

MAMMALS

H. E. ANTHONY, Curator

In building up a museum department there are three main phases of activity which must be considered. These are so fundamental that a neglect of any one of them cripples a department and renders it inefficient.

**Building Up
a Department**

The first of these activities is the collection and careful custody of specimens, the raw material that serves as the foundation for all subsequent work in the department. The second activity is the identification, study, and publication of all research based upon this material which is of sufficient importance to justify the outlay of time and money. The third activity, and from the point of view of the general public the most important, is the creation of exhibits which are true to fact, interesting, and instructive. Each of these activities is closely dependent upon the others for the fullest expression, and every year plans are made in the Department of Mammals with this end in view, that the departmental resources may be strengthened in collections, exhibitions and publications. Not infrequently one phase of activity outruns another, but before this condition has resulted in uneven development it is advisable to plan for a readjustment and catch up in the neglected quarters.

During 1927, the greatest activity has taken place in collection and exhibition. So many of the departmental personnel have been in the field that work on publications has dropped behind in consequence. Although shortage of museum funds prevented the planning of expeditions financed by the department, generous outside support from friends of the Museum made possible several very important undertakings and the accession of much valuable material for the collections.

The Taylor Sudan Expedition returned to New York on June 14, after an absence of nearly seven months. This expedition was entirely financed by Mr. Irving K. Taylor, who generously donated to the Museum everything taken on the trip. Curator H. E. Anthony accompanied Mr. Taylor as the Museum naturalist.

The party covered an extensive itinerary in the Anglo-Egyptian

Sudan, traveling about 4,000 miles during the time they were in this region. The principal objects of the trip were the collecting of specimens of mammals, birds, fishes, and reptiles, and in this the expedition was very successful. More than 250 mammals, 500 birds, hundreds of fishes, and a small collection of reptiles were brought back to the Museum. In addition, important photographic results were obtained, both motion pictures and still.

The work in the Sudan was divided into three principal stages. Outfitting at Khartoum, Messrs. Taylor and Anthony took two native sailing craft—nuggers—and spent a month working south along the White Nile, stopping to collect on either bank wherever conditions were favorable. Most of this time was spent in building up series of birds and small mammals.

On February 15, the expedition took over a charter on the "Beatrice," a Nile shooting steamer, and for the next six weeks the main emphasis was laid upon larger mammals. Steaming south from Khartoum up the White Nile, no stop was made for collecting until the Bahr-el-Ghazal was reached. From there southward to Mongalla the boat tied up wherever game was plentiful, and splendid series of large mammals, such as Buffalo, Nile Lechwe, White-eared Cob, Waterbuck, Tiang, Roan, Gazelles, etc., were secured. Some of this material will be used for exhibition purposes, and work has been started on groups of Lechwe and White-eared Cob. Although 1927 was a year of high Nile and the tall grass was too green to burn, resulting in far more cover than during normal years, the expedition was fortunate in securing a representation of all the species for which the trip was particularly planned.

At the conclusion of the collecting on the Nile, the party moved into the Red Sea Provinces and made a trip into the Red Sea Hills, especially for the Nubian Ibex. Here four good specimens of Ibex were taken, as well as other desirable species of that dry region, such as Wart-hog, Dorcas Gazelle, and Ariel.

The expedition awaited a homeward-bound steamer at Port Sudan on the Red Sea and improved the interval by collecting the brilliantly colored shallow-water fishes about the harbor. A great number of these were brought back as specimens.

The Morden-Clark Expedition, which was in Asia at the time of the last annual report, returned to the Museum in February,

1927. As has been previously reported, the purpose of this expedition was to secure specimens of the large mammals of the Pamirs, the Thian Shan Mountains, and of Central Asia in general, with especial regard to a series of the largest of all sheep, *Ovis poli*. After traversing an itinerary of 7,800 miles, during which the transportation facilities varied from horses, camels, and coolies to motors and railroads, the expedition eventually achieved its purpose. Mr. William J. Morden planned and financed this expedition and acted as leader of the party, and Mr. James L. Clark, Assistant Director of the Museum, was the museum representative.

