

*Ameiurus nebulosus* 正體中文

**System:** Terrestrial

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Actinopterygii	Siluriformes	Ictaluridae

**Common name** barbotte brune (French, Canada), Zwergwels (German), bullhead (English), Brauner katzenwels (German, Germany), kanalnyi somik (Russian, Ukraine), brown bullhead (English), bruine Amerikaanse dwergmeerval (Dutch), sumik karlowaty (Polish), common catfish (English), common bullhead (English), catfish (English), brun dvärgmal (Swedish), hornpout (English), horned pout (English), dvergmalle (Norwegian), Katzenwels (German), marbled bullhead (English), poisson chat (French), minister (English), piikkimonni (Finnish), northern brown bullhead (English), mudcat (English), dvärgmal (Swedish), sumcek krpatý (Slovak), sumecek americký (Czech), somn American (Romanian), bici-cu-coarne (Romanian), somn pitic (Romanian), brun dværgmalle (Danish), dværgmalle (Danish)

**Synonym** *Silurus nigrescens* , Lesueur  
*Amiurus catus* , (Linnaeus, 1758)  
*Pimelodus catus* , (Linnaeus, 1758)  
*Silurus felis* , Linnaeus, 1766  
*Ameiurus lacustris* , (Walbaum, 1792)  
*Ameirus nebulosus* , (Lesueur, 1819)  
*Pimelodus nebulosus* , Lesueur, 1819  
*Ictalurus nebulosus* , (Lesueur, 1819)  
*Ictalurus nebulosus nebulosus* , (Lesueur, 1819)  
*Amiurus nebulosus* , (Lesueur, 1819)  
*Ameirus nebulosus* , Lesueur, 1819  
*Silurus coenosus* , Richardson, 1836  
*Pimelodus atrarius* , DeKay, 1842  
*Amiurus vulgaris* , (Thompson, 1842)  
*Ameiurus vulgaris* , (Thompson, 1842)  
*Pimelodus vulgaris* , Thompson, 1842  
*Pimelodus felis* , Agassiz, 1850  
*Ictalurus nebulosus marmoratus* , (Holbrook, 1855)  
*Ictalurus nebulosus pannonicus* , Harka & Pinter, 1990

**Similar species**

**Summary** *Ameiurus nebulosus*, the brown bullhead, is a species of catfish native to North America and introduced to a number of other countries around the world as a game fish. It is a hardy species that can tolerate a wide range of environmental conditions, including water pollution, allowing it to successfully establish outside of its native range. Some concern has been raised over its invasive potential, but there is a lack of information on its effects.



[view this species on IUCN Red List](#)

## Species Description

McDowall (1990) describes the brown bullhead as a "stout fish with a thick body and ventrally flattened head. The back is moderately arched and there is a distinct hump behind the head. Four pairs of barbels are present around the mouth, with a single long one at each corner of the mouth, a pair in front of the eyes on the snout, and two pairs beneath the chin. The skin is thick and leathery with a layer of mucuous. Scales are absent. Colouration is a dark brown to greenish olive on the back, with slightly paler sides. The underside of the head and lower jaw are a buttery yellow colour, which pales to a creamy white or pale grey on the belly".

## Notes

Resistant to domestic and industrial pollution, therefore able to survive in heavily degraded waters. Reported to bury itself in mud to avoid adverse environmental conditions (FishBase, 2004). Brown bullhead are scavengers as well as predators, locating their prey in the substrate through the use of their sensory barbels (McDowall, 1990). A painful wound can be inflicted by the sharp spines in the fins of brown bullhead catfish if they are not handled carefully. Toxins released by the fish contribute to the pain of the wound (McDowall, 1990).

## Lifecycle Stages

Maturity attained at two to three years of age, when around 180-200mm long. Can live for up to eight years (McDowall, 2000).

## Uses

Popular in some areas as a gamefish. Reportedly a good eating fish, especially when smoked (FishBase, 2004).

## Habitat Description

Found in sluggish, often weedy, streams and rivers. Also occurs in impoundments, lakes, lagoons and ponds. The brown bullhead can tolerate waters with high carbon dioxide and low oxygen concentrations, as well as temperatures up to 31.6°C (FishBase, 2004). It can live out of water for long periods if kept moist (McDowall, 2000).

## Reproduction

Spawning occurs in a nest, a shallow depression in the substrate, built by one or both parents. Eggs are guarded, with the attendant fish moving them with its barbels and fanning them with its fins to encourage development. Hatching occurs in around a week, with the young dispersing in small shoals. (FishBase, 2004; McDowall, 2000).

## Nutrition

Feeds on a wide variety of items including snails, freshwater crayfish, fish eggs, worms, insects (adults and larvae), fish and algae (FishBase, 2004; McDowall, 2000). The main prey of adult brown bull head in Lake Taupo, New Zealand are freshwater crayfish (Barnes, 1996).

