

# The masked newt: variation of body coloration in a Great crested newt, *Triturus cristatus*

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THIS note describes a Great crested newt with unusual colour patterns encountered at a pond in East Kent in April 2007. The belly pattern of the species is unique to each individual (Hagström, 1973), although it does tend to show variation over time (Arntzen & Teunis, 1993). Variation in colour in the upper parts of the body is, however, uniformly described (Smith, 1951; Griffiths, 1996; Beebee & Griffiths, 2000) as varying between dark brown and black with black spots. None of these authors lists any further variation in the coloration of the upper parts of the species.

The unusual animal was obtained by bottle trapping (Griffiths, 1985), carried out as part of a scientific programme in support of the National Amphibian and Reptile Recording Scheme. Bottle traps were set at night and recovered the following morning. Over the course of five surveys in 2007 this was the only unusually marked animal encountered, either at this or adjacent ponds. No strangely patterned animals were encountered by torching or netting, other methods used as part of the survey.

There were no lesions or any other signs on the body to suggest that the coloration was a result of some pollutant entering the pond, and it was therefore assumed that the cause of the unusual markings was genetic rather than a result of contamination.

The animal was an adult male in full breeding condition (Figure 1). The head and throat were predominately yellow-orange, with a small area of normal coloration surrounding both eyes, resembling a mask. The crest was well developed but contained areas of pale pigment. The flanks were mainly normal but with some yellow patches.

The tail (Figure 2) shows an abrupt change from normal coloration to yellow with a few small brown patches. The tail stripe is especially interesting, as the tail plays an important part in courtship. Normally described as white to silver, in this case a definite pinkish hue is visible.

Courtship patterns amongst European newts, including Great crested newts, are amongst the best understood of all amphibian species and were reviewed by Halliday (1977, 1990) and Arntzen & Sparreboom (1989), and are also described in Griffiths (1996). In the case of the Great crested newt, courtship includes the waving of the tail combined with a more violent tail movement over the head of the female, referred to as the whiplash. The male may then stand in a "handstand" position, rocking from side to side, which enables the female to see the size of the male's crest.

Several colour variations within the species have been reported to Natural England in recent years (Jim Foster, pers. comm.), but appear to be very rare. Nowhere have the gene mutations that produce variations become established in local populations. It therefore seems unlikely that brightly coloured Great crested newts will become a regular feature in UK populations.

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Figure 1. © D. Sewell.



Figure 2. © D. Sewell.

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Adult male *Triturus cristatus* (normal colour variant). © D. Sewell.