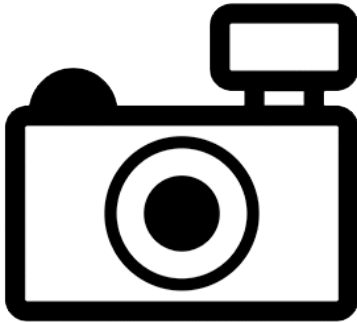


# Blue-eyed Panaque (*Panaque suttonorum*)

## Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, Web Version – 03/08/2018



No Photo Available

## 1 Native Range and Status in the United States

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### Native Range

From Froese and Pauly (2013):

“South America: western and eastern tributaries of Maracaibo Lake, Venezuela.”

From Ries and Lima (2009):

“This species has a restricted distribution and occurs in the western and eastern tributaries of Lake Maracaibo, Venezuela.”

From Lujan et al. (2010):

“Endemic to the Lake Maracaibo basin in Venezuela and Colombia including the Catatumbo, Santa Ana, and Motatán River drainages.”

### Status in the United States

No records of *Panaque suttonorum* in the United States were found.

### Means of Introductions in the United States

No records of *Panaque suttonorum* in the United States were found.

## Remarks

No additional remarks.

## 2 Biology and Ecology

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### Taxonomic Hierarchy and Taxonomic Standing

From Eschmeyer et al. (2017):

“*suttoni*, *Panaque* Schultz [L. P.] 1944:308, Pl. 10 (fig. B) [Proceedings of the United States National Museum v. 94 (no. 3172)] Río Negro below Río Yasa mouth, Santa Ana River drainage, Maracaibo basin, Zulia State, Venezuela. Holotype: USNM 121033. Paratypes: MCZ 21835 [ex USNM 121035] (1); USNM 121034 (1), 121035 (3, now 2), 121075 (1). Type catalog: Ferraris & Vari 1992:30, Ferraris 2007:278. Named for Dr. and Mrs. Fredrick A. Sutton, so name should have been formed as *suttonorum*. First emendation not researched. •Valid as *Panaque suttoni* Schultz 1944 -- (Isbrücker 1980:75, Burgess 1989:437, Galvis et al. 1997:95). •Valid as *Panaque suttonorum* Schultz 1844 -- (Isbrücker 2001:30, Isbrücker 2002:24, Fisch-Muller in Reis et al. 2003:391, Ferraris 2007:278, Lujan et al. 2010:697) **Current status:** Valid as *Panaque suttonorum* Schultz 1944. Loricariidae: Hypostominae.”

From ITIS (2013):

“Kingdom Animalia  
Phylum Chordata  
Subphylum Vertebrata  
Superclass Osteichthyes  
Class Actinopterygii  
Subclass Neopterygii  
Infraclass Teleostei  
Superorder Ostariophysi  
Order Siluriformes  
Family Loricariidae  
Subfamily Hypostominae  
Genus *Panaque*  
Species *Panaque suttonorum* Schultz, 1944”

### Size, Weight, and Age Range

From Froese and Pauly (2013):

“Max length: 28.0 cm SL male/unsexed; [Fisch-Muller 2003]”

## Environment

From Froese and Pauly (2013):

“Freshwater; benthopelagic; pH range: 6.2 - 7.5; dH range: 4 - 15. [...]; 20°C - 24°C [assumed to be recommended aquarium temperature range] [Baensch and Riehl 1985]”

## Climate/Range

From Hanke et al. (2006):

“Both the Royal Panaque and the Blue-eyed Panaque are native to South America and are unlikely to survive long in Canada’s present climate, unless they are released downstream of hotspots or near warm industrial effluent (the same can be said for most tropical fishes, including pacu). Illegally released tropical aquarium fishes persist in Alberta downstream of hotspots despite cold winters in that province (Nelson and Paetz 1992), and the possibility of tropical fish introductions is a persistent threat to hotspots in British Columbia.”

From Froese and Pauly (2013):

“Tropical; [...]”

## Distribution Outside the United States

### Native

From Froese and Pauly (2013):

“South America: western and eastern tributaries of Maracaibo Lake, Venezuela.”

From Ries and Lima (2009):

“This species has a restricted distribution and occurs in the western and eastern tributaries of Lake Maracaibo, Venezuela.”

