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On the scientific name of the extant Giant Lizard of La Gomera (Canary Islands): *Gallotia gomerana* Hutterer, 1985 *vs. G. bravoana* Hutterer, 1985 (Reptilia: Lacertidae)

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ABSTRACT: Current published data on the scientific name of the extant Giant Lizard of La Gomera are discussed. We conclude that available information does not support the synonymy *Gallotia gomerana = G. bravoana*, so the extant giant lizards of La Gomera should be named as *Gallotia gomerana* while *Gallotia bravoana* must be maintained for the larger extinct species of this island.
Key words: Giant lizards, scientific name, *Gallotia, gomerana, bravoana*, La Gomera, Canary Islands.

RESUMEN: Se presenta y discute la información publicada más relevante referente a los nombres científicos utilizados para designar a los actuales lagartos gigantes de La Gomera. Se concluye que los datos disponibles no sustentan la sinonimia *Gallotia gomerana = G. bravoana*. Esto implica que la denominación científica para los lagartos gigantes vivos de La Gomera debería ser *Gallotia gomerana*, y que *G. bravoana* debería emplearse para los lagartos extintos de mayor talla de dicha isla.
Palabras clave: Lagartos gigantes, nombre científico, *Gallotia*, *gomerana*, *bravoana*, La Gomera, Islas Canarias.

INTRODUCTION

Since a giant lizard was discovered alive on La Gomera (Valido *et al*., 2000) in 1999, several scientific names —mainly *G. gomerana* Hutterer, 1985 and *G. bravoana* Hutterer, 1985— have been used by different authors to refer to this reptile. In order to clarify this situation, we have tried to arrange and interpret current available relevant data.

HISTORICAL BACKGROUND

- In 1985, Rainer Hutterer describes two subspecies of giant lizards from La Gomera based on fossil remains: *G. goliath bravoana* Hutterer, 1985 and *G. simonyi gomerana* Hutterer, 1985. The former being the largest with a snout-vent length (SVL) of 380 mm, 21-24 maxillary teeth and 25-26 dentary teeth; while the second had a SVL of only 214 mm, 18-20 maxillar and 21-22 dentary teeth respectively.
- In 1996, Castillo and collaborators find similarities related to the pholidotic characteristics and dentition between two mummified specimens of the extinct *G. goliath goliath* (Mertens, 1942) found on Tenerife and *G. simonyi simonyi* (Steindachner, 1889) from El Hierro.
- In 1998, Wolfgang Bischoff considers: (*a*) the previous results of Castillo *et al*. (1996); (*b*) the variation of some osteological characters used in the diagnosis of *G. simonyi* (Steindachner, 1889) and *G. goliath* (Mertens, 1942); and (*c*) the fact that the coexistence of two species, one of large size ("*simonyi* group") and the other smaller ("*galloti* group"), in one island is more parsimonious than the situation where one small and several larger coexist. Based on these considerations, as a **provisional** [sic] interpretation he concluded that all the (sub)fossil giant lizards of the "*simonyi* group" were subspecies of *G. simonyi*: *G. simonyi simonyi* (Steindachner, 1889) from El Hierro, *G. simonyi bravoana* Hutterer, 1985 [a new combination!] from La Gomera, *G. simonyi goliath* (Mertens, 1942) from Tenerife and *G. simonyi ssp*. from La Palma; the last being described later as *G. simonyi auaritae* Mateo, García-Márquez, López-Jurado et Barahona, 2001. Nonetheless, he cautiously indicates the possibility that *G. simonyi* [s.l.] and *G. goliath* [s.l.] could be considered allospecies paralleling the case of *G. galloti* [s.l.] and *G. caesaris* [s.l.].
- In 2000, Barahona and collaborators publish a comparative study of living and subfossil specimens of the genus *Gallotia* from the Western Canary Islands, showing that characteristics formerly used in the diagnosis of the extinct species and subspecies fell within the range of intra-specific variation (ontogenetic and individual) of the living species. A synonymy of *G. simonyi* (Steindachner, 1889) = *G. goliath* (Mertens, 1942) is proposed due to: (*a*) only two species (one small and one large) can be distinguished amongst the fossil remains on El Hierro and Tenerife (as is the case today); (*b*) the morphological characteristics of the subfossils attributed to *G. goliath* (Mertens, 1942) match those of *G. simonyi* from Tenerife and La Palma, and any differences observed in the subfossil forms fall within the range of variation of the living species or are shown to be directly related to size.

