CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II

A. Proposal

Transfer of the yellow-naped parrot *Amazona auropalliata* (Aves: Psittacidae) from Appendix II to Appendix I.

The yellow-naped parrot *A. auropalliata* has suffered a marked population decline owing to the destruction of its habitat and the ransacking of nests for the domestic and international trade in live specimens. The species is currently considered to be endangered or in danger of extinction by the legislation of all six of its range States. Only Nicaragua currently permits its commercial utilization, under a system of quotas for its extraction from the wild. The evident diminishing number of specimens in the wild, observed as ongoing [criterion C. i) of Annex 1, Resolution Conf. 9.24], and the fact that the species is impacted by trade, cause *A. auropalliata* to be a species *in danger of extinction* according to the CITES criteria, meeting the requirements for inclusion in Appendix I.

B. Proponent

Costa Rica.

C. Supporting statement

1. Taxonomy

1.1 Class: Aves

1.2 Order: Psittaciformes

1.3 Family: Psittacidae

1.4 Species: *Amazona auropalliata*

Subspecies: *A. a. auropalliata*, *A. a. caribaea,* and *A. a. parvipes*

1.5 Scientific synonyms: *Amazona ochrocephala auropalliata*
Amazona auropalliata auropalliata

1.6 Common names:
English: Yellow-naped parrot
French: Amazone à cou jaune
Spanish: Perico de nuca amarilla; lora de nuca amarilla; loro nuquiamarillo

1.7 Code number:

2. Biological parameters

2.1 Distribution

Amazona auropalliata is found in Mesoamerica from south-eastern Mexico to north-western Costa Rica, including Guatemala, Honduras, El Salvador and Nicaragua. Although it is primarily a species of the Pacific slopes (*A. auropalliata auropalliata*), a population does exist on the Caribbean slopes (*A. auropalliata parvipes*), from Colón, Honduras, eastwards and southwards through the Honduran and Nicaraguan Moskito Coast, to just north of Bluefields (Monroe and Howell, 1966; Forshaw

1977; Low, 1992; Howell and Webb, 1995). The subspecies *A. auropalliata caribaea* inhabits the Bahía Islands of Honduras (Lousada, 1989; Lousada and Howell, 1996).

2.2 Habitat availability

A. auropalliata prefers deciduous forests and evergreen gallery forests, as well as wooded savannahs, and to a lesser degree secondary high forests or agricultural zones (Stiles and Skutch, 1995). Its need to nest in trees and its affinity for wooded habitats and forests mean that analysis of habitat availability is a pertinent issue, in the light of deforestation, the advance of the agricultural frontier and urbanization. In all of its range States the habitat of *A. auropalliata* is being jeopardized by deforestation. The species does find refuge in wild areas under state protection (e.g. in Costa Rica).

In Mexico, the species is found in the states of Oaxaca and Chiapas. Until 1990, Oaxaca had undergone the most deforestation in the country with 71,900 ha per year (19 per cent of the national total of deforestation), whereas Chiapas was in fourth place with 41,200 hectares annually (SARH, 1993). Between 1975 and 1991, Chiapas lost 23 per cent of its forest cover (Sosa-Cedillo, V. 1994). By 1993, the rate of deforestation had decreased in both states, but Chiapas moved into third place for deforestation in the country. In 1991, Chiapas had 273,000 ha and Oaxaca 798,000 ha of low deciduous forest (dry tropical forest). The low forests are in second place for deforestation in the country (SARH, 1991-1992). The shrimp farm projects and the designation of 63 per cent of the coastal area of Chiapas for exploitation threaten the mangrove zones of this state (Mugica, 2000).

Parrot researchers in Guatemala view the habitat of *A. auropalliata* as compromised by deforestation for farming and cattle ranching, the felling in the agricultural countryside of trees in which the species typically nests, and the transformation of cattle ranching areas into single-crop areas [Toft and Brice, 1993; Brice, 1995; W.T. Williams in personal communication to Ann Michels, Environmental Investigation Agency (EIA)]. The forest coverage of El Salvador has been reduced to minimal remnants of high forest and a few patches of deciduous tropical forest and mangroves (Ramos, 1985). Habitat destruction has brought the species to the point where it is in danger of extinction in El Salvador (Low, 1992). In Honduras, Wiedenfeld (1993) includes the destruction of habitat among the factors responsible for the decline of *A. auropalliata*. Its habitat is further reduced by the felling of mangroves in the Fonseca Gulf to create shrimp farms and to extract lumber and firewood. This species is not very commonly found in a disturbed habitat. In Nicaragua, the habitat, deciduous tropical forest, is being lost in the Pacific region by urbanization and the advance of the agricultural frontier (Wiedenfeld, 1995; Pérez and Zúñiga, 1998). Reports from local people suggest that the species has disappeared from the areas in proximity to human settlements. Costa Rica has lost more than half of its forests since 1940 (Stiles, 1985). The period from 1950 to 1982 saw the felling of practically all of the deciduous tropical forest, the typical habitat of *A. auropalliata,* in the north-east and on the Nicoya peninsula, with only a few patches remaining in state protected areas, amounting to approximately 15,100 ha. The dry tropical forest has since begun to regenerate in these areas. A conservative estimate of the potential habitat of *A. auropalliata* in Costa Rica, including forest areas, pastureland, and farming zones of the dry Pacific region, would give an area of 6,871 km^2, of which only 1,085 km^2 (16 per cent) is under state protection (Abadía *et al.*, 1998).

