

JANE'S
FIGHTING
SHIPS
1978-79

Eighty-first year of issue

JANE'S FIGHTING SHIPS

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USE OF JANE'S FIGHTING SHIPS

Current information on the world's navies appears under the following headings:

Major Matters: summaries by country of the significant naval events between March 1977 and March 1978.

Pennant List of Major Surface Ships: lists in numerical order of pennant numbers of the larger surface ships, indicating their type and the country to whose fleet they belong. Soviet ships are not included as their pennant numbers change frequently.

Recognition Silhouettes: are grouped according to similarity of shape to aid visual identification and are not all to the same scale.

Ship Designations: explains the formula used throughout the book for categorising different classes of ship.

Ship Reference Section: contains detailed information and illustrations of naval forces alphabetically by country. Within each country information is presented where available as follows:

At the beginning appears data including listings of Naval Boards, Diplomatic Representatives, details of personnel, strength and composition of the fleet and the mercantile marine. Following are details of deletions from the fleet during the last five years. Pennant lists are provided for major navies with drawings at a scale of 1:1200 unless specified otherwise.

The detailed information about the fleet's ships follows this general section in an order which varies according to the size and variety of the fleet concerned. Generally, submarines head this main section followed by aircraft carriers, cruisers, destroyers, frigates, corvettes, amphibious forces, light forces, mine warfare forces, survey vessels, service forces, tenders and tugs. A miscellaneous section may include training ships, royal yachts, floating docks, hovercraft and such like, although craft listed will depend on the size of the fleet concerned.

Within the main information section of each navy tonnages are included in both standard and full-load displacements—that of standard because it is used in international documents (eg. The London Treaty of March 1936 and the Montreux Convention of July 1936) and is defined as "the displacement of the vessel, complete, fully manned, engined and equipped ready for sea—but without fuel or reserve feed-water on board". Unless otherwise stated the lengths given are overall.

Appendices: present statistical summaries on comparative strengths and composition of major fleets and types of associated equipment—naval aircraft, guns, missiles, radar, sonar and torpedoes held by the principal navies.

Addenda: covers information received after the main reference section has gone to press.

Indexes: give page references for all ships in alphabetical order of name and class.

FOREWORD

It is rare during the preparation of this book to find one salient change occurring world-wide. This year, however, despite the failure of the Sixth Session of the Law of the Sea negotiations to produce any overall agreement, the adoption of a 200-mile Exclusive Economic Zone (EEZ) by many countries is illustrated by the dramatic increase in the number of ships clearly intended to patrol an area suddenly expanded by 98.5 per cent. Available budgets have obviously influenced the choice of vessels in all cases and what is equally clear, in some instances, is that insufficient consideration has been given to the role intended for these craft. In basic terms, if the role is to intercept illegal immigrants in fast canoes all that is needed is faster canoes with some form of communication and minimal armament. If the role is to intercept and board fast trawlers poaching in the outer fringes of a 200-mile EEZ then many other considerations must come into play. Should there be an aggressive neighbour who must be deterred and if this task is to be combined with patrolling the EEZ more complicated factors are clearly involved. Variations in the apprehended tasks of a naval force make it both practically and financially imperative that a clear appreciation of those tasks be made and that certain basic parameters which can be achieved at minimum expense be agreed. In a normal (if there is such a thing) democracy this programme must then be put into phrases of an adequacy and clarity to satisfy both the administration and the voting public that the need really exists and that the proposed solution is the best possible.

During a recent discussion on the vagaries of public taste with regard to contemporary music of the more serious kind a wise old musician answered an infuriated young man who complained that the public did not appreciate his compositions, 'The listeners who, after all, provide our financial support have been brought up to understand a musical language which may vary slightly with their age,' he said. 'If you wish to express yourself in totally different musical jargon you cannot expect them to buckle down to learning a new language every time you see fit to change.' This is as true in the realms of defence as it is in those of music—if you want support the surest way of receiving it is to provide a well-considered argument in terms sufficiently simple and straightforward to explain your requirements to those who control your finances. Jargon may be necessary for intra-mural exchange—it butters no parsnips for those beyond the walls. Dean Swift meant much the same thing when he wrote of a

'Barren superfluity of words—
Proper words in proper places.'

The roles of navies are by no means cut and dried. The definition of 'sea power' is still a matter of semantics between those concerned with maritime affairs. What is clear, however, is that geographical situation and self-sufficiency, or otherwise, in raw materials combine with the state of a country's industrial and financial base to cause widely varying approaches to the problem. To provide a fleet which is solely reactive to a current threat which may alter with a change in emphasis or government is the result of a basic failure to appreciate not only the form but the longevity of the principles of sea power. A state that is dependent on the sea for its living, on sea transport, on fisheries and on all that lies beneath the surface must view the whole scope of that dependence with objectivity. History has proved too often that those who live by the sword shall likewise die—he who depends on the sea may also die should it be denied him. The briefest survey of today's trade figures shows that the greatest proportion of the world's countries depend on free use of the oceans for their existence. Anyone wishing to dominate the world need only achieve control of certain nodal areas of these oceans to fulfil his aim. In vast areas of the threequarters of the world which is water-covered, far from national boundaries and from the land where population may be put at risk, great conflicts may occur and then recede attended by little understanding and minimum reaction from governments not immediately concerned. Across the seas huge quantities of trade flow to countries which possess neither the finances nor the ability to protect those ships on whom their future depends. These states must rely on neutrality or alliances to ensure their continued existence yet, in a world where the imperfections of modern politics put such compacts at daily risk, it is not hard to appreciate the successive dilemmas of Western politicians. Faced without by a vast authoritarian structure backed by all the power of modern forces and within by schisms in their own parties, bloody terrorists and apathy their problems may seem insoluble. However, amid all the diverse characters of their complaints they have one prime duty, the success and the welfare of their people which, in every Western case, depends on the free use of the sea and, therefore, adequate arrangements for the protection of maritime interests.

These invocations are based not on emotion but on the undeniable facts of this last year. The increase in inter-dependence is shown by the steady augmentation of the world's merchant-ship tonnage. The 11 982 major vessels registered by Lloyds in 1977 represented a six per cent increase on the previous year following advances of nine per cent and ten per cent in preceding years. Of the total, 44 per cent are oil-tankers and 25 per cent ore- and bulk-carriers while the leading shipping countries are Liberia, Japan, the United Kingdom, Norway and Greece. Of these, none is able to defend its own fleet on the whole stretch of the world's seaways. Close on their heels, with a steady annual increase, is the merchant fleet of the USSR, now sixth in overall tonnage, having overhauled the USA. The chief value of this fleet to the USSR is in the gathering of hard currency and the weakening of Western trade facilities by vigorous undercutting of tariffs. As this trade is valuable in peacetime it is also unnecessary in war for a country which relies little on external sources of raw materials. Of the American merchant fleet, about one tenth is currently in reserve and a high proportion of trade is carried in foreign bottoms or under flags of convenience. As this trade includes a considerable percentage of the increasing American dependence on external oil supplies political problems would arise were there interference with the latter two types of transport.

Although the pattern of world merchant shipping covers all oceans and seas it is more convenient and accurate to consider naval affairs in various geographical areas after discussing the overall situation of the two major powers, the USA and the USSR.

The Superpowers (USA and USSR)

Although many correspondents ask for a numerical assessment of the 'placing' of these two fleets this remains as impossible now as it has been for the last five or ten years. Each has its strengths and weaknesses and it is far more productive to consider these than it is to seek out some maritime Olympic standard with awful awards of Gold and Silver.

Firstly, ships' value depends on their geographical situation in the event of conflict. In the early part of this century Admiral Fisher concentrated his main force in British home waters to oppose the growing strength of Germany, which was drawn up along a North Sea coastline of little more than 200 miles. Today geographical factors are of just as great importance. The Soviet navy is split into four fleets, each of which has to emerge through narrow defiles. The Northern fleet must make passage through the four main openings in the Greenland-United Kingdom gap, the Baltic fleet must make use of Danish waters or the White Sea canal, the Black Sea fleet is forced to move through the Turkish straits or north through the Volga canal chain while the Pacific fleet is hedged about, except in the very north, by the mainland of Japan.

The US Navy, as well, faces geographical problems of deployment. With a not dissimilar pattern of assignment, with the exception of ballistic-missile submarines, between the Pacific and the Atlantic any concentration of forces must involve long passages. From San Diego in the Pacific to Norfolk, Virginia in the Atlantic is 4 500 miles through the Panama Canal. For those carriers and other ships too large to transit the Canal the closest route is via Cape Horn, a passage of 12 000 miles. Even at 30 knots this means 17 days of straight steaming—in the event of a crisis such a deployment might be too late. At the same time trade figures show that about 43 per cent of US traffic crosses the Pacific while 57 per cent is carried on the Atlantic, posing a major problem to the naval staff should it be faced with a threat on both eastern and western seaboard while, at the same time, operating a fleet halved in numbers in the last ten years. One must see some justification for an ex-Chairman of the US Joint Chiefs of Staff Committee who recently asked, 'Have we truly a two-ocean navy?'

One of the Soviet navy's strengths is, therefore, that, provided its passage to the open oceans has been unimpeded, it can concentrate where national policies dictate, unhampered by any trade defence requirements. With a fleet in which embarked aircraft are at last becoming more numerous this freedom of action is providing increased options for the Soviets while stretching the areas where reaction from the West may be needed. The recent operations of the Soviet task-force off Eritrea, a form of employment frequently forecast here in the last five years, is a sinister case in point.

From the material point of view the gap between the more conventional forces of the two navies is now beginning to close with the increasing introduction of Harpoon, Phalanx and Standard missiles into the US Navy. If both the strategic and tactical versions of the cruise-missile Tomahawk are also included in the US Navy's inventory the balance will be considerably tilted in their favour. No Soviet

surface ships at present carry any form of strategic weapon and it would be to the great benefit of the USSR were they to forestall the introduction of the strategic Tomahawk by the processes of SALT II.

