

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

Ecological Risk Screening Summary

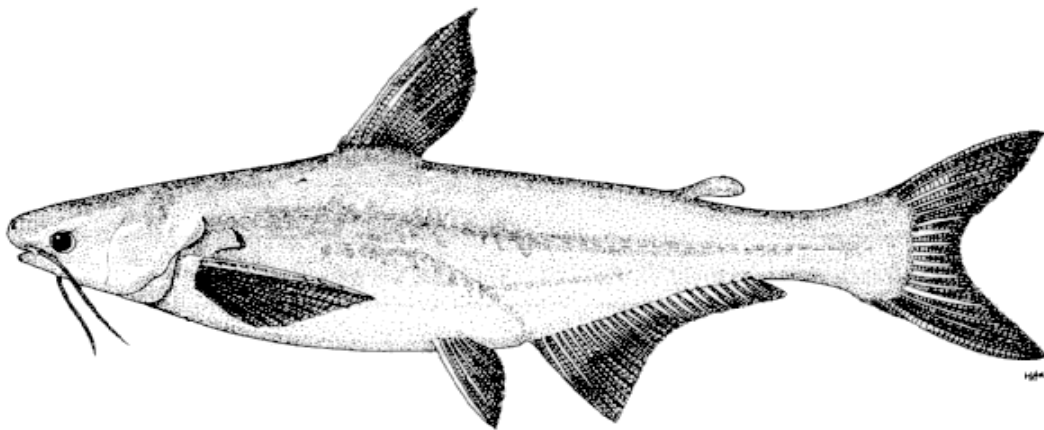
U.S. Fish & Wildlife Service, March 2012

Revised, August 2018

Web Version, 5/1/2020

Organism Type: Fish

Overall Risk Assessment Category: Uncertain



FAO

Image: W.J. Rainboth. Licensed under Creative Commons BY-NC 3.0. Available:
<http://www.fishbase.se/photos/PicturesSummary.php?StartRow=6&ID=14126&what=species&TotalRec=10>

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018):

“Asia: Mekong, Bangpakong, and Chao Phraya basins”

From Vidthayanon (2012):

“The species is recorded from the Bangpakong and Chao Phraya rivers (Roberts and Vidthayanon 1991) in Thailand, and from the lower Mekong basin (from Yunnan in southern China to Viet Nam).”

Status in the United States

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

Means of Introductions in the United States

This species has not been reported as introduced or established in the United States.

Remarks

No additional remarks.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

According to Eschmeyer et al. (2018), *Pangasius conchophilus* Roberts and Vidthayanon 1991 is the current valid name for this species and is also the original name.

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 conchophilus* (Roberts and Vidthayanon, 1991)

Size, Weight, and Age Range

From Froese and Pauly (2018):

“Maturity: L_m ?, range 37 - ? cm
Max length: 120 cm SL male/unsexed; [Baird et al. 1999]”

Environment

From Froese and Pauly (2018):

“Freshwater; benthopelagic; potamodromous [Riede 2004]”

Climate

From Froese and Pauly (2018):

“Tropical”

Distribution Outside the United States

Native

From Vidthayanon (2012):

“The species is recorded from the Bangpakong and Chao Phraya rivers (Roberts and Vidthayanon 1991) in Thailand, and from the lower Mekong basin (from Yunnan in southern China to Viet Nam).”

Introduced

From Vidthayanon (2012):

“[...] the species has been introduced to Malaysia.”

Means of Introduction Outside the United States

No information on means of introduction of *Pangasius conchophilus* was found.

Short Description

From Froese and Pauly (2018):

“Anal soft rays: 25 - 30. Dorsum dull grey with pale green iridescence; maxillary band of teeth forms a continuous row with no break in midline [Rainboth 1996]. Snout protruding with upper jaw tooth bands partly exposed when mouth is closed; large median vomerine tooth plate [Kottelat 2001].”

