GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: ***Lates niloticus***

Lates niloticus 简体中文 正體中文

System: Freshwater

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Actinopterygii	Perciformes	Centropomidae

Common name persico del nilo (Italian), nile perch (English), Nilbarsch (German), nijlbaars (Dutch), sangara (Kiswahili), Victoria perch (English), victoriabaars (Dutch), chengu (Kijitta), mbuta (Kiluo), perche du nil (French), victoriabarsch (German), perca di nilo (Spanish), nilabborre (Swedish)

Synonym
Perca latus , Geoffroy Saint-Hilaire, 1827
Lates niloticus , var. *macrolepidota* Pellegrin, 1922
Lates albertianus , Worthington, 1932
Lates niloticus rudolfianus , Worthington, 1932

Similar species

Summary The Nile perch (Lates niloticus) is a large freshwater fish. Also known as capitaine, mputa or sangara, it can grow up to 200kg and two metres in length. It was introduced to Lake Victoria in 1954 where it has contributed to the extinction of more than 200 endemic fish species through predation and competition for food.

view this species on IUCN Red List

Species Description
Large perch-like predator. Dorsal fin deeply notched, giving the appearance of two separate fins; the first part completely spinous; third dorsal spine enlarged. Lateral line continuous. Pre-orbital and pre-opercular bones with spines; a large spine on operculum.

Lifecycle Stages
In Lake Victoria, male size at first maturity 50-55cm TL (ca. 2 years), females 67,5-85cm TL (2-4 years). Fifty percent maturity at 60-74cm TL for males and 102-110cm TL for females. Maturity sizes strongly decreasing in recent years.

Uses
Nile perch took decades to become evident in Lake Victoria and then burst into the huge biomass of the late 1980s and 1990s and the subsequent harvest for \r\r\nexport. It rose to become the main fishery species in the lake in the late 1990s and the basis of a huge export industry. This raised the price of Nile \r\r\nperch to something beyond the reach of many lakeside communities. All of this was documented in the first two phases of an IUCN-World Conservation Union's \r\r\nNile perch project, which culminated in the making of the film \"Big fish, small fry\". The project has moved on to conflict resolution and capacity building \r\r\nusing \"beach units\" to give more responsibility and management involvement to local people. This work is supported by the three riparian government fisheries \r\r\ndepartments, through the Lake Victoria Fisheries Organisation (LVFO), and is currently being reviewed.
\r\nIn recent years the Nile perch population has begun to stabilise and the availability of large fish has declined as has the catch which is now way below the \r\r\ncapacity of the factories which process and export the fish to USA, Europe, Australia and New Zealand. The view of the three riparian governments is that \r\r\nNile perch is an essential export earner and they have attempted to brand it as \"organic\", as it is wild and without artificial additives etc.(although cage rearing has begun). This same export has brought some benefits to the local people (in income from fishing and jobs in factories) and \r\r\nsome disbenefits from availability of fish for food and economic and social upheaval (Howard, G., pers. comm., August 2005).

Habitat Description
Freshwater species, but living in brackish waters in Lake Mariout. Introductions in Lake Victoria were mainly from Lake Albert, but also from Lake Turkana. The present populations in Lake Victoria are apparently not pure *Lates niloticus* but contain some genetic material from *Lates macrophthalmus* from Lake Albert.

Reproduction
Free spawning over shallow sheltered areas, all the year round with peaks in rainy season.
Up to 16 million eggs per breeding cycle.

Nutrition
Large predator, feeding in Lake Victoria on haplochromine cichlids, the zooplanktivorous cyprinid *Rastrineobola argentea*, the prawn *Caridina nilotica* and juvenile Nile perch (cannibalism). Young stages feed on invertebrates.

General Impacts
The Nile perch is responsible through predation and competition for food for the decimation and possible disappearance of two hundred or more species of the unique flock of endemic haplochromine cichlids in Lake Victoria.

