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## Lower Jaw as a Diagnostic Aid in the Identification of Mammals

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THE LOWER JAW AS A DIAGNOSTIC AID  
IN THE  
IDENTIFICATION OF MAMMALS<sup>1</sup>

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This paper is intended to aid archeologists to identify mammalian skeletal remains in the field. Thus, since the paper was designed primarily for archeological research in Arkansas, it has been limited to mammals most likely to be associated with Arkansas Indian remains. Most had a definite food value, and a few, such as the panther and bobcat, were ornamental.

The illustrations show the left side of the lower jaw. In some cases, an upper view of the lower jaw has been included. The purpose of the skull profile is to show the placement of the jaw. It is not for identification.

In the upper left-hand corner of each figure is a series of numbers. The numbers represent the dental formula of one side of the jaw. The numbers above the horizontal line refer to the teeth of the upper jaw, and those below the line to the teeth of the lower jaw. The first numeral indicates the number of incisors, the second the number of canines, the third the number of premolars, and the fourth the number of molars. In some cases, some of these groups may be absent. The dental formulas may be useful even if the teeth have been lost, because the corresponding tooth sockets will remain.

Small arrows in the drawings point to features of primary importance in identification, such as the presence of a canine tooth, the presence of a large incisor followed by a gap in the tooth row, location and shape of jaw processes.

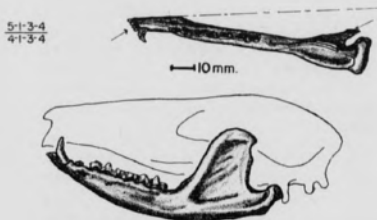
Examination of the tooth sockets should be the first step in identification. This will reduce the possibilities. The next step should be a study of the posterior processes of the jaw bone.

REFERENCES

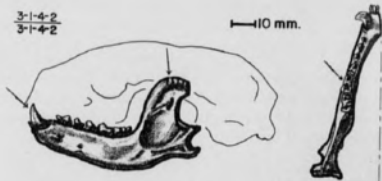
1. Brown, Gordon H. "Illustrated Skull Key to the Recent Land Mammals of Virginia." Release No. 52-2, *Virginia Cooperative Wildlife Research Unit*, Blacksburg, Va. (1952).
2. Burt, William H., and Grossenheider, Richard P. *A Field Guide to the Mammals*. Houghton Mifflin Co., Boston, Mass. (1952).
3. Glass, Bryan P. *A Key to the Skulls of North American Mammals*. Burgess Publishing Co., Minneapolis, Minn. (1951).

<sup>1</sup> The author thanks Dr. John A. Sealander of the Zoology Department, University of Arkansas, for his helpful suggestions concerning form and content of this paper.

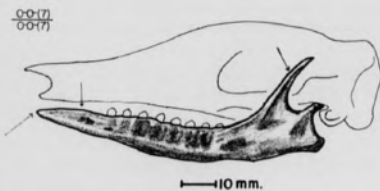
OPPOSSUM *Didelphis virginianus* (Fig. 1)



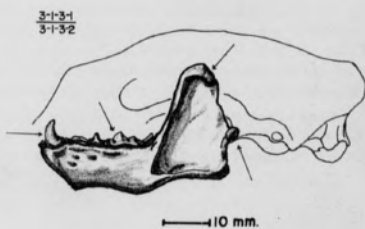
RACCOON *Procyon lotor* (Fig. 3)



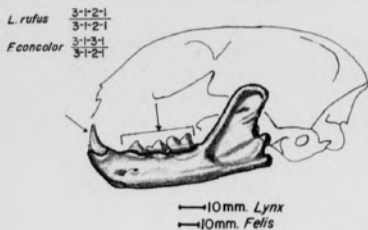
ARMADILLO *Dasypus novemcinctus* (Fig. 2)



