Acanthogobius flavimanus 正體中文

System: Freshwater

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Actinopterygii	Perciformes	Gobiidae

Common name Yaponskii rechnoi bychok (English, Russian Federation), spotted goby (English, Viet Nam), Mahaze (English, Japan), Japanese river goby (English), Oriental goby (English), yellowfin goby (English), Cá Bong hoa (English, Viet Nam), Zheltoperyi bychok (English, Russian Federation), Cá Bong (English, Viet Nam)

Synonym *Gobius flavimanus* , Temminck & Schlegel
Gobius stigmothonus , Richardson
Aboma snyderi , Jordan & Fowler

Similar species

Summary The yellowfin goby, *Acanthogobius flavimanus* is native to Asia. It has been introduced to Australia and the west coast of North America through ship ballast water and hull fouling. It negatively interacts with native and endangered species competing for food and resources.

view this species on IUCN Red List

Species Description
Acanthogobius flavimanus is easily identified due to its largesize. Adult yellowfin goby have a large head and elongate body and can grow to 30cm in length. This fish is pale brown with a series of dark saddles and spots. Juveniles have pale yellow ventral and anal fins. All ages possess yellow ventral fins whereas other gobies have clear, white, grey or black ventral fins (Barnham, 1998).

Lifecycle Stages
Acanthogobius flavimanus larvae are pelagic. Newly hatched larvae swim out of the burrow and remain near the bottom. After the yolk sac is absorbed, the larvae disperse rapidly. Larvae float on the surface of the water column during flood tide and descend to near the bottom while the tide ebbs. Pelvic fins fuse into a sucking disc, and the fish are able to cling to substrates or crawl into burrows. Juvenile *A. flavimanus* prefer tidal sloughs with a muddy bottom and peatmoss banks (Wang 1986).

Habitat Description
Acanthogobius flavimanus inhabit muddy and sandy bottoms along the shore of bays and estuaries, and sometimes ascends rivers (FishBase, 2005). *A. flavimanus* are usually found in freshwater reaches of streams just above tidal influence during most of the year. Individual fish are commonly found in bays and inlets in water depths between 1 and 14 metres (Barnham, 1998).

Reproduction
Acanthogobius flavimanus is oviparous, spawning in winter to early spring. During the breeding season in winter months, adults migrate downstream to spawn in the estuaries. Eggs are constructed in intertidal mudflats and deposited in Y-shaped covered nests (burrows or tunnels) 15-35cm deep and are ovoid in shape. Eggs measure 5.5mm long and 0.9mm wide and take 28 days to develop at optimum temperature (13C). The female may leave the burrow after spawning or may join the male in guarding the eggs. The incubation period is approximately 28 days at 13 C. (Barnham, 1998; FishBase, 2005; and Wang, 1986).

Nutrition
Acanthogobius flavimanus have been reported as aggressively feeding on smaller fish (Barnham, 1998). Wang (1986) reports that, \"Major food items for small juvenile yellowfin goby are harpacticoid copepods (Miyazaki 1940) and other copepods (Dotsu and Mito 1955); the large juveniles eat amphipods, mysid shrimp, and small fish.\"

General Impacts
The introduction of *Acanthogobius flavimanus* alters fish communities and hastens the decline of native species. In California introductions of *A. flavimanus* have been associated with extirpations of an endangered species of fish - the tidewater goby (*Eucyclogobius newberryi*)\r\nfrom certain bodies of water. It also competes with native species for food sources (Meng *et al.* 1994: Lafferty *et al.* 1999, Nico and Fuller, 2004).

Pathway
It also is hypothesized that introduced gobies arrived as eggs on fouling organisms, such as oysters, growing on ship hulls (Nico and Fuller, 2004).

Principal source: Wang, 1986. Fishes of the Sacramento-San Joaquin Estuary and Adjacent Waters, California: A Guide to the Early Life Histories.
Barnham, 1998. Freshwater Fish of Victoria - Gobies.

Compiler: National Biological Information Infrastructure (NBII) & IUCN/SSC Invasive Species Specialist Group (ISSG)

Review: Dr. Michael Marchetti, Department of Biology\ California State University, Chico\ Chico California

Pubblication date: 2006-08-14

ALIEN RANGE

[12] AUSTRALIA

[44] UNITED STATES

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20 references found for **Acanthogobius flavimanus**

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].
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

Appendix B.2: Invasive Exotic Species of the Carlsbad Hydrologic Unit
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Summary: Available from:
http://www.dpi.vic.gov.au/dpi/nreninf.nsf/childdocs/-B1F754E6F182011F4A2568B30006520E-49A3E2BB3EDF7F50CA256BC80006E464-2B067B6CC15F68524A256DEA0029020F-E27767B2B07A8938CA256BF10004DF42?open [Accessed 13 October 2005]
Bell, J. D., A. S. Steffe, and R. B. Talbot. 1987. *The Oriental Goby, Acanthogobius flavimanus, colonizes a third estuary in New South Wales, Australia.* Japanese Journal of Ichthyology, Vol.34(2), pp. 227-230.
FishBase, 2005. *Acanthogobius flavimanus*: Yellowfin goby. Froese, R. and D. Pauly. Editors.
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.php?id=3832 [Accessed 13 October 2005]
Global Biodiversity Information Facility (GBIF), 2010. Species: *Acanthogobius flavimanus* (Temminck & Schlegel, 1845)
Summary: Available from: http://www.gbif.net/species/13536315/ [Accessed 15 June 2010]
ITIS (Integrated Taxonomic Information System), 2005. Online Database *Acanthogobius flavimanus*
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.
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