

***Pangasius nieuwenhuisii* (a catfish, no common name)**

Ecological Risk Screening Summary

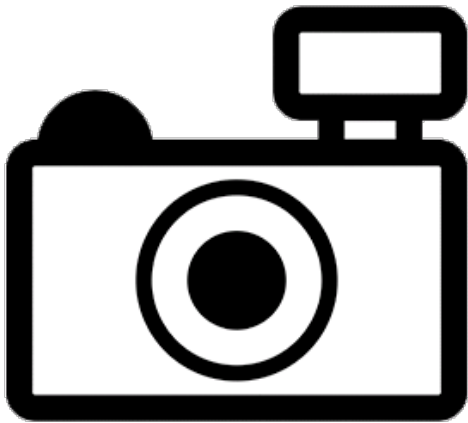
U.S. Fish & Wildlife Service, April 2012

Revised, August 2018

Web Version, 2/10/2021

Organism Type: Fish

Overall Risk Assessment Category: Uncertain



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018):

“Asia: Known only from the Mahakam basin in eastern Borneo [Indonesia].”

From Gustiano (2009):

“Distribution: *Pangasius nieuwenhuisii* is endemic to Kalimantan Timur (Indonesia) and only occurs in the Mahakam basin.”

Status in the United States

No records of *Pangasius nieuwenhuisii* in the wild or in trade in the United States were found.

Pangasius nieuwenhuisii falls within Group I of New Mexico's Department of Game and Fish Director's Species Importation List (New Mexico Department of Game and Fish 2010). Group I species "are designated semi-domesticated animals and do not require an importation permit." With the added restriction of "Not to be used as bait fish."

Means of Introductions in the United States

No records of *Pangasius nieuwenhuisii* in the wild in the United States were found.

Remarks

No additional remarks.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

According to Eschmeyer et al. (2018), *Pangasius nieuwenhuisii* (Popta 1904) is the current valid name of this species. *Pangasius nieuwenhuisii* was originally described as *Neopangasius nieuwenhuisii* Popta 1904.

From ITIS (2018):

Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata
Infraphylum Gnathostomata
Superclass Actinopterygii
Class Teleostei
Superorder Ostariophysi
Order Siluriformes
Family
Genus *Pangasius*
Species *Pangasius nieuwenhuisii* (Popta, 1904)

Size, Weight, and Age Range

From Froese and Pauly (2018):

"Max length : 60.0 cm TL male/unsexed; [Kottelat et al. 1993]"

Environment

From Froese and Pauly (2018):

"Freshwater; benthopelagic."

Climate

From Froese and Pauly (2018):

“Tropical”

Distribution Outside the United States

Native

From Froese and Pauly (2018):

“Asia: Known only from the Mahakam basin in eastern Borneo [Indonesia].”

From Gustiano (2009):

“Distribution: *Pangasius nieuwenhuisii* is endemic to Kalimantan Timur (Indonesia) and only occurs in the Mahakam basin.”

Introduced

No records of introductions of *Pangasius nieuwenhuisii* were found.

Means of Introduction Outside the United States

No records of introductions of *Pangasius nieuwenhuisii* were found.

Short Description

From Roberts and Vidthayanon (1991):

“*Pangasius nieuwenhuisii*, known only from the holotype, belongs to a group of four species endemic to Borneo and distinguished from all other *Pangasius* in having palatal dentition consisting of a median tooth band. It apparently is most closely related to *P. humeralis*, the only other species with a greatly enlarged humeral gland and humeral spine. Direct comparison of the 400 mm holotype with two paratypes (312 and 389 mm) of *P. humeralis* (RMNH, Nov. 1989) revealed the following differences: eye more anterior and smaller, its diameter about two-thirds as large as in *P. humeralis*; Length of palatal tooth band one and a half times that in *P. humeralis*; and adipose fin of same length but twice as large. The holotype has all fins uniformly dusky (possibly discoloration from preservative), with no indication of black pectoral fins characteristic of *P. humeralis*.”

“The holotype has gill rakers on first gill arch $7+12=19$; anal fin rays 31?. A radiograph, difficult to interpret, shows $19?+28?=47?$ vertebrae.”

Biology

From Froese and Pauly (2018):

“The stomach of the holotype contains very hard seeds of higher plants [Roberts and Vidthayanon 1991].”

