GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: ***Leuciscus idus***

Leuciscus idus 正體中文

System: Freshwater

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Actinopterygii	Cypriniformes	Cyprinidae

Common name

jaz (Polish), Iaz (Russian), mazdruga (Bulgarian), rimte (Danish), orff (Welsh), Orfe (English), orfe (German), ido (Italian), Goldorfe (German), säyne (Finnish), golden orfe (English), jalec tmavy (Czech), ide rouge (French), ide (English), id (Swedish), ide (French), jasek (Czech), jelec jesen (Czech), ide dorée (French), ide mélanote (French), jàsz (Hungarian), jesen nížinný (Czech), jesen obecný (Czech), Jesen (German), vaduvita (Romanian), strandkarpe (Danish), jezuve (Czech), silver orfe (English), lugojanel (Romanian), Nerfling (German, Austria), vederbuk (Norwegian), yaz (Russian, Ukraine), winde (Dutch), jez (English, Slovenia), véron (French), Weißfisch (German), Gäse (German), jalec tmavý (Slovak), leukiskos-tsiróni (Greek), ryba májová (Czech)

Synonym

Cyprinus idbarus , Linnaeus, 1758
Idus idus , (Linnaeus, 1758)
Cyprinus jeses , Linnaeus, 1758
Cyprinus orfus , Linnaeus, 1758
Cyprinus orphus , Linnaeus, 1758
Cyprinus idus , Linnaeus, 1758
Leuciscus idus idus , (Linnaeus, 1758)
Leuciscus neglectus , Selys-Longchamps, 1842
Idus melanotus , Heckel, 1843
Idus miniatus , Bonaparte, 1845
Idus miniatus , Heckel & Kner, 1858
Idus oxianus , Kessler, 1877
Squalius oxianus , Kessler, 1877
Leuciscus idus oxianus , (Kessler, 1877)
Idus melanotus orientalis , Sinitzyn, 1900
Leuciscus idus auratus , Bade, 1901
Leuciscus idus idus sibiricus , Kirillov, 1958
Cyprinus microlepidotus , Ekström, 1835
Leuciscus idus lapponicus , Günther, 1868

Similar species

Scardinius erythrophthalmus

Summary

Leuciscus idus (orfe) are a large-bodied freshwater fish native to Europe. They are valued as a sport fish in many countries and have been introduced to a number of locations for this purpose. Concerns have been raised about their potential to damage to native aquatic ecosystems but there seems to be a lack of information regarding any proven effects.

view this species on IUCN Red List

Species Description
Orfe are a chunky fish, with the back and belly dinstinctly arched. The head is small and bluntly pointed, and the tail has a definite fork in it.
Two colour forms exist. The wild form is a greyish-olive colour on the back and upper sides, paling to silver on the sides and a silvery-white on the belly. Both anal and pelvic fins are a reddish colour. The ornamental variety of orfe has a bright orange back, silvery-orange sides and belly, and bright orange tail and dorsal fin. These two colour morphs are known as 'silver orfe' and 'golden orfe' respectively. Golden orfe populations may revert to the wild colouration over time (McDowall, 2000).

Notes
The maximum reported age for this species is 18 years, and the maximum published weight is 4kg (FishBase, 2004).

Lifecycle Stages
Matures at three to four years of age. Spawning occurs in spring (McDowall, 2000).

Uses
A popular sporting fish among coarse anglers (McDowall, 2000), and in some areas of Europe there is also commercial fishery production (McDowall, 1990). The golden orfe variant is valued as an ornamental fish, as it is just as suitable as goldfish for small ponds (McDowall, 1990).

Habitat Description
Orfe inhabit clear, clean pools of medium-to-large rivers, ponds and lakes (FishBase, 2004). Retreats into deep holes during winter (McDowall, 2000).

Reproduction
Spawns in schools over weed beds or gravel in shallow areas. Produces thousands of pale yellow eggs c. 2mm in diameter. Hatching occurs in one to two weeks, producing young fish 8-10mm long (McDowall, 2000).

Nutrition
Feeds on crustaceans, insect larvae, worms, snails as well as some fish and vegetation (McDowall, 2000).

