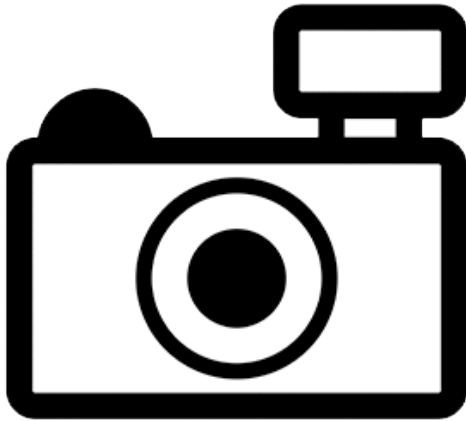


Basa Catfish (*Pangasius bocourti*)

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



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018a):

“Asia: Mekong and Chao Phraya basins [Cambodia, Laos, Thailand, Vietnam].”

“[In Cambodia:] Known from the Mekong basin [Rainboth 1996]. Found in Tonle Sap [Suvatti 1981].”

“[In Laos:] Found in the Mekong River [Baird et al. 1999]. Found in Ban Hang Khone at Don Khone, 3 km below the fall line of the great waterfalls of the Mekong basin at Lee Pee [Roberts 1993].”

“[In Thailand:] Found in the Mekong and Chao Phraya basins [Roberts and Vidthayanon 1991; Vidthayanon et al. 1997]; also from Tonle Sap [Monkolprasit et al. 1997].”

Status in the United States

No records of *Pangasius bocourti* in the wild or in live trade in the United States were found. The species is imported frozen for human consumption.

From Hsieh et al. (2009):

“Tra (*Pangasius hypophthalmus*) and basa (*Pangasius bocourti*), farm-raised catfish in the Pangasiidae family, are imported from Asia and have become the fastest growing fish commodity in the U.S. market, accounting for 40% of total exports of frozen basa and tra fillets (Thanh 2003).”

Means of Introductions in the United States

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

Remarks

From Vidthayanon (2012):

“[...] some farms hybridise it with *Pangasianodon hypophthalmus* for better performance.”

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

According to Eschmeyer et al. (2018), *Pangasius bocourti* Sauvage 1880 is the current valid name for this species. It was originally described as *Pangasius (Pseudopangasius) bocourti*.

From ITIS (2018):

Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata
Infraphylum Gnathostomata
Superclass Actinopterygii
Class Teleostei
Superorder Ostariophysii
Order Siluriformes
Family Pangasiidae
Genus *Pangasius*
Species *Pangasius bocourti* Sauvage, 1880

Size, Weight, and Age Range

From Froese and Pauly (2018a):

“Max length : 120 cm SL male/unsexed; [Baird et al. 1999]”

Environment

From Froese and Pauly (2018a):

“Freshwater; benthopelagic; potamodromous [Riede 2004].”

Climate

From Froese and Pauly (2018a):

“Tropical”

Distribution Outside the United States

Native

From Froese and Pauly (2018a):

“Asia: Mekong and Chao Phraya basins [Cambodia, Laos, Thailand, Vietnam].”

“[In Cambodia:] Known from the Mekong basin [Rainboth 1996]. Found in Tonle Sap [Suvatti 1981].”

“[In Laos:] Found in the Mekong River [Baird et al. 1999]. Found in Ban Hang Khone at Don Khone, 3 km below the fall line of the great waterfalls of the Mekong basin at Lee Pee [Roberts 1993].”

“[In Thailand:] Found in the Mekong and Chao Phraya basins [Roberts and Vidthayanon 1991; Vidthayanon et al. 1997]; also from Tonle Sap [Monkolprasit et al. 1997].”

Introduced

No records of *Pangasius bocourti* introductions were found.

Means of Introduction Outside the United States

No records of *Pangasius bocourti* introductions were found.

Short Description

From Froese and Pauly (2018a):

“Anal soft rays: 31 - 35. Body stout and heavy, head broader than long; blue-black dorsum; blunt snout with broad white band on muzzle; single large patch of vomerine teeth with separate patch of palatine teeth on each side [Rainboth 1996]. Rounded head and blunt rounded snout [Kottelat 2001].”

