ence, Italy, left on January 20 for two months of exploration in the central highlands of Guatemala. The expedition will be joined by Brando Barringer and Reginald Jacobs, of Philadelphia, who will make the round trip by airplane. Lake Atitlan is high set among the mountains, with a known depth of more than 1,000 feet. With a specially constructed wire trap lowered by reel, Mr. de Schauensee, who is one of the curators in the department of vertebrate zoology of the academy, will seek to secure additions to the few species of fishes now recorded from this body of water, which may be much deeper than it now is believed. The expedition has permits to collect rare orchids which are found in that part of the country.

DISCUSSION

THE WHITNEY SOUTH SEA EXPEDITION

THE work of the American Museum's Whitney South Sea Expedition in collecting birds in the New Zealand region from December, 1925, to April, 1926, for unexplained reasons has aroused much unwarranted criticism. The charges brought against us are so often untrue or admittedly based on hearsay that they have seemed to us to be unworthy of attention, but they continue to be made and, in some instances, to involve other American museums. It seems desirable, therefore, that we should reply to those which are sufficiently definite to make a reply possible. It is remarkable that in no single instance have these charges been made direct to the American Museum. If they had been, we should have replied to them at once. We have nothing to conceal, and if excess of zeal should have led our collector to violate the ethics of his profession, we should be among the first to admit and to regret it. But invariably these accusations have reached us through a third or fourth person or in some publication. For this reason, as well as from the nature of some of the criticisms, we conclude that neither the affiliations nor the objects of the Whitney Expedition are known to those who have attacked it. They should, therefore, be stated before these attacks are replied to.

In 1920 the American Museum of Natural History of New York City, under a fund provided by the late Harry Payne Whitney, inaugurated an ornithological survey of the islands of the Pacific. This was designed to include a comprehensive view of the avifauna as a whole and an intensive study of the birds of all the more important islands, the whole being intended to help solve the problems connected with the origin and development of insular faunas. The field work was entrusted to Rollo H. Beck, a leader among American bird collectors, who from 1913 to 1917 had served the museum with marked success on the coasts of South America and in the West Indies.

Mr. Beck began his labors at Papeete in 1920 and, in command of the 75-foot Tahitian schooner *France,* continued as the leader of the expedition until 1928, making what is doubtless the longest ornithological voyage in history. During this period he secured in the aggregate a large number of specimens, but when it is remembered that he visited not less than 600 islands and islets, and over 1,000 localities, it will be realized that the number secured at each station is not in excess of the needs of science. And we add, with all possible emphasis, that in no case has our work endangered the existence of a species or materially affected its numbers. It should also be remembered that while Old World museums are often well supplied with birds from the area visited, American museums were usually without them. Contained in our collections, they are now available to our sister museums.

Thus far 44 papers have been published on the work of the Whitney Expedition. They mark merely the beginning of researches which are now being conducted by an associate curator who has been placed on our staff especially to study the Whitney Expedition collections. Attention should also be called to the fact that the success of the expedition induced its patron to offer to the City of New York the sum of $750,000 if it would appropriate an equal amount for the construction of an addition to the museum to be devoted exclusively to the museum's department of birds. This building, known as the Whitney Wing, is now completed and will be occupied during the coming year. One entire floor in it will be given to habitat groups illustrating the bird-life of the Pacific. At this moment an expedition on the yacht *Zaca,* under the command of its owner, Mr. Templeton Crocker, is making studies and securing accessories for these exhibits.

It is also pertinent to state that after Mr. Whitney's death his wife and children purchased and presented to the American Museum, in his memory, the unique Rothschild collection of birds. It may, therefore, be said that directly and indirectly the Whitney South Sea Expedition is one of the most notable undertakings in the annals of ornithology.

I turn now to the charges that have been made against this expedition. They are usually so unfounded or seem to us to be so trivial that if they did not, in some instances, reflect on other American museums we should not feel justified in asking space in which to reply to them.

Thus, for example, in a pamphlet issued by the

New Zealand Bird Protection Society in 1926 (p. 4), it is said "we understand at least two museums are interested in the present [Whitney] Expedition and that there are more to follow, so the matter better be threshed out at once as to whether the authorities are to be permitted to thus distribute the people's heritage to foreigners." Various references are also made to the "monetary value" of the specimens collected, to the institutions in America backing the expedition.

