

# THE ARK ROYAL STORY

By Peter Hodges

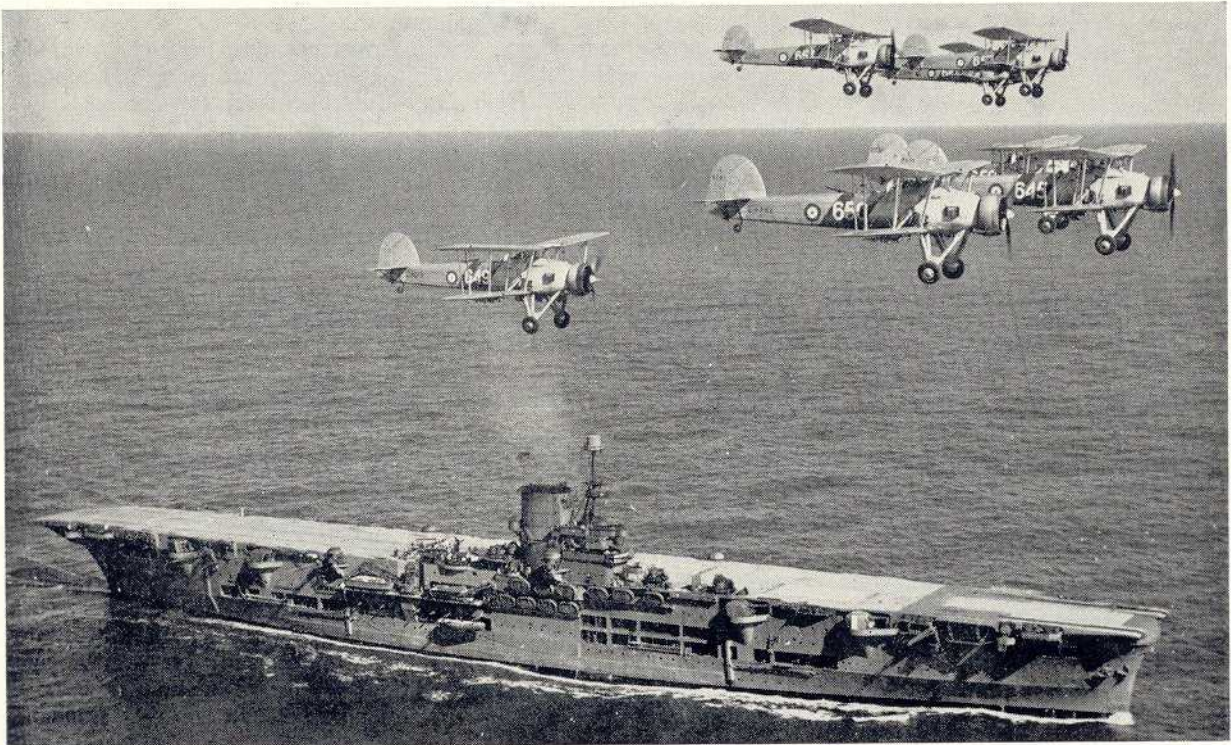
*HMS Ark Royal on her shake-down cruise in early 1939 symbolises the new era of naval air power which was to dominate the war at sea in the 1939-45 period. The 'Ark' was the first of the Royal Navy's big fleet carriers with an armoured flight deck and forerunner of Illustrious, Victorious, Indomitable, and the other carriers which won fame in the Second World War. In the air here is a Swordfish squadron with the peacetime style of coloured fuselage bands which identified each ship's aircraft. In this case these were blue-red-blue as illustrated in the drawing on page 38. Another machine is visible on the flight deck and this aerial view well illustrates the disposition of the 4.5 inch gun mounts and their associated high angle directors. Eight barrel pom-pom mounts are visible forward of the island (Imperial War Museum).*

SHIPS, LIKE MEN, can become legends; and exceptional examples of both may become legends in their own lifetime. Comparisons are odious, but even those who retain a special affection for a particular vessel must surely agree that during her short life, the aircraft carrier HMS *Ark Royal* of World War 2 gathered about herself an unmistakable aura of greatness.

