

XV. THE UNIVERSITY OF OKLAHOMA MUSEUM OF ZOOLOGY EXPEDITION OF 1925.*

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The primary purpose of a state university natural history museum should be to advance scientific knowledge concerning the biota of its own state. It should very strongly emphasize the research phase of museum work; popular instruction which is so much in evidence in municipal and large national or privately endowed institutions and which is their most important function should be secondary in a university museum. This does not mean at all that popular instruction of the public through the several possible methods be neglected, nor is the exhibition side of museum work to suffer. A definite program of instruction through the public schools of the state and in the museum building itself should be carefully planned and carried out as soon as possible.

The exhibits of a modern museum do not consist of a series of stuffed animals placed so as merely to attract attention, but consist rather of habitat groups which really teach. These groups are so built that they show the animals in their natural surroundings doing the things that they naturally do. It may be a family of adults and young of the same species of animal or it may be several kinds of animals which are normally found in the same habitat. In this way, the most may be learned in a museum about any animal. Of course it is necessary for university teaching to have, in addition, a well arranged synoptic or systematic series representing the several animal phyla, as well as the smaller groups of the animal kingdom, showing to the best advantage their distinguishing characteristics.

Most of the biological problems of any state are attacked at the state university. It is then the business of the university museum to possess the material necessary for the solving of such problems. The larger and more representative this collection of state material, the better the work that can be done with the aid of it, and the greater the number of advanced students that will be attracted by it. There is, however, no good reason for any university museum (except those of the largest institutions of

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the country) to try to obtain huge series of animals and plants, world-wide in scope. It should rather assemble the best possible collections of *state* animals and plants. The state university museum because of its location is better fitted to gather such representative collections from its own state than is any other museum. In the case of Oklahoma, the museum is of the greatest importance in that it is the only one having zoological collections of any size between Kansas and the Pacific coast. Hence its geographic position is strategic and it is highly important that these collections be built up as rapidly as possible.

With these aims in view the University of Oklahoma Museum of Zoology sent an expedition into southeastern Oklahoma during the summer of 1925 to procure a representative collection of the vertebrates of that region. The party consisted of three students in charge of the author, and Mrs. Ortenburger. There are probably few sections of the United States where as little collecting has been done as in Oklahoma; and, with the possible exception of the panhandle region, the least collecting has been done in the southeastern counties of the State. For this reason and because this section is more or less burned over nearly every year, it was decided to work there first.

Seven main camping places were selected; they were as follows: (1) 18 miles southwest of Wister, Le Flore County; (2) the Broken Bow region, McCurtain County; (3) 10 miles southeast of Broken Bow on Mountain Fork River, McCurtain County; (4) 1 to 4 miles west of the Arkansas-Oklahoma line on the Red River, McCurtain County; (5) 4 miles east of Tuskahoma, on the Kiamichi River, Pushmataha County; (6) 6 miles south of Thackerville, on the Red River, Love County; and (7) 8 miles northwest of Cache, in the Wichita Mountains, Comanche County. Collecting was done in all directions within walking distance of each camp and farther in many instances, as in the vicinity of Broken Bow where collecting was carried on as far as 25 miles to the north, and at least 10 miles in all other directions. The time consumed by the trip was about 7 weeks, from June 11 to August 1.

Although the main purpose of the expedition was to collect vertebrates and data concerning them, and although the students in the party were being given courses in vertebrate field zoology, a good collection of molluscs, crayfish, and Arachnida was also secured. More than 2000 insects were obtained by only incidental collecting. As was to be expected these insects were

of the greatest interest and importance as is shown in papers concerned with them on other pages of this volume. The fact that of the 2000 to 4000 species of beetles which occur in this state only some 60 species were collected shows that this work has only begun.

Perhaps the most important collection made (if any group may be said to be more important than another) was that of fish. Well over 2000 fish were secured, mostly by seining with small minnow nets. Fifty-five species and subspecies of 43 genera and 14 families are represented; of this number 2 genera and 3 species are new to science. Moreover of these new species one is of particular interest as it is a new black bass, one of the foremost game fish south of the trout country. This again illustrates the general lack of knowledge of the vertebrates of our state. The detailed report upon the fish will be found in a separate paper in this volume.

While two years ago only a mere handful of amphibians and reptiles could be listed as certainly occurring in Oklahoma, we can now name and illustrate with many specimens in our own museum, 15 species of amphibians, 14 species of lizards, 10 species of turtles, and 42 species of snakes. This herpetological collection although relatively small (some 1300 specimens), is one of the most important in the United States, because of the fact that with the exception of a very small representation in four institutions there are no other reptiles or amphibians from this state in museums of the country. Our knowledge of the geographical distribution of forms of these groups has been materially advanced already, even with this small beginning. These specimens are also listed with notes in another paper in this volume and a key to the snakes of Oklahoma has been prepared as a result of these collections.

While the Museum possesses an excellent collection of over 2000 mounted birds and bird skins and a very important and remarkably complete series of bird eggs numbering over 5000, it is nevertheless of great importance that records for this state be compiled. Much of the material in the Museum is extralimital, and we cannot emphasize too much the necessity of further collections within the State. During the summer 36 species of birds were collected and a total of 70 skins made. In this lot there is at least one form new to the state, and over half of the specimens represent new county records. Details of this

collection with pertinent field notes constitute another report in this volume.

As was anticipated little could be done in midsummer in the way of mammal collecting. Moreover frequent fires have gone far towards lessening the former natural abundance of all animals, especially mammals of this region. A better example of the necessity of doing intensive field work before it is too late could not be found. Every year sees thousands of animals killed by fire and other artificial agents, so that even now we can never gain a complete knowledge of the fauna of our state such as we could have obtained 50 years ago, or even 10 years ago. This statement applies equally to fish, as oil pollution of streams in nearly all the petroleum producing regions of the State is wiping out the aquatic fauna of those districts. We cannot repeat too often, or stress the fact too much, that it is necessary to act quickly before it is entirely too late.

This short summary of the results of this last summer's field work carried out with the aid of a few untrained students serves to show what could be done with proper equipment and trained museum collectors. It indicates moreover what a virgin field Oklahoma is. Oklahoma was not opened until well after the surrounding states had been settled, and until after there was considerable knowledge concerning the natural history of these states. We are considerably behind them in making a state biological survey, and yet we are allowing the animal population of this rich territory to disappear before it is even known.