

WRITING LATIN AMERICAN AERONAUTICAL HISTORY

By GARY L. KUHN

Aeronautics have sometimes been spectacular in Latin America. Mountains and jungle have been humbled, partially, after centuries of almost unchallenged superiority over man. In such accomplishment, aviators have achieved heroic status. It is, therefore, remarkable that so little has been written in English about pioneering Latin American airmen and airlines. Fortunately, these achievements have been praised in print within the republics of Latin America.

But the aeronautical history of the region (beyond stories of individual achievement) has not yet been written. Lacking is a survey in any language telling the story of the sustained growth of Latin American aeronautics and evaluating its significance. Given the difficult geography of the region, the airplane is generally but vaguely credited with making an important contribution in lands where other means of transportation are retarded. This contribution would seem to be difficult to measure; rapid growth of private and commercial aviation is common to all areas of the world. Yet, an essay should be able to suggest contributions unique to Latin American conditions. Such a suggestive essay would perhaps inspire detailed research.

Two problems confront the researcher. Fundamental is the relative scarcity of information and statistical data. Both aeronautical periodicals and government bureaus in Europe and in the United States have recorded in detail the development of aviation, such as their Latin American counterparts, when existent, have not. A second problem is that of reliability. Books and articles tend to be uncritical. They patriotically describe the national pioneers in the most laudatory terms. The problem of properly discounting this enthusiasm is made difficult by the scarcity of sources. The two problems reinforce each other.

Latin American aeronautical scholarship comes most abundantly from Brazil. This nation, a leader in the development of internal air transportation, has several "heroes" for whom "priority" is claimed in the discovery of certain aeronautical principles. Well known is the Brazilian refusal to accept the evidence that the Wright Brothers were the first to achieve flight in a heavier-than-air vehicle that should be called an airplane.

Alberto Santos-Dumont, whose inspirations to other pioneers made him more significant than the Wrights in the earliest years of aviation, is Brazil's candidate for being the first to fly an airplane. A variety of writers, including the inventor's nephew, have stated the case of their countryman. The intention is to disqualify the Wrights because of secrecy and/or their rail-launched aircraft. Peter Wykeham, a recent British biographer of Santos-Dumont, has concluded that the Brazilian claims are not valid.

More scholarly and more convincing have been Brazilian claims to the invention of the balloon. The Montgolfier brothers of France are usually credited with the first discovery of the means to ele-

vate balloons in 1782-3. Nevertheless, Bartolomeu Lourenco de Gusmao, a scientifically inclined priest, born in Brazil, has a prior claim which recent research has validated. Gusmao elevated an unmanned paper structure filled with heated (and therefore lightened) air before the King of Portugal in 1709.

The late Alfonso de Esquivel Taunay, for many years a leading historian of Sao Paulo, Brazil, contributed important research to the cause of Gusmao. His discoveries in European archives, and those of others inspired by him, have shown that the dismissal by most aeronautical historians of Gusmao's invention as a birdlike fantasy is not justified. Unfortunately, Taunay's findings have had little impact outside the Ibero-American world. Aeronautical histories written in English continue to ignore Gusmao. The barrier caused by cultural and linguistic differences is one more handicap to writing Latin American aeronautical history.

Aeronautical history can be written from the bias of any nation. Most of the larger republics of Latin America have at least one work which might be said to cover this subject for that particular nation. Most of these aeronautical histories begin with the balloon flights of the nineteenth century and then deal with the early years of aviation. For example, the book (translated from *Medio siglo de aeronautica; historia de la aviacion en el Uruguay*), *A Half Century of Aeronautics; History of Aviation in Uruguay* covers the years 1868-1918.

These national aeronautical histories are written sometimes by amateur enthusiasts, occasionally by professional writers or journalists, and often by participants. None have been written by university professors for colleagues. They are not burdened with such scholarly apparatus as footnotes and bibliography. Usually only long, reproduced segments are identified (imprecisely) as to their source. The reader is unable to pursue most information further, in the hope of clarifying details.