Great Britain led the world in the development of the aircraft carrier and only procrastination and peace-time purse strings between the World Wars prevented her from entering the arena in 1939 with an overwhelming force of naval carrier-borne aircraft.

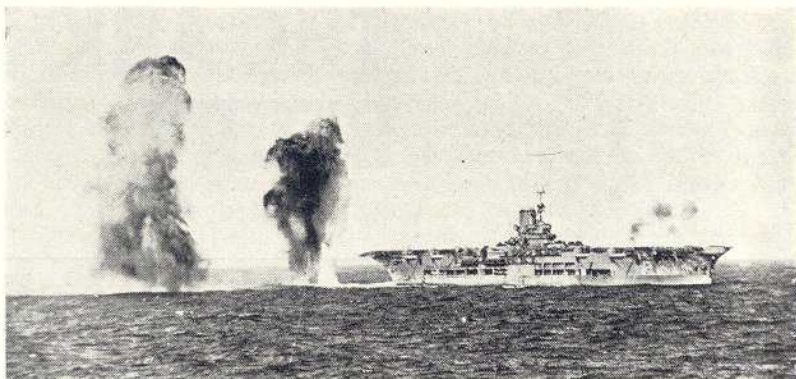
The bulk of the carriers which the Royal Navy possessed were conversions of other capital ship hulls and of these early ships, only *Hermes* had been designed from the drawing board for her particular duties. In many ways she was an experiment in the small-carrier idea, and has a special place in the development of her type in that she could fairly be said to have been the forerunner of the light fleet carrier which emerged towards the end of 1944.

Like *Eagle*, however, *Hermes* retained a predominantly surface weapon armament to the exclusion of adequate AA gun defence. *Courageous*, *Glorious* and *Furious* on the other hand, although conversions from battle-cruiser hulls, were much better equipped in this respect. Many lessons were learned between 1919 and 1939, and these led the naval architects towards a design to embrace the best features of the existing aircraft carriers. Opinions in informed circles on the subject of displacement varied considerably. Some



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**Right:** Ark Royal as the Luftwaffe used to know her. Here she takes avoiding action to escape a stick of bombs while her 4.5 inch guns answer back. This was near Sardinia in November 1940. **Below:** Last look at the flight deck for a crew member as he prepares to shin over the side to a waiting destroyer early on November 14, 1941. The ship sank soon after, taking her Swordfish (seen forward) with her (Imperial War Museum).



thought that the small *Hermes*-style ship best suited RN requirements, while others believed that the aircraft carrier should be a very large vessel in the 30,000 tons category. Both arguments, of course, were valid, for the small carrier could be produced comparatively quickly, and thus in quantity, whereas the big ship would be able to carry a large number of aircraft. As a naval power, Great Britain rarely produced extreme warships of any class. Rather, she settled for the compromise which was nationalistically so typical. The projected aircraft carrier, therefore, dropped very neatly between the 10,000 tons of *Hermes* and the 33,000 tons of the USS *Saratoga* and came out at 22,000 tons displacement.

Realising the vulnerability of the bulky profile, and thus the need for the aircraft carrier to be protected both by anti-submarine destroyers and heavy-gun surface ships, all thoughts of anything other than a principally anti-aircraft gun armament were abandoned.

However, unlike *Courageous* and *Glorious*, which had 16 4.7 inch AA guns, the new ship was to have a newly developed Dual Purpose 4.5 inch twin mounting, giving her parity at least with the contemporary destroyer armament of foreign powers, combined with a powerful AA defence. It was to stand her in good stead in the Mediterranean.

Following the 'four cornered' main armament idea, her eight twin 4.5s were grouped in pairs forward and aft, each controlled by an independent Fire Control director and High Angle Control System. Her second line of defence was 48 2 pdr pompoms in six 'Chicago Planos', backed up by 32 Vickers 0.5 inch machine guns in eight 'quad' mountings.

The disposition of the weapons will be well known to those who have built the excellent Airfix kit of this famous ship, and since technical data is best shown in tabular form it has been included as a tail piece to this necessarily short story.