Management Info
Eradication of the Nile perch in Lake Victoria is impossible in practice, and is also not an option because of its economic success.

Pathway
Introduced for fisheries purposes.

Principal source:

Compiler: Dr. Jos Snoeks, Africa Museum, Leuvensesteenweg, Tervuren, Belgium & IUCN/SSC Invasive Species Specialist Group (ISSG)

Review: Dr. Jos Snoeks, Africa Museum, Leuvensesteenweg, Tervuren, Belgium.

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ALIEN RANGE

[1] CUBA
[1] UNITED STATES

[1] LAKE VICTORIA

Red List assessed species 145: CR = 51; EN = 2; VU = 17; DD = 62; LC = 13;

Allochromis welcommei **VU**
Astatotilapia piceatus **CR**
Brycinus jacksonii **EN**
Haplochromis acidens **DD**
Haplochromis altigenis **DD**
Haplochromis apogonoides **CR**
Haplochromis argenteus **CR**
Haplochromis barbarae **CR**
Haplochromis bartoni **DD**
Haplochromis boops **DD**
Haplochromis bwathondii **VU**
Haplochromis cavifrons **DD**
Haplochromis chromogynos **VU**
Haplochromis cinctus **CR**
Haplochromis cnester **CR**
Haplochromis crassilabris **CR**
Haplochromis cronus **DD**
Haplochromis cryptogramma **DD**
Haplochromis decticostoma **DD**
Haplochromis dichrourus **CR**
Haplochromis dolichorhynchus **DD**
Haplochromis erythrocephalus **DD**
Haplochromis eutaenia **DD**
Haplochromis flavipinnis **CR**
Haplochromis gowersi **DD**
Haplochromis harpakteridion **DD**
Haplochromis hiatus **CR**
Haplochromis iris **CR**
Haplochromis katunzii **CR**
Haplochromis labriformus **DD**
Haplochromis laparogramma **LC**
Haplochromis lividus **DD**
Haplochromis macrognathus **CR**
Haplochromis maculipinna **DD**
Haplochromis mandibularis **DD**
Haplochromis maxillaris **VU**
Haplochromis melanopterus **VU**
Haplochromis melichrous **DD**
Haplochromis michaeli **CR**
Haplochromis mylergates **CR**
Haplochromis nigrescens **DD**
Haplochromis nyanzae **DD**
Haplochromis obtusidens **DD**
Haplochromis pallidus **DD**
Haplochromis paraguiarti **DD**
Haplochromis paropius **LC**
Astatoreochromis alluaudi **LC**
Bagrus docmak **LC**
Brycinus sadleri **LC**
Haplochromis aelocephalus **CR**
Haplochromis antleter **CR**
Haplochromis arcanus **DD**
Haplochromis artaxerxes **DD**
Haplochromis bareli **CR**
Haplochromis bayoni **DD**
Haplochromis brownae **CR**
Haplochromis cassius **CR**
Haplochromis chlorochrous **DD**
Haplochromis chrysogynaion **DD**
Haplochromis cinereus **DD**
Haplochromis coprologus **CR**
Haplochromis crocopeplus **CR**
Haplochromis cryptodon **DD**
Haplochromis cyaneus **EN**
Haplochromis dentex **CR**
Haplochromis diplotaenia **DD**
Haplochromis empodisma **DD**
Haplochromis estor **DD**
Haplochromis fischeri **VU**
Haplochromis gilberti **DD**
Haplochromis granti **CR**
Haplochromis heusinkveldi **CR**
Haplochromis humilior **DD**
Haplochromis ishmaeli **CR**
Haplochromis kujunjui **DD**
Haplochromis lacrimosus **DD**
Haplochromis laprogramma **VU**
Haplochromis longirostris **CR**
Haplochromis macrops **DD**
Haplochromis maisomei **DD**
Haplochromis martini **CR**
Haplochromis megalops **VU**
Haplochromis melanopus **DD**
Haplochromis mento **DD**
Haplochromis microdon **CR**
Haplochromis nanoserranus **CR**
Haplochromis nuchisquamulatus **DD**
Haplochromis obesus **CR**
Haplochromis pachycephalus **DD**
Haplochromis pancitrinus **CR**
Haplochromis paraplagiostoma **DD**
Haplochromis parvidens **CR**

