

## ***Peckoltia lineola* (a catfish, no common name)**

### **Ecological Risk Screening Summary**

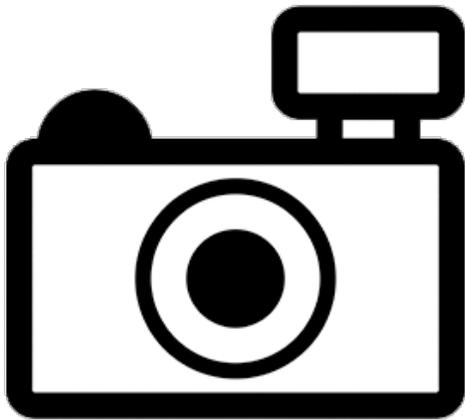
U.S. Fish & Wildlife Service, February 2013

Revised, August 2018

Web Version, 12/21/2020

Organism Type: Fish

Overall Risk Assessment Category: Uncertain



No Photo Available

## **1 Native Range and Status in the United States**

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### **Native Range**

From Armbruster (2008):

“Known from the Río Ventuari of Venezuela and the Río Iniridá of Colombia [...]”

### **Status in the United States**

No records of *Peckoltia lineola* in the wild in the United States were found.

*P. lineola* is in trade in the United States (e.g. AquaImports 2020).

*Peckoltia lineola* falls within Group I of New Mexico’s Department of Game and Fish Director’s Species Importation List (New Mexico Department of Game and Fish 2010). Group I species “are designated semi-domesticated animals and do not require an importation permit.”

## Means of Introductions in the United States

No records of *Peckoltia lineola* in the wild in the United States were found.

## Remarks

No additional remarks.

## 2 Biology and Ecology

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### Taxonomic Hierarchy and Taxonomic Standing

According to Eschmeyer et al. (2018), *Peckoltia lineola* Armbruster 2008 is the current valid name and the original name for this species.

From Bailly (2017):

“Biota > Animalia (Kingdom) > Chordata (Phylum) > Vertebrata (Subphylum) > Gnathostomata (Superclass) > [...] Actinopterygii (Class) > Siluriformes (Order) > Loricariidae (Family) > Hypostominae (Subfamily) > *Peckoltia* (Genus) > *Peckoltia lineola* (Species)”

### Size, Weight, and Age Range

From Armbruster (2008):

“Largest specimen examined 96.9 mm SL.”

### Environment

From Froese and Pauly (2018):

“Freshwater; benthopelagic.”

### Climate/Range

From Froese and Pauly (2018):

“Tropical”

### Distribution Outside the United States

Native

From Armbruster (2008):

“Known from the Río Ventuari of Venezuela and the Río Iniridá of Colombia [...]”

Introduced

No records of introductions of *Peckoltia lineola* were found.

## Means of Introduction Outside the United States

No records of introductions of *Peckoltia lineola* were found.

### Short Description

From Armbruster (2008):

“*Peckoltia lineola* can be identified from all other *Peckoltia* except *P. braueri*, *P. caenosa*, *P. cavatica*, and *P. vermiculata* by having vermiculations on the head and snout. *Peckoltia lineola* can be identified from *P. braueri*, *P. cavatica*, and *P. vermiculata* by having thick vermiculations almost as wide as the pupil on the compound pterotics and snout (vs. thin vermiculations much narrower than the pupil diameter and by also having large spots on the compound pterotics and snout (vs. no spots); from *P. braueri* and *P. cavatica* by lacking an orange band in the dorsal fin; from *P. cavatica* by having the vermiculations cross the bones like the compound pterotic (vs. dark lines only outlining the plates and bones of the head); from *P. caenosa* by having dark bands in the fins (vs. light spots), by having long, thick, longitudinal lines on the abdomen (vs. vermiculations with a random orientation), by having the light interspaces on the snout of about the same width of the black spots and lines (vs. light vermiculations narrower than dark ones), and by having the light bands of the caudal at least 50% width of dark bands (vs. 25%); and from *P. vermiculata* by not having the vermiculations coming from a central point on the parieto-supraoccipital. *Peckoltia lineola* is similar to *P. brevis* except that some of the spots on the head and snout combine to form lines (vs. all spots separate) and the spots on the abdomen combine to form long, thick longitudinal lines (vs. spots separate).”

