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Corrections and emendations to the description of *Deltamys araucaria* Quintela *et al.*, 2017 (Rodentia, Cricetidae)

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The most important point about a scientific system is that it should be true. But the explanation of a scientific system involves a further postulate: besides being true it must be understood.

—Jose Ortega y Gasset (The Modern Theme, 1931)

A new species was recently described to the akodontine genus *Deltamys* Thomas, 1917, based on animals collected in Araucaria forest, Rio Grande do Sul state, Brazil. Quintela *et al.* (2017) described *Deltamys araucaria* on the basis of the integration of morphological, chromosomal, and molecular characters analysis. Here I correct and/or emend critical aspects of this paper, including the type locality, diagnostic characters, and the appropriate recognition of earlier literature on this same taxon. My aim in this note is not to criticize this important new contribution but to facilitate future communication among researchers.

Type locality: The type locality of *D. araucaria* was given as “São Francisco de Paula municipality (29°29’73”S, 050°13’49”W; 913 m above sea level), Rio Grande do Sul State, Brazil” (Quintela *et al.* 2017:78). Clearly this type locality was poorly defined, not only the latitude coordinate is erroneous (i.e., there are only 60 seconds in a minute) but also the designated locality is imprecise (the municipality of São Francisco de Paula covers about 3,289.7 km², see <http://www.saofranciscodepaula.rs.gov.br/>). As such, the coordinates given, even if they were correct, are ambiguous - do they represent the actual spot where the holotype was captured or only the mid-point of the type locality as given (i.e., the municipality)? Although overlooked by Quintela *et al.* (2017), the terra typica of *D. araucaria* is as that designated for *Scapteromys meridionalis*, a sigmodontine previously described by some of these same researchers, which they also gave as “São Francisco de Paula municipality (29°29’73”S, 50°13’49”W; 913 m above sea level), Rio Grande do Sul State, Brazil” (Quintela *et al.* 2014:213). According to the recommendation 76A.2 of the ICNZ (1999) “A statement of a type locality that is found to be erroneous should be corrected.” Taken into account the original information (Quintela *et al.* 2014, 2017) plus additional contributions (Pedó *et al.* 2013; Quintela 2014; Luza *et al.* 2015, 2016), the type locality of both *Deltamys araucaria* and *Scapteromys meridionalis* is here restricted to 5 km by road W Centro de Pesquisas e Conservação da Natureza Pró-Mata/PUCRS, Rio Grande do Sul State, Brazil. This restriction is supported by several lines of evidence including, among others, the following: (1) according to Pedó *et al.* (2013:figure 1) *Deltamys araucaria* (cited there as “*Akodon* sp. 2 (2n = 34),” see below) was exclusively recorded in four neighboring transects crossing natural grasslands and *Araucaria* forests placed inside Centro de Pesquisas e Conservação da Natureza Pró-Mata (see also Luza *et al.* 2015, 2016, where the species is referred as *Deltamys* sp., and the collection sites references with numbers and letters, respectively); (2) these four transects are located within a quadrant with the NW corner positioned at 673900/576500 and with the SE corner positioned at 673750/577500 (UTM Coordinate system; Pedó *et al.* 2013); (3) since the collection site is located inside a protected area, a terra typica including the name of such protected area and a reference to its headquarters seem appropriate.

Diagnostic characters: In a perceptible effort to provide a diagnosis based on exclusive characters, Quintela *et al.* (2017:78) diagnosed *D. araucaria* as “A markedly tawny furred *Deltamys* species; 2n=34, FNa=34; protostyle present; M1 anterior alveolus parallel to or above posterior border of zygomatic plate in ventral view.” However, an inspection of the published figures illustrating dental aspects (Quintela *et al.* 2017:figs. 6 and 9) reveals that there is no a protostyle but a protoloph. This assertion is reinforced by the presence of an enteroloph (instead an enterostyle), correctly identified as it by Quintela *et al.* (2017:fig. 6). Protostyles and enterostyles are lingual accessory cusps rarely present in akodontines but present in other sigmodontines such as oryzomyines, thomasomyines and wiedomyines (e.g., Weksler 2006:fig. 25). To the contrary, minute lophs placed at the interior part of both hypoflexus and protoflexus are moderately frequent in

several genera of Akodontini (e.g., *Brucepattersonius*, *Oxymycterus*; see Hershkovitz 1994, 1998); and clearly this is the case exemplified by *D. araucaria*. Few living akodontines have protostyles; *Lenoxus apicalis* is a suitable example within this tribe to illustrate this structure (Fig. 1).

Antecedents: The description of *D. araucaria* included neither synonyms nor previous references about this taxon. However, *D. araucaria* had been previously mentioned as “*Akodon* sp. 2 (2n = 34)” by Pedó (2005), Pedó et al. (2010), and Pardiñas et al. (2015:145). Therefore, “*Akodon* sp. 2 (2n = 34)” is a synonym of *D. araucaria*. The clear association of both taxa is important because (1) it reduces taxonomic “noise,” since “*Akodon* sp. 2 (2n = 34)” is not an enigmatic form but instead represents a prior stage in our knowledge of *D. araucaria* (a worthy habit in taxonomy/nomenclature is not to allow ‘loose ends’); (2) field data originally gathered for “*Akodon* sp. 2 (2n = 34)” now adds to the overall knowledge of *D. araucaria*; and (3) efforts made by multiple authors are adequately credited.

In summary, of the issues listed above, the ambiguous original designation of the type locality of *D. araucaria* is clearly the crucial problem. However, the finding that it is the second time that the same error is repeated, should encourage authors, reviewers and editors to strengthen their attention of key data in original manuscripts. Errors mostly introduced by authors happen, but that is one reason why journals have reviewers and editors. In general terms, the selection of specialized reviewers and editors, clearly linked to the goals of papers and journals, seems to be the critical point to enlarge credibility in a growing horizon of scientific production.

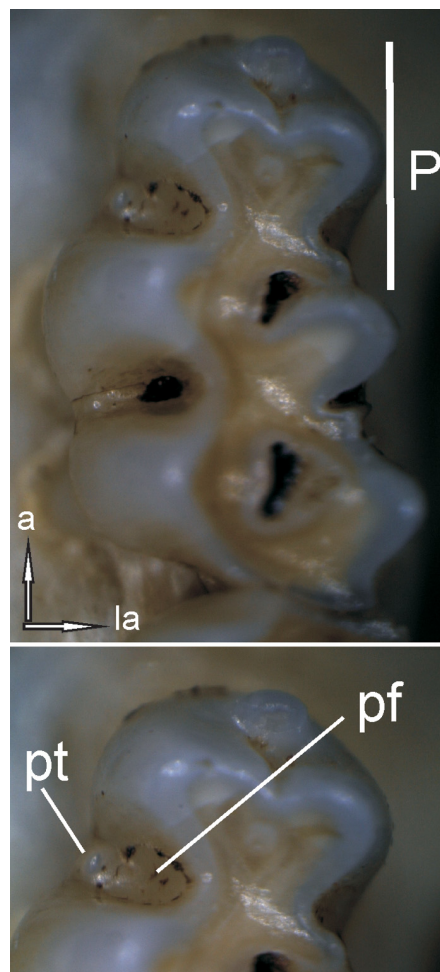


FIGURE 1. Left first upper molar in *Lenoxus apicalis* (based on a female collected 14 km W Yanahuaya, Puno, Peru, belonging to the collections of the Museum of Vertebrate Zoology at Berkeley, California, USA, MVZ 171512). Acronyms: a: anterior; la: labial; P: procingulum; pf: protoflexus; pt: protostyle.

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