

Chondrostoma soetta

Taxonomic Authority: Bonaparte, 1840

Synonyms:

Order: Cypriniformes

Notes on taxonomy:

Region: 1

Common Names:

Savetta

Italian

Family: Cyprinidae

General Information

Biome Terrestrial Freshwater Marine

Geographic Range of species:

Restricted to northern Italy, the southern part of Switzerland. It has been introduced in some Italian lakes. It is locally extinct in Slovenia and the Isonzo river basin in Italy due to the introduction of *Chondrostoma nasus*, a practice still implemented.

Introductions in rivers of central Italy was often a misidentification for *C. genei*. Several present records for *C. soetta* are probably a misidentification for *C. nasus*, due to similarity between these two species. As an example of how the alien species are spread now in Italy, in rivers from the Rovigo Province in eastern Italy, where *C. soetta* is still reported, the biomass of all native species was found to be about 22% of whole ichthyofauna.

Conservation Measures:

Listed in Annex II of the Habitats Directive of EU and in the Appendix III of the Bern Convention.

Habitat and Ecology Information:

A deepwater lacustrine species that also inhabits large rivers. It migrates from the lake to its tributaries for spawning in spring.

Threats:

Dams, water pollution and extraction, and introduction of alien species as *Rutilus rutilus*, *Silurus glanis* and *Chondrostoma nasus*. The reduction in suitable spawning places due to pollution (agriculture) and to water extraction is of major concern.

Other threats to the species are predation by cormorants, where in several places of Italy have become a serious pest and destroyed a large amount of fishes, especially in torrents or small river where the fishes migrate to for reproduction. (Compiled by C. esare Puzzi from GRAIA, and P.G. Bianco pers comm.).

Species population information:

Very different from one locality to another. It is locally extinct in Slovenia but still thriving in other parts of its range.

This species is now becoming quite rare in the lakes of northern Italy and Switzerland (Lugano, Maggiore, Como, Iseo, Garda) mainly as result of interaction with alien species, especially *Rutilus rutilus*, which was introduced around 1990 and has become very common and is the subject of commercial fishing in several of these lakes. (Bianco, P. pers comm)

This species is also rarely found in rivers and has nearly disappeared in the main stretch of the Po basin, in the other rivers it forms very small populations and spawning occurs only in a few areas of each river (except in the Po).

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 checked="" type="checkbox"/>	<input type="checkbox"/>
Slovenia	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 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
- 5.5 Wetlands (inland) - Permanent Freshwater Lakes (over 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"/>
1.3	Extraction	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.3.6	Groundwater extraction	<input 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"/>
1.4.6	Dams	<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"/>
2.1	Competitors	<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"/>
7	Natural disasters	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7.1	Drought	<input type="checkbox"/>	<input 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"/>

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"/>
1.2.2	Implementation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.2.2.1	International 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"/>
3.8	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"/>

4.1	Maintenance/Conservation	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.2	Restoration	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.4	Protected areas	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.4.3	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%	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: Endangered (EN) Possibly Extinct

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

Rationale for the Red List Assessment: The lake populations have increasing difficulty in reaching the spawning places in the tributaries. Although the introduced sub-populations are thriving, the threat to the remaining severely fragmented natural population and spawning areas is high due to dam construction, pollution, water extraction and predation by cormorants and *Silurus glanis*. The AOO (spawning grounds) is estimated at less than 500 km². It is locally extinct in Slovenia and the Isonzo river basin in Italy due to the introduction of *Chondrostoma nasus*, a practice still implemented.

Current Population Trend: Decreasing

Date of Assessment: 31/10/2004

Assessor(s): A.J. Crivelli

Evaluator: Bianco, G. & Darwall, W.

Notes on Red listing:

Bibliography

- Maier, K.-J., Zeh, M., Ortlepp, J. & Zbinden, S., 1995, Distribution et reproduction des espèces du genre *Chondrostoma* en Suisse: le nase (*C. nasus*), la sofie (*C. toxostoma*) et la savetta (*C. Soetta*)., Information concernant la pêche, No 53, , 62 pp, Office fédéral de l'environnement, des forêts et du paysage, Bern, Switzerland
- Bianco, P.G., 1995, Mediterranean endemic freshwater fishes of Italy., *Biological Conservation*, , 72, 159-170, ,
- Povz, M., 2002, Status of the freshwater fishes and lampreys in Slovenia, , *Conservation of Freshwater Fishes: Options for the Future*, Collares-Pereira, M.J., Cowx, I.G. & Coelho, M.M., , Fishing News Books, Oxford, U.K.
- Zeh, M. & Ortlepp, J., 1996, Spawning grounds of *Chondrostoma soetta* Bonaparte, 1840 (Cyprinidae) in southern Switzerland, , *Conservation of Endangered Freshwater Fish in Europe*, Kirchhofer, A. & Hefti, D., , 299-304, Birkhäuser Verlag, Basel, Switzerland
- Bianco, P.G., 2002, Pesci, , Rete Ecologica Nazionale. Un approccio alla conservazione dei vertebrati italiani., Boitani L., Corsi F., Falcucci A., Maiorano L., Marzetti I., Masi M., Montemaggiore A., Ottaviani D., Reggiani G., Rondinini C., , Università di Roma "La Sapienza", Dipartimento di Biologia Animale e dell'Uomo; Ministero dell'Ambiente, Direzione per la Conservazione della Natura; Istituto di Ecologia Applicata. <http://www.gisbau.uniroma1.it/REN>,
- Bianco P.G. & Ketmaier, V., 2001, Anthropogenic changes in the freshwater fish fauna in Italy with reference to the central region and *Barbus graellsii*, a newly established alien species of Iberian origin., *J. Fish Biol.*, , 59, 190-208, ,
- Grimaldi, E. & Polli., 1997, Lago Maggiore e Lago di Lugano. Ricerche sulla acque Italo Svizzere nel quadriennio 1992-1995., , 2, 83, Commissione Italo-Svizzera per la Pesca.,
- Turin, P. & Zanetti, M., 2001, Quali quantitative evolution of freshwater fish populations in Rovigo Province (Veneto Region, NE Italy). (in Italian with English summary)., *Quaderni ETP*, , 30, 23-26, ,
- Puzzi, C.M., Trasforini, S., Sartorelli, M., Barenghi, B. & Zilio, A., 2001, Lake of Lugano: limnological features and fish community analysis, with particular care of two allochthonous species, pike-perch (*Stizosteidon lucioperca*) and roach (*Rutilus rutilus*)., *Quaderni ETP*, , 30, 39-48, ,