

# Redhook Myleus (*Myloplus rubripinnis*)

## Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, February 2011  
Revised, February 2019  
Web Version, 1/7/2020



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Available:

[https://commons.wikimedia.org/wiki/File:Myloplus\\_rubripinnis\\_Scheveningen\\_Sea\\_Life\\_15022016\\_1.jpg](https://commons.wikimedia.org/wiki/File:Myloplus_rubripinnis_Scheveningen_Sea_Life_15022016_1.jpg). (February 2019).

## 1 Native Range and Status in the United States

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### Native Range

From Froese and Pauly (2019):

“South America: Amazon and Orinoco River basins; north and eastern Guiana Shield rivers [Bolivia, Brazil, Columbia, Ecuador, French Guiana, Guyana, Peru, Suriname, and Venezuela].”

## Status in the United States

According to Froese and Pauly (2019), a single specimen was reported in Massachusetts in 1991. No established populations have been reported in the United States, however it is found in the aquarium trade.

From Aqua Imports (2019):

“RED HOOK SILVER DOLLAR (MYLOPLUS RUBRIPINNIS)

[...]

\$19.99

[...]

Approximate purchase size: 3 – 3.5

In stock”

## Means of Introductions in the United States

According to Froese and Pauly (2019), the single occurrence in Massachusetts was likely an aquarium release.

## Remarks

No additional remarks.

## 2 Biology and Ecology

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### Taxonomic Hierarchy and Taxonomic Standing

According to Fricke et al. (2019), *Myloplus rubripinnis* (Müller and Troschel 1844) is the current and valid name of this species. The original name of *Myloplus rubripinnis* (Müller and Troschel 1844) was *Myletes rubripinnis* (Müller and Troschel 1844). *Myletes luna* (Valenciennes 1850) is a synonym of *Myloplus rubripinnis*.

From ITIS (2019):

“Kingdom Animalia

Phylum Chordata

Subphylum Vertebrata

Superclass Osteichthyes

Class Actinopterygii

Subclass Neopterygii

Infraclass Teleostei

Superorder Ostariophysi

Order Characiformes

Family Characidae

Genus *Myloplus*

Species *Myloplus rubripinnis* (Müller and Troschel, 1844)”

## Size, Weight, and Age Range

From Froese and Pauly (2019):

“Max length : 41.5 cm TL male/unsexed; [Giarrizzo et al. 2015]; max. published weight: 2.5 kg [Boujard et al. 1997]”

## Environment

From Froese and Pauly (2019):

“Freshwater; benthopelagic; pH range: 5.0 - 7.0; dH range: ? - 15. [...] 23°C - 27°C [Riehl and Baensch 1996; assumed to be recommended aquarium temperature]”

## Climate/Range

From Froese and Pauly (2019):

“Tropical;”

## Distribution Outside the United States

Native

From Froese and Pauly (2019):

“South America: Amazon and Orinoco River basins; north and eastern Guiana Shield rivers [Bolivia, Brazil, Columbia, Ecuador, French Guiana, Guyana, Peru, Suriname, and Venezuela].”

Introduced

No introductions of *Myloplus rubripinnis* outside of their native range have been reported.

## Means of Introduction Outside the United States

No introductions of *Myloplus rubripinnis* outside of their native range have been reported.

## Short Description

From Andrade et al. (2016):

“Later, [Jégu et al. 2004] elevated *Myloplus* to the generic level and allocated to it the seed-eating [...] *Myloplus rubripinnis*, both of which, in addition to having two rows of premaxillary teeth that are set apart from each other, have molariform teeth, [...]”

From SeriouslyFish (2020):

“It [*Myloplus rubripinnis*] can be distinguished from those species as the black-trimmed, red anal fin is much more obvious than any of the *metynnis* [*sic*] species.”

## Biology

From Froese and Pauly (2019):

“Gregarious and non-aggressive [Boujard et al. 1997]. Prefers calm zones of main rivers where the vegetation hangs over the river banks. Feeds on the leaves of river plants [Planquette et al. 1996]. Possesses powerful dentition that can cause serious bites.”

