

***Peckoltia sabaji* (a catfish, no common name)**

Ecological Risk Screening Summary

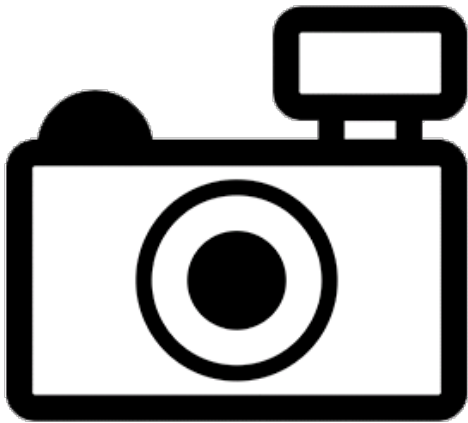
Jose Rivera, February 2013

Mandi Ohar, September 2018

Christopher Osborne, September 2018

Organism Type: Fish

Overall Risk Assessment Category: Uncertain



No Photo Available

1 Native Range and Status in the United States

Native Range

From Armbruster (2003):

“Currently known from the Rupununi, Essequibo, and Takutu River drainages of Guyana, and from single localities in the Río Casiquiare - Río Negro and the Río Cinaruco - Río Orinoco drainages of Venezuela [...].”

Status in the United States

No records of *Peckoltia sabaji* in the wild or in trade in the United States were found.

Peckoltia sabaji 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 sabaji* in the wild in the United States were found.

Remarks

Peckoltia sabaji was first described in 2003 (Armbruster 2003).

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

According to Fricke et al. (2018), *Peckoltia sabaji* Armbruster 2003 is the current valid name and the original name for this species.

From ITIS (2018):

Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata
Infraphylum Gnathostomata
Superclass Actinopterygii
Class Teleostei
Superorder Ostariophysi
Order Siluriformes
Family Loricariidae
Subfamily Hypostominae
Genus *Peckoltia*
Species *Peckoltia sabaji* Armbruster, 2003

Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 19.8 cm SL male/unsexed; [Armbruster 2003]”

Environment

From Froese and Pauly (2018):

“Freshwater; demersal.”

Climate

From Froese and Pauly (2018):

“Tropical; 6°N - 1°N, 68°W - 58°W”

Distribution Outside the United States

Native

From Armbruster (2003):

“Currently known from the Rupununi, Essequibo, and Takutu River drainages of Guyana, and from single localities in the Río Casiquiare - Río Negro and the Río Cinaruco - Río Orinoco drainages of Venezuela [...].”

Introduced

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

Means of Introduction Outside the United States

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

Short Description

From Armbruster (2003):

“*Peckoltia sabaji* is diagnosable from nearly all other members of the Ancistrini based on coloration: small spots on the head with spots becoming very large on the caudal peduncle and caudal fin [...]. Only an undescribed *Peckoltia* among the Ancistrini examined has such large spots on the caudal peduncle. *Peckoltia sabaji* can be separated from the similarly colored undescribed species of *Peckoltia* by having a very long caudal peduncle [...] and by having a much greater number of spots on the body (the undescribed species has fewer than ten spots present on the body posterior to the nape whereas *P. sabaji* has more than ten in adults). *Peckoltia sabaji* can be further separated from all other Ancistrini except *Hemiancistrus*, *Panaque*, and other *Peckoltia* by lacking (or rarely having) odontodes on the opercle in adults. Species of *Panaque* have widened, spoon-shape teeth (vs. villiform teeth). [...] Some species of *Hypostomus* (Hypostomini) have a similar color pattern to that of *P. sabaji*, but lack the evertible cheek plates and associated hypertrophied odontodes characteristic of the Ancistrini, and have odontodes on the opercle.”

“Body low, narrow, and elongate. Body depth increases curvilinearly from snout tip to origin of dorsal fin, decreases to near end of caudal peduncle, and then increases at a steep angle until caudal fin. Ventral surface flat. Body widest at insertion of pectoral fins, narrowest at end of caudal peduncle. Snout rounded. Caudal peduncle oval in cross section with dorsal and ventral surfaces flat.”

