

The Illegal Parrot trade in Mexico

A Comprehensive Assessment



THE ILLEGAL PARROT TRADE IN MEXICO

A COMPREHENSIVE ASSESSMENT

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Teyeliz is a non profit organization whose mission is the conservation of Mexican biodiversity and the combat of illegal trade in wild species.

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THE ILLEGAL PARROT TRADE IN MEXICO

A COMPREHENSIVE ASSESSMENT

Executive Summary

Mexico has 22 species of parrots (psittacines) of which six are endemic. Wild parrots are widespread across the country and have a strong connection with Mexican culture. All species except two are officially listed as at risk; 6 species are classified as endangered, 10 as threatened, and 4 as under special protection. The foremost threats psittacines face in Mexico are loss of habitat and illegal trapping for the pet trade. While some research has been done in the past regarding parrot trafficking, the fundamental questions of the volume of illegal trapping, how and where it is carried out, how trapping affects particular species and how the illegal trade relates to the legal trade were poorly understood. This assessment provides, for the first time, comprehensive answers to these and related questions, as well as detailed historical information on the regulatory programs applied to parrot trapping, the enforcement of those programs, seizures by enforcement officials, mortality rates of captured parrots, and prices in the legal and illegal trades, including historical trends.

Based on interviews with trappers and representatives of their unions, and analysis of other data, an estimated range of 65,000 to 78,500 parrots are captured each year. The overall mortality rate for trapped parrots exceeds 75% before reaching a purchaser, which translates to about 50,000 to 60,000 dead birds annually, making this trade terribly inhumane and wasteful.

The rate of parrot seizures by the environmental police, Procuraduría Federal de Protección al Ambiente (Profepa), was assessed. The seizures by Profepa represent an average of only about 2% of the annual illegal trade. Seizure rates appear to be mostly correlated with the level of enforcement effort. It is apparent that Profepa and other agencies currently lack adequate personnel and budgets to police the trade.

Through analysis of seizure data obtained from the United States Fish and Wildlife Service, the assessment determined that only a small percentage of the annual illegal capture is being smuggled out of the country; about 86% to 96% of all trapped Mexican parrots stay in the internal trade. This is a shift from the 1970s and 1980s when the lucrative and huge USA market was considered to drive the trafficking. Now, Mexico must solve the problem internally.

This assessment finds that fewer than 150 registered trappers have focused on parrots exclusively. No parrot trapping had been authorized by wildlife officials between 2003 and late 2006. Prior to 2003, the trapping regulations had many drawbacks. Officials were unable to control the number of specimens taken, the time period or the place of capture. The existence of legal trapping authorizations provided cover for the illegal trade, through forging of documents and other illicit methods. Despite the lack of any approved trapping seasons for the last three years unsustainable capture of wild parrots has continued unabated. It takes place all year round, even inside natural protected areas, and affects almost all of the 22 species.

Populations of parrots are decreasing due to this exploitation. Scientific surveys estimate a 25-30% decrease in some species; interviews with parrot trappers themselves further corroborate some of these declines. Some parrots have been extirpated from large parts of their historic range. Eventual extinction is foreseeable for whole species if illegal trapping is not reined in.

This assessment shows that national and international bans have not cause increased smuggling or increased prices of the affected parrot species over the last 10 years. Prices in Mexico and the USA have, in fact, generally decreased in that time period. Mexico's imports of non-native parrots have sharply increased, but they are too expensive for the huge segment of the Mexican public that purchases low-cost, illegal wild-caught parrots. Breeding centers for native parrots are few; they can breed only a small number of the 22 species and their prices cannot compete with the prices of their wild-caught cousins.

This assessment provides policy recommendations to stop the devastating impacts on Mexico's prized native parrots. First and foremost is a well-publicized complete ban on any more trapping authorizations. **While authorizations were temporarily halted for three years, new information obtained at the time of printing this report, in October of 2006, indicated that government officials have issued more trapping authorizations.** This could be disastrous as it will provide more cover for the illegal trade and fails to send the needed strong message to the trappers and traffickers that the government is serious about conserving viable populations of parrots for the future. Not only a permanent ban, but also dramatically increased enforcement efforts to make the ban effective are needed. This should include increased enforcement efforts by U.S. Fish and Wildlife Service Law Enforcement agents to reduce the illegal trade, especially for the orange fronted parakeet (*Aratinga canicularis*), white fronted parrot (*Amazona albifrons*), yellow cheeked parrot (*Amazona autumnalis*), lilac crowned parrot (*Amazona finschi*) and red crowned parrot (*Amazona viridigenalis*), for which smuggling across the border appears to be increasing, thus is a continuing threat to the species' survival.

The lessons about the need for a total ban were learned over several decades in a comparable situation when Mexico attempted to cut back on sea turtle harvesting, but only after several failed harvesting programs and drastic population crashes in almost all native sea turtle populations. For parrots, the time is ripe to tackle the challenges before it is too late. Several Profepa inspectors interviewed agreed a permanent ban is needed.

The recommended permanent ban on further parrot trapping should be accompanied by a well-funded bi-national education campaign to make the Mexican and USA publics fully aware that it is wrong to buy any parrot that lacks proper documentation. Encouraging the breeding of low-cost exotic parrots could provide a substitute supply of pets. A Mexican government program to train parrot trappers to pursue other work will be vital, such as breeding exotic parrots and guiding birdwatchers in the field. An important element of conserving wild populations will be to provide some subsidization of trappers, to shift them from an illegal occupation to a legal occupation. USA funding should assist in this as well, in view of the vast deleterious impact that consumer demand from the USA had on these species particularly during the 1970s and 1980s. In sum, only integrated, coherent and well-funded policy changes will succeed in solving the biological, economic and social challenges of the illegal parrot trade.

Chapter 1 - Introduction

Mexico harbors 22 species of parrots, parakeets and macaws that inhabit many ecosystems, from the evergreen rainforests of the southeast to the pine and oak forests of the sierras in the northwest (Macias et al 2000). These “psittacines” are distributed widely across 26 out of the 32 states (Macias et al 2000; Howell et al 1995). Six species are endemic to Mexico: maroon fronted parrot, (*Rhynchopsitta terrisi*), lilac crowned parrot (*Amazona finschi*), red crowned parrot (*Amazona viridigenalis*), blue rumped parrotlet (*Forpus cyanopygius*), green parakeet (*Aratinga holochlora*) and Socorro parakeet (*Aratinga brevipes*). (A complete list of species’ scientific names and common names is in the Appendices.)

All but two species are listed as “at risk” by the Mexican government: 6 are classified as endangered, 10 as threatened, and 4 as under special protection. The foremost threat parrots face is habitat loss. This was recognized as the most important threat to 21 species by the experts of the Technical Subcommittee for the Protection, Conservation and Recovery of Psittacines (part of the National Technical Consultative Committee for the Recovery of Priority Species of the Environment Ministry). Illegal trade is the second most important threat affecting 13 species, while nest destruction and poaching comes third, affecting 7 species (Macias et al 2000).

In general illegal trade and overexploitation negatively affect 19 of the 22 species in one way or another. The 3 species rarely affected by these threats are: the Socorro parakeet (*Aratinga brevipes*), which inhabits the Revillagigedo Islands far out in the Pacific Ocean away from possible trade routes; the brown-hooded parrot (*Pionopsitta haematotis*), which is so rare that it almost unknown to the public and trappers; and the maroon fronted parrot (*Rhynchopsitta terrisi*), which has a very localized population in the northwest that nests in cliffs inaccessible to trappers.