To follow this story we must go back to 1935, when at Birkenhead, in Messrs Cammell Laird's shipyard, the keel plate of Job No 1012 was laid by the young daughter of the Managing Director. From this plate was to rise the third *Ark Royal*—a legend in her lifetime and the target not only of bombs and torpedoes, but also of the German propaganda broadcasts of the infamous Lord Haw-Haw.

The first vessel to bear this honoured name was an Elizabethan ship of some 700 tons laid down in Deptford in 1586. She had been ordered by Sir Walter Raleigh and, following a practice prevalent at the time, it was his intention to name her *Ark Raleigh*.

At this time the exploits of the Elizabethan mariners had so incensed the Spanish as to make war eventually inevitable, so that Queen Elizabeth I purchased the partly completed hull on the stocks, and—again to signify her ownership—renamed the vessel *Ark Royal*. Wearing the flag of Lord Howard of Effingham she was flagship of the English fleet against the Armada, and eight years later in 1596 led the expedition to Cadiz.

The next *Ark Royal* was again a private ship, taken over during the building. Intended as an oil tanker, she was purchased by the Admiralty in 1914 and

completed as a seaplane carrier. The aircraft were housed in a hangar structure, and the ship was provided with heavy duty derricks by which the seaplanes were recovered. She saw service off Gallipoli in 1915 and in many waters in and around the Mediterranean and the Persian Gulf between 1918 and 1920.

In 1935, her name was changed to *Pegasus* and she became a trials ship for experimental aircraft catapults. She survived the World War 2, reverted briefly to the Mercantile Marine in 1947, and was finally scrapped in 1950.

In 1935, as we have seen, HMS *Pegasus* was commissioned under her new name and Job No 1012 was started: and in April 1937, the third HMS *Ark Royal* was launched by Lady Maud Hoare, the wife of the First Lord of the Admiralty. In the next 20 months building was completed and the ship accepted into Naval service under the Command of Captain A. J. Power, CVO, RN.

With the war clouds already gathering, she left the United Kingdom in January 1939 for the usual 'shake-down' cruise to the Mediterranean. Here was indeed a ship. The most modern vessel of her kind, fast, powerful in attack and defence, and the culmination of Naval Air Arm thinking over a period of 20 years.

After her shake-down, she returned to home waters, and during the deceptively glorious summer of 1939 she exercised her ship's company and air crews in readiness for the now inevitable conflict. In August of that year, within a few weeks of the outbreak of war, she embarked five squadrons. Nos 800 and 803 were of Blackburn Skua dive bombers, and 810, 818 and 821 were the faithful Fairey Swordfish torpedo bombers. When war was declared on September 3, she was at sea with the Home Fleet, comprising the Flagship *Nelson*, four other battleships, three battle cruisers, five cruisers, three flotillas of destroyers and the aircraft carrier *Furious*.

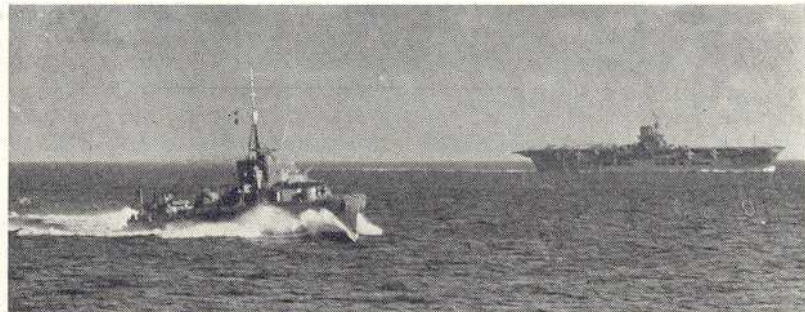
Hardly had war started when she was in the thick of it, for in that same month of September she narrowly avoided being torpedoed by U-39, while patrolling North West of Ireland. The enemy was depth-charged to the surface by *Ark Royal's* escorting destroyers and became the first U-boat to be sunk in the World War 2.

