Aequidens plagiozonatus

Ecological Risk Screening Summary

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1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2015):

"South America: Amazon River basin (upper Guaporé River drainage) and the Paraná River basin (upper Paraguay River drainage)."

Antonio de Oliveira et al. (2015):

"*Aequidens plagiozonatus* was observed in the following streams: Escondidinho, Queixada, Lourencinho, and Macao in Rondonópolis, Mato Grosso State, Brazil."

Status in the United States

No records of *Aequidens plagiozonatus* in the United States were found.

Means of Introductions in the United States

No records of *Aequidens plagiozonatus* in the United States were found.

Remarks

No additional remarks

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From ITIS (2015):

"Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata
Infraphylum Gnathostomata
Superclass Osteichthyes
Class Actinopterygii
Subclass Neopterygii
Infraclass Teleostei
Superorder Acanthopterygii
Order Perciformes
Suborder Labroidei
Family Cichlidae
Genus *Aequidens*
Species *Aequidens plagiozonatus* Kullander, 1984"

From Eschmeyer et al. (2017):

"***plagiozonatus, Aequidens*** Kullander [S. O.] 1984:155 […], Fig. 1 [Zoologica Scripta v. 13 (no. 2);] Internal lakes of the Piquiri-Itiquira system, Itiquira, Mato Grosso State, Brazil. Holotype: MZUSP 28232. Paratypes: ANSP 53925 (1); FMNH 70476 (1); MZUSP 2823-35 (2, 3, 3), 28236-38 (2, 3, 28); NRM 18009 (5). Type catalog: Ibarra & Stewart 1987:6 […]. •Valid as *Aequidens plagiozonatus* Kullander 1984 -- (Britski et al. 1999:149 […], Kullander in Reis et al.

2003:609 […], Sarmiento et al. 2014:122, 188 […]). **Current status:** Valid as *Aequidens plagiozonatus* Kullander 1984. Cichlidae: Cichlinae."

Size, Weight, and Age Range

From Froese and Pauly (2015):

"Max length: 10.3 cm SL male/unsexed; [Kullander 2003]"

Environment

From Froese and Pauly (2015):

"Freshwater; benthopelagic."

Climate/Range

From Froese and Pauly (2015):

"Tropical"

Distribution Outside the United States

Native

From Froese and Pauly (2015):

"South America: Amazon River basin (upper Guaporé River drainage) and the Paraná River basin (upper Paraguay River drainage)."

From Antonio de Oliveira et al. (2015):

"*Aequidens plagioconatus* was observed in the following streams: Escondidinho, Queixada, Lourencinho, and Macao in Rondonópolis, Mato Grosso State, Brazil."

Introduced

No records of *Aequidens plagiozonatus* introductions were found.

Means of Introduction Outside the United States

No records of *Aequidens plagiozonatus* introductions were found.

Short Description

A physical description of *Aequidens plagiozonatus* was not found.

Biology

From Tondato et al. 2013:

"*Hoplias malabaricus*, *Aequidens plagiozonatus* and *Symbranchus marmoratus* were present in shallower environments and in more open areas."

Human Uses

Anecdotal evidence for use in aquarium trade.

Diseases

No records of OIE reportable diseases were found.

From Casal et al. (2008):

"*Kudoa aequidens* sp. n. (Phylum Myxozoa) was ultrastructurally described in the sub-opercular musculature of the fish *Aequiden plagiozonatus* (Fam. Cichlidae) from the Amazonian estuarine region of the Pará State, Brazil."

From Videira et al. (2015a):

"Morphological and molecular procedures were used to describe a new species [*Potaspora aequidens*] of microsporidian that infects the muscles of the sub-opercular region and the caudal fins of the freshwater *Aequidens plagiozonatus* in Brazil."

From Videira et al. (2015b):

"A new species of Myxosporea, *Henneguya aequidens* sp. n. (Myxozoa: Myxobolidae), was described based on its ultrastructural features. This is a parasite of the freshwater fish *Aequidens plagiozonatus,* in the Peixe-boi River, Pará, Brazil."

From Videira et al. (2013):

"This study represents the first record of parasitism by *Calyptospora* in *A. plagiozonatus*."

From Videira et al. (2011):

"The final diagnosis of the infection by LCDV [lymphocystis disease virus, an iridovirus] was confirmed by transmission electron microscopy, together with macro and micro features of lymphocystis. To conclude, we show here, for the first time in the Amazon region, a morphological and ultrastructural description of lymphocystic disease in *Aequidens plagiozonatus*."