“Body stout, fairly wide. Head gently sloped to parieto-supraoccipital. Parieto-supraoccipital with tall, rounded crest. Parieto-supraoccipital crest barely raised above nuchal region. Nuchal region rises slightly to nuchal plate. Dorsal profile sloped ventrally to dorsal procurent caudal-fin spines, then rising rapidly to caudal fin. Ventral profile flat to ventral procurent caudal-fin spines and then sloping ventrally to caudal fin. Supraorbital ridge rounded, contiguous, but slightly offset medially from rounded ridge proceeding from anterior margin of orbit to anterolateral corner of anterior nares. Head contours smooth. Eye medium-sized.”

“Keels absent. Mid-ventral plates bent at their midline above pectoral fin to form ridge. Dorsal plates bent dorsally below dorsal fin to form ridges that converge at preadipose plate, dorsal surface flat between ridges. Five rows of plates on caudal peduncle. Abdomen covered in small plates except for small naked areas posterior to lower lip and at insertions of paired fins. First anal-fin pterygiophore exposed to form a platelike structure. A pair of lateral plates converging at midline between anus and exposed first anal-fin pterygiophore. 24–26 [...] plates in the median series.”

“Frontal, infraorbitals, nasal, compound pterotic, sphenotic, and parieto-supraoccipital, supporting odontodes; opercle supporting odontodes in juveniles but not in adults, posterodorsal corner of opercle covered by one or two plates in adults. Odontodes on lateral plates not enlarged to form keels. Hypertrophied cheek odontodes 19–26 [...], longest almost reaching first mid-ventral plate in adults. Cheek plates evertible to approximately 90° from head. Odontodes on tip of pectoral-fin spine slightly hypertrophied.”

“Dorsal fin short, reaching preadipose plate fin when adpressed; dorsal-fin spine same length as proceeding rays making edge straight. Dorsal-fin spinelet V-shaped, dorsal-fin spine lock functional. Dorsal fin II,7. Adipose fin with one preadipose plate and fairly long spine. Caudal fin forked, lower lobe longer than upper, I,14,I with four to five [...] dorsal procurrent caudal-fin rays and four to five [...] ventral procurrent-fin rays. Anal fin short with unbranched ray weak and approximately same length of first branched ray. Anal fin I,4, Pectoral-fin spine almost reaching just beyond pelvic fin when adpressed ventral to pelvic fin. Pectoral fin I,6. Pelvic fin reaching to posterior insertion of anal-fin when adpressed. Pelvic fin I,5.”

“Iris operculum present. Flap between anterior and posterior nares short. Lips wide, fairly thin. Upper lip with small, round papillae. Lower lip with small papillae anteriorly and posteriorly, becoming larger medially. Maxillary barbel short, maximally reaching base of evertible cheek plates. Buccal papilla small. Jaws narrow, dentaries forming very acute angle, premaxillaries forming angle of 90° to slightly greater than 90°. Teeth with small, moderately wide cusps, lateral cusp approximately half length of medial cusp, stalk of tooth long; 10–16 dentary teeth [...], 10–19 premaxillary teeth [...].”

“Base color light tan with brown to black markings. Four dorsal saddles on the body, the first below the middle rays of the dorsal fin, the second below the posterior rays of the dorsal fin and slightly posterior, the third below the adipose fin and slightly anterior, and the fourth at the end of the caudal peduncle. Third and fourth bars may have anterior extensions or have an anterior projection making them h-shaped. Fourth bar combines with first band of caudal dorsally. The first two saddles combine midbody. All fins with dark bands with dark and light areas ranging from approximately equal width to dark bands wider, caudal bands may be irregular. Number of bands increases with size. Dark spot present between dorsal-fin spinelet and spine. Abdomen with large spots that combine to form thick longitudinal lines (usually one almost continuous central line and lines on each side). Lower surface of caudal peduncle with dark blotches formed from the lower extensions of the third and fourth dorsal saddle, the anterior extensions of the third and fourth saddles, and accessory blotch between the third and fourth saddles. Juveniles colored as adults, but without anterior extensions of the third and fourth dorsal saddles, without spots on the abdomen, and with the spots and lines on the head less numerous.”

