

# Euproctus platycephalus

Taxonomic Authority: (Gravenhorst, 1829)

Synonyms:

Region: 10

Common Names:

Sardinian Brook Salamander	English
Sardinian Mountain Newt	English
tritone sardo	Italian

Family: Salamandridae

Order: Caudata

Notes on taxonomy:

## General Information

Biome  Terrestrial  Freshwater  Marine

### Geographic Range of species:

This species is endemic to Sardinia, Italy, where it is mostly found in the eastern part of the island between the Limbara-Mountains in the North and the Sette Fratelli Mountains in the South. There are only a few records from western Sardinia (i.e., Linas Mounth), (Lecis and Norris, 2003). Further information is needed on the range of the species in the southwest of the island. It is found at elevations of between 50 and 1800m asl, although it is most often found at elevations of 400 - 800m asl.

### Conservation Measures:

This species is listed on Appendix II of the Berne Convention and on Annex IV of the EU Natural Habitats Directive; it is also protected by regional legislation (Regional Law n. 23/1998 (art. 5, c. 3)). The Gola di Gorroppu has been designated as a Site of Community Importance under the Habitats Directive. In addition, a number of populations live in establish and planned protected areas including the Parco Regionale Sette Fratelli, Parco Nazionale Gennargentu-Golfo di Orosei and Parco Regionale Monte Limbara. Programmes to remove trout from the species habitat would assist in the recovery of populations.

### Species population information:

This is generally a rare species that can be locally common in suitable habitat (eg. over 400 specimens may be found in a single pool). The largest population of the species is in the Gola di Gorroppu. In one well-studied population the sex ratio is largely male. The number of subpopulations is declining. Between 1999 and 2001 it was found in 14 sites, whereas around 1991 it was present in 30 sites (and even in 1991 it was absent from nine other sites where it was previously observed).

### Habitat and Ecology Information:

It is a montane species of permanent and temporary stagnant and running waters, with calm areas of small or large rivers preferred. Its terrestrial habitats are generally restricted to riverine macchia or woodland, and the species may also be found in cave systems. Its breeding sites are permanent pools, water holes, small lakes and streams. The eggs are deposited between stones or are buried in sand; the larvae develop in the streams (Griffiths, 1996; Rimpp, 1998). The species is quite adaptable and can be found in artificial pools.

### Threats:

The major threats to the species are pollution of waterbodies, habitat fragmentation, predation by introduced trout and prolonged drought (often caused by excessive water abstraction). During the 1950s many populations were lost through the application of DDT to waterbodies. Recently the Gola di Gorroppu population has become threatened through damage to its habitat caused by tourist activities.

## Country Distribution

	Native - Presence Confirmed	Native - Presence Possible	Extinct	Reintroduced	Introduced	Vagrant
Italy	<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
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## Major Lakes

## Major Rivers

## Upper Level Habitat Preferences

	Score
1.4 Forest - Temperate	1
3.4 Shrubland - Temperate	1
3.8 Shrubland - Mediterranean-type Shrubby Vegetation	1
5.1 Wetlands (inland) - Permanent Rivers/Streams/Creeks (includes waterfalls)	1
5.2 Wetlands (inland) - Seasonal/Intermittent/Irregular Rivers/Streams/Creeks	1
5.7 Wetlands (inland) - Permanent Freshwater Marshes/Pools (under 8ha)	1
5.8 Wetlands (inland) - Seasonal/Intermittent Freshwater Marshes/Pools (under 8ha)	1

## Lower Level Habitat Preferences

	Score
Deciduous Broadleaf Wood	1
Forest and Field	2
Mediterranean Scrub	1
Mixed Forest	1

5.18 Wetlands (inland) - Karst and Other Subterranean Hydrological Systems (inland)	1
7.1 Caves and Subterranean Habitats (non-aquatic) - Caves	1
12.2 Artificial/Aquatic - Ponds (below 8ha)	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"/>
1.3	Extraction	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.3.6	Groundwater extraction	<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"/>
6.3	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"/>
6.3.4	Other non-agricultural	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
7	Natural disasters	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
7.1	Drought	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
9	Intrinsic factors	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
9.9	Restricted range	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
10	Human disturbance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
10.1	Recreation/tourism	<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"/>
1.2.1.3	Sub-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"/>
1.2.2.3	Sub-national level	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	Communication and Education	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2.2	Awareness	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Research actions	<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 checked="" 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"/>
5	Species-based actions	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5.4	Recovery management	<input 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% <i>Other forms removed from the wild:</i>
Source of specimens in commercial trade	100%	>75%	51-75%	26-50% <25% <i>Other source of specimens:</i>

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: Endangered (EN)  Possibly Extinct

Red List Criteria: B2ab(iii,iv)

Rationale for the Red List Assessment: Listed as Endangered, because its Area of Occupancy is less than 500 km<sup>2</sup>, its distribution is severely fragmented, and there is a continuing decline in the extent and quality of its habitat, and in the number of subpopulations.