2.3 Population status

The analysis of habitat destruction (section 2.2), the pressure from the ransacking of nests (sections 2.7 and 3.3), the local population sizes (this section), the domestic legislation (section 4.1.1), and the declines (section 2.4) demonstrate that the species is found to be endangered in all of its range States (also Wiedenfeld, 1993, 1995). *A. auropalliata* is currently considered endangered or in danger of extinction by the legislation of all six of its range States (section 4.1.1). There are specific studies of its population size in Honduras and Nicaragua (see

below). Although locally the species may appear common in certain zones of its distribution, the sightings probably relate to a stable population of ageing birds with low recruitment rates due to the excessive ransacking of nests (section 2.7). Since it is a long-lived species, even a total extraction of chicks would not be noticed until many years later and the population could suddenly succumb when the adults die of old age (Wiedenfeld, 1995). Based on the findings of the evaluations of the population status of *A. auropalliata* in Honduras and Nicaragua, Wiedenfeld (1993, 1995, 1999) concludes that it could become necessary to list the yellow-naped parrot in Appendix I of CITES.

The species is classified in the national regulations of Mexico as in danger of extinction (see section 4.1.1). In the legislation of Guatemala, it has been considered almost extinct since 1999 (see section 4.1.1). Previously, the species was recognized as in danger of extinction in Guatemala by Toft (1993), Brice (1995) and W.T. Williams [personal communication to Ann Michels, Environmental Investigation Agency (EIA)]. Low (1992) considers the El Salvador population to be in danger of extinction. This endangered status was confirmed in 1994 in the legislation of this country (see section 4.1.1). In Costa Rica, the Department of the Environment and Energy has declared it a "species with reduced population" (see section 4.1.1). Stiles (1985) confirms that in Costa Rica it is a species whose population has been reduced to dangerously low levels, which has been eliminated from certain areas and which is common in protected areas. The data presented on destruction of habitat (section 2.2), pressure from the ransacking of nests (section 3.3), and the declines (section 2.4) show that *A. auropalliata* is in danger of extinction in Costa Rica as well.

In Honduras, the species is considered by law to be *In danger of extinction, of commercial importance or importance for consumption, and of importance for the prioritization of areas*, (see section 4.1.1). Wiedenfeld (1993) has estimated a population of 140,290 individuals, although he included only the subspecies *parvipes* and *caribaea* from north-eastern Honduras, not making any formal counts in the south of the country (provinces of Choluteca and El Valle). The species has been almost eliminated on the Pacific slopes in Choluteca and El Valle, and it is diminishing over all of its range (Wiedenfeld, 1993). Wiedenfeld sought for five days to find remaining populations in the south of Honduras and was able only to see 58 birds, mostly in one location. Wiedenfeld (1993) concludes that the species is endangered in Honduras.

The species is on the *List of Nicaraguan Species of Endangered Animals or Animals in Danger of Extinction* (see section 4.1.1). Wiedenfeld (1995) has estimated the national population in Nicaragua at 178,770 individuals, and its average density at 2.3 individuals / km^2 on the Atlantic side and 1.4 individuals / km^2 on the Pacific side. 128,280 individuals were estimated on the Caribbean slopes (*A. a. parvipes*) and 31,313 for the Pacific slopes as a whole (*A. a. auropalliata*). For that region, this figure is considered to be very low (Wiedenfeld, 1995). In 1999, the national population was estimated at 85,000 individuals, with a density of 1.1 birds per km^2 (Wiedenfeld *et al.*, 1999). In the 1995 and 1999 studies in Nicaragua *A. auropalliata* is the *Amazona* whose population is most severely reduced. In 1999, it was recorded as the smallest population of the six species of parrots included in the research. Despite the moderate numbers of *A. auropalliata*, the species should be considered as in danger of extinction due to the population decline and the strong pressures both from its extraction for the cage-bird trade and the destruction of habitat (Wiedenfeld, 1995).

In Mexico, there probably do not exist more than 40 specimens in breeding facilities (Sánchez and Cantú, 1995; Sánchez, M.E. personal communication). In Nicaragua, since 1992 at least four exporters have attempted to begin breeding the species in captivity. In 1993 and 1994, none of them were producing substantial numbers of young (Wiedenfeld 1995). Wiedenfeld (1995) recommends the strengthening of the initiative for the captive breeding of *A. auropalliata* in Nicaragua. There is no programme for the breeding in captivity of this species in Costa Rica. In Costa Rica, the population of *A. auropalliata* illegally kept in households as pets is probably around

22,700 individuals (calculated from data in Drews, 2001[1]). Some specimens are maintained in captivity in zoos, probably in total something less than a hundred.

2.4 Population trends

The decline in population of *A. auropalliata* has been particularly marked in the past 20 years. Juniper and Parr (1998) consider the species formerly common and locally abundant, but probably declining currently throughout its range of distribution. Before the 1970s, when it was still considered to be a subspecies of *A. ochrocephala*, the yellow-naped parrot was considered a common resident in its area of distribution (e.g. El Salvador: Dickey and van Rossem, 1938; Honduras: Monroe, 1968; Guatemala: Land, 1970; Costa Rica: Wetmore, 1944). Beginning in the 1980s, the first observations of the diminishing population were presented, resulting principally from habitat destruction (Ridgely, 1981; Noegel cited In Low, 1983; El Salvador: Thurber, 1987, cited In Wiedenfeld, 1993). In 1983, *A. auropalliata* was recognized as a species distinct from *A. ochrocephala,* and protection measures began to be put into effect. In Mexico (1983) capture of *A. auropalliata* was prohibited by the Schedule on Utilization of Songbirds and Decorative Birds. In Honduras, in the early 1980s, people trapping birds sold the yellow-naped parrot very cheaply because they were very common, but in 1985, the price rose substantially because of the difficulty of obtaining the birds (Kreger, 1985, cited in Wiedenfeld, 1993).

