS AMIRAL CHARNER and FNS COMMANDANT BORY.

Laid down in Brest Dockyard during 1953 and first commissioned in 1959, FNS COLBERT initially joined the Mediterranean Fleet. During late 1964 the ship embarked General De Gaulle for a voyage to Chile, Uruguay and Brazil and again in 1967, with the President aboard, voyaged to the Canadian Province of Quebec.

Between 1970 and 1972, FNS COLBERT was reconstructed and re-armed, including the Masurca surface to air missile system. Subsequently, in 1981 she was fitted with Exocet anti-ship



FNS AMIRAL CHARNER.

missiles. FNS COLBERT is manned by over 500 officers and men.

The two frigates, FNS AMIRAL CHARNER and FNS COMMANDANT BORY, were built as units of the Commandant Riviere class and commissioned in the early 1960s. Both vessels are equipped for general escort duties. Each ship is manned by 167 officers and men.

For the Review, FNS AMIRAL CHARNER will form part of the First Mobile Review Line of warships which will pass HMAS COOK at 1300. FNS COLBERT and FNS COMMANDANT BORY will be moored in the harbour at Robertson's Point and east of Garden Island respectively.

GREECE

HS ARIS A 74 CAPT P. KARAMANOLIS

Comprising part of the First Mobile Review Line is the Greek Training Ship HS ARIS.



HS ARIS.



FNS COLBERT.



FNS COMMANDANT BORY (Photo — C. Sattler)



The previous HS ARIS, 1937 (Photo — J. C. Fahay Collection, USN)

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SHIPS OF THE REVIEW

— CONTINUED



INS GODAVARI

Currently on a world training cruise, HS ARIS has embarked up to 500 personnel, including 370 under training for her Australian visit. The ship was completed for service in 1980 and can satisfy other naval duties, such as transport or hospital ship.

INDIA

INS GODAVARI F 20 CAPT S V GOPALACHARI

Another participant in the First Mobile Review Line will be the Indian representative to the Bicentennial Naval Review, INS GODAVARI.

Built in India at Bombay, the 4,000 tonne ship is the name and leadship of a class of frigates now numbering three units. An interesting feature of the design is her ability to embark two large Sea King helicopters for anti-submarine and anti-ship duties.

INS GODAVARI is a modification of the original Royal Navy Leander class frigate, also serving with the RNZN and RAN.

ITALY

ITS CAIO DUILIO C 554 CAPT N PAVONE

Italy's midshipmen's training cruiser ITS CAIO DUILIO is a veteran of more than 20 years of service. Initially the ship operated as a helicopter carrying cruiser, but in 1980 was altered to suit the training role.

Alterations were made to the helicopter hangar, which was lengthened to provide classroom space.

ITS CAIO DUILIO now carries a crew of 470 officers and men and is armed with a twin Standard anti-aircraft missile system, in addition to guns, torpedoes and helicopters.

The Italian representative in the Bicentennial Naval Salute



ITS CAIO DUILIO (Photo — C. Sattler)

will form part of the First Mobile Review Line of warships which will steam past HMAS COOK off Bennelong Point at 1300.

JAPAN

Commander Training Squadron — RADM T. IWASAWA
(Embarked in JDS KATORI)

JDS KATORI	TV 3501	CAPT K. SHIMOZU
JDS SETOYUKI	DD 131	CMDR Y. YAMANAKA
JDS SHIMAYUKI	DD 133	CMDR H. YAMAMURA

The Japan Training Squadron 1988, visiting Australia for the Bicentennial Naval Salute, consists of JD Ships KATORI, SETOYUKI and SHIMAYUKI. About 800 officers and men serve aboard the ships, including approximately 130 newly



Japanese ships in the Review

commissioned Officers who graduated from the Japanese Officer Candidate School in mid-March this year.

One of the most important purposes of the training cruise is to develop the seamanship and leadership skills of these newly commissioned officers through the training afloat. Another important purpose is to broaden the perspective of these future leaders through the opportunity to visit foreign countries and meet citizens of those nations.

The dedicated training ship JDS KATORI has visited Australia on a number of occasions since being commissioned in 1969. Both destroyers, JDS SETOYUKI and JDS SHIMAYUKI, were completed for service in 1986-87 and operate primarily as anti-submarine ships.

JDS KATORI will form part of No 1 Mobile Review Line with JDS SETOYUKI secured to a buoy in Farm Cove and JDS SHIMAYUKI three ships east of Fort Denison.



JDS KATORI



JDS SETOYUKI



JDS SHIMAYUKI

October/December, 1988

THE NAVY

Page Eleven

SHIPS OF THE REVIEW

— CONTINUED

MALAYSIA

Flag Officer Commanding ARMADA
— RADM DATO KARON BIN DATO (DR), M. SALLEH

(Embarked in KD SRI INDERA SAKTI)

KD SRI INDERA SAKTI A 1503 CAPT W. T. FOOK
KD LEKIR F 26 CMDR I. JAWI



KD LEKIR



HNLMS Jan van Brakel



KD SRI INDERA SAKTI

The Royal Malaysian Navy is represented at the Review by the Logistic Support ship KD SRI INDERA SAKTI and the frigate KD LEKIR. The former is a specialist vessel designed to support a squadron of up to six small ships in an operational area away from base.

KD SRI INDERA SAKTI was commissioned for service



HNLMS Kortenaer

FAIRWIND '88

Netherlands Task Group 429.4



HNLMS Witte de With



HNLMS Zuiderkruis

exactly one year after the signing of the contract to build the ship. In addition to her support role, the vessel is employed as a training, communications and transport ship.

KD LEKIR, and 1,850 tonne frigate, joined the Malaysian Fleet in 1984. She is the second of her class to join the Navy and is conservatively manned by a crew of 128 personnel.

KD LEKIR will join the First Mobile Review Line. KD SRI INDERA SAKTI will be moored four ships east of Fort Denison.

THE NETHERLANDS

COMNEDSECON/C(NL)TG 429.4

— CAPT E. BAKKER RNIN

(Embarked in HNLMS WITTE DE WITH)

HNLMS WITTE DE WITH	F 813	CMDR F. J. SCHULLER
		TOT PEURSUM
HNLMS ZUIDERKRUIS	A 832	CAPT W. M. D. VOGT
HNLMS KORTENAER	F 807	CMDR F. O. LAKS
HNLMS JAN VAN BRAKEL	F 825	CMDR W. J. E. VAN RIJN

Leading the Dutch contingent to Australia and the Bicentennial Naval Salute is the HNLMS WITTE DE WITH, the new 3,750 ton air defence frigate.

For all four ships, HNLMS WITTE DE WITH, the frigates HNLMS KORTENAER and HNLMS JAN VAN BRAKEL and the support ship HNLMS ZUIDERKRUIS, the visit to Australia will be the first by any of the group.

HNLMS WITTE DE WITH will sail through the other ships of the Naval Review in the Second Mobile Review Line. HNLMS KORTENAER and HNLMS JAN VAN BRAKEL will moor north-east and south-east of Garden Island respectively. HNLMS ZUIDERKRUIS will be seen off Point Piper.

NEW ZEALAND

HMNZS WELLINGTON	F 69	CMDR A. D. CLAYTON-GREENE
HMNZS WAIKATO	F 55	CMDR B. NOFFKE
HMNZS ENDEAVOUR	A 11	CMDR M. D. LLOYD

From across the Tasman Sea, the island nation of New Zealand is represented by two of her Navy's four operational frigates and the new support ship HMNZS ENDEAVOUR.

Like all of the Royal New Zealand Navy's major units, the frigates HMNZS WAIKATO and HMNZS WELLINGTON are regular visitors to Sydney for training, operational and goodwill visits. The ships often join the Royal Australian Navy units for major exercises.

HMNZS WAIKATO was commissioned in 1966 and HMNZS WELLINGTON, formerly HMS BACCHANTE, was purchased from the Royal Navy in 1982. The latter has since received a three-and-a-half year refit at the Devonport Naval Dockyard in Auckland and is expected to serve well into the 1990s.



HMNZS WELLINGTON



HMNZS WAIKATO

Both frigates embark a crew of 250 officers and men, and are home-ported in Auckland.

The new support ship, HMNZS ENDEAVOUR, joined the Royal New Zealand Navy in 1988. Built in South Korea, the ship is designed to increase the time spent "on station" through the re-supplying to the frigates of fuel, provisions and armament. HMNZS ENDEAVOUR is equipped with a helicopter deck aft of her bridge superstructure.

HMNZS ENDEAVOUR is berthed at the Navy's Kiriwhiri Dolphins. HMNZS WAIKATO is alongside the cruiser wharf, Garden Island, and HMNZS WELLINGTON is the third ship in the Second Mobile Review Line.



HMNZS ENDEAVOUR

NIGERIA

(Personnel contingent only attending)
CDRE A. A. MADUEKE

PAKISTAN

Commander Pakistan Fleet — RADM A. TASHIM, HI(M)
SJ&B

(Embarked in PNS TUGHRIL for the Flag Salute Steampast, otherwise embarked in PNS NASR)

PNS NASR	A 47	CAPT S. Z. A. SHAH, T.S.T.
PNS TUGHRIL	D 167	CMDR S. A. ALI

The last Pakistani warship to visit Sydney Harbour was the PNS TIPPU SULTAN in 1951. Today, Australia and her Navy welcome the destroyer PNS TUGHRIL and the tanker NASR to the Naval Bicentennial Salute.