Three of her Skuas spotted and attacked a second German submarine, but pressed home their attack at such a low level that they were disabled by their own bomb-bursts, and crash-landed. The aircrews were picked up by the U-boat (which had escaped unharmed) and these men were the first naval airmen to become prisoners of war in World War 2. Later that month they were avenged, when a Skua of 803 squadron shot down a Dornier flying boat—the first enemy aircraft to be destroyed.

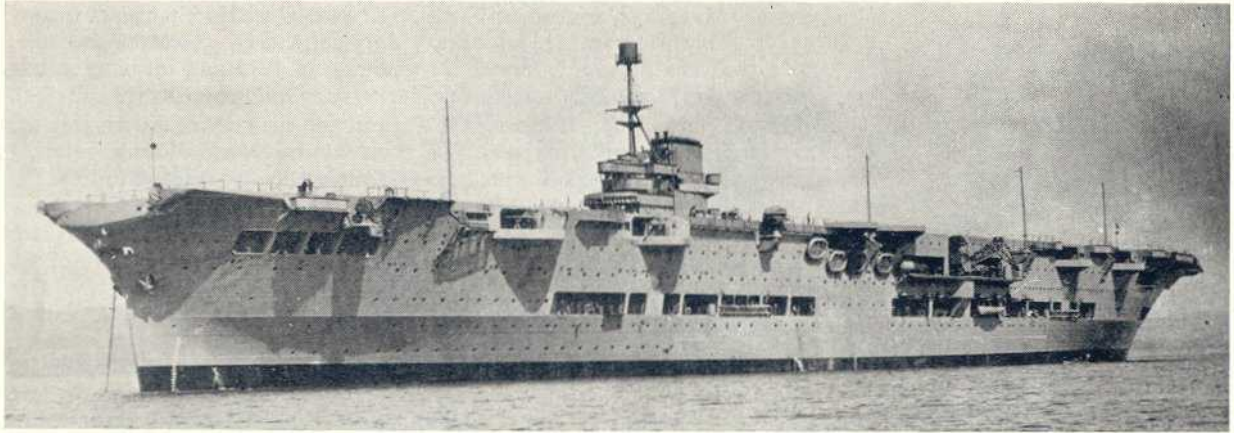
All the following Autumn, 'Ark' was in the Atlantic, ranging from Sierra Leone to Brazil on the hunt for German surface raiders. By mis-chance the range of her air patrols just failed to locate the *Graf Spee*, which was later to be brought to account at the Battle of the River Plate.

Meanwhile *Ark Royal* had been ordered first back to Portsmouth, and then in March 1940 to Alexandria, and it was here that she heard of the German invasion of Norway. By April she was off Trondheim, and spent many weary and hair-raising weeks off the Norwegian coast, supporting Allied troops ashore with her aircraft.

**Below:** Force H was the very first of what were later called Carrier Task Forces. *Ark Royal* was the main component of Force H and here she is seen from the catapult deck of HMS Sheffield during a foray in the Mediterranean. Note the *Walrus* amphibian with folded wings in Sheffield's hangar and the four-barrelled pom-pom mount. **Far right:** On November 27, 1940, Force H encountered units of the Italian Fleet near Sardinia. Here *Ark Royal* and an escorting destroyer work up to full speed to launch a *Swordfish* strike on the enemy 75 miles away. The aircraft can just be seen ranged aft on the flight deck (Imperial War Museum).



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Above: Ark Royal on her builder's trials in 1938. At this time she was not strictly a navy ship and still flies the red ensign aft. Note the temporary guard rail round the flight deck. Some of the close range gunnery equipment is yet to be fitted (Imperial War Museum).

The fall of France saw her in company with HMS *Hood* sharing the unhappy task of intercepting the French battleship *Richelieu*. She was present at the tragic action against the French Fleet at Oran, and later formed part of the force which made an abortive attempt to align Senegal with the Free French Forces of General de Gaulle.

