



**Billing Code 4333–15**

**DEPARTMENT OF THE INTERIOR**

**Fish and Wildlife Service**

**50 CFR Part 17**

**[Docket No. FWS–HQ–ES–2015–0019; 4500090024]**

**RIN 1018–BC78**

**Endangered and Threatened Wildlife and Plants; Reclassifying the Golden Conure from Endangered to Threatened with a Section 4(d) Rule**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Proposed rule

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), announce a 12-month finding on a petition to delist or downlist the golden conure under the Endangered Species Act of 1973, as amended (Act). The golden conure is a psittacine bird (parrots, parakeets, macaws, cockatoos, and others) endemic to the south Amazon Basin in Brazil. After review of the best available scientific and commercial information, we find that listing the golden conure as a threatened species is warranted. Accordingly, we propose to list it as a threatened species with a rule issued under section 4(d) of the Act. If we finalize this rule as proposed, it would reclassify the golden conure from endangered to threatened on the List of Endangered and Threatened Wildlife (List). Additionally, we are proposing to update the List to reflect the latest scientifically accepted taxonomy and nomenclature for the species as *Guaruba guarouba*, golden conure.

**DATES:** We will accept comments received or postmarked on or before **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

Comments submitted electronically using the Federal eRulemaking Portal (see ADDRESSES, below) must be received by 11:59 p.m. Eastern Time on the closing date. We must receive requests for public hearings, in writing, at the address shown in FOR FURTHER INFORMATION CONTACT by INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER.

**ADDRESSES:** You may submit comments by one of the following methods:

(1) *Electronically:* Go to the Federal eRulemaking Portal:

<http://www.regulations.gov>. In the Search box, enter FWS–HQ–ES–2015–0019, which is the docket number for this rulemaking. Then, click on the Search button. On the resulting page, in the Search panel on the left side of the screen, under the Document Type heading, click on the Proposed Rules link to locate this document. You may submit a comment by clicking on “Comment Now!”

(2) *By hard copy:* Submit by U.S. mail or hand-delivery to: Public Comments Processing, Attn: FWS–HQ–ES–2015–0019; U.S. Fish and Wildlife Service, MS: BPHC, 5275 Leesburg Pike, Falls Church, VA 22041-3803.

We request that you send comments only by the methods described above. We will post all comments on <http://www.regulations.gov>. This generally means that we will post any personal information you provide us (see *Public Comments*, below, for more information).

**FOR FURTHER INFORMATION CONTACT:** Don Morgan, Chief, Branch of Delisting and Foreign Species, Ecological Services, U.S. Fish and Wildlife Service, MS: ES, 5275 Leesburg Pike, Falls Church, VA 22041–3803; telephone, 703–358–2171. If

you use a telecommunications device for the deaf (TDD), call the Federal Relay Service at 800-877-8339.

## **SUPPLEMENTARY INFORMATION:**

### **Information Requested**

#### *Public Comments*

We intend that any final action resulting from this proposed rule will be based on the best scientific and commercial data available and be as accurate and as effective as possible. Therefore, we request comments and information from other concerned governmental agencies, the scientific community, industry, or any other interested parties concerning this proposed rule. We particularly seek comments concerning:

- (1) Reasons why we should or should not reclassify the golden conure from an endangered species to a threatened species under the Act (16 U.S.C. 1531 et seq.).
- (2) The golden conure's biology, range, and population trends, including:
  - (a) Biological or ecological requirements of the species, including habitat requirements for feeding, breeding, and sheltering;
  - (b) Genetics and taxonomy;
  - (c) Historical and current range, including distribution patterns;
  - (d) Historical and current population levels, and current and projected trends; and
  - (e) Past and ongoing conservation measures for the species, its habitat, or both.
- (3) Factors that may affect the continued existence of the species, which may include:

(a) Habitat modification or destruction (e.g., information regarding future rates of deforestation or other forms of habitat loss or degradation within the known range of the golden conure);

(b) Overutilization, including information regarding illegal collection and trade;

(c) Disease or predation;

(d) The inadequacy of existing regulatory mechanisms; or

(e) Other natural or manmade factors affecting the species' continued existence.

(4) Biological, commercial trade, or other relevant data concerning any threats (or lack thereof) to this species and existing regulations that may be addressing those threats.

(5) Information on the locations of any additional or newly discovered populations of this species. See Appendix B in the species status assessment report (SSA) for a list of known localities used by the golden conure (available under Docket No. FWS–HQ–ES–2015–0019 on <http://www.regulations.gov>)

(6) Information on the number of captive-bred golden conures in Brazil.

(7) Information regarding current or future rates of deforestation in the Brazilian Amazon as they may correlate to current or projected gross domestic product (GDP) in that country.

(8) The appropriateness of the conservation measures proposed under section 4(d) of the Act, including those that would allow the import and export of certain golden conures into and from the United States and certain acts in interstate commerce without a permit under the Act.

Please include sufficient information with your submission (such as electronic copies of scientific journal articles or other publications, preferably in English) to allow us to verify any scientific or commercial information you include.

Please note that submissions merely stating support for or opposition to the action under consideration without providing supporting information, although noted, will not be considered in making a determination, as section 4(b)(1)(A) of the Act directs that determinations as to whether any species is an endangered or threatened species must be made “solely on the basis of the best scientific and commercial data available.”

You may submit your comments and materials concerning this proposed rule by one of the methods listed in **ADDRESSES**. We request that you send comments only by the methods described in **ADDRESSES**.

If you submit information via <http://www.regulations.gov>, your entire submission—including any personal identifying information—will be posted on the website. If your submission is made via a hardcopy that includes personal identifying information, you may request at the top of your document that we withhold this information from public review. However, we cannot guarantee that we will be able to do so. We will post all hardcopy submissions on <http://www.regulations.gov>.

Comments and materials we receive, as well as supporting documentation we used in preparing this proposed rule, will be available for public inspection on <http://www.regulations.gov>, or by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, Headquarters Office (see **FOR FURTHER INFORMATION CONTACT**).

*Public Hearing*

Section 4(b)(5)(E) of the Act provides for a public hearing on this proposal, if requested within 45 days of the date of publication of this proposed rule. Requests must be sent to the address shown in **FOR FURTHER INFORMATION CONTACT** and received by the date specified in **DATES**.

#### *Peer Review*

The purpose of peer review is to ensure that our reclassification determination is based on scientifically sound data, assumptions, and analyses. In accordance with our joint policy on peer review published in the *Federal Register* on July 1, 1994 (59 FR 34270), and our August 22, 2016, memorandum updating and clarifying the role of peer review of listing actions under the Act, we sought the expert opinions of five appropriate specialists regarding the SSA report that informed this proposed rule. The peer reviewers have expertise in (1) the life history of the golden conure, (2) birds of the Amazon, and (3) the effects of habitat degradation and deforestation on Amazonian birds. We received responses from four of the five peer reviewers, which we took into account in our SSA and this proposed rule. Their comments and suggestions can be found online at [https://www.fws.gov/endangered/improving\\_ESA/peer\\_review\\_process.html](https://www.fws.gov/endangered/improving_ESA/peer_review_process.html).

We invite any additional comments from the peer reviewers on the proposed rule during the public comment period on this proposed rule (see **DATES**, above); all comments received from peer reviewers will be available, along with other public comments, in the docket for this proposed rule at <http://www.regulations.gov> under Docket No. FWS–HQ–ES–2015–0019.

## **Previous Federal Actions**

On May 22, 1975, the Fund for Animals, Inc., petitioned us to list 216 taxa of plants and animals, including the “golden parakeet,” as an endangered species pursuant to the Act. On September 26, 1975, we proposed to list the “golden parakeet (*Aratinga guaruba*)” as endangered (40 FR 44329). On June 14, 1976 (41 FR 24062), we finalized the listing as endangered.

On August 21, 2014, we received a petition from the American Federation of Aviculture, Inc. (AFA), requesting that the golden conure be removed from the List or reclassified as a threatened species. The AFA also requested that if we determined that downlisting to threatened status was warranted, we develop a rule under section 4(d) of the Act (also called a 4(d) rule) that would allow for import and export of certain golden conures into and from the United States, and interstate commerce of the species under certain circumstances.

On April 10, 2015, we published in the Federal Register (80 FR 19259), a 90-day finding for the 2014 petition, concluding that the petition provided substantial information indicating the petitioned action may be warranted, and we initiated a status review for this species.

On July 29, 2017, the AFA filed a complaint under the Act to compel the Service to issue a 12-month finding regarding the AFA’s petition, pursuant to 16 U.S.C. 1533(b)(3)(B). On November 6, 2017, the AFA and the Service entered into a settlement agreement whereby the Service agreed to submit a 12-month finding for the golden conure to the Federal Register for publication no later than September 1, 2018. This proposed rule constitutes the 12-month finding and our 5-year status review for the

golden conure.

## **Background**

### *Species Status Assessment (SSA) Report for the Golden Conure*

A thorough review of the taxonomy, life history, ecology, and overall viability of the golden conure is presented in the SSA Report (Service 2018; available at Docket No. FWS–HQ–ES–2015–0019 on <http://www.regulations.gov>). The following discussion is a summary of the information and analyses from the SSA Report.

### *Current Conservation Status*

The golden conure is currently listed as endangered under the Act (41 FR 24062; June 14, 1976) and the species is considered “Vulnerable” at the national level in Brazil (MMA 2014, p. 122). The International Union for the Conservation of Nature (IUCN) recently reclassified the species from endangered to vulnerable because its population is estimated to be larger than previously thought (Bird Life International (BLI) 2017, unpaginated). IUCN’s “vulnerable” listing acknowledges that the species nevertheless has a small estimated population that is expected to experience a rapid decline over the next three generations due to habitat loss and limited pressure from poaching (BLI 2017, unpaginated). The species is also included in Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) Appendix I (CITES 2018a, unpaginated). CITES is an international treaty for the conservation of wild fauna and flora subject to trade; species on CITES Appendix I are considered threatened with extinction and international trade is permitted only under exceptional circumstances, which generally precludes commercial trade (CITES 2016, unpaginated).

### *Species Description*

The golden conure is a large, 34-centimeter (13-inch), macaw-like bird with striking yellow plumage and green flight feathers (Laranjeiras 2011a, unpaginated; Parr and Juniper 2010, p. 436). The sexes are similar in appearance, but in first-year juveniles the yellow color is variably streaked with green—most often on the back of the head, nape and chest (Forshaw 2017, p. 223; Laranjeiras 2011a, unpaginated; Reynolds 2003, p. 10).