SHIPS OF THE REVIEW

— CONTINUED

For the Review, PNS TUGHRIL will join ships in the Second Mobile Review Line, while the latter will moor in Athol Bight.

PNS TUGHRIL was originally commissioned in August 1945 as the USS HENDERSON. She was modernised during the late 1950s and was later transferred to Pakistan. PNS NASR is a recent addition to the Pakistani Navy.



PNS NASR



PNS TUGHRIL

PAPUA NEW GUINEA

HMPNGS AITAPE P 84 MAJ U. TOM
HMPNGS TARANGAU P 01 CAPT M. SUNDIE

Australia's near neighbour, Papua New Guinea, is represented today by the former RAN patrol boat, HMPNGS AITAPE and the new Pacific Forum-type patrol craft HMPNGS TARANGAU.

HMPNGS AITAPE was transferred to Papua New Guinea in 1974 as one of five Attack class boats to form the basis of a capable patrol force. HMPNGS TARANGAU was completed in February 1987, the first of a class of four built in Australia for the Papua New Guinea Defence Force.

HMPNGS AITAPE will join RAN patrol boats as part of the Small Ships Mobile Review, passing Bradleys Head at 1330. The new HMPNGS TARANGAU will anchor between FNS COLBERT and USS NEW JERSEY.



HMPNGS TARANGAU (Photo — C. Smith)



HMPNGS AITAPE (Photo — C. Sattler)

SOLOMON ISLANDS

RSIPV LATA 03 M. PADA

Representing the South Pacific island nation of the Solomon Islands is new patrol boat RSIPV LATA, built in Australia at Fremantle. Two of the class will operate around the islands. RSIPV LATA will form part of the Small Ships Review Line.



RSIPV LATA

UNITED KINGDOM

Flag Officer Flotilla Two — RADM A. P. WOODHEAD
(Embarked in HMS EDINBURGH for the Flag Salute Steampast, otherwise embarked in HMS ARK ROYAL)

HMS ARK ROYAL	R 09	CAPT M. G. T. HARRIS
HMS EDINBURGH	D 97	CAPT A. B. ROSS
HMS SIRIUS	F 40	CMDR T. MORTON
RFA FORT GRANGE	A 385	SEN CAPT D. A. REYNOLDS, RFA
RFA OLWEN	A 122	CAPT J. B. DICKINSON, OBE, RFA
RFA ORANGELEAF	A 110	CAPT G. D. WILSON, RFA

Leading the Royal Navy's Squadron of three warships and three auxiliaries to Australia for the 1988 celebrations and today's Bicentennial Naval Review is the 20,000 tonne aircraft carrier HMS ARK ROYAL.

The carrier is the third of the Invincible class to be commissioned and was accepted into service on 1st July, 1985. An interesting feature of HMS ARK ROYAL is her "ski-jump" at the forward end of the flight deck to enhance the performance of the Sea Harrier VSTOL aircraft which are embarked along with Sea King helicopters. Some of HMS ARK ROYAL's aircraft will participate in the Naval Review Flypast.



HMS SIRIUS

HMS EDINBURGH is a Type 42 guided missile destroyer, displacing 4,500 tonnes and carrying 26 officers and 275 ratings. She was commissioned in 1985. HMS SIRIUS is a Leander class frigate modernised to launch Exocet missiles and mount a large towed array sonar from her stern. The ship first entered service in 1966 and completed modernisation in 1977. All three warships are making their first visit to Australia.

The Royal Fleet Auxiliary is represented by the supply ship FORT GRANGE, oiler OLWEN and the support tanker ORANGELEAF.

During the Review HMS ARK ROYAL and her consorts will be at buoys or anchored in harbour. The carrier can be seen below Kurraba Point and HMS SIRIUS near Shark Island. HMS EDINBURGH will follow HMAS DARWIN and other ships in the Second Mobile Review Line.

RFA FORT GRANGE will remain alongside in Woolloomooloo Bay and RFA ORANGELEAF will be secured to a buoy north of Point Piper.



RFA ORANGELEAF



RFA FORT GRANGE



HMS ARK ROYAL



HMS EDINBURGH

UNITED STATES

Commander Cruiser Group 5 — CMDR 7th FLEET VADM P. D. MILLER

(Embarked in USS INGERSOLL for the Flag Salute Steampast, otherwise embarked in USS NEW JERSEY)

USS NEW JERSEY	BB 62	CAPT D. J. KATZ
USS BREWTON	FF 1086	CMDR P. D. MALLETT
USS INGERSOLL	DD 990	CMDR J. L. FRANK III
USS BERKELEY	DDG 15	CMDR C. R. GIRVIN

Sydney and Australia have, since 1986, been fortunate to have twice welcomed the grand United States Navy dreadnought USS MISSOURI. On both occasions, as the public response to the 40-year-old veteran showed, the ship was welcomed by all residing in the city on the harbour.

Now, in 1988, we again welcome a battleship in this, our Bicentennial year, the USS NEW JERSEY, sister-ship of the "Mighty Mo". With a crew of more than 1,500 personnel, the USS NEW JERSEY was recommissioned in December 1982. Historically, the ship first entered service in May 1943; was laid up in June 1948; re-activated, initially for Korea, from 1950 to 1957;



USS BREWTON (Photo — C. Sattler)



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**FERRANTI
INTERNATIONAL**

SHIPS OF THE REVIEW

— CONTINUED

recommissioned for Vietnam between 1968-69, and again in 1982 for her fourth commissioning.

"Down Under" with NEW JERSEY are the destroyers USS BERKELEY and USS INGERSOLL and the frigate USS BREWTON.

USS BERKELEY is a Charles F. Adams class guided missile destroyer, similar to the RAN's three DDGs. USS INGERSOLL is a multi-mission surface warfare platform, incorporating the most modern electronic combat systems. At 7,800 tonnes, she is larger than most cruisers in other naval fleets.



USS INGERSOLL (Photo - C. Satter)

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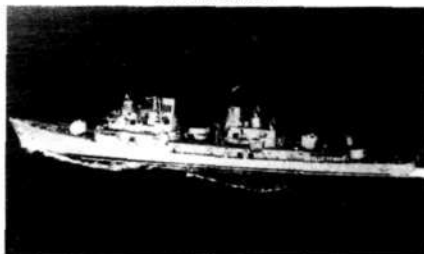
The previous USS INGERSOLL in 1952 (Photo - USN)

USS BREWTON is one of 46 Knox class frigates commissioned by the USN from 1969 to 1974.

During the Review, USS NEW JERSEY will be visible near Bradleys Head. USS BERKELEY and USS BREWTON will both moor east of Garden Island. USS INGERSOLL will form the rear of the Second Mobile Review Line during the sailpast HMAS COOK, with His Royal Highness, Prince Andrew, embarked.



USS NEW JERSEY.



USS BERKELEY (Photo - USN)

VANUATU

RVS TUKORO — CAPT M LIGO

The patrol boat RVS TUKORO is another of the Pacific Forum type patrol craft to participate in the International Naval Review. The boat was built by Australian Shipbuilding Industries in Western Australia. She will form part of the Small Ships Review Line.

USS NEW JERSEY

NEW JERSEY and her sister battleships were reactivated to provide a near-term increase in the US fleet's combat power. They are a capable blend of the old; represented by the 16-inch guns, high speed and armour, and the new; symbolised by Tomahawk and Harpoon cruise missiles, Close-In Weapons System, and modern electronic warfare and communication equipment.

Operating as the centrepiece of a Battleship Battle Group (BBBG), NEW JERSEY can:

- Conduct surface strike missions.
- Carry out high speed Naval gunfire attacks.
- Support amphibious operations.
- Establish a powerful and symbolic naval presence anywhere in the world.
- Operate jointly with Aircraft Carrier Battle Groups (CVBG) in high enemy air threat situations.
- Operate independent of aircraft carrier support in lesser threat areas and provide flexibility in CVBG scheduling.

ARMAMENT

Main Gun Battery: Nine 16" 50 cal guns in three gun turrets
Range: 23 miles
Projectiles: Armour Piercing 2,700 lbs.
High Capacity 1,900 lbs.
Powder: Standard load 6 110 lb bags
Rate of fire: 2 rounds per min per gun
Use: Anti surface, shore bombardment

Secondary Gun Battery: Twelve 5" 38 cal guns in six twin mounts
Range: 9 miles



21-gun broadside.

Projectiles: 55 lbs.
Powder: 30 lbs.
Rate of fire: 15 rounds per min per gun.
Use: Anti surface, anti air, shore bombardment

Air Defence: Four Phalanx Close In Weapon Systems capable of firing 20mm ammunition at a rate of 3,000 rounds per minute for self defence against missiles and aircraft.

Missiles: Tomahawk: Capacity for 32 land attack, or anti ship cruise missiles in eight armoured box launchers.
Harpoon: 16 anti-ship missiles in canister mounts.

VITAL STATISTICS

Class: IOWA class battleship
Length: 887'7"
Beam: 108'1"
Draft: 38 feet
Displacement: 57,200 tons
Boilers: Eight 600 PSI Babcock & Wilcox
Main Engines: Four geared Westinghouse turbines
Horsepower: 212,000 shaft horsepower (total all four shafts)
Propellers: Two five-bladed 175" (inboard),
Two four-bladed 183" (outboard)
Rudders: Two 21' high
Speed: In excess of 33 knots.
Cruising Range: 15,000 miles at 15 knots.
Tank Capacity: 2,402,922 gallons of fuel oil (F-76),
69,966 gallons of diesel oil,
32,644 gallons of aviation fuel (JP-5),
209,076 gallons of fresh water,
132,133 gallons of boiler feed water

Anchor: Two anchors, port and starboard bow, each weighing 30,000 pounds. Each anchor chain is 12 shots or 1,080 feet long and each link weighs about 110 pounds.