“The red hooked anal fin of the female is actually a plough. The male has a bilobed anal fin which is designed to wrap around the female's "hook". During spawning, the female inserts the hook into the substrate (e.g., gravel) and ploughs a furrow while laying the eggs with the male in a position next to her with his bi-lobed fin wrapped around the hook as he fertilises the eggs. The female's "hook" is surprisingly strong and can be pushed into coarse gravel (up to the anal opening) without any problem with a shaking body action, the male's bilobed hook folds under the same pressure so they can work in unison [Davison 2005, personal communication].”

## Human Uses

From Froese and Pauly (2019):

“Fisheries: minor commercial; aquarium: commercial”

From Aqua Imports (2019):

“RED HOOK SILVER DOLLAR (MYLOPLUS RUBRIPINNIS)

[...]

\$19.99

[...]

Approximate purchase size: 3 – 3.5

In stock”

## Diseases

According to Poelen (2014), *Myloplus rubripinnis* is a host for the parasites *Anacanthorus paraspathulatus* and *Notothecioides llewellyni*.

**No OIE-reportable diseases (OIE 2020) were found to be associated with *Myloplus rubripinnis*.**

## Threat to Humans

From Froese and Pauly (2019):

“Traumatogenic”

“Possesses powerful dentition that can cause serious bites.”

### 3 Impacts of Introductions

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No established populations of *M. rubripinnis* have been reported outside of their native range. A single specimen was found introduced in Massachusetts but no information is available on its impacts.

### 4 Global Distribution

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**Figure 1.** Known global distribution of *Myloplus rubripinnis*. Locations in Bolivia, Brazil, Columbia, Ecuador, French Guyana, Guiana, Peru, Suriname, and Venezuela. Map from GBIF Secretariat (2019).

### 5 Distribution Within the United States

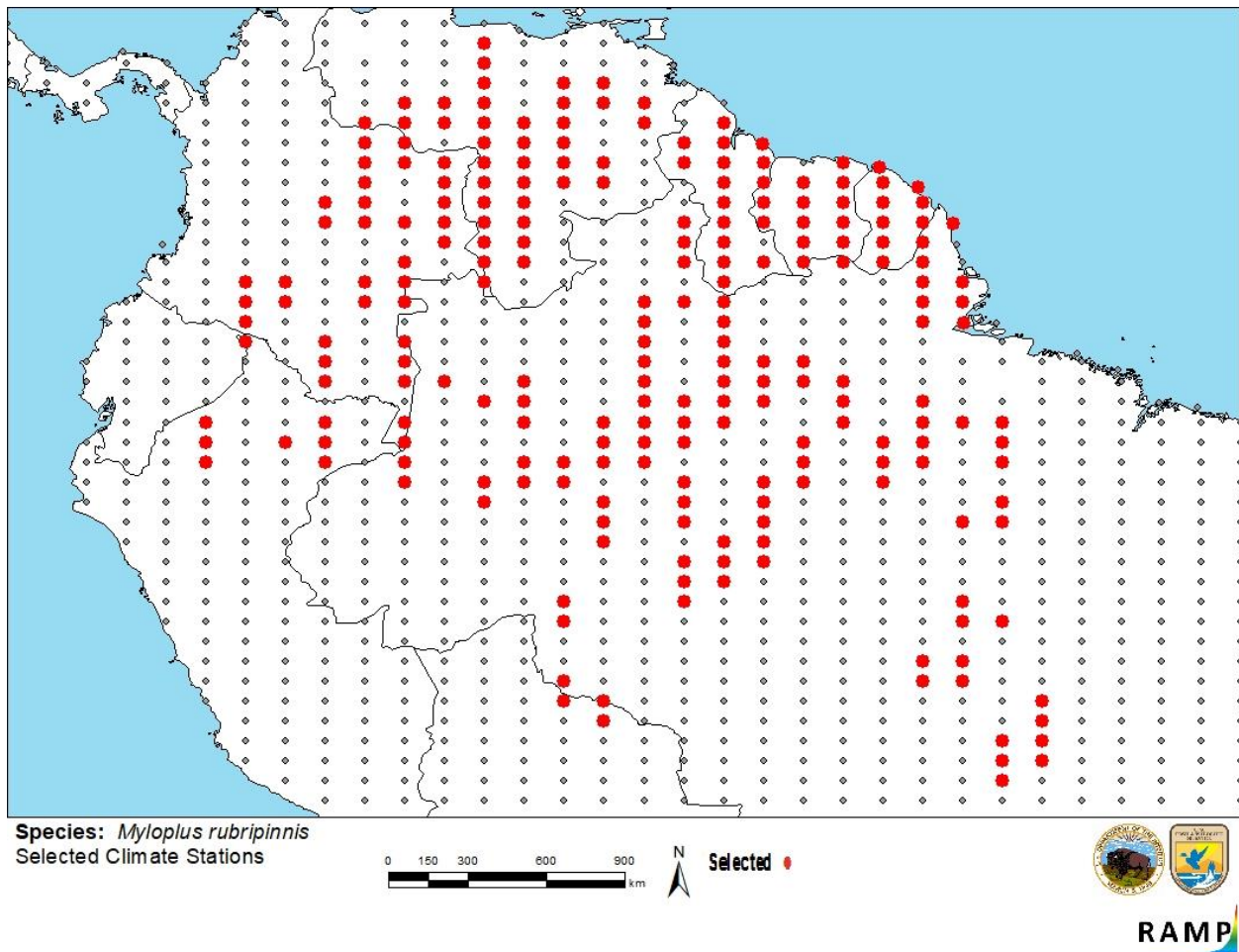
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A single specimen has been recorded in the United States. It is likely this specimen was an aquarium release and does not represent an established population of *Myloplus rubripinnis*.

