

## CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II

A. Proposal

To transfer *Amazona oratrix* from Appendix II to Appendix I, in accordance with Article XV, paragraph 1(a), of the Convention.

This proposal is presented in accordance with Resolution Conf. 9.24, with particular emphasis on:

- 1) The Biological Criteria for Appendix I (see Annex 1, Resolution Conf. 9.24) which *Amazona oratrix* fully meets.
- 2) The Precautionary measures (see Annex 4, Resolution Conf. 9.24) which are applied by means of the national conservation measures to protect the species in its various range States, as a species in danger of extinction.

B. Proponent

Mexico.

C. Supporting statement1. Taxonomy

1.1 Class: Aves

1.2 Order: Psittaciformes

1.3 Family: Psittacidae

1.4 Genus, species and subspecies: *Amazona oratrix* (Ridgway, 1887), *A. o. magna* (reported in Collar *et al.* 1992); *A. o. tresmariae* (Nelson, 1900); *A. o. oratrix* (Ridgway, 1887); *A. o. belizensis* (Monroe and Howell, 1966); *A. o. guatemalensis* (reported in Collar, 1997); *A. o. hondurensis* (reported in Collar, 1997); *A. o. caribaea* (reported in Clements, 2000) and *A. o. parvipes* (reported in Clements, 2000)

1.5 Scientific synonyms: *Amazona ochrocephala oratrix* (Ridgway, 1887), *Chrysotis leuillantii* (Gray, 1859), *Amazona [ochrocephala] oratrix* (Ridgway 1887), *Amazona [ochrocephala] oratrix* (Ridgway, 1887), *A. [ochrocephala] auropalliata* (Lesson, 1842), and *A. [ochrocephala] ochrocephala* (Gmelin, 1788) are often considered as conspecific species, but owing to the lack of evidence of interbreeding among these taxa in the different areas where there is apparently overlapping or in those areas where there is overlapping of one or two subspecies (such as in Oaxaca, Mexico and Honduras), it is suggested that the species be considered an allospecies of a complex of superspecies (AOU 1998). Eberhard and Bermingham's studies (in preparation) on the phylogeography of the complex *A. ochrocephala* agree in considering *A. oratrix* in Mexico and Mesoamerica as a species distinct from *A. ochrocephala*.

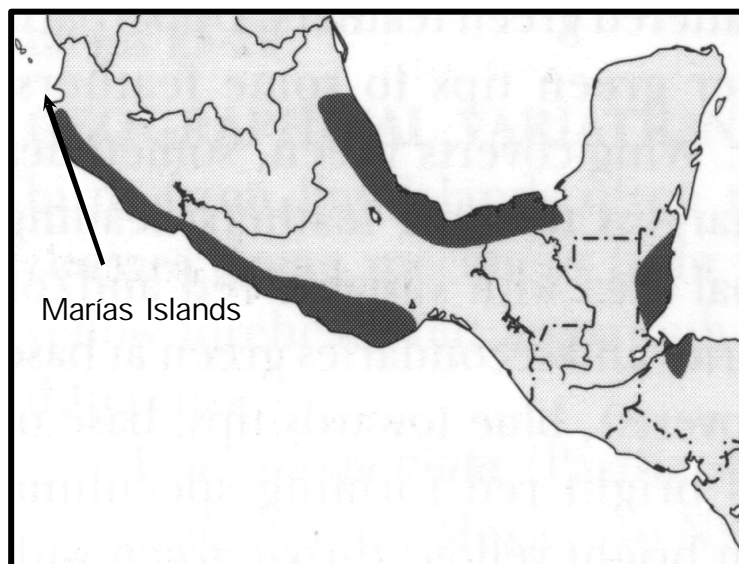
- 1.6 Common names:
- |             |  |
|-------------|--|
| English:    | Yellow-headed amazon, yellow-headed parrot           |
| French:     | Amazonne à tête jaune                                |
| Spanish:    | Loro cabeza amarilla, loro cabeciamarillo, loro real |
| Dutch:      | Dubbele geelkopamazone                               |
| German:     | Doppelgelbkopfamazone                                |
| Italian:    | Amazzone testagialla                                 |
| Portuguese: | Amazona de cabeça amarela, papagaio campeiro         |
| Swedish:    | Gulhuvad amazon                                      |

1.7 Code number: Unknown

## 2. Biological parameters

### 2.1 Distribution

*Amazona oratrix* is limited to Belize, Guatemala, Honduras and Mexico (Forshaw 1989, Collar 1997, AOU 1998, Juniper and Parr 1998, BirdLife International 2000, Clemens 2000) (Figure 1). The authors indicate that various populations exist. *A. o. tresmariae* breeds on the Mariás Islands of Mexico. The nominal population of *A. o. oratrix* is found on the Pacific side of Mexico in the states of Jalisco, Colima, Michoacán, Guerrero and Oaxaca. Some authorities consider that there is a distinct breed, *A. o. magna*, see Collar *et al.* 1992, located on the slopes of the Gulf of Mexico in Tamaulipas, San Luis Potosí, Veracruz, Tabasco, Chiapas, Puebla and Campeche [with records of its presence also in Guanajuato (CONABIO 2002)]. The *A. o. belizensis* population is found in Belize (Collar *et al.* 1992, Collar 1997, BirdLife International 2000) and in the central Petén, Guatemala (Collar *et al.* 1994, Lousada and Howell 1996). Lousada and Howell (*op. cit.*) and BirdLife International (2000) also describe a population classified as *A. oratrix guatemalensis* that resides from Manbique Point in north-eastern Guatemala across the coastal plain extending as far as north-western Honduras.