Armour: The main armour belt of the hull is 13.5", tapering 19" vertically to 1.62". Aft to protect the propellers and shafts, the armour is 13.5" thick.



USS NEW JERSEY (Photo - USN)



USS NEW JERSEY (Photo - USN)

Other armour thicknesses are:
 Turret faces 17"
 Turret tops 7.25"
 Turret backs 12"
 Turret sides 9.25"
 Second deck armour 6"
 Conning tower sides 17.3"
 WWII
 134 officers, 2,400 enlisted
 TODAY
 Navy 70 officers, 1,400 enlisted
 Marine Corps 2 officers, 61 enlisted

Personnel:

A CHRONOLOGY

September 1940: Keel laid
 December 1942: Launched
 May 1943: Commissioned at Philadelphia Naval Shipyard
 January 1944: Joined the FIFTH FLEET in the Pacific
 August 1944: Became the flagship for Admiral Halsey and the THIRD FLEET
 August 1945: Became the flagship for Admiral Spruance and the FIFTH FLEET

June-August 1947

June 1948

November 1950
 May 1951

April 1953

September 1955-
 January 1956
 August 1957
 April 1968

September 1968

April 1969
 December 1969

December 1982

June 1983-May 1984

May 1984
 April 1985
 May 1985

May-October 1986

June 1986
 February-October
 1987

Part of the first training squadron in the North Atlantic since the beginning of World War II
 Decommissioned at Bayonne, New Jersey and assigned to the New York group, Atlantic Reserve Fleet

Recommissioned at Bayonne, New Jersey
 Joined the SEVENTH FLEET off Korea, served as flagship for the Fleet Commander
 Rejoined the SEVENTH FLEET off Korea as flagship for Fleet Commander

On duty with the SIXTH FLEET in the Mediterranean

Decommissioned at Bayonne, New Jersey
 Recommissioned at Philadelphia Naval Shipyard

Began tour of gunfire support off the coast of Vietnam

Awarded Navy Unit Commendation
 Decommissioned at Puget Sound Naval Shipyard, Bremerton, Washington

Recommissioned by President Reagan at Long Beach, California

Deployed to the Western Pacific, Central America and to duty with the SIXTH FLEET in the Eastern Mediterranean in support of the US Marine contingent of the Multi-National Peace-keeping Force in Beirut, Lebanon

Awarded second Navy Unit Commendation
 Awarded Battle Efficiency "E"
 Awarded Spokane Trophy for Excellence in Surface Ship Combat Systems Readiness

Deployed to the Western Pacific as centerpiece of the first Battleship Battle Group to deploy to the Western Pacific since the Korean War

Awarded second Battle Efficiency "E"
 Drydock shipyard restricted availability, Long Beach Naval Shipyard

ANZAC Ship Project "M" CLASS FRIGATE

The five member companies of Australian Warships Systems teamed up earlier this year with the common objective to design, build and support the 12 ANZAC light frigates for the Australian and New Zealand Navies.

A consortium spokesman has said that AWS is totally committed to winning the A\$5 billion contract and propose to Project authorities a well-balanced tender by the end of 1988. Priority will be given to price, Australian and New Zealand industrial involvement and build strategy incorporating the latest shipbuilding techniques.

Royal Schelde of the Netherlands has been designing and building quality ships since 1875. Every class of frigate commissioned into the Royal Netherlands Navy since World War II has come from the Royal Schelde Shipyard. Royal Schelde's impressive credentials are now working for AWS.

The multi-purpose frigate design, a joint development by the Royal Netherlands Navy, Royal Schelde and the most renowned of Dutch Naval Industries is the base-line design for the ANZAC frigates. A total of eight NATO multi-purpose frigates are now on order with Royal Schelde.

AWS is committed to becoming the prime contractor for the ANZAC Frigate



Artist's impression of the M class.

Project and is determined to deliver the 12 ANZAC "M" class ships on time.

The 12 multi-purpose "M" class frigates will be capable of operating on all oceans of the world and particularly in sea areas surrounding Australia and New Zealand.

Their main tasks will be anti-submarine warfare, surface warfare and local air defence.

The sensor, weapon and Command System makes the "M" class frigates highly suitable for crisis management operations.

Besides the traditional hull-mounted sonar, these ships will be fitted with Tactical Towed Array Systems (TACTAS), a towed passive long-range sonar.

The other weapons and sensors provide for a long-range warning and attack capability against surface targets, a long-range air warning, a short-range defence capability against air and surface targets and a highly flexible and quick reaction command system.

Design

The ship has been designed by The Royal Netherlands Navy in close co-operation with Royal Schelde.

Results of extensive research by more than six scientific laboratories have been applied. The design constitutes a logical continuation of previous successful construction programmes, like the Air Defence, Standard and Guided Missile Frigates.

The experiences of the Royal Navy during The Falklands conflict have been incorporated where necessary.

This resulted in a design which is in line with the Standard and Air Defence Frigates, but incorporating important improvements in many areas. Platform and sensor weapon and command systems are designed flexible so that adjustments and operation improvements throughout the lifetime are relatively easy to incorporate.

Appellation

The Dutch "M" frigates are named after the following naval heroes.



The first Dutch M class frigate after launch.

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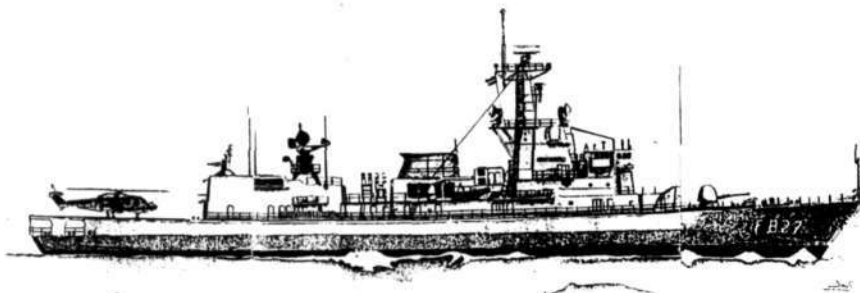
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Laid Down	Commissioning
Karel Doorman F 827	1985
Willem van der Zaan F 829	1985
Tjerk Hiddes F 830	1986
Van Amstel F 831	1988
Abraham van der Hulst F 832	1989
Van Nes F 833	1990
Van Galen F 834	1990
Van Speijk F 828	1991

Platform automation

The platform system of the "M" frigates is almost completely automated.

The ship sails with unmanned engine-rooms. Under peacetime conditions, apart from exercises, one man can monitor and control the platform from the ship's control centre. Operation of all platform systems is

centralised and is effected by means of control orders transmitted via special function keys and rolling-ball commands.

Innovations

SEWACO

Fully integrated SEWACO system information handling system with SEWACO databus, General Operator Stations, NATO programming language: ADA mass-memory integrated communications and message-handling system with glass-fibre cabling; satellite communication 3-dimensional target acquisition radar vertical launch system for NATO Sea Sparrow Sonar system, consisting of PHS-36 hull-mounted sonar and towed array passive long-range sonar (TACTAS).

PLATFORM

- Hydrostatic transmission of essential propulsion auxiliary systems.
- rudder/roll stabilisation;
- platform automation (one operator control);
- improved seakeeping and manoeuvring capabilities;
- reduced detectability;
- reduced vulnerability (incorporation of Falklands lessons learned);
- rigid inflatable boat.

Accommodation

Much emphasis has been put on the accommodation of the crew.

A new standard of accommodation has been introduced. As a result, the crew of the "M" frigates will have more privacy and more space for their personal belongings. A new designed furniture will be used: bunks, cupboards, desks, sinks.

Standardisation has been applied as much as possible, so that the same furniture can be used for the different categories of the crew. This new accommodation is also suitable for sailing with a crew which consists of men and women.

Weapons and Sensors

1. Hull-mounted sonar: PHS 36
2. 76 mm gun: OTO MELARA
3. Active electronic warfare
4. Multiple weapon control system with two fire control radars: STIR
5. Satellite communication
6. 2 x 20 mm gun
7. Navigation and sea-warning radar: DECCA
8. 3-dimensional surveillance and target indication radar: SMART
9. Passive electronic warfare
10. Radar dispensing system: 2 x SRBOC
11. 8 HARPOON surface-to-surface missiles
12. 2 x 2 torpedo tubes
13. Air warning radar: LW-08
14. 16 Vertical Launch NATO Sea Sparrow guided missiles
15. GOALKEEPER close-in weapon system
16. Medium-weight helicopter with torpedoes and radar
17. Passive long-range sonar (TACTAS): ANACONDA

DEVELOPMENTS IN SEABORNE AIRPOWER

by A. W. GRAZEBROOK

In 1988, five years after the Australian Government decided to scrap our fixed wing seaborne airpower force, it is perturbing to note that other governments, with sharper perceptive ability than that of Australia, have successfully enhanced the capability of their defences by exploiting new developments in carrier borne airpower.

These countries include Spain, USSR, France, Italy, India and (reportedly) Japan. Of these countries, four (USSR, France, India and Japan) have a direct military involvement in our region. Developments in the other two are of interest for professional and technical reasons.