Biology

From Froese and Pauly (2018):

“Occurs in large rivers [Rainboth 1996] and enters flooded forests [Roberts 1993]. Found in rapids and in deep slow reaches [Singhanouvong et al. 1996]. Juveniles feed on prawns and insects; subadults and adults on prawns, insects and particularly mollusks which are more predominant in stomach contents than in any other *Pangasius* species [Roberts and Vidthayanon 1991] and on plants [Roberts 1993]. Migrates into the middle Mekong along the Thai-Lao border as water levels and turbidity begin to increase. Reproduces early in the flood season and juveniles of 6 to 7 cm are taken by late June [Rainboth 1996].”

From Vidthayanon (2012):

“This species feeds on fish, crustaceans, insects and, in the rainy season, is an important consumer of flooded forest fruits and leaves in the Mekong [Baird 2007].”

“In the dry season, inhabits deep water pools in large rivers.”

Human Uses

From Vidthayanon (2012):

“This species is widely consumed throughout its range from both subsistence and commercial fisheries, and is locally cultured in cages from wild collected fries in Viet Nam. One of the most important species in the markets of the Chao Phraya and Mekong in Thailand.”

Diseases

No information on diseases of *Pangasius conchophilus* was found. **No records of OIE-reportable diseases (OIE 2020) were found.**

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

A single record of introduction was found for Malaysia for *Pangasius conchophilus* but no information on impacts of introduction was available.

4 History of Invasiveness

Pangasius conchophilus is a catfish species native to the Mekong, Bangpakong, and Chao Phraya basins in Asia. An introduction to Malaysia has been reported but not confirmed. No information on impacts of introduction was available. The history of invasiveness is no known nonnative population.

