

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

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, April 2012

Revised, August 2018

Web Version, 2/9/2021

Organism Type: Fish

Overall Risk Assessment Category: Uncertain



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1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018):

“Asia [Cambodia, China, Indonesia, Laos, Malaysia, Thailand, and Viet Nam].”

From Vidthayanon (2013):

“The species occurs in Sundaland, Sumatra and Borneo (Kalimantan; Kapuas drainage, to the Kapuas Lakes; Roberts and Vidthayanon 1991, Kottelat and Widjanarti 2005; and Sarawak; Rajang drainage; Parenti and Lim 2005). It is also recorded from Peninsular Malaysia.”

Status in the United States

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

Pangasius nasutus 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 nasutus* 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 nasutus* (Bleeker 1863) is the current valid name and the 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 nasutus* Bleeker, 1863

Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 90.0 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 [Cambodia, China, Indonesia, Laos, Malaysia, Thailand, and Viet Nam].”

From Vidthayanon (2013):

“The species occurs in Sundaland, Sumatra and Borneo (Kalimantan; Kapuas drainage, to the Kapuas Lakes; Roberts and Vidthayanon 1991, Kottelat and Widjanarti 2005; and Sarawak; Rajang drainage; Parenti and Lim 2005). It is also recorded from Peninsular Malaysia.”

Introduced

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

Means of Introduction Outside the United States

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

Short Description

From Froese and Pauly (2018):

“Dorsal spines (total): 2; Dorsal soft rays (total): 7; Anal soft rays: 26 – 30”

From Gustiano and Pouyaud (2006):

“Diagnosis: *Pangasius nasutus* is distinguished by having an inferior mouth, with snout strongly projecting, tooth band of upper jaw entirely exposed when jaws are closed, the jaw teeth very sharp and projected, eye very small (6.6-13% HL), head robust (length 22.8-28.8% SL; width

13- 17.2% SL), caudal peduncle slender (depth 5.8-8% SL), body width 16.9-21.7% SL, predorsal length 36.1-40.8% SL, gill rakers on the first branchial arch 16-24.”

Biology

From Froese and Pauly (2018):

“Occurs in medium to large-sized rivers [Taki 1978] and lakes [Kottelat and Widjanarti 2005]. Feeds on fishes [Kottelat and Widjanarti 2005].”

From Vidthayanon (2013):

“This species occurs in mainstreams and larger tributaries. Subadults and juveniles seasonally move up to flooded lakes for feeding.”

From Gustiano and Pouyaud (2006):

“Ecology and reproduction: this species tend to be omnivorous, feeding on benthic organisms, hard seed or higher plants, and fishes (pers. obs.).”

Human Uses

From Froese and Pauly (2018):

“Fisheries: commercial”

From Hashim et al. (2015):

“The interest in evaluating *Pangasius* sp. is related to the current market price for both species. The cost of *P. nasutus* is threefold in comparison to the *P. micronemus*. However, *P. nasutus* is more in favor of consumers suggesting its taste is better than *P. micronemus*.”

From Gustiano and Pouyaud (2006):

“At present, *Pangasius nasutus* has an important commercial value in Sundaic region, where its capture is highly appreciated by fishermen. It is considered as a candidate for aquaculture and its reproduction in captivity has already been achieved (Legendre 2000).”

Diseases

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

According to Pariselle et al. (2003) *Pangasius nasutus* is hosts to *Thaparocledus serpens*, *Thaparocleidus ocrea*, *Thaparocleidus megagripus*, *Thaparocleidus citreum*, and *Thaparocleidus alatus*.

Poelen et al. (2014) states that *Cladorchis pangasii*, *Cladorchis pangasii nasutus*, and *Cladorchis pougosii* are parasites of *Pangasius nasutus*.