Human Uses

From Gustiano (2009):

“In the present study, the author found hard seeds in the gut content. When the author and fisherman did fishing, we used banana to catch the fish from the middle part of river.”

Diseases

No records of OIE-reportable diseases (OIE 2021) were found for *Pangasius nieuwenhuisii*.

Pariselle et al. (2001) lists *Thaparocleidus mahakamensis* as a parasite of *Pangasius nieuwenhuisii*.

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

No records of introductions of *Pangasius nieuwenhuisii* were found; therefore, there is no information on impacts of introductions.

4 History of Invasiveness

No records of introductions of *Pangasius nieuwenhuisii* were found; therefore, the history of invasiveness is no known nonnative population.

5 Global Distribution

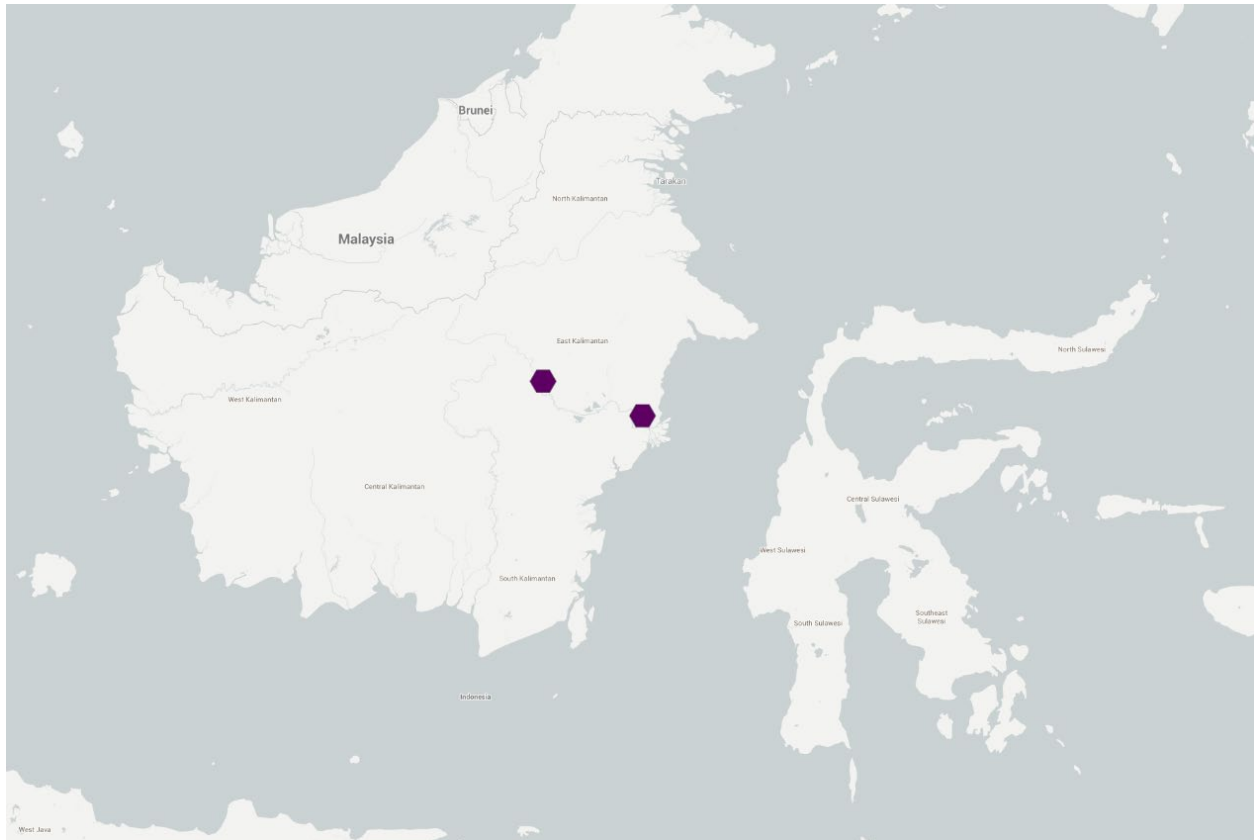


Figure 1. Known global distribution of *Pangasius nieuwenhuisii*. Locations are in the Indonesian part of Borneo. Map from GBIF Secretariat (2018).

