



<http://dx.doi.org/10.11646/zootaxa.3646.2.8>

<http://zoobank.org/urn:lsid:zoobank.org:pub:21F7E368-F1B1-4E62-8FE5-CB55993E445F>

On the available names for the northern and eastern South American subspecies of *Puma concolor* (Linnaeus, 1771) (Mammalia: Felidae) and their type localities

F.O. NASCIMENTO^{1,3} & G.S.T. GARBINO^{1,2}

¹Mastozoologia, Museu de Zoologia da Universidade de São Paulo, Avenida Nazaré 481, CEP 04263-000, São Paulo, SP, Brazil

²Pós-Graduação, Museu de Zoologia, Universidade de São Paulo, Avenida Nazaré 481, CEP 04263-000, São Paulo, SP, Brazil

³Corresponding author. E-mail: fabnasc@gmail.com, fabnasc@usp.br

The puma, *Puma concolor* (Linnaeus, 1771), is one of the widest distributed mammals of the world, occurring historically from southwestern Canada to southern Argentina (Young and Goldman 1946, Macdonald *et al.*, 2010). For this reason, more than 40 nominal forms were described for the species (Wozencraft, 2005). Recently, Culver *et al.* (2000), based on three mtDNA sequences and 10 microsatellite loci, defined six phylogeographic groupings of *P. concolor*, assigning six subspecific names to these groups. This taxonomic arrangement was followed in the mammalian taxonomic compendium edited by Wilson and Reeder (2005), although the subspecific name used for the eastern Brazilian subspecies was not the same (Wozencraft 2005).

The current consensus, with which we agree, is that *Puma concolor* has six genetically distinct phylogeographic groups to which subspecific names are attributed. We do not agree, however, that the names proposed for the northern South American and eastern South American subspecies, both by Culver *et al.* (2000) and Wozencraft (2005), are adequate for the taxa. Our rationale is based on the nomenclatural principles of the International Code of Zoological Nomenclature (ICZN 1999) and on the type locality of *Felis concolor* Linnaeus, 1771, erroneously accepted as “Cayenne, French Guyana”, which was discussed in detail by Hershkovitz (1959) and included a previous but forgotten lectotype designation by Husson (1978).

The correct type locality of *Felis concolor* Linnaeus, 1771. Linnaeus’s (1771) description of *Felis concolor* was based on Brisson (quoting Barrère), Marcgrave and Buffon (Goldman 1946, Hershkovitz 1959). Ultimately, according to Husson (1978), the sources of Linnaeus’ references were Marcgrave (1648) and Barrère (1743), who described animals from Northeastern Brazil and French Guyana, respectively (Hershkovitz 1959). Nevertheless, Linnaeus (1771) cited the *habitat* of *Felis concolor* only as “Brassilia” (= Brazil).

Merriam (1901: 593) was the first to restrict the type locality of *Felis concolor*, designating it as “Brazil (probably southeastern Brazil)”. This allocation was followed by Nelson and Goldman (1929) and Vieira (1946, 1955). Goldman (1946: 200, 202), posteriorly, moved the type locality of *Felis concolor* to “Cayenne, French Guyana”. His decision was based on the assumption that the primary Linnaean reference was Brisson, who gave the *habitat* as Guyana and Brasil but was ultimately basing his description on Barrère’s “tigre rouge” from Cayenne. It is noteworthy that the acceptance of Cayenne as the type locality of *F. concolor* was followed in most subsequent influential works (*e.g.* Cabrera 1958, Currier 1983, Anderson 1997, Culver *et al.* 2000, Wozencraft 1993, 2005).

Hershkovitz (1959) then proposed that the correct type locality of *Felis concolor* was Brazil. His rationale, different from Merriam (1901), was based on the assumption that Linnaeus’ name was based primarily on the *cuguacuarana* of Marcgrave, and in the same way as most type localities of Marcgrave (Thomas 1911: 123-124), the type locality of *Felis concolor* could be assumed to lie in or near to the Brazilian state of Pernambuco, being restricted by the author to “Pernambuco, Brazil” (Hershkovitz 1959: 97, 99). The article of Hershkovitz, although relevant to the debate, is not cited in Culver *et al.* 2000 and Wozencraft (2005), both of which made important taxonomic decisions, while other authors followed Hershkovitz and assigned the type locality of *Felis concolor* to Brazil (Weigel 1961; Mazzoli & Bartlett-Ryan 1996; Cherem *et al.* 2004; Ruiz-Garcia *et al.*, 2009).

Husson (1978), following Hershkovitz (1959), argued that when the latter was assuming that Linnaeus was primarily basing his species on Marcgrave’s *cuguacuarana*, he was subjectively designating Marcgrave’s description and figure as a lectotype. Husson (1978) then formally designated the description and the figure of Marcgrave’s *cuguacuarana* as the lectotype of *Felis concolor*. This decision, the only one that was based on the ICZN (Article 74.6 of the ICZN 1999), was neither followed nor cited in the synonyms lists that followed the two works (Currier 1983, Culver *et al.* 2000,