Trade in parrots has occurred in Mexico for centuries. Indigenous people used them as food, as pets, and for their colorful feathers that were much sought after to adorn clothing and other artistic purposes (Sahagun, 1992, Thomsen et al. 1991). Feathers were so important, that they were part of the tribute paid to the Aztec empire by conquered states and cities, e.g., “Tochtepec, which was the traders headquarters on the frontiers of the southern and eastern countries, paid, besides a great many clothes, 16,000 balls of rubber, 24,000 bunches of parrot’s feathers....” (Soustelle 1961).

Parrot trade increased with the Spanish colonization. “Since that first contact [with Columbus] parrots and macaws have been featured in domestic and international trade” (Thomsen et al 1991). Unfortunately, with international trade came smuggling. Smuggling reached its peak in the 1980s when an estimated 50,000 to 150,000 neotropical parrots were smuggled annually into the USA (Thomsen in James 1992; Thomsen and Hemley 1987).

Legal commerce of parrots has continually existed in modern Mexico until very recently. The government has allowed capture of different species of parrots each year, ranging from a high of 17 species in 1979-1982 to a low of 4 species in 1989-1990 and a range of 5 to 7 species up until 2002 (Iñigo et al 1991, DOF 1982-1999, Semarnat 2005 a, b, d, e, i). In 2003 no permits were issued for the first time and from then up to

2006 there were no legal captures (Semarnat 2005 i). However, and alarmingly, at the time of printing this report in October of 2006 we were informed that numerous new capture authorizations have just been issued, but we lack full information to be able to state all the details about them here.

Few past investigations have assessed the parrot trade in Mexico. Foremost are “The Psittacine Trade in Mexico” (Iñigo and Ramos 1991); “Illegal Trade of Mexican Parrots” (Cantú and Sánchez 1996b); and “Parrot Smuggling Across the Texas-Mexico Border,” (Gobbi et al. 1996). These and other studies demonstrated that overexploitation and illegal trade have been major threats for many species.

Nevertheless, these studies did not attempt to estimate the actual numbers of parrots captured annually for the illegal trade. A few such estimates exist, but they were not well documented (Profepa 2002, Reuter cited by Cardoso 2002). For the first time ever, in this assessment we make a well documented estimate. **Through interviews with trappers and representatives of their unions, and analysis of a variety of other data, we estimate that in the range of 65,000 to 78,500 parrots are taken each year.**

Based on these estimates we were able to assess the effectiveness of the parrot seizures by the environmental police, Procuraduría Federal de Protección al Ambiente (Profepa). (Note that a full list of acronyms used in this report is in the Appendices.) **The seizures of Profepa represent an average of only about 2% of the annual take.**

The immense parrot smuggling that occurred across the Mexico-USA border in the 1970s and 1980s has been a fixture in the minds of many government officials, NGOs and scientists for a long time, thus the view that Mexican parrot illegal trade was predominantly an international problem has been maintained almost as dogma. Using parrot seizure information obtained from the United States Fish and Wildlife Service (USFWS) law enforcement database, plus data from the trappers and Profepa inspectors, we were able to determine that this preconception is incorrect now. The great majority of parrots taken from their habitats in the wild remain in Mexico for the domestic trade. Only a small percentage of the annual illegal captures are still being smuggled out of the country.

However, the smuggling that is still occurring has a detrimental effect on certain endangered species, which are some of the most sought after birds in the illegal trade. Thus, smuggling is still a large problem that needs to be solved.

The legal trade in parrots in Mexico has changed rapidly. Legal imports of non-native “exotic” species from around the world are increasing so much that some of these species are finding their way into the illegal trade also. Some exotic species are being seized by environmental authorities in higher numbers than Mexican species. Pet shops are increasing as well and the presence of parrots for sale is becoming the norm for most shopping malls.

Unfortunately, the increase in exotic parrot imports is not curbing the trapping of native parrots because the exotics are destined for a different higher-end market within Mexican society. Parrot breeding is still in its infancy in Mexico; it appears doubtful that it can be much of a substitute in the near future for illegal trapping and trade.

Captive breeding of most Mexican species is difficult and cannot compete price-wise with the illegal trade or with the importing and breeding of exotic species.

This assessment's key finding is that Mexico needs to change its wildlife laws and regulations, and the way they are implemented, in order to stop the high level of trapping otherwise several of these beautiful and highly prized birds may face extinction in the near future. Dramatic strengthening of enforcement efforts by all government agencies involved is vital. But, legal and enforcement improvements will not be enough. The culture of buying wild parrots for pets has to change as well and this cannot happen without a broad education campaign. The reality is that having a pet parrot has been engrained in Mexican culture for centuries, so it will hardly be stamped out. With human population increases and economic growth, the demand will just keep expanding as well unless effective interventions occur affecting both the legal and illegal trades. Mexicans need to seek alternatives; captive breeding of very common exotic species may help.

We hope the careful assessment presented here will help wildlife authorities and all stakeholders concerned about the survival of wild parrots find solutions in the near future. Time is running out.

Chapter 2 – Mexican Parrot Species

In 1999, parrot experts formed the Technical Subcommittee for the Conservation, Management and Sustainable Use of Parrots. With the knowledge they had at the time they gave their opinion as to the main threats faced by the different species. The main threats are habitat loss and illegal trade through its different variations (Table 2.1). Illegal trade affects most of the Mexican parrot species, some more than others (see Chap. 9 - Seizures).

Table 2.1

Threats affecting Mexican species of parrots, according to Macias et al. 2000

Species	Habitat loss or modification	national or international illegal trade	overexploitation	Natural predation	lack of information	Limited or inadequate conservation measures	destruction and poaching of nests for illegal trade	lack of protection thus encouraging illegal trade	rare or small population
<i>Aratinga holochlora</i>	x	x							
<i>Aratinga strenua</i>	x	x			x				
<i>Aratinga brevipes</i>	x			x		x			
<i>Aratinga nana</i>	x		x				x		
<i>Aratinga canicularis</i>	x	x				x			
<i>Ara militaris</i>	x	x						x	
<i>Ara macao</i>	x	x							
<i>Rhynchopsitta pachyrhyncha</i>	x								
<i>Rhynchopsitta terrisi</i>	x								
<i>Bolborhynchus lineola</i>	x				x				
<i>Forpus cyanopygius</i>	x				x				
<i>Brotogeris jugularis</i>	x	x							
<i>Pionopsitta hamataotis</i>	x				x				x
<i>Pionus senilis</i>	x	x					x		
<i>Amazona albifrons</i>	x	x	x						
<i>Amazona xantholora</i>	x						x	x	
<i>Amazona viridigenalis</i>	x						x	x	
<i>Amazona finschi</i>	x	x				x			
<i>Amazona autumnalis</i>	x	x					x		
<i>Amazona farinosa</i>	x	x					x		
<i>Amazona oratrix</i>	x	x					x		
<i>Amazona auropalliata</i>		x						x	x
Total	21	13	2	1	4	3	7	4	2

Source: Macias et. al. 2000

Many Mexican species have been in trade for decades (see Chap. 6 - Trapping Authorizations) and their populations have decreased. Trappers themselves acknowledge this trend (Table 2.2).