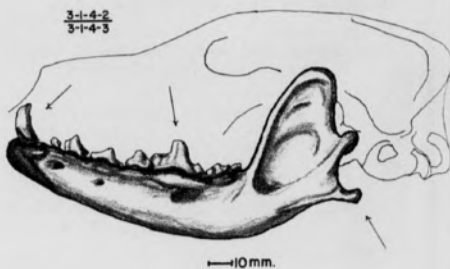
SKUNK *Mephitis mephitis* (Fig. 4)



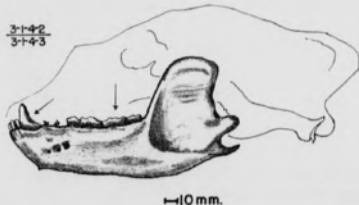
PANTHER *Felis concolor*  
BOBCAT *Lynx rufus* (Fig. 5)



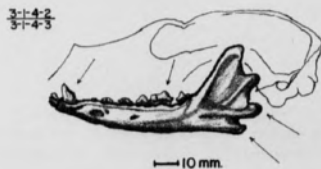
COYOTE *Canis latrans*  
WOLF *Canis niger* (Fig. 7)



BLACK BEAR *Ursus americanus* (Fig. 6)



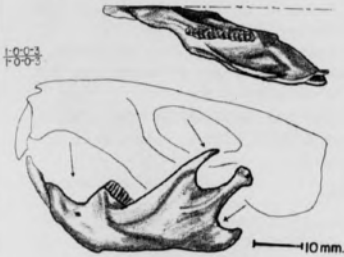
GRAY FOX *Urocyon cinereoargenteus* (Fig. 8)



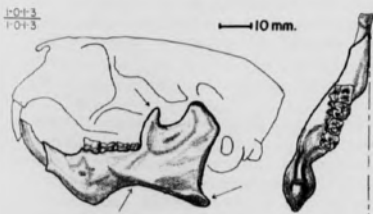
BEAVER *Castor canadensis* (Fig. 10)



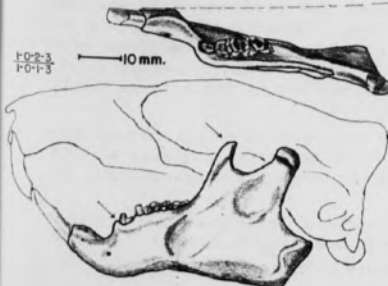
MUSKRAT *Ondatra zibethica* (Fig. 12)



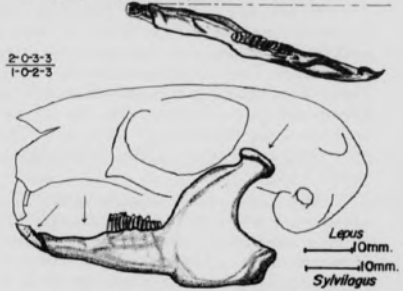
PORCUPINE *Erethizon dorsatum* (Fig. 13)



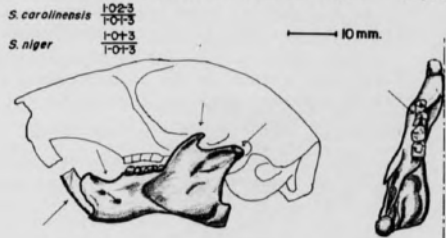
WOODCHUCK *Marmota monax* (Fig. 14)



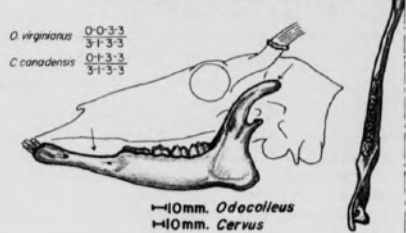
SWAMP RABBIT *Sylvilagus aquaticus*  
COTTONTAIL *Sylvilagus floridanus* (Fig. 9)  
JACKRABBIT *Lepus californicus*



GRAY SQUIRREL *Sciurus carolinensis*  
FOX SQUIRREL *Sciurus niger* (Fig. 10)



WHITETAIL DEER *Odocoileus virginianus*  
ELK *Cervus canadensis* (Fig. 15)



BISON *Bison bison* (Fig. 16)

