

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

Ecological Risk Screening Summary

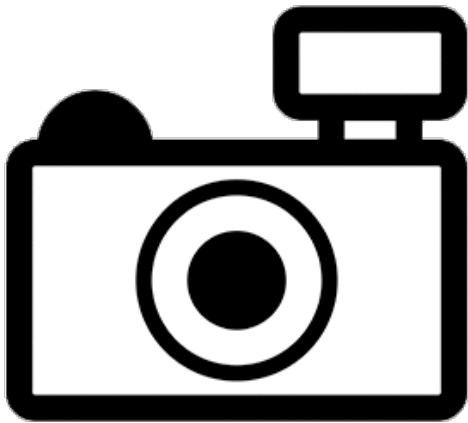
U.S. Fish & Wildlife Service, April 2012

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: northern Borneo, Malaysia”

From Gustiano et al. (2003):

“*Pangasius sabahensis* is endemic to northern Borneo and is presently known only from the type locality, the Kinabatangan River, Sabah State, Malaysia”

Status in the United States

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

Pangasius sabahensis 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 sabahensis* 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 sabahensis* Gustiano, Teugels and Pouyaud, 2003 is the current valid and original name for this species.

From ITIS (2018):

Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata
Infraphylum Gnathostomata
Superclass Actinopterygii
Class Teleostei
Superorder Ostariophysi
Order Siluriformes
Family Pangasiidae
Genus *Pangasius*
Species *Pangasius sabahensis* Gustiano, Teugels and Pouyaud, 2003

Size, Weight, and Age Range

From Gustiano et al. (2003):

"Maximum observed size 343 mm SL."

Environment

From Froese and Pauly (2018):

"Freshwater; benthopelagic."

Climate

From Froese and Pauly (2018):

“Tropical”

From Gustiano et al. (2003):

“*Pangasius sabahensis* is reported from estuarine areas.”

Distribution Outside the United States

Native

From Froese and Pauly (2018):

“Asia: northern Borneo, Malaysia”

From Gustiano et al. (2003):

“*Pangasius sabahensis* is endemic to northern Borneo and is presently known only from the type locality, the Kinabatangan River, Sabah State, Malaysia”

Introduced

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

Means of Introduction Outside the United States

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

Short Description

From Gustiano et al. (2003):

“Head broad and rounded in ventral profile and deep anteriorly. Snout long and elongated. Nostrils large; anterior nostrils entirely situated on anterior margin of upper lip; posterior nostrils located completely on dorsal surface of head; distance between anterior nostrils smaller than distance between posterior nostrils. Mouth large. Premaxillary toothplate visible when mouth closed; premaxillary teeth conical; vomerine toothplate large and slender, consisting of two separate patches in young, becoming fused ontogenetically; vomerine teeth submolariform; palatine toothplates short and slender throughout ontogeny; palatine teeth conical. Eyes latero-ventrally placed. Maxillary and mandibular barbels long, reaching beyond posterior border of operculum. Distance between snout and isthmus proportionally long. Gill rakers short, 19–23 [...] on first branchial arch.”

“Body robust and broad. Dorsal with two spines; first very small, second long and slender. Dorsal-fin rays six or seven (seven in holotype). Posterior margin of dorsal spine with 14–20 strong serrae; numerous minute serrae on anterior margin. Pectoral-fin rays 9–12 (holotype nine). Pectoral spine robust with 16–19 strong serrae on posterior margin and no serrae on anterior

margin. Pectoral fin not reaching vertical through base of last dorsal fin-ray basis. Six soft pelvic fin-rays; prepelvic distance proportionally long; dorsal, pectoral and pelvic fins with short extension [*sic*] at tip; anal fin short with 24–32 [...] soft fin rays. Adipose fin of notable size, its length almost twice eye diameter. Caudal fin short and somewhat lobed.”

“Coloration in live specimens, head and body sky-bluish grey dorsally; body sides silvery grey laterally and pale ventrally; dorsal, pectoral and anal fins yellowish or whitish.”

Biology

From Gustiano et al. (2003):

“The species is omnivorous with a tendency towards piscivory increasing with age. *Pangasius sabahensis* occurs sympatrically with *P. micronema* and *P. kinabatanganensis* in the Kinabatangan River.”

Human Uses

No information on human uses of *Pangasius sabahensis* was found.

Diseases

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

Pariselle et al. (2002) list *Pangasius sabahensis* as a host of *Thaparocleidus mehurus*.

Threat to Humans

From Froese and Pauly (2018):

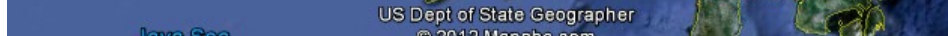
“Harmless”

3 Impacts of Introductions

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

4 History of Invasiveness

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



7 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Pangasius sabahensis* was low for 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 the contiguous United States was 0.000, low (scores between 0.000 and 0.005, inclusive, are classified as low). All States had low individual climate scores.

