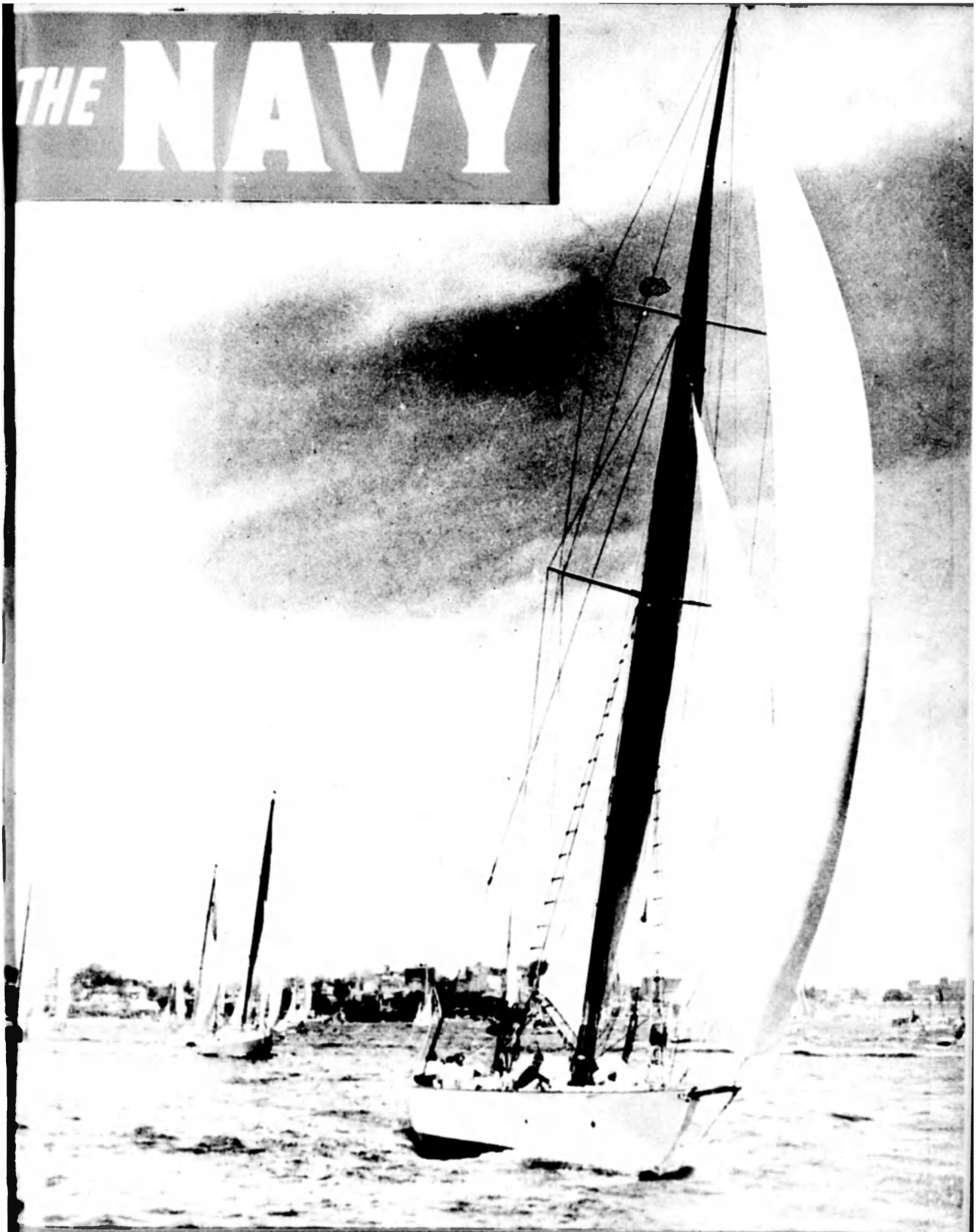
THE NAVY



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A HEALTHY CRITICISM

The Director of Naval Reserves, Captain A. S. Rosenthal, has made important recommendations following his inspection of the New South Wales Division of the Australian Sea Cadet Corps.

His official report by no means flatters the standard of training in some units.

But it does pay tribute to the improvement which he found in other units.

However, it is inescapable—from the Director's findings—that while a lively enthusiasm does exist that enthusiasm needs more co-ordination and more supervision by qualified instructors.

The Director does not make clear in his official report that the officers and instructors of the Sea Cadet Corps are volunteers. His criticism, therefore, is based on a standard of efficiency which a naval officer would expect to find in H.M. establishments.

But this is all to the good. It calls for a very high degree of efficiency which the Sea Cadet Corps can achieve through local and State-wide efforts. That degree of efficiency could well lead to potential first-class recruits joining the R.A.N. or the R.A.N.R.

In his official report the Director says that he considers it vitally necessary that the New South Wales Navy League committee try to find additional qualified and interested persons for appointment as officers and instructors.

He recommends that all officers and instructors be required to carry out a course in an R.A.N. establishment, and to be examined in squad drill, boat work, Sea Cadet syllabus and knowledge of Sea Cadet regulations.

The Director says: "If found wanting, appointments should be terminated, even if such action means the disbanding of a local unit—on the grounds that no unit is better than a bad one."

He reports that he found no suggestion that cadets were joining the R.A.N. or the R.A.N.R. However, he looked forward to some improvement in the future in the way of recruits.

The Director states that the Navy has helped provide camps for Sea Cadets.

But he believes that a firm policy should apply and accordingly, he recommends:

- That camps be limited to H.M.A. establishments within the State to which a unit belongs.
- Embarkation of cadets in ships should be limited to daylight passages only, except in the case of cadets who have already carried out a camp of at least seven days in a naval establishment.

The Director points out that one pleasing aspect he noticed was the institution of organised games for sea cadets since the tour of Captain Spurgeon. Activities such as these would encourage the development of Corps spirits, the Director said.

Summing up, the Director says: "It is considered that more Service control should be applied in training matters—the Navy's main role in sea cadet administration.

"It is therefore recommended that the administrative staff in New South Wales be reconstituted.

"It is proposed that a senior R.A.N.R. officer, with R.A.N.R. officers as executives and training officers, be made Headquarters Staff."

The Director recommends that the new body should act in an R.A.N. establishment, preferably H.M.A.S. *Rushcutter*.

He further recommends that an officer's course be carried out in *Penguin* or *Rushcutter* in accordance with the present sea cadet syllabus.

PROTECTION IN THE ATOMIC AGE

A party of journalists recently visited H.M.S. *Ark Royal*, the Royal Navy's most modern aircraft-carrier and the first ship to be fitted with remote control for use in the event of an atomic attack at sea.

Describing the visit, the aeronautical correspondent of the London "Times" said: "If an atomic attack were made on the Fleet and the *Ark Royal* was within the 'fall-out' area she would immediately be 'sealed'. That means she would cease to draw air from the atmosphere, the air inside the ship being recirculated, and all the ship's complement would immediately be withdrawn to safe positions away from danger of contamination.

"Without normal ventilation the temperature in the engine and boiler rooms would soon become unbearable. All staff would immediately be withdrawn and the ship steered by remote control from two emergency control rooms on No. 6 deck. Each of these rooms can control two engines and two boiler rooms.

"The *Ark Royal* has actually been brought to anchor in Sandown Bay, off the Isle of Wight, by remote control, without anyone in the engine room."

The correspondent quoted the senior engineer, Lieutenant-Commander D. G. Greaves, R.N., as having said: "The use of remote control has proved most successful. It could be a normal method of steaming and it reduces the manpower required for the task."

The Short Seamew, powered by an Armstrong-Siddeley Membe turbo-prop engine, in flight. It carries the latest radar "search and strike" equipment. The radar scanner is housed in the bulge under the cockpit.

A NEW SUBMARINE HUNTER

By Rear-Admiral Sir Matthew Slattery

Formerly Chief of Naval Air Equipment at the Admiralty

A GLANCE at any map of the world shows that the sea covers something like five-sevenths of the earth's surface. A great deal of this mass of water lies in the Indian and Pacific Oceans and most countries in that part of the world have many thousands of miles of coastline for which they are responsible. The development of maritime and coastal defence aircraft is obviously of great importance to those countries, where large areas of coastal waters have to be patrolled.

Experience in the last war showed that underwater attacks on shipping came as near to bringing Britain to defeat as any other single offensive action undertaken by Germany, and it seems likely that submarine attacks on convoys carrying supplies will continue to play a part in war.

Defence against submarines is mainly achieved by the concerted action of surface vessels and aircraft, the latter operating from shore bases or from carriers with the convoy. Reconnaissance is, of course, an essential requirement in the first place, and when this involves the searching of wide areas of open sea, it is probably most economically performed by large shore-based aircraft. In inshore waters, however, it can be done effectively and economically by small aircraft operating from coastal airstrips. When, however, the convoy finds itself in a submarine-infested area, it must be defended promptly by the largest possible number of aircraft brought into action as speedily as possible.

For this purpose, reinforcements of long-range, shore-based aircraft cannot be depended upon for they would take several hours to reach the scene of action. Carrier-borne aircraft operating with the convoy are the real and effective solution to this problem.

In view of the large numbers of aircraft required, it is essential that they should be small, rugged and simple; they must be able to operate in the foulest weather from the smallest carriers. It is also important for these aircraft to be maintained by the minimum number of mechanics, who will often have to operate in far from ideal conditions.

These same aircraft will in every way be suitable for inshore patrol of coastal waters generally.

In peace time, aerial supervision of isolated stretches of coastline is politically important, and there are the problems of Customs evasion, air/sea rescue, communications and general reconnaissance. Many of the tasks I have mentioned have to be carried out by countries who cannot afford to spend vast sums of money on military aircraft.

The difficulties which face such nations in equipping their air forces have been carefully studied by Short Brothers and Harland Ltd., aircraft manufacturers of Belfast, Northern Ireland, which has recently produced the Seamew, a versatile and simple submarine hunter, now going into service with the Coastal Command of Britain's Royal Air Force and with the Royal Navy.

The Seamew, already in full-scale production at Belfast, is a light, robust aircraft for operation in a variety of duties. Costing only between one-half and two-thirds the price of any comparable machine in operation, it comes well within the purchasing power of small countries or of countries with small air forces.

Simplicity of design also means simplicity of production, low labour costs, reliability of performance and the minimum of maintenance. The last two factors make the Seamew a suitable machine for operations in areas where airfield and maintenance facilities are primitive. Its short take-off and a slow approach speed mean that the aircraft can operate from the smallest carriers without using a catapult, although it is fitted with catapult take-off gear.

The aircraft's wide range of flying speeds and its ability to turn in very small circles around a target give it a tactical advantage over fast and less manoeuvrable aircraft. Quickly removable inspection panels give complete accessibility to the power plant—seven men can work comfortably around the nose of the aircraft and a complete engine change can be achieved in little over an hour. An advantage of the turbo-prop engine is its ability to operate on kerosene or low-grade petrol.

A special form of undercarriage has been designed for the Seamew. The main legs completely eliminate bounce when landing—this is very important in the case of a landing on an aircraft-carrier in heavy seas, or when putting down on improvised airstrips. The undercarriage legs can be jettisoned if the aircraft is "ditched" — this avoids nosing over.

The Seamew has an extensible tail wheel so that on touch down the aircraft maintains an attitude similar to that of the conventional tricycle arrangement. For take-off, however, the tail wheel leg compresses and puts the aircraft in the best position for a quick climb away. It can carry a wide assortment of weapons, including torpedoes, bombs and rockets fitted externally to the wings.

The retiring Federal president of the Navy League, Commander I. D. Bates, said this at the annual meeting of the Federal Council in Melbourne on October 31.

Commander Bates, who did not seek re-election, was succeeded as president by Vice-Admiral Sir John Collins, K.B.E., C.B.

Commander Bates said that the Navy League should not be satisfied until its activities had been introduced into the Northern Territory and New Guinea.

However, the League had continued to expand in the past year, he said. The Australian Capital Territory division was formed at a public meeting on September 22.

"His Excellency the High Commissioner for New Zealand, Mr. Lisle Alderton, himself an ex-naval officer, has accepted the presidency of the new division and Mr. John Howse, M.P., who gladly undertook the spadework of launching it, is the vice-president with Messrs. Harald Ganter and Ronald Hull," he added.

"Commander A. D. MacLachlan, R.A.N. (retd.), is honorary secretary and treasurer. There is every hope that a Sea Cadet unit will be formed to operate on Lake George."

In a detailed statement of the officer and cadet strength of the Sea Cadet Corps, Commander Bates said that Victoria now had a total of 395 officers and cadets, N.S.W. 350, Tasmania 235, Western Australia 93, South Australia 38, and Queensland 162, making a total of 1273.

"The Corps has continued to expand, but in all divisions there is still a severe shortage of officers and instructors," Commander Bates said.

"I have had occasion from time to time to refer in public addresses to the origin and history of the Navy League of Australia. I find in N.S.W. that records are very sparse indeed. I suspect that this may be so in other divisions. I ask all of you to take steps as soon as possible to examine the records of your divisions and ensure that they are adequately kept.

"It would be a great help if the N.S.W., Victorian, and South Australian divisions, which were in being before the formation of the Navy League of Australia, would pool information on their respective histories with the Federal secretary."●

The Seamew pioneers a return to simplicity, the need for which is beginning to be widely appreciated in aeronautical circles all over the world. Aircraft designers are beginning to concentrate on the problems of light weight and low cost without sacrificing operational efficiency. Military aviation is reaching the point where high performance and the provision of much complex equipment are not the only criteria. Production potential and lower costs are beginning to tilt the balance.●

THE NAVY LEAGUE IS GROWING

NORTHERN Territory and New Guinea are now the only two parts of the area covered by the Navy League of Australia in which there is no division of the League.

LET'S LOOK AT RUSSIA'S NAVAL STRENGTH

By MURRAY McGREGOR (in Johannesburg)

When on June 15 the Queen reviewed her fleet and the foreign warships drawn up in her honour at Spithead, the ship that attracted most attention was the Russian cruiser "Sverdlov." This is not surprising. Not only is the "Sverdlov" a striking ship but the fact of her presence was important. For of all the navies of the world the one that least is known about is that of Russia, officially known as the Red Fleet.

A FEW months before the First Lord of the Admiralty, in introducing the Navy Estimates, startled his fellow members of the House of Commons and the public when he said that the Russians now had the second largest navy in commission in the world (the largest is the United States Navy). Many people thought that he meant that the Red Fleet was now stronger than the Royal Navy but, fortunately, that is not so. The Royal Navy is still much stronger than the Russian Navy, but a large proportion of its ships are laid up in reserve, while most of the Russian ships are kept permanently in commission. This gives them an advantage as it means that their ships are instantly ready for war, while the crews being always attached to their ships get more experience than if they were to be hurriedly drafted to them in an emergency.

Certainly the smartness of the *Sverdlov* and the efficiency of her crew at the review seem to show that there is nothing wrong with the quality of the ships and seamen of the Soviet Union. If the Red Fleet has many more ships and men like those on view at Spithead then it must be a formidable force. Just how big the Russian Navy is nobody really knows. The *Sverdlov* is about the only ship to have become visible from behind the Iron Curtain for many years, so much of the information about the Russian Navy in naval reference books is mere guesswork.

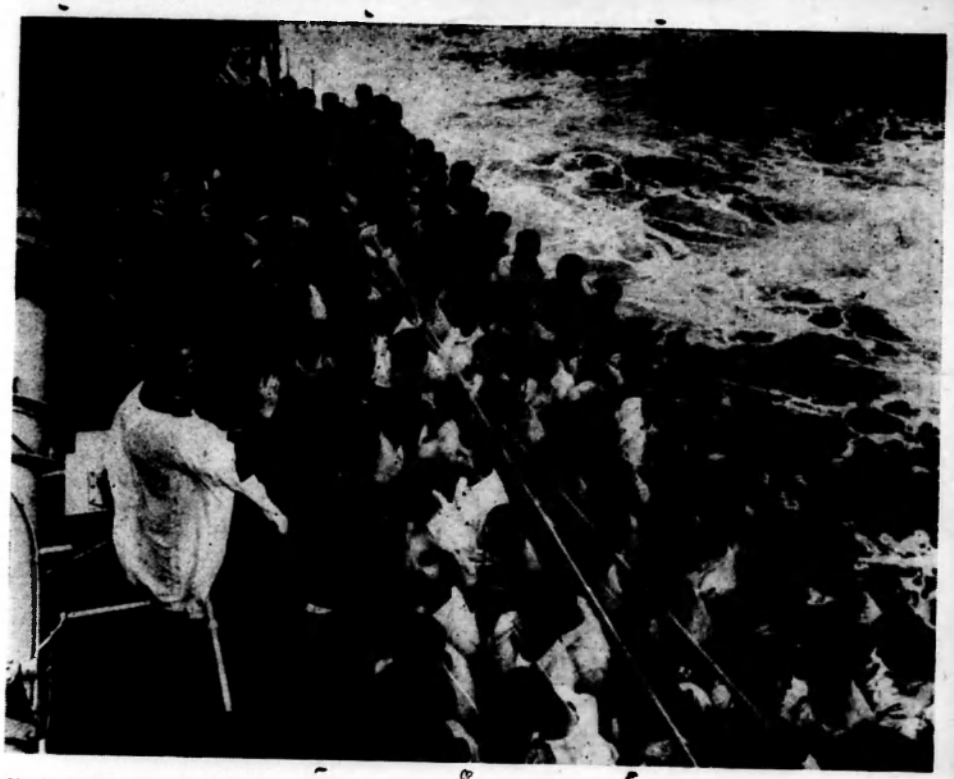
About some Russian ships we know quite a lot. These are ships that used to belong to foreign navies or are still relics of the old Czarist Navy. Since the war the Russians have acquired so many ships from former enemies that their fleet could almost be called by the name once given to the French Navy, a Navy of Samples.

Thus of their battleships the most powerful known to be in existence is the *Novorossik*. She was originally the Italian battleship *Guiulio Cesare*, which was launched as far back as 1911, but was so completely rebuilt during 1933-37 as to become almost a new ship. She is now a ship of 26,140 tons, mounting an armament of ten 12.6-inch guns, with a number of smaller and anti-aircraft weapons. Her speed after reconstruction was 27 knots, but she could probably not do more than 23 to-day. She is not as stoutly protected as British or U.S. ships, having a belt of 10 inches in thickness with a 5-inch armoured deck and 11 inches in her four big turrets.

Even older are the *Gangout* and *Sevastopol*, survivors of a class of four built between 1909 and 1914, one of which, as the *Marat*, was present at the 1937 Coronation Review, where she caused interest and amusement by what Oscar Parkes described as "her hammer funnel and her sickle bow." She had been built as the *Petropawliwsk* and resumed her former name shortly before the war. She was so badly damaged by air attack in Kronstadt harbour that she had to be beached in a hurry, but as her big gun turrets were still usable she became a sort of fort for the defence of the place. It would have been possible for the Russians to rebuild her, but it seems that they have not done so, probably thinking (very wisely, too) that the time, money and effort would be better spent in building a new ship.

The two remaining ships of the class have a displacement of 23,500 tons and were designed for a speed of 23 knots, but it is doubtful whether they could reach 18 to-day. Their armament consists of 12 12-inch guns in four turrets, 16 4.7-inch and 10 3-inch high-angle guns, with a number of smaller anti-aircraft weapons. Their armour is not heavy, with a maximum thickness of 9½ inches on the side, a 3-inch deck and 12-inch on the turrets.

From the Finnish Navy the Russians acquired the coast-service battleship *Vainomonin*, which they renamed *Viborg*. She is an interesting little ship although quite useless for fleet operations. On a displacement of only 3900 tons she mounts four long 10-inch guns in two turrets, also eight 4.1-inch high-angle guns in four small turrets and a number of Bofors and Oerlikon light A.A. guns. She has only 2-inch armour on her side, 4 inches on the big turrets and an armoured deck of ¾-inch. But her diesel-electric engines give her a speed of 15 knots with a wide range of action, while her light craft fits her for operations almost anywhere in the shallow waters of the Baltic. Her heavy armament would make her an awkward customer for anything less than a capital ship.



Chaplain R. Traynor preaches from one of H.M.A.S. "Anzac's" torpedo tubes at a Service during the destroyer's recent voyage to Malaya —A.P.A. photo.

These are the known Russian battleships: what other might there be? First there is that great ship of which so many conflicting reports have been received, the *Sovietski Soyus* (i.e., Soviet Union). She was laid down under the name of *Tretii International* (i.e., Third International) in 1938 at Leningrad, one of a class of four. The incomplete hull of one of them, the *Krasnaya Bessarabia*, was destroyed by the Russians themselves when they abandoned Nicolaiev to the Germans in 1941; another, the *Stana Sovetov*, also laid down at Leningrad, was, like the *Sovietski Soyus*, badly damaged while on the stocks by German air attacks: the fourth unit of the class seems never to have been laid down at all. The *Soyus* herself has been variously described as being complete and in service, as having been broken up on the stocks, as having been launched in 1945 but not yet completed. Originally planned as a 45,500-ton ship, she is now stated by those who believe in her existence to be a 45,000-ton battleship. Her speed is reported as "high—over 30 knots," her draft shallow to fit her for Baltic operations. Some reports credit her with a main armament of nine 16-inch guns, others would have it that she has six 16-inch guns in two turrets plus launching apparatus for flying-bombs or V2 rockets—altogether a most formidable ship and more than a match on paper for Britain's greatest battleship, the *Vanguard*. If the Russians have succeeded in completing two ships of this class they would make her Baltic Fleet a powerful force.

Another battleship that might have been added to the Red Fleet is the former German battleship

Gneisenau, one of the pair whose escape up the English Channel in February, 1942, caused such comment. She was damaged in her flight up-channel, was taken to Kiel for repairs where she suffered more damage from R.A.F. attacks, was then shifted to Gdynia farther in the Baltic, and finally sunk there in 1944. Thus she was in a bad way when the Russians raised her last year and it is doubtful whether they have been able to rebuild her. Originally she was a ship of 31,300 tons and 32 knots speed, mounting nine 11-inch guns in three turrets and many smaller, strong armour protection (14 in. on belt and turrets and several 3-inch armoured decks) and a wide radius of action. If the Russians have managed to restore her to her old state she would be a fine reinforcement to their Baltic Fleet.

Two other well-known German ships might have been raised. The first is the old battleship *Schlesuig-Holstein*, a pre-Dreadnought that fought at Jutland in 1916 and was later made into a training ship, in which capacity she visited South Africa in 1939 a few months before war broke out. She took part in operations against Poland in 1939, but was not active after that. She was sunk at Gdynia in 1944. Even if reports that she had been raised and added to the Red Fleet under the name of *Borodino* or *Orel* (both good old Russian battleship names) are true, she would not be of much value to them. A ship of 13,000 tons, she was built in 1906 and her original 18½ knots would probably not be more than 14 or 15 to-day. She carried four 11-inch guns with some smaller guns and her armour was 9½-inch belt and 11-inch on the turrets. The second ship would be of far more value to the Russians if they rebuilt her. She is the ship that was famous some twenty years ago as the "Pocket-battleship" *Deutschland*, renamed *Lutzow* by Hitler shortly after the war started. Like the other German ships mentioned she was sunk in the Baltic towards the end of the war but was raised by the Russians in 1946. If restored to her original state she would be an armoured cruiser of 12,000 tons, with diesel engines giving her a full speed of 26 knots and the enormous radius of 21,000 miles at a speed of 10 knots without refuelling; she was armed with six 11-inch guns in two turrets, eight 5.9-inch guns and numerous anti-aircraft weapons. Her armour was light, 3-inch on her sides and 5½-inch on her turrets with a deck of 1¾-inch, yet she was a formidable ship and if properly handled could have done much damage to the sea-borne trade of her enemies.

Of greater importance than battleships under modern conditions are aircraft-carriers.

So far as is known the Red Fleet has none, although for many years *Jane's Fighting Ships*, the famous naval annual, listed one, the *Stalin* of 12,000 tons, as "building," but has ceased to do so now. The incomplete hull of the German carrier *Graf Zeppelin*, launched in 1938 at Kiel and sunk in 1942 at Stettin, was supposed to have been raised by the Russians and taken to Kronstadt for completion. She is reported to have foundered while on tow to the Russian naval base. She was designed as a ship of nearly 20,000 tons with a speed of 34½ knots, with 4-inch armour on her sides and 3-inch on the flight-deck, carrying a much heavier gun armament than British or American carriers and with a capacity of some 40 planes; a good ship but probably not as good as the 23,000-tonners of the *Indomitable* class. Even if the Russians have not succeeded in salvaging her it would not be surprising if they were to try to acquire an aircraft-carrier or two, in view of the great importance attached to this class of ship to-day.

In cruisers the Russian Navy is strong but exactly how strong is difficult to know. The *Sverdlov* is one of a large class, of which four are known to have been completed and another four to eight are still under construction. Ships of 12,800 tons and 34 knots speed, they each carry twelve 6-inch guns in four turrets. The later units of the class are said to be 1000 tons larger and to mount 7.1-inch guns instead of 6-inch. The sole obvious weakness of these ships is that their main armament is incapable of being used for anti-aircraft fire, whereas in practically all cruisers built in other countries since the war, such as the U.S.S. *Worcester* and the French *De Grasse*, the main guns are on high-angle mounting.

The *Sverdlovs* are good ships, superior on paper to the *Superb*, *Colony* and *Town* classes which form the bulk of the Royal Navy's cruiser force and matched only by the *Belfast*, the biggest British cruiser.

These Russian cruisers are enlarged editions of the seven ships of the *Kirov* class, each of which on a tonnage of 8800 mounts nine 7.1-inch guns in three turrets and has a speed of 35 knots. An older ship is the *Krasni Kavkas*, of 8000 tons mounting 7.1-inch guns and with her original speed of 30 knots probably reduced to about 25 by now. Several older and smaller cruisers also exist, mounting varying numbers of 5.1-inch guns, too old and slow for cruiser work but still in service as training ships.

All the above are Russian built, but the Red Fleet also includes several ships which it got from other navies. Chief of them is the *Stalingrad*, ex-Italian cruiser *Duca d'Aosta*, of 8660 tons and 36 knots speed, with a main armament of eight 6-inch guns in four turrets. She was handed to Russia under the terms of the Italian Peace Treaty. Then the ex-German *Nurnburg* is now the Russian *Admiral Makaroff*, a ship of 6700 tons with a speed of 31 knots and mounting nine 5.9-inch guns in three turrets. Two other ex-German cruisers are probably in service, the *Lutzow* and the *Seydlitz*, which are said to have been renamed *Petropavlovsk* and *Poltava*.

The former was given to Russia under the Non-Aggression Agreement of 1939 and the latter was seized in a sunken condition when the Russians occupied Koenigsburg. The Germans claim that they sank the ex-*Lutzow* during their attack on Russia and that the ex-*Seydlitz* was so badly damaged before the Russians got her that she could not have been rebuilt. These two ships were sisters to the *Prinz Eugen*, which accompanied the *Scharnhorst* and the *Gneisenau* on the escape from Brest, and which was later used by the United States in the atomic bomb tests at Bikini. They were all ships of 14,600 tons with a speed of 32 knots, armed with eight 8-inch guns in four turrets, twelve 4.1-inch high-angle guns and many small A.A. guns. Their armour was good for cruisers, being a belt of 3-inch armour, 5½-inch on the turrets and two armour decks of 1½-inch plating, with extremely good internal sub-division. The German naval annual, Wever's *Taschenbuch der Kriegsflotten*, says that one of these ships may be in a state of completion but even that is doubtful; the French annual *Flottes de Combat* says that one or perhaps both exist, with a new main armament of ten 7.1-inch guns; while *Jane* thinks that both are complete and that their new armament is of twelve 7.1-inch guns! Anyone who has studied Russian naval history knows that they are adepts at raising and repairing sunken ships, so it is on the cards that they have succeeded in making good use of all the sunken or damaged German ships that they have been able to lay their hands on. So I think we may safely conclude that *Petropavlovsk* and *Poltava* are to-day efficient units of the Red Fleet's Baltic squadrons, of which they would be by far the most powerful cruisers.

The Russians have always liked big, heavily-armed destroyers and of these there are a good number in their fleets. Besides their own big ships of the *Leningrad* and *Stalin* classes, ships of about 2500 tons and 38 knots speed, mounting five or six 5.1-inch guns with many anti-aircraft weapons and eight or nine torpedo tubes, they have also a number of similar ships taken from the navies of their former enemies. Thus they have four of the big German destroyers of the *Narvik* or similar types, of 2400 to 2600 tons, a speed of 36 knots and mounting four or five 5-inch or 5.9-inch guns, with a powerful A.A. armament and eight torpedo tubes. They also have at least two ex-Japanese destroyers of about the same size but a speed of nearly 40 knots, which have probably been given a new armament of Russian guns as they were taken over in an unarmed condition. Then they have some 40 or 50 ships of the *Slavny* and *Ogievni* type, 1800 tons, 36 knots, with four 5.1-inch guns, many A.A. guns and eight torpedo tubes. Somewhat smaller are the British-designed, Italian-built ex-Roumanian destroyers *Regele Ferdinand* and *Regina Maria*, now called the *Letutshi* and the *Litshoi*, of 1400 tons and 35 knots, with five 4.7-inch guns and six tubes. Of about the same size and speed are about a dozen ships that used to belong to the German, Japanese and Italian fleets. The oldest units of this type are seven of the 1300-ton ships of the *Karl Liebknecht* class, once the pride of the Czarist Navy, mounting four 4-inch guns each and nine torpedo tubes and still probably capable of doing 25 knots.

Of sea-going torpedo boats and escort ships they have a large number, about 80 in all, both Russian built and taken over from other navies. They may even have an ex-British frigate the *Lark*, sister to the *Nereide* which was for

many years on the South Atlantic Station. She was badly damaged by torpedo at Murmansk in 1944 and abandoned, but is stated to have been salvaged by the Russians and put into service again. If so she would be about the best ship of that type that the Russians possess, being of 1470 tons with a speed of 19 knots, and with a main armament of six 4-inch high-angle guns.

Then we come to the Red Fleet's submarines, and here the Iron Curtain is at its most impenetrable. Estimates of the number of Russian submarines in service vary from 200 to 800. It is probable that about 300 is about correct, but whether all of them are seagoing or whether that figure represents the total number in service is more difficult to say with any certainty. For the Russians have for many years been building small submarines for coast defence, ships which are able to be moved from one coast to another by means of the canal and river systems of Russia. They also have a number of German-type midget submarines.

Their seagoing submarines also include a number of German ships that were seized in various Baltic ports after the collapse of Hitler's regime. Moreover, they got hold of a number of German engineers and technicians who were busy in the large-scale building of U-Boats, and it is thought that these men are now busy building submarines of the latest German types for the Russians. It is, therefore, reasonable to suppose that most Russian submarines are to-day fitted with the Schnorkel breathing tube, with Walther turbines to give them greater underwater speeds, with acoustic or other "homing" torpedoes and with minelaying apparatus.

Under-sea Mines

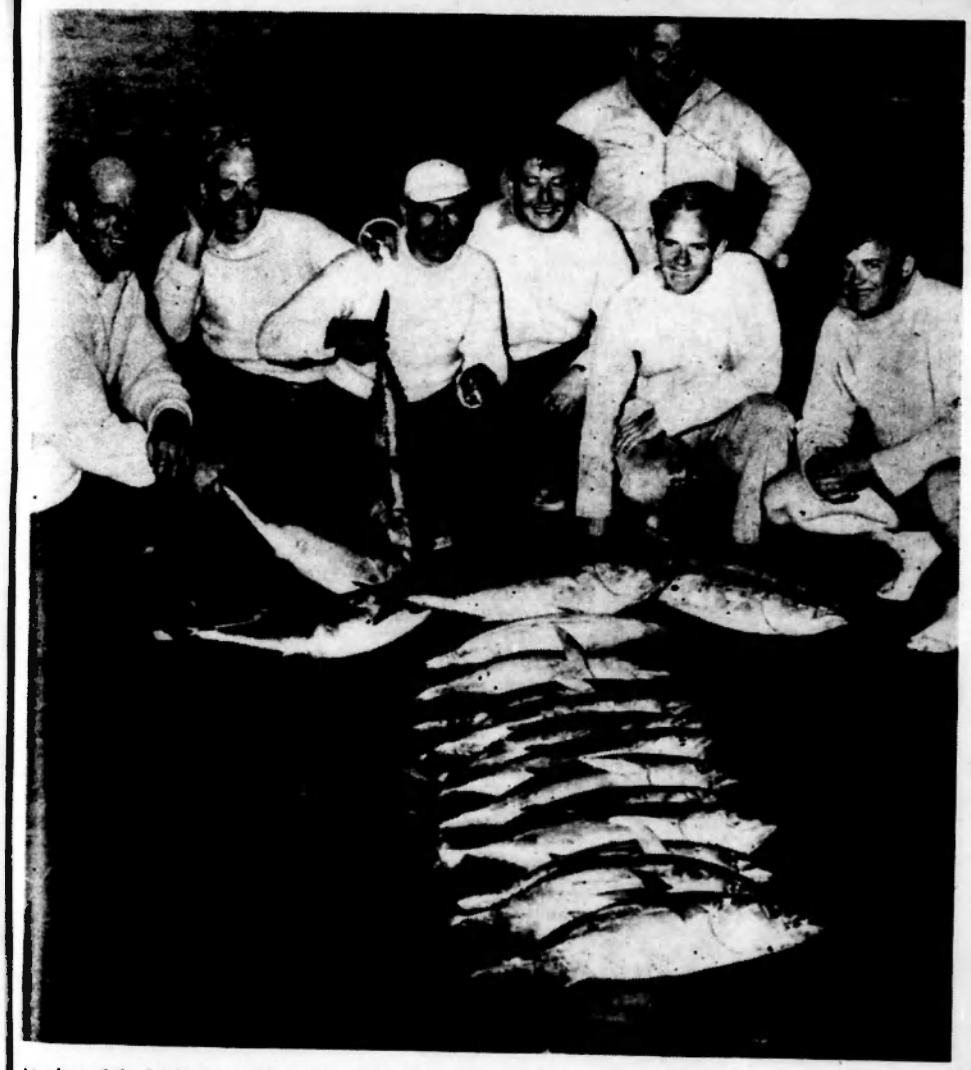
The Russians have always been fond of the use of under-sea mines. They were one of the chief defences of the Russian coast against the British and French Fleets in the Crimean War a century ago, while in the Russo-Japanese War of 1904-05 the chief losses suffered by the Japs were caused by Russian mines. It is, therefore, not surprising that the Russian fleet to-day includes a large number of ships fitted to lay mines. Besides the submarines mentioned above, most of their destroyers and many of their cruisers are fitted for minelaying, while they have a large number of special minelayers. Among these there is one that must be one of the oldest ships actively employed in any navy. This is the *Marti*, built in Denmark in 1893 as the Czar's royal yacht *Standart*, but cleverly reconstructed as a minelayer in 1936. She is now a ship of 5800 tons with a speed of 18 knots, carrying four 5.1-inch guns, many light A.A. guns and 500 of her deadly "eggs."

Hundreds of motor-torpedo boats, motor patrol vessels, minesweepers, river gunboats and such craft round off their fishing fleet, while their navy also includes many depot ships, tenders, tankers, icebreakers, training ships and other non-fighting ships. Among these is the sister to the Italian full-rigged training ship *Amerigo Vespucci*, which attracted so much attention in the recent Spithead Review. She is the ex-*Cristoforo Colombo*, given to Russia by Italy in terms of the peace treaty. What her new name is is not known for certain, but it might well be *Tovarish*, after a full-rigged training ship that the Russians used to have. Another is the ex-German *Gorch Fock*, one of the three that Hitler's navy built, another of which is to-day the *Eagle* of the United States' Coastguard, the third being the *Guanabara* of the Brazilian Navy.

It is obvious, therefore, that the Red Fleet is a formidable force. It is especially strong in cruisers, destroyers, submarines and minelayers, just the sort of ships to prey on the sea-borne commerce of an enemy. The navies of the Western powers are making great efforts to eradicate the danger from attack by mine and submarine, but the danger of gunfire attacks should not be forgotten. Think of the plight of a convoy that was being escorted by anti-submarined frigates and minesweepers if it were to be attacked by a couple of *Sverdlovs!*

One big weakness of the Russian naval situation must be remembered: that it is of necessity divided into two major and two minor sections, separated from each other by continents and which would be totally cut off from each other by war. Their big fleets are those in the Baltic and Black Seas, while smaller divisions are in the Pacific and the White Sea. The Russians have built canals linking many of their rivers with the White Sea, Baltic and Black Sea. These canals and rivers are not navigable by big ships; only by small craft such as motor-torpedo boats, launches and small coastal submarines, of which Russia has built many.