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

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

4 History of Invasiveness

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

5 Global Distribution

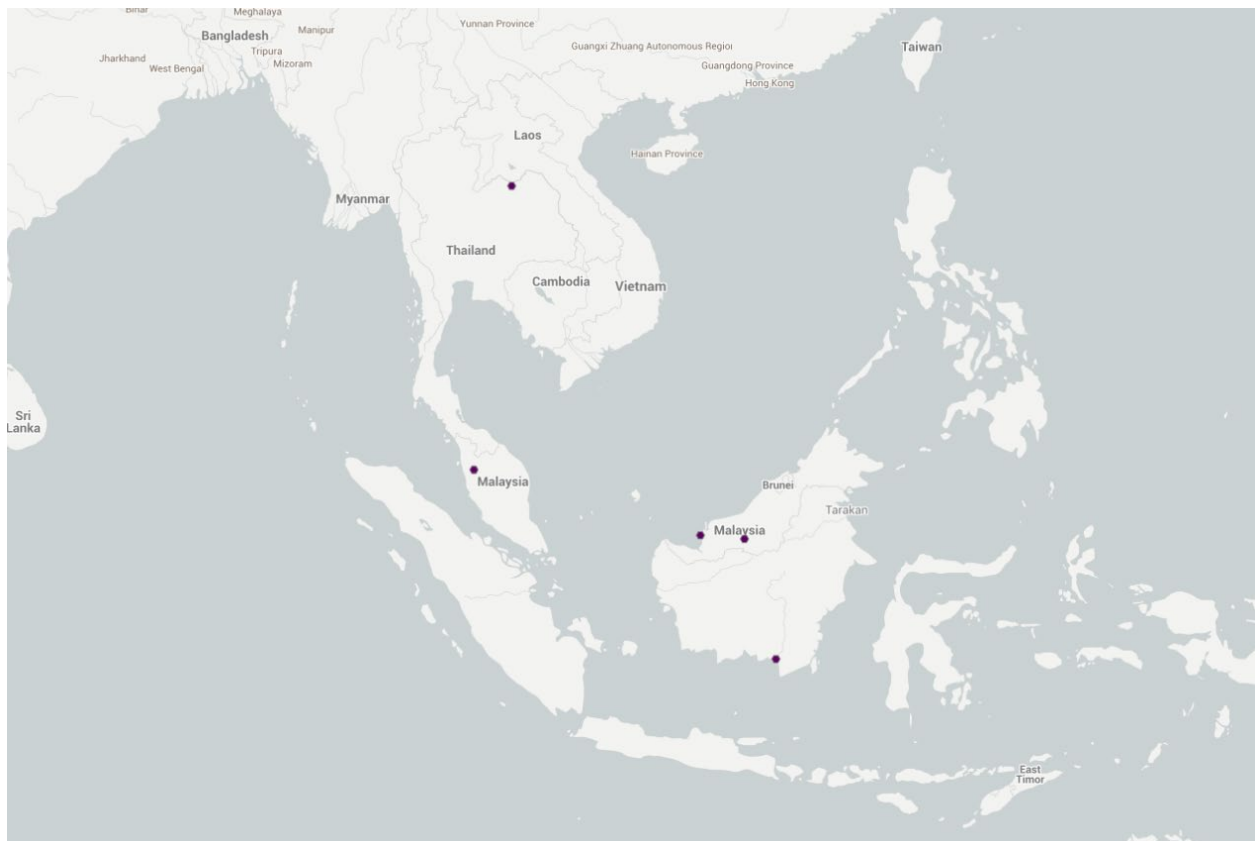


Figure 1. Known global distribution of *Pangasius nasutus*. Locations are in Thailand, Malaysia, and Indonesia. Map from GBIF Secretariat (2018).

6 Distribution Within the United States

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

7 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Pangasius nasutus* was generally low across the majority of the contiguous United States with a small patch of medium match in Florida. 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.