“Dorsal margin of orbit forming ridge higher than interorbital space. Dorsal surface of head between orbits concave laterally and convex medially. Supraoccipital pointed posteriorly; point of supraoccipital slightly raised and with odontodes slightly larger than those of surrounding bones and plates. Following head bones supporting odontodes: infraorbitals, frontal, nasal, pterotic-supracleithrum, and supraoccipital. Preopercle and opercle rarely supporting odontodes. Posterodorsal margin of opercle often covered by plate.”

“Lower lip wide, covered with short, wide papillae. Upper lip narrow, spotted ventrally, and with very small papillae posteromedially and larger, wider papillae anteriorly and laterally. Only maxillary barbel present, typically reaching about three quarters of way from its origin to gill opening. Some individuals with one or both barbels bifurcated or trifurcated, split barbels are shorter than unsplit barbels. Mouth with small, narrow buccal papilla. Iris with small dorsal flap, not reaching ventral to center of pupil.”

“Usually 27 lateral plates [...]. Plates unkeeled. Five rows of plates on caudal peduncle. Plates covering almost all surfaces of body except for anterior margin of snout and between mouth and pectoral girdle. Abdominal plates variable. Most individuals with some small, deeply embedded plates ventral to pectoral girdle, medially on abdomen, ventral to pelvic girdle, near anus, and along sides; however, any abdominal area may be naked. Extent of abdominal plating only partially correlated with size, most small individuals with fewer plates, but some adults with few plates on abdomen.”

“24–53 [...] evertible cheek odontodes Longest [*sic*] evertible cheek odontode does not reach posterior to cleithrum. Evertible cheek odontodes supported by plates than can be everted to approximately 90° from the head. Hypertrophied cheek odontodes relatively weak. Slightly longer odontodes present along dorsal-, adipose-, and pectoral-fin spines; largest individual examined with modestly hypertrophied odontodes at tip of pectoral-fin spine.”

“All fin spines and rays supporting odontodes. Dorsal fin II7; dorsal-fin spinelet V-shaped, dorsal-fin lock functional; dorsal-fin spine elongated relative to other fin rays in some specimens; dorsal fin reaching adipose fin when adpressed in juveniles, but not in adults. Adipose fin with single median preadipose plate and fairly long curved spine. Caudal fin I14I; caudal fin forked, lower lobe longer than upper; usually 5 dorsal and ventral procurrent caudal-fin rays [...]. Pectoral fin I6; pectoral fin spine reaching beyond base of pelvic fin when adpressed ventral to pelvic fin. Pelvic fin I5; pelvic-fin spine reaching at least to end of base of anal fin when adpressed. Anal fin I4; anal-fin spine slightly shorter than first ray.”

“Teeth bicuspid with a longer, slightly wider median lobe and a thicker, shorter, darker-yellow lateral lobe. Most teeth are worn such that the two lobes are approximately equal in length. 27–57 dentary teeth [...]. 31–58 premaxillary teeth [...].”

“Considerable ontogenetic change in shape. Juveniles more dorsoventrally flattened and not as elongate as adults.”

“In life, the base color is light tan (almost yellow), tending to orange on the fins [...]. Small- to medium-sized dark spots on the head becoming much larger posteriorly; corresponds with decrease in numbers of rows of spots. Size of spots varies, even between specimens collected together, but spots always largest on caudal peduncle and fin. Dorsal-fin spine either without spots or spots present distally. Dorsal fin with spots centered on the membranes, rays typically without spots; dark wash present between dorsal-fin spine and first ray and between the distal branches of the first ray; dorsal fin generally with a black margin. Adipose fin with spot present on preadipose plate and one or two large spots along spine; adipose-fin membrane mottled. Spots on caudal fin largest on body, often combining to form bands (particularly ventrally); caudal-fin