### *Taxonomy*

The golden conure was first documented in 1788 (ITIS 2017, unpaginated) and was later noted in the manuscripts of European explorers to Brazil in the 18th and 19th centuries (Yamashita 2003, p. 38). It was originally placed in its own (monotypic) genus *Guaruba*, then subsequently placed in the genus *Aratinga* by some authors (Peters 1937; Pinto 1978; Forshaw 1989, as cited in Tavares *et al.* 2004, p. 239), while others placed it in the genus *Conurus* (Salvadori 1891; Miranda Ribeiro 1920, as cited in Tavares *et al.* 2004, p. 239).

Researchers have since noted that its behaviors, including reproduction and vocalization, differ markedly from those of *Aratinga* species and have recommended that the golden conure's scientific name be returned to the monotypic genus *Guaruba* (Laranjeiras 2011a, unpaginated; Sick 1990, p. 112). Additionally, recent genetic analyses indicate that the golden conure is more closely related to the red-shouldered macaw (*Diopsittaca nobilis*) and the blue-crowned parakeet (*Thectocercus acuticaudatus*) (Urantówka and Mackiewicz 2017, entire), than to the *Aratinga* parakeets (Tavares *et al.* 2004, pp. 230, 236–237, 239). Therefore, the golden conure is recognized as *Guaruba guarouba* by (1) the Integrated Taxonomic Information System (ITIS 2017,

unpaginated); (2) the Brazilian Ornithological Records Committee (Piacentini *et al.* 2015, p. 163); (3) Taxonomy of Birds of the World (Clements *et al.* 2017, unpaginated); and (4) Birdlife International (BLI 2017, unpaginated). Based upon our review of the best available information, we recognize the golden conure as a valid full species in the monotypic genus *Guaruba* and we are proposing to correct its scientific name to *Guaruba guarouba* on the Federal List of Endangered and Threatened Wildlife (see **Proposed Technical Correction**, below).

#### *Abundance and Distribution*

In general, the golden conure is relatively poorly studied and information on local abundance and distribution of populations throughout the range is limited (Laranjeiras 2011b, p. 303). An earlier global population estimate (i.e., from 2010 and earlier) indicated fewer than 2,500 individuals remained, but a 2011 estimate signaled the global population contained 10,875 individuals within 174,000 square kilometers (km<sup>2</sup>) (67,182 square miles (mi<sup>2</sup>)) of suitable habitat (Laranjeiras 2011b, p. 311). This estimate was derived using: (1) Occurrence data obtained after 1987, that extended the species' known range considerably to the southwest; (2) a density estimate calculated from a conure survey in western Pará in 2007 (Laranjeiras 2011b, p. 311); and (3) estimates of suitable habitat within the known area of occurrence from a habitat modeling study in 2009 (Laranjeiras and Cohn-Haft 2009). However, because the golden conure has a patchy distribution and is poorly studied, more survey work would be required to produce better estimates.

The species' current known range includes portions of the following four states in Brazil (noted from east to west): (1) The western part of Maranhão; (2) the central region

of Pará; (3) the extreme southeast of Amazonas; and (4) the northeastern portion of Rondônia (Laranjeiras 2011a, unpaginated). Additionally, the species was recorded in a fifth state, the northern portion of Mato Grosso, in the 1990s (Lo 1995, entire), but there have been no recent sightings in that area (Moura *in litt.* 2018; BLI 2016, p. 2; Laranjeiras 2011a, unpaginated; Laranjeiras and Cohn-Haft 2009, p. 3; Albertani *et al.* 1997, p. 135).

The species' historical range once extended farther eastward (to more eastern portions of the states of Pará and Maranhão), but the habitat there was mostly deforested in the 1970s and 1980s (Laranjeiras and Cohn-Haft 2009, p. 5). The golden conure is believed to be extirpated from these regions (BLI 2017, unpaginated; BLI 2016, p. 3; Laranjeiras and Cohn-Haft 2009, p. 5), which represented approximately 30 to 35 percent of the historical range (Laranjeiras 2011a, unpaginated; Laranjeiras and Cohn-Haft 2009, p. 8).

The species is limited to regions where extensive stands of tall Amazonian rainforest are still present (Oren and Novaes 1986, p. 331). Although the species can tolerate some disturbance in the forest, the golden conure is absent from landscapes with advanced deforestation; flocks disappear seasonally from the fragmented landscapes, indicating that they require intact forest (Laranjeiras 2011a, unpaginated).

The best estimate of the geographic distribution of the golden conure is based on recent records and habitat modeling (see Service 2018, Figures 5 and 6, pp. 19-20; Laranjeiras 2011b, p. 311; Laranjeiras and Cohn-Haft 2009, entire). The total current range of the golden conure is estimated to be no more than 340,000 km<sup>2</sup> (131,275 mi<sup>2</sup>) (Laranjeiras and Cohn-Haft 2009, p. 3). The species' distribution within this range is not

continuous and is described as patchy—possibly associated with the distribution of specific nesting or food resources (Laranjeiras 2008, as cited in Laranjeiras and Cohn-Haft 2009, p. 6). The estimated suitable habitat for the golden conure within this range is 174,000 km<sup>2</sup> (67,182 mi<sup>2</sup>) (Laranjeiras 2011b, p. 311). However, parrots can cross great gaps and are capable of flying long distances (Lees and Peres 2009, pp. 284, 286); thus, it is possible that some of the recent records of the golden conure that extended the range represent vagrant groups (Moura *in litt.* 2018). Because the species has a patchy distribution within its range, extrapolation of densities to estimate the global population is problematic, and population estimates throughout the range are needed (Laranjeiras 2011a, unpaginated).

#### *Habitat*

The golden conure lives in in Brazil's lower Amazon basin, in an area south of the Amazon River, east of the Madeira River, and north of the Brazilian Shield (Laranjeiras and Cohn-Haft 2009, p. 9). The Brazilian Shield is a region formed of Precambrian crystalline rocks that may be exposed or covered by layers of sedimentary rocks (Buckup 2011, p. 203). The species occupies primary (old growth) terra firme (unflooded) rainforest on undulating landscapes in the lowlands at elevation at or under 300 meters (984 feet) (Sick 1997, as cited by Laranjeiras 2011a, unpaginated). However, the species has also has been recorded in the regrowth of secondary forests and in igapó (seasonally flooded) forests while feeding (Laranjeiras 2011a, unpaginated, citing several sources; Laranjeiras 2011b, pp. 308–309; Oren and Noveas 1986, p. 332; Laranjeiras 2008a, as cited in Laranjeiras 2011a, unpaginated). The majority of golden conure groups appear to be resident (i.e., non-migratory), even in the post-reproductive period (Laranjeiras

2008, as cited in Forshaw 2017, p. 226; Laranjeiras 2011a, unpaginated; Yamashita 2003, p. 38).

The golden conure uses large, old growth, hardwood trees (Yamashita 2003, p. 38) for cavity nesting (Oren and Novaes 1986, pp. 333–334). In most cases, the species uses the same tree for nesting and roosting (BLI 2016, p. 4; Laranjeiras 2011a, unpaginated; Yamashita 2003, p. 38). Most known nest and roost cavities have been found high in tall, standing, dead trees within a small, disturbed (cleared) area adjacent to continuous forest. The golden conure seems to prefer using isolated trees (i.e., some distance from a neighboring tree) for nesting likely because isolated trees provide better protection against terrestrial or arboreal predators (Laranjeiras 2011a, unpaginated; Kyle 2005, p. 3). To date, we are aware of 7 different species of hardwood trees used for nesting (Laranjeiras 2011b, p. 308; Silveira and Belmonte *in press*, unpaginated; Oren and Novaes 1986, p. 333; Lima *et al.* 2014, p. 323) and more than 28 species of fruiting trees used for feeding (Service 2018, pp. 10, 60–61).

### *Biology*

The golden conure is frugivorous (fruit-eating), and its diet varies throughout the year and across its distribution (Laranjeiras 2011a, unpaginated). The species eats whole fruit, seeds, pulp, buds and flowers, nectar, and peels; it will also feed on cultivated plants such as corn (*Zea mays*) and mangoes (*Mangifera indica*) (Laranjeiras 2011b, pp. 308–309; Oren and Novaes 1986, p. 332).

Breeding and nesting take place during the wet months, generally from November or December through April (Forshaw 2017, p. 227; Laranjeiras 2011a, unpaginated; Oren and Novaes 1986, p. 332). The social structure and breeding behavior of the golden

conure appear to be unique from that of other members of the parrot family in that the species engages in communal brood-rearing. The golden conure remains in flocks made up of family groups or clans (averaging 10 individuals) (Laranjeiras 2011a, unpaginated), and individuals in the group (referred to as “reproductive helpers”) assist in rearing the young. Most other large parrots are believed to incubate and rear young in pairs (Albertani *et al.* 1997, pp. 135–136).

The golden conure’s communal brood-rearing includes the use of one or two uncommon reproductive strategies where the flock is either made up of (1) multiple related nesting pairs with reproductive helpers (Oren and Novaes 1986, p. 333), or (2) a single leading pair with juveniles from different generations acting as helpers (Reynolds 2003, p. 12; Oren and Novaes 1986, p. 333). Nest protection seems to be an important part of communal brood-rearing, and a group will vigorously defend the nest in response to potential competitors or predators (Forshaw 2017, p. 228; Laranjeiras 2008a, as cited in Laranjeiras 2011a, unpaginated).

Most of the information regarding development of the young is from captive birds. Eggs hatch within 28 to 30 days (Arndt 1996, as cited by Forshaw 2017, p. 227; Laranjeiras 2011a, unpaginated; Oren and Novaes 1986, p. 333). Nestlings reach adult size in about 60 days (Laranjeiras 2011a, unpaginated) and fledge at approximately 55–60 days post hatch (Arndt 1996, as cited by Forshaw 2017, p. 227). The post-reproductive period, when first year juveniles can be seen in the flocks at feeding sites in the wild, is from March or April to July or August (Laranjeiras 2011b, p. 304; Oren and Novaes 1986, p. 332).

First-year juveniles always stay with the family group and can be easily identified by their green-streaked plumage (Yamashita 2003, p. 38). Juveniles attain adult plumage in a molt when they are about 1 year old (Laranjeiras 2011a, unpaginated). Fledged chicks and juveniles will beg for food from foraging adults (Kyle 2005, p. 4). Annual survival information is limited, but first-year juveniles represent no more than 13 percent of the individuals in flocks (Laranjeiras 2008a, as cited in Laranjeiras 2011a, unpaginated). In some areas (e.g., in eastern Pará, where trapping for the illegal pet trade has occurred), the percentage of observed first-year juveniles in the flocks was zero (Reynolds 2003 as cited by Laranjeiras 2011b, p. 309).