USSR

CONSTRUCTION of the new big Russian carrier continues. However, it is still not certain that the ship is to have steam catapults and the ability to operate aircraft comparable with the FA18. Some reports suggest that she will be limited to VSTOL aircraft. Nevertheless, the ship will be through-decked, nuclear-powered, and (at 70,000 tons) about twice the size of the existing Russian aircraft carriers. In military terms, she will be large enough and (with other Russian fleet units) capable of protracted operations within our region — in the Indonesian Archipelago, and Indian Ocean.

Of at least as great a regional significance, enhanced Russian involvement in seaborne fixed-wing maritime airpower will provide Russia's client powers with a growing source of technology, equipment, and operational doctrine and training in this field of warfare.

FRANCE

AS France's two existing CTOL carriers approach retirement, work has started on a new nuclear-powered CTOL aircraft carrier, displacing some 34,000 tons

standard. The design of the new ship is of interest, as it represents the sum of French experience and developmental thinking from operations of their existing CTOL carriers and, presumably, the war operations of the Argentine's Super Etendard strike fighters in the Falklands War.

The first steel for the new ship — to be named CHARLES DE GAULLE — was cut in October 1987. She is expected to start sea trials in 1995 and commission in 1996. She will have two steam catapults, one forward on the port side and one at the forward end of the angled deck. Unlike the latest USN carriers, and the existing French carriers, DE GAULLE's two lifts will both be on the starboard side and both abaft the island. The island will be markedly further forward than in either existing French or US carriers.

The existing carriers' strike/lighters will retire in the early 1990s. The proposed French replacement — a naval version of the French Rafale still in the early development stages — will not be ready in time. There is a proposal to buy or lease FA18s from the US. Operating trials are being conducted to test the feasibility of this.



GIUSEPPE GARIBALDI.

Main Characteristics

Length o.a.:	122.25m
Beam:	14.37m
Draft:	4.30m
Design displacement:	3,320 tonnes
Propulsion:	2 Rolls Royce gas turbines 2 SWD cruise speed diesel engines
Max speed:	29 + knots
Max speed (2 diesels):	21 knots
Endurance (18 knots):	5,000 + nautical miles
Crew:	154. 16 off, 32 Chief Petty Officers, 106 Corporals and ratings
Accommodation:	163

DEVELOPMENTS IN SEABORNE AIRPOWER

— CONTINUED

Given the continuing troubles in France's South Pacific territories, it is more than possible that we will see French CTOL carriers operating in our region. The ability of the French Navy for protracted operations of a balanced force at great distances from home is markedly greater than that of the British Navy at the time of the Falklands War.

JAPAN

ALTHOUGH much Japanese naval thinking has advocated the acquisition of sea control carriers for protection of trade, this option has been rejected by successive Japanese Governments, not because the need for seaborne fixed-wing airpower is unrecognised, but for outright political reasons. As a result, the Japanese Maritime Self-Defence Force has adopted a less effective method of defence against strike aircraft — the US AEGIS system. The first Japanese AEGIS destroyer is expected to commission in 1990.

However, there are increasingly strong reports that the



GIUSEPPE GARIBALDI.

Japanese Government will accept the need for one or more small aircraft carriers equipped with VSTOL aircraft (Sea Harrier type), and ASW and AEW helicopters. This type of ship will provide Japanese surface forces (war or merchant) with air defence out to the 1,000 nm distance from Japan — too far for shore-based fighters.

As Japan is Australia's largest (in tonnage and therefore merchant shipping terms) customer, a Japanese decision to go ahead with sea control carriers would have a beneficial effect on Australia's defence position.

INDIA

INDIA now operates two aircraft carriers — both older ships, but both now armed with the very latest in ASW and air-to-surface helicopters and the very latest in air defence VSTOL strike fighters. As one of India's ships — the former British HERMES — demonstrated in the Falklands War, it is the aircraft that really count. The Indian Sea King helicopters are armed with the very latest in air-to-surface missiles — the Sea Eagle. These are lighter, but have larger warheads and longer range than Exocet.

To succeed and supplement their two existing carriers, the Indian Navy is developing a new design of 30-40,000 ton aircraft carriers. Plans are in hand to equip the existing Indian carriers with AEW Sea Kings.

Apart from carrier-borne fixed wing aircraft, the Indian Navy has just commissioned the first of eight Russian-built Bear F long-range anti-submarine and maritime reconnaissance aircraft. These are three times as large as, and have twice the radius of action of, the RAAF's P3Cs. In addition, the Bear F is equipped for air-to-air refuelling.

Given that involvement by one or another super-power would be balanced by the consequent involvement of the other, the Indian Navy can dominate the Indian Ocean outside the range of shore-based strike fighters, and give a good account of itself inside such range.

ITALY

ITALY's new aircraft carrier GIUSEPPE GARIBALDI is of interest in that she is the smallest aircraft carrier afloat, with a much greater proportion of payload being devoted to shipborne weapons than in other new aircraft carriers. Contrary to earlier expectations, she will now be equipped with VSTOL aircraft. The type was ruled out in the contest for the RAN order because the ship was designed for Mediterranean operations — a much more intense threat environment and much shorter distances than in our region.

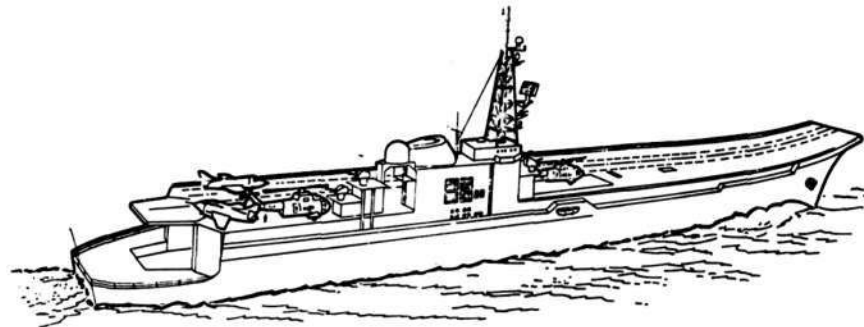
SPAIN

ALTHOUGH the design of the Royal Spanish Navy's new sea control aircraft carrier PRINCIPE DE ASTURIAS was not the preferred choice of the RAN prior to the INVINCIBLE debacle, the new ship is of interest for several professional reasons.

Firstly, the Spanish Navy will operate the ship with their FFG7 class frigates, which are virtually identical to HMAS DARWIN. Secondly, the Spanish carrier has propulsion systems, sensors and combat data systems which are compatible with the FFG7.

Thirdly, the new Spanish carrier group is virtually a mirror image of that which would have provided the RAN with its main strength if we had obtained a new carrier.

Fourthly, the new Spanish ship took two years longer to build than expected because of modifications instituted during construction. The original build time was six years and the revised time eight years. However, the modifications involved an extra



Spain's sea control ship.

1,500 tons full load displacement to increase aircraft complement from 20 to 37, with a commensurate increase in support capability.

Fifthly, the fact that the Spanish Navy has an aircraft carrier has enabled it to acquire less costly helicopters for her FFG7s. Spain has bought the SH60B from the US instead of having to incur the cost and time penalties of the RAN's specially equipped SH08Bs. If the RAN had had a new carrier, that ship would have operated our existing Sea Kings whilst the FFG7s could have been equipped with a less costly smaller helicopter, such as the Lynx or Dauphin.

Finally, the achievement on displacement of the new Spanish carrier adds force to those critics of the RAN who argue that, in seeking the enhanced LPH, the RAN was aiming too high — if Navy had sought the cheaper but nevertheless very capable Spanish type, we would have got the funds needed from the Fraser Government.

Although the Royal Spanish Navy's new ship is unlikely to be seen in our region — in which Spain has minimal national interest — there is much for the professional to learn from the ship herself: from the much increased payload obtained at a relatively small displacement cost, from the advantages of buying an off-the-shelf design, and from the ability of the Royal Spanish Navy to obtain the equipment they need.

VULNERABLE AUSTRALIA

TODAY, six years after HMAS MELBOURNE was paid off, five years after the Australian Government decided to dispense with an effective air defence for our ships, and five years after the Australian Government scrapped Navy's S2 Tracker fixed-wing ASW aircraft and A4 Skyhawk strike fighters while they still had much useful life left, the ability of our surface forces to operate in war are limited — very severely limited — by the lack of a fixed-wing air defence capability. This is a major operational disadvantage.

For the Defence Department and RAAF, opposition to a new RAN aircraft carrier was strategically based. The ability of an aircraft carrier to operate at extended distances from our shores was not denied. It was argued instead that we did not need to operate at those extended distances from our shores. Therefore, it was contended, we should not spend funds on a new aircraft carrier.

It must be doubted whether even these arguments were properly considered by the new Government which made a decision against a carrier within hours of coming to office and without consulting its primary source of professional naval advice

— the then Chief of the Naval Staff, who learned of the decision from the radio.

Be that as it may, today Australia finds itself with a revised strategy — that recently announced to extend and enhance our naval operations up into the ASEAN region — for which an aircraft carrier would be a major advantage in peacetime and an absolute necessity in war. Further, the strategic situation in the South Pacific has deteriorated and we need a major platform there for graduated response situations. On top of that, in the Indian Ocean we have lost our pre-eminent maritime strength to a power which now operates two aircraft carriers (one of them that which the Australian Government refused at the bargain basement price of \$100 million).