The expedition left the United States January 30, 1926, and two months later set out from Srinagar, Kashmir. The Russian Pamirs were entered by way of the Gilgit-Hunza route, the expedition being the first granted the privilege of transporting full equipment over the difficult passage. In the Pamirs, twenty-seven specimens of the spectacular Marco Polo sheep (*Ovis poli*) were obtained in a month's strenuous hunting at altitudes averaging 15,000 feet. Owing to the unusually early season in which the expedition reached the hunting grounds, they were able to obtain *Ovis poli* in their winter coats.

The Thian Shan Mountains were next visited. Here, in about two months' collecting, a splendid series of Ibex and Roe Deer were secured, and data were taken from which groups could later be constructed.

At Urumchi, the capital of Chinese Turkestan, the expedition re-outfitted and left October 16 for Kuchengtze, where camel transport was taken for the journey to Mongolia. Outer Mongolia was entered November 1, but six weeks later a band of suspicious and unfriendly Mongol soldiers captured Mr. Morden and Mr. Clark. For two days they were tortured and kept tied to a post in weather below zero. After enduring unusual hardships, they were released and late in December reached the Trans-Siberian Railroad, whence they proceeded to Peking, arriving there January 1, 1927, just nine months after leaving Kashmir.

The expedition returned with not only a fine series of skins, complete skeletons, and full scientific measurements of the large game of the country which they visited, but a complete record of the trip in motion pictures, still photographs, and field notes.

Through the generosity of Mr. Childs Frick, Mr. George G. Goodwin, assistant in the Department, continued the field work in the Gaspé Peninsula begun in 1923. Mr. Goodwin spent six weeks with Mr. Frick in the valley of the Cascapedia River and brought back a valuable collection of 350 specimens of mammals which includes rare species of Shrews and Voles.

An expedition from which much is expected left New York early in July to explore the region about Mt. Roraima in British Guiana. This expedition, known as the Lee Garnett Day Roraima Expedition, is in charge of Mr. G. H. H. Tate, who is accompanied by Mr. T. D. Carter, both of the Department of Mammals. Geoffrey Tate went with the party as a volunteer assistant. The biological exploration of the Roraima sector is one of the most important pieces of South American work upon which this Museum could be engaged, and the department is especially fortunate in having the interested coöperation of Mr. Lee Garnett Day whose financial support alone has made the expedition possible. Communications from the field have informed the Museum that the party has successfully penetrated to Roraima. The itinerary was by way of the Amazon to Manaus, thence north along the Rio Branco to the limit of launch navigation, and from there on by means of canoes and Indian porters. Due to the customary delays, it was some weeks after leaving Manaus before the final objective was reached, but specimens have been collected en route and the time has not been lost.

The especial importance of Roraima as a focus of zoological interest lies in the fact that it is the highest plateau in north-eastern South America and represents a remnant of a former elevated area which undoubtedly had a fauna more or less peculiar to it and with elements found today only in the Andes far to the west. The Museum expedition spent some days on the summit of Roraima, and although the word received from the party has been only fragmentary, there is reason to believe that collections of great scientific value will be brought out.

A less promising part of the word received told of widespread forest fires of several seasons previous which had wiped out most, if not all, of the primeval forest about the foot of Roraima, a fact that may interfere with the securing of a complete collection in that particular section. The expedition is expected to return early in 1928.

Valuable additions to the collections have come in during the year from the Olalla Brothers, working for this Department and the Department of Birds, on the Ucayali and other tributaries of the Upper Amazon River, and from Mr. A. W. Anthony in Guatemala.

Some valuable specimens of Alaskan mammals have been donated to the department by Mr. Van Campen Heilner, Field Representative of the Department of Ichthyology. **Gifts** Mr. Heilner made a trip to King Cove on the Alaskan Peninsula after the Big Alaska Brown Bear, *Ursus gyas*, and was successful in securing four animals, a good-sized male, a female, and two young. Measurements were taken, skeletons saved, and data collected for the possible use of this material in an Alaska Bear Group. Mr. Heilner also donated a splendid head of Grant's Caribou, *Rangifer granti*, which has horns of record size.

