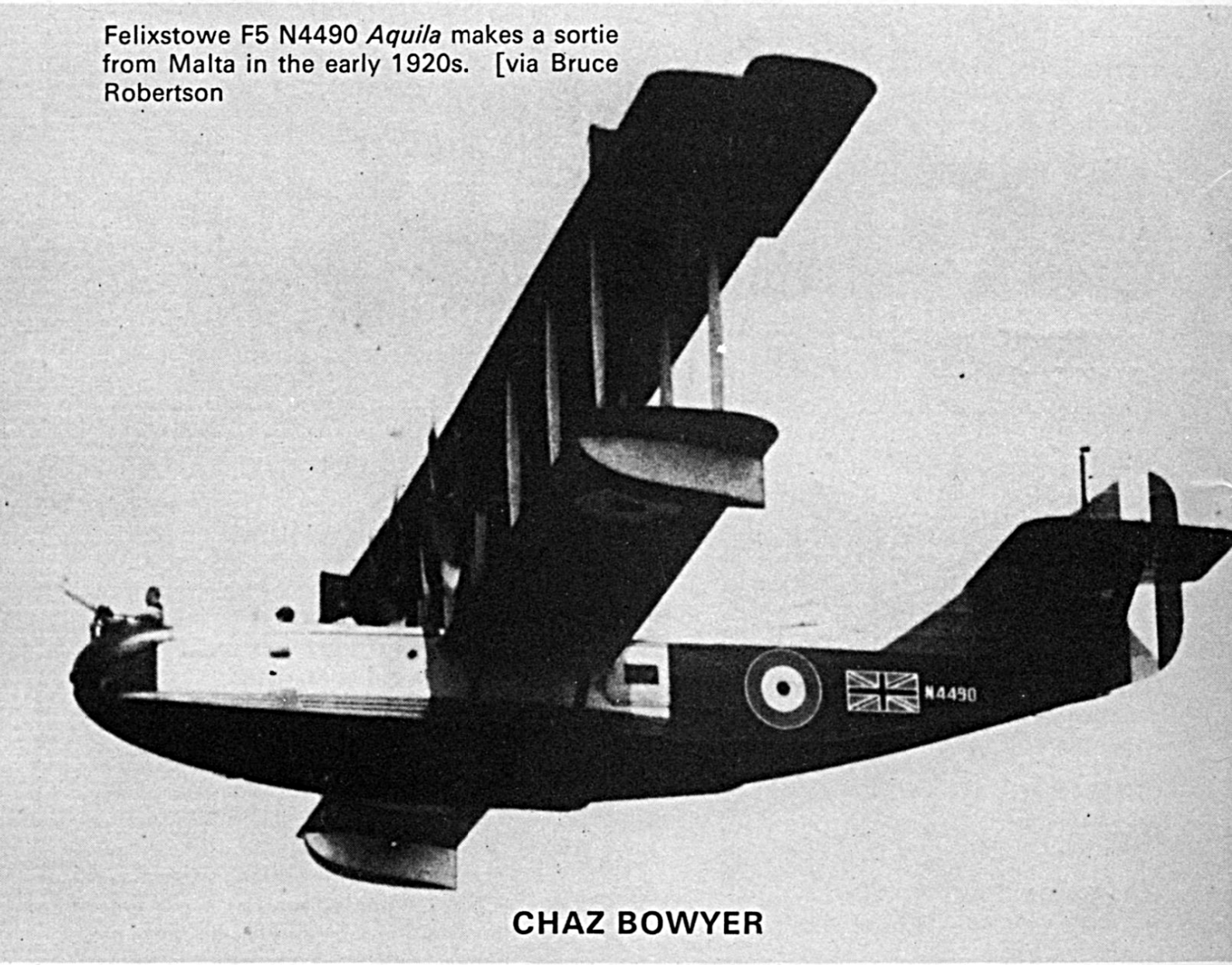


Felixstowe F5 N4490 *Aquila* makes a sortie from Malta in the early 1920s. [via Bruce Robertson

