

**U.S. FISH AND WILDLIFE SERVICE
SPECIES ASSESSMENT
AND LISTING PRIORITY ASSIGNMENT FORM**

SCIENTIFIC NAME: *Aulacorhynchus huallagae*

COMMON NAME: Yellow-browed toucanet

HQ CONTACT: Rachel London, Acting Chief, Branch of Delisting and Foreign Species, 703–358–2491, rachel_london@fws.gov

DATE INFORMATION CURRENT AS OF: July 2022

STATUS/ACTION

Species petitioned for listing which we have determined is not a listable entity

Species petitioned for listing which we have determined does not warrant listing (does not meet the definition of a threatened or endangered species)

Non-listed species for which we have not received a petition but for which we have undertaken a species status assessment on our own initiative and which we have determined does not warrant listing (does not meet the definition of a threatened or endangered species)

Listed species petitioned for delisting which we have determined does not warrant delisting

Listed species petitioned for downlisting which we have determined does not warrant downlisting

Listed species petitioned for uplisting for which we have made a warranted-but-precluded finding for uplisting (this is part of the annual resubmitted-petition finding)

Listed species petitioned for uplisting which we have determined does not warrant uplisting

New candidate

Continuing candidate

Date when the species first became a candidate (as currently defined): May 21, 2004

Listing priority number change

Former LPN:

New LPN:

Candidate removal: Former LPN:

Taxon does not meet the Act's definition of "endangered species" or "threatened species" because it is more abundant or widespread than previously believed or not subject to the degree of threats sufficient to warrant issuance of a proposed listing or continuance of candidate status.

Taxon does not meet the Act's definition of "endangered species" or "threatened species" because it is not subject to the degree of threats sufficient to warrant issuance of a proposed listing or continuance of candidate status due, in part or totally, to conservation efforts that remove or reduce the threats to the species.

Taxon does not meet the Act's definition of "species."

Taxon mistakenly included in past notice of review.

Taxon believed to be extinct.

Petition Information:

Non-petitioned

Petitioned; Date petition received: May 6, 1991

90-day "substantial" finding FR publication date; citation: December 16, 1991 (56 FR 65207)

12-month "warranted but precluded" finding FR publication date; citation: May 21, 2004 (69 FR 29353)

FOR PETITIONED CANDIDATE SPECIES:

A. Is listing warranted?

Yes

B. To date, has publication of a proposal to list been precluded by other higher priority listing actions?

Yes

C. Why is listing precluded at this time?

Higher-priority listing actions—including court-approved settlements, and court-ordered and statutory deadlines, for petition findings and listing determinations—continue to preclude the proposed and final listing rules for this species. We continue to monitor populations and, if necessary, will change the status of the species or implement an emergency listing. The "Progress on Revising the Lists" section of the current CNOR (<https://endangered.fws.gov/>) provides information on listing actions taken during the last 12 months.

PREVIOUS FEDERAL ACTIONS:

On May 6, 1991, we received a petition from the International Council for Bird Preservation to list 53 different bird species, including the yellow-browed toucanet (*Aulacorhynchus huallagae*), proposing that they be included on the U.S. list of endangered species. On December 16, 1991, we published in the *Federal Register* (56 FR 65207) a 90-day finding in which we announced that the petition to add 53 species of foreign birds contained substantial information indicating that listing may be warranted for all species. This document constitutes our 12-month finding on the May 6, 1991, petition to list the yellow-browed toucanet under the Act.