As early as the 1990s, once it was considered to be a distinct species, the decrease was evident, to the point of its already being eliminated from some areas. In El Salvador it was recognized as in danger of extinction (Low 1992). In 1991, Mexico declared it in danger of extinction as part of the *A. ochrocephala* complex by Ecological Ruling CT-CERN-001-91. In 20 years, illegal trafficking reduced the Mexican population by 90 per cent (EIA 1994). By 2000, the species had practically disappeared from Oaxaca (SEMARNAP 2000b). In Honduras, as part of an analysis of the parrot population status, Wiedenfeld (1993) found that *A. auropalliata* was almost eliminated from the Pacific slopes in Choluteca and El Valle, with a marked decline in recent years, and that it is diminishing throughout its range of distribution. Interviews with local people document various local extinctions in Honduras (Wiedenfeld, 1993). In Guatemala, the decline from ransacking nests and destruction of habitat is likely to bring the species to the point of extinction in less than 20 years (Toft, 1993; Brice, 1995). In Nicaragua, Wiedenfeld (1995) has observed that even though there are still some *A. auropalliata* on the Pacific slopes, they have apparently declined with the increase in human population. The local people interviewed provide evidence of severe declines and some local extinctions (e.g. on the slopes of the Mombacho y Rivas volcano). In 1999, Wiedenfeld *et al.* (1999), in analysing the population trend between the estimate for 1994/1995 and that for 1999, concluded that there was a decline over those four years, although it was not statistically significant.

In Costa Rica, the species is in decline (Juniper and Parr 1998), has been reduced to dangerously low levels (Stiles 1985, Stiles and Skutch 1995), and has disappeared locally in various zones outside the protected areas, reducing its area of distribution (Stiles, 1985; Abadía *et al.*, 1998). Slud (1964) and Forshaw (1977) consider it common in the low basin of the Tempisque River. In recent years, J. Sánchez of the Museum of Natural History, on the basis of observations from 20 years ago, considers the species as scarce in that basin (cited in Abadía *et al.*, 1998). It has disappeared from the most deforested areas of Guanacaste, from Puntarenas near Miramar to just before the Carara National Park, among other places (Abadía *et al.*, 1998). *A. auropalliata* is not a very common resident and is becoming ever rarer on the dry slopes of the northern Pacific and southwards to the Tárcoles zone (Stiles and Skutch, 1995). The species has been considered

[1] Extrapolated total for *A. auropalliata* calculated for the sample of 1,021 households in Drews (2001), applied to the approximate total of 835,848 households in Costa Rica (INEC 1999).

common and stable in the protected areas of the dry Pacific region (Stiles, 1985; Langen, 1994; G. Barbosa cited in Abadía *et al.*, 1998).

The subspecies *A. a. caribaea*, endemic to the Bahía Islands in Honduras, is in serious decline owing to capture for export (Juniper and Parr 1998). Lousada estimated a population of 200-300 birds in Guanaja in 1987, and of only 100-200 in 1994 (Lousada and Howell 1996). Wiedenfeld (1993) did not find any *A. a. caribaea* In 1992 when visiting the Bahía Islands. The populations of *A. a. parvipes* have been diminishing with the change in ground use and capture for domestic and external trade. The parrot was the least abundant *Amazona* recorded in habitats disturbed by farming and fallow ground in north-eastern Honduras (Wiedenfeld, 1993). Wiedenfeld (1993) cites Salaverri and Murphy (1991) who report that the species has diminished in eastern Honduras, and that the local people informed them that the parrots do not come to the crops in the quantities previously noted. Wiedenfeld (1995) predicts that the decline of *A. a. parvipes* in Nicaragua will continue in synchronism with the advance of the agricultural frontier in that region.

2.5 Geographic trends

The species' northernmost point of distribution was in the extreme south-east of the state of Oaxaca, at the level of the Isthmus of Tehuantepec. Its southernmost point was the most north-eastern part of Costa Rica, extending to the Nicoya peninsula (Ridgway, 1916; Binford, 1968; Slud, 1964; Howell S.N.G. and Webb, S. 1995). Its northern distribution has been reduced, to the point that it has practically disappeared from Oaxaca (SEMARNAP 2000b). The species has been decimated throughout its original range of distribution, principally on the Pacific slopes, leading to local extinctions in Mexico, Honduras, Nicaragua and Costa Rica (see sections 2.3 and 2.4). It is possible that the southernmost point of its distribution may also have been reduced by at least 70 km, since 40-50 years ago the species supposedly reached Puerto Quepos in Costa Rica (D. Castelfranco personal communication, cited in Abadía *et al.*, 1998).

2.6 Role of the species in its ecosystem

Few details exist on the diet of the yellow-naped parrot, although in general it feeds on seeds and fruit in the treetops (Forshaw 1977). Included in its diet are seeds of *Cochlospermum* and *Curatella*, as well as fruit from *Ficus* and *Terminalia*, *inter alia* (INE 2000). Like the majority of parrots, its most important function in the ecosystem is that of being a seed predator or disperser in the canopy (Renton 2001).

2.7 Threats

The greatest threat to the yellow-naped parrot is the destruction of its habitat (section 2.2) from the change in ground use to farming and urbanization (Ridgely, 1981; Low, 1992; Toft and Brice, 1993; Joyner, 1994; Wiedenfeld, 1993 and 1995; Brice, 1995; Williams, 1996; Lousada and Howell, 1996). The second threat is the ransacking of nests for illegal trade in live specimens to supply domestic and international demand (see sections 3.1-3.3).

The most exhaustive study to date on the ransacking of nests of neotropical parrots concludes that levels of ransacking over 70 per cent, as is the case with *A. auropalliata* in Guatemala, will lead to severe declines in the population (Wright *et al.*, 2001). In the first two years of a rural study on *A. auropalliata* in Guatemala, there was no successful reproduction due to the fact that 100 per cent of the nests were ransacked for illegal trade, which is carried on both internationally and within Guatemala (Toft and Brice, 1993). From 1993 to 1995 the percentage of nests ransacked increased from 32 per cent to 51 per cent despite the fact that the nests were guarded (Brice, 1995). In Tamaulipas, Mexico, the populations of *A. auropalliata* remain low because of the pressure of ransacking that has affected over 30 per cent of the nests of the *Amazona* studied (Pérez and Equiarte, unpublished manuscript, cited in Thomsen and Brautigam, 1991). In Costa Rica, a third of the nests of *A. auropalliata* were ransacked, corresponding to approximately 85 per cent

of total mortality (calculated from data in Wright *et al.*, 2001). Nests are plundered even in well-patrolled zones in the areas under state protection (e.g. Costa Rica: Guanacaste National Park, Wright 1996). The combination of natural depredation, plundering, and destruction of nests probably impedes the recruitment of individuals to the population in Costa Rica and could lead to its eventual extinction (Wright 1996).