6 Distribution Within the United States

No records of *Pangasius nieuwenhuisii* in the wild in the United States were found.

7 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Pangasius nieuwenhuisii* was low across the entire contiguous United States. There were no areas of high or medium match. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for contiguous United States was 0.000, low (scores between 0.000 and 0.005, inclusive, are classified as low). All States had a low individual climate score.

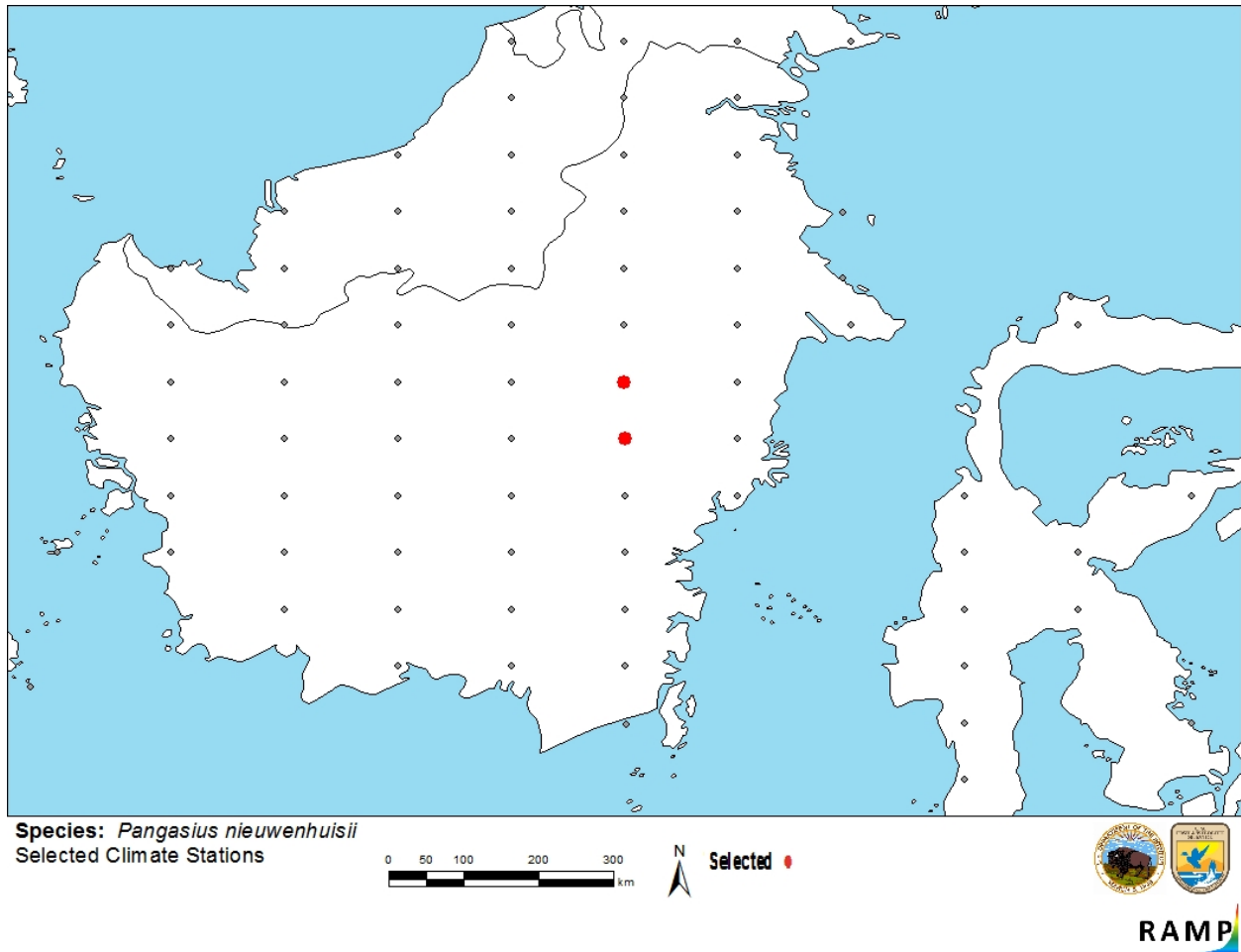


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in Borneo selected as source locations (red; Indonesia) and non-source locations (gray) for *Pangasius nieuwenhuisii* climate matching. Source locations from GBIF Secretariat (2018). Selected source locations are within 100 km of one or more species occurrences, and do not necessarily represent the locations of occurrences themselves.

