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AN UNUSUAL DENTAL ANOMALY IN A MINK

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ABSTRACT

Anomalous lower molars present in a female mink, *Mustela vison* Schreber, trapped during November 1975 in Knox County, Tennessee are reported. These paired M_2s appear unique for North American *Mustela* because of their large size, double root and complicated cusp pattern.

INTRODUCTION

Trappers and fur buyers often serve as an excellent source of specimens useful to the zoologist for a variety of purposes. Carcasses obtained through trappers and fur buyers and prepared as skeletons have proved especially valuable to zooarchaeologists who are involved in the identification and analysis of animal remains from archaeological sites.

METHODS

It is not always possible to obtain exact collection locale data for every specimen, but this information is generally less essential to the zooarchaeologist who makes basic identifications of skeletal remains than it is to the mammalian taxonomist. During the winter trapping season of 1975-1976, numerous carcasses of native furbearers such as raccoon, red and gray fox, muskrat, mink and weasel were obtained from trappers and fur buyers in several states; these specimens were processed and the skeletons added to the research osteological collection, Zooarchaeology Section, Department of Anthropology, University of Tennessee, Knoxville. One of these, a mink from East Tennessee, is especially noteworthy because of its anomalous dentition.

RESULTS

An adult female mink, *Mustela vison* Schreber, was trapped along Flat Creek near House Mountain, Knox County, in mid-November 1975 by Elmer Lauderdale, Mascot, Tennessee. This mustelid (UTK 1627) possessed the normal number of teeth recorded for *M. vision* ($I\frac{3}{3}$, $C\frac{1}{1}$, $P\frac{3}{3}$, $M\frac{1}{2}$), but the tpical, peg-like M_2 had been replaced by a tooth similar in structure to but slightly smaller than the M_1. Measurements (mm) of these two molars are as follows: M_1 crown length 7.1, maximum width 3.7; M_2 crown length 6.0, maximum width 3.0; the maximum length of the left M_1 is only .2 mm greater than the right, but .4 mm wider. The M_2 possess a distinct paraconid, protoconid and hypoconid (Fig. 1). It also is noteworthy that the M_1s have developed a distinct metaconid, the one in the left being more pronounced. This pair of double-rooted anomalous molars emerges from the base of the ascending rami and projects forward at a 45° angle (viewed laterally); lingually they project inward, the anterior third of the M_2s paralleling, and touching, the posterior third of the M_1s (Fig. 1, occlusal view). Only the anterior half of the M_2 meshes with the M^1.

DISCUSSION

Dental anomalies reported for certain representatives of the Mustelidae such as the badger (Long & Long, 1965) and the fisher (Heran, 1970) typically involve supernumerary or subnumerary teeth. Generally, it is the incisors or premolars which are affected. A replacement of the simple, peg-like molars with more complicated, second carnassial-like teeth in this Knox County

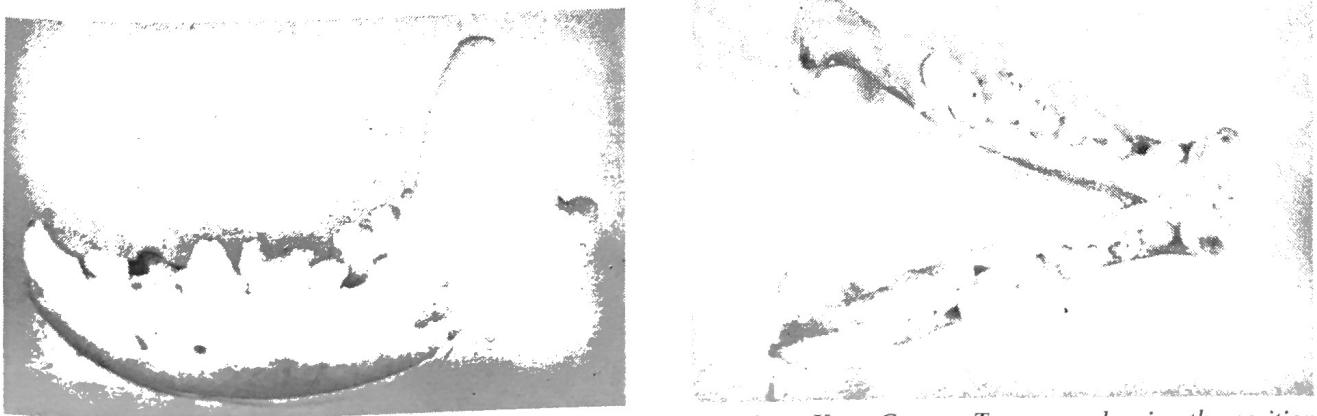

FIG. 1: *Lateral (left) and occlusal (right) views of a mink dentary from Knox County, Tennessee showing the position and form of the anomalous M_2 (scale: X2).*

mink is particularly noteworthy; we have been unable to locate published reports describing a similar tooth type for North American *Mustela*. However, Mazak (1974) describes a similar M_2 anomaly found in a European weasel, *Mustela nivalis* Linnaeus, collected in Norway; Mazak considers the two roots and three fully developed cusps as being primitive characters. The absence or reduction of the metaconid is explained as a progressive character, typical of *Mustela*, and is regarded as a phylogenetical heritage (Mazak, 1974). Hall (1951) has indicated that the complete suppression of the inner cusp (metaconid) is "the outstanding specialization." George G. Simpson examined the specimen described by Mazak and expressed the opinion (in Mazak, 1974) that the characters of this anomalous M_2 do not entirely suggest an atavistic condition, but rather suggest that ". . . it is a mutation or a developmental anomaly in which the field of growth in the molar teeth has extended farther posteriorly than is normal in the species or indeed in the family."

LITERATURE CITED

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Cosmetics and Cancer

Dr. David Fine reported at the recent American Chemical Society meeting in New Orleans that the chemical carcinogen N-nitrosodiethanolamine, which is known to cause liver cancer in rats, has been found in at least 28 commercial cosmetic preparations including a wide variety of face creams, hand lotions and shampoos. Among cosmetic samples yielding the highest levels of the carcinogen were Max Factor's "Ultralucent Whipped Creme," Revlon's "Moondrops," Helena Rubenstein's "Silk Fashion" and Clairol's "Herbal Essence."