CHAZ BOWYER

Fighting 'boats, 1914-18

FOR a maritime nation like Great Britain with its centuries-old traditions of naval power, it is something of a paradox that the main types of flying boat utilised by the Royal Naval Air Service during the world's first air war were derived directly from the designs and ideas of an American, the pioneer Glenn Curtiss. As early as 1908 Curtiss had experimented with aircraft designed to rise from a water surface, and his first successful flight occurred on January 26, 1911. A year later, on January 12, 1912, he piloted his first true flying boat, i.e. with a boat hull in place of the usual float undercarriage. Continuing his experiments, Curtiss visited England in late 1913 and after his return to America he was joined by an Englishman, John Cyril Porte, an ex-Royal Navy officer whose Service career had been abruptly terminated on medical grounds. An accomplished pilot, Porte had become intensely interested in Curtiss's ideas for seaborne aircraft. Spurred on by the *Daily Mail's* offer in 1913 of a £10 000 prize for the first successful trans-Atlantic flight, Curtiss designed a large flying boat which he named *America*. Its pilot was to have been John Porte, assisted by Lt. J. H. Towers, USN, and the completed aircraft emerged in June 1914. Before testing of the *America* had been completed the European war began and on August 4, 1914, Porte sailed to England where he was accepted for service with the RNAS in the rank of squadron commander and appointed in

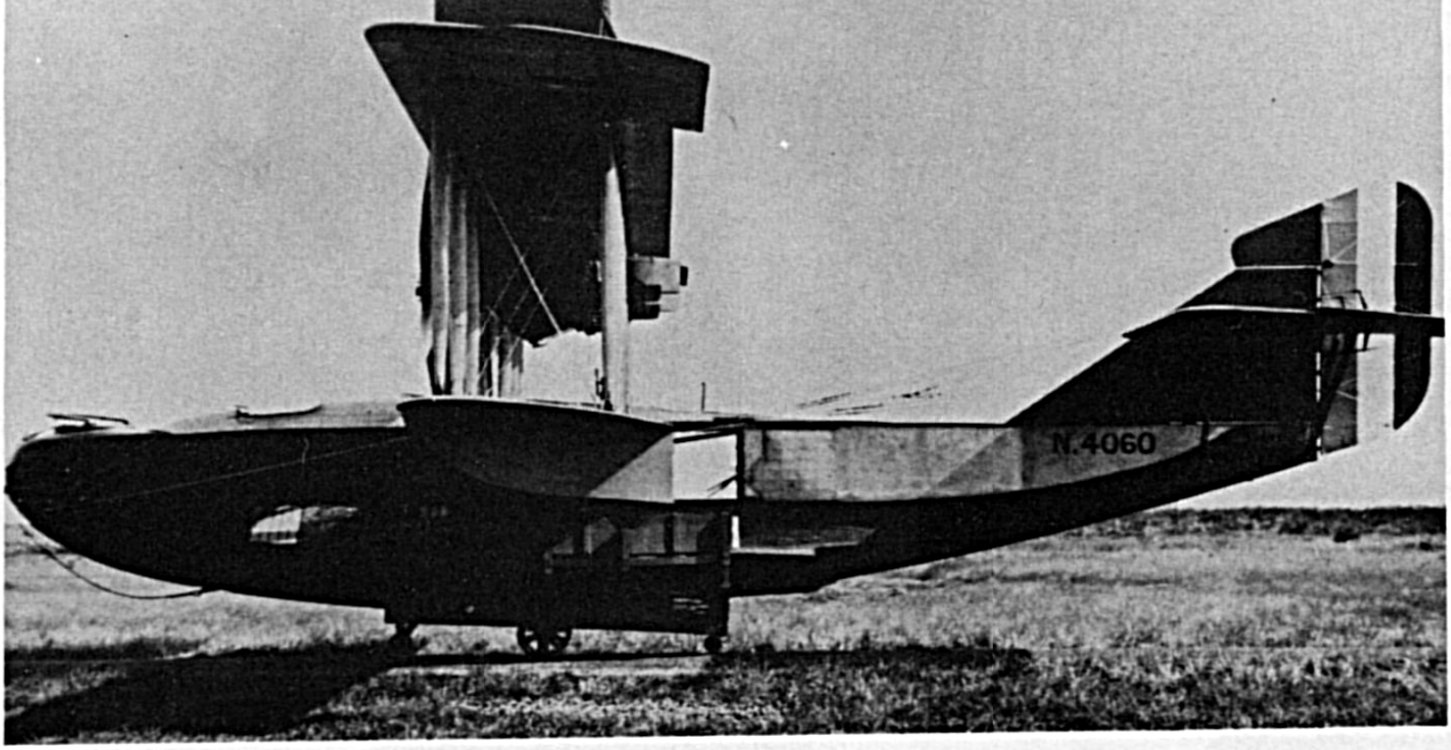
Curtiss H12 8677 which destroyed the Zeppelin *L43* off Vlieland on June 14, 1917. [via Bruce Robertson