The present situation with regard to naval ballistic missiles is definitely on the side of the USSR. Both the submarine-borne SS-N-17 and 18 have materially increased the range at which strategic bombardment could take place and, therefore, have greatly widened the search areas of any hunting force. As the SS-N-18 can be fired to any point in the northern hemisphere from the Soviet coastal zone it will be seen that the problem of countering these monsters is formidable, but by 1980 the Soviet fleet will have a similar task when the American Trident I missile is at sea in the 'Ohio' class. It is significant that a new base for these submarines is in the north-west of the USA in the state of Washington giving access to the nearest part of Soviet territory across the great depths of the Pacific Ocean, an area from which Trident I could reach all points in the USSR. Thus in the next couple of years this balance in the Soviet's favour will be partly redressed and the proposed introduction of Trident II with a 6 000 mile range would further ensure the invulnerability of the submarines carrying it.

In the world of naval aviation the US Navy continues to retain a position of overwhelming superiority. With over half-a-century of experience the carriers now constituting that strength have probably reached the ultimate in this form of shipbuilding although their modernisation and replacement are of extreme importance. The greatest compliment to this type of naval strength is the long-delayed decision of the USSR to follow suit, but *Kiev* and her sisters, while of the same family, are of a different genus, designed for very varying operations. Their surface-to-surface missiles, torpedo tubes, guns and sonar show this to be a class with considerable fighting qualities apart from the aircraft they carry, a very different approach from American practice. *Kiev* may well have problems with her comparatively low freeboard and bluff-ended flight deck, her aircraft may yet need improvement in design and handling, but she is the first carrier of her size designed to operate V/STOL aircraft in any navy. As the focal point of a task-force deployed to enhance 'wars of national liberation,' to deter uprisings or to demolish political moves inimical to the USSR this is a very potent and important class of ship.

In the often misunderstood world of the submariners certain important things have been happening in the field of attack submarines which tend to alter previously calculated balances. The US Navy, with 68 nuclear-propelled attack submarines in service and 28 building, have a minimal edge over their Soviet opposite numbers with 87 operational and eight on the slips. The later submarines of the two navies are probably very similar in performance although the new 'Los Angeles' class is proving a more silent craft than the Soviet 'Charlies' and 'Victors'. When the submarine-launched Harpoon with a range of 60 miles is included in her armament, *Los Angeles* and her sisters will retrieve a position of advantage which was lost when the Soviet navy introduced a family of cruise-missiles, originally surface-launched, into their submarines. The dived-launched 25 mile range SS-N-7 missile was introduced into service in the Soviet 'Charlie' class in 1967. During the Harpoon development period the Soviets have evolved another weapon which has much the same capabilities as the American Subroc, the SS-N-15, a tube-launched missile able to carry a torpedo or a nuclear head to a range of 20 miles. However, no range advantage will be achieved as this weapon is put to sea in the newer attack submarines, of which four to six are completed every year.

The anti-submarine struggle would be a desperate affair should hostilities ever be joined. The USA has a very considerable geographical advantage so far as the laying-out and use of underwater detection devices such as the SOSUS chain are concerned. The great distances involved, should the USSR choose such a system, would, with present technology, make it either appallingly expensive or grossly inefficient. So the use of buoys, of intelligence ships off Allied ports and long-range aircraft are currently relied on for early warning—a position of inferiority for the USSR. However, the combined operations of weather and reconnaissance satellites and the huge fleet of Soviet research and survey ships, nearly 50 per cent of the world's total, are providing the essential knowledge of weather and oceanic conditions without which submarine hunting becomes a game of blind-man's-buff. The oceanographer is a key figure in the understanding of the submarine's environment and, while NATO countries are parsimonious in funding such studies, they are handing the initiative to the potential opposition.

Thus, in the sphere of material matters, the USSR has made great strides which are now being overtaken by the USA despite a very vocal opposition skilled in turning figures to fit their argument. The advantages held for so long by the US Navy by its possession of an unchallenged carrier force are not likely to be eroded in the

immediate future although progressive cuts in building programmes can only weaken the overall balance. The advantage accruing from the education and training of the all-volunteer US Navy, with its emphasis on initiative, must, however, provide a position of strength compared with a navy manned by conscripted junior ratings, no matter how detailed the technical training of their superiors.

In all these considerations the first question must be whether the fleet, as it exists and is planned to exist, is adequate for the purposes of its masters, the politicians. The nation with great strength and an aggressive policy will always call the tune if facing a country or alliance whose aims are peaceful. At present the strength of the Soviet armed forces is clear for all to see and recent events such as the bombardment of Massawa and the search for ever more havens for their ships in foreign ports speak more eloquently of their policies of aggression, expansion and meddling in others' affairs than ten thousand words from Admiral Gorshkov, their naval Commander-in-Chief.

On the American side the political aims of the USA's foreign policy, strategy and security were put with unusual clarity by President Carter in March when he was apparently giving a public rendering of Presidential Directive No 18 of August 1977. The USA will, the President said, maintain the strategic nuclear balance, work for the strengthening of Europe with NATO and build up sufficient strength 'to counter any threats to the vital interests' of the USA and its friends in the Middle East, Asia and other areas. The world-wide commitments of the US Navy which are implicit in this statement are certainly not reflected in the comments of other US politicians or in the drastic cuts made to the naval programme as listed in the Addenda to this book. The deletion of six submarines and 20 major warships, the erasure of 13 important conversions and the reduction of the Naval Reserve by nearly a half can only have a weakening effect on material readiness and morale. It seems possible that some programme analysis, based on the Central Front syndrome and 'what can be afforded' rather than 'what is necessary', has produced this result which, if agreed by Congress, could only result in politicians entering discussions with a weakened backing. Theodore Roosevelt's 1910 recommendation to 'speak softly and carry a big stick' did not endear him to many of his peace-loving compatriots but the disasters of 1914-18 were not then contemplated. Today aggression is once again abroad, and no matter how much a display of strength is abhorrent, it is, regrettably, often the only way, even if expensive, of out-facing those who rely on threats to promote their policies. At the same time as active strength is essential in these circumstances, the sound condition of a country's Reserves is also most necessary. What Rear-Admiral A. T. Mahan wrote—'The place of a reserve in a system of preparation for war must be admitted because it is inevitable'—has been proved only too true over the last 80 years.

With the overall world situation dominated by the difference between two major power groups there exists, more than ever, a series of independent areas of strife where local rivalries, if undeterred, could very easily result in wide repercussions. As the declared policy of the USSR is to support 'wars of national liberation' it is logical to consider certain geographical areas and the impact which naval forces could have in them, as it is in these distant parts that NATO could well be outflanked, eventually encircled and separated from its sources of supply and its overseas markets.

The NATO area

This must be dealt with first as it will remain for the foreseeable future the primary objective of Soviet advances. While the Central Front in Europe continues to present a reasonably united show of NATO force the nibbling will probably be at the fringes and, although the main Soviet aim is presumably the political subjugation of these peripheral countries through the well-entrenched Fifth Column, activity at sea would also be expected. NATO's northern and southern flanks are areas where sea-borne operations would be needed and here we find a significant weakness in the North Cape area. The Norwegian fleet's major strength lies in submarines and fast attack craft. Reinforcement from without is becoming increasingly difficult as the Soviets' northern maritime frontier is pushed further forward towards the Greenland-United Kingdom barrier as the capabilities of their ships and aircraft increase. In the south political problems could well offset the growing abilities of the Turkish and Greek navies.

Within the Baltic the three Scandinavian navies and that of West Germany face a Warsaw Pact concentration of amphibious and minewarfare forces which can be reinforced or transferred through the White Sea canal route. Finland has concentrated largely on Light Forces and a large coast guard while Sweden backs up her fast attack craft and submarines with a considerable amphibious group and strong minewarfare forces for both minelaying and clearance. All her larger ships are reaching the end of their hull lives and replacement is

out of the question while the Government keeps the Defence Vote heavily pared. West Germany has fewer financial problems and although her navy is of generally similar form to that of Sweden her major ships are being reinforced by the Type 122 frigate programme. This is a navy of increasing capabilities and undoubted efficiency whose earlier preoccupation with Baltic problems has given way to a twofold attitude in which the North Sea is given greater attention than before.

Denmark, too, has this problem of two sea areas to consider but, in her case, the threat of invasion from the east must take prior place. For this task submarines, fast attack craft and minelayers are available with some of the larger ships and major patrol craft intended for the protection of her interests and fisheries in the Faeroes and Greenland.

The North Sea has always been a centre for European naval struggles but its varying depths make it unsuitable for the operation of nuclear submarines although diesel boats armed with cruise missiles could well patrol there. At present its importance lies in the multitude of sea routes which cross it and the increasing network of oil lines and routes which, for the rest of the century, will be of the greatest importance to the United Kingdom and Norway as well as to the rest of Western Europe in the event of interruption of supplies from the Persian Gulf. Protection of the rigs and the routes has become a subject of heated discussion and Norway has started a special force for this purpose. The British rely on the Royal Navy which has been reinforced by five (later, seven) 16 knot offshore patrol craft to be backed up if necessary by frigates from the fleet.

On the western flank of the North Sea the 'green and greedy land' of Britain has continued a naval building programme despite the increasing incidence of unofficial strikes, the opposition of the Government's left wing and consequential delays. The evidence of 'under-spend' continues, not through inadequate budgeting, but through the perennial problem of completion dates 'sliding to the right'. Thus the Royal Navy gets less for the allocated funds than it should; funds which are desperately needed as some of the *Leander* class frigates pass their fifteenth birthday, as the *Porpoise* class submarines reach the end of their years and over twenty other frigates move towards retirement or deletion. Not only is this need shown amongst the major fighting ships—only two of the Royal Navy's minesweepers are under twenty years old—while the Hydrographer of the Navy, with over four-fifths of the oil-rich North Sea alone needing adequate survey, has retained a quarter of his meagre force of eight ships (an eighth of those declared by the USSR and, in fact, a sixteenth of that country's total of major survey and research ships) only by making them pensioners of the Shah of Iran for service in the Gulf.

Meanwhile, despite the changes of mind of the politicians and the shipyard workers which hold back the building programme, the men of the fleet have reached an advanced pitch of professional ability as new training ideas bear fruit. The resultant efficiency can only be impaired by a sag in morale as these splendidly prepared and competent young men find their families suffering from pay anomalies and while they reflect on the fact that the whole structure of the fleet depends not only upon governmental support but also on the industrial efficiency and willingness to work of their countrymen ashore.

