



## Rectification of the type locality of *Ischnocnema paranaensis* (Anura: Brachycephalidae), a missing species of the Atlantic Forest of Brazil

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*Ischnocnema paranaensis* (Langone & Segalla, 1996) was described on the basis of a specimen collected in 1988 in a high-altitude site in the Atlantic Forest of the state of Paraná, southern Brazil (Langone & Segalla 1996). Since then, no additional records of the species have been obtained, despite being searched for multiple times shortly after its description (Eterovick *et al.* 2005). Several surveys at high altitudes in Paraná (*e.g.* Alves *et al.* 2006, Langone *et al.* 2008), some of which in the same region where the type was collected (Ribeiro *et al.* 2005, Fontoura *et al.* 2011), also failed to find this species. The species was therefore considered endangered in the state of Paraná (Segalla & Langone 2004), and the possibility that it had disappeared from the highlands was also considered (Eterovick *et al.* 2005). A species without any records for nearly 30 years should be sought mainly at its type locality, yet, the location of the type locality was incorrectly reported in the original description. Therefore, we here rectify the type locality of *I. paranaensis*.

In the original description, it was mentioned that the type specimen was collected during the day over mosses of the genus *Sphagnum*, 4 km west of Pico Paraná, at 1722 m a.s.l. (Langone & Segalla 1996). When this point is plotted on a topographic map (1:50.000; MI-2843-1; from 1992), it falls in the forest region of Ribeirão Cerrinho (25°14'59"S, 48°50'41"W), at 1310 m a.s.l. When the point is visualized on Google Earth, it lies at 1340 m a.s.l., also in a forest area. Later, however, Segalla & Langone (2004) and Eterovick *et al.* (2005) mention that the type was collected in grasslands at Pico Paraná (*i.e.* 25°14'58"S, 48°48'23"W), the highest peak in southern Brazil, reaching 1800 m a.s.l. (*sensu* Google Earth), or 1922 m a.s.l. (*sensu* Maack 1981).

According to the collectors of the type specimen (André A. Remi de Meijer and Luiz César Pereira Machado; personal communication to MRB in 1988), who are not listed in Langone & Segalla (1996), the type was collected at the locality Abrigo 1 (25°14'43"S, 48°49'40"W; based on the datum WGS84), Serra dos Órgãos (not to be confused with the homonym in the state of Rio de Janeiro), municipality of Antonina, State of Paraná, at 1615 m a.s.l. The original collectors also reported that the type specimen was singing during the day from *Sphagnum* mosses in open grasslands (“campos de altitude” or “Refúgio Vegetacional”, *sensu* Veloso *et al.* [1991]). Indeed, Abrigo 1 contains a small patch of grasslands in the middle of elfin forests (“Floresta Ombrófila Densa Altomontana”, *sensu* Veloso *et al.* [1991]) and is in excellent state of conservation (MRB pers. obs., in 2010). As such, we rectify the type locality to the open grasslands of Abrigo 1, Serra dos Órgãos, municipality of Antonina, State of Paraná, at 1615 m a.s.l. Our proposed correction is in accordance with the International Code of Zoological Nomenclature (ICZN 1999), whose article 76.1 establishes that “The type locality of a nominal species-group taxon is the geographical... place of capture, collection or observation of the name-bearing type”; *i.e.*, the indication of the type locality in the original description may not necessarily be assumed as correct, because what matters is the real place of collection, be it known or unknown. The sensibility of the Code to this aspect is apparent in the Recommendation 76A.2: “A statement of a type locality that is found to be erroneous should be corrected”.

Despite the proximity of the locality reported in the original description and the true type locality, the difference in altitude is considerable (about 500 m a.s.l.). Indeed, this variation is larger than the altimetric amplitude of occurrence of certain amphibian species of the Atlantic Forest (*e.g.* Pie *et al.* 2013). As an example, of the 21 species of