

Chondrostoma toxostoma

Taxonomic Authority: (Vallot, 1837)

Synonyms:

Region: 1

Common Names:

Order: Cypriniformes

Family: Cyprinidae

Notes on taxonomy:

General Information

Biome Terrestrial Freshwater Marine

Geographic Range of species:

It is restricted to the Rhône river basin in France and Switzerland and to coastal rivers in France. In France it has been introduced in river basins of the Atlantic coast. It has also been recorded in the Aude and Hérault (Kottelat, M. pers com).

Habitat and Ecology Information:

It prefers the lower reaches of rivers. It can be found also in reservoirs. In presence of *Chondrostoma nasus* (an introduced species) *C. toxostoma* occupies the areas upstream and in the absence of *C. nasus* it occupies both upstream and downstream zones. Hybridization between *C. nasus* and *C. toxostoma* has been observed in the wild. Hybrids can successfully reproduce as shown by the introgressive capacity at the nuclear and mitochondrial level, and the survival of hybrids.

Conservation Measures:

It is listed in the Annex II of the Habitats Directive of EU and in Appendix III of the Bern Convention.

Threats:

Habitat destruction (dams) and introduction of *Chondrostoma nasus*. However the destruction of dams has also allowed *C. nasus* to extend its range further upstream. In the past it has been out competed in its range by introduced *C. nasus*. The disappearance of spawning sites is a important factor for the decline.

Species population information:

Decreasing.

Country Distribution

| | Native - Presence Confirmed | Native - Presence Possible | Extinct | Reintroduced | Introduced | Vagrant |
|-------------|-------------------------------------|----------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|
| France | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 |
| 12.1 Artificial/Aquatic - Water Storage Areas (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"/> |
| 2.3 | Hybridizers | <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"/> |
| 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"/> |
| 1.2.2 | 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 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"/> |
| 4 | Habitat and site-based actions | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4.1 | Maintenance/Conservation | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4.4 | Protected areas | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4.4.3 | Management | <input 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: | |
|---|-------------|----------|---------------|-----------------|------------------------------------|
| | | | | Not used at all | |
| 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: Vulnerable (VU)

Possibly Extinct

Red List Criteria: A2ce

Rationale for the Red List Assessment: The population of *C. toxostoma* is estimated to have declined by >30% in the past 10 years based on data from hybridisation studies (Crivelli, A. pers comm). It is threatened by hybridization with *C. nasus* and by habitat destruction due to water extraction and pollution, and by dam construction.

Current Population Trend: Decreasing

Date of Assessment: 31/10/2004

Assessor(s): A.J. Crivelli

Evaluator: J. Freyhof

Notes on Red listing:

Bibliography

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- Maier, K.L., Zeh, M., Ortlepp, J. & Zbinden, S., 1995, Distribution et reproduction des espèces du genre *Chondrostoma* en Suisse: la 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