Across the Channel lies part of the fleet of a second country which has dual-frontier problems, France. This year the main striking force of her increasingly capable fleet lies in the Mediterranean, an outpost of NATO in technical terms but part of one of the two strongest fleets in Europe and of one of the world's three overseas navies. The steadily improving condition of the French navy is a tribute to her designers and her naval staff; it would probably be even more effective were it not for the incursion of political problems. At the same time this is the only navy, apart from those of the USA and USSR, which has a regular presence in the Atlantic, Mediterranean, the Indian Ocean, the West Indies and the Pacific. Also, with decree Number 78-272 of 9 March 1978, the French Navy has, through the authority of the three *Prefets Maritimes*, an over-riding interest and responsibility around French coasts and throughout their 200-mile EEZ 'pour le plus grand bien des usagers de mer et des intérêts de la nation.' The *Amoco Cadiz* disaster came only seven days after the promulgation of this decree. The sea-gods are very fickle and remarkably demanding.

Spanish armadas and treasure fleets are a part of history but the new fleet of King Carlos is growing into a significant contribution to current world naval strengths. New designs, both Spanish and foreign, are taking their place in the build-up of this navy and, with one of the fastest improving shipbuilding industries in the West, the yards of Spain are well-placed to support this advance. The situation in Italy is very similar. An integration of the production of Italian hulls, machinery and weapon systems are not only placing their fleet

in a very strong position in the Mediterranean but also in the foreign export market. With an increase in on-board helicopter strength and afloat support this is becoming a long-range navy capable of deep-water operations.

Sandwiched between Italy and the two somewhat reluctant NATO partners, Greece and Turkey, lies Yugoslavia whose own naval programme shows a dependence on both Western and Soviet sources. With weapons and missiles from the USSR and radar and Rolls-Royce gas turbines from Western Europe the Yugoslavs are building a considerable naval force on the Adriatic, the Danube and the frontier lakes. It remains to be seen how much they will be needed in the upheavals which could follow Marshal Tito's death. Further differences in this area are centred on the problems arising between Greece and Turkey over Cyprus and the Aegean continental shelf. Both are building up navies on the classic pattern of the world's smaller fleets: submarines and fast attack craft. Both have in the past relied on Western Europe and the USA for their vessels although now each has an expanding indigenous shipbuilding industry. Weapon systems, nevertheless, must come from abroad and with the long-standing American embargo on arms' shipments to Turkey it would be simple for her to turn to nearer neighbours for assistance. Turkish pride and independence are not to be treated with cavalier disregard.

The Southern Mediterranean

The President of Syria has shown his capability for taking his own line both with his Arab neighbours and with the USSR. His naval needs have until now been met by imports from the Soviet navy, which uses his ports in an area where Egyptian bases are now denied to them. Now, with the possibility of disruption to this source, Syria has made moves into the Western market. If President Assad is worried about possible opposition, his view must be directed towards Israel. This country has clearly learned the lessons of the war of 1973. While the *'Reshef'* class have been rearmed with a mix of Harpoon and Gabriel missiles the problem of controlling the former beyond the visual horizon has become a matter of increasing importance. The new helicopter-armed corvettes, a necessary adjunct while shore-based aircraft are in minimal numbers, could give the necessary direction for the new American missiles.

The provision of new equipment also faces President Sadat and his naval advisers in Egypt. The Soviet Union has never been well-known for providing spares and handbooks to its client countries and now that Egypt has left the Soviet arena she must place a greater dependence on Western sources. The funding for spares and replacements is probably by Saudi Arabia and Kuwait but speed is the need and the United Kingdom may have lost its chance owing to labour problems and resultant delays. The chances for other West European countries must therefore appear bright. New frigates from Italy, new submarines from West Germany, new weapon systems from those countries able to ensure delivery are highest on Egyptian shopping lists.

To the west, Libya is more than capable of financing her purchases from her own oil wealth. New submarines and missile craft from the USSR will, when training problems permit, be amalgamated with missile corvettes from Italy and fast attack craft from France to form a potent naval force in the gut of the Mediterranean. Should Mr Mintoff of Malta remain in power and offer facilities to President Ghaddafi and his Soviet supporters in 1979 the passage from the West to the eastern Mediterranean, including Turkey, Greece and the Suez Canal, will be at grave risk. NATO's southern flank will be at peril with little chance of reinforcement.

Further west still Tunisia and Algeria lean towards the East while Morocco, despite her recent orders from Spain, is now inclining to the Soviets with expectations of ship deliveries in the near future. Overall, the northern coasts of Africa and the interests of its littoral countries give little cause for satisfaction in the West. Soviet reinforcements for a combined Arab push against Israel could well be made easier by a Turkey rebuffed by the USA and the Western build-up in support of Israel disturbed by Libyan intervention.

Sub-Saharan Africa

The north-west and western coasts of Africa could soon become a Soviet paradise. With a major naval and air base at Conakry and Soviet naval exports to several West African countries providing an area wide open to military and naval advisers as well as so-called 'fisheries experts,' overall pressure can be exerted with little effort. Whatever the reaction of Nigeria with her new orders placed in Western Europe the Soviet position in the countries to her north and west could well frustrate any aims she may have for Western support or independent action. The same is true for the Ivory Coast, Togo, Cameroon and Gabon—any Westward leaning could swiftly be snuff-

fed out, Zaire, primarily dependent on Western supplies, and the Congo where China has staked her claim, also lie at risk. Guinea stands to the north and to the south, Angola, where the savage massacres by the surrogate Cubans have ensured a temporary Soviet claim to harbour rights in Luanda, Lobito and Mocamedes, a classic case of encirclement by sea and air power. Further south the future success of SWAPO in Namibia could open the excellent harbour of Walfish Bay to the Soviet fleet, a valuable adjunct as Western vacillations and double standards put the whole of the Republic of South Africa in jeopardy. The bloody internecine wars which appear to be the outcome expected by certain influential Americans could finally result in the black and coloured populations being placed under a yoke of a severity previously unknown and the splendid deep-water ports of the Cape Province and Natal being handed to those whose interests are best served by the disruption of the Cape route between Asia and Western Europe.

On the east coast of Africa Mozambique is, in addition to offering tacit acknowledgement of British Government support, providing deep-water harbour facilities to the USSR at a point where both the Mozambique Channel route and that outside Madagascar can most conveniently be reached. While her northern neighbour, Tanzania, is hitched to the red star of China from the naval point of view, Kenya remains Western-orientated. Somalia's fleet is Soviet-supplied but no longer supported from the same source, a classic condition in which deterioration soon sets in. Djibouti has an alliance with France, South Yemen provides ample airport and harbour space for the Soviets, North Yemen inclines towards Moscow in a dilatory fashion and the Eritrean coast remains a battleground fought over by Cubans, Soviets, Ethiopians and Eritrean guerillas. Navies have little part in this war as the Soviets have sufficient control of the sea to permit bombardment and reinforcement at will but the outcome of the war could be vital to Western shipping, to Saudi Arabia, to Sudan and to all those who revere the principles of free passage of the world's seas and oceans. With Massawa and the Dahlak Archipelago in Soviet hands entrance to and exit from the Suez Canal could be cut with no difficulty.

This is only part of the African state of affairs, the resolution of the whole being vital, as it always has been, to naval affairs around that continent's coasts. A Soviet presence in Libya, cutting the Mediterranean in two, could be linked via Chad and the southern areas of Sudan with Ethiopia and the closing of the Red Sea. A separate area of naval threat would be provided by the junction of Mozambique and Angola through Rhodesia and Zambia, giving an overland rail and road route for stores and personnel before the subjugation of the South African Republic. The increasing Soviet strength in West Africa, supported by hireling troops and naval task forces, could put all the vital Western trade routes around the continent at risk.

The Arabian Peninsula Area

No segment of the world, except the Polar regions, can be considered in isolation and this is more true of the Arabian Peninsula than most. With the enormously important strategic position of Turkey to the north, an area no doubt alluring to the Soviets, and with Syria and the Soviet tributary Iraq as buffers to the north and north-east the line of a second Soviet pincer, aligned with that through Africa, is clearly defined. The distance from the Caucasian border of the USSR through the Lake Van area of eastern Turkey to Mosul is 200 miles of inhospitable and difficult country, passable to determined troops. From Mosul to the Soviet naval installations on the Shatt-al-Arab near Basra is another 500 miles but these distances are nothing to modern aircraft and, with the growing strength of Soviet-supplied and supported ships in the Iraqi navy, much mischief could be wrought with mines and missiles in the vital oil exporting area from Abadan to the Straits of Hormuz.

It is hardly surprising, therefore, that Iran and Saudi Arabia are making great strides in building up considerable naval forces to restrain any impediment to the free flow of their enormously valuable oil trade. Both, however, are faced with the problem of training ships' companies which are, on entry, of a basically low educational standard. This may have been at the root of Iran's reduction of her order for 'Spruance' class destroyers in the USA but it has not deterred a plan, mentioned in the Addenda, for very large increases of major classes of ships in the future. The Saudis also, with two coasts to care for, are busily procuring increasing numbers of ships from the USA while the United Arab Emirates, Qatar, Bahrain and Kuwait are all candidates for inclusion in Western order books. Where these orders will eventually germinate is dependent on many factors not least of which are industrial cohesion resulting in the keeping of delivery dates, the stability or instability of the dollar affecting oil prices and trust engendered by strong and realistic foreign policies.

The Indian Ocean

Any understanding of the maritime situation in the Indian Ocean must start with a realisation of the immense distances involved and the fact that very few island areas exist as compared with the Pacific. From Durban to Fremantle is 4 200 miles, nearly twice the haul from San Diego to Hawaii and Fremantle is nearly 5 000 miles from Aden, further than the run from Hawaii to Hong Kong. The east coast of Africa bounding this ocean is some 4 000 miles long and it is these huge stretches which must affect the choice of ships required to operate further off shore than the 200-mile EEZ. The importance of this consideration is added to by the uncertainty of events in the north-western portion of the ocean. Not only does the Gulf traffic and that from the Suez Canal join here but also the political rivalries are more intense than elsewhere. The two bordering countries of the Indian Ocean possessing fleet air arms, Australia and India, must soon decide on the form of replacements for their ageing carriers and these could very sensibly be small ships with a mixed V/STOL/helicopter complement. Both these fleets are accelerating programmes for the deep-water and coastal ships needed to replace their elderly predecessors. Australia prefers to expand her own ship-building and this wise policy has been adopted in India, where submarine construction is planned. Pakistan has received ships from the USA and China while her larger Indian neighbour has preferred to accept help from the USSR and the United Kingdom. Whether 'Kashin' class destroyers are transferred or not, the Indian fleet will remain the main naval power in this area for many years ahead.

