

## Contribution to the knowledge of the fossil mammals from the ancient Tertiary terrains of Paraná

F. Ameghino\*

### Tapiroidea

#### General characteristics:

Upper molars with 2 transverse crests on the crown, each one with distinct trituration faces separated in all their length by a transverse groove without intermediate tubercle attachment that puts them in communication with the external side, nor basal cingulum lowest or farthest remote molars trilobate by three transverse crowns.

This is one of the most particular and interesting genera of the ancient fauna of the Paraná, which I founded at first on a single upper back tooth, adding in my latest writing the description of another three new upper molars presenting the same characteristics, and the lower far remote one, of a very particular form.

Professor Scalabrini has recognized several other upper molars of *Ribodon*, but all of them, save some small differences purely individual as from age, are absolutely identical to the previous descriptions, although some of them of a sufficiently smaller size, which convinces me in the idea that the upper back teeth of this animal with the exception of the first, they were of the same

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general form, differing only in respective position and size. Nevertheless, the entirety of examples now known, although it may be somewhat short, permits me to complete the general characteristics of the upper back teeth adding some details whose distinctive value was not available to me before judging such a small number of pieces.

So I can add now to my description of the anterior, that the hill as first lobe is somewhat larger than the posterior, and that back transverse hills are lobes, as well as the figures without enamel that form by wearing away are narrow and high on the external side and wide and rounded on the internal, being here where the edge of the enamel that limits the figure by wearing away is most wide and regular. Over the average transverse line that separates these two hills, something farther outside from the middle of the width of the molars, the enamel that surrounds the figures forms in each one of them at the same height and to the inverse, two folds that give to the figure and to the molar a particular form. At the anteroexternal angle of each molar exists a sufficiently elevated tubercle or hill attachment, separated from the forward lobe by a groove that penetrates the crown forming a fold of external enamel. Another hill, appearing but smaller, is found at the posteroexternal angle but this disappears soon with advanced age and wearing away of the molar.

In proportion, as the age of the animal advances, the molars growing in size approach until they touch and press each other, resulting in the anterior and posterior perpendicular faces having planes and flattening, not knowing which way to turn, the coat of enamel thins until it disappears in some cases. The crown of each molar as a whole is higher and wider on the external side and lower and narrower on the internal, wider in the front side and narrower in the back, lacking all vestige of a cingulum, either external or internal.

Dr. Burmeister, in the mentioned works, mentions and figures a tooth (molar) of this animal (*An., etc.*, vol. III, p. 160, pl. III, fig. 18A,B) according to a plaster cast that was deposited in the

museum, adding that it seems to him that it approached the figures given by Leidy from *Hyrachyus agrarius* (*Report of the United States Geol. Survey, etc., vol. I, Fossil Vertebr., 1873, p. 60, pl. 14, fig. 10*) that proposes to reunite *Ribodon* with *Hyrachyus* although he is disposed to consider the Argentine species as different.

This observation is really strange to me, when I clearly said in my preceding account that while the animal seemed to enter into the tapir family, it differed more from the genus *Tapirus* than all known fossil genera known until now in Europe and North America, and it is clear that among them one understood that *Hyrachyus* had already been described by Leidy as very similar to the genus *Tapirus*.

The upper molars of *Hyrachyus agrarius* mentioned by Leidy in the work and figure mentioned by Dr. Burmeister, compared with those of *Ribodon*, differ more than the molars of the other genera of the tapir family, including *Hyrachyus*, compared among themselves.

The form of the crown of the upper back teeth of *Hyrachyus* is now perfectly characteristic of the tree tapirs, so the two transverse crests unite over the external side putting in communication the superficial wear facets of the hills, fundamental characters that I have already said several times are lacking in *Ribodon*.

To this principle distinctive character are united the following of less importance:

In *Hyrachyus* alone, three posterior molars are presented as bilobate, the anterior being wide on the external side, narrow and rounded on the internal side, without vestige of a groove that divides the molars into two parts. In *Ribodon* all the upper molars, save the large one, ought to have more or less the same configuration with the exception perhaps of the first premolar. Due to this conformation they show in the center a transverse groove that separates the two lobes and the two crests along all their length, whereas in *Hyrachyus* said groove is substituted by a fold of enamel on

the internal side that penetrates the crown without reaching the external edge. Many more similarities are in this case between the molars of *Hyrachyus* and those of the tapirs than with those of *Ribodon*.

In *Hyrachyus* the molars are not pressing to one another, touching scarcely by the external edges and remaining well separated over the internal side. In *Ribodon*, on the contrary, they touch along all widths of the anterior and posterior perpendicular faces.

Finally there are two distinct genera, that in order to make an idea of the enormous difference that they presented in the conformation of the molars, it seems to me that is enough to compare an excellent depiction of the molar of *Ribodon* given by Burmeister with the figures by the notes of *Hyrachyus agrarius*, etc. pl. IX, figs. 9, 10a, b, c as with the included figure 11 of the same picture in the same work of Leidy cited by the author.

Many more seem to be found in *Ribodon*, and some European and Asiatic animal fossils, very rare, characterized also by upper molars with two transverse crests separated in total length, that either touches over the external side or only did it in a very advanced age. In this case they find *Listriodon*, some of whose fossil species in the Tertiary terrains of the Siwalik Mountains in India present molars very similar to those of *Ribodon*. I will cite particularly the molars of *Listriodon theobaldi* (Lyd.) and of *Listriodon pentapotami* (Falc.) figured by Dr. Lydekker in numbers 12, 15, 16 and 17 of pl. VIII of vol. III, *Paleontologia Indica, Indian Tertiary and pre-Tertiary Vertebrata*, Calcutta, 1884. But the molars of *Listriodon* also differ from those of *Ribodon* by some important generic characteristics as presented in the basal anterior and posterior cingula, the wider transverse hills that were produced by the figured use of sufficiently different form, and others of minor importance.

From America, apparently all that has been acquainted with *Ribodon* is an upper molar, from the lower Pampean of the tufas at the bottom of the Río de Plata, in the city of Buenos Aires, that indicates a distinct genus, something similar that will be designated with the name *Antaodon cinctus*, whose description I am going to add here in separate note, because I will contribute to form an idea of the particulars that distinguish *Ribodon* and to the small sub family that pertaining jointly with *Antaodon*.<sup>1</sup>

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<sup>1</sup> The molar of *Antaodon cinctus* even only until now, shows by an evident means the existence of an old animal sufficiently similar to tapirs, but very distinct from all those known to date as brought up to date as they became extinct on both continents.

Presenting only a small similarity and some common characteristics of certain importance with the Argentine genus *Ribodon*, together with that which seems to form a particular subfamily, whose upper molars would be characterized by two transverse hills separated by -----.