command of the Hendon air station.

Porte immediately persuaded higher authority to purchase two of Curtiss's flying boats for the RNAS and these arrived by November 1924 and were tested for Service use at Felixstowe RNAS station. On proving moderately successful, the type (officially titled Curtiss H4) was ordered in reasonable quantity. By early 1915 Porte was stationed at Felixstowe, flying H4s operationally on coastal patrols, and his experiences soon showed him defects of the design when employed over the North sea patrol areas. With official approval, he began a series of exploratory experiments to improve the hull structures and eventually produced a three-engined flying boat, ludicrously nicknamed "HMS Baby", this first Porte Baby being serialled 9800. Small production quantities were later used operationally but in general the Babies were quite obviously too cumbersome and structurally fragile for the rough and tumble of daily usage by RNAS crews in 1916/17. 9800 achieved a particular niche in British aeronautical history, however. Flown by Sqn Cdr Porte, the Baby took off from Felixstowe on May 17, 1916, carrying Bristol Scout C3028 mounted on its upper wing, and successfully launched the tiny single-seater during flight—the first-ever "composite" aircraft flight. With the laudable intention of providing a long-range vehicle for combatting the contemporary Zeppelin menace, this flight, though entirely successful, was, surprisingly, never repeated during the war.

Porte continued his search for an improved design and, fitting Curtiss H4 3580 with an entirely new form of hull, he produced the 1 (F1). It was the forerunner of a fighting line of F-boats which gave sterling service during the next nine years. Meanwhile, Porte had persuaded Curtiss to design a larger and more effective version of his H4. The resulting aircraft was titled H8 and, with improved engine power, became the Curtiss H12. In RNAS units the early H4s soon came to be familiarly dubbed "Small Americas" to differentiate between them and the "Large Americas"—the H12s. These latter equipped most RNAS stations around Britain's coast during 1917 and their war record proved to be prodigious.

Perhaps the most famous H12 was 8666—"Old Eightysix-Sixtysix" as it came to be called. Based at RNAS Yarmouth and piloted almost exclusively by Flt Lt C. J. Galpin, 8666 arrived at Yarmouth on May 9, 1917, and nine days later scored its first success. With Galpin in command and his crew comprising F/S/Lt Robert Leckie, CPO V. F. Whatling and A/M O. R. Laycock, 8666 was flying a dawn patrol off Texel Island when Galpin spotted a Zeppelin. Wheeling into the attack, Galpin handed over control of the boat to Leckie and manned the bow Lewis gun. Leckie flew 8666 alongside the mammoth airship and Galpin raked the German from stern to stem. His firing was accurate and the *L22* erupted in a holocaust of flaming gas, falling to its destruction 18 miles NNW of Texel. It was the first airship to be destroyed by a flying-boat. 8666 continued to harass Zeppelins on several occasions. On May 23/24 Galpin closed with the *L40* but the German escaped by jettisoning water ballast and disappearing into clouds well beyond the flying boat's ceiling. *L40* was again encountered by Galpin on June 5 near Terschelling, and although the boat's crew expended all of their ammunition on the Zeppelin, the latter again escaped disaster.