South-west Pacific

Included here are the northern and eastern interests of Australia, New Zealand and the problems of South-east Asia. Australia has to face an essential fact—50 per cent of her overseas trade is with the Asiatic countries from Singapore eastward and with North America. It is to the advantage of all involved to ensure the free passage of the ships involved in this commerce.

Both Australia and New Zealand have the 200-mile EEZ problem to face and both rely on harbours vulnerable to mines. They have extreme weather conditions to face and neither has the financial resources to provide a fleet of adequate size to meet all its needs. It is not surprising, therefore, to note a fair measure of co-operation with other Pacific powers in the naval exercises carried out in this area.

In South-east Asia the stark political divisions prevent any general form of co-operation but it is noticeable that Malaysia, Singapore, Indonesia and Thailand are developing short-range navies of very similar capabilities except for Indonesia's new submarines. One cannot believe that the large numbers of ships credited to Viet-Nam and Kampuchea (Cambodia) represent any great threat to their neighbours. They are both lacking in fuel supplies and training while the wholesale slaughter of all those experienced in any form of command pursued in Kampuchea must have demolished any chance of successful naval operations. The problems in the Philippines are very different. The build-up of this navy has been so rapid that the training organisation must be stretched to its limits although, with the main emphasis on coastal operations, this may have less impact than otherwise.

North-west Pacific

The possible upsurge in Sino-Japanese trade and relations is of considerable naval importance in this area. Japan's sea routes, which provide nearly all the raw materials needed for her industries, would be notably reduced and be more within the compass of the Maritime Self-Defence Force (MSDF) to protect were she to use Chinese resources. Of her major imports of crude oil and petroleum, ores, timber, coal, chemicals, textiles, cereals and machinery a growing quantity is likely to be available from China in the future and with routes of only 500 miles in a sea area which could be virtually sealed off from outside interference such a course of action must have considerable attractions.

The MSDF itself is steadily improving in its capabilities and with more helicopters joining the fleet and the new AOE 421 programme showing the first move towards afloat support this is becoming a far better balanced fleet than before. In the same context the 500 ships and craft of the Maritime Safety Agency cannot be ignored. Although under the wing of the Ministry of Transport this force is armed and highly skilled in such diverse trades as coast guard and rescue work, hydrography, oil pollution clearance, in all of which it has a full inventory of specialised vessels and its own air arm.

Japan's vast neighbour, China, still shows no signs of predatory ambitions, a point borne out by the composition of her naval building programme. New submarines, frigates and fast attack craft are increasing her self-defence capability. With no embarked aircraft

and no afloat support capability worth noting this is clearly not a navy intended to operate beyond the range of shore support. Chinese survey and research ships are now probing further afield but in a country where scientific studies have been the rule for more than 2 000 years and in which science is being restored to its rightful place this is hardly surprising. What is of transcending importance is the condition of Sino-Soviet relations now that the USSR's expectation of a major domestic upheaval in the wake of Mao's death has been proved false. The hope of a compromise with Mao's successors appears unlikely as do any immediate plans for a sharing of communist hegemony. With this situation the Soviet Pacific Fleet regains a position of maximum importance. With all forms of missile armament from short-range cruise missiles to 4 000-mile ballistic missiles available as well as normal artillery this is a force capable of use as a pressure group should relations be further exacerbated.

Points of difference exist in plenty—would the Soviets support Viet-Nam in disputes over off-shore rights in the South China Sea?—would China support Japanese claims over the Sakhalin Islands?—would the Soviets support operations by Taiwan?—which way would loyalties fall in the event of another Korean conflict? These are all valid questions and with the two Koreas pressing forward with their home-based shipyards and armament industries and with Taiwan an armed camp the chances of a conflict which could well spread its tentacles must be borne firmly in mind. A Soviet pre-emptive strike against China now appears less likely but her manipulation of local differences could well precipitate major hostilities which the USA would find difficult to evade.

North-east Pacific and the Arctic

In this area lies the main bulk of American warning lines for any sudden nuclear attack. The Canadians, now aiming to reinforce their naval and maritime air forces, are in the forefront of this zone whose frozen vastnesses are little known to those not involved. But this is an area where much could be attempted in the early phases leading to hostilities. Soviet submarine deployments through Baffin Bay, the use of the raucous ice-edge as cover for ballistic-missile and attack submarines must be part of any appreciation of future struggles. The popular misconception that submarines can leap at will through the Polar pack-ice is very wrong but navigation beneath the ice and use of the fringes as a cover from sonar detection are both well-tried and proved.

South America

A responsible figure who recently denied the strategic importance of South America was probably thinking only of the immediate future. The Soviet Union has two valuable entrepôts to the continent—Mexico City and Cuba. The former is the centre of the intelligence operators, the second of the activists. While the first remains fully-manned Cuba has been drained of over 40 000 troops to act in Africa in the Soviet's interest, leaving their home island's defence as the responsibility of others. There are therefore fewer Cubans available to follow the example of Che Guevara but the states of South America are preparing against invasion. This is a word improperly

understood; one man can invade as well as ten thousand and cause greater devastation in the long run. The South American navies are split between the larger ships and submarines designed for protection against a neighbour's attack and the Light Forces and river craft, all available and being produced in increasing numbers as a barrier to incursion from without. Small raids can lead to mighty revolutions and it is here, on the coasts and up the great rivers, on the great lakes and the vast tributaries that defence against insidious penetration must be mounted. No matter how much the suppression of human rights may raise anger and protests in other countries, if these navies fail to protect their homelands against invasion all form of individual freedom will be at risk.

Current developments

Modern requirements and standards in Western countries ensure that minimal funds are made available for defence. A distinguished US Chief of Naval Operations once said, 'If my cash is cut give me an increase in Intelligence.' He meant it on a selective basis but, with the cash cut every effort must be made to ensure that the intelligence of designers and planners is combined in an attempt to use the available finances to the best advantage. Hog-tied by endless committees and mounting bumf, by continual demands for long-term evaluations, the process of improving the West's defensive capability against an advancing tide of tyranny is liable to deteriorate. It is only 40 years ago that politicians and the public, with a few noble exceptions, called for peace through patience. Today the situation is very little different. Wherever we look the glove has been thrown down and few have the courage to accept the fact. The West has reached a point where the pious calls of Helsinki have been ignored and where detente has been twisted to the Soviet's advantage.

The understanding of a country's defence needs depends on an appreciation of its history, its ideals and the policies rooted in those factors. No two countries are alike—each has its own pride and tradition which will not take kindly to foreign ideas or ways of life. This does not debar the integration of abilities and resources resulting in an overall saving and mutual assistance. The 'two-way street' agreement to ensure a greater equality in the sale of equipment between the USA and European NATO has now been in existence for some three years. As the present financial balance rests at about eight to one in favour of the USA there is clearly a long way to go. Nevertheless without such agreements the waste resulting from lack of standardisation and compatibility must gravely weaken the whole effort of deterrence. In this the navies stand in the forefront—long-range, long-endurance forces which can occupy an area without aggression and promote peaceful solutions. Many people, saddened by the evidence of tyranny and the vacillations of their leaders have turned their attention inwards as a barrier to the evil without. But understanding, wisdom and determination can still win—and not lose the victory.

J. E. MOORE, CAPT. RN
April 1978

MAJOR MATTERS

Abu Dhabi

All forces now under UAE command.

Albania

One 'Whiskey' class submarine deleted. Four Chinese 'Hoku' class missile craft and two 'Shanghai' class added.

Algeria

Three 'Osa II' missile craft, one 'Polnocny' class LCT added to the fleet. Ten Baglietto patrol craft delivered to the Coast Guard.

Argentina

New frigate programme being discussed.

Australia

Replacement for *Melbourne* under discussion with a number of foreign builders. Fifteen patrol craft of Brooke PCF 420 Type to be built. *Tobruk* laid down. Third FFG ordered in USA. *Cook* launched. New survey ships and launches to be ordered. Plans for replacement of *Supply*—possibly by French 'Durance' class.

Belgium

E21 frigate programme completed. Fifteen new MCMV to be built.

Brazil

'Niteroi' class—two remain to be completed. Possibility of new corvette programme.

Canada

Order for new destroyers being put out to tender (Addenda).

Denmark

'Nils Juel' class frigates to complete 1979-80. 'Peder Skram' class to receive eight Harpoon missiles which are also to be fitted in 'Willemoes' class.

Dominican Republic

Three 'Cohoes' class now act as patrol ships.

Ecuador

'Gearing' class transferred from USA. Two Type 209 submarines now in service. Possibility of new construction programme of frigates and corvettes.

Egypt

Possible new construction—two 'Lupo' class frigates, two Type 209 submarines and 52 metre fast attack craft. 'Osas' to be re-engined and rearmed.

Ethiopia

Four 105 ft Sewart fast attack craft delivered.

Finland

New minelayer/training ship ordered. Plans for two frigates, five missile craft and four minesweepers.

France

SNA 72 continuing. PA75 delayed. Sixth SSBN delayed. New class of minehunter started. Deletion of several of 'E50' Type and 'Le Fougeux' class. Extra 'Durance' class to be built.

Germany (Federal Republic)

Continuation of Type 122 frigate programme. Details of Troika MCM programme (Addenda).

Greece

Confirmation of new submarine orders and indigenous fast attack craft programme.

Guatemala

New deliveries of Halter craft.

India

New Fleet Air Arm possibilities. Possible new 'Kashin' class frigate transfers. 'Nanuchka' class deliveries. Continuing programmes at Garden Reach, Calcutta.

Indonesia

New frigate programme in the Netherlands. New type 209 submarines from West Germany.

Iran

Possible new Western European orders (Addenda).

Ireland (Republic)

New Corvette (*Emer*) commissioned.

Israel

New helicopter-corvettes under construction. Three new submarines in commission. New order for 'Flagstaff' Hydrofoils from USA. Start of new 'Dvora' class (small FAC-missile).

Italy

Order for new helicopter-cruiser (*Giuseppe Garibaldi*) New 'Maestrale' class frigates and new helicopters.

Japan

New 'Improved Uzushio' class submarine building. New construction 'DD122' class approved. Second 'Tachikaze' destroyer launched. First 'Improved Haruna' class destroyer to be launched September 1978. New 1200 ton frigate class planned as well as new fleet support ship, new surveying ship and cable layer. One new and three projected large patrol vessels for Maritime Safety Agency.

