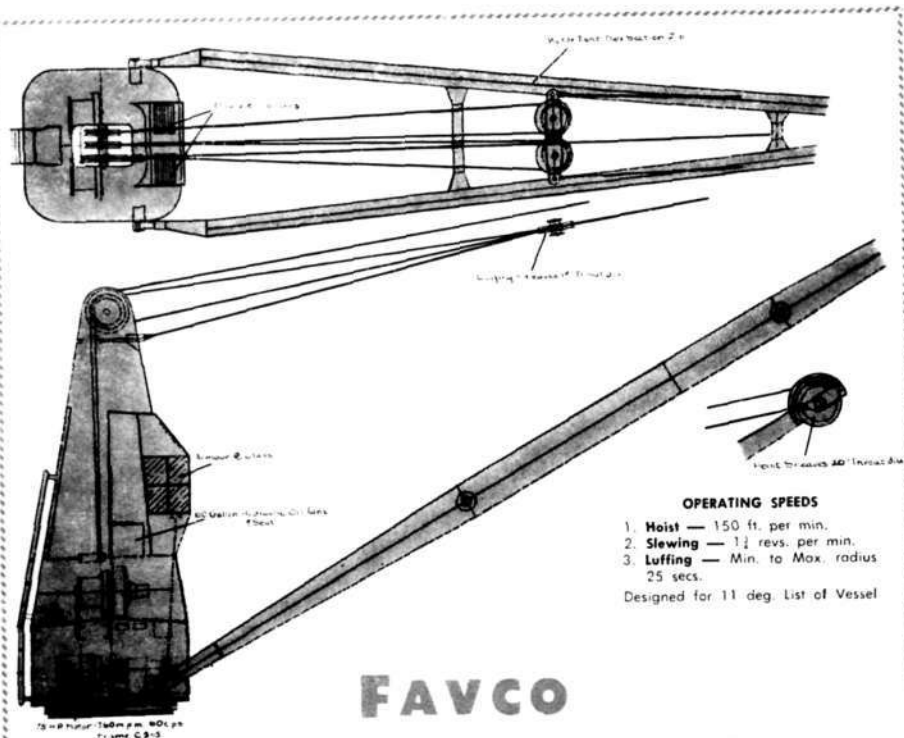


THE
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May - June - July
1966

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THE NAVY

The magazine of the Navy League of Australia

Vol. 28

MAY-JUNE-JULY, 1966

No. 2

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

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THE NAVY, MAY-JUNE-JULY, 1966.

Page One



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2 'ORSOVA'	EASTER CRUISE , Mar. 27-Apr. 12. From Sydney. To Nuku'alofa, Suva, Noumea, Hayman Island. Returns via Whitsunday Passage, pass Lord Howe Island and Ball's Pyramid. Fares from: First, \$394 (£197); Tourist, \$278 (£139).	6 'CANBERRA'	ORIENTAL CRUISE , Oct. 19-Nov. 16. From Sydney: Via New Georgia Sound ('The Slot') to Japan for 8 days, with calls at Yokohama (Tokyo), Kobe and Nagasaki. Returns via Hong Kong, passing Yap Island. Fares from: First, \$838 (£419); Tourist, \$464 (£232).
3 'CHUSAN'	TAHITIAN CRUISE , May 25-June 15. From Sydney. To Auckland, off Rarotonga, to Papeete. Pass Bora Bora, to Lautoka and Suva. Pass Norfolk and Lord Howe Islands and Ball's Pyramid. Fares from: First, \$470 (£235); Tourist, \$372 (£186).	7 'ARCADIA'	CHRISTMAS/NEW YEAR CRUISE , Dec. 20-Jan. 2. From Sydney. Pass Lord Howe Island, Ball's Pyramid and Norfolk Island to Suva, New Zealand, calling at Bay of Islands, Auckland and Picton. Fares from: First, \$316 (£158); Tourist, \$208 (£104).
4 'HIMALAYA'	SUNSHINE CRUISE , July 21-Aug. 4. From Sydney. Pass Norfolk Island, to Pago Pago. Pass Niufo'ou (Tin Can Island) en route to Suva and Nuku'alofa. Returns via Kandavu Passage passing Kandavu Island, Ball's Pyramid and Lord Howe Island. One Class fares from \$250 (£125).	8 'ORSOVA'	CHRISTMAS CRUISE , Dec. 21-30. From Sydney. To Hobart, then to New Zealand, cruising in Pelorus and Queen Charlotte Sounds, and calling at Wellington. Fares from: First, \$202 (£101); Tourist, \$144 (£72).

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Editor's Notes . . .

This issue of your magazine heralds the first of a new series of features on the navies of the world. The article appearing in this edition is of the Royal Swedish Navy and I would like to record my appreciation to Hans F. Gronwall, Attache at the Royal Swedish Embassy, Canberra, for his ready response and kind co-operation in providing reference material and the official photographs which have been reproduced.

A cartoon drawn by "Vic!" (Mr. Vic Burley) appears for the first time and as "Vic" has volunteered to submit his cartoons from time to time I trust they will become a regular feature.

A special thank you to Lt. Robert Haase, U.S.N., and Lt. John Fait, U.S.N.R. of the U.S.S. **John S. McCain** for a most interesting tour of their ship and particularly for those flavoursome strawberry hot cakes.

There are still very few items and photographs of local news being submitted by State Divisions of the League or from Units of the Australian Sea Cadet Corps, this local news is essential if the magazine is to be interesting for all to read.

The next edition will be a special issue for "Navy Week", the feature article will be the Italian Navy.

Contributions Invited

The editor invites persons to submit articles and photographs for inclusion in the magazine. All contributions should be addressed: The Editor, "The Navy", Box C178, Clarence Street Post Office, Sydney, N.S.W., Australia.

The editor does not hold himself responsible for manuscripts, though every effort will be made to return those with which a stamped and addressed envelope is enclosed.

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Periscope on Australia

by Grommet

WRANS 25 YEARS OLD

The Women's Royal Australian Naval Service—WRANS—were 25 years old on 28th April, 1966.

On 28th April, 1941, fourteen WRANS joined H.M.A.S. *Harman*, the Navy's radio station in Canberra, as the first women in the R.A.N.

Twelve of the girls were telegraphists and two were cooks. At the end of World War II about 3,000 women were wearing Navy uniform and doing men's work ashore.

The WRANS were disbanded in 1948 but reformed in 1951.

Today there are 600 WRANS and 17 WRAN officers serving in the R.A.N.

The Navy employs WRANS as radio operators, writers, sick berth attendants, drivers, stewards and cooks, thus allowing more sailors to be freed for sea duty.

SAILORS BUILD WHARF

Sailors from H.M.A.S. *Derwent* have undertaken a civil aid project on a small island in eastern Malaysia.

They have built a pontoon wharf for use by trading craft visiting the island of Salakan, about 110 miles from Tawau, in Sabah.

About 250 natives live on Salakan and depend on fishing and copra for their livelihood.

Nine sailors have spent two weeks on Salakan, living under canvas while they constructed the pontoon 50 yards from shore.

Wood was supplied by the local natives who will build the walkway between the pontoon and shore.

ABOLITION OF SEMAPHORE

The Royal Australian Navy has abolished semaphore signalling, which had been in use, first in Britain, then in Australia, for more than 150 years.

The R.A.N. will continue to use flag signals of the international code.

The Royal Navy has also ceased training sailors in the use of the semaphore.

In recent years semaphore has been used in the Royal Australian Navy only as an alternative to more modern systems such as radio, signal lamps and, during the refuelling, when ships are in close company.

While men who can send and receive semaphore are serving in R.A.N. ships captains may continue to use the system in such operations as refuelling at sea, but as new sailors join, the practice will die out.

CONSTRUCTION PROGRAMME

The R.A.N. has begun a reconstruction programme at Garden Island that could cost more than \$3 million.

Additional facilities are needed to service the three new missile destroyers *Perth*, *Hobart* and *Brisbane*. The work includes the construction of three wharves and a large workshop on the Rushcutter Bay side of the island. This section will cost about \$1,250,000. An additional \$800,000 will be spent on building a new wharf on the western side of the entrance to Captain Cook Dock.

Other works earmarked for completion within the current Navy budget are: A support facility for submarines in Sydney Harbour to cost \$3,200,000; Tartar and other missile firing ranges at Jervis Bay (\$170,000); a weapons workshop at Williamstown Dockyard to cost \$250,000; and accommodation buildings at H.M.A.S. *Cerberus*, Westernport and Darwin \$800,000.

ADDITIONAL "TRACKERS"

The 14 Grumman Trackers recently ordered by the Royal Australian Navy to widen H.M.A.S. *Melbourne's* effective search area are to be supplemented by a further six Trackers which will supplant the Gannets of No. 816 Squadron in the A.S.W. role.

NEW SYDNEY TUG

J. Fenwick and Co. Pty. Ltd., of Sydney, has placed an order with Adelaide Ship Construction Pty. Ltd., for a new tug to operate out of Sydney. The new vessel will be fitted with a Mirreles National KSSGMR6 diesel propulsion unit, similar to the units installed in two other Fenwick tugs, the "Farm Cove" and the "Manly Cove". All diesel tugs in the Fenwick fleet are equipped with Mirreles National propulsion engines. The new tug's engine is similar to the unit installed in the Queensland tug "Carlock," which recently made news when it rescued a Royal New Zealand Navy cruiser and towed it from the Coral Sea to Auckland. The new Fenwick tug is expected to be ready for service early in 1967.

FIREFLIES' LAST FLIGHT

An era in Australian Naval Aviation ended in March, with the flight of the R.A.N.'s last four "firefly" aircraft to Bankstown, New South Wales, for disposal by the Department of Supply. Two aircraft were flown from H.M.A.S. *Albatross*, the Naval Air Station at Nowra and the others from Melbourne, Victoria.

Since the Fireflies were replaced by the Gannets in 1956, they have been used as trainers, for spotting bush fires and as target towing aircraft for gunnery training. Over recent years they have been gradually phased out of service.

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Fireflys were first introduced into the R.A.N. in 1949, when the Navy took delivery of its first aircraft carrier, H.M.A.S. Sydney, which carried 25 Fireflys and 25 Sea Furies.

At the outbreak of the Korean War, H.M.A.S. Sydney was sent to Korean waters as part of the U.N. Force. During operations off Korea the Fireflys performed notably. They flew 743 sorties, including 179 anti-submarine patrols and inflicted heavy damage on the enemy, dropping 1118 five hundred pound bombs and 10 one thousand pound bombs. Eight of the planes were lost during the war.

SOUTH-EAST ASIAN DUTY

Three ships of the Australian Fleet (Melbourne, Yarra and Supply) sailed on 24th March for duties in South-East Asian waters.

The ships are serving with the British Commonwealth Strategic Reserve.

The Flag Officer Commanding the Australian Fleet, Rear Admiral V. A. Smith, is flying his flag in H.M.A.S. Melbourne.

"FLEET AIR ARM TROPHY"

The annual award for the best all-round squadron in the Fleet Air Arm — the "Collins Trophy" — has been awarded to Number 817 Squadron (operating from H.M.A.S. Melbourne) for its outstanding effort in meeting many varied commitments during the past year.

Number 817 Squadron, comprises Westland Wessex anti-submarine hunter-killer helicopters.

The Naval Board also commended the excellent record and high standards achieved by Number 725 Helicopter Training Squadron based at the Naval Air Station, Nowra.

The "Collins Trophy" is a silver model of a Gannet aircraft and was presented to the Navy by the Fairey Aviation Company in 1956.



Westland Wessex Helicopters of 817 Squadron

EXERCISE "SEA IMP"

Five Australian warships (Melbourne, Supply, Vampire, Yarra and Derwent) participated in a SEATO "air-sea" exercise, code named "Sea Imp", in the South China Sea, from 19th May to 9th June. Ships and aircraft from Great Britain, New Zealand, the U.S.A. and the Philippines (total 40) also took part in the exercise which was directed by Rear Admiral C. P. Mills, R.N., flying his flag in the "county" class, guided missile destroyer Devonshire.

The exercise was organised to train and increase the effectiveness of the armed forces of SEATO Nations for collective defence.

"BRISBANE" LAUNCHED

Australia's third guided missile destroyer (DDG), *Brisbane*, was launched at the Defoe Shipbuilding Yard, Bay City, Michigan, U.S.A., on 6th May, by Mrs. F. C. Chaney, wife of the Minister for the Navy.

The ceremony took place in fine but windy weather before a crowd of more than 2,000 people. During the hour-long ceremony speeches were made by the shipyard chairman, Mr. Thomas Defoe; Rear Admiral J. J. Fee, U.S.N. and the Honourable F. C. Chaney, M.P. The Lady Mayoress of Brisbane, Mrs. Sylvia Jones, read a letter from the Premier of Queensland and also presented a *Brisbane* City Crest to the ship.

