



NATURAL HISTORY NOTES

TRITURUS ALPESTRIS (Alpine newt):

HYPOMELANISM. Various colour aberrations have been described in many species of caudate amphibians including *Triturus* newts (Dyrkacz, 1981; Bechtel, 1995; Grossenbacher & Thiesmeier, 2003; Thiesmeier & Grossenbacher, 2004). Although the terminology is sometimes confusing, the most frequently reported colour aberrations are albinism – absence of melanin including eyes, hypomelanism or partial albinism – partial absence of melanin, and leucism – lacking of all integumentary pigments except of eyes (Bechtel, 1995). Here, we describe a recent incidence of hypomelanism in the larva of *T. alpestris*.

The aberrant and three typically pigmented larvae were captured by dip-net in a temporary water puddle (approx. 8 km SW Jihlava, Czech Republic; 620 m a.s.l.) on 9th September 2006. Whereas the unusually coloured individual was at climax larval stage (stage 18, after Watson & Russell, 2000; total length 48.2 mm), the typically pigmented larvae were already metamorphosing. In comparison with ‘normally’ coloured counterparts, the aberrant larva had greatly reduced dark (melanin) pigmentation (Figures 1 and 2). The basic colour was white-yellow with a few dark spots on the tail and greatly reduced dark marbling pattern on the dorsal and ventral tail fins. Although the eye pupil was black, the iris completely lacked black pigmentation.

To record coloration after metamorphosis, all larvae were transported to the laboratory and then placed in an aquarium at 17°C. The aquarium was filled with soft water (conductivity 100 µS/cm) up to 5 cm, and equipped with a clump of Java moss and a piece of Styrofoam. Larvae were fed with live *Tubifex* worms every second day. Under these conditions all typically pigmented larvae metamorphosed within one week. However, the aberrant individual remained at the climax stage without any sign of metamorphosis (i.e., tail fin and gill reduction) for two months after capture, which suggests that the larva was not only hypomelanistic, but also paedomorphic. This seems a little surprising given that both melanin synthesis and metamorphosis are under the same endocrine control in amphibians (Herman, 1992; Rose, 1999).

During two consecutive seasons (2005 and 2006) we checked pigmentation in 520 larvae obtained from eggs of 25 females in the laboratory. In addition, we regularly monitored the presence of newt larvae in 20 water bodies. However, we found no other similarly coloured specimen. Because we are unaware of other report of hypomelanism in *T. alpestris*, despite its frequent use as the model species in various research areas (e.g., Denoël & Joly, 2000; Van Buskirk & Schmidt, 2000; Garner & Schmidt, 2003), we suggest that the incidence of hypomelanism is quite rare phenomenon in this species.



Figure 1. Typically coloured larva of *T. alpestris*.



Figure 2. Hypomelanistic larva of *T. alpestris*.

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