A very fine collection of 105 heads and horns was presented to the Museum by Mr. Norman de R. Whitehouse. The trophies are from animals shot by his father, the late Mr. J. Henry Whitehouse, and represent many successful hunting trips into almost all parts of the world. Many of the heads are of rare species, and some are unusually large specimens, especially an Indian Buffalo which was listed by Rowland Ward in 1922 as the second largest on record. The gift was received with the understanding that the Museum had the privilege to dispose of any specimens which could not be placed on exhibition here, and thirty-two of the best heads were donated by the Museum to the National Collection of Heads and Horns of the New York Zoological Society in Bronx Park, where they will be displayed with labels telling their history.

The needs of exhibition have received considerable attention during 1927. Plans of far-reaching scope have been formulated and set in train, and work has been directed along **Exhibition** lines already laid out.

In the *Hall of South Asiatic Mammals* noticeable progress has been made. Some seven groups of mammals are being withdrawn temporarily from the Southeast Wing and installed in glass cases on the Third Floor, West Corridor. The species being placed in cases are the Black Buck, Thamin, Chital, Sambar Deer,

Marsh Deer, Nilgai, and Sumatran Rhinoceros. This provides for the groups in question a safe method of storage while it also allows many of the Asiatic mammals to be placed on public exhibition. Of even more importance, however, is the fact that the *Hall of South Asiatic Mammals* is freed for the time being of seven groups and the Department of Preparation has the space to begin the erection of large background cases and the permanent construction which must be completed before this hall is finally ready for opening to the public. The larger mammals mounted and now ready for installation include Indian Elephant, Gaur, Indian Buffalo, Indian Rhinoceros, and Tiger.

Mr. Arthur S. Vernay, who has displayed such a keen interest in the development of this hall, and who, with Colonel Faunthorpe, has undertaken to collect all the necessary groups of South Asiatic mammals, has placed the Museum yet more deeply in his debt by setting forth for Asia once more to secure desiderata. The prize which he wishes to add to the hall is the Sonda Rhinoceros, *Rhinoceros sondaicus*, becoming very rare and threatened soon with extinction. Mr. Vernay believes he has information which will allow him to collect this scarce mammal, which, if he does, will make the American Museum collection of Asiatic Rhinoceroses complete.

Mr. Vernay has taken with him Mr. A. E. Butler and Mr. Clarence C. Rosenkranz of the Department of Preparation, with the plan to secure background studies and accessory material for the groups of Asiatic mammals. When these preparators return, they will stop at Angola to make similar studies for the magnificent group of Giant Sable Antelope which Mr. Vernay has so generously donated to the African Hall.

With all this activity on the *Hall of South Asiatic Mammals*, it is expected that the hall will soon reach the stage where the final, finished product is in sight. The necessary structural changes in the *Hall of North Asiatic Mammals* have been started, and the high dome of the hall is being erected.

The plans for the new *Hall of African Mammals* have been taken over by Mr. Daniel E. Pomeroy since the passing of Mr. Carl E. Akeley. Although a great deal has been done on this

proposed new hall, the lack of a building and of sufficient space to press forward with the active mounting of material has dictated a policy of anticipation and preparation rather than consummation.

Small-scale models of groups for the *African Hall* have been made for about half the space involved and work has been begun on several of the large groups. The following habitat groups are now under way: Buffalo Group, Waterhole Group, and Giant Sable Group.

In the *Hall of Ocean Life* installation of exhibits has gone forward during the year in the hanging of cetacean skeletons and models. Plans for the construction of a group of Pacific Walrus have also reached a definite stage, and material will be collected in 1928. A detailed account of changes in this hall, as well as in the *Hall of Primates*, is given in the report of the Honorary Director.