Table 2.2

Rough estimates of parrot population decrease according to trappers

Species	Sinaloa	Jalisco	Nayarit
<i>Aratinga canicularis</i>	20% -30% (last five years)	No change	25%
<i>Amazona albifrons</i>	20% - 30%		
<i>Amazona finschi</i>		25%	25%
<i>Forpus cyanopygus</i>		No change	25% - 33% (8-10 years)

Some trappers attribute the decrease to migration and say that birds are flying up to the sierras. Some others do not agree there is a decrease and believe that since there have been no trapping authorizations in the past few years, populations must have increased (curiously ignoring illegal trapping) and still others say populations of some species have not changed.

Scientists have documented decreases in many species (Table 2.3), and in some cases these findings corroborate what the trappers stated. For example, both scientists and trappers found a 25% decrease in the blue rumped parrotlet (*Forpus cyanopygus*).

Table 2.3

Population decreases of Mexican parrot species

Species	Population decrease	Source
<i>Amazona oratrix</i>	68% decrease in last 10 years	Birdlife International 2000
<i>Amazona viridigenalis</i>	95% decrease (original pop. 100,000 estimated now at 5,000)	Enkerlin 2000
<i>Amazona finschi</i>	extirpated from 25% - 100% in different areas of the Pacific slope. Decline during last 20 years	Renton et al 2006
<i>Amazona auropalliata</i>	90% decrease and extirpated from Oaxaca	EIA 1994, Macias et al 2000
<i>Amazona farinosa</i>	extirpated from parts of Oaxaca, Tamaulipas, Campeche and all of Veracruz. Decline occurring in last decades.	Macias et al 2000 Renton 2006
<i>Amazona albifrons</i>	extirpated from areas in the Pacific slope	Monterubio 2006b
<i>Brotogeris jugularis</i>	extirpated from Oaxaca, present in only 22% of census counts in Chiapas	Macias et al 2000, Monterubio 2006 ^a
<i>Forpus cyanopygus</i>	25% decrease	Rios Muñoz 2002

The decrease in populations forces trappers to look for them elsewhere and many of them are trapping outside their state (see Chap. 7 - Illegal Trade). Detained traffickers informed Profepa inspectors that populations have decreased so much in Chiapas that they enter natural protected areas to capture parrots (Profepa Chiapas).

Illegal trade is definitively affecting parrot populations directly. In many instances scientists have documented local extirpations while the habitat remains (Renton et al. 2003, Rios 2002, Macias et al 2003). Capture of parrots legally or illegally has a detrimental effect on populations for several reasons:

- extraction of individuals decreases population
- extraction of reproductive age adults inhibits future breeding
- extraction of breeding adults causes mortality of abandoned eggs or nestlings
- extraction of nestlings causes loss of nest, nesting tree or nesting site, and
- extraction of individuals year after year can stop population growth and cause local extirpations.

Loss of nesting sites is a fundamental limiting factor (Enkerlin 2000, Wright et al 2001).

Chapter 3 - Parrot Trappers

Most bird trappers in Mexico are organized and form unions of capturers, bird salesmen, transporters and breeders. According to the Environment Ministry there are 6 registered unions (Semarnat 2005 c) (Table 3.1). These unions have existed for many years and generally are not democratic, being in control of their founders and their associates. Some of them control the illegal trade of birds as well as the markets, like the Sonora market in Mexico City (Profepa 2002).

Table 3.1

Registered bird trapper and salesmen unions according to Semarnat

Bird Trapper Unions	Bird trappers and street salesmen	Trappers with permits	States of capture and sale
Unión Nacional de Capturadores, Vendedores, y Transportistas de Aves Canoras y de Ornato A.C.	608	388	Coahuila, Durango, Guanajuato, Hidalgo, Jalisco, México, Michoacán, Morelos, Nayarit, Nuevo León, Puebla, Querétaro, Quintana Roo, San Luis Potosí, Sinaloa, Tabasco, Veracruz
Unión Nacional de Capturadores, Transportistas y Vendedores de Aves Canoras y de Ornato de la República Mexicana A.C.	96	14	Hidalgo, Jalisco, Morelos, Puebla, Michoacán, Campeche, Nuevo León, San Luis Potosí, Veracruz
Unión de Criadores, Capturadores, Transportistas y Vendedores de Aves Canoras y de Ornato de Puebla A.C.	13	13	Puebla
Unión de Criadores, Capturadores, Vendedores y Transportistas de Aves Canoras y de Ornato, Xocoyolo A.C.	21	21	Puebla
Unión Nacional de Criadores, Capturadores, Transportistas y Vendedores de Aves Canoras y de Ornato de Puebla A.C.	17	17	Puebla
Asociación Nacional de Capturadores, Transportistas y Vendedores de Aves de Trino y de Ornato de Chalco, A. C. EdoMex	31	31	EdoMex, Morelos
Free trapper	1	1	Puebla
Total	787	485	

Source: Semarnat 2005 c

Several new smaller unions have been created by unsatisfied members; these apparently are not registered with the Environment Ministry. The two biggest unions heavily dominate the wild bird trade (Table 3.2).

Table 3.2

Comparison of bird trade union membership

Registered unions	Number of members	Percentage
6	787	100%
2 biggest unions	704	89.45%

Source: Semarnat 2005 c

Profepa had estimated the number of bird trappers, bird salesmen and transporters in the hundreds of thousands (Profepa 2002). Nevertheless, the number of bird trappers and salesmen registered in the Environment Ministry was less than 2,550 in total in 2000 and less than 800 in 2005 (Table 3.3). The National Institute of Statistics, Geography and Informatics only accounts for 1,186 trappers, hunters and related occupations for the year 2000 (INEGI 2000).

Table 3.3

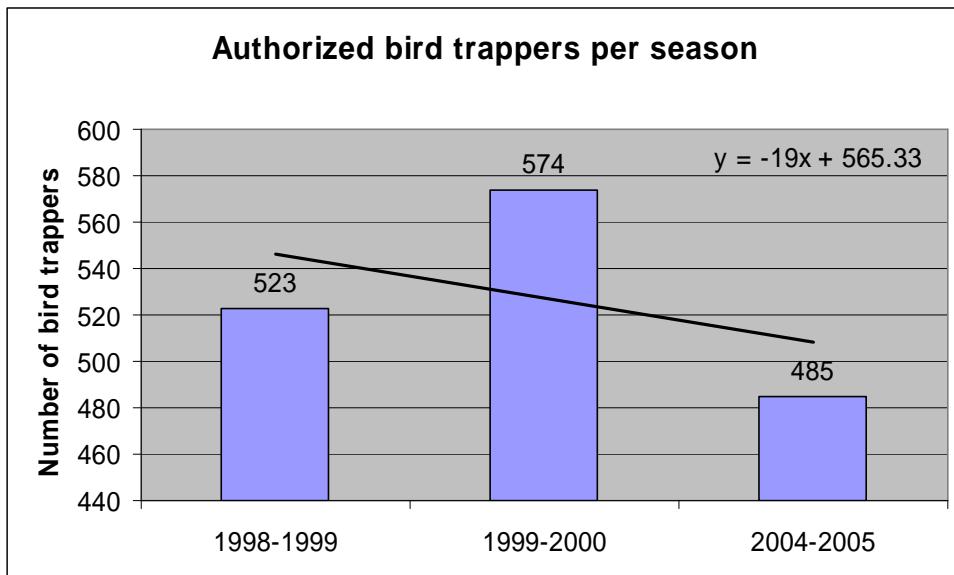
Registered bird trappers and bird salesmen

Season	1998-99	1999-2000	2004-2005
Established salesmen	8	3	
Street bird salesmen	1,938	1,950	302
Bird trapper	523	574	485
Total	2,469	2,527	787

Source: Semarnap 2000 a, b, c ; Semarnat 2005 c

The number of registered trappers is small and has been decreasing in the past few years (Graph 3.1). This could be due to trappers not registering anymore, the reduction in authorized seasons, trappers forming new smaller unions, becoming independent, changing occupation, and so on.