5 Global Distribution

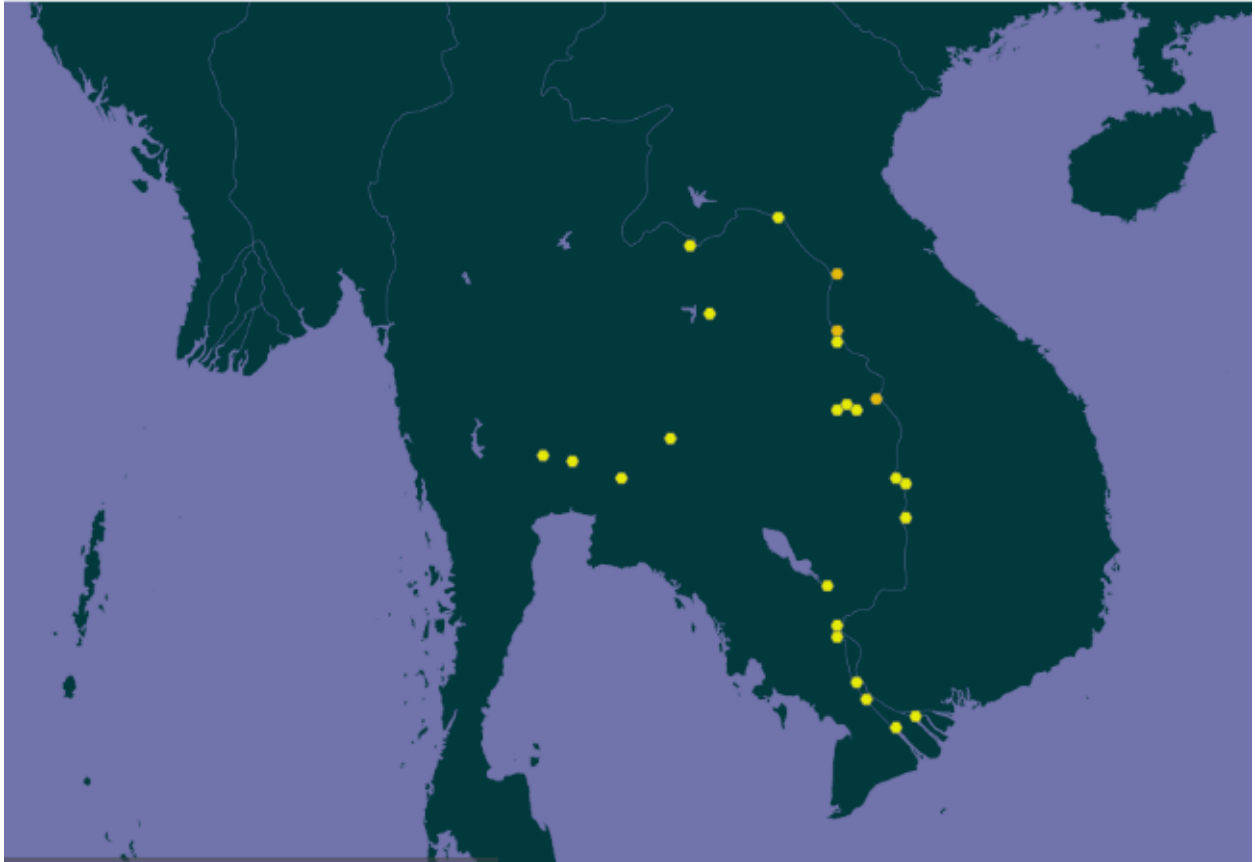


Figure 1. Known global distribution of *Pangasius conchophilus*. Locations are in Thailand, Laos, Vietnam, and Cambodia. Map from GBIF Secretariat (2018).

6 Distribution Within the United States

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

7 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Pangasius conchophilus* was generally low across the contiguous United States. There were areas of medium match in southern Florida and Texas. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.000, low (scores below 0.005 are considered low). All States had low individual climate scores.