In captivity, adults reach sexual maturity at about 3 years of age (Oren and Novaes 1986, p. 333), with the average age for successful breeding occurring between 6 and 8 years (Reynolds, 2003, p. 12). Lifespan for the golden conure in the wild is not known, although the generation length was estimated as 7.4 years (BLI 2016, unpaginated) and the maximum age recorded for the species in captivity was 60 years with a median age of 14 years (calculated using adults  $\geq 4$  years;  $n=190$ ) (Young *et al.* 2011, p. 35). Information is lacking on the species' carrying capacity, birth rates, nesting success, and home range (broadly defined as confined areas where individuals conduct their day-to-day activities (Boitani and Fuller 2000, p. 65).

### **Summary of Factors Affecting the Species**

A species is an “endangered species” for purposes of the Act if it is in danger of extinction throughout all or a significant portion of its range and is a “threatened species” if it is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. Section 4 of the Act and its implementing

regulations (50 CFR part 424) set forth the procedures for listing species, reclassifying species, or removing species from listed status. A species may be determined to be an endangered or threatened species due to one or more of the five listing factors described in section 4(a)(1) of the Act: (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. A species may be removed from listed status (i.e., “delisted”) or reclassified on the same basis. Our analysis of threats is an evaluation of both the threats currently facing the species and the threats that are reasonably likely to affect the species in the foreseeable future without the Act’s protections.

In our analysis, we considered conservation measures (primarily the use of protected areas) as part of the current condition and projected future scenarios to evaluate viability of the species (Service 2018, pp. 42-47). We generally define viability as the ability the golden conure to sustain populations in natural ecosystems and disturbed habitats over time. Using the SSA framework, we considered what the species needs to maintain viability by evaluating the species in terms of resiliency, redundancy, and representation (Wolf *et al.* 2015, entire). For further information on viability, see the SSA Report (<http://www.regulations.gov> at Docket No. FWS–HQ–ES–2015–0019).

When we listed the golden conure as endangered in 1976, the species was perceived to be declining in numbers due to any one the following factors, or a combination of all three factors: The present or threatened destruction, modification, or

curtailment of its habitat or range (Factor A); overutilization of the species for commercial, recreational, scientific, or educational purposes (Factor B); or the inadequacy of existing regulatory mechanisms (Factor D) (41 FR 24062; June 14, 1976).

The golden conure presently faces the most risk from loss and degradation of its habitat from deforestation originating from multiple anthropogenic activities (Factor A) (BLI 2016, p. 4; IBAMA 2003 and SEMA 2007, as cited by Laranjeiras 2011a, unpaginated; Collar 1992, p. 5). Habitat loss and degradation is likely to be intensified by synergistic effects associated with the consequences of climate change (Staal *et al.* 2015, p. 2) (Factor E). Climate projections include increased temperatures, dryer conditions, and more extreme weather (including droughts), which have the potential to stress trees and cause tree mortality (Fearnside 2009, pp. 1003, 1005). These conditions also increase the unintentional spread of fires, further contributing to deforestation (Fearnside 2009, p. 1005). Additionally, the golden conure is still being illegally collected and traded within Brazil, at some unknown level, for the live pet bird trade (Factor B). These threats and other potential stressors are discussed in detail in the SSA Report and are summarized below.

#### *Habitat Loss—Deforestation*

Large-scale deforestation in the Amazon has occurred since the 1970s and 1980s concurrent with the growth of Brazil's economy (GFA 2017, unpaginated). The Brazilian Amazon is approximately the size of Western Europe, and as of 2016, an area the size of France has been lost to deforestation (Fearnside 2017a, pp. 1, 3).

Approximately 30 to 35 percent of the golden conure's range has already been lost to deforestation, primarily in the eastern states of Pará and Maranhão (Laranjeiras 2011a,

unpaginated; Laranjeiras and Cohn-Haft 2009, p. 8), and another 23 to 30 percent of the golden conure's habitat is predicted to be lost within 22 years or three generations (Bird *et al.* 2011 Appendix S1),

The golden conure's range partially overlaps what is known as the “arc of deforestation,” an area in the southeastern Amazon where rates of deforestation and forest fragmentation have been the highest (Prioste *et al.* 2012, p. 701; Laranjeiras 2011a, unpaginated; Laranjeiras and Cohn-Haft 2009, p. 8). After a long period of deforestation in the Amazon, rates dropped dramatically during the years from 2005 to 2011 (Alves *et al.* 2017, p. 76; Fearnside 2017b, p. 1; Prodes 2017, unpaginated; Hochstetler and Viola 2012, p. 759)). Deforestation declined from an annual average of about 21,000 km<sup>2</sup> (8,108 mi<sup>2</sup>) per year for the 5-year period between 2000 to 2004—to 7,000 km<sup>2</sup> (2,703 mi<sup>2</sup>) in 2009 (Petherick 2013, p. 8; Hochstetler and Viola 2012, p. 759).

Despite these declines, the total area deforested in Brazil's Amazon has risen steadily since deforestation rates were first measured in 1988 (IPAM 2017, p. 7 using PRODES 2017 data). More recently, deforestation rates are increasing again (Fearnside 2017b, p. 1; IPAM 2017, p. 15; Biderman and Nogueron 2016, unpaginated), as global demand for agricultural commodities continues to rise (Brando *et al.* 2016, abstract), and the “arc of deforestation” could continue to be a hotspot (Alves *et al.* 2017, p. 76).

An area does not have to be mostly deforested to lose value as suitable habitat for forest-dependent species such as the golden conure. Deforestation itself creates isolation of remnant forest patches and forest edge effects (Barlow *et al.* 2016, p. 144; Ewers and Didham 2006, pp. 123–124). Edge effects decrease habitat quality within remaining patches and the functional connectivity between them (Zurita *et al.* 2012, p. 504, citing

many sources). Additionally, disturbance within the forest remnant, such as selective logging and increased fires, changes forest structure and species composition, generally reducing biodiversity (Barlow *et al.* 2016, p. 144).

Forest habitat degradation and fragmentation typically begin with road construction and subsequent human settlement. Activities resulting from human settlement include: (1) An increased network of unofficial roads; (2) logging; (3) crop production and cattle ranching; (4) increased fires; and (4) further infrastructure development, including more roads, dams and hydroelectric projects, and mining (GFA 2018a, b, c, and d, unpaginated; GFA 2017, unpaginated; Sonter *et al.* 2017, entire; Barber *et al.* 2014, entire; BLI 2016, unpaginated; Yamashita 2003, p. 38).

Roads have a major effect on Amazon deforestation. Deforestation is much higher near roads (including unofficial roads) and rivers (Barber *et al.* 2014, entire). Nearly 95 percent of all deforestation occurred within 5.5 km (3.4 mi) of roads or 1 km (0.6 mi) of rivers (Barber *et al.* 2014, pp. 203, 205, 208). Unofficial roads are rapidly expanding in the region and contribute to further degradation, including logging, new colonization, forest fragmentation, and increased fire risk (Barber *et al.* 2014, p. 203).

Logging in the Amazon was once restricted to areas bordering major rivers but the construction of highways and strategic access roads, coupled with the depletion of hardwood stocks in the south of Brazil, made logging an important, growing industry (Veríssimo *et al.* 1992, p. 170). Logging operations typically occur on private lands claimed by ranchers, land speculators, and squatters who sell extraction rights to logging companies (GFA 2018a and b, unpaginated). After logging, the land may be clear-cut and burned, in preparation for crops (Reynolds 2003, p. 10). Burning makes nutrient-

deficient land temporarily nutrient-rich, but it will only yield crops for a few years, creating a cycle of more land clearing (Reynolds 2003, p. 10). Revenues from timber sales are also used to finance conversion of the land to cattle ranching (GFA 2018a, unpaginated). Although the Brazilian forest code requires private landowners in the Amazon to maintain 80 percent of their land as forest, the code has been poorly enforced (GFA 2018b, unpaginated), and full compliance has not been achieved (Azevedo *et al.* 2017, entire; see **Conservation Measures and Regulatory Mechanisms**, below).

Logging on public lands is allowed via concessions where logging companies are granted logging rights for a fee (GFA 2018a, unpaginated). The concession system typically requires practices that minimize effects to the forest (e.g., rotation of harvest, minimum-tree-size standards, and targets for long-term sustainable yield) (GFA 2018a, unpaginated). However, the concession system is not currently working as intended and illegal logging in public protected areas remains a serious threat, particularly logging of mahogany (*Swietenia macrophylla*) (BLI 2016, p. 5), a CITES Appendix II species (CITES 2018b). CITES Appendix II includes species that are not necessarily threatened with extinction, but for which trade must be controlled to avoid uses that are incompatible with their survival (CITES 2016, unpaginated). An example of illegal logging is that which occurs in Jamari National Forest, an area that is poorly protected and faces pressures from loggers, squatters, and poachers (Forshaw 2017, p. 224, F. Olmos *in litt.* 1999 as cited in BLI 2016, p. 5).

Also, as of 2010, Brazil had only leased a small amount of private concession forest, and instead, had announced plans to sell large forest tracts (GFA 2018a, unpaginated). If these lands were to become privately owned, they would be subject to

Brazil's forest code and up to 20 percent could be legally deforested. Additionally, although selective logging and requirements for minimum tree sizes are intended to minimize effects to the forest, logging of larger trees is likely to have a greater effect on the golden conure because the species uses larger, older trees for its nesting and roosting (Yamashita 2003, p. 38).

Expanding crop production and ranching are also major drivers of deforestation in the Amazon basin. Soy beans only grew in temperate climates until agricultural research generated new varieties that grow in the tropics. These innovations, coupled with the application of fertilizer, allowed for the expansion of soy farming into the Amazon beginning in the 1970s (GFA 2018c, unpaginated). Soy beans are primarily used for cattle feed, and in 1990s and early 2000s, high demand for beef created a “soy-cattle pasture deforestation dynamic,” where soy production replaced existing cattle pasture, and forced new deforestation into the Amazon for cattle ranching (GFA 2018c, unpaginated). In 2006, the soy industry, in response to pressure from consumers, retailers, and nongovernment organizations, instituted a soy moratorium in Brazil's Amazon. The agreement curbs forest clearing for soy by blocking farms that violate the agreement from selling to companies that signed the soy moratorium (Gibbs *et al.* 2015, p. 377). In the 2 years preceding the moratorium, approximately 30 percent of soy expansion occurred through deforestation rather than by replacement of pasture or other previously cleared lands; by 2014, just 1 percent of soy expansion was responsible for deforestation in Brazil's Amazon (Gibbs *et al.* 2015, p. 377). The soy moratorium was renewed indefinitely in 2016, or until it is no longer needed (Patiño 2016, unpaginated).