To write an accurate history of the continent and a half which is Latin America, it is too often necessary to partially discount the various "heroic" achievements listed by patriotic writers. Also, and even with the differences in emphasis of various aeronautical historians, a study of the twenty republics must compare one with another, and the whole with the rest of the world. In this way, the true significance of the celebrated flights can best be appreciated. Considering the difficulties added by rugged geography and technological retardation, many Latin American aeronautical achievements have indeed been impressive.

The first heavier-than-air flight in Latin America well illustrates this. It was accomplished in January 1910 in Mexico City. This city's elevation of nearly 7,500 feet was much more of a handicap to the airplanes of 1910 than it will be for the Olympic athletes of 1968. Nevertheless, impressive progress was made in the first decade of Mexican aviation. Even when cut off from the advanced technology of Europe and the United States

by warfare and political tensions, a significant indigenous industry developed. Later, Mexican military fliers achieved notable long distance flights, while civilians inaugurated many small but very useful airlines.

In other countries, aeronautical history is dominated by one or several outstanding achievements. Domingo Rosillo, Cuba's most famous aviator, made the first flight between Florida and Cuba in 1913. In that same year, the isthmus of Panama was crossed for the first time by an airplane. Here aviation was restricted by regulations prohibiting flights too near the newly completed canal. In Central America, the outstanding achievement was an airline which specialized in hauling cargo from the most remote settlements in the region. Transportes Aereos Centroamericanos (TACA) developed precociously, thrived for a time, and then disintegrated, much as the Maya civilization had done in the same general region one thousand years earlier.

In South America, also, three themes predominate in the aeronautical literature. The first flights in each nation are celebrated; flights successful in overcoming geographical barriers are even more famous; and pioneers of commercial air service also receive recognition.

The year 1910 saw the first airplane flights in several South American nations. Aviators from the leading countries, Chile and Argentina, were active in the introduction of the airplane to neighboring lands. International flights sometimes meant the reduction of geographical obstacles. The more than one hundred miles of water separating Buenos Aires, Argentina from Montevideo, the capital of Uruguay, was crossed in 1912. In 1918, a Chilean pilot flew to Argentina over the highest part of the Andes Mountains. Earlier, two Peruvian fliers separately had been first to cross the Alps Mountains in Europe. All of these achievements have been extolled in print in the respective countries.

The story of commercial air service is more recent, and better known in this country. In the nineteen-twenties, the first attempts to establish airlines were made, usually prematurely. In the thirties, international and local air service spread along the perimeter of South America, and sometimes into the interior. The development of these airlines attracted much attention, as European and United States interests competed for the privilege of providing air service. This competition was regarded as important to the national interests of the world powers involved. In 1940, German control of airlines in South America was a matter of concern in this country. The Panama Canal seemed threatened from neighboring Colombia, and German aeronautical influence was also predominant in the strategic Brazilian bulge. Numerous articles exposed the dangers of this situation in both intellectual and popular magazines.

The years around 1940 also saw written in the United States, a first few books dealing with Latin American aeronautics. By this time, the clippers of Pan American Airways conveniently connected North and South America. Some books were merely travelogues describing the flight down to Rio. Of value are two books by Alice Rogers Hager, who paid attention to aeronautical developments within the countries she visited. The "German scare" of 1940 probably inspired the Council of Foreign Relations to sponsor William A. M. Burden's study of *The Struggle for Airlines in Latin America*.

Unfortunately, the years around 1940 remain unique in this burst of publication.

Military aviation in Latin America has hardly been described in English. One reason is that these air forces have seen little combat. Some were involved in skirmishes with neighbors in the 1930's, but this activity is only a small part of their story. In World War Two, only Brazil and Mexico participated in aerial combat. Both flew P-47 Thunderbolts--the Mexican Air Force in the Philippines and the Brazilian Air Force in Italy. The accomplishments of these two expeditionary forces have been published in their respective homeland. A brief history in English would require the collection of these writings from newspapers, magazines, and small books.