Kenya

Reports of transfer from Israel.

Korea (North)

Building programme continues.

Kuwait

Ten fast attack craft to be ordered.

Libya

Completion of Italian corvettes continues. More 'Foxtrot' class submarines and 'Osa' class fast attack craft received.

Malaysia

Frigate *Mermaid* transferred from Royal Navy, July 1978 as *Hang Tuah*.

Mexico

Considerable building programmes under consideration.

Morocco

'Descubierta' class frigate and 'Lazaga' class fast attack craft on order from Spain. Deliveries of Soviet fast attack craft expected.

Netherlands

Holland transferred to Peru. First 'Kortenaer' class at sea. Order for first new submarine allocated (Addenda).

Nigeria

Orders placed for Blöhm and Voss frigate, three West German Type 143 and three French 'La Combattante III' class fast attack craft.

Norway

New ships taken up by charter for Coast Guard while seven new ships are building.

Pakistan

Two ex-US destroyers transferred.

Peru

Four helicopter-carriers ordered from Italy. *Aguirre* (ex-*De Zeven Provinciën*) commissioned in the Netherlands after refit as a helicopter cruiser on 24 February 1978 as well as *Garcia y Garcia* (ex-*Holland*).

Saudi Arabia

The large programme of new construction in the USA is now listed by class and name.

South Africa

The purchase of two type A69 frigates and two 'Agosta' class submarines has been suspended by United Nations' resolution.

Spain

New helicopter-carrier ordered from Bazan to US Sea-Control Ship design.

Sri Lanka

New patrol craft delivered from the United Kingdom.

Surinam

Considerable orders from the Netherlands now listed.

Sweden

Continuing Government cuts in defence spending are preventing replacement of older ships.

Taiwan

Order for extra thirteen PSMM5 missile craft cancelled—to be replaced by Taiwan-designed patrol craft.

Thailand

Three missile craft ordered from CN Breda (Venezia).

Tunisia

Second ex-US 'Adjutant' class MSC transferred by France. Two Vosper Thornycroft 103 ft fast attack craft—patrol commissioned.

Turkey

Second pair of Type 209 submarines to commission in 1979-80. Last three of Lürssen fast attack craft due to commission. First of Abeking and Rasmussen SAR33 Type completed successful trials—presumed that next 13 are to be built.

Union of Soviet Socialist Republics

Second 'Kiev' class due to commission. Building of SSBNs now

confined to 'Delta II' and 'III' classes at rate of six per year. 'Victor II', 'Charlie II' and 'Tango' class submarines building at rate of two per class per year. 'Kara' class cruisers and 'Krivak' class destroyers in continuing programme. New 'Koni' class frigate programme started. New radio-controlled minesweepers building. More tankers being converted for abeam refuelling.

United Kingdom

Ark Royal to pay off late-1978 and *Bulwark* to recommission. Third 'Invincible' class planned. Further orders for Type 42 destroyers planned. Fifth Type 22 frigate to be ordered in 1978. Further orders for MCM Vessels ('Hunt' class) planned. Two more 'Island' class off-shore patrol vessels ordered. *Andromeda*, first of the 'Broad-beamed Leander' class, has started conversion to carry Exocet and Sea Wolf missiles.

United States of America

Latest Five Year Programme is contained in the Addenda.

Yugoslavia

First of Yugoslav built missile craft now commissioned.

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The illustrations are a vital part of this publication and in the sphere of photography the continual assistance of Dr Giorgio Arra, Mr Robert Carlisle, Mr R. Forrest of Wright and Logan, Mr Michael Lennon and Mr and Mrs (C. and S.) Taylor as well as too many others to be individually noted has allowed nearly a third of the illustrations to be replaced this year. The line drawings have also been updated and here I thank Mr A. D. Baker III, Lieutenant-Commander

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Information and photographs are invaluable and, quite obviously, the book could not continue without them. As preparation of material starts in mid-November and continues at the rate of seventy pages a week from then on, if data and pictures arrive after a particular country's section has been passed to the printer, they can be included only at the proof stage, an expensive form of correction. So, please, if you wish to help and save my ageing ulcers do not delay in passing on what you have available. We have started next year's edition and any contributions will be most gratefully received. The address is:

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MAJOR SURFACE SHIPS PENNANT LIST

Albania	Alb	Guatemala	Gua	Papua New Guinea	PNG
Algeria	Alg	Guinea	Gn	Paraguay	Par
Angola	Ang	Guinea Bissau	GB	Peru	Per
Anguilla	Ana	Guyana	Guy	Philippines	Pip
Argentina	Arg	Haiti	Hai	Poland	Pol
Australia	Aust	Honduras	Hon	Portugal	Por
Austria	Aus	Hong Kong	HK	Qatar	Qat
Bahamas	Bhm	Hungary	Hun	Romania	Rom
Bahrain	Bhr	Iceland	Ice	St Kitts	StK
Bangladesh	Ban	India	Ind	St Lucia	StL
Barbados	Bar	Indonesia	Indo	St Vincent	StV
Belgium	Bel	Iran	Iran	Saudi Arabia	SAr
Belize	Blz	Iraq	Iraq	Senegal	Sen
Bolivia	Bol	Ireland	Ire	Sierra Leone	SL
Brazil	Brz	Israel	Isr	Singapore	Sin
Brunei	Bru	Italy	Ita	Somalia	Som
Bulgaria	Bul	Ivory Coast	IC	South Africa	SA
Burma	Bur	Jamaica	Jam	Spain	Spn
Cameroon	Cam	Japan	Jap	Sri Lanka	Sri
Canada	Can	Jordan	Jor	Sudan	Sud
Chile	Chi	Kampuchea	Kam	Sweden	Swe
China, People's Republic	CPR	Kathy	Ken	Surinam	Sur
Colombia	Col	Korea, Democratic People's Republic (North)	DPRK	Syria	Syr
Comoro Islands	Com	Korea (Republic) (South)	RoK	Taiwan	RoC
Congo	Con	Kuwait	Kwt	Tanzania	Tan
Costa Rica	CR	Laos	Lao	Thailand	Tld
Cuba	Cub	Lebanon	Leb	Togo	Tog
Cyprus	Cyp	Liberia	Lbr	Tonga	Ton
Czechoslovakia	Cz	Libya	Lby	Trinidad and Tobago	TT
Denmark	Den	Madagascar	Mad	Tunisia	Tun
Dominican Republic	DR	Malawi	Mhw	Turkey	Tur
Ecuador	Ecu	Malaysia	Mly	Union of Soviet Socialist Republics	USSR
Egypt	Egy	Malta	Mlt	United Arab Emirates	UAE
Equatorial Guinea	EqG	Mauritania	Mtn	United Kingdom	UK
El Salvador	EIS	Mauritius	Mrt	United States of America	USA
Ethiopia	Eth	Mexico	Mex	Uganda	Uga
Fiji	Fij	Montserrat	Mnt	Uruguay	Uru
Finland	Fin	Morocco	Mor	Venezuela	Ven
France	Fra	Netherlands	Nld	Viet-Nam	Vtn
Gabon	Gab	New Zealand	NZ	Virgin Isles	VI
Gambia	Gam	Nicaragua	Nic	Yemen Arab Republic (North)	YAR
Germany, Democratic Republic	GDR	Nigeria	Nig	Yemen, People's Democratic Republic (South)	YPDR
Germany, Federal Republic	GFR	Norway	Nor	Yugoslavia	Yug
Ghana	Gha	Oman	Omn	Zaire	Zai
Greece	Gra	Pakistan	Pak	Zambia	Zam
Grenada	Gra	Panama	Pan	Zanzibar	Zen

<i>Pennant No.</i>	<i>Ship Name</i>	<i>Type</i>	<i>Country</i>	<i>Pennant No.</i>	<i>Ship Name</i>	<i>Type</i>	<i>Country</i>
1	Tahchin	FF	Tld	D 03	Santander	DD	Col
1	Brooke	FFG	USA	D 03	Presidente Velasco Ibarra	FF	Ecu
1	Glover	AGFF	USA	4	General Belgrano	CL	Arg
1	Raleigh	LPD	USA	4	Nassau	LHA	USA
1	Tarawa	LHA	USA	4	Austin	LPD	USA
B 1	Durango	FF	Mex	4	Talbot	FFG	USA
D 1	Hercules	DD	Arg	4	Lawrence	DDG	USA
DD 1	Hsiang Yang	DD	RoC	LHA4	Nassau	LHA	USA
D 1	25 De Julio	FF	Ecu	PS 4	Rajah Lakandula	FF	Pip
DE 1	Uruguay	FF	Uru	04	Latorre	CL	Chi
PF 1	Montevideo	PF	Uru	5	Nueve de Julio	CL	Arg
A 01	Ethiopia	FF	Eth	5	Tapi	FF	Tld
01	Aetos	FF	Gre	5	Da Nang	LHA	USA
01	Adelaide	FFG	Aust	5	Ogden	LPD	USA
D 01	Moran Valverde	FF	Ecu	5	Richard L. Page	FFG	USA
F 01	Dat Assawari	FFG	Lby	5	Claude V. Ricketts	DDG	USA
IE 01	Cuauthemoc	DD	Mex	5	Oklahoma City	CG	USA
PA 01	Dedalo	CVH	Spn	5	Da Nang	LHA	USA
2	Prasae	FF	Tld	D 5	Artemiz	DDGS	Iran
2	Ramsey	FFG	USA	DD 5	Yuen Yang	DD	RoC
2	Charles F. Adams	DDG	USA	05	Veinte De Julio	DD	Col
2	Iwo Jima	LPH	USA	IB 05	Tehuantepec	FF	Mex
2	Vancouver	LPD	USA	6	Khirirat	FF	Tld
2	Saipan	LHA	USA	6	Duluth	LPD	USA
D 2	Santissima Trinidad	DD	Arg	6	Julius A. Furer	FFG	USA
DD 2	Heng Yang	DD	RoC	6	Barney	DDG	USA
V 2	25 De Mayo	CVS	Arg	6	Providence	CG	USA
D 2	Presidente Alfaro	FF	Ecu	DD 6	Huei Yang	DD	RoC
DE 2	Artigas	FF	Uru	06	Condell	FFG	Chi
Q2	Canberra	FFG	Aust	06	Siete De Agosto	DD	Col
D 02	Presidente Alfaro	FF	Ecu	06	Aspis	DD	Gre
02	O'Higgins	CL	Chi	IB 06	Usumacinta	FF	Mex
D 02	Caldas	DD	Col	IA 06	Como Manuel Azueta	FF	Mex
D 02	Devonshire	DLGH	UK	7	Makut Rajakumarn	FF	Tld
IB 02	Coahuila	PF	Mex	7	Cleveland	LPD	USA
IE 02	Cuittlahuac	DD	Mex	7	Henry B. Wilson	DDG	USA
3	Pin Klao	FF	Tld	7	Springfield	CG	USA
3	Schofield	FFG	USA	7	Guadalcanal	LPH	USA
3	John King	DDG	USA	7	Oliver Hazard Perry	FFG	USA
3	Belleau Wood	LHA	USA	DD 7	Fu Yang	DD	RoC
3	Okinawa	LPH	USA	E 7	President Bourguiba	FF	Tur
D 3	Pres. Velasco Ibarra	FF	Ecu	PS 7	Andres Bonifacio	FF	Pip
DD 3	Hua Yang	DD	RoC	07	Lynch	FFG	Chi
DE 3	18 De Julio	FF	Uru	8	McInerney	FFG	USA
LHA3	Belleau Wood	LHA	USA	8	Dubuque	LPD	USA
03	Prat	CL	Chi	8	Lynde McCormick	DDG	USA