Cattle ranching is the largest cause of deforestation in every Amazon country and is responsible for about 80 percent of current deforestation rates (GFA 2018d, unpaginated). Brazil is the largest beef exporter in the world, supplying about one quarter of the world market (GFA 2018d, unpaginated). Brazil's Amazon supports about 200 million head of cattle on approximately 450,000 km<sup>2</sup> (173,746 mi<sup>2</sup>) of deforested land (GFA 2018d, unpaginated). Cattle from the Amazon are mostly sold in the domestic markets because some of the Amazon states have not been cleared for the presence of foot-and-mouth disease (Fearnside 2017b, p. 14). Beginning in 1998, states in the south (non-Amazonian) were certified as free of foot-and-mouth disease (Kaimowitz *et al.* 2004, as cited by Fearnside 2017b, p. 14). The growing export market for beef from these southern states has indirectly increased the demand for Amazon beef for the domestic market (Fearnside 2017b, p. 14). In 2015 and 2016, new markets for Brazilian beef were opened up via agreements with Russia, the United States, and China (Fearnside 2017b, p. 14). The Chinese market, in particular, has significant potential demand for both beef and leather, with China being the world's largest manufacturer of shoes (Fearnside 2017b, p. 16).

Conversion of native forest for the cultivation of palm plantations for the production of palm oil is an emerging agricultural use in the region that is likely to further reduce the amount of habitat available to golden conure. Palm oil is in high demand and the industry is highly profitable (Lees *et al.* 2015, p. 2). Increased palm oil production has the potential to create thousands of new jobs and raise regional standards of living in Brazil (Lees *et al.* 2015, p. 2). The Brazilian government plans to increase biofuel production in the next decade, driven primarily by demands for fuel (ethanol and

biodiesel) (Villela *et al.* 2014, p. 273). Palm oil production has been touted as a “green fuel” from both a biodiversity and a climate change perspective because degraded lands (e.g., abandoned cattle pastures and mining areas) can be used for plantations (Lees *et al.* 2015, p. 2). However, a recent study of regional avian biodiversity in palm oil plantations concluded that they are as detrimental to avian biodiversity as other forms of agriculture such as cattle pasture (Lees *et al.* 2015, entire). Therefore, any native forest converted to palm plantations will result in habitat loss for the golden conure, and any degraded land that is planted for palm oil will not have the opportunity to regenerate or be restored to suitable habitat for the species.

Increased fire risk results from human settlement and the activities noted above (Barber *et al.* 2014, p. 203)(see *Projected Effects from Climate Change*, below).

Although use of fire for land management is now common in rural Amazonia (Malhi *et al.* 2008, p. 171), wildfires in the tropical forests of the Amazon were rare over the past millennia, and the trees are not adapted for fire (Fearnside 2009, p. 1005). Amazonian trees have thin bark, and fire heats the cambium under the bark at the base of the trunk, causing the tree to die (Fearnside 2009, p. 1005) and further contributing to deforestation.

Hydroelectric dams are also a major contributor to deforestation in the Amazon. Areas affected by dams include both the area flooded by the dam and effects from the increased human settlement around the dam (GFA 2018e, unpaginated). Brazil is the second-largest producer of hydroelectricity in the world (after China), and hydropower supplies about 75 percent of Brazil’s electricity (GFA 2018e, unpaginated; Fearnside 2017c, unpaginated). Numerous dams are under construction or planned in the Amazon basin. For example, the Belo Monte “mega dam” on the Xingu River, flooded 673 km<sup>2</sup>

(260 mi<sup>2</sup>) of lowlands and forest, and blocked 1,609 km (1,000 mi) of the Xingu River (Fearnside 2017c, unpaginated). Recently the Brazilian Government announced an end to the construction of mega dams in the Amazon (Branford 2018, unpaginated), but smaller dams within the golden conure's range are still under construction or planned (GFA 2018e, unpaginated; Fearnside 2017c, unpaginated; Nobre *et al.* 2016, p. 10763).

Mining for minerals also contributes to deforestation of the Amazon. In Brazil, mining has grown from 1.6 percent of GDP in 2000, to 4.1 percent in 2011, and is projected to increase by a factor of 3 to 5 by 2030 (Brasil Ministério de Minas e Energia 2010, as cited by Ferreira *et al.* 2014, p. 706). In Brazil's Amazon, mining leases, exploration permits, and concessions collectively encompass 1.65 million km<sup>2</sup> (0.64 million mi<sup>2</sup>) of land, with about 60 percent located in the Amazon forest (Departamento Nacional de Produção Mineral 2012, as cited in Sonter *et al.* p. 1). Although mining is rapidly expanding in the region, to date, the environmental approval process for new mines or the expansion of existing projects does not consistently evaluate for off-lease effects of these projects, including the indirect or cumulative impacts to the surrounding forest (Sonter *et al.* 2017, p. 1). The total off-lease effects of mining-induced deforestation can be 12 times greater than that from the leases alone (Sonter *et al.* 2017, p. 2).

#### *Deforestation Rates and Gross Domestic Product*

Annual deforestation rates in the Brazilian Amazon have always varied, but have generally been correlated with national economic growth as measured by GDP (Petherick 2013 p.7; Hochstetler and Viola 2012, p. 759). However, beginning in 2005, measures of deforestation and GDP have separated or “decoupled” (Lapola *et al.* 2014, p. 27;

Petherick 2013 p.7). The Amazon experienced dramatic reductions in annual average rates of deforestation from almost 21,000 km<sup>2</sup> (8,108 mi<sup>2</sup>) between 2000 and 2004—to about 7,000 km<sup>2</sup> (2,703 mi<sup>2</sup>) in 2009 and 2010 (Prodes 2017, unpaginated; Petherick 2013, p. 8; Hochstetler and Viola 2012, p. 759) and 6,418 km<sup>2</sup> (2,478 mi<sup>2</sup>) in 2011 (Prodes 2017, unpaginated). During this same period, Brazil's GDP rose steadily, indicating strong, sustained growth from an export commodity boom (Petherick 2013 p.7; Hochstetler and Viola 2012, pp. 759–760).

The decoupling has been attributed to a number of factors with no clear consensus on which factor has been the most effective (Moutinho 2015, p. 2). Contributing factors include government strategies and policies for forest conservation (Assunção *et al.* 2012, p. 697) such as: (1) The expansion of protected areas, which reduced the supply of unclaimed forest land (Nepstad *et al.* 2014, p. 1118); (2) an effort that began in 2007 to blacklist the worst deforesters; and (3) efforts to monitor and control municipalities with high levels of illegal deforestation through sanctions and restricted access to credit (Moutinho 2015, p. 3; Assunção *et al.* 2012, p. 698).

Reductions in deforestation have also been attributed to market and social forces, such as decreases in the price of agricultural commodities (including soy and beef) in 2005 (Fearnside 2017b, p. 1; Assunção *et al.* 2012, entire) and the 2006 soy moratorium (Gibbs *et al.* 2015, pp. 377–378). Importantly, increased soy production from 2006 to 2010 was due to agricultural intensification practices (Lapola *et al.* 2014, p. 28) and expansion into previously cleared land in the Amazon (Nepstad *et al.* 2014, p. 1121). Eventually cleared land that is suitable for soy production will become scarce, likely increasing deforestation pressure on the Amazon (Nepstad *et al.* 2014, p. 1121).

Although GDP is not presently a good predictor of Amazon deforestation (Fearnside 2017b, p. 14), as global population and food demands continue to rise (Beckman *et al.* 2017, p. i; Brando *et al.* 2016, abstract), it is possible that these measures could more closely correlate in the future.

Brazil is one of the countries that currently has comparatively low productivity levels and is projected to grow faster as it catches up with more developed countries (Guardian 2012, unpaginated). Brazil is expected to remain among the top ten economies as rated by GDP based on purchasing power parity (GDP PPP) by 2050 (PWC Global 2016). GDP PPP measures the relative purchasing power of different countries' currencies over the same types of goods and services, allowing for more accurate comparison of living standards (Euromonitor International 2013, unpaginated). Forecasts vary for Brazil's GDP PPP, with one forecast predicting that GDP PPP will rise steadily through 2050 (PWC Global 2016, unpaginated), while a more recent forecast predicts that GDP PPP will stagnate then drop after about 2050 (Knoema 2018, unpaginated). Therefore, if deforestation rates were to correlate more closely with GDP PPP in the future, in one scenario deforestation rates would steadily rise, and in the other scenario, deforestation rates would stabilize and then decline after about 2050.

#### *Projected Effects from Climate Change*

Changes in Brazil's climate and associated changes to the landscape are likely to result in additional habitat loss for the golden conure. Across Brazil, temperatures are projected to increase and precipitation to decrease (Barros and Albernaz 2014, p. 811; Carabine and Lemma 2014, p. 11). The 2013 Intergovernmental Panel on Climate Change (IPCC) predicted that by 2100, South America will experience temperature

increases ranging from 1.7 to 6.7 degrees Celsius (°C) (3.06 to 12.06 degrees Fahrenheit (°F)) under the medium and high emission scenarios and 1.0 to 1.5 °C (1.8 to 2.7 °F) under a low emissions scenario (Carabine and Lemma 2014, p. 10; Magrin *et al.* 2014, p. 1502). Projected changes in precipitation in South America vary by region, with rainfall reductions in the Amazon estimated with medium confidence (about a 5 out of 10 chance) (IPCC 2018, unpaginated; Carabine and Lemma 2014, p. 11; Magrin *et al.* 2014, p. 1502).

Downscaled models, based, in part, on the earlier (2007) IPCC data, predict more severe changes, with the greatest warming and drying occurring over the Amazon rainforest, particularly after 2040 (Marengo *et al.* 2011, pp. 8, 15, 27, 39, 48; Féres *et al.* 2009, p. 2). Estimates of temperature changes in the Amazon by the end of the 21st century (2090–2099) are 2.2 °C (4 °F) under a low greenhouse gas emission scenario and 4.5 °C (8 °F) under a high-emission scenario (Marengo *et al.* 2011, p. 27). Increased temperatures of these amounts put the Amazon region at a high risk of forest loss and more frequent wildfires (Magrin *et al.* 2007, p. 596). Some leading global circulation models indicate that extreme weather events, such as droughts, will increase in frequency or severity due to global warming. As a result, droughts in Amazonian forests could become more frequent in the future (Marengo *et al.* 2011, p. 48). For example, the 2005 drought in Amazonia was a 1-in-20-year event; however, those conditions may become a 1-in-2-year event by 2025, and a 9-in-10-year event by 2060 (Marengo *et al.* 2011, p. 28). Deforestation is greater under drought conditions due to more risk of fires (Marengo *et al.* 2011, p. 16).

A number of large-scale drivers of environmental change (i.e., land-use change from deforestation and climate changes due to global warming) are operating simultaneously and interacting nonlinearly in the Amazon (Nobre *et al.* 2016, p. 10759). Thus, the risks to golden conure from deforestation will likely be intensified by synergistic effects associated with climate change (Staal *et al.* 2015, p. 2). The Amazon's rainforest may have two "tipping points": (1) A temperature increase of 4.0 °C (7.2° F); or (2) deforestation exceeding 40 percent (Nobre *et al.* 2016, p. 10759). Once exceeded, these tipping points could cause large-scale shifts in the vegetation to a savanna (i.e., "savannization") mostly in the southern and eastern Amazon (Nobre *et al.* 2016, p. 10759) within the golden conure's range.