**Figure 1.** Distribution of *Amazona oratrix* (Source: Juniper and Parr 1998)

Wild populations members of the taxonomic complex *Amazona oratrix* [*ochrocephala*] have established themselves in various parts of North America and the Caribbean (see AOU 1998, Long 1981 and Lever 1987 in Collar *et al.* 1992), even though it is not always evident which of the breeds or species is involved, and with the possibility, in every case, that different species are involved, and that they are hybridized. (Forshaw 1989). Lever has reported that *oratrix* is the

established form in Puerto Rico and in Miami, even though in the latter it is hybridized with *A. viridigenalis* (Collar *et al.* 1992).

## 2.2 Habitat availability

In Belize, *A. oratrix* resides in the savannahs near the coast, medium forests, and flooded forests and mangroves (Collar *et al.* 1992, Gracia *et al.* 1994, Howell and Webb 1995, Miller and Miller 1997). In Guatemala, the species resides in medium forests and savannahs with isolated pines similar to the population in Belize (Howell and Webb 1995, BLI 2000). The population in Honduras resides in mangroves and coastal shrub-like thickets (Lousada and Howell 1996, BLI 2000). In Mexico, *Amazona oratrix* frequents the sub-rainforests both of the Pacific slopes, including the Marias Islands, and of the Gulf of Mexico (Forshaw 1977, AOU 1983, Collar *et al.* 1992, Enkerlin Hoeflich 1995, Collar 1997). This species is found in different types of vegetation: low deciduous forests, medium subdeciduous forests, savannahs and gallery forests, and areas of pasture with isolated trees (Forshaw 1977, Pérez and Eguiarte 1989, Collar *et al.* 1992, Enkerlin Hoeflich 1995, Howell and Webb 1995, Juniper and Parr 1998). The studies of Enkerlin-Hoeflich (1995) on the coastal plain of Tamaulipas, Mexico, document that less than 17 per cent of the original vegetation remains, due to conversion to ranching.

## 2.3 Population status

On the global level, *A. oratrix* is classified as 'endangered' in accordance with the latest IUCN *Red List of Threatened Species* (Hilton-Taylor 2000). BirdLife International also considers it to be endangered in its report *Threatened Birds of the World* (A1a, c, d; A2c, d; C1; C2a) (BirdLife International 2000). The IUCN report *Parrots: Status Survey and Conservation Action Plan 2000-2004* takes the view that the populations of this species are declining very quickly and it is therefore considered to be in danger of extinction (Snyder *et al.* 2000). In Belize, the species is considered to be in danger of extinction (Miller and Miller 1997). Currently, the organization 'Programme for Belize', in cooperation with the Government of Belize, is working for the conservation of the last viable population of this species (Rodríguez *in litt.* 2002). In Guatemala, the populations of this species have been greatly reduced and have almost disappeared from the country (Bjork *in litt.* 2001). In Mexico, it has been considered 'in danger of extinction' since 1991 (Criterio Ecológico CT-CERN-001-91, Macias Caballero *et al.* 2000) as part of the complex *A. ochrocephala* (D.O.F. 1991). In 1994 and 2002, the status of 'in danger of extinction' was ratified by the Official Mexican Regulation NOM- 059-ECOL (D.O.F. 1994 and 2002) for *A. oratrix*.

Recently, three different groups of highly qualified specialists have concluded that *Amazona oratrix* is in fact in the category of endangered species (BirdLife International 2000, Macias-Caballero *et al.* 2000, Snyder *et al.* 2000). Furthermore, they agree that on the global level, more than 90 per cent of the wild population has been lost since the 1970s; and that they have undergone a decline of more than 68 per cent of their wild population in the last 10 years. This devastation is the result of the plundering and exploitation for the live wild bird market, along with the loss of more than 70 per cent of its natural habitat, the sub-rainforests (BirdLife International 2000, Macias-Caballero *et al.* 2000, Snyder *et al.* 2000).

## 2.4 Population trends

On a global level, according to Collar *et al.* (1992, 1994) the parrot *A. oratrix* has "suffered one of the most dramatic population declines of any bird of the Americas, estimated at 90 per cent in the last 20 years". Studies conducted in 1976 and 1979 estimate that the total of the population (presumably in Mexico) was less than 17,000 birds, with every sub-population diminishing (Collar *et al.* 1992). Ridgely reported in 1981 that *A. oratrix* had "declined drastically in numbers in every area in which information exists (existed)". For 1994, it was estimated that fewer than 7,000 birds remained (Collar *et al.* 1994, Juniper and Parr 1998). Enkerlin-Hoeflich (1995a) reported that very

few healthy populations of this species remained, and that they were all in isolated patches throughout their range of distribution.