Threat to Humans

From Froese and Pauly (2015):

"Harmless"

3 Impacts of Introductions

No records of *Aequidens plagiozonatus* introductions were found.

4 Global Distribution

Figure 1. Known global distribution of *Aequidens plagiozonatus*. Locations are in Bolivia and Brazil. Map from GBIF Secretariat (2017).

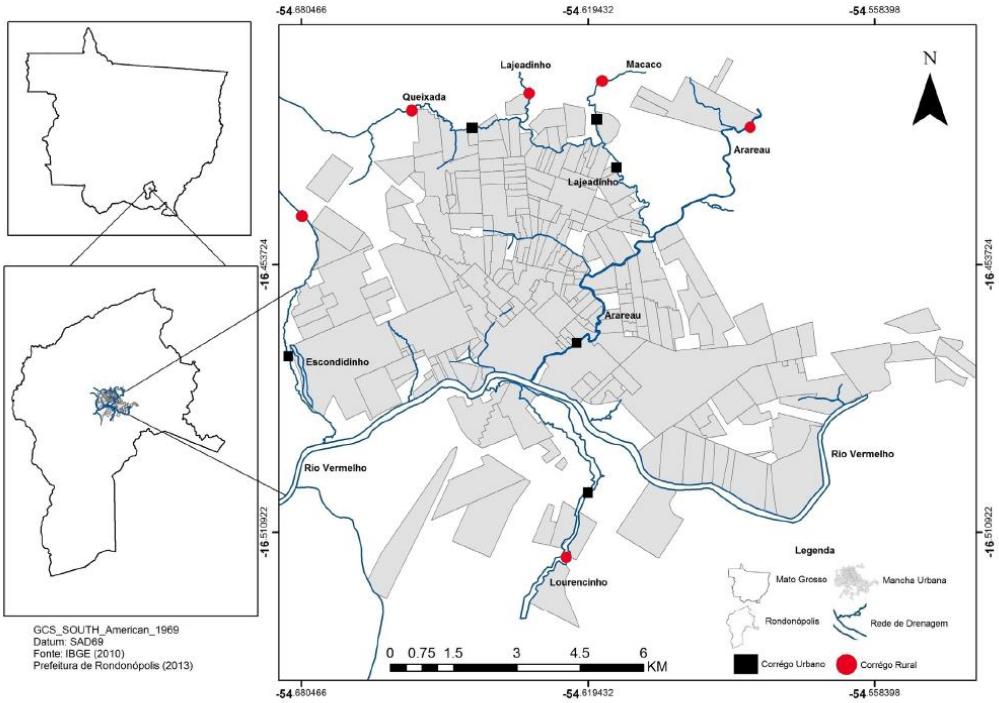

Figure 1. Urban area of Rondonópolis, Mato Grosso, with streams Arareau (16°28′13″S, 54°37′17″W), Lourencinho (16°30′25″S, 54°37′18″W), Lajeadinho (16°26′02″S, 54°36′51″W), Escondidinho (16°28′30″S, 54°40′56″W), Macaco (16°25′19″S, 54°37′05″W) and Queixada (16°25′39″S, 54°38′52″W), tributaries to the Vermelho River.

Figure 2. Distribution of *Aequidens plagiozonatus* in the Mato Grosso State of Brazil. Figure from Antonio de Oliveira et al. (2015).

5 Distribution Within the United States

No records of *Aequidens plagiozonatus* in the United States were found.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Aequidens plagiozonatus* was high for Florida and medium for the Gulf Coast of Texas and southern Atlantic Coast. The match was low everywhere else. The Climate 6 score (Sanders et al. 2014; 16 climate variables; Euclidean distance) for the contiguous U.S. was 0.016, medium, and Florida had an individually high climate score.