Brisbane is now fitting out before commissioning at the end of 1967.

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Navy League Visit To The "Perth"



Presentation of a portrait of H.M. the Queen. (L. to R.) Mr. W. E. S. Brennan, Cmdr. Richards, the Hon. L. H. Bury, M.P., Vice Admiral Sir John Collins.



ABOARD H.M.A.S. PERTH

Inspecting the "Tartar" Missile system (L. to R.) Cmdr. A. A. Townsend, Rear Admiral H. A. Showers, Vice Admiral Sir John Collins.

More than 200 members of the Navy League and their friends visited Australia's new guided missile destroyer (DDG), H.M.A.S.

Perth at Garden Island, Sydney, on Sunday, 17th April.

All guests were given a most comprehensive inspection of the

ship and deeply appreciated the excellent organisation of the tours conducted by the ship's officers.

The visitors also witnessed the presentation to the ship by Mr. W. E. S. Brennan, of a portrait of Her Majesty the Queen.

RED CHINA HAS MISSILE SUBMARINE

The U.S. Defence Secretary, Mr. Robert McNamara, when addressing a meeting of Foreign Ministers of the fifteen member North Atlantic Treaty Organisation (N.A.T.O.) stated that China had a ballistic missile submarine, further, that she may be able to produce atomic weapons in the next two years.

He said it was estimated that Peking could have medium-range missiles by 1967 and ocean-hopping intercontinental missiles by 1975.

He also estimated that China would have nuclear material to make nuclear bombs for aircraft as well as missile warheads.

Mr. McNamara also gave a stern appraisal of China's conventional military forces.

He said their standing army of 2.3 million men was the world's largest and was backed by mammoth reserves.

The Chinese Air Force now was estimated to total 1,500 planes—Soviet designed MIG 15's, 17's and 19's, plus a few supersonic MIG 21's.

He classed this as a large Air Force but said it was armed by aging equipment.

Peking's conventional, non-nuclear military might could not be ignored, he said.

Its shadow now hung over India, Vietnam and Laos, and it might be used to support Peking-backed guerilla warfare in Africa, Latin America and Asia.

Recruits were being trained in Latin America for this purpose.

Thailand already had been "targeted" by Peking for insurgency warfare.

Mr. McNamara reassured NATO that the United States would not lower its military guard in Europe, despite its commitment in Vietnam.

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New Patron for New South Wales Division



His Excellency Sir Roden Cutler, V.C., K.C.M.G., C.B.E., K. St. J., the Governor of New South Wales, has accepted the position of Patron of the New South Wales Division of the Navy League of Australia.

Fellows and Associates of the League are deeply appreciative of the honour His Excellency has been pleased to bestow upon the Division.

Sir Roden, an Army V.C. winner, has had a distinguished career. Upon discharge from the A.I.F. he became State Secretary of the R.S.L. and in 1943 was appointed Assistant-Deputy Director of Security Services in New South Wales.

Later in 1943 he became Assistant Commissioner for Commonwealth Repatriation, this post he held until 1946, when he entered the Diplomatic Service. The Commonwealth Government appointed him High Commissioner to New Zealand, a post he held until 1952.

His other diplomatic appointments have been:

1952-55 — High Commissioner to Ceylon.
1955-56 — Australian Minister to Egypt.

1957 — Secretary-General of SEATO Council and Military Advisers' Meeting, in Canberra.

1957-58 — Chief of Protocol in the Department of External Affairs, Canberra.

1959-61 — Australian High Commissioner to Pakistan.

1961-65 — Australian Consul-General in New York.

September, 1965 — Ambassador to the Netherlands.

Mr. Cutler, born at Manly, was educated at Sydney High School and the University of Sydney, where he graduated Bachelor of Economics.

He won Sydney and Australian Universities blues for swimming and represented N.S.W. in interstate Services shooting for several years before 1939.

THE NAVY LEAGUE OF AUSTRALIA (Victorian Division)

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Interest	15	5	1	Officers' Expenses	22	18	6
				T.S. "Melbourne" Insurance	25	3	8
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				Annual Meeting Expenses	34	11	9
				"The Navy"—U.K.	9	6	9
				"The Sea Cadet"—U.K.	8	0	2
				Advances to Units	684	2	2
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SEA CADET CORPS NEWS

Report of Activities and Training Undertaken by the New South Wales Division for the Quarter Ending 31st March, 1966

Ten Officers, one Chief Petty Officer Instructor and five Petty Officer Instructors attended a special course in H.M.A.S. *Melbourne* from 3rd-12th January, and this proved to be most comprehensive in that all aspects of ship routine were covered and this included the allocation of officers for duty watches.

Cadets carried out continuous training in H.M.A.S. *Albatross* and H.M.A.S. *Penguin* from 9th-21st January. In the latter establishment a Boat Charge Certificate Course was conducted, whilst at the Naval Air Station one posting of Cadets attended an Air Badge Course, and another posting a course for the Physical Training Instructors Badge — the first such course of its kind to be held for Sea Cadets. Despite the extremely high physical training standard set by the Naval Instructors, it was indeed pleasing that 75% of the total number of Cadets qualified.

The second R.A.N.R. Petty Officers Divisional Course commenced in H.M.A.S. *Rushcutter* on 3rd February and with the permission of the Commanding Officer (Reserves) eight Sea Cadet Petty Officer Instructors are participating.

Training weekends completed and those still scheduled to take place for the period under review are as follows:—

H.M.A.S. *Penguin*—
18th-20th February.

H.M.A.S. *Creswell*—
25th-27th February.

H.M.A.S. *Albatross*—
25th-27th February.

H.M.A.S. *Sydney*—
25th-27th February.

H.M.A.S. *Penguin*—
11th-13th March.

H.M.A.S. *Yarra*—
18th-20th March.

H.M.A.S. *Vendetta*—
18th-20th March.

H.M.A.S. *Vendetta*—
25th-27th March.

The Annual Swimming Carnival was held in H.M.A.S. *Penguin* on Saturday, 19th February, and a high standard of swimming was witnessed. Two Units were involved in a "photo-finish" for the Points Score Trophy and the end result was that both T.S. *Sydney* and T.S. *Sirius* gained equal points. Each Unit will, therefore, hold the Cup for a period of six months. T.S. *Condamine* were also a most successful Unit winning both Relay trophies. At the conclusion of the Carnival, Mrs. Showers, the wife of the President of the Navy League of Australia, N.S.W. Division, kindly consented to present the medals and trophies.

Special arrangements were made for 150 Cadets to inspect H.M.A.S. *Perth* at Sydney Cove during the forenoon of Saturday, 12th March.

T.S. *Sirius* was permitted to conduct a shoot on the 22 range in H.M.A.S. *Watson* on 12th March.

To farewell Sea Cadet Commander D. J. Mort on his retirement the Senior Officer gave a farewell party for him on Friday, 4th March.

The Annual Inspection of all Units by F.O.I.C.E.A.'s Representative, Commander R. E. Lesh, R.A.N., the Captain of H.M.A.S. *Rushcutter*, commenced with T.S. *Parramatta* on Saturday, 5th March. T.S. *Condamine* will be inspected on Saturday, 19th March and T.S. *Sydney* on Saturday, 26th March.

Instruction of Officers and Instructors of the Corps in the new drill for the .303 rifle commenced in H.M.A.S. *Rushcutter* on Tuesday, 15th March. Unfortunately, it was not possible to secure from the R.A.N. the services of a Gunnery Instructor for evening and weekend tuition but, as a result of the excel-

lent liaison maintained with the Army Cadet Corps Headquarters staff, two senior Army Drill Instructors have been provided for this purpose.

L. MACKAY-CRUISE,
Lieutenant-Commander
R.A.N.R.
Senior Officer.

INTERNATIONAL RIFLE COMPETITION FOR SEA CADETS

Canada's Royal Canadian Sea Cadet Corps *Royal Sovereign* of Sault Ste Marie, Ontario, has been declared the winner of the 1965 International Small Bore Rifle Competition for Sea Cadets which is sponsored annually by the Navy League of Canada.

For the coming year R.C.S.C.C. *Royal Sovereign* will be the holders of the Duke of Edinburgh Ship's Bell Challenge Trophy which will be returned to Canada by last year's winner, *Limhamn* Sea Cadet Corps, Malmo, Sweden.

The *Limhamn* Corps this year placed second and will receive the trophy of the Navy League of Great Britain which has been held by the Sault Ste Marie Corps for the previous year.

The Navy League of Australia's Trophy for the third place winner remains in England for a second year with the Isle of Portland Corps in Dorset receiving the trophy from the *Jellicoe* Corps of Newcastle.

This competition has been in operation 11 years and has been won six times by Canada, three times by England and once each by New Zealand and Sweden. Final scoring of targets is conducted for the Navy League by the Dominion of Canada Rifle Association.

Top individual results were shared by P. Pellerin, P. Umbrasas,

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T. Wall and R. Rouleau of Sauli Ste Marie with H. Schoonmaker of Hanna, Alberta and T. Westerberg of Malmö, Sweden, all of whom posted perfect scores. Nine additional cadets were within one point of perfect targets.

TOP SEA CADET A GIRL

At the annual passing-out parade of the Pretoria Sea Cadet Corps last month 18-year-old Judy de Reuch became the first girl to win the trophy for the outstanding cadet of the year. She competed on equal terms with 50 boys and seven other girls.

Judy is also the first girl to reach the rank of leading seaman. For this she passed 38 seamanship subjects, including musketry.

In addition to these two achievements she was also awarded the trophy for the best shottist in the detachment.

Judy joined the corps two years ago and is now attempting to qualify for her airman's badge. The corps opened its membership to girls six years ago.

ANNUAL CHURCH PARADE OF THE NEW SOUTH WALES DIVISION

The annual Church Parade of the New South Wales Division of the Corps was held at Garden Island Dockyard Chapel on Sunday, 29th May, 1966.

Approximately 300 Cadets paraded and were inspected by the Flag Officer in Charge East Australia Area, Rear Admiral T. K. Morrison, C.B.E., D.S.C., R.A.N.

The chapel service was conducted by the Base Chaplain, Reverend E. J. Rolfe, R.A.N., the lessons being read by a member of the Corps and Admiral Morrison. The Division's Colours were "laid up" in the Sanctuary during the service.

A service was also held aboard H.M.A.S. Perth.

Reverend Rolfe's text was taken from I Timothy, chapter 4, verse 11: "These things command and teach". In his address to the Cadets he emphasised the need for young men to establish and build a life based on sound principles to be upheld and lived by at any cost.

The service concluded with the Naval hymn "Eternal Father Strong to Save".

The Division, led by the R.A.N.R. band, "Marched Past" outside the Chapel; Admiral Morrison taking the salute.

Special guests at the service included the Senior Officers of the Army Cadet Corps and the Air Training Corps, Lieutenant Colonel

F. S. B. Peach and Squadron Leader E. Watson, R.A.A.F.

The Editor is always pleased to receive news and photographs concerning the activities of Divisions of the Corps.



The address being delivered by Reverend E. J. Rolfe, at the Annual Church Parade of the N.S.W. Division of the A.S.C.C.



Rear Admiral Morrison inspecting the guard outside Garden Island Dockyard Chapel.

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The Colours of the N.S.W. Division being "laid up".



Rear Admiral Morison taking the salute during the "March Past". The Senior Officer of the N.S.W. Division, Lt. Cmdr. L. Mackay-Cruise is on the Admiral's far right.



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The aim of the Australian Sea Cadet Corps is to provide for the spiritual, social and educational welfare of boys and to develop in them character, a sense of patriotism, self-reliance, citizenship and discipline.

Uniforms are supplied free of charge.

Cadets are not required to undergo any medical examination and are fully insured against accident while on duty.

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

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

general sporting activities and other varied subjects.

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

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

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

Senior Officers, Australian Sea Cadet Corps

NEW SOUTH WALES: "El Abrigo", 4 Rangers Ave., Mosman.

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SOUTH AUSTRALIA: C/- 30 Pirie Street, Adelaide.

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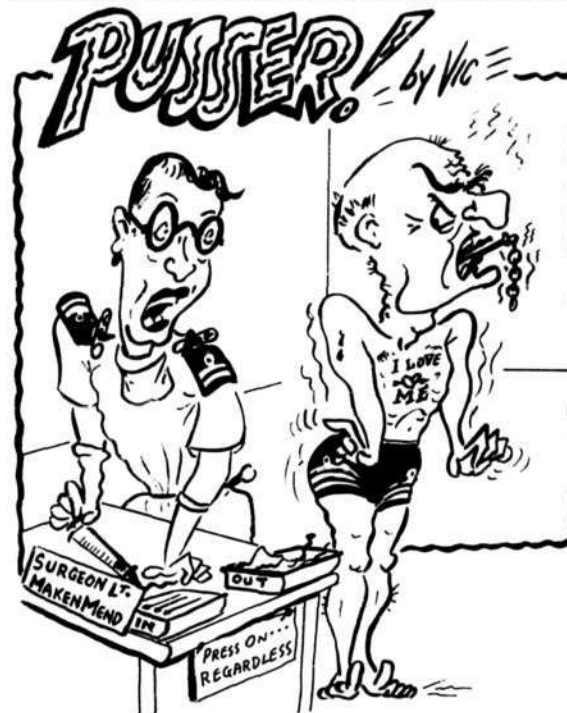
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"I can't marry you," said the sailor to the girl. "We have nothing in common. You don't even know the difference between port and starboard."

