

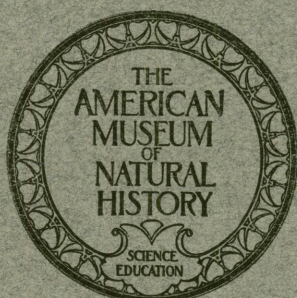
# AMERICAN MUSEUM NOVITATES

No. 35

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## A NEW FOSSIL RODENT FROM ECUADOR

By H. E. ANTHONY



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## A NEW FOSSIL RODENT FROM ECUADOR

By H. E. ANTHONY

Mr. A. M. Tweedy, Resident Manager of the mines of the South American Development Company at Portovelo, Ecuador, who has given such great assistance to the expeditions of the American Museum in Ecuador, has added to the collections a most interesting genus of fossil rodents. He gave to Mr. George K. Cherrie, who was in charge of the Museum's late expedition to Ecuador, July 1921 to January 1922, parts of a skull and skeleton of a large hystricomorph rodent related, among fossil genera, to *Neoreomys* of the Santa Cruz beds, and among living forms to *Myocastor*. This material Mr. Tweedy secured from Señor Carrasco who owns a large hacienda near Nabon, Provincia del Azuay. The accompanying diagram will show the nature of the locality where this rodent was found (Fig. 1).

Nabon is in the interandean area, at an elevation of about 9000 feet. The region is open and treeless, the only forest being found in scattered clumps along the higher ridges to the east. Although this section has a

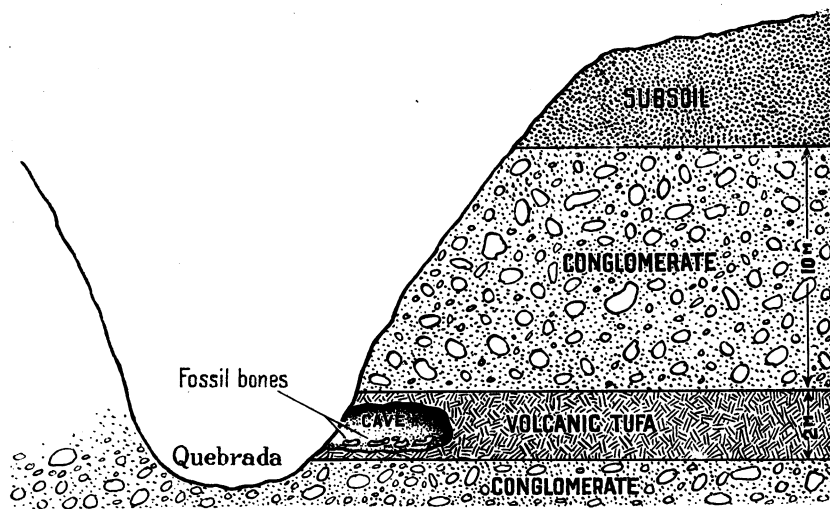


Fig. 1. Diagram based upon a sketch made by Mr. A. M. Tweedy, who was given the data by Señor Carrasco, the original collector of the fossil bones. The entrance to the cave was unearthed by a landslide.

comparatively long dry season and for most of the year is a region of extreme aridity, it is visited by torrential rains which erode the topography and scour out the ravines.

There is little doubt that this hystricomorph lived in the Pleistocene and such an interesting find leads one to hope that additional researches in Ecuador will bring to light more of the members of the preceding epochs.

I am indebted to Dr. W. D. Matthew, Curator of the Department of Palæontology of the American Museum, both for permission to describe this material which belongs in his department and for helpful discussions upon the material itself.

#### **Drytomomys, new genus**

A large hystricomorph rodent with very heavy incisors which have a thick cutting edge of enamel; molars rooted but fairly hypsodont, crown pattern made up of a series of deep reëntrant loops which become isolated by wear to form enclosed lakes, the normal number of which is three. There is a very deep fossa in the lateral face of the premaxillary.

Genotype: *Drytomomys æquatorialis*.