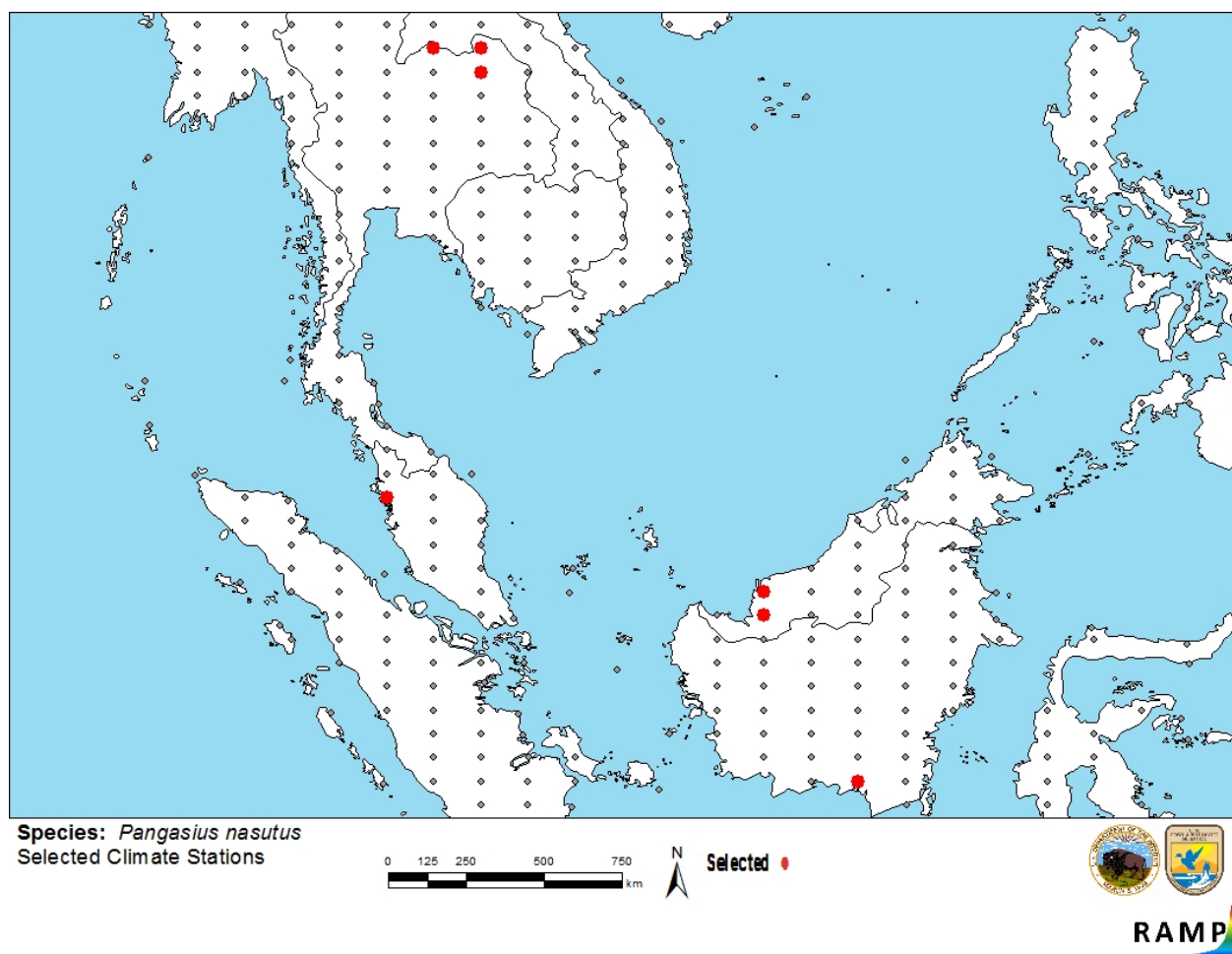


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in southeastern Asia selected as source locations (red; Thailand, Malaysia, Indonesia) and non-source locations (gray) for *Pangasius nasutus* climate matching. Source locations from GBIF Secretariat (2018). Selected source locations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