A study from 1984 estimated that the total population of the breed *tresmariae* in the Marias Islands was fewer than 800 individuals (Collar *et al.* 1992). Howell and Webb (1995) describe the population on the Pacific slopes as "rare or not common, and localized". On the Pacific coast in Chamela, Jalisco, the population has diminished and only a few pairs or flocks with few birds are seen infrequently (Macias Caballero *et al.* 2000, Renton *in prep.*). It is believed that the populations in the lowlands of the Atlantic (*A. o. magna*) have been most affected. According to Collar *et al.* (1992) the disappearance of the bird in Mexico has been "ample and merciless", this area being the most devastated by deforestation and the closest to the United States border for illegal traffic. *A. o. belizensis* is described as "not very common to common", even though the plundering of nests is fairly frequent (Howell and Webb 1995). *A. o. guatemalensis* is "rare", its numbers are in the hundreds and it is in "serious condition" since there is intensive collection of it and it is restricted to a thin coastal strip threatened by cattle ranching (Lousada and Howell 1996).

## 2.5 Geographic trends

*A. oratrix* is gradually disappearing from its range of distribution. In Mexico, it has been eliminated from the state of Guanajuato and from some regions in the states of Veracruz, San Luis Potosí, Tamaulipas, Querétaro, Puebla and Chiapas (Macias-Caballero *et al.* 2000). The preliminary results (April-June 2002) of the project "Evaluation of the current state of the populations of the yellow-headed parrot (*Amazona oratrix*) in Mexico" supported by CONABIO, show that the greater part of the original area of distribution for the species in Mexico has been deforested. The species is found only in some areas where residual woodlands of natural vegetation still exist. However, in certain areas of the Pacific where there are large expanses of optimal habitat (Chamela-Cuixmala Biosphere Reserve) where this species previously existed in large flocks, today these forests are already almost empty and one pair in over 50km<sup>2</sup> can occasionally be found. This species and its ecosystem are suffering from the phenomena of 'empty forest, stripped of fauna' since the high selective pressure on the species has been greater than the loss of forest in these locations. On the other hand, in the areas where the species is still present, a high rate of illegal extraction of young birds is reported, as well as the capture of adults with nets (Macias-Caballero *et al. in prep.*).

## 2.6 Role of the species in its ecosystem

They are basically grain-eating birds, which occasionally consume nuts and leaves. They consume seeds and nuts of leguminous plants and other seeds rich in energy and protein. The principal elements of the diet in Tamaulipas, Mexico, are: *Bumelia laetevirens*, *Pithecellobium ebano* (*flexicaule*), *Ficus cotinifolia*, *Wimmeria concolor*, *Myrcianthes fragans*, *Acacia farnesiana*, *Brosimum alicastrum*, *Bursera simaruba*, *Pithecoctenium echinatum*, *Solanum erithanum*, *Erethia anacua* and *Prosopis* (Perez and Eguiarte 1988, Enkerlin-Hoeflich 1995a, Enkerlin-Hoeflich *et al.* 1997, González-Elizondo 1998). The species serves as food for certain species of reptiles such as the black-tailed indigo snake (*Drymarchon corais*), birds such as the caracara (*Polyborus plancus*) and the peregrine falcon (*Falco peregrinus*) and mammals such as the coati-mondi (*Nasua nasua*) which prey on the eggs, the young, and the adults (Enkerlin Collar *et al.* 1992, Hoeflich *et al.* 1997).

## 2.7 Threats

Trade in *Amazona oratrix* represents a very great threat to the wild populations of this species, taking into account its natural life history, with its low level of productivity, and also the clearing or transformation of its habitat (Perez and Eguiarte 1988, Enkerlin Hoeflich 1995, Juniper and Parr 1998, BirdLife International 2000, Macias-Caballero *et al.* 2000, Snyder *et al.* 2000). In Belize, these factors are combined with the added pressure of subsistence hunting (D. S. Wood *in press* 1986 in Collar *et al.* 1992).