The capture of adults for illegal trade is an additional threat. During research conducted in Mexico by J.C. Cantú and M.E. Sánchez on the illegal traffic in parrots from 1992 to 1996, practically no *Amazona auropalliata* chicks were observed for sale, only adult birds and one or two young (Cantú, J.C. personal communication).

Plundering of nests associated with illegal international traffic is abundant with this species (see section 3.3). Furthermore, the extraction of young birds from the wild for legal international trade is an additional pressure on the Nicaraguan population. Although the numbers of exported *A. auropalliata* are low (600 specimens as the CITES quota for 2001), on average about 1,200 young birds are extracted, assuming a mortality of 54 per cent according to Pérez and Zúñiga (1998) in the course of capture and transport. In addition, the existence of a legalized international market is very probably associated with the plundering of nests in the countries of origin (Wright *et al.*, 2001, and see section 3.3). Pérez and Zúñiga (1998) recommend a revision of the CITES export quota, in view of the prolonged pressure on the species, the reduced habitat on the Pacific and Atlantic coasts, and the subsequent serious degree of vulnerability.

Another threat to the wild population may be a particularly high natural mortality. In Guatemala, the loss of up to 33 per cent of the nests has been reported, due to depredation (falcons and iguanas), disturbances from killer bees, and infestations of mites and flies (Brice, 1994 and 1995; Joyner, K. 1994). The combination of threats keeps the population from increasing, since very few birds are being added to the population. When the adults die, the lack of recruitment of young birds in the reproductive phase may well lead to a rapid and probably irreversible collapse (Guatemala: Brice, 1995; Toft and Brice, 1993; Honduras: Wiedenfeld, 1993; Costa Rica: Wright 1996).

3. Utilization and trade

3.1 Domestic use

The species is used as a pet in all of its range States. It is one of the most sought-after parrots in the region because of its outstanding capacity to imitate human speech. In these countries, it is not commercially bred in captivity. Extractions from the wild, principally of young birds, supply the national and international demand for these birds (Mexico: Iñigo and Ramos, 1991; Guatemala: Toft and Brice, 1993; Honduras: Wiedenfeld, 1993). The plundering of nests is the most common method of capture. The methods frequently include the felling of nesting trees (Mexico: Iñigo and Ramos; Honduras: Wiedenfeld, 1993; Miskito Indians: Wiedenfeld, 1993; Nicaragua: Wiedenfeld, 1995). In Mexico, adult specimens lured by a parrot placed on a branch are captured with glue and ropes with slip-knots (Iñigo and Ramos, 1991).

In Mexico, there is no legal trade in this species, since its capture has been prohibited since 1983 (Official Gazette 1983). No sale permit has been issued for *A. auropalliata* bred in captivity by any breeding facility registered with the authorities (Cantú, J. personal communication). In 2000, there were no *A. auropalliata* in the 21 Wildlife Management and Conservation Units (UMAS) that handle parrots (SEMARNAP 2000b). Even so, of the 22 species of parrots in Mexico, *Amazona auropalliata* is one of the most sought-after and the species with the fourth-highest level of illegal trade (Cantú and Sánchez 1996 and 1997a).

In Honduras, trade in this wild species was prohibited by Decree 001 of 1990 (Wiedenfeld, 1993). However, trade in *A. auropalliata* continues. It is the most sought-after *Amazona*, which means that the moratorium on capture should continue (Wiedenfeld, 1993). *A. auropalliata* is the most common

species in households. Surveys on possession of parrots in Puerto Lempira and in Wampusirpi suggest that one in every three households has a parrot as a pet, for the most part *A. auropalliata* (Wiedenfeld (1993). Assuming an incidence much lower on the national scale, Wiedenfeld (1993) has calculated that the national demand for pet parrots is at least 10,000 specimens per year. This value would be doubled to at least 20,000 birds extracted from the wild, when a mortality rate in the course of capture and transport of around 50 per cent is taken into account (according to Iñigo and Ramos, 1991; Pérez and Zúñiga, 1998).

In Nicaragua, about 20 per cent of households keep some type of parrot as a pet (Zegarra R.E. and C. Drews, unpublished data). *A. auropalliata* comprises 8.4 per cent of these parrots. The current captive population of this species is at least 19,865 specimens. The birds are sold by itinerant bird vendors or in markets throughout the country. Among the parrots offered for sale by itinerant bird vendors, *A. auropalliata* accounts for 27 per cent, and of all the species of *Amazona*, it is the one most frequently traded in the streets (Pérez 1997). In Nicaragua, this is the most sought-after species of parrot for use as a pet, and it is the most expensive *Amazona*: it is sold in the domestic market for around USD 50 (Wiedenfeld, 1995, Herrera 2001). Pérez and Zúñiga (1998) estimate the annual extraction in Nicaragua at 11,124 *A. auropalliata*, taking into consideration a mortality rate of 54.5 per cent throughout the chain of trade until the time of export. This number exceeds by almost 14 times the export quota established up to 1998 by the Nicaraguan CITES Management Authority, and is more than 5 per cent (8,938 specimens) of the total estimated Nicaraguan population of this species (Wiedenfeld, 1995, Pérez and Zúñiga 1998). Domestic trade in the Eastern Market of Managua has not decreased in recent years: in 1996 and 1997, *A. auropalliata* represented 7 per cent of the parrots held there (Pérez 1997). In 2000, it accounted for 10 per cent of the parrots in this market, and was the second-commonest *Amazona* there, after *A. autumnalis* (Zegarra R.A., unpublished data). This would result in at least 1,303 to 1,862 specimens of *A. auropalliata* legally supplied by the Eastern Market of Managua each year, without taking into consideration the mortality rate associated with extraction and transport (calculated from Gutiérrez and Gómez, 1996).

