A REVIEW OF THE OLDEST TERTIARY MAMMALS FROM THE UPPERMOST JURUÁ RIVER, WESTERN AMAZONIAN BRAZIL

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The existence of Tertiary deposits along the Juruá River in western Amazonian Brazil has been known for a long time, but the evidence still comprises only rather fragmentary material of fossil mammals. The first Tertiary (pre-Quaternary) mammals discovered on the Juruá were Toxodontidae (Notoungulata) and a large rodent. Additional material collected subsequently indicates the presence of the Late Miocene-Pliocene Solimões Formation. Fossil mammals and reptiles of the same age from the Acre and Purus rivers indicate an extensive geographic distribution for this formation. Two expeditions in 1956 and 1962 to the uppermost Juruá River discovered even older fossil mammals that clearly indicate the presence of older Tertiary deposits. Morphologically similar taxa have not been reported from either the Acre or Purus rivers. Unpublished field observations of the stratigraphy along the uppermost Juruá suggest an older fossil-bearing unit, possibly the Ramon Formation, underlays the Solimões Formation. Sediments of this older unit have been correlated with the continental “red beds” of eastern Peru. The fossil material from this older unit includes a primitive "nesodontine" toxodontid. "Nesodontines" probably represent a paraphyletic group that isn't known in the South American fossil record after the Santacrucian (Middle Miocene, about 16 Ma). During the Deseadan-Colhuehuapian interval, "nesodontines" occur in faunas that are widely distributed geographically, from Colombia, Bolivia and Patagonia. Another toxodontid from the uppermost Juruá, *Plesiotoxodon amazonensis*, is very similar morphologically to *Pericotoxodon* from the Laventan of Colombia (Middle Miocene). The Notohippidae is represented by a lower molar talonid of primitive aspect, that in some respects resembles the notohippids from Mustersan and Tinguiririan age deposits in Patagonia (*e.g. Eomorphippus*). Leontiniidae are also present, and *Purperia cribatidens* presents affinities with *Huilatherium* of Laventan and *Colpodon* of Colhuehuapian age. Determinable remains of Astrapotheriidae are referred to *Xenastrapotherium*, a geographically widespread taxon recorded in Laventan and older deposits in Colombia. The presence of Pyrotheria is based on two specimens, both tooth crown fragments. Other equatorial or Amazonian pyrotheres *Griphodon* and *Colombitherium* indicate this group was widespread. The rodents include high-crowned molars assigned to the Potamarchinae (Dinomyidae), morphologically similar to *Simplimus* from Middle Miocene age deposits elsewhere in South America, and low-crowned teeth assigned to the Eumysopinae (Echimyidae), but also morphologically similar to Colhuehuapian-Colloncuran taxa. These fossil mammals indicate an older age for these deposits. The maximum possible age of these fossils is difficult to assess, but we note that there is nothing so far that appears significantly older than about Deseadan age (Oligocene). Some taxa represented among this material are clearly younger than Deseadan (*e.g. Plesiotoxodon*) and the material doesn't include many archaic taxa known from Deseadan and older faunas (*e.g.* Archaeohyracidae, Trigonostylopidae, or Isotemnidae). The occurrence along the Juruá in Brazil of Middle Miocene and older fossil mammals takes on greater significance today because of the improved state of our knowledge of contemporaneous faunas throughout South America.