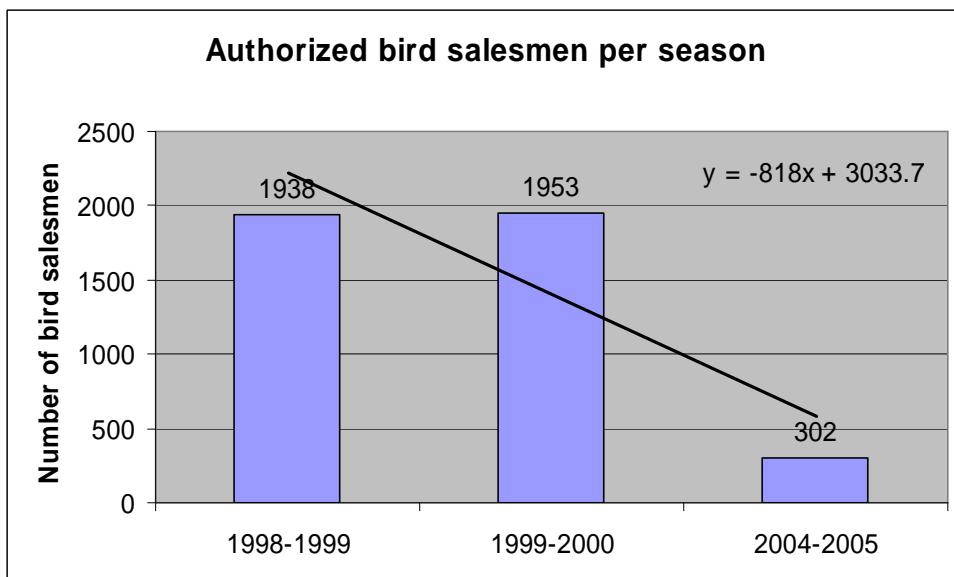
Graph 3.1



Source: Semarnap 2000 a, b, c; Semarnat 2005 c

Although the number of trappers has decreased it has not varied much in the last 8 years. On the other hand, the number of bird salesmen did have a huge decrease of 85% in the last five years (Graph 3.2). It is evident that the number of street salesmen has diminished in some cities. It was harder to find bird street salesmen in 2005-06 in Mexico City than in 1995-96 (Sánchez, per. obs.).

Graph 3.2



Source: Semarnap 2000 a, b, c ; Semarnat 2005 c

The numbers of bird trappers registered with the Environment Ministry include trappers who capture about 70 to 80 different species of singing and ornate birds including parrots (DOF 1995-2000). Of the 485 registered trappers in 2005, we estimate less than 150 capture parrots exclusively. However, an unknown number of independent trappers and occasional trappers also capture parrots.

Parrot trappers view their work as a way of life. Some have been trapping parrots for more than 50 years starting as children of 10 to 12 years of age (Trappers Nayarit, Sinaloa, Jalisco). Of the trappers we interviewed, 58% have trapped for more than 10 years. On average parrot trappers have been working on this activity for 17 years. Many learned their trade from their fathers and grandfathers.

Trapping is a male activity. We did not find or hear of any women trappers, but there are female stockpilers or hoarders, saleswomen, and even union leaders.

Capture seasons

Capture of parrots occurs all year round but there are two main seasons: dry (November to February) and rainy (April to October). Typically, near the end of the dry season nestlings are taken out of their nests and during the rainy season adults are captured. Nevertheless, each trapper has his own preferences that depend on the species and region.

For example, authorizations for 2000–2001 were issued for two main periods, from January to April and from September to December (Semarnat 2005 a, b, d; 2006 j); practically all were for during the dry season. Thus, many trappers could count on having two permits a year. In the 1990s, permits were issued in June and July and the trapping season (8 to 9 months) ended the next year in February with 4 to 5 specific months given to trap different species of psittacines per state (DOF 1990-1999). Union leaders told us the government permits were useful for them when they tried to show the legality of their specimens, but in reality capture continues all year long regardless of the permitted period.

Capture areas

According to the Wildlife Law capture of wildlife can only take place inside Units of Management and Conservation (UMAs). In 1999, the Agreements for the use and capture of singing and ornate birds established that the Environment Ministry would verify that capture would take place within the confines of the UMAs (DOF 1999). Since 2000-2002, the only authorizations issued by wildlife authorities have been for 24 UMAs in 8 states (see Chap. 6 - Trapping Authorizations).

According to trappers themselves, union leaders and Profepa, capture of parrots occurs wherever there are parrots. Trappers do not respect the boundaries of the UMAs and will trap outside the UMA and even outside their state (Profepa inspectors) (see Chap. 7 - Illegal Trade). Trappers will go inside federal, state, private and community owned lands (ejidos) to trap (Trappers, Nayarit, Sinaloa, Jalisco, Quintana Roo; Profepa inspectors).

Trappers put their nets and traps in or near gullies, fruit trees, resting trees, and cultivation fields that are near forests or bushlands (Trappers Nayarit, Sinaloa, Jalisco). They trap inside all ecosystem types: evergreen tropical forest, medium tropical forest, low deciduous tropical forest, spiny forest, mangroves, pine and oak forest, etc. But, they prefer to use the borders of forests especially near cultivation fields.

Many of the trappers that have been detained by Profepa inspectors said they captured inside natural protected areas, especially in southern states (Profepa Campeche, Veracruz, Chiapas, Oaxaca). Considering that the main threat to parrot species is habitat loss (Macias et al 2000), it is natural that remaining populations are more and more confined inside reserves. It is to be expected that trappers will go wherever the density of valuable parrots is greatest.

Species captured

The typical trapper concentrates on a few species of parrots, usually trapping from 1 to 3 different species that are more abundant in their state or nearby states. They use different capture methods depending on the species and the age, but except for traps and nestling captures their main method (nets) is not selective and will capture any parrot species in their area (see Chap. 4 - Capture Methods). Some trappers only capture adults, others specialize in nestlings and some take both. The number of specimens captured per trapper varies with an average of 40 to 113 birds per species annually (Table 3.4). For more abundant species like the orange fronted parakeet, they can capture as many as 500 birds per year and for others like the white fronted parrot about 20 to 50 per year (Sinaloa trappers).

Table 3.4

Annual capture by typical trappers of various species

Species	Age	Range	Average
Blue rumped parrotlet	Adult	100-120	113
Orange fronted parakeet	Adult	30-500	280
White fronted parrot	Adult	20-50	31
Lilac crowned parrot	Adult	20-150	78
	Nestling	30-50	40

Source: Sinaloa, Jalisco and Nayarit trappers

Some parrot trappers work opportunistically and only seek nestlings. For example some trappers in Quintana Roo have been capturing parrots for ten years but only take 3 to 9 nestlings a year (Quintana Roo trappers). These parrot trappers work most of their time in other activities like farming, construction, bicycle repair, etc. The number of opportunistic bird trappers has been estimated as high as 20,000 (Groselet cited in Velázquez 2004)

Some high-priced species are in great demand, such as the yellow headed parrot. But, their populations have decreased so much that in many places trappers don't seek them out. They will just trap them by chance or if they spot a nest they will take the nestlings. Some species like the brown hooded parrot (*Pionopsitta haematotis*) are so scarce that no trapper targets them; very rarely does one show up in bird markets much less in seizures by authorities (see Chap. 9 - Seizures).