<i>Pennant No.</i>	<i>Ship Name</i>	<i>Type</i>	<i>Country</i>	<i>Rennant No.</i>	<i>Ship Name</i>	<i>Type</i>	<i>Country</i>
DD 8	Kwei Yang	DD	RoC	J 18	Halland	DD	Swe
IB 08	Chihuahua	FF	Mex	19	Almirante Williams	DDG	Chi
PS 8	Gregorio de Pilar	FF	Pip	19	Blue Ridge	LCC	USA
R 08	Bulwark	LPH	UK	19	Tattnall	DDG	USA
08	Vendetta	DD	Aust	19	Dale	CG	USA
9	Guam	LPH	USA	D 19	Glamorgan	DLGH	UK
9	Denver	LPD	USA	DD 19	Kuen Yang	DD	RoC
9	Towers	DDG	USA	J 19	Smaland	DD	Swe
9	Long Beach	CGN	USA	20	Almirante Brown	DD	Arg
DD 9	Chiang Yang	DD	RoC	20	Bennington	CVS	USA
PS 9	Diego Silang	FF	Pip	20	Mount Whitney	LCC	USA
R 09	Ark Royal	CV	UK	20	Donner	LSD	USA
10	Albany	CG	USA	20	Goldsborough	DDG	USA
10	Juneau	LPD	USA	20	Richmond K. Turner	CG	USA
10	Sampson	DDG	USA	C 20	Tiger	CL	UK
10	Duncan	FFG	USA	D 20	Almirante Brown	DD	Arg
10	Tripoli	LPH	USA	DD 20	Lao Yang	DD	RoC
DD 10	Po Yang	DD	RoC	D 20	Fife	DLGH	UK
F 10	Aurora	FFGH	UK	J 20	Ostergotland	DD	Swe
L 10	Fearless	LPD	UK	21	Espora	DD	Arg
PS 10	Francisco Dagahoy	FF	Pip	21	Melbourne	CVS	Aust
11	Vampire	DD	Aust	21	Cochrane	DDG	USA
11	Port Said	FF	Egy	21	Gridley	CG	USA
11	Intrepid	CVS	USA	D 21	Espora	DD	Arg
11	Chicago	CG	USA	D 21	Inhauma	DD	Brz
11	Coronado	LPD	USA	D 21	Lapanto	DD	Spn
11	Sellers	DDG	USA	D 21	Norfolk	DLGH	UK
11	New Orleans	LPH	USA	D 21	Falcon	DD	Ven
11	Split	DD	Yug	D 21	Carabobo	DD	Ven
A 11	Minas Gerais	CVS	Brz	DD 21	Liao Yang	DD	RoC
D 11	Nueva Esparta	DD	Ven	J 21	Södermanland	DD	Swe
DD 11	Dang Yang	DD	RoC	22	Rosales	DD	Arg
F 11	Jamuna	FF (survey)	Ind	22	Benjamin Stoddert	DDG	USA
F 11	Visby	DD	Swe	22	England	CG	USA
F 11	Almirante Clemente	FF	Ven	D 22	Rosales	DD	Arg
L 11	Intrepid	LPD	UK	D 22	Jaceguay	DD	Brz
R 11	Vikrant	CVS	Ind	D 22	Almirante Ferrandiz	DD	Spn
12	Shreveport	LPD	USA	D 22	Falcon	DD	Ven
12	Robison	DDG	USA	J 22	Gästrikland	DD	Swe
12	Inchon	LPH	USA	23	Almirante Domecq Garcia	DD	Arg
D 12	Kent	DLGH	UK	23	Richard E. Byrd	DDG	USA
D 12	Zulia	DD	Ven	23	Halsey	CG	USA
DD 12	Chien Yang	DD	RoC	D 23	Almirante Domecq Garcia	DD	Arg
F 12	Sundsväl	DD	Swe	D 23	Frontin	DD	Brz
F 12	Achilles	FFGH	UK	D 23	Almirante Valdes	DD	Spn
F 12	Gen. José Trinidad Moran	FF	Ven	D 23	Bristol	DLG	UK
R 12	Hermes	LPH	UK	J 23	Halsingland	DD	Swe
13	Nashville	LPD	USA	24	Almirante Storni	DD	Arg
13	Hoel	DDG	USA	24	Waddell	DDG	USA
D 13	Gen. Juan Jose Flores	FF	Ven	24	Reeves	CG	USA
F 13	Halsingborg	FF	Swe	D 24	Almirante Storni	DD	Arg
14	Blanco Encalada	DD	Chi	D 24	Alcala Galiano	DD	Spn
14	Trenton	LPD	USA	F 24	Rahmat	FF	Mly
14	Buchanan	DDG	USA	25	Bainbridge	CGN	USA
DD 14	Lo Yang	DD	RoC	D 25	Segui	DD	Arg
F 14	Kalmar	FF	Swe	D 25	Marcilio Diaz	DD	Brz
F 14	Leopard	FF	UK	D 25	Jorge Juan	DD	Spn
F 14	Almirante Brion	FF	Ven	F 25	Bayandor	PF	Iran
15	Cochrane	DD	Chi	26	Bouchard	DD	Arg
15	Cordoba	DT	Col	26	Serrano	PF	Chi
15	Ponce	LPD	USA	26	Belknap	CG	USA
15	Berkeley	DDG	USA	26	Tortuga	LSD	USA
DD 15	Lao Yang	DD	RoC	D 26	Bouchard	DD	Arg
DT 15	Cordoba	FF	Col	D 26	Mariz E. Barros	DD	Brz
F 15	Euryalus	FFGH	UK	F 26	Naghdi	PF	Iran
16	Ministero Zenteno	DD	Chi	27	Py	DD	Arg
16	Boyaca	FF	Col	27	Orella	PF	Chi
16	Velos	DD	Gre	27	Josephus Daniels	CG	USA
16	Cabildo	LSD	USA	27	Whetstone	LSD	USA
16	Joseph Strauss	DDG	USA	D 27	Py	DD	Arg
16	Lexington	CVT	USA	D 27	Para	DD	Brz
16	Leahy	CG	USA	F 27	Lynx	FF	UK
D 16	London	DLGH	UK	PF 27	Tai Yuan	DD	RoC
DE 16	Boyaca	FF	Col	28	Thyella	DD	Gre
F 16	Diomede	FFGH	UK	28	Wainwright	CG	USA
F 16	Umar Farooq	FF	Ban	28	Thomaston	LSD	USA
F 16	Oland	FF	Swe	D 28	Paraiba	DD	Brz
17	Ministero Portales	DD	Chi	F 28	Kahnamuie	PF	Iran
17	Conyngham	DDG	USA	F 28	Cleopatra	FFGH	UK
17	Harry E. Yarnell	CG	USA	29	Uribe	PF	Chi
DD 17	Nan Yang	DD	RoC	29	Jouett	CG	USA
F 17	Uppland	FF	Swe	29	Plymouth Rock	LSD	USA
18	Almirante Riveros	DDG	Chi	D 29	Buena Piedra	DD	Arg
18	Colonial	LSD	USA	D 29	Parana	DD	Brz
18	Semmes	DDG	USA	30	Horne	CG	USA
18	Worden	CG	USA	30	Fort Snelling	LSD	USA
D 18	Antrim	DLGH	UK	D 30	Pernambuco	DD	Brz
DD 18	An Yang	DD	RoC	31	Ierax	FF	Gre
F 18	Galatea	FFGH	UK	31	Galicia	LSD	Spn