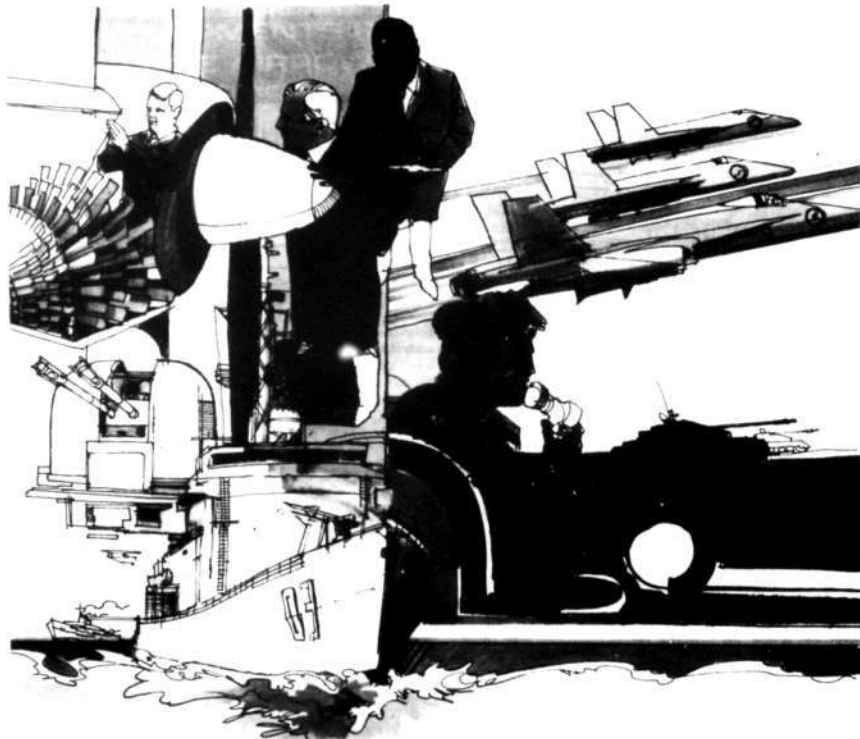
The arguments in favour of a carrier — that is, a flat-topped ship with ability to support, control and operate air defence VSTOL fighters, and AEW AST ASW and troop/cargo carrying helicopters — are that without one we cannot deploy a stabilising evacuating force, let alone a force for war operations, in the South Pacific. Further, our fleet cannot operate in waters liable to attack by air. With the deployment in the region of the Bear-type aircraft, that includes a major portion of coastal waters. Further, we have no AEW aircraft.

For it should be noted that shore-based fighters have never successfully provided air defence for a squadron or fleet of warships in war operations. Air Force officers confirm privately the difficulty of providing air defence for a fleet from control, response time and range aspects.

Finally, it is significant that the present Minister for Defence argued recently against a carrier on the grounds that we could not afford it — the strategic argument went unmentioned (at least in the report seen by this writer). We could only have a carrier by giving up the ANZAC frigate or submarine projects, etc.

That same Minister wrote (in *The Australian*, Friday, 13th May, page 4) "No matter how high it is on the Government's list of priorities, defence — in peacetime — cannot be insulated from economic realities." Elsewhere, we have been told we have a deterrent strategy. A deterrent strategy involves spending what is necessary before a war to deter a war. If we wait until there is a war to spend enough on defence, the deterrent strategy has failed. For the deterrent to be effective, we have to have in being the deterrent force.

The time has come to stop spending what we can afford and to start spending what we must spend to implement the deterrent strategy. Australia's much reduced relative defence capability, five years after the carrier decision, emphasises a need for a fundamental change in defence funding policy.



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SHIPS OF THE REVIEW

Royal Australian Navy

HMAS STALWART — Fleet Flagship

The 15,500 tonne HMAS STALWART is the largest naval vessel wholly designed and built in Australia. During her years in commission, the ship earned for herself the reputation of "Maid of All Work", initially satisfying Fleet maintenance and destroyer tender duties and more recently as Fleet flagship as well as training ship.

HMAS STALWART has visited Japan, Korea, China and numerous other ports in South East Asia, sailed to Macquarie Island (half-way to the Antarctic), and in May 1986 acted as a relief and re-supply ship following the destruction caused by Cyclone Namu in the Solomon Islands.

The flight deck at the ship's stern is large enough to receive every type of helicopter in the Royal Australian Navy. The Wessex helicopter normally carried aboard the ship can carry 10 passengers, or up to 1 tonne underslung load and is fitted with a winch for rescue operations.

For the Review, HMAS STALWART will be berthed at the Oil Wharf at the northern extremity of the Garden Island Naval Dockyard.



HMAS SUCCESS.

maintain the propulsion, replenishment and auxiliary machinery and support systems in HMAS SUCCESS. Providing underway replenishment support to the Fleet is a challenging and continuing task requiring technical proficiency and high seamanship standards.

During the Review HMAS SUCCESS will anchor north of Clarke Island.

HMA Ships HOBART and BRISBANE — Guided Missile Destroyers

Australia's three guided missile destroyers — HMA Ships PERTH, HOBART and BRISBANE — are particularly versatile US-built ships, generally regarded as the best balanced vessels



HMAS STALWART.

HMAS SUCCESS — Fleet Auxiliary Oiler Replenishment

A Fleet Underway Replenishment Ship, based on the French Durand Class, HMAS SUCCESS was built in Australia by Cockatoo Island Dockyard Pty Ltd at Sydney. She is the largest ship ever built in Australia for the RAN, and the largest ship ever built in the Port of Sydney.

The ship entered service with the Royal Australian navy in April 1986.

Her role is to replenish Fleet units at sea by the underway transfer of liquid fuels, distilled water, dry and frozen victuals, ammunition, and spare parts and stores items.

HMAS SUCCESS enables Fleet units to operate with a greater degree of independence from shore support than had previously been possible.

The ship's company of 205 is required to operate and



HMAS BRISBANE.

SHIPS OF THE REVIEW

— CONTINUED

built in modern times. Their main task is air defence of the Fleet, but they also have formidable anti-submarine and surface gunnery capabilities.

Two of these American built ships are part of the Naval Review.

The DDGs saw action in Vietnamese waters in the 1960s and 1970s, where they served with distinction. The ships are involved in all major RAN exercises, as well as deployments to south East Asia, the Pacific and Indian Oceans. To further improve their effectiveness, the class is in the process of extensive modernisation/refits which will see them fitted with new sensors, improved computer, gun and missile systems, plus new mess decks and cafeteria facilities. Combined with their high technology and proud history, the Royal Australian Navy's DDGs will continue to provide the front line of the nation's naval defences through to the turn of the century.

For the Review, HMAS HOBART will lead a group of seven warships of seven nationalities between the lines of other ships. Embarked in HMAS HOBART will be the Fleet Commander, Rear Admiral P. R. Sinclair, AO, RAN. HMAS BRISBANE will be alongside Garden Island's cruiser wharf, while HMAS PERTH (under modernisation) will be at the West Dock Wall.

HMA Ships CANBERRA, SYDNEY and DARWIN — Guided Missile Frigates

Four guided missile frigates (FFGs), HMA Ships ADELAIDE, CANBERRA, SYDNEY and DARWIN, joined the RAN between 1980 and 1984.

The FFGs are long-range escort ships with primary capabilities in the roles of interdiction, surveillance, reconnaissance, area air defence and anti-submarine warfare.

Like the guided missile destroyers, the FFGs are armed with both Standard anti-air and Harpoon anti-surface missiles. For anti-submarine warfare the FFG will embark two Sikorsky Seahawk S-70B-2 helicopters to provide long-range cover for the Fleet. The FFGs are the first RAN ships to be driven by gas turbines for main propulsion, allowing them to get underway in less than 45 minutes. Each vessel is a "high tech" ship, designed for maximum performance and operations with minimum manning. The ships also introduced to the Fleet the Phalanx "close-in weapon-



HMAS PARRAMATTA.

system", a rapid fire gun designed to destroy incoming missiles with a shower of 20 mm rounds.

The FFGs are becoming the backbone of the Royal Australian Navy. They are ideally suited to complement the other Fleet units, to protect Australia's sea lanes, merchant and military convoys and to contribute to effective naval task force operations.

Two additional FFGs are being built in Williamstown, Victoria, and are expected to enter service in the early 1990s.

For the Review, HMAS DARWIN will lead the Second Mobile Review Line of six warships from six navies. HMAS CANBERRA will be anchored west of Fort Denison and HMAS SYDNEY will berth alongside the East Dock Wall at Garden Island.

HMA Ships PARRAMATTA, STUART and TORRENS — Destroyer Escorts

The Royal Australian Navy has five operational River class destroyer escorts, three of which are represented at the 1st October Naval Review.

Designed primarily as anti-submarine ships, the destroyer escorts were commissioned into the Fleet between 1961 and 1971. Like the DDGs, the River class are armed with the Australian-designed Ikara anti-submarine missile system and in recent years have been fitted with the Mulloka sonar system, also developed in Australia. From 1977 to 1985, HMA Ships PARRAMATTA, STUART and DERWENT received half-life modernisations. Since then, the two youngest ships, HMAS SWAN and HMAS TORRENS, have also been extensively refitted.

All the ships are armed with twin 4.5 inch guns, which are used with digital fire control radars and computers.

Close range air and surface defence is provided by the Seacat missile system, which is controlled by a separate radar and computer.

A submarine threat can be met by using either the Ikara or the triple torpedo tubes carried on all the escorts.

Ikara is a rocket propelled guided missile which carries a homing torpedo toward its submarine target. The torpedo is dropped into the sea by parachute and is then acoustically homed onto the submarine target.