Some species are disliked by trappers and hoarders for different reasons. For example, the orange chinned parakeet (*Brotogeris jugularis*) is frowned upon by hoarders because it is hard to keep them quiet during transportation; if one screams they all start screaming, and thus they can be detected by authorities (Groselet per. obs.). Some trappers have stopped trapping military macaws (*Ara militaris*) for the same reason, they are too loud and they fear being denounced and caught by policemen (Silva per. obs.). Another example is the Yucatán parrot (*Amazona xantholora*) which is fragile and prone to disease and high mortality, so trappers and hoarders prefer other species (Profepa Yucatán, Campeche, Unions). Some species are not targeted at all due to lack of demand, an example being the red fronted parrot (*Rhynchopsitta pachyrhyncha*) (Silva per. obs.). Nevertheless, this species and some others are still trapped by a special kind of opportunistic trapper, Indian inhabitants of the sierras. They may capture a few parrots each year and when they come down to towns and cities they sell or exchange them to pay for their trip (Silva per. obs.).

Sale of parrots

Parrot trappers usually sell directly to an intermediary called an "acopiador" or hoarder. Some of the hoarders used to be bird trappers in the past but most are just salesmen working for the unions or independently. Trappers say that hoarders tell them where to meet, which can be in the trappers' own homes, at crossroads, out of the way places, etc. Sometimes they don't even know who the hoarders are because they change, but they say the hoarders always seem to know where to find them (Jalisco, Nayarit, Sinaloa trappers).

Some of the trappers sell their birds out of their homes to anyone and some go out to sell them house by house. Some even go out on crossroads to sell birds to people in passing cars and busses (Jalisco, Nayarit, Sinaloa trappers). A few of the opportunistic trappers trap and sell on an individual request basis. People from the towns or cities nearby know they trap birds and ask them for a particular species and they go out and get it for them (Quintana Roo trappers).

Hoarders buy parrots from several trappers in one state and sometimes from several states. They stockpile the parrots until they have enough for transportation to one or several distribution centers (see Chap. 8 - Trade Routes). There are some female hoarders; one in Chiapas controls the capture of nestlings by children (Profepa Chiapas).

Hoarders can be very unscrupulous and uncaring for their hoard of parrots. For them it is all about profit from volume sales, so they will accept a high percentage of mortality as long as enough survive to make a sell and profit (see Chap. 10 - Mortality).

Monitoring and inspection

It is the job of the Secretariat of Environment and Natural Resources (Semarnat) to monitor and inspect trappers and the UMAs as to where, how and what is trapped (Semarnat 2006 b). When asked about this, trappers unanimously stated they are never checked upon by the authorities. They say no one verifies if they comply with the species or quotas allowed in the permits so they capture whatever they can. Some of the old trappers with as many as 35 or even 50 years experience told us they do not recall ever being inspected. Some said they don't even know which authority is in charge of checking how much they trap. One of them stated the only time they are inspected is when the police detain a trapper, which occurs very rarely.

Chapter 4 - Capture Methods

Wild parrots are captured using several different methods. Some of these have entered into disuse and some were banned before 2000 (DOF 1989-1999). A traditional method was the use of sticky gum. Trappers extracted the gum from the resin of a Ficus tree and boiled it until it was sticky. It then was laid on the end of a small branch that in turn was tied to the end of 2 meter pole to function as a perching limb for birds. The pole was then placed in maize fields so that the sticky branch protruded above the top of corn plants. A series of poles were put in line to allow several parrots to alight on them and get stuck. This method has been banned by wildlife authorities since 1983 (DOF 1983). Most trappers stopped doing it because it was very laborious and birds ended up badly damaged, which decreased their price.

One surprising method is the use of wood and wire cage traps. This is very much in use for several species of singing birds but is used rarely for parrots. A parrot is placed inside the cage to attract others. The cage has two or several entrances on the top with trap doors. The trap door closes when the bird alights on a perching stick, which is the trigger. This method is used on the smallest of the Mexican parrots, the blue rumped parrotlet. It is legal and does not harm parrots, although some may still die of stress.

Another method is using a series of slip knots that are tied to branches on top of fruit or resting trees. The traditional way was to make the slip knots out of braided horse hair from the mane or tail. Folklore determined it was best to use three different color hairs. A parrot is tied to a branch and used to attract others. These days monofilament fishing line or nylon are used. This method is not considered legal by any regulation but it is still used, mainly in Northeastern Mexico, and one of the species trapped with it is the red crowned parrot. The method is mostly safe for parrots but leg injuries can occur.

The main method for capturing adult parrots is setting nets. Some trappers make their own but the majority of nets used nowadays are the same as used by ornithologists and bat researchers, that is, mist nets. Mist nets are made of black silk-nylon thread that birds have difficulty seeing. The mist nets used by researchers usually have three pouches but the trappers buy theirs from Indonesia (about 100 meters long by 50 cm wide – cost: \$72 dollars) and cut them to fit their needs. Their nets have up to ten pouches, around ten meters long and four meters high. The use of nets is legal and parrots are not injured. Nevertheless, up to 10% of the catch may die from stress (see Chap. 10 - Mortality).

Regardless of the method, when they are used during the reproductive season the capture of any adult that has a nest with eggs or nestlings will most probably doom them also. Thus, the negative effect on the population is magnified.

Nestlings are mostly captured from tree cavities (Iñigo & Ramos 1991, Enkerlin 2000). Trappers climb the tree to take the nestlings out by hand but when they can't put their hand inside the cavity they saw or hack it open with machetes (Enkerlin 2000). This method ruins the cavity for future nesting. If the cavity cannot be reached by the trapper he may cut down the entire tree and nestlings can be injured or killed (Iñigo & Ramos 1991). The availability of adequate nesting cavities has been determined to be one of the limiting factors to the growth of psittacid populations (Wright et al 2001, Iñigo 2000,

Enkerlin 2000). In some cases trappers are able to reach down into the nests and take one of two nestlings year after year (Silva per. obs.)

Another method is to take the nestlings from nests built inside termite nests. The orange fronted parakeet is the main species that uses termite nests and it has been pointed out that the distribution of this species in Mexico and Central America closely approximates the distribution of the colonial termite *Euthermes nigriceps*. They appear to only use nests still occupied by termites (Hardy 1963 quoted in Collias 1984). Several pairs may use the same termite nest (Macias et. al. 2000). The importance of using a nest occupied by termites has to do with the building of the nest. Parrots will start scratching out the nest and the termites will seal the exposed portion of the walls so that the birds and the termites will not be in contact when the nest is finished (Hardy 1963 quoted in Collias 1984). The end result is a tube going upward before making an inward and downward turn to a chamber of 15-20 cm in diameter (Forshaw 1977). Trappers and hoarders hire children of local towns to pull the nestlings from these termite nests (Profepa Chiapas, Oaxaca; Fallabrino per. com.) and then come around to collect them once or twice a month. In this case, although many cavities are destroyed parrots can easily make a new one.