[ANIMAL GROUP AND FAMILY/PLANT GROUP, ORDER AND FAMILY]:

Birds, Toucans (Aves: Ramphastidae)

DISTINCT POPULATION SEGMENT (DPS)

N/A

BIOLOGICAL INFORMATION

To assess yellow-browed toucanet viability, we followed the species status assessment (SSA) framework and used the three conservation biology principles of resiliency, redundancy, and representation (Shaffer and Stein 2000, pp. 306–311). Briefly, resiliency supports the ability of the species to withstand environmental and demographic stochasticity (for example, wet or dry, warm or cold years, variation in demographic rates), redundancy supports the ability of the species to withstand catastrophic events (for example, droughts, large pollution events), and representation supports the ability of the species to adapt to both near-term and long-term changes in its physical and biological environment (for example, climate change, disease). A species with a high degree of resiliency, representation, and redundancy is better able to adapt to novel changes and to tolerate environmental stochasticity and catastrophes. In general, species viability will increase with increases in resiliency, redundancy, and representation (Smith et al. 2018, p. 306). Using these principles, we identified the species' ecological requirements for survival and reproduction at the individual, population, and species levels, and described the beneficial and risk factors influencing the species' viability.

We use the SSA framework to assemble the best scientific and commercial data available for this species. The SSA framework consists of three sequential stages. During the first stage, we evaluate the species' needs. The next stage involves an assessment of the historical and current condition of the species' demographics and habitat characteristics, including an explanation of how the species arrived at its current condition (i.e., how threats and conservation actions have influenced the species). The final stage of the SSA framework involves assessing the species' plausible range of future responses to positive and negative environmental and anthropogenic influences. The SSA framework uses the best available information to characterize viability as the ability of a species to sustain populations in the wild over time and is used to inform our

regulatory decision.

Species Description

The yellow-browed toucanet is 37 to 41 centimeters (15–16 inches) long (BLI 2021, unpaginated). It is mostly green, with a yellow brow, blue band at the breast, red rump, chestnut-tipped tail feathers, white base of bill, and yellow undertail coverts – a distinguishing characteristic (Bonaccorso *et al.* 2010, p. 337). The bill is bluish gray, with a white border at the base and a white throat (BLI 2021, unpaginated; Schulenberg 2014, unpaginated). The Yellow-browed toucanet most closely resembles the Crimson-Rumped Toucanet (*A. haematopygus*) and the Blue-Banded Toucanet (*A. coeruleicinctis*; Schulenberg & Parker 1997, p. 718–719).

Taxonomy

The yellow-browed toucanet (*Aulacorhynchus huallagae*) is in the Ramphastidae (toucan) family. It is most closely related to the Blue-Banded Toucanet (Bonaccorso *et al.* 2011, p. 345; Short and Kirwan 2017, unpaginated). It was described as a species in the early twentieth century (Carriker 1933 as cited in Bonaccorso *et al.* 2010, p. 337), and its continued taxonomic standing as a full species is well established (ITIS 2017, unpaginated). In Peru, the species is called “tucancillo de ceja amarilla”, or “yellow-browed toucanet” (Acosta 2015, p. 55).

Habitat/Life History

The yellow-browed toucanet occurs in humid montane forests, where it forages in the canopy for fruit and seeds (Schulenberg 2014, unpaginated). At one locality, the species occupied a lush forest dominated by tall *Clusia* trees (Schulenberg and Parker 1997, p. 717). The species is most frequently seen in pairs, but is occasionally found in small groups of three to four individuals (Schulenberg and Parker 1997, p. 717). Breeding may occur from October through February or March, though information is limited (Short and Horne 2001 as cited in Schulenberg 2014, unpaginated) as sightings are extremely infrequent. The species is thought to nest in tree cavities and the eggs are thought to be white without any markings (Schulenberg 2014, unpaginated). Generation length is 7 years (BLI 2021, unpaginated).

Historical and Current Range/Distribution

The full extent of the historical range of the yellow-browed toucanet is unknown, but it likely occurred in the Peruvian Departments of La Libertad, San Martín, and Amazonas. The yellow-browed toucanet currently occupies a small range on the eastern slope of the Andes in north-central Peru at elevations of 2,000–2,600 meters above sea level (6,562–8,530 feet; Schulenberg 2014 unpaginated; Bonaccorso and Guayasamin 2013, p. 3). It occurs from the Departments of southern Amazonas and northwestern San Martín, to Río Abiseo National Park in west-central San Martín and the Cumpang/Utcubamba area in northeastern La Libertad (Collar *et al.* 1992, p. 563; Schulenberg and Parker 1997, p. 718; Carriker 1933, p.