Haplochromis pellegrini **DD**
Haplochromis perrieri **CR**
Haplochromis phytophagus **DD**
Haplochromis pitmani **DD**
Haplochromis plagiostoma **DD**
Haplochromis prodromus **DD**
Haplochromis pseudopellegrini **DD**
Haplochromis pyrrhocephalus **LC**
Haplochromis riponianus **LC**
Haplochromis serranus **DD**
Haplochromis sphex **CR**
Haplochromis sp. nov. 'micro-obesus' **CR**
Haplochromis sulphureus **CR**
Haplochromis teegelaari **CR**
Haplochromis theliodon **CR**
Haplochromis thuragnathus **DD**
Haplochromis tyrianthinus **DD**
Haplochromis vanoijeni **VU**
Haplochromis vonlinnei **CR**
Haplochromis xenognathus **LC**
Hoplotilapia retrodens **VU**
Macropleurodus bicolor **VU**
Mormyrus kannume **LC**
Oreochromis variabilis **CR**
Platytaeniodus degeni **LC**
Pyxichromis parorthostoma **DD**
Yssichromis fusiformis **VU**
Haplochromis percoides **CR**
Haplochromis pharyngomylus **DD**
Haplochromis piceatus **VU**
Haplochromis plagiodon **VU**
Haplochromis plutonius **CR**
Haplochromis prognathus **DD**
Haplochromis ptistes **CR**
Haplochromis pyrrhopteryx **CR**
Haplochromis saxicola **DD**
Haplochromis spekii **DD**
Haplochromis sp. nov. 'argens' **VU**
Haplochromis squamulatus **DD**
Haplochromis tanaos **LC**
Haplochromis teunisrasi **CR**
Haplochromis thereuterion **VU**
Haplochromis tridens **DD**
Haplochromis ushindi **CR**
Haplochromis victorianus **CR**
Haplochromis worthingtoni **DD**
Haplochromis xenostoma **CR**
Labeo victorianus **LC**
Mastacembelus frenatus **LC**
Oreochromis esculentus **CR**
Paralabidochromis victoriae **DD**
Pundamilia macrocephala **VU**
Xenoclarias eupogon **CR**

BIBLIOGRAPHY

13 references found for **Lates niloticus**

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].

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]

Fryer, G. 1960. Concerning the proposed introduction of *Nile perch* into Lake Victoria. East African Agricultural Journal 25(4): 267-270.

Summary: The suggestion that the fishery in Lake Victoria would benefit if the *Nile perch* were introduced is based on ignorance of several fundamental biological concepts. Such an introduction is not only undesirable but would jeopardize the existing commercial fishery.

