



An Observation of Polydactyly Associated With Tail Injury in the Great Crested Newt (*Triturus cristatus* Laurenti 1768)

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The Great Crested Newt (*Triturus cristatus*), Great Britain’s largest newt, is rough and warty and coloration is dark brown or black with white speckling on the sides (Speybroeck et al. 2016). The venter is vibrant orange with irregular yet well-defined black spots (Inns 2009) that form a pattern unique to each individual (Hoque et al. 2011). Male SVL (12–14 cm) is slightly smaller than that of females (13–16 cm), although females can occasionally be larger (Inns 2009). Predators of *T. cristatus* include Eurasian Otters (*Lutra lutra*), Barred Grass Snakes (*Natrix helvetica*), and predatory birds such as the Tawny Owl (*Strix aluco*) (Martín and López 1990; Bringsøe and Nørgaard 2018).

Diseases are often associated with amphibian deformities (Lima and Dill 1990) and parasitic cysts can cause polydactyly (Hecker and Sessions 2001). Other natural and anthro-

pogenic factors include pollutants, UV-radiation, or trauma (Pfeiffer et al. 1985; Johnson et al. 2002; Blaustein and Johnson 2003), the last sometimes associated with attempted predation (Bohl 1997) or cannibalism (Crump et al. 1992). Prenatal stress and a genetic predisposition to deformities can cause abnormalities (Blaustein and Johnson 2003). Some newts develop abnormalities over time; for example, injury and subsequent poor regeneration of the missing digit can lead to polydactyly (Maginnis 2006).

At 1306 h on 28 August 2022, we found a subadult female *T. cristatus* (SVL 10.5 cm, weight 7.3 g) under a waterproof cover near a greenhouse in a residential garden in Norfolk, UK (52.75367, 0.80336). This was the first newt found in this residential area, although they are known to occur in a nearby nature reserve (Deaton 2022). The newt



Figure 1. A female Great Crested Newt (*Triturus cristatus*) with polydactyly on the right forelimb. Photograph by Lana J. Deaton.

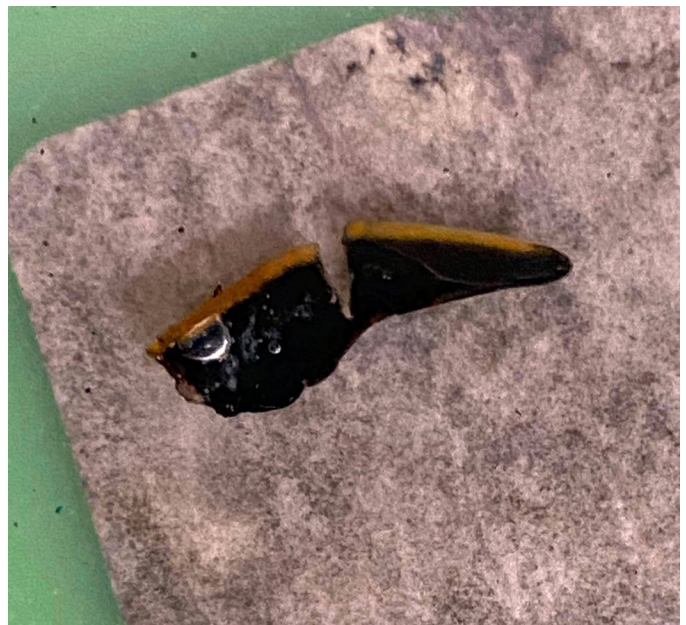


Figure 2. Sections of the tail that broke off a female Great Crested Newt (*Triturus cristatus*) while being moved to a more suitable location. Photograph by Lana J. Deaton.

(Fig. 1) had polydactyly of the right forelimb and its tail had been injured, most likely by an avian predator as evidenced by the V-shaped damage (Fig. 2). Six and 7-mm sections of the tail broke off while moving the newt to a more suitable and safe location.

Polydactyly has been documented previously in Bosca's Newt (*Lissotriton boscai*) and the Marbled Newt (*T. marmoratus*) (Laurentino et al. 2016), Alpine Newts (*Ichthyosaura alpestris*) (Kopecký 2013), the Montseny Newt (*Calotriton arnoldi*) (attributed to faulty regeneration after male-male interactions) (Martinez-Silvestre et al. 2014), as well as Great Crested Newts from Epping Forest in Great Britain (Jarvis 2011) (suspected to have been the result of a genetic mutation as no injuries were noted) and from two localities in the Czech Republic, some with other limb-related deformities (Ma át et al. 2015).

Acknowledgements

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