#### **Drytomomys æquatorialis, new species**

TYPE: No. 13219, Department of Vertebrate Palæontology, from Nabon, Prov. del Azuay, Ecuador, near the hacienda of Señor Carrasco, who took the bones from the cave. The type is a fragmentary skull, only the anterior portion of the cranium, carrying four molar teeth, and the anterior portion of the mandible, all of the teeth present. Accompanying these parts of the skull are a few fragments of limb bones, etc.

DESCRIPTION.—General proportions of cranium unknown; a very deep and apparently extensive fossa is indicated as lying in the lateral face of the rostrum, partly in the premaxillary, partly in the maxillary; incisive foramina probably of fair size; mandible robust and heavy, typically hystricomorph; incisors, upper and lower, very large and strong, proportionally enormous, rather deeper than broad and with well-developed cutting edge of heavy enamel; molar teeth rooted but with high crowns, four in each jaw; molar pattern simple, formed by a series of reëntrant loops of enamel which enter from the inside in the case of the upper molars, externally in the lower series; in the state of wear shown by the type most of these loops have been cut off to become completely detached lakes, elliptical in outline, while the tooth is sub-columnar in shape, completely encircled by enamel with scarcely any trace of the entering loop which was ancestral to the lake; true molars with typical pattern of three loops or lakes, lower premolars with two main lakes and three (left) or four (right) additional small lakes.

MEASUREMENTS.—Length of upper diastema, approximate, 32 mm.; dimensions of upper premolar,  $7.8 \times 8.7$ ; dimensions of  $m^1$ ,  $6.3 \times 6.8$ ; dimensions of  $m^2$ ,  $7.2 \times 7.5$ ; length of mandibular toothrow, I-M<sub>3</sub>, 60; crown length of mandibular molar series, 31.5; dimensions of lower premolar,  $9.5 \times 6.7$ ; dimensions of  $m_1$ ,  $6.2 \times 7$ ; dimensions