So much for the material side of Russia's Navy. What about its men? In the Russo-Japanese War the Russian Fleets, although much stronger on paper than those opposed to them, proved no match for the Japs. This showed that their leadership and efficiency must have been less than that of the Japanese. There seems to have been a marked improvement since then. The Russians have a large number of good training ships in commission, and the handling of the *Sverdlov* at Spithead left nothing to be desired. When the Germans attacked Russia in 1941 one of the things that surprised most foreign observers was the technical skill of the Russians. At any rate, it would be most dangerous to base any of our defence plans on any assumption of inefficiency or incompetence on the part of Russia's naval personnel. We should credit them with being efficient and then see to it that our own navies are always kept at the highest pitch of efficiency possible. ● —"The Sailor," Johannesburg.



Members of the R.A.N. Game Fishing Club display their catch of tuna during a recent game fishing competition at Batemao's Bay, N.S.W.

NEWS OF THE WORLD'S NAVIES

"No need for panic" in A-bomb attack

The opinion that there was no need for panic concerning wartime atomic attacks if proper precautions were taken was emphasised at a conference of more than 50 naval medical officers which was opened at H.M.A.S. *Lonsdale*, Port Melbourne, on December 13.

Medical officers of the Royal Australian Navy and of the Royal Australian Naval Reserves in the South-East Australian Area attended. Professor R. R. H. Lovell, Professor of Medicine, and Professor M. R. Ewing, Professor of Surgery, both of the University of Melbourne, and both of whom served as medical officers in the Royal Navy during the Second World War, were also present.

The R.A.N. Medical Director-General, Surgeon Rear-Admiral Lionel Lockwood, presided.

Films dealing with atomic physics and protective measures were shown and addresses on the science of atomics generally and methods of defence against heat, blast and radiation were given by Lieutenant-Commander V. G. Jerram, R.A.N., and Lieutenant A. A. Andrews, R.A.N., both of the R.A.N. Atomic, Biological and Chemical Defence School at Balmoral (N.S.W.).

Surgeon-Commander K. C. Armstrong, R.A.N., Medical Officer-in-Charge of the School of Aviation Medicine at the R.A.N. Air Station at Nowra (N.S.W.), said that despite the tremendous power and danger of atomic weapons we were by no means defenceless against them. A vast amount of study and investigation had been devoted to atomic defence, both at sea and ashore.

Comprehensive measures had been devised for the protection both of ships at sea and shore-based communities.

The ideally-defended community ashore would be one from which all but essential personnel could be speedily evacuated and in which adequate underground earth, steel, and concrete group shelters were provided for those who had to remain.

Dressings, drugs and foodstuffs would have to be stock-piled in enormous quantities and distributed among various areas.

Eight new craft launched in U.K.

Several ships and small craft were launched from yards in the United Kingdom during September and October.

During September the following coastal and inshore minesweepers and motor torpedo boats were launched:

C.M.S. *Somerleyton*, Richards Ironworks Ltd., Lowestoft; C.M.S. *Aldington*, Camper & Nicholson Ltd., Southampton; I.M.S. *Downham*, J. S. White Ltd., Cowes; M.T.B. *Dark Avenger*, Saunders Roe Ltd., Anglesey; M.T.B. *Dark Invader*, Morgan Giles Ltd., Teignmouth.

In October three frigates were launched, two anti-submarine frigates and one aircraft direction frigate (a new type).

The anti-submarine frigates are H.M.S. *Blackwood*, launched from the shipyards of Messrs. J. I. Thornycroft & Co. Ltd., of Woolston, Southampton and H.M.S. *Malcolm*, launched from the yard of Messrs. Yarrow & Co. Ltd. The former was named by Lady MacLaren, wife of Sir Hamish MacLaren, Director of Electrical Engineering, Admiralty, and the latter by Mrs. Geoffrey Robson, wife of Vice-Admiral William G. A. Robson, C.B., D.S.O., D.S.C., Flag Officer, Scotland.

Particulars of the two ships are: extreme length 310 feet (300 feet between perpendiculars), beam of 33 feet; powered by geared steam turbines of advanced design. They are armed with three Bofors guns, and two three-barrelled anti-submarine mortars of the same design as those fitted in H.M.S. *Rocket*. Each mortar can fire a pattern of large projectiles with great accuracy, and the projectiles can be set to explode at a predetermined depth. They can be trained over a wider arc than previous types of anti-submarine mortars.

The A/D frigate is H.M.S. *Llandaff*, which was named by the Countess Mountbatten of Burma, wife of the First Sea Lord.

The frigate is of 340 feet extreme length and has a beam of 40 feet. She will be powered by Admiralty standard range diesel engines. Her main armament will consist of two 4.5-inch guns and she will have two smaller guns.

The following inshore minesweeper and seaward defence boat were accepted into Naval service after being fitted out recently:

I.M.S. *Edlingham*, William Weatherhead & Sons, Cockenzie; S.D.B. *Mayford*, Richards Ironworks Ltd., Lowestoft.

U.S. lets contract for earth satellite

The U.S. Navy last month let a contract for the construction of part of the rocket which will take the first man-made earth-circling satellite 200 miles into outer space, according to Press messages from Washington.

The project will climax U.S. participation in the 1957-58 international geophysical year.

The Aerojet General Corporation of Azusa, California, will build a liquid motor for the second stage of the three-stage rocket.

The satellite, large enough to hold scientific instruments, will circle the earth every two hours at a speed of 18,000 miles an hour.

It will be tracked from the ground by optical and radio devices.

The Glenn L. Martin Co., of Baltimore, Maryland, has been awarded the basic contract for the launching rocket. It also will build the first stage, which will lift the satellite off the ground.

When the first stage exhausts its thrust it will drop back to earth and the second stage will take over.

It will be succeeded by the third stage, which will carry the satellite into outer space.

Ten satellites will be launched to make sure that at least some will reach outer space.

The contract for the third-stage rocket has not yet been awarded.

Nelson's Trafalgar papers sold

Historical documents concerning Napoleon and Nelson dating from the first Italian campaign to the Battle of Trafalgar were offered for sale and bought at Sotheby's, London, this month. They formed part of the collection of manuscripts sent from New York by the executors of the late Andre de Coppet.

Among the sales was a letter written by Nelson to his uncle before he lost his right hand, describing the Battle of St. Vincent, and another letter written by Nelson in 1800 about the British Blockade of Malta. A third letter, amusing and delightful and written to Emma Hamilton, was sold for £A.275. It stated:

First Officer Joan Cole, who has returned to the U.K. after being on loan to the R.A.N., with the Flag Officer in charge East Australian Area, Rear-Admiral H. J. Buchanan (right) and Commander C. J. Stevenson at a recent film preview. First Officer Cole was Director of W.R.A.N.S.

> "To-day I dine with Admiral Greme, who has also lost his right arm, and as the Commander of the troops has lost his leg, I expect we shall be caricatured as the lame defenders of England."

Nelson's secret plan for the Battle of Trafalgar addressed to Bayntun, Captain of the *Leviathan*, was bought for £A.338, and a chart of the Distinguishing Pendants and Orders of Sailing of the fleet before Trafalgar brought £A.250. Among other Nelson papers sold was the Order of Battle for Trafalgar, and a full-page diagram of the Trafalgar attack.

New Director of W.R.A.N.S. appointed

A new Director of the Women's Royal Australian Naval Service has been appointed as from March 12.

She is First Officer Elizabeth Hill, of the Women's Royal Naval Service, who will serve in the acting-rank of Chief Officer, and will succeed Acting Chief Officer Joan Cole, who will return to the United Kingdom after having been on loan to the Royal Australian Navy from the Royal Navy for two and a half years.

First Officer Hill's appointment was announced by the Minister for the Navy, the Right Hon. Sir Eric Harrison.

She arrived in Melbourne from England in the *Orion* last month.)

She will visit R.A.N. shore establishments in different parts of the Commonwealth at which members of the W.R.A.N.S. are stationed.

Until recently she has been in charge of the W.R.N.S. unit at the Royal Naval air station at Arbroath, Scotland. She has been a first officer for five years.

Australian training ship for cadet-midshipmen

In future, cadet-midshipmen who graduate from the Royal Australian Naval College will go direct to an R.A.N. training ship in Australian waters instead of to a Royal Navy training ship in the United Kingdom, as formerly.

They will be sent to the Royal Naval College at Dartmouth (England) later.

The conversion of the anti-submarine frigate *Swan* to a training ship for cadet-midshipmen has been nearly completed at the Garden Island Naval Dockyard in Sydney and the vessel will be commissioned early in February.

Sixty cadets who passed out of the Naval College on December 7 will join her for her first training cruise.

The Minister for the Navy, Sir Eric Harrison, said that, because changes had been made in the entry-system and training of cadet-midshipmen of the Royal Navy, alterations had become necessary in the Australian system and had

Continued on page 18

SYDNEY YAWL WINS BLUE-WATER CLASSIC

THE Royal Australian Navy sloop, Tam O'Shanter, made no ripples on the sea of space in newspaper columns reporting the 680-mile Sydney-Hobart yacht race.

But she was right with the leaders three days out of Sydney. At that stage she was ahead of the Tasmanian cutter, *Nell Gwynne* — which finished fourth in the race. But *Tam O'Shanter* dropped out from then on and finished at the rear of the field.

Tam O'Shanter is a Bermuda sloop which the Royal Australian Naval College uses for training cadet midshipmen in sailing.

Officers from the Naval College sailed her in the race.

The 34-ft. Sydney yawl, *Moonbi* won the coveted first place on handicap, followed by *Cooroyba*, a 35-ft. South Australian sloop, and the 42-ft. Sydney sloop *Janzoon*.

The 57-ft. Sydney cutter *Even* took line honours in a thrilling and bitterly contested race from *Kurrewa IV*, a 64-ft. cutter from Victoria.

Even and *Kurrewa IV* vied for the lead from the time the yachts left Sydney until they approached the Derwent River.

One of Australia's greatest yachtsmen, Jock Muir, co-skipper of *Even*, took the honours when he out-manoeuvred *Kurrewa IV* down the last 40 miles to the finishing line.

Muir even doused his lights to avoid giving away his position to *Kurrewa IV* when the two big cutters were fighting for the lead a few miles from the finish shortly before dawn on December 31.

All yachts encountered calm seas and little wind throughout their 680-mile journey.

The 52-ft. Victorian cutter *Winston Churchill*, skippered by Victoria's Minister for Transport, Mr. A. G. Warner, made a dramatic bid at one stage in the race by sailing more than 50 miles out to sea in a gamble to pick up a strong south-east breeze which would have enabled her to stand in for Hobart on the one tack.

Winston Churchill's gamble failed.

Crew members from all yachts reported after the race that it had been a placid and almost dull time.

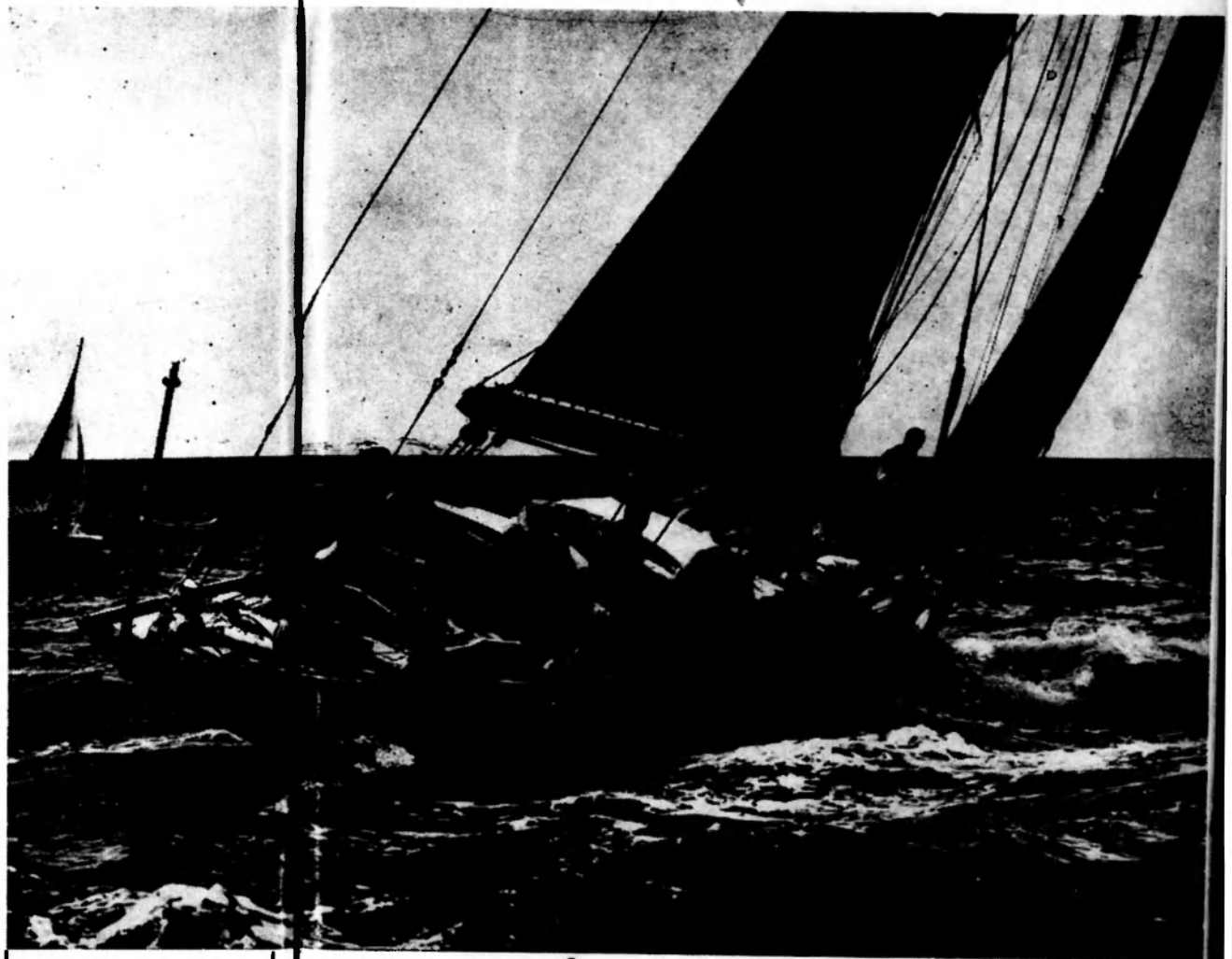
The only drama occurred when a 12-ft. shark attacked the *Even* off the Tasmanian coast during the final stages.

The shark raked and scarred the hull in the attack.

Details of times and corrected times for the leading yachts were:

Even, 4 days 18 hours 13 minutes 14 seconds; *Kurrewa IV*, 4 days 18 hours 33 minutes 42 seconds; *Nell Gwynne*, 4 days 21 hours 5 minutes 5 seconds; *Solo*, 4 days 23 hours 10 minutes 31 seconds; *Cooroyba*, 5 days 14 minutes 42 seconds; *Moonbi*, 5 days 1 hour 28 minutes 24 seconds; *Janzoon*, 5 days 2 hours 41 minutes 21 seconds; *Southern Myth*, 5 days 3 hours 11 minutes 8 seconds; *Carol J.*, 5 days 3 hours 50 minutes 53 seconds.

On corrected times *Moonbi* won by 12 minutes from *Cooroyba* with *Janzoon* almost 4 hours behind *Cooroyba*, and *Nell Gwynne* an hour behind the third yacht.



The 57ft. cutter "Even" with starboard boom awash heads south towards Tasmania outside Sydney Heads at the start of the Sydney to Hobart yacht race. She crossed the finishing line first, but "Moonbi" won the race on handicap.

SANTA WAS DELAYED BY ROUGH SEAS

Santa was late getting Christmas mail and food to families at three lighthouses on the Victorian coast—but the children got their Christmas toys.

The lighthouses are at Wilson's Promontory, Cliffy Island, and Deal Island.

The 40-foot ketch *Alpha*, which does the mail run to the lighthouses from Port Albert ever fortnight, was kept there for week by rough seas.

The toys, however, reached t children by the supply steam *York*, which does the round thr times a year.

Continued from page 15

created need for the R.A.N. to provide a training ship of its own.

In the *Swan*, as in the Royal Navy training ship in the past, cadet-midshipmen would perform all the duties normally done by ratings to obtain the knowledge and experience required to fit them to direct and control the men who would eventually serve under them.

At the end of their training in the *Swan* they would go to the Royal Naval College at Dartmouth as midshipmen for 16 months, and, after they had been promoted sub-lieutenants, those who were to be executive officers or officers of the Supply and Secretariat Branch would return to Australia for more sea-training.

Those who were to specialise in engineering would remain in the United Kingdom longer.

Mountbatten sees a "streamlined" navy

A streamlined Navy with ships to carry guided missiles was envisaged by Lord Mountbatten, Britain's first Sea Lord, at the launching of the frigate *Llandaff* on the Tyne.

Lord Mountbatten said the objective was a streamlined Navy of ships to carry guided missiles, with larger ships to follow. He hoped it would be possible to persuade shipbuilding firms to dovetail these proposed new naval ships between the big tankers now building.

The *Llandaff* is one of a new type of air direction frigate, and will be powered by diesel engines. She is one of five frigates ordered on the Tyne.

New draft of N.S.T.'s begin this month

Six hundred youths from all States in the Commonwealth will be called up to begin their national service training with the Royal Australian Navy on Monday, January 9.

One hundred and fifty-five of them will be University and technical school students.

The Minister for the Navy, Sir Eric Harrison, said that the 445 youths who were not students would complete their training in 154 consecutive days ending on June 10, but the students would serve for two separate periods of 77 days each.

They would finish their first period on March 25 and would do their second period in the first three months of 1957.

The interval in their training had been arranged so that their studies would be interfered with as little as possible.

A hundred and sixty students who completed the first part of their training last March would begin the second part on the same date as youths in the new call-up began their training.

Sir Eric Harrison added that the training of naval national servicemen was done at H.M.A.S. *Penguin*, Balmoral (N.S.W.), H.M.A.S. *Leeuwin*, Fremantle (W.A.), Flinders Naval Depot, Crib Point (Vic.), and other shore establishments and in ships of the Fleet.

New "Forrestal" Class ready in July

The United States carrier *Saratoga*, second of the "Forestals," has been floated out of the graving dock at the New York yard and should be ready for delivery next July.

Although generally similar to her predecessor she will be of greater power and higher speed and cost £73,900,000.

nees have each received £43.

Big fire damage at Admiralty

Fire gutted a large part of the two top floors of the Admiralty building in Whitehall, London, on December 8.

A worker in the transport section of the Admiralty discovered the blaze at 2.40 a.m.

Within a few minutes dense smoke and vivid flames were coming from the roof.

The sky over the West End reflected a deep orange glow.

Among those who watched were the First Sea Lord and Chief of the Naval Staff, Admiral Earl Mountbatten, and the First Lord of the Admiralty, Mr. J. P. L. Thomas.

No casualties were reported.

No information yet on peroxide sub.

Although she was launched in March, 1954, no information on the success or otherwise of the trials of the submarine *Explorer* have been released, says Oscar Parkes in the London "Navy."

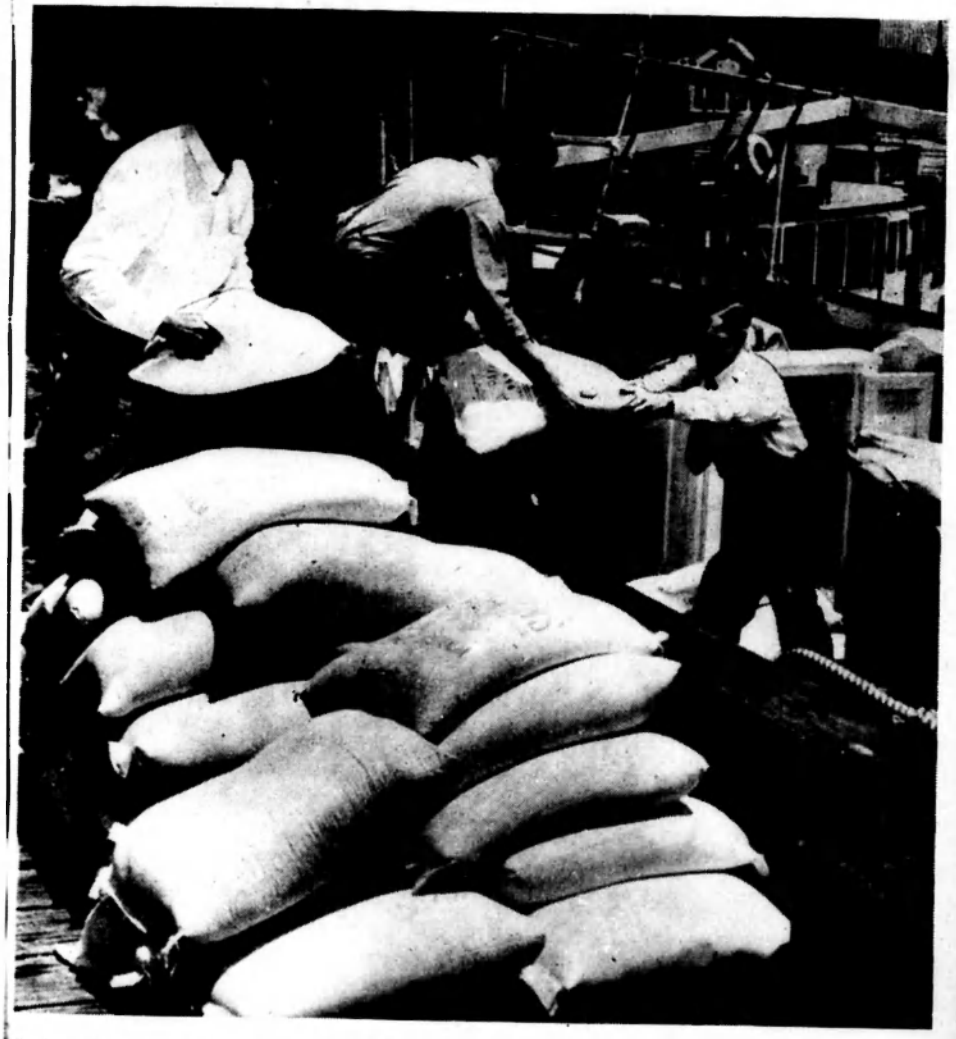
It will be remembered that the U.S. *Nautilus* was launched in January, 1954, without her atomic plant aboard, was running her trials in January, 1955, and had proved herself for commissioning in April, he adds.

"The Americans did not think much of the Walther peroxide turbine and turned to atomic power for high endurance and underwater speed, and it is to be hoped that our two experimental boats will justify themselves.

"Meanwhile we are proceeding with eight large conventional boats of the 'Porpoise' class intended, like their predecessors, for minelaying of which it is understood that the *Porpoise*, *Narwhal* and *Rorqual* are in hand at Barrow, the *Grampus*, *Sealion* and *Whale* at Birkenhead, and the *Cachelot* at Scott's Greenock yard. They will be completed in 'the next year or two' according to the First Sea Lord, and be our last conventional boats, to be succeeded by atomic submarines 'in a matter of time.'"

TYPE CUT OFF

Australia's Hospital Ship Gift To India



The hospital ship 'Indaustral,' presented to the Indian Government by Australia recently under the Colombo Plan, is shown being prepared in Sydney for her voyage to India. Here, the ship's master, Captain D. M. Dodds (right), Mr. M. Heyworth (left), and Mr. Leo Powning load sacks of flour which formed part of the vessel's store. (Story, page 22.)

MARITIME NEWS OF THE WORLD

From our Correspondents in LONDON and NEW YORK By AIR MAIL

"Kista Dan" leaves for Antarctic

The Polar motorship Kista *Dan* left Melbourne on December 27 on Australia's most important mission to Antarctica.

Nearly 1000 people stood in drizzling rain to farewell her.

The ship will land a relief party at Australia's permanent base at Mawson in MacRobertson Land, reconnoitre large tracts of coastline where man has never set foot, and choose a site for a second Australian base.

This expansion of Australian activity will be part of the Commonwealth contribution to the International Geophysical Year beginning June, 1957.

The International Geophysical Year is a special year in which many nations co-operate in a wide range of scientific research.

The Minister for External Affairs, Mr. R. G. Casey, before the ship sailed, said that the Australian sector of Antarctica was of vital importance.

"It lies close to Australia's back door," he said.

"Meteorologically, the region is of great value, because Australia's weather, more than that of any other country, is influenced by conditions in the Antarctica.

"There is also the possibility that it holds appreciable mineral wealth and other natural resources.

"In short, we cannot afford to neglect this region, for no one can predict what importance it may assume in the next fifty years."

Mr. Casey said that the Kista *Dan*, which had just returned from relieving the Australian station at Macquarie Island, would land the relief party of 19 men, under Mr. William Bewsher, at Mawson.

Before this, it would explore, as far as ice conditions permitted, the coast of Wilkes Land, in the Australian sector, which had been photographed from the air but never visited by man.

The ship, under the direction of the Director of the Antarctic Division of the Department of External Affairs, Mr. Phillip G. Law, would also choose the site for the second Australian station, at Vestfold Hills.

This station, about 350 miles east of Mawson, would provide a valuable intermediate station between Mawson and the proposed American and Russian bases on the Knox Coast of Antarctica.

Mr. Casey said the relief expedition would carry a de Havilland Beaver aircraft, equipped with floats and skis, for reconnaissance flights.

The Beaver would be left at Mawson to carry out aerial surveying during the coming Antarctic winter.

A special steel hangar had been designed in Melbourne to house the aircraft.

Mr. Casey said Australia was making a notable contribution to the programme of Antarctic research for the International Geophysical Year.

Australia's preparations were more advanced than those of other countries which would maintain stations in Antarctica.

Preparations had been going on at Mawson since last year.

The experience gained by Australians in cross-country journeys with tracked snow vehicles would be of considerable value to the Trans-Antarctic Expedition which, under the leadership of Dr. Vivian Fuchs, would cross the continent during the International Geophysical Year.

"Australia's interest in the Antarctic has been maintained for two generations, and the last nine years have seen a steadily growing scientific interest," Mr. Casey said.

Chinese Capture Korean coastguards

Chinese Communist ships on Christmas Day fired on a South Korean coastguard cutter and took four coastguards captive.

A South Korean Government spokesman said the coastguard cutter discovered 14 Chinese Communist vessels fishing in South Korean waters—inside the Rhee line, the border of the area claimed by South Korea as territorial water.

The spokesman said the cutter seized one of the fishing boats, put four coastguards aboard, and took it in tow.

Soon after, six armed Chinese Communist ships appeared and opened fire on the cutter, which returned the fire.

The exchange of fire lasted more than five hours, he said.

The spokesman added: "When the Chinese ships made their escape they took with them the fishing boat carrying the four coastguards."

Press reports state that South Korea has described the engagement as "an act of war" by Communist China.

The South Korean Government spokesman claimed that Communist China, North Korea, and Japan had joined together in an aggressive pact to encircle South Korea.

French expedition to Adelie Land

Fourteen French scientists left Hobart on December 26 for Adelie Land, Antarctica, in the Norwegian icebreaker *Norsel*.

The expedition, which spent five days in Hobart, will carry out upper atmospherical research at two bases.

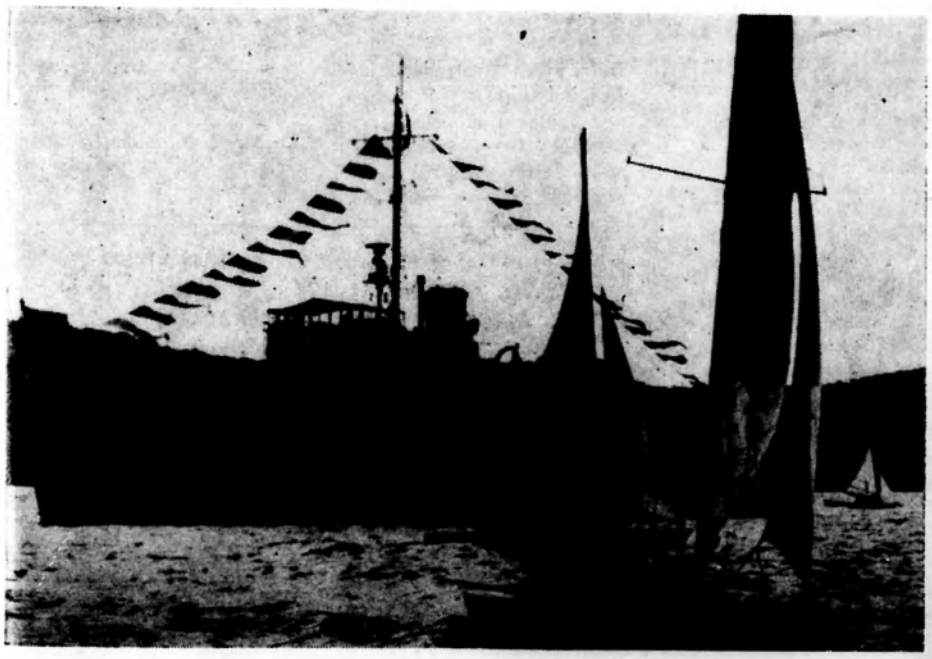
One base is on the coast of Adelie Land, at Pointe Geologie, and the other 400 miles inland.

The icebreaker will anchor off the coast for about three weeks while the two parties settle in. The ship will be back in Hobart at the end of February.

New link with "Cutty Sark"

After years of fruitless efforts to trace surviving members of the family of Captain John Willis—"Old White Hate"—for whom the famous ship Cutty *Sark* was built on Clydeside in the 1860's, chance has solved the problem.

Australian Alan Villiers, author, sailor, and a Governor of the Cutty *Sark* Society, chanced to meet in Montreal Mr. Sydney Appleton, son of a Trinity Pilot who lived in Deal, Kent, who re-



Yachts gather around the corvette H.M.A.S. "Wagga," which was flagship for the Pittwater regatta in Broken Bay (N.S.W.) on December 27.

called that as a boy he used to play with a nephew of Captain Willis.

This nephew's widow, Mrs. Kirkaldy Willis, was found living near Deal and her son William, who lives in Kenya, readily agreed to offer many interesting and prized records of his ancestor's famed clipper to the Cutty Sark Society. These records and souvenirs are on view at the National Maritime Museum, Greenwich.

Mexico asks for Jap fishermen

The Mexican Government has asked Japan for Japanese tuna fishermen, according to a Press report from Tokyo.

The request was made in a letter to Mayor Yogaro Adachi, of Otaru, Hokkaido.

The letter did not disclose the number of fishermen Mexico wanted but offered to issue entry permits immediately.

Russia may buy the "Georgic"

Russia may buy the 27,000-ton liner *Georgic*, which was withdrawn from the Australian migrant service recently, says the London "Sunday Express."

The British Ministry of Transport stated that it has received several inquiries for the *Georgic* but it declined to disclose which firms or countries were interested.

Special stamps from Antarctica

Four stamps of the current Falkland Islands Dependencies series will be specially overprinted to honour the British Trans-Antarctic expedition.

The stamps range in value from 1d. to 6d. They show the polar research ships *Discovery I*, *Discovery II*, *Penola* and *Trepassy*.

Each stamp also has a portrait of the Queen. The overprinted stamps will be released on the day the expedition lands in the Antarctic.

Appendix out in gale at sea

The Tasman liner *Wanganella* changed course at the height of a 40-mile-an-hour gale on the night of December 4 so that a Sydney surgeon could take out a passenger's appendix.

The surgeon, Dr. G. C. Shortland, 35, a resident at Royal South Sydney Hospital, said: "The ship was plunging wildly at first. It would have been impossible to operate.

"But the master, Captain H. S. Norrie, did a marvellous job. He headed us down toward Tasmania, and it was quite steady enough to operate."

The ship later landed the patient, who was taken to hospital in Sydney.

India given Australian hospital ship

Australia has presented a motor vessel to India as a mobile hospital and medical dispensary in the Andaman and Nicobar Islands.

The Minister for External Affairs, Mr. R. G. Casey, handed the ship over to India's High Commissioner, General K. M. Cariappa, on November 29 at Man-o'-War steps, Sydney.

Mr. Casey said that the Indian Government last year asked Australia if it could supply the ship. It is a gift under the Technical Co-operation Scheme of the Colombo Plan.

The vessel is a wooden ship, formerly the *Ruena*, 103 tons, and now named *Indaustral*.

Built about 1946, it operated as a sugar carrier along the Queensland coast for its former owners, the Fairymead Sugar Company.

Total cost to the Commonwealth of the ship's purchase and refit was about £60,000.

It contains a modern operating theatre and dispensary and £1000 worth of equipment. It can accommodate about 20 patients, a medical officer, orderlies and crew.

The *Indaustral* will be based on Port Blair in the Andamans, about 500 miles from the Indian mainland in the Bay of Bengal.

Personalities

SIR JOHN COLLINS IS NEW N. LEAGUE CHIEF

The new Federal president of the Navy League of Australia, Vice-Admiral Sir John Collins, is one of Australia's outstanding Naval officers. He succeeds Commander (S) J. D. Bates, who did not seek re-election.

ADMIRAL COLLINS was born on January 7, 1899.

He joined his first ship, H.M.S. *Canada*, in April, 1917, and saw service with the Grand Fleet.

He served in H.M.S. *Renown* during the visit of the Duke and Duchess of York in 1927.

At the outbreak of war in 1939 Admiral, then Captain, Collins was at the Navy Office as A.C.N.S. and D.N.I.

From November, 1939, to May, 1941, he commanded H.M.A.S. *Sydney* and was awarded the C.B. in July, 1940, for his brilliant service in the Mediterranean, where he made world-wide news by sinking the Italian cruiser *Bartolomeo Colleoni*.

In June, 1941, he was Chief of Staff to the Commander-in-Chief China, and in January, 1942, as Commodore commanding the China Force, he directed all British Naval forces in the "ABDA Area."

He later cleared Java of British shipping and civilians when the fall became inevitable.

In April, 1943, he took command of H.M.A.S. *Shropshire* and took part in actions against the Japanese at Arawe, Cape Gloucester, the Admiralties and Hollandia.

In June of that year he took part in the operations at Sansapor, Morotai and in the re-occupation of the Philippines.

He was wounded in the action off Leyte in October, 1944, and after recovering resumed command of the Australian Squadron in July of that year.

In January, 1948, he became Chief of the Naval Staff and First Naval Member of the Australian Naval Board.

Admiral Collins was the first Australian-trained officer to hold this appointment.

He was promoted to Vice-Admiral on May 10, 1950, and in 1951 he was awarded the K.B.E.

In 1953 his term as First Naval Member was extended for the second time. He relinquished this appointment in February, 1955.

Commander Keatinge

Commander E. P. Keatinge, whose promotion from lieutenant-New Year list of promotions, is officer-in-charge of the Torpedoe and Anti-submarine School at H.M.A.S. *Rushcutter* (Sydney).

He entered the Royal Australian Naval College in 1935 and was commander was announced in the made a Cadet-captain. He became a midshipman in January, 1939, sub-lieutenant in 1940, and lieutenant in 1942.

His first ship was H.M.A.S. *Canberra* from which he proceeded to Malta to join H.M.S. *Sussex* in which he served till September, 1940. In this ship he served in the Mediterranean, took part in the pursuit of the *Graf Spee*, and on the East Indies station, in the escort of the first A.I.F. Convoy from Colombo to Aden. He did his courses in the latter part of 1940, returning to Australia early in 1941, when he was appointed to H.M.A.S. *Hobart*.

In *Hobart* he served in the Mediterranean, on the East Indies station, in the Java Sea, and then in the Pacific with the Australian-United States Task Force 74. He took part in the Battle of the Coral Sea, the landing in the Solomon Islands, and subsequent

Vice-Admiral Sir John Collins, K.B.E., C.B., new President of the Navy League of Australia, is congratulated by the retiring President, Commander J. D. Bates, V.R.D., R.A.N.V.R., who held office since 1950.

actions until the ship was torpedoed, in July, 1943.

In October of that year he was appointed to H.M.A.S. *Shropshire* and after a year's service in that ship proceeded to the United Kingdom for a torpedo course. He qualified in July, 1945, and then joined H.M.A.S. *Australia* in which he served until 1948.

He again went to England in 1948 for anti-submarine courses and service with the Royal Navy. Returning to Australia in 1951, he served for two years at Navy Office Melbourne and was then appointed as First Lieutenant, H.M.A.S. *Sydney*.

He relinquished this appointment to become the officer-in-charge of the Torpedo and Anti-Submarine School.

Commander White

A former prisoner-of-war, Commander Norman White, has been promoted from lieutenant - commander in the New Year list.