In Costa Rica, the possession of captive parrots as pets is a common practice, despite its being illegal (Drews 2001). 18 per cent of households keep some type of parrot as a pet. 48 per cent of the breeds cited are *Amazonas*. *A. auropalliata* comprises 27 per cent of *Amazona* in households (calculated from data in Drews 2001). Between 27,000 and 35,000 parrots annually satisfy this demand (Drews 2000). 13 per cent of them are *A. auropalliata*, in other words at least 3,510 to 4,550 birds (calculated from data in Drews 2001). Considering the mortality associated with the capture and transport to be approximately 50 per cent (Iñigo and Ramos, 1991; Pérez and Zúñiga, 1998), the number of specimens – predominantly young birds – of *A. auropalliata* extracted annually from the wild in Costa Rica is between 7,020 and 9,100.

The use of parrots for human consumption dates from the pre-hispanic era in the neotropics (Thomsen and Brautigam, 1991). Today it is apparently rare and although Wiedenfeld (1995) records its existence in Nicaragua, the author concludes that this practice is not common.

3.2 Legal international trade

A. auropalliata is the most expensive species of Central American *Amazona* in the international market, because of its ability to imitate human speech (see section 3.4). The only country among its range States that permits the extraction of *A. auropalliata* from the wild for export is Nicaragua. The great majority of the exports of *A. auropalliata* in the world come from Nicaragua (Figure 1). From 1993 on, Nicaragua had an annual export quota of 800 specimens (http://www.cites.org/eng/notifs/1993/726.doc). Pérez and Zúñiga (1998) recommended reducing the annual quota by 50 per cent. In 2000, Nicaragua reduced the quota from 800 to 600 live specimens (http://www.cites.org/eng/resources/quotas/2000/Nicaragua.shtml). In 2000, Nicaragua exported 661 specimens (74 per cent of the global total exported), of which 35 were personal pets and 44 were part of the 1999 quota (WCMC-World Conservation Monitoring Centre – written

communication). Of the total for the rest of the world that year, 39 per cent were re-exports of birds also of Nicaraguan origin, mostly exported by European countries.

In Nicaragua, the species has a legal minimum price of USD 210 per specimen (price FOB in 1996, Pérez and Zúñiga 1998), corresponding to USD 126,000 per year if the total quota for 2000 were exported. The distribution of earnings from the export quota of Nicaraguan birds in 2000 was: 79 per cent for the exporters, 11 per cent for the Government, 7 per cent for the gatherers, and 3 per cent for farmers (Herrera 2001). Between 1989 and 1994, *A. auropalliata* was the second most commonly exported species from Nicaragua, after *A. autumnalis* (Pérez and Zúñiga 1998). All of the specimens of *A. auropalliata* exported come as young birds from the wild, and are then raised in farms until they are exported.

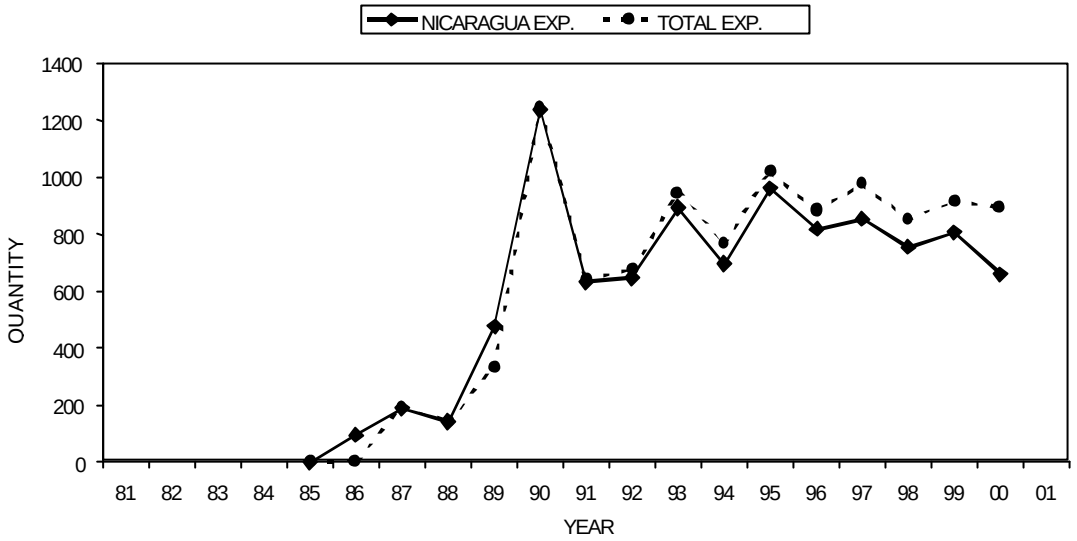

Figure 1. CITES exports of *A. auropalliata* from Nicaragua (continuous line), and total exports (dotted line) registered by the World Conservation Monitoring Centre for the period 1981 to 2000. Source: WCMC.

