

Carachama (*Chaetostoma lineopunctatum*)

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, March 2014
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1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2014):

“South America: Aguaytia, Pachitea and Pisqui River basins in the Ucayali River drainage, Peru.”

From Ortega Torres et al. (2016):

“This species occurs in the Amazon river basin in Peru (Ortega et al. 2012). It has been recorded in the Aguaytia river basin, in the drainage of the Ucayali river at Pachitea and Pisqui (Fisch-Muller 2003), the Urubamba river, in the Tambo river basin, Mayapo river, Inambari river (Ichthyological collection- MHN-UNMSM), the Apurimac River Valley (Paredes 2010) and the Marañón River basin (Lujan et al. 2011). Its type locality is the Azupizú River, a tributary of the Pachitea River, in the upper Amazon River system, Peru (Eigenmann and Allen 1942). It has a wide range.”

Status in the United States

No records of *Chaetostoma lineopunctatum* in the United States were found.

Means of Introductions in the United States

No records of *Chaetostoma lineopunctatum* in the United States were found.

Remarks

No additional remarks.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

According to Eschmeyer et al. (2017), *Chaetostoma lineopunctatum* Eigenmann & Allen 1942 is the valid name for this species, it is also the original name for this species.

From ITIS (2014):

“Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata
Infraphylum Gnathostomata
Superclass Osteichthyes
Class Actinopterygii
Subclass Neopterygii
Infraclass Teleostei
Superorder Ostariophysi
Order Siluriformes
Family Loricariidae
Subfamily Hypostominae
Genus *Chaetostoma* Tschudi, 1846
Species *Chaetostoma lineopunctatum* Eigenmann and Allen, 1942”

Size, Weight, and Age Range

From Froese and Pauly (2014):

“Max length: 14.3 cm SL male/unsexed; [Fisch-Muller 2003]”

Environment

From Froese and Pauly (2014):

“Freshwater; demersal.”

Climate/Range

From Froese and Pauly (2014):

“Tropical”

Distribution Outside the United States

Native

From Froese and Pauly (2014):

“South America: Aguaytia, Pachitea and Pisqui River basins in the Ucayali River drainage, Peru.”

From Ortega Torres et al. (2016):

“This species occurs in the Amazon river basin in Peru (Ortega et al. 2012). It has been recorded in the Aguaytia river basin, in the drainage of the Ucayali river at Pachitea and Pisqui (Fisch-Muller 2003), the Urubamba river, in the Tambo river basin, Mayapo river, Inambari river (Ichthyological collection- MHN-UNMSM), the Apurimac River Valley (Paredes 2010) and the Marañón River basin (Lujan et al. 2011). Its type locality is the Azupizú River, a tributary of the Pachitea River, in the upper Amazon River system, Peru (Eigenmann and Allen 1942). It has a wide range.”

Introduced

No records of *Chaetostoma lineopunctatum* introductions were found.

Means of Introduction Outside the United States

No records of *Chaetostoma lineopunctatum* introductions were found.

Short Description

From Salcedo et al. (2011):

“This species [*C. lineopunctatum*] is distinguished from all other species of *Chaetostoma* based on the presence of small black dots on the body and head, and two series of black dots on the membranes between its dorsal-fin rays.”

From Lujan et al. (2015):

“Body: black; round to vermiculate; distinct; ½ size of naris; 2-4 spot widths apart; 5-7 irregular rows or series of oblique columns”

From Salcedo (2007):

“[...] identify specimens as *Chaetostoma lineopunctatum*, as follows: “...a series of spots between the dorsal spine and the first ray, two series of spots between the rays, the spots

conspicuous, of the size of those on the center of the caudal peduncle; each membrane of the caudal, anal, pectoral, and ventral fins with dark longitudinal line bordered by hyaline; tip of the upper and lower caudal lobes rusty [Eigenmann and Allen 1942].””

Biology

From Ortega Torres et al. (2016):

“Tropical demersal freshwater fish (Froese and Pauly 2013). Members of the same genus are often present in small streams, ravines and fast flowing rivers with a high oxygen concentration, as well as in white water rivers, particularly to the west of the Andes. They live on a substrate formed by rocks and gravel. Its considered to be an herbivore bentonic genus (Meza pers comm. 2013) because of the shape of his jaw (Lujan and Armbruster 2011), feeding periphyton and algae, though can consume macroinvertebrates associated to the periphyton (Maldonado et al. 2005, Ortega-Lara et al. 2000, 2002). This genera presents sexual dimorphism (Ortega pers comm. 2013), having the males a larger anal fin (Maldonado et al. 2005, Ortega-Lara et al. 2000, 2002).”

“The genus *Chaetostoma* presents male parental care through surveillance of the eggs hidden in the current. Their habits are generally nocturnal and bentonical [benthic], remaining hidden in caves or under logs during the day (Vargas 2012, Ortega-Lara et al. 1999, 2002). They don’t seem to be associated to great migrations (Vargas 2012).”