Legality of methods

In the 1990s, the only methods to capture birds allowed by law were the use of nets, cages or traps (DOF 1989-1999). However, since adoption of the General Law of Wildlife of 2000 there is no regulation that expressly establishes what methods are allowed or prohibited. Nevertheless, authorities still follow the guidelines set before 2000 when issuing a capture permit.

Taking nestlings from their nests had been banned since 1951 by the Federal Law of Hunting. It was then annually banned by the Agreements that establish capture and use of singing and ornate birds until 1999 when these were no longer published by the Environment Ministry (DOF 1999). The General Law of Wildlife entered into force in 2000 and since it did not prohibit the taking of nestlings it appears this practice can be authorized on a case by case basis. The Environment Ministry has confirmed issuing authorizations to take psittacine nestlings (Semarnat 2006 i). Curiously though, the Environment Ministry also confirms that for the capture authorizations issued from 2000-2002 the only method approved was the use of nets (Semarnat 2006 a), so it is unclear that any legal method could have been used to take the nestlings out of their nests.

Chapter 5 - Normativity

Wildlife regulations

For the last 30 years parrots have been legally exploited in Mexico. The law that ruled over hunting and capture of wildlife was the Federal Law of Hunting of 1951 (DOF 1952). It prohibited the destruction or appropriation of nests and eggs of wild birds but allowed capture of all species of birds.

In 1988 the General Law of Ecological Equilibrium and the Protection of the Environment (LGEEPA) entered into force and established that authorizations cannot be issued for threatened and endangered species except for the purpose of controlled breeding and development of the populations of the species in question (DOF 1988). For the first time a federal law made a distinction between wildlife and threatened wildlife. Unfortunately there was no regulation that defined which species were threatened or endangered.

In 1991 a first attempt was made to clarify this situation with the publication of the Ecological Criteria that classified species as rare, threatened, endangered or subject to special protection (DOF 1991). In it, 6 species of parrots were classified as endangered, 4 as threatened, and two under special protection (see Chap. 6 - Trapping Authorizations). In 1994 a second list was created under the form of a Mexican Norm and in it six species of parrots were classified as endangered (two different from 1991), seven as threatened and one as rare. In 2002 a new list of classification was issued which has six parrot species as endangered (two different from the 1994 and 1991 lists), ten species listed as threatened and four species listed as under special protection (DOF 2002b). Thus, 20 of 22 Mexican parrot species now are in some status of risk.

To apply the dispositions of both the Hunting Law and the LGEEPA, trapping regulations were issued annually through an Agreement for Capture, Transportation and Use of Ornate and Singing Birds. These agreements established which species of parrots (of those still allowed to be captured by the LGEEPA) could be captured, the season and the states of capture. They did not say exactly how many specimens per species could be captured because they established general capture quotas through possession limits of specimens for each different type of permit. For example, permits of type II had a limit of 600 specimens and type III of 100 specimens, permits of type I had limits by state and season ranging from 10 to 600, etc. (DOF 1995)

In 2000 the General Law of Wildlife entered into force revoking the Federal Law of Hunting (DOF 2000). This law allows the use and capture of any species of parrot if all the requisites established by it are met. The law establishes that all use of wildlife – hunting, capture, conservation, etc - must be done through UMAS. These UMAS are any piece of land owned or possessed privately, communally, or by the federation, state or municipality that are registered with the Environment Ministry for the purposes of using or conserving wildlife (DOF 2000, Nachón et al. 2001).

The UMAS must operate with an approved management plan and permanently monitor the status of the habitat and wildlife populations in them (DOF 2000, Nachón et al.

2001). Anyone seeking authorization to capture parrots must register the UMA, have the management plan and demonstrate that:

- capture quotas are smaller than the natural renovation of the populations to be captured;
- they are the product of controlled breeding in the case of confined specimens of wildlife; and
- the capture will have no negative effects over the populations (DOF 2000).

For species classified as being at risk (endangered, threatened or special protection) authorizations for capture will only be issued when precedence is given to activities of restoration, repopulation and reintroduction (DOF 2000). Furthermore, for any species at risk, before issuing any authorization the UMA must have:

- criteria, measures and actions for controlled breeding, and the development of the population in its natural habitat included in its management plan;
- measures and actions to offset the factors that have influenced in the decrease of its populations and deterioration of its habitat; and
- a population study that has rigorous data on mortality and natality (DOF 2000).

In the case of threatened and endangered species the management plan and population study must be certified by a specialized and recognized expert in the field. For endangered species this must be sanctioned by a National Consultative Committee (DOF 2000). **Despite all of the above requirements, capture authorizations for parrots were routinely issued without any of them being met** (see Chap. 6 - Trapping Authorizations).

Penal Code

In 1996 the Penal Code was reformed to include environmental crimes for the first time (DOF 1996). It established a penalty of six months to six years in prison to anyone who captured wildlife with prohibited methods or whose activities threatened the extinction of any species. The same penalty would be issued for any activity for commercial purposes with wild species classified as endemic, threatened, endangered, rare or under special protection, without authorization or permit, or if these species were banned from any use. The penalty also applied if these species were harmed maliciously. Nevertheless, the actual penalties applied were not very severe and convicted traffickers could avoid jail by paying a fine and bail.

In 2002 the Penal Code (DOF 2002a) was reformed again and penalties were increased to one year to nine years in prison. This penalty is increased by three years if the activity is done inside a natural protected area or with commercial purposes. Only severe crimes get 12 or more years and thus, those arrested for it do not have a right to bail. The reform also covered the activities of importing and exporting wildlife without proper permits and violations of international wildlife treaties ratified by Mexico. Since the entry into force of these new penalties, the number of jailed parrot traffickers has increased, but it remains very small in comparison to the size of the trade (see Chap. 9 - Seizures).

Chapter 6 - Trapping Authorizations

Historically Mexico has always allowed parrots to be captured or even hunted. But over the years the number of species of parrots allowed to be captured has decreased from a high of 17 species in 1979-1982 to zero in 2003-2005 (Table 6.1).

Table 6.1

Parrot species authorized to be captured per season, 1979-2005

YEAR	79-82	82-83	83-84	84-85	85-86	86-87	87-88	88-89	89-90	90-91	91-92	92-93	93-94	95	96	97	98	99	2000	2001	2002	2003	2004	2005	
<i>Aratinga holochlora</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	No	No	No	No	No	No	No	No	No	No	No	No
<i>Aratinga strenua</i>	Y	Y	Y	No	No	Y	Y	Y	No	No	No	No	No	No	No	No	No								
<i>Aratinga brevipes</i>	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
<i>Aratinga nana</i>	Y	Y	Y	No	No	Y	Y	Y	No	No	No	No	Y	Y	Y	Y	Y	Y	Y	Y	Y	No	No	No	No
<i>Aratinga canicularis</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	No	No	No	No
<i>Ara militaris</i>	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
<i>Ara macao</i>	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
<i>R. pachyrhyncha</i>	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
<i>Rhynchositta terrisi</i>	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
<i>Bolborhynchus lineola</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	No	No	No	No	No	No	No	No
<i>Forpus cyanopygius</i>	Y	Y	No	No	No	No	No	No	No	No	No														
<i>Brotogeris jugularis</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	No	No	No	No	No	No	No	No
<i>Pionopsitta haematonotis</i>	Y	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
<i>Pionus senilis</i>	Y	Y	Y	No	No	Y	Y	No	No	No	No	No													
<i>Amazona albifrons</i>	Y	Y	Y	Y	SI	Y	Y	No	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	No	No	No	No
<i>Amazona xantholora</i>	Y	No	No	No	No	Y	Y	No	Y	Y	Y	Y	Y	Y	Y	No	No								
<i>Amazona viridigenalis</i>	Y	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
<i>Amazona finschi</i>	Y	Y	No	Y	Y	No	No	No	No	No	No														
<i>Amazona autumnalis</i>	Y	Y	Y	Y	Y	Y	Y	Y	No	Y	Y	Y	Y	Y	Y	Y	Y	No	No	Y	Y	No	No	No	No
<i>Amazona farinosa</i>	Y	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Y	Y	No	No	No	No
<i>Amazona oratrix</i>	Y	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
<i>Amazona auropalliata</i>	Y	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Total species	17	11	9	6	6	8	9	9	4	6	6	6	7	6	6	6	5	5	7	7	3	0	0	0	
Total specimens		104,530															3324	952	4645	12626	2928	0	0	0	