From Lujan et al. (2010):

“Endemic to the Lake Maracaibo basin in Venezuela and Colombia including the Catatumbo, Santa Ana, and Motatán River drainages.”

### Introduced

From Hanke et al. (2006):

“A Blue-eyed Panaque (*Panaque suttonorum*), a loricariid catfish found in 1995 in Shawnigan Lake, Vancouver Island, probably represents a single, illegally released aquarium fish,”

“Blue-eyed Panaque (*Panaque suttonorum*) – Family Loricariidae (suckermouth armoured catfishes) The Royal British Columbia Museum fish collection contains a single Blue-eyed Panaque (RBCM 996-190-001) (Figure 3 [in source material]), which was collected in 1995

from a ditch where Royce Road crosses Shawnigan Creek (approximately at 48°40'05", 123°37'32") (Figure 1 [in source material]). The creek leads into the north end of Shawnigan Lake, Vancouver Island. The specimen is 21.8 cm total, and 19.2 cm fork length. This specimen originally was misidentified as *Hypostomus plecostomus* when it was received in 1996.”

## Means of Introduction Outside the United States

From Hanke et al. (2006):

“A Blue-eyed Panaque (*Panaque suttonorum*), a loricariid catfish found in 1995 in Shawnigan Lake, Vancouver Island, probably represents a single, illegally released aquarium fish, as does a large Silver Pacu (*Piaractus* cf. *P. brachypomus*), which was found in Green Lake on Vancouver Island in 2004.”

## Short Description

From Lujan et al. (2010):

“Largest specimen 278 mm SL. Body deep and broad. Dorsal profile of snout rising at approximately 35° to middle of supraoccipital, then approaching horizontal back to nuchal plate. Body depth greatest at nuchal plate or approximately coequal with predorsal plates and posterior margin of supraoccipital. Dorsal profile posterior of nuchal plate sloped gently downward and approximately straight to posterior insertion of adipose-fin membrane, then sloping upward slightly to first dorsal procurent caudal-fin ray, upward slope increasing at first dorsal procurent caudal-fin ray. Ventral profile straight and horizontal from snout to pelvic-fin insertion, sloped slightly upward to posteriormost insertion of anal fin, then either straight or with distinct concavity back to first ventral procurent caudal-fin ray; downward slope increasing slightly at first ventral procurent caudal-fin ray. Entire snout, dorsal and lateral surfaces of trunk armored with plates bearing small odontodes; each trunk plate with distinct posteromedial cluster or medial row of enlarged odontodes increasing in size posteriorly. [...] Eye large (orbit diameter 10.3-16.7% HL); orbit positioned dorsal of lateral midline at anterior margin of posterior third of head; [...]. Maxillary barbel relatively long (2.8-5.1% HL), attached to lower lip along approximately half of length; [...] Dorsal fin II, 7; dorsal-fin spinelet prominent and V-shaped; dorsal-fin lock functional; posteriormost dorsal-fin ray free from body. Pectoral fin 1,6; pectoral-fin spine terminating approximately halfway between posterior insertion of pelvic fin and anus when adpressed ventral to pelvic fin; [...]. Pelvic fin 1,5; pelvic-fin spine terminating between anterior and posterior insertion of anal fin when adpressed. Anal fin 1,4; [...] first unbranched ray ossified. Adipose-fin spine sloped at approximately 60° and slightly curved along entire length or more strongly curved distally; [...]. Caudal fin 1,14,1; dorsal procurent caudal-fin rays four or five (mode four); ventral procurent caudal-fin rays four or five (mode five); caudal fin shallowly lunate or slightly forked. [...] Lateral median plates 26-28 (mode 26), middorsal plates 24-26 (mode 24), midventral plates 25-27 (mode 25); anteriormost five or six midventral plates strongly bent. Caudal peduncle plate rows five. [...] Abdomen fully plated. Modest ventrolateral caudal-peduncle keel formed by somewhat strongly angled ventral plates [...].”

“Color. - All paratypes uniformly pale and bleached. Holotype uniformly brown. Live specimen photographed by D. Taphorn (Fig. 15 [in source material but see image at beginning of document]) uniformly dark gray to black with pale bluish eyes.”