5). The species has been surveyed in the Alto Huayabamba Conservation Concession Area; a large parcel of land just north of Río Abiseo National Park that is protected by the Department (State) of San Martín and private landowners (MOE 2017, p. 13). Peru's Red Book of Endangered Wildlife describes the species' range as 5,705 square kilometers (km²; 2,203 square miles (mi²)); the extent of occurrence has been estimated at 450 km² (BirdLife 2021, unpaginated). However, there have been only 32 georeferenced sightings throughout this range (GBIF.org 2021, unpaginated; Figure 1).



Figure 1. Map of the 6 georeferenced sighting records (yellow dots) of the yellow-browed toucanet with images modified from GBIF,org (2021).

Population and Species Needs

The yellow-browed toucanet relies on Andean forests in north-central Peru at elevations of 2,000–2,600 m (6,562–8,530 ft). It needs humid montane forests dominated by tall *Clusia* trees, where it forages in the canopy for fruit and seeds. It uses cavities in the trees to nest. However, the species is not well studied and information on the species needs is limited.

SUMMARY OF BIOLOGICAL INFORMATION

The yellow-browed toucanet is a rare bird of the toucan family that occurs in the Andes Mountains of North central Peru. The species currently occupies three small locations in humid montane forests on the eastern slope of the Andes in north-central Peru. The species' extent of occurrence has been estimated at 450 km². The yellow-browed toucanet relies on Andean forests in north-central Peru at elevations of 2,000–2,600 m (6,562–8,530 ft). It needs humid montane forests dominated by tall *Clusia* trees, where it forages in the canopy for fruit and seeds. It uses cavities in the trees to nest. The species is most frequently seen in pairs but is occasionally found in small groups of three to four individuals.

FACTORS INFLUENCING THE STATUS

The Act directs us to determine whether any species is an endangered species or a threatened species because of any factors (or threats) affecting its continued existence (i.e., whether it meets the definition of a threatened species or an endangered species). We use the term “threat” to refer in general to actions or conditions that are known to or are reasonably likely to negatively affect individuals of a species. The term “threat” includes actions or conditions that have a direct impact on individuals, as well as those that affect individuals through alteration of their habitat or required resources. The term “threat” may encompass—either together or separately—the source of the action or condition, or the action or condition itself.

However, the mere identification of any threat(s) does not necessarily mean that the species meets the statutory definition of an “endangered species” or a “threatened species.” In determining whether a species meets either definition, we must evaluate all identified threats by considering the expected response by the species, and the effects of the threats—in light of those actions and conditions that will ameliorate the threats—on an individual, population, and species level. We evaluate each threat and its expected effects on the species, then analyze the cumulative effect of all of the threats on the species as a whole. We also consider the cumulative effect of the threats in light of those actions and conditions that will have positive effects on the species—such as any existing regulatory mechanisms or conservation efforts. The Secretary determines whether the species meets the definition of an “endangered species” or a “threatened species” only after conducting this cumulative analysis and describing the expected effect on the species now and (if evaluating whether a species is a threatened species) in the foreseeable future.

The Act does not define the term “foreseeable future,” which appears in the statutory definition of “threatened species.” Our implementing regulations at 50 CFR 424.11(d) set forth a framework for evaluating the foreseeable future on a case-by-case basis. The term foreseeable future extends only so far into the future as the Services can reasonably determine that both the future threats and the species’ responses to those threats are likely. In other words, the foreseeable future is the period of time in which we can make reliable predictions. “Reliable” does not mean “certain”; it means sufficient to provide a reasonable degree of confidence in the prediction. Thus, a prediction is reliable if it is reasonable to depend on it when making decisions.

It is not always possible or necessary to define foreseeable future as a particular number of years. In some instances, defining foreseeable future as a particular number of years may even be confusing, since the time period within which we can make reliable predictions—that is, the foreseeable future—may vary by threat. Analysis of the foreseeable future uses the best scientific and commercial data available and should consider the timeframes applicable to the

relevant threats and to the species' likely responses to those threats in view of its life-history characteristics. Data that are typically relevant to assessing the species' biological response include species-specific factors such as lifespan, reproductive rates or productivity, certain behaviors, and other demographic factors.