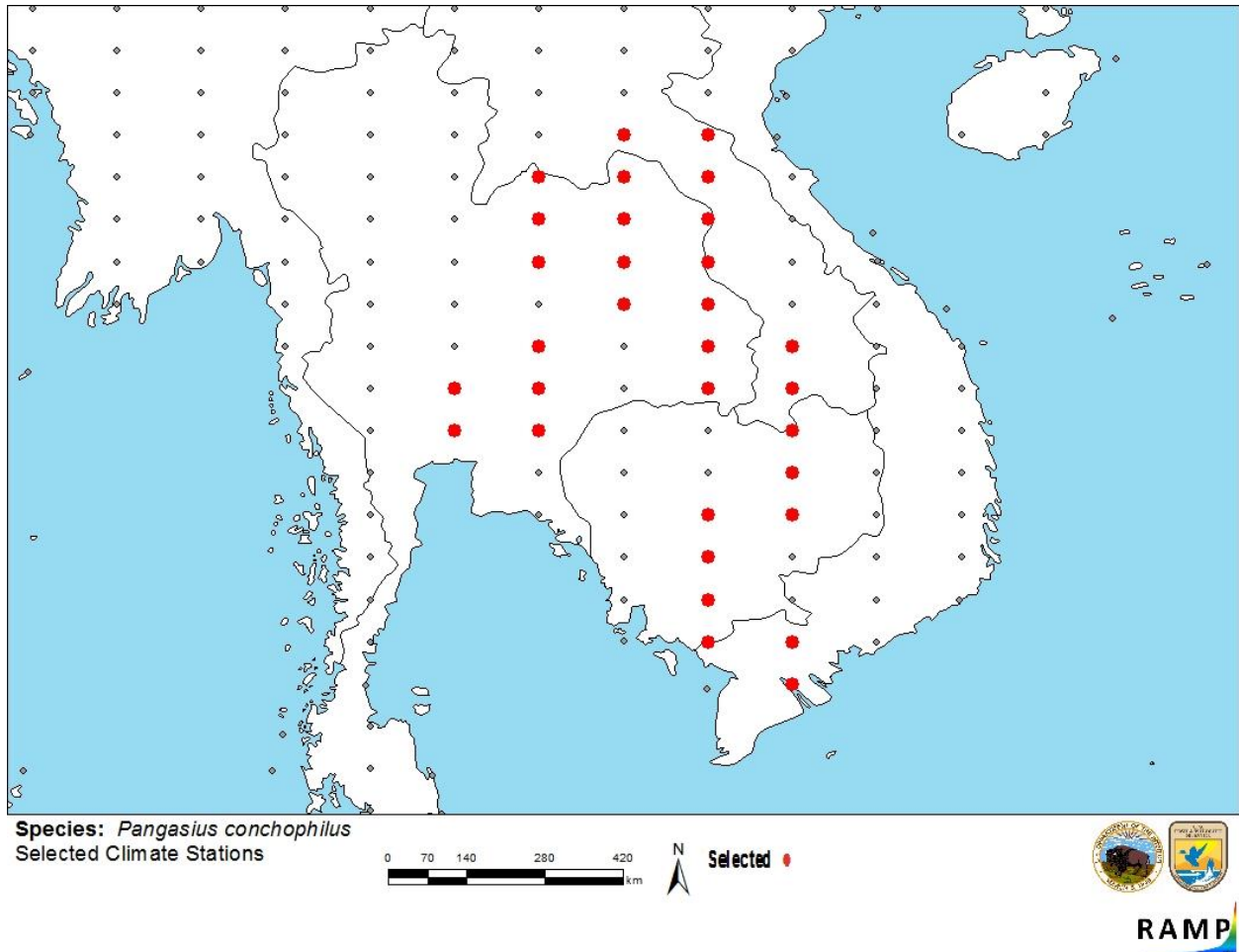


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in Southeast Asia selected as source locations (red; Thailand, Laos, Cambodia, and Vietnam) and non-source locations (gray) for *Pangasius conchophilus* climate matching. Source locations from GBIF Secretariat (2018). Selected source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

