

A LARVAL ALBINO OF THE GOLDEN-STRIPED SALAMANDER, *CHIOGLOSSA LUSITANICA*

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Albinism is a pigmentary disease with a genetic origin (Parent, 1992). Although albinism is described for many species of amphibians (e.g. Dyrkacz, 1981; Crucitti & Gentili, 1987; Guyetant & Moine, 1992) it is rarely observed in nature. Albino and other odd-coloured amphibians were recently the focus of attention and the apparent increase in their frequency has been linked to environmental causes and inbreeding due to reduced gene flow between populations Beebe (1997).

The Golden-striped Salamander (*Chioglossa lusitanica*) is a streamside salamander endemic to the Northwest of the Iberian Peninsula. Until the 1980's the species was one of the least known European amphibians but has been thoroughly studied since (e.g. Arntzen, 1981, 1994a,b; Vences, 1990; Alexandrino *et al.*, 1997; Teixeira *et al.*, 1999). Two cases of albinism were reported for the species so far: one partially albino adult found near Porto, North Portugal, in 1960 (Brame & Freytag, 1963) and one totally albinotic larva collected in Valongo Mountains, also in the vicinities of Porto, in 1977 (Arntzen, 1999).

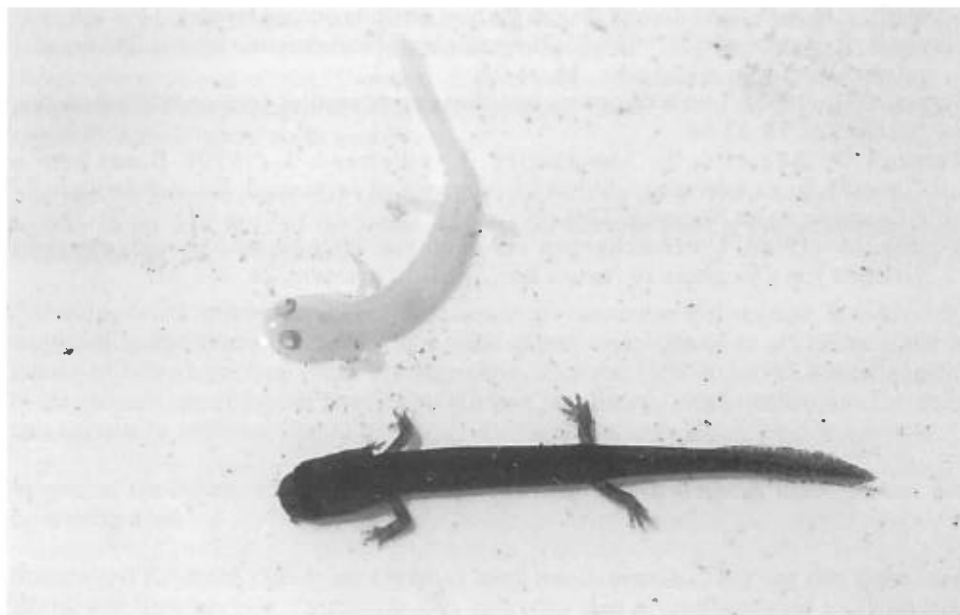


Plate 1: Albinotic and normally coloured larvae of Golden-striped Salamander, *Chioglossa lusitanica*.

A national survey of the distribution of *C. lusitanica* in Portugal was carried out from 1994 to 1998 (Teixeira *et al.*, 1999). We visited 374 potential habitats such as mountain brooks and mines. The species was detected in 200 squares U.T.M. 10x10 km. During this study a totally albino larva (see photo) was found in a mine near Candal in Lousã Mountains, Central Portugal. Hundreds of larvae (in different stages of development) and awith no pigmentary abnormality were also observed in the same place.

The low number of reported cases spanned over a large period of time suggest that albinism is rare in the Golden-striped Salamander.

REFERENCES

- Alexandrino, J.; Ferrand, N. & Arntzen, J.W. (1997). Genetic variation in some populations of the Golden-striped salamander, *Chioglossa lusitanica* (Amphibia: Urodela), in Portugal. *Biochem. Gen.*, **34**: 371-381.
- Arntzen, J.W. (1981). Ecological observations on *Chioglossa lusitanica*. *Amphibia-Reptilia*, **1**: 187-203.
- Arntzen, J.W. (1994a). Allometry and autotomy of the tail in the Golden-striped salamander, *Chioglossa lusitanica*. *Amphibia-Reptilia*, **15**: 267-274.
- Arntzen, J.W. (1994b). Speedy salamanders: sedentariness and migration of *Chioglossa lusitanica*. *Rev. Esp. Herp.*, **8**: 81-86.
- Arntzen, J.W. (1999). *Chioglossa lusitanica* Bocage 1864 – der Goldstreifen salamander. in: K. Grossenbacher & B. Thiesmeier (Eds). *Handbuch der Reptilien und Amphibien Europas*. Aula Verlag. Wiesbaden. pp. 301-321.
- Beebee, T. (1997). Funny-coloured frogs. *Brit. Herp. Soc. Bul.*, **60**: 40.
- Brame, A.H. & Freitag, G.E. (1963). Ein halbalbina von *Chioglossa lusitanica*. *Zool. Gart.*, **27**: 130-131.
- Crucitti, P. & Gentili, G. (1987). Un fenotipo semialbino di *Triturus cristatus karelinii* (Strauch, 1870). *Atti. Soc. Ital. Sci. Nat. Milano*, **128**: 57-61.
- Dyrkacz, S. (1981). Recent instances of albinism in North American amphibians and reptiles. *Herpet. Circ.* Society for the study of amphibians and reptiles, **11**.
- Guyétant, R. & Moine, S. (1992). L'albinisme chez la salamandre tachetée *Salamandra salamandra* L. *Rev. Fr. Aquar.*, **19**: 91-92.
- Parent, G.H. (1992). L'utilisation des batraciens et ds reptiles comme bio-indicateurs. *Nat. Belges*, **73**: 33-59.
- Teixeira, J.' Sequeira, P.; Alexandrino, J. & Ferrand, J. (1999). Bases para a Conservação da salamandra-lusitânica, (*Chioglossa lusitanica*). *Estudos de Biologia e Conservação da Natureza*, **22**: 1-33.
- Vences, M. (1990). Untersuchungen zur okologie, etologie und geographischen variation von *Chioglossa lusitanica* Boc. 1864. *Salamandra*, **26**: 267-297.