"Couldn't I look at the labels on the bottles?" she asked.

An officer on board a battleship was drilling his men. "I want every man to lie on his back, put his legs in the air, and move them as if he were riding a bicycle," he explained. "Now begin!"

After a short effort, one of the men stopped.

"Why have you stopped, Cassidy?" asked the officer.

"If you please," was the reply, "O'm free-wheeling."

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The Royal Swedish Navy A REVIEW

Since the end of the Second World War, about five per cent. of Sweden's gross national product has been used for defence purposes. Sweden's defence expenditure must be viewed against the background of the countries "alliance-free" policy.

Extensive research is conducted into defence equipment. This research proves very expensive when all equipment designed and manufactured is solely for the use of the Swedes, very little if any is sold to other countries. For these reasons, defence material is more expensive in "alliance-free" Sweden than in the neighbouring NATO countries. Sixty-five per cent. of

Sweden's defence expenditure is for the purchase of military equipment — Sweden does not receive any foreign military aid. Equipment (like the British Seacat, surface to air missile), which for various reasons is obtained from abroad, is paid for in cash. Approximately seven-eighths of the equipment expenditure for the armed forces stays within the country.

The Total Defence of Sweden

During the last 150 years Sweden has been preserved from war. Today, as in the past, the desire to maintain peace and freedom in the country, constitutes the ground for Sweden's foreign policy. The Swedish Government believes that the best way to attain this aim is to stay out of the alliances of the Great Powers. At the same time it is obvious that an independent policy of this kind requires strong armed forces to preserve the independence of the country, as long as there is no evident relief of the tension between the Great Powers and of international disarmament. Sweden's foreign and defence policies which are supported by the nation as a whole, serve the same peace-preserving purpose. By this policy Sweden even wants to contribute to peace and stability in Scandinavia.

In accordance with this non-aligned and peace-preserving policy and according to her ability and to the principles of the United Nations, Sweden tries to contribute to the peaceful collaboration between the nations. The Swedish policy may therefore be characterized as an active peace-policy.

It is equally important that the Great Powers should have confidence in Sweden's will and capability to defend herself. If Sweden were attacked or exposed to hard political pressure by an adversary and if any of the Great Powers should have doubts about Sweden's will to fight, this Great Power might be tempted to take the first step itself and, by attacking Sweden, try to prevent the adversary to obtain bases on Swedish territory.

Should Sweden be attacked, despite her wish to remain neutral, the chief task of her armed forces is to prevent the aggressor from gaining a firm foot-hold on Swedish soil.



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Today, however, war is no longer
an affair confined only to the armed
forces of a country. War today
means total war, affecting countries
involved and their people as a
whole. The total war can therefore
only be met successfully by *total*
defence. The Swedish total defence
must therefore be of such an all-
round character as to be able to
beat off an attack, no matter where
or how it is launched. The state of
preparedness must be so high that
even a surprise attack on Sweden
could be beaten off with her own
resources.

The *Military Defence* must be
fully integrated with the *Civil De-*
fence, *Economic Defence* and
Psychological Defence. All four
branches exist to solve the common
total defence problems. Every
Swedish citizen—man or woman—
has a place in the Total Defence.

When estimating Sweden's chances
to defend herself, it must also be
remembered that the structure of
the country offers favourable con-
ditions for a successful defence,
also against nuclear weapons.
Sweden is a sparsely populated
country with few really large cities.
Only three cities have more than
100,000 inhabitants. The possibilities
of saving the population from air
and missile attacks by means of
extensive evacuation from cities are

greater in Sweden than in many
other countries. It has also been pos-
sible to reduce the effects of such
attacks by "going underground"
with shelters, stores and important
defence constructions such as rock-
hangars, tunnel-shelters for warships
and coast-artillery.

The Swedish Armed Forces are
well prepared for fast mobilization
in different parts of the country.
This fact makes it possible to meet
a surprise attack at an early stage,
and with comparatively strong
forces.

Large parts of the country would
have to be attacked by amphibious
forces, probably combined with air-
borne operations. Such a procedure
would force the aggressor to a big
employment of sea and air trans-
portation, a fact rendering it diffi-
cult for him to launch his attack
with very strong forces at one time.
By using all her available defence
resources Sweden believes she has
a good chance of defending herself
against invasions of all kinds.

The character of the total war
has gradually increased the need for
co-operation between units from the
three services. Co-operation has
been planned and practiced for a
long time. Peace time planning is
also aiming at a far reaching de-
centralization in the case of war.

when the regional military and
civilian authorities are given greater
delegated power. In other words the
total defence must work to full
effect even if orders from the Govern-
ment and the Supreme Command
should not get through.

THE SWEDISH NAVY

The Central Organization

The Commander-in-Chief of the
Royal Swedish Navy is responsible
to the King-in-Council and the
Supreme Commander for the navy's
military preparedness and its readi-
ness for active service and service
in general. The Naval Staff is a
joint all-purpose staff for the Navy,
the Coast Artillery being completely
integrated into this organization.

Regional Command Organizations

For the Navy's unit production
there are on the lower regional
levels naval base chiefs and coast
artillery chiefs who are the Navy's
mobilizing authorities. Their most
important task during peace-time is
their responsibility for mobilization.
In addition, they are responsible for
training and certain voluntary activi-
ties. Training establishments,
schools and coast artillery regiments
are subordinated to the naval base
chief and the coast artillery defence
chief respectively.

Special Training Organization

All training onboard is directed
by the Commander of the Coast
Fleet who is directly subordinate
to the C-in-C, R. Sw. N. The same
applies to the naval college and the
coast artillery gunnery school.
Although training establishments
are subordinate to naval base chiefs
and coast artillery defence chiefs
for administrative purposes the
training as such is directed by the
C-in-C, R. Sw. N.

Organization within various Military Districts

At the level below the military
commander in chief, the size of the
naval organization varies within
different military districts. Within
each of the Western, Southern and
Eastern Military Districts there is
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organization with the military dist-
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Frogmen of the Coast Artillery.

the fleet's professional training are under the command of the chief for the East Coast's naval bases. The Karlskrona Naval Schools, which are responsible for the basic military training and certain non-commissioned officer training in the fleet, are subordinated to the chief of the Southern Coast's naval bases. There is no special training establishment belonging to the chief of the West Coast's naval bases.

In the case of the coast artillery, there is a coast artillery defence with a subordinated coast artillery regiment within each of the Western, Southern, Eastern and Northern (lower Norrland) Military Districts. The fifth coastal artillery defence with its corps, is on the island of Gotland, under the command of the chief for the Eastern Military District.

There are naval dockyards at Stockholm, Karlskrona and Gothenburg. The dockyard at Stockholm is in the process of being moved to rock-covered installations in the nearby Archipelago — a maze of more than 70,000 islands and skerries. The new base will be known as the "Musko" Navy Yard.

The majority of the Navy's modern warships are attached to the Swedish Home Fleet which is almost entirely made up of commissioned ships.

Personnel and Training

The training of conscripts — between 5,000-6,000 per year — is concentrated at a few units and training centres. Naval seamen are training at recruit and trade courses held at land bases, at the naval basic training establishments at Karlskrona and Berga (just south of Stockholm), and at training courses held at sea.

Coast artillery personnel are trained partly at the regiments, and

partly at special common schools. The greater majority of the conscripts receive supplementary training during repetition exercises at the combat units to which they belong.

Officers are trained at the Royal Naval College.

Wartime Organization

Operational command is exercised by the Commanders-in-Chief of the Naval Commands who have the following forces at their disposal during wartime: warship units, coast artillery forces and helicopter units. They also co-operate with attack and fighter reconnaissance units, etc., from the Air Force. The wartime organization also includes the Naval Coast Guard which is manned by personnel both from the Navy and from the coast artillery.

The coast artillery is co-ordinated with units from the Navy and the Army to form coast artillery brigades plus checking battalions and companies made up to suit their specific local tasks for both naval warfare and land operations.

Even during peacetime, commissioned ships maintain a high state of readiness and can be put into action at short notice. Since most of the remaining warships are kept in "moth balls", fully fitted



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The fleet minelayer "Alvsnabben".

and equipped, their commissioning time is short. Sections of the coast artillery can also be mobilized quickly. This is also true for the Naval Coast Guard, whose personnel generally live close to their place of wartime service.

The Naval Volunteer Reserve (Sjovarnskaren)

The Naval Volunteer Reserve is a voluntary organization belonging to the Navy, and its chief task is the recruitment and training of conscript officers and N.C.O's. The members are made up of Naval Volunteer Reserve Cadets (about 1,200) and Volunteer Reservists (about 1,500). The latter are conscripts or war volunteers in the Navy.

Cadets aged 15-19 are trained during three summer and two winter courses, after which they are attached to the Navy as conscript officers and N.C.O's. When fully trained as officers, they serve on board motor-torpedo boats and auxiliary minesweepers, as gunnery officers on frigates and minesweepers, as radar station commanders or as combat information officers at observation centres. Fully-trained N.C.O's serve as helmsmen on board auxiliary minesweepers or at Coast Guard stations.

Naval Reservists usually remain in the Corps until the age of 47; however some of them remain as

war volunteers until reaching 60 years.

Ships and Other Equipment

Sweden's modern Navy comprises one cruiser, eight destroyers, an equal number of large motor-torpedo boats, more than thirty small motor-torpedo boats and 22 submarines. In addition, there are some older destroyers that have been rebuilt as frigates, plus minesweepers and various support vessels (complete details of the fleet are given in a later section).

Almost all the ships have been built within the country, and both the armament as well as the other equipment is predominately Swedish-made. In this respect, all the artillery pieces are manufactured by "Bofors", while the mines and torpedoes come from the Navy's own factories. The Swedish firm of A. B. Bofors, manufacture such modern naval equipment as 120 mm. (4.7-inch) automatic guns in various mountings, 3-inch automatic guns in single turret mounting, 57 mm. automatic gun in single deck mounting, 40 mm. automatic guns in various mountings, and 375 mm. anti-submarine rocket launchers.

In the field of missiles, foreign weapons are being used for the time being. The wire-guided French missile SS 11 has been placed on light vessels, while the British "Seacat" is being used to reinforce the close-range anti-aircraft artillery on board destroyers, frigates and larger vessels. The destroyers *Smaland* and *Halland* are armed with sea-to-sea missiles.

The coast artillery is equipped chiefly with fixed and mobile artillery, a great deal of which is highly modern. The artillery guns are being supplemented with missile units. The French missile SS 11 is already in service and a coastal missile is undergoing trials. Mines are the other main weapon used by the coast artillery. These are used



The destroyer "Smaland"



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in controllable mine-fields. Roughly ten mine-layers are used for mine-laying and maintenance. A large number of fast transport and patrol vessels have been added to the coast artillery in recent years.

The naval helicopter units use foreign machines such as the American "Vertol" and the French "Alouette II". The latter, however, is made under licence by SAAB.

A Few Tactical Principles

The chief task of the Swedish Navy is defence against invasion and the protection of shipping. The defence zone includes the entire sea area all the way to the aggressor's coast. In this area, the defensive battle can be fought by several different means and for a considerable time.

Submarines make up the first line of defence. They can remain in the combat zone for long periods, are equipped with modern torpedoes (such as the 53 cm torpedo which is 7 metres long and weighs 1,600 kilos. High explosive accounts for 300 kilos of the weight) and in the future with missiles as well. They can also be used to lay mines. A "super submarine" now being designed in Sweden need surface only in exceptional circumstances. These super submarines will have an increased radius of action as well as

greater submerged speed, manoeuvrability and striking power.

Closer to the Swedish coast, the submarines are backed up by powerful surface units composed of a cruiser, destroyers and motor-torpedo boats. These ships carry artillery, missiles and torpedoes as well as large quantities of mines. They operate alternately from different bases that provide the ships with cover and maintenance ser-

vices. A base consists of a large archipelago region in which there are wartime mooring places, maintenance workshops and depots, stores, etc., well dispersed and often blasted out of the rocks. Few countries in the world are favoured with such ideal base areas for warships.

Still closer to the country's coast, there are anti-submarine and mine-sweeping units that also take part in the protection of shipping. Anti-submarine units consist of frigates, helicopters and "anti-submarine" submarines. Minesweeping units are made up of minesweepers, helicopters and salvag-diving patrols.