General Impacts
There is no information regarding the impacts of orfe in New Zealand as it is confined to one location. Most concerns appear to be based on the fact that it is in the same family as the highly invasive European carp (*Cyprinus carpio*), which has caused damage to some aquatic ecosystems where it has been introduced Australia, New Zealand and the USA. However, orfe can tolerate a higher level of salinity than any other cyprinid fish so may be able to colonise brackish water and estuarine habitats. These are often critical bottlenecks for anadromous (migrating up rivers from the sea to breed in fresh water) species. The potential for orfe to cause problems in countries where its natural controls are absent is of concern (David Rowe pers.comm., 2005).

Management Info
Preventative measures: The use of potentially invasive alien species for aquaculture and their accidental release/or escape can have negative impacts on native biodiversity and ecosystems. Hewitt *et al*, (2006) Alien Species in Aquaculture: Considerations for responsible use aims to first provide decision makers and managers with information on the existing international and regional regulations that address the use of alien species in aquaculture, either directly or indirectly; and three examples of national responses to this issue (Australia, New Zealand and Chile). The publication also provides recommendations for a 'simple' set of guidelines and principles for developing countries that can be applied at a regional or domestic level for the responsible management of Alien Species use in aquaculture development. These guidelines focus primarily on marine systems, however may equally be applied to freshwater.
Copp *et al*, (2005) Risk identification and assessment of non-native freshwater fishes presents a conceptual risk assessment approach for freshwater fish species that addresses the first two elements (hazard identification, hazard assessment) of the UK environmental risk strategy. The paper presents a few worked examples of assessments on species to facilitate discussion. The electronic Decision-support tools- Invasive-species identification tool kits that includes a freshwater and marine fish invasives scoring kit are made available on the Cefas (Centre for Environment, Fisheries & Aquaculture Science) page for free download (subject to Crown Copyright (2007-2008)).

Pathway
There have been instances of orfe being illegally introduced to new locations by anglers.Golden orfe are valued as ornamental pond fish

Principal source: McDowall, R. M. 2000. The Reed field guide to New Zealand freshwater fishes. Auckland, Reed.
FishBase, 2004. Species profile *Leuciscus idus* Ide

Compiler: IUCN SSC Invasive Species Specialist Group
Updates with support from the Overseas Territories Environmental Programme (OTEP) project XOT603, a joint project with the Cayman Islands Government - Department of Environment

Review: Dr. David Rowe, NIWA (National Institute of Water & Atmospheric Research). Hamilton New Zealand.