Commander White entered the Royal Australian Naval College in 1936 and became a midshipman three days before the declaration of World War II.

His first ship was H.M.A.S. *Canberra*. As a sub-lieutenant he was appointed to H.M.A.S. *Perth* in January, 1942, and was made a prisoner-of-war by the Japanese when the *Perth* was sunk in March that year.

Since the war he has completed a navigating course in England and served for some time at H.M.A.S. *Watson*, the radar training school. He is now serving in H.M.A.S. *Sydney*.

Navy Promotions

Eight senior R.A.N. officers from New South Wales and one Victorian have been promoted.

They are included in the New Year's promotions announced by the Minister for the Navy.

The promotions are:

ROYAL AUSTRALIAN NAVY

Commander John Hastie Dowson, of Elizabeth Bay (N.S.W.), to captain.

Lieutenant - Commander Eldred Pottinger Keatinge, of Edgecliff (N.S.W.), to commander.

Lieutenant - Commander Daniel Buchanan, of Coonabarabran (N.S.W.), to commander.

Lieutenant-Commander Norman Harold Stephen White, of Manly (N.S.W.), to commander.

Lieutenant-Commander E. Peter James Ashenden Daish, of Sydney (N.S.W.), to commander (E).

Lieutenant - Commander Christopher Clement Connolly, of Lane Cove (N.S.W.), to commander.

Lieutenant - Commander (L) David William Johns, of Wahroonga (N.S.W.). to commander.

Instructor Lieutenant - Commander Richard Gerard Fennessy, D.S.C., of Watson's Bay (N.S.W.), to instructor - commander.

Lieutenant-Commander Robert Grant Craft, of Clayton (Vic.), to commander (S).

ROYAL AUSTRALIAN NAVAL RESERVE

Lieutenant Leslie Alderson Smith, of North Sydney (N.S.W). to lieutenant - commander.

Lieutenant William Griffith Dovey, of Vaucluse (N.S.W.), to lieutenant-commander.

Lieutenant Thomas Russell Vasey, of Sydney, to lieutenant-commander.

Lieutenant - Commander (L) Charles Short McVey, of Brisbane, to commander (L).

Surgeon Lieutenant - Commander Edward Eric Keith Bottomley, of Hartwell (Vic.), to surgeon-commander.

Lieutenant (S.B.) David John Richardson, of Brighton Beach (V.), to lieutenant - commander (S B).

ROYAL AUSTRALIAN NAVAL VOLUNTEER RESERVE

Lieutenant Richard Eric Godson, of Brighton Beach (V.), to lieutenant-commander.

Lieutenant John Brooke Howse, of Orange (N.S.W), to lieutenant-commander.

Surgeon Lieutenant - Commander James Stuart Guest, O.B.E., of Melbourne, to surgeon - commander.

Lieutenant (S.B.) Rolf Eric Griffiths, of Woollahra (N.S.W.), to lieutenant-commander (S.B.).

Lieutenant Alexander Garrock Steel, of Bexley (N.S.W), to lieutenant-commander.

Lieutenant Robert George Ive, of Mt. Lawley (W.A.), to lieutenant-commander.

Lieutenant David Henry Case, of Bellerive (Tas.), to lieutenant-commander.

Lieutenant Basil Yaldwin Hall, of Armadale (V.), to lieutenant-commander.

THE NAVY REMEMBERS "PERTH" AND "YARRA"

Short services in memory of officers and men of the Royal Australian Navy who lost their lives in H.M.A.S. *Perth* and H.M.A.S. *Yarra* in the Second World War were held in the Australian destroyers *Tobruk* and *Anzac* off the north-west coast of Java, near where the *Perth* was sunk on November 29.

Both ships stopped during the services. After two minutes' silence had been observed and a wreath had been dropped on the water they proceeded on their way to the Malayan area to relieve the R.A.N. destroyers *Arunta* and *Warramunga* in the naval component of the strategic reserve.

The captain of the *Tobruk*, Captain R. Rhoades, D.S.C., A.D.C., R.A.N., and the captain of the *Anzac*, Commander E. I. Peel, D.S.C., R.A.N., had both served under Captain H. M. L. Waller, D.S.O., R.A.N., who was captain of the *Perth* when she was sunk, and who went down with his ship.

The *Perth* and the United States cruiser *Houston* were overwhelmed and sunk on the night of February 28, 1942, after they had encountered eight Japanese cruisers and 20 destroyers while on passage to Tjilitjap, on the south coast of Java, to embark evacuees.

Three days later the sloop *Yarra*, commanded by Lieutenant-Commander R. W. Rankin, R.A.N., was attacked and sunk by three Japanese cruisers and four destroyers after a brilliant and heroic fight to save two merchant ships and a small motor minesweeper 100 miles south of the Java coast.

A W.R.A.N. telegraphist being instructed at the Signal School at Flinders Naval Depot, Crib Point, Victoria, is shown here receiving and typing a signal transmitted in morse.

A MESSAGE FROM THE FEDERAL PRESIDENT

The new Federal President of the Navy League of Australia, Vice-Admiral Sir John Collins, K.B.E., C.B., in a message to Navy League members, said:—

"On assuming office as Federal President of the Navy League I greet all Presidents of Divisions, Vice-Presidents and members of the Executive Committees, and also all Officers and Instructors of the Sea Cadet Corps throughout Australia. In thanking you for your fine services in the past I would express my confidence that the good work will be continued with enthusiasm in 1956.

"I ask all Fellows of the League to accept my best wishes for a prosperous and peaceful New Year. Many of you, I know, have no time to take a great part in the League's activities, but you are doing your share in endorsing, by your fellowship, the objects of the League and helping us to maintain that much-needed youth movement, the Sea Cadet Corps.

"To the Sea Cadets I would say — be loyal to God, your Queen and yourselves; be keen, attend your drills regularly, try to pass for higher rating and regard it all as good fun. If you do these things you will enjoy your days in the Corps and get a lot of benefit from them.

"I look forward to a year of great progress in the Navy League and particularly in the Sea Cadet Corps. Good luck to you all."

"CONTROL OF ATLANTIC VITAL" — MONTGOMERY

FIELD - MARSHAL Lord Montgomery, in a recent talk to the Royal United Service Institute, said that if the strength of Britain's offensive air power failed to deter an aggressor and war was forced upon her it would be vital for Britain to have control of the seas.

"This will be necessary not only for the transport of men and materials but also to give increased flexibility to our operations generally," he said.

Lord Montgomery added that he "was on record as saying" that in an East-West war the West could not win if it lost control of the Atlantic.

One of the means to bring Western Europe to its knees, without the necessity of complete thermo-nuclear destruction, would be to cut off all supply.

He said: "Navies require aircraft for locating and destroying submarines and for the defence of fleets at sea. So far as we can see at present aircraft cannot be operated economically or efficiently in mid-ocean against submarines or indeed against raiding cruisers unless some form of floating airfield can be provided there.

"For these reasons there may always be a need for vessels from which to operate aircraft. But with progress in vertical take-off and landings we should aim to design something smaller and cheaper than the present aircraft-carrier.

"There is also a definite role for navies in the offensive use of short-range ballistic missiles fired from submarines or from ships specially designed for the purpose.

"It is sometimes considered that the day of the navies is over. I disagree profoundly. Indeed it may well be that the navies will play a definite part in saving us from complete disaster after a heavy surprise attack.

"Navies will escape damage initially so long as the Fleets are at sea and suitably dispersed. The Fleets at sea, in being, may therefore be only undamaged echelon in the armed forces after the initial clash."

The First Sea Lord, Admiral Earl Mountbatten, commenting on Lord Montgomery's statement, said: "We have inherited from the last war and ageing conventional navy supported in this country by large concentrated bases of maintenance and supply, organised on the proven methods of the past.

"The nuclear threat requires changes in methods and organisation, and these will be given the most serious consideration. Research offers us in the future novel weapons, equipment, and machinery, and careful judgment is needed between maintaining adequate conventional strength and waiting for the fulfilment of research.

"As you know, we are making a start with guided weapon ships but this is only a first step.

"Meanwhile it should never be forgotten that the ships we now have will continue to perform a very vital job in conserving the ties and unity of the Commonwealth in peace as well as carrying out in war the tasks involved in control of the seas which will not be transformed by the nuclear weapon."

Later, Earl Mountbatten said that the Admiralty had been examining the possibilities of atomic propulsion for warships, particularly submarines.

REVIEWS

"Up Funnel, Down Screw," by Geoffrey Penn; published by Hollis & Carter (London).

Since 1937, when the engineering branch of the Royal Navy first became organised as an integral part of the naval service, the problem of entry, training and status of engineer officers has been the subject of frequent controversy and committees of enquiry. The first real attempt to solve it was made in 1902 by Lord Fisher, when the Selborne-Fisher memorandum—reaffirmed and clarified by the Cawdor memorandum in 1905—established a system of common entry and training for deck, engineer and marine officers. All were to be executive officers, members of the military branch.

Commander Penn, in this interesting history of the engineering branch, might well have devoted more space to the obvious pit-falls of the new scheme—the entitlement it appeared to give a Commander (E), who had spent all his time since a sub-lieutenant on engineering duties, to command one of H.M. sea-going ships.

The author was more concerned, however, to emphasise the Gilbertian, but purely temporary, situation that resulted from Lord Fisher's memorandum. Pre-1902 entry engineer officers still remained civilians, but were to be responsible for training and supervising their subordinates who were military officers and appeared in the Navy List before them.

This situation was rectified to some extent in 1914, when all engineer officers were given the executive curl and made members of the military branch. But the defects of the Selborne-Fisher scheme were then becoming more generally realised and, until this year, subsequent changes were in the reverse direction.

In 1921 officers started to specialise as engineers on promotion to midshipmen; and in 1925 the term "military branch" was abolished and officers were again separated into "executive" and "engineer" officers, though the word "categories" instead of "branches" was used.

The author, for some reason, seems to be satisfied with the latter change. It must, however, be a matter of regret to him—who justly champions the cause of engineer officers—that he wrote his book in 1954 instead of this year. For the new officer structure has eliminated any possible difference between the status and prospects of the deck officer on the general list and of the engineer officer. Both can look forward to commanding H.M. shore establishments and non-sea-going ships, and also Flag rank; both now wear precisely the same uniform; and both are entitled to the same ceremonial and marks of respect.

—G.P.T., in the London "Navy."

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"Nelson," by Stephanie Plowman; published by Methuen (London).

A biography of Nelson seems to have become almost an annual event, and there are now so many of them that judgment of their individual merits becomes almost difficult simply because of the sheer mass. Judgment of the latest addition to the ranks, however, is not so difficult, for it does not really measure up to the very high standard of some of its predecessors.

The author has allowed herself to be carried away by her hero, and her judgment of historical fact, has, as a result, suffered in the extreme. Nelson, by any standards, was a remarkable admiral, but he was never quite the colossus which this book attempts to build. The less creditable episodes are glossed over or completely ignored; some of his contemporaries are treated with rather less than justice in the comparison with this paragon of all the virtues.

One looks in vain for the author's comments on his decidedly odd behaviour under Lord Keith in 1799; one looks in vain, too, for the name of Hamilton in these pages. Sir Hyde Parker, Commander-in-Chief at Copenhagen, "apart from the fact that he had undoubtedly been in the Navy for a considerable time, had nothing whatsoever to recommend him for the job"—a statement which seems a little unkind in view of his earlier activities with Hood off Toulon and Corsica and as Commander-in-Chief at Jamaica, where his brilliance almost completely stopped the West Indian trade.

Calder, too, is castigated by the author for his action with Villeneuve, a fact which suggests that she has not adequately studied the overall strategy of the 1804-1805 campaign at sea, nor appreciated the over-riding duties of the various blockading squadrons, of which Calder's was one.

It is not really good enough, in these days when the importance of historical accuracy is more fully recognised than ever before, to expect serious readers to accept so unbalanced a portrait of Nelson as this book paints. No one will deny that Nelson was undoubtedly a tactical genius at sea, but equally no one can deny that he

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For Sea Cadets

THE "GREY GOOSE'S" NEW ROLE

HER MAJESTY'S ship *Grey Goose* (Lieutenant-Commander D. W. Wilson, D.S.M., R.N.), renowned as a steam gunboat during the Second World War, has been converted into an experimental gas turbine fast patrol boat and has joined the Trials Squadron at H.M.S. *Hornet*, the Coastal Forces Base at Gosport. Two experimental Rolls-Royce RM.60 marine gas turbines of advanced design have been installed in her and they transmit their power through Rotol controllable pitch propellers, which obviate the use of reverse gearing.

The work of structural alteration, as well as the installation of turbines, propellers, shafting and electrical equipment, was carried out by Messrs. Vosper Ltd., of Portsmouth, at their Camber shipyard in association with Messrs. Rolls-Royce and Rotol. Her conversion was extensive, the alterations amounting to building up from an almost bare hull and generally reconditioning the hull itself. Her accommodation between decks has been completely reconstructed and the necessary generators and navigational arrangements installed. Her armament had previously been removed.

There was a private Commissioning Service at H.M.S. *Hornet* on June 22 conducted by the Archdeacon of Portsmouth, the Venerable E. J. K. Roberts, M.A., and attended by Lieutenant-Commander Peter Scott, M.B.E., D.S.C. and Bar, R.N.V.R., the best known of the gunboat's wartime commanding officers. On July 6 the *Grey Goose* went to sea to show her paces, and I had the opportunity of judging the performance of this floating test bed, which will provide data for the building of gas turbine warships of the future.

The *Grey Goose* was originally powered by two Metropolitan Vickers single reduction geared steam turbines aggregating 8000 shaft horse-power and of a design which represented the lightest steam machinery produced for naval purposes. The two RM.60 gas turbine engines develop 10,800 brake horse-power and this gives an increase of some 35 per cent. in total power combined with a reduction of 50 per cent. in machinery weight and a saving of about 25 per cent. in machinery space.

Soon after the end of the Second World War there were discussions on the project between the Admiralty and Rolls-Royce, who had much design experience in the field of aero engines. These led to the Admiralty placing a development contract with the firm, and after considerable work on the drawing board, the detailed design was started in January, 1948. The prototype engine ran for the first time in June, 1951.

Two thousand hours of running were carried out on the test bed at Messrs. Rolls-Royce's Derby Works, and sea trials lasting a period of nearly a year have been run in the hands of the main contractors, Messrs. Vospers. Now that the *Grey Goose* has been handed back to the Navy, further rigorous trials are being carried out, but already much valuable experience has been obtained and a considerable step forward in marine gas turbine technology has been achieved. It is significant that two RM.60 gas turbines have been purchased by the United States Navy for installation and evaluation in a much bigger ship, the destroyer escort *Mills*.

The *Grey Goose* was laid down on January 23, 1941, at the Cowes, Isle of Wight, shipyard of Messrs. J. Samuel White & Co. Ltd. as a steam gunboat. Launched on February 16, 1942, she was completed on July 4 the same year. Seven of her class were completed to form an experimental flotilla of fast and powerful craft to serve as E-boat killers.

At the time they were officially described as 'light coastal craft,' and the public and the enemy were left to assume that they were ordinary motor gun and torpedo boats, powered by petrol engines. Had it not been for security considerations they could have been described as 'destroyers in miniature' with powerful steel hulls. With a displacement of 205 tons standard and 260 tons full load they were of 146 feet in length overall with a beam of 20 feet and a shallow draught of 5½ feet. In spite of an exceptionally heavy armament which finally included a 3-inch gun, two 6-pounder guns, four 20 mm. Oerlikon anti-aircraft pieces, two 21-inch torpedo tubes, and depth charges, their high efficiency steam turbines, fed from a single boiler, gave them a speed of over 35 knots.

Seven ships of the flotilla were officially credited with sinking six enemy ships and causing heavy damage to many more. Only one steam gunboat was lost during the war, but the *Grey Goose* is the only one of her class now in Her Majesty's Service. It was in the *Grey Goose* that Lieutenant-Commander Peter Scott led the flotilla in dashing Channel actions against enemy shipping. These attacks became a regular feature of the war news.

An official account of an offensive patrol in which the *Grey Goose* took part on the morning of July 27, 1943, described how an enemy force of two or three trawlers and eight R-boats was engaged four miles north of Cape Levi, East of Cherbourg, and within range of coastal batteries. During the action, which lasted about 25 minutes, several hits were scored on the enemy vessels and two were left burning. The *Grey Goose* suffered superficial damage and a few casualties.

This was merely one of the many actions in which the *Grey Goose* took part. In June and July, 1944, she fought German E-boats in the Narrow Seas and for his leadership Lieutenant Peter Neville Hood, R.N.V.R., who commanded her during this period of the war, was awarded a U.S. decoration, the Legion of Merit, Degree of Legionnaire.

Now, ten years after the war, the *Grey Goose* has been given a new lease of life, and in her, notable progress is being made in the development of gas turbine machinery for the Royal Navy.●

Navy frogmen being picked up at a speed of 10 knots from a rubber dinghy lashed to the side of a landing barge. A frogmen is landed into the rubber dinghy. This picture was taken during recent exercises in Sydney Harbour.

BOOK REVIEWS

Continued from page 27

had many faults. 'It would have been a better book had the author acknowledged them openly, instead of glossing them over or ignoring them completely.

—*P.K.K., in the London "Navy."*

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"No Man's Mistress," by Alexander Fullarton; published by Davies (London).

This is not just another novel about the last war. Alexander Fullerton begins by describing what many officers and men felt in Alexandria during the eventful Mediterranean campaign of 1942—the heat, the flies, the sand and perhaps the most realistic of all; the attitude of the Egyptians to the Allies in this period. And then we are shown the beginning of a Malta convoy.

James Wentworth, Royal Navy, retired, goes to the Summer Ball at H.M.S. *Dolphin* and meets his old friend and shipmate Peter Tregarth. In a submarine laid up in Reserve, they talk through the night of events when they were both midshipmen serving in H.M.S. *Pelorus*, one of the cruisers serving in the Eastern Mediterranean.

Peter Tregarth finds that his father is taking passage in H.M.S. *Pelorus* to Malta and thinks that he was responsible for his death. How his father really died is something you must find out when you read this tale of the Royal Navy in time of war. The events leading up to the sinking of the *Pelorus* by torpedo bombers after leaving Alexandria are vividly described. Action messing, the scream of stuka dive bombers, the sinking of an enemy troopship and submarine are woven into this exciting tale of a Malta convoy.

The author has fine powers of characterisation, as all who go down to the sea in ships will instantly recall and recognise.

—*A.R.C.R., in the London "Navy."*

REBUILDING THE FRENCH NAVY

By Georges Marey — in Paris

Almost entirely wiped out at the end of the second World War, the French Navy is now in process of methodical reconstruction.

DURING a first period extending from 1946 to 1948, work was limited to restoring the ruins of naval dockyards, clearing the waterways, mine-sweeping the approaches, and refloating some 3000 sunken vessels. At the same time, the construction of a few vessels that had been begun before the war was completed, and foreign vessels were acquired.

From 1949 the building up of the fleet really began. The *Jean Bart*, a 35,000-ton man-of-war, sister ship to the *Richelieu*, was finished; and the first post-war shipping was launched, about 8000 tons a year.

In 1951, events in Korea and Indo-China led to the passing of the Rearmament Law, raising the annual rate of construction to 17,000 tons, then to 27,000 tons in 1953, and finally to 29,000 tons in 1954 — this latter programme including the aircraft-carrier *Clemenceau*.

An annual average of 30,000 tons has moreover been recognised as indispensable to maintain the fleet above the minimum tonnage of 360,000 tons, by modernising and replacing old ships, and to bring the French Navy up to the level of its national missions and to the international obligations which France took on at the Lisbon conference.

On January 1, 1955, the Fleet consisted of 312 vessels, with a total tonnage of 370,000 tons, three-quarters of which were combat vessels; the Fleet Air Arm numbered 15 flotillas. Now the goal to be aimed at has been fixed at 540,000 tons (450,000 tons in combat vessels, 20,000 tons in amphibian craft, and 70,000 tons in auxiliary vessels), to which must be added 20 Fleet Air Arm flotillas.

To achieve this aim, the Navy would have to have an annual budget of about 200,000,000,000 francs. Unfortunately, this is not the case in 1955 and 1956, when the budget falls short of this mark by 20 to 30 billion.

However, the 1955 quota has been maintained at the rate of 30,000 tons. The most important item of it will be a new 22,000-ton aircraft-carrier, of the *Clemenceau* type, capable of carrying about 60 aircraft. It will be 257 metres long, 43 metres wide, 126,000 h.p., speed 32 knots, armed with twelve double 57 m.m. guns, and manned by 2500 men.

In addition to the aircraft-carrier, construction will begin this year on various vessels, including:—

The *Commandant Riviere*, an escort vessel of 1750 tons, also called an "aviso of the French Union," as it will be used in the security of sea communication with the French overseas territories. With a speed of 25 knots, the *Commandant Riviere* will be heavily armed with artillery and anti-submarine arms. It will also carry a platform for a light helicopter.

Three fast escort vessels of 1250 tons; speed 27 knots; 20,000 h.p.

Three chaser submarines of 750 tons.

The 1956 programme will reach only 22,000 tons, a squadron supply vessel having had to be struck off the programme for financial reasons.

It includes a series of 21 small vessels, the largest of which is of 2000 tons, a squadron escort vessel of the "Killer" type, specialised in anti-submarine tactics. With its high speed (34 knots), it will chase and attack enemy submarines in liaison with the ordinary escort vessels which play only a defensive role.

The other items included in the 1956 programme are French Union escort vessels, coastal escort vessels, an L.S.T. of the improved American type, coastal tankers of 1000 tons, and finally a pocket submarine of 30 tons.

It will be seen that no provision has been made for replacing the training-ship for cadet-officers, the *Jeanne* d'Arc, which will be unfit for use by 1960 (she went into service in 1931).

On the other hand, it must not be forgotten that, in addition to the vessels constructed on the French Budget, a few other vessels are added each year from the off-shore credits, or as part of the Mutual Aid Programme within the Atlantic Organisation.

The greater part of the requirements of the Fleet Air Arm had hitherto been supplied by free American aid. But in accordance with the express wish of the Parliament, the Navy is now turning towards a programme of purely French aeronautical construction.

The three types of aircraft necessary are the anti-submarine [illegible] carried aboard, the anti-submarine plane based on land, and the jet fighter plane.

Only the first of these three is as yet perfected. This is the "Breguet 1050," which can take off from an aircraft-carrier. Weighing 8 tons, it is driven by a turbo-jet engine with a Rolls-Royce air-screw. It has a wing-span of nearly 16 metres, but its wings may be folded back. It is armed with rockets and grenades. Five planes of this type have been ordered for the present, and 100 others will be ordered on the 1956 Budget. These latter will be able to go into service at the same time as the new aircraft-carrier *Clemenceau*.

The coastal anti-submarine plane will be the "Hurel-Dubois H.D. 35," two prototypes of which will come out this year. The jet fighter is not yet perfected. In the meantime, the Fleet Air Arm will use the "Aquilon," on order from the National Aeronautical Construction Company of the South-East.

To these will be added twenty or so light helicopters, of the "Alouette" type, and a few heavy helicopters which will gradually supplant the American aircraft.

But, while we may note with satisfaction that French construction in this field is getting under way, we must not forget that the volume of construction will still be inadequate. Higher credits will have to be allocated in the years to come if we want the Fleet Air Arm to reach the fixed objective: twenty combat flotillas equipped with modern aircraft.•

DUTCH SHIP RAMMED BY SPERM WHALE

A Dutch ship, which a sperm whale rammed in the Antarctic, put into Melbourne on December 27 for repairs.

The ship, 730-ton *Johanne W. Vinke*, sailed 2000 miles from the Antarctic whaling grounds.

She was whaling with 18 other Dutch catchers and their 44,000-ton mother-ship when the whale rammed her.

The impact bent the propeller.

The master, Captain A. van den Broeke, said he hoped his ship would be ready for the blue fin whales season opening on January 7.

The ship is a converted Canadian corvette.

She had been whaling in Antarctic waters for three weeks.

Ex-P.W. Share in Japanese assets

The closing date for claims by U.K. ex-Japanese prisoners-of-war and internees for a share of the money realised from Japanese assets in the United Kingdom under Article 14 of the Peace Treaty is to be March 31, 1956.

Those eligible to share in the realised assets include U.K. ex-servicemen who were prisoners-of-war: British civilian internees; Merchant Navy members captured while serving in British ships registered in the United Kingdom; and widows and orphans of deceased eligible persons.

At the end of October a total of £2,615,000 sterling had been paid to 57,490 beneficiaries. More than 49,000 ex-prisoners-of-war have each received £46 stg., including £3 from the money received from the Burma-Siam Railway, and about 8300 civilian inter-

STRANDED SEAMAN SWAM AFTER HIS SHIP

When the tanker *British Ensign* left Port Pirie (South Australia) on December 9 a member of the crew who had missed the ship dived into the sea and started to swim after it.

Roy Maxwell, a fireman, was visiting a friend on another tanker when he saw *British Ensign* leaving.

He swam after the ship until a tug picked him up and transferred him to a Harbour Board launch.

The launch caught the ship when she slackened speed to let the pilot disembark, and Maxwell climbed aboard.

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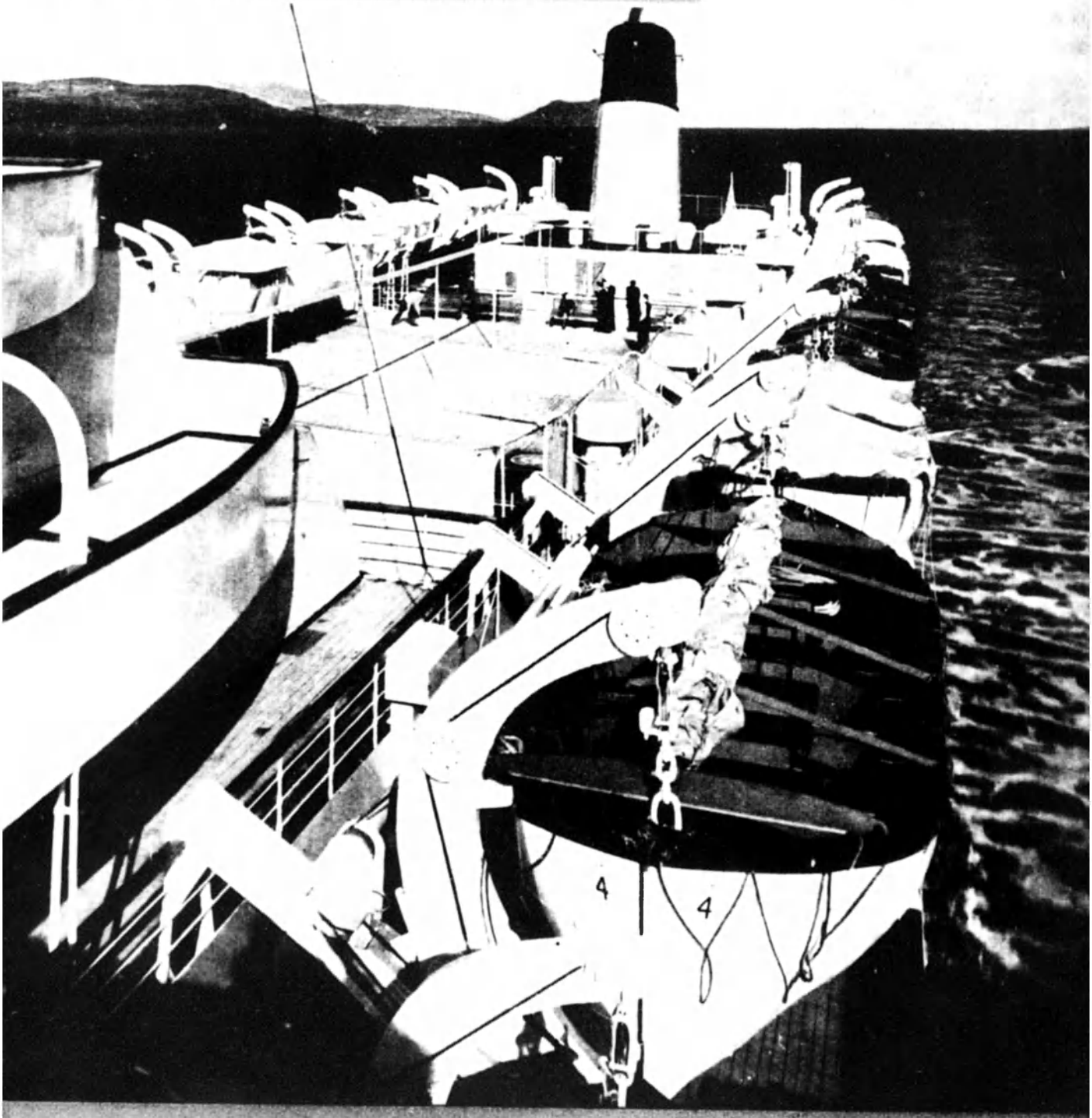

AUSTRALIA'S MARITIME JOURNAL FEBRUARY, 1956 1/6

Sir Ross and Sir Keith Smith arriving at Sydney, 1919.

The map looked like a mahjongg set!

A map of Siam used in the 1919 England-Australia air race was so primitive that it resembled, according to the late Sir Keith Smith, "a mahjongg set upside down."

But, despite this and other hazards, Sir Keith with his brother, Sir Ross Smith, and Sergeants W. H. Shiers and J. M. Bennett, battled through to win the Commonwealth Government's £10,000 prize for the first flight from England to Australia.

Flying a World War I Vickers Vimy bomber at an average speed of 84 m.p.h., the Smith brothers completed the journey in 28 days. (Today's passenger services do it in 2½ days; a jet takes about a day.)

Flew in Open Cockpit. Greatest worry for the fliers was the appalling condition of landing grounds along the route. At Sourabaya, in Java, 200 coolies toiled for 13 hours to extricate the aircraft from the mud.

Flying in open cockpits, the aviators were often soaked to the skin. But with little more than a compass to guide them, the fliers touched down at Darwin to win the coveted prize.

The Smith brothers used Shell aviation spirit and oil on this famous flight.

In fact, nearly every airman who flew from Europe to Australia in the pioneering years that followed, relied on Shell.

Today, SHELL is still servicing major flying routes all over the world.

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Vol. 19. FEBRUARY, 1956. No. 2.

THREE IMPORTANT QUESTIONS ANSWERED

Speaking at the recent "passing out" ceremony at the Royal Australian Naval College, the First Naval Member, Vice Admiral Dowling, dealt with three questions which must be in the minds of many young men who look to the Navy as a career.

They were:—

- Is there a future requirement for a strong Navy?
- Is there security in the Navy as a career?
- Is there a good chance of promotion to high rank?

In this fast-moving age of great scientific and technical progress there has been much discussion among the leaders of military thought in Britain about the usefulness of a Navy in a future war of terrible thermo-nuclear weapons, guided projectiles of intercontinental range, high-flying, high-speed aircraft, and swift, long-range submarines.

Over the past few years the voices of those who regard the Navy as an outdated force were particularly strong. Happily a saner view appears to be held fairly generally now. This has been influenced no doubt by the United States defence policy (which emphasises Naval power so strongly that the U.S. Navy's shipbuilding programme includes such highly expensive units as the Forrestal class of super-carriers and atomic-powered submarines), and by the Soviet's formidable Navy build-up since the war.

On the subject of security and prospects in an Australian Navy career, these must apply to the rating and recruit equally as to the young officer, if indeed not more so. Only recently we have seen the dangerous drift away from the R.A.N. of trained men of the lower deck, who prefer to "take their time" rather than sign on for a further period. This, of course, is symptomatic of an age of strong competition among employers (including the Services) for good, skilled men — and Naval training is a high recommendation in the eyes of many civilian employers.

The inescapable fact is that nowadays security and prospects in the Navy must be compared with security and prospects in civil employment. And to compensate for the disadvantages to family life inseparable from life in the fighting Services, these must have an edge on what civil life can offer.

Vice Admiral Dowling, after he had posed these three questions, proceeded to answer them:

"I can give you a definite and emphatic answer in one word — yes," he said.

"The (Australian) Government, and indeed all Governments of maritime nations, have quite clearly made up their minds that so long as three-quarters of the world's surface is covered by salt water a strong Navy is a vital element of defence, in hot or cold war. There is security even if you don't reach the highest ranks. In the years ahead, intended changes in officer structure will ensure increased hopes of promotion."

Vice Admiral Dowling pointed out that the Royal Australian Navy was designed not only as a small, balanced Fleet, fully mobile and flexible, but for integration with the Navies of our Allies.

At the drop of a hat the R.A.N., or elements of it, could become part either of the Royal Navy or the United States Navy. For this reason, he said, he hoped it would not be long before the R.A.N. had a system of exchange with officers of the United States Navy as we now have with the Royal Navy.

He added: "The Navy becomes more and more technical. . . . The very structure of Fleets is under change. The task force of World War II will be replaced by battle groups — small units probably consisting of an aircraft carrier, a guided missiles cruiser, and a squadron of anti-submarine escorts. These mobile groups offer small targets for thermo-nuclear weapons and long-range guided missiles, but can be quickly concentrated with other groups if required.

"The guided missile is replacing the gun and, perhaps, will replace the bomber. The helicopter is coming into its own for detecting and destroying enemy submarines with 'dunking sonar' and target-seeking torpedoes."

Vice Admiral Dowling referred to a letter which his great-grandfather, 120 years ago, wrote to his son when he sent him to England to complete his education. Some of the points of advice — which applied even now — were:—

Lead a Christian life. This is the ideal and manly life.
Never lower your standards.
Avoid low company.
Avoid over indulgence.
Behave and appear as a gentleman should.
Get to know and understand your fellow man.
See that work always come before play.

Vice Admiral Dowling added three points of advice himself to the young graduates:—

Never lose your sense of values.
Never lose the common touch.
Never lose your humility.

NEW "Q" CLASS ARE POWERFUL SUBMARINE HUNTERS

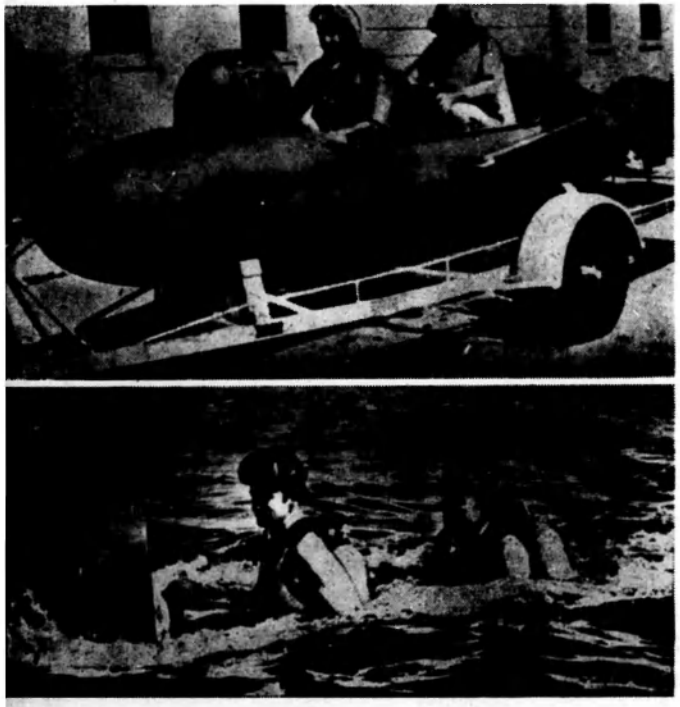
Special Correspondent

WITH her clean rich grey paint glistening in the sun and her White Ensign and new commissioning pendant flying sniffly in the breeze, H.M.A.S. *Quickmatch* sailed out of Port Phillip Bay (Vic.) one afternoon recently to rejoin the Australian Fleet in Sydney.

Her conversion from an obsolete Q class destroyer to a fast anti-submarine frigate of most modern type had been completed, and only that morning she had been accepted on behalf of the Royal Australian Navy as having fulfilled her trials satisfactorily and having in all other respects complied with the Navy's needs.

Now, with her sister-ships *Queenborough* and *Quadrant*, converted some time previously, she is one of the most efficiently equipped and deadliest ships of her kind afloat.

At that time both her converted sister-ships were engaged in operational duties in widely separated parts of the world.



An Italian two-man submarine undergoing trials recently. The submarine has a submerged speed of six knots and a fuel range of 37 miles.

The *Queenborough*, after gaining first-hand experience against the latest types of submarines with ships of the British Home Fleet and other NATO Navies, had just left the United Kingdom on her voyage home. The *Quadrant* was taking part in exercises off the east Australian coast in which her capabilities and skill as a hunter and killer were being tested with the assistance of Royal Navy submarines based in Sydney.

