

# Triturus carnifex

**Taxonomic Authority:** (Laurenti, 1768)

**Synonyms:**

**Region:** 10

**Common Names:**

Italian Crested Newt	English
Italienischer Kammolch	German
tritone crestato italiano	Italian

**Order:** Caudata

**Family:** Salamandridae

**Notes on taxonomy:** Some of the populations north of the Alps, in Austria and Germany, show degrees of hybridisation with *Triturus cristatus*. The exact ranges of members of the *Triturus cristatus* superspecies are unclear in the central Balkans.

## General Information

**Biome**  Terrestrial  Freshwater  Marine

### **Geographic Range of species:**

This species occurs through most of Italy, southern Switzerland, Slovenia, northern Croatia, and northern Bosnia-Herzegovina, with an apparently disjunct population on the Adriatic side of the Balkan Peninsula in eastern Bosnia-Herzegovina, Serbia-Montenegro, Macedonia, and Albania, south to central Greece. There are populations north of the Alps in Austria, southeast Bavaria (Germany), western Hungary, and southern Czech Republic. There are a number of introduced populations in western Switzerland (Geneva), Germany (not mapped), Portugal (São Miguel Island in the Azores), the Netherlands (not mapped) and the UK (not mapped). Recorded from sea level to elevations approaching 2,000m asl (Greece).

### **Habitat and Ecology Information:**

There are a wide variety of terrestrial habitats from Beech woodlands to arid Mediterranean climates. Its breeding and larval development take place in various stagnant permanent and temporary aquatic habitats. This species can be found in modified habitats such as quarries.

### **Conservation Measures:**

Listed on Appendix II of the Berne Convention. Listed on Annex IV of the EU Natural Habitats Directive. Protected by national legislation in several countries. It is present in a number of protected areas over its range.

### **Threats:**

It is sensitive to changes in water quality. The principal threats to the species are loss of aquatic habitats, especially breeding sites, through agricultural intensification and agrochemical pollution, and introduction of predatory fishes. In the Balkans, there has been loss of breeding habitats in recent years due to decreased spring rains, perhaps as a result of global climate change.

### **Species population information:**

There are large populations in the south of its range, with the species becoming less abundant in the north. It is still locally very abundant in Italy, but several populations on the River Po plain are known to have become extinct. It is known to be dramatically decreasing through habitat loss in Montenegro (Kalezic and Dzukic, 2001), and populations are declining generally in the Balkans.

<b>Country Distribution</b>	Native - Presence Confirmed	Native - Presence Possible	Extinct	Reintroduced	Introduced	Vagrant
Albania	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Austria	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bosnia and Herzegovina	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Croatia	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Czech Republic	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Germany	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Greece	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hungary	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Italy	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Macedonia, the former Yugoslav Republ	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Netherlands	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Portugal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Slovenia	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Switzerland	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
United Kingdom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Serbia and Montenegro	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**FAO Marine Habitats** Native - Presence Confirmed Native - Presence Possible Extinct Reintroduced Introduced

## Major Lakes

## Major Rivers

<u>Upper Level Habitat Preferences</u>		Score	<u>Lower Level Habitat Preferences</u>		Score
1.4	Forest - Temperate	1	Marsh Wetland		2
3.4	Shrubland - Temperate	1	Mediterranean Scrub		1
3.8	Shrubland - Mediterranean-type Shrubby Vegetation	1	Mire, Bog, Fen		2
5.4	Wetlands (inland) - Bogs, Marshes, Swamps, Fens, Peatlands	1	Urban		2
5.5	Wetlands (inland) - Permanent Freshwater Lakes (over 8ha)	2			
5.6	Wetlands (inland) - Seasonal/Intermittent Freshwater Lakes (over 8ha)	1			
5.7	Wetlands (inland) - Permanent Freshwater Marshes/Pools (under 8ha)	1			
5.8	Wetlands (inland) - Seasonal/Intermittent Freshwater Marshes/Pools (under 8ha)	1			
11.2	Artificial/Terrestrial - Pastureland	1			
11.3	Artificial/Terrestrial - Plantations	1			
11.4	Artificial/Terrestrial - Rural Gardens	1			
12.1	Artificial/Aquatic - Water Storage Areas (over 8ha)	1			
12.2	Artificial/Aquatic - Ponds (below 8ha)	1			
12.5	Artificial/Aquatic - Excavations (open)	1			

### Major threats

Code	Description of threat	Past	Present	Future
1	Habitat Loss/Degradation (human induced)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.1	Agriculture	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.1.1	Crops	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.1.1.3	Agro-industry farming	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.1.4	Livestock	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.1.4.3	Agro-industry	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.4	Infrastructure development	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.4.1	Industry	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.4.2	Human settlement	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	Invasive alien species (directly affecting the species)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2.2	Predators	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6	Pollution (affecting habitat and/or species)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6.1	Atmospheric pollution	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6.1.1	Global warming/oceanic warming	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6.3	Water pollution	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6.3.1	Agriculture	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
7	Natural disasters	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
7.1	Drought	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### Conservation Measures

Code	Conservation measures	In place	Needed
1	Policy-based actions	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.2	Legislation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.2.1	Development	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.2.1.1	International level	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.2.1.2	National level	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.2.2	Implementation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.2.2.1	International level	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.2.2.2	National level	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	Research actions	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.1	Taxonomy	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.2	Population numbers and range	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.3	Biology and Ecology	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.4	Habitat status	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.5	Threats	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.8	Conservation measures	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.9	Trends/Monitoring	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Habitat and site-based actions	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4.1	Maintenance/Conservation	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.2	Restoration	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.4	Protected areas	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4.4.2	Establishment	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4.4.3	Management	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### Utilisation of Species

Purpose/Type of Use	Subsistence	National	International	Other purpose:
Primary forms removed from the wild	100%	>75%	51-75%	26-50% <25%
Source of specimens in commercial trade	100%	>75%	51-75%	26-50% <25%

Trend in wild offtake/harvest in relation to total wild population numbers over last five years:

Trend in offtake/harvest produced through domestication/cultivation over last five years:

CITES: Not listed

### Red Listing

Red List Assessment: Least Concern (LC)  Possibly Extinct

Red List Criteria:

Rationale for the Red List Assessment: Listed as Least Concern in view of its wide distribution, tolerance of a broad range of habitats, presumed large population, and because it is unlikely to be declining fast enough to qualify for listing

in a more threatened category.

**Current Population Trend:** Decreasing

**Date of Assessment:** 12/17/2004

**Assessor(s):** Jan Willem Arntzen, Mathieu Denoël, Robert Jehle, Franco Andreone, Brandon Anthony, Benedikt Schmidt, Wiesiek Babik, Robe

**Notes on Red listing:**

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