### 2.7.1 Destruction of habitat

In Belize, the habitat of this species is moderately conserved, although the country has a high rate of deforestation; in the period from 1990-2000 this country lost 2.6 per cent of the habitat where *Amazona oratrix* is found, the annual rate of deforestation being 35,625 ha/year (FORIS 2002). In Guatemala the situation is more alarming, given the small size of the remaining populations of *Amazona oratrix* and the growing rate of deforestation. During the period 1990-2000 this country had already lost 25 per cent of its rainforests and sub-rainforests, with an annual rate of deforestation in that period of 53,743 ha/year (FORIS 2002). The situation of the habitat for this species in Honduras is worrying since there is an annual loss of 58,970 ha/year. In Mexico the habitat of *Amazona oratrix* is highly disturbed and changed (Enkerlin Hoeflich 1995, Collar *et al.* 1992, Renton *in press*). Mexico has suffered one of the highest rates of deforestation in the world with an average loss of 678,000 ha/year (CONABIO 1998, FORIS 2002). In particular, one of the most disturbed forest ecosystems in Mexico comprises the sub-rainforests where this species is found (DGF 2000, Trejo and Dirzo 2000). The Periodic National Forest Inventory (SARH 1994) points out that for the sub-rainforests of the Pacific slopes and those of the Gulf of Mexico and Mexico's Caribbean slopes, which comprise different types of vegetation such as the low deciduous forest described by Rzedowski (1994), and which is where *A. oratrix* occurs (Perez and Eguiarte 1989, Enkerlin Hoeflich 1995), about 18.3 million hectares have been lost during the period between 1950 and 1994, that is to say approximately 64.2 per cent of its original extent (SARH 1994). In the period 1990-2000 alone, 630,574 ha/year of jungle and forest were cleared in Mexico (FORIS 2002). Approximately 19 per cent of the vertebrates endemic to Mesoamerica also exist in these forests which are important for *A. oratrix* (Flores and Geréz 1994). Before 1950, it is estimated that these forests were the most abundant tropical forest ecosystems in the Republic of Mexico (Rzedowski 1994, Challenger 1998), covering approximately 28.5 million hectares of the country (SARH 1994, DGF 2000). In the last 40 years, an accelerated process of deforestation and modification of those forests has taken place; at the beginning of the 1980s, a total of 3.3 million hectares had already been cleared or modified, 23.5 per cent of the area being used for agricultural purposes, 28.5 per cent for cattle-ranching purposes, and 2.7 per cent for other purposes such as tourism (Toledo *et al.* 1989, Challenger 1998).

### 2.7.2 Trade

*Amazona oratrix* is one of the most popular birds in the international parrot trade. It has been considered as one of "the most easily domesticated and with the best speaking ability among all the neotropical parrots" (Ridgely 1981). The yellow-headed parrot is one of the species most sought after and most illegally traded (Cantú and Sánchez 1997 and 2000). In the state of Colima, trade is suspected as the cause of scarcity of the species, since there existed a large demand for the young (Schaldach 1963 in Collar *et al.* 1992). Studies conducted in Tamaulipas also indicated that capture is the principal threat for the species (Vázquez and Maldonado-Rodríguez 1990 in Collar *et al.* 1992). Even in a relatively protected location in this state, such as the Los Colorados ranch, in 1985 the nests of the Amazon parrot suffered a 30 per cent loss owing to capture (Pérez and Eguiarte 1989). Currently there exists evidence in Belize of considerable capture of birds destined both for foreign markets (Howell *in press*, in Collar *et al.* 1992) and for the illegal trade which takes place locally in this country (Rodríguez *in litt.* 2002).

### 2.7.3 Natural causes

In Tamaulipas the strong rains can flood the nesting cavities and drown the young birds. The eggs, young birds, and adults are preyed upon by different species of reptiles, birds and mammals (Konrad 1986 in Collar *et al.* 1992, Vázquez and Maldonado-Rodríguez 1990 in Collar *et al.* 1992, Enkerlin-Hoeflich *et al.* 1997). Other natural threats facing the species are

forest fires, hurricanes, and prolonged droughts. There is also currently major competition for nesting cavities because of the expansion of the killer bees that frequently force the parrots to abandon their nests.

### 3. Utilization and trade

For the last 50 years, *Amazona oratrix* has been one of the most popular species of neotropical parrot with a great demand for trade in live wild birds in the domestic and international markets (Nilsson 1981, Iñigo-Elias and Ramos 1991, Collar *et al.* 1992, Cantú and Sánchez 1996a., Howell and Webb 1995). It is one of the species of the genus *Amazona* that reproduces best for its sale in captivity by amateur and commercial breeders in Europe, the United States of America, and Asia (Allen and Jonson 1991). *Amazona oratrix* is subject to illegal domestic and international traffic (Ramos 1982, Nilsson 1988, Iñigo-Elias and Ramos 1991, Collar *et al.* 1992, Gobbi *et al.* 1996, Cantú, J.C. and M.E. Sánchez. 1996a, Macias-Caballero *et al.* 2000). The great popularity and high value of *A. oratrix* in the domestic and international pet markets have caused major pressure for its extraction from the wild, causing its populations to diminish throughout its range of distribution (Enkerlin-Hoeflich 1995a, Collar *et al.* 1992, BirdLife International 2000). The proximity of Mexico to the largest pet market in the world, the United States, created a large market, both legal and illegal, for this species and others from the genus *Amazona* between the 1960s and the early 1990s. The United States prohibited the import of birds from the wild with the Conservation of Wild Birds Act that came into effect in October 1992 (Federal Register 1995, Gobbi *et al.* 1996, Enkerlin-Hoeflich *et al.* 1997). It is the species with the second-highest number of birds confiscated on the Mexico-Texas border, after *A. auropalliata* (Gobbi *et al.* 1996). *A. oratrix* most probably comes from Mexico, while *A. auropalliata* presumably comes from Honduras and Guatemala (Snyder *et al.* 2000). In the last three years, the State Delegations of PROFEPA of Chiapas and Oaxaca have confiscated different shipments of this species as well as of *Amazona farinosa* and *A. auropalliata* (Ruiz *in litt.* 2001).