Two of the DEs are now permanently home ported to HMAS STIRLING in Western Australia as part of the two-ocean navy concept. The River class DEs are expected to be replaced in the active Fleet from the early to mid-1990s, initially by two new FFGs now building in Victoria, and then by a new generation of frigates.

All three destroyer escorts will be anchored in harbour, HMAS PARRAMATTA south of Bradleys Head, HMAS STUART east of Fort Denison and HMAS TORRENS above Shark Island.



HMAS CANBERRA.



Oberon class submarine during the 75th Anniversary.

HMA Submarines ONSLOW, ORION and OXLEY — Submarines

Oberon class submarines were commissioned into the Royal Australian Navy from HMAS OXLEY in 1967 to the sixth and last, HMAS OTAMA, in 1978.

The Squadron is based at HMAS PLATYPUS in Sydney Harbour with one, and later two, boats home ported to HMAS STIRLING in Western Australia.

The boats are very quiet (an essential submarine attribute) and boast long endurance, which is an important factor in Australia's area of interest. Each crew consists of 63 men who undergo specialist training to develop the skills required for this demanding Service.

For the Naval Review HMAS ONSLOW can be viewed in the mouth of Neutral Bay, near her base, HMAS ORION just south of Bradleys Head and HMAS OXLEY east of Garden Island.

HMA Ships FREMANTLE, GEELONG, DUBBO and WOLLONGONG — Patrol Boats HMA Ships CURLEW, RUSHCUTTER and SHOALWATER — Minehunters

The Royal Australian Navy's patrol boats are deployed to bases around the coastline at Sydney, Cairns, Darwin and HMAS Stirling in Western Australia. The boats fulfil a wide variety of tasks from the tropic north to the inclement Bass Strait, patrolling for unlicensed fishing craft, oil rig surveillance and providing a response to national civil coastal surveillance and enforcement as required.



HMAS RUSHCUTTER.



HMAS FREMANTLE.

Four of the Fremantles are to participate in the Naval Review. Three of the boats will sail up the harbour and through the lines of the other ships at 1330 as part of the Second Mobile Review Line. HMAS WOLLONGONG will provide the escort for HMAS COOK.

The Fremantle class entered service between 1980 and 1985 as replacements for the smaller Attack class patrol boats which were allotted to the Naval Reserves or paid off for transfer under Defence Co-operation Programmes. Two of the Fremantle class have since been allotted for service with the RANR. The lead boat, HMAS FREMANTLE, was constructed in the UK and the remainder at Cairns in Northern Queensland. All boats carry the names of Second World War Bathurst Class Minesweeping Corvettes.

Also participating in the Review are the new GRP Bay class minehunter catamarans, HMAS RUSHCUTTER and HMAS SHOALWATER. Both vessels were commissioned during 1986-87. The former is moored at the northern end of Garden Island and the latter in Athol Bight.

The veteran minehunter HMAS CURLEW is also a member of the Small Ship Review Line.

HMAS MORESBY — Survey Ship

The surveying of Australian and Papua New Guinea waters which, combined involve 30,000 km of coastline is the mammoth task entrusted to the RAN Hydrographic Service.

HMA Ships MORESBY, FLINDERS, BETANO and BRUNEI are engaged full time on this work while, for the future, four new survey vessels are under construction.

MORESBY, a large, modern survey ship, is based in Western Australia. She operates her own helicopter and carries advanced electronic surveying equipment. The 765 tonne FLINDERS, which carries out surveys mainly in the Barrier Reef area, is based at Cairns, Queensland.

The two LCHs, HMA Ships BETANO and BRUNEI, were modified during 1985 to interim survey ships. Both carry out inshore surveys in the north of Australia and are also based at Cairns, Queensland, until the commissioning of the new craft.

HMAS MORESBY is moored south-west of Bradleys Head.

HMAS COOK — Oceanographic Research Ship

HMAS COOK is fitted with the most advanced oceanographic and survey equipment. She is normally engaged on military and civilian oceanographic research, including work for

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SHIPS OF THE REVIEW — CONTINUED —



HMA Ships COOK and MORESBY.

the CSIRO, universities and museums. HMAS COOK was commissioned in 1980.

Fulfilling the role of Reviewing Vessel for his Royal Highness, The Duke of York, HMAS COOK will review almost 60 warships and auxiliaries during the period from 1300 to 1500. HMAS COOK will sail from the Overseas Passenger Terminal at 1250, to begin the Review at 1300.

In 1986, HMAS COOK acted as the Reviewing Vessel during the Navy's 75th Anniversary Review. His Royal Highness, The Duke of Edinburgh, was embarked for the occasion as the Reviewing Officer.

On Australia Day 1988, HMAS COOK was again on centre stage as the Reviewing Vessel for Their Royal Highnesses, The Duke and Duchess of Wales, when Prince Charles reviewed the Tall Ships as part of a spectacular harbour extravaganza.

During today's International Naval Review, Their Royal Highnesses, The Duke and Duchess of York, will be on board HMAS COOK.

The patrol boat HMAS WOLLONGONG will act as the escort for the Reviewing Officer in HMAS COOK.

MISCELLANEOUS NAVAL CRAFT

Supporting the numerous Royal Australian Navy Ships in today's Review are the heavy landing craft, HMAS LABUAN, the torpedo recovery vessel (TRV) TREVALLY and the diving tender vessel (DTV) SEAL.

The LCH is a participant in the static review, moored South of Robertsons Point, Cremorne, between the aircraft carrier HMS ARK ROYAL and French cruiser COLBERT.

TRV TREVALLY and DTV SEAL are members of the Small Ships Review Line, which passes HMAS COOK at 1334.

PARTICIPATING SHIPS

SHIP	PENNANT NUMBER	COMMANDING OFFICER
------	-------------------	--------------------

AUSTRALIA

Flag Officer Commanding Australian Fleet — RADM P. R. SINCLAIR, AO
(Embarked in HMAS HOBART for the Flag Salute Steamast, otherwise embarked in HMAS STALWART)

HMAS HOBART	D 39	CAPT D. D. FARTHING, DSC, ADC
HMAS STALWART	A 215	CAPT B. WILSON
HMAS SUCCESS	A 304	CAPT R. T. DERBIDGE, MBE
HMAS BRISBANE	D 41	CAPT R. A. K. WALLS, AM
HMAS DARWIN	F 04	CAPT G. P. KABLE
HMAS CANBERRA	F 02	CMDR C. S. H. HARRINGTON
HMAS STUART	D 48	CMDR J. S. O'HARA
HMAS TORRENS	D 53	CMDR G. J. DIKKENBERG
HMAS SYDNEY	F 03	CMDR R. E. SHALDERS
HMAS PARRAMATTA	D 46	CMDR G. F. SMITH
HMAS COOK	A 291	CMDR B. D. HUNT
HMAS ORION	S 61	CMDR M. G. GEE
HMAS LABUAN	L 128	CMDR A. W. REGAN, RANR
HMAS MORESBY	A 73	CMDR R. J. WILLIS
HMAS AWARE	P 91	CMDR K. C. LIDDHARD, RFD, RANR
HMAS OXLEY	S 57	LCDR R. A. SHALDERS
HMAS ONSLOW	S 60	LCDR J. N. EDGELL, RN
HMAS DUBBO	P 214	LCDR I. W. WEEKLEY
HMAS GEELONG	P 215	LCDR G. J. KELLY
HMAS WOLLONGONG	P 206	LCDR D. G. STREET
HMAS FREMANTLE	P 203	LEUT N. J. WARK
HMAS RUSHCUTTER	M 80	LCDR G. J. MARSON
HMAS SHOALWATER	M 81	LEUT P. C. FREYER-HORNSBY
HMAS PERTH	D 38	CMDR M. C. SMITH
HMAS ADELAIDE	F 01	LCDR R. C. MOFFITT
HMAS PLATYPUS	Shore Establishment	CAPT K. F. PITT
HMAS WATERHEN	Shore Establishment	CMDR W. R. OVERTON

Flag Officer Naval Support Command — RADM A. R. HORTON, AO

HMAS ALBATROSS	Shore Establishment	CDRE M. J. TAYLOR
HMAS WATSON	Shore Establishment	CAPT M. T. DUNNE
HMAS NIRIMBA	Shore Establishment	CAPT D. H. BLAZEY
HMAS PENGUIN	Shore Establishment	CMDR R. CAWTHORN
HMAS KUTTABUL	Shore Establishment	CMDR R. W. GARING

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FLYPASTS

MILITARY

A highlight of today's events will be the flypast at 1345 by naval aircraft of the Royal Australian Navy Fleet Air Arm, supported by Sea Harriers and Sea Kings from HMS ARK ROYAL. Helicopters from India, Italy, The Netherlands and New Zealand will also participate.

Aircraft from the Royal Australian Air Force will also participate in the military flypast, including eight F/A-18s and four F-111C aircraft.

The RAN, in 1988, has more than 20 aircraft. These include five different helicopter types, plus two fixed-wing HS 748 aircraft. Looking to the future, the Fleet Air Arm will soon take delivery of the first of 16 Sikorsky S-70B-2 Seahawk helicopters. These state-of-the-art machines will be flown primarily from the RAN's guided missile frigates, with a maximum of two embarked in each FFG.

Home for the FAA is HMAS ALBATROSS at Nowra, NSW. Westland Sea Kings are the principal anti-submarine helicopters and have operated from various ships, including STALWART and TOBRUK.