In a letter from England to Dr. Henry B. Ward, permanent secretary of the American Association for the Advancement of Science, Beck is referred to as a "dealer" in bird skins. The truth is that the American Museum is solely responsible for the Whitney Expedition and that, with the exception of certain specimens given to government authorities, and in one case to an artist, all the specimens collected by the expedition were sent to the American Museum.

The character of much of the criticism directed toward the expedition is reflected in the following communication:

"Have you heard Sydney Porter's story of the American Whitney expedition which has been going around all the islands in the South Seas where there are very rare birds and wiping them right out to provide specimens for the countless American museums? He says they have exterminated the Antipodes Island Parrakeet and flightless snipe, the Norfolk Island Parrakeet, the Masked Parrakeet (they killed 18 and none have been seen wild since), the Fijian aureocinctus lorikeet and the lovely blue lorikeets I hoped one day to be able to afford to send a collector to obtain a few live pairs of! I hope there may be some exaggeration, but I fear it is all too likely, as one knows what American collectors are. I think, anyhow, we should let American ornithologists know our unvarnished opinion of the whole business if anything of the kind has really happened. If they were afraid of the birds dying out before enough museum specimens had been secured, if they had caught a few pairs of the parrakeets *alive* they could have bred them in the wonderful California climate, got all the specimens they wanted, and saved the species as well." (April 2, 1934.)

Evidently we have here the source on which the Marquess of Tavistock based his attack on the Whitney Expedition published in *The Auk* for July, 1934. The same issue of that magazine contained my reply to him and as briefly as possible, therefore, I state here that of the Antipodes parrakeet (*Cyanorhamphus unicolor*) we collected 2 specimens, of the snipe (*Coenocorypha aucklandica tristrami*), 2, of the Norfolk Island parrakeet (*Cyanorhamphus verticalis*), 2; of the Fijian parrakeet (*Charmosynopsis aureocincta*), 12, of the masked parrakeet, 26, and of the very common, widely distributed blue lorikeet (*Vini peruvianus*), a representative series from 8 islands.

It should be admitted that the number of masked parrakeets secured is in excess of our needs. However, Vitu Levu, the island it inhabits, is larger than southeastern England and the greater part of it is still unexplored. The fact that in a brief visit Beck could have secured so large a series of this forest-inhabiting species is evidence of its abundance, while the restriction of his labors to a limited part of its range indicates that he could not have seriously affected its numbers.

The suggestion that we breed parrakeets and thereby base our studies of geographical variation and insular evolution on aviary specimens merely demonstrates its maker's ignorance of the requirements of science.

I append now serially other charges together with our replies to them:

(1) "When the Expedition arrived in New Zealand waters, instead of making straight for Auckland or Wellington to ask for permission to collect birds, they delayed their arrival, staying in the Hauraki Gulf and collecting birds on the island sanctuaries, the homes of the rarest of the New Zealand birds, where one may not even land without permission from the Government. Previous to this they collected in the Chatham Islands, where all the birds are protected by the New Zealand Government."

This is untrue. The expedition arrived in New Zealand in December, 1925, and no collecting was done there until December 17, the date on which our permit was issued. Chatham Island was not visited until March 4, 1926, nearly three months later. No collecting was done in the Hauraki Gulf or its sanctuaries.

(2) It has been said that in many instances Beck collected more specimens than his permit allowed.

This is unfortunately true of his work on Chatham Island. There our permit granted permission to take four specimens each of *Hapolorhyncus albofrontatus, Petroica macrocephala* and *Rhipidura flabellifera,* and the expedition secured eight, nine and eight specimens, respectively, of these species. It should be recalled, however, that when several members of an expedition take to the field independently they can not be acquainted with one another's doings until they return to headquarters. While no individual, therefore, may exceed the prescribed number of a given species, their work as a whole may do so. As evidence that in the aggregate the expedition's activities on Chatham Island did not make excessive demands on its bird-life, it should be stated that while our permit allowed us 44 specimens of 9 land birds, we collected but 38. It should be added that specimens of the "excess" species were presented by Beck to the

New Zealand Dominion Museum from which we hold due acknowledgment.

(3) "The ship landed at the Antipodes and did great slaughter, especially among the Royal Albatrosses (*Diomedea epomophora*) which at that time were nesting. Many times the dinghy (the small boat from the ship) was so loaded with bodies that it almost sank" (letter to Dr. Ward).