## **Biology**

From Armbruster (2008):

“The main collection consists of only nuptial males. Nuptial males with hypertrophied odontodes on sides and posterior part of head; hypertrophied odontodes becoming larger posteriorly. Hypertrophied odontodes on upper caudal-fin spine and adipose spine. Upper caudal-fin spine thickened. Odontodes on pectoral-fin spine not noticeably larger.”

“Habitat. Specimens collected in Venezuela were from rocky riffles.”

## **Human Uses**

*P. lineola* is in trade in the United States (e.g. AquaImports 2020).

## **Diseases**

No records of diseases of *Peckolita lineola* were found. **No records of OIE-reportable diseases (OIE 2020) were found for *P. lineola*.**

## **Threat to Humans**

From Froese and Pauly (2018):

“Harmless”

## **3 Impacts of Introductions**

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No records of introductions of *Peckoltia lineola* were found, therefore there is no information on impacts of introductions.

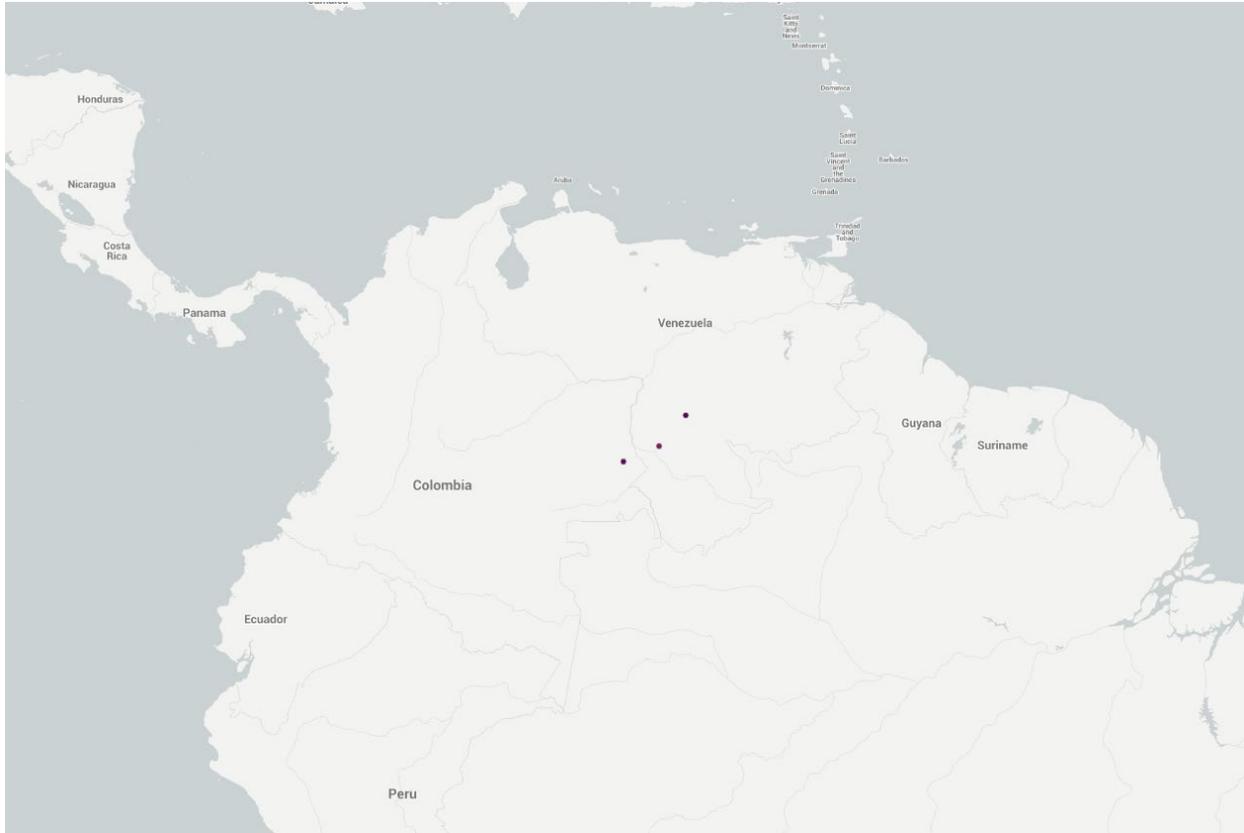
## **4 History of Invasiveness**

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No records of introductions of *Peckoltia lineola* were found, therefore the history of invasiveness is classified as “no known nonnative population.” *P. lineola* is in trade but detailed information regarding the duration and volume of trade was not available to assess the trade history.

## **5 Global Distribution**

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**Figure 1.** Known global distribution of *Peckoltia lineola*. Locations are in Colombia and Venezuela. Map from GBIF Secretariat (2018).

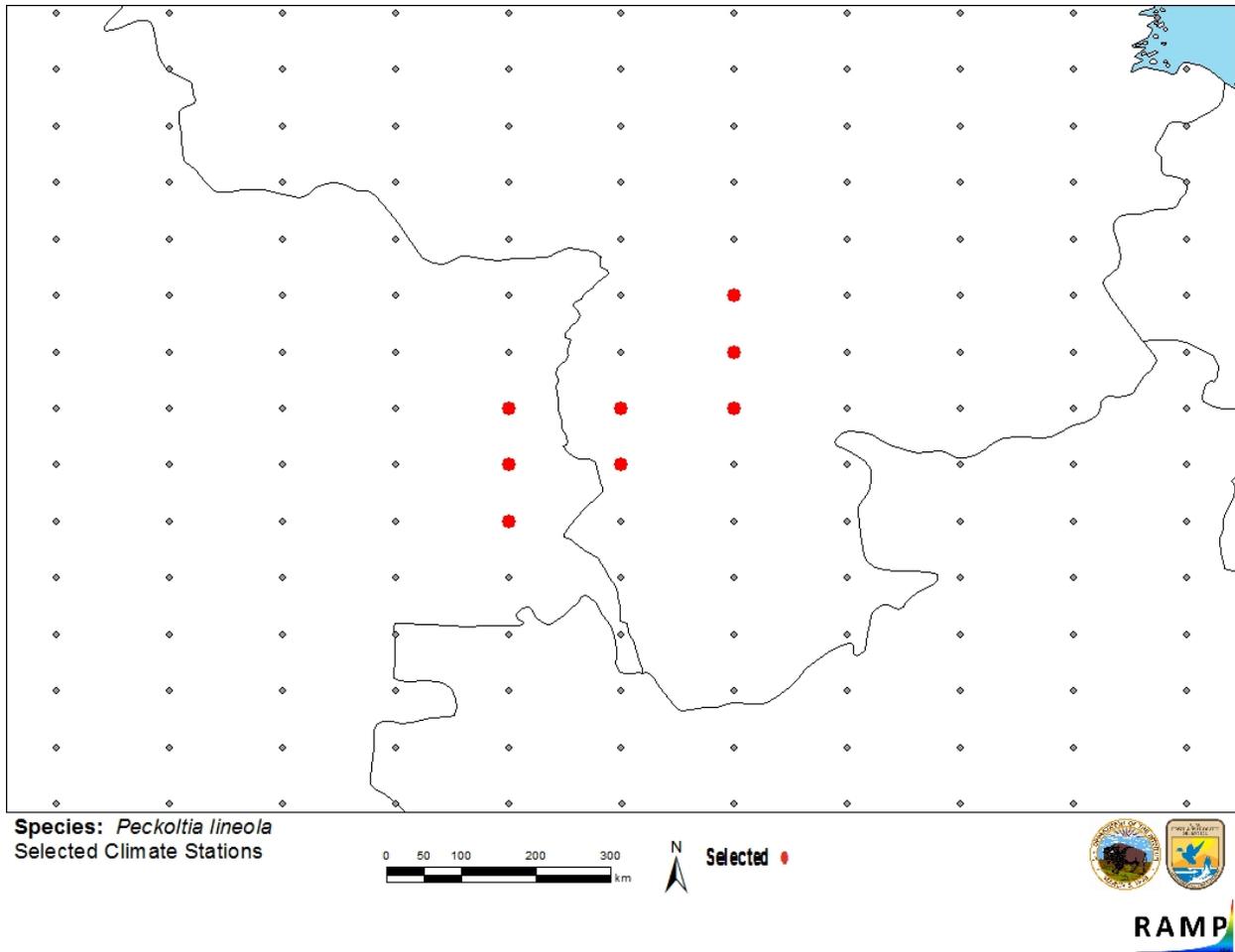
## 6 Distribution Within the United States

