AN EXTINCT ICTERID FROM SHELTER CAVE, NEW MEXICO.

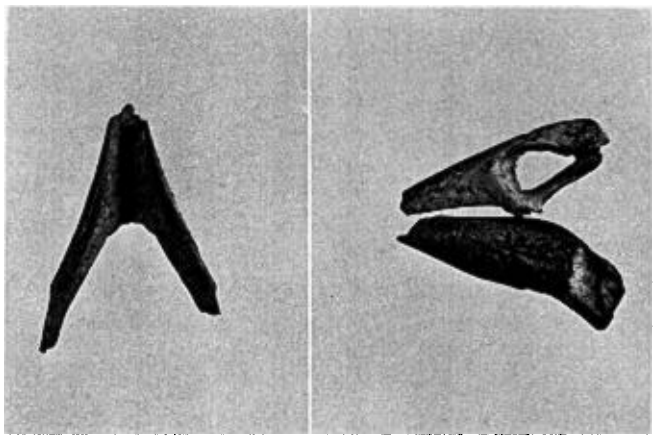
BY ALDEN H. MILLER.

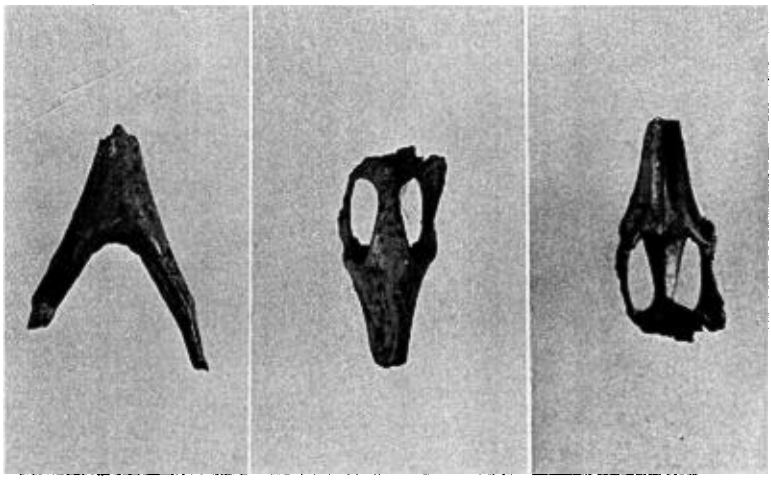
Plate IV.

AMONG an assortment of about two hundred passerine bird bones from Shelter Cave, New Mexico, submitted to me for identification by Dr. Hildegarde Howard of the Los Angeles Museum of History, Science and Art, there are two mandibles, one upper and one lower, which are of unusual size and proportions. As far as known at the present time, the remainder of the passerine material from this cave, with the possible exception of some very fragmentary parts, is not distinguishable from the bones of living species. Certain of the passerine bones are Recent but others undoubtedly are of considerable age since they were associated with the remains of extinct horses (*Equus*) and antelopes (*Tetrameryx*). The loose matrix of the deposits, which gave little indication of stratification, made it impossible to determine the relative age of the mandibles just mentioned. Nevertheless, the character of the matrix and of the bone shows that the mandibles do not pertain to the uppermost Recent, or guano, layers (see Howard, Condor, XXXIII, 1931, p. 206).

The two mandibles are not known to have been associated in the matrix. Bones were numbered consecutively as collected, and thus proximity of two numbers indicates extraction from the same section of the excavation. The mandibles are numbered 320 and 338, and accordingly, may have come from the same individual. Identification of the two mandibles was made independently. Not until they were found to belong to the same type of bird was it surmised that they represented the same species. Since the association of the mandibles is not proved, I will proceed to a separate discussion of each. I am indebted to Dr. Howard and to Dr. William Alanson Bryan of the Los Angeles Museum for the opportunity to study these specimens and to Dr. Alexander Wetmore of the United States National Museum for the loan of skeletons.

The lower mandible upon examination proves to belong to some member of the Icteridae rather than of the Fringillidae, although





PYELORHAMPHUS MOLOTHROIDES. AN EXTINCT ICTERID.

the latter family contains certain groups which it resembles in some respects. The great depth of the rami at the base of the tomium and the pronounced curvature of the tomium basally are suggestive of a short-billed finch or grosbeak. Contrarily the extreme lateral compression of the distal part of the bill with its concave tomial outline as viewed dorsally and the deep trough in which the tongue rested are distinctly icterine. In fact, these latter features completely outweigh the superficial resemblance in depth of ramus to the bills of grosbeaks. Unfortunately there are no characters in the distal parts of the lower mandible of icterids, fringillids and thraupids, at least known or perceptible by me, which may be used to separate all members of these families. After a study of skulls of all the North American groups of size and character comparable to the specimen, supplemented by examination of skins, drawings and descriptions of such forms, more remote geographically, as might be similar or related, I have concluded that this lower mandible is representative of an icterine type heretofore unknown.