## **Biology**

From Froese and Pauly (2013):

“Feeds on algae [Galvis et al. 1997].”

From Lujan et al. (2010):

“Local fishermen interviewed in 2007 by D. Taphorn (UNELLEZ, pers. comm.) report that *Panaque suttonorum* are most frequently collected in slack water at the mouths of rivers where they join Lake Maracaibo.”

## **Human Uses**

From Froese and Pauly (2013):

“Fisheries: of no interest; aquarium: commercial”

From Khoo et al. (1995):

“The blue-eyed plecostomus, *Panaque suttoni* (Eigenmann Sc Eigenmann) [a synonym of *P. suttonorum*], is imported from South America for the pet fish industry.”

## **Diseases**

**No records of OIE reportable diseases were found.**

From Khoo et al. (1995):

“Although there have been other reports of RLO [rickettsia-like organisms] in fish, this is the first known reported case of an RLO infection in tropical freshwater fish [*Panaque suttonorum*].”

## **Threat to Humans**

From Froese and Pauly (2013):

“Harmless”

## **3 Impacts of Introductions**

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A single specimen was collected in Canada in 1995 but it was the result of an aquarium release that did not result in an established population (Hanke et al. 2006). No other records of introduction were found.

## 4 Global Distribution

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**Figure 1.** Known global distribution of *Panaque suttonorum*. Map from GBIF Secretariat (2013).

The records of *Panaque suttonorum* reported by Hanke et al. (2006) in Canada represented single individuals and not established populations.

## 5 Distribution Within the United States

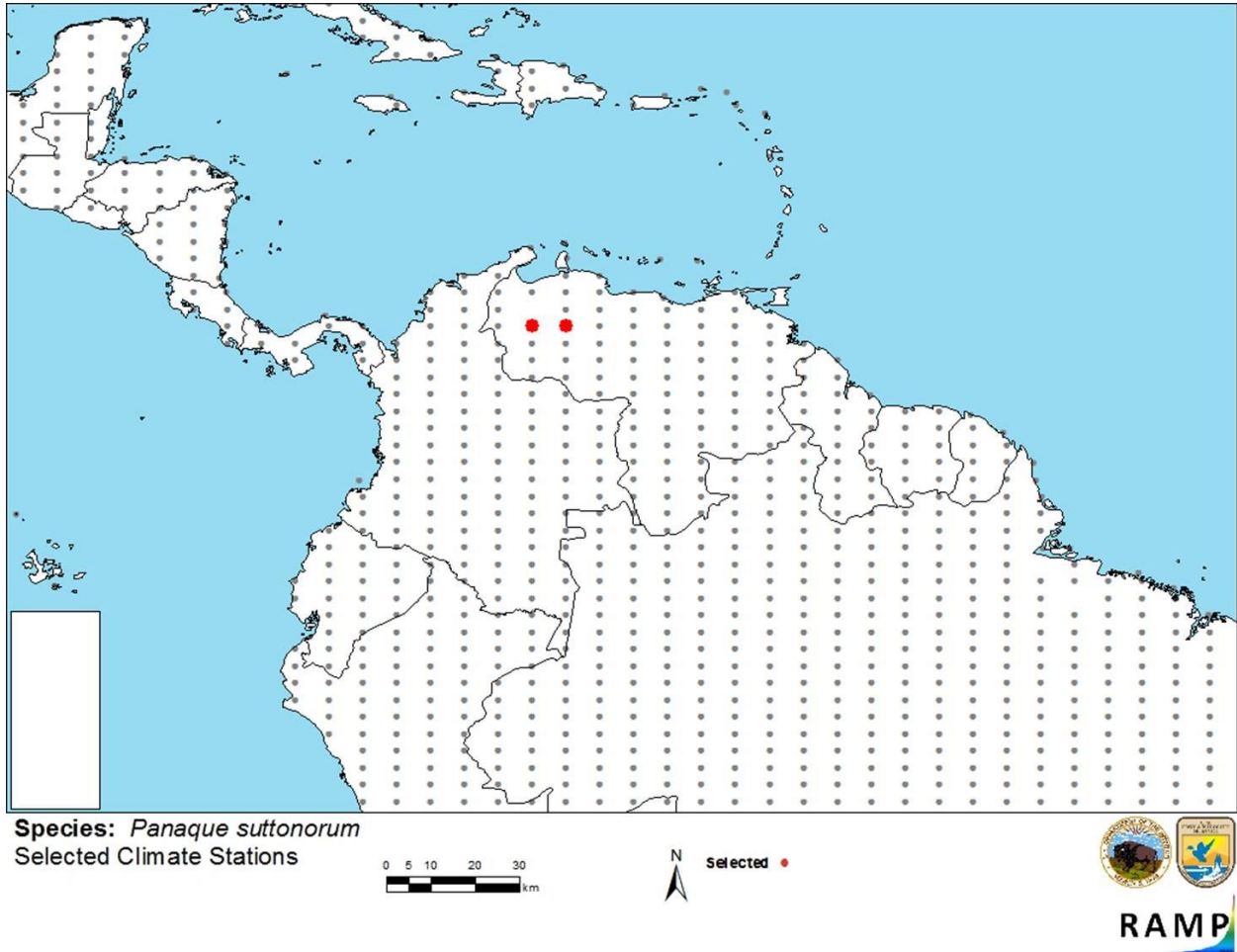
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No records of *Panaque suttonorum* in the United States were found.