A Curtiss H16, probably from RNAS Felixstowe, 1917. [via the author

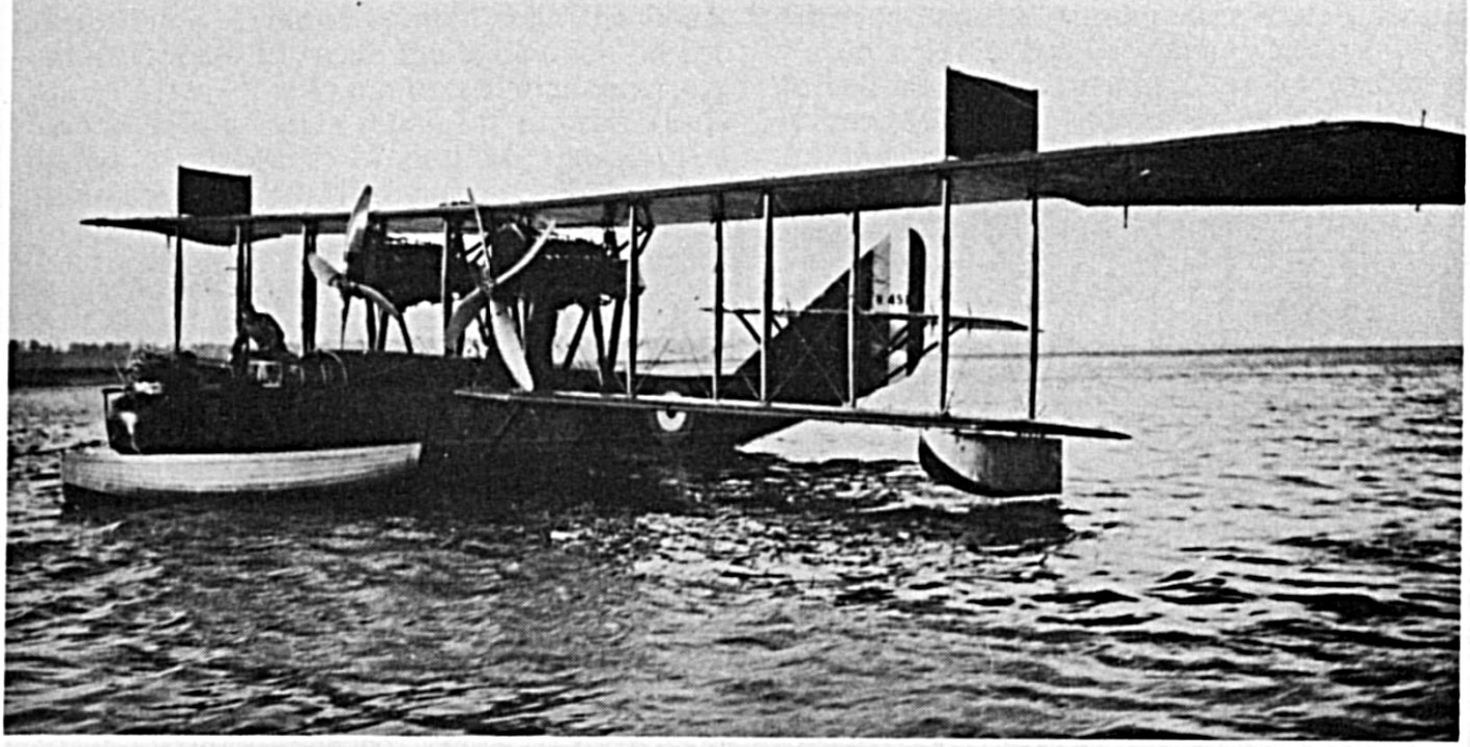
Leckie tackled two Zeppelins. The first target was *L46* but in the event both airships employed normal evasive tactics, rising fast to a safe height and retreating to more peaceful areas.