Biology

From Froese and Pauly (2018a):

“Known from large rivers [Rainboth 1996]. Found in rapids and also in deeper slower reaches [Singhanouvong et al. 1996]. Enters flooded forest [Roberts 1993]. Feeds on plants [Roberts 1993]. Spawns at the onset of flood season and the young are first seen in June, averaging about 5 cm by mid-June.”

“Below the Khone Falls [on the Mekong River in Laos], it undertakes upstream migration beginning in November when the water level within the river decreases and continues well into the dry season, at least until February. In the late dry season, or the start of the monsoon season, it migrates downstream from the Khone Falls to the Mekong Delta [Sokheng et al. 1999].”

“Undertakes upstream migration in June-July at Champassack Province, Southern Laos [Singhanouvong et al. 1996]. Enters the flooded forest during high water (July-October) and feeds mainly on fruits [Roberts 1993].”

From Vidthayanon (2012):

“The species feeds heavily on flooded forest fruits and leaves in the wet season (Baird 2007).”

Human Uses

From Froese and Pauly (2018a):

“Marketed fresh [Rainboth 1996].”

From Vidthayanon (2012):

“It is the sixth most common species in the wet season wing trap fishery at the Khone Falls in southern Lao PDR, making up 3.8% of the catch (Baird *et al.* 2004), however catches at the Khone Falls have declined.”

“This species is widely consumed throughout its range. Popularly bred and cultured in cages, and some farms hybridise it with *Pangasianodon hypophthalmus* for better performance. It is well-known in the markets as Basa fish or Dory in fillet products (imitating marine Dory *Zeus* spp.). Fry for aquaculture is taken from the wild.”

From So et al. (2006):

“Only juvenile *P. bocourti* are commercially collected with multiple hooks and lines in order to meet the demands of aquaculture, [Van Zalinge et al. 2002] while adult fish are rarely observed and not commercially caught because they have a biologically complicated life history (data not shown).”

From Hsieh et al. (2009):

“Tra (*Pangasius hypophthalmus*) and basa (*Pangasius bocourti*), farm-raised catfish in the Pangasiidae family, are imported from Asia and have become the fastest growing fish commodity in the U.S. market, accounting for 40% of total exports of frozen basa and tra fillets (Thanh 2003).”

Diseases

No records of OIE-reportable diseases (OIE 2020) were found for *Pangasius bocourti*.

Froese and Pauly (2018b) list *Pangasius bocourti* as a host of *Thaparocleidus vietnamesis*.

Poelen et al. (2014) list *Thaparocleidus komarudini* as a parasite of *P. bocourti*.

Moravec et al. (2015) list *P. bocourti* as a host of *Orientatractis mekongensis*.

According to Lymbery et al. (2016), Dong et al. (2015) lists *P. bocourti* as a host of *Edwardsiella ictaluri*.

Threat to Humans

From Froese and Pauly (2018a):

“Harmless”

3 Impacts of Introductions

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

4 History of Invasiveness

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

5 Global Distribution



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

Additional locations in Cambodia are given in So et al. (2006).