Threats

Deforestation for livestock, agriculture, timber, and gold mining are the main threat. Since the 1990s, coca farmers have converted the upper reaches of the Huallaga Valley region, negatively affecting forests throughout the region (BLI 2019, unpaginated). From 2000–2015, 341,515 hectares (843,902 acres) of forest in San Martín were lost due to expansion of agriculture and livestock (MOE 2017, p. 13). Peru's Red Book of Endangered Wildlife lists illegal logging as the biggest threat to the yellow-browed toucanet (MOAI 2018, p. 180). Other threats include small-scale gold mining which, from 2013-2018 destroyed over 68,000 hectares of primary rainforest in the Peruvian Amazon (Neal and Roberts 2018, unpaginated).

Part of the species' range is within Río Abiseo National Park, a World Heritage Site and one of the top Andean conservation priorities for the World Wildlife Fund (UNEP–WCMC 2008, unpaginated). Mining companies in the area have attracted workers leading the regional population and thus resource extraction (e.g. food, wood) from within the park to increase (Obenson 2002, unpaginated). Just north, the Alto Huayabamba Conservation Concession Area was established partly to conserve the area's biodiversity and ecological processes, however natural resources such as wood and food are still harvested in the area (MOE 2017, p. 13). It is unclear if the use of natural resources is sustainable.

Surveying efforts have demonstrated that all existing populations of the yellow-browed toucanet are small; however due to surveying limitations, local densities are not well documented. Given the inherent threats to small populations (e.g., loss of genetic diversity via genetic drift, stochastic environmental events), continued habitat loss/degradation will exacerbate extinction risk of this species.

Conservation Measures and Existing Regulatory Mechanisms

We are unaware of any species-specific conservation measures planned for the yellow-browed toucanet, although part of its range occurs in protected public lands including Río Abiseo National Park and Alto Huayabamba Conservation Concession Area. Río Abiseo National Park is one of the World Wildlife Fund's top Andean conservation priorities (UNEP–WCMC 2008, unpaginated). The species is listed as endangered in the IUCN red list. The species is not included in CITES as trade is not identified as a threat to the species.

Cumulative Effects

While the range of this species is not well monitored, it is expected that the habitat will continue to be modified and reduced due to development activities and expansion of coca farms. Climate change, which has been found to affect flowering/fruiting times of trees and impacts local temperature regimes, will also negatively impact the persistence of this species.

CURRENT CONDITION

Resiliency: The yellow-browed toucanet population is estimated to be between 600 and 1500 and decreasing (BLI 2021, unpaginated). The population size has not been evaluated in two decades and we assume it to be smaller than when it was last estimated because of ongoing threats to its habitat. Additionally, the species is not well-studied, and we do not know the demographic information to determine the species resilience to withstand stochastic events. However, the species resiliency is tied to the availability of the species' montane forest habitat.

Redundancy: The range of the species is small. They are frequently seen in pairs, but occasionally found in small groups of three to four individuals. There is no information on the number of populations or locations where the species occurs within its range. However, because the population size and its range are very small and subject to ongoing threats, we assume the redundancy is low.

Representation: The yellow-browed toucanet resides in a narrow elevational range in the Andes Mountains. Habitat is represented by mature montane forests dominated by tall *Clusia* trees. Because the species' habitat is limited to mature forests in a narrow elevational range, it likely has low representation. Additionally, given its small population size, the species likely has limited genetic diversity.

FUTURE CONDITION

Given the threats to the species, in conjunction with its small and declining population size, we anticipate that without additional conservation action the population of yellow-browed toucanets will continue to decline further endangering the viability of this species.

