

WEST INDIES EXPEDITION SAILS ON SCHOONER

The Museum's West Indies Zoological Expedition began operations in the last week of March with the sailing of Donald Erdman from Puntarenas, Costa Rica, aboard his 37-foot auxiliary schooner, the *Booby*. Mr. Erdman, an ichthyologist formerly on the staff of the United States National Museum, Washington, D. C., is conducting this expedition under a special arrangement with Chicago Natural History Museum. Cruising the Caribbean until some time in August, Mr. Erdman and his shipmates will collect fishes in the waters along the coasts of various Central American countries and islands of the West Indies. His first port was to be Balboa, Panama. Mr. Erdman, who is now a resident of Costa Rica, acts as his own sailing skipper.

A 'BUSMAN'S HOLIDAY' IN SOUTH AMERICA

By BRYAN PATTERSON
CURATOR OF FOSSIL MAMMALS

WHEN a Museum scientist leaves for an extended stay on another continent, those who happen to read about his departure usually visualize him as spending his time in a tropical rain forest, in a desolate, arid region, or in comparable exotic surroundings. Usually he does, but not always. In my own case, I have just returned from a fourteen-month stay in Argentina, all but three weeks of which was devoted to intensive work on fossil mammals contained in museums—exactly the sort of work that I do in Chicago.

The explanation of this does not lie in any aversion on my part to field work—quite the contrary—but in the fact that in regard to the particular problems on which I was engaged the field work had already been done. Thanks to the support of Marshall Field, now First Vice-President of the Museum, the institution conducted a series of paleontological expeditions to Argentina and Bolivia from 1922 to 1927 under the leadership of Elmer S. Riggs, formerly Curator of Paleontology. These expeditions brought back to Chicago a magnificent representation of the fossil mammalian faunas of southern South America that range in age from Eocene to Pleistocene. I joined the Museum staff too late to participate in the fun of collecting the material, but I fell heir to the numerous research problems involved.

HOME WORK IS HARDEST

The year 1927 in which the expeditions closed is a long time ago, measured in terms of a human lifetime, and it may well be asked, "Why the long delay?" The collecting of specimens, although it may involve travel to far corners of the earth, strenuous

work, difficulties and even hardships in the field, is actually the simplest part of museum research work. The more difficult part begins after the collections have reached the museum. First, the specimens have to be put in condition for study, a task that of course varies with the nature of the materials. For fossil vertebrates, this is very laborious and time-consuming. The bones, often fragile and delicate, have to be freed from the surrounding matrix, which is often very hard, and months may be spent on the preparation of a single specimen.

In the case of the collections brought together by the Marshall Field Expeditions, some ten years elapsed before all of the material was prepared for study. With the specimens available, the next step is to determine the species represented. Only after this has been done can the contribution to knowledge represented by collections be accurately assessed and the preparation of detailed reports undertaken. Determination of material may range from a rather simple to a very difficult task. The degree depends directly upon the state of previously published work and the accessibility of adequately determined earlier collections that are pertinent to the new collection under study. If the literature is inadequate and earlier collections are very widely scattered and in large part not properly determined, the difficulties can be enormous. This was the situation confronting anyone who attempted to determine the material obtained by the Marshall Field Expeditions.

A UNIQUE FOSSIL FAUNA

Major collections of South American fossil mammals are contained in more than a dozen institutions in three continents—South America, North America and Europe. The type specimens, that is those on which the descriptions of the species were originally based, are mostly in Argentina. Most of the material contained in North American and European museums has never been compared with these types, and it is not possible to identify specimens with any assurance from the descriptions given in the literature. This is due to special and interesting circumstances. Our knowledge of South American fossil mammals and of the chronology of Cenozoic continental deposits is in very large measure due to two remarkable Argentines, the brothers Florentino and Carlos Ameghino. Between them they brought to light what was in effect a new world of life, the mammals of Tertiary South America, which are completely unlike any occurring elsewhere in the world.

The greater part of the work the Ameghinos accomplished over half a century ago was carried on without any official support. Florentino operated a small stationery store, and on the slender profits from this supported himself and financed Carlos in a long series of collecting expeditions in Patagonia, then among the least-known regions of the

world. Patagonia is one of the world's great fossil fields and the Ameghinos were the first to explore it. The new and fascinating specimens discovered in a constant stream by Carlos were rapidly described by Florentino, who, working early and late, could barely manage to keep abreast of the flood. The preparation of detailed, properly illustrated monographs was obviously impossible under such conditions, and the legacy left to posterity by Florentino, who died at the relatively early age of 56, consists in large part of a long series of papers containing brief, unillustrated diagnoses of new forms. Without access to the specimens on which they were based, the great majority of these diagnoses cannot be utilized for purposes of identification, nor can the validity of the numerous species proposed be determined. The Ameghino Collection was, of course, private property. After Florentino's death, it was boxed up to remain relatively inaccessible until the early 1930's, when it was purchased by the Argentine government and placed in the Museo Argentino de Ciencias Naturales. Due to these various difficulties, few of the collections of South American fossil mammals contained in North American and European museums are adequately determined.

TWO FOUNDATIONS GIVE AID

In 1938, thanks to the grant of a Carnegie Corporation grant-in-aid for travel from the American Association of Museums, I was able to visit France and England and to examine South American fossils in Paris and London. This solved certain problems, but on the other hand made it even more evident that only an examination of the Ameghino Collection would suffice for complete identification of the Marshall Field collections. I had hoped to do this in the early 1940's, but the war years and other work that had come up in the meantime intervened. In 1951, however, through the award of a John Simon Guggenheim Memorial Foundation Fellowship, it was at last possible to make the long deferred journey to South America and to examine the Ameghino and other collections contained in the excellent museums of Argentina. Every possible facility for work was afforded me while there, and amid such pleasant surroundings and with so much of interest to examine, the months passed by like weeks. Nearly every question that had been insoluble at long range proved capable of solution with the original types at hand. It is now possible, twenty-five years after they were collected, to begin the final phase of work on our South American fossil mammals.

Visiting Hours Change May 1

Beginning May 1, summer visiting hours, 9 A.M. to 6 P.M., will go into effect, continuing until September 7 (Labor Day).



Sanborn, Colin Campbell. 1953. "A 'Busman's Holiday' in South America." *Bulletin* 24(5), 4-4.

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