spots centered on fin rays; spots present along dorsal margin of dorsal and ventral caudal-fin spines, but ventral margin of ventral caudal-fin spine tan. Pectoral fin spots smallest, centered on either side of the pectoral-fin rays and dorsally along the pectoral-fin spine; spots fade distally. Pelvic fin with large spots dorsally, centered on rays and spine, spots fading posteriorly and distally. Anal fin spotted randomly with spots centered over membranes. Ventral surface behind mouth much lighter than sides, occasionally with slight mottling. Upper lip with small dark spots. Barbels mottled. Eye with dark spots dorsally, mottled ventrally.”

“Considerable ontogenetic change observed in coloration [...]. The smallest individual examined with mottled head and spots that appear to form dorsal saddles posteriorly; large spots present on all fins. Slightly larger individuals with spots on the head, but posterior body spots still forming saddles; dorsal and caudal fins with bands. As individuals grow, the spots become more numerous and the relative size of the spots decreases.”

Biology

From Armbruster (2003):

“Uncommon. Found in medium to large rivers among boulders. Usually in runs and riffles, but small individuals may be found hidden in the holes of lateritic rocks in pools. Most specimens I collected were collected at night. The largest individual was captured in a gill net in the main stem Essequibo and it appeared to be moving from deeper water into the shallows where there were exposed boulders.”

Human Uses

No information on human uses of *Peckoltia sabaji* was found.

Diseases

No records of diseases of *Peckoltia sabaji* were found. **No records of OIE-reportable diseases (OIE 2021) were found for *P. sabaji*.**

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

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

4 History of Invasiveness

No records of introductions of *Peckoltia sabaji* were found, therefore the history of invasiveness is classified as “no known nonnative population.”