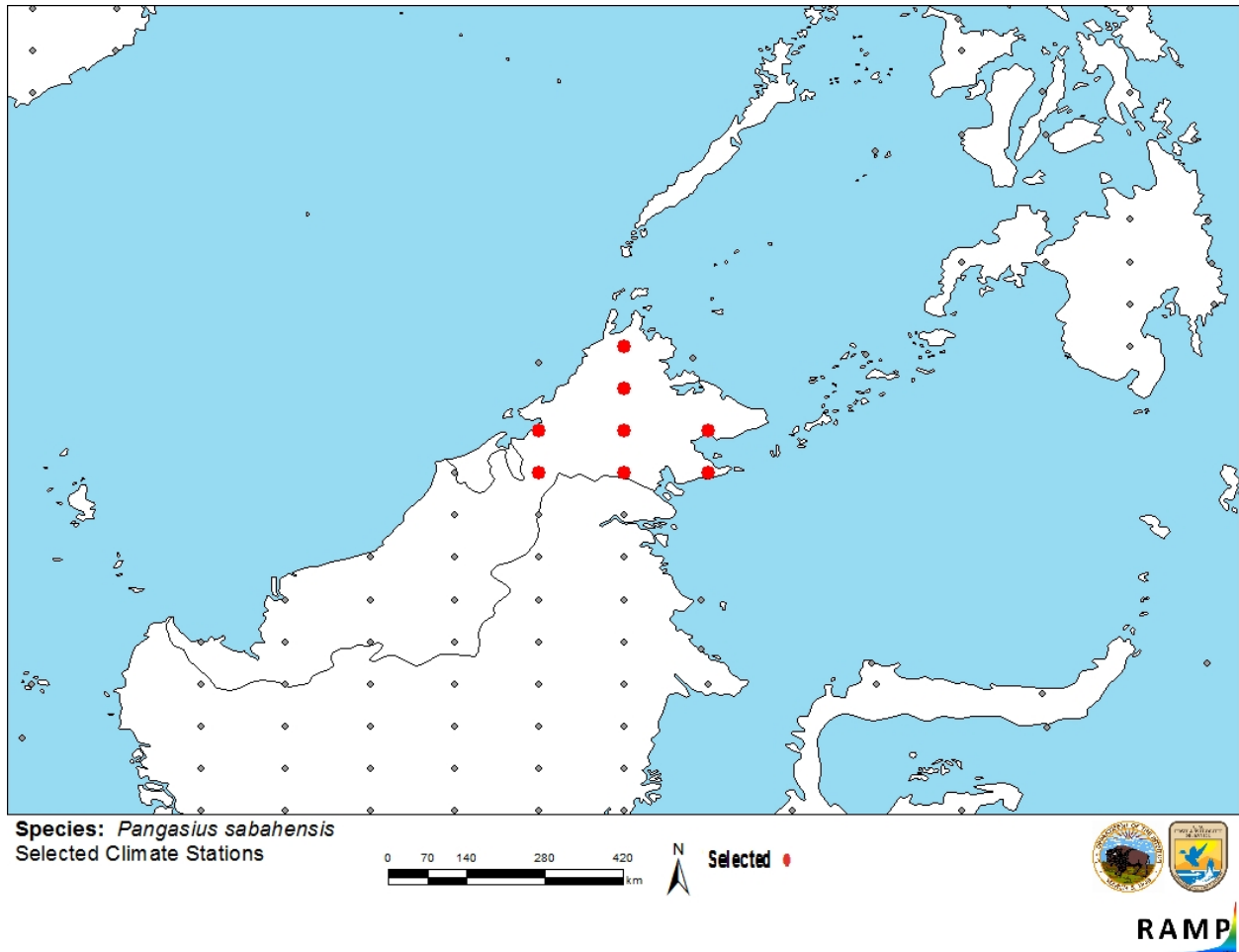


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations on the island of Borneo selected as source locations (red; Malaysia) and non-source locations (gray) for *Pangasius sabahensis* climate matching. Source locations from Froese and Pauly (2018). Selected source locations are within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