A combined aircraft patrol of 8666 in company with a DH4 met the *L44* on September 5. Galpin attacked without hesitation despite fierce anti-aircraft fire put up by several German light cruisers in the area. This AA fire holed the Curtiss's hull, while the DH4 was compelled to ditch in the sea due to mechanical trouble. Galpin, on seeing his compatriots' dilemma, landed 8666 alongside the sinking DH4 and picked its crew from the sea. The damage in the boat's hull prevented take-off, however, and it was not until three days later that 8666 and the two crews were finally rescued and brought to England. But 8666's fighting record was not solely concerned with fighting airships. On February 20, 1918, with Robert Leckie in command, it tackled two U-boats and promptly bombed the leading one, causing serious damage.

Another particularly successful H12 was 8677 from Felixstowe. With F/S/Lt B. D. Hobbs in command and F/S/Lt R. F. L. Dickey manning a Lewis gun, this Curtiss attacked and destroyed Zeppelin *L43* in flames near Vlieland on June 14, 1917. After further doughty service, 8677 was shot down by *Oberleutnant* Christiansen, OC Borkum seaplane base, on April 25, 1918. A second H12 to fall victim to Christiansen's Brandenburgs was a Yarmouth-based boat which was forced to alight in enemy-patrolled waters on May 30, 1918, due to an engine defect. While still afloat it was discovered by five German floatplanes and destroyed, the pilot being killed in the first strafing onslaught. The remaining crew became prisoners.

Despite such fighting deeds, the Curtiss H12 was by no means ideal for war work. The hull in particular was weak and a rough sea could easily break the bottom planing surface, thereby risking the boat on every take-off and landing at east coast naval air stations. Armament was none too plentiful and the design suffered from too many "blind spots" from a defensive point of view during the increasing number of air combats in 1917/18. It was these major defects which had led John Porte to produce his F1 design. Although a fair improvement in all departments over the H12, the F1 was further developed by fitting a larger, improved hull to the upper structure of Curtiss H12 8650—resulting in the Felixstowe F2 flying boat. With minor modifications the F2 was put into production as the F2a and its hull remained the basis for all F-boats for the remainder of the war. Ordered into wide production, the F2a began reaching RNAS units by the end of 1917. Its improvement over all previous designs of boat delighted its operational crews while the additional installations of two rear waist gun positions reduced the deadly tail "blind spot" to a minimum. Spanning some 98ft with a length of 45ft, the F2a was big by any aircraft standards. In spite of its bulk it could be manoeuvred reasonably well; indeed, one pilot has been on record as actually looping an F2a!