Latin American air forces play a political role in certain nations. This is probably not the concern of the aeronautical historian, except as it determines success in the acquisition of new equipment. The use of military aircraft in political revolution is unusual, though by no means unknown. The ouster of Juan Peron in 1955 involved considerable activity by Argentina's air force.

The most significant (i.e. the most historical) contemporary contribution of military aviation in Latin America is not an obvious one. It is not political, nor even military. Economic development, the stated goal of all Latin American governments and of the Alliance for Progress, is promoted by the airplane. Military aviation is prominent in providing communication and transportation to remote regions which have important economic potential.

Since 1931, the Brazilian Air Force has flown to small settlements of the interior. Its air service, both scheduled and unscheduled, is called National Air Mail. Much more is involved than carrying mail; frequent passengers and considerable cargo also travel on the flights. An important Brazilian goal is to settle the interior of the country. Such is the rationale for the new capital, Brasilia, which had aerial connections with other areas of Brazil before even roads had reached it. In Brazil's struggle to exploit her rich interior, the airplane plays an historic role.

Likewise in other countries, efforts are being made to open agricultural colonies in regions heretofore unexploited because of their isolation. Such colonization is intended both to raise the production of foodstuffs needed for Latin America's rapidly growing population, and to meet peasant demands for ownership of land. Air service is essential for the supply of the agricultural colonies and for transporting their production to urban centers. Especially in South American lands such as Colombia and Peru, fertile lands located on the other side of the Andes (from the populated areas) are being exploited via the airplanes of the national air forces.

More important than the colonization of new areas is the need to increase agricultural production from farms already cultivated. Only in this way can Latin America, where population is increasing more rapidly than any other region of the world, hope to feed itself and to increase vital earnings from agricultural exports. In this struggle, also, the airplane has current prominence that historians should note.

In the last twenty years, agricultural aviation has progressed greatly throughout the world. Specialized aircraft and chemicals have steadily become more efficient. Latin America possibly has

benefitted more than most regions, but the historian is handicapped once again by a lack of statistics. It is known that most Latin American nations rely on the exportation of one or two crops for most of their earnings in foreign trade. In 1963, two-thirds of Ecuador's exports, by value, were bananas; for El Salvador, and coffee and cotton, the figure was three-fourths. Cotton and bananas are two crops in which aerial disease prevention has permitted increased production, partly by opening new areas unsuited to previous technology. In the 1960's, half of all aircraft registered in Ecuador and three-quarters of those in El Salvador are agricultural aircraft.

Thus the Latin American aeronautical historian must be aware that much of his history is current history. He, therefore, must be alert to aviation data appearing in current literature. Unfortunately, newspapers and magazines in this country tend to slight Latin American news, with the exception of political crises. Valuable material is published however, and there are bibliographical aids available. This is also true for the earlier years of Latin American aeronautical history.

The Library of Congress has contributed much to the bibliography of aeronautical history, and it contains a very respectable though far from complete collection of books and periodicals on the subject. *Aeronautic Americana: A Bibliography of Books and Pamphlets on Aeronautics Published in America Before*

1900 was issued by the Library of Congress in 1943. It includes twenty-two items pertaining to Latin America. Many useful magazines were listed in 1962 in *Aeronautical and Space Serial Publications: A World List*. However, many Latin American aeronautical magazines are devoted to news from Europe and the United States, while largely ignoring developments within their own nation.

Two other fundamental bibliographical works, taken together, well cover Latin American aeronautical history. Paul Brockett and the Smithsonian Institution published a *Bibliography of Aeronautics* in 1910, and supplements until 1932. Articles in periodical literature comprise most of the entries. More recent articles are found in the *Index to Latin American Periodical Literature, 1929-1960*, with annual supplements. These two valuable items do not list books. Neither do they include many useful publications of the United States government, which must be located by using the specialized bibliographies for government documents. The *New York Times Index* makes available many news items. No effective bibliography exists for aeronautical publication within Latin America.

Material, then, does exist for the Latin American aeronautical historian. A wide variety of significant topics deserve study. While aviation continues to make history in Latin America, its past should be written.

