

## Description of a case of albinism in a tadpole of *Discoglossus pictus pictus* (Anura: Discoglossidae) in Sicily

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*Discoglossus pictus* Otth 1837, is an anuran species of the central Mediterranean region, with two geographically isolated forms, one occurring in Sicily and Malta (*D. pictus pictus*) and another in the eastern Maghreb, from the northeast of Morocco to Tunisia (*D. pictus auritus*) (Zangari, Cimmaruta and Nascetti, 2006). An alien population of *D. pictus auritus* also occurs in northeast Spain and southern France (Lanza et al., 1986; Escoriza and Boix, 2012), possibly introduced from Algeria (Martínez-Solano, 2004). Several species of frogs show great polymorphism regarding their coloration (Hoffman and Blouin, 2000) and *D. pictus* is a particularly variable species, showing three color patterns: striped, spotted and uniform (Lanza et al., 2007). In the literature, albinism is documented in many species of anurans (Smallcombe, 1949; Browder, 1972; Hopperskaya, 1975; Sanabria, Quiroga and Laspiur, 2010; Toledo, Rodrigues da Silva and Araujo, 2011), although it is very rare in *D. pictus*, and has only been described in two cases, in a tadpole and in a subadult specimen (Boulenger, 1897; Spadola and Insacco, 2010).

In April 2012 an albino tadpole of *D. pictus* (lateral view: Fig. 1, dorsal view: Fig. 2) was found near Belsito (Palermo, northwestern Sicily) at 767 m above sea level, in a temporary pond with many tadpoles of *D. pictus* bearing a normal phenotype. This specimen lacked pigment in the eye, as can be appreciated in Fig. 1, therefore being a case of full albinism.

Albinism or partial albinism is a recessive genetic trait in amphibians (Smith-Gill, Richards and Nace, 1972; Frost-Mason and Mason, 1996), although in some cases it could be favored by environmental distress (Vershinin, 2004), as for example, by parasite infections, and might be associated with other morphological malformations (Johnson et al., 2002). Albinism or partial albinism may affect adversely individual survival (Møller and

Mousseau, 2001; Krécsak, 2008), although in laboratory conditions albinism has not been linked to alterations in the development or growth of tadpoles (Corn, 1986). But an increase in the rate of predation suffered by albino tadpoles (Childs, 1953) can justify the rarity of the persistence of this phenotype in the wild.

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**Figure 1.** Lateral view of the albino tadpole of *D. pictus pictus*, Belsito (Sicily).



**Figure 2.** Dorsal view of the albino tadpole of *D. pictus pictus*, Belsito (Sicily).

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