No records of *Peckoltia lineola* the wild in the United States were found.

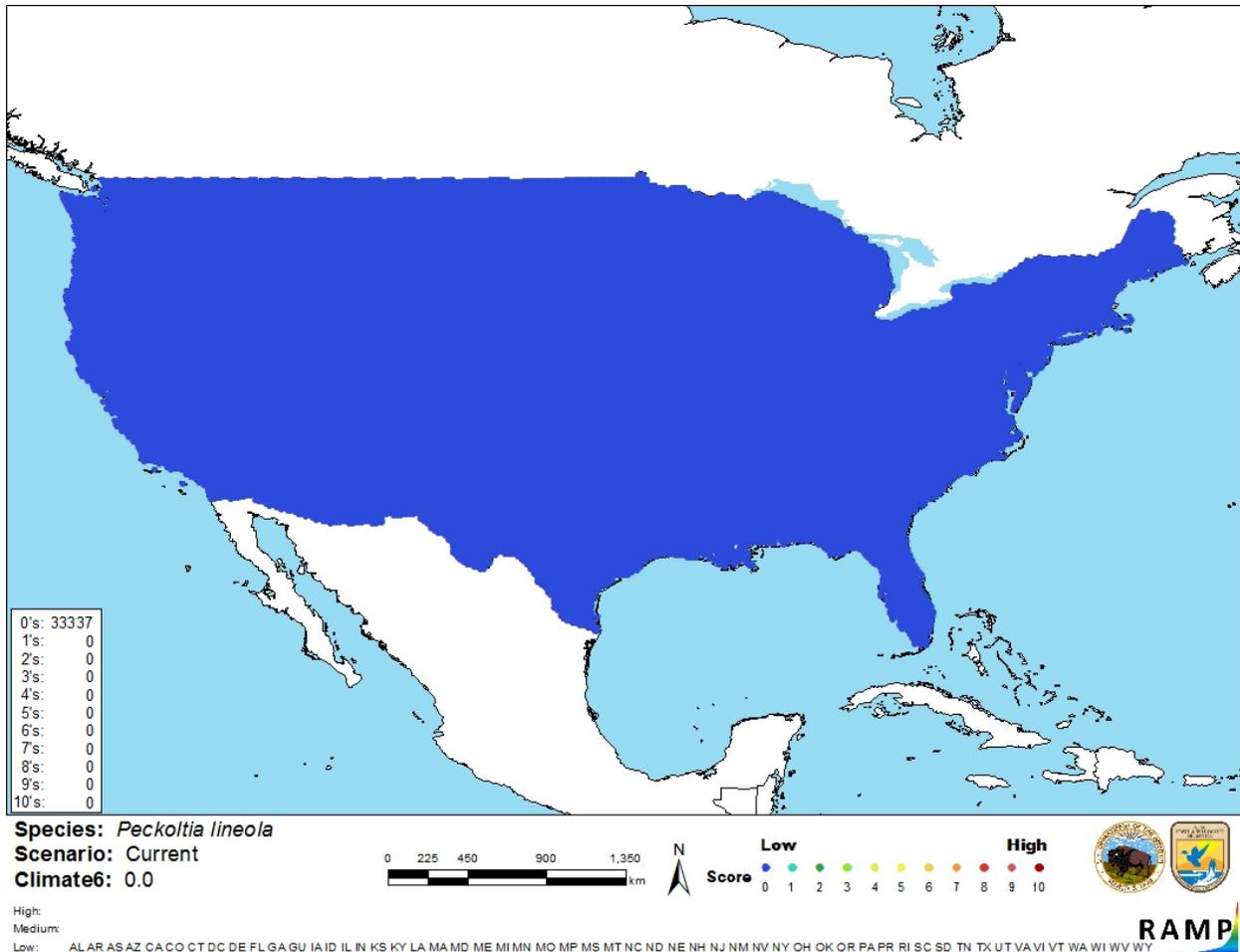
## 7 Climate Matching

### Summary of Climate Matching Analysis

The climate match for *Peckoltia lineola* was low across the entire contiguous United States. There were no areas of medium or high match. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.000, low (scores between 0.000 and 0.005, inclusive, are classified as low). All States had a low individual Climate 6 score.



**Figure 2.** RAMP (Sanders et al. 2018) source map showing weather stations in northeastern South America selected as source locations (red; Colombia, Venezuela) and non-source locations (gray) for *Peckoltia lineola* climate matching. Source locations from 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 *Peckoltia lineola* in the contiguous United States based on source locations reported from 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
$\geq 0.103$	High

## 8 Certainty of Assessment

The certainty of assessment is low. There was some general information about the species available from peer-reviewed sources. There were no records of introductions found and therefore there is no information on impacts available to evaluate.

## 9 Risk Assessment

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### Summary of Risk to the Contiguous United States

*Peckoltia lineola* is a species of catfish native to Venezuela. This species is present in the aquarium trade. The history of invasiveness is classified as “no known nonnative population.” There were no records of introductions to the wild found therefore there is no information on impacts available. The climate match was low. There were no areas of high or medium match in the contiguous United States. The certainty of assessment is low. The overall risk assessment 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

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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 11.**