IMPORTANT BOOKS AND ARTICLES FOR LATIN AMERICAN AERONAUTICAL HISTORY

1. BIBLIOGRAPHICAL REFERENCES

Brockett, Paul. *Bibliography of Aeronautics*, Smithsonian Institution, miscellaneous collection, IV, Washington, 1910. Supplements for the years 1909-1932 published by the National Advisory Committee for Aeronautics, Washington, 1921-1936.

Diaz, Arquer, Graciano, and Vindel, Pedro. *Historia Bibliografica Iconografica de la Aeronautica en Espana, Portugal, Países Hispano-Americanos, y Filipinas desde la Origenes Hasta 1900*. Madrid, 1930.

Gamble, William Burt. *History of Aeronautics: A Selected Bibliography of Reference to Materials in the New York Public Library*. New York, 1938.

Library of Congress, *Aeronautical and Space Serial Publications: A World List*, Washington, 1962.

Pan American Union, *Index to Latin American Periodical Literature, 1929-1960*, VIII Volumes (especially I, under Aeronautics, Airlines, etc.), Boston, 1962.

2. NATIONAL HISTORIES OF AERONAUTICS.

"Anais de Fundacao Santos-Dumont," Volume I, in *Revista do Instituto Historico e Geografico de Sao Paulo*, LVI, Sao Paulo, 1959.

Aponte B., Leandro, *Cincuenta Anos de Aeronautica en el Paraguay*, Asuncion, 1957.

Biedma Regalde, Antonio Mari, "Evocando el Pasado," in *Revista Nacional de Aeronautica*, A Series of Articles Dealing with Aeronautics in Argentina, Usually Appearing Monthly in the Years 1955-1963 (Buenos Aires).

Chafardet Urbina, Luis M. *Trayectoria de la Aviacion en Venezuela*, Caracas, 1941.

De La Jara, Carlos Adolfo. *Historia de la Aviacion del Peru*, Lima, 1935.

Direccion General de Aeronautica Civil. *Historia Grafica de la Aviacion Mexicana*, Mexico City, 1950.

Fernandez Prada, Alberto. *La Aviacion en el Peru*, Lima, 1966.

Forero F., Jose Ignacio. *Historia de la Aviacion en Colombia*, Bogota, 1964.

Garcia de Souza, Jose. *A Verdade Sobre a Historia da Aeronautica*, Rio de Janeiro, 1943.

Lavenere-Wanderley, Nelson. *Historia de Forca Aerea Brasileira*, Rio de Janeiro, 1967.

Maria y Campos, Armando de. *La Navegacion Aerea en Mexico*, Mexico City, 1944.

Negrete, Doroteo. *Historia de la Aeronautica en Mexico*, (also entitled *Cronologia Aeronautica de Mexico*), Mexico City, c. 1923.