5 Global Distribution

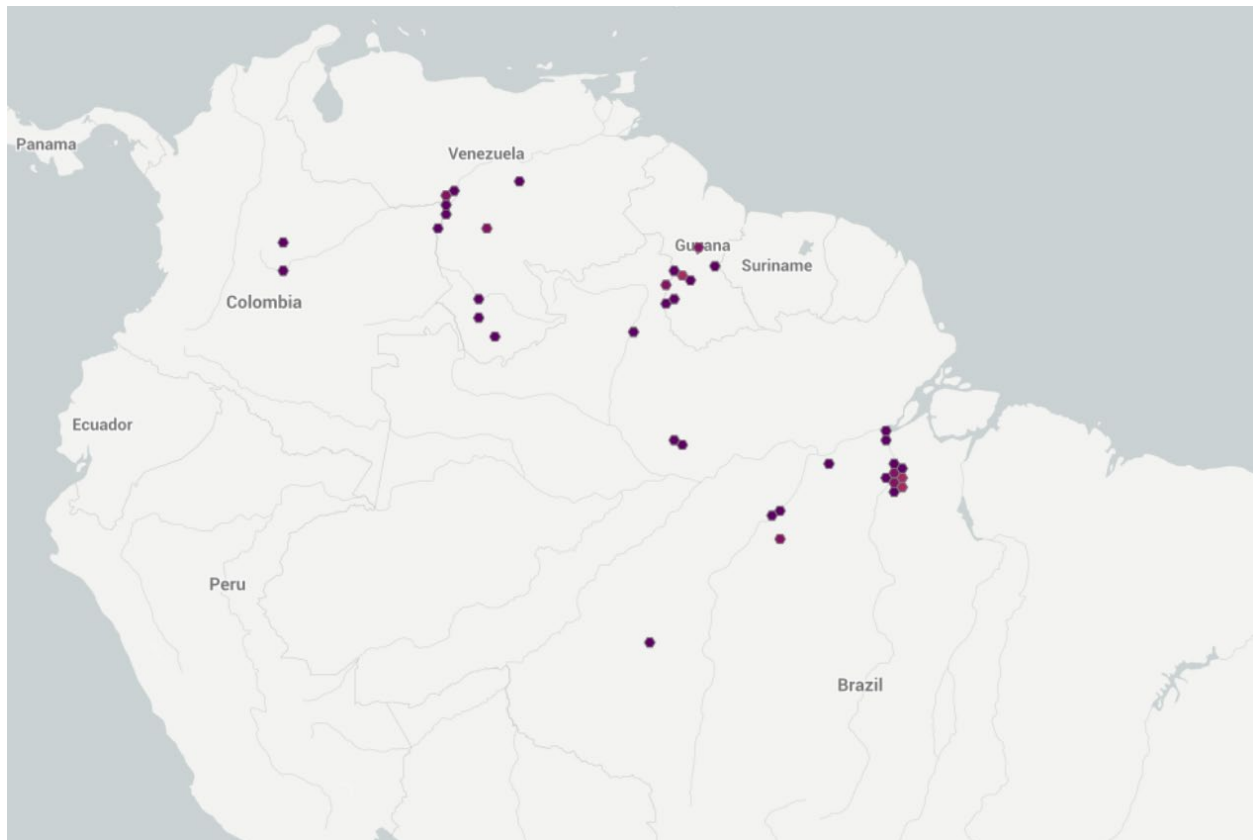


Figure 1. Map of northern South America showing locations where *Peckoltia sabaji* has been reported. Locations are in Colombia, Venezuela, Guyana, and Brazil. Map from GBIF Secretariat (2018).

6 Distribution Within the United States

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

7 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Peckoltia sabaji* was low across the entire contiguous United States. There was a very small area of medium match at the extreme southern tip of Texas. There were no areas of 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 low individual climate matches.