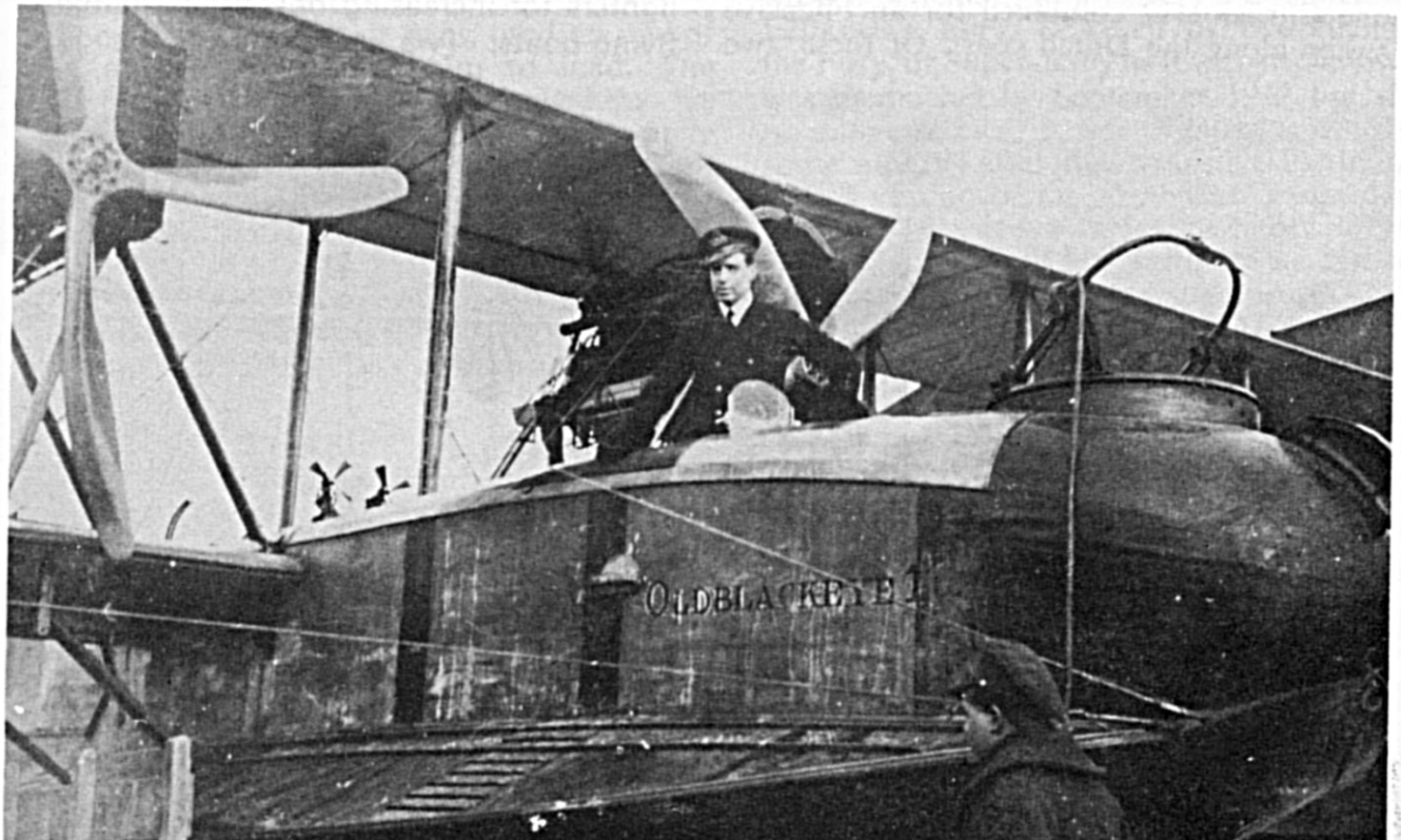
Although it could not match the H12's anti-airship record, one F2a from Killingholme had a near-miss on May 10, 1918. Captained by Capt T. C. Pattinson with Capt A. H. Munday acting as bow Lewis gunner, the F2a claimed the destruction of the Zeppelin *L62*. In fact, although the *L62* was lost on that date, evidence from surviving German records gives proof that the airship attacked by Pattinson was *L56* which, considerably damaged, managed to regain its base at



F2A N4510 built by May, Harden and May. [via J. M. Bruce

Wittmundhaven safely. *L62* had exploded in flames due to unknown causes, although sabotage was strongly suspected. That the F2a could absorb terrifying damage and survive was amply illustrated by the experience of N4512 from Yarmouth station on March 18, 1918. Commanded by Robert Leckie, this F2a spotted two German seaplanes near Terschelling and set off in pursuit. During the ensuing fight the flying boat was literally riddled with explosive and tracer bullets. Flying alongside each other, the opponents pumped broadside after broadside into each other at point-blank range, for all the world like men-o'-war from Nelson's day. The F2a suffered numerous hits in flying wires, oil tanks, instrument board and petrol tanks, apart from various dangerously close calls by its crew. Due to a loss of some fifty gallons of petrol and oil from ruptured tanks, the boat was forced to abandon the combat and turn for home. Within half an hour the F-boat was attacked by three single-seat German floatplanes. Hugging the waves at a mere five feet height, the F2a's rear gunners