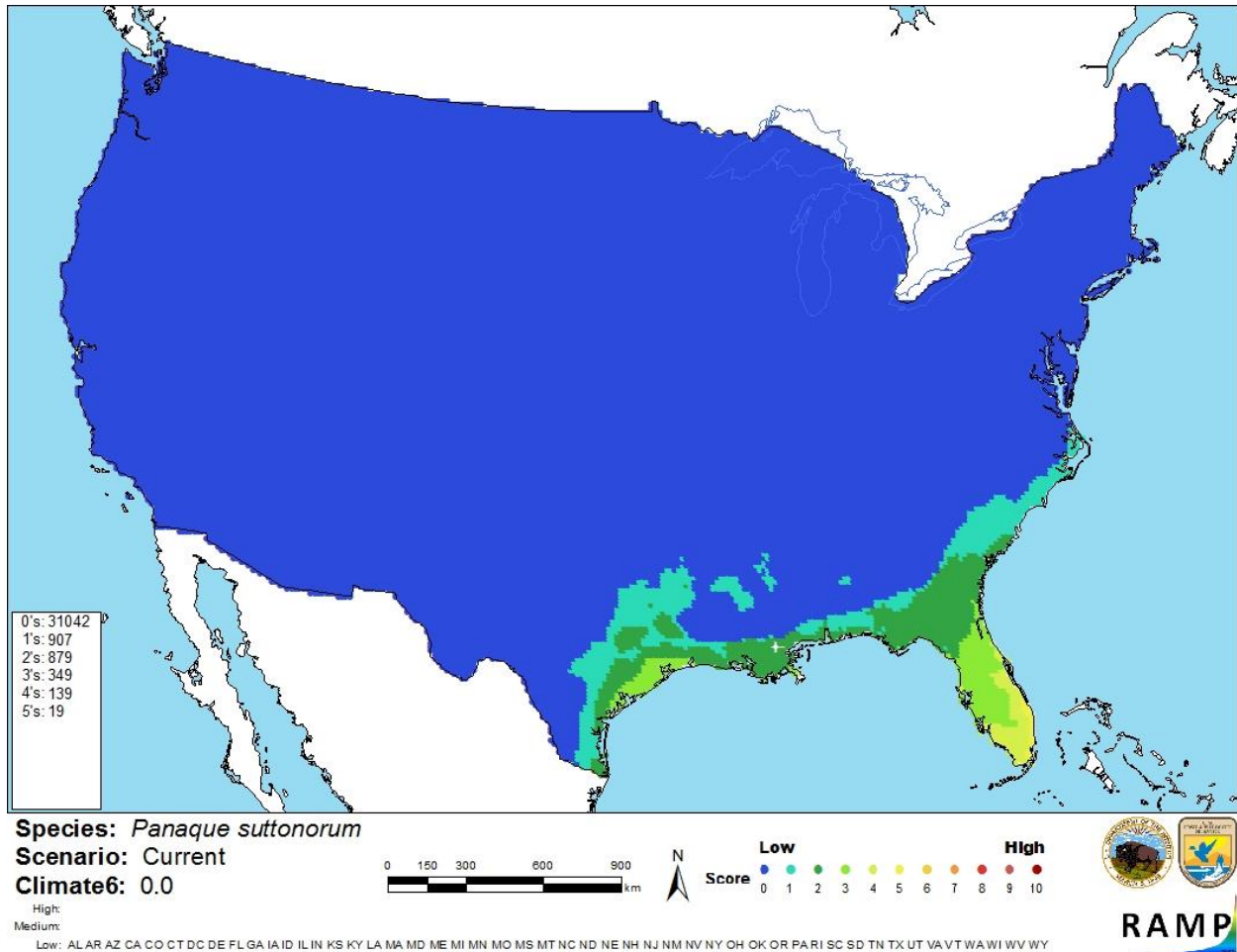
## 6 Climate Matching

### Summary of Climate Matching Analysis

The climate match was low for most of the United States. There was a low to medium match for Florida. The Climate 6 score (Sanders et al. 2014; 16 climate variables; Euclidean distance) for the contiguous U.S. was 0.000, low. No states had individually high climate scores.



**Figure 2.** RAMP (Sanders et al. 2014) source map of northern South America showing weather stations selected as source locations (red; Venezuela) and non-source locations (gray) for *Panaque suttonorum* climate matching. Source locations from GBIF Secretariat (2013).



**Figure 3.** Map of RAMP (Sanders et al. 2014) climate matches for *Panaque suttonorum* in the contiguous United States based on source locations reported by GBIF Secretariat (2013). 0 = Lowest match, 10 = Highest match.

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

Climate 6: Proportion of (Sum of Climate Scores 6-10) / (Sum of total Climate Scores)	Climate Match Category
$0.000 \leq X < 0.005$	Low
$0.005 < X < 0.103$	Medium
$\geq 0.103$	High

## 7 Certainty of Assessment

The certainty of this assessment is medium. There is limited but adequate biological and ecological information available for *Panaque suttonorum*. A single record of introduction was available from a peer-reviewed source and no information on impacts of introduction was found.



## 8 Risk Assessment

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### Summary of Risk to the Contiguous United States