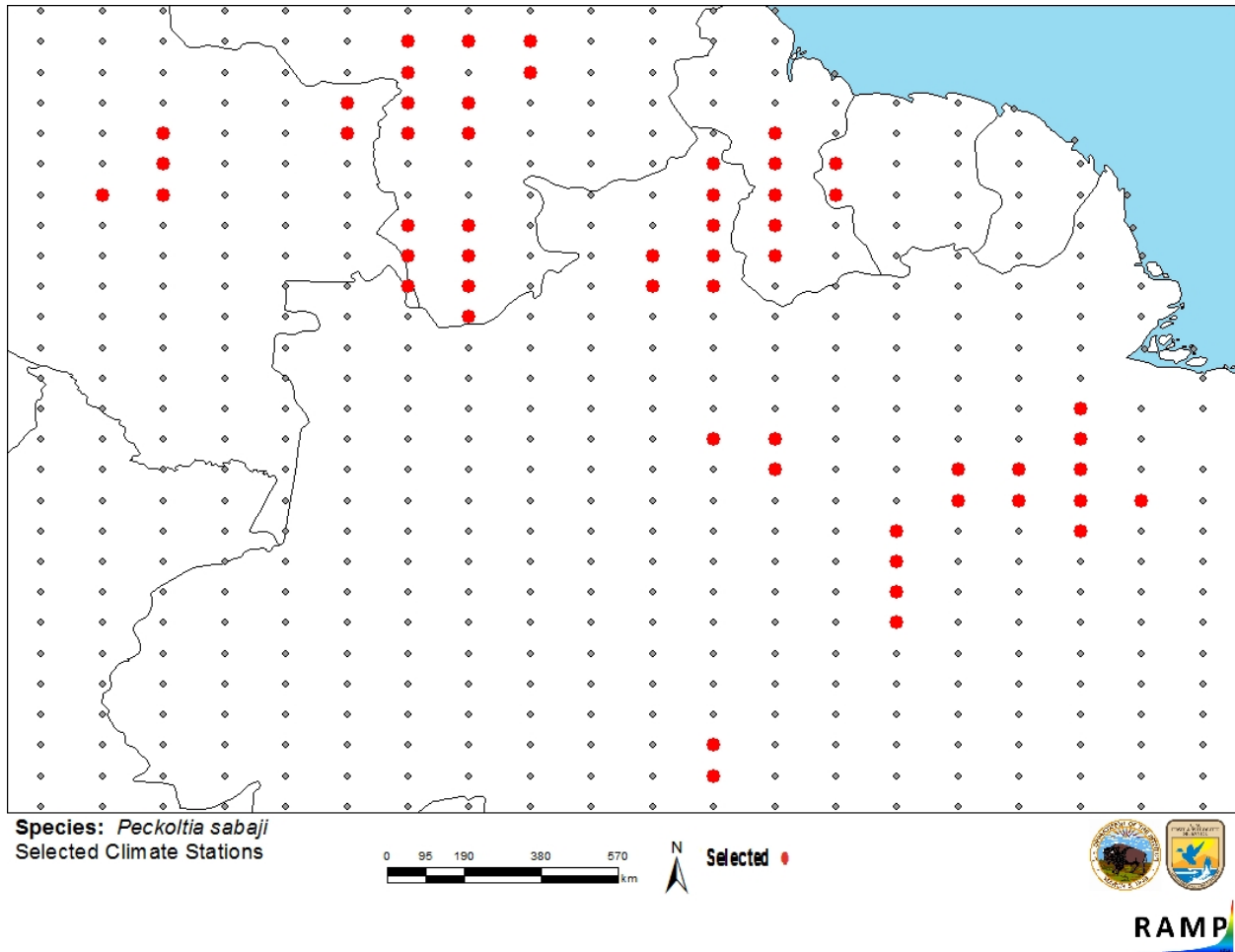


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in northeastern South America selected as source locations (red; Colombia, Venezuela, Guyana, Suriname, Brazil) and non-source locations (gray) for *Peckoltia sabaji* climate matching. Source locations from GBIF Secretariat (2018). Selected source locations are within 100 km of one or more species occurrences, and do not necessarily represent the locations of occurrences themselves.

