

## First record of a piebald Selvagens Gecko *Tarentola boettgeri bischoffi* (Squamata: Gekkonidae)

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Atypical colorations resulting from a deficiency of colour pigments are often reported in the herpetological literature. Such conditions may affect the entire body or only part of it and can range from “true” albinism, a hereditary lack of pigmentation caused by a deficiency in one of the enzymes involved in melanin synthesis, in which the animal completely lacks pigmentation in all portions of the body, including the eyes, to leucism, characterized by a deficiency in integumentary pigmentation while still preserving normally pigmented eyes. This last condition is usually caused by developmental anomalies in the differentiation of the pigment cells, do not necessarily involve genetic mutations and may be restricted to some body regions (thus generating a “piebald” phenotype (Acevedo, Torres and Aguayo-Lobo, 2009)) or to the whole body, with the exception of the retina (Dyrkacz, 1981).

Despite a low frequency of occurrence, cases of the mentioned colour anomalies have been reported for a variety of reptile species. Albinism records include *Podarcis muralis* (Fontanet and Matallanas, 1985; Spadola and Di Toro, 2007), *Gallotia caesaris gomeræ* (López-Jurado and Mateo, 1998) and *Elaphe longissima* (Krofel, 2004), while leucism has been reported for *Vipera berus* (Krecsák, 2008). Although being recorded among Gekkonidae (e.g.: albino *Euleptes europaea* (Delaugerre, 1981)), a literature review revealed that so far **hypo-pigmentation, either partial or complete**, whichever its underlying cause, has not been recorded in *Tarentola* spp.

*Tarentola boettgeri bischoffi* Joger, 1984 is a medium sized nocturnal gecko endemic to the Selvagens archipelago, Madeira, Portugal, where it can be found in 3 isolated sub-populations in the three main islands of the archipelago: Selvagem Grande, Selvagem Pequena and Ilhéu de Fora (Rebelo, 2008). During the daytime the species normally presents a dark grey/brown dorsal coloration with darker or lighter irregularly shaped spots, a lighter vertebral line and whitish underparts.

On 16 June 2009, while conducting a population monitoring study on the Selvagem Grande *T. b. bischoffi* population, a gecko with a distinctive white patch was found (Fig. 1 and Fig. 2). The white patch was clearly defined and spread from behind the right jaw to the right forelimb. At its longest the patch was 153 mm and at its widest 88 mm. The individual was an adult male and had a SVL of 630 mm. The head width was 160 mm and it weighed 7.1 g. The observed piebald phenotype could either be a result of a mutation during development (resulting on a partially albinistic individual in which the albinism is restricted to a certain proportion of the body) or to a defect in pigment cell differentiation during development (leading to a partially leucistic individual). However, from the mere observation of the gecko’s white patch it is not possible to identify the underlying cause for this localized hypopigmentation as albinism or leucism. During all of the monitoring study, which started in 2005, and includes 3201 captures so far, this was the only individual where this unusual coloration was observed. The specimen was found under a rock in the central plateau and the vegetation surrounding the collection site was dominated by *Suaeda vera*. The animal seemed in good condition and after being photographed and measured, was released in the same place it was found.

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**Figure 1.** Lateral view of a piebald *Tarentola boettgeri bischoffi*, Selvagem Grande, Madeira, Portugal.



**Figure 2.** Ventral view of a piebald *Tarentola boettgeri bischoffi*, Selvagem Grande, Madeira, Portugal.

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