Similarly, a recent study that considered only the effects from global warming (i.e., absent deforestation) predicted that by the end of this century, some areas of rainforest will be replaced by deciduous forest and grassland in a moderate emissions scenario (RCP 4.5) and by all grassland in the high emissions scenario (RCP 8.5) (Lyra *et al.* 2016, entire). Although the projected outcomes of models are not definitive, any terra firme forest habitat that shifts from rainforest to other habitat types (e.g., savanna) would result in loss of habitat for the golden conure.

#### *Illegal Collection and Trade*

The golden conure is highly prized as an aviary bird and has been extensively trapped for both the domestic and international pet trade in the past (BLI 2016, p. 5; Alves *et al.* 2013, p. 60; Laranjeiras 2011a, unpaginated; Yamashita 2003, p. 38; Snyder *et al.* 2000, p. 132; Collar 1992, p. 304; Oren and Novaes 1986, pp. 329, 334–335). The international trade of wild neotropical parrots was significantly reduced during the 1990s

due to (1) tighter enforcement of CITES regulations, (2) stricter measures under European Union legislation, (3) adoption of the Wild Bird Conservation Act (WBCA; 16 U.S.C. 4901 et seq.) in the United States, and (4) adoption of national legislation in various other countries (Snyder *et al.* 2000, p. 99). Although an illegal international trade of the golden conure for the pet trade occurred in the past, there is little evidence that this practice is continuing (Laranjeiras 2011a, unpaginated; Silveira and Belmonte 2005 *in press*, unpaginated). In contrast, the illegal domestic market for the species is still occurring at some level (Silveira and Belmonte *in press*, unpaginated).

Historically, keeping birds was an important part of local indigenous tradition and culture (Carvalho 1951 and Cascudo 1973, as cited by Alves *et al.* 2013, p. 54). Young golden conures were taken from the wild to raise as pets and for feathers, but now they are also sold to bird traders (Oren and Novaes 1986, p. 335). Much of the area occupied by the golden conure is poor, and selling the birds for the domestic pet trade provides an extra source of income (Yamashita 2003, p. 39).

There are mixed reports regarding the degree to which illegal capture of golden conures from the wild (“poaching”) is still occurring. The Brazilian Institute of Environment and Renewable Natural Resources (IBAMA) has licensed and regulated bird breeding in an effort to reduce poaching (Alves *et al.* 2013, p. 61). As a result, several sources believe poaching is no longer a major concern for the species because trade is thought to mostly be from the substantial captive population, and thus does not significantly affect the wild population (Silveira *in litt.* 2012, Lees *in litt.* 2013, in BLI 2016, p. 5). Additional captive populations exist outside Brazil. There are CITES-

registered captive-breeding operations for golden conures in the United Kingdom and the Philippines.

However, some level of illegal capture and trade of the species is still occurring. For example, in 2016, approximately 57 golden conures were seized in Brazil (IBAMA 2017 as cited by Lima *in litt.* 2018). We have no seizure data from any other years, and this number may represent a year where seizures were high, but it demonstrates that domestic trafficking is occurring (Lima *in litt.* 2018). Captive rearing may not be a practical alternative to illegal trade, particularly in low-income areas because the price of commercially bred birds is approximately 10 times higher than wild-caught individuals (Renctas 2001, as cited in Alves *et al.* 2013, p. 61; Machado 2002, as cited in Alves *et al.* 2010, p. 155).

Additionally, oversight of domestic wildlife-breeding facilities in Brazil is limited (Alves *et al.* 2010, entire), and many wild bird species declared to be captive-bred are actually born in the wild and traded under fraudulent documentation (Alves *et al.* 2013, p. 61). Although each Brazilian state has a wildlife center responsible for managing, licensing, and inspecting all categories of breeders, traders, and zoos (Kuhnen and Kanaan 2014, p. 125), most centers lack resources and funding (Padrone 2004, as cited in Kuhnen and Kanaan 2014, p. 125). Also, there are not enough inspections at market places and commercial breeding facilities to fight illegal domestic trade (Alves *et al.* 2010, pp. 154–155).

The United States is a major importer of pet birds, yet relatively little trade in the golden conure has been observed. We reviewed all records of legal and intercepted illegal trade in the CITES annual trade records submitted by the U.S. Fish and Wildlife

Service from 1981 to 2016. During this 35-year period, 54 live golden conures were imported into the United States and 26 were exported (UNEP–WCMC 2018, unpaginated). One record of illegal trade was reported in 1981, and involved the unlawful importation of a single animal from Brazil. Overall, the U.S. trade in the golden conure has been relatively low compared with other pet birds.

#### *Other Potential Stressors*

Other potential stressors to the golden conure include hunting and persecution (Factor B), and predation or disease (Factor C). The species is likely still hunted at low levels as a food source, and for feathers, and birds that raid crops may be shot by farmers (Oren and Novaes 1986, p. 335). However, we have no information about the rate that these activities may be occurring or the extent to which they may be affecting populations. Similarly, we have no information regarding diseases that may affect golden conures in the wild.

Golden conures, including eggs and nestlings, are prey to a variety of native predators, including toucans (Oren and Novaes 1986, p. 334; Forshaw 2017, p. 228), raptors (Laranjeiras 2008a, as cited in Laranjeiras 2011a, unpaginated; Silveira and Belmonte *in press*, unpaginated), monkeys, snakes, and the tayra (*Eira barbara*), an omnivorous weasel (Oren and Novaes 1986, p. 334). However, we have no information regarding the rates predation on the golden conure from these predators and how that may be affecting the conure.

#### **Conservation Measures and Regulatory Mechanisms**

The golden conure is considered “Vulnerable” at the national level in Brazil (MMA 2014, p. 122). Like other wildlife species, conures and their nests, shelters, and

breeding grounds are protected by Brazilian environmental laws (Clayton 2011, p. 4; Environmental Crimes law of Brazil (1999) as cited in MSU 2018, unpaginated; Official List of Brazilian Endangered Animal Species Order No. 1.522/1989 as cited in ECOLEX 2018; CFRB 2010, p. 150; Law No. 5.197/1967 as cited in LatinLawyer 2018, unpaginated). Additionally, several Brazilian laws are designed to protect forests. Destruction and damage of forest reserves, cutting trees in forest reserves, and causing fire in forests, among other actions, without authorization are prohibited (Clayton 2011, p. 5; Law No. 9.605/1998 as cited in LatinLawyer 2018, unpaginated).

Protected areas have been emphasized as the best hope for the golden conure's survival (e.g., in the Tapajos River region and the Gurupi Biological Preserve) (Laranjeiras and Cohn-Haft 2009, pp.1, 8; Silveira and Belmonte *in press*, unpaginated). The species occurs in nine areas recently designated as Important Bird Areas (IBAs) in Brazil (BLI 2018a-h, unpaginated; Lima *et al.* 2014, p. 318; Laranjeiras 2011a, unpaginated; Devenish *et al.* 2009, pp. 104–106). IBAs are places of international significance for the conservation of birds and other biodiversity (BLI 2018i, unpaginated). Levels of protection at IBAs vary from fully protected to no protections (BLI 2018i, unpaginated). For example, the Gurupi IBA has partial protection while the Caxiuanã / Portel IBA has none (Service 2018, pp. 68-70; BLI 2018b, unpaginated; Devenish *et al.* 2009, pp. 104-106). Additionally, the species' predicted range overlaps with numerous other protected areas, also having various levels of protection (Service 2018, pp. 68-70; Laranjeiras and Cohn-Haft 2009, p. 8).

Various regulatory mechanisms (Law No. 11.516, Act No. 7.735, and Decree No. 78, as cited in ECOLEX 2018, unpaginated) and Law 6.938/1981 (LatinLawyer 2018,

unpaginated) direct Brazil's federal and state agencies to promote the protection of lands and govern the formal establishment and management of protected areas to promote conservation of the country's natural resources. These mechanisms generally aim to protect imperiled wildlife and plant species, genetic resources, overall biodiversity, and native ecosystems on federal, state, and privately owned lands (e.g., Law No. 9.985, Law No. 11.132, Resolution No. 4, and Decree No. 1.922, as cited in ECOLEX 2018, unpaginated).

*Protected Areas:* Protected areas have traditionally formed the backbone of forest conservation in the Amazon Basin, and they still remain a vital conservation strategy (GFA 2018f, unpaginated). Brazil has the largest protected area network in the world. The National Protected Areas System (Federal Act 9.985/2000, as cited in LatinLawyer 2018, unpaginated) was established in 2000, and covers nearly 2.2 million km<sup>2</sup> (0.8 million mi<sup>2</sup>) or 12.4 percent of the global total (WDPA, 2012 as cited by Ferreira *et al.* 2014, p. 706). This extensive network of protected areas is intended to (1) preserve priority biodiversity conservation areas, (2) establish biodiversity corridors, and (3) protect portions of the 23 Amazonian ecoregions identified by World Wildlife Fund (Rylands and Brandon 2005, pp. 612, 615; Silva, 2005, entire). Brazil's Protected Areas may be categorized as "strictly protected" or "sustainable use" based on their overall management objectives. Strictly protected areas include national parks, biological reserves, ecological stations, natural monuments, and wildlife refuges protected for educational and recreational purposes and scientific research. Protected areas of sustainable use (national forests, environmental protection areas, areas of relevant ecological interest, extractive reserves, fauna reserves, sustainable development reserves,

and private natural heritage reserves) allow for different types and levels of human use with conservation of biodiversity as a secondary objective.

By 2006, 1.8 million km<sup>2</sup> (0.7 million mi<sup>2</sup>), or approximately 45 percent of Brazil's Amazonian tropical forest, was under some level of protection as federal or state managed land, or designated as indigenous reserve (managed by indigenous communities) (Barber *et al.* 2014, p. 204). Of this, 19.2 percent was strictly protected areas, and 30.6 percent was comprised of federal and state sustainable use area, with indigenous reserves making up the remainder (Barber *et al.* 2014, p. 204).

Indigenous lands are legally recognized areas where indigenous peoples have perpetual rights of access, use, withdrawal, management, and exclusion over the land and associated resources (GFW 2018, unpaginated). Indigenous communities sustainably use their forest land, and large-scale deforestation is prohibited (Barber *et al.* 2014, p. 204). Indigenous communities practice shifting cultivation, trade non-timber forest products, and occasionally allow selective logging (GFA 2018g, unpaginated; Schwartzman and Zimmerman 2005, p. 721).