6 Distribution Within the United States

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

7 Climate Matching

Summary of Climate Matching Analysis

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

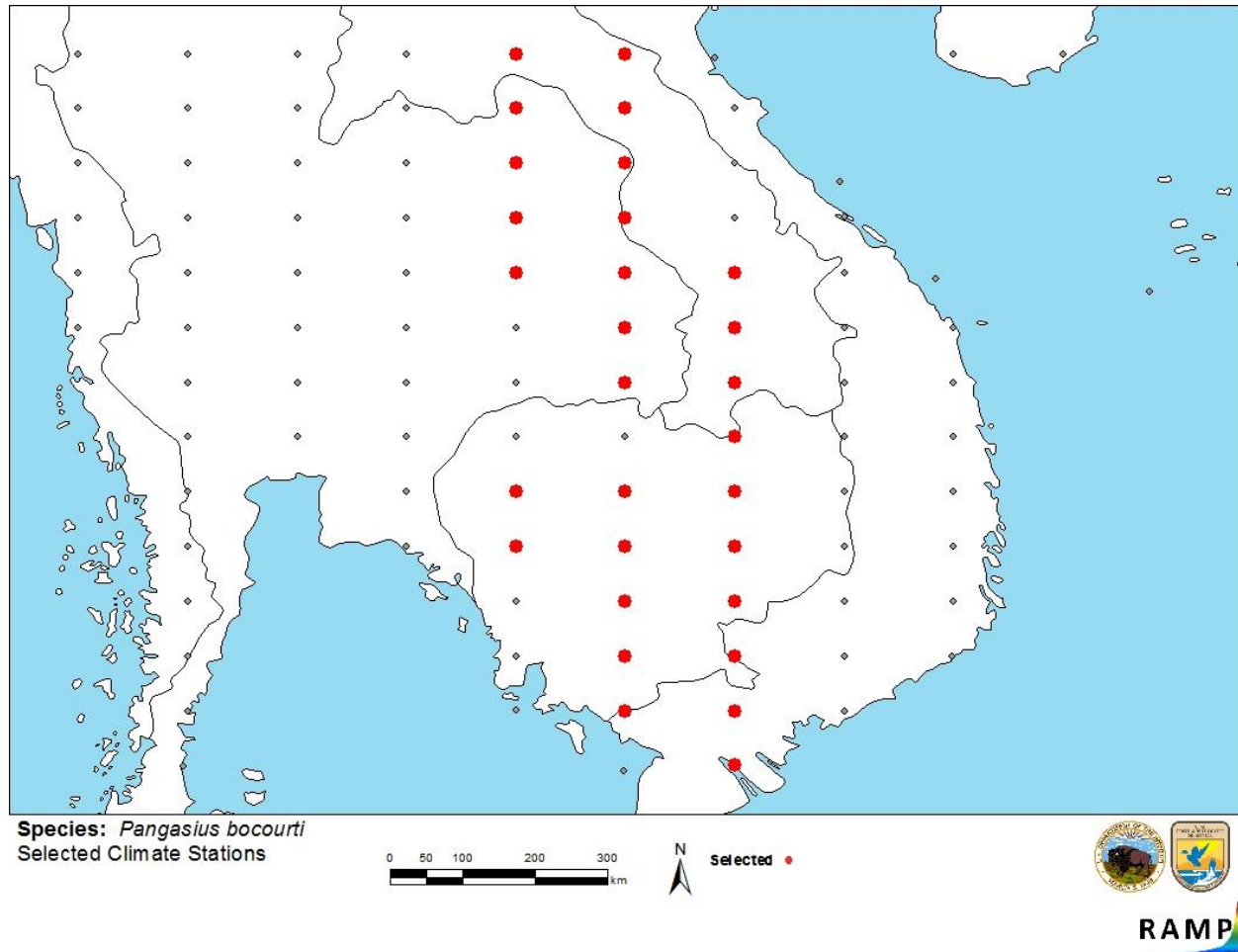


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations selected as source locations (red; Thailand, Laos, Cambodia, Vietnam) and non-source locations (gray) for *Pangasius bocourti* climate matching. Source locations from So et al. (2006) and GBIF Secretariat (2018). Selected source locations are within 100 km of one or more species occurrences and do not necessarily represent the locations of occurrences themselves.