An open cockpit F2A, *Old Blackeye 1,* at RNAS Killingholme. [via J. M. Bruce

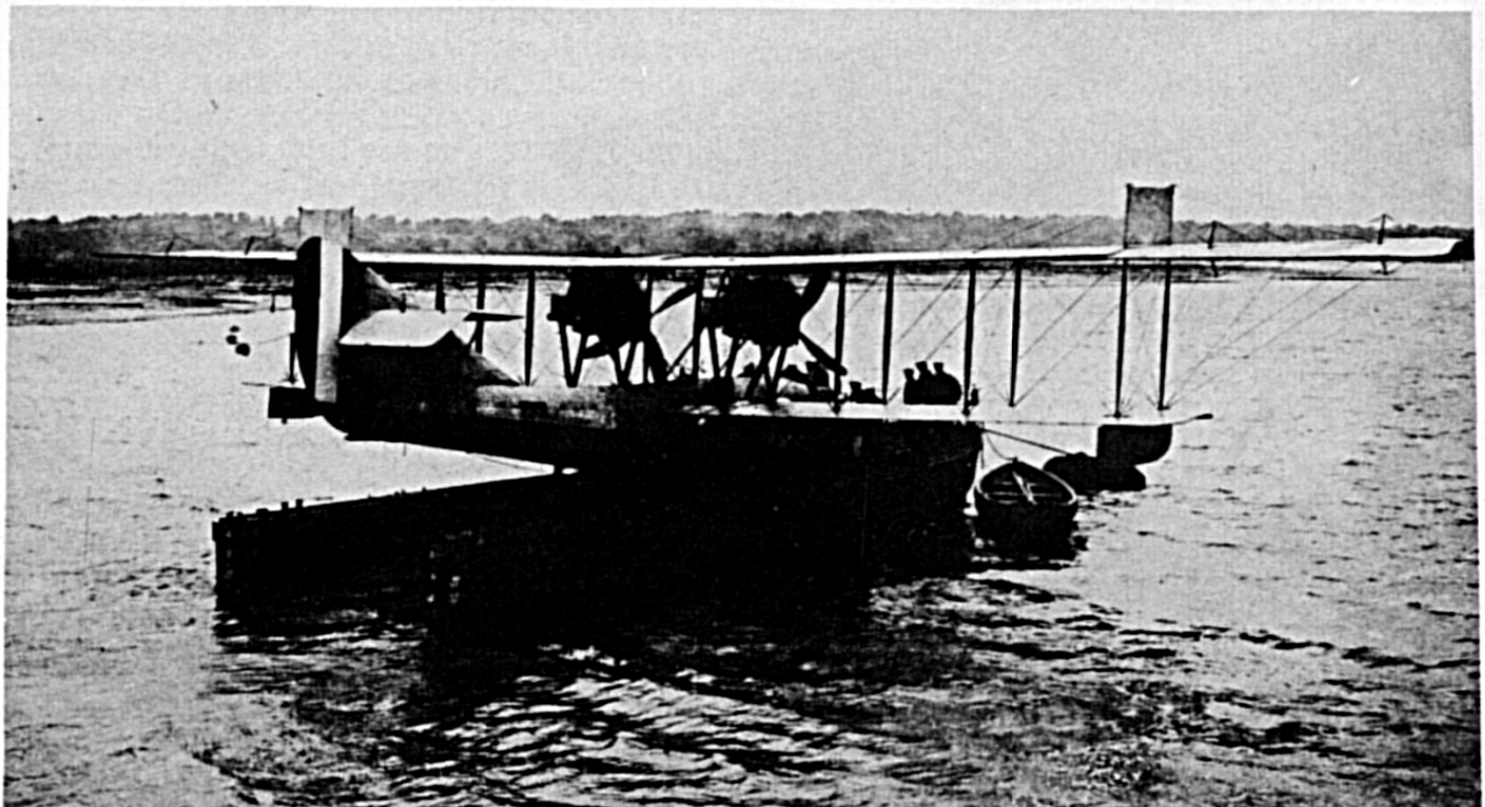


A brand new Felixstowe F3. [via Bruce Robertson

used up their remaining ammunition in keeping the enemy at bay, but not before two of their opponents had again hit the boat's fuel tanks and further shattered parts of the structure. This second combat lasted for some ninety minutes before the Germans left the scene. On arrival at Yarmouth the F2a was described by one spectator as "a horrible sight".