Developments in amphibious warfare have made the island-studded coastline especially vulnerable for invasion by sea. An aggressor could rapidly establish protected landing zones there. The invasion defence in the coastal areas therefore has a system of fixed firing points with long-range artillery fire plus mobile combat forces that can quickly be concentrated against an aggressor. The coast artillery batteries can from their granite and armoured installations direct heavy fire to



The submarine "Valen" of the "Hajen" class.



The frigate "Mode"



The icebreaker "Oden". Has four screws, two forward and two aft.

throw back invasion forces at sea and after landing. Light checking units with rapid firing batteries and mines defend the approaches. Defensive stubbornness is increased with the aid of mobile checking units that use light missiles, mine and artillery to break up penetrations. A special corps of amphibious combat forces are especially trained for counter-attacks against enemy infiltration.

Total Strength of the Navy

There are 19,100 (5,200 regulars) officers and men in the Navy and Coast Artillery, this figure includes conscripts some of whom serve only 15-40 days of the year.

Warship Strength

Cruiser (Kryssare).

The Fleet has only one big ship, the Cruiser *Gota Lejon* (sister ship, *Tre Kronor*, was discarded in 1964) of the "Tre Kronor" class, which was completed in 1947, reconstructed in 1951-52 and modernised in 1958.

Displacing 8,200 tons standard and 9,200 tons full-load with an overall length of 597 feet and a beam of 54 feet, she is armed with seven, six-inch guns, disposed in a triple turret forward and two twin turrets aft, four 57 mm. anti-aircraft guns, eleven 40 mm. AA. guns, six 21-inch torpedo tubes, and depth

charge throwers. She is fitted for minelaying, with a capacity of 120 mines. Her armour protection is exceptionally strong, including 3 to 5 inch sides. Her main propelling machinery comprises four Swedish four-drum type boilers supplying high-pressure superheated steam to two sets of De Laval geared turbines turning two shafts and developing 100,000 shaft horse power, equal to a speed of 33 knots. She carries 610 officers and men.

Destroyers (Jagare). Total—8.

Four "Ostergotland" class: *Gastrikland*, *Halsingland*, *Ostergotland* and *Sodermanland*.

Two "Halland" class: *Halland* and *Smaland*.

Two "Oland" class: *Oland* and *Uppland*.

Those of the "Ostergotland" class were completed in 1958-59. They have a full-load displacement of 2,600 tons and an overall length of 380 feet. Main armament consists of four, 4.7 inch guns in twin mountings, forward and aft, four to seven, 40 mm. Bofors AA. guns, six 21-inch torpedo tubes, and a triple-barrelled depth-charge mortar. A speed of 35 knots derived from two Babcock & Wilcox boilers and a two-shaft arrangement of De Laval turbines aggregating 40,000 shaft horsepower. All have a capacity of 60 mines. *Gastrikland* and *Sodermanland* are fitted with the British "Seacat" guided missile launchers.

Halland (photograph) and *Smaland* were completed in 1955-56 and were the first Swedish destroyers of post-war design and construction. They have fully automatic gun turrets and ahead throwing anti-submarine weapons of the "Bofors" type on the fore-castle, and are to

be equipped with ship-to-ship guided missiles, possibly the "Rb-08". These vessels are already equipped with "Seacat".

These destroyers with a full-load displacement of 3,200 tons and an overall length of 397 feet, are armed with four, 4.7 inch guns, two, 57 mm. AA. guns and six, 40 mm. AA. guns as well as eight, 21-inch torpedo tubes, two, four-barrelled depth-charge mortars, and a guided-rocket launcher. Three boilers and two sets of De Laval double reduction geared turbines turning two shafts and developing 58,000 shaft horsepower give them a speed of 35 knots. Manned by a crew of 290, these vessels can be fitted for mine laying.

Oland and *Uppland* were completed in 1947-49, modernised 1960-63, *Uppland* being fitted with a helicopter platform.

With a full-load displacement of 2,400 tons and an overall length of 364 feet, these destroyers mount four, 4.7 inch semi-automatic guns with an elevation of 80 degrees, six, 40 mm. AA. guns, eight, 20 mm. AA. guns, six, 21-inch torpedo tubes, and fittings for 60 mines. Two Penhoet boilers and De Laval geared turbines of 44,000 shaft horsepower provide a speed of 35 knots.

Ships complement is 210 officers and men.



A "Vertol" helicopter using her "dipping sonar" to find an enemy submarine.

The remainder of the escort fleet comprises 12 fast Anti-submarine Frigates (Fregatter) ex-destroyers of World War II construction:

Four "Visby" class—*Halsingborg*, *Kalmar*, *Sundsvall* and *Visby* (1,320 tons, full load displacement).

Four "Goteborg" class — *Gavle*, *Karlskrona*, *Malmo* and *Norrköping* (1,300-1,400 tons, full load displacement).

Four "Mjolner" class — *Magne*, *Mode* (see photograph), *Mjolner*

and *Munin* (960 tons, full load displacement). Formerly rated as sea-going torpedo boats or coastal destroyers

Submarines (U-batar) — Total 22 (conventionally powered).

Sweden is the fifth largest submarine force in the world — the U.S.S.R. has 425, U.S.A. 200, United Kingdom 42 and the People's Republic of China 30.

The fleet comprises:

Six of the "Draken" class, completed in 1961-62. Submerged displacement — 1,000 tons. These boats have fast diving capabilities.

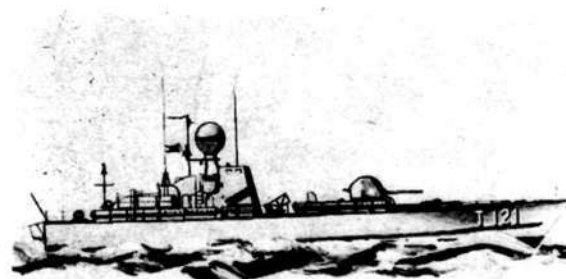
Six of the "Hajen" class, completed in 1956-1960. Submerged displacement of 990 tons. Equipped with Schnorkels and have fast diving capabilities (see photograph of the *Valen*).

Three "Najad" class. These minelaying submarines were completed in 1943 and have a submerged displacement of 720 tons.

Six "Abborren" class of coastal submarines. Completed 1943-44, reconstructed 1960-64. Submerged displacement of 460 tons



A model of the new attack submarine "Sjoormen".



"T 121" type of MTB. Scheduled for delivery 1966-68.

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Miscellaneous Craft

Sweden's substantial fleet of smaller ships includes the Fleet Minelayer (*Minfaryg*) also Cadets' Seagoing Training Ship *Alvsnabben* (see photograph); one submarine depot ship; 37 Motor Torpedo Boats and Motor Gun Boats; 18 Coastal Minesweepers; 10 Mining Tenders, manned by Coastal Artillery personnel; 6 Ocean Minesweepers; 19 Inshore Minesweepers; 1 large and 12 small Patrol Vessels; 1 Salvage Vessel equipped with a decompression chamber; 1 Supply ship; 12 Surveying vessels; 5 Ice-breakers; 3 Oilers and numerous Landing craft and tenders.

New Construction Programme

Plan "Ob-62" includes the construction of:—

Two Guided Missile Frigates
(ship to air).

Ten Submarines:

Five "Sjoormen" class (see photograph). To have improved endurance whilst dived. New Hydro-Dynamic Design ("drop-formed"). Will be launched 1967-68.

Five "A-11" type, able to remain submerged for extensive periods of time.

Twelve ("T 121" type) Motor Torpedo Boats (see photograph). Will displace 200 tons, carry one, 57 mm. gun, Six, 21-inch torpedo tubes and light rocket launchers. A speed of over 40 knots will be obtained

from a Proteus gas turbine of 4,250 S.H.P. These vessels will be capable of firing remotely controlled torpedoes.

Twenty Motor Gunboats (Class "K1"). These heavily armed patrol craft will be for use in narrow waters. They will be sturdy and seaworthy, have radar directed fire control, mine laying facilities and should prove to be ideally equipped for anti-submarine operations. 170 tons, full load displacement, with one, three-inch and one, 40 mm. gun, light rocket launchers and a speed in excess of 25 knots. All empty spaces aboard are to be filled with plastic foam to increase buoyancy if seriously damaged.

Nine ("M 69" type) Coastal Minesweepers, similar to the existing "Arko" class.

Helicopters

Three American Boeing Vertol Model 107-11 helicopters (see photograph), are operated by the Royal Swedish Navy as the HKP-4. They are a Medium Assault Transport Helicopter type, powered by two General Electric T58-GE-8B

turboshaft engines each rated at 1,250 s.h.p., and can carry 17 fully-equipped troops or a 4,000 lb. cargo load over a range of 115 miles. These machines are equipped with sonar. Their principal tasks include anti-submarine functions, mine-sweeping, reconnaissance, rescue and transport duties.

A number of French Sud-Aviation SE-3120 Alouette II helicopters were assembled in Sweden and purchased by the Royal Swedish Navy. The Alouette is a five-seat general purpose helicopter powered by one Turbomeca Artouste IIC turboshaft engine rated at 406 s.h.p. giving the machine a maximum speed of 109 m.p.h., and a maximum range of 374 miles. Empty the machine weighs 1,874 lbs. More than 1,000 helicopters of this type are serving in more than 39 countries of the world.

The Royal Swedish Navy and Coast Artillery are a highly organized and efficient fighting force, at this moment in a period of seething progress—a force well equipped and prepared for any emergency.



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Nautical Notes from all Compass Points

By SONAR

ARGENTINA

Argentina's *Aviacion Naval* will shortly retire its remaining Chance Vought F4U Corsairs which still equip the 2nd Air Attack Squadron aboard the *ARA Independencia*. The *Aviacion Naval* hopes to replace the Corsair with the A-4 Skyhawk aboard the *Independencia* but is anxious to obtain more modern examples of this shipboard attack aircraft than the refurbished A-4Bs being supplied to the *Fuerza Aerea Argentina*. The *Aviacion Naval* has also made representations to the government for the supply of Sikorsky S-61 helicopters for ASW and

suggests that the *Marinha do Brasil* plans to augment its three helicopters of this type in the near future.

on the CH-112 or on the CH-113A Voyageur.

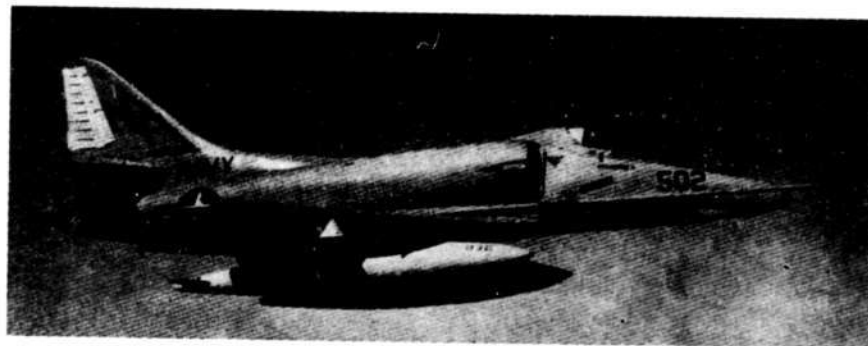
Report on Defence

At the end of the first full year of integration, the Department of National Defence says 1965 was one of the Canadian Armed Forces' most active years in recent history and saw marked progress in the re-organisation and re-design of the Forces to a new, functional pattern.

Some of the notable achievements of 1965 were the formation of a new command structure, reducing Canadian commands from 11 to six:

CANADA

A new combined armed forces helicopter training unit began training its first students at Rivers, Manitoba, at the end of October. The Rivers unit provides pilots from the three Canadian services, with an eight-week course which includes 50 hours on the Hiller CH-112. Previously the unit had trained only RCAF and Army pilots, the RCN



This flight view of the Douglas A-4E indicates the load-carrying versatility of this single-seat fighter-bomber, ordered for the RAN to replace the Sea Venom which will reach the end of its service life in 1967. Twenty separate items weighing up to 8200 lb. can be carried on its bomb racks. Two 20 mm Colt cannon are fitted in the wing roots and external loads may include variations of nuclear or HE bombs, Zuni or Mighty Mouse rocket packs, Sidewinder infra-red missiles, Bullpup air-to-surface missiles (as seen above). Note the flight refuelling probe on the starboard side of nose. A-4E is powered by a Pratt & Whitney J52-P-6 of 8500 lb. st. Max. TO wt. is 24,500 lb. Empty wt. 9300 lb.

transport roles, and additional Grumman Albatross amphibians, but as Argentina's current military budget is completely expended there seems little likelihood of the service receiving new equipment in the immediate future.