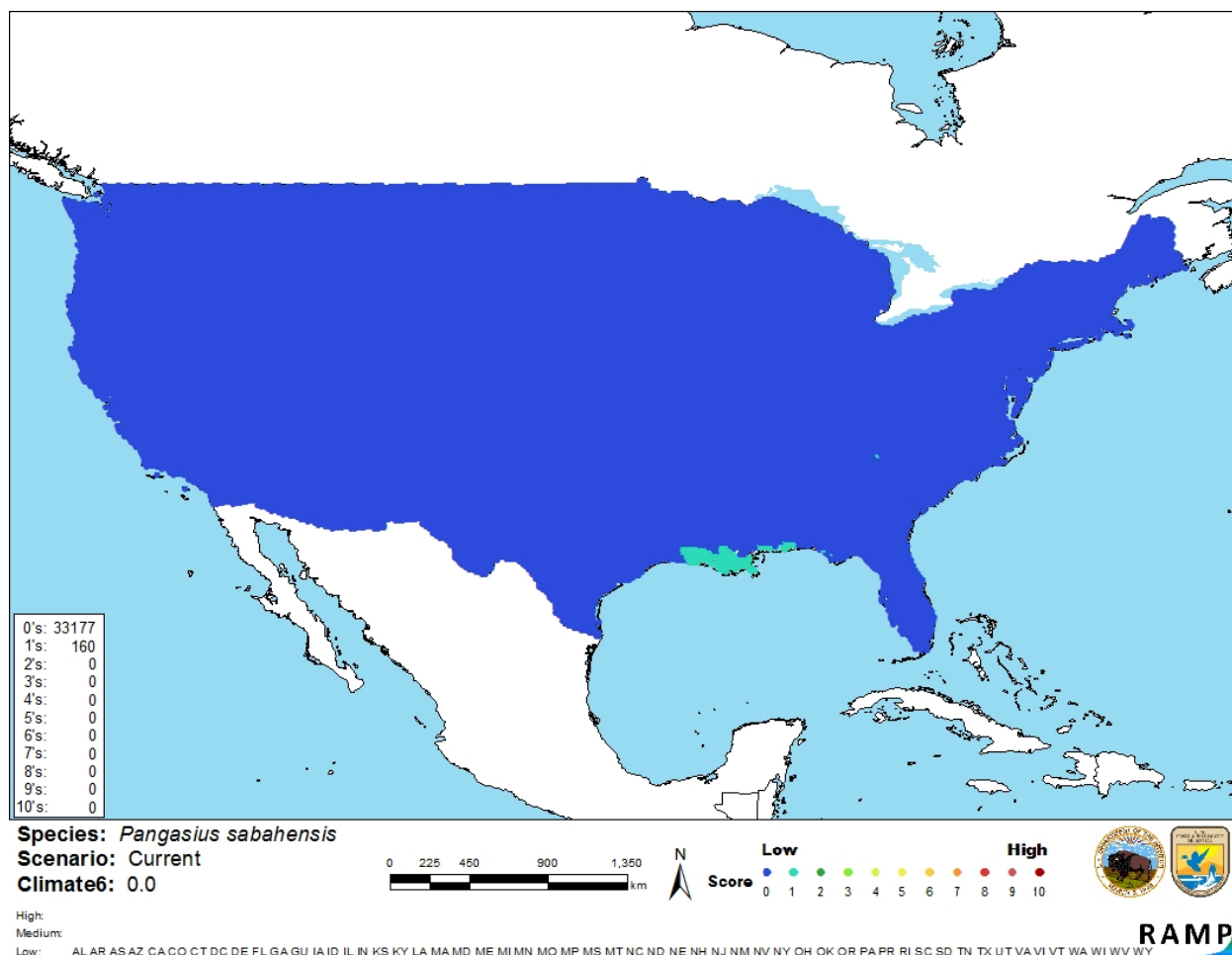


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Pangasius sabahensis* in the contiguous United States based on source locations reported by Froese and Pauly (2018). Counts of climate match scores are tabulated on the left. 0/Blue = Lowest match, 10/Red = Highest match.

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 for *Pangasius sabahensis* was low. There is some biological information for this species and the description is adequately described. There were no known documented introductions on this species. There are no reports of *P. sabahensis* in the United States.

9 Risk Assessment

Summary of Risk to the Contiguous United States

Pangasius sabahensis is a species of catfish native to the Kinabatangan River drainage in the northern part Malaysia on the island of Borneo. The history of invasiveness is no known nonnative population. There were no records of introductions to the wild found, and this species is not known to be found in trade. The climate match was low. There were no areas of high or medium match. 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.

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Froese R, Pauly D, editors. 2018. *Pangasius sabahensis* (Gustiano, Teugels, and Pouyaud, 2003). FishBase. Available: <http://www.fishbase.se/summary/Pangasius-sabahensis.html> (August 2018).

Google Inc. 2011. Google Earth (Version 6.0.3.2197) [Software]. Available: <http://www.google.com/intl/en/earth/index.html> (March 2012)

Gustiano R, Teugels GG, Pouyaud L. 2003. Revision of the *Pangasius kunyit* catfish complex, with description of two new species from South-East Asia (Siluriformes; Pangasiidae). *Journal of Natural History* 37:357–376.

[ITIS] Integrated Taxonomic Information System. 2018. *Pangasius sabahensis* (Gustiano, Teugels, and Pouyaud, 2003). Reston, Virginia: Integrated Taxonomic Information System. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=681716#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/Director-s-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. 2002. Monogeneans from pangasliidae (siluriformes) in Southeast Asia: iv. Five new species of *Thaparocleidus* Jain, 1952 (ancylodiscoididae) from *Pangasius krempfi*, *P. kunyit*, *P. mekongensis* and *P. sabahensis*. Parasite 9:315–324.

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.

No references in this section.