Mendoza, R.E.; Cudmore, B.; Orr, R.; Balderas, S.C.; Courtenay, W.R.; Osorio, P.K.; Mandrak, N.; Torres, P.A.; Damian, M.A.; Gallardo, C.E.; Sanguines, A.G.; Greene, G.; Lee, D.; Orbe-Mendoza, A.; Martinez, C.R.; and Arana, O.S. 2009. Trinational Risk Assessment Guidelines for Aquatic Alien Invasive Species. Commission for Environmental Cooperation. 393, rue St-Jacques Ouest, Bureau 200, Montr&#65533;al (Qu&#65533;bec), Canada. ISBN 978-2-923358-48-1.
Summary: In 1993, Canada, Mexico and the United States signed the North American Agreement on Environmental Cooperation (NAAEC) as a side agreement to the North American Free Trade Agreement (NAFTA). The NAAEC established the Commission for Environmental Cooperation (CEC) to help the Parties ensure that improved economic efficiency occurred simultaneously with trinational environmental cooperation. The NAAEC highlighted biodiversity as a key area for trinational cooperation. In 2001, the CEC adopted a resolution (Council Resolution 01-03), which created the Biodiversity Conservation Working Group (BCWG), a working group of high-level policy makers from Canada, Mexico and the United States. In 2003, the BCWG produced the &#65533;Strategic Plan for North American Cooperation in the Conservation of Biodiversity.&#65533; This strategy identified responding to threats, such as invasive species, as a priority action area. In 2004, the BCWG, recognizing the importance of prevention in addressing invasive species, agreed to work together to develop the draft CEC Risk Assessment Guidelines for Aquatic Alien Invasive Species (hereafter referred to as the Guidelines). These Guidelines will serve as a tool to North American resource managers who are evaluating whether or not to introduce a non-native species into a new ecosystem. Through this collaborative process, the BCWG has begun to implement its strategy as well as address an important trade and environment issue. With increased trade comes an increase in the potential for economic growth as well as biological invasion, by working to minimize the potential adverse impacts from trade, the CEC Parties are working to maximize the gains from trade while minimizing the environmental costs.
Available from: English version: http://www.cec.org/Storage/62/5516_07-64-CEC%20invasives%20risk%20guidelines-full-report_en.pdf [Accessed 15 June 2010]
French version: http://www.cec.org/Storage/62/5517_07-64-CEC%20invasives%20risk%20guidelines-full-report_fr.pdf [Accessed 15 June 2010]
Spanish version: http://www.cec.org/Storage/62/5518_07-64-CEC%20invasives%20risk%20guidelines-full-report_es.pdf [Accessed 15 June 2010].
Pitcher, T. J., Hart, P. J. B. 1995. The impact of species changes in African lakes. Fish and Fisheries Series 18, Chapman & Hall, London: 601pp.
Summary: This book covers the impact of species changes engendered by the introduction of fish species, impoundment and heavy exploitation. Aspects considered include reduction of biodiversiy, the conservation of unique endemic faunas, the assessment of changes in
Witte, F., Van Densen, W. L. T. 1995. Fish stocks and fisheries of Lake Victoria. Samara Publishing Ltd., UK. 404pp.
Summary: The results of eighteen years research on the fisheries of Lake Victoria are presented. The introduction is followed by sections dealing successively with fish and fisheries, methodologies for sampling, gear and boats, methods for monitoring fish stocks,

General information

FishBase, 2005. Species profile *Lates niloticus* Nile perch
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=347i [Accessed 21 March, 2005]
Food and Agriculture Organisation of the United Nations (FAO), 1998. Aquatic Species Introductions Database (DIAS).
Summary: The database includes records of aquatice species introduced or transferred from one country to another and does not consider movements of species inside the same country. Coverage of accidental introductions of organisms (e.g., through ship ballast waters) is not complete and records on this topic have been generally entered only when important impacts on fisheries or on the environment have been caused.
Hauser, L., Carvalho, G. R., Pitcher, T. J. and Ogutu-Ohwayo, R. 1998. Genetic affinities of an introduced predator: Nile perch in Lake Victoria, East Africa. Molecular Ecology 7: 849-859.
Summary: Several populations of Nile perch have been used to stock the lakes of the Lake Victoria system. The taxonomic status of the introduced populations has been examined through enzyme analysis. Geneticially, introduced *Nile perch* in Lakes Kyoga and Nabugabo
Howard, G., pers. comm., August 2005. Extracted from an email from Geoffrey Howard, Regional Programme Coordinator IUCN - East Africa Regional Office, Nairobi, Kenya.
ITIS (Integrated Taxonomic Information System), 2005. Online Database *Lates niloticus*
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=Lates+niloticus&p_format=&p_ifx=plglt&p_lang= [Accessed March 2005]
Pringle, M. Robert., 2005. The Origins of the Nile Perch in Lake Victoria. BioScience &#65533; September 2005 / Vol. 55 No. 9