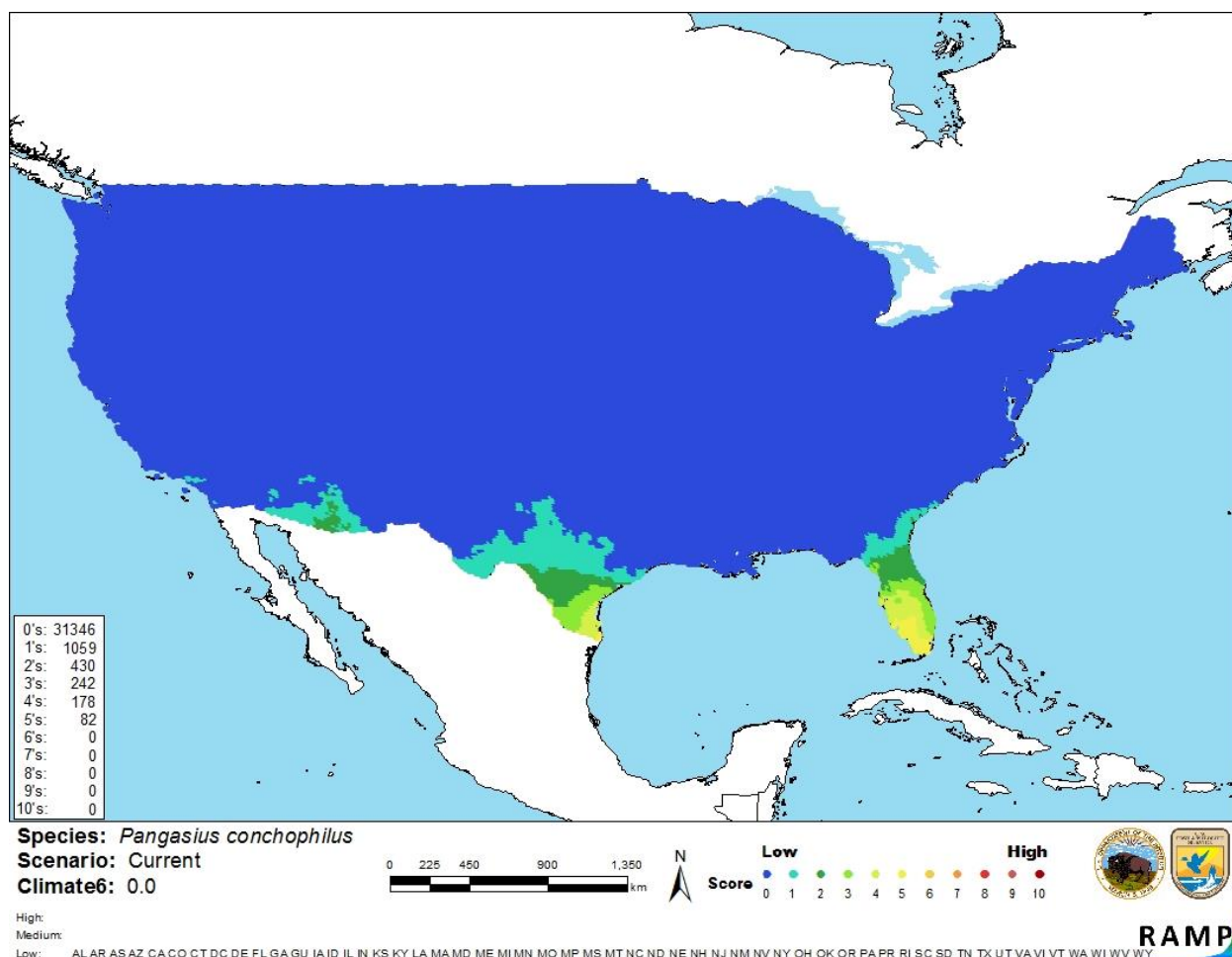


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Pangasius conchophilus* in the contiguous United States based on source locations reported by GBIF Secretariat (2018). Counts of climate match scores are tabulated on the left. 0/Blue = Lowest match, 10/Red = Highest match.

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. *Pangasius conchophilus* was introduced in Malaysia, but no information on impacts of introductions was available.

9 Risk Assessment

Summary of Risk to the Contiguous United States

Pangasius conchophilus is a species of shark catfish native to Southeast Asia. This species is consumed throughout its native range; it's caught in both subsistence and commercial fisheries. The species is propagated from fry stage in Viet Nam. The history of invasiveness is no known nonnative population. There were no records of introductions to the United States found. There was one unconfirmed report of introduction outside of its native range in Malaysia. No information on impacts of introduction was found. The climate match was low. There were small areas of medium match in Florida and Texas. 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 remarks**
- **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, and Pauly D, editors. 2018. *Pangasius conchophilus* Roberts & Vidthayanon, 1991. FishBase. Available: <http://www.fishbase.se/summary/Pangasius-conchophilus.html> (August 2018).

GBIF Secretariat. 2018. GBIF backbone taxonomy: *Pangasius conchophilus* (Roberts and Vidthayanon, 1991). Copenhagen: Global Biodiversity Information Facility. Available: <https://www.gbif.org/species/5202481> (August 2018).

[ITIS] Integrated Taxonomic Information System. 2018. *Pangasius conchophilus* (Roberts and Vidthayanon, 1991). Reston, Virginia: Integrated Taxonomic Information System. Available: <https://www.itis.gov/servlet/SingleRpt/SingleRpt> (August 2018).

[OIE] World Organisation for Animal Health. 2020. OIE-listed diseases, infections and infestations in force in 2020. Available: <http://www.oie.int/animal-health-in-the-world/oie-listed-diseases-2020/> (April 2020).

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

Vidthayanon C. 2012. *Pangasius conchophilus*. The IUCN Red List of Threatened Species 2012: e.T181218A1710343. Available: <http://www.iucnredlist.org/details/181218/0> (August 2018).

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.

Baird IG, Inthaphaisy V, Kisouvannalath P, Phylavanh B, Mounsouphom B. 1999. The fishes of southern Lao. Lao PDR: Ministry of Agriculture and Forestry. Lao Community Fisheries and Dolphin Protection Project.

Kottelat M. 2001. Fishes of Laos. Colombo 5, Sri Lanka: WHT Publications.

Rainboth WJ. 1996. Fishes of the Cambodian Mekong. Rome: FAO. FAO species identification field guide for fishery purposes.

Riede K. 2004. Global register of migratory species - from global to regional scales. Bonn: Federal Agency for Nature Conservation. Final Report, R&D-Projekt 808 05 081.

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 143:97–143.

Roberts TR. 1993. Artisanal fisheries and fish ecology below the great waterfalls of the Mekong River in southern Laos. Natural History Bulletin Siam Society 41:31–62.

Singhanouvong D, Soulignavong C, Vonghachak K, Saadsy B, Warren TJ. 1996. The main wet-season migration through Hoo Som Yai, a steep-gradient channel at the great fault line on the Mekong River, Champassack Province, Southern Lao PDR. Lao PDR: Department of Livestock-Fisheries, Ministry of Agriculture-Forestry. Indigenous Fishery Development Project, Fisheries Ecology Technical Report 4.