

Alosa macedonica

Taxonomic Authority: (Vinciguerra, 1921)

Synonyms:

Order: Clupeiformes

Notes on taxonomy:

Region: 1

Common Names:

Macedonian shad

English

Family: Clupeidae

General Information

Biome Terrestrial Freshwater Marine

Geographic Range of species:

Its range is limited to Lake Volvi in northern Greece. It was previously present in Lake Koronia but in 1995 the lake dried up killing all the fish (Barbieri pers com)

Conservation Measures:

On paper it is protected by Greek laws on fishery management but in practice it receives little protection. It is listed in Annexes II and V of the Habitats Directive of EU.

Habitat and Ecology Information:

A lake species, non migratory. Maximum age: 10 years. It is a predominantly zooplantivorous fish, but the oldest fish are able to eat small fish.

Threats:

In the past the fishery was uncontrolled and overfishing was common. Today the fishermen are disappearing and the fishing pressure is low. Ongoing eutrophication of the lake and water extraction for irrigation might be threats in a near future.

Species population information:

A large A. macedonica population was established in the lake in recent years, principally due to overfishing of its predators (Zarfdjian et al. 1996). A further field survey in 1996 indicated the population to be increasing (Kottelat, pers comm.).

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

5.5 Wetlands (inland) - Permanent Freshwater Lakes (over 8ha) 1

Lower Level Habitat Preferences

Score

Major threats

Code	Description of threat	Past	Present	Future
1	Habitat Loss/Degradation (human induced)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3	Extraction	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3.2	Fisheries	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3.2.1	Subsistence	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3.2.2	Artisinal/small-scale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6.3.1	Agriculture	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6.3.2	Domestic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6.3.8	Sewage	<input 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"/>
9	Intrinsic factors	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
9.8	Population fluctuations	<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 type="checkbox"/>	<input checked="" type="checkbox"/>
1.2	Legislation	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.2.1	Development	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.2.1.2	National level	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.2.2	Implementation	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.2.2.2	National level	<input type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>
3.3	Biology and Ecology	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3.4	Habitat status	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3.5	Threats	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3.8	Conservation measures	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.9	Trends/Monitoring	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	Species-based actions	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5.3	Sustainable use	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5.3.1	Harvest management	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Utilisation of Species

Purpose/Type of Use	Subsistence	National	International	Other purpose:	
1. Food - human	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
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:	Decreasing				
Trend in offtake/harvest produced through domestication/cultivation over last five years:	Unknown				
CITES:	Not listed				

Red Listing

Red List Assessment: Vulnerable (VU) Possibly Extinct

Red List Criteria: D2

Rationale for the Red List Assessment: This species is restricted to Lake Volvi (estimated EOO 80 km2) where it is threatened by the potential introduction of alien species, water extraction, and eutrophication.

Current Population Trend: Increasing

Date of Assessment: 31/10/2004

Assessor(s): A. J. Crivelli

Assessor(s): A.J. Cuvell

Evaluator: Bianco, G., Barbieri, R.

Notes on Red listing:

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- Zarfdjian, M.H., Economidis, P.S. & Sinis, A., 1996, Large zooplankton predation by fish in Lake Volvi (Macedonia, Greece)., , Theme 1. Condition of the world's aquatic habitats. Proceedings of the World fisheries Congress, Athens, Greece., Armantrout, N.B., , 267-278, Oxford & IBH Publishing Co., New Dehli
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