A. auropalliata specimens represent a relatively low proportion of the total number of parrots exported by Nicaragua. The average number of exports of *A. auropalliata* for 1984 to 1994 was 733 birds per year, which is equivalent to a fifth of the annual average of all exports of parrots (Wiedenfeld, 1995). In 1995, 5,543 parrots were exported from Nicaragua, of which 17 per cent were *A. auropalliata*. In 1996, *A. auropalliata* accounted for 8.5 per cent of the 9,669 parrots exported, and in 1997 for 10 per cent of the 8,153 parrots exported (data from Pérez 1999 and WCMC). Wiedenfeld (1995) has recommended that due to the fact that the population on the Pacific slopes is greatly reduced, and because there exist pressures from the unrestrained capture for domestic trade and probably for smuggling, capture for export should take place only among the Caribbean population (*A. a. parvipes*); he concludes that the species will ultimately have to be included in Appendix I (also Wiedenfeld *et al.*, 1999). It is not known with certainty what proportion of parrots exported by Nicaragua come from the subspecies *A. a. parvipes*.

In the 1980s, Honduras was the largest exporter of birds in the Central American region, including Mexico (Thomsen and Brautigam, 1991), and was also the principal exporter of *A. auropalliata* (data in Wiedenfeld, 1993). This was the species of parrot most exported by this country between 1987 and 1989, with an average of 8,388 specimens annually. The principal destination was the United States. In 1988, 9,535 *A. auropalliata* were exported, almost half of all bird exports. Decree 001 of 1990 prohibited the export of parrots from Honduras (Wiedenfeld, 1993).

Out of the total of 2,627 *A. ochrocephala* imported legally into or confiscated in the United States between 1977 and 1980, from El Salvador, Guatemala, Honduras and Nicaragua (Nilsson 1981), most were *A. auropalliata.* The great majority came from Guatemala and Honduras. The records prior to 1983 did not differentiate between the different breeds of *A. ochrocephala.* Strictly speaking, *A. ochrocephala* exists only from Panama southward and *A. oratrix* is found in Mexico and Belize and possibly in a very small population between Guatemala and Honduras (Forshaw 1977; Howell and Webb 1995). Some of the 4,059 *A. ochrocephala* from Mexico in this same period were certainly *A. auropalliata*, judging from a confiscation in 1980 of 259 specimens in southern California that for the most part were yellow-naped chicks (Nilsson 1981). In 1981, Mexico exported 2,976 *A. ochrocephala* to the United States (Iñigo and Ramos, 1991). In 1982, the export of wild fauna, formerly legal, was prohibited in Mexico. In 1983, El Salvador exported 460 *A. ochrocephala* to the United States (TRAFFIC 1985), possibly all of which were *A. auropalliata*. Costa Rica did not export *A. auropalliata* for commercial purposes. The Costa Rican export records for this species in the years 1992 to 1998, show one pet, 14 feathers for personal use, and a re-export in 1997 of 500 parrots from Nicaragua to the United States (Gómez and Drews, 2000).

In summary, the United States market has encouraged the supply that was first filled principally by Mexico until 1982, after which Honduras came to supply this demand from 1981 to 1989. Finally, and up to the present, Nicaragua has been supplying the market since 1990, in which year the number of yellow-naped parrot exports increased more than 300 per cent (see Figure 1). The United States prohibited the import of wild birds with the enactment of the Wild Bird Conservation Act in October 1992 (Federal Code of Regulations 1995).

3.3 Illegal trade

From 1990 to 1993, *A. auropalliata* was the species most frequently confiscated on the border between Mexico and Texas. Confiscations totalled 648 specimens, accounting for 26.6 per cent of all birds confiscated in that period (Gobbi *et al.*, 1996). Traffic also occurs among the range States. When Honduras was exporting parrots in the 1980s, there was traffic from Nicaragua to Honduras (Wiedenfeld, 1995). The situation then reversed, with traffic from Honduras to Nicaragua, the exporting country, across the frontier by way of the Moskito region. There is also traffic in parrots from Nicaragua to El Salvador and Costa Rica (Wiedenfeld, 1995), as well as from Costa Rica to Panama and Nicaragua (Stiles 1985). Specimens of *A. auropalliata* have even appeared in neotropical markets outside its range States (e.g. Peru: Plowden, 1987).

One report stated that 90 per cent of the Mexican population of the yellow-naped parrot had disappeared owing to illegal traffic (EIA 1994). Legal domestic trade was replaced by illegal capture and sale in large quantities after the wild bird trade was prohibited in Mexico in 1983 (Pérez 1986, Iñigo and Ramos, 1991). Before this prohibition, illegal international trade was already in existence: in April 1980, 259 parrots, principally yellow-naped parrots, were confiscated in the United States, with a further 32, also including yellow-naped parrots, being confiscated in July of the same year (Nilsson 1981). Out of the 22 species of parrots that inhabit Mexico, the yellow-naped parrot is the species whose distribution lies third in terms of reduction (Ridgway 1916; Forshaw 1977), but it is the bird with the fourth-highest level of illegal trafficking in the country (Cantú and Sánchez 1996a, 2002), being sold illegally in markets, streets, and animal stores (Cantú and Sánchez 1996a and 1996b). The vendors are supplied, at least partially, by the illegal international traffic in this species from Guatemala. Between 1998 and 2000, 10 *A.* auropalliata were confiscated in the state of Chiapas, to which it is native, and 16 specimens were confiscated in the state of Nuevo León which is adjacent to Texas, suggesting that the latter were intended to be smuggled into the United States (Cantú and Sánchez 2002).

The illegal trade in Guatemala is both domestic (section 3.1) and international. Internationally, it is directed principally towards Germany, Japan, and the United States (Toft and Brice, 1993). In 1993, a network trafficking in *A. auropalliata* was discovered, starting in Nicaragua, passing through

Honduras, and ending in El Salvador, from where the birds were ultimately smuggled out of the region (Black 1995). But traffic was also documented in the opposite direction, from El Salvador to Nicaragua and then to Honduras. Some confiscations of *A. auropalliata* between 1996 and 1999 in El Salvador appear in Ramos and Ricord (2000). In Honduras, after the prohibition of trade in wild fauna since 1990, an active and open traffic has been documented in markets and through itinerant vendors, to maintain smuggling operations and in large part to satisfy the domestic demand for pets (Wiedenfeld, 1993). The traffic involved illegal permits issued by the former Directorate of Renewable Natural Resources DIRENARE and other authorities (Wiedenfeld, 1993). Pet-keeping in households represents an illegal domestic trade in Honduras of at least 20,000 parrots per year (section 3.1). According to Juniper and Parr (1998), the subspecies *caribaea* in the Bahía Islands is in serious decline from capture for illegal export. Practically 100 per cent of the chicks are extracted each year. At least 7,020 to 9,100 *A. auropalliata* chicks are extracted annually from the wild, illegally, to supply the pet market in Costa Rica (see section 3.1). The local price for one *A. auropalliata* can reach the equivalent of USD 180 (Abadía *et al.*, 1998).