Another Q class ship, the *Quiberon*, was lying at Garden Island Sydney. She, also, is undergoing a conversion that will be finished towards the end of this year.

After the *Quickmatch* had passed through the tumbling waters of the Rip and turned eastward into Bass Strait she ran into a long, slow swell which she rode gently and through which she cut cleanly, throwing up curling masses of woolly-white foam on the both sides of her bow.

It was in Bass Strait, between Point Nepean and Cape Schanck, only a few weeks before, that she had done her speed trials and delighted her Captain and other officers with her quick acceleration, her rare handling qualities and her flexibility.

"It is just like driving a motor-bike," one of them had said enthusiastically as he stood with the Captain on the bridge.

As she approached the measured mile—marked out by beacons ashore—on the day of those particular trials, she gathered speed like an eager greyhound. She passed the last beacon, and as she turned at full speed in a short circle to get ready for another run, she heeled over and sent some of her crew, taken suddenly unawares, sliding across her decks into the guard rails.

Astern of her, as she circled, she left a wide shimmering, sparkling path that looked like fluffy cotton-down, in the broad centre of which her propellers had carved a turbulently-rushing frothy depth.

There was a thrill and fascination about this display of speed.

It was no wonder, then, that in her bright new dress, with her proud banners flying, and the sunlight streaming down upon her, she made a brave and splendid showing as she went to join the Fleet.

And, as she went, the good wishes of all who loved the sea and ships went with her.

The *Quickmatch* and her sister-ship were lent to the Royal Australian Navy by the Royal Navy during the Second World War, when, manned by R.A.N. crews, they served with distinction in all the waters of the globe.

It had been intended that after the war the ships would be returned to the Royal Navy. But meantime a new threat had arisen. This was a long-range, snort-fitted submarine which the Germans had begun to use.

Even after the war had ended in an Allied victory, a potential threat still confronted the Western powers, because plans for still more deadly types of submarines had passed into other than Allied hands, one of which was a fast type fitted with turbine-engines that burned a special fuel mixture.

Since then submarines that can travel much faster and remain submerged for very long periods without snorting have become standard. These improvements have been achieved by streamlining the vessels' hulls and greatly increasing their battery capacities.

If another war broke out and such submarines began to roam the oceans they could create so much havoc among Allied shipping that the disastrous effects of Hitler's U-boat campaign would seem a minor affair by comparison.

It was as a consequence of this threat that the Navies of the Western powers decided to strengthen their anti-submarine defences with the greatest possible despatch. And as a result of that decision the British Government presented the Royal Australian Navy with the Q class destroyers as a gift on condition that they were converted into fast, modernly equipped anti-submarine frigates.

The R.A.N.'s anti-submarine force contains other vessels besides these frigates. The aircraft carrier *Sydney* has, until recently, been the most potent unit in the force because she has been able to employ both her own great mobility and the added mobility of her anti-submarine aircraft. When the new carrier *Melbourne* arrives in Australian waters this year she will have the additional advantage of the even greater range and efficiency of Gannet turbo-prop aircraft.

Other ships in the force are the R.A.N.'s modernised River class frigates, all of which are equipped with up-to-date anti-submarine devices, and its Tribal and Battle class destroyers which have been equipped in the same way.

Its Daring class vessels, of small cruiser type, at present being built, and four frigates whose construction is contemplated, will all be fitted with the most modern anti-submarine apparatus yet devised.

It would be useless, however, to have modernly-equipped ships if their officers and men were not adequately trained in how best to use them. For that reason ships of the Royal Australian Navy are engaged in anti-submarine exercises almost continuously.

With the submarines of the Royal Navy that have been specially based on Sydney so that such exercises could be held, R.A.N. officers and men gain valuable practical experience that would not be available to them otherwise.

Most of the exercises are held on a small scale off the east Australian coast between Jervis Bay and Sydney, but exercises on a large scale are arranged at least once a year. These have taken place in Bass Strait, the Tasman, the Pacific, and in the Arafura, Java, and South China Seas. Ships of the Canadian and New Zealand Navies and of the British Far East Fleet, as well as aircraft of the Royal Air Force, the Royal Australian Air Force, and the Royal New Zealand Air Force, have joined in some of them at different times.

The participation of the Air Forces has been important because they would play a significant role in defending coastal and near-coastal waters against submarine attacks.

But on the wider ocean areas, beyond the effective range of land-based aircraft, the task of combating submarines is one for warships and carrier-based aircraft. A submarine can be initially detected from the air, visually or by radar, only when it is surfaced, or when it has raised its snort or periscope above the water. A rough or choppy sea also increases the difficulty of detection from the air.

It is recognition of these vital facts that has led the Royal Australian Navy to modernise its ships and their under-water equipment, and to build up a fully mobile and flexible fleet that could be integrated immediately with the Navies of our Allies in the event of an emergency.

Within this fleet the *Quickmatch* and her sister-ships, with their highly efficient weapons and equipment, will hold a worthy place.

SAILING THE WORLD—BY JEEP

By Murray Sayle

THE sea-going adventures of Ben Carlin began eleven years ago in a bar in Delhi, India.

Conversation was running low among a group of soldiers assembled for light refreshments when a queer-looking vehicle pulled up across the street.

It was an amphibious jeep, the first one seen in the Indian theatre of the war. You could call it a baby automobile which could float, or a small boat with wheels, depending on the way you looked at it.

"You know," said one of the soldiers wearing the crowns of a major in the British Army, "you could go round the world in one of those things."

"Five dollars say you couldn't," said a girl named Elinore, from Boston, U.S.A., who was serving in the American Red Cross.

"Taken," said Major Ben Carlin.

He will have no difficulty in collecting. Elinore — now Mrs. Carlin — is helping him in the attempt!

The Carlins have already crossed the Atlantic (after five tries), the Mediterranean, and the English Channel in their cross-bred vehicle.

[The Carlins recently reached Australia.]

By the end of 1956 they plan to be back in New York, their starting point.

Clearly, they will not break any speed records. The only distinction they can win is that of going round the world in the most unsuitable possible form of transport, in the most extreme discomfort—if you like, the supreme example in our time of doing things the hard way.

Ben Carlin, now 41, was born in Perth, Western Australia. He was working as a mining engineer in China on the outbreak of World War II, and enlisted in the British Army at the nearest British consulate on the day he received the news that Hitler had lowered the boom.

After the Allies made it game, set and match, he took his discharge in the U.S. and started looking for an amphibious jeep to win his five-dollar bet.

The manufacturers sold him a brand-new surplus model for 800 dollars. It cost Carlin 2000 dollars—all the money he had in the world—to adapt it for his adventures.

It ought to be made clear that Carlin's jeep is not the DUKW, the amphibious truck well known to most of the world's veterans. It is the much smaller vehicle which the U.S. Army calls "Jeep, Amphibious, 4x4, quarter-ton." Only 1000 of them were built before the U.S. Army decided they were too small to be of any practical use.

So Carlin had no difficulty buying one.

The 20-gallon tank of a jeep would not take him far across the Atlantic. Carlin built two tanks, fore and aft, shaped to give the jeep a rough, blunt, pointed bow and stern, and increased gasoline capacity to 200 gallons. Still not nearly enough.

After much experimenting, he designed a 600-gallon, cigar-shaped tow tank which, he calculated, should just about turn the trick.

In place of the canvas top of the jeep, Carlin added a wood-and-perspex roof with aerial for a small radio receiver. Extra water and oil tanks completed the job.

Fully loaded, the jeep weighs two tons, and rides in the water with eight inches of freeboard. The standard jeep engine gives 40 miles per hour on land and (because of the drag of the wheels and the poor shape of the hull) an agonizingly slow 2½ knots afloat.

All this time Carlin was looking for another man, preferably an engineer veteran, to go with him. Elinore, now discharged from the Red Cross, was helping him look, but with ideas of her own about who the second adventurer should be.

It took a long while to persuade Carlin that a woman could stand up to the rigors of the trip. But Elinore convinced him — and Carlin countered by suggesting a plain gold band on the third finger of the left hand. Ben and Elinore were married in New York in the spring of '48 and a fortnight later they left Halifax, in Nova Scotia, for their honeymoon trip to the Azores, 2200 miles away.

The first day out, they lost their tank. It cost Carlin his last ninety dollars to have another made.

Next time the propeller bearing — one of the few parts Carlin could not repair while afloat—broke down after six days at sea and a passing ship hoisted the jeep aboard and took them home.

Three or four more tries failed because of leaks, severe headwinds and the like.

Elinore turned out to be a worse sailor than she hoped and was sick almost continuously during the first attempts.

It is impossible to cook aboard the jeep and the pair lived entirely on canned food. During the last, successful, attempt to get to the Azores, a heavy sea came aboard and washed all the labels off the cans stacked on the jeep's floor.

So, at mealtimes, they took pot luck among the cans. For one week they lived entirely on ravioli, which the luck of the draw turned up meal after meal.

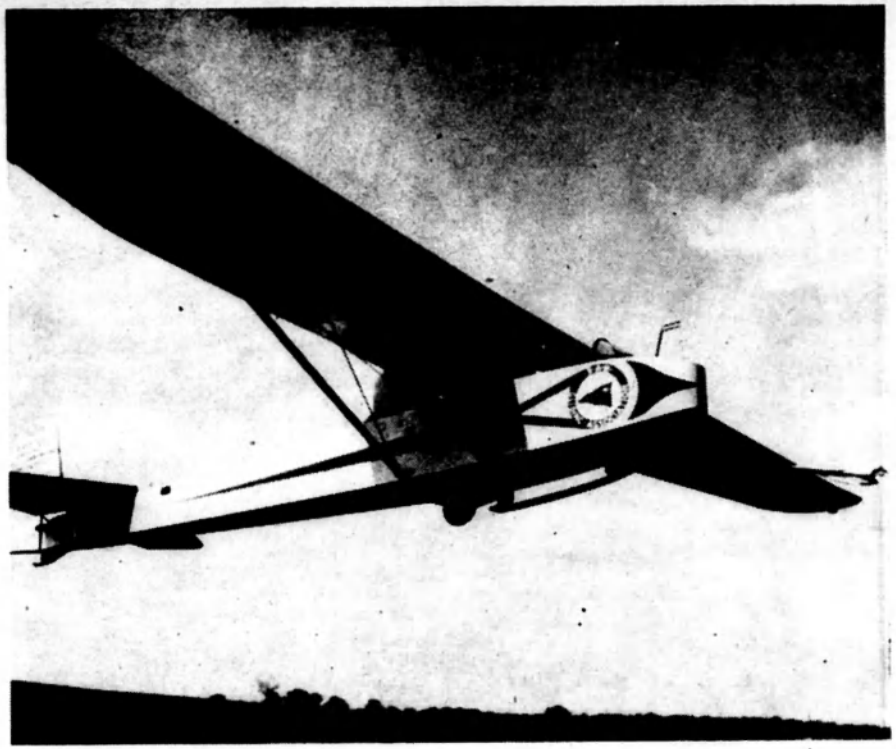
Even at 1500 revolutions a minute, you cannot run the sturdiest gasoline engine continuously for more than a few days. More than half a dozen times, while the jeep wallowed in the Atlantic swell, Carlin stripped the motor, changed the spark plugs, decarbonized the cylinders.

They hit Flores in the Azores after 32 days at sea—a tribute to the books on navigation which Carlin had studied nights in the New York Public Library. The island Portuguese, astonished to see any kind of small boat crawl in out of the blue yonder, were dumbfounded when the boat ran up the beach and parked outside the nearest bar. They promptly declared a "*Festival do Zheep*," and a scheduled one-week stopover turned into three liquid months of celebration.

Already the Carlins had a lot to celebrate. They had notched up the smallest power-boat crossing of the mid-Atlantic, and had covered the longest single hop of the whole world journey.

The next hop, to Madeira, was much shorter, but it brought the jeeping couple close to disaster. A twelve-day hurricane almost swamped the vehicle, made eating or sleeping impossible and cut off radio communications.

The radio trouble was traced to wet insulators, and Ben finally got the set working again by posting Elinore topside on the roof of the jeep, where she clung with one hand and wiped the insulators with a fistful of kleenex tissues.



On his first solo flight in a glider is naval cadet F. Foster, at Schofields aerodrome. He is one of a group of midshipmen from Flinders Naval Depot who gave up eight days of their leave to learn gliding. Lieutenant-Commander A. Goodheart, one of Australia's foremost gliding experts, was the instructor.

Ben says you could have trailed them over the Atlantic by the line of crumpled tissues bobbing on mountainous seas.

The radio, working again, brought in the frantic portugese coast guard transmitter forlornly crying "*Allo Zheep, Allo Zheep*" on all wavelengths, like a heart-broken shepherd. Ben reassured them that they were still afloat, and accepted an offer from the Portugese Navy to rendez-vous with them at sea with fresh supplies of gasoline.

Sleeping aboard, impossible during the hurricane, is difficult at all times. Because of the hopeless shape of the hull from a 'naval-design point of view, the jeep waddles about at sea like a tipsy duck and must be continually brought on to course. There are no hunks aboard, and indeed no free space at all except a 4-foot by 2-foot shelf behind the two driving seats. So, while Elinore drove, Ben curled up his 6-foot, 210-pound frame on the shelf, and every two hours they changed places.

In a storm, the cabin must be sealed up altogether, and oil fumes from the engine soon make the air foul. Elinore, who is cursed with a non-seagoing stomach, could often do no more than 15 minutes at the wheel before Ben took over.

After the hurricane subsided, the expedition made Madeira without further incident, and touched the African coast in Spanish Morocco on a dead-calm day.

The Spanish authorities were most helpful to the travellers, who now faced the overland transit of the Sahara in their heavily overloaded vehicle. (There is almost a ton on each axle of the jeep, built to carry a quarter that weight.)

A detachment of Spanish soldiers even filled in a dried riverbed with stones to enable them to cross.

With the Atlantic behind them, the short hop across the Mediterranean was a pleasant day's outing. The pair then drove through Spain and France, into the Channel at Dieppe and out again at Dover, where a regulation-conscious British policeman greeted Ben by asking for his driving license, refused to believe that he had come from France, let alone America, and then arranged a temporary driving card for the triumphal trip up to London.

The jeep by this time—the fall of 1950—was in bad shape. The pounding of the Atlantic and the washboard roads of Africa had loosened every bolt, and rust had attacked the thin metal of the hull.

While Elinore took a job with the U.S. Air Force in Britain, Ben rented a garage in London and stripped the jeep down to a heap of parts. The rebuilding took close to three years of steady single-handed work.

Everything was ready by last summer. Quietly, without publicity, the jeep slipped back into the Channel at Dover and followed the land route across Europe and Asia as far as Singapore. A friend brought up the rear in a light pick-up with the expedition's baggage.

People who have never met Ben Carlin and his wife invariably say: "This trip proves that they are a brave and resourceful pair, but what else does it prove? Why go to all this trouble?"

And "Why?" was the first question I put to Carlin in London.

It is not, I can assure you, a gigantic publicity stunt, nor are the Carlins being paid by the manufacturers of any of the equipment they are using.

Indeed, when the makers of the jeep heard of the project they tried to persuade Carlin not to go, as they did not wish their product to be used in any suicide attempts

Neither of the pair seeks publicity for their expedition, and newspapermen have a great deal of trouble getting the modest and self-deprecating Carlin even to describe the harrowing experiences they have had.

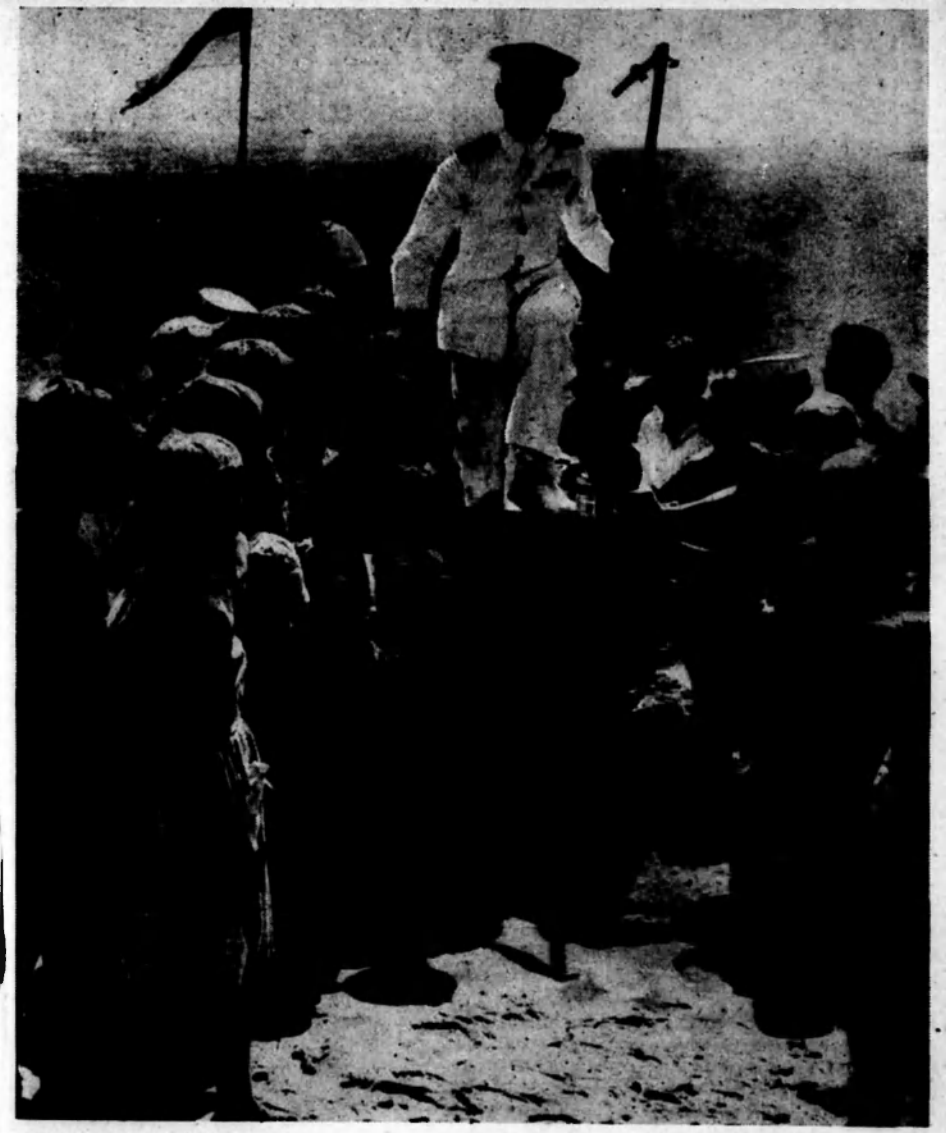
"It is a challenge, like Everest, the four-minute mile, or travel to the moon," says Ben.

"There is no percentage in any of these things except that you have done something no one has done before and, more important, you have made yourself a promise and kept it.

"I said that it could be done, and I would not like my friends back in India to think I was a man who indulged in loose boasting in bars. So I intend to prove that it can be done."

And, if Ben and Elinore Carlin fail to go round the world in their jeep, there's one thing you can be quite sure of. It's impossible. ●

—From "The World Veteran."



Local children welcomed Lieutenant-Commander J. Hume ashore at Yarra Bay on January 18 to re-enact Governor Phillip's first landing there. Lieutenant-Commander Hume is commanding officer of the minesweeper H.M.A.S. "Wagga," which provided the boat's crew for the ceremony.

A U.S. Atomic Explosion — as Seen by a Canadian Naval Observer

". . . Deep purple fades into lavender and then into creamy white until at last it is crowned with a snowy crest of snowy vapour." This is the colourful description of an atomic cloud by the writer of this article, republished from "The Crow's Nest," the official journal of the Royal Canadian Navy.

THE advent of atomic weapons in the closing phase of the Second World War left the United States Armed Forces in sole possession of the greatest weapon of mass destruction the world had known.

As long as this state of affairs endured, the Canadian services did not need to concern themselves greatly with the problems of defence in nuclear warfare, but within a comparatively short period it became evident that other countries, both inside and outside the North Atlantic Treaty Organisation, were making rapid strides in the production of atomic weapons.

Although Canada shared in the pioneering scientific research which led to the release of energy from the atom, she chose after the war to concentrate on nuclear studies outside the weapons field. Thus it was that few Canadians, civilian or members of the armed forces, had ever witnessed an atomic explosion, although defensive measures were studied and exercised.

Last year, however, the United States Atomic Energy Commission agreed that Canadian armed forces personnel, sponsored by the U.S. Army, should be invited to take part in a series of trials, called "Exercise Desert Rock VI," at the AEC Nevada proving grounds.

Senior officers of the three armed services were asked to attend as observers. Three officers of the Royal Canadian Navy who had a first-hand view of atomic might were Rear-Admiral H. S. Rayner, Commodore K. L. Dyer and Captain (L) H. G. Burchell.

An invitation was also extended to a Canadian party of officers and men of the three Services to witness an atomic explosion from forward slit trenches and to take part in the subsequent survey of the contaminated fall-out area. This portion of the tests was known as "Exercise Sapling."

Personnel began preliminary training at Barriefield, Ont., in January, but it was not until April 20 that all had reached Camp Desert Rock, Nevada.

They were allotted quarters, eight to a tent, identical for officers and men. While toilet and ablution facilities were on the super-market principle, designed for numbers and gossip rather than privacy, they were remarkably efficient, considering that all water was hauled from 15 miles away in 2000-gallon trailers.

Meals were served in tents or long tin huts and the Canadians were amazed at the standard maintained despite sudden changes in the number of meals required and serving times when "shots" were cancelled with little warning.

In the days preceding the scheduled date of the explosion they were to witness, April 26, the members of the party were kept busy preparing equipment and running monitoring exercises on clean and contaminated ground.

The "Shot" was not fired until May 4, and after a succession of disappointing day-to-day postponement. It was well known that certain flashy gentlemen in Las Vegas were eager to wager sizeable sums that it would not take place at all.

Wind direction was the most important factor in deciding whether or not an atomic device would be set off. During a series of tests, such as Exercise Desert Rock VI in which a considerable number of shots are fired, radioactive fall-out could render repeatedly-exposed land dangerous to man and beast for a long time. The wind direction is, accordingly, watched carefully so that the fall-out over any sector does not bring the radioactivity to a dangerously high level.

Because the shot which the Canadian team was to witness was a comparatively large one and near the end of the series, only a narrow sector remained at the test site over which fall-out could be permitted to occur.

A weather conference was held at 1000 the day previous to "shot day" and if the predictions at that time were favourable a blue flag was raised at headquarters. The troops boarded buses or other vehicles at midnight and moved the 35 miles from the camp to the shot area. On arrival, a field kitchen provided buns and scalding coffee, served in canteen cups that doubled the apparent temperature of the beverage. The lateness of the hour and the chill desert kept conversation to a glum minimum.

A naked, white bulb gleamed in the sky a few thousand yards away, the only clue to the location of the steel tower bearing the nuclear device.

There was nothing for Service personnel to do but await the results of the "Met" conference at 0330 and shot-time minus one hour. The Canadian party waited three nights on the desert for the announcement on each occasion. "Sorry, gentlemen, the shot is off." On other occasions, except the last, the shot was cancelled before the buses left the camp.

It was a novel experience for naval personnel to sit out the "graveyard" watch in a slit trench 4000 feet above sea level in the bottom of a dried lake. A figure, dressed in GI helmet, GI winter clothing, Canadian Army bush clothing and a borrowed blanket or two, might emerge from the gloom. There was good reason for this burden of clothing. Although temperatures on the desert may have reached 100°F. under a blue sky and blazing sun the previous afternoon, in the dead of the night the mercury sank as low as 23°F.

Cracked lips, peeling noses and blistered skin were common among the men exposed to the sun and hot, dry winds of the desert. The wind at times built up to dangerous velocities and one night 152 tents were demolished. None of the Canadian tents was among these. By herculean efforts and good "damage control" procedure, they kept their shelters intact.

The stamina of the naval personnel was amazing. After a night of fruitless waiting in the slit trenches or a day exercising on Yucca Flats, they could be found hitching lifts to Las Vegas or lining up for U.S. Army-sponsored tours to Death Valley and Boulder Dam.

Many Service personnel were recalled. The local paper quoted odds of five to two against the shot going off. The Canadians travelled the length and breadth of Yucca Flats, in jeeps, Beaver aircraft and helicopters, assessing a variety of techniques for mapping the radiation intensity over a fall-out area. Out on the desert stood the silent tower and the equally silent Doom City, its homes inhabited by clothing-store dummies.

Wednesday, May 4, arrived with nothing to indicate that it held more hope than the preceding days. Rumours were rampant that a delay of from 48 hours to one week was imminent and the betting in Las Vegas was two to one against the shot going off.

However, the blue flag was raised after the 1000 "Met" conference and it remained up past the 2130 conference time. For the first time in days there was an air of optimism as personnel piled into their buses for the midnight ride to Yucca Flats. The night had retained some of the previous day's heat and there was cheerful and hopeful chatter as the troops drank their coffee under a canopy of glittering stars. Even the baleful light on the "thing" seemed to have softened its sneer. There were encouraging announcements over the PA system at regular intervals and at last the light on the tower went out. Somebody suggested they were going to salvage the bulb. The time was shot time minus one hour.

At shot time minus 15 minutes there are orders to assemble in the assigned trenches. A calm voice tells of the role of the aircraft which are in continuous patrol over the area. The machinery for the test is already in motion as the countless automatic measuring devices are put into action to send out vital information in the last micro-seconds before their disintegration.

The voice describes the position to be assumed by personnel in the slit trenches — eyes closed, head two feet below ground level, body braced on one knee facing ground zero. The time reports increase in frequency.

One minute . . . 30 seconds . . . 15 seconds . . . 10 seconds . . . nine, eight, seven . . . zero.

There is a flash of light . . . a silent, white, blinding flash of light that exceeds all expectations, although there have been many advance warnings. It is hard to believe that eyes are closed and hands covering the face below ground level.

The dazzling flash fades swiftly and a stolen glance a second or so later shows the edges of the trench undulating gently in a rosy glow.

Until now there has been a deadly hush and then blast wave and sound arrive simultaneously in a shattering blow, like that experienced when standing directly below a discharging twin four-inch gun.

The shock is so devastating that one scarcely notices the shower of earth and stones tumbling into the trench. Heads are raised above trench level into the cloud of dust that is rolling across the desert. Little flames are flickering upward along the exposed sides of a nearby Joshua tree.

And then Canadian eyes glimpse the awe-inspiring and incredibly beautiful atomic cloud billowing skyward, an ever-changing kaleidoscope of colour. Deep purple fades into lavender and then into creamy white until at last it is crowned with a snowy crest of frozen vapour. Busy, gnat-like jet aircraft weave a cobweb of vapour trails as they shepherd the atomic cloud in its stately march to the northward, its stem broken and its mushroom head already distorted

Continued on page 24

NEWS OF THE WORLD'S NAVIES

American helicopters for Royal Navy

Press messages from London last month stated that the Admiralty will cancel an order for British helicopters for anti-submarine work and will probably order American Westland Sikorsky 58's.

The British helicopters originally ordered were the two-engined, twin-rotor Bristol 191's. The Press message quoted an Admiralty statement as saying that a smaller helicopter was more suitable for operating from aircraft-carriers and other ships.

The Westland Sikorsky 58 has one engine and one rotor.

A new navy for West Germany

The German Navy was re-born on January 17 when the first 120 sailors of the new German Navy paraded at Wilhelmshaven.

The West German Defence Minister took the salute, the German flag was raised, and a band played "Deutschland Uber Alles."

According to the London "Times," West Germany has asked Britain and the United States to help her build up her new Navy. The newspaper's correspondent in Bonne says that the West German Government has asked Britain to sell it seven frigates and has asked America for the loan of twelve destroyers.

West German sources say the first units of the new Navy will put to sea in the next few months. They will be 18 mine-detecting and mine-sweeping vessels of the former German Navy which have been operating under the U.S. flag for some years.

The sources say the new German Navy will be fully established by the end of 1959. It is expected to comprise 170 ships and 17,000 men, with the emphasis on destroyers of about 2200 tons.

Under treaties with the Western Allies West Germany has agreed not to build surface ships of more than 3000 tons.

The West German Navy will include mine-layers, convoy escort ships, mine-sweepers, coastal submarines, assault landing craft, training ships, and an air arm of two groups.

R.A.N. carrier visits French port

The Royal Australian Navy's new aircraft-carrier, H.M.A.S. *Melbourne*, visited the French channel port of Le Havre on January 21.

It was an informal visit. The carrier has been undergoing flying trials in the English Channel following her recent commissioning.

H.M.A.S. *Melbourne* is expected to arrive in Australian waters to join the Australian fleet about the middle of this year.

Names given to new atomic subs.

The names of the U.S. Navy's third and fourth nuclear-powered submarines have been announced by the United States Department of the Navy. They are the U.S.S. *Skate* (SSN-578) and U.S.S. *Swordfish* (SSN-579).

The *Skate* is being built by General Dynamics Corp., Electric Boat Co. Division, Groton, Connecticut. The *Swordfish* is under construction at the U.S. Naval Shipyard, Portsmouth, New Hampshire.

The *Skate* will be the second United States submarine to have that name. The first (SS-305) was launched in April, 1943. After making seven successful war patrols, the *Skate* took part in the Bikini atom bomb tests and was one of the eight submarines to withstand successfully two explosions of the atom bomb.

The *Swordfish* is the second submarine to carry her name, too. The first (SS-139) was launched in April, 1939, and made twelve successful war patrols but was lost on her 13th in January, 1945.

French Navy ships arrive at Suva

The French cruiser *Jeanne d'Arc* reached Suva on January 21 with the escort ship *La Grandiere* on their way to Australian and New Zealand ports.

The cruiser carries 185 midshipmen on a training cruise.

Communist Navy, Air build-up in East

Hanson Baldwin, military editor of the "New York Times," last month said that continued strengthening of Communist Forces in the Far East was causing United States military leaders concern.

The main build-up was in naval and air forces, he said. Reports indicated that about 7000 planes —about one-third of the Communist bloc's total air power—are now based in Communist China, North Korea, and Siberia.

Thirty new Soviet surface warships were transferred from the Atlantic to the Pacific last year, and more than 90 Soviet submarines.

Baldwin said that the Soviet Navy build-up in the Far East was even more pronounced than the increase in air strength. If reports from Japan were correct, as they appeared to be, Russia had sent to the Pacific the biggest naval convoy that had yet crossed the difficult Arctic sea route.

Progress in American shipbuilding programme

The United States Department of Defence has announced that it has contracted with the New York Shipbuilding Corporation to build the fifth Forrestal class aircraft-carrier.

It has also given a contract for the construction of three ocean minesweepers to Peterson Builders Inc., Wisconsin. They will be non-magnetic wooden vessels with a length of 189 feet, a beam of 36 feet, and a full load displacement of 963 tons.

The *Suribachi*, first of a new line of ammunition ships, was launched on November 2. The U.S. Defence Department describes the ship as representing the most recent devlopment in ships design to conduct rapid replenishment-at-sea operations of ammunition explosives. Ships may be serviced along both sides of the *Suribachi*.

The new ammunition ships are named after volcanoes. *Suribachi* is a volcano on Iwo Jima.

American plan for nuclear seaplane

The U.S. Navy's Seamaster seaplane may be the first aircraft to fly on nuclear power, the Navy Secretary, Mr. Charles Thomas, said on January 19.

The Seamaster is an experimental plane now powered by non-atomic jet engines. One test model crashed a few weeks ago, but a second plane is under construction.

Mr. Thomas told the U.S. House of Representatives Armed Services Committee: "The large hull of the new Seamaster may be the air frame which will take aloft the first nuclear power plant."

Mr. Thomas also said the Navy expects next year to begin building a nuclear-powered aircraft-carrier.

The Budget bill now before the committee provides for designing and planning a nuclear plant for a carrier, but not for its construction, he said.

It contains authorisation for a 60,000-ton conventionally-driven carrier and for a nuclear-driven light cruiser to serve as a guided missile ship.

Mr. Thomas emphasised the need for submarines, noting that the bill provided for six more atomic-driven submarines and the conversion of one submarine to launch guided missiles.

Navy apprentice school is commissioned

The Royal Australian Navy Apprentice Training Establishment was commissioned on January 5 and the first entry of apprentices is expected in June or July.

The establishment is at Schofields (N.S.W.).

The first commanding officer is Captain (E) F. L. George, R.A.N., who recently returned to Australia after visiting Royal Navy apprentice training establishments in the United Kingdom.

The Navy intends to enter 100 apprentices a year, each of whom will do a four years' course. The trainees will be between 15 and 17 and will need to have passed the sub-intermidate or intermediate examinations, or their equivalents.

Russia hands back Finnish Navy base

Russia on January 20 began handing back to Finland the naval base at Porkkala, ten miles west of Helsinki.

The transfer was expected to have been completed late last month.

The base was leased to Russia in 1944, under the terms of the Russo-Finnish armistice.

Greater the deed, greater the need,
Lightly to laugh it away,
Shall be the mark of the English breed
Until the Judgment Day.

—Rudyard Kipling.

HOW THE NAVY SPENT CHRISTMAS IN PENANG

A SPECIAL Correspondent in H.M.A.S. "Tobruk" has sent us this account, in diary form, of how the ship's company spent Christmas at Penang. The "Tobruk" is in Malayan waters as part of the strategic reserve.

Pictured at right, by Australian Photographic Agency staff photographer, is the *Tobruk*" steaming through heavy seas in the Australian Bight on her way to Malaya.

Thursday, 22nd December: Activities began with a cocktail party for the Captain and officers at the residence of the Resident Commissioner. In a most congenial atmosphere heads of the fighting and civil service and leading citizens were met. During the cocktail party invitations to dinner were offered and accepted. All officers reported having a very good time at the various dinners.

Second Battalion R.A.R. Sergeants' Mess at Minden Barracks, Penang, issued an invitation for a formal evening to 20 chief and petty officers. An excellent buffet dinner was provided and many friends were made.

Friday, 23rd Decembers Friday saw 10 officers and civilians and 50 other ranks embarked in *Tobruk* for a day at sea. The visitors were shown over the ship and witnessed burning of smoke floats, firings of practice squid, and firing of main armament. The 4.5's fired star shells which were used as targets for the close range weapons.

The seaboat was lowered to recover the practice squid projectiles. When the seaboat was hoisted, the soldiers and airmen assisted in manning the falls with great enthusiasm. On return to harbour the visitors expressed their delight for having had a first-class day—for most of them it was their first visit to a warship.

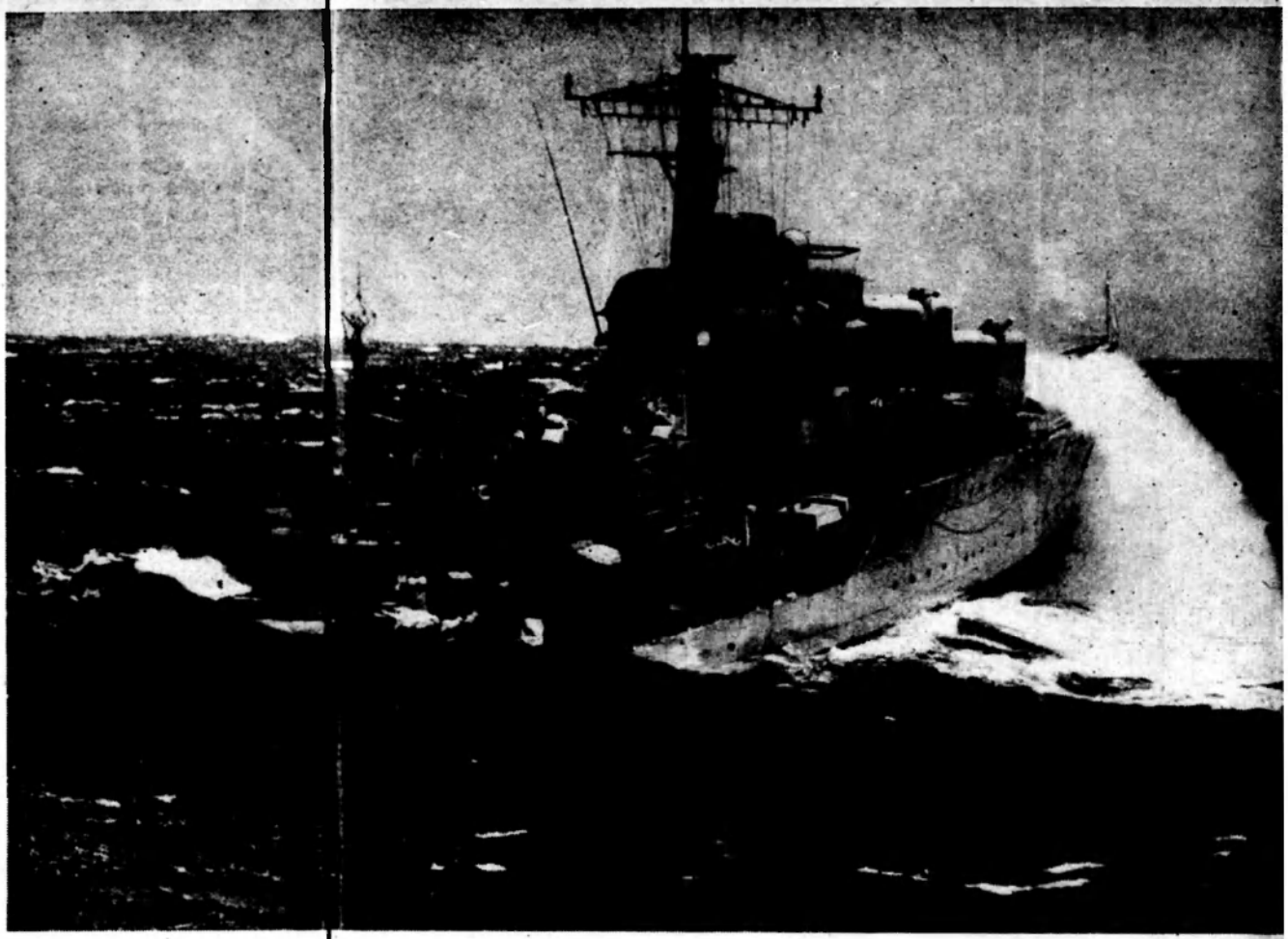
On Friday night chief and petty officers were entertained by the Sergeants' Mess at the 105th Field Artillery Regiment, R.A.A., at Butterworth.