The Aerospatiale Squirrel light helicopters are employed for light utility, search and rescue, survey, support and training, while the Bell Kiowas satisfy both communications and survey duties. Westland Wessex and Bell Iroquois helicopters are flown as utility aircraft.

For electronic warfare training, two HS 748s are active and are often reconfigured for the VIP or transport role.

Joining the service aircraft are also members of the Fleet Air Arm Historic Flight, featuring such veterans as the Sea Fury, Firefly, Tracker and Dakota.

CIVIL

A civil flypast featuring a QANTAS Boeing 747, a Boeing 767 from Ansett and an A300 Airbus from Australian Airlines will take place at approximately 1445. This significant contribution by Australia's three major airlines adds an extra dimension to today's event.

Special approval has been received for these large aircraft to conduct today's flypast above the Fleet at a height of 300 metres. The horizontal separation between each aircraft will be at 600 metres. Each aircraft has a vertical clearance above the Harbour Bridge of 150 metres. The civil flypast will be conducted at 210 knots, the slowest flying speed possible for these aircraft.

STS YOUNG ENDEAVOUR

GREAT Britain's Bicentennial Gift to Australia, the Sail Training Ship YOUNG ENDEAVOUR, is already a well-known and popular member of the Australian maritime community.

During today's Review the barquentine will host former Chiefs of Naval Staff and Board Members of the Young Endeavour Trust. The vessel will be anchored north of Mrs Macquarie's Point.

NAVAL ESTABLISHMENTS

THE emphasis of today's Bicentennial Naval Salute rests on the seagoing ships and sailors of the Royal Australian Navy and those of visiting countries.

However, behind all their effort lies the dedicated and hard work of shorebound sailors and WRANs and civilians within the Naval Support Command.

During the Review, 300 sailors and Reserve Cadets are parading on Fort Denison, the minuscule rock in the Harbour, north of the Domain.

Included in this number are personnel from HMAS HARMAN at Canberra, HMAS NIRIMBA a training establishment, and HMAS KUTTABUL in Sydney.

Also represented are HMAS WATSON and HMAS PENGUIN, two Sydney shore establishments.

ANNUAL General Meeting 1988

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, 11th November, 1988, at 8.00 pm.

BUSINESS

1. To confirm the Minutes of the Annual General Meeting held in Melbourne on Friday, 13th November, 1987.
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, 1988.
4. To elect office bearers for 1988/89 as follows:
 - (a) Federal President;
 - (b) Federal Vice-Presidents (3);
 - (c) Auditor.
 Nominations for these positions are to be lodged with the Hon Secretary prior to the meeting.
5. General Business. To deal with any matter notified in writing to the Hon Secretary by 30th October, 1988.

BY ORDER OF THE FEDERAL COUNCIL
 9 Callion Road, R. M. BLYTHMAN
 Camberwell, Vic, 3124 Hon Federal Secretary

USS MISSOURI/HMAS DARWIN

The "battles" of Rimpac 88 are over and the multi-nation exercise has been labelled an unqualified success.

RAN Maritime Commander, Rear Admiral Peter Sinclair, spoke of the success of the exercise on his return to Australia from the exercise headquarters in Hawaii.

As a major figure in Rimpac 88, RADM Sinclair was able to see first-hand the smooth operation of the many facets involved.

RADM Sinclair took command of a defending force during the free-play phase of the exercise. Under his control were eight services from three nations, among his assets were nuclear submarines, a battleship, the USS MISSOURI, and B-52s.

He said the mix of nationalities and services under his command made for a particular challenge.

"Conducting and co-ordinating the offensive and defensive actions at sea were formidable," he said.

"That we were able to get such close co-ordination and effectiveness speaks well for the ability of three countries to work together."

He said the inter-operability of Australian, US and Canadian forces was a highlight of the exercise, proven across the full operational spectrum.

The exercise scenario for the free-play phase saw the defending Orange force under RADM Sinclair's command, opposing a Blue amphibious task force spearheaded by the US carrier, NIMITZ.

The battles raged across the north-eastern Pacific for almost two weeks.

The MISSOURI led the surface action groups against NIMITZ and her escorts as they made their way from San Diego to Hawaii.

One of the six RAN participants almost continually in the thick of the action was HMAS DARWIN. She accompanied USS LONGBEACH in deep probe surface strikes and participated in the successful prosecution of submarines.

The highlight of DARWIN's Rimpac was escorting MISSOURI in a high-speed dash through the enemy amphibious task force as it approached the enemy amphibious

zone. Our correspondent reports DARWIN provided her with AAW protection while her 16-inch guns "destroyed the remnants of the survivors".

In the final, live-fire phase of the exercise, DARWIN successfully fired two war-shot Mk 46 anti-submarine torpedoes from her ship-launched torpedo tubes.

DARWIN also fired an SM-1 surface-to-air missile with some good results. Sister-ship, HMAS CANBERRA, probably had better results with her SM-1 firing but the highlight of her Rimpac participation was her Harpoon firing.



The estimated total outlay of \$7,658 million by the Department of Defence in 1988-89 represents a real growth of 0.5 per cent (2.4 per cent of Gross Domestic Product and about 9.3 per cent of total Commonwealth Budget outlay).

The Minister for Defence, Mr Kim Beazley, said that real growth in Defence outlay, together with civilian personnel, logistic and industrial savings would ensure the Government continued to maintain the momentum of the 1987 Defence White Paper.

"About 83 per cent of total Defence expenditure will be spent in Australia on manpower, capital equipment and stores, overhaul of equipment and construction and maintenance of facilities," the Minister said.

The main priorities were to:

- improve conditions for Service personnel and their families, including housing;
- maintain investment spending — including expenditure on capital equipment and capital facilities — at about 30 per cent of total Defence spending, in line with the Government's commitment to longer-term capability improvement as part of the Defence self-reliance policy;
- pursue a wide range of efficiencies and rationalisation in the areas of logistics, facilities and the use of civilian personnel; and
- continue the rationalisation of Defence factories and dockyards.

"Several important new projects will be started but sufficient flexibility will remain to commit, in future years, some high-priority new projects such as the joint ANZAC Ship Project," Mr Beazley said.

"This provides for the construction in Australia of 12 surface combatants, eight for Australia and four for New Zealand.

"The facilities investment programme continues to target the strategic initiatives outlined in the White Paper."

The Minister said the retention of some proceeds from property sales would enable more relocation and rationalisation projects to begin.

"I will continue the civilianisation of some Service positions to allow redirection of Service members to operational areas, while at the same time reducing the number of civilians from 35,818 to 33,787," Mr Beazley said.

"The approved average strength target of 70,279 for the Regular forces (Navy 15,715, Army 31,961, Air Force 22,603) is a slight increase on the 70,181 achieved last year.

"Active Reserve Forces will increase to 28,880 with the opening of a new Navy Reserve Port Division in Cairns."

Mr Beazley said he had introduced a wide-ranging logistics review with savings which would increase gradually over the next few years to a target of around \$200 million a year. The Minister said he was also pursuing measures to increase Defence receipts through the disposal or sale of obsolete stores and equipment.

SIGNIFICANT NEW PROJECTS

Major Capital Facilities

A total of \$129 million has been approved for a range of new major facilities projects, including:

- Stage 2 development of RAAF Base Tindal at Katherine, NT;
- redevelopment of Army facilities at Bandiana, Victoria, to improve security and the efficiency of training and logistics operations;
- building of a new communications school at HMAS Cerberus, Crib Point, Victoria;
- more accommodation and messing facilities for Navy at HMAS Coonawarra, Darwin, NT;
- a new Military Police complex including living and working accommodation at Holsworthy, NSW; and
- a new munitions-filling facility at St Marys, NSW.

Major Capital Equipment

Eleven million dollars (out of a total cost of some \$245 million) will be spent on these new major equipment purchases in 1988-89:

- upgrading the F111s major avionic systems, including the attack and terrain-following radars, and the flight control and communications/navigation systems;

DEFENCE REPORT CONTINUED

- an air traffic control and weather warning radar for the Army Aviation Centre at Oakey, Queensland; and

- camouflage nets for use in northern Australia by the Operational Deployment Force and supporting units.

Later Decisions

Decisions will be made later in the year on several other new proposals, including:

- improved electronic support measures for RAAF P3C Orion maritime surveillance aircraft;
- further development of the Jindalee over-the-horizon radar;
- major supply and administrative systems computer redevelopment projects;
- evaluation of wheeled light-armoured vehicles for 2nd Cavalry Regiment (which will be relocated to Darwin in 1992);
- enhancement in mine counter-measures including the acquisition of additional naval exercise mines;
- the replacement of F111-C avionics test equipment; and
- the replacement of outer wings for the C-130E Hercules aircraft.

Initial phases of other new projects, including a Headquarters Australian Defence Force command and support system, military satellite communications, computer-aided maintenance management and submarine-towed array systems are also being considered for commencement in 1988-89.