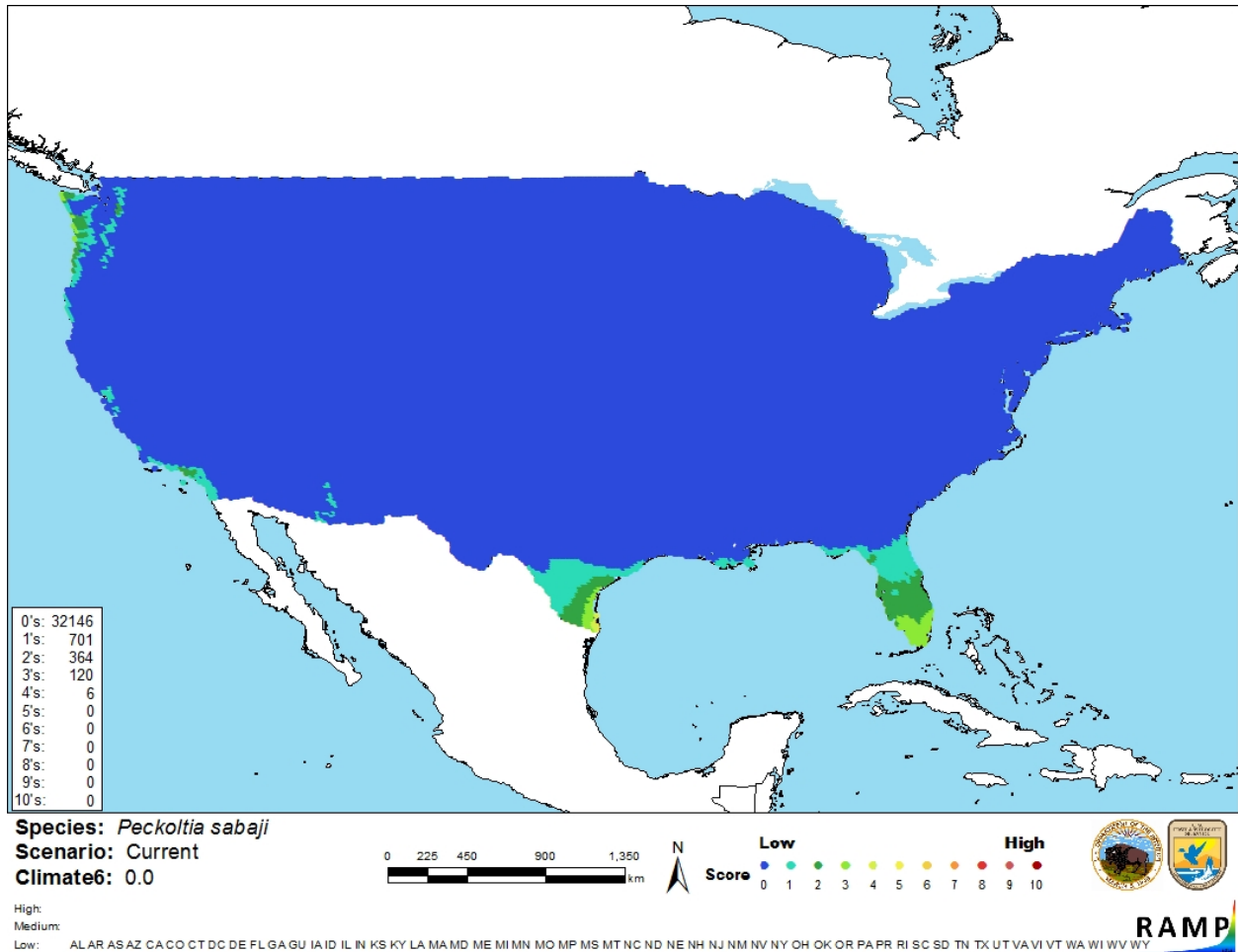


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Peckoltia sabaji* in the contiguous United States based on source locations reported from GBIF Secretariat (2018). Counts of climate match scores are tabulated on the left. 0/Blue = Lowest match, 10/Red = Highest match.

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
≥ 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

Summary of Risk to the Contiguous United States

Peckoltia sabaji is a species of catfish native to Guyana and Venezuela. *P. sabaji* was first described in 2003. It may be found associated with boulders in the streams of its native range. The history of invasiveness is classified as “No Known Nonnative Population.” There were no records of introductions to the wild found and therefore no information on impacts of introduction. The climate match was low for the entire 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:** *Peckoltia sabaji* was first described in 2003.
- **Overall Risk Assessment Category: Uncertain**

10 Literature Cited

Note: The following references were accessed for this ERSS. References cited within quoted text but not accessed are included below in Section 11.

Armbruster JW. 2003. *Peckoltia sabaji*, a new species from the Guyana Shield (Siluriformes: Loricariidae). *Zootaxa* 344:1–12.

Fricke R, Eschmeyer WN, 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> (September 2018).

Froese R, Pauly D, editors. 2018. *Peckoltia sabaji* (Armbruster, 2003). FishBase. Available: <https://www.fishbase.de/summary/Hemiancistrus-sabaji.html> (September 2018).

GBIF Secretariat. 2018. GBIF backbone taxonomy: *Peckoltia sabaji* (Armbruster, 2003). Copenhagen: Global Biodiversity Information Facility. Available: <https://www.gbif.org/species/5202088> (September 2018).

[ITIS] Integrated Taxonomic Information System. 2018. *Peckoltia sabaji* (Armbruster, 2003). Reston, Virginia: Integrated Taxonomic Information System. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=680318#null (September 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 (November 2020).

[OIE] World Organisation for Animal Health. 2021. OIE-listed diseases, infections and infestations in force in 2020. Available: <http://www.oie.int/animal-health-in-the-world/oie-listed-diseases-2020/> (January 2021).

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

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.