Pennant No.	Ship Name	Type	Country	Pennant No.	Ship Name	Type	Country
31	Bon Homme Richard	CVA	USA	F 43	Liberal	DDH	Brz
31	Sterett	CG	USA	F 43	Torquay	FF	UK
31	Decatur	DDG	USA	PF 43	Chung Shan	FF	RoC
31	Point Defiance	LSD	USA	44	William V. Pratt	DDG	USA
D 31	Piaui	DD	Brz	F 44	Independencia	DDH	Brz
F 31	Descubierta	FF	Spn	45	Yarra	FF	Aust
F 31	Brahmaputra	FF	Ind	45	Dewey	DDG	USA
D 32	Santa Catarina	DD	Brz	F 45	União	DDH	Brz
32	William H. Standley	CG	USA	F 45	Minerva	FFGH	UK
32	John Paul Jones	DDG	USA	46	Parramatta	FF	Aust
32	Spiegel Grove	LSD	USA	46	Preble	DDG	USA
D 32	General Jose De Austria	FF	Ven	F 46	Kistna	FF	Ind
F 32	Nilgiri	FF	Ind	F 47	Danae	FFGH	UK
F 32	Diana	FF	Spn	48	Stuart	FF	Aust
F 32	Salisbury	FF	UK	49	Derwent	FF	Aust
PF 32	Yu Shan	FF	RoC	50	Swan	FF	Aust
33	Fox	CG	USA	51	Artemiz	DD	Iran
33	Parsons	DDG	USA	51	Meliton Carvajal	FF	Per
33	Alamo	LSD	USA	D 51	Liniers	DD	Spn
D 33	Maranhao	DD	Brz	D 52	Alava	DD	Spn
D 33	Almirante Jose Garcia	FF	Ven	F 52	Juno	FFGH	UK
F 33	Himgiri	FF	Ind	53	Torrens	FF	Aust
F 33	Infanta Elena	FF	Spn	54	Leon	FF	Gre
PF 33	Hua Shau	FF	RoC	F 54	Hardy	FF	UK
34	Biddle	CG	USA	F 55	Waikato	FFGH	NZ
34	Somers	DDG	USA	56	Lonchi	DD	Gre
34	Oriskany	CV	USA	F 56	Argonaut	FFGH	UK
34	Hermitage	LSD	USA	F 57	Andromeda	FFGH	UK
D 34	Mato Grosso	DD	Brz	F 58	Hermione	FFGH	UK
F 34	Udaygiri	FF	Ind	59	Forrestal	CV	USA
F 34	Infanta Cristina	FF	Spn	A 59	Deutschland	CLT	GFR
F 34	Wen Shan	FF	RoC	F 59	Chichester	FF	UK
35	Mitscher	DDG	USA	60	Saratoga	CV	USA
35	Monticello	LSD	USA	C 60	Mysore	CL	Ind
35	Truxtun	CGN	USA	F 60	Jupiter	FFGH	UK
D 35	Alagoas	DD	Brz	61	Castilla	FF	Per
D 36	Sergipe	DD	Brz	61	Iowa	BB	USA
F 35	Dunagiri	FF	Ind	61	Ranger	CV	USA
PF 35	Fu Shan	FF	RoC	61	Babr	DDG	Iran
36	Anchorage	LSD	USA	D 61	Churruca	DD	Spn
36	California	CGN	USA	F 61	Atrevida	FF	Spn
36	John S. McCain	DDG	USA	62	Independence	CV	USA
F 36	Taragiri	FF	Ind	62	New Jersey	BB	USA
F 36	Whitby	FF	UK	62	Palang	DDG	Iran
PF 36	Lu Shan	FF	RoC	D 62	Gravina	DD	Spn
37	Portland	LSD	USA	F 62	Princesa	FF	Spn
37	South Carolina	CGN	USA	63	Navarinon	DD	Gre
37	Farragut	DDG	USA	63	Rodriguez	FF	Per
D 37	Rio Grande Do Norte	DD	Brz	63	Kitty Hawk	CV	USA
F 37	Vindhyagiri	FF	Ind	63	Missouri	BB	USA
F 37	Jaguar	FF	UK	D 63	Mendez Nunez	DD	Spn
PF 37	Shoa Shan	FF	RoC	64	Constellation	CV	USA
38	Perth	DDG	Aust	64	Wisconsin	BB	USA
38	Shangri-La	CVS	USA	D 64	Langara	DD	Spn
38	Pensacola	LSD	USA	F 64	Nautilus	FF	Spn
38	Luce	DDG	USA	65	Enterprise	CVN	USA
38	Virginia	CGN	USA	D 65	Blas De Lezo	DD	Spn
D 38	Espirito Santo	DD	Brz	F 65	Villa Bilbao	FF	Spn
D 38	Intrepido	FF	Spn	66	America	CV	USA
F 38	Arethusa	FFGH	UK	67	Panthir	FF	Gre
PF 38	Tai Shan	FF	RoC	67	John F. Kennedy	CV	USA
39	Hobart	DDG	Aust	68	Nimitz	CVN	USA
39	Mount Vernon	LSD	USA	P 68	Arnala	FFL	Ind
39	Macdonough	DDG	USA	69	Dwight D. Eisenhower	CVN	USA
39	Texas	CGN	USA	F 69	Bacchante	FFGH	UK
F 39	Naïad	FFGH	UK	P 69	Androth	FFL	Ind
40	Mississippi	CGN	USA	70	Carl Vinson	CVN	USA
40	Fort Fisher	LSD	USA	70	Canberra	CA	USA
40	Coontz	DDG	USA	F 70	Apollo	FFGH	UK
40	Mississippi	CGN	USA	71	Villar	DD	Per
F 40	Niteroi	DDH	Brz	71	Saam	FF	Iran
F 40	Sirius	FFGH	UK	F 71	Baleares	FFG	Spn
41	Brisbane	DDG	Aust	F 71	Scylla	FFGH	UK
41	Arkansas	CGN	USA	72	Zaal	FF	Iran
41	King	DDG	USA	72	Guise	DD	Per
41	Midway	CV	USA	F 72	Andalucia	FFG	Spn
D 41	Oquendo	DD	Spn	F 72	Ariadne	FFGH	UK
F 41	Defensora	DDH	Brz	73	Rostam	FF	Iran
F 41	Vincent Yanez Pinzon	FF	Spn	73	Chung Nam	FF	RoK
42	Mahan	DDG	USA	73	St Paul	CA-	USA
D 42	Roger De Lauria	DD	Spn	73	Palacios	DDGS	Per
F 42	Constituição	DDH	Brz	F 73	Cataluña	FFG	Spn
F 42	Legazpi	FF	Spn	P 73	Anjadip	FFL	Ind
F 42	Phoebe	FFGH	UK	74	Ferré	DDGS	Per
PF 42	Kang Shan	FF	RoC	74	Faramaz	FF	Iran
43	Rashid	FF	Egy	C 74	Delhi	CL	Ind
43	Dahlgren	DDG	USA	F 74	Asturias	FFG	Spn
43	Coral Sea	CV	USA	P 74	Andaman	FFL	Ind
D 43	Marques De La Ensenada	DD	Spn	F 75	Extremadura	FFG	Spn

Pennant No.	Ship Name	Type	Country	Pennant No.	Ship Name	Type	Country
F 75	Charybdis	FFGH	UK	134	Des Moines	CA	USA
P 75	Amini	FFL	Ind	F 137	Beas	FF	Ind
76	Datu Kalantaw	FF	Plp	139	Salem	CA	USA
F 76	Hang Tuah	FF	Mly	F 139	Betwa	FF	Ind
P 77	Kamorta	FF	Ind	F 140	Talwar	FF	Ind
P 78	Kadmath	FF	Ind	141	Haruna	DDH	Jap
P 79	Kiltan	FF	Ind	142	Hiei	DDH	Jap
D 80	Sheffield	DDGH	UK	F 143	Trishul	FF	Ind
P 80	Kavaratti	FF	Ind	F 144	Kirpan	FF	Ind
81	Kyong Nam	PF	RoK	F 145	President Pretorius	FF	SA
81	Almirante Grau	CL	Per	F 146	Kuthar	FF	Ind
F 81	Descubierta	FF	Spn	F 147	President Steyn	FF	SA
P 81	Katchal	FF	Ind	148	Newport News	CA	USA
82	Ah San	PF	RoK	F 148	Taranaki	FF	NZ
82	Coronel Bolognesi	CL	Per	F 150	President Kruger	FF	SA
P 82	Kanjar	FF	Ind	L 153	Nafkratoussa	LSD	Gre
83	Ung Po	PF	RoK	160	Alamgir	DD	Pak
83	Capitan Quiñones	CL	Per	161	Akizuki	DD	Jap
P 83	Amindivi	FF	Ind	161	Badr	DD	Pak
84	Babur	CL	Pak	162	Teruzuki	DD	Jap
84	Aguirre	CL	Per	162	Jahangir	DD	Pak
85	Sfendoni	DD	Gre	163	Amatsukaze	DDG	Jap
85	Kyong Puk	PF	RoK	164	Takatsuki	DD	Jap
F 85	Keppel	FF	UK	164	Shah Jahan	DD	Pak
86	Jonnam	PF	RoK	165	Kikuzuki	DD	Jap
D 86	Birmingham	DDGH	UK	D 165	Tariq	DD	Pak
87	Chi Ju	PF	RoK	166	Mochizuki	DD	Jap
D 87	Newcastle	DDGH	UK	D 166	Taimur	DD	Pak
F 87	Nigeria	FF	Nig	167	Nagatsuki	DD	Jap
F 88	Broadsword	FEG	UK	168	Tachikaze	DDG	Jap
D 88	Glasgow	DDGH	UK	169	Asakaze	DDG	Jap
90	Kwang Ju	DD	RoK	F 169	Amazon	FFGH	UK
91	Chung Mu	DD	RoK	F 170	Antelope	FFGH	UK
92	Seoul	DD	RoK	D 171	Z 2	DD	GFR
D 92	Godavari	FF	Ind	F 171	Active	FFGH	UK
93	Pusan	DD	RoK	D 172	Z 3	DD	GFR
95	Chung Buk	DD	RoK	F 172	Ambuscade	FFGH	UK
F 95	Sutlej	FF (survey)	Ind	F 173	Arrow	FFGH	UK
96	Jeong Buk	DD	RoK	F 174	Alacrity	FFGH	UK
97	Dae Gu	DD	RoK	F 176	Avenger	FFGH	UK
R 97	Jeanne D'Arc	CHV	Fra	P 177	Kamorta	FF	Ind
98	In Cheon	DD	RoK	D 178	Z 4	DD	GFR
R 98	Clemenceau	CVS	Fra	P 179	Z 5	DD	GFR
99	Taejon	DD	RoK	D 181	Hamburg	DD	GFR
C 99	Blake	CL	UK	D 182	Schleswig Holstein	DD	GFR
F 99	Lincoln	FF	UK	D 183	Bayern	DD	GFR
R 99	Foch	CVS	Fra	D 184	Hessen	DD	GFR
F 101	Yarmouth	FFH	UK	F 184	Ardent	FFGH	UK
101	Harukaze	DD	Jap	D 185	Lütjens	DDG	GFR
102	Yukikaze	DD	Jap	F 185	Avenger	FFGH	UK
103	Ayanami	DD	Jap	D 186	Mölders	DDG	GFR
F 103	Lowestoft	FFH	UK	D 187	Rommel	DDG	GFR
104	Isonami	DD	Jap	202	Ikazuchi	FF	Jap
F 104	Dido	FFGH	UK	203	Inazuma	FF	Jap
105	Uranami	DD	Jap	204	"Riga" Class	FF	CPR
106	Shikinami	DD	Jap	205	"Riga" Class	FF	CPR
F 106	Brighton	FFH	UK	205	St. Laurent	DDH	Can
107	Murasame	DD	Jap	206	"Riga" Class	FF	CPR
F 107	Rothsay	FFH	UK	206	Saguenay	DDH	Can
108	Yudachi	DD	Jap	207	"Riga" Class	FF	CPR
D 108	Cardiff	DDGH	UK	207	Skeena	DDH	Can
F 108	Londonderry	FFH	UK	209	Kiangnan	FF	CPR
109	Harusame	DD	Jap	210	Themistocles	DD	Gre
F 109	Leander	FFGH	UK	211	Miaoulis	DD	Gre
110	Takanami	DD	Jap	211	Isuzu	FF	Jap
F 110	Kaveri	FF	Ind	212	Kanaris	DD	Gre
111	Oonami	DD	Jap	212	Mogami	FF	Jap
F 111	Otago	FF	NZ	213	Kontouriotis	DD	Gre
112	Makinami	DD	Jap	213	Kitakami	FF	Jap
113	Yamagumo	DD	Jap	214	Sachtouris	DD	Gre
F 113	Falmouth	FFH	UK	214	Ooi	FF	Jap
114	Makigumo	DD	Jap	215	Chikugo	FF	Jap
F 114	Ajax	FFGH	UK	APD 215	Tien Shan	FF	RoC
115	Asagumo	DD	Jap	216	Ayase	FF	Jap
F 115	Berwick	FFH	UK	217	Mikuma	FF	Jap
116	Minegumo	DD	Jap	F 217	Milanian	PF	Iran
117	Natsugumo	DD	Jap	218	Tokachi	FF	Jap
F 117	Ashanti	FFH	UK	219	Iwase	FF	Jap
118	Murakumo	DD	Jap	220	Chitose	FF	Jap
D 118	Coventry	DDGH	UK	F 220	Köln	FF	GFR
119	Aokumo	DD	Jap	221	Niyodo	FF	Jap
F 119	Eskimo	FFH	UK	F 221	Emden	FF	GFR
120	Akigumo	DD	Jap	222	Teshio	FF	Jap
F 122	Gurkha	FFH	UK	F 222	Augsburg	FF	GFR
F 124	Zulu	FFH	UK	223	Yoshino	FF	Jap
F 125	Mohawk	FFH	UK	F 223	Karlsruhe	FF	GFR
F 126	Plymouth	FFH	UK	224	Kumano	FF	Jap
F 127	Penelope	FFGH	UK	F 224	Lübek	FF	GFR
F 129	Rhyl	FFH	UK	225	Noshiro	FF	Jap
F 131	Nubian	FFH	UK	F 225	Braunschweig	FF	GFR
F 133	Tartar	FFH	UK				

