Phalloceros caudimaculatus 正體中文

System: Freshwater

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae

Common name zyworodka jednoplamka (Polish), pilkkukala (Finnish), Vielfleckk&#65533;rpfling (German), speckled mosquitofish (English, Australia), spottail mosquitofish (English, South Africa), kolstert-muskietvis (Afrikaans, South Africa), caudo (English, New Zealand), kaudi (Danish), spotted livebearer (English)

Synonym *Girardinus caudimaculatus* , (Hensel, 1868)
Phalloceros caudomaculatus , (Hensel, 1868)

Similar species *Gambusia affinis, Gambusia holbrooki*

Summary Phalloceros caudimaculatus (caudo) are a small species of live-bearing freshwater fish that originate from South America. A relative of the notoriously invasive Gambusia spp., they appear to be much less aggressive towards other fish, although they may be able to impact upon native species through competition. Phalloceros caudimaculatus have no value, apart from as aquarium fish.

view this species on IUCN Red List

Species Description
A small, stout fish with a slightly arched back and deep belly in front of the anal fin. The mouth is small and upturned, and the tail is rounded. Males possess a modified anal fin called a gonopodium. This has a terminal hook and is used for internal fertilisation of the female. Colour can be variable, but is often grey-olive with dark coloured scale margins, which form a hatching pattern on the sides. Jet black blotches and speckles are distributed over the sides and on the fins (McDowall, 2000).

Notes
Reportedly a non-aggressive species when compared to the closely related *Gambusia* spp. (Morgan *et. al*, 2004).

Lifecycle Stages
Short-lived, with a life-expectancy of around 1 year (McDowall, 2000).

Uses
May be kept as an aquarium fish (McDowall, 2000)

Habitat Description
Slow-flowing waterways or ponds with large weed beds, which are used for cover (DPI, 2004). Can reportedly survive in temperatures as low as 5°C (McDowall, 2000)

Reproduction
Reproduce by internal fertilisation and give birth to live young. Gestation is around 24 days (FishBase, 2004) and up to 80 young per litter are produced (McDowall, 2000). Breeding occurs during summer/autumn and litters can be spaced by only five to six weeks (McDowall, 2000).

Nutrition
Feeds on aquatic plants, algae, small insects and crustaceans (FishBase, 2004; McDowall, 2000).

General Impacts
Displacement of native freshwater fishes through competition is the main potential impact for this species (Morgan *et. al*, 2004)

Management Info
Chemical: The use of poisons such as Rotenone may be an option in some locations (DPI, 2004).

Pathway
Importation for home aquaria may contribute to this species' spread.

Principal source: McDowall, R. M. 2000. The Reed field guide to New Zealand freshwater fishes. Auckland, Reed.
FishBase, 2004. Species profile *Phalloceros caudimaculatus* Dusky millions fish

Compiler: IUCN/SSC Invasive Species Specialist Group (ISSG)

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

Pubblication date: 2005-03-21

ALIEN RANGE

[2] AUSTRALIA
[1] NEW ZEALAND
[1] MALAWI

BIBLIOGRAPHY
13 references found for **Phalloceros caudimaculatus**

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]
Kailola., P.J. undated. Risk assessment of ten species of ornamental fish under the Environment Protection and Biodiversity Conservation Act 1999
Summary: http://www.deh.gov.au/biodiversity/trade-use/invitecomment/pubs/ornamental-fish.pdf [Accessed March 2006]
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].

General information

FishBase, 2004. Species profile *Phalloceros caudimaculatus* Dusky millions fish
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://64.95.130.5/summary/SpeciesSummary.cfm?id=4685 [Accessed 28 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 *Phalloceros caudimaculatus*
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=Phalloceros+caudimaculatus&p_format=&p_ifx=plglt&p_lang= [Accessed March 2005]
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.
Morgan, D. L., Gill, H. S., Maddern, M. G., Beatty, S. J. 2004. Distribution and impacts of introduced freshwater fishes in Western Australia. New Zealand Journal of Marine and Freshwater Research *38*: 511-523.
Summary: Has distributional data on introduced freshwater fish in Western Australia.
New South Wales Department of Primary Industries (Fisheries) webpage.
Summary: Information on caudo in New South Wales, Australia.
Available from: http://www.fisheries.nsw.gov.au/thr/species/fn-mosquitofish.htm [Accessed 28 September, 2004.]
Rowley, J.J.L., Rayner, T.S. and Pyke, G.H., 2005. New records and invasive potential of the poeciliid fish *Phalloceros caudimaculatus*, New Zealand Journal of Marine and Freshwater Research, 39:1013-1022.
Summary: Available from: https://www.rsnz.org/publish/nzjmfr/2005/083.pdf [Accessed 14 June 2006]