## General Impacts

Although there is some concern that brown bullheads may negatively affect trout fisheries (Dedual, 2002), freshwater crayfish (Barnes, 1996) and eels (Rowe and Graynoth, 2002) there does not appear to be any hard evidence of environmental impacts caused by this species.

## Management Info

Dedual (2002) suggests that commercial harvesting of brown bullhead using fyke nets in Lake Taupo, New Zealand could be an option if they are found to impact upon trout.



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## Pathway

Commercial fishermen may inadvertently transport brown bullhead in their nets, as they are able to survive for long periods out of water. Stocking may occur in locations where brown bullhead is valued as a sport fish.

**Principal source:** McDowall, R. M., 2000. The Reed field guide to New Zealand freshwater fishes. Auckland, Reed.

FishBase, 2004. Species profile [Ameiurus nebulosus](#)

McDowall, R. M. 1990. New Zealand Freshwater Fish a natural history and Guide. Heinmann and Reed MAF Publishing Group.

Barnes, G.E., 1996. The biology and general ecology of the brown bull head catfish (*Ameiurus nebulosus*) in Lake Taupo. MSc Thesis, University of Waikato, Hamilton.

[Rowe, D.K and Graynoth, E, 2002.](#) Lake Managers Handbook- Fish in New Zealand Lakes. Ministry for the Environment, Wellington.

**Compiler:** IUCN/SSC Invasive Species Specialist Group (ISSG) with support from the Terrestrial and Freshwater Biodiversity Information System (TFBIS) Programme ([Copyright statement](#))

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

**Publication date:** 2006-04-11

## ALIEN RANGE

[1] AUSTRIA	[1] BELARUS
[1] BULGARIA	[1] CANADA
[1] CHILE	[1] CHINA
[1] CZECH REPUBLIC	[1] DENMARK
[1] FINLAND	[1] FRANCE
[1] GERMANY	[1] HUNGARY
[1] IRAN, ISLAMIC REPUBLIC OF	[1] IRELAND
[1] ITALY	[1] NETHERLANDS
[1] NEW ZEALAND	[1] NORWAY
[1] POLAND	[1] PUERTO RICO
[1] ROMANIA	[1] RUSSIAN FEDERATION
[1] SERBIA AND MONTENEGRO	[1] SLOVAKIA
[1] SPAIN	[1] TURKEY
[1] UKRAINE	

## BIBLIOGRAPHY

15 references found for *Ameiurus nebulosus*

### Management 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. Sheloung, 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](http://www.cefas.co.uk/media/118009/fisk_guide_v2.pdf) is available from [http://www.cefas.co.uk/media/118009/fisk\\_guide\\_v2.pdf](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]

[Dedual, M. 2002. Vertical distribution and movements of brown bullhead \(\*Ameiurus nebulosus\* Lesueur 1819\) in Motuopa Bay, southern Lake Taupo, New Zealand. Hydrobiologia 483: 129-135.](#)

**Summary:** Outlines the distribution of brown bullhead in Lake Taupo. Mentions that they may threaten the trout fishery there.

[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, Montréal \(Québec\), 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 Strategic Plan for North American Cooperation in the Conservation of Biodiversity. 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](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](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](http://www.cec.org/Storage/62/5518_07-64-CEC%20invasives%20risk%20guidelines-full-report_es.pdf) [Accessed 15 June 2010].

[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

[Barnes, G.E., 1996. The biology and general ecology of the brown bull head catfish \(\*Ameiurus nebulosus\*\) in Lake Taupo. MSc Thesis, University of Waikato, Hamilton.](#)

[Barnes, G. E., Hicks, B. J. 2003. Brown bullhead catfish \(\*Ameiurus nebulosus\*\) in Lake Taupo. In Managing invasive freshwater fish in New Zealand. Proceedings of a workshop hosted by Department of Conservation, 10-12 May 2001, Hamilton. 2003.](#)

**Summary:** Has information on the distribution, abundance and diet of brown bullhead in lake Taupo, New Zealand.

[FishBase, 2004. Species profile \*Ameiurus nebulosus\* Brown bullhead](#)

**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?genusname=Ameiurus&speciesname=nebulosus> [ Accessed 21 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 \(Integrated Taxonomic Information System\), 2004. Online Database \*Ameiurus nebulosus\*](#)

**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.itis.gov/servlet/SingleRpt/SingleRpt?search\\_topic=TSN&search\\_value=164043](http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=164043) [Accessed December 31 2004]

[McDowall, R. M.1990. New Zealand Freshwater Fish a natural history and Guide. Heinmann and Reed MAF Publishing Group](#)



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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 for all freshwater fish found in New Zealand. An excellent reference.