Saturday, 24th December: A bus trip around the island of Penang was arranged for 20 ratings, who thoroughly enjoyed the scenic views. The tour also included a trip in the cable railway to Penang Hill. Tennis was played against the R.A.R., *Tobruk* winning by one game. A water polo match was played against the 2nd Battalion R.A.R. officers, who defeated *Tobruk* 4 - 3.

The majority of officers and ratings found their way to the Penang racecourse for the opening day of the Christmas - New Year meeting. Despite numerous tips and lucky potents the totalisator finished up the winner. However, everyone was surprised with the splendid layout of the course and the excellent facilities—only a partition separated the tote pay-out from a well-stocked bar.

R.S.L. Christmas parcels were distributed during the forenoon and were very popular. The two bottles of beer per man received with the parcels were placed in the ship's cold room for Christmas Day.

On Saturday night Christmas shopping continued and on board the midnight oil was burned finishing off the Christmas decorations in the mess decks. Since leaving Australia there has been keen competition between the various messes to win the weekly cake for the best mess. This custom was revived as an experimnt eand the results have been so gratifying that it has been retained as a routine.



Sunday, 25th December: Christmas Day dawned clear and bright. Facilities weer made available for all denominations to attend the various churches ashore and prayers were held on the forecastle at 0930. The beer issue was made with dinner and at 1200 the Captain and all officers walked through every mess to wish everyone a merry Christmas and to admire the decorations. The hard work which had gone into the preparations produced very good results. The officers decided to give a carton of 500 cigarettes to the best mess. This selection proved no easy task and was finally awarded to No. 2 mess, a forecastle seamen's mess. All mess decks were excellent.

The Christmas dinner of roast turkey, roast pork, ham, apple sauce, seasoned gravy, peas, cauliflower, baked potatoes, Christmas pudding and brandy sauce, raisins and mixed nuts was very well cooked. The cooks had worked through Christmas eve to ensure that nothing was lacking.

The welfare committee provided each member of the ship's company with a cigar and a rich aroma permeated the ship during the afternoon.

Monday, 26 December: A bus tour for 20 ratings was arranged. Golf was played against the Army, who proved superior and defeated *Tobruk*'s team 3—0.

Most of the watch ashore took advantage of this last day to visit newly-made friends and for a last

Continued on page 18

A PROUD RECORD

The Royal Navy Submarine "Tactician" left Sydney for England last month after two years' service with the Royal Australian Navy

TACTICIAN, one of the Triton class, was built by Messrs. Vickers Armstrong at Barrow in Furness, launched on July 29, 1942, and completed in November of the same year.

Tactician first saw war service in the Mediterranean in the early months of 1943, where she served with distinction, earning the battle honours of Sicily, 1943, and Mediterranean, 1943. In 1944 she left for the East Indies Station, where she served until the termination of hostilities against Japan.

After a two years' spell at home, *Tactician* left for the Mediterranean in January, 1949, and in May, 1950, left for service on the Australian Station, arriving in Sydney to join the newly formed Fourth Submarine Squadron in August, 1950.

While at Sydney her time has been spent working with the Australian Navy and Air Force, but although based at Sydney *Tactician* has become known in many ports on the Far East Station.

In Japan in early 1952 she was giving anti-submarine training to the United Nations ships in the Korean War. Later in that year she was in Subic Bay exercising with the American Navy. She has twice visited Hong Kong and New Zealand, has cruised to Tasmania and the Fiji Islands, and has been at Melbourne coincident with the Melbourne Cup.

In September, 1954, she took part in a large-scale combined fleet exercise at Manus, and early in 1955 was at Singapore for ANZAC 1.

Her activities with the Fourth Squadron have been extensive and varied, with several trips through the Barrier Reef to her credit and visit to the extremities of the Station.

Tactician leaves the Squadron with a work and travel record to be proud of.

CHRISTMAS IN PENANG

Continued from page 17

look at Penang. The consensus of opinion being that if Christmas couldn't be spent at home, Penang was the place to spend it.

The Captain and officers held a cocktail party at 1930 to return some of the overwhelming hospitality extended by the Services and citizens of Penang.

An unusual family reunion took place when Petty Officer Edward C. Baum, 28, invited his younger brother, Private Fred Baum, 20, of 2nd Battalion, R.A.R., on board *Tobruk* for Christmas dinner. The Baum brothers were born in Bunbury, W.A., and after attending school there the family moved to Perth. It was in Perth in 1944 that the brothers were last together.

TWO MARINES BEGIN TRANSATLANTIC VOYAGE

Two marines begin transatlantic voyage

Two Royal Marine officers paddled a 25ft. sailing boat out of a creek at Frinton, Essex, into the North Sea on January 3 on the first stage of an 8800-mile voyage.

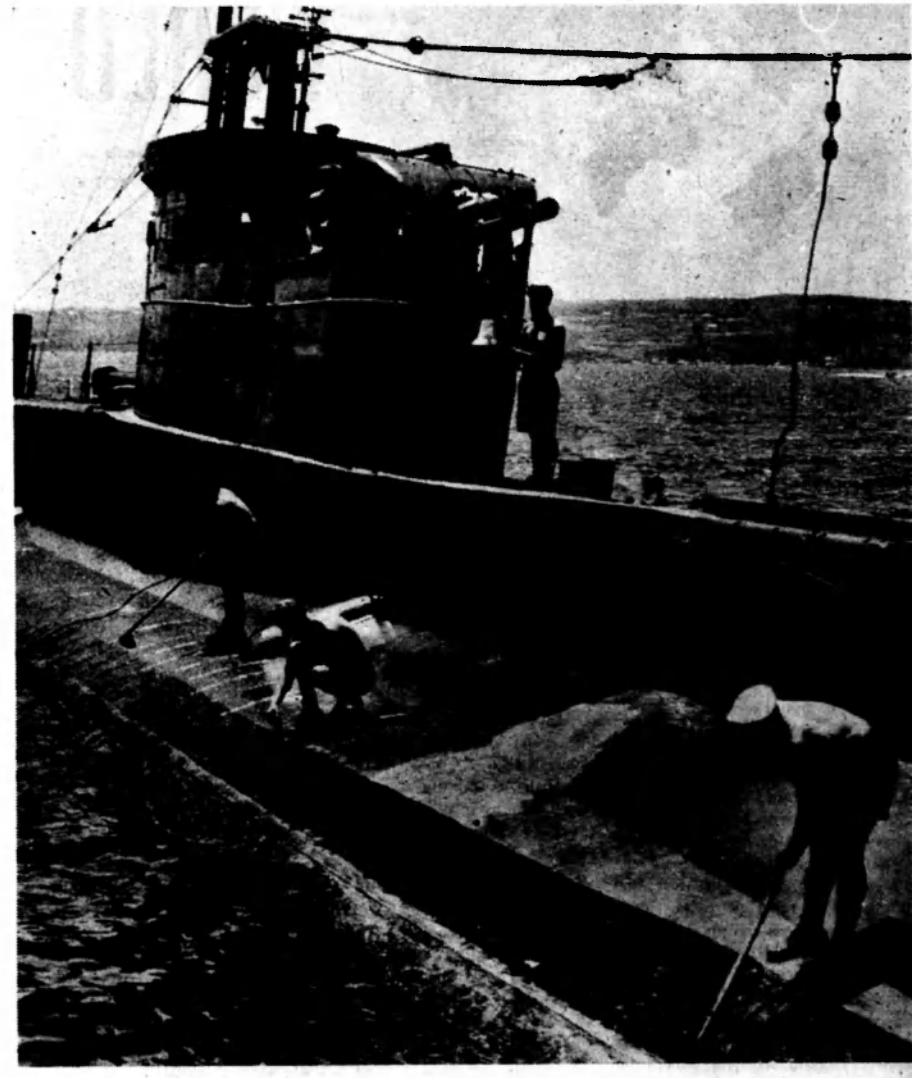
Major Ian Major and Major Gordon Sillars hope to dock their boat in New York Harbour by June. They estimate the total cost of fuel for the voyage at £6/6/-.

They plan to navigate the inland waterways of France, stopping at Paris, Dijon and Lyons. From Majorca and Gibraltar the sloop will sail 700 miles into the Atlantic, stopping at the Canaries.

The big hop will be to Barbados, then to the Florida coast of the United States and inland to New York city.

Laugh and the world laughs with you;
Weep, and you weep alone;
For sad old earth must borrow its mirth,
But has trouble enough of its own.
—Ella Wheeler Wilcox.

A Scrub-down for H.M. Submarine Tactician



Ratings preparing H.M. Submarine "Tactician" for her voyage back to England last month.

MARITIME NEWS OF THE WORLD

From our Correspondents in LONDON and NEW YORK

By AIR MAIL

Antarctica a single land mass

The leader of the United States Navy's task force engaged in 'Operation Deep Freeze," Admiral George Dufek, last month stated that his long-range aircraft had established that Antarctica was a single land mass.

Earlier explorers believed that a strait connecting the Ross and Weddell Seas divided the continent.

Admiral Dufek said that flights by ten long-range aircraft had revealed that the area once believed to be occupied by an ice-locked strait was composed of a range of 15,000ft. mountains.

Four aircraft of "Operation Deep Freeze" on January 18 flew more than 2000 miles from McMurdo Sound in the Antarctic to Christchurch, N.Z. The commanding squadron officer, Commander Ebbe, said three of the aeroplanes had flown over the South Pole, one of them twice. He said he was disappointed that the aircraft had not been able to land. The terrain of the Pole was flat and a light plane would have been able to land.

An American Associated Press correspondent with the expedition reported on January 11 that the explorers found food—still edible—left by Sir Ernest Shackleton's expedition 48 years ago.

Shackleton was forced to turn back when only 85 miles from the Pole. The correspondent said that Shackleton's base camp, on a little hollowed-out shelf over the frozen ice of McMurdo Sound, still stands. A wooden hut about 40 feet by 20 feet had whitened over the years but was still in good condition.

Scattered around the hut were tins, bales, and boxes. They contained hams, soup, marrow, fat, corn kernels, concentrated fruits, and other foodstuffs for man and beast.

Some of the boxes were marked "British Antarctic Expedition, 1908." Others were left by the 1917 expedition.

In the hut all but one window were intact. Caribou-skin sleeping bags were lying about. On a wall, not even yellow, was a picture of King Edward VII and Queen Alexandra.

British ship breaks out of ice trap

The British Commonwealth Antarctic ship *Theron* late last month began cutting through ice flows in the Weddell Sea towards a possible escape route.

The *Theron* had been trapped in the ice for three weeks. The leader of the expedition is Dr. Vivian Fuchs. He and his party of explorers had been trying to reach Vahsel Bay, on Coats Land, part of the Antarctic coast. They intend to establish a base there for the main British Commonwealth expedition next year.

Just before the *Theron* s breakthrough, Dr. Fuchs began dynamiting the ice which imprisoned his ship.

Air reconnaissance showed that the ship was locked in four square miles of ice, four to six feet thick.

Sequel to Japanese ferry sinking

A Marine Court of Inquiry at Kobe (Japan) on January 17 disciplined the captain of the ship *Utaka Maru III* for a collision in the Inland Sea last May when the ferry *Shiun Maru* sank with the loss of 168 lives.

The *Shiun Maru* (1509 tons) and the *Utaka Maru III* (1282 tons) collided in fog, although both had radar. The *Shiun Maru*'s captain went down with his ship.

The Court, which had been sitting for more than five months, found the captain of the *Utaka Maru III* "guilty of negligence contributing to the collision" and suspended his licence for three months.

£10,000 worth of opium seized in Sydney

Five Chinese crew members of the British tanker *Surf Patrol* were each fined £100 in a Sydney Court of Petty Sessions on January 16 for unlawful possession of opium valued at £10,000.

The magistrate said he had no doubt there was "some scheme or plot" to get the opium into Sydney.

The defendants acted together and were apparently bringing opium in "on a very large scale," he said.

The Chinese pleaded guilty through an interpreter.

Evidence was given that the Chinese had the opium strapped to their legs, in their socks, and in their waist-bands.

British test ship leaves for Monte Bello

The 2250-ton tank-landing ship *Narvik* last month sailed from Malta for tests of nuclear weapons in the Monte Bello Islands, off the West Australian coast, the London "Daily Express" correspondent at Malta said on January 16.

He said the ship had been converted into a floating laboratory and headquarters, in which scientists would spend a year in atomic and radio-activity research.

Ships abandoned in North Sea gale

Rough seas whipped by gale force winds pounded the coast of Britain and north-west Europe late last month.

Tugs and went lifeboats to the aid of British, Italian and Norwegian ships reported in difficulties.

Two crews abandoned ship.

A Danish tanker rescued the crew of the Glasgow ship *Herriesburn* (1699 tons), which was ablaze in the middle of the Kattegat on January 22.

The crew of 16 of the Norwegian ship *Sbanholm* (1320 tons) abandoned ship north of the Dogger Bank when she listed heavily after her deck cargo of timber shifted.

They were taken on board a Dutch tug which took their ship in tow.

Storms kept in port ferry-shipping between West Germany and Scandinavia.

French Polar ship reaches her base

The French Antarctic expedition in the ice-breaker *Norsel* reached the coast of Adelie Land on January 3. Disembarkation began in good conditions, according to reports from Paris.

The *Norsel*, 592 tons, left Hobart on December 26. Fourteen French explorers and scientists, lead by veteran Polar explorer Rogel Guillard, will set up two bases for other French scientists taking part in the 1957-58 Geophysical Year.

Barges engulfed by huge waterspout

A huge waterspout struck eight barges off Daiozaki Point, Mie Province, Japan, on January 18.

Eye-witnesses said the waterspout was a quarter of a mile high and travelled for about mile.

The eight barges were being towed by the 41-ton tugboat *Shinei Maru* when they were engulfed. Tow-ropes snapped, one barge went straight down, another was badly damaged, and two others ran aground.

The other four, their seamen dazed and injured, and the tug reached port. Several seamen are missing.

Teenage sailors' nightmare voyage across the Timor

Six teenage Indonesians were driven 700 miles across the Timor Sea last month in a 20-foot boat.

The boat was heavily laden with copra and had only six inches of freeboard.

They were seven days at sea, from Timor to Bathurst Island. For the last three days they had only coconuts for food and had to rely on catching rain for drinking water.

They caught the rain in garments and rung out the water into half coconut shells.

Their only navigational aids were a Boy Scout compass and a small map of the East Indies pasted in a school exercise book.

They were later taken to Darwin.

Chinese gunboat holds up British ship

A Nationalist Chinese gunboat on January 15 prevented the 979-ton British freighter *Hydralock* from entering the Chinese Communist port of Foochow.

The Royal Navy later announced that the frigate *St. Bride's Bay* hurried to the scene and the *Hydralock* entered Foochow the following morning without further incident.

Two boy stowaways on small trawler

Two schoolboy stowaways were reported aboard a tiny fishing trawler plunging through the North Sea towards Arctic fishing grounds on January 18.

The skipper of the trawler, the 79-ton *Stella Canopus*, Captain Don Tennyson, radioed that he had found the boys, who had been missing from their homes since January 15.

He said the boys were safe and he did not intend to turn back. He is a former shipmate of the father of one of the boys, Frederick Scholes, 13. Frederick's father was washed overboard from a trawler and drowned 14 months ago.

The other young stowaway, Gordon Stainton, 14, was told he could never be a fisherman because doctors had amputated one of his feet.

Captain Tennyson will return the boys to their mothers when his cruise ends early in February.

American Admiral Presents U.S. Award to R.A.N. Officer

ADMIRAL FELIX B. STUMP, United States Commander-in-Chief, Pacific, presented the Legion of Merit (Degree of Officer) to Acting-Commander W. G. Bowles, D.S.C., R.A.N., on January 17 for his outstanding services to the United States Government in action against the Communists in the Korean war.

The ceremony took place at Navy Office, Melbourne, in the presence of Vice-Admiral R. R. Dowling, C.B., C.B.E., D.S.O., First Naval Member of the Australian Comonwealth Naval Board and Chief of the Naval Staff, and other members of the Board.

Admiral Stump was in Melbourne for the S.E.A.T.O. Military Advisers' Conference.

Acting - Commander Bowles, who is at present Chief Staff Officer (Air) to the Flag Officer-in-Charge, East Australian Area, Sydney, had already been awarded the Distinguished Service Cross by the Queen in August, 1952, for his Korean services. In the rank of Lieutenant-Commander he was Commanding Officer of 805 (Sea Fury Fighter) Squadron, which was embarked in the aircraft carrier *Sydney* in Korean waters from September, 1951, until February, 1952.

The citation for the ward of the Distinguished Service Cross by the Queen read:—

"Lieutenant-Commander Bowles has proved himself to be the most outstanding operational pilot in the *Sydney* Carrier Air Group. Although he has been shot down once and on numerous occasions had his aircraft damaged by enemy gunfire he has remained completely imperturbable and has continued to fly against the enemy with his usual dash and vigour. He has shown himself to be fearless, a natural leader in the air, and an outstanding example of what a fighter pilot should be. Thanks to his inspired leadership his squadron has enjoyed some very marked successes."

The citation for the award of the Legion of Merit by the United States Government is as follows:—

"For exceptionally meritorious conduct in the performance of outstanding services to the Government of the United States as Commander of 805 Squadron, based on H.M.A.S. *Sydney*, while serving with the United Nations' Blockading and Escort Force, Naval Forces Far East, during operations against enemy aggressor forces in Korea. An inspiring and aggressive leader, Lieutenant-Commander Bowles personally led his squadron in many successful attacks on enemy forces, installationh, bridges and road-nets along the west coast of Korea, provided effective close air support to the Eighth Army ground forces, and made possible the close naval blockade of West Korea by reconnaissance flights in marginal and adverse weather. Through his sound judgment and skill in providing air spot with planes of his squadron, he was instrumental in the successful gun strikes against enemy shore batteries by surface units of the West Coast Blockading and Escort Element. By his skilled airmanship, courage and unswerving devotion to duty, Lieutenant - Commander Bowles contributed materially to the success of the naval campaign in the Korean conflict and upheld the highest traditions of the Naval Service."

Mr. Boutcher

Mr. E. E. (Ted) Boutcher, Administrative Officer, Garden Island, retired on 24th January after more than 42 years with the Commonwealth Public Service — most of that time at Garden Island.

Mr. Boutcher joined the Service when Garden Island was under the control of the Royal Navy. His first trip to the Island was by rowing boat from Man O-War Steps. He witnessed the birth of the Royal Australian Navy in 1913. At the outbreak of the Great War in 1914 he was still a young clerk working in the same building he occupied at the end of his service a few days ago.

He recalls sleeping in his present office on the night before World War I was officially declared, awaiting news of German shipping in the Pacific Ocean.

Soon after the outbreak of hostilities, Mr. Boutcher was seconded for duty in the hospital ship which accompanied the Australian contingent to New Guinea and was present at the German surrender at Rabaul.

Later he returned to Garden Island and subsequently enlisted in the A.I.F. He served with a field ambulance unit in France and Belgium, and returned once more to Garden Island in 1919, where he held office until 1939.

At this stage he was transferred to Melbourne for 18 months with the Department of Defence Co-ordination. The promotion of Mr. F. H. Smith to Navy Office, as Deputy Director of Navy Accounts (later to become Finance Member of the Naval Board), left the way open for Mr. Boutcher's return to Garden Island as Civil Secretary, in which appointment he continued to his retirement. The title recently was changed to Administrative Officer.

Mr. Boutcher enjoys a reputation for deep insight and great understanding, and his judgment and opinions have been widely sought and respected throughout the local Command during his length of office.

In the very difficult years of World War II he carried very serious responsibilities as civil adviser and secretarial mainstay to the senior authorities administering the Sydney Naval Establishments.

His comprehensive knowledge of local administrative procedure, his capacity for sound interpretation of the many complicated industrial regulations and awards and his individual ability and mental alertness have won him the highest esteem.

It could be said that Mr. Boutcher is an institution at Garden Island. No-one has a greater knowledge of its growth and of its history over the years. When he leaves, part of Garden Island will go with him. His very many friends — uniformed and civilian alike — together with colleagues from other Government departments with whom he has been associated will wish him many years of happiness in his retirement.—J.J.

Captain Bull

Captain J. W. N. Bull, R.A.N., will take up the appointment of General Manager, Garden Island, this month.

Captain Bull entered the R.A.N. College in 1919. At Passing Out in December, 1922, he was awarded "maximum time" and the prizes for engineering theory and for physics and chemistry.

He became a midshipman in May, 1923, sub-lieutenant (E) in March, 1926, and lieutenant (E) two years later.

A lieutenant-commanded (E) in March, 196, he became acting-commander (E) in April, 1941, being promoted to that rank at the end of the year.

His first ship was H.M.A.S. *Adelaide*, at the beginning of 1923. In July of that year he proceeded to the United Kingdom to the Royal Naval Engineering College at Keyham, where he remained till August, 1927. On his return to Australia he was appointed to H.M.A.S. *Sydney*.

At the otubreak of war he was serving in H.M.A.S. *Australia*, from which ship he went in April, 1941, to H.M.A.S. *Adelaide*, with the rank of acting-commander.

In January, 1942, he went to Mort's Dockyard, Sydney, as Principal Naval Overseer, and from December, 1942, to the end of 1943 he was at Navy Office and then at Australian Shipping Board on the Staff of the Third Naval Member as Director of Shipping.

At the end of 1943 he was appointed commander (E' of H.M.A.S. *Hobart*, in which ship he was serving at the cessation of hostilities in September, 1945.

New Committees

The New South Wales Division of the Navy League of Australia has elected the following committees for this year:—

N.S.W. Divisional Committee:
President: Rear-Admiral H. A. Showers, C.B.E. (Retd.).
Vice-President: Cdr. W. L. Reilly, R.A.N. (Retd.).
Hon. Treasurer: Mr. F. E. Trigg.
Committee: Cdr. (S) J. D. Bates, V.R.D., R.A.N.V.R.; Lt. Cdr. G. E. Rodney Brown, R.A.N.V.R.; Capt. S. Darling, D.S.C., V.R.D., R.A.N.R.; Cdr. F. M. Osborne, D.S.C., M.P.; Mr. L. J. Pearson; Lt. Cdr. H. D. Reid, R.A.N.V.R.; Cdr. A. S. Storey, D.S.C., R.A.N. (Retd.); Mr. V. Tadgell; Mr. E. P. Watts; Mr. H. S. G. Wolfe.
Secreatry: Mr. R. I. Rae.

Australian Sea Cadet Committee:
Chairman: Lt. Cdr. G. E. Rodney Brown, R.A.N.V.R.
Representing Sea Cadet Corps: Sea Cadet Commander L. F. Forsythe, Sea Cadet Ltd. Cdr. D. J. Mort.
Naval Liaison Officer: Lt. Cdr. G. M. Dixon, D.S.C., D.S.C., R.A.N.V.R.
Committee: Capt. S. Darling, D.S.C., V.R.D., R.A.N.R.; Capt. W. Pearson; Cdr. (S) J. D. Bates, V.R.D., R.A.N.V.R.
Secretary: Mr. R. I. Rae.

Finance and Membership Sub-Committee:
Mr. F. E. Trigg, Lt. Cdr. H. D. Reid, R.A.N.V.R., Mr. E. P. Watts, Mr. R. I. Rae.

Publications Sub-Committee:
Mr. V. Tadgell, Mr. F. E. Trigg, Mr. H. S. G. Wolfe, Mr. R. I. Rae.

Ship collision off Dutch coast

Only one man has been reported saved from the 288-ton Norwegian motorship *Sirabuen*, which was in collision with the Brazilian ship *Loide Venezuela* (5408 tons) off the Dutch coast during a blizzard on January 10.

The Brazilian ship sent a radio message saying that after an hour's search it had saved the chief officer of the *Sirabuen* but that the rest of the Norwegian ship's crew was lost and the ship was sinking.

PROVIDING SEA-TIME FOR SCIENTISTS

By a Special Correspondent in London

SCIENTISTS, designers and others concerned with the development of new equipment for the Royal Navy are being granted increasing facilities for service afloat to study the problems of those who use their equipment in H.M. Ships.

The Controller of the Navy, Admiral Sir Ralph Edwards, K.C.B., C.B.E., believes these visits pay handsome dividends, and it is hoped that sea-time for civil scientists and designers, at all levels, will become an increasing feature of Naval planning.

The ability to defend ourselves depends in great measure on scientific preparedness. Planning today is at the mercy of scientific discovery and invention. The closest liaison must, therefore, be maintained between those who provide equipment and those who use it.

For some time naval officers have been specially appointed to naval research and development establishments in an endeavour to ensure that civilian officers fully appreciate naval problems. But scientists and designers cannot acquire full knowledge and appreciation through the experience of others.

The Chief of the Royal Naval Scientific Service has always regarded it as important that members of his staff should have sea experience. But long periods at sea are possible only for a small proportion of those engaged on research, design and the production of naval equipment. Many, including draughtsmen, do, however, go in ships for trials and inspections, even if they do not proceed to sea.

As fleet scientific advisors, a member of the Royal Naval Scientific Service, who has usually attended the Naval Staff Course at the Royal Naval College, Greenwich, and the Joint Services Staff Course at Latimer, is attached to each of the staffs of the Commanders-in-Chief, Home Fleet and Mediterranean Fleet. During fleet exercises a number of civil officers are embarked in various units of the fleets as observers to study the general problems of operation and weapon efficiency.

In recent years the amount and complexity of electronic equipment now fitted in ships has increased to such an extent that special efforts are made to enable the designers and producers of this equipment to study at sea the problems of the user and the maintenance staff.

During the past 18 months the fleets have been able to accommodate about one hundred civil scientific officers of the Crown in various ships for periods varying between a few days and four or five weeks. Included in this number are staff representatives from Ministry of Supply establishments, which are responsible for most of the airborne electronic equipment for the Navy. Designers and engineers of industrial firms engaged on Admiralty work have also been embarked in this way on what has become known as "the electronics ticket."

ATOMIC EXPLOSION

Continued from page 12

by the windws of the stratosphere.

The time is approximately 0530. The troops have had four hours of sleep in the last 24 and their work is just beginning.

The day promises to be hot, but the hours ahead are to show how well the troops have profited from the time spent in training.

The Exercise Sapling party vehicles gather personnel from the trench area and move off to begin a detailed survey of the fall-out zone, the first to be attempted by a Canadian radiation team organised specifically for this type of operation in the field. They leave clad in protective clothing and carrying respirators, their departure followed by the curious stares of U.S. service personnel whose mission as observers has been almost completed.

The main show is over, but the succeeding hours show that the techniques learned earlier in Canada and on the desert are effective and practical. They show, too, the marked ability of naval personnel to adapt themselves to unusual regulations, new techniques and an entirely strange environment.—J.P.K.

Strange Craft Finally Completes Voyage

Frank Kubala, 29, on the Kapok-log raft which he sailed into Sydney Harbour recently after a two-years voyage from Cooktown, Queensland. This picture was taken in Watsons Bay, Sydney, where he was towed after passing through the heads.

For Sea Cadets

WHY UNDERSTAND ART?

By DOROTHY HELMRICH
Founder and President of the Arts Council of Australia.

One of a series of articles on appreciation of the Arts, published by arrangement with the Royal Society of St. George.

WITH the quickening of interest in the arts in Australia, in such a tangible form as the establishment of our first National Theatre and the proposed Opera House on the shores of the harbour, one pauses to think about the real meaning of such movements.

I have been asked many times, "what is the function of the arts in our daily life?" I think we must regard the arts as entertainment, in the best sense of the word. When we see a play, or a ballet, or listen to a symphony or an opera we should be so entertained that we are for the time being sharing the experiences of the artists performing these things for us.

If it is a play it will either stimulate us mentally and give us something to think about, or perhaps it will make us laugh. Both are good, for what is life without thought and laughter?

I think it is most important that young people should grow up with a knowledge of the arts. Plays, ballet, opera, music, art exhibitions should be part of their life. They help to develop imagination — a response to colour, sound, and language. They wake the more subtle side of a person's nature and enable him to live a richer and more satisfactory life.

It is better still if he does some of these things himself.

We have a rich cultural inheritance from Great Britain, and the many New Australians coming into the country are bringing their culture with them. All this, blended with what we have to contribute, will produce an Australian culture through which our people will express themselves and in their turn create things of beauty and strength which will enrich the lives of the people and entertain them at the same time.

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REVIEWS

"The Eyes of the Navy,. A Biographical Study of Admiral Sir Reginald Hall." By Admiral Sir William James; published by Methuen (London).

The generation in the Navy that knew "Blinker Hall" is fast passing away; but in the years before the First World War, his was a name to conjure with. He was known as a strict disciplinarian, yet one who could get the best of any ship's company, and a fine seaman whose ships broke all records in gunnery.

In 1913 he was given command of the finest ship in the Navy, the new battle-cruiser *Queen Mary* in which, with his present biographer as his Commander, he introduced a number of innovations in organisation at which many old fogies shook their heads in disapproval; but later they were all adopted enthusiastically throughout the fleet.

It is doubtful if he, his Admiral (Beatty) or his ship's company were the more grieved when illness compelled him to come ashore a month or two after the outbreak of war in 1914; but the Navy gained, after all, for he became Director of Naval Intelligence, a job for which he was supremely qualified.

The work of the Intelligence Division up to then had been somewhat humdrum, a routine business of receiving reports and passing out the gist of them to the fleet, but Hall had much more live ideas of what it should be.

He was a master at organising spies, whose task was not only to penetrate the enemy's secrets but also to foil the enemy's "cloak-and-dagger men," to feed them with spurious information so skilfully that they accepted it as real.

Sir William James's story of the luxury yacht, apparently owned by a wealthy German-American and blamelessly flying American colours as she cruised along the west coast of Ireland, beats many fictional thrillers. Hall's great innovation, however, was the use he made of interception of wireless messages, and the organisation he set up for penetrating the Germans' secret codes and cyphers—the closest of secrets at the time, though all disclosed since—in the famous "Room 40," of which Commander James was brought back from sea to be the head.

That enabled German intrigues all over the world to be unmasked —thus incidentally deciding the United States to join the Allies—but it needed all Hall's skill to do so convincingly without disclosing to the enemy how that result had been achieved.

Hall thus became a power amongst the political heads of Allied Governments, and it was a bitter disappointment to him when he was excluded from the Peace Conference and, through jealousy, his work at the Admiralty was refused all recognition at the end of the war. He retired and entered Parliament, where he had a distinguished political career. He died in 1943.

Sir William James naturally devotes most of his biographical sketch to Hall's remarkable achievements as D.N.I. The full details of that have been given to the world long since, in Official Histories and the memoirs of politicians, so that he discloses no new secrets. But he has skilfully woven them into a connected narrative, in which the complex process of deceiving the enemy and penetrating his secrets and intrigues is clearly unfolded before the entranced reader.

—H.G.T., in the London "Navy."

"Run Silent, Run Deep." By Edward L. Beach; published by Wingate (London).

This is yet another of our old friends, the life story of a warship, this time of an American submarine. The author of the tale served with the American Navy during the late war, and is now a naval aide-de-camp to President Eisenhower.

His yarn is certainly exciting, for the submarine's task is to haunt the fairways of Japanese merchant shipping and thereby to run the gauntlet of every anti-submarine device from aeroplanes to minefields.

In the submarine are two men at loggerheads with one another, and a host of lesser types such as one meets in any warship. Their conflicts provide sub-plots to the main theme of warfare under the sea.

We are accustomed nowadays to descriptions of depth-charges and crash-dives and torpedo-attacks; nor are the amorous imaginings of warriors (male or female) wholly unknown to readers of post-war fiction. Even so, this author holds our attention and is able to jog it at tense moments in the story.

English N.O.s will observe the friendly ways of the American fleet in which (when he feels friendly) the Commander is "Buddy" to his "buddies." Ice cream, chicken soup, and pressed trousers (or pants) are parts of the impedimenta of modern democratic warfare as it is waged by America.

Definitely, then, this is good entertainment. It has no pretensions to appear literature, but it is well

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FIRST ATLANTIC YACHT RACE

By Captain R. Barry O'Brien

In the early days of yacht-racing contests were generally the result of private wagers between individual owners. Such was the first recorded trans-Atlantic yacht race, in 1866, between the American schooners Henrietta, Fleetwing and Vesta.

THE wealthy owners of these three boats were dining together in New York one summer's evening in that year, when the conversation turned to the relative merits and demerits of keel-boats and centre-board boats in deep-water racing.

The owner of the *Vesta*, a centre-boarder, declared that, despite the popular prejudice against centre-board vessels in rough water, his craft would hold her own with any keel-boat of her size even in a race across the Atlantic.

"What do you say if our two boats make a race of it from Sandy Hook to Cowes?" suggested the owner of the *Fleetwing*, which was a keel-boat.

"That suits me," was the prompt reply.

"Let us make the stakes 30,000 dollars a side."

"That suits me," again came the reply.

"Let us sail in the stormy month of December."

"That suits me. The stronger the wind, the better my boat will like it," declared the owner of the *Vesta*.

At this stage of the discussion, the third member of the party, a young man named James Gordon Bennett, who was owner of the *Henrietta* and the son of the editor and proprietor of the "New York Herald," asked if he would be allowed to enter the race with his boat, if he put up his 30,000 dollar stake.

Mr. Pierre Lorillard and Mr. George A. Osgood, of New York, owners of the *Vesta* and *Fleetwing* respectively, were quite agreeable to this suggestion, especially as the *Henrietta*, a keel-boat, was considered the slowest of the three craft. Before the dinner-party broke up it had been decided that the winner of the race should take the whole 90,000 dollars (£18,000) stakes.

The projected race aroused great interest in New York, and people who scarcely knew the difference between a spanker-boom and a jibboom suddenly became yacht-racing enthusiasts. Betting on the race became so heavy that a man could hardly put his head out into the street, declared the American correspondent of one English newspaper, without being urged to choose his boat and take or give the odds.

The *Fleetwing* was the favourite, and to make sure that she lived up to her reputation her owner engaged Captain Thomas, late of the U.S. packet-ship *New York*, to sail her across the Atlantic.

Not to be outdone, Mr. Bennett, Junr., engaged as his yacht master no less a celebrity in the maritime world than Captain Samuel Samuels, formerly of the famous U.S. packet-ship *Dreadnought*, which had broken more transatlantic speed records than any other clipper-ship.

Mr. Lorillard, of the *Vesta*, decided on the other hand that since his centre-boarder was unquestionably tricky to handle, it would be wisest to retain the services of her present master, Captain Dayton, who had done well with her and won several closely contested matches.

There was practically no difference in size or rig between the three yachts. All were two-masted schooners of a little more than 100 feet length. The *Vesta* was 201 tons, American measurement; the *Henrietta* and *Fleetwing* were 203 and 204 tons, American measurement, respectively. Each yacht carried a foresail and mainsail, fore and main gaff-topsails, main topmast-staysail, fore topmast-staysail, inner and flying jibs, a square-sail for use when running, and two or three supplementary fancy "kites."