In Nicaragua, the total commercial volume of parrots extracted from the wild has been estimated at 86,866 individuals annually, including mortality (Pérez and Zúñiga 1998). 43,731 (50 per cent), would be in illegal trade, since that number accounts for the surplus over the volume of the legal trade of the Eastern Market and of international trade. It is not possible to determine from the information available what proportion of the total illegal volume relates to international trafficking. For *A. auropalliata*, the number of birds in illegal trade in the Eastern Market of Managua is estimated at 4,480 a year. In general, for each parrot legally exported from Nicaragua, nine birds are extracted from the wild: 1 is exported legally, 5 are illegally traded, and 3 die in the process.

3.4 Actual or potential trade impacts

Domestic and international trade negatively affect the survival of this species. The volume of legal international trade is not high at present (section 3.2 and Figure 1). But despite the laws that protect this species in its various range States and in some fauna-importing countries, a very substantial illegal traffic in *A. auropalliata* exists. This traffic aggravates the fact that the species is endangered and has reached the point of extinction locally (see sections 2.3 and 2.4). The existence of legal international trade, under the provisions of Appendix II, has maintained a demand that appears in turn to sustain illegal trade and the corresponding plundering of nests (Wright *et al.*, 2001). Listing this species in Appendix I would reduce the international demand and partially reduce the plundering of nests.

The selling price of *Amazona* in the United States is related to the level of plundering of nests in the countries of origin. One specimen of *A. auropalliata* costs between USD 825 (Wright *et al.*, 2001) and USD 1,350 (Michels 1996) in the United States. The levels of plundering of nests are significantly lower in species whose sale price is lower than USD 500 than in species, like *A. auropalliata*, whose price is higher (Wright *et al.*, 2001). The plundering of nests in the countries of origin is linked to illegal international traffic, in addition to the supply of local markets. Furthermore, there is a positive relationship between legal trade and poaching. The plundering of nests of parrots in the countries of origin, including *A. auropalliata*, dropped significantly after the restriction of imports of these birds to the United States with the passage of the Wild Bird Conservation Act in 1992 (Wright *et al.*, 2001). North American bird breeders consider species of birds with a price higher than USD 500 as more likely to be illegally imported into the United States since they can be sold at a lower price than species bred in captivity there (Harris, 1994; Sefton, 1995). Precisely because of this link between international trade and plundering of nests, it is hoped that restricting international trade by listing the species in Appendix I will result in a partial reduction of the plundering of nests, thus improving the prospects for survival of this species (also Wright *et al.*, 2001).

3.5 Breeding in captivity for commercial purposes (outside the country of origin)

Outside the species' range States, it is well known to breeders in the United States, while it is rare in Europe, and seldom bred (Low 1992). In the early and mid 1980s, reproduction of yellow-naped parrots in the United States was very poor, although it improved in the 1990s (Thompson 1996). Reproduction in captivity of *A. auropalliata* is particularly difficult but not impossible (Wiedenfeld, 1995).

4. Conservation and management

4.1 Legal status

4.1.1 National

A. auropalliata is currently considered endangered or in danger of extinction by the legislation of its six range States. Only Nicaragua currently permits its commercial utilization (see also section 3.2). The high incidence of plundering of nests (sections 2.4 and 2.7), of illegal pet-keeping by households in the range States (section 3.1) and of illegal traffic (section 3.3), demonstrate the serious difficulties facing all of its range States in implementing laws to protect the species.

MEXICO: NOM-059-ECOL-2001 classifies the species *Amazona auropalliata* as in danger of extinction (Official Gazette 2002). Article 87 of the General Law on Ecological Balance and Environmental Protection prohibits the utilization of natural populations of endemic species that are either endangered or in danger of extinction (Official Gazette 2000). The guidelines of the Project for the Conservation, Management, and Sustainable Utilization of Parrots in Mexico stipulate that trade in the species within the country should not be permitted (SEMARNAP 2000b). The state of Chiapas, which harbours the majority of the Mexican population of this species, has a permanent moratorium on the capture and use of any species of bird (Official Gazette 1995).

GUATEMALA: The species is almost extinct in Guatemala, and is on the *List of Species of Wild Fauna in Danger of Extinction* from the *Red List of Fauna* (Guatemala 2001). In this list *A. auropalliata* appears under Category 1 of the National Council for Protected Areas CONAP, corresponding to: *"Almost Extinct. No reports from the last 50 years. Permitted uses: exclusively scientific, with priority given to research for its conservation."* This classification is supported by Resolution No. ALC/032-99 of CONAP, published on 17 November 1999. The species has been on the *Red List of Wild Fauna for Guatemala* since 1996, under Resolution No. 27-96 of CONAP, of 9 May 1996 (Solís *et al.*, 1999), since it is "an endangered species or a species in danger of extinction owing to excessive hunting, trade, and/or destruction of habitat".

HONDURAS: The species is considered to be *In danger of extinction, of commercial importance or importance for consumption, and of importance for the prioritization of areas*, according to the *List of Species of Wild Animals of Special Concern in Honduras*, Resolution No. GG-APVS-003-98, of 14 December 1998 (Solís *et al.*, 1999). Decree 001 of 1990 prohibits trading in wildlife in Honduras (Thomsen and Mulliken 1992, Wiedenfeld, 1993).