Source: Official Diary of the Federation (years 1982-1999), Semarnat 2005 a, b, d, e, h, i (years 2000-2005), Iñigo et al 1991 (years 1979-1987), Macias et al. 2000.

Species allowed to be captured and authorizations were issued

Y

Species allowed to be captured but no authorizations were issued

N

Species not allowed to be captured but authorizations were issued

Y

N Species not allowed to be captured

Many Mexican parrot species have been in trade for decades. The top three, i.e., orange fronted parakeet (*Aratinga canicularis*), white fronted parrot (*Amazona albifrons*) and yellow cheeked parrot (*Amazona autumnalis*) have been legally trapped for over 20

years (Table 6.2). Not coincidentally, these are also the top three seized species in Mexico in the same order (see Chap.s 9 - Seizures and 7 - Illegal Trade).

Table 6.2

Number of years legally trapped, 1979-2005

Species	Years legally trapped during 1979 to 2005
<i>Aratinga canicularis</i>	23
<i>Amazona albifrons</i>	23
<i>Amazona autumnalis</i>	19
<i>Bolborhynchus lineola</i>	19
<i>Brotogeris jugularis</i>	19
<i>Aratinga nana</i>	18
<i>Aratinga holochlora</i>	17
<i>Amazona xantholora</i>	12*
<i>Aratinga strenua</i>	9
<i>Amazona finschi</i>	8*
<i>Pionus senilis</i>	7
<i>Amazona farinosa</i>	6
<i>Forpus cyanopygius</i>	5
<i>Pionopsitta haematonotis</i>	4
<i>Amazona viridigenalis</i>	4
<i>Amazona oratrix</i>	4
<i>Amazona auropalliata</i>	4
<i>Ara militaris</i>	0
<i>Ara macao</i>	0
<i>R. pachyrhyncha</i>	0
<i>Rhynchositta terrisi</i>	0
<i>Aratinga brevipes</i>	0

Source: Official Diary of the Federation (years 1982-1999), Semarnat 2005 a, b, d, e, h, i (years 2000-2005), Iñigo et al 1991 (years 1979-1987), Macias et al. 2000

* Two years of authorizations were illegally issued.

The first species to be banned were those classified as endangered, such as both macaws and the red and maroon fronted parrots. Likewise, the Socorro parakeet was only on an island in the Pacific where no parrot trapper worked, so there was no reason to authorize its capture.

Nevertheless, the reasons for banning some species from capture are not always clear. Some species have been banned, then authorized, then banned and authorized once again (Table 6.1, above). For example, the Yucatan parrot and Aztec parakeet have been authorized and banned three times. The white crowned parrot, Pacific parakeet, white fronted parrot, lilac crowned parrot and blue headed parrot have been authorized and banned twice.

The reason for these back and forth decisions have to do with lack of population data for the different species. According to the General Office of Wildlife of the Environment Ministry (DGVS), “the authorizations for trapping parrots before the entry into force of the Wildlife Law [in 2000] were based on quotas established by the Agreement that establishes the calendar of hunting and use of singing and ornate birds which was published in the Federation Official Diary” (Semarnat 2006 d, g).

That Agreement was created through meetings with trappers and wildlife authorities. The DGVS says that some technicians and scientists attended the meetings but that “...there are no records of any population study in their archives that were used as basis to determine the species or quotas” (Semarnat 2006 d, g). This lack of population studies had been noted before by Profepa: “There are no studies of populations or habitats in the archives of the General Office of Wildlife, which is evidence that the agreements with the bird trapper unions have not been complied with” (López Medellin cited in Profepa 2002). And before that, in 1998, the General Director of the DGVS said: “It is unfair that we determine quotas of capture [of birds] when we don’t know the real state of the populations” (Pérez 1998). It is clear that the DGVS did not have population studies of the different species of parrots to make a determination of which species should be allowed to be captured.

Some decisions were based on the change of regulations. For instance, in 1994 the regulation that determined the risk status of species entered into force and in that year the green parakeet (*Aratinga holochlora*) was listed as threatened and taken out of the use calendar (DOF 1994). But the decision to ban or authorize a species has not always followed the official classification of the status of threat. For example, the Yucatan parrot and lilac crowned parrot were classified as threatened in 1994, yet both still were authorized for capture in 1998 and 1999 (Table 6.3).

Table 6.3

Threat status for Mexican parrots, 1991-2006

Species	Ecological Criteria (1991)	NOM-059 (1994)	NOM-059 (2001)	IUCN 2006
<i>Aratinga holochlora</i>	unclassified	threatened	threatened	Least Concern
<i>Aratinga brevipes</i>	unclassified	threatened	threatened	Endangered
<i>Aratinga strenua</i>	unclassified	unclassified	threatened	Least Concern
<i>Aratinga nana</i>	unclassified	unclassified	special protection	Least Concern
<i>Aratinga canicularis</i>	unclassified	unclassified	special protection	Least Concern
<i>Ara militaris</i>	Endangered	Endangered	Endangered	Vulnerable
<i>Ara macao</i>	Endangered	Endangered	Endangered	Least Concern
<i>Rhynchopsitta pachyrhyncha</i>	Endangered	Endangered	Endangered	Endangered
<i>Rhynchopsitta terrisi</i>	Endangered	Endangered	threatened	Vulnerable
<i>Bolborhynchus lineola</i>	unclassified	unclassified	threatened	Least Concern
<i>Forpus cyanopygius</i>	unclassified	unclassified	special protection	Least Concern
<i>Brotogeris jugularis</i>	unclassified	unclassified	threatened	Least Concern
<i>Pionopsitta haematocephala</i>	threatened	Rare	threatened	Least Concern
<i>Pionus senilis</i>	threatened	threatened	threatened	Least Concern

<i>Amazona xantholora</i>	threatened	threatened	special protection	Least Concern
<i>Amazona viridigenalis</i>	unclassified	Endangered	Endangered	Endangered
<i>Amazona finschi</i>	unclassified	threatened	threatened	Vulnerable
<i>Amazona farinosa</i>	threatened	threatened	threatened	Least Concern
<i>Amazona oratrix</i>	Endangered	Endangered	Endangered	Endangered
<i>Amazona europalliata</i>	Endangered	threatened	Endangered	Least Concern
<i>Amazona autumnalis</i>	special protection	unclassified	unclassified	Least Concern
<i>Amazona albifrons</i>	special protection	unclassified	unclassified	Least Concern

Source: DOF 1991, 1994, 2002b, IUCN 2006 <http://www.iucnredlist.org/>

Some decisions have to do with new administrations and new policies. For example at the beginning of the presidential administration of 1989-1994 five species were banned, but three of them were later on authorized during the same administration. This later change was probably due to pressure from the bird trapper unions.