#### 3.1 National utilization

In Mexico, the General Wildlife Act (DOF. 2000) establishes strict requirements for the authorization of commercial exploitation for species in risk and in any event makes such authorization subject to activities of conservation. Even so, of the 22 species of parrots that inhabit Mexico, *Amazona oratrix* is the most sought after (Cantú and Sánchez 1996a and 1997). Its sale has been observed in markets, in animal stores, and by itinerant bird vendors in Mexico City (Cantú and Sánchez 1996b). The most common method of capture is to take birds from their nests; also, the trees may be cut down to bring the nests down. Another method is to place a parrot on a branch tied to a rope with slipknots to trap the birds by their feet, and another is to trap them with glue (Iñigo-Elias and Ramos 1991).

#### 3.2 Legal international trade

The 31 species of the genus *Amazona* recognized in the literature (Clements 2000) and in CITES have all been part of the live bird trade. Between 1980 and 1999, the trade bases of CITES record trade in 31 species of the genus *Amazona* on a world level, for a total of 730,756 specimens reported as exported and 716,597 as imported (World Trade Data provided by WCMC 1995 and 2001). Before 1986, the species *Amazona oratrix* was not recognized by CITES, and consequently specimens of this species that may have been traded were grouped with *Amazona ochrocephala*, giving a total of 86,693 specimens (Table 1). From 1986 until 1999, CITES began to record the trade in *Amazona auropalliata* as a species, recording a total of 509 specimens (Table 1). However, before CITES was implemented, between 1968 and 1971 the United States imported a total of 5,322 specimens of *Amazona [ochrocephala] oratrix* of which 51 per cent came from specimens captured in Mexico and Guatemala (Banks 1970, Banks and Clapp 1972, Clapp and Banks 1973a, b.). Iñigo-Elias and Ramos (1991) report that at least 2,716 individuals from the complex *ochrocephala* (including *A. oratrix*) were exported from Mexico to the United States between October 1979 and June 1980; and that the exports from Mexico of *A. ochrocephala* (including

*A. oratrix*) authorized for 1981 and 1982 totalled 7,200 specimens. In September 1982, the collection and export of the species was prohibited in Mexico (Iñigo-Elias and Ramos 1991). Subsequently, Mexico established an export quota of 60 specimens in 2001, which was not used. A quota was not requested for 2002.

**Table 1.** Total exports and imports of parrots of the genus *Amazona* in the WCMC database "CITES Trade Database" between 1982 and 1999 including the most traded species *Amazona aestiva* as compared to *Amazona oratrix*, *Amazona auropalliata* and *A. ochrocephala*. (Source: World Trade Data provided by WCMC 1995, 2001).

Species	Reported imports (no. of individuals)	Reported exports (no. of individuals)	% relative to total imports of individuals of every species	% relative to total exports of individuals of every species	Difference between imported and exported specimens
<i>Amazona aestiva</i>	264,901	388,746	36.97	53.20	123,845
<i>Amazona ochrocephala</i>	86,693	37,652	12.10	5.15	-49,041
<i>Amazona auropalliata</i>	7,282	9,599	1.02	1.31	2,317
<i>Amazona oratrix</i>	509	551	0.07	0.08	42
27 other species	158,683	103,027	22.14	14.38	-55,656
Total trade	716,597	730,756			

Given that it was not until 1983 that the species *Amazona oratrix* was accepted (AOU 1983), previous records do not distinguish among the different breeds of *Amazona ochrocephala* (Table 2). However, we now know that in certain countries *A. ochrocephala* or *A. auropalliata* do not exist, allowing us to make assumptions about when the records refer to *A. oratrix*. *A. ochrocephala* only exists from Panama southward and *A. auropalliata* is limited to a narrow coastal strip from the south of Mexico to Costa Rica, with another population on the Caribbean slope between Honduras and Nicaragua (Forshaw 1989, Howell and Webb 1995). The numbers for El Salvador, Guatemala, Honduras and Nicaragua may for the most part be *A. auropalliata*. The numbers for Mexico are impossible to differentiate, though it can be said that for the most part, they are *A. oratrix*.

**Table 2.** Imports of *Amazona ochrocephala* to the United States (including confiscations). (Source: Nilsson 1982)

Country/Year	1977	1978	1979	1980	TOTAL
El Salvador		30	265		295
Guatemala		264	142	602	1,008
Honduras	2	773	178	370	1,323
Mexico	202	400	1,032	2,425	4,059
Nicaragua	1				1
TOTAL	205	1,467	1,617	3,397	6,686

The movements of specimens of *A. oratrix* recorded in Mexico in the past few years cover for the most part certain 'sub-products' (e.g. biological samples) of the species for research purposes. However, confiscations, repatriations, and movements of live organisms have also occurred. Tables 3 and 5 show the recorded movements of specimens in the last three years in Mexico. (Source: CITES Scientific Authority, Mexico).