BRAZIL

The recent arrival in the U.K. of Brazilian Navy personnel for training on *Wasp* ASW helicopters

having its own helicopter training programme at H.M.C.S. *Shearwater*. The initial tri-service course just completed included four RCN, one RCAF and five Army pilots, and basic helicopter training will now be the same for all three services, but RCN pilots will undergo advanced training on the CHSS-2. RCAF pilots on the CH-113B Labrador, and Army pilots will continue their training at Rivers either

near-completion ahead of schedule of the integrated Canadian Forces Headquarters; the ordering of a new tactical fighter (CF-5) for service in close support of ground forces; the introduction of new weapons and equipment, including armoured personnel carriers, helicopters, anti-tank weapons and the first submarine to be built expressly for Canada.

The submarine, *Ojibwa*, was built



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at H.M. Dockyard, Chatham, and commissioned in September. She is intended primarily for training but will be readily convertible to operational service if required. Two more of the same class are building.

Four destroyer escorts of the *St. Laurent* class, converted to carry anti-submarine helicopters and fitted with the Canadian developed variable depth sonar, returned to service during the year. This brought to eight the number of helicopter-destroyers in the Fleet. Meanwhile, delivery was accepted of more heavy Sea King helicopters. Some of these are to go into the *Bonaventure*.

State of the Fleet

The Government has announced a programme to re-equip her Forces up to 1970 and the programme includes the construction of four helicopter-destroyers larger than the current types, two operation support ships similar to the *Provider* (which at 22,000 tons, and commissioned in 1963, was the largest ship ever built in Canada for the R.C.N.), improvement of the *Restigouche* class destroyer escorts by the addition of new anti-submarine detection and armament systems, and improvements to the Tracker aircraft.

Bonaventure is to begin a half-life refit this year.

The R.C.N. has two first-line air squadrons for anti-submarine warfare, one armed with the Trackers and the other with the Sea Kings, and there are four other squadrons engaged in training, evaluation and utility services.

Ever since the end of the second world war the R.C.N. has been primarily anti-submarine in composition and capability, and in 1949 the Canadian Government announced a programme for the construction of the first Canadian-designed anti-submarine destroyer escorts. The first to commission was H.M.C.S. *St. Laurent* in 1955, and she has been followed by six sister ships. The *Restigouche* class came next with seven ships, followed by four *Mackenzie* class destroyer escorts.

This programme was completed in 1964 with the addition to the fleet of two more ships, incorporating in their construction the vari-

able depth sonar and hangar and flight deck for the all-weather Sea King anti-submarine helicopter. A conversion programme involving all seven *St. Laurents* to give them the same capability completes this year with the commissioning of the *Fraser*.

Other ships operational in the Fleet this year will include the 10 *Prestonian* class frigates (ocean escorts), one *Tribal* class destroyer escort and two *Algonquin* class destroyer escorts.

The first of the three *Oberon* class submarines for the R.C.N. was, of course, commissioned at Chatham Dockyard in September, and two more are due to enter service in 1967 and 1968.

CEYLON

Order for Patrol Boats

Thornycroft (Malaysia) in Singapore, have built two new patrol launches for the Ceylon Navy. They are fast, twin screw boats with a length of 45 feet and a beam of 12 feet, each fitted with Thornycroft K6 M.S.I. diesel engines developing 250 S.H.P. and a speed of 25 knots.

The launches have been comprehensively fitted for patrol duties with extensive radar and radio equipment.

They have hard-chine hulls with double-skin teak planking.

HOLLAND

Contractual discussions concerning the supply of 15 *Westland Wasp* helicopters for the *Marineluchtvaartdienst* had reached final stage at the time of closing for press. The *Wasps* will be operated from the six new *van Speyk* class frigates of the Royal Netherlands Navy as well as two supply vessels.

INDONESIA

The Indonesian Navy will conduct an exercise to coincide with the annual SEATO exercise in the South China Sea.

A monitored broadcast from Radio Djakarta stated that the Indonesian exercise would last from the end of May until 1st June. The SEATO operation is expected to begin on 19th May and end on 6th June.

JAPAN

Diesel Destroyer

Uraga Dockyard has launched the 2,050 tons displacement destroyer-escort *Yamagumo*, first of a class of three on order there and at the Mitsui Tamano yard. Dimensions are: 374 ft. by 38 ft. 10 in. by 12 ft. 9 in. and the machinery consists of geared diesel engines totalling 26,500 b.h.p. for a speed of 27 knots. The armament consists of four 76 mm. dual purpose guns, four Asroc A/S missile launchers and four Bofors. It is not known what machinery is installed, but a variety of very highly rated diesel engines are readily available in Japan.

NEW ZEALAND

New Frigate

The Royal New Zealand Navy will take delivery next September of a *Leander* class frigate H.M.N.Z.S. *Waikato*, now fitting out at Belfast. When commissioned she will join the two *Rothsay* class frigates already in service with the Dominion Navy.

Of the three surviving *Loch* class frigates, *Hawea* is in reserve and *Rotoiti* and *Pukaki* are to be scrapped.

Helicopters for Frigates

Westland Aircraft at Yeovil, are to supply *Wasp* helicopters to operate from the *Leander* class frigate currently building for the R.N.Z.N. at Harland and Wolff.

The company have just signed a contract with the New Zealand Government to supply two *Wasps* at a cost, including spares and equipment, of £250,000. The first is due for delivery in July and will join the frigate when it leaves for New Zealand after completing working-up trials later this year. The second will be delivered direct to New Zealand in the autumn.

Powered by Bristol Siddeley Nimbus turbines, the five-seat *Wasps* will be capable of operating in the A.S.W., Air Sea Rescue, Casualty Evacuation and Liaison roles.

Cadets Complete First Year

First Naval Officers to be trained in New Zealand completed their cadets' year when they passed out



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from H.M.N.Z.S. *Tamaki* recently. Seven of the original class of eight will continue training this year to become officers on the Supplementary List.

New Survey

The first survey of the Hokianga Bar for more than 100 years is being made by the survey launches H.M.N.Z.S. *Takapu* and the *Tarapunga* of the Hydrographic Branch of the R.N.Z.N. The old chart of the area was compiled from a survey made by H.M.S. *Pandora* in 1851 and the *Takapu* and *Tarapunga* may take up to two years to complete a survey of the Hokianga Harbour and its approaches.

SOUTH AFRICA To be Sold

One of the first ships bought for the fledgling South African Navy after the war, the S.A.S. *Bloemfontein*, has been sold.

The 225-foot minesweeper and escort vessel ended her proud history as a warship on 16th March, at a sale in Simonstown.

A spokesman for the Department of Defence said that the *Bloemfontein* had become obsolete.

Her sister ship, the S.A.S. *Pietermaritzburg*, was recommissioned as a midshipmen's training vessel in 1962 and would continue service with the navy.

The *Bloemfontein*, carrying a complement of 85 men and officers and weighing 1,040 tons, was launched on December 20, 1944, as H.M.S. *Rosamund*, one of Britain's *Algerine* class ocean minesweepers and escort vessels.

Naval School

The *R150,000 Anti-submarine and naval tactical school for training officers and ratings in tactics will be completed by about August next year.

Situated near Seaforth Beach, Simonstown, the building is of unusual design and has such features as windowless airtight rooms and equipment described as "very secret".

*Rand

Navy Surveys Port
South African Naval teams and the survey vessel, S.A.S. *Natal* are

conducting a detailed hydrographical survey of the Umzimvubu River and its estuary.

The investigation is intended to establish the practicability of reopening the Port St. John's harbour, according to the leader of one of the teams. If it is reopened it will become the Transkei's first harbour.

A five-man team is working from a rubber dinghy in the river from the mouth to the bridge, two miles upstream, and has also set up a tide gauge.

Other teams have been working from small boats lowered from S.A.S. *Natal* while the vessel is conducting a deep-water survey within a three-mile radius of the Umzimvubu River mouth.

SPAIN

Spain's Navy has negotiated a contract through the U.S.N. for the purchase of six Sikorsky SH-3D ASW helicopters, with deliveries to be made at a rate of one a month

from June. The SH-3D is the Navy version of the Sikorsky S-61, which has been in quantity production for five years and is in commercial service with major helicopter airlines. The military version is in use by the U.S.A.F., Royal Danish Air Force, the Royal Canadian and Japanese navies, and is scheduled to enter service soon with the U.S. Coast Guard and Italian Navy.

SWITZERLAND

The purchase of up to 16 surplus R.N. Gannets by the Swiss Air Force may follow the recent evaluation of an aircraft of this type at Emmen. The aircraft are required for use as target tugs.

UNITED KINGDOM

R.N. Frigate

Another *Leander* class frigate, H.M.S. *Argonaut*, has been launched at the Hebburn-on-Tyne shipyard of Hawthorn Leslie (Shipbuilders)



Tactical Bombers—These two new versions of familiar aircraft are the FB-111, bomber version of the F-111, and the S.2 Buccaneer, an improved model of the Royal Navy's main carrier-based attack plane. The FB-111, being developed to replace most of the B-57 Strato-fortresses in the Strategic Air Command, will be slightly longer than the 72-foot F-111A, and will carry up to 50 conventional 750-pound bombs. The S.2 Buccaneer has two Rolls-Royce RB.168 Spray turbojet engines giving it an estimated speed of more than 900 m.p.h. at sea level.

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Ltd. The standard displacement of the class is about 2,000 tons and the ship has a length o.a. of 372 ft. and a beam of 41 ft. Her armament will consist of 4.5 in. guns, a SeaCat ship-to-air launcher and director, and an anti-submarine mortar. She will carry a helicopter.

Decision has been taken by the R.N. to scrap 48 ships ranging in age from about eight years to more than 20 years. They include fleet radar pickets (*Broadsword* and *Scorpion*, each of 2,280 tons, built as destroyers in 1947-48, later converted), destroyers, frigates, mine-sweepers, and the Royal Navy MTB's, the 50-ton Dark Fighter and Dark Highwayman, which were commissioned in 1958.

Jet Powered Frigate

A marine version of the Bristol Siddeley Olympus jet, the engine being developed for the Concord supersonic airliner, is the main power unit in the world's first major warship to be propelled entirely by gas turbines. The 1,500-ton Royal Navy frigate *Exmouth*, in a major refit lasting two years, is to have her present steam propulsion machinery replaced by three gas-turbines made by Bristol Siddeley at Coventry. A single Olympus, developing more than 22,000 h.p., will propel the *Exmouth* at full power. Two *proteus* marine jets, each developing over 4,000 h.p., will be used for cruising. The *Exmouth* will also have a gas turbine to drive her main electric generator. If future ships were designed from the start to employ gas turbines, engine space requirements could be a third less than with conventional machinery, and engine room staff reduced by as much as 25 per cent.

Reorganizing at the Top

Britain's Defense Minister Denis Healey plans a revolutionary shake-up at the top levels of the Royal Army, Navy and Air Force. Healey wants to do away with the present Chiefs of Staff for each service. Instead, he would like tri-service chiefs with functional titles — for operations, planning, logistics, etc. One reason for support of the plan was Labor's embarrassment when the First Lord of the Admiralty and

the First Sea Lord quit in protest over the decision not to build new aircraft carriers.

To Drop Semaphore

Semaphore is no longer to be taught in the Royal Navy. A Defence Council instruction has gone out to the fleet and with it passes a form of naval signalling used by sailors for more than 150 years.

UNITED STATES OF AMERICA

Fixed Price Contracts for the construction of a prototype hydrofoil (PGH) gunboat are being given by the U.S.N. Bureau of Ships to Grumman Aircraft Engineering Corporation, and Boeing Aerospace Division. The two companies will work to a Navy design. Boeing handling its share of the task at Seattle and Grumman carrying out design and engineering at its Bethpage facility, Long Island and construction work at its Stewart plant, Florida.

The U.S. Navy briefed the aircraft industry on the service's proposals for a new multi-mission attack fighter referred to as the VFAX. The VFAX, which is seen as a long-range and relatively inexpensive aircraft with a unit cost of about \$1m. (£357,000), will be primarily an air superiority fighter for carrier air cover but capable of ground attack and close support missions.

Successful landing and take-off tests on a circular runway have been completed by the U.S.N. with Navy test pilots using the General Motors automobile proving track in Arizona, near Williams AFB. Aircraft used in the test of the circular runway concept included a Douglas Skyhawk jet fighter, a piston-engined Douglas Skyraider and a C-54 (Sky-master) transport. Main advantage of the circular runway would be reduction in size of airports, with concentration of terminal facilities in the centre, shorter taxiways, etc., but the need for runway banking and other features pose major operational difficulties.

The U.S. Navy expects to conduct experiments related to oceanic surveillance and anti-submarine war-

fare from the fourth Manner Orbiting Laboratory (MOL) sent into orbit with a human crew. Using sensitive radiometers the Navy will attempt to spot nuclear submarines from temperature differences in the water.