- Pedemonte, Juan Carlos. *Medio Siglo de Aeronautica: Historia de la Aviacion en Uruguay, 1868-1918*, Second Edition, Montevideo, 1944.
- Pena Herrera, Juan. *Historia de la Aviacion Ecuatoriana, 1842-1943*. Quito, 1944.
- Rodrigues, Lysias. *Brasileiros Pioneiros de Ar*, Rio de Janeiro, 1944.
- Saenz de San Pelayo, Pedro M. *La Navegacion Aerea en el Mundo*, Bogota, 1927.
- Secretaria de Aeronautica de la Nacion. *La Aeronautica Nacional al Servicio del Pais*, Buenos Aires, 1948.
- Terry, Tomas A. "Primeras Publicaciones Sobre Aeronautica en Cuba," *Revista de la Biblioteca Nacional*, Havana, IV, II (April-June, 1953), 20-39.
- Pan American Union. *Study of Air Transport in the Americas*, Washington, 1964.
- Perdigao, Luiz F. *Missao de Guerra*. Rio de Janeiro, 1958.
- Santos-Dumont, Alberto. *My Airships: The Story of My Life*. London, 1904.
- Stanford Research Institute. *Air Transport Development and Coordination in Latin America: A Study of Economic Factors*. Washington, 1961.
- Villares, Henrique Dumont. *Quem Deu Asas Ao Homem: Alberto Santos-Dumont, Sua Vida e Sua Gloria*. Sao Paulo, 1953.
- Villasana Heredia, Esperanza. *Juan Guillermo Villasana: Una Vocacion y Un Destino*, Mexico City, 1963.
- Vindel, Francisco. *Las Primeras Aeronaves en America Fueron de Invencion Espanola*, Madrid, 1954.
- Wykeham, Peter. *Santos-Dumont: A Study in Obsession*. London, 1962.
- Zook, David H., Jr. and Crabbe, William M., Jr. "Airpower in the Chaco War," *Air Power Historian*, X (1963), 23-27.
- "Documents Relating to the First Military Balloon Corps Organized in South America: The Aeronautic Corps of the Brazilian Army, 1867-1868," Contributed by F. Stansbury Haydon, *Hispanic American Historical Review*, XIX (November, 1939), 504-517.
- Gibbs-Smith, Charles H. *The Aeroplane: An Historical Survey of its Origins and Development*. London, 1960.
- Gibbs-Smith, Charles H. "Father Gusmao: The First Practical Pioneer in Aeronautics," *Journal of the Royal Society of Arts*, XCVII, No. 4803 (September 9, 1949), 822-830.
- Gibbs-Smith, Charles H. *A History of Flying*. London, 1953.
- Green, William and John Fricker. *The Air Forces of the World: Their History, Development and Present Strength*. London, 1958.
- Hager, Alice Rogers. *Frontier by Air: Brazil Takes the Sky Road*. New York, 1942.
- Hager, Alice Rogers. *Wings over the Americas*. New York, 1942.
- Josephson, Matthew. *Empire of the Air: Juan Trippe and the Struggle for World Airways*. New York, 1944.
- Leite, Bertha. "Bartolomeu de Gusmao na Documentacao de Lisboa," *IV Congresso de Historia Nacional*, Instituto Historico e Geografico Brasileiro, XII, Rio de Janeiro, 1951.
- McCann, Frank D., Jr. "Aviation and Diplomacy: The United States and Brazil, 1939-1941," *Inter-American Economic Affairs*, XXI, IV (Spring 1968), 35-50.
- Napoleao, Aluizio. *Santos-Dumont and the Conquest of the Air*. Trans. Luiz Victor Le Cocq D'Oliviera, 11 Vols., Ministry of State for Foreign Affairs of Brazil, Rio de Janeiro, 1945.
- Newton, Wesley P. "Aviation in the Relations of the United States and Latin America, 1916-1929," unpublished Ph.D. dissertation, University of Alabama, 1964.

ABOUT THE AUTHOR

Gary G. Kuhn is Assistant Professor of History at Wisconsin State University, LaCrosse, Wisconsin and has been compiling a manuscript for a book on Latin American aviation for the past several years. Thus his treatise printed here comes from immediate personal experience.

Prof. Kuhn is no stranger to the *Journal*; his first article appeared in Vol. 5, Summer 1960 as "American Aircraft in Uruguayan Colors." 1961 brought "The Northrop YC-125 Raider" (Spring), and five years later, "Aviation Pioneers in Peru and Chile" (Summer, 1966). His introduction to the Society was in Vol. 3, Summer 1958, while still at the University of Minnesota, from which he graduated in 1965.

The foregoing article was delivered as an address to the Joint Session of the A.A.H.S. and the American History Association at Portland, Oregon, in August 1966.

3. OTHER BOOKS AND ARTICLES

- Biedma Regalde, Antonio Maria. *Aerostacion*, Part I, Buenos Aires, 1939.
- Biedma Regalde, Antonio Maria. *La Aeronautica Argentina en el siglo Pasado*. Buenos Aires, 1936.
- Boy, Herbert. *Una Historia con Alas*. 2nd Ed. Bogota, 1963.
- Burden, William A. M. *The Struggle for Airways in Latin America*. New York, 1943.
- Davies, R. E. G. *A History of the World's Airlines*, London, 1964.