

Pungitius hellenicus

Taxonomic Authority: Stephanidis, 1971

Synonyms:

Region: 1

Common Names:

Order: Gasterosteiformes

Family: Gasterosteidae

Notes on taxonomy:

General Information

Biome Terrestrial Freshwater Marine

Geographic Range of species:

Restricted to an estimated ten separate, deep, isolated pools in the Sperchios River catchment in Central Greece: the Aghia Paraskevi spring, and a system of drainage and irrigation canals and a small number of natural wells in the areas of Lycochoria and Valtos and near the village of Kompotades.

Habitat and Ecology Information:

Lives in springs and drainage and irrigation systems with cool springs or slow-running waters with rich vegetation. The water temperature never exceeds 20° C in summer. Its present location appears to provide the only remaining suitable habitat where it can survive.

Conservation Measures:

Both the Aghia Paraskevi spring and P. hellenicus have been granted protection by law No 67/1981 of the Greek State and official decision of the Phthiotis Prefect. However, the law is not effectively enforced. It is listed in Appendix III of the Bern Convention.

Threats:

Water extraction (some springs have been completely capped for water extraction), and pollution.

Species population information:

Decreasing.

Country Distribution

	Native - Presence Confirmed	Native - Presence Possible	Extinct	Reintroduced	Introduced	Vagrant
Greece	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Upper Level Habitat Preferences

Score

Lower Level Habitat Preferences

Score

5.1	Wetlands (inland) - Permanent Rivers/Streams/Creeks (includes waterfalls)	1
5.9	Wetlands (inland) - Freshwater Springs and Oases	1
12.9	Artificial/Aquatic - Canals and Drainage Channels, Ditches	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"/>
1.3	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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	Pollution (affecting habitat and/or species)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6.3	Water pollution	<input type="checkbox"/>	<input 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"/>
9.1	Limited dispersal	<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"/>

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 checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3.1	Taxonomy	<input checked="" type="checkbox"/>	<input 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 type="checkbox"/>	<input checked="" type="checkbox"/>
4.4	Protected areas	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.4.1	Identification of new protected areas	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.4.2	Establishment	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	Species-based actions	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5.1	Re-introductions	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Utilisation of Species

Purpose/Type of Use	Subsistence	National	International	Other purpose:	
				None	
Primary forms removed from the wild	100%	>75%	51-75%	26-50% <25%	Other forms removed from the wild:
Source of specimens in commercial trade	100%	>75%	51-75%	26-50% <25%	Other source of specimens:

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:

Red Listing

Red List Assessment: Critically Endangered (CR)

Possibly Extinct

Red List Criteria: B2ab(i,ii,iii,iv,v)

Rationale for the Red List Assessment: This species is restricted to a very small area of remaining habitat (estimated AOO < 10 km²) and is undergoing a continuous decline due to ongoing water extraction, pollution, and habitat destruction. The population is now extremely fragmented such that individual sub-populations are at an increased risk from stochastic events.

Current Population Trend: Decreasing

Date of Assessment: 31/10/2004

Assessor(s): A.J. Crivelli

Evaluator: Barbieri, R. & Kottelat, M.

Notes on Red listing:

Bibliography

Economidis, P.S., 1995, Endangered freshwater fishes of Greece., Biological Conservation, , , 72, 201-211, ,

Keivany, Y., Nelson, J.S. & Economidis, P.S., 1997, of *Pungitius hellenicus* Stephanidis, 1971 (Teleostei, Gasterosteidae), a stickleback fish from Greece., Copeia, , , 1997, 558-564, ,

Keivany, Y., Daoulas, C.K., Nelson, J.S. & Economidis, P.S., 1999, Threatened fishes of the world: *Pungitius hellenicus* Stephanidis, 1971 (Gasterosteidae), Environmental Biology of Fishes, , , 55, 390, ,