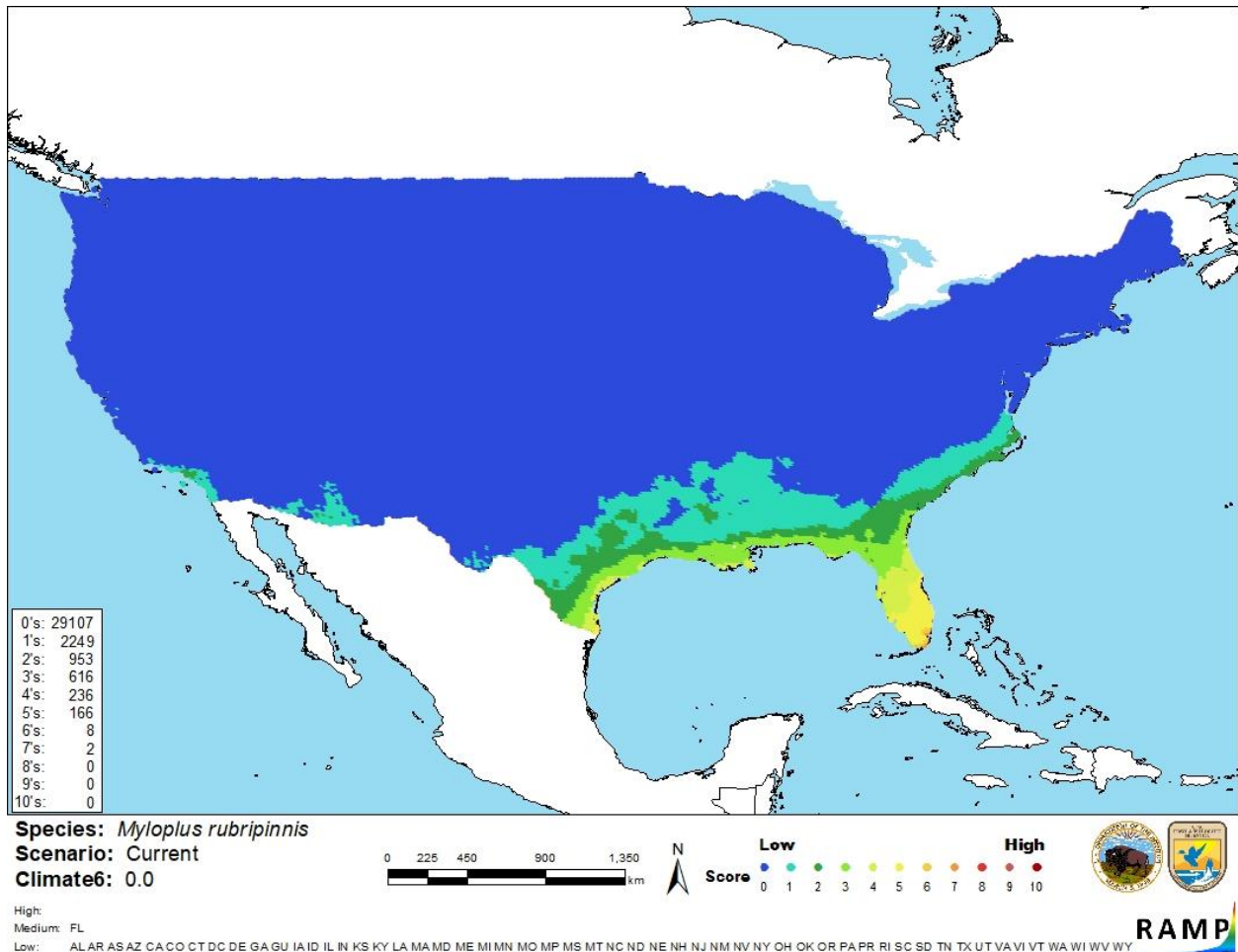
# 6 Climate Matching

## Summary of Climate Matching Analysis

The climate match was low for a majority of the contiguous United States. There was a very small area of high match in extreme southern Florida. The rest of the southern half of Florida had medium matches and there were small areas of medium match along the Gulf Coast. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for contiguous United States was 0.000, a low match. (Scores between 0.000 and 0.005, inclusive, are classified as low.) All States received low individual climate 6 scores, except for Florida, which received a medium climate score.



**Figure 2.** RAMP (Sanders et al. 2018) source map showing weather stations in South America selected as source locations (red; Bolivia, Brazil, Columbia, Ecuador, French Guyana, Guiana, Peru, Suriname, Venezuela) and non-source locations (gray) for *Myloplus rubripinnis* climate matching. Source locations from GBIF Secretariat (2019). 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 *Myloplus rubripinnis* in the contiguous United States based on source locations reported by GBIF Secretariat (2019). 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
$\geq 0.103$	High

## 7 Certainty of Assessment

Certainty of assessment is low. There is limited available information on *Myloplus rubripinnis*. No established populations have been reported outside of their native range.

## 8 Risk Assessment

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### Summary of Risk to the Contiguous United States

Redhook Myleus (*Myloplus rubripinnis*) is a South American freshwater fish native to the Amazon and Orinoco River basins and the Guiana Shield. This species can be found in Bolivia, Brazil, Columbia, Ecuador, French Guyana, Guiana, Peru, Suriname, and Venezuela. No established populations have been documented outside of their native range, creating an uncertain history of invasiveness. A single specimen was identified in Massachusetts, United States, likely due to an aquarium release. *Myloplus rubripinnis* is a minor commercial fish and is widely distributed in the aquarium trade. This species is capable of producing wounds or injuring humans due to their two rows of premaxillary teeth and molariform teeth. The climate match for the contiguous United States was low. All states received low individual climate scores except for Florida, which received a medium climate score. The certainty of assessment is low. The overall risk assessment category for *Myloplus rubripinnis* 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

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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.**

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## 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.**

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