Lance at Sea

The U.S. Navy is interested in adopting the Ling-Temco-Vought XMGM-52A Lance surface-to-surface battlefield missile for shipboard application. The aim is to use it as a Landing Force Support Weapon. An analytical study of the feasibility of adapting Lance for shipboard use has been made by the Dynamics Research Corporation of Stoneham, Massachusetts, under contract from the Naval Ordnance Station, Pasadena, California.

First Lance test firing was made at the White Sands Missile Range, New Mexico, on March 15th last. Launched from an inclined ramp the 20 ft. (6.09 m.) long missile was stabilized by spin-rockets and tail fins. Propulsion is obtained by twin Rocketdyne pre-packaged liquid-propellant rocket motors. Exceptional accuracy is claimed from the Systron-Donner Automet pre-set inertial guidance system. Launch weight is about 3,200 lb. (1,451 kg.).

Intruder Developments

As a result of operations over Vietnam by Attack Squadron 75 (VA-75) with the Grumman A-6A Intruder from the U.S.S. *Independence*, the APQ-88 tracking radar carried by the aircraft is being replaced by APQ-112. Modifications introduced during the period in which the Intruders of VA-75 were on operations included the provision of separate antennae for the IFF and Tacan in place of the common antenna which resulted in the two systems interfering with each other, and the provision of Douglas Multiple Ejection Racks and Triple Ejection Racks in place of the standard Multiple Bomb Racks which had resulted in a bomb interference problem. Four Intruders were lost by VA-75 during the unit's deployment, but none was directly attributable to enemy action. All A-6A Intruders are now

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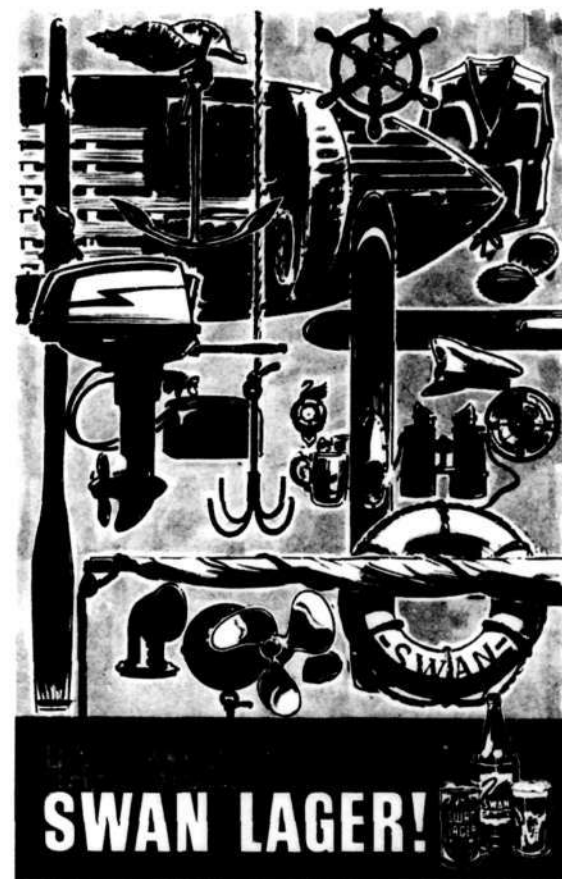
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being retro-fitted with J52-P-8A turbojets of 9,300 lb. st. (4 218 kgp) in place of the earlier J52-P-6 of 8,500 lb. st. (3 855.5 kgp), and a further development of the Intruder, the A-6B, will follow the A-6A into production. A side-by-side long-range trainer version of the basic design, the G-128NT, is to be offered on the European market by Grumman. Off-the-shelf navigational training equipment will supplant the avionics system of the A-6A.

Phantom FV and TSF

McDonnell is scheduled to complete a preliminary design study in August which, funded by the U.S.N., is intended as an alternative to the General Dynamics F-111B. Known as the Phantom FV, this project features increased wing area, J79-GE-10 engines of 17,900 lb. st. (8 120 kgp) with afterburning, and equipment for the air-superiority fighter role with Sparrow AAM's. Weighing some 20,000 lb. (9 070 kg) less than the F-111B, the Phantom FV will offer significant increases in speed, payload and ferry range over those of current Phantom models. A Spey-engined version of the Phantom FV was submitted to the R.A.F. by McDonnell as an eleventh-hour bid in the TSR-2 replacement conflict, the essential changes proposed for the U.S.N. version being equally applicable to the anglicised variants of the Phantom. Yet another Phantom version for which a U.S.A.F. procurement order was anticipated as we closed for press is the Phantom TSF (Tactical Strike Fighter) evolved from the unarmed RF-4C. In prototype form at least, the Phantom TSF is simply an RF-4C with the reconnaissance equipment removed from the nose and an F-105D gun capsule housing a 6,000 rounds-a-minute 20 mm. Vulcan six-barrel rotary cannon inserted in its place. The normal range of underwing stores may be carried. It will be recalled that the U.S.A.F. wanted built-in cannon armament in the F-4D but this proved impracticable from the cost viewpoint, and the lack of gun armament in a number of U.S.A.F. aircraft for suppressing flak and attacking roads has proved a serious disadvantage in Vietnam.



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JAPANESE TO VISIT SYDNEY AND MELBOURNE

A training fleet consisting of four ships of the Japanese Maritime Self-Defence Force will visit Australia in August during the course of a three month, 17,900 mile cruise of the South-West Pacific.

The fleet will be in Sydney from 15th-19th August and Melbourne from 22nd-25th August.

The fleet, under the command of Rear Admiral Hidesumi Mizutani, will consist of the "Moon" class destroyer *Akizuki* (DD161), the flagship of the Maritime Self-Defence Force. This destroyer, like her sister ship *Teruzuki*, is of a new design, having a long forecastle hull; was received from the U.S.A. as part of the 1957 Military Aid Programme, but built in the Mitsubishi Zosen Company's shipyards, Nagasaki, under an "off-shore" procurement agreement.

Designed as a flotilla leader, with a full load displacement of 2,890 tons, an overall length of 387 feet, *Akizuki* was laid down in 1958 and completed in 1960. She is armed with three, 5-inch dual purpose guns in single mounts (one forward and two aft) and four, 3-inch AA. guns in twin mounts. Equipped with four, 21-inch torpedo tubes (quadrupled) and two homing torpedo launchers, she also has two radar systems and two sonar installations. Her anti-submarine weapons include two Hedgehogs, two Y-guns, one U.S. model Mk. 108 rocket launcher and two depth charge throwers. Machinery comprises two sets of Mitsubishi-Escher-Weiss geared turbines turning two shafts and developing 45,000 shaft horse power, equal to a speed of 32 knots. She carries 330 officers and men.

Other units of the force will comprise three anti-submarine destroyer escorts ("A" Type DDK) of the "Wave" class — *Makinami*, *Onami* and *Takanami*, each displacing 2,500 tons, full load, length at the waterline being 357 feet. Armed with six, 3-inch AA. guns in twin mountings (two forward, one aft),

four, 21-inch torpedo tubes (quadrupled) and two homing torpedo launchers, they also carry two, U.S. model Mk. 15 Hedgehogs and two Y-guns. The Hedgehog throwers are mounted on turntables before the bridge. Four torpedo loading racks are mounted in pairs abreast the after funnel while the droppers for anti-submarine homing torpedoes are mounted on the quarterdeck. All three vessels were completed in 1960, and have a speed of 32 knots derived from two Mitsubishi-Nagasaki CE type boilers and a two

shaft arrangement turning two Mitsubishi-Escher-Weiss turbines aggregating 35,000 shaft horsepower.

Each vessel carries a complement of 220 officers and men.

The visiting force will scatter wreaths at the entrance to Sydney Harbour in memory of the men in Japanese midget submarines who died during the ill-fated wartime mission in mid-1942.

The last visit to Australia by ships of the Japanese Maritime Self-Defence force was in July, 1962.

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Visits by U.S. Warships

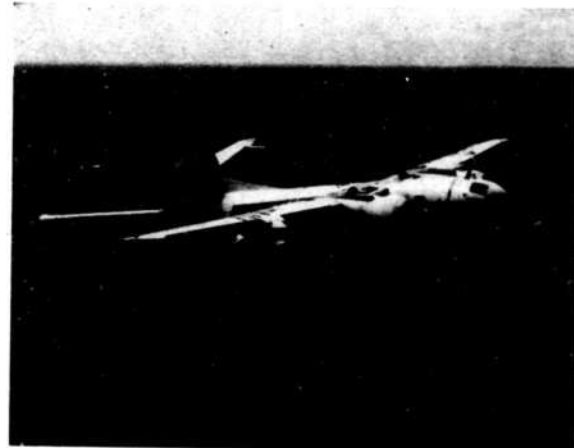
Twice this year Australia has been privileged by visits from warships of the United States Navy.

On 1st March, five ships of the U.S.N. Anti-submarine Warfare Group 1, under the command of Rear Admiral Evan P. Aurand paid a seven day visit to Sydney. Rear Admiral Aurand's flagship, the U.S.S. *Hornet*, an ASW Support Aircraft Carrier, converted "Essex" class, was escorted by the Frigate (DL) *John S. McCain*, of the "Mitscher" class, the destroyer *Epperson* of the "Basilone" class and two converted "Fletcher" class destroyers, *Fletcher* and *Nicholas*.

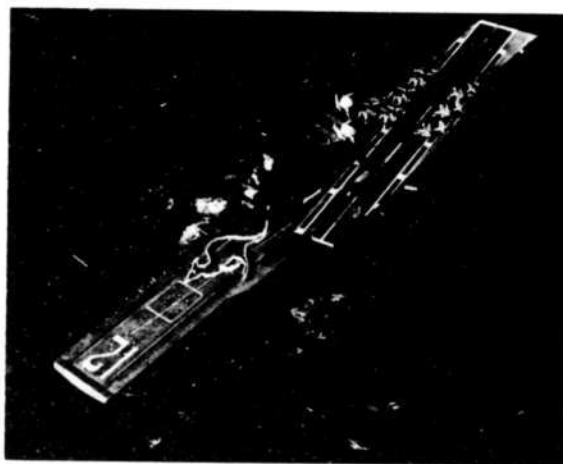
The group had completed a tour of duty with the Pacific Fleet and were returning to their respective home ports.

For two weeks before visiting Australia the group cruised from Japan, visiting and passing through several World War II battle areas, including Iwo Jima, Saipan, Guam, Rabaul, Guadalcanal and the Coral Sea.

The radar picket escort ship *Cul-*



An S-2D Grumman Tracker from the U.S.S. *Hornet*.



aterra, a converted destroyer of the "Edsall" class visited Fremantle in Western Australia, while the ice-breaker *Glacier* (AGB 4) visited Adelaide, South Australia.

The *Hornet* (CVS 12) displaces 38,500 tons, full load, her overall length being 899 feet. She was converted in 1952 and given an angled flight deck and "Hurricane" bow. In 1961-62 she underwent a FRAM II conversion (Fleet Rehabilitation and Modernisation) costing 10 million dollars thus extending her life for an additional 10 years. Aircraft carried included Sikorsky SH-3A anti-submarine helicopters, the S-2D "Tracker", Grumman E-1B early warning radar aircraft and A-4 "Skyhawk" light attack jet bombers.

The *John S. McCain* (DL 3) was going "home" for conversion to DDG (similar to Australia's guided missile destroyers) when she would be fitted with "Tartar" missile launchers and ASROC (2 triple tube anti-submarine rocket launchers).

When in Sydney she was already equipped with two "Dash" (Drone anti-submarine pilotless helicopters)

"Tie me kangaroo down sport." "Hornet" sailors pay tribute to their Australian friends as they steam out of Australian waters toward their homeland after a six-day visit to Sydney. Since the Yanks couldn't take an Aussie kangaroo with them, they decided to make their own by spelling him out on the flight deck.

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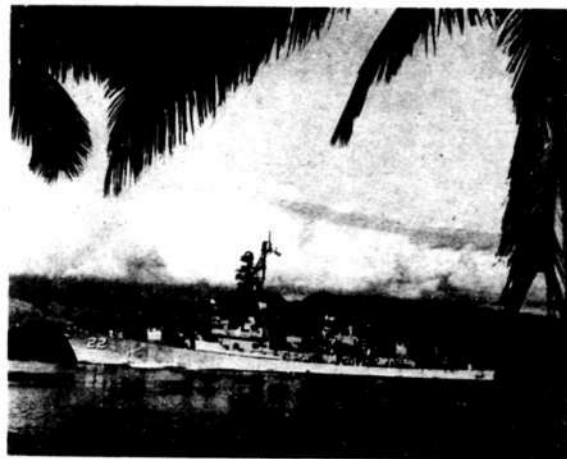
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The Guided Missile destroyer (DDG) "Benjamin Stoddert."

together with platform landing deck and hangar. She carries two fully automatic loading 5-inch guns, one 3-inch gun, and fires Mk. 32 torpedoes (brackets of 3 tubes). She is fitted with the now obsolete "Weapon Alfa" Mk. 108, a 12.75 in. anti-submarine solid fuel rocket having a range of 1,000 yards and a firing rate of 12 per minute. This weapon is a glorified version of the "hedgehog".