Liverpool welcomed her in September 1940 for a much needed dry-docking, but by November she was in Gibraltar, and was never to see England again. Italy, climbing on the bandwagon of Hitler's astonishing successes in 1940, had declared war, and 'Ark' had already fought off the Reggia Aeronautica's bombers in the Mediterranean. Now in February 1941, the Royal Navy carried out a devastating bombardment of Genoa, and 'Ark' was there, giving air cover to the capital ships.

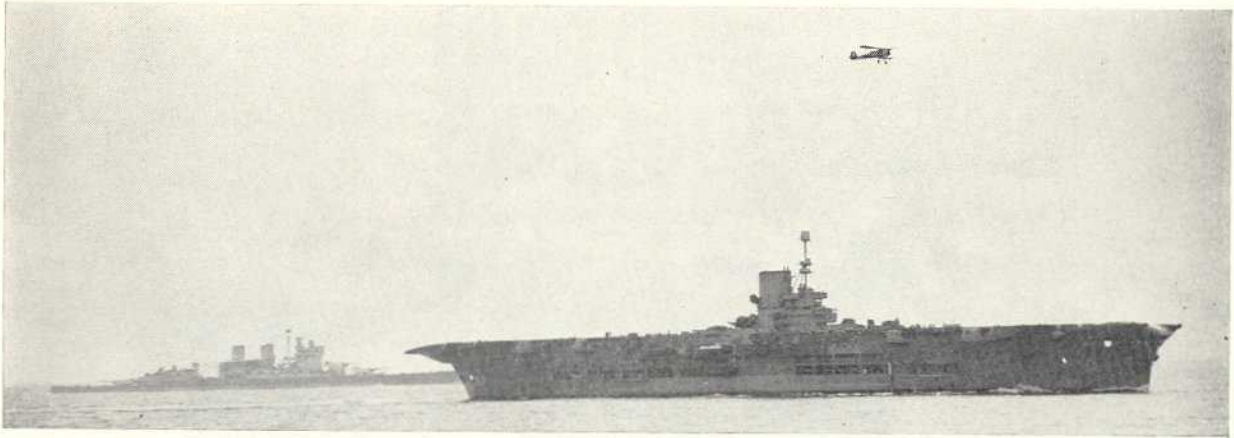
Withdrawing safely from the dangerously confined waters, the great carrier made her way eastwards into the Atlantic, and thereafter ran from Gibraltar on sweeps, searching for the German cruiser *Hipper* and the battle cruisers *Scharnhorst* and *Gneisenau*. HMS *Renown*—Britain's most modern battle cruiser—was often in her company, and the two ships worked together as a splendid team. Despite all efforts, however, the three German warships escaped the attentions of the Royal Navy and eventually made their way back to Brest.

Meanwhile the war in the Mediterranean was gaining pace. The Luftwaffe had arrived in Sicily to stiffen the Axis airpower; Malta was besieged; Tobruk was surrounded and Egypt was threatened. The 'Ark' was in the thick of it, ferrying desperately needed Hurricane fighters to Malta, and escorting tank-carrying merchantmen to build up General Wavell's land forces.

Each trip was a nightmare of successive air attacks from high level, torpedo and dive bombers. To be fair, it is understandable that enemy pilots thought they had hit the great ship, for she would often be completely hidden by mountainous bomb bursts. But every time, she would emerge from the smoke and spray, creaming along with her guns spitting fire, while the sturdy eight-gun Fairey Fulmar fighters were re-armed on her flight deck.

Hardly had Force H—*Renown*, *Ark Royal*, *Sheffield* and six destroyers—returned to Gibraltar than the news came through that the German battleship *Bismark* and the heavy cruiser *Prinz Eugen* were loose in the Atlantic. The date was May 23 1941, and in one short day Britain was to be numbed by the loss of her biggest battle cruiser.

After that frighteningly short engagement when the battle-cruiser *Hood* blew up and the battleship *Prince of Wales* was badly damaged, the grim chase started. Brilliantly shadowed in the best traditions of the cruiser by HMS *Norfolk*; attacked by aircraft from *Victorious*; lost and re-found in mid Atlantic, *Bismark* may yet have escaped. For, damaged as she was, she was still very much a going concern in all senses of the word, and unless she could be slowed down it was becoming painfully clear that no available ship could catch her. The only chance was *Ark Royal's* Swordfish torpedo bombers.



