A GERMAN COPENHAGEN



HE WHITEHEAD LOCOMOTIVE TORPEDO was once described as a David to a naval battle-fleet's Goliath; this menacing little weapon was to have a profound effect on naval warfare, unforeseen by its British inventor when first produced in 1866. In theory, the addition of the submarine and torpedo boat to any naval fleet could provide a means to narrow down whatever numerical advantage an opposing battle fleet might have against one's own. It was this strategy that was proposed in Grand Admiral Alfred von Tirpitz's *Doctrine of Risk* in 1897, the impetus behind the naval arms race between Britain and Germany prior to the start of the Great War in 1914.

Within the first few months of the war, Tirpitz's proposed theories were becoming an uncomfortable reality for the Royal Navy. On 5 September 1914, the destroyer HMS *Pathfinder* became the first surface vessel lost to a submarine-fired locomotive torpedo when it was sunk by U21 off May Island in the Firth of Forth. Seventeen days later Leutnant Otto Weddigen, commanding U9, quickly dispatched the old armoured cruisers *Cressy, Aboukir* and *Hogue* to the bottom of the North Sea off the Dutch coast. Over 1,650 seamen lost their lives from the four ships sunk that month. After these attacks and a further loss of a fourth cruiser to Weddigen's torpedoes, HMS *Hawke* on 15 October, a rash of 'periscope-itis' (panic sightings of periscopes often where there were none) broke out amongst the surface fleet of the Royal Navy.

The concept of an aeroplane carrying the locomotive torpedo was not lost on aviation supporters prior to the start of hostilities. According to the official document AP1344 History of the Development of Torpedo Aircraft, compiled by the Aircraft Armament Torpedo Section of the RAF in March 1919, with photographs provided by Captains Turner at Calshot and Hardee at East Fortune, discussions were held concerning the use of torpedo aeroplanes during early 1911. Commodore N.F. Usborne, Captain M.F. Sueter and Lieutenants D.H. Hyde Thompson and C.J. L'Estrange Malone of the Royal Navy proposed the use of airships and aeroplanes to carry torpedoes at a time when heavier-than-air craft were barely capable of lifting a weight greater than that of their pilots.

From their mutual interest in the potential of torpedo carrying aircraft, Capt Sueter and Lt Hyde Thomson drew

up the secret Specification No. 6938, *A Torpedo Carrying Seaplane*, dated 19 March 1914, stating;

The invention relates to seaplanes (i.e. aeroplanes designed to rise from and alight upon water) which carry and launch automobile torpedoes. According to the invention the torpedo is directly suspended from the fusilage [sic.] of the seaplane and as close thereto as is conveniently possible, and to enable this to be done the supporting and bracing members of the main floats of the seaplane are so arranged as to leave a clear space between the floats to accommodate the torpedo and enable it to be dropped between the floats into the water.

A profile line drawing of a large heavily braced two-seat twin float machine was submitted with the specification, there were also scrap views of the methods for carrying the torpedo between the floats. On completion in mid 1914, the ungainly Sopwith Special Seaplane, the first British built aircraft designed to carry a torpedo aloft bore considerable resemblance to the illustrated machine in Capt Sueter and Lt Hyde Thomson's specification. Despite its intent however, the Special seaplane was a disappointment; although powered by a single 14-cylinder 205hp Salmson (Canton-Unné) 2M.7 motor, it was barely capable of lifting itself into the air and subsequently never got airborne with its intended warload.

It is generally accepted that the first release of a torpedo from an aircraft in flight took place in 1914, off the Italian city of Venice. Two years earlier, prominent Italian lawyer Pateras Pescara advised the Italian Navy on the use of a torpedo carrying aeroplane, as Capitano Alessandro Guidoni claims in his book *Aviazione-Idroaviazione*, published in 1927. The Italian Navy High Command showed interest in Pescara's concept, detailing Guidoni to conduct preliminary ballistics trials. Using Guidoni's faithful old Farman biplane, experiments in weight dropping were carried out using lead weights up to 176lb, but the Farman was found to be unsuitable for lifting heavier loads.

From the Pescara-Guidoni PP, an indigenous twinengined monoplane fitted with hydrofoil floats built to Pescara and Guidoni's design, an 827lb mock-up missile was dropped in the waters off Venice on 26 February 1914. Despite the fact that the object dropped from the Pescara-Guidoni PP was not an offensive weapon, history records that this was the first air dropping of a torpedo from an