ON-GOING PROJECTS

Major Capital Equipment

The Defence Budget for 1988-89 includes provision for continuing payments against projects approved in earlier years, including:

- \$402 million for the purchase of 75 F/A-18 Hornet aircraft and associated equipment (46 aircraft have been delivered and 18 are planned to be assembled in Australia this year);
- \$381 million for the construction stage of the new submarine project (the first is due for delivery in 1995);
- \$129 million for 16 Sea Hawk helicopters to operate from the guided-missile frigates;
- \$87 million for 39 Blackhawk helicopters;
- \$77 million for various Army communications projects, including new single-channel radios (manpack, vehicle-mounted and ground station);
- \$63 million for 67 Pilatus PC9 trainer aircraft from Hawker de Havilland at Bankstown, NSW. Deliveries began in July, 1987;
- \$53 million for the construction of two guided-missile frigates at Williamstown dockyard;
- \$48 million on new light-field vehicles to replace the Army's Landrovers and Landcruisers;
- \$39 million for continued development of the Defence Integrated Secure Communications (DISCON) system which is planned for completion by the end of 1991;
- \$30 million for Hamel 105 mm field guns produced jointly by the Bendigo and Marbyrnong ordnance factories;
- \$30 million for Australian industry assistance in conjunction with major projects;

- \$27 million for 2,095 new vehicles to replace 2.5 and five-tonne general-service vehicles;
- \$27 million for replacement small arms for the Army;
- \$25 million for Standard missiles;
- \$24 million for short and medium-range air-to-air missiles for the F/A-18 Hornet aircraft;
- \$24 million for the modernisation of HMA Ships BRISBANE, PERTH and HOBART;
- \$23 million for helicopter operation modifications on the four US-built guided-missile frigates at Garden Island Dockyard, NSW, and logistic support;
- \$21 million for the development and upgrading of the over-the-horizon radars; and
- \$18 million for Harpoon anti-ship missiles.

Major Capital Facilities

The Defence Budget provides for estimated continuing payments of \$241 million against projects approved in earlier years, including:

- \$25 million on Tindal RAAF Base in preparation for F/A-18 Hornet operations from 1989;
- \$12 million on training facilities at Swanbourne, Western Australia;
- \$11 million on upgrading living-in accommodation;
- \$11 million on the Maritime Command Centre for the Navy;
- \$11 million to complete Stage 1 of the Australian Defence Force Academy and to provide additional accommodation blocks;
- \$10 million on rationalisation of the Mulwala explosives factory;
- \$10 million on facilities for the introduction of the new utility helicopter at Townsville, Queensland; and
- \$8 million on a new warehouse for the 21st Supply Battalion, Moorebank, NSW.

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BRITAIN'S MARITIME HERITAGE

By V. Heal
Published by Conway Maritime Press, 1988
Reviewed by "Acheron"

This compact 130-page book provides a wonderful guide to the maritime heritage of Great Britain. The book describes the historic vessels, museums and other maritime collections, set out alphabetically by location.

Numerous photographs are also reproduced, including ships, museums, models and maps and some old artist's impressions.

Basically each entry is presented via an address, location, open hours, the facilities and a description of the collection. All types of ships and museums from naval & naval to mercantile are included within the covers.

Britain's Maritime Heritage should retail at an attractive price in Australia (£4.95), and is available from most respected book merchants.



FAIR WINDS TO AUSTRALIA

By Lew Lind
Published by Reed Books Pty Ltd
Reviewed by "Acheron"

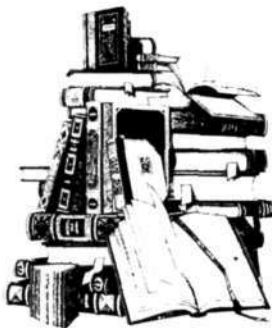
The prime object of this book was to record the naval sailing ships which served in Australasian waters during the past two centuries.

This new publication from Reeds seeks to describe, and in most cases illustrate, the sailing men-o-war which were both well-known or simply visiting one of Australia's seaports. The book is presented 'a la Janes' through 15 chapters spanning some 200 pages. From HM Ships SIRIUS and SUPPLY to STS YOUNG ENDEAVOUR in 1988, this large selection of the sailing warships provides the most extensive list of such craft yet produced in book form.

I was particularly pleased with the theme of the book. The author deserves credit for including not only the Royal Navy sailing men-o-war of the Australia Station 1959 to 1913, but also pre-1859 ships, visitors from abroad, the odd collection of sailing craft requisitioned by the RAN during the two World Wars and the enemy vessels, such as the German raider, SMS SEADLER, which proved such a nuisance to naval authorities in the Great War. Add to this the Snake-class luggers, Army and Air Force craft, plus the dwindling number of ships in the post-1945 fleet, and the book provides excellent reading.

My only complaint with Fair Winds to

BOOK



REVIEW

Australia is the publisher's consistent desire to place photographs away from the actual entry or narrative concerning the ship. The author has managed to secure a large number of new and interesting photographs, while also relying on a similar number of well-known illustrations.

The book is provided with a list of abbreviations, bibliography and extensive index. As well, a colour section at the front depicts a selection of the Tall Ships to visit Australia in January, 1988.

For the book purchaser, naval historian, the release of Fair Winds to Australia comes at the same time as the publication of Ships of the Australia Station (see next review). The similarity of both works will not escape many, but which book to purchase is now the dilemma!



SHIPS ON THE AUSTRALIA STATION

By John Bastock
Published by Child and Associates Pty Ltd, Sydney, 1988
Reviewed by J. Straczek

John Bastock's Australia's Ships of War was published in 1975 and has remained one of the most sought-after (and hard to get) books dealing with the history of ships of the Royal Australian Navy. Now, some 13 years later, he has followed this work with Ships on the Australia Station.

Ships on the Australia Station chronicles the history of Royal Navy warships which have either served in Australian waters or were important or significant visitors to Australia. The introductory sec-

tion of the book presents a brief outline of British and Colonial naval activities in Australia. The main section of the book provides a history of all Royal Navy ships which have served in Australian waters from 1859 till 1913. The chapters in the main section of the book have been presented as a chronology with the number of years covered by each chapter being the tenure of service of the flagship of the Imperial Squadron on the Australia Station. As there is an amount of overlap with some vessels serving under more than one flagship the second or subsequent references to these ships has been done in the form of a silhouette bearing the page number where the original reference appeared. The book is then rounded off by a chapter dealing with some of the more important visiting ships during this period.

As the book deals with the ships which served as Australia's shield up until the arrival of the first Australian Fleet unit in 1913 there is no in-depth discussion on the development of naval forces in Australia. The ships' histories on the other hand provide a valuable insight into the activities of the Royal Navy in Australian waters in the latter part of the 19th century. These narratives are supported by technical details of the ships and where possible, photographs.

Observing the period covered by this book it would be normal to suspect that there were very few photographs to illustrate some of the earlier ships. Surprisingly, this is not the case. The book is very well illustrated by photographs covering the period 1857 to 1913. Many of these photographs are crystal clear and represent not only an excellent illustration of the ship but also show the development, or from another point of view destruction, of the harbour area. These photographs are supported by a number high-quality colour paintings supplemented by various ships' drawings and silhouettes. All of these paintings and drawings are the author's own work and add to the overall high quality of the book's contents.

Unfortunately, the author has been let down by the publishers in the manner in which the book is presented. A number of pages in the review copy had light ink smudgings on the bottom. This coupled with an incorrect chapter reference on the top of page 115 detracted from the overall appearance of the book. Whilst these may appear to be minor criticisms of an otherwise excellent publication these sorts or errors should not appear in a book which retails for \$80.

In summary, Ships on the Australia Station is a well-written and illustrated publication which helps to fill a major gap in the available information on the Royal Navy in Australian waters during the 19th century and will prove to be a valuable reference source in the future.

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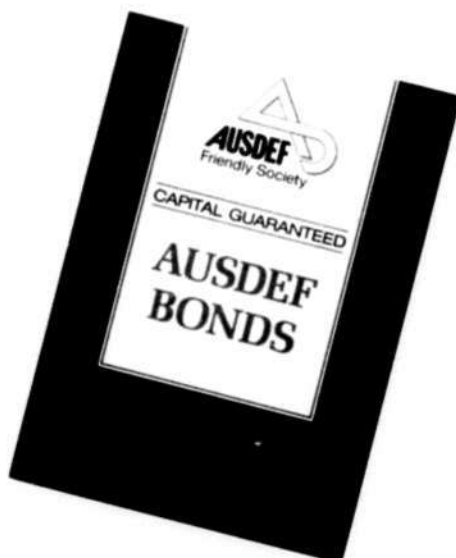
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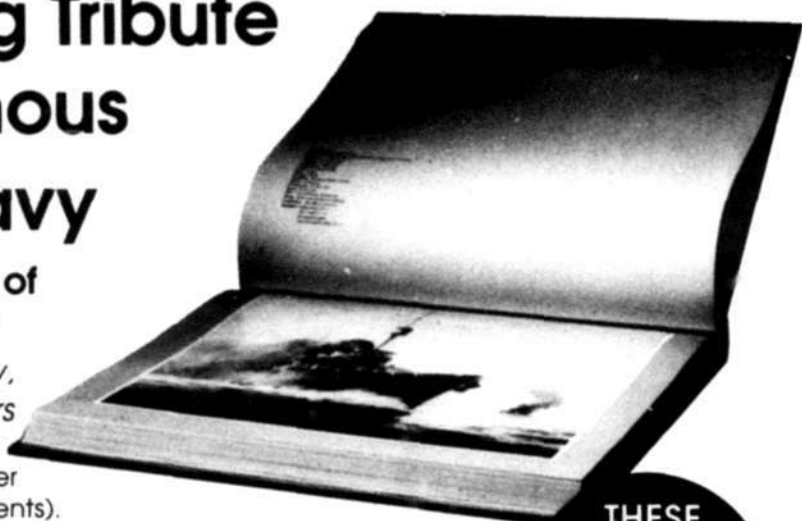
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