To date, the golden conure has been found in numerous protected areas or IBAs, with a total area of approximately 154,673 km<sup>2</sup> (51,719 mi<sup>2</sup>) (Service 2018, pp 68-70). However, not all of the area represented contains suitable habitat for the species and several of the IBAs (39 percent) presently have no protection (61,864 km<sup>2</sup> (23,866 mi<sup>2</sup>)). An additional 26 percent of IBAs presently have just partial protection (40,582 km<sup>2</sup> (15,669 mi<sup>2</sup>)) (Service 2018, pp 68-70).

Despite significant efforts to designate and establish protected areas, funding and resources are limited and adequate enforcement of these areas is challenging. For

example, the conure occurs in Jamari National Forest, which is poorly protected and faces pressures from loggers, squatters, and poachers (Forshaw 2017, p. 224, F. Olmos *in litt.* 1999 as cited in BLI 2016, p. 5).

*Forest Code:* Brazil's forest code was created in 1965, and was subsequently changed in the 1990s via a series of presidential decrees (Soares-Filho *et al.* 2014, p. 363). As of 2001, the forest code required landowners in the Amazon to conserve native vegetation on their rural properties by setting aside what is called a "legal reserve" of 80 percent of their property (i.e., with 20 percent available to be harvested) (Soares-Filho *et al.* 2014, p. 363). The forest code severely restricted deforestation on private properties but proved challenging to enforce, and full compliance has not been achieved (GFA 2018b, unpaginated; Azevedo *et al.* 2017, entire; Soares-Filho *et al.* 2014, p. 363). For instance, the lack of registered property boundaries made it difficult to link deforestation to particular land owners, and the majority of deforestation from 2002 to 2009 (about 69 percent) occurred on properties whose boundaries were not publicly registered (Azevedo *et al.* 2017, p. 7653).

In late 2012, a new forest code was approved that reduces restoration requirements by providing amnesty for previous illegal deforestation by smaller property holders (Soares-Filho *et al.* 2014, p. 363). Under the older forest code, legal reserves that were illegally deforested were required to be restored at the landowner's expense. The new forest code forgives the legal reserve debt of small properties (up to 440 hectares (1,087 acres)) (Soares-Filho *et al.* 2014, p. 363). Although the 2012 forest code reduced the restoration requirements, it also introduced measures that strengthen conservation

including addressing (1) fire management, (2) forest carbon, and (3) payments for ecosystem services (Soares-Filho *et al.* 2014, p. 363).

Additionally, the new forest code created an Environmental Reserve Quota where quota surplus on one property may be used to offset a legal reserve debt on another property within the same biome; this could create a market for forested lands, adding monetary value to native vegetation and potentially abating up to 56 percent of legal reserve debt (Soares-Filho *et al.* 2014, p. 363). Proponents of the new forest code believe that it will act as an effective barrier to agricultural development, while others believe that amnesty will lead to the perception that illegal deforesters are unlikely to be prosecuted or could be forgiven in future land reforms (Soares-Filho *et al.* 2014, pp. 363-364).

*Legal Captive Rearing and Trade:* IBAMA has licensed and regulated breeding of native bird species, including golden conure, in an effort to reduce poaching (Alves *et al.* 2013, p. 61). The captive population of golden conures in Brazil is believed to be about 600 birds (Prioste *et al.* 2013, p. 146), and one breeder reported that in 8 years she reared nearly 600 birds (Weinzettl, *in litt.* 2015). Therefore, there is reason to believe that the captive population of golden conures in Brazil is at least 600 birds or larger. Additional captive populations of golden conures exist as CITES-registered captive-breeding operations in the United Kingdom and the Philippines. Although we have no further information on these programs, the captive rearing of golden conures in Brazil is believed to have reduced the incidence of poaching of young golden conures from the wild (Silveira *in litt.* 2012, Lees *in litt.* 2013, as cited in BLI 2016, p. 5).

*Reintroduction:* Captive rearing and reintroduction efforts have contributed to the recovery of other parrots in Central and South America but we know of only one attempt to reintroduce the golden conure to an area where it had been extirpated. The species was extirpated from the Belém region of Pará in 1848 (Moura *et al.* 2014, p. 5). In 2017, researchers reintroduced the golden conure to this area (at Utinga State Park in Belém) (globo.com 2018, unpaginated). The project includes a post-release monitoring component (Moura *in litt.* 2018), but it is too soon to know whether or not the reintroduction has been successful.

*Additional Regulatory Mechanisms:* “Reducing Emissions from Deforestation and Forest Degradation” (REDD) is a “payment for ecological services” initiative that creates a financial value for the carbon stored in forests (GFA 2018h, unpaginated). The program offers incentives to developing countries to reduce emissions from forested lands and invest in low-carbon paths to sustainable development (GFA 2018h, unpaginated). REDD plus (REDD+) goes one step further by including objectives for (1) biodiversity conservation, (2) sustainable management of forests, and (3) improvements to forest governance and local livelihoods (GFA 2018h, unpaginated). Brazil is one of the most advanced countries in the world in REDD+ planning and maintains an “Amazon Fund,” which receives compensation for reductions in deforestation. To date, the Norwegian government is the major donor and lesser donors include the government of Germany and the Brazilian oil company Petrobras (GFA 2018h, unpaginated). The successful funding and implementation of REDD+ is expected to reduce rates of deforestation in Brazil’s Amazon rainforest and would likely benefit the golden conure and its habitat. However, the initiative is in its early stages and is

being hampered by numerous issues, particularly unresolved land-tenure problems (May *et al.* 2018, p. 44).

The golden conure is protected under CITES, an international agreement between member governments to ensure that the international trade of CITES-listed plant and animal species is legal and does not threaten species' survival. Under this treaty, CITES Parties (member countries or signatories) regulate the import, export, and re-export of specimens, parts, and products of CITES-listed plant and animal species. Brazil is a Party to CITES. Trade in CITES-listed plants and animals must be authorized through a licensing system of permits and certificates that are provided by the designated CITES Management Authority of each CITES Party. CITES includes three Appendices that list species meeting specific criteria. Depending on the Appendix in which they are listed, species are subject to various permitting requirements.

The golden conure is listed in CITES Appendix I and receives the highest degree of protection. Species listed in this Appendix are those that are threatened with extinction and which are, or may be, affected by trade. Commercial trade in Appendix I wildlife species is strictly prohibited, except in limited circumstances provided by the treaty. However, commercial international trade may be allowed in certain circumstances where animals have been produced by CITES-registered captive-breeding operations. Trade in specimens from registered operations may be treated as if they were listed in CITES Appendix II, although they remain Appendix I listed specimens. Each shipment requires the issuance of both CITES export and import documents. There are two CITES-registered captive-breeding operations for the golden conure: one in the United Kingdom and the other in the Philippines. The United States may also allow non-

commercial trade in this species on a case-by-case basis for approved purposes such as scientific, zoological, and educational activities.

Two other laws in the United States apart from the Act provide protection from the illegal import of wild-caught birds into the United States: the Wild Bird Conservation Act (WBCA) and the Lacey Act (18 U.S.C. 42; 16 U.S.C. 3371 et seq.). The WBCA was enacted in 1992, to ensure that exotic bird species are not harmed by international trade and to encourage wild bird conservation programs in countries of origin. Under the WBCA and our implementing regulations (50 CFR 15.11), it is unlawful to import into the United States any exotic bird species listed under CITES except under certain circumstances. We may issue permits to allow import of listed birds for scientific research, zoological breeding or display, cooperative breeding, or personal pet purposes when the applicant meets certain criteria (50 CFR 15.22–15.25).

The Lacey Act was originally passed in 1900, and was the first Federal law protecting wildlife. Today, it provides civil and criminal penalties for the illegal trade of animals and plants. Under the Lacey Act, in part, it is unlawful to (1) import, export, transport, sell, receive, acquire, or purchase any fish, or wildlife taken, possessed, transported, or sold in violation of any law, treaty, or regulation of the United States or in violation of any Indian tribal law; or (2) import, export, transport, sell, receive, acquire, or purchase in interstate or foreign commerce any fish or wildlife taken, possessed, transported, or sold in violation of any law or regulation of any State or in violation of any foreign law. Therefore, for example, because the take of wild-caught golden conures would be in violation of Brazil's wildlife law, the subsequent import of the species would be in violation of the Lacey Act. Similarly, under the Lacey Act, it is unlawful to import,

export, transport, sell, receive, acquire, or purchase specimens of these species traded contrary to CITES.

### **Summary of Biological Status and Threats**

The best scientific and commercial information available indicates that the golden conure is more widespread and abundant than believed at the time of listing as endangered (BLI 2017, unpaginated; Bird *et al.* 2011, Appendix S1; Laranjeiras 2011b, p. 311; Laranjeiras and Cohn-Haft 2009, pp. 1, 3) and that the threat from poaching for the pet trade (Factor B) has diminished (Silveira *in litt.* 2012, Lees *in litt.* 2013, in BLI 2016, p. 5; Snyder *et al.* 2000, p. 99) but is still occurring at some unknown level. The global population is estimated at 10,875 individuals within 174,000 km<sup>2</sup> (67,182 mi<sup>2</sup>) of suitable habitat across a range of approximately 340,000 km<sup>2</sup> (131,275 mi<sup>2</sup>) (Laranjeiras 2011b, p. 311; Laranjeiras and Cohn-Haft 2009, pp. 1, 3). Nevertheless, the population is regarded as small, and is believed to be declining (BLI 2016, p. 1) primarily due to loss and degradation of its habitat from deforestation (Factor A) (BLI 2016, p. 4; IBAMA 2003 and SEMA 2007, as cited by Laranjeiras 2011a, unpaginated; Collar 1992, p. 5).

Although rates of deforestation have declined in recent decades, they are increasing again (Alves *et al.* 2017, p. 76; Fearnside 2017b, p. 1; IPAM 2017, p. 15; Prodes 2017, unpaginated; Biderman and Nogueron 2016, unpaginated) and are projected to continue to increase (Bird *et al.* 2011, entire; Soares-Filho *et al.* 2006, p. 520) as the global demand for agricultural commodities continues to rise (Brando *et al.* 2016, abstract). Risks from deforestation will likely be intensified by synergistic effects associated with climate change (Staal *et al.* 2015, p. 2) (Factor E). Climate projections include increased temperatures, dryer conditions, and more frequent extreme weather

(including droughts), which have the potential to stress trees and cause tree mortality (Fearnside 2009, pp. 1003, 1005). These conditions also increase the unintentional spread of fires, further contributing to deforestation (Fearnside 2009, p. 1005). Deforestation itself can cause regional shifts in the climate and is likely to operate together with the effects of climate change to negatively alter rainforest habitat. Although there are uncertainties in the various models, and projected outcomes are not definitive, any terra firme forest habitat that shifts from rainforest to other habitat types (e.g., savanna) would no longer be available to the golden conure.