Undoubtedly one of the F2a's finest exploits was the classic air combat which took place on June 4, 1918. On that day four F2as and one Curtiss H12 combined for an offensive sweep along the Dutch coast. Of these, two F2as were from Yarmouth; N4295 (piloted by Robert Leckie and "flagship" of the formation) and N4298. The other three boats were N4302, N4533 and H12 8689, all from Felixstowe. Starting out just before 13.30, all five headed for the Haaks Light Vessel and by 15.30 had met no enemy opposition. The first casualty was N4533 which was forced to land due to a burst petrol pipe, some ten miles north of Terschelling island. Leckie signalled to its skipper to taxi to neutral Holland and then burn the machine. Circling in escort, Leckie soon spotted five German

Curtiss H12 8681, used in trials of towed lighters for increasing operational range of flying boats. [via J. M. Bruce



immediately avoided combat with the boats but attempted to strafe the lame-duck on the water. After some 45 minutes of manoeuvring, Leckie saw a large gaggle of aircraft (estimated at between 14 and 16 in number) approaching from the east, reinforcements for the Germans. As soon as he had identified this fresh menace, Leckie signalled the other three boats to form in Vee-formation on his machine and against odds of five-to-one, flew head-on into the attack. Unfortunately, the skipper of the H12 8689, Ensign Eaton USN, was too busy pursuing one of the original opponents and failed to join Leckie in his defiant charge. In the words of one contemporary pilot, "He (Leckie) went hell-for-leather for them and drove clean through the enemy formation, splitting it right up". Leckie then led his men in line-ahead in a turning curve to cut off three of the German machines and proceeded to blast everything available into these. All three German pilots soon turned out of the fight and the F-boats continued to circle their many opponents. The combat quickly became a chaotic whirlwind of aircraft zig-zagging through a veritable hail of ammunition flying in every direction. Each F-boat fought like a demon and the Germans soon began to suffer losses. The boats' first victim was a single-seater which went down under the fire of N4289's rear guns, while a second which tackled Leckie's boat was also sent spinning into the sea.

N4302 suffered the death of its co-pilot and a little later was forced to alight due to the usual bugbear of most F-boats, a broken fuel feedpipe. After a hasty repair, the skipper managed to get it airborne again but by then the fight was over. The crew of N4533, though never in the air fight, fired on one of its tormentors, forcing him to land. The German pilot was quickly rescued by his comrades and his machine deliberately burned. N4533's crew, captained by Capt Dickey, eventually beached and burned the aircraft, although its destruction has been

Line-up of colourful F2As at Felixstowe, August 22, 1918. [via J. M. Bruce

Christiansen. A similar fate befell Ensign Eaton's H12, 8689, which was eventually forced down by several German machines, its crew becoming "guests" of neutral Holland for the remainder of the war. The three remaining F-boats flew home to Yarmouth and it was later learned that for the loss of their two companion boats they had accounted for six German machines in what remains the greatest flying boat air combat of WW1.

A modicum of revenge was extracted by the Borkum pilots on the next day when five German Brandenburgs shot out the port engine of an H12 from Felixstowe which then wrecked itself in attempting to alight on the sea. Its crew clung to the wreckage for eight hours before being rescued. A further victory for the Germans was F2a N4305. Shot down on July 31, 1918, two of its crew were killed by German fire and the boat strafed and left burning. Fortunately the remaining three crewmen were soon rescued by a British destroyer.

Continuing his unceasing search for a better flying boat, John Porte, ably assisted as always by Lt J. D. Rennie, produced the F3 development which, though faster and capable of carrying a better warload, proved inferior to the F2a in many respects. Although the F3 was used operationally, its activities were confined mainly to anti-submarine patrol work both in the UK and at Malta around the Mediterranean shipping lanes. Porte also devised the F5 development but this version never achieved operational status before the Armistice, although it was to be the mainstay of the RAF's few coastal units for a further seven years of the peace. One mammoth project associated with John Porte was a triple-winged behemoth of a flying boat named the Felixstowe Fury. Powered by five engines, the Fury, or Super-Baby as it was also known, was completed by September 1918 but saw no active service. It was eventually wrecked some months after the Armistice. Although a civil version of the Fury was designed by Porte in 1919 it was never built because its creator, John Cyril Porte, finally succumbed in October of that year to pulmonary tuberculosis—the wasting disease from which he had suffered for some ten years.