THE CHARACTERS OF THE GENUS GEOCAPROMYS CHAPMAN

(WITH ONE PLATE)

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In his "Revision of the Genus Capromys" (Bull. Amer. Mus. Nat. Hist., Vol. 14, pp. 313-323, Nov. 12, 1901) Mr. Frank M. Chapman established a sub-genus Geocapromys (p. 314) to include Capromys brownii J. B. Fischer, C. thoracatus True and C. ingrahami J. A. Allen. animals that were supposed to have skulls and teeth essentially like those of the species of true Capromys, but to have unusually short tails and poorly developed thumbs. Sixteen years later Dr. Glover M. Allen raised Geocapromys to generic rank and added to its characters the presence of a small supplemental reentrant angle near the front of the lingual side of the first mandibular molariform tooth (Bull. Mus. Comp. Zool. Vol. 61, p. 9; Jan., 1917). In 1919 Mr. H. E. Anthony noticed that the course of the upper incisor of Geocapromys is clearly shown on the face of the maxillary as a prominent swelling on the wall of the antorbital foramen, while in Capromys no such swelling is present (Bull. Amer. Mus. Nat. Hist., Vol. 41, p. 631, Dec. 30, 1919). In his 1917 paper Dr. Allen, misled by Chapman's imperfect specimens of Geocapromys colombianus, made his own better material of the Cuban animal the basis of the new name G. cubanus (p. 9), and proposed (p. 5) the generic name Synodontiomyos for the original C. colombianus. These errors he later recognized and corrected (Bull. Mus. Comp. Zool., Vol. 62, p. 145, May, 1918). When preparing the copy for my "List of North American Recent Mammals 1923" I concluded that the dental features pointed out by Allen and Anthony did not warrant the generic separation of the group from Capromys. Not knowing of any other characters I relegated Geocapromys to subgeneric rank again. More recently, while examining broken skulls from caves in Cuba, I found that there are important and constantly present features of both skull structure and tooth arrangement that fully justify the generic separation of the two groups. The diagnostic characters may be tabulated as follows:
PREORBITAL BAR OF MAXILLARY SLOPING OBVIOUSLY FORWARD; ROOT CAPSULE OF UPPER INCISOR TERMINATING IN CONTACT WITH OUTER HALF OF ANTERIOR BORDER OF ALVEOLUS OF PM1; BASES OF ALVEOLI OF RIGHT AND LEFT PM1 SEPARATE, NOT ENCROACHING ON FLOOR OF MAXILLARY PASSAGE; PM1 WITH ONLY TWO REENTRANT ANGLES ON LINGUAL SIDE. . . . C. promyss

PREORBITAL BAR OF MAXILLARY VERTICAL OR SLOPING SLIGHTLY BACKWARD; ROOT CAPSULE OF UPPER INCISOR TERMINATING ABOVE AND CENTRAL TO ANTERIOR HALF OF OUTER BORDER OF ALVEOLUS OF PM1; BASES OF ALVEOLI OF RIGHT AND LEFT PM1 IN CONTACT, ENCROACHING ON FLOOR OF MAXILLARY PASSAGE; PM1 WITH A SMALL THIRD REENTRANT ANGLE ON LINGUAL SIDE. . . . G. promyss

REMARKS ON GEOCAPROMYS

SKULL.—The ascending branch of the maxillary dividing the orbit from the antorbital foramen is vertical (G. inghami) or backward-sloping (G. brownii and G. thoracatus) in relation to alveolar line instead of conspicuously forward-sloping as in Capromys (pl. 1, figs. 1 and 2). By this character alone any one of the three living species can be distinguished from any of the four living Capromys. (I have not seen a specimen of the extinct G. colombianus in which the ascending branch is preserved). The backward slope in Geocapromys is never so strong as the forward slope in Capromys, but the difference is obvious when the general direction of the ascending branch is compared with the line of the alveolar margin.

TEETH.—Root of upper incisor encased in the lower half of the maxillary wall of the antorbital foramen (see pl. 1, fig 1), the distance between the outer surfaces of the very obvious incisor capsules of opposite sides greater than that between the outer sides of the basal capsules of the opposite first molars. In Capromys the root of the incisor terminates opposite the antero-inner edge of the lower lip of the antorbital foramen (pl. 1, fig. 2), and the transverse diameter of the rostrum through the scarcely evident capsules is less than that through the bases of the first molars. The base of PM1, which is hidden by the incisor capsule in Geocapromys, often forms an obvious external swelling in Capromys (as in pl. 1, fig. 2).

These characters indicate that the members of the two genera have been developing along consistently different lines. In Capromys the incisor root has pushed back to a position where more advance is prevented by contact with the base of PM1; in Geocapromys its position is such that it could be extended much farther back in a capsule along the outer surface of the molar shafts as in Spalacopus. Capromys condition is nearly paralleled in Octodon.romys.

FAROTHER APART IN CAPROMYS THAN IN GEOCAPROMYS. This character is not visible in complete skulls, but is evident in the broken-away palates so often found in caves. The upper surface of such a fragment of the maxillary (lower floor of nares) in the region between the anterior zygomatic roots is traversed by a deep median sulcus in Capromys occupying the space between the rather widely separated bases of the opposite premolars; in Geocapromys there is no median sulcus between the premolars, but the maxillary rises as a broad flat plate to the level of the conuate bases of these teeth. Immediately behind this level the groove begins, passing backward to the posterior nares between the progressively more separated roots of the molars.

The genus Geocapromys contains four species—the living G. brownii (Fischer) of Jamaica, G. thoracatus (True) of Little Swan Island, Gulf of Honduras, G. inghami (Allen) of Plana Keys, Bahamas, and the extinct though geologically Recent G. colombianus (Chapman) of Cuba (with its synonym G. colombianus G. M. Allen).

EXPLANATION OF PLATE

ALL FIGURES NATURAL SIZE


FIG. 1a. Geocapromys brownii (Fischer). Adult male. No. 14108, U. S. Nat. Mus., Jamaica. Palate cut away from skull and viewed from above. pm1 = base of premolar, i = base of incisor capsule.

FIG. 2. Capromys pilorides Desmarest. Small individual, No. 1038a, U. S. Nat. Mus. Cuba. pm1 = capsule at base of premolar, i = base of incisor capsule.

FIG. 2a. Capromys pilorides Desmarest. Large individual. No. 25349, U. S. Nat. Mus. Palate cut away from skull and viewed from above. pm1 = base of premolar, i = base of incisor capsule.

FIG. 2b. Capromys sp. No. 25409, U. S. Nat. Mus. Cuba (cave deposit). Palate cut away from skull and viewed from above. pm1 = base of premolar, i = base of incisor capsule.
1. Geocapromys.
2. Capromys.

(All figures natural size)