Human Uses

From Ortega Torres et al. (2016):

“It is occasionally captured for personal consumption and has potential ornamental use.”

Diseases

No information on the diseases of *Chaetostoma lineopunctatum* was found.

Threat to Humans

From Froese and Pauly (2014):

“Harmless”

3 Impacts of Introductions

No records of *Chaetostoma lineopunctatum* introductions were found.

4 Global Distribution



Figure 1. Known global distribution of *Chaetostoma lineopunctatum*, in South America. Map from GBIF Secretariat (2017).



Figure 2. Additional known distribution of *Chaetostoma lineopunctatum*, in South America. Map from VertNet (2017).

5 Distribution Within the United States

No records of *Chaetostoma lineopunctatum* in the United States were found.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Chaetostoma lineopunctatum* was medium in Florida, small portions of the Texas Gulf Coast, the Southwest, and the southern California coastline. It was low everywhere else. The Climate 6 score (Sanders et al. 2014; 16 climate variables; Euclidean distance) for the contiguous United States was 0.001, low.

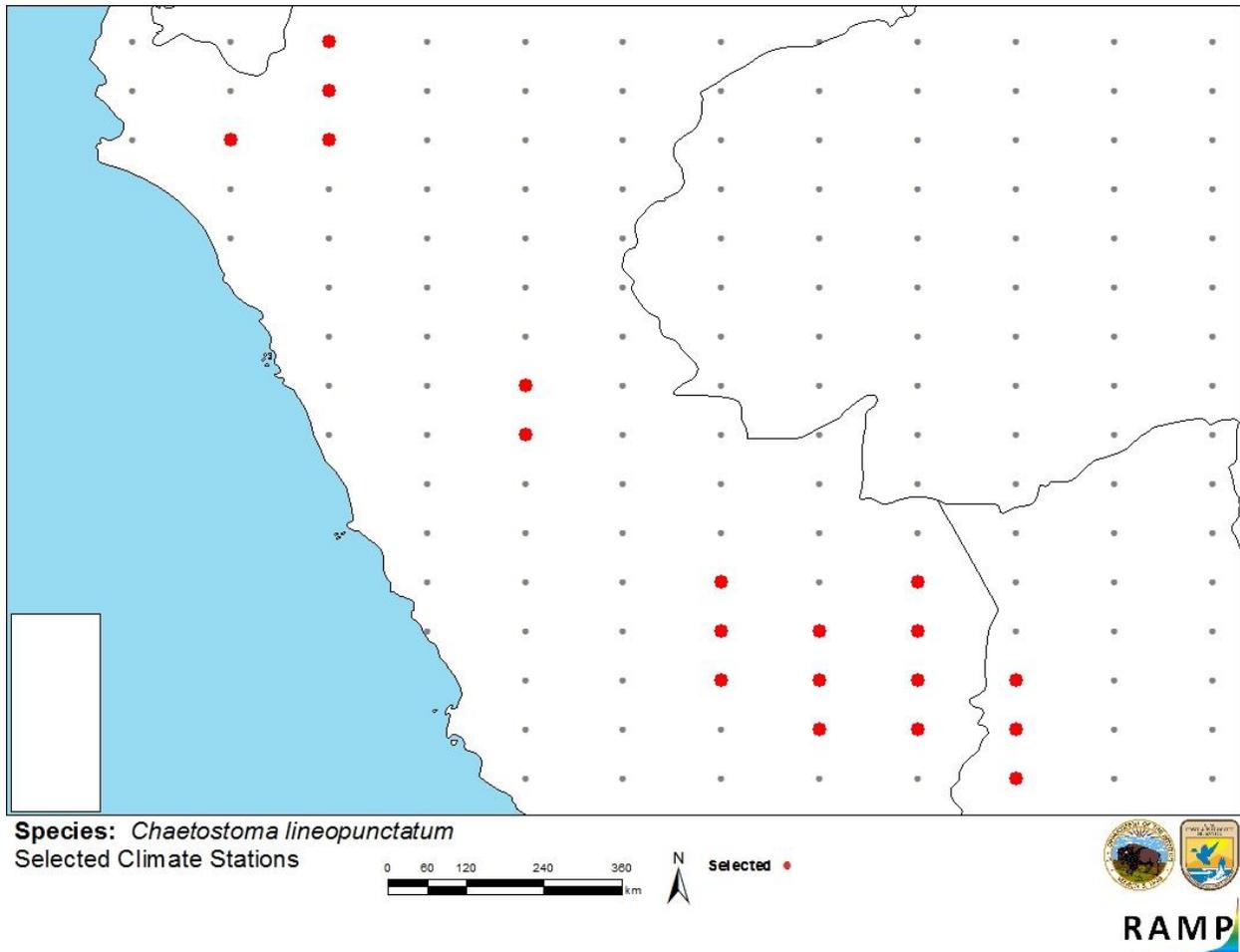


Figure 3. RAMP (Sanders et al. 2014) source map showing weather stations selected as source locations (red; Bolivia, Peru) and non-source locations (grey) for *Chaetostoma lineopunctatum* climate matching. Source locations from GBIF Secretariat (2017) and VertNet (2017).

