PHILATELIC LAXITY

by Albert Pelsser

LANGLEY'S AERODROMES

Of the many scientists involved in the research of aerodynamics in the late 19th century, the most eminent were Otto Lilienthal, Octave Chanute and Samuel Langley. Langley was the second pioneer, after Chanute, who tried his luck in this field on what proved to be the very eve of achieving powered, controlled and sustained flight. An American mathematician and physicist and Head of the Smithsonian Institution in Washington, D.C., Professor Samuel Pierpont Langley started experimenting aviation in the last decades of the 19th century. He scored his first significant success on 6 May 1896, when his steam-powered free-flying *Aerodrome No. 5* (a modified version of his fifth design) flew for ninety seconds covering three quarters of a mile, before running out of fuel. Langley chose a floating houseboat as his launching platform, fitted with a spring-powered catapult and anchored on the Pontomac River, Washington, D.C. On 28 November 1896, another successful flight was made with a similar model, the *Aerodrome No. 6*; it flew for distance of approximately 1,460 metres.

Because of his success, Langley was able to obtain substantial funding of US$50,000 to build a powered aircraft capable of being controlled by a pilot. Since a full-sized steam engine would be too heavy, Langley decided to call upon his assistant, a talented engineer, Charles Manly, to build a gasoline engine. Making almost every part himself, Manly built an engine that put out 52 horsepower with a total weight of only 125 pounds. The aircraft (now called *Aerodrome A*) that it would power weighed 730 pounds; it was a tandem-winged design with a cruciform tail and would be launched from the top of the houseboat with a new mechanism.

On 7 October 1903, with Manly aboard, the 48-foot span *Aerodrome A* tripped on the launcher and plunged into the water below. After repairs, a second attempt on 8 December 1903 was no more successful; again the worst happened and the aircraft broke and fell into the Pontomac. At that time, many thought that if a man with Langley's ability and resources could not succeed in this endeavour, heavier-than-air flight was unlikely to become a reality. Nine days later, on 17 December 1903, the Wright brothers, a pair of bicycle-makers, proved then wrong.

Langley made an important contribution to flight, but he spent far too much time on the power plant and too little time on controlling the aircraft in the air. Langley did no further work on his plane, which was put in the Smithsonian Institution and labelled "the first heavier-than-air machine capable of flight." Obviously, the statement was open to question, for the plane as originally built never flew. In 1914, a prominent American aviation pioneer and aircraft manufacturer, Glenn H. Curtiss, flew it after a number of vital alterations to both engine and airframe. The label on Langley's machine was subsequently changed, as it could not have flown in 1903.

Figure 1

Langley named his flying machine *Aerodrome*, which is a misrepresentation of the Greek word *aerodromoi* meaning "air runner." Strictly translated from the Greek, the word *aerodrome* means a place from which a machine would fly. Because of this, flying machines eventually became known as *airplanes* or *aircraft*, and the word *aerodrome* was later used by the British for their airports.

The only stamp from the philatelic collection related to the International Civil Aviation Organization (ICAO), which since 1945 has its headquarters in Montreal, Canada, commemorating Langley was issued by Sierra Leone Scott #681 (see Figure 1). Although it is labelled to show Langley's *Aerodrome No. 5*, it would appear to depict the full-sized version *Aerodrome A*. This is confirmed by the date of the experiment shown on the stamp, that is 1903.

CHECKLIST

Sierra Leone	681	1985 Feb 28	ICAO 40th anniversary, Samuel P. Langley, *Aerodrome A* listed as 1903 *Aerodrome No. 5* in error

REFERENCES

Taylor, Michael J.H. *History of Flight*. London: Brian Trodd Publishing House Ltd., 1990.
Wood, Ken. "Philately & Flight: Change of Scene." *Stamp Collector*, April 8, 1985, p.12.