Although an illegal international trade of the golden conure occurred in the past, there is little evidence that this practice is continuing (Laranjeiras 2011a, unpaginated; Silveira and Belmonte 2005 *in press*, unpaginated). In contrast, the golden conure continues to face an unknown level of pressure from poaching and illegal trade within Brazil (Factor B) (Silveira and Belmonte *in press*, unpaginated), particularly in poorer areas (Silveira and Belmonte *in press*, unpaginated; Alves *et al.* 2013, p. 61). Captive golden conure breeding programs in Brazil have helped to limit poaching of wild golden conures (Silveira *in litt.* 2012, Lees *in litt.* 2013, in BLI 2016, p. 5). However, poaching of young conures for the illicit domestic pet trade in Brazil has the potential to negatively affect golden conure populations, especially if individuals are being collected from small or fragmented populations. Population-level effects could operate synergistically with effects from habitat loss or degradation to the further detriment of the species.

Although existing conservation efforts and regulatory mechanisms appear to be substantial (e.g., Brazil has the largest protected area network in the world), at this time they do not adequately ameliorate threats to the golden conure (Factor D). Despite

significant efforts to preserve the rainforest in Brazil’s Amazon basin, enforcement has proven to be challenging, and full compliance has not been achieved. Habitat loss due to deforestation is ongoing and is predicted to continue, resulting in global population declines of the golden conure (BLI 2016, p. 1; Bird *et al.* 2011 Appendix S1).

### **Proposed Determination of Species Status**

Section 4 of the Act (16 U.S.C. 1533), and its implementing regulations at 50 CFR part 424, set forth the procedures for determining whether a species is an endangered species or threatened species and should be included on the Federal Lists of Endangered and Threatened Wildlife and Plants (listed). The Act defines an endangered species as any species that is “in danger of extinction throughout all or a significant portion of its range” and a threatened species as any species “that is likely to become endangered throughout all or a significant portion of its range within the foreseeable future.” Under section 4(a)(1) of the Act, we determine whether a species is an endangered species or threatened species because of any one or a combination of the following: (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.

#### *Determination of Status Throughout All of Its Range*

As required by section 4(a)(1) of the Act, we conducted a review of the status of the golden conure and assessed the five factors to evaluate whether the species is endangered or threatened throughout all of its range. We examined the best scientific and

commercial information available regarding the past, present, and future threats faced by the golden conure. We reviewed information presented in the 2014 petition, information available in our files, information gathered through our 90-day finding in response to the petition, information gathered in our status review, and other available published and unpublished information.

In considering what factors may constitute threats, we must look beyond the mere exposure of the species to the factor to determine whether the species responds to the factor in a way that causes actual impacts to the species. If there is exposure to the factor, but no response, or only a positive response, that factor is not a threat. If there is exposure and the species responds negatively, the factor may be a threat and we then attempt to determine if it may drive or contribute to the risk of extinction of the species such that the species warrants listing as an endangered or threatened species as those terms are defined by the Act.

When we listed the golden conure as endangered in 1976, the species was perceived to be declining in numbers due to either Factor A, Factor B, or Factor D, or a combination of all three factors (41 FR 24062; June 14, 1976). At present, the best scientific and commercial information available on the range and abundance of the species indicates that the species is more widespread and abundant than previously believed and that the threat from overutilization for the pet trade (Factor B) has diminished (Silveira *in litt.* 2012, Lees *in litt.* 2013, in BLI 2016, p. 5; Snyder *et al.* 2000, p. 99). Habitat modeling studies have estimated that there are approximately 10,875 individuals within 174,000 km<sup>2</sup> (67,182 mi<sup>2</sup>) of suitable habitat across a range of approximately 340,000 km<sup>2</sup> (131,275 mi<sup>2</sup>) (Laranjeiras 2011b, p. 311; Laranjeiras and

Cohn-Haft 2009, pp. 1, 3).

Tighter enforcement of CITES, stricter European Union legislation, adoption of the WBCA in the United States, and adoption of national legislation in other countries have all helped to significantly curtail illegal international trade (Snyder *et al.* 2000, p. 99). In addition, government-authorized captive breeding programs in Brazil are thought to have curtailed the illegal domestic trade (Silveira *in litt.* 2012, Lees *in litt.* 2013, in BLI 2016, p. 5). Thus, after assessing the best available information and as a result of the aforementioned information, we conclude the golden conure is not currently in danger of extinction throughout its range.

As described below, we next considered whether the golden conure is likely to become in danger of extinction throughout its range within the foreseeable future. The term “foreseeable future” describes the extent to which we can reasonably rely on predictions about the future in making determinations about the future conservation status of the species. The golden conure has already lost 30 to 35 of its historical range (Laranjeiras 2011a, unpaginated; Laranjeiras and Cohn-Haft 2009, p. 8). We expect both the species’ global population and its habitat to decline an additional 23 to 30 percent in 22 years (Service 2018, pp. 42-46; Bird *et al.* 2011 Appendix S1). Additionally, habitat loss and degradation is likely to be intensified by synergistic effects associated with the consequences of climate change (Service 2018, pp. 42-46; Staal *et al.* 2015, p. 2). There is a strong likelihood of warming to at least 1.5 to 2.0 °C (3.6 °F) in Latin America by the end of the Century (Carabine and Lemma 2014, p. 8), and downscaled estimates for the Amazon over the same time period (i.e., by the end of the Century) indicate temperature increases of 2.2 °C (4 °F) under a low greenhouse gas emission scenario and 4.5 °C (8

°F) under a high-emission scenario (Marengo *et al.* 2011, p. 27). Increased temperatures of these amounts put the Amazon region at a high risk of forest loss and more frequent wildfires (Magrin *et al.* 2007, p. 596). Downscaled models, based, in part, on the earlier (2007) IPCC data, predict severe changes (increased warming and drying) over the Amazon rainforest, particularly after 2040 (Marengo *et al.* 2011, pp. 8, 15, 27, 39, 48; Féres *et al.* 2009, p. 2). Additionally, some leading global-circulation models indicate that extreme weather events, such as droughts, will increase in frequency, with drought becoming a 9-in-10-year event, by 2060 (Marengo *et al.* 2011, p. 28) further contributing to deforestation due to more risk from fires (Marengo *et al.* 2011, p. 16). Therefore, based on the best available data, we assessed foreseeable future to be 22 to 42 years (or approximately three to six generations of the golden conure). We based the lower end of this range (22 years) on the peer-reviewed work by Bird *et al.* 2011, relating to deforestation and declines in the population. We based the upper end of this range (42 years) on peer-reviewed studies predicting effects from climate change (such as drought) on deforestation after about 2040 to 2060 (Marengo *et al.* 2011, pp. 8, 15, 27, 28, 39, 48; Féres *et al.* 2009, p. 2). We conclude that it is reasonable to rely on the predictions made in these peer-reviewed studies in making determinations about the future conservation status of the golden conure.

Although the golden conure is now known to be more widespread and abundant than previously thought, the species remains relatively rare. It occurs only within the southern basin of Brazil's Amazon, and much of this area is in the "arc of deforestation" and is threatened by loss and degradation of its rainforest habitat from deforestation. Effects from deforestation are exacerbated by the projected effects from climate change.

Additionally, even though government-authorized captive breeding programs in Brazil are thought to have curtailed the illegal domestic trade, some unknown level of illegal collection and trade is ongoing, particularly within Brazil (Silveira and Belmonte *in press*, unpaginated).

Existing regulatory mechanisms and conservation efforts do not currently adequately ameliorate threats to the golden conure (Factor D). The factors identified above continue to affect the golden conure such that it is likely to become in danger of extinction within the foreseeable future throughout all of its range. Based on the best available scientific studies and information assessing land-use trends, lack of enforcement of laws, predicted landscape changes under climate-change scenarios, and predictions about how those threats may impact the golden conure, we conclude that the species is likely to be in danger of extinction in the foreseeable future throughout all of its range. Accordingly, we find that the golden conure meets the definition of a “threatened species” under the Act, and we are proposing to list the golden conure as threatened throughout its range.

#### *Significant Portion of its Range*

Under the Act and our implementing regulations, a species warrants listing if it is endangered or threatened. The Act defines “endangered species” as any species that is in danger of extinction throughout all or a significant portion of its range (16 U.S.C. 1532(6)), and “threatened species” as any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range (16 U.S.C. 1532(20)). Because we have determined that the golden conure is threatened throughout all of its range, under the Final Policy on Interpretation of the Phrase

“Significant Portion of Its Range” in the Endangered Species Act’s Definitions of “Endangered Species and “Threatened Species” (79 FR 37578; July 1, 2014) (SPR Policy), if a species warrants listing throughout all of its range, no portion of the species’ range can be a “significant” portion of its range.

#### **Proposed 4(d) Rule**

When a species is listed as endangered, certain actions are prohibited under section 9 of the Act and our regulations at 50 CFR 17.21. These include, among others, prohibitions on take within the United States, within the territorial seas of the United States, or upon the high seas; import; export; and shipment in interstate or foreign commerce in the course of a commercial activity. Exceptions to the prohibitions for endangered species may be granted in accordance with section 10 of the Act and our regulations at 50 CFR 17.22.

The Act does not specify particular prohibitions and exceptions to those prohibitions for threatened species. Instead, under section 4(d) of the Act, the Secretary of the Interior, as well as the Secretary of Commerce depending on the species, was given the discretion to issue such regulations as deemed necessary and advisable to provide for the conservation of such species. The Secretary also has the discretion to prohibit by regulation with respect to any threatened species any act prohibited under section 9(a)(1) of the Act. For the golden conure, the Service is exercising our discretion to propose a rule under section 4(d) of the Act. If this proposed rule is adopted, we will incorporate all prohibitions and provisions of 50 CFR 17.31 and 17.32, except that import and export of

certain golden conures into and from the United States and certain acts in interstate commerce will be allowed without a permit under the Act, as explained below.

#### *Import and Export*

The proposed 4(d) rule imposes a prohibition on imports and exports (by incorporating 50 CFR 17.31), but creates exceptions for certain golden conures. Shipments of captive specimens (i.e., not taken from the wild) may include live and dead golden conures and parts and products, including the import and export of personal pets and research samples. The proposed 4(d) rule would adopt the existing conservation regulatory requirements of CITES and the WBCA as the appropriate regulatory provisions for the import and export of these golden conure specimens.