FINDING

Regulatory Framework

Section 4 of the Act (16 U.S.C. 1533) and its implementing regulations (50 CFR part 424) set forth the procedures for determining whether a species is an "endangered species" or a "threatened species." The Act defines an endangered species as a species that is "in danger of

extinction throughout all or a significant portion of its range,” and a threatened species as a species that is “likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” The Act requires that we determine whether any species is an “endangered species” or a “threatened species” because of any one or a combination of the following factors:

- (A) The present or threatened destruction, modification, or curtailment of its habitat or range;
- (B) Overutilization for commercial, recreational, scientific, or educational purposes;
- (C) Disease or predation;
- (D) The inadequacy of existing regulatory mechanisms; or
- (E) Other natural or manmade factors affecting its continued existence.

These factors represent broad categories of natural or human-caused actions or conditions that could have an effect on a species’ continued existence. In evaluating these actions and conditions, we look for those that may have a negative effect on individuals of the species, as well as other actions or conditions that may ameliorate any negative effects or may have positive effects.

Status Assessment

After evaluating threats to the species and assessing the cumulative effect of the threats under the section 4(a)(1) factors, we determine that the yellow-browed toucanet experiences present and threatened destruction, modification, and curtailment of its habitat/range. Thus, after assessing the best available information, we conclude that yellow-browed toucanet is warranted for listing but precluded by other higher priority actions.

RECOMMENDED CONSERVATION MEASURES

- Facilitate creation and enhancement of habitat management plans, including sustainable natural resource use
- Encourage further research/provide funding for universities/graduate students to study the yellow-browed toucanet and its current range.
- Support conservation and research organizations working to study and protect the Peruvian Andes (and range of yellow-browed toucanet).
 - Yunkawasi – Education, science, and social development
 - ECOAN – Association of Andean Ecosystems: of the Global Forest Generation group
 - ACCA Peru – Amazon and Andean Conservation Organization
- Continue to improve effectiveness of actions taken under the US-Peru 2017 Memorandum of Understanding to combat illegal gold mining.

LISTING PRIORITY

THREAT			
Magnitude	Immediacy	Taxonomy	Priority
High	Imminent	Monotypic genus	1
		Species	2*
		Subspecies/population	3
	Non-imminent	Monotypic genus	4
		Species	5
		Subspecies/population	6
Moderate to Low	Imminent	Monotypic genus	7
		Species	8
		Subspecies/population	9
	Non-imminent	Monotypic genus	10
		Species	11
		Subspecies/population	12

Rationale for listing priority number:

In the previous Assessment (81 FR 71457), the yellow-browed toucanet was assigned an LPN of 2. After reevaluating the available information, we find that no change in the classification of the magnitude and imminence of threats to the species is warranted. The yellow-browed toucanet does not represent a monotypic genus. The yellow-browed toucanet’s estimated population is small (600–1,500 mature individuals) and the species has a restricted range. The few records of this species are from just three small locations. The magnitude of threats to its habitat, particularly from deforestation for agriculture, livestock, and gold mining, remains high and the species’ suitable habitat is likely declining. The LPN remains a 2 to reflect imminent threats of high magnitude.

Magnitude: The yellow-browed toucanet’s estimated population is small (600–1,500 mature individuals) and declining, and the species has a restricted range. The magnitude of threats to the habitat remains high and its population is likely declining due to habitat loss from deforestation. These threats are likely to continue in the future.

Imminence: Habitat loss—the conversion of montane forest for agriculture and mining (Factor

A)—is currently affecting the species and is expected to continue in the future. Therefore, threats to the yellow-browed toucanet are considered imminent.

Rationale for Change in Listing Priority Number

N/A

Is **Emergency Listing** Warranted?

No; there is currently no emergency posing a significant risk to the conservation of the Bogotá rail.

DESCRIPTION OF MONITORING

We are not aware of any monitoring efforts for the yellow-browed toucanet.

COORDINATION WITH STATES

No countries provided information or comments on the species or latest assessment. The range country, **Peru**, did not provide information or comments.

LITERATURE CITED

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All SAFs supporting 12-month findings or candidate notices of review will be signed by the Director. SAFs should continue to be surnamed by Regional and Headquarters staff and leadership.



Martha Williams, Director
U.S. Fish and Wildlife Service

June 20, 2023

Date