Pennant No.	Ship Name	Type	Country	Pennant No.	Ship Name	Type	Country
229	Ottawa	DDH	Can	F 482	Com Roberto Ivens	FF	Por
230	Margaree	DDH	Can	F 483	Com Sacadura Cabral	FF	Por
231	"Kiangnan" class	FF	CPR	F 484	Augusto De Castilho	FF	Por
232	"Kiangnan" class	FF	CPR	F 485	Honorio Barreto	FF	Por
233	"Kiangnan" class	FF	CPR	525	Port Said	FF	Egy
233	Fraser	DDH	Can	F 540	Pietro De Cristofaro	PF	Ita
F 233	Nilgiri	FFGH	Ind	F 541	Umberto Grosso	PF	Ita
234	Assiniboine	DDH	Can	F 542	Aquila	PF	Ita
F 234	Himgiri	FFGH	Ind	F 543	Albatros	PF	Ita
236	Gatineau	DD	Can	F 544	Alcione	PF	Ita
240-246	"Luta" Class	DD	CPR	F 545	Airone	PF	Ita
250	Iman Bondjol	PF	Indo	F 546	Licio Visintini	PF	Ita
251	Surapati	PF	Indo	C 550	Vittorio Veneto	CGH	Ita
252	Pattimura	PF	Indo	D 550	Ardito	DDG	Ita
253	Sultan Hasanudin	PF	Indo	D 551	Audace	DDG	Ita
257	Restigouche	DD	Can	F 551	Canopo	FF	Ita
258	Kootenay	DD	Can	C 553	Andrea Doria	DLGH	Ita
259	Terra Nova	DD	Can	F 553	Castore	FF	Ita
260	Tippu Sultan	FF	Pak	C 554	Caio Duilio	DLGH	Ita
261	Mackenzie	DD	Can	F 554	Centaurio	FF	Ita
261	Tughril	FF	Pak	555	Tariq	FF	Egy
262	Saskatchewan	DD	Can	D 555	Geniere	DD	Ita
263	Yukon	DD	Can	F 555	Cigno	FF	Ita
264	Qu 'Appelle	DD	Can	D 558	Impetuoso	DD	Ita
265	Annapolis	DDH	Can	D 559	Indomito	DD	Ita
266	Nipigon	DDH	Can	D 562	San Giorgio	DD	Ita
275	Warszawa	DDG	Pol	F 564	Lupo	FF	Ita
D 278	Jan Van Riebeeck	FF	SA	F 565	Sagittario	FF	Ita
280	Iroquois	DDH	Can	F 566	Perseo	FF	Ita
281	Huron	DDH	Can	F 567	Orsa	FF	Ita
282	Athabaskan	DDH	Can	D 570	Impavido	DDG	Ita
283	Algonquin	DDH	Can	F 570	Maestrale	FF	Ita
F 300	Oslo	FF	Nor	D 571	Intrepido	DDG	Ita
F 301	Bergen	FF	Nor	F 571	Grecale	FF	Ita
F 302	Trondheim	FF	Nor	F 572	Libeccio	FF	Ita
F 303	Stavanger	FF	Nor	F 573	Scirocco	FF	Ita
F 304	Narvik	FF	Nor	F 574	Alisco	FF	Ita
F 310	Sleipner	FF	Nor	F 575	Euro	FF	Ita
F 311	Aeger	FF	Nor	F 580	Alpino	FF	Ita
D 340	Istanbul	DD	Tur	F 581	Carabinieri	FF	Ita
F 340	Beskytteren	FFH	Den	F 590	Aldebaran	FF	Ita
341	Samadikun	FF	Indo	F 593	Carlo Bergamini	FF	Ita
D 341	Izmir	DD	Tur	F 594	Virginio Fasan	FF	Ita
342	Martadinata	FF	Indo	F 595	Carlo Margottini	FF	Ita
D 342	Izmit	DD	Tur	F 596	Luigi Rizzo	FF	Ita
343	Ngurah Rai	FF	Indo	D 602	Suffren	DLG	Fra
D 343	Iskenderun	DD	Tur	D 603	Duquesne	DLG	Fra
344	Monginsidi	FF	Indo	D 609	Aconit	DD	Fra
D 344	Içel	DD	Tur	D 610	Tourville	DDG	Fra
F 344	Bellona	PF	Den	C 611	Colbert	CLG	Fra
F 345	Diana	PF	Den	D 611	Duguay-Trouin	DDG	Fra
F 346	Flora	PF	Den	D 612	De Grasse	DDG	Fra
F 347	Triton	PF	Den	D 622	Kersaint	DDG	Fra
F 348	Hvidbjornen	FFH	Den	D 624	Bouvet	DDG	Fra
F 349	Vaedderen	FFH	Den	D 625	Dupetit Thouars	DDG	Fra
F 350	Ingolf	FFH	Den	D 627	Maille Brezé	DDG	Fra
351	Jos Sudarso	FF	Indo	D 628	Vauquelin	DDG	Fra
F 351	Fylla	FFH	Den	D 629	D'Estrées	DDG	Fra
D 352	Gayret	DD	Tur	D 630	Du Chayla	DDG	Fra
F 352	Peder Skram	FF	Den	D 631	Casabianca	DDG	Fra
D 353	Adatepe	DD	RoC	D 632	Guépratte	DDG	Fra
F 353	Herluf Trolle	FF	Den	D 633	Duperré	DDG	Fra
D 354	Kocatepe	DD	Tur	D 634	La Bourdonnais	DDG	Fra
F 354	Niels Juel	FF	Den	D 635	Forbin	DDG	Fra
355	Iman Bondjol	FF	Indo	D 636	Tartu	DDG	Fra
D 355	Tinaztepe	DD	Tur	D 638	La Galissonière	DD	Fra
F 355	Olfert Fischer	FF	Den	D 640	Georges Leygues	DDGH	Fra
356	Surapati	FF	Indo	D 641	Dupleix	DDGH	Fra
D 356	Zafer	DD	Tur	D 642	Montcalm	DDGH	Fra
F 356	Peter Tordenskjold	FF	Den	D 643	Jean de Vienne	DDGH	Fra
357	Lambung Makurat	FF	Indo	714	William R. Rush	DD	USA
D 357	Muavenet	DD	Tur	715	William McWood	DD	USA
D 358	Berk	FF	Tur	718	Hamner	DD	USA
D 359	Peyk	FF	Tur	F 725	Victor Schoelcher	FF	Fra
360	Nuku	FF	Indo	F 726	Commandant Bory	FF	Fra
F 421	Canterbury	FFGH	NZ	F 727	Admiral Charner	FF	Fra
451	Mella	FF	DR	F 728	Doudart de Lagrée	FF	Fra
452	Gregorio Luperon	FF	DR	F 729	Balny	FF	Fra
453	Pedro Santana	FF	DR	F 733	Commandant Rivière	FF	Fra
462	Hayase	AM	Jap	F 740	Commandant Bourdais	FF	Fra
F 471	Antonio Enes	FF	Por	743	Southerland	DD	USA
F 472	Alm Pereira Da Silva	FF	Por	F 748	Protet	FF	Fra
F 473	Alm Gago Coutinho	FF	Por	F 749	Enseigne de Vaisseau Henry	FF	Fra
F 474	Alm Magalhaes Correia	FF	Por	763	William C. Lawe	DD	USA
F 475	Joao Coutinho	FF	Por	F 763	Le Boulonnais	FF	Fra
F 476	Jacinto Candido	FF	Por	F 765	Le Normand	FF	Fra
F 477	Gen. Pereira D'Eca	FF	Por	F 766	Le Picard	FF	Fra
F 480	Com Joao Belo	FF	Por	F 767	Le Gascon	FF	Fra
F 481	Com Hermenegildo Capelo	FF	Por	F 771	Le Savoyard	FF	Fra