The *Epperson* (DD719) was completed in 1949 and has since undergone FRAM I conversion. Originally designed as a unit of the "Gearing" class she was converted for anti-submarine warfare and equipped with improved sonar and other electronic gear. She carries four, 5-inch guns in twin mounts (forward and aft), hedgehog and six homing torpedo tubes.

Nicholas (DD449) of 2,940 tons, full load was completed in 1942, has since undergone a FRAM II conversion and equipped with "Dash", landing deck and hangar, and six ASW torpedo launchers. She is also fitted with the Canadian built Variable Depth Sonar (VDS).

U.S.S. *Fletcher* (DD445) was completed in 1942 and has been in almost constant commission since.

In 1949 she was converted to serve as a close support convoy escort. In 1963 *Fletcher* was a unit of the U.S. Pacific Fleet Recovery Force for Astronaut, Major Gordon Cooper, Jr., U.S.A.F., during the MA-9 space flight. She has been awarded twenty battle stars for her



The U.S.S. "Pine Island".

operations. It has been reported that this ship is shortly to be decommissioned, having outlived her useful life.

CORAL SEA WEEK

A Seaplane Tender, two guided missile destroyers and a submarine visited Australia for the Battle of the Coral Sea celebrations. This year's guest of honour was Vice Admiral Paul H. Ramsay, U.S.N., Deputy Chief of Naval Operations (Air), from Washington, D.C.

Admiral Ramsay attended Ohio State University and the U.S. Naval Academy at Annapolis. He was formerly Director of Air Warfare, Office of the Chief of Naval Operations, Washington. He has also held the positions of Chief of Staff, U.S. Pacific Fleet and Commander, Naval Air Test Centre. He holds the Navy Cross, Legion of Merit; is a Member of the Naval Order of the U.S. Legion of Valour and is an officer of the Order of the British Empire.

Units visited all States except Tasmania. They included the Seaplane Tender of the "Currituck" class, *Pine Island* (AV 12), of 15,092 tons, full load displacement, she is armed with four, 5-inch guns. In performing her mission as a



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seaplane tender, *Pine Island* provides services for reconnaissance and anti-submarine seaplanes and their crews — much like an air base on land.

One of the first tasks she accomplishes upon arriving at her destination is to lay a seadrome which is basically a seaplane landing field.

This is done in a bay that is free of obstructions and can provide protection from the heavy ocean waves.

By anchoring specially lighted buoys in a straight line for a distance of about two miles, a safe path on which seaplanes can land and take off is provided. Additional mooring buoys are set out to pro-

vide a secure place for the arriving seaplanes to moor.

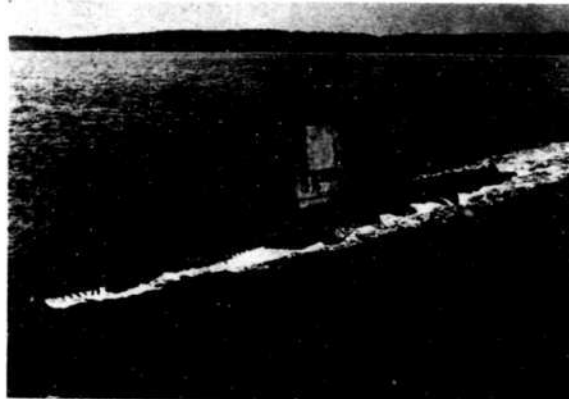
Crash boats keep the seaplanes clear of floating debris, and are available with emergency fire fighting equipment if needed.

Other boats refuel and service seaplanes, and transport pilots and crew members between their aircraft and the tender.

At the moment the U.S. Navy has three large seaplane tenders in commission.

Other vessels included two destroyers of the "Charles F. Adams" class, *Benjamin Stoddert* (DDG 22) and *Berkeley* (DDG 15), the same class as Australia's *Petth*, *Hobart* and *Brisbane*. Both vessels carry 42, "Tartar" missiles which are fifteen feet long and one foot in diameter, they are also fitted with ASROC and two, triple tube torpedo launchers. The *Benjamin Stoddert* has bow mounted long range sonar.

Bugara (SS 331) a submarine of the "Balao" class was visiting Australian waters for the third time since she was completed in 1944. She is a fleet snorkel submarine fitted with "Steinke" hood device for escape when disabled and has ten, 21-inch torpedo tubes.



The "Balao" class submarine "Bugara."

N.A.T.O. COLLAPSING

N.A.T.O. is in deep trouble!

The 17-year-old North Atlantic alliance is reeling under the blows levelled on it by France's President de Gaulle.

The intransigent French leader has issued an eviction notice to all United States forces and installations on French soil. Everybody out by next April, he demands.

Moreover, French troops are to be totally removed from under the integrated N.A.T.O. command. And S.H.A.P.E. (Supreme Headquarters, Allied Powers Europe) headquarters in Paris will have to find a new home.

De Gaulle's dictums have Washington in a quandary. Cost of relocating U.S. facilities in France to other European countries could cost 2.5 billion dollars. French officials say they won't pay a penny of it.

Other N.A.T.O. capitals are deeply concerned. It's now feared that France's intended pullout may start a chain reaction!

Portugal has already hinted that it may follow De Gaulle's move. Premier Salazar has branded N.A.T.O. as "inadequate" for Portugal's present needs.

Italy is greatly disturbed by Paris' moves. With France out, Italy would be isolated, having no geographic connection with the rest of the alliance.

Elsewhere on N.A.T.O.'s southern flank, some influential Turks are said to be having second thoughts about their country's commitment. Greece's domestic political turmoils severely limit that country's contribution.

N.A.T.O. without France would be a geographic absurdity! A great bulk of the alliance's supply lines cross French soil. The fields of France provide just about the only regrouping, or "fall-back" area in case of Communist attack from the East. Without this vital area N.A.T.O. forces would have to hold on and fight to the death within the confines of narrow West Germany.

THE BIG DANGER

The smaller countries, such as Belgium, Holland, and Denmark are worried too—and for a yet more serious reason.

They well know that N.A.T.O. was created not only as a shield against the Soviets, but as a means of tying West Germany firmly to the West by integrating her armed forces among those of the other members.

De Gaulle's act threaten to upset the delicate balance of power arrangement so far achieved. With France on the outside, the Bonn government will undoubtedly increase in power and influence within the shrunken alliance.

Top-level positions vacated by French officers may fall by default to the West Germans. Not only this, but with the budding French atomic arsenal placed beyond reach, Bonn will undoubtedly demand more participation in allied nuclear strategy planning. Various proposals for giving the Federal Republic more nuclear "say-so" are in the wind.

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NUCLEAR LUFTWAFFE

Look at what is happening inside Germany. West Germany already has the largest military force in N.A.T.O. outside of the United States, with 500,000 men under arms, plus a rebuilt Luftwaffe of 1,000 planes.

Bonn's twelve divisions in N.A.T.O. are equipped with U.S.-made "Honest John" rockets and "Sergeant" missiles, with "Pershing" rockets on the way. These projectiles are topped with tactical nuclear warheads under U.S. custody.

Numbers of West German F104G jet fighter-bombers are loaded right now—and have been for six years — with American atomic bombs.

True, all of these nuclear devices are under "elaborate" American control. Two U.S. sentries, for example, guard each nuclear-armed Luftwaffe plane. However, a U.P.I. reporter not long ago shockingly revealed that "this American control had existed more in principle than in fact."

Present plans call for the West German nuclear strike force within N.A.T.O. to increase from two air wings to five. With each wing having 36 combat aircraft and 14 in reserve, West Germany will have a total of 250 nuclear strike planes, each able to carry an American atomic bomb.

The Luftwaffe pilots train at Luke Air Force Base in Arizona! Here they learn the latest in nuclear drop techniques.

The threat of Communism is not the only danger to America! Is it possible that rising out of the ashes of World War II is a new menace to the free world?

SENSITIVE WARPLANE CAN "SMELL OUT" SUBMARINES

A warplane which is so sensitive it can "smell" the diesel fumes of a submarine cruising on the surface 50 miles away was recently demonstrated off Sydney.

The "sniffer" is one of the many

electronic devices on the U.S. Navy's Lockheed P-3 Orion anti-submarine plane.

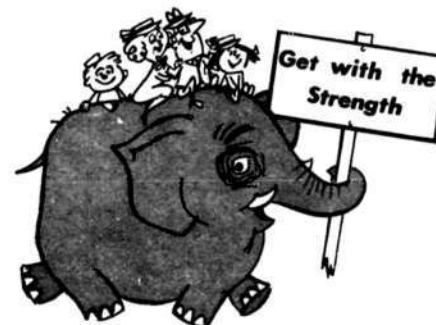
The Orion is the most modern and deadly anti-submarine aircraft in the world.

The R.A.A.F. has ordered 10 Orions to replace its Neptune fleet. The Orion can fly over the

ocean as low as 100 feet by day and 500 feet by night.

In a 12-hour patrol it can cover up to 50,000 square miles of ocean.

During long flights one of the plane's four engines is frequently turned off and "feathered" to enable it to conserve fuel.



"That's something you don't often see."
"That elephant with the sign in his trunk?"
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"Yes — that makes sense. But how did you know the sign referred to a bank?"
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"Get with the Strength — Bank Commonwealth?"
"Right."

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Compiled by "Periscope"

AIR BELOW

A new underwater swimming and diving device that frees its users from the cumbersome air tanks employed in scuba diving has been introduced by Evenrude Motors of Milwaukee, Wis., a division of Outboard Marine Corp. The Aquanaut is a portable, power-driven compressor, which is mounted on an inflatable, floating "doughnut". Its two-horsepower, two-cycle engine supplies filtered air to two swimmers through flexible, 25-foot hoses, attached to simple face masks. Swimmers using the Aquanaut breathe naturally, without a mouthpiece. The air hoses float and will not kink. And the Aquanaut enables swimmers to remain underwater for long periods. Price: \$279.

IT'S A BIRD, IT'S A PLANE!

In fact, it's an inflatable Hovercraft which can be stowed in the trunk of a car but, when inflated (somewhat in the manner of the dust bag of a vacuum cleaner), can carry seven men at speeds up to 35 miles an hour over water, swampland or other trackless areas. Including its own small engine, the Inflatable Hovercraft weighs only 150 pounds. In tests near London, it was driven over parked cars and even people, demonstrating its ability to clear obstacles without harming them. The body is made of two-ply rubberized cotton, originally developed as a material for the skirt that retains the cushion of air which supports a conventional Hovercraft. The craft, under development for the British Ministry of Aviation, has not been priced for commercial production.

AVROC 5-20 GUN

Development of the 20 lb Avroc 5-20 gun, which fires cartridge-less 5mm rocket-propelled projectiles, has been announced by Avco Corporation Ordnance Division (Richmond, Indiana, U.S.A.). Launching

of the projectile by low pressure from the initial firing of the rocket-motor not only makes the gun almost recoilless, but also cycles the gun so that another projectile is brought into the firing position as the first leaves the barrel.

FINGER-CONTROL BOAT ANCHOR

This rig permits finger tip control of small boat anchors and eliminates the messy tangle of wet rope and awkward anchor from the bottom of the boat. It consists of a rope reel that mounts anywhere along the side of a boat on either flat or curved surfaces, plus a bow mount that holds the anchor away from the hull to prevent damage. The anchor is lowered quickly, smoothly, silently, and simply by turning a button on the reel. The free spooling reel stops when the anchor reaches bottom or when the finger is removed from the button. The handle does not move during this operation, and also it will not spin if the hand accidentally slips from it while reeling in the anchor. The reel holds approximately 100 feet of braided rope. The solo angler who likes to keep his boat in one position can use two of these rigs, one at each end, and drop them simultaneously.

FISHING ROD HOLDER

Ideal for both trolling and still fishing is a new plastic rod holder from which fish positively cannot jerk the rod. It leaves both hands free for operating motor, rowing, baiting hooks, or enjoying a snack. It is made of high-impact plastic. A simple push-button gear permits quick adjustment to any of three positions—low, for still fishing; medium, for trolling and drifting; and upright, to hold the rod out of the way when not in use. In the last position it also can be used as a flagstaff holder or a radio-antenna holder. The holder has a 360-degree swing or rotation range. It can be easily mounted on the top or on the side. The holder itself is designed for easy detachment from its base.