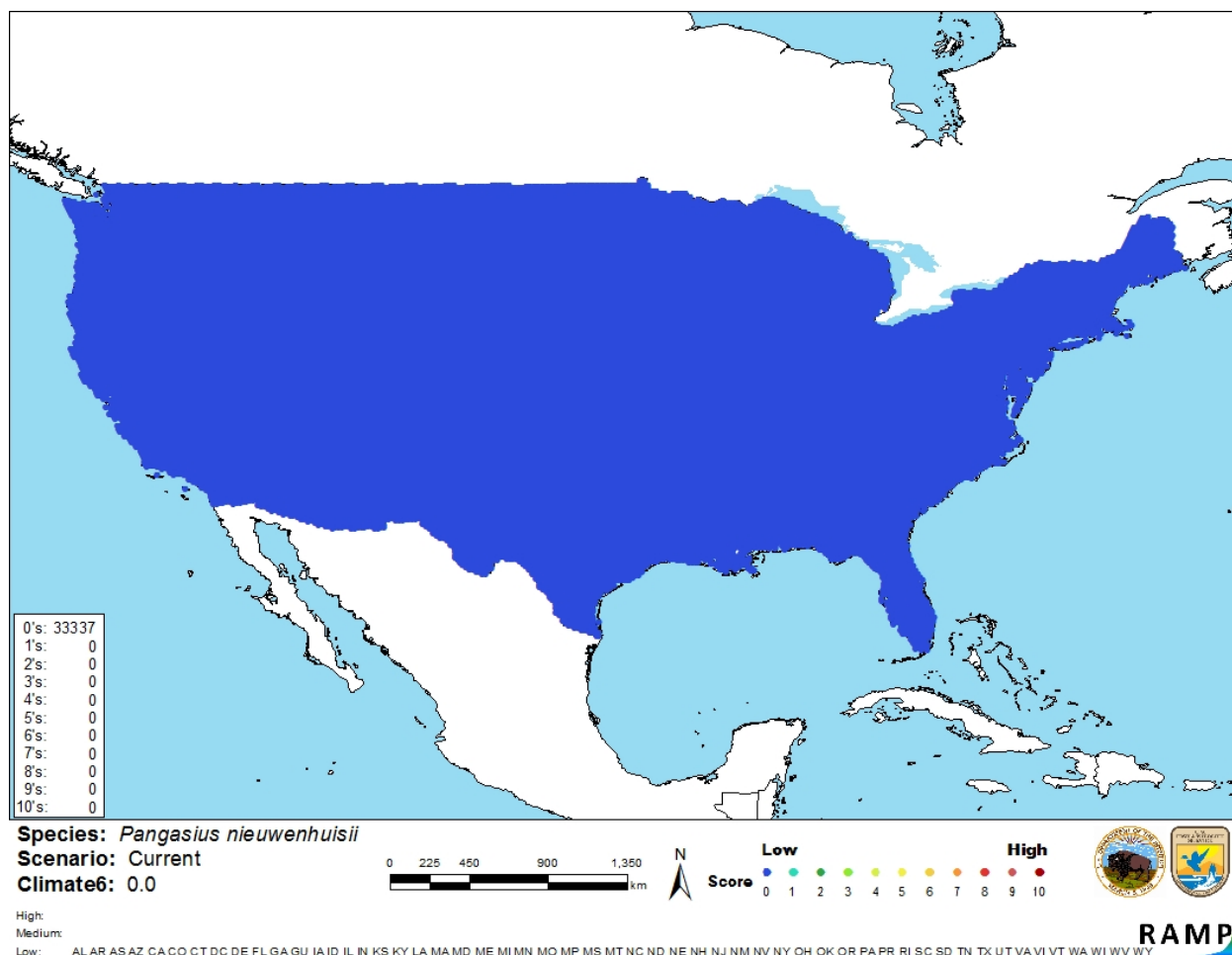


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Pangasius nieuwenhuisii* in the contiguous United States based on source locations reported by GBIF Secretariat (2018). Counts of climate match scores are tabulated on the left. 0/Blue = Lowest match, 10/Red = Highest match.

