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A NEW FOSSIL PERISSODACTYL FROM PERU

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Through the generosity of Mr. J. C. Richards, a geologist of the Pure Oil Company, The American Museum of Natural History has come into possession of a most interesting fossil record of a hitherto unknown Perissodactyl. The specimen was sent to the Museum for identification by Mrs. Isabel B. Wasson, and it has been through her kind offices that the Museum has acquired it.

The specimen is a fragment of the left lower jaw, containing two molar teeth in a very good state of preservation. This fragment was collected on the Huallaga River, Peru, a day's journey down the river from Chepeza—the head of navigation—at Chiococa, on October 7, 1920. Mr. Richards reports that the fossil came from highly folded gypsum beds in the river bank.

I am indebted to Dr. W. D. Matthew, Curator of Palæontology in the American Museum, for the privilege of describing this new genus, and also for the benefit of his advice on its age and determination.

Griphodon peruvianus, new species and genus

TYPE.—No. 17724, Department of Vertebrate Palæontology, from Chiococa, near Chepeza, on Rio Huallaga, Peru; collected by J. G. Richards. The specimen is a fragment of the left mandible with deciduous pm_4 and m_1 in position and well preserved. The permanent pm_3 and pm_4 were in position and have been exposed by sectioning.

DESCRIPTION.—Mandibular ramus apparently robust; last deciduous premolar and first lower molar with two main transverse ridges, slightly crenulated along anterior faces, worn to a smooth plane along posterior faces; anterior cingulum appearing as scarcely more than a roughening of the enamel; posterior cingulum well developed as a deep notch or shoulder with a shallow, secondary ridge along posterior border; no basal tubercle, either external or internal, between two main ridges; no trace of any structure in the crown pattern which links one main ridge to its fellow; molars brachydont rather than hypsodont; mental foramen situated midway under pm_4 .

MEASUREMENTS.—Last deciduous premolar, greatest breadth of crown, 22 mm.; greatest length of crown, 29.3; first lower molar, greatest breadth of crown, 25.8; greatest length of crown, 32.2.

Griphodon is represented by such fragmentary material that it appears inadvisable, at present, to attempt a definite position for it in mammal classification. It is obviously unrelated generically to any known form, but molar development of a somewhat similar pattern is known among the Tapirs, the Pyrotheres and the Lophiodonts, and *Griphodon* probably belongs to one of these three groups.

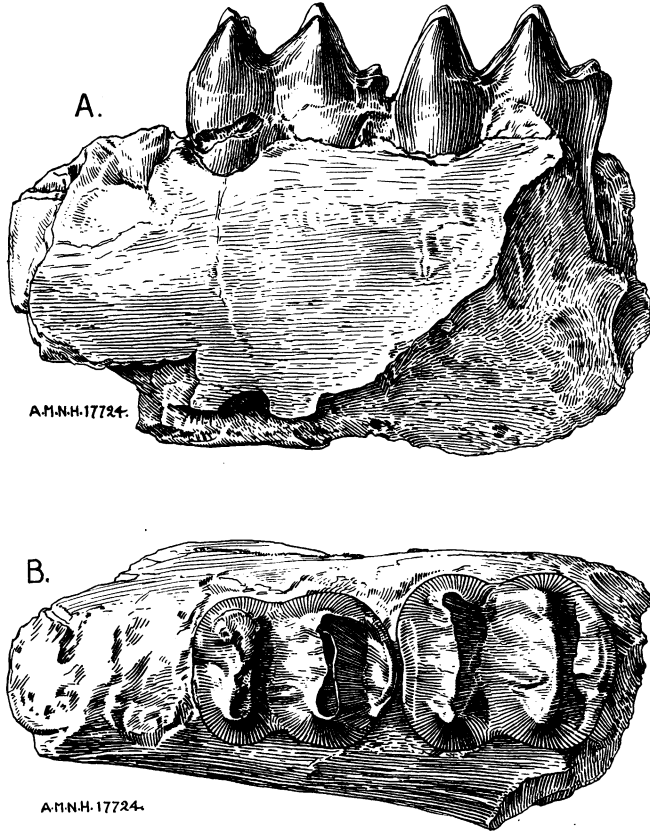


Fig. 1. Type jaw fragment of *Griphodon peruvianus*. Note position of mental foramen in A. Figures nine-tenths natural size.

The presence of a wide posterior cingulum on the lower molar teeth separates the new genus from any of the tapirs. The tapirs however have a distinct anterior cingulum on the lower molars which is practically absent on the *Griphodon* molar. Moreover, the transverse breadth of the

tapir molars varies but little from the second tooth of the row backward; the molars are practically subequal. *Griphodon* shows an appreciable widening of the molars as the succession of teeth passes backward, and in this character more nearly resembles the *Pyrotheres*.

The position of the mental foramen is significant. This opening is well indicated on the specimen as about half of the foramen is present, the line of fracture passing directly through it. It is impossible to say whether *Griphodon* had but one mental foramen, as have the tapirs, or whether the one seen in the specimen is one of a pair, as found in the *Pyrotheres*. The position of the foramen in the type specimen of *Griphodon* directly under a midpoint of pm_4 distinguishes this new genus from any tapir. On the other hand, *Pyrotherium* has the anterior mental foramen under pm_4 and the posterior mental foramen under m_1 .

The description of *Griphodon* had been written and was about to be submitted for publication when the presence of a peculiarly shaped fragment within the body of the ramus led to the conclusion that at least one permanent premolar had not yet erupted. A careful sectioning of the jaw fragment disclosed two unerupted premolars and showed the premolar in position to be deciduous. The last tooth in the specimen appears to be a true molar, as there is no evidence of a tooth to succeed it. The crowns of two permanent premolars were exposed by this sectioning, the crown of pm_3 and of pm_4 .

The crown of pm_3 crumbled so upon exposure that not all of it could be saved. It does not differ radically in appearance from the deciduous pm_4 , with this exception. The two transverse crests of the tooth are connected by an external crest which dips down to form a very wide V (viewed in profile) with the lowest point midway of the tooth. The transverse breadth of this tooth is noticeably less than that of pm_4 .

The permanent pm_4 also crumbled somewhat upon exposure but the portion remaining intact is similar to its milk predecessor, having as an additional feature a small anterior conule, about half as high as the transverse crests.

The fragment of *Griphodon* jaw is highly mineralized and quite heavy. The structure of the specimen indicates the presence of metallic sulphides which give it weight.

Without a better knowledge of the formation from whence *Griphodon* came, an opinion as to its age can be at best but mere conjecture. Taking into consideration the appearance of the fossil and its advanced degree of mineralization, it seems most compatible with the evidence to place *Griphodon* in the Oligocene.