### 3.3 Illegal trade

Enkerlin-Hoeflich (1995a) has estimated that between 350 and 600 parrots, including individuals of *A. oratrix*, are illegally collected each year just in the author's 526-hectare area of study in north-eastern Mexico. This species was the most frequently confiscated on the border with Texas, from 1990 to 1993 (Gobbi *et al.* 1996). Cantú and Sánchez (1996b) cite finding *A. oratrix* for sale in the Sonora Market in Mexico City, with a total of 83 specimens being found on six occasions in 1995. The species is in such high demand throughout Mexico that even other species of *Amazona*, or even species of *Aratinga*, are sold with their heads dyed yellow to pass as *A. oratrix* (Iñigo-Elias and Ramos 1991, Enkerlin-Hoeflich 1995, Cantú and Sánchez 1996a). The number of specimens illegally imported into the United States through Mexico is estimated at between 25,000 and 150,000 (Brautigam 1986, Gobbi *et al.* 1996, Thompsen and Brautigam 1991). According to an agent from the United States Fish and Wildlife Service (USFWS), smugglers interrogated in three different cases estimated that 20,000 to 25,000 birds of different species were moved across the border between the United States and Mexico in just one year in the Rio Grande Valley in Texas (Gobbi *et al. op cit.*). TRAFFIC-USA reports that 22 per cent of all birds confiscated in Texas on the border with Mexico are *A. oratrix*. From 1990 to 1993, 542 specimens of *A. oratrix* were confiscated (Gobbi *et al. op. cit.*). A three-year undercover investigation by US authorities into illegal trade resulted in the confiscation of 360 *Amazona oratrix* (U.S. Customs 1998). On May 27, 1999, the US Fish and Wildlife Service (USFWS) and the Federal Office of Environmental Protection together repatriated to Mexico 82 parrots of the genus *Amazona* in six different species, 21 specimens of which were *Amazona oratrix* (ARA Foundation 2000). Also, in the year 2000, a shipment of 29 parrots were repatriated from the United States to Mexico, four of which were *A. oratrix* (Directorate-General for Inspection and Surveillance of Wildlife, PROFEPA-SEMARNAT).

**Table 3.** Movements of specimens of *A. oratrix* during 1999, Mexico

CITES N°	Import/ Export	Country of des- tination	Objectives	Description	Appendix	Quantity	Country of origin	Country of provenance
7221	import	Panama	research	feather sample	II c	50 items	Mexico	Mexico
7221	import	Panama	research	feather sample	II c	50 items	Mexico	Mexico
7350	export	U.S.A.	research	blood smear	II w	60 items	Mexico	Mexico
7350	export	U.S.A.	research	non viable egg	II w	6 items	Mexico	Mexico
7350	export	U.S.A.	research	tissue saved in formol	II w	3 items	Mexico	Mexico
7350	export	U.S.A.	research	vial with ectoparasites	II w	30 items	Mexico	Mexico
7350	export	U.S.A.	research	vial of serum	II w	60 items	Mexico	Mexico
7730	re-export	U.S.A.	pet	0.1 live "jose" band : xyz-151	II w	1 head	unknown	U.S.A.
7876	export	Panama	research	feather sample	II f	30 items	Mexico	Mexico
7901	import	Mexico	repatriation confiscation	live	II w	21 head	Mexico	U.S.A.



**Table 4.** Movements of specimens of *A. oratrix* during 2000, Mexico

CITES N°	Import/ Export	Country of des- tination	Objectives	Description	Appendix	Quantity	Country of origin	Country of provenance
009751	export	U.S.A.	research	samples in accordance with annexed list	I W	328 items	Mexico	Mexico
010683	import	Mexico	trade	0.0.4	II I	4 head	Mexico	U.S.A.
011542	export	U.S.A.	research	vials with serum	II W	60 items	Mexico	Mexico
011542	export	U.S.A.	research	blood smear	II W	60 items	Mexico	Mexico
011542	export	U.S.A.	research	vials with ectoparasites	II W	30 items	Mexico	Mexico
011542	export	U.S.A.	research	non viable eggs	II W	6 items	Mexico	Mexico
011542	export	U.S.A.	research	dead sample (tissue)	II W	3 items	Mexico	Mexico
011410	export	U.S.A.	research	feather	II W	2 items	Mexico	Mexico
011410	export	U.S.A.	research	feather	II W	3 items	Mexico	Mexico

**Table 5.** Movements of specimens of *A. oratrix* during 2002, Mexico

CITES N°	Import/ Export	Country of des- tination	Objectives	Description	Appendix	Quantity	Country of origin	Country of provenance
15139	Import	Mexico	Specimens that have to be marked before sale	Trade	II C	10 head	Holland	Holland
15587	Import	Mexico	Live	Personal (pet)	II F	1 head	U.S.A.	U.S.A.

In Belize, too, there is evidence of considerable capture of *A. oratrix* for foreign markets (Lousada and Howell 1996). Lousada and Howell report that the robbing of nests continues to be a common practice there and that the parrots are killed when they eat the fruit harvests. The populations of *A. o. guatemalensis* are captured illegally by Hondurans crossing towards Guatemala, who plunder the young birds from the nests. The birds are also frequently captured on Honduran territory (Lousada and Howell *op. cit.*).