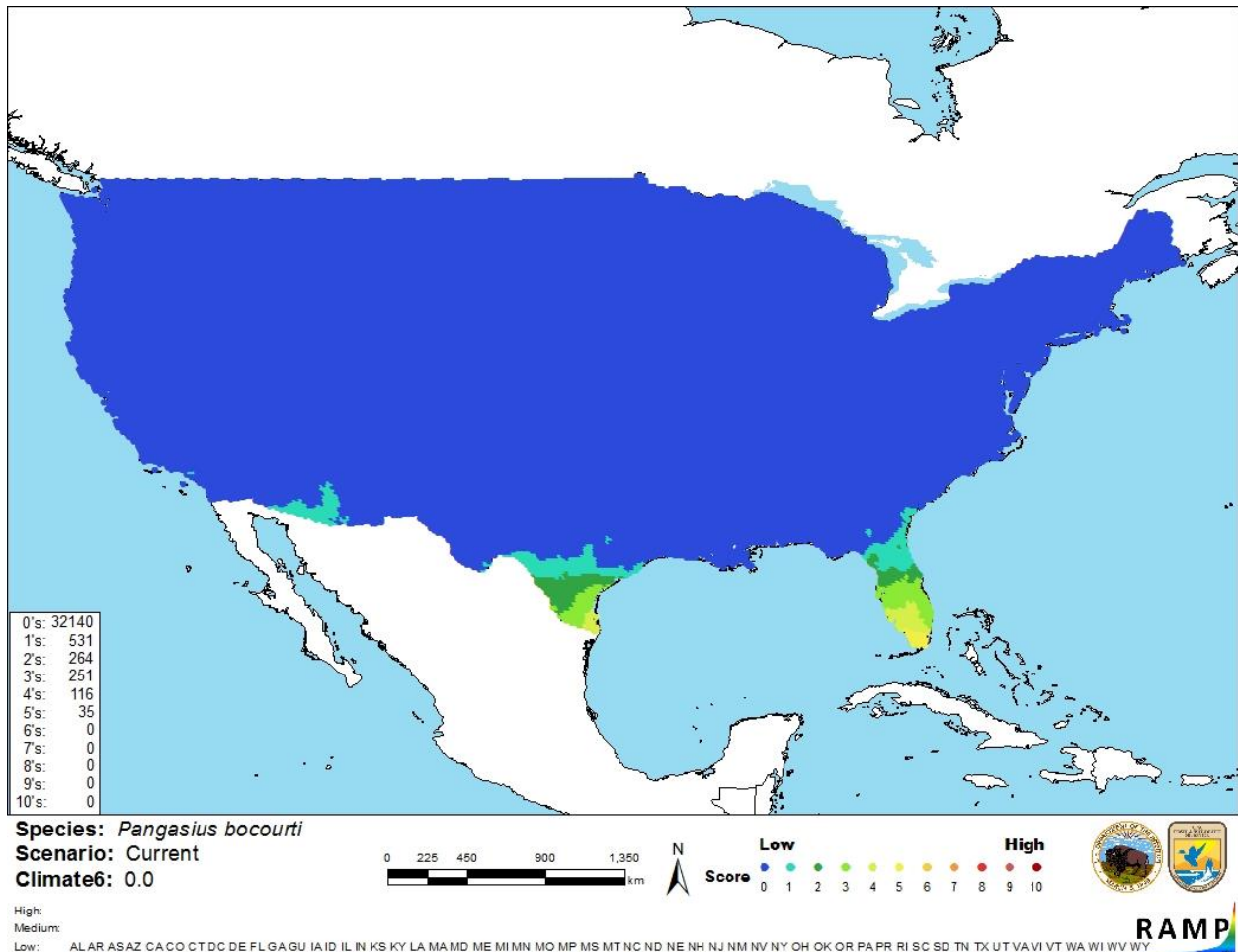


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Pangasius bocourti* in the contiguous United States based on source locations reported by So et al. (2006) and GBIF Secretariat (2018). Counts of climate match scores are tabulated on the left. 0/Blue = Lowest match, 10/Red = Highest match.

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 for *Pangasius bocourti* is low. There is some ecological and biological information available. No records of introductions were found. Therefore, there is no information on impacts of introductions to evaluate.

9 Risk Assessment

Summary of Risk to the Contiguous United States

The Basa catfish (*Pangasius bocourti*) is a species of catfish native to the major river drainages in Southeast Asia. It is a commercial fishery species and is also heavily used in aquaculture. It is not imported live to the United States but it is imported frozen for human consumption. The history of invasiveness is no known nonnative population. No records of introductions were found and there was not enough information on trade of the species available to meet the requirements for low. The climate match was low. However, there were small areas of medium match in southern Florida and Texas. The certainty of assessment is low. The overall risk assessment category 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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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.

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