*Panaque suttonorum* is a freshwater armored catfish that is popular in the aquarium industry. The history of invasiveness for *P. suttonorum* is uncertain. A single record of an introduction was found (in Canada), and that introduction did not result in an established population. *P. suttonorum* is present in the aquarium trade but information on volume or duration of time in trade was not available. The climate match for the contiguous U.S. is 0.000, low. The certainty of the assessment is medium. The overall risk assessment category is uncertain.

### Assessment Elements

- **History of Invasiveness (Sec. 3): Uncertain**
- **Climate Match (Sec. 6): Low**
- **Certainty of Assessment (Sec. 7): Medium**
- **Remarks/Important additional information** No additional remarks.
- **Overall Risk Assessment Category: Uncertain**

## 9 References

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**Note: The following references were accessed for this ERSS. References cited within quoted text but not accessed are included below in Section 10.**

Eschmeyer, W. N., R. Fricke, and R. van der Laan, editors. 2017. Catalog of fishes: genera, species, references. Available:  
<http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>. (February 2017).

Froese, R. and D. Pauly, editors. 2013. *Panaque suttonorum* Schultz, 1944. FishBase. Available:  
<http://www.fishbase.org/summary/Panaque-suttonorum.html>. (May 2013).

GBIF Secretariat. 2013. GBIF backbone taxonomy: *Panaque suttonorum* Schultz, 1944. Global Biodiversity Information Facility, Copenhagen. Available:  
<http://www.gbif.org/species/2339872>. (May 2013).

Hanke, G. F., M. C. E. McNall, and J. Roberts. 2006. First records of the Yellow Bullhead, *Ameiurus natalis*, a loricariid catfish, *Panaque suttonorum*, and a Silver Pacu, *Piaractus* cf. *P. brachypomus*, in British Columbia. Canadian Field-Naturalist 120(4):421–427.