Each yacht's complement for the race consisted of 22 to 25 officers and men, and two or three judges and guests in addition. It was agreed that Masters should choose their own courses across the Atlantic, and one and all decided to keep to the European steamship tracks. To ensure that the boats might be reported as frequently as possible, the following notice was issued to transatlantic shipping:—

> In the great race which is to take place on Tuesday, December 11, at 1 p.m., the *Henrietta* will display on the ocean a blue flag, nine by three feet; the *Fleetwing* will exhibit a red flag, nine by three; and the *Vesta* will carry a white flag of the same dimensions.
>
> At night, the *Henrietta* will burn a blue light and fire a blue rocket one minute afterwards; the *Fleetwing* will burn a red light and fire a red rocket one minute afterwards; and the *Vesta* will burn a white light and fire a white rocket one minute afterwards.

As the day of the start of the race approached the *Henrietta* became the favourite, largely owing to the fact that her young owner had made it known that he intended to sail in her, rather than await the outcome of the race in New York, like the owners of his two rivals. It was felt that his enthusiasm, plus the skill, experience, and proved passage-making ability of his famous captain, should carry the *Henrietta* to victory.

The day of departure dawned fine and clear with a fresh westerly breeze, which was just what was wanted. From an early hour New York Harbour was gay with bunting, and music blared from excursion steamers, packed with spectators, which had been chartered to accompany the contestants to the starting-line off Sandy Hook. Burst after burst of cheering rent the air as the three stately schooners weighed ancher and proceeded in tow of their tugs down the Narrows, for New Yorkers were having a day out and everyone was enjoying it thoroughly.

The tugs held their charges in line abreast position off Sandy Hook lightship, until, at one p.m. prompt, the signal was given for the race to begin. Towlines were slipped on the instant, and the racing crews began to crowd on canvas. The strains of Auld Lang Syne came from the steamers as the yachts gathered speed. Each of the latter responded with three hearty cheers.

An ocean tug accompanied the yachts to sea. On her return to harbour after dark she reported that when last seen they were sailing abreast of one another and footing it well before a freshening westerly breeze. Soon after night fell the rivals separated; they saw nothing more of one another until Cowes was reached.

The following extracts of the *Henrietta's* log, kept by Captain Samuels, give a fair indication of the weather and conditions they encountered:—

> Wednesday, December 12: Very heavy squalls with sleet and snow . . . ship running under mainsail, foresail, jib and flying jib . . . every prospect of a gale. Distance run 225 miles.
> Thursday, December 13: Strong breeze and squally weather, passed steamer bound west, supposed to be Cuba . . . At 9.30 p.m. passed another steamer bound west; showed rockets and blue lights, to which she replied. At 10 p.m. wind increasing, took in topsails and flying jib. At midnight reefed mainsail. . . . Everything easy and comfortable.
> Friday, December 14: Midnight, strong breeze and squally, with snow. At 3 a.m. blowing hard, furled flying jib. At 5 a.m. moderating, set flying jib. . . . At 6 a.m. set all light sails—weather dark and heavy in south-west.
> Saturday, December 15: Very squally . . . up and down with topsails and staysails as weather demanded. At 6 a.m. blowing hard, handed all light sails. Day breaks dark and heavy, with heavy hail and snow squalls . . . ship fairly dancing over the water, often at the rate of 13 knots. . . . Everything as trim and comfortable as on shore.
>
> Sunday, December 16: Strong northerly winds, with violent squalls and spits of snow. At 4 p.m. took in topsails, staysails and flying jib. At 8 p.m. blowing heavy, double-reefed foresail and mainsail, and took bonnet off jib. Ship running across the seas and behaving well . . . passed close under stern of a brig steering to southward under double-reefed topsails and reefed foresail. . . . Divine Service in cabin; reading of prayers and Lessons for the day, and one of Jay's sermons. Everyone on board well and hearty. Distance run 246 miles . . . one-third of distance across.
> Monday, December 17: Blowing hard, ship running in the trough of the sea and fairly burying herself. This is yachting in earnest. Double-reefed foresail; pass-

H.M.A.S. "Nirimbe," a former Navy air-training station, was commissioned on January 4 as an apprentice training school. This will be the first apprentice school operated by the Royal Australian Navy. It will train all classes of artificers and shipwrights.

ing snow squalls throughout night. Distance run by observations 280 miles—the best day's run yet . . . off Grand Banks and off soundings . . . everything trim and snug.

Tuesday, December 18: One week out . . . half way to Cowes . . . wind increasing, set squaresail with bonnet off . . . high seas . . . distance run 250 miles . . . ship in perfect order and all hands in best of condition.

Wednesday, December 19: Fresh gale. At 3 p.m. double-reefed sails and took bonnet off jib. 6 p.m. gale increasing, close-reefed sails and furled mainsail . . . blowing heavily, with high, toppling seas. At 8.40 p.m. boarded by very heavy sea, completely burying us, filling foresail, and staving boat . . . the little craft fairly staggering and straining. Hove-to under storm main-trysail. How hard to have to lie-to in such a race, but few ships in my 30 years' experience would have run so long in the trough of the sea as this little plaything did. Well may her owner feel proud of her. At 11 p.m. the sky cleared. The moon shone out beautifully for the rest of the night. . . . At 6 a.m. set reefed foresail and jibs. 9 a.m. wind freshening, ship beginning to step off again. Set squaresail. Sea still running very high. During the blow barometer fell

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For Sea Cadets

NORTH-WEST PASSAGE

THE thrilling stories of the gallant men who, for centuries, partially navigated the North-West Passage, particularly the incomplete achievements of Sir John Franklin and Sir Robert McClure, aroused the admiration and respect of their contemporaries and posterity. Not till the twentieth century, however, were those icy treacherous seas entirely mastered by man.

In 1903, Roald Amundsen, a Norwegian, left his native land in a tiny forty-seven-ton vessel, the *Gjoa*, en route for arctic Canada, with the object of completing the North-West Passage from east to west, if possible.

After experiencing great discomfort in the Atlantic, he subsequently sailed through Davis Strait and Baffin Bay (which lie to the west of Greenland), through the Lancaster Sound, and then entered Franklin Strait. Very soon after this the ship became icebound, near King William Island.

For two successive winters, Amundsen was forced to remain there enduring severe privations, experiencing much loneliness, loathing the monotonous diet, the same wearisome scene month after month, and bemoaning the absence of any kind of amusement. Except for the occasional "Northern" lights — an interesting natural phenomenon—there was complete darkness during the long, intensely cold arctic winters, and as the lighting arrangements on the ship were poor, the boredom and frustration were almost unbearable.

And then, in July, 1905, there was a considerable melting of the vice-like ice, and it was possible to think about starting the voyage again.

Cautiously proceeding, because of the dangerous floes and intermittent mist, the sturdy *Gjoa* successfully navigated the Victoria Strait, Maud Gulf, Coronation Gulf, Dolphin and Union Strait and sailed on till about mid-October, when she found herself stuck again. This time, however, it was at the estuary of the mighty Mackenzie river — the largest and longest stream in Canada.

In spring, 1906, conditions were such that sailing was again possible, and the little schooner at last crossed the Arctic Sea, passed through the Bering Sea, and then entered the tranquil Pacific Ocean. Her now-famous captain had conquered the North-West Passage. This, of course, he had achieved when the ship reached the Mackenzie.

It was many years later that the North-West Passage was navigated both ways. On June 9, 1940, the eighty-ton Royal Canadian Mounted Police schooner, the *St. Roch*, used for delivering essential supplies to lonely Arctic policemen, and also to patrol those northern waters, left Esquimalt, British Columbia, led by Staff-Sergeant H. A. Larsen, on a protracted voyage.

Conditions were as bad as possible in the Arctic, and the small schooner had to fight pack ice at Port Barrow, Alaska, for eighteen days before she could proceed with the usual summer port visitation.

At length winter came and the *St. Roch* was anchored near Banks Island.

In spring and summer, 1941, the *St. Roch* proceeded eastward, performing her customary tasks, but progress was slow because of the very dangerous icy conditions, and, by the end of September, it was necessary for her to anchor again, this time on the west coast of Boothia Peninsula, for the winter.

The following spring the schooner sailed in a northerly and then an easterly direction, till Lancaster Sound had been navigated, after which she took a southerly course through Baffin Bay, Davis Strait, and then crossed the Atlantic Ocean. Halifax, Nova Scotia, was reached in October, 1942. The *St. Roch* was therefore the first ship to sail the *entire* North-West Passage from west to east.

In July, 1944, she left Dartmouth, Nova Scotia, again for the Great White North, was hindered at times, but to a decidedly lesser degree, by fogs, ice floes and mirages, and successfully navigated the Davis Strait and Baffin Bay.

The ship then passed through Lancaster Sound, Barrow Strait and Melville Sound, after which she navigated the narrow Prince of Wales Strait, which separates Banks Island from Victoria Island.

Cautiously sailing to avoid dangerous ice floes, and sturdily battling against howling blizzards in the Arctic Ocean, the *St. Roch*, having delivered considerable supplies en route, subsequently reached the Bering Sea and entered the Pacific.

Vancouver, British Columbia, was reached in October, 1944, and all on board were naturally proud because the *St. Roch* had crossed the whole North-West Passage both ways and had accomplished the second momentous voyage in the extraordinarily short space of three months.

Staff-Sergeant Larsen was promoted to the rank of Inspector, and became a Fellow of the Royal Geographical Society.

FIRST ATLANTIC YACHT RACE

Continued from page 30

from 30.10 inches to 29.30 inches. . . . Noon, fair prospect of second edition of last night's performance but from westward.

From other accounts Captain Samuels' hard driving of the vessel on this occasion scared the life out of all hands. It is recorded that after the big sea broke aboard the carpenter rushed into the cabin, shouting: "Mr. Bennett, we must heave-to! She's opening up forward, sir!"

The owner made his way on deck and informed the captain of the carpenter's report. After going forward and examining the leaky planks, Samuels expressed the opinion that there was nothing to worry about. As the gale was increasing all the time, however, he eventually hove-to. Subsequently he said he had never known a ship to heave-to so well in a high, breaking sea.

The *Fleetwing* encountered the same blow, during which six of her crew were washed out of the cockpit and lost. She was running with a southerly gale on the beam at the time, and the boarding sea nearly laid her flat on her beam-ends. Her jib-boom was carried away, some sails blew away, and the cabin gutted out. Several hours were lost in making good the damage. The *Vesta* caught the tail-end of the blow and came through it unharmed.

The weather in the eastern half of the Atlantic was less severe than in the western half, and occasional spells of warm sunshine were enjoyed. The *Henrietta's* log entry for Saturday, December 22, reads:—

Throughout these 24 hours wind northerly, warm and pleasant. At 7 a.m. signalled s.s. *Bremen*. bound west. All light sails set and everything drawing beautifully. As we near the end of the race the excitement becomes more and more intense. The wind and weather are all that could be desired. Distance run 252 miles.

At 10 p.m. on Christmas Eve the *Henrietta* passed the Bishop Rock (bearing North 12 miles). At 2.30 on Christmas morning she was abeam of the Lizard. At 8.30 a.m. she passed the Start; at 1 p.m. she took her pilot off Portland Bill and learnt that she was the first of the three yachts to arrive.

Still favoured by a fine westerly wind, she passed the Needles at 3.45 p.m. and anchored off Cowes at 5.40 p.m. having completed the course of some 3,200 miles in 13 days 21 hours 45 minutes, at an average speed of approximately 9½ knots.

The *Fleetwing* was second, arriving off Cowes at 2 a.m. on Boxing Day. But for her mishap in mid-Atlantic she would doubtless have been much closer to, and perhaps ahead of, the *Henrietta* at the finish.

The *Vesta* arrived at Cowes two hours after the *Fleetwing*. She would have arrived some hours earlier but for the fact that her master mistook St. Catherine's Point for the Needles in misty weather, and only discovered his mistake when he was boarded by a pilot off St. Catherine's at 8.50 p.m. on December 25th. In consequence of this error in navigation, the *Vesta* had to beat back against the wind for 10 or 12 mile, before being able to head for the Needles channel.

Despite the fact that many thought she was incapable of enduring a North Atlantic winter passage, the *Vesta* completed the voyage without the loss of a sail or a spar. Her best day's run was 277 miles; her least 165 miles These runs compared very favourably with the *Henrietta's* maximum run of 280 and minimum run of 113 miles.

Queen Victoria, who was in residence at Osborne House on the occasion of the race, made it known that she would be glad to see the three yachts under canvas, and after their great welcome at Cowes they sailed round to Osborne Bay under full sail especially for her benefit.

REVIEWS

Continued from page 27

above the average of its sort, written with a minimum of slang and a maximum of knowledge of the subject.

The blurb, of course, hails the book as a work of art and "a great novel," but only a very ill-tempered reviewer pretends to take blurbs seriously. They are merely conventional, like the use of "Dear Sir" to a man whose guts we hate.

—J.H.B.P., in the London "Navy."

NORTH-WEST PASSAGE

Continued from page 31

In more recent years the North-West Passage was once again conquered, but this time by a naval vessel. In 1954, H.M.C.S. *Labrador* became the first naval vessel of any navy to conquer the North-West Passage, the largest ship ever to make the trip, and the first to find a route with commercial possibilities through the Canadian archipelago.

—*From the "Sea Cadet," London.*

WHY UNDERSTAND ART?

Continued from page 26

Australia has won her laurels in the world of sport and I feel sure that our young people have an innate love of the arts if given an opportunity to know them as they do their games. The two activities are essential for a balanced life.

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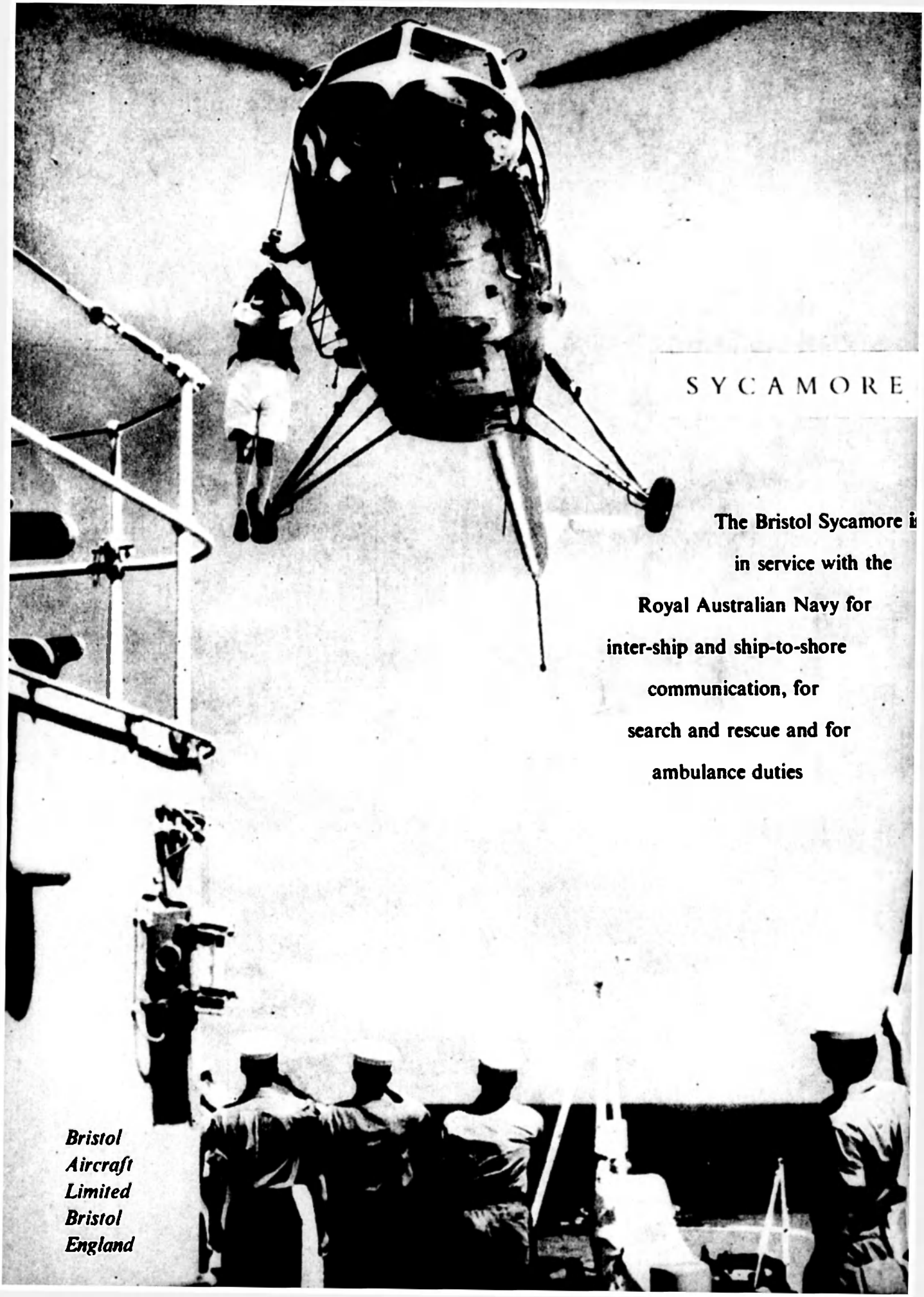

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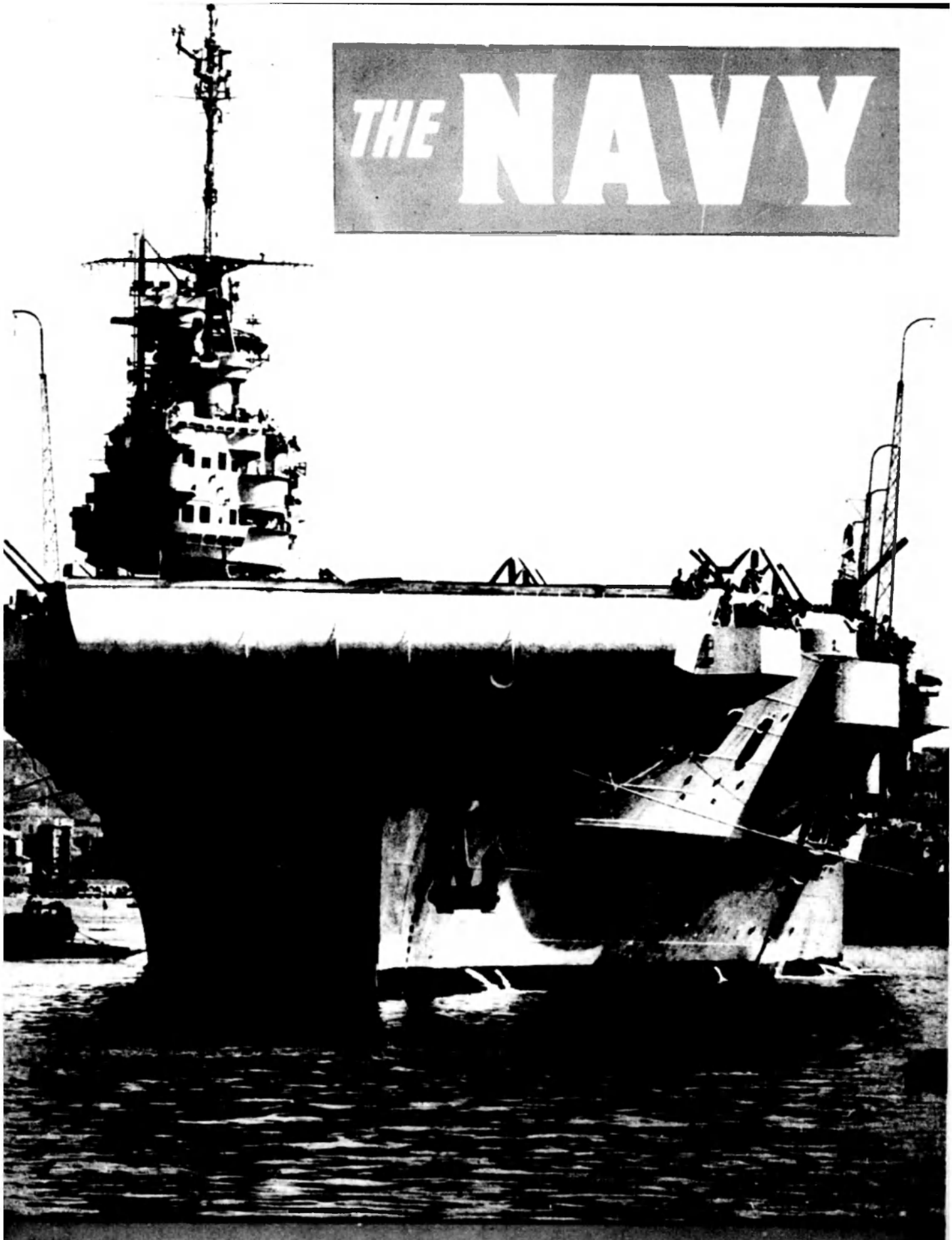
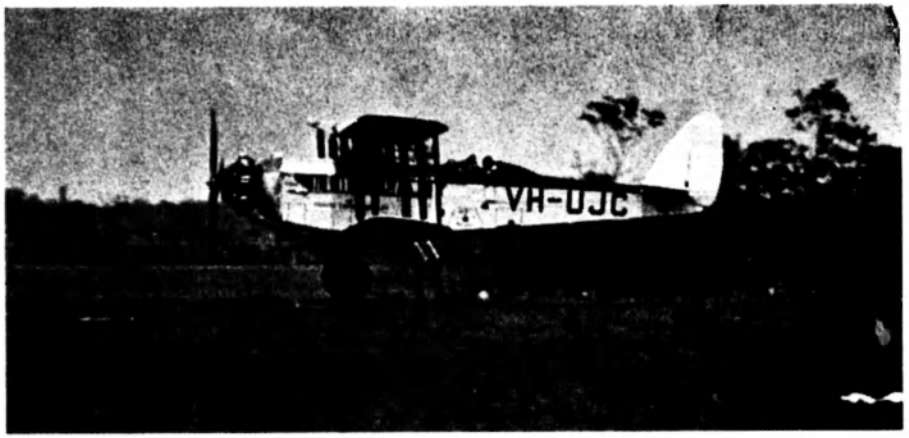


AUSTRALIA'S MARITIME JOURNAL



Qantas aircraft, "Diana," taking off on the inaugural Brisbane-Singapore service, December, 1934.

Hotel meeting launched an air service

In the winter of 1920, four men met in the Gresham Hotel, Brisbane, Q., to discuss the formation of an air service now known all over the world as Qantas Empire Airways.

Two of the men, Hudson Fysh (later Knighted) and P. J. McGinness, were Air Flying Corps pilots in the first World War. Both earned the Distinguished Flying Cross. The others were Western Queensland pastoralists — Sir Fergus McMaster and A. H. Templeton.

This was in the "barnstorming" era of Australian aviation when flying-men were risking their necks stunt-flying all over the Commonwealth in old aeroplanes from war-disposals stock.

Men of vision, such as Hudson Fysh and his companions, could see a future in the development of air services to benefit the people of the outback rather than provide entertainment. As a result of their meeting at the Gresham, Queensland Northern Territory Aerial Services Ltd. (Qantas) came into being.

Joy-Riding at First. Money was short, and in the beginning the organisation was forced to provide joy-riding flights — £3.3.0 for 7 minutes in the air, and £5.5.0 for looping the loop.

By 1922, Qantas was operating a service between the rail-head towns of Charleville and Cloncurry. Today it operates over 26 countries totalling 68,000 miles.

From the days Qantas was founded, SHELL aviation spirit and oil were at the disposal of this Empire-wide airline.

Shell's aviation service pioneered refuelling for aircraft, not only in Australia, but along all major flying routes throughout the world.

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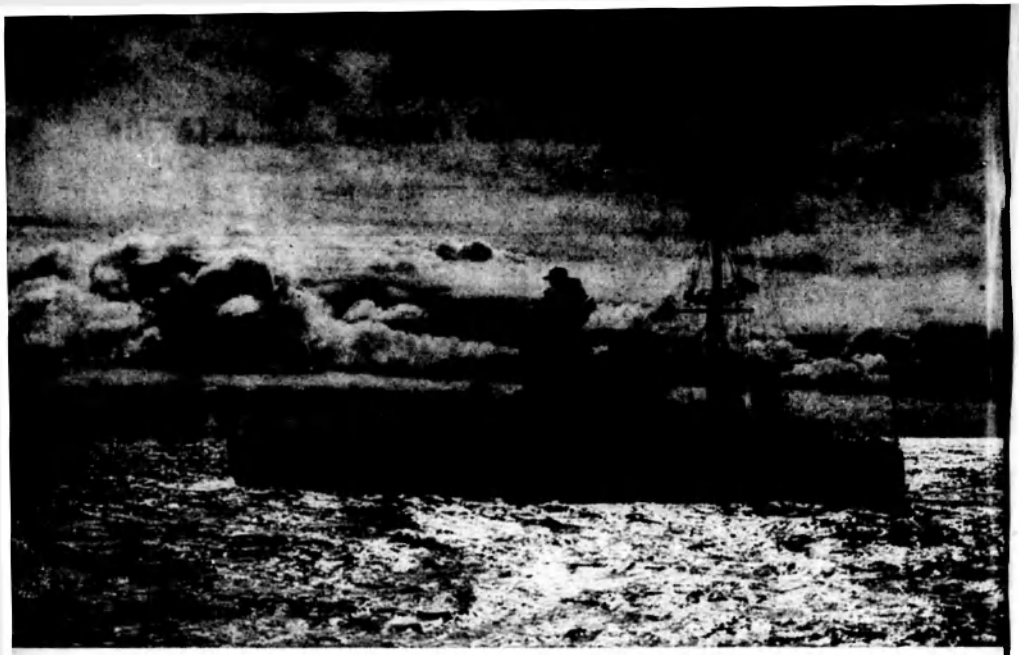

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FLAGS OF CONVENIENCE

The curious increase in the tonnage of merchant ships registered in countries which we do not normally associate with maritime traditions was the subject of debate in the House of Lords recently, and provoked comment in a letter to London newspapers.

In the Lords, Lord Winster pointed out some of these inflated tonnages when he was referring to the fall in the United Kingdom's share of world tonnage, and in particular the fall in British tramp tonnage.

In 1924, he said, Panama had only 15 ships on her register. In 1954 she had 565, totalling nearly four million gross tons. Of these ships, 224 were tankers, totalling more than two million gross tons. In 1954 Liberia had 176 ships on her register, totalling 1,600,000 tons. The total of ships registered in Panama, Liberia, Honduras, and Costa Rica, was 854, totalling six million gross tons — seven per cent. of the world's tonnage.

Lord Winster added: "The object of these exceptional registrations is to avoid the obligations which legislation enforces in the recognised maritime countries. . . . They evade national taxation, but also evade regulations about survey and load-line. But the serious thing is that if a decline in shipping activity materialises, the owners of ships on these fictitious registers will be able to undercut ships on the registers of countries which do impose adequate regulations and adequate supervision of the ships registered under their flags."

Lord Winster said that the growing practice of flag discrimination was an "evil system" because it diverted trade from normal economic channels into ones which were determined by nationalist passions.

Inevitably it increased transportation cost and hampered the development and growth of trade between countries.

Lord Geddes, speaking in the debate, said that the fleets registered under "flags of convenience" constituted a menace.

If war should come, he said, these millions of tons of shipping would be unlikely to be available, except at exorbitant prices.

He said that the trouble lay in British taxation policy. Owners under these flags were able to accumulate reserves far more quickly than British owners and they were building some of the finest ships in the world.

Following the debate in the House of Lords, several bodies discussed "flags of convenience" at meetings. The annual conference of the Navigators' and Engineers' Union expressed grave concern over the rise of both flag discrimination and the registration of shipping in non-maritime countries.

Captain W. H. Coombs, president of the Officers' (Merchant Navy) Federation, wrote a letter to the "Times" summarising the attitude of Merchant Navy officers.

He said that there was complete agreement between the representatives of ship owners and ship masters and seamen about the serious outlook for British shipping if the registration of ships under "flags of convenience" was not arrested. He said they believed that otherwise British shipping would be faced with inevitable, and relatively speedy, decline.

Captain Coombs added: "I am convinced that the British shipping industry, nothwithstanding its present apparent well being, is to-day faced with forms of insidious competition which, if not speedily overcome, may reduce Britain to a nation of little maritime importance within a relatively small number of years."

AN HISTORIC ORDER

Work has begun on giving Nelson's last flagship, the *Victory*, her most extensive re-rigging since 1946.

The order for the special rope needed to replace her rigging at Portsmouth went fittingly enough to the Ropery at Her Majesty's dockyard, Chatham, where the *Victory* was built and launched.

It is expected that the re-rigging will be completed in time for Portmouth "Navy Days" in August of this year.

The rope to be used will be made in the same long timber-built rope walk at Chatham as that required in refitting the *Victory* five years before Trafalgar.

The work for the Ropery, now the only Admiralty rope-making establishment, includes the manufacture of rarely laid shroud-line and cable-shroud ropes.

Mr. W. J. Blackler, foreman of the Ropery, who has had 45 years of experience as a rope maker, will supervise the work.

He made the rigging for the *Victory* before she was opened to the public at Portsmouth in September, 1927. Even at that stage the making of cable-shroud ropes was an almost forgotten art in Naval dockyards.

The present Ropery at Chatham dates from 1785 and it meets the needs of Naval ships at all parts of the world.

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H.M.A.S. SWAN MAKES HISTORY

She becomes the first R.A.N. training ship for our midshipmen.

ON February 10, 1956, the anti-submarine frigate, H.M.A.S. *Swan* became the Royal Australia Navy's first cadet-midshipmen training ship.

She was commissioned at Garden Island Dockyard, Sydney, with Commander R. J. Robertson, D.S.C., as her commander.

This means that in future cadet-midshipmen who graduate from the Royal Australian Naval College will go direct to a R.A.N. training ship in Australian waters instead of to a Royal Naval training ship in the United Kingdom.

The midshipmen will be sent to the Royal Naval College at Dartmouth after their initial training on *Swan*.

Shortly before *Swan* was commissioned she was joined by fifty-five cadet-midshipmen from all over Australia.

Cadet-midshipmen on the *Swan* will perform all duties normally done by ratings to obtain the knowledge and experience to fit them to direct and control the men who will eventually serve under them.

At the end of their training in the *Swan* they will go to the Royal Naval College at Dartmouth as midshipmen for 16 months.

After they have been promoted sub-lieutenant, those who are to be executive officers or officers of the Supply and Secretariat Branch will return to Australia for more sea-training.

Those who are to specialize in engineering will remain for a longer period in the United Kingdom.

H.M.A.S. *Swan* was laid down on May 1, 1935, and commissioned on January 21, 1937.

In 1939 she served with the China Station, visiting Port Moresby and Darwin, Singapore, Bali and Sourabaya before re-entering the Australian Station on July 21.

When war broke out she was in Sydney, and on December 10, she joined the 20th Mine Sweeping Flotilla as leader.

On operations, *Swan* swept a total of eleven German mines and ended this phase of her wartime career with a sweep off Port Moresby at the close of December, 1941.

On January 8, 1942, she arrived in Darwin to operate as an anti-sub and escort vessel.

At Amboina on January 16 she came under enemy attack for the first time when Japanese aircraft bombed the port.

In February she was one of the escorting ships taking part in the unsuccessful attempt to re-inforce Timor.

On February 19, *Swan* was loading ammunition in Darwin when the first and heaviest air raid on Australia began. Japanese aircraft attacked her seven times and she suffered many near misses. Five of her crew were killed and nineteen wounded.

Swan left Darwin for repairs and became operational again on May 3 when she started a period of convoy escort duty from Townsville to Thursday Island and New Guinea.

Members of the Sydney Fencing Club entertained some of the officers from French warships which visited Sydney recently. Ensign de Vaisseau Salle (right) and Master at Arms Le Maigne Marcel chat with Miss Marie McGeorge (left) and Miss Elaine Bathgate.

During 1943 *Swan* escorted Queensland-New Guinea convoys for ten months of the year and spent the last two months at Brisbane refitting.

On April 17, 1944, *Swan* arrived at Milne Bay for escort and anti-sub duties in New Guinea waters. She remained on active operational duty until September 19. During this period she gave fire support to land operations and took part in the bombardments of Wide Bay in New Britain and Cape Sarme in New Guinea. She also took part in the successful bombardment of the Jacquinot Bay area in New Britain.

Swan continued operations in New Guinea waters until June, 1945. She supported the 6th Australian Division in land operations at Kairiru Island, and in March she again shelled Wide Bay, and in the following month bombarded the Aitape-Wewak area.

In September of the same year she proceeded to New Ireland to accept the surrender of the Japanese forces in the area. On October 16, 1945, *Swan* reassumed her role as leader of the 20th Minesweeping Flotilla. The flotilla carried out extensive sweeping operations in the New Britain, New Ireland, New Guinea and Solomons areas.

Swan was on the spot when H.M.A.S. *Warrnambool* went down after striking a mine off the Queensland coast.

Excepting periods of docking and refit *Swan* was in constant operation as a sweeper under the command of Acting Captain R. V. Wheatley, R.A.N., (S.L. 20th M.S.F.) for a period of some three years. On August 10, 1948, she berthed at Sydney bringing to a close almost twelve years active seagoing service. On August 18, 1950, *Swan* finally paid off into reserve.

In the pre-war period of her service *Swan* steamed 43,837 miles. On active war service she steamed 187,663 miles and on post-war minesweeping duties 49,756 miles.

Swan is the twenty-fourth vessel of the name in British Naval annals, the first dating from the launching of the King's ship *Swan* in 1420 during the reign of Henry V.

WOODEN SHIP FOR ANTARCTIC VOYAGE

The wooden motorship *John Biscoe* will carry members and equipment of the New Zealand expedition to the Antarctic next summer.

She will be sailed to New Zealand by a Navy crew after refit in Britain.

On the Antarctic trip, a New Zealand frigate will escort her as far as the pack ice.

An Admiralty Report from London

R.N.'s NEW OFFICER PLAN

A 31-PAGE Admiralty Fleet Order has been issued to all officers of the Royal Navy

The A.F.O. sets out in detail a new officer structure which offers, among other things, increased career prospects for the officers of Her Majesty's ships.

The following is a digest of the salient points as set out in an Admiralty News Summary.

As the equipment in Naval ships and aircraft multiplies both in quantity and complexity, so does the need increase for Naval Officers to broaden their professional knowledge. The Seaman Officer, for example, must know more and more about the technical features of his weapons and other fighting aids, while the technical officer has to play a much more direct part than in the past in fighting his ship.

The training of Naval Officers has never been designed to produce specialists in the narrow sense of the term. Officers have, however, entered the Navy for service in a particular branch as, for example, Executive or Engineer Officers. It has now been decided that this division of officers into branches will limit too rigidly, for the Navy's future requirements, the range of appointments in which officers can be employed, and the training and experience they can acquire.

This division will therefore be abolished from January 1, 1957, and a radical re-organisation of the officer structure will be introduced in which all officers, with the exception of Instructor, Medical and Dental Officers, will be placed on one of three lists to be known as:

- The General List
- The Special Duties List and
- The Supplementary List.

These lists will be made up as follows:

The General List

The General List will consist of all cadet-entry officers of the present Executive, Engineering, Electrical and Supply and Secretariat Branches, of all ex-ratings who have obtained commissions in one of these branches through the Upper Yardmen scheme and University graduate entries into the Engineering and Electrical Branches.

The General List will form the main body of Naval Officers. They will fill all major posts of responsibility in the Navy.

As it is impossible for officers to become expert in all fields, they will belong to one of four specialisations—Seaman, Engineer, Electrical or Supply and Secretariat—but their early common training and, subsequently, their common responsibility for a wide range of general Naval duties will both be designed to form them into one corporate professional "whole."

All General List officers will be equal in status and all will have the opportunity of promotion to high rank.

Common Entry for Cadets

Resulting from this new scheme, successful candidates for cadetships at the Britannia Royal Naval College, Dartmouth, will, from the May 1957 entry (examination in October 1956), be entered as cadets for service on the General List and not as cadets in a particular branch as in the past.

They will, however, be allocated to a specialisation, according to their choice and aptitudes and the needs of the Service, on completion of their first year's training at Dartmouth.

For the present, owing to the special educational qualifications and training required, cadets for the Electrical specialisation will continue to be selected before entry to Dartmouth. They will, however, be entered for service on the General List in the same way as all other cadets.

Common training and professional experience

While at Dartmouth, cadets will be given a larger measure of common training than they have had in the past, and all junior officers on the General List will, in their early training period, qualify to take command of boats and obtain bridge watchkeeping certificates or certificates of competence.

After completion of their specialist training, General List Officers will be encouraged to

widen their professional knowledge as much as they can.