This statement is exaggerated. Beck collected 17 specimens of the royal albatross, not at Antipodes but at the Chathams and in surrounding waters. Two of these have been given to the Cleveland Museum, two to the Museum of Comparative Zoölogy in Cambridge, two to the Bishop Museum in Honolulu and one to the Royal Zoological Museum in Stockholm, leaving ten in the American Museum, not an excessive number of an abundant species.

(4) "I also met someone in Norfolk Island who was residing there when the Expedition called, and he said that the Norfolk Island Parrakeet (*C. cooki* = *C. verticalis*) which was at that time common was almost wiped out and only during this last year or two have any been seen. This also happened to the Norfolk Island Robin" (letter to Dr. Ward).

The expedition secured two specimens of the parrakeet, as stated above, and 15 of the robin, a common species.

(5) "Numbers of skins of the nearly extinct Sand Plover (*Thinornis novaeseelandiae*) were obtained and also the skins of other very rare birds" (letter to Dr. Ward).

Our permit allowed us to collect 10 specimens of this plover; Beck took but six.

(6) "The Expedition, however, raided the Kermedecs without asking any permission. . . ." "A permit was obtained and they sallied forth raiding our islands, with the result we found some rare birds were exterminated, such as the Antipodes Parrakeet" (letter of E. V. Sanderson, Hon. Secy N. Z. Native Bird Protection Society to International Wild Life Protection Society, Cambridge, Mass.).

It is true that Beck landed on the Kermedecs before he had received his collecting permit. He passed these islands on his voyage from Fiji to New Zealand, from which they are distant about 600 miles. To have visited New Zealand first and then returned to the Kermedecs would therefore have added 1,200 miles to his journey. He was now so far south of the latitudes in which his vessel was built to cruise that every day added to the length of his journey increased its risks. He can perhaps, therefore, be excused if he made his collections in advance of the permit that was subsequently granted him. Beck's "raid" on the Kermedecs consisted in collecting 27 specimens of land-birds, none of them representing rare species.

Of the Antipodes parrakeet, as already stated, Beck collected 2 specimens. Since his visit to the island in 1926, Oliver ("New Zealand Birds," 1930) writes that this species is common there. Mr. Sanderson's charge that Beck exterminated this bird is evidently, therefore, unfounded.

This covers the more tangible charges of which we are aware. I am confident that if our critics had been more accurately informed of the results of our labors and more fully acquainted with our objectives, they would have been more discriminating in their accusations.

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NOVEMBER 20, 1934

THE WESTERN INVASION OF SAMIA CECROPIA

THE Cecropia moth is one of the most familiar insects of the United States, native from Canada to Florida, and west to Nebraska. When Packard's memoir on the Saturniidae was published (1914), it was not known in Colorado, that region being occupied by another species, *Samia gloveri,* which could be found from the foothills to the high mountains, and was common. When "The Zoology of Colorado" was published (1927) *S. cecropia* had invaded the eastern plains of that state, and was reported to be destructive in orchards. Soon after, it began to appear in other parts of Colorado, and now it is abundant at Boulder, as indicated by the numerous specimens brought to the university each summer. Since *S. cecropia* came in, I have not seen a single *S. gloveri.* The last actual date I have for *S. gloveri* is Estes Park, 1917, collected by Mrs. R. S. Tallant. I presume that *S. gloveri* still exists in the mountains, but it seems to have disappeared where *S. cecropia* has appeared. The specimens of *S. cecropia* do not appear to be hybrids, or at any rate are distinctly *S. cecropia* and not *S. gloveri.* It is probable that *S. cecropia* is twice or three times as abundant as *S. gloveri* ever was, but even so, it leaves plenty of room and plenty of food for the latter species.

Mr. Walter R. Sweadner, of the University of Pittsburgh, has just published (*Entomological News,* November, 1934) a very interesting article which seems to throw important light on this problem. He found, in Montana, that *S. cecropia* would mate with *S. gloveri* in a state of nature, and he even observed a male *S. gloveri* mated with a female *S. cecropia,* while a female *S. gloveri* a few feet away remained unmated. Raising various *Samia* hybrids, he found that the females were sterile, but the males would mate with one of the parent species and produce healthy offspring. Now it would seem that if *S. cecropia* invades the territory of *S. gloveri,* and is two or three