Current Population Trend: Decreasing Date of Assessment: 12/17/2004

Assessor(s): Franco Andreone, Roberta Lecis, Paul Edgar, Benedikt Schmidt, Claudia Corti

Notes on Red listing:

### Bibliography

- Arnold, E.N., 2003, , Reptiles and amphibians of Europe, , , 288, Princeton University Press,
- Voesenek, L.A.C.J. and van Rooy, P.T.J.C., 1984, Herpetological research on eastern Sardinia; proposal for a biogenetic reserve, , , , 73pp, Research Institute for Nature Management, Arnhem and Department of Animal Ecology, Nijmegen University, Nijmegen, Netherlands
- Thorn, R., 1968, Les Salamandres d'Europe, d'Asia, et d'Afrique du Nord, , , , 376 pp, Éditions Paul Lechevalier, Paris
- Rimpp, K., 1998, Euproctus platycephalus (Gravenhorst, 1829), , Atlas of Amphibians and Reptiles in Europe, , , , Societas Europea Herpetologica & Museum National d'Histoire Naturelle,

- Read, A.W., 1998, On *Euproctus platycephalus*, British Herpetological Society Bulletin, , , 62, 31, ,
- , 1997, , Atlas of Amphibians and Reptiles in Europe, Gasc, J.-P., , 494, Societas Europea Herpetologica & Museum National d'Histoire Naturelle, Paris
- Alcher, M., 1981, Reproduction en élevage de *Euproctus platycephalus* (Urodela, Salamandridae), Amphibia-Reptilia, , , 2(2), 97-105, ,
- Lecis, R. and Norris, K., 2003, Geographical distribution of the Sardinian brook salamander *Euproctus platycephalus* and implications for its conservation, The Herpetological Journal, , , 13(3), 121-124, ,
- Puddu, F., Viarengo, M. and Ermineo, C., 1988, Euproctus sardo, , Animali di Sardegna: gli Anfibi e i Rettili, Della Torre, , , , Cagliari
- Alcher, M., 1980, Contribution a l'étude du développement de l'Urodèle *Euproctus platycephalus* (Gravenhorst, 1829), Vie et Milieu, , , 30, 157-164, ,
- Lecis, R. and Norris, K., 2004, Population genetic diversity of the endemic Sardinian newt *Euproctus platycephalus*: implications for conservation, Biological Conservation, , , 119, 263-270, ,
- Lecis, R. and Norris, K., 2003, Habitat correlates of distribution and local population decline of the endemic Sardinian newt *Euproctus platycephalus*, Biological Conservation, , , 115, 303-317, ,
- Van Rooy, P.T.J.C. and Stumpel, A.H.P., 1995, Ecological impact of economic development on Sardinian herpetofauna, Conservation Biology, , , 9, 263-269, ,
- Bovero, S., Sotgiu G., Castellano, S. and Giacoma, C., 2003, Age and Sexual Dimorphism in a Population of *Euproctus platycephalus* (Caudata: Salamandridae) from Sardinia, Copeia, , , 1, 149-154, ,
- Griffiths, R.A., 1996, , Newts and Salamanders of Europe, , , 188 pp, Poyser Natural History, London
- Alcher, M., 1980, Maintien en captivité des amphibiens torrenticoles *Euproctus platycephalus* et *Euproctus montanus* (Urodela: Salamandridae). Conditions d'obtention de la reproduction de l'espèce sarde, Rev. ft. Aquariol., , , 7, 61-64, ,
- Alcher, M., 1975, L'Urodèle *Euproctus platycephalus* (Gravenhorst, 1829); répartition géographique et exigences thermiques, Vie et Milieu, , , 25, 169-179, ,
- Böhme, W, Grossenbacher, K. and Thiesmeier, B., 1999, , Handbuch der Reptilien und Amphibien Europas, band 4/I:Schwanzlurche (Urodela), , , , Aula-Verlag, Wiesbaden, Germany.