AquaImports. 2020. L2020 False leopard frog pleco (*Peckoltia lineola*). Boulder, Colorado: AquaImports. Available: <https://www.aqua-imports.com/product/l202-lineola-pleco-peckoltia-lineola/> (December 2020).

Armbruster JW. 2008. The genus *Peckoltia* with the description of two new species and a reanalysis of the phylogeny of the genera of the Hypostominae (Siluriformes: Loricariidae). *Zootaxa* 1822:1–76.

Bailly N. 2017. *Peckoltia lineola*. World Register of Marine Species. Available: <http://www.marinespecies.org/aphia.php?p=taxdetails&id=1008458> (August 2018).

Eschmeyer WN, Fricke R, van der Laan R, editors. 2018. Catalog of fishes: genera, species, references. California Academy of Science. Available: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp> (August 2018).

Froese R, Pauly D, editors. 2018. *Peckoltia lineola* Armbruster, 2008. FishBase. Available: <https://www.fishbase.de/summary/Peckoltia-lineola.html> (August 2018).

GBIF Secretariat. 2018. GBIF backbone taxonomy: *Peckoltia lineola* (Armbruster, 2008). Copenhagen: Global Biodiversity Information Facility. Available: <https://www.gbif.org/species/5202095> (August 2018).

New Mexico Department of Game and Fish. 2010. Director's species importation list. Santa Fe, New Mexico: New Mexico Department of Game and Fish. Available: [http://www.wildlife.state.nm.us/download/enforcement/importation/information/Directors-Species-Importation-List-08\\_03\\_2010.pdf](http://www.wildlife.state.nm.us/download/enforcement/importation/information/Directors-Species-Importation-List-08_03_2010.pdf) (November 2020).

[OIE] World Organisation for Animal Health. 2020. OIE-listed diseases, infections and infestations in force in 2020. Available: <http://www.oie.int/animal-health-in-the-world/oie-listed-diseases-2020/> (November 2020).

Sanders S, Castiglione C, Hoff M. 2018. Risk Assessment Mapping Program: RAMP. Version 3.1. U.S. Fish and Wildlife Service.

## **11 Literature Cited in Quoted Material**

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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.**

No references in this section.