Pubblication date: 2010-10-04

ALIEN RANGE

[1] FRANCE
[1] NEW ZEALAND
[1] UNITED STATES
[1] NETHERLANDS
[1] UNITED KINGDOM

BIBLIOGRAPHY
11 references found for **Leuciscus idus**

Managment information

Centre for Environment, Fisheries & Aquaculture Science (CEFAS)., 2008. Decision support tools-Identifying potentially invasive non-native marine and freshwater species: fish, invertebrates, amphibians.
Summary: The electronic tool kits made available on the Cefas page for free download are Crown Copyright (2007-2008). As such, these are freeware and may be freely distributed provided this notice is retained. No warranty, expressed or implied, is made and users should satisfy themselves as to the applicability of the results in any given circumstance. Toolkits available include 1) FISK- Freshwater Fish Invasiveness Scoring Kit (English and Spanish language version); 2) MFISK- Marine Fish Invasiveness Scoring Kit; 3) MI-ISK- Marine invertebrate Invasiveness Scoring Kit; 4) FI-ISK- Freshwater Invertebrate Invasiveness Scoring Kit and AmphISK- Amphibian Invasiveness Scoring Kit. These tool kits were developed by Cefas, with new VisualBasic and computational programming by Lorenzo Vilizzi, David Cooper, Andy South and Gordon H. Copp, based on VisualBasic code in the original Weed Risk Assessment (WRA) tool kit of P.C. Pheloung, P.A. Williams & S.R. Halloy (1999).
The decision support tools are available from:
http://cefas.defra.gov.uk/our-science/ecosystems-and-biodiversity/non-native-species/decision-support-tools.aspx [Accessed 13 October 2011]
The guidance document is available from http://www.cefas.co.uk/media/118009/fisk_guide_v2.pdf [Accessed 13 January 2009].
Champion, P. Clayton, J. and Rowe, D. 2002. Alien Invaders Lake Managers Handbook. Ministry for the Environment.
Summary: Available from: http://www.mfe.govt.nz/publications/water/lm-alien-invaders-jun02.pdf [Accessed 3 February 2005]
Clearwater, Susan J.; Chris W. Hickey and Michael L. Martin. 2008. Overview of potential piscicides and molluscicides for controlling aquatic pest species in New Zealand. Science for conservation 283. March 2008, New Zealand Department of Conservation
Summary: Available from: http://www.doc.govt.nz/upload/documents/science-and-technical/sfc283entire.pdf [Accessed 20 March 2008]
Copp, G.H., Garthwaite, R. and Gozlan, R.E., 2005. Risk identification and assessment of non-native freshwater fishes: concepts and perspectives on protocols for the UK. Sci. Ser. Tech Rep., Cefas Lowestoft, 129: 32pp.
Summary: The discussion paper presents a conceptual risk assessment approach for freshwater fish species that addresses the first two elements (hazard identification, hazard assessment) of the UK environmental risk strategy The paper presents a few worked examples of assessments on species to facilitate discussion.
Available from: http://www.cefas.co.uk/publications/techrep/tech129.pdf [Accessed 1 September 2005]
IUCN/SSC Invasive Species Specialist Group (ISSG)., 2010. A Compilation of Information Sources for Conservation Managers.
Summary: This compilation of information sources can be sorted on keywords for example: Baits & Lures, Non Target Species, Eradication, Monitoring, Risk Assessment, Weeds, Herbicides etc. This compilation is at present in Excel format, this will be web-enabled as a searchable database shortly. This version of the database has been developed by the IUCN SSC ISSG as part of an Overseas Territories Environmental Programme funded project XOT603 in partnership with the Cayman Islands Government - Department of Environment. The compilation is a work under progress, the ISSG will manage, maintain and enhance the database with current and newly published information, reports, journal articles etc.
Rowe, D.K and Graynoth, E, 2002. Lake Managers Handbook- Fish in New Zealand Lakes. Ministry for the Environment, Wellington.
Summary: Available from: http://www.mfe.govt.nz/publications/water/lm-fish-in-nz-lakes-jun02.pdf

General information

FishBase, 2004. Species profile *Leuciscus idus* Ide
Summary: FishBase is a global information system with all you ever wanted to know about fishes . FishBase on the web contains practically all fish species known to science. FishBase was developed at the WorldFish Center in collaboration with the Food and Agriculture Organization of the United Nations (FAO) and many other partners, and with support from the European Commission (EC). Since 2001 FishBase is supported by a consortium of seven research institutions. You can search on Search FishBase
This species profile is available from:
http://www.fishbase.org/Summary/SpeciesSummary.cfm?ID=2801&genusname=Leuciscus&speciesname=idus [Accessed 27 September, 2004]
Freshwater Biodata Information System New Zealand (FBIS), 2005
Summary: The Freshwater Biodata Information System (FBIS) contains fish, algae, aquatic plant and invertebrate data and metadata gathered from New Zealand s freshwater streams, rivers and lakes. FBIS provides different ways to search for biodata: choose a predefined search from a list of common searches; use the map view to draw a box on a map and search for biodata; or create your own search for maximum search flexibility. FBIS is offered as a nationally available resource for the New Zealand public, institutions and companies who need access to a well-maintained long-term data repository.
Available from: https://secure.niwa.co.nz/fbis/validate.do?search=common [Accessed 5 August 2005]
ITIS (Integrated Taxonomic Information System), 2005. Online Database *Leuciscus idus*
Summary: An online database that provides taxonomic information, common names, synonyms and geographical jurisdiction of a species. In addition links are provided to retrieve biological records and collection information from the Global Biodiversity Information Facility (GBIF) Data Portal and bioscience articles from BioOne journals.
Available from:
http://www.cbif.gc.ca/pls/itisca/taxastep?king=every&p_action=containing&taxa=Leuciscus+idus&p_format=&p_ifx=plglt&p_lang= [Accessed March 2005]
McDowall, R. M. 1990. New Zealand Freshwater Fishes: a natural history and guide. Auckland. Heinemann Reed.
Summary: An excellent reference book on New Zealand freshwater fish. Contains more in-depth information on species than McDowall, 2000.
McDowall, R. M. 2000. The Reed field guide to New Zealand freshwater fishes. Auckland, Reed.
Summary: Contains short descriptions and distributions far all freshwater fish found in New Zealand. An excellent reference.