



Issue 48 Jan19—Mar19

Contraails

Newsletter of the Christchurch Aviation Society

CAvSoc

History of Aviation

Our January talk was by Ernie Ball, a CAvSoc member who is a former BA pilot and currently is involved with the Air Training Corps. We were reminded how it all started Back in 1903 yet in just 66 years we had come from 25mph to supersonic at 1,350mph with the first flight of the Concorde on 2nd March 1969. Equally amazing are the statistics in height from 10 feet to 65,000 feet, duration of flight from 12 seconds to 19 hours, the distance of flight from 125 feet 10,000



miles and from 1 passenger to 900. This was due to the rapid developments in aerodynamics, metallurgy, engines and the knowledge to link it all together. Leonard da Vinci started sketching flying machines in the early 16th century but the materials required were not available. Breaking the surly bonds of earth was left to the Montgolfier brothers with an unmanned hot air balloon on 4th June 1783 which rose to 3000' and travelled 1.5 miles with the wind. On 21st November a manned flight sailed over Paris for 5 mile in 25mins. There was effort to fly like the birds with flapping wings, ornithopters, but whilst models could be made, all man carrying attempts, especially between 19th and 20th century, failed due to lack of power. Cayley and Lilienthal made gliders but the latter was killed in a glider in 1896. Steam engines were tried in Giffard's early dirigible as early as 1852. Airships could carry the engines and development was rapid from 1900, especially the products of Heinrich von Zeppelin who even started an airline in 1909. Transatlantic flying followed with over a million miles flown in 590 flight with 34,000 passengers but the tragic loss of the Hindenburg and the British R100 put an end to their success along with the need for huge hangars to build and support them. In 1903 the

Wright brothers had made a light engine and worked out the dynamics with a home built wind tunnel and importantly how to control flight. In 1908 the Wright Flyer was marketed in Europe but the English Channel was first crossed by a Bleriot Monoplane on 27 July 1909. A characteristic of wars is to drive technology forward and the largest advance in WW1 was in the engines and with the Rolls-Royce Eagle powered Vickers Vimy bomber, Alcock and Brown crossed the Atlantic in 1919 albeit at its narrowest 2,000 mile point taking 16 hours. Lindbergh achieved the crossing into Paris by 1927 covering 3,600 miles in 33 hours, if nothing else a masterpiece in staying awake. Amelia Earhart reduced the short crossing to 14 hours in 1932 and Amy Johnson made a name for herself flying to Australia in 1930 taking 19 days. The Handley Page HP42 was a classic 27 seat airliner from 1931 to 1939 during which no passenger was lost. The flying boats now provided comfortable air travel from the late 30's with the famous Shorts C class providing connections to the empire. WW2 saw their demise having a myriad of hard airfields available. Post WW2 developments were rapid with the availability of the Merlin for the Avro York but jet engines and turboprops would soon overhaul the piston age. Arguably the piston engine Ambassador built at Christchurch might have performed better with the Dart engine which powered the Vickers Viscount whose success in 1948 saw 445 built and operational service up to 2008. The price of pioneering was paid with the jet powered de Havilland Comet with a first flight in 1949 but the fatal crashes in 1954 allowed the Boeing 707 to steal the jet airliner market with 150 passengers crossing the Atlantic at 550mph. Apart from the BAC1-11, made in Christchurch, Britain's airliners were lacklustre in operational performance compared to the USA products. From 1967 the Boeing 737 has seen more than 10,00 built. From 1969 the 747 ruled the skies for cost effective transport whilst Concorde provided the ultimate travel but only until 2003. Three engine aircraft were tried but ultimately were overtaken by the reliability that two engines could provide. We now have a 'plastic' aeroplane, the Boeing Dreamliner that can fly from London to Perth, 9,000 miles, in 17.5 hours. New Airbus aircraft will cater for the New York Singapore in 19.5 hours, for 9,500 miles. A world apart from 120 feet at 25mph.



Meetings Schedule

Wednesday **6th March 2019**

Battle of the Atlantic by Dr Henry Goodall

Wednesday **1st May 2019—AGM**

Wednesday **04 Sep 19** Bomber Command by George Caple