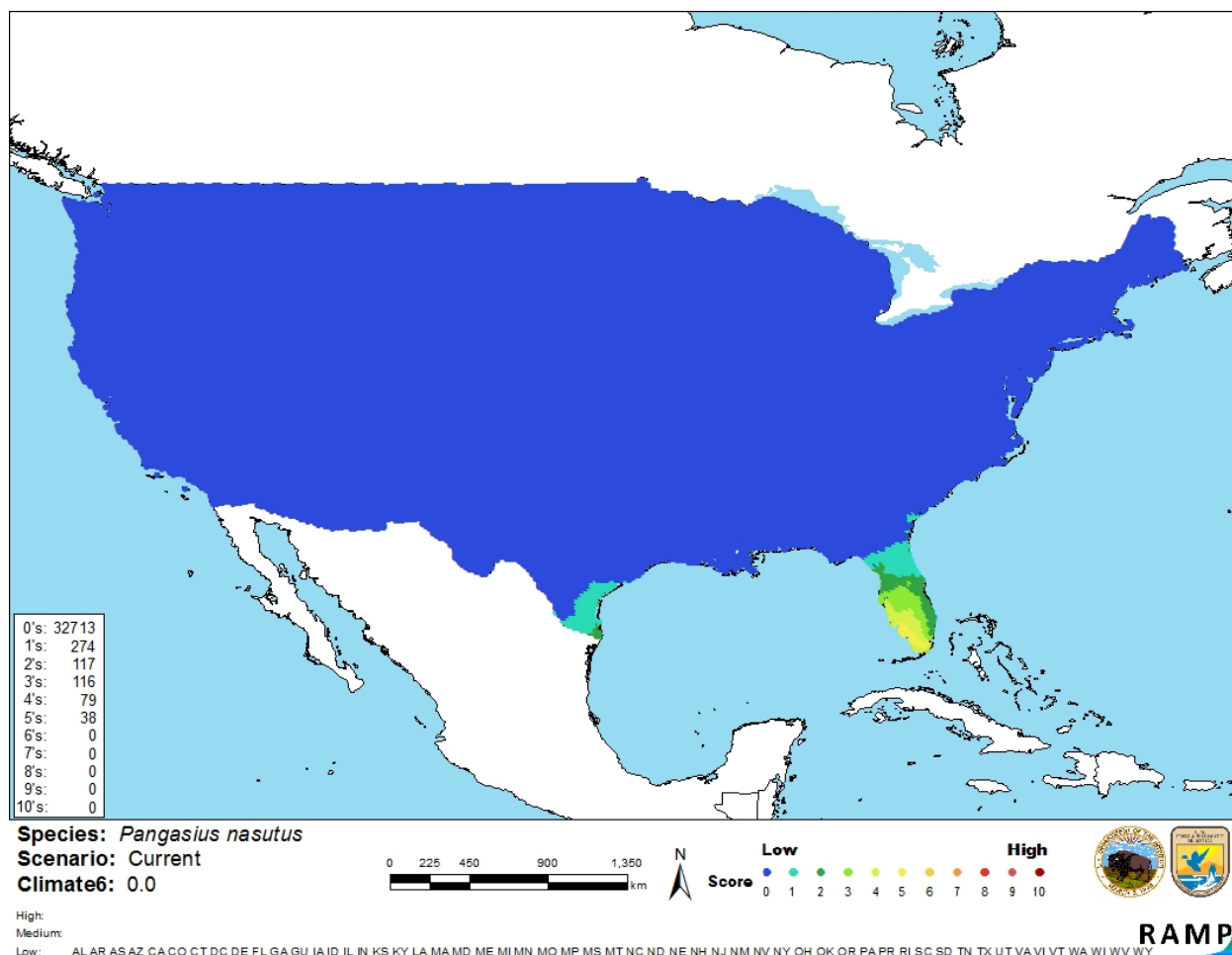


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Pangasius nasutus* in the contiguous United States based on source locations reported by GBIF Secretariat (2018). Counts of climate match scores are tabulated on the left. 0/Blue = Lowest match, 10/Red = Highest match.

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 nasutus is a species of catfish native to Cambodia, China, Indonesia, Laos, Malaysia, Thailand, and Viet Nam in Asia. This species is used as a fishery. The history of invasiveness is no known nonnative population. There were no records of introductions to the wild found, and it is not found in trade. The climate match was low. There was a small area of medium match in Florida. 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 nasutus* Bleeker, 1863. FishBase. Available: <https://www.fishbase.de/summary/Pangasius-nasutus.html> (August 2018).

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Hashmin RB, Jamil EF, Zulkipli FH, Daud JM. 2015. Fatty acid compositions of silver catfish, *Pangasius* sp. farmed in several rivers of Pahang, Malaysia. Journal of Oleo Science 64:205–209.

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- Vidthayanon C. 2013. *Pangasius nasutus*. The IUCN Red List of Threatened Species 2013: e.T180981A1684954. Available: <http://www.iucnredlist.org/details/180981/0> (October 2017).

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.

- Bleeker P. 1863. Description de trois espèces nouvelles de Siluroïdes de l'Inde archipélagique. Verslagen en Mededeelingen der Koninklijke Akademie van Wetenschappen. Afdeling Natuurkunde 15:70–76.
- Kottelat M, Whitten AJ, Kartikasari SN, Wirjoatmodjo S. 1993. Freshwater fishes of Western Indonesia and Sulawesi. Hong Kong: Periplus Editions.
- Kottelat M, Widjanarti E. 2005. The fishes of Danau Sentarum National Park and the Kapuas Lakes area, Kalimantan Barat, Indonesia. Raffles Bulletin of Zoology Supplement (13):139–173.
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