Above: Another picture from Force H days; the battle cruiser in the distance is Renown and the picture was taken from the cruiser Sheffield. A Swordfish is in circuit on return from a patrol (Imperial War Museum).

After many anxious hours, when again *Bismark's* exact position became unknown, she was spotted by a Coastal Command Catalina. At the same time, 'Ark's' aircraft were patrolling the area, and they too spotted the German battleship. It was now May 26, and if she was to be stopped, it had to be done before the morning of May 27, for after that time she would be within the protective umbrella of the Luftwaffe air cover, and U-boats would also be able to help by threatening the Royal Navy's capital ships.

The first Swordfish strike was abortive for, in error, the planes attacked the British cruiser *Sheffield*. This near disaster, however, at least demonstrated one vital fact; that the particular torpedo warheads were ineffective. Accordingly, the next strike were re-armed, and set off on their desperate mission.

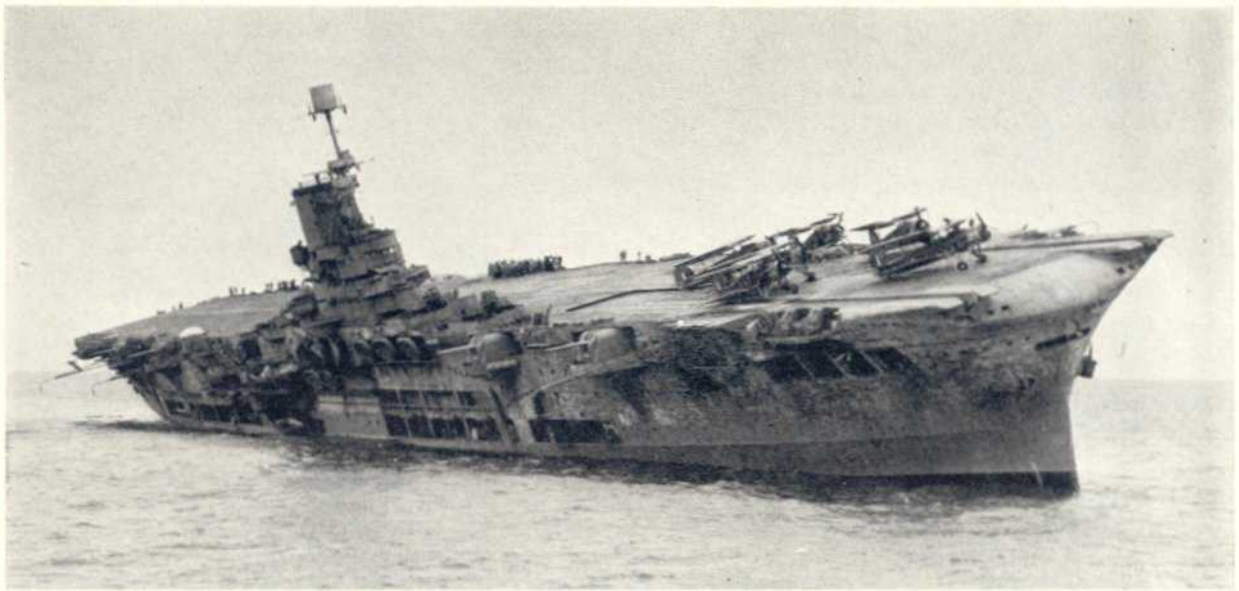
Weather conditions—bad by most standards—were good for a torpedo attack. There was seven-tenths cloud, a low ceiling and rain squalls. Pressing home their assault in the face of fierce anti-aircraft fire, the Swordfish scored two hits. One was amidships, but the other was the vital blow; at 21.05 one of the 'tin-fish' had struck the *Bismark* right aft and she could no longer be manoeuvred, for her steering gear was wrecked. *Bismark* turned northwest away from the French coast, and Captain Philip Vian in *Cossack*, with three other 'Tribals' and a Polish destroyer, harried her throughout the night, scoring a further two torpedo hits. The rest is well known. Crippled by the torpedo attacks and unable to steer a course for France and safety, *Bismark* went down bravely, virtually smashed to pieces by the heavy guns of the battleships *King George V* and *Rodney*. *Ark Royal*, whose aircraft were again available, was not needed and she turned eastwards towards Gibraltar.