EL SALVADOR: The species is considered In Danger of Extinction in the *Official List of Endangered Vertebrate Species which are Threatened or In Danger of Extinction*, Wildlife Conservation Act, Article 6 (d) and Article 42, of 25 May 1994 (Solís *et al.*, 1999).

NICARAGUA: The species is on the *List of Nicaraguan Species of Endangered Fauna or Fauna in Danger of Extinction and covered by special Government regulation (CITES Appendices)*, published by MARENA in its journal *Naturaleza*, in November-December 1996

(Solís *et al.*, 1999). There is a partial closed season for the species, from 1 January to 31 May (Solís *et al.*, 1999).

COSTA RICA: It is a species with a "reduced or endangered population" according to Article 63 of Decree 26435-MINAE *Regulation under the Wildlife Conservation Act No. 7317* of 3 December 1997. Keeping, hunting, and extracting it from the wild for any purpose are prohibited (Article 25 of the Act). Stiles (1985) confirms that in Costa Rica the law is applied so laxly that it is possible to find birds offered for sale in markets and streets. Also, currently, despite sporadic surveillance by authorities in the streets and ports, the controls are insufficient to prevent either the movement of thousands of these animals, or their extraction, even from national parks (see sections 2.7, 3.1 and 3.3).

4.1.2 International

A. auropalliata is listed in Appendix II of CITES.

4.2 Species management

4.2.1 Population monitoring

The year 2000 saw the establishment of the Project for the Conservation, Management, and Sustainable Utilization of Parrots in Mexico, which includes monitoring of the populations (SEMARNAP 2000b). Reports have been produced for the CITES Secretariat on the population status and management of *A. auropalliata* in Honduras (Wiedenfeld, 1993) and Nicaragua (Wiedenfeld, 1995). In 1999 a second evaluation of the population status of the species was made in Nicaragua (Wiedenfeld *et al.*, 1999). Costa Rica does not have a programme for monitoring the national population of *A. auropalliata*.

4.2.2 Habitat conservation

In 1995, the "La Encrucijada " Biosphere Reserve was created in Mexico, covering an area of 144,688 ha on the coast of Chiapas (SEMARNAP 2000a). Wiedenfeld (1993) observed in the "Las Iguanas" Wildlife Refuge 50 of the 58 specimens that he was able to find when travelling through the south of Honduras. Costa Rica has at least five protected areas in the area of distribution of the species. Sixteen per cent of the potential habitat for the species in Costa Rica is under state protection in national parks or biological reserves, a total of 108,581 ha (Abadía et. al. 1998).

4.2.3 Management measures

In Mexico, the Project for the Conservation, Management, and Sustainable Utilization of Parrots (see section 4.2.1) includes the following as monitoring objectives: maintaining the moratorium, not authorizing trade within the UMAs, repatriation of confiscations, and a regional programme of conservation (SEMARNAP 2000b). Wiedenfeld (1993) has examined the possibility of future management of the species in Honduras, concluding that the moratorium should continue until it can be demonstrated that collections do not affect the population. In the case of Nicaragua, Wiedenfeld (1995) believes that although a reasonably adequate system exists to control exports, the constant changes in the administrative organization and the budget of the CITES Authority are a matter for concern. He suggests that a population monitoring programme be implemented, given the existence of a domestic consumption that has not been counted, smuggling, destruction of habitat by change in ground use and population growth, all of which threaten the yellow-naped parrot. In 1999, a population study additional to the 1994/1995 one was conducted in Nicaragua. This concludes that ultimately it may also be necessary to list the species in Appendix I of CITES

(Wiedenfeld, 1995, Wiedenfeld *et al.*, 1999). In Costa Rica, there is no management programme for the species for either commercial or conservation purposes.

4.3 Control measures

4.3.1 International trade

International trade in this species is prohibited in every one of its range States (see above, and Thomsen and Mulliken 1992), except Nicaragua. Control is effected in ports by Customs agents. In Nicaragua, a person from the CITES Management Authority inspects the shipment before signing a copy of the export permit (Wiedenfeld, 1995). In 1996, Mexico's Federal Office for Environmental Protection engaged and trained 80 inspectors for visual inspection of flora and fauna shipments in the ports of the country.

4.3.2 Domestic measures

Measures of domestic control such as supervision of commercial activities, checks in markets and streets, confiscations, as well as in some cases environmental education, have arisen from the legal protection of the species in each country (section 4.1.1).

5. Information on similar species

Characteristics of similar adult *Amazona*.

SPECIES	SUBSPECIES	BEAK	CLAWS	HEAD	BEND OF THE WING	THIGHS
Amazona oratrix	*tresmariae*	Pale	Pale	Extensive yellow down to the breast	Extensive red with yellow	Yellow
	oratrix	Pale	Pale	Extensive yellow	Extensive red	Green and yellow
	belizensis	Pale	Pale	Extensive yellow	Extensive red	Mainly green, some yellow
Amazona auropalliata	*auropalliata*	Dark grey	Dark	Yellow nape, occasionally some yellow on the forehead	Green	Green
	caribaea	Pale with dark spots	Dark	Yellow nape, yellow forehead	Red patches, sometimes yellow spots	Green, occasionally some yellow
	parvipes	Variable, pale with dark stripes	Greyish	Yellow nape, green or yellow forehead	Red patches, very occasionally yellow	Green, occasionally some yellow
Amazona ochrocephala	*panamensis*	Pale	Pale	Only forehead yellow	Some red	Green
	ochrocephala	Pale with dark stripes	Pale	Forehead and crown yellow	Almost no red	Green, some yellow

Modified from Lousada and Howell (1996) with additions from Low (1992) and Forshaw (1977).

6. Other comments

None.

7. Additional remarks

None.

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