
A partially neotenus Great crested newt, *Triturus cristatus*

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NEOTENY (or paedomorphosis) refers to the retention of juvenile features into sexual maturity (e.g. Smith, 1964; Beebee & Griffiths, 2000; Pough *et al.*, 2004). It can occur in Palmate, Smooth and Great crested newts, although it is an unusual condition in these species (e.g. Smith, 1950; Smith 1964; Dolmen, 1980; Banks, 1985). Neoteny encompasses a range of forms, including larvae that grow to adult size and otherwise normal-looking adults with gills, and it includes individuals lacking in pigmentation (Beebee & Griffiths, 2000). Among the three newt species that occur in Britain, neoteny seems to occur least frequently in the Great crested newt. It has been observed in this species in continental Europe (e.g. Dolmen, 1980), but neotenus Great crested newts do not seem to have been recorded in Britain (Smith, 1950; Smith, 1964; Beebee & Griffiths, 2000).

The current note describes a pale coloured, neotenus Great crested newt. As it is not fully grown, it is unlikely to be sexually mature. Hence it may be better described as an example of partial neoteny, a term used by Smith (1964) to refer to the prolongation of the larval state, even though sexual maturity is not achieved. Smith (1964) notes that partial neoteny is known in all the British species of newts, but he does not cite specific instances of its occurrence in the Great crested newt and it seems sufficiently unusual to merit reporting.

A single specimen was found during the course of monitoring ponds as part of a legally authorised (licensed by the Department for Environment, Food and Rural Affairs) development mitigation scheme. The specimen was found in a pond in Norfolk (TM 19 99). The site is a well-vegetated, shallow pond, which was approaching complete desiccation when the specimen was discovered (31 August 2005). The larva was captured while netting a small pool of remaining water, which contained many Smooth newt larvae. Normally

coloured Great crested newt larvae were found earlier in the year, but these were assumed either to have completed metamorphosis and left the pond by the time of the survey visit in question, or to have been stranded and killed as other parts of the pond dried.

The partially neotenus specimen was the size to be expected of a normal Great crested newt larva in the later stages of development (approximately 55 mm total length). However, it was unusually coloured, being almost entirely devoid of dark pigmentation. There were a few black spots on the dorsal surfaces, primarily of the tail, but also the body. The tail fin was heavily spotted, as in normally developing Great crested newt larvae. Most of the body was devoid of other pigmentation except for pale yellow areas, primarily dorsally, but also on the lower edge of the tail. The eyes were normally coloured, so that the specimen is more accurately described as leucistic rather than albino (the latter has pink eyes). Similar coloration among other neotenus specimens has been described in Smith's 1964 publication which contains a photograph of such a neotenus Smooth newt.

Neoteny in newts is sometimes regarded as a response to specific environmental conditions, especially cool environments and where escape from the water may be difficult (Smith, 1964; Banks, 1985). However, neoteny can also occur in situations where it is regarded as a developmental aberrance. As both the process of metamorphosis and the development of pigmentation are controlled by the pituitary gland, then pale or albino neotenes may be the result of a malfunction in pituitary action (Beebee & Griffiths, 2000). Since the currently described individual originated from a temporary pond, it seems unlikely that neoteny would confer any advantage. In fact, the animal would have died as its pond dried. Hence, it seems that this specimen is an example of a failure of pituitary action.



Figure 1 (above). Partially neotenus Great crested newt, approximately four months old.

Figure 2 (centre). Partially neotenus Great crested newt, one year old.

Figure 3 (left). Close-up of head, at one year old.

The newt was removed from the pond and maintained in captivity (under licence from English Nature) to observe its further development. At just over one year old, it measured approximately 80mm long. Curiously, the largest right-hand gill, which was absent at the time of capture, had not

regenerated during ten months in captivity (newt larvae normally show considerable regenerative powers). The black spotting had increased on the head, flanks and tail, but the animal had shown no signs of transformation into the normal post-metamorphic form. The extent of further development of dark pigmentation remains to be seen. Smith (1950) observed that pale neotenus specimens (either Smooth or Palmate newts) were small, whereas adult sized neotenus animals were normally coloured, which is consistent with increasing pigmentation as individuals grow. Whether this animal attains sexual maturity in its current form – hence becoming fully neotenus – also remains to be seen.

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A review of the records of the Sand boa (*Eryx jaculus*) in Romania

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ABSTRACT – An account of the records of the Sand boa (*Eryx jaculus*) in Romania is presented, together with a review of the relevant literature. Preserved specimens in the collection of the “Grigore Antipa” National Museum of Natural History, in Bucarest (MGAB) and Museum of the Martin-Luther University Halle-Wittenberg (IZH) are listed. The distribution of *Eryx jaculus* and its conservation status in Romania is discussed.

THE Sand boa (*Eryx jaculus*) is one of the rarest reptiles within the European herpetofauna. It is distributed on the continent only in extreme southern Albania, Macedonia, Greece, on many Aegean islands (especially the Cyclades), in southeastern Romania, southern Bulgaria, as well as in Turkey (Tokar & Obst, 1993). Its occurrence in

Romania, as well as the existence of preserved individuals housed in museum collections, is scarcely known. The purpose of this short note is to give an account of the records from the literature, the specimens in museum collections, to comment on the distribution of the species in Romania, and to discuss its conservation status.