HATE TATTOOS

About half of Britain's Royal Navy ratings are tattooed — and half of them would be happier if they were not, a Navy doctor says. Surgeon-Commander Ronald Scutt, of the Portsmouth Naval Command, said after completing a two-year probe into why 20,000 ratings have tattoos: "It's most alarming to find that half the Navy's sailors are tattooed and wish they weren't. It's a form of ritual which separates the men from the boys."

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Brief History of the U.S. 7th Fleet

A U.S.I.S. feature

The United States 7th Fleet, watchdog over 30 million square miles of water in the Pacific and a respected force for peace and deterrence, has a distinguished 22-year history of duty, in war and peace.

The 7th Fleet, established on March 15, 1943, first achieved glory in the famous Battle of Leyte Gulf in the Philippines in October, 1944, after General Douglas MacArthur led the landing of troops to begin the liberation of the Japanese held islands.

The Fleet was again in active combat during the Korean hostilities that started in mid-1950.

First to fire shells at the enemy in Korea was the light cruiser "Juneau", which bombarded Samchok, a port on the East Coast. On July 3, 1950, Task Force 77 of the Fleet launched the initial naval air

strike in the Korean conflict. It was the first time the U.S. Navy used jet aircraft in combat.

As more ships joined it, the 7th Fleet participated in every major operation of the Korean hostilities.

The Fleet did not see action again until late in 1954 when it was ordered to stand by near the Chinese Nationalist-held Tachen Islands, 120 miles north west of Taiwan, after Chinese Communists persisted in heavily shelling the Tachens. The 7th Fleet joined the Chinese Nationalist Navy in evacuating more than 18,000 civilians and 20,000 military personnel from

the bombarded islands in February 1955.

When the Chinese Reds started firing on the Nationalist-held islands of the Quemoy group near the Chinese mainland across the Strait from Taiwan in August, 1958, the Fleet once again was alerted and began a large-scale air defence exercise in the Taiwan Strait with high-performance jets. The rapid buildup of the Fleet to 140 ships, including four aircraft carriers, had its intended effect on the Chinese Communists. By the end of October, 1958, the mainland communists had drastically reduced their



An F-4B Phantom jet of Fighter Squadron 21, based aboard the U.S. Seventh Fleet carrier MIDWAY, releases its load of bombs on a Viet Cong concentration somewhere in the Republic of Vietnam. Midway's aircraft have been conducting strikes against Communist military targets in North Vietnam and Viet Cong strongholds in the South since April, 1965 (U.S.I.S. Photograph)



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U.S. MARINES LAND — Thousands of U.S. Marines are on duty in South Vietnam to help that country fight aggression by Communist Viet Cong. Photo shows Marines wading ashore at Da Nang from landing craft.

shelling of the Quemoy islands.

In September, 1960, the Fleet was called upon to support the United Nations for the second time by transporting United Nations forces from Indonesia and Malaya to strife-torn Congo in Africa.

However, the 7th Fleet is noted for more than its combat posture. It has always shown that it is humanitarian as well, outstretching a helping hand to all those in need of friendship and assistance.

Late in December, 1957, the Fleet carried out the first of a series of its many rescue and relief missions, furnishing desperately needed medical supplies and food to survivors of floods that had ravaged Ceylon.

On October 10, 1958, the flagship "Helena", using helicopters and small boats, rescued 116 Chinese Communist civilians from a reef of the Paracel Islands in the South China Sea.

During the 1958 Christmas season, units of the 7th Fleet came to the aid of 7,000 persons made homeless by a fire on Amami-O-Shima of the northern Ryukyu Islands, off southern Japan.

In 1959, the Fleet carried out two more rescue missions. It helped flood victims of central Taiwan during August, and the carrier "Kearsarge" used helicopters to evacuate 3,200 persons from Nagoya, a city in southern Japan, after 160 m.p.h. typhoon winds had ripped the metropolis. Navy medical teams

inoculated 17,000 Japanese and performed nearly 100 minor surgical operations. Helicopters dropped more than 100,000 pounds of relief supplies.

When Hong Kong staggered from the effects of Typhoon "Wanda" in September, 1962, rescue parties and medical teams from the 7th Fleet helped victims of the storm.

In November, 1964, a severe typhoon and ravaging floods struck South Vietnam. The carrier "Princeton", answering urgent appeals for help, delivered 200,000 pounds of clothing, food, bedding and medical supplies to the homeless during a week-long period.

Besides combat action and humanitarian roles, the 7th Fleet has joined with member nations of the Southeast-Asia Treaty Organisation (SEATO) in military exercises to bolster their mutual capability of co-ordinated defence. Australia, New Zealand, Philippines, United Kingdom, France, Pakistan, Thailand and the United States are members of this alliance for collective defence.

The men of the 7th Fleet have many friends in the foreign ports where they have made goodwill visits. Sailors and marines have donated thousands of pints of fresh blood, as well as contributed many thousands of dollars from their own purses each year to help the needy and unfortunate.

Today the U.S. 7th Fleet has assumed an unparalleled position of leadership in the western Pacific. At

no period since the Fleet's creation in 1943 has its role been more vital and influential and its presence an important part in the lives of more than 1,000 million people.

WORLD'S FIRST NUCLEAR-POWERED CARRIER "ENTERPRISE" GOES INTO COMBAT

During the first day of combat operations, aircraft unloaded more than 100 tons of bombs on suspected Viet Cong troop concentrations and supply dumps in South Vietnam. Every day since that date the enemy has been suffering the effects of bombings by aircraft from the 85,000-ton, \$474 million carrier.

The "Big E" joined the 7th Fleet in the Pacific in November 1965. Two other U.S. atomic warships—the cruiser "Long Beach" and the missile frigate "Truxtun"—are due to join the Pacific Fleet some time this year.

Not only is the "Big E" the world's biggest warship, but she has an awesome striking power for use in combat. The carrier has an Air Wing consisting of approximately 100 planes flown by seven squadrons and three specialized detachments. Of the four types of jets aboard, three are supersonic.

Two squadrons have fighter aircraft—one flying the F8E Crusader and the other using the F4B Phantom II, the world's fastest operational jet.

The Crusader is capable of flying twice the speed of sound. The Phantom II, a dual seat, twin-engine jet, is able to intercept and destroy enemy aircraft under all kinds of weather conditions. It holds the world's speed record of more than 1,600 miles an hour, and can carry both "Sidewinder" and "Sparrow" missiles.

The heavy attack squadron on the "Enterprise" flies the supersonic, swept-wing, twin-engine "Vigilante" (A5A), which has an inertial navigation system and sophisticated bombing equipment. The "Vigilante" weighs over 22 tons, can fly faster than Mach 2 and is used for reconnaissance and attack in all kinds of weather.

Three other squadrons of the "Big E" fly the A4C "Skyhawk", a single-seat, subsonic light attack aircraft, capable of speeds in excess

of 500 knots and of delivering a heavyweight punch in either conventional or nuclear weapons.

Another squadron flies the A1H "Skyraider", a single-seat propeller-driven bomber used primarily for low-level attack missions. Its speed is about 350 miles per hour. The "Skyraider" is recognized as the fleet's most versatile plane because of its capacity to transport a wide variety of weapons.

The RF8A Photo "Crusader" is the reconnaissance "eye" of the naval force. On nighttime missions, it uses flash flares, each one producing 125 million candlepower of light.

The E1B "Tracer", an all-weather twin-engine aircraft with an 18-foot "radome" mounted above the fuselage, is a radar early warning aircraft which extends radar alertness against the enemy.

A jet-powered helicopter, the "Sea Sprite", furnishes search-and-rescue capability as well as a variety of other services between ships. For example, the transfer of men and materials from one ship to another at sea.

Despite her massive size — a length of 1,123 feet, a width of 257 feet on the flight deck, and a height (keel to the top of the mast) equal to a 25-storey building—the "Enterprise" can manoeuvre with the ease of a destroyer and accelerate and decelerate faster than any conventional aircraft carrier.

Included in the most modern and complex equipment aboard the carrier is the "tactical data system". It takes only millionths of a second for the data processing and communications system to evaluate enemy threats and recommend counter-moves to shipboard commanders in the fleet.

Information relating to detection, location, tracking, speed, identity and size of enemy contacts is fed into the "brain" of the system. The situation is comprehended in a split second. Personnel instantly man the weapons needed to deal with the threat.

Total output of all the "Big E's" electronic equipment is equal to that of 300 powerful radio stations; sufficient generating capacity to supply the power needs of a city of more than two million persons.

Teamed with the "Enterprise" in

Vietnamese waters is the nuclear-powered guided missile frigate, U.S.S. "Bainbridge". This 8,400-ton ship is armed with "Terrier" surface-to-air missiles in twin launches mounted fore and aft, an anti-submarine rocket launcher (ASROC) and torpedo tubes, in addition to conventional weapons.

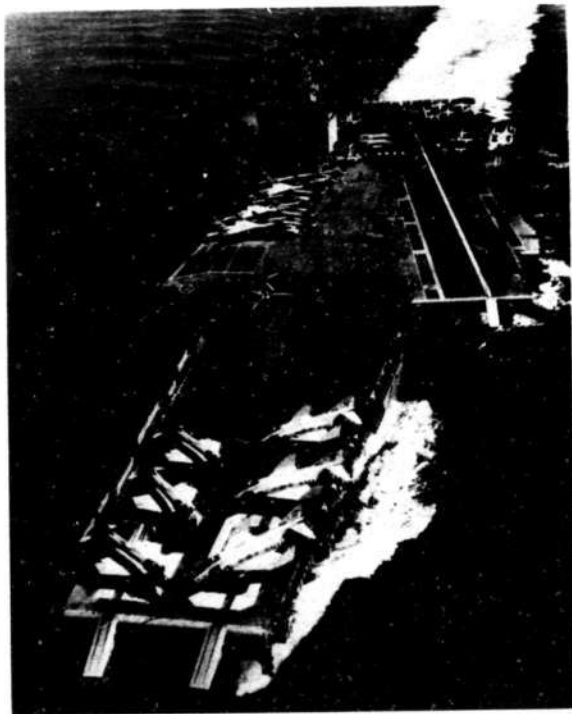
The Bainbridge's supersonic, solid-fueled, radar-guided "Terrier" missiles give her an anti-aircraft striking power far beyond the gunnery limits of any warship in World War II. "Terriers" are also effective against surface targets at close or intermediate ranges.

This frigate can track hostile submarines for weeks at a time. The "ASROC" weapons system pro-

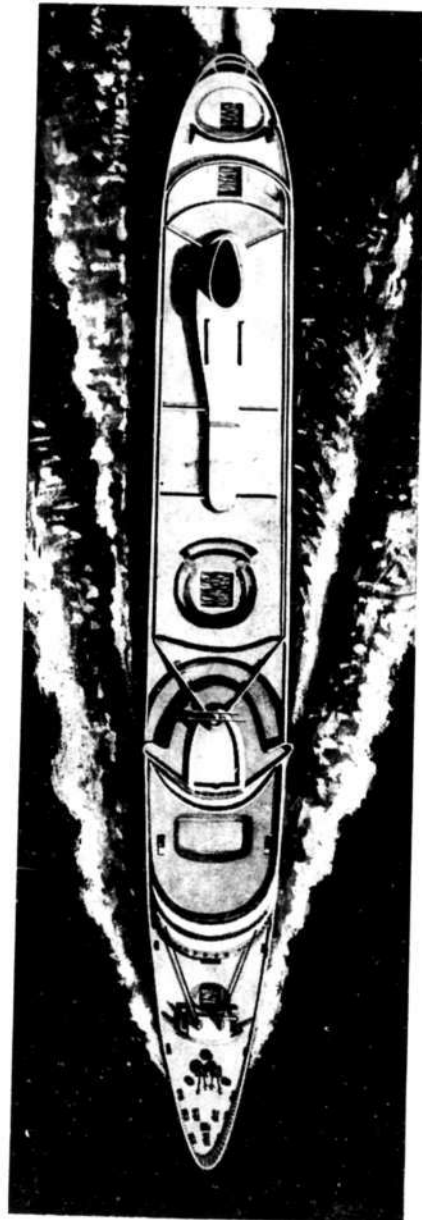
vides a deadly weapon against undersea craft. "Bainbridge" can detect a submarine at long range, quickly compute its course and speed, and fire acoustic-homing torpedoes or depth charges.

The Bainbridge is 564 feet long, has a beam of 56 feet, is powered by two atomic reactors, and can travel at speeds greater than 30 knots. All living space aboard is air conditioned.

These warships along with other units of the 7th Fleet are practical symbols of U.S. Naval strength, and evidence that the United States of America is committed to the defence of all free people whose liberty is menaced by communist aggression.



WORLD'S BIGGEST WARSHIP — This is the 85,000-ton U.S.S. Enterprise, the world's first nuclear-powered aircraft carrier, from whose flight deck Navy planes are striking at the enemy in Vietnam. The "Big E" has an Air Wing of about 100 planes and a crew of nearly 5,000 officers and men.



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