In Mexico, from 1976 to 1979, the sale of *A. ochrocephala* by bird vendors in public gardens or in the streets was very frequent. In 1983, the capture and sale of the yellow-headed parrot as part of the complex *A. ochrocephala* was prohibited (D.O.F. 1983). Illegal capture and sale replaced the trade that had been legal in Mexico up to then. Cantú and Sánchez (1996a and 1996b) demonstrated that from 1992 to 1996, *A. oratrix* continued to be sold in the largest illegal fauna market found in Mexico City, the Sonora market. Between 1994 and 1995, an increase in the number of specimens for sale in the market was recorded. During the same investigation, both the sale of *A. oratrix* by vendors in Mexico City and the sale of parrots illegally in pet stores in Mexico City were observed.

Among the species of parrots in which it is prohibited to trade, *A. oratrix* was the most frequently confiscated between 1998 and 2000 by the Federal Office of Environmental Protection. During the period 1990 to 1993, the yellow-headed parrot was the species with the second-highest number of confiscations by the United States authorities on the border between the state of Texas and Mexico (Gobbi *et al.* 1996).

### 3.4 Actual or potential trade impacts

The principal impact on the conservation of the species is the strong pressure of trade that is generated on the wild animal populations. Combined with the problems of loss and degradation of habitat, this makes the future of the species not very promising. The principal technique employed to capture parrots consists in removing the young birds from the nests (Iñigo-Elias and Ramos 1991). The capturer can climb the tree or cut down the tree in which the nest is found, or cut through the trunk to extract the young birds from the nest cavity. Enkerlin-Hoeflich (1995a) demonstrates that since successful nests are more likely to be reused, the continuous and forced necessity of the birds to find new cavities due to the poaching or destruction of the cavities could reduce productivity. In the long run, this is likely to have significant impacts on the populations. The mortality rate of parrots in illegal trade is estimated to be between 40 and 50 per cent greater than in the legal international trade due to poor nutrition, stress, and hoarding (Iñigo-Elias and Ramos 1991). It is estimated that 90 per cent of smuggled birds die before arriving in the United States (Department of Justice press release 1994). This high mortality rate necessarily means that a greater number of individuals has to be captured to satisfy the demand.

Enkerlin-Hoeflich (1995a, 1995b) demonstrates that the ability of *A. oratrix* to recover from over-capture is very low given that the species faces more capture pressure than other species and has a low index of productivity (only 0.3 young per nest). Additionally, it shows a high proportion of pairs that do not nest (65 per cent) and a very low nesting success rate (1 in 4), further predisposing them to future negative impacts from over-capture. The price of an individual *A. oratrix* in the United States varies between USD 825 (Wright *et al.* 2001) and USD 1,350 (Michels 1996). Trade in *A. oratrix* is very lucrative and consequently the rewards of illegal traffic are high. In the United States the average selling price in 1996 was estimated at USD 1,350. The levels of plundering are significantly lower for species whose selling prices are less than USD 500 than for species with higher prices (Wright *et al.* 2001). This relationship suggests that the plundering of nests in the countries of origin is linked to illegal international traffic, in addition to supply of the local markets. An analysis of 10 species of parrots in Guatemala demonstrated that the plundering of nests was significantly reduced after the restriction of imports when the U.S. Wild Bird Conservation Act was put into effect in 1992 (Wright *et al.* 2001). Precisely because of the link between international trade and plundering of nests, it may be hoped that restricting international trade by including *A. oratrix* in Appendix I will result in some reduction of the plundering of nests, thus improving the species' prospects for survival. The suspension of the import of parrots of wild origin can reduce the plundering of nests in the countries of origin by reducing the international demand (Wright *et al.* 2001).

### 3.5 Captive breeding for commercial purposes (outside the country of origin)

In the United States, the yellow-headed parrot is one of those more often found in captivity (Allen and Johnson 1991) and it is thought to be "the *Amazona* parrot most often reproduced in captivity" (Thompson 1996). In a survey of bird breeders in the United States, it was reported that fewer than 20 per cent of *A. oratrix* in captivity were known to have been born in captivity, and that more than 50 per cent were of wild origin (Allen and Johnson *op. cit.*). This was nine years after export of this species had been prohibited in Mexico. Even so, *A. oratrix* was reported as the sixth most abundant species of parrots in captivity and its productivity was among the lowest of the parrots popularly kept in captivity (Allen and Johnson *op. cit.*).

## 4. Conservation and management

### 4.1 Legal status

#### 4.1.1 National

In Mexico, Article 87 of the General Law on Ecological Balance and Environmental Protection establishes restrictions on the utilization of natural populations of endemic species that are endangered or in danger of extinction (D.O.F. 1996). The General Wildlife Act establishes that authorization for the utilization of at-risk species will be given only when priority is given to activities of restoration, repopulation, or reintroduction. Furthermore, for species in danger of extinction, specimens have to be the product of controlled reproduction and contribute to the development of populations (D.O.F. 2000). The Plan for the Conservation, Management, and Sustainable Use of the Parrots of Mexico suggests that trade in them should not be permitted in the country (Macias Caballero *et al.* 2000).

#### 4.1.2 International

In Belize, *A. oratrix* is completely protected from capture and export under the Belize Wildlife Protection Act of 1981 (Michels 1996). In Honduras, Decree 001, signed in 1990, prohibits trading in wildlife (Wiedenfeld 1993).

