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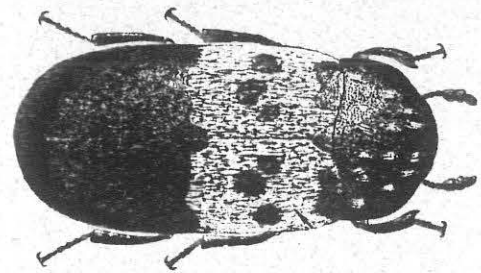
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MUSE U.M. NEWS

APRIL 1996

No. 5

NEWS AND INFORMATION FROM
THE UNIVERSITY OF MONTANA ZOOLOGICAL MUSEUM



Dermestes

RECENT ACCESSIONS BY THE MUSEUM

Penny Reynolds recovered the skeleton of a **Bald Eagle** (*Haliaeetus leucocephalus*) found near Frenchtown, Montana. The bird had been dead about one year before the skeleton was found. (U.S.F.&W. permit #PRT-805747.)

Dan Pletscher, Wildlife Biology, donated more specimens of the **Gray Wolf** (*Canis lupus*) including the skeletons of three pups found near a den at Glacier National Park, and the skulls of two adult wolves from the Camas pack. The adult wolves were killed by other wolves.

Denver Holt recovered a **Barn Owl** (*Tyto alba*) from Lake County. An uncommon species, this is the first complete barn owl specimen from Montana in the Museum. The only previous Montana record is a single wing of an individual killed by a Great Horned Owl in Missoula.

Gary Kerr has arranged for the donation of a **Bobcat** (*Lynx rufus*) which is being prepared as a complete skeleton for the research collection.

Two **Emus** (*Dromaius novaehollandiae*) were donated from the ranch of Ted and Cindy Brosam. These will be prepared as complete skeletons, one for the research collection and one for the teaching collection. Thanks again to Gary Kerr for arranging this donation.

A fetal **Elk** (*Cervus elaphus*) was donated by Gary Haas. Approximately nine inches in length, it will be preserved as a whole specimen in alcohol.

MONTANA NATURAL HERITAGE PROGRAM TO FUND MUSEUM POSITION

In recent years, the Zoological Museum has received several hundred specimens generated from the field research of the Montana Natural Heritage Program (MNHP). These are primarily small mammals; mice, voles, lemmings, shrews, and bats. These specimens are important in giving depth and breadth to our mammal research collection, and as well, we are providing housing for voucher specimens from their research. The latest donation from the Natural Heritage Program, received in March, consisted of 150 small mammals including **Sorex palustris**, **S. vagrans**, **S. cinereus**, **Microtus pennsylvanicus**, **M. montanus**, **Clethrionomys gapperi**, and **Zapus princeps**.

Also, MNHP has made a substantial financial contribution to the Zoological Museum which will be used

to fund a work-study position in the Museum's preparation lab. This position will begin in September 1996 and should last 1-2 years. The individual hired will be responsible for preparing all the material donated by MNHP. This will include preparation of study-skins, and cleaning of skulls and skeletons using the dermestid beetle colony.

DINING ON BEAR PAWS AND EMUS

What if you were offered a job where your only tasks would be to eat all the wild and exotic game brought to you and to reproduce; nothing else would be asked of you? That's the job description of the dermestid beetles "employed" the Zoological Museum. These beetles, members of the family Dermestidae, are used to clean skulls and skeletons for the Museum's research and teaching collections. Their favorite food is dried flesh, and the larvae consume it bit-by-bit leaving us with beautifully prepared and fully clean skeletons.

The larvae only grow to about one-half inch, but hundreds or thousands will converge on a specimen and will clean a small animal, such as a mouse, in a day. Larger items, such as bobcat or swan, may take two days to a week. We have even processed an entire elk by putting it in one limb at a time. Lately, the "bugs" have dined on a bear paw, which the police suspected was a human hand, and two complete emus.

Though the beetles are efficient, some preparation is still involved before an animal can be put in the colony. It must be skinned, eviscerated, and the large muscle groups, brain, eyes, and tongue removed. Then the specimen is partially dried. If this procedure is not followed, these tissues will decompose and will be unpalatable to the beetles.

Before beetles were put to work, techniques such as boiling, maceration, or chemical methods were used. Boiling and scraping the bones is very labor intensive and can crack teeth or produce warping of skulls. Maceration involves putting an animal in a sealed jar of water and letting nature take its course. This method takes a long time and it is never fun when the time comes to open those jars! Chemical methods often attack the bone and make a specimen unsuitable for a museum collection.

Ironically, the same beetles that do such a good job for us are also major museum pests. They range across North America and will consume museum specimens such as study skins, taxidermy mounts, furs, insects, or dried plants. Museums use air-tight storage cabinets, freezing of incoming specimens, and regular pest inspections to control infestations. But properly contained and cared for, they provide quality skeletal preparations for the research and teaching collections of the Museum.