The upper mandible is deep and narrow with an elevated internarial ridge and ovate nostrils; it is clearly icterine. It is unlike the upper mandible of other icterids to a degree comparable to the degree by which the lower mandible differs from known forms. Since the lower mandible presents characters which are more obviously unique than those of the upper mandible, I will use the former as a basis for the formal description of a new species of a new genus to be known as *Pyelorhamphus molothroides*.

Pyelorhamphus new genus.

Generic characters.—Lower mandible most nearly like *Molothrus* and *Tangavius* in the deep, short, sharply pointed bill, but groove for tongue relatively much deeper and narrower; tomial contour, viewed dorsally, strongly concave; tomium, viewed laterally, straight in distal portion (extreme tip lacking) but strongly, although not abruptly, convex basally with ramus relatively deep in this region; ramus posterior to termination of horn sheath strongly deflected downward; angle of rami at symphysis relatively obtuse indicating broad or massive head relative to length of bill.

Type.—*Pyelorhamphus molothroides.*

Pyelorhamphus molothroides new species.

Type.—Lower mandible, lacking the extreme tip and most of the rami posterior to the region of the horn sheath, no. 320, locality 1010, Los

Angeles Museum, from Quaternary of Shelter Cave, west slope of Organ Mountains, Dona Ana County, New Mexico. Collected by H. A. Wylde and W. M. Strong, August 25, 1930. (See Plate IV, figs. 1, 2 and 3.)

Description.—See features as given under generic characterization; in addition, tomium sharp distally but somewhat thickened proximally by development of a moderately broad shoulder or thickening above the point of attachment of the genio-hyoideus muscle; tip constricted, the tomial edges nearly parallel subterminally; sides of groove for tongue high and nearly vertical; gonys practically straight; shape of scar of posterior margin of horn covering and point of insertion of masseter muscle on outer surface of ramus, in so far as present, similar to *Molothrus* and *Tangavius;* size large indicating a bird with decidedly larger or broader head than *Tangavius* or *Euphagus.*

Referred upper mandible.—The upper mandible, no. 338 (Plate IV, figs. 2, 4 and 5) from Shelter Cave, consists of the base of the bill forward of the attachment of the jugals but including the entire nostril area. Palatines and extreme tip are lacking. Culmen nearly straight anterior to nostrils; culmen moderately curved above posterior part of nostrils; internarial bridge much broader anteriorly than posteriorly; base of culmen (nasal process of maxilla) elevated posteriorly into distinct ridge rising above posterior part of nasal fossae; angle formed by junction of anterior and ventral margins of nostrils only slightly greater than 90°; maxillo-palatine groove deep and divided medially into two parts; grooves for tomium of lower mandible strongly divergent posteriorly, corresponding in shape with tomium of lower mandible no. 320.

Measurements.—Lower mandible: greatest depth of ramus, near base of tomium, 4.6 mm.; greatest width across rami immediately proximad of base of horn sheath, 11.2 mm.; distance from symphysis to proximal end of tomium (base of horn sheath), 7.0 mm.; depth of groove at symphysis, 3.3 mm.

Upper mandible: greatest anteroposterior diameter of nostril, 5.2 mm.; greatest depth perpendicular to tomium at point of attachment to jugals, 4.6 mm.

A number of points of resemblance between *Pyelorhamphus* and the cowbirds are to be noted, some of which are mentioned in the above descriptions. The character of the culmen posteriorly is identical with *Tangavius* except for size, and the pattern of the palatal grooves of the maxilla and the shape of the internarial bridge are suggestive of molothrine affinities. In both *Tangavius* and *Molothrus* the lower mandible is stout and deep relative to the upper mandible. This peculiarity of proportions in these icterids led me for some time to overlook the correspondence of the upper and lower fossil mandibles, which correspondence is attested by

the lateral palatal grooves of the upper mandible. Although the resemblances to the cowbirds seem to point definitely to relationships with these icterids, it is not impossible that the similarities are parallel developments and that *Pyelorhamphus* may have phylogenetic affinities with other moderately short- or conical-billed icterids such as *Leistes* or *Psomocolax*. Certainly *Pyelorhamphus* does not seem to be intimately related to the Caciques, Oropendolas, Orioles, Grackles, or Meadowlarks. *Dolichonyx*, although short-billed, has a much shallower lower mandible and differently shaped symphysis than the Shelter Cave bird.

Pyelorhamphus presents an extreme shortening and basal thickening of the usual slender, tapering icterine bill. This is carried to a degree unique within the family. Partly as results of the shortening, such features have appeared as the sharp angle formed by the ventral and anterior margins of the nostril and the pronounced medial concavity of the tomium of the lower mandible. Thus, the genus is fairly certainly not ancestral to any known living form and may be regarded as a culmination of a trend in bill shape such as may be seen in the living cowbirds.

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