ITIS (Integrated Taxonomic Information System). 2013. *Panaque suttonorum* Schultz, 1944. Integrated Taxonomic Information System, Reston, Virginia. Available:  
[http://www.itis.gov/servlet/SingleRpt/SingleRpt?search\\_topic=TSN&search\\_value=680307](http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=680307). (May 2013).

- Lujan, N. K., M. Hidalgo, and D. J. Stewart. 2010. Revision of *Panaque* (*Panaque*), with descriptions of three new species from the Amazon Basin (Siluriformes, Loricariidae). *Copeia* 2010(4):676–704.
- Khoo, L., P. M. Dennis, and G. A. Lewbart. 1995. Rickettsia-like organisms in the blue-eyed plecostomus, *Panaque suttoni* (Eigmann & Eigenmann). *Journal of Fish Diseases* 18:157–164.
- Reis, R., and F. Lima. 2009. *Panaque suttonorum*. The IUCN Red List of Threatened Species 2009: e.T167757A6377591. Available: <http://www.iucnredlist.org/details/full/167757/0>. (May 2013).
- Sanders, S., C. Castiglione, and M. Hoff. 2014. Risk assessment mapping program: RAMP. U.S. Fish and Wildlife Service.

## 10 References Quoted But Not Accessed

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**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.**

- Baensch, H. A., and R. Riehl. 1985. *Aquarien atlas*. Band 2. Mergus, Verlag für Natur-und Heimtierkunde GmbH, Melle, Germany.
- Burgess, W. E. 1989. *An atlas of freshwater and marine catfishes. A preliminary survey of the Siluriformes*. T.F.H. Publications, Neptune City, New Jersey.
- Ferraris, C. J., Jr. 2007. Checklist of catfishes, recent and fossil (Osteichthyes: Siluriformes), and catalogue of siluriform primary types. *Zootaxa* 1418:1–628.
- Ferraris, C. J., Jr., and R. P. Vari. 1992. Catalog of type specimens of recent fishes in the National Museum of Natural History, Smithsonian Institution, 4: Gonorynchiformes, Gymnotiformes, and Siluriformes (Teleostei: Ostariophysi). *Smithsonian Contributions to Zoology* 535:1–52.
- Fisch-Muller, S. 2003. Loricariidae-Ancistrinae (Armored catfishes). Pages 373–400 in R. E. Reis, S. O. Kullander, and C. J. Ferraris, Jr., editors. *Checklist of the freshwater fishes of South and Central America*. EDIPUCRS, Porto Alegre, Brazil.
- Galvis, G., J. I. Mojica, and M. Camargo. 1997. *Peces del Catatumbo*. Asociación Cravo Norte, Santafé de Bogotá, D.C.
- Isbrücker, I. J. H. 1980. Classification and catalogue of the mailed Loricariidae (Pisces, Siluriformes). *Verslagen en Technische Gegevens, Instituut voor Taxonomische Zoölogie, Universiteit van Amsterdam* 22:1–181.

- Isbrücker, I. J. H. 2001. Nomenklator der Gattungen und Arten der Harnischwelse, Familie Loricariidae Rafinesque, 1815 (Teleostei, Ostariophysi). DATZ-Sonderheft Harnischwelse 2:25–32.
- Isbrücker, I. J. H. 2002. Nomenclator of the 108 genera with 692 species of the mailed catfishes, family Loricariidae Rafinesque, 1815 (Teleostei, Ostariophysi). Cat Chat, Journal of the catfish study group (UK) 3(1):11–30.
- Lujan, N. K., M. Hidalgo, and D. J. Stewart. 2010. Revision of *Panaque* (*Panaque*), with descriptions of three new species from the Amazon basin (Siluriformes, Loricariidae). Copeia 2010(4):676–704.
- Nelson, J. S., and M. J. Paetz. 1992. The fishes of Alberta. University of Alberta Press, Edmonton, Alberta.
- Reis, R. E., S. O. Kullander, and C. J. Ferraris, Jr., editors. 2003. Check list of the freshwater fishes of South and Central America. CLOFFSCA, EDIPUCRS, Porto Alegre, Brazil.
- Schultz, L. P. 1944. The catfishes of Venezuela, with descriptions of thirty-eight new forms. Proceedings of the United States National Museum 94(3172):173–338.