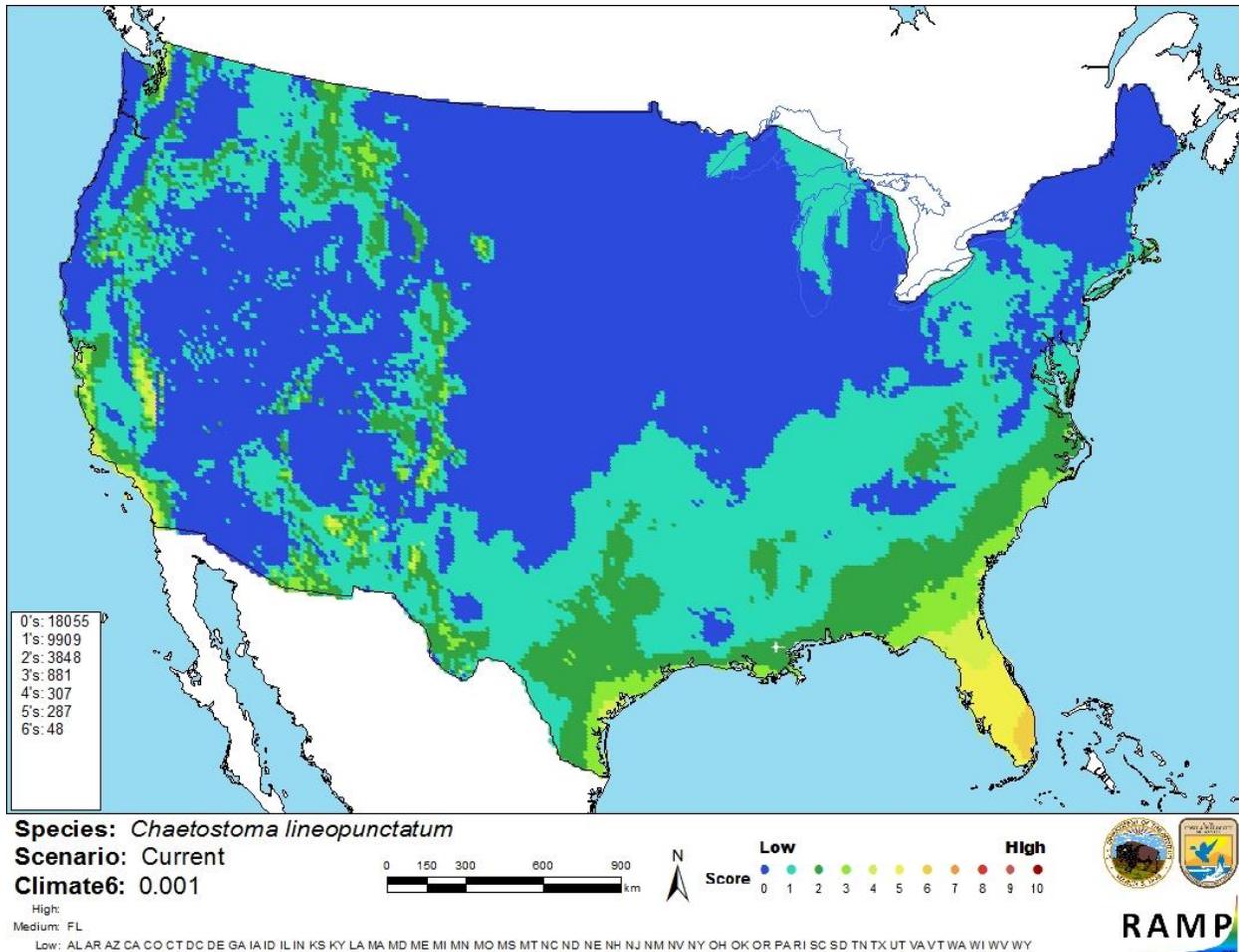


Figure 4. Map of RAMP (Sanders et al. 2014) climate matches for *Chaetostoma lineopunctatum* in the contiguous United States based on source locations reported by GBIF Secretariat (2017) and VertNet (2017). 0 = Lowest match, 10 = Highest match.

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
≥ 0.103	High

7 Certainty of Assessment

The certainty of this assessment is low. Minimal information about *Chaetostoma lineopunctatum* was available. No records of introductions were found.

8 Risk Assessment

Summary of Risk to the Contiguous United States

The history of invasiveness for *Chaetostoma lineopunctatum* is uncertain. No records of introductions were found but there was not enough additional information about levels of the species in trade to determine a history of invasiveness. The climate match is low. The certainty of assessment is low. 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): Low**
- **Remarks/Important additional information** No additional remarks.
- **Overall Risk Assessment Category: Uncertain**

9 References

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

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10 References Quoted But Not Accessed

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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