### 4.2 Species management

In Mexico, there are different breeders that work with parrots, some of whom possess individuals of *A. oratrix*. During the year 2000, the Directorate-General for Wildlife, in cooperation with PROFEPA, moved a total of 67 reproductive specimens of *Amazona oratrix* in captivity from the ARA Foundation facilities in Monterrey, Mexico. A total of 45 specimens went to six different Management Units (UMAS), while the remaining 22 specimens of known origin were made available to the Technological and Higher Studies Institute of Monterrey for a reintroduction project (ARA Foundation 2000).

#### 4.2.1 Population monitoring

In Mexico, the PREP establishes the following goals for the conservation of *A. oratrix*: "To number no less than three identified populations considered to be stable in each of its range regions (Gulf, South and Pacific). These populations should be in protected areas and/or with collaborative agreements and in each case the conservation of this species should be explicitly included in the management plan of the said areas" (Macias-Caballero *et al.* 2000). Currently, there is no permanent monitoring programme for the species, however the project "Evaluation of the current state of the populations of the yellow-headed parrot (*Amazona oratrix*) in Mexico" is under development under the responsibility of the Centre for Environmental Quality of ITESM and the Institute of Biology of UNAM, with the financial support of CONABIO (Macias Caballero *et al. in prep.*).

#### 4.2.2 Habitat conservation

In Belize, the habitat and populations of *Amazona oratrix* are protected in two reserves: Rio Bravo Conservation and Management Area and Monkey Bay Wildlife Sanctuary (Rodríguez, V. *in litt.* 2002). In Mexico, there are various protected natural areas within the range of distribution of *A. oratrix*: on the Gulf slopes, these are: the Abra Tanchipa Biosphere Reserve in San Luis Potosí, the Sierra Gorda Biosphere Reserve In Querétaro, the Tuxtlas Biosphere Reserve in Veracruz and the Pantanos de Centla Biosphere Reserve in Tabasco. On the Pacific slopes, there is the Chamela-Cuixmala Biosphere Reserve in Jalisco. Furthermore, 19 Important Bird Areas (IBAs - AICAS in Spanish) are recognized in Mexico in

which *Amazona oratrix* exists. These are: La Incrucijada, coastal wetlands on the northern Yucatán peninsula, the estuary of the Soto La Marina river, Coalcomán-Pomaro, the Mariás Islands, Chamela-Cuitzmala, Sierra de Tamaulipas, Cerro del Metate, and wetlands of southern Tamaulipas and northern Veracruz (<http://conabioweb.conabio.gob.mx/aicas/doctos/aicas.html>).

#### 4.2.3 Management measures

The guidelines of the PREP suggest that internal demand for the species has to be abated through awareness-raising programmes on its state of conservation. For as long as it maintains its status as a species in danger of extinction, it is recommended that no commercial exploitation of specimens of wild life in the Wildlife Management and Conservation Units, applicable to commercial use of the species, be authorized. Once it has moved to the “endangered” category, trading will be permitted by those who comply with the current regulations and conservation programmes. It is proposed that a moratorium of three years should be put into effect for any type of trading in the species. After that, there should be a regulatory and surveillance infrastructure to verify compliance and penalize offenders (Macias-Caballero *et al.* 2000).

### 4.3 Control measures

#### 4.3.1 International trade

In 1981 *A. oratrix* was included in Appendix II of CITES under the Order Psittaciformes. In Guatemala the export of wild domestic birds was prohibited in 1986 (Thomsen and Mulliken 1992). In Mexico in 1996, the Federal Office of Environmental Protection implemented the Inspection Programme for Ports, Airports, and Borders under which all of the flora and fauna shipments entering and leaving the country by its various ports were visually inspected. Article 55 of the General Wildlife Act in Mexico lays down that imports, exports, and re-exports of specimens of wild species covered by CITES have to be carried out in accordance with that Convention and Article 53 stipulates that authorization from the Ministry of the Environment and Natural Resources is required for the export of wild species (D.O.F. 2000).

#### 4.3.2 Domestic measures

In Mexico, the General Wildlife Act establishes a series of requirements for the utilization of species in danger of extinction: authorization for the utilization of at-risk species will be granted only when priority is given to activities of restoration, repopulation, or reintroduction. In addition, for species in danger of extinction, specimens have to be the product of controlled reproduction and contribute to the development of populations (D.O.F. 2000).

### 5. Information on similar species

*A. oratrix* is one of three species recognized in the complex *Amazona ochrocephala*, together with the yellow naped parrot (*A. auropalliata*) and the yellow crowned parrot (*A. ochrocephala*) (Forshaw 1989, AOU 1998, Collar 1997, Clemens 2000). Different geographical breeds mentioned by different authors exist (Forshaw 1989, Collar *et al* 1992, Howell and Webb 1995, Collar 1997, Clemens 2000).

### 6. Other comments

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## 7. Additional remarks

Costa Rica and Guatemala have presented a proposal to include *A. auropalliata* in Appendix I. If accepted, this proposal will facilitate the work of identifying the two species (*A. oratrix* and *A. auropalliata*) for the importing countries since both of them will be in Appendix I.

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