There will, for instance, be some inter-change of appointments between specialisations.

General List Officers other than Seamen specialists may be appointed from time to time "for Seaman duties," while the range of day-to-day duties allocated to all specialists in the general running of ships and establishments will be broadened.

Promotions to the rank of Captain, R.N., will be pooled between the specialisations; officers will be appointed to senior posts of an administrative as opposed to a strictly specialist nature according to their abilities, without regard to specialisation; and officers of all specialisations may expect to be considered for promotion to the higher ranks on the basis of their individual merits in comparison with that of their contemporaries.

Sub-Specialisation

Most of all Seaman specialists will be required to sub-specialise in one of the following subjects — aviation, gunnery - navigation and aircraft direction, submarines, communications, torpedo and anti-submarine warfare, physical training and welfare, and surveying.

About one third will be required for flying duties as pilots, but about a third of these will return to general Seaman duties after seven years with the Fleet Air Arm.

Engineer specialists will subspecialise in either marine, air or ordnance engineering.

Electrical and Supply Secretariat specialists will need to be competent in the whole range of their specialist duties.

The Post List

Seaman specialists will be divided into two groups on promotion to Commander, that is, into the Post List and the General List.

Only those who are appointed to the Post List will be eligible for command of shore establishments and for staff and administrative duties, including staff appointments afloat.

Like officers of other specialisations, Seaman specialists who are placed on the Post List and those who remain on the General List will both be eligible for promotion to Captain and to Flag rank.

Career Prospects

An essential part of the new officer structure is to improve the career prospects of Naval Officers.

To this end, the number of cadets to be entered in the future will be smaller than it has been in the past. Subsequent deficiencies in the junior ranks will be made good by the employment of officers and the Special Duties and Supplementary Lists.

For officers on the General List, promotion to the rank of Lieutenant-Commander will, as in the past, be automatic after eight years' service in the rank of Lieutenant. It is hoped, however, that with the new structure up to three quarters of Lieutenant-Commanders on the General List will reach the rank of Commander, which is a much higher percentage than has ever been attained before.

For new entrants, the retiring age of Lieutenant - Commanders will be 50, as compared to 45 at present, and they will have the opportunity to retire at about the age of 40 if they wish, by which time they will know if they are not going to receive further promotion.

Commanders on the Post List will also retire at 50, while for all Commanders on the General List the retirement age will be 53.

Post List Captains not selected for Flag rank will retire at about the age of 51, while for those on the General List the retirement age will be 55.

Thus it is designed to give all General List officers a really worthwhile career, with, of course, a pension and terminal grant at the end of it.

The Instructor, Medical and Dental Branches

Owing to their special professional requirements, the Instructor, Medical and Dental Branches will, as already stated, continue their separate existence. Each of these branches has its own entry regulations and career structure and each will continue to supply an essential service to the Royal Navy.

The Royal Marines

The Royal Marines will also remain outside the new structure, except that their career prospects will be aligned as far as possible with those of General List Officers. The Royal Marines have their own special duties to perform both afloat and ashore and the Corps will remain an essential and integral part of the Naval Service.

The Special Duties List

The second list of Naval Officers in the new structure will be called the Special Duties List, which will replace the Branch List; formerly called the Warrant List.

Special Duties Officers are promoted from the lower deck, usually between the ages of 25 and 34 and are selected on the basis of their professional ability and personal qualities.

Such officers have always been important members of the Naval Service primarily owing to the high degree of specialised experience and knowledge they have gained during their time in the Service.

In the new Special Duties List they will play a still more important part than in the past as their numbers eventually increase and their responsibilities are extended.

To mark this development, their titles of rank will be changed from, for example, Commissioned Engineer or Senior Commissioned Stores Officer, to Sub-Lieutenant, Lieutenant and Lieutenant-Commander, with a prefix or suffix to indicate the nature of their specialised duties.

Opportunities for transfer to the General List will only be available under very exceptional circumstances. The great majority of Special Duties List Officers will however reach the rank of Lieutenant on their list before retirement. It is hoped that, eventually, a third of those who reach the rank of Lieutenant will be promoted to Lieutenant-Commander and some of these will reach the rank of Commander.

Like officers on the General List, Special Duties List Officers will receive a pension and terminal grant on retirement on completion of the necessary number of years' service.

The Supplementary List

The Supplementary List will consist of officers entered initially on short service commissions in the Fleet Air Arm and any other officers who may be recruited in the future on a similar basis for certain specific duties.

Entry on the Supplementary List as Officer Pilot or Observer in the Fleet Air Arm will be for an initial period of 12 years with the opportunity of leaving the Active List after eight years. Shortly before completion of 10 years' service, officers will have the opportunity to volunteer for selection for a pensionable career. Officers selected would normally reach the rank of Lieutenant-Commander but there will be only a limited opportunity of promotion beyond that rank.

Transfers from the Supplementary List to the General List may be made in exceptional circumstances.

Officers who leave the Active List on completion of 12 or 8 years' service will receive a tax-free gratuity.

Regulations for entry on the Supplementary List for any other specialised duties will be published when there are vacancies to be filled.

R.N.S.A.'s REGATTA IN SYDNEY HARBOUR

ONE of the most successful regattas yet held by the Royal Naval Sailing Association (Australia Branch) took place on Sydney Harbour on Saturday, February 4, in a light easterly breeze.

The Branch Captain, Rear-Admiral H. J. Buchanan, C.B.E., D.S.O., and Captain V. A. Smith, D.S.C., A.D.C., R.A.N., received their guests in the flagship H.M.A.S. *Quadrant*. Among those present were Rear-Admiral H. M. Burrell, C.B.E., A.D.C., and Mrs. Burrell, Captain W. H. Harrington, D.S.O., R.A.N., Captain L. Gellatly, O.B.E., D.S.C., A.D.C., R.A.N., and Mrs. Gellatly, Rear-Admiral Sir Leighton Bracegirdle, K.C.V.O., C.M.G., D.S.O., and Lady Bracegirdle, Captain and Mrs. Murchison, Mr. and Mrs. F. White. Representatives of yacht clubs present included Dr. and Mrs. T. M. Furber of the Royal Prince Edward Yacht Club, the Commodore of the Cruising Yacht Club Mr. W. Wilson, and Mr. and Mrs. Sam Stirling. Mr. Sam Stirling presented the yacht *Mavis* to the R.A.N.

The picturesque harbour, 156 yachts of all types, some with gaily coloured sails, made a sparkling spectacle.

The light wind conditions called forth all the skill of the many skippers and there were some very interesting results.

In the First Division, *Pakerdoo* won the Milson Plate by a comfortable margin. The Milson Plate was presented by the late Lieutenant J. L. Milson, V.D., R.N. Brigade.

The Braemer Challenge Jug for whalers was won by Commander R. J. Robertson, D.S.C., R.A.N., Captain of H.M.A.S. *Swan*. This trophy was presented by Lieutenant-Commander J. L. Paxton, R.N.V.R., a past Rear-Commodore of the Royal Naval Sailing Association.

The East Australian Area Sailing Association *Warrego* Trophy for dinghies was won by Sub-Lieutenant J. E. Buchanan, R.A.N., son of Rear-Admiral Buchanan, of H.M.A.S. *Quadrant*.

The yacht *Mavis* sailed in the First Division under the able command of Captain (E) K. McK. Urquhart, R.A.N., the former Branch Captain. The East Australian Area Sailing Association ex-German yacht *Schwalbe* also sailed in the Third Division.

Results:

1st Division Yachts

1. *Pakerdoo* (D. C. Brockhoff) 4-53-5.
2. *Kyeema* (C. C. Galbraith) 4-57-0.

3. *Norn* (A. F. Albert) 4-59-55.

International Dragon Class

1. *Pel* (W. L. Fesq) 5-6-33.
2. *Van Diemen* (R. E. Brooks) 5-7-2.
3. *Siboney* (H. and C. Halvorsen) 5-7-24.

Restricted Division Yachts

1. *Spectre* (J. H. Freeman) 5-18-26.
2. *Imshi* (B. S. Robertson) 5-18-41.
3. *Fiesta* (W. Holliday) 5-21-45.

2nd Division Yachts

1. *Sireen* (P. C. Psaltis) 4-32-2.
2. *Lass O'Luss* (J. R. Colquhoun) 5-0-10.
3. *Teal* (R. E. Jeffries) 5-3-45.

3rd Division Yachts

1. *Rani* (H. J. Quinn) 5-16-38.
2. *Naiad* (J. M. Coxon) 5-17-22.
3. *Southerly* (K. J. Patrick) 5-19-33.

4th Division Yachts

1. *Sarie Marais* (H. Wotkiss) 4-54-59.
2. *Lilith* (E. L. Thompson) 4-57-0.
3. *Tern* (J. O'Donnell) 5-0-51.

Island Class Division

1. Sub-Lieutenant J. E. Buchanan 4-13-0.
2. Mr. K. Smith 4-14-0.
3. Lieutenant A. Pulsford.

Service Whalers

1. H.M.A.S. *Swan* (Commander R. J. Robertson) 4-10-1.
2. H.M.A.S. *Rushcutter* (Lieut.-Cmdr. K. Robin) 4-11-30.
3. H.M.A.S. *Rushcutter* (Lieutenant J. Martin).

Jubilee Class Dinghies

1. *Nyala* (F. A. Barclay) 4-44-12.
2. *Wendy* (J. B. Griffin) 4-45-47.
3. *Sea Sprite* (R. T. White) 4-46-43.

Finn Class Dinghies

1. R. E. Johnson 4-24-47.
2. R. V. Gale 4-26-41.
3. C. S. Ryrie 4-27-52.

S.A.S.C. Races

No. 1 Division

1. *Waitere* (H. S. Lloyd) Won by 2.7 sec.
2. *Hoana* (K. Brown) 3 min. 55 sec.
3. *Waitangi* (W. J. Wearne) bet. 2 and 3.

No. 2 Division

1. *Hinemoa* (J. P. Maynard) Won by 17 sec.
2. *Ranger* (E. C. Gale) 1 min. 23 sec.
3. *Elfin* (S. G. Macintosh) bet. 2 and 3.

No. 3 Division

1. *Talua* (D. M. Helliwell) Won by 1 min.
2. *Windsong* (I. G. Ullett) 1 min. 25 sec.
3. *A'Shirlmn* (J. Jackson) bet. 2 and 3.

On Saturday, March 17, at 7 p.m., the Royal Naval Sailing Association (Australia Branch) will hold a barbecue on the beautiful lawns of Garden Island.

Proceeds from this function will go towards the upkeep of the yacht *Samuel Pepys*.

This famous yacht is an R.N.S.A.24 which has sailed in many ocean races, including the Bermuda Yacht Race, the Fastnet Race, and has been sailing recently in the Mediterranean.

The R.N.S.A. Parent Club has lent the *Samuel Pepys* to the Australia Branch for a period of two years and she will arrive in H.M.A.S. *Melbourne* in May.

It is the intention that this yacht will be entered for the Sydney-Hobart and other ocean races and there will be many expenses involved in keeping her in first-class racing trim.

NAVAL PLANE'S UNUSUAL CRASH

An aircraft of the U.S. Navy Antarctic expedition crashed into a snow-covered mountain so gently that its seven occupants did not know they had crashed.

The single-engined Otter aircraft, on its way to supply a trail party in Little America, became weighted down with ice.

The pilot pulled the nose up high, but even with full power the aircraft could attain only about 50 miles an hour. It hit the mountain at about 45 miles an hour.

The force of the crash was negligible. Some passengers thought a normal snow landing had been made. The deep snow was so soft that none of the occupants was injured, although some had their seat belts unfastened.

The seven men were found unharmed a week later, but the expedition leaders decided not to try to salvage the aircraft because of the severe structural damage and the difficulty of reaching the spot where it crashed.

MORE RADAR SHIPS

The United States Navy will soon commission four more ocean radar station ships for offshore employment in the continental air defence system.

They will be assigned to the West Coast to take stations which will extend out into the Pacific the nation's radar protection. The first four such ships, commissioned early in 1955, were assigned to radar picket duty off the Atlantic coast.

The latest ships will be commissioned at the yards where they were converted to their new type from liberty ships.

Two-year-old Suzanne Gordon gets a helping hand from Matelot Mecanicien Charlick Plevon when she visited the French training cruiser "Jeanne d'Arc" in Sydney recently.

NEWS OF THE WORLD'S NAVIES

Snow Warfare for Royal Marines

Cold weather warfare training began in January for volunteer Royal Marines making their headquarters in a Norwegian hut near Aviemore, in the Scottish highlands. Previously a week's preliminary training took place at the R.M. Commando School at Bickleigh, near Plymouth, to bring volunteers up-to-date in their knowledge of map reading, compass fork and cross country marching on Dartmoor.

At Glenmore Lodge, 1,100 feet above sea level, where they spend three weeks, they learn to live and fight in the snow, the rudiments of ski-ing and the use of special clothing and weapons. They are also prepared to live in snow holes and small tents in below freezing temperatures and avoid frostbite and other cold injuries.

Much of their training, under Captain M. J. Baizley, R.M., designed to achieve the highest standards of physical fitness, initiative and military efficiency, is undertaken on a plateau of the Coirngorm range at a height of more than 3,000 feet.

To gain knowledge of fighting at low temperatures, other Royal Marines are this winter training in Norway with the Norwegian Army under more intense cold and tougher conditions than it is possible to find in Britain. Others are training in the Canadian Arctic.

R.A.N. Men Visit Invasion Beaches

A large number of the 1,000 officers and men in the new Royal Australian Navy aircraft carrier *Melbourne* have visited Paris and the invasion beaches of Normandy.

The Rev. "Tubby" Clayton, founder of Toc H, spent two days aboard the ship at sea.

In spite of severe winter conditions and successive gales the *Melbourne* completed her final trials before she went to Le Havre.

The trials included the successful launching by her steam catapult of her new Sea Venom all weather day and night jet fighters and her Gannet turbo-prop anti-submarine aircraft. The aircraft were launched when the only wind passing over the flight deck was that caused by the speed of the carrier.

The *Melbourne* will arrive in Australian waters towards the middle of this year.

R.N. and R.A.N. Ships at Exercise

Flags of eight SEATO nations flew from Bangkok's Don Muang airport when the first joint exercises of South-East Asia Treaty Powers began last month.

An Australian and British task force of one cruiser and four destroyers, and a New Zealand frigate met the American carrier *Princeton* and her escorting warships in the Gulf of Siam at dawn.

When the morning mists cleared a shuttle service of Marine helicopters flew a battalion of heavily armed combat-equipped marines from the *Princeton* to a bivouac on the airport.

Thirty-three helicopters flew nearly 700 men from the carrier, almost 30 miles away.

The movement was marred by one of the helicopters falling into the sea.

Seven marines jumped clear before the aircraft sank. A skiff from the Australian destroyer *Tobruk* picked them up.

The second phase of the manoeuvres will be the arrival of a fleet of American transports from Manila with a battalion of U.S. paratroopers and their equipment.

Special Squadron for Atom Tests

The Royal Navy's participation in the third series of British atomic weapons test in the Monte Bello Islands next April is to include a Special Squadron, which will operate in waters adjacent to the islands with its senior officer, Commodore Hugh C. Martell, in H.M.S. *Narvik*, a 5,000 ton landing ship with a complement of about 250.

Narvik left Portsmouth recently for the Indian Ocean.

In Australian waters she will be joined by other ships, both from the Royal Navy and from the Royal Australian Navy.

New Navy for West Germany

The West German Parliament has authorised the Government to order the first ships for its new Navy.

The Government will order eight destroyers and 145 smaller vessels, including E-boats, from German shipyards.

Under the Paris Treaties, West Germany must not build ships bigger than 3,000 tons. The first building programme does not yet include submarines.

The Defence Ministry plans a total outlay of 6,200 million marks (£stg.518 million) on West German naval forces.

Russian Subs On the Move

Russian submarines are suspected to be in the Mediterranean for the first time, according to the London, "Daily Telegraph."

It says that Royal Navy ships equipped with asdic have located unidentified submarines.

The Admiralty would not comment on the report, but its spokesman said that submarines are entitled to operate in the Mediterranean outside territorial waters.

The "Daily Telegraph" correspondent at Nicosia (Cyprus) says notification would not be necessary for passage of Russian submarines through the Straits of Gibraltar. Harbourage would be available to them in Albania and, possibly, egypt.

New Ensign for Ceylon Navy

A new Ensign was hoisted on ships of the Royal Ceylon Navy on the fifth anniversary of the founding of this Commonwealth Navy.

During the past five years, the Royal Ceylon Navy has operated under the White Ensign as worn by the Royal Navy.

The new Ensign consists of the Red Cross of St. George in a white field with the national flag of Ceylon in the upper canton next to the staff.

New Role for H.M.S. Protector

The Admiralty has announced that H.M.S. *Protector* (Captain J. V. Wilkinson, D.S.C., G.M., R.N.), an armed netlayer of 3,600 tons, has been converted and commissioned for service in the Falkland Islands and Dependencies during the season from about November to April.

She will operate on an annual cycle, returning each year to the United Kingdom about the end of May for overhaul and recommissioning. She sailed from Portsmouth on October 3rd for Port Stanley in the Falkland Islands.

H.M.S. *Protector* will be under the Commander-in-Chief America and West Indies' Command. Her main role will be "to assist the Governor of the Falkland Islands and Dependencies during the Antarctic season in maintaining the security of the territories under his jurisdiction and in furthering the policy of Her Majesty's Government in that area."

Hitherto this role has been carried out by a frigate of the America and West Indies Station; but these frigates were not strengthened against ice and were less suitable than the *Protector* for this work.

The *Protector*, specially strengthened and carrying two helicopters for the purpose of ice spotting, communications and transport, will be a more reliable and flexible ship for operating in Antarctic waters and for supporting our civilian bases.

She will have a Royal Marine platoon embarked. As opportunity offers, she will carry out some scientific work on behalf of the Hydrographer of the Navy.

Balloon Weather Stations from Japan

A series of balloon-borne weather stations are being launched from the U.S. Naval Air Facility at Oppama, Japan, to gather weather information on their flight across the Pacific, at an altitude of 30,000 feet, the Navy announced.

This pioneering meteorological project, a co-ordinated programme of the Navy's Bureau of Aeronautics and the Naval Research Laboratory, is known as the "transosonde," or "transoceanic sounding" system.

The system uses a plastic balloon, 39 feet in diameter, to carry the weather instruments, including 50 watt radio transmitting equipment and necessary power supplies.

From this flight information, meteorologists are able to determine the speed and direction of the wind, as well as to plot weather contours for the jet stream, similar to the more familiar weather maps published in the daily newspapers.

The balloons carry about 350 pounds of ballast, sufficient for an estimated three to six days flight, which means that the balloons, with their associated radio telemetering equipment, have a possible range of 10,000 miles or more. As the balloons descend below the 30,000 foot level, an automatic cut-off device terminates the flight and lowers the equipment by parachute. The transmitters contain shipping instructions to assure their return by the finders.

The flights across the Pacific are the latest in a programme which originated in the Navy in 1949. Flight tests of the present system were begun in Oregon in 1952. Subsequent flights across the United States from West to East, and later across the Atlantic Ocean to the coast of Europe, have successfully demonstrated the practicability of the scheme.

Atom Bomb "Sinks" U.S. Navy Ships

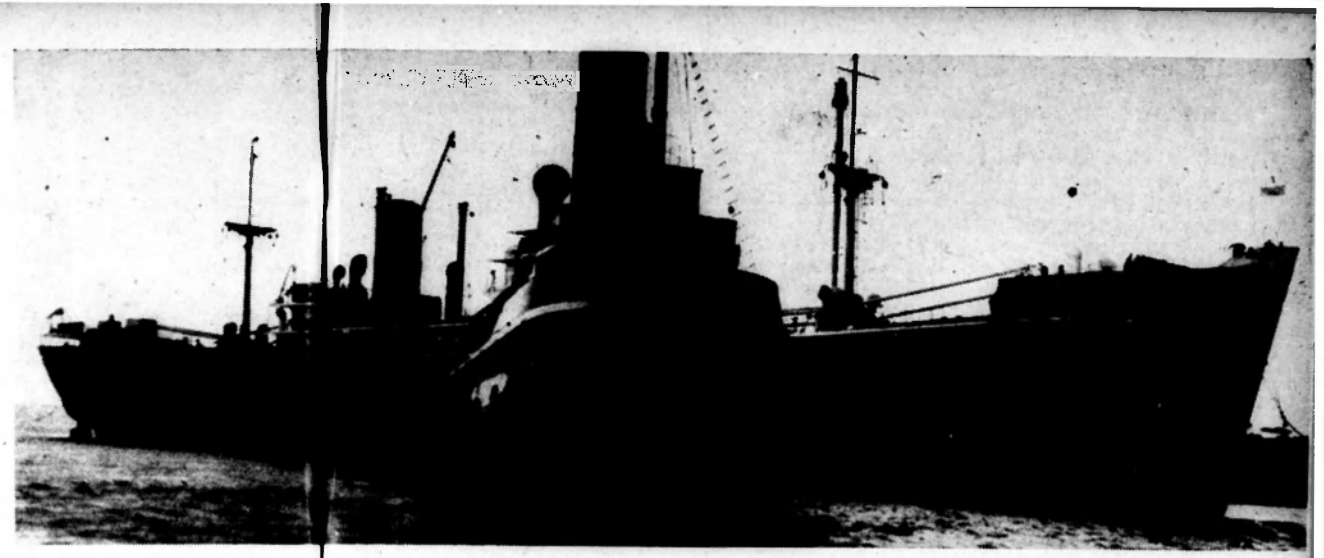
A simulated atom bomb exploded over the Iwo Jima "invasion" fleet recently, theoretically sinking four U.S. Navy transports carrying 2,000 men.

The four ships listed as sunk were within a radius of 4,000 yards below the point of "explosion," says an American Associated Press correspondent aboard the U.S.S. *Mount McKinley*.

A second ring of ships about 4,000 yards from the destroyed ships theoretically received heavy damage and casualities.

REPLACING THE MERCHANT NAVY

By L. Hughes — in London



EVERY now and again the newspaper reader will come across a paragraph stating that a ship is making her last voyage before going to the break-up yard.

Usually it is a well-known liner, the less romantic ships such as tramps, tankers, and coasters are as a rule towed to their last resting places unhonoured and unsung, although they, too, in their various ways have upheld the prestige of the Merchant Navy and contributed to the nation's well-being.

Few who read the news of the end of these vessels stop to think whether others are replacing them. It is taken for granted. It is this attitude which is disturbing, for if there is any industry where apathy is dangerous, it is shipping. More than one British shipowner has issued the warning that at present building prices, and under existing taxation yolicy, it is not possible to build a ship which can hope to pay for itself over the 25 or 30 years of its life.

Shipbuilding costs are four times what they were pre-war, and taxation is so high that the cash resources of many shipowners are getting very low. The depreciation they are able to set aside falls far short of the amount needed to buy new tonnage.

The life of a ship varies according to its class. A liner, passenger or cargo, built for and spending all her life in one particular trade, can give good service for 30 years or more: a tanker on the other hand has a useful life of rarely more than 16 years. The average of all ships may be taken as 20-25 years.

Shipping is subject to very stringent regulations. At intervals of about four years every ship, if it is to retain its classification at Lloyd's, must undergo a survey. The older the ship gets, the more exacting become the classification society's requirements and the heavier becomes the cost of overhaul and refitting. The time must inevitably be reached when the ship can no longer be operated at a profit. Of course, if the owner intends to replace her, he does not wait until that stage is reached before ordering a new ship, for shipping is a continuing industry and plans have to be made years ahead.

There was a time when a shipowner could obtain fixed prices and firm delivery dates. That time may come again, but at present the building prices are subject to adjustments for changes in prices of material and for changes in wage rates occurring before the ship is delivered, so that the shipowner does not know the ultimate cost of the vessel he has ordered, nor can he be certain of the date when it will be handed over to him. This is strikingly illustrated by the experiences of the Shell group. They are having built for them in British yards more than 30 tankers of 18,000 deadweight tons each, of identical specifications, on a cost-plus basis. So far, the maximum variation in price has been as much as £70,000 a ship—roughly 6 per cent. of the price.

It is estimated that the average delay in delivery time over the whole of their present programme is four months a ship, or a total delay of 280 ship-months.

That represents a loss of earning power of 10 ships for 2½ years, or, in terms of money, £12,500,000 lying idle for that period.

What would be the total replacement cost of the British Merchant Navy? It has been put at £2,000,000,000.

This is a staggering figure, but one group of companies alone estimates that it would cost £100,000,000 to replace its fleet, and when one sees the substantial sums which companies have to allocate to replace vessels as they become obsolescent, these huge figures no longer appear unrealistic. For example, the Furness Withy group has spent £17,000,000 on new ships in the past five years, and the Cunard Company has a shipbuilding liability of £18,900,000.

Every shipping company has to set aside money to a reserve for fleet replacement. The sums vary, of course, from company to company. A study of balance sheets may reveal that some have huge reserves, but it is important to realise that these reserves are not "free," for they have to a great extent already been invested in ships.

When it is stated that to build a dry-cargo ship of the liner class may cost close on £200 per gross ton, a figure which will be added to if passenger accommodation or refrigerated space have to be provided, it will be appreciated that the problem of replacement is, indeed, serious for the shipowner. With his ship costing four times the amount it did in, say, 1937, it has to earn four times as much to pay its way. That, in the face of increased competition from other maritime countries, particularly the re-emergence of Germany and Japan as mercantile powers, is a formidable prospect.

Sir William Currie, the chairman of the P. & O. Steam Navigation Company, has pointed out that the policy of the Japanese Government has been to use its shipping as an instrument of commercial policy. Japanese lines have entered specific trades, and by their competition and conduct have brought down the rates of freight in those trades to uneconomic levels.

The cost of building a ship is made up of about 80 per cent. wages and 20 per cent. materials. Roughly 75 per cent. of that cost is inflationary and as there is no sign of the inflationary trend being arrested, on the face of it there would seem little hope of a fall in building costs.

The chairman of the Union-Castle Line has urged that shipbuilders and sub-contractors, and the trade unions concerned, should get together to see how by co-operation and by increased effort shipbuilding costs can be more equated to resources and prospects. "It is scarcely fair," he said, "to assume that shipowners are the only people who should be expected to shoulder the burden of increased shipbuilding costs."

Now as to the taxation position. Shipowners have made repeated representations to the Government that high taxation is depriving companies of resources with which to maintain their fleets by replacement. A little encouragement has been forthcoming through the investment allowance introduced by Mr. Butler in his last Budget. The ultimate effect of the allowance is that wear and tear allowances on which income tax relief is granted are extended over the normal life of a new ship to 120 per cent. of the first cost. While this is a welcome measure of relief, it scarcely touches the immediate problem of replacement. The rate of allowances does not bridge the gap between the total of depreciation allowances made to the industry and the current cost of replacing the annual wastage in the merchant fleet. Unless there is some permanent recognition on the part of the Government that the cost of replacement must be set aside before taxation is levied, it seems likely that the resources of British shipowners must gradually run down.

A company with a sizeable fleet will require to replace a ship every one or two years. It might be suggested as a sound proposition that the owner of, say, 20 ships should be allowed to retain tax-free profits sufficient to replace one ship each year, with a similar provision for those companies with smaller fleets.

No Government can afford to ignore the fact that British shipping contributes largely to the national income.

It is the fact that the last inquiry made by the industry at the request of the Government showed that British shipping contributed in the year for which the survey was made no less than £221,000,000 to our balance of payments. If it is to continue to earn foreign exchange at this level it must have modern and efficient ships.

If shipowners, owing to the high taxation policy, combined with high shipbuilding costs, are obliged to withdraw old ships from service without replacement the effects will be far-reaching. So keen is the competition in the liner trades that if an owner fails to maintain regular services foreign competitors will step in to fill the gap. Tramp shipowners can from time to time suspend building operations and, in fact, do so, awaiting either a fall in building prices or a revival in freight rates. This is evidenced by the fact that at present there are very few orders for new tramp ships.

The whole picture is one deserving careful study by the Government, and it is to be hoped that with a substantial majority, the new Government will follow up the encouragement given by its predecessor to industry generally.

The final Report of the Royal Commission on the Taxation of Profits and Income has now appeared and it gives little comfort to shipowners. The Commission has definitely rejected the proposal that depreciation should be calculated on the replacement value of ships and firmly anchors itself to the "historic cost" principle.

Its proposals with regard to the "balancing charge" which shipowners hoped might have been recommended for abolition will place owners in an even worse position than they are at present.

The Commission proposes that what has been rightly regarded as a capital gain when a ship is sold for more than its original cost should in future become taxable, and although this will not apply to ships sold abroad which were built before 1946, the so-called "concession" simply limits the range on which the burden will be increased.

British shipowners are very disappointed and, in the words of the President of the Chamber of Shipping, feel that "After years of patient endeavour to convince the authorities by reasoned argument that the British mercantile marine cannot hope to survive in adequate strength and efficiency under the existing policy of taxation we seem to be back where we began."

British shipping requires more than sympathy if it is to maintain its position. "Fine phrases," as the President says, "do not build ships."

— From the London "Navy."

When the French training cruiser "Joanna d'Arc visited Sydney recently, R.A.N. midshipman went on board and drank the health of the visitors.

Personalities

Lord Geddes Accepts Tanker Appointment

THE P. & O. Company has announced that Lord Geddes has accepted the appointment as Tanker Adviser to the P. &O. Group of Companies, and takes up his duties immediately.

This is a new position which arises directly from the decision of the Board, announced on 12th September, 1955, that the P. & O. Group would build a fleet of tankers and enter the tanker field for the first time.

This decision was taken to meet a growing demand for oil carriers at a time when the number of British vessels available had not kept pace, and when a very great and increasing reliance had been put on foreign flag carriers.

Some 500,000 tons deadweight of tankers are being ordered for delivery between 1958 and 1960. They will be owned and operated by a number of different companies in the P. & O. Group, each of whom Lord Geddes will be advising.

Ross Campbell Geddes, 2nd Baron Geddes, is the eldest son of the late Lord Geddes (formerly Sir Auckland Geddes), who was at one time British Ambassador to the U.S.A.

The present Lord Geddes was born in 1907 and succeeded his father in 1954.

Educated at Rugby and Caius College, Cambridge, he served in a number of different capacities with the Shell Group of Companies from 1931 to 1946.

During the war he went to Washington as the Tanker Member of the British Merchant Shipping Mission under Sir Arthur Salter, from 1942 to 1944. Then in the latter year he returned to the Ministry of War Transport as Deputy Director of the Tanker Division, where he remained until the end of hostilities.

Lord Geddes resigned from the Shell Group shortly after the war ended to become a partner in Chr. Salvesen and Company, the Scottish whaler and tanker owners. From here he left in 1950 to form his own tanker business, which he still conducts from headquarters in Edinburgh.

Sir John Collins

The Federal Government has appointed Vice-Admiral Sir John Collins Australian High Commissioner for New Zealand.

Vice-Admiral Collins, 57, formerly was Chief of the Australian Naval Staff. He was recently elected President of the Navy League of Australia.

The Minister for External Affairs (Mr. Casey) said that Admiral Collins would succeed Mr. P. R. Heydon, now Australian High Commissioner in New Delhi.

Mr. O. L. Davis, a counsellor in the Department of External Affairs, had been acting-High Commissioner in New Zealand.

Sir John Collins will leave for New Zealand in April.

Capt. K. McK. Urquhart, R.A.N.

Captain (E) K. McK. Urquhart, R.A.N., at present General Manager of the Naval Dockyard at Garden Island, Sydney, has been appointed Naval Engineer Officer on the staff of the Royal Australian Naval Liaison Officer in London and will leave Sydney for the United Kingdom in the Orion on April 2nd.

Captain Urquhart will be succeeded at Garden Island by Captain (E) J. W. N. Bull, R.A.N., new General Overseeer, Eastern Area (Sydney), and Staff Officer (Engineering) to the Flag Officer in Charge, Eastern Area.

Admiral Sir Walter H. Cowan

Britain's "Little Admiral," Admiral Sir Walter H. Cowan, died at his home at Kineton recently, aged 84.

He was only 5 ft. 2 in. tall.

Admiral Cowan retired from the Navy in 1931, but when World War II broke out he declared "I want to die fighting, and not in bed."

He joined the Army and fought in Tobruk and the Western Desert when he was over 70. He won the D.S.O. at 73.

The medal ribbons on his uniform took up five rows by the time the war ended.

At 73 he became a Naval commando and took part in the raid on the Dalmation Islands, for which he was awarded the D.S.O.

Admiral Cowan won his first D.S.O. during the Nile Expedition in 1893.

He took part in the Battle of Jutland in World War I, and, in 1919, commanded Britain's Baltic force.

Lieut.-Commander Kelly.

Lieutenant - Commander D. P. W. Kelly is the Commanding Officer of No. 806 Air Squadron which has won the 1955 Boyd Trophy—the premier award of the Fleet Air Arm.

Lieutenant - Commander Kelly succeeded Lieutenant-Commander Chilton as Commanding Officer early in 1955 and he remained with the Squadron until it was disbanded in November last.

Lieutenant - Commander Kelly, an outstanding aerobatic pilot, took part in many impressive displays, individually and as leader of his Squadron. He is a bachelor, aged 29, and has been in the Navy for 16 years. Formerly he served at many Naval Air Stations and also afloat in the aircraft carrier *Theseus*. He is a keen Rugby player and has represented the United Services.

The Boyd Trophy commemorates the work for Naval Aviation of Vice-Admiral Sir Denis Boyd, who, as Captain, commanded H.M.S. *Illustrious* from which strikes were launched against the Italian Fleet at Taranto. It incorporates a silver model of a Fairey Swordfish bomber and was presented to the Royal Navy by the Fairey Aviation Company.

Last year it was awarded to the Naval Test Squadron at the Aeroplane and Armament Experimental Establishment at Boscombe Down.

R.N. Appointments

The Admiralty has announced the following appointments:

Rear Admiral G. A. Thring, D.S.O. and Bar — Flag Officer Malayan Area, in succession to Rear Admiral E. H. Shattock, C.B., O.B.E. (May).

Rear Admiral R. S. Wellby, D.S.O. — Head of the United Kingdom Services Liaison Staff in Australia and as Senior Naval Adviser to the United Kingdom High Commissioner (April).

Rear Admiral C. L. G. Evans, C.B.E., D.S.O., D.S.C. — Flag Officer Flying Training in succession to Rear Admiral G. Willoughby, C.B. (February).

Rear Admiral P. Dawnay, M.V.O., D.S.C.— Deputy Controller in succession to Rear Admiral L. F. Durnford-Slater, C.B. (February).

Rear Admiral R. H. Wright, D.S.C. and Bar — Assistant Chief of Naval Staff in succession to the late Rear Admiral M. G. Goodenough, C.B.E., D.S.O. (mid-January).

Surgeon Rear Admiral R. L. G. Proctor, M.D., Ch.B., F.R.C.P., D.P.H.— Deputy Medical Director-General, is to be an Honorary Physician to H.M. The Queen in succession to Surgeon Rear Admiral S. G. Rainsford, C.B., D.Sc., M.D., B.Ch., M.R.C.P., D.P.H.

The Reverend Frederick Darrell Bent, O.B.E., M.A., Q.H.C. —is to be Chaplain of the Fleet succeeding the Venerable Archdeacon Frank N. Chamberlain, C.B., O.B.E., M.A., F.K.C., Q.H.C. (May).

HUDSON BAY COMPANY

A special appointment to "do honour to the greatest living statesman and to renew the company's link with the illustrious name of Churchill" has been made by one of the oldest British pioneer enterprises, the Hudson Bay Company.

Sir Winston Churchill has accepted the honorary appointment of Grand Seigneur of the Company of Adventurers of England Trading into Hudson Bay — claimed to be the oldest chartered trading company in existence.

Australia will claim new gliding records

The Royal Australian Navy glider team is claiming four British gliding records, the Navy announced last month.

They are a long distance record of 208 miles and three speed records for a 193-mile triangular flight. The flights were made in N.S.W. recently.

The team will submit the claims to the Federation Aeronautique Internationale.

"The First and the Last"

By *Adolph Galland. Published by Methuen (London).*

This book, written by a German fighter pilot whose career during the Second World War can only be described as meteoric, is much more than just another autobiography. It is a personal account of the building up and subsequent war service, from 1936 until the eclipse of the Luftwaffe in 1945, of the German fighter wings, of which Galland was head by the end of 1941. For this alone it would be worth reading, but Galland, besides being an unusually brave man and brilliant pilot, obviously has a wise head on his shoulders. His reasons for the failure of the Germain Air Force, though sometimes based on conjecture rather than deduction, are always interesting, as are the accounts of his many conversations with Hitler and Goering.