This 4(d) rule proposes to allow a person to import or export, into and from the United States, captive specimens, without a permit issued under the Act, provided that the export is authorized under CITES and the import is authorized under CITES and the WBCA. The import would require a CITES document issued by the foreign Management Authority indicating a source code of “C”, “D”, or “F.” Exporters of captive birds would need to provide a signed and dated statement from the breeder of the bird, along with documentation that identifies the source of their breeding stock in order to obtain a CITES export permit from the U.S. Fish and Wildlife Service’s Division of Management Authority. Exporters of captive-bred birds must provide a signed and dated statement from the breeder of the bird confirming its captive-bred status, and documentation on the source of the breeder’s breeding stock. The source codes of C, D, and F for CITES permits and certificates are as follows:

- Source Code C: Animals bred in captivity in accordance with Resolution Conf. 10.16 (Rev.), as well as parts and derivatives thereof, exported under the provisions of Article VII, paragraph 5 of the Convention.

- Source Code D: Appendix I animals bred in captivity for commercial purposes in operations included in the Secretariat's Register, in accordance with Resolution Conf. 12.10 (Rev. CoP15), and Appendix I plants artificially propagated for commercial purposes, as well as parts and derivatives thereof, exported under the provisions of Article VII, paragraph 4, of the Convention.

- Source Code F: Animals born in captivity (F1 or subsequent generations) that do not fulfill the definition of "bred in captivity" in Resolution Conf. 10.16 (Rev.), as well as parts and derivatives thereof.

The proposed 4(d) rule would not allow any U.S. import or export of golden conures that are taken from the wild; such birds must continue to meet the requirements of 50 CFR 17.31 and 17.32, including obtaining a permit under the Act, with the following exception. This 4(d) rule proposes to allow a person to import or export a wild golden conure specimen if the specimen was held in captivity prior to the date the species was listed in CITES Appendix I (i.e., prior to the date that CITES entered into force on July 1, 1975, with "golden parakeet" (i.e., the golden conure) listed in Appendix I) and provided that it meets all the requirements of CITES and WBCA. If a specimen was taken from the wild and held in captivity prior to that date (July 1, 1975), the exporter would need to provide documentation as part of the application for a U.S. CITES preconvention certificate. Examples of documentation may include: (1) a copy of the original CITES permit indicating when the bird was removed from the wild, (2)

veterinary records, or (3) museum specimen reports. Additionally, consistent with the 4(d) regulations for other species in the parrot family at 50 CFR 17.41 (c), the prohibitions on take would apply and the 4(d) rule would require a permit under the Act for any activity that could take a golden conure. Our regulations at 50 CFR 17.3 establish that take, when applied to captive wildlife, does not include generally accepted animal husbandry practices, breeding procedures, or provisions of veterinary care for confining, tranquilizing, or anesthetizing, when such practices are not likely to result in injury to the wildlife.

We assessed the conservation needs of the golden conure in light of the broad protections provided to the species under CITES and the WBCA. As noted above in **Summary of Factors Affecting the Species**, some level of poaching for illegal trade of golden conures is occurring within Brazil (Silveira and Belmonte *in press*, unpaginated) but there is little evidence that this practice occurs at the international level (Laranjeiras 2011a, unpaginated; Silveira and Belmonte 2005 *in press*, unpaginated). The best available commercial data indicate that tighter enforcement of CITES, stricter European Union legislation, adoption of the WBCA in the United States, and adoption of national legislation in other countries have all helped to significantly curtail illegal international trade (Snyder *et al.* 2000, p. 99). Therefore, illegal international trade is not likely to be occurring at levels that negatively affect the golden conure population. Additionally, legal international trade of the species is not currently occurring at levels that affect the golden conure population. Therefore, we find that the import and export requirements of the proposed 4(d) rule provide the necessary and advisable conservation measures that are needed for this species. This proposed 4(d) rule, if made final, would streamline the

permitting process for these types of activities by deferring to existing laws that are protective of golden conures in the course of import and export.

#### *Interstate Commerce*

Under the proposed 4(d) rule, a person may deliver, receive, carry, transport, or ship a golden conure in interstate commerce in the course of a commercial activity, or sell or offer to sell in interstate commerce a golden conure without a permit under the Act. At the same time, the prohibitions on take under 50 CFR 17.21 would apply under this proposed 4(d) rule, and any interstate commerce activities that could incidentally take golden conure or otherwise constitute prohibited acts in foreign commerce would require a permit under 50 CFR 17.32.

Between 1981 and 2016, persons within the United States imported 54 golden conures and exported 26; all were reported as live captive-bred birds except two exported birds that originated from an unknown source and one imported bird seized upon import (UNEP–WCMC 2018, unpaginated; Service 2018, p. 33). These imports and exports were made for commercial, captive-breeding, zoological, and personal purposes (UNEP–WCMC 2018, unpaginated; Service 2018, p. 33). We have no information to indicate that interstate commerce activities in the United States are associated with threats to the golden conure or would negatively affect any efforts aimed at the recovery of wild populations of the species. Therefore, because (1) acts in interstate commerce within the United States have not been found to threaten the golden conure, (2) the species is otherwise protected in the course of interstate and foreign commercial activities under the take provisions set forth at 50 CFR 17.31, and (3) international trade of this species appears to be effectively regulated under CITES, we find this proposed 4(d) rule contains

all the prohibitions and authorizations necessary and advisable for the conservation of the golden conure.

### **Proposed Technical Correction**

Sections 50 CFR 17.11(c) and 17.12(b) of Title 50 of the Code of Federal Regulations direct us to use the most recently accepted scientific name of any wildlife or plant species, respectively, that we have determined to be an endangered or threatened species. The golden conure currently appears on the List as the “golden parakeet” (*Aratinga guarouba*). However, in this proposed rule, we refer to the species by the common name “golden conure” and, based on the best available scientific information regarding the species’ taxonomy, we use the scientific name *Guaruba guarouba*. Both “golden conure” and “golden parakeet” are common names associated with *Guaruba guarouba*. We find that the best available scientific information available supports the designation of the golden conure to its own genus (*Guaruba*). Therefore, we propose to update the List to reflect this change in the scientific name for golden conure.

The basis for this taxonomic change is supported by published studies in peer-reviewed journals (e.g., Urantówka and Mackiewicz 2017, entire; Tavares *et al.* 2004, pp. 230, 236–237, 239; Sick 1990, p. 112). Accordingly, we propose to correct the scientific name of the species under section 4 of the Act (16 U.S.C. 1531 *et seq.*) by changing the name as currently listed (i.e., golden parakeet (*Aratinga guarouba*)) to the corrected species name (i.e., golden conure or golden parakeet (*Guaruba guarouba*)). We note that we are not required to propose such a technical correction and can generally make such a change in a direct final rule. We determined it more efficient, however, to include the technical correction in this proposal.

## **Effects of This Rule**

If this proposed rule is made final, it would revise 50 CFR 17.11(h) to reclassify the golden conure from endangered to threatened on the List of Endangered and Threatened Wildlife. Additionally, if the proposed 4(d) rule is adopted in a final rule, the Service will incorporate all prohibitions and provisions of 50 CFR 17.31 and 17.32, except that import and export of certain golden conures into and from the United States and certain acts in interstate commerce will be allowed without a permit under the Act. In addition, if the proposed taxonomic change is made final, we will revise the List of Endangered and Threatened Wildlife to change the species' scientific name to *Guaruba guarouba*, and its common name to golden conure (=golden parakeet).

## **Required Determinations**

### *Clarity of the Rule*

We are required by Executive Orders 12866 and 12988 and by the Presidential Memorandum of June 1, 1998, to write all rules in plain language. This means that each rule we publish must:

- (1) Be logically organized;
- (2) Use the active voice to address readers directly;
- (3) Use clear language rather than jargon;
- (4) Be divided into short sections and sentences; and
- (5) Use lists and tables wherever possible.

If you feel that we have not met these requirements, send us comments by one of the methods listed in **ADDRESSES**. To better help us revise the rule, your comments should be as specific as possible. For example, you should tell us the numbers of the

sections or paragraphs that are unclearly written, which sections or sentences are too long, the sections where you feel lists or tables would be useful, etc.

*National Environmental Policy Act (42 U.S.C. 4321 et seq.)*

We have determined that we do not need to prepare an environmental assessment, as defined under the authority of the National Environmental Policy Act of 1969, in connection with regulations adopted under section 4(a) of the Endangered Species Act. We published a notice outlining our reasons for this determination in the *Federal Register* on October 25, 1983 (48 FR 49244).

### **References Cited**

A complete list of references cited in this rulemaking is available on the Internet at <http://www.regulations.gov> under Docket No. FWS–HQ–ES–2015–0019 or upon request (see **FOR FURTHER INFORMATION CONTACT**). Authors

The primary authors of this proposed rule are the staff members of the Branch of Delisting and Foreign Species, Ecological Services Program, U.S. Fish and Wildlife Service.

### **List of Subjects in 50 CFR Part 17**

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Wildlife.

### **Proposed Regulation Promulgation**

Accordingly, we propose to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

### **PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS**

1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361-1407; 1531-1544; and 4201-4245, unless otherwise noted.

2. Amend § 17.11(h), the List of Endangered and Threatened Wildlife, by:

a. Removing the entry for “Parakeet, golden” under BIRDS; and

b. Adding an entry for “Conure, golden (=golden parakeet)” in alphabetical order under BIRDS to read as follows:

**§ 17.11 Endangered and threatened wildlife.**

\* \* \* \* \*

(h) \* \* \*

Common name	Scientific name	Where listed	Status	Listing citations and applicable rules
* * * * *	* * *			
<b>BIRDS</b>				
* * * * *	* * *			
Conure, golden, (=golden parakeet)	<i>Guaruba guarouba</i>	Wherever found	T	41 FR 24062, 6/14/1976; [ <i>Federal Register</i> citation of final rule]; 50 CFR 17.41(c) <sup>4d</sup> .
* * * * *	* * *			

3. Amend § 17.41 by revising paragraph (c) introductory text and paragraph (c)(2)(ii) introductory text, and by adding paragraph (c)(2)(ii)(D) to read as follows:

**§17.41 Special rules—birds.**

\* \* \* \* \*

(c) The following species in the parrot family: Salmon-crested cockatoo (*Cacatua moluccensis*), yellow-billed parrot (*Amazona collaria*), white cockatoo (*Cacatua alba*), and the golden conure (*Guaruba guarouba*).

\* \* \* \* \*

(2) \* \* \*

(ii) *Specimens held in captivity prior to certain dates:* You must provide documentation to demonstrate that the specimen was held in captivity prior to the applicable date specified in paragraphs (c)(2)(ii)(A), (B), (C), or (D) of this section. Such documentation may include copies of receipts, accession or veterinary records, CITES documents, or wildlife declaration forms, which must be dated prior to the specified dates.

\* \* \* \* \*

(D) For *golden conures*: July 1, 1975 (the date CITES entered into force with the “golden parakeet” (i.e., the golden conure) listed in Appendix I).

\* \* \* \* \*

Dated: August 3, 2018.

James W. Kurth  
Deputy Director,  
U.S. Fish and Wildlife Service,  
Exercising the Authority of the Director,  
U.S. Fish and Wildlife Service.