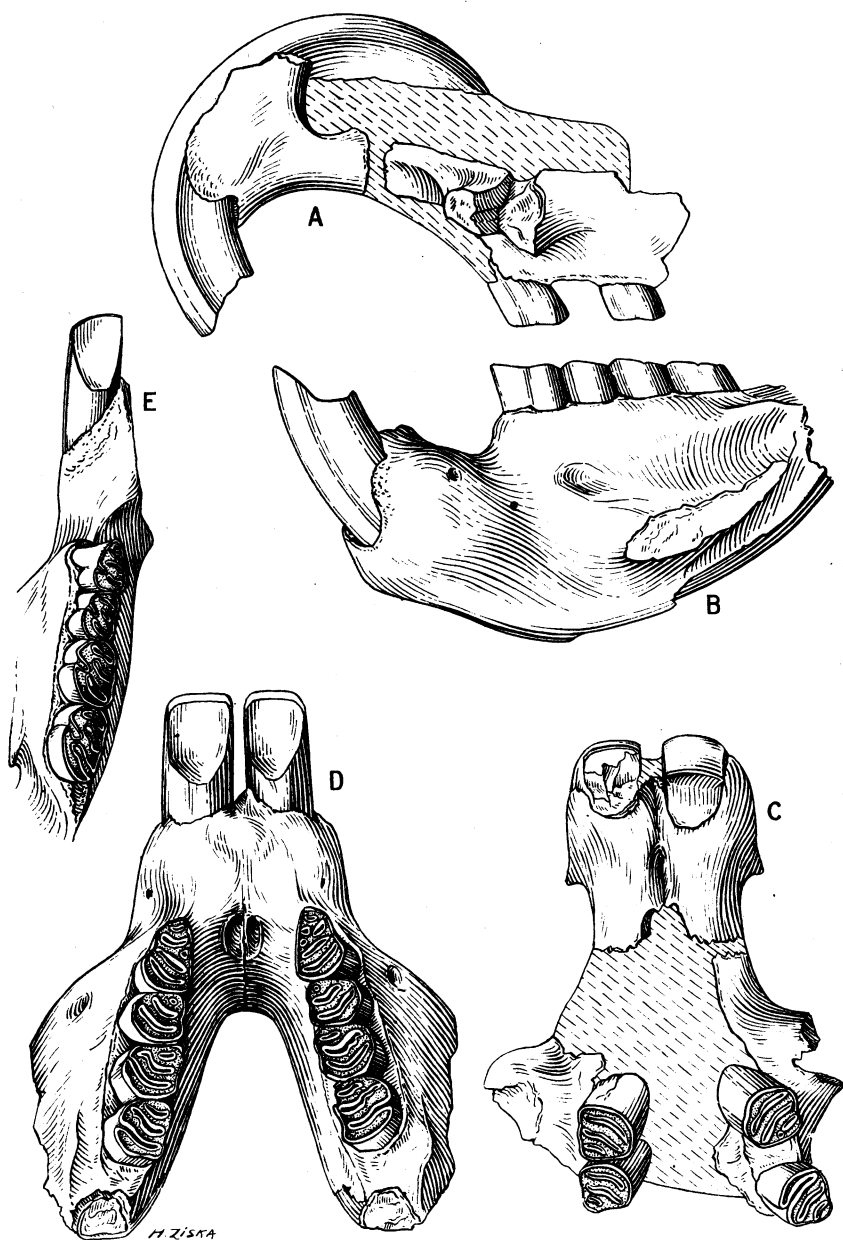


Fig. 2. A, B, C, D, *Drytomomys aequatorialis*, type specimen (A. M. Dept. Vert. Pal. 13219, Nat. Size). E. *Myocastor coypus* (A. M. Dept. Mam. 42751, Nat. Size).

of  $m_2$ ,  $7.5 \times 7.4$ ; dimensions of  $m_3$ ,  $8.8 \times 7.5$ ; breadth of upper incisor, 8.4; depth of upper incisor, 10.7; breadth of lower incisor, 8.4; depth of lower incisor, 10.2.

*Drytomomys* may be readily distinguished from all living rodents by its excessively developed incisors and by the molar pattern of completely isolated enamel lakes. While the skull is of about the same size as in the genus *Castor*, the incisors are actually twice as heavy and the enamel cutting edge is conspicuously heavier. It was because of this highly developed chisel-like incisor that the new genus was named *Drytomomys*, from the Greek *δρυτόμος*, a wood cutter and *μυς*, a mouse. If I am correct and this rodent was a woodcutter, it was even better equipped than the beaver, and bearing out this assumption is the presence of the deep lateral fossa of the rostrum which undoubtedly mark the attachment area of a greatly developed masseter muscle.

Apparently its closest affiliations with living rodents are with *Myocaster*. The molars of this genus, in the worn stage, show a fairly close approximation to the condition seen in the fossil genus. However, *Myocaster* molars have an extra reëntrant, internal in the upper series, external in the lower, which the *Drytomomys* tooth lacks. A specimen of *Myocaster* (No. 42751) has a molar tooththrow equal in length to that of the new genus, but the incisor teeth are about half as heavy.

Among fossil genera, *Neoreomys* is similar in many details to the Ecuador rodent but differs from it in the same characters as does *Myocaster*. In fact *Neoreomys* resembles *Myocaster* more closely than it does *Drytomomys*. No other genus of the Santa Cruz fauna bears as close a relationship to *Drytomomys* as does *Neoreomys*, but *Drytomomys* is so obviously related to this genus that it would appear perfectly at home in any collection from the Santa Cruz formation.

The fragments of limb bones present, the head of a humerus, distal end of an ulna, head of a femur and badly broken distal end of a tibia, all indicate an animal of robust and heavy build. These limb bones are very much larger than those of *Myocaster* and only a little less robust than those of *Hydrochærus*.







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FRANK E. LUTZ, Editor

**I**ssued, as occasion requires, for the publication of preliminary announcements, descriptions of new forms, and similar matters.

The articles are numbered serially but paged independently. An index will be provided for each 300 (approximately) pages.