Triturus carnifex **System:** Freshwater_terrestrial

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Amphibia	Caudata	Salamandridae

Common name Italian Crested Newt (English), Tritone crestato italiano (Italian)

Synonym *Triton carnifex* ,Laurenti, 1768
Salamandra carnifex ,(Laurenti, 1768)

Similar species

Summary The Italian Crested Newt (Triturus carnifex) can grow up to 18cm. The species native in the south-central Europe and in the Balkan region, where it frequently occurs in natural and artificial waterbodies. The species prays on invertebrates. The sexual maturity is reached at 3 to 4 years. The specie was introduced to Central and Northern Europe for ornamental purposes. The hybridisation with native species threatens the genetic diversity of local populations. Currently no measures were undertaken to manage the invasion of this species.

view this species on IUCN Red List

Species Description
Typically, T. cernifex have a stout body, a large head and well developed legs (Meilink et al. 2015). The appearance and size of the Italian Crested Newt (Triturus carnifex), however, differs among the supscecies: The subspecies T. carnifex carnifex, for example, is dark browm with an orange-yellow belly (amphibiaweb.org, 27.02.2018). The subspecies T. carnifex macedonicus has dense dark belly spots. Females range up to 180mm and males up to 150mm (amphibiaweb.org, 27.02.2018). Adults have toxic skin secretions, wich is not very effective in protecting them against predators. The predators include birds, snakes and mammals such as Badgers and Hedgehogs. Fish are the major predator for larvae (http://www.froglife.org/info-advice/amphibians-and-reptiles/italian-crested-newt/, 05.03.2018). The species in native in the south-central Europe and in the Balkan region. It was introduced to the South east and Northern Europe and the Azores. The species is listed in the Red List of Threated Species in the category Least Concern (IUCN, 2018).

Notes
The taxonomic rage of the species is unclear due to widely common hybridization within the genus. Native populations are generally declining. The loss of aquatic habitats and the introduction of predatory fishes and the decrease of spring rains as a result of global climate change threatens the populations (IUCN Red List, 2018).

Lifecycle Stages
The lifecycle metamorphosis is very typical for Urodeles. It consists of an aquatic larval stage and an adult terrestrial stage. The timing of the metamorphosis can vary among population in different geographical areas. Some larvae transform in the same year they hatched, but mostly larvae metamorphose to immature juveniles after a period of overwintering. In few cases larvae grow and gain sexual maturity before metamorphosing into adults (Kalezic et al., 1994).

Uses
The species is used as an ornamental pet for garden ponds. It is traded in several countries (Google shopping, https://www.exotic-pets.co.uk/crested-newt.html, 2018).

Habitat Description
The species can adapt to a wide range of habitats up to an altitude of 2140m. During the breading season it requires still waters. It mostly occurs in pools within streams, but also in artificial water bodies, such as garden ponds and water-filled gravel pits (amphibiaweb.org, 27.02.2018).

Reproduction
Females reach sexual maturity in the age of 3.6 years and males in 3.8 years. Variability of the reproduction cycle is depending on the geographical location (Cvetković et al, 1996). Females lay about 250 eggs per breeding season (amphibiaweb.org, 2018).

Nutrition
Adults feed on terrestrial invertebrates. Larvae feed on rog tadpoles and other larval amphilians. Tadpoles feed on aqatic invertebrates during the aqatic phase (amphibiaweb.org, 27.02.2018).

General Impacts
Naturally the Italian Crested Newt (Triturus carnifex) was separated from other native species of the genus, eg. Triturus cristatus (Laurenti, 1768), trough geographical barriers. The species was intentionally introduced in areas outside of their natural range, most likely as pet or for ornamental purposes. In the introduced area it hybridizes with native species. This causes genetic pollution ant threatens native species diversity (Meilink et al., 2015).

Management Info
Currently no measures were undertaken to manage the invasion of this species. The species is listed in Annex II in of the EU Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora." Official Journal of the European Union 206 (1992): 7-50.

Pathway
In 1903 the breeding site for alien species was established in Surrey by T.B. Rothwell. The amphibians were kept outside and ocassionally escaped trough the waterways and colonized local waterbodies. Brede et al., 2000.The species was used as ‘garden ornaments’ and released into the wild because a change in legislation prohibited sale (Bogaerts, 2002).Arntzen and Thorpe, 1999

Principal source: Antonio Romano, Jan Willem Arntzen, Mathieu Denoël, Robert Jehle, Franco Andreone, Brandon Anthony, Benedikt Schmidt, Wiesiek Babik, Robert Schabetsberger, Milan Vogrin, Miklós Puky, Petros Lymberakis, Jelka Crnobrnja Isailovic, Rastko Ajtic, Claudia Corti. 2009.Triturus carnifex. The IUCN Red List of Threatened Species 2009: e.T59474A11947714.
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ALIEN RANGE

[1] FRANCE **[1]** GERMANY

[1] NETHERLANDS
[1] SWEDEN
[2] UNITED KINGDOM

[1] PORTUGAL
[1] SWITZERLAND

Red List assessed species 1: LC = 1;

Triturus cristatus **LC**

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