

Daniel Guggenheim Medal

MEDALIST FOR 1936

For pioneer and creative work in the theory of dynamics.



GEORGE WILLIAM LEWIS

George William Lewis was one of the great American leaders of aeronautical research. Under his direction, as chief executive of the National Advisory Committee for Aeronautics (NACA), the age of flight took great forward strides, solidly grounded in science and technology.

He was born in Ithaca, New York, on March 10, 1882; received the degree of M.E. from Cornell University in 1908, and the degree of M.M.E. in 1910. He was a member of the Swarthmore College faculty from 1910 until 1917, then became Engineer-in-charge at Clarke-Thomson Research, Philadelphia, where he remained until 1919. He joined NACA as Executive Officer in 1919, and became its Director of Aeronautical Research in 1924, from which position he resigned because of health on September 1, 1947. He remained in NACA service as Research Consultant until his death on July 12, 1948.

In 1919 the NACA staff totaled 43, including the pioneer research staff of NACA's Langley Laboratory, located at Langley Field, Virginia. Lewis recruited and inspired young scientists, engineers, and mathematicians, and welded them into effective, balanced research teams. He pioneered novel methods of flight research, new ideas for recording instruments, and new methods and facilities for research on engines, propellers, structures, seaplanes, ice prevention, helicopters, and many other branches of aerodynamics. He developed and made use of many wind tunnels, including variable-density, full-scale, refrigerated, free-flight, gust, transonic, and supersonic types.

By 1938 Hitler had multiplied German air research facilities until they were five times the magnitude of those available in the United States. This challenge to American leadership was clearly presented to the President and the Congress by Lewis, who arranged to spend May 1939 in Germany, touring the new air research facilities. In June he testified before Congress in detail, and reported the opinion of numerous German scientists and professors, that war would start before the next snow fell.

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Congress approved the doubling of NACA's facilities and staff at Langley, and the construction of a second major NACA station, now known as the Ames Research Center, at Moffett Field, California. A year later, Congress authorized the NACA Aircraft Engine Research Laboratory at Cleveland, Ohio, now known as Lewis Research Center in honor of Dr. Lewis.

NACA research facilities built during Lewis's regime cost about \$80,000,000 and, although often new in concept and design, never failed to meet their planned performance. When failing health caused him to resign as Director of Aeronautical Research in 1947, the seventeen members of NACA signed a testimonial praising Lewis for "inspiring leadership," and declared: "The Committee's research organization has won the confidence and respect... of the aeronautical world, and made scientific and technical contributions of inestimable value to the national security." He died on July 12, 1948.