

At Highland Light I found the hoary bat less active and irregular in its movements than the red bat. Its large and comparatively steady flight made it easier to shoot than either of the two smaller species with which it was associated. It began to fly immediately after sunset. In the Adirondacks Dr. C. Hart Merriam found the hoary bat a late flyer, and an exceeding difficult animal to kill on account of its swift, irregular motions.\* It is possible that while on Cape Cod the animal modifies its habits on account of the unusual surroundings in which it finds itself. The fatigue of a long migration might also have an appreciable effect on a bat's activity.

*Lasionycteris noctivagans* (SILVER-HAIRED BAT).

September 1, 1890. One silver-haired bat taken.

September 2, 1890. Four taken and perhaps a dozen others seen.

The silver-haired bat was not seen again during 1890.

September 10, 1891. Three shot and probably half a dozen others seen. They were mostly flying north.

September 11, 1891. Two shot and four or five more seen.

September 12, 1891. About a dozen bats seen. Some were without doubt this species, but just what proportion I could not tell.

While September 12th is the latest date at which I have seen *Lasionycteris noctivagans* at Highland Light, I have a specimen killed there by Mr. W. M. Small on October 28, 1889.

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ZOOLOGICAL NOTES.

MUSEUMS AND SCIENCE.

THE recently published report of the 1896 meeting of the Museums Association of Great Britain shows how much interest is taken and thought bestowed in rendering

\* Trans. Linn. Soc. New York, II, p. 78-83. 1884.

museums instructive and attractive to the public. The most interesting of the eleven papers read, however, is one from the sharp-pointed pen of Mr. F. A. Bather, dealing with the scientific rather than the popular side of museums, and entitled 'How May Museums Best Retard the Advance of Science?' Chief among these is "that jealousy with which a museum curator should guard the precious specimens entrusted to his care, forbidding the profane hands of the mere anatomist ever to disturb them in their holy rest." This is a well-aimed shaft, for specimens have no value save for the information to be extracted from them, and yet, in too many cases, they are regarded as fetishes and, like *Spirula* and *Notoryctes*, carefully bottled up with the probability that they will eventually go to pieces without yielding up any information. Another point on which Mr. Bather dwells at some length is the "idea of keeping certain collections separate according as they happen to have belonged to some person with a lengthy name \* \* \* or to have been presented by some individual who laid it down in his will that his specimens were to be known for all eternity as the 'Peter Smith Collection.'" This is a matter that was touched on by Dr. Goode in his principles of Museum Administration, and, as he says, "the acceptance of any collection, no matter how important, encumbered by conditions, is a serious matter, since no one can foresee how much these conditions may interfere with the future development of the museum." Fortunately, the bequests received by the larger museums of the United States are practically unhampered. Other methods of impeding the progress of science are noticed, such as striking dullness through the hearts of thousands by funeral rows of stuffed birds with their melancholy Latin names, and, as Mr. Bather says, much may be done if a museum will keep its material carefully to itself. On the question of

loaning specimens Mr. Bather dwells lightly, owing to his connection with the British Museum, whose policy in this respect is well known. Here, again, we in this country are fortunate, as most specimens, even types, may be borrowed by workers in museums and some knotty problems thereby unravelled, but the main propositions in the paper demand a careful consideration. Finally, Mr. Bather seems to use the term type a little vaguely, as one does not feel quite sure whether he means type or typical material. There can be but one type, or one series of specimens collectively forming a type, and no museum can afford to permanently part with these. Typical specimens are quite another matter, and the more distributed the better.

#### A DOG OF THE ANCIENT PUEBLOS.

AMONG the many objects obtained by Dr. Fewkes last summer from the ruined pueblo of Chaves Pass, Arizona, is the cranium of a domesticated dog, found in a grave with a human skeleton. Although the mere fact of a dog being discovered under such circumstances is in itself interesting, it is not at first sight remarkable, since it is well known that in America, as elsewhere, the dog was domesticated at an early date, and Clavijero mentions an ancient dog which he calls "a quadruped of the country of Cibola, similar in form to a mastiff, which the Indians employ to carry burdens." Aside from the fact that this is the first dog's cranium discovered by Dr. Fewkes, there are some points of special interest in the present case. Most of the Indian dogs are more or less wolfish in their aspect, and have long skulls with comparatively low foreheads, thus showing a small degree of specialization in the way of breed, and this is true of such of the mummied dogs of Egypt as I have seen. The cranium of the Chaves dog, on the contrary, is of the broad-faced type, with high forehead, and,

curiously enough, is precisely similar in size and proportions to the cranium of an Eskimo dog from Cumberland Sound, the resemblance extending to the peculiar concavity and squareness of the nasal region. While this is an interesting coincidence, it is not brought forward as implying community of origin, but as instancing long domestication in order that so well-marked a breed could be established. A curious confirmation of the early origin of this breed was received from San Marcos, Texas, where, in excavating for ponds, at the station of the U. S. Fish Commission, a human skeleton and bones of other animals were found in a layer containing many flint implements, overlaid by two feet of black soil. The bones were those of existing species, including teeth of several bison, and there was also a fragment of a dog's skull similar in size and proportions to that obtained at Chaves Pass. Owing to the circumstances under which the bones were exhumed it is not known whether or not the dog and man were found together. While none of the bones were mineralized, the condition under which they were found, and the character of the human cranium, showed them to be of very considerable age.

Dr. Fewkes states that the skulls of carnivores are used in Hopi religious ceremonies and that the skull, paws, etc., are regarded as powerful fetishes of warriors and cherished by them with much care. It is customary to bury a priests' fetishes with him, and there is little doubt that the dog's cranium from Chaves Pass was a fetish of the man in whose grave it was found. As Dr. Fewkes believes that the people of the Chaves Pass ruin formerly lived far south, in contact with Nahuatl peoples, it can readily be seen how a dog's skull came to be part of the ceremonial outfit of the priest in whose grave it was found.

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