As the summer of 1941 wore on, 'Ark' found herself again battling through the Mediterranean. Crete fell, and the situation looked generally more grim than ever. Malta was the key, and had to be maintained if Britain was to retain her increasingly tenuous hold on the Eastern Mediterranean. The potentially strong Italian Fleet was active, but a new menace had crept into the Mediterranean. German U-boats had slipped past Gibraltar.

It was in November 1941 that Force 'H' sailed from Gibraltar with Hurricanes for Malta and, having successfully flown them off, turned westwards towards the Rock. *Ark Royal* had now steamed more than 200,000 miles without a refit and the crew were happy in the knowledge that they would soon be home for a much-needed rest while their ship was docked.

At about 3.30 pm on the afternoon of November 13, while steaming at 22 knots *Ark Royal* was torpedoed abreast the 'island' by U-81. She rapidly took on an alarming list to starboard, and having lost main power and internal communications the full extent of the damage could not, at first, be ascertained. There was every likelihood that she would capsize with heavy loss of life, so in less than 30 minutes nearly 1,500 men of her ship's company were transferred to the destroyer *Legion*.

Those who remained on board fought desperately to save the ship. In appalling conditions, partial power was restored, and the list temporarily



*Last hours of the 'Ark'; here seen on the evening of November 13, 1941, shortly before she sank. Crew members are clustered on the port side ready to abandon ship and some Swordfish are left behind picketed to the deck. The two catapults are well shown here. Note how worn was the ship's paintwork with paint worn away at the bows by the action of sea (Imperial War Museum).*

checked; but only the port boiler-room was workable and as the ship settled, so the water flooded upwards, until the uptakes (which led across the ship to the funnel on the starboard side) were completely immersed. At that point there was nothing for it but to evacuate the remainder of the ship's company. Tugs from Gibraltar—itsself only a few miles away—were already in attendance, but there was now no hope. Slowly the great ship turned on her side until the flight deck was vertical; and just after six o'clock on the morning of November 14 1941, she slid quietly down into 1,000 fathoms of blue water.

Thus ended the notable career of a notable ship; admired by her friends and the envy of her enemies, she lies about 30 miles from Gibraltar.

It was no surprise to learn that the fourth ship of the projected 'Audacious' class, scheduled to be *Irresistible*—and to be built by Cammell Laird—was duly renamed and launched in May 1950 as HMS *Ark Royal*. As is now well-known the present *Ark Royal* seems likely to remain in service as the very last carrier in the Royal Navy of the 1970s, a most appropriate but sad farewell to the short history of the British aircraft carrier.

### Technical data

Displacement (standard)	22,000 tons
Displacement (max)	27,700 tons
Length (overall)	800 ft
Beam (maximum)	95 ft
Draught (normal)	23 ft
Machinery	3 shafts—geared turbines—102,000 SHP
Speed	30½ knots
Fuel Oil	4,620 tons
Aviation fuel	100,000 gallons
Aircraft (double hangars)	Up to 72 (according to type) Blackburn Skua Fighter Dive-Bombers. Fairey Swordfish TSR. Fairey Fulmar fighters (replaced Skuas). 3 aircraft lifts, 2 catapults.
Armament	16×4.5 inch guns in 8×Twin 4.5 inch UD Mk III mountings. 48×2 pdr pompoms in 6×'M' Mk VI (8-barrel) mountings. 32×0.5 inch Vickers machine guns in 8×Mk IV (quad) mountings. 4×High Angle Control Systems Mk IV
Complement	1,575 Officers and Men
Commanding Officers	Captain A. J. Power, CVO, RN (until April 1940). Captain C. S. Holland, RN (until April 1941). Captain L. E. H. Maund, RN