Mr. William J. Morden, Field Associate in this department, has written an interesting and valuable account of the experiences on the Morden-Clark Expedition, entitled "Across Asia's Snows and Deserts," published by G. P. Putnam's Sons.

Other publications of the year include an article in *Natural History* and one in the *New York Zoological Society Bulletin* by H. E. Anthony; and three papers in *Novitates*, based upon the mammals of the Asiatic expeditions, have been written by Dr. G. M. Allen of the Museum of Comparative Zoology, Cambridge, Massachusetts.

- BUBU, JAMES H., Rochester, New York.
 1 Jumping mouse (*Zapus hudsonius*); Rochester, New York.
- CANADIAN GOVERNMENT, Ottawa, Canada. (Through Prof. Wm. Rowan).
 Skin and skeleton of adult male wood bison.
- DRUMMOND, DR. I. Wyman, New York City.
 1 Belgian sheep dog, Ghent; Montreal, Canada.
- GEISLER, M., Bird Company, New York City.
 1 Sun bear.
- GOODWIN, GEORGE G., New York City.
 8 Cave rats, 7 small mammals; West Point, New York.
- HASSLER, W. G., New York City.
 1 Grey squirrel; New York City.
- JOSEPH, ELLIS S., New York City.
 2 Binturong, 1 Blesbok, 1 Patagonian cavy, 1 Panda, 1 Puma.
- MCINTOSH, WARD, New York City.
 1 Small monkey.
- MARIA, BROTHER NICÉFORO, Colombia, South America.
 13 Small mammals, skins and skulls; South America.
- METCALF, JESSE, New York City.
 Skins and skeletons of 3 Mediterranean seals.
- MILLER, W. DEW., New York City.
 1 New York weasel; Collier's Mills, New Jersey.
- MINIONE, MRS. MILDRED, New York City.
 Hoary bat (*Nycteris cinerea*); New York City.
- MORDEN, WM. J., Chicago, Illinois.
 1 Antelope; Wyoming.
- MURPHY, DR. ROBERT C., New York City.
 15 Gray squirrels; New York.
- NEW YORK ZOOLOGICAL SOCIETY.
 1 Tailed agouti, 1 sable antelope, 2 armadillos, 1 galada baboon, 1 badger, 1 brown bat, 1 black bear, 1 polar bear cub, 1 American bison, 1 bison calf, 1 camel, 1 cebus, 2 cheeta, 1 coati, 3 ferrets, 1 swift fox, 1 young red fox, 1 genet, 1 gerbille, 1 young giraffe, 1 red river hog, 1 wart hog, 1 kangaroo, 1 lynx, 1 Canadian lynx, 1 Indian martin, 1 mink, 2 monkeys, 1 langur monkey, 1 mouflon, 1 opossum, 1 murine opossum, 1 aoudad, 1 paradoxure, 1 puma, 1 rat, 1 skunk, 1 suricata, 2 tahr, 1 tiger, 1 South American wild dog, 1 albino woodchuck, 1 zebra.
- OBRIEN, MASTER THEODORE, New York City.
 1 Gray squirrel, Central Park.
- OTTO, COMMANDER E. F., City Island, New York.
 1 Black fish (*Globicephalus*); Orchard Beach, New York.
- PARKS, DEPARTMENT OF, New York City.
 1 Leopard, 1 Wallaroo.
- POWELL, WALDO, Fairy Cave, Missouri.
 1 Bat; Fairy Cave, Missouri.
- POWERS, DR. LILLIAN D., New York City.
 1 Squirrel (*Sciurus adolphei dorsalis*); Central America.
- PULITZER, RALPH, New York City.
 1 Black rhinoceros skull; Tanganyika, Africa.
- PYNE, MEREDITH, New York City.
 Skin and horns of black rhinoceros; Kenya Colony, East Africa.
- RICHARDS, MRS. WILLIAM A., Huntington, Long Island.
 1 Thoroughbred bulldog, male; \$50 towards cost of mounting.