- In 2000, Valido and collaborators mention the discovery of giant lizards alive on La Gomera, without assigning any scientific name to this population.
- In 2001, Nogales and collaborators identified the giant lizard found alive on La Gomera as *G. gomerana* Hutterer, 1985, raising it to the species status based on morphological and genetic differences with closely related species: *G. simonyi* (Steindachner, 1889) from El Hierro, and *G. intermedia* Hernández, Nogales et Martín, 2000 from Tenerife.
- In 2002, Mateo argues that the name of the Gomeran giant lizard should be *G. bravoana*, based on the morphometric evidence obtained by Barahona *et al*. (2000) and the strict application of the International Code of Zoological Nomenclature (without any further comment!). He mentions the previous paper of Bischoff (1998) just to recall that both giant lizards of La Gomera were considered as a single subspecies, namely *G. simonyi bravoana*.
- In 2003, Maca-Meyer and collaborators study ancient mitochondrial DNA sequences extracted from the Teneriffan mummified specimens of *G. goliath goliath* (Mertens, 1942), the same as those mentioned by Castillo *et al*. (1994). These authors conclude that this extinct lizard is phylogenetically distinct within the "*simonyi* group" from the extant *G. simonyi* of El Hierro, and also from the recently discovered live *G. gomerana* on La Gomera and *G. intermedia* from Tenerife.
- Finally, in 2005, the Spanish Herpetological Society (AHE), in the last Spanish Herpetofaunal List (Montori *et al*., 2005), register the Gomeran giant lizard as *G. bravoana* Hutterer, 1985. Likewise, this same year, it was included with the same name in the Spanish Catalogue of Threatened Species, and in the official list of Canarian common names of animal and plants (Machado & Morera, 2005), under the entry "lagarto gigante de La Gomera" (translated: Giant Lizard of La Gomera). However, in the Canarian Catalogue of Threatened Species it is still considered as *G. simonyi gomerana*.

DISCUSSION AND CONCLUSION

According to the information compiled above, it seems that the alternative scientific names used for the extant Giant Lizard of La Gomera, namely *Gallotia bravoana* or *G. gomerana*, depend basically on how the systematics of the group is interpreted, and less on nomenclatural grounds. Two sceneries are possible:

(a) Only one large lizard species inhabited La Gomera; consequently *gomerana* and *bravoana* are synonyms independently of their rank or to which other taxon they may have been ascribed as subspecies. This synonymy was proposed by Bischoff (1998) and the consideration of being "provisional" has no effect under the Code of Nomenclature. The synonymy *G. goliath bravoana* Hutterer, 1985 = *G. simonyi gomerana* Hutterer, 1985 was established, and Bischoff acts as first reviser when selecting the name *bravoana* under the new combination *G. simonyi bravoana*. The valid name would be *Gallotia bravoana* Hutterer, 1985 after it was raised to species status by Mateo (2002).

(b) Two large lizard species were present on La Gomera, as originally proposed by Hutterer (1985). The specimens found alive on the island were identified by Nogales *et al*.

(2001) as *G. simonyi gomerana* (one of the two taxa described by Hutterer, 1985) and simultaneously raised to the status of species (*G. gomerana*). These authors implicitly do not recognise the synonymy established by Bischoff (op.cit.) and suggest to solve the problem by molecular studies. In this case, the valid name for the living Giant Lizard of La Gomera would be *Gallotia gomerana* Hutterer, 1985.

One should bear in mind that Barahona *et al*. (2000) explicitly proposed the synonymy of *G. simonyi* and *G. goliath* according to the results obtained from Tenerife, El Hierro and La Palma, but not from La Gomera. Moreover, according to the posterior study of Maca-Meyer *et al*. (2003) the synonymy *simonyi = goliath* is not supported, so that Tenerife was inhabited by two large species of the "*simonyi* group" (*G. goliath* and *G. intermedia*) and the smaller *G. galloti*. It is also possible that this situation could have been similar in La Gomera, where the smaller species is *G. caesaris* and the two larger taxa are those described by Hutterer (1985). Nonetheless, to extrapolate results from one island to another —as they did— has to be done cautiously because of the different age and geological genesis of the islands: less than 1 My for El Hierro, 2 My for La Palma, about 12 My for Tenerife —with a complex geological evolution—, and about 10 My for La Gomera (Cantagrel *et al*., 1984; Ancochea *et al*., 1990; Fuster *et al*., 1993; Carracedo *et al*., 1998). These markedly different geological histories may have affected the number of established species.

In conclusion, the synonymy *G. goliath bravoana = G. simonyi gomerana*, as proposed by Bischoff (1998) is not supported because: (a) the similarities in the pholidosis of *G. goliath* and *G. simonyi* were found on islands other than La Gomera (Tenerife and El Hierro respectively) and, in addition, all extant species of the "*simonyi* group" show similarities in their pholidotic traits; (b) in spite of the variation found by Barahona *et al*. (2000) in the characters formerly used in the diagnosis of the extinct species and subspecies, these authors established the synonymy *G. simonyi = G. goliath* based on their results from Tenerife, El Hierro and La Palma (not from La Gomera). Moreover, DNA mitochondrial analysis shows that *G. goliath* (Tenerife) is different from all extant species of the "*simonyi* group"; (c) to consider that the existence of only two species (one small and the other large) on one island as the most probable situation is just an hypothesis, and has not been proven, particularly on La Gomera, which is a rather old island. In fact, Tenerife had three different species: *G. goliath*, *G. intermedia* and *G. galloti*.

Consequently, the name *Gallotia bravoana* has to be maintained for the larger extinct species of La Gomera and *Gallotia gomerana* for the extant Giant Lizard of this island.

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