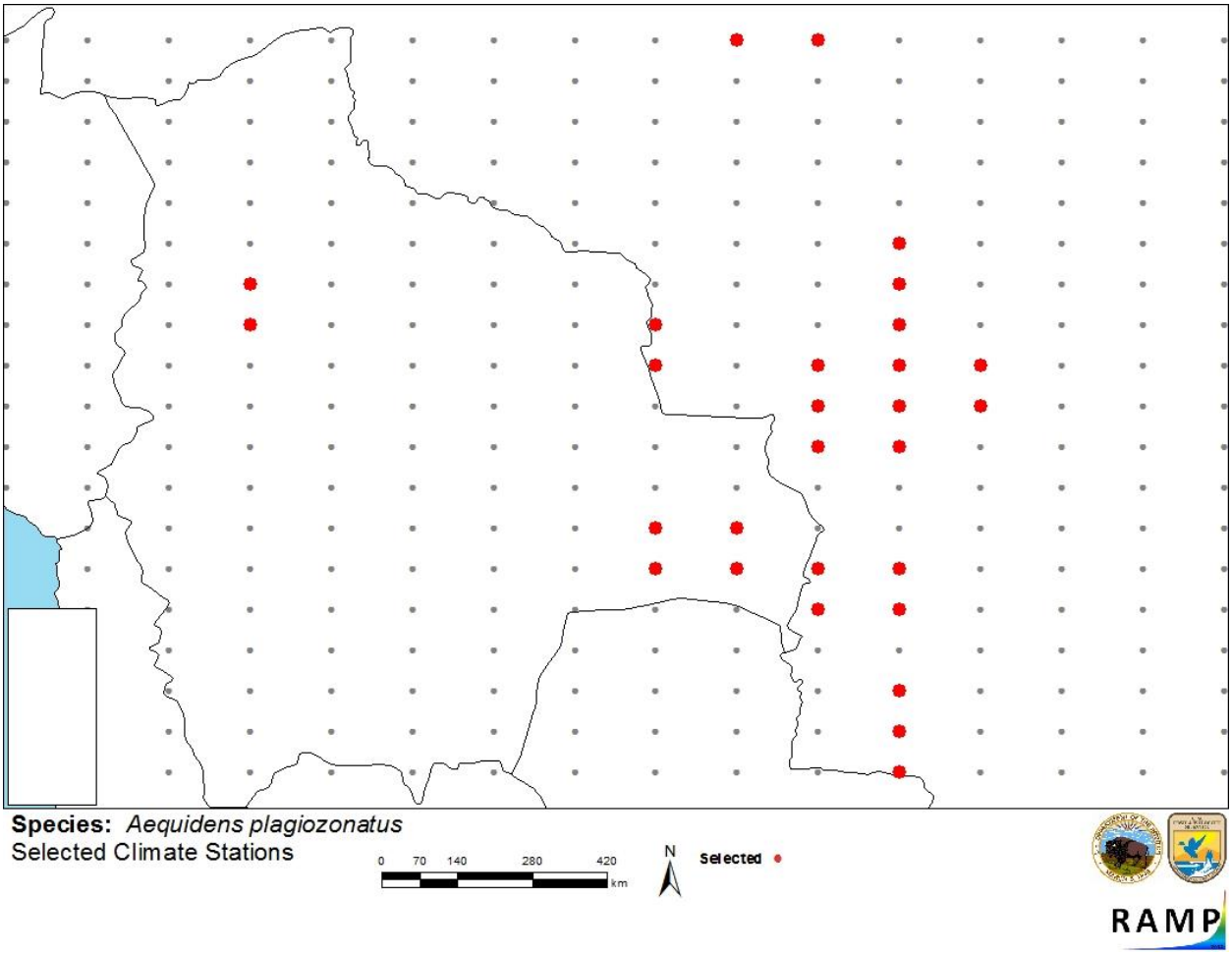

Figure 3. RAMP (Sanders et al. 2014) source map showing weather stations in Bolivia and Brazil selected as source locations (red) and non-source locations (gray) for *Aequidens plagiozonatus* climate matching. Source locations from Antonio de Oliveira et al. (2015) and GBIF Secretariat (2017).