The High, Medium, and Low Climate match Categories are based on the following table:

Climate 6: (Count of target points with climate scores 6-10)/ (Count of all target points)	Overall Climate Match Category
$0.000 \leq X \leq 0.005$	Low
$0.005 < X < 0.103$	Medium
≥ 0.103	High

8 Certainty of Assessment

The certainty of assessment is low. There was some general information about the species available from peer-reviewed sources. There were no records of introductions found and therefore there is no information on impacts available to evaluate.

9 Risk Assessment

Summary of Risk to the Contiguous United States

Pangasius nieuwenhuisii is a species of catfish native to eastern Borneo [Indonesia]. The history of invasiveness is uncertain. There were no records of introductions to the wild found, and no evidence of this species in trade. The climate match was low. The certainty of assessment is low. The overall risk assessment is uncertain.

Assessment Elements

- **History of Invasiveness (Sec. 4): No Known Nonnative Population**
- **Overall Climate Match Category (Sec. 7): Low**
- **Certainty of Assessment (Sec. 8): Low**
- **Remarks/Important additional information:** No additional information
- **Overall Risk Assessment Category: Uncertain**

10 Literature Cited

Note: The following references were accessed for this ERSS. References cited within quoted text but not accessed are included below in Section 11.

Eschmeyer WN, Fricke R, van der Laan R, editors. 2018. Catalog of fishes: genera, species, references. California Academy of Science. Available:
<http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>
(August 2018).

Froese R, Pauly D, editors. 2018. *Pangasius nieuwenhuisii* Popta, 1904. FishBase. Available:
<https://www.fishbase.de/summary/Pangasius-nieuwenhuisii.html> (August 2018).

GBIF Secretariat. 2018. GBIF backbone taxonomy: *Pangasius nieuwenhuisii* (Popta, 1904). Copenhagen: Global Biodiversity Information Facility. Available:
<https://www.gbif.org/species/5202438> (August 2018).

Gustiano R. 2009. Pangasiid catfishes of Indonesia. Bulletin Plasma Nutfah 15:91–100.

[ITIS] Integrated Taxonomic Information System. 2018. *Pangasius nieuwenhuisii* (Popta, 1904). 1991. Reston, Virginia: Integrated Taxonomic Information System. Available:
https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=681711#null (August 2018).

New Mexico Department of Game and Fish. 2010. Director's species importation list. Santa Fe, New Mexico: New Mexico Department of Game and Fish. Available:
http://www.wildlife.state.nm.us/download/enforcement/importation/information/Directors-Species-Importation-List-08_03_2010.pdf (November 2020).

[OIE] World Organisation for Animal Health. 2021. OIE-listed diseases, infections and infestations in force in 2021. Available: <http://www.oie.int/animal-health-in-the-world/oie-listed-diseases-2021/> (February 2021).

Pariselle A, Lim LHS, Lambert A. 2001. Monogeneans from Pangasiidae (Siluriformes) in Southeast Asia: I. Five new species of *Thaparocleidus* Jain, 1952 (Ancylostoidinae) from *Pangasius pangasius*, *P. kinabatanganensis*, *P. rheophilus* and *P. nieuwenhuisii*. Parasite 8:127–135.

Roberts TR, Vidthayanon C. 1991. Systematic revision of the Asian catfish family Pangasiidae, with biological observations and descriptions of three new species. Proceedings of the Academy of Natural Sciences of Philadelphia 143:97–144.

Sanders S, Castiglione C, Hoff M. 2018. Risk Assessment Mapping Program: RAMP. Version 3.1. U.S. Fish and Wildlife Service.

11 Literature Cited in Quoted Material

Note: The following references are cited within quoted text within this ERSS, but were not accessed for its preparation. They are included here to provide the reader with more information.

Kottelat M, Whitten AJ, Kartikasari SN, Wirjoatmodjo S. 1993. Freshwater fishes of Western Indonesia and Sulawesi. Hong Kong: Periplus Editions.

Popta CML. 1904. Descriptions préliminaires des nouvelles espèces de poissons recueillies au Bornéo central par M. le Dr. A. W. Nieuwenhuis en 1898 et en 1900. Notes from the Leyden Museum 24:179–202.