The book starts with the author's first experience of flying which, like that of most of the younger Luftwaffe pilots, had perforce to be in gliders owing to the ban on military flying until the rise of Hitler to power.

Sidelights on his service in the Condor Legion under General Franco in the Spanish Civil War follow, and the author makes no bones over the fact of this period being deliberately used for testing out the new Messerschmitt 109 fighter — which we were to meet over the Channel only too often three years later — and, perhaps more important, for the operational trials of ground attack support for the infantry by aircraft. As a result of the success of the operations in Spain this new tactic was to play a decisive part in the lightning progress of the Polish campaign later on. Of interest too is a short paragraph in this chapter on the notorious bombing of Guernica in Northern Spain which seeks, somewhat lamely, to mitigate the criticism expressed at the time over this bloody incident.

And so the story continues into the Second World War, at the beginning of which the author found himself in command of a ground support unit on the Polish frontier. By May, 1940, however, he had been promoted to Captain, had won the Iron Cross, 2nd class, and was now flying with the 27th Fighter Group in the West. At the end of 1941 he had been promoted to General of the Fighter Arm and, as such, joined the General Staff in Berlin — much to his disgust and disinclination. Two months later he temporarily escaped from his office to take charge of one of the fighter groups on the Normandy coast which had been given the task of providing protection for the passage of the battle-cruisers *Scharnhost* and *Gneisenau* up the Channel — Operation "Thunderbolt." The two short chapters devoted to this incident, which Galland describes in proud terms, are of particular interest in showing the extreme detail in the planning and the excellent co-operation later between the German Navy and Air Force. The embarkation in the ships of special G.A.F. fighter direction officers is a reminder of how completely dependent the Navy was on its sister service in all maritime air operations.

Here, for lack of space, we must leave the rest of General Galland's career to the reader. Perhaps to the less air-minded the most interesting part will be the descriptions of meetings, or perhaps summonings would be the better word, with his Chief, Reichsmarschall Goering, and less often with Hitler. With both Galland appears to have been on close terms, and his account amply confirms previous glimpses we have been given of the characters of these two men, who, more than any others, may be said to have been responsible for what went awry in German air strategy and tactical planning.

At times the reader may be rather irritated by the author's tendency to exaggerate the effect which his fighter arm had on the general issue of the war, the occasion "begging of the question," and also by his inclination from time to time to be wise after the event. Apart from this, however, there is much wisdom and not a little pathos. Galland had three brothers, all of whom became fighter pilots, two being killed in action after distinguished service.

When Group Captain Bader, then a prisoner of war, met the author, there developed a mutual esteem and admiration. Bader writes a spirited introduction in which he refutes a passage in the book concerned with the delivery of his artificial leg to a German airfield by the Royal Air Force.

Finally it must be mentioned that although Galland is frankly Anglophile, this book was not specially written for British consumption, having first appeared in Germany in 1953.

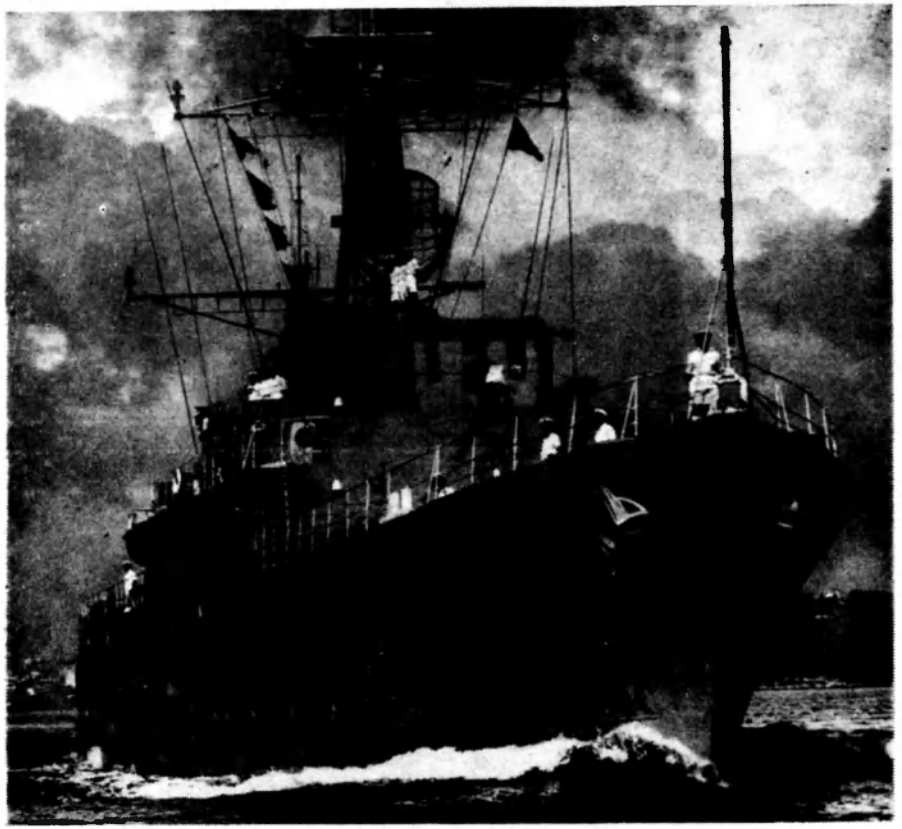
R.S.D.A.

—In the London "Navy."

"Gulf Stream North"

By *Earl Conrad. Published by Victor Gollancz (London).*

Gulf Stream North is a book for all who respond to the call of the sea. It is a story of five days in the life of a very old sailing



Five warships of the R.A.N. and R.N.Z.N. left Sydney recently for Singapore to take part in SEATO exercises. The anti-submarine frigate H.M.A.S. "Quadrant" is shown leading the ships.

vessel, the *Moona Waa Tongue*, fitted with a diesel engine, while fishing off the coast of Florida for menhaden, a species of herring valuable for the fertiliser, meal and oil which are made from it.

Earl Conrad's tale — told by the coloured mate of the vessel — is a story of human courage and endurance in the face of tremendous difficulties.

The process of laying out the nets, the buntpullers, the ring setters, the purse-boat and the many other technical expressions used in menhaden fishing, cannot perhaps be fully understood without some knowledge of deep sea fishing.

But it is the human interest, the pathos of the story, which will appeal to the average reader. The conversation of the black crew during those long spells when no fish were to be found — their jokes, their philosophy, their views on the white man, on religion, on the Bible — these are all magnificently told by Bix, the mate of the *Moona Waa Tongue*.

Overloaded with fish on the fifth day, her white captain drunk and completely laid out, the vessel sank in a sudden storm while vainly endeavouring to reach the harbour she ought to have entered the day before. Fortunately a coastguard cutter saved the crew — apart from one man washed overboard.

Continued on page 27

MARITIME NEWS OF THE WORLD

From our Correspondents in LONDON and NEW YORK By AIR MAIL

Australia's Gift Launch in Rough Trip

The launch *Indaustral*, Australia's gift to India, reached Singapore last month with her fuel tanks almost empty after a very rough passage from Sydney.

The *Indaustral*, a Colombo Plan gift, is a 40 ft. hospital launch which the Indian Government will use in the Andaman and Nicobar Islands.

She left Sydney early in January and was due at Singapore on January 28.

Local agents said she could make only three knots in very bad weather and was 20 days behind schedule when she arrived, with her radio out of commission.

Big Sea Shift for Migrants

British migration to Australia in 1955 was the highest for three years, and the year's average sailings under the assisted passages scheme alone exceeded 500 people every week.

Under the scheme 26,356 men, women and children migrated.

Australian Ships for Hong Kong

Two Australian coastal ships, *Carlisle* and the *Tuggerah*, left Sydney recently for Hong Kong.

They have been bought by a Hong Kong shipping firm, John Manners and Co., and will be used in the China coast trade.

The *Carlisle*, formerly owned by James Patrick and Sons, is towing the *Tuggerah*, which used to trade regularly between Sydney and Catherine Hill Bay. She was owned by the Wallarah Coal Company.

Research on Atom-powered Ships

Lord Privy Seal R. A. Butler has indicated that research for building atom-powered ships was going on in Britain.

Mr. Butler said Britain's Atomic Energy Authority is collaborating with the Shipbuilding Research Association.

He told the Commons that the British Government was aware of U.S. developments.

Norwegians Capture Russian Fishing Vessels

The Norwegian Navy has captured a 14th Russian fishing vessel inside Norway's sea boundaries.

United Press says the Norwegian action apparently forced the remainder of the Soviet fishing fleet to seek the safety of the high seas.

The lighthouse-keeper at Svinoey, 10 miles off the Norwegian mainland, reported that the Soviet fleet had pulled back from Norwegian waters and was hovering on the horizon.

He said the Russians gave no indication of making another, "invasion" of Norway's four-mile territorial waters.

The three-day "invasion" cost the Soviet 13 fishing boats and one factory ship.

Norwegian torpedo and patrol boats had to open fire at least twice to prevent the Soviet vessels escaping.

Atomic Ice-breaker for Arctic Use

Russian scientists and ship-designers are planning an atomic icebreaker for use in the Arctic and a shipyard is being prepared for the work, says the newspaper "Pravda."

New Dry Dock in Mediterranean

A giant new dry dock has been opened in Naples.

It is the second largest in the Mediterranean — next to that at Toulon (France).

It is 1,145 ft. long, 147 ft. wide and 45 ft. deep.

Modern Pirates Board Ships

Modern pirates, wearing hoods, had boarded ships in the Mediterranean, a Marseilles Court was told recently.

The pirates had "hi-jacked" smuggled goods from the ships.

The Court is trying 31 men for theft, smuggling, for having

received stolen goods, and for currency control offences.

The French Customs are claiming about £3,250,000 sterling in evaded duties from the men on trial.

The prosecution said a gang of 45 operated in a high-speed motor boat, the *Esone*.

The gang had twice boarded the ketch *Riff Roc*, a smuggling vessel, and stolen cigarettes worth £40,000 sterling.

On October 3, 1952, they had boarded the Dutch-owned vessel *Combinatie* by moonlight off the Spanish coast.

The prosecution said the gang stripped *Combinatie* of 2,100 cases of cigarettes, worth £A169,680, food and equipment.

Satellite Base on South Magnetic Pole

A French Antarctic expedition now based at Adelie Land, about 2,000 miles south of Hobart, plans to set up a satellite base soon on the south magnetic pole.

The director of French exploration in polar regions, M. Paul Emile Victor, said this in Sydney.

M. Victor said he left 14 French explorers at Adelie Land where they will remain until next January, without any contact with the outside world, except radio.

To reach the south magnetic Pole, the explorers would have to make their way 300 miles south across the Polar icecap.

M. Victor said the party had enough food for two years in case ice conditions next summer prevented a ship getting through to Adelie Land.

He said the base had no airstrip because terrific winds, up to 140 m.p.h., blew up at a moment's notice and made aviation impossible in the region.

Happy in his work. This French sailor, in the visiting training cruiser "Jeanne d'Arc," wore a bright smile when photographed soon after the cruiser arrived in Sydney recently.

CHRISTMAS CONVOY

By Hugh Love

IT WAS two nights before Christmas. We were a week out from Gibraltar bound for Freetown with the slowest and most bloody-minded convoy that ever sailed the broad Atlantic. Officially it was a seven knot convoy but I doubt if the fastest ship of the lot was able to do seven knots on her acceptance trials which, if looks meant anything, probably took place during the shipping boom after the Napoleonic Wars.

Until the start of this particular convoy our destroyer had been the pride of the Royal Navy, at least we thought so. She was the fastest, most heavily armed and best equipped ship of her size that had ever left the United Kingdom. Unfortunately, it was over a year since she had left the U.K. and this was going to be our second Christmas away from home as well as our second actually at sea.

This in itself was bad enough but we could bear it on the belief that it was necessary, but, just before we left Gib. our "relief" came out from England and the buzz was that we were going home for a much needed refit which would mean Christmas leave for all the ship's company.

When we learned to the contrary it was ten times worse to bear as a result of our being so certain that we were going home. Our "relief" picked up a U.K. bound convoy and disappeared from Gib with Christmas leave almost a certainty while we, who had been bashing our hearts out in the Med. for over a year, picked up a bunch of floating scrap and headed for Freetown at an alleged seven knots with the sure knowledge that we would be at sea again on Christmas Day.

The efficiency of the ship dropped by half. The morale of the crew just disappeared and I, the poor down-trodden First Lieutenant, was blamed by everyone for everything. The Skipper said that it was up to me to see that the crew were happy and why couldn't I do my job properly. Things had been different when he had been a First Lieutenant. The crew were of the opinion that if I had been a First Lieutenant worth my salt I would have seen to it that a suitable defects report would have been rendered at the appropriate time to make sure that a trip to the U.K. was an absolute necessity.

The Skipper bottled me from stem to stern every time we met one another. I took it out of the officers, who took it out of the petty officers, who, in turn, took it out of the men, with the result that we were a ship divided with no one liking anyone and everyone thinking that someone else was to blame for something that was nobody's fault.

Up till this time they had been the finest bunch of officers and men that you could find on any ship. Without complaint they had put up with every kind of upset and inconvenience that could come the way of a destroyer in war time with destroyers on short supply. They would have taken this setback in their stride too if only our "relief," that had been based in England with regular home leave all the time we had been abroad, had not gone back home in our place—at least that is what we thought.

On the day before Christmas I tried very hard to raise some seasonable cheer. I had a word with all the officers and petty officers telling them what I thought of them. They said they could do nothing without the co-operation of the crew and that co-operation was not forthcoming. The Bosun said with much gloom, "I only hope that we get to Freetown without running into any trouble. They are all so low that I don't fancy our chance in a scrap." I told him to shut up or I would throw him over the side—but that is how they felt.

I had the first watch on Christmas Eve—eight till midnight. The sea was flat calm. There was a bit of moon but not a sound anywhere. The convoy was spread over miles of ocean but in fairly good order. As far as we knew there was not a U-boat within a hundred miles, and just as well. My mind was not entirely on the ship. I was fed up. Why should I be the one who should have to try to make everyone else happy? Why should I care if they let Christmas go by witout doing anything about it? If anyone had a right to be fed up at not getting home I was that one. I was 25—although I felt and looked like 50—I had a beautiful new wife at home and a baby daughter I had never even seen. To hell with the lot of them. If they wanted to be miserable, well they jolly well could be miserable and that went for the whole shooting match from the skipper down.

When Bob came up to take over just before midnight and said "Happy Christmas," I ignored him and left the bridge hardly telling him where we were and what we were doing.

I went below and turned in and for about the first time in my naval experience I couldn't sleep. I got up and had a cigarette but threw it away half finished. I tried to sleep again, but finally gave it up and had a walk round the upper deck. I looked in on the mess deck. The watch off were fast asleep and all was quiet and in

good order. I began to feel a bit easier until I realised that they had made no effort to decorate the mess deck. This depressed me. I knew every man-jack on that ship as well as any officer ever knew any crew. For over a year I had been father and mother, guide, philosopher and friend, priest and father confessor to the whole bunch of them. I knew a great deal about their homes and families. I knew that most of them had as strong bonds with home and family and Christmas as I had. It angered as well as saddened me to know that they were hurting themselves as well as me by this display of childish stupidity. It wasn't my fault that they were going to be at sea for the second year running and the crew of another ship who had spent last Christmas at home were going to be at home this Christmas as well. To hell with the lot of them, and the Navy, and My Lords of the Admiralty, and anyone else you could care to think of. I went below and fell asleep.

Almost immediately the Alarm Rattlers came to life. I was at my action station before I was fully awake. Even so, I noticed that we closed-up slower than was our wont and I thought, angrily, "Christmas or no Christmas, I'll give them it when daylight comes. They'll exercise action until they won't know or care if it's Christmas Day or Hallowe'en!"

I picked up the phone, got in touch with the bridge and was told that the radar had blipped something in the water about five miles ahead that might be the conning tower of a submarine. By this time we were full ahead, all guns were trained on the bearing of the contact and down aft a pattern pattern of depth charges was ready that would blow half the U-Boats in the German Navy out of the ocean, given the chance.

Our searchlight sizzled and clattered. The beam shot out across the water. I hated the searchlight. It gave me the creeps. It gave me an awful lonely feeling. You lost your comforting oneness with the surrounding dark which was a bad thing in war-time.

The light stayed on long enough to let us see and recognise a ship's boat, and then we were in darkness again.

The Skipper called me from the bridge. "What do you make of it, Number One?"

I said, "Looks like a ship's lifeboat. Seems genuine enough, but you never know. Could be a U-boat trap."

"O.K. We'll circle her until first light and then investigate. Keep everyone closed-up and ready for anything. Double up on Radar and Asdic."

We had two hours to go until dawn. I spent the time thinking of all the things I would rather be doing than what I was doing. I could think of nothing I would rather NOT be doing except swimming away from a torpedoed ship in the Arctic Circle in mid-winter.

After a lifetime of waiting the sky began to clear and we were able to close the boat.

There were three people in her —all negroes. A man, a woman and a little boy. They were huddled together in the stern sheets. The man and the woman were in a bad way but the little boy, although he was scared, looked healthy. My thought was that the father and mother had gone without and the little chap had got all the food and water that was going.

We got them on board with difficulty—they could do nothing for themselves—and then put a hole in the bottom of their boat and let it sink. Then I turned to see what was happening on the deck and what I saw I can still see to this day.

The Doc and a few of our seamen were grouped round the little negro family who were sitting on the deck leaning against a Carley float. The man was looking up at the Doc. His face was lined and haggard, but his eyes were serene. There was a great dignity about him. He had one arm round his wife. She was looking down at the little boy who was huddled against her side encircled by her arm. Her face was drawn and old, but she was half-smiling. The boy was looking up at her. The fear had gone out of him.

For a moment I thought I was looking at something that I had seen before, or was it part of a dream or had someone told me a story like this?

An then the Doc took charge and the man and the woman were taken below. The Doc pointed to me and said to the boy, "You're all right, son, you can stay up here. Go to Uncle Jimmy. He'll show you how the ship works."

The kid stood undecided so I went over to him and held out my hand. "What's your name, son?" I asked in the gentlest voice I could muster.

He looked after his father and mother and for a moment kept his eyes away from me. Then he looked up and with a little grin on the corners of his mouth said, "Joseph."

"Well, Joe, you come with me and we'll see what the cook can raise," and I started off down aft.

I'm not a particularly clever chap, I say that in all modesty, and when it comes to thinks like psychology I'm a nonstarter, but once in a while—a long while—I have a brain wave that is none of my doing. I had one then. I turned on my tracks and headed for the mess deck shouting to a seaman to tell the P.O. of the mess deck that I wanted him. When the P.O. appeared I handed Joe over to him and said, "Here is a new man for the seaman's mess. Sign him on and look after him," and I walked off.

I don't know where the decorations came from. I don't know where the Christmas Tree had been hidden or all the things that were hung on it. All I know and all I cared about was that when Joe and his father and mother left us in Freetown they left the happiest and most efficient ship in the Royal Navy. A ship that had just celebrated the most joyful Christmas I had ever known and, human nature being what it is, we got considerable additional pleasure out of meeting our "relief" crawling out of Freetown with the scruffiest looking convoy you ever saw heading round the Cape for Egypt.

BOOK REVIEWS

Continued from page 22

It is indeed astonishing that as late as in the year 1949 — for this story is based on fact — an old tub of this kind, with rotten timbers and obviously in urgent need of a long refit, should have been allowed to go to sea at all.

G.P.T.

—In the London "Navy."

"A Hundred Years of Sea Stories"

Edited by Lieutenant-Commander P. K. Kemp, R.N. Published by Cassell (London).

No anthology will ever satisfy every reader. In the case of *A Hundred Years of Sea Stories*, the Editor, Lieutenant-Commander P. K. Kemp, has made this point abundantly clear in his own foreword. Indeed, it is evident that he has his own doubts about his choice; and many readers will certainly wonder why their own particular pet story has been omitted.

Having said so much, however, there can remain only praise for the wide range covered in the small compass of some 300 pages. No doubt many will wish to make the acquaintance of the Victorian

Continued on page 37

E.V.2 Gilbert Chevallier, of the French cruiser "Joanne d'Arc, being "rescued" by a helicopter during a Navy display for members of the French training squadron who visited H.M.A.S. "Albatross."

For Sea Cadets

THE SUBMARINE STORY

By GILBERT HACKFORTH-JONES — in London

UNLIKE the aeroplane, with which man had conquered his own inability to fly, the submarine, which enables him to go to great depths under water, serves absolutely no useful purpose other than as a weapon of war.

It is very expensive to build, and has to be so strongly constructed and equipped with machinery that there is only just enough space left to provide cramped living conditions for its crew.

If war was abolished all over the world (and let us hope that this one day will happen) no submarine would ever be built, except perhaps, an occasional Bathysphere for the purpose of exploring the bottom of the sea.

About a quarter of a century ago an American submarine was fitted out by the Polar explorer Wilkins, especially for the purpose of diving under pack-ice with the object of reaching the North Pole.

She was fitted with a large vertical drill with which she would be able to bore her way through the ice to God's fresh air when she should arrive at her destination. In the event no serious attempt was made to carry out this dangerous project, which is the only example, besides that of Professor Picard's exploration of the depths of the ocean, that I can find of a submarine being used for peaceful purposes.

The secret of the deadliness of the submarine as a war-weapon lies solely in her ability to become invisible at will, and thus to "stalk" her unconscious victim in the same way as a hunter stalks his quarry; creeping up until within such a close range that it is impossible to miss with the weapon carried for that purpose. Everything, therefore, in the design and construction of a submarine exists solely for the purpose of enabling her firstly to fulfil her fell purpose, and, secondly, of being able thereafter to escape the counter-attacks which she is bound to suffer as soon as she has betrayed her presence by striking her victim.

First of all, let us examine the problem of building a submarine for ourselves and so see how it works.

We have all played with boats in our baths and probably have unwittingly demonstrated over and over again the simple principle of flotation, which is: "that when a body is placed in liquid it sinks until it has displaced its own weight of that liquid." Taking an enamelled soap dish as our specimen we turn it on its side and holding it in that position we allow it to slide gently into the bathwater. As the material from which the soap-dish was made is heavier weight-for-weight than water, we find the soap-dish goes straight to the bottom of the bath.

Recovering it and pouring out the water in it we will hold it, this time, horizontal and the right way up. In this position we lower it on to the surface of the water, and removing the support of our hand we discover that it floats. It weighs the same as it did before, but this time, because of its hollow shape it is able to displace its own weight *before* becoming completely submerged.

Now let us pursue the experiment further. Our soap-dish is bobbing placidly on the surface of the water, all unconscious of the fate which awaits it. Stealthily we begin to load her piecemeal with bits of soap, a nail brush and a few drops of water squeezed from the sponge. As the dead-weight of this "cargo" is added to the dead-weight of the soap dish it sinks lower in the water until there comes a time when the rim of the soap-dish is just level with the surface. At this stage a few further drops of water squeezed from the sponge into the interior of the soap-dish will finish our experiment. Obeying the principle of flotation the soap-dish will try to sink further, so as to displace an extra amount of water equal in weight to that which we've just added internally. But, alas! She can displace no more, the whole of the soap-dish is now under water and there is no buoyancy left.

In fact she now possesses what is called negative buoyancy and sinks to the bottom. Just before the last few drops of water were added she was in a condition of "neutral equilibrium," with neither positive nor negative buoyancy.

Positive buoyancy is what all ships and boats on the surface of the sea possess. Negative buoyancy is what all ships and boats on the surface of the sea possess. Negative buoyancy is what all wrecks, which have sunk after their hulls have been breached, possess. Neutral buoyancy is the condition which a submarine requires to be in when submerged. It is also the condition of all fishes in the sea. When a fish wants to rise in water it points itself upwards, waggles its fins and tail, and propels itself towards its objective and when it wants to sink it points itself downwards. In neither case does it make itself heavier or lighter than the water in which it swims; and if it was paralysed, or died, it would remain suspended at the spot in the water where its propelling powers ended, for having neither positive nor negative buoyancy it would neither rise nor fall.

The submarine, when it is on the surface, is simply an ordinary vessel with positive buoyancy. In order to be able to submerge that positive buoyancy must be overcome by allowing water to flow into special tanks in the submarine's hull. These are called main ballast tanks, and when they are completely full the submarine will be nearly in a state of neutral buoyancy. I say "nearly" because the chances are that she won't be what is called in "perfect trim," due to a number of causes which affect her dead-weight: for example, food, the number of men aboard, drinking water, oil fuel and ammunition supplies: these all vary from day to day and must be compensated for. This is done, not by removing water from or adding it to the main ballast tanks, but by adjusting the amount already carried in smaller internal auxiliary ballast tanks. When this has been done the submarine will weigh exactly the same as the water which she displaces and so, like a fish, she can by waggling her fins and tail (only we call them hydroplanes and propellers), descend into the depths and rise again to within a foot or two of the surface. If she wants to become a surface vessel again the water in her main ballast tanks must be expelled before she can achieve positive buoyancy.

The next problem is sea-pressure. At 100 ft. the pressure would be about 45 lb. per sq. in., that is, three times as great as the normal atmospheric pressure. The rate of increase of pressure is directly proportional to the increase of depth. A submarine's hull at 500 ft., therefore, is subjected to a pressure of 225 lb. on every square inch of her exterior. Her plating must be thick enough not only to withstand the pressure at the maximum depth for which she has been designed, but must possess an ample margin of strength for safety purposes in case the submarine is inadvertently dived too deep. A steel plate, 1 in. thick and 1 ft. square, weighs 40 lb. So you see the pressure-hull of a submarine is a very heavy thing indeed.

If a submarine is taken below the surface by means of her propellers and hydroplanes, and then the propellers are stopped, she will continue to remain horizontal as long as her head-way ensures that the hydroplanes have a grip on the passing water.

When eventually all head-way is lost the submarine will lie like a fish in a state of suspended animation. If she is in perfect equilibrium about her point of balance she will remain horizontal. If, however, a few men are made to walk from one end of the vessel to the other (say forward to aft), the displacement of their weights will affect the horizontal balance of the submarine and she will tilt steadily down by the stern, and *continue to do so if she is allowed to, until she assumes a completely vertical position.* This movement can only be corrected when a submarine is stopping by adjusting weights in the opposite direction, for unless she is going ahead and maintaining an even keel by using her hydroplanes, she has no *longitudinal stability.* Because of this a submarine, like Felix-the-cat, must always keep moving, for loss of control will inevitably follow if she does not. The only thing that a submarine can do if she wants to stop is to "sit on the bottom" of the sea, provided of course that the water is shallow enough for her to remain at a safe depth when so doing.

We now see that a submarine can only remain submerged for as long a time as she can work her propellers. Some means of storing propelling energy must therefore be provided. For this purpose the electrical storage battery, which can be charged by dynamos when the submarine is on the surface, has been universally employed.

When the submarine is submerged her propellers are driven by electric motors which derive their power from three batteries, and when the batteries are run down they must be recharged. Up to a few years ago this could only be done by bringing the submarine to the surface, so that her diesel engines could suck in enough air to work.

Now-a-days it is only necessary for a submarine to rise to "Periscope Depth": that is, about thirty feet under the surface. In this position a breathing-tube called a "Snort" is raised, so that fresh air, both for the engines and for the crew, can be drawn down below through one tube, and the engine's exhaust can be expelled through another.

This has been a very important improvement in design, and means that there is theoretically no limit to the length of time a submarine can remain submerged at periscope depth.

Numerous British submarines have already crossed the Atlantic Ocean without rising above periscope depth, and in the last war German U-boats travelled as far as Singapore in that condition.

FIRST AND FORENOON

By Hugh Lovo in London

IT IS ten minutes to eight and I am climbing the ladder to the bridge. It is a terrible night. The ship is swaying and plunging like a mad horse. The spray being whipped over the fo'c'sle by a wicke dwind strikes my face like a thousand iced needles. I am wearing so many clothes that I find it difficult to get up the ladder. It is so dark that I wonder if I will ever be able to see the convoy.

When I reach the bridge I stand on the top step of the ladder and try to adjust my eyes to the blackness. There is a faint orange glow from the chart table and I can see Bob's head dimly silhouetted. I wonder why he is worrying with a chart. We are hundreds of miles from land. Young Joe is peering out over the bridge through binoculars. Bunts is quietly tucked away in the only nearly-draughtless corner of the bridge and if I know Bunts he is fast asleep.

I cross to the chart table. Bob looks up and says, "Hullo, Tiny," and adds cheerfully, "What a bloody night."

I shiver and adjust the towel round my neck.

"Where are we?"

"Somewhere in the Western Ocean." Bob is an R.N.R. type and the Atlantic is always the Western Ocean to him.

"What about the convoy?" I ask.

"Still with us," and after a moment, "I think. Ask young Joe, he should know."

"I can see two of them." Joe says. "The Greek and the big Liberty ship."

Bob begins to hand over to me. Course, speed, position of convoy (hypothetical this), zig-zag, state of readiness and all the rest. "Got the weight, Tiny?" he asks, and when I nod he says, "O.K., she's all yours. Not a bad night," and he leaves the bridge with indecent speed singing quietly to himself. His cheerfulness grates on me.

Young Joe looks at his watch. "One minute to eight," he says. "If Guns is late, I'll murder him."

But Guns, who has been twenty-five years in the Service, is never late as he is never early. Exactly on eight he and Bunts' relief arrive together. "Some night," he says and sways over to Young Joe. "O.K., Joe, off you go and get your beauty sleep." Guns is one of those lucky people whose eyes never seem to be affected by change from light to dark.

Young Joe and Bunts leave the bridge together. Joe mutters something and they both laugh. "What the hell have they got to laugh about?" I ask Guns. He doesn't say anything.

I speak. "Bob said to look out for the Greek. He's up to his tricks again. Can you see him?"

"Yes, he seems a bit too close."

"I think I'll open out a bit. The Commodore will never see us and I'll feel happier."

At quarter past eight we settle in our new position, giving the Greek more room to play about in. If anything, the night is blacker than ever. My feet are freezing and, as I never feel at home in gloves, two of my fingers are numb. I massage them until the blood starts flowing again.

At nine o'clock Bunts says "Will I boil the kettle, Sir?"

We have an electric kettle on the bridge, a tin of milk and a bottle of Bovril. When the kettle boils we mix the Bovril, milk, salt and boiling water and pour some warmth into ourselves. Then I stick my head into the chart-table, pull the canvas covers round my shoulders and light a cigarette. It takes seven minutes to finish the smoke. Guns has his smoke and I look out for the Greek. Then Bunts has his and goes below with the dirty cups. I suspect he has another cigarette when he is below, but I don't say anything. I would do the same myself.

At five to ten Guns says, "I've lost the Greek."

I fix my binoculars on the bearing where the Greek should be and make a close search. No sign. The big Liberty ahead of the Greek is still in station.

"I'll go back to our proper station," I say to Guns. "Let me know as soon as you see him."

I make a slow alteration. I don't want to waken the Skipper. She lurches a bit. There is a huge sea running. "See him yet, Guns?"

"No, nothing doing."

"Blast him. I'll go closer. For heaven's sake sing out the moment you spot him."

I close until we are about a cable astern of the Liberty ship in the position that the Greek should be in. No sign of him. I'm wondering what to do next when Bunts screams in near panic. "Ship on the port beam, Sir. Coming straight at us."

One quick frightened look and I'm yelling down the voice pipe. "Full ahead together. Hard-a-starboard."

Thank heavens the Chief himself is in the engine-room. She answers almost at once and heels over sharply. Suddenly the Skipper is on the bridge. He doesn't ask any questions, bless him. He sizes up the situation and we watch the Greek go lurching past with little enough sea to spare. I turn a complete circle and take up my proper station.

"We're back in station now, Sir," I say.

"Thanks, Tiny. What happened?"

WRANS from H.M.A.S. "Harman," the Navy's signal station at Canberra, watch P/O L. Muir plotting aircraft movements on a screen at H.M.A.S. "Watson" training depot.

I tell him exactly what happened.

"You were out of station?"

"Yes, Sir."

"Now you know why you must always try to keep in station."

"Yes, Sir."

That's all.

"If you want to go below for ten minutes for a cigarette I'll take over," he says.

"Thank you, Sir. I'd rather wait here."

He waits for about five minutes and then goes back to his sea cabin.

Guns, peering through his binoculars, mutters, "That bloody Greek."

I look at my watch. Quarter past eleven. Forty-five minutes to go or with luck, forty. Andy is always on time. I am thinking that the weather is easing a bit, but we hit a bad patch and the wind screams through the rigging like a thousand demented souls. I check with Guns. The Greek and the Liberty ship are in station. The rest of the convoy are probably where they should be, but we can't see a sign of them. All's well. I go to the chart table and make a few notes for the log.

Twenty minutes to midnight and I hear Andy climbing the ladder. Good old Andy. He comes on to the bridge cursing the ship, the night, the weather and every other thing that he can think of.

"Hullo, Andy," I say, "lovely night. Glad to see you."

"Lovely night, my eye," he says. "Cold, wet, stormy, noisy and miserable."

Five to twelve, and I say, "O.K., Andy. Got the weight?"

"All right. Good night."

"She's all yours. Good night," I say cheerfully and leave the bridge quietly singing to myself. I hear Andy mutter. It sounds like, "What has he got to sing about?"

My cabin is warm and bright. McLeod has left a flask of coffee and some corned-beef sandwiches for me. My pyjamas are warming on a chair in front of the radiator. The chair is secured to the bulkhead so that the pyjamas won't catch fire. I pull off my seaboots and stockings and rub my feet with a warm towel and then stretch them out to the radiator. Slowly and with much pleasure I undress. I don't care if the ship blows up during the night. I am going to sleep comfortably in orthodox nightwear.

I pour the coffee and eat the

sandwiches. Life is good. I light a cigarette and climb into my bunk. There is about half-an-inch of steel between me and the raging, freezing sea and the Greek, and the steering motor in the engine-room that keeps starting and stopping all the time. But I am not worried. The steering motor could be in my cabin and still not keep me awake.

I push my feet to the bottom of the bunk, enjoying the warmth of the clean, white sheets. I lie back and smoke my cigarette in great luxury. My bunk is tight against the ship's side and I can hear the sea growling past. I hope that Andy has the idiosyncrasies of the Greek weighed up. I carefully stub out my cigarette, switch off the reading lamp and prepare for sleep. It is the happiest moment of the day.

I sleep on my back, fully stretched out with my arms tight against my sides acting as wedges against the rolling of the ship. I think of my bed at home with the Big Tree almost touching the window. I wonder vaguely why a quiet, home-loving chap like me should be in the middle of the Atlantic, in the middle of winter, surrounded by all sorts of unpleasant possibilities. I mentally shrug my shoulders, yawn, and I am just about to close my eyes when there is a shout, loud and piercing above the howl of the wind, and I watch the side of my cabin cave in, and at once I know that the Greek has got us at last.

I jump up in my bunk and to my eternal shame I scream with fright.

My wife has her hands on my shoulders and she is gently pushing my head back on to the pillow. "It is all right, dear," she says. "You're at home in bed. The war finished ten years ago."

—From the London "Navy."

BOOK REVIEWS

Continued from page 27

collection, *Tales of Shipwrecks and Adventures at Sea*, from which the second story in the book is taken, or will return to Conrad, Tomlinson, Bullen or Melville with renewed enthusiasm. Even those of use who are left mourning the non-inclusion of some favourite can at least have the satisfaction of turning it up and re-reading it and wondering why. Certainly the whole collection should fulfil Commander Kemp's desire and whet the appetite of readers to explore on their own account the riches available.

A.E.G.

—In the London "Navy."

THE Bristol Aeroplane Company, with its two subsidiary companies Bristol Aircraft Ltd and Bristol Aero-Engines Ltd, forms one of the largest design, research and manufacturing organizations in the British Aircraft Industry. A major part of its resources is now devoted to production of the Britannia airliner and its Proteus turboprop engines; this aircraft is expected to command a substantial world sale for some years to come. Bristol has pioneered the development of British helicopters; the single-engined Sycamore is in service in many parts of the world and good progress is being made with the larger twin-engined machines. Among the wide range of aero-engines being built by the Company is the Olympus turbojet which made possible the present world's altitude record and now powers Vulcan bombers. A design licence for the engine has been sold to the United States. The Company is also engaged on the development of the BE25 supercharged turbo-prop and the lightweight Orpheus jet engine. There is an extensive programme of research and development in the field of guided weapons and their ramjet power units. Bristol two-litre cars and aircraft plastic drop tanks are other branches of successful enterprise, and to complement the parent organization are the associated companies, Rotol, British Messier and Short Bros & Harland, and associated and subsidiary companies in Canada, Australia, New Zealand, France and Spain.

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