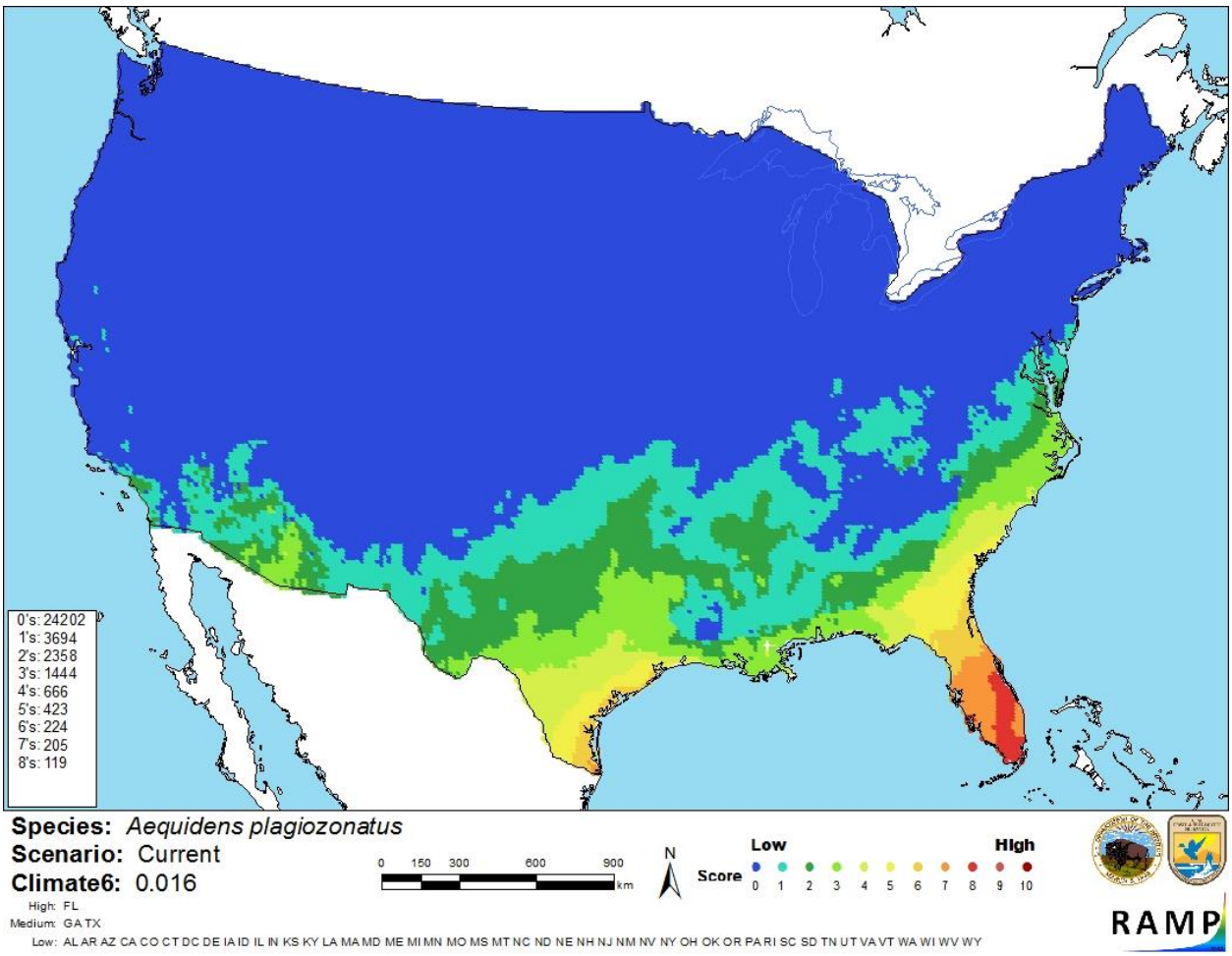

Figure 4. Map of RAMP (Sanders et al. 2014) climate matches for *Aequidens plagiozonatus* in the contiguous United States based on source locations reported by Antonio de Oliveira et al. (2015) and GBIF Secretariat (2017). 0 = Lowest match, 10 = Highest match.

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
$0.000 \leq X \leq 0.005$	Low
$0.005 < X < 0.103$	Medium
≥ 0.103	High

7 Certainty of Assessment

The certainty of assessment is low. There was very little information available about *Aequidens plagiozonatus*. The information that was available, especially the distribution information, was of high quality. No records of introductions were found.

8 Risk Assessment

Summary of Risk to the Contiguous United States

The history of invasiveness is uncertain. There were no records of introductions of *Aequidens plagiozonatus*. Many records of parasitic infection were found. Climate match was medium, 0.016. The certainty of assessment is low; there was a general lack of biological and ecological information. The overall risk assessment category is uncertain.

Assessment Elements

- **History of Invasiveness (Sec. 3): Uncertain**
- **Climate Match (Sec. 6): Medium**
- **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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