There is at least one example where a ban on a species was based on actual field information. During all the years of issuance of the use calendars to establish authorized species and quotas, the state of Chiapas had a total ban on any bird trapping. One species, the yellow chinned parakeet (*Brotogeris jugularis*), has most of its distribution restricted to Chiapas and a minuscule portion of the southern part of the state of Oaxaca. And so, authorizations were given for Oaxaca, but trappers soon trapped out the species and were entering Chiapas to trap it. In 1996 the office of Profepa Oaxaca requested that: “The yellow chinned parakeet (*Brotogeris jugularis*), barred parakeet (*Bolborhynchus lineola*) and Aztec parakeet (*Arantiga nana*) should be excluded from the calendar of use because the illegal traffic observed by Profepa inspectors in the field showed that it had decreased due to diminishing populations” (Profepa 1996c). The species was included in the 1997-1998 season, but authorizations were not issued and after that it was taken out of the calendar (DOF 1998). The same happened for the barred parakeet (*Bolborhynchus lineola*), which was included in the calendar up to 1998 but no authorizations were issued and it was taken out afterwards (DOF 1999).

Specimens captured

It is very difficult to know how many parrots have been legally captured over the years. From 1979 to 1997 there is only one summary record, of 104,530 for the year of 1982 (Iñigo et al 1991) (Table 6.1, above). As we have seen, quotas for species were established through the use calendars for birds, but these calendars only mentioned the species authorized and a general quota for states. They did not mention how many specimens could be captured by species and by state.

Why are there almost no records for the capture for parrots before 1998? The DGVS answered: “...before that year capture authorizations were issued through credentials to trappers of the Registry of Singing and Ornate Birds (RACO). These registries did not make a differentiation between parrots and singing birds. They only established a determined quantity of birds for possession. Thus, it is not possible to have data on the

capture of parrots before 1998.” (Semarnat 2006 d, g). Neither the Environment Ministry, nor other Ministries, knew how many parrots were being captured annually (or any other bird species). And as we have seen, the DGVS did not have population studies to determine how many parrots could be captured sustainably.

In fact this was a huge problem for Profepa because they could not know if a trapper had already used up his quota or what species he was allowed to trap. In 1996 Profepa Oaxaca proposed that this be changed; their proposal said: “The volume of use and quotas of capture should be determined for each species, because the actual calendar does not distinguish behavior of populations” (Profepa 1996 c).

Although wildlife authorities did not know how many birds were being captured they did know that a huge illegal trade was occurring under the umbrella of trapping authorizations. The General Director of the DGVS said in 1998: “We issued a capture authorization for 100 to 400 birds under a single permit, depending on the state, but when the birds reached the market, we noticed many more birds than authorized, possibly four to five times more birds than the permits allowed” (Ramirez quoted by Pérez 1998).

In 1998, a manual of procedures for authorizations was published in the Federation Official Diary that established that use of wildlife had to be done through the UMA units and that populations studies had to be done before any authorizations were issued (DOF 1998). This requisite was afterwards included in the Wildlife Law of 2000 (DOF 2000). For the first time, the DGVS issued authorizations on specific quotas for specific species of parrots. From 1998 to 2002, 24,475 parrots were captured “legally” (see below) from eight different species (Table 6.4).

Table 6.4

Capture authorizations, 1998-2002

Species	1998	1999	2000	2001	2002	Total
<i>Aratinga nana</i>	10	10	1089	5317	2058	8484
<i>Aratinga canicularis</i>	3098	667	2831	100		6696
<i>Amazona albifrons</i>	90	40	40	3485	853	4508
<i>Amazona xantholora</i>	40*	21	30	1306	17	1414
<i>Amazona autumnalis</i>				1359		1359
<i>Pionus senilis</i>			175	674		849
<i>Amazona farinosa</i>			220	385		605
<i>Amazona finschi</i>	86	214	260			560
Total	3,324	952	4,645	12,626	2,928	24,475

* 1998 data taken from Macias et al 2000

** Authorizations from 2001 that extended over into 2002

Source: Semarnat 2005 a, b, d, e, h, i (years 1998-2005)

Legality of authorizations

In 2003 no authorizations were issued, nor in 2004 or 2005. Why? In the year 2002 the DGVS requested the Technical and Consultative Subcommittee for the Protection and Conservation of Psittacines to review the requests for capture from 21 different UMAs. All of these requests were eventually rejected by the DGVS after receiving the report from the Subcommittee because they:

- “Lacked registry or renewal of the UMA”
- “Lacked approval or renewal of management plans”
- “Lacked annual activity and capture report from previous years”
- “Lacked up to date inventories”
- “Lacked payment of rights for the use or capture of species in some status of risk”
- “Used methods of population sampling with sources of error”
- “Had overestimations of population in data from population sampling methods”
- “Lacked location of routes of population sampling in map of the UMA”
- “Lacked population data: mortality and natality for these group of species.
- “Lacked analysis used to determine population density” (Semarnat 2006 c).

Most of these requisites were established in the Wildlife Law, so if an UMA did not meet them, the DGVS could not properly issue a capture authorization. Out of the 21 UMAs rejected in 2002 there were 9 that had received authorizations for capture in 2000 and 2001 (Table 6.5).

Table 6.5**UMAs authorized or rejected for capture of parrots, 2000-2005**

Authorized to capture 2000	Authorized to capture 2001	UMAs rejected 2002 onwards
Ejido Tres Reyes	Ejido Tres Reyes	
Niños Héroes	Niños Héroes	Niños Héroes
Ejido Ursulo Galván	Ejido Ursulo Galván	Ejido Ursulo Galván
Ejido Misantla Segundo	Ejido Misantla Segundo	Ejido Misantla Segundo
Colonia Río Azul	Colonia Río Azul	Colonia Río Azul
Ejido Dotación Las Juntas	Ejido Kicche Las Pailas	Ejido Kicche Las Pailas
Comunidad Indígena de Chacala	Ejido Venustiano Carranza II	Ejido Venustiano Carranza II
Comunidad Indígena de Jocotlán	El Baluarte	El Baluarte
Ley Federal de Reforma Agraria	Las Maravillas	Las Maravillas
	San Miguel	San Miguel
Ejido Dotación Las Juntas	Aratinga's	La Laja
Ejido Adolfo López Mateos	Profr. Carlos F. López	Las golondrinas
Comunidad Indígena de Tomatlán	Palmillas II	Ejido Humedales
Comunidad Indígena de Tomatlán	Tigre Grande	Ejido Acatepec
Quiviquinta	Ejido Dzulá	Ejido La Remonita
	Pich	Ejido Ixcuinatoyac
		Macanguas
		Pool Hayin
		Los Pumas
		Laguna Mocu
		Camp. Jaguares
		Ik Balam

Source: Semarnat 2006 c, f

It is highly improbable that the 9 UMAs listed as approved had actually met the requisites of the Wildlife Law in 2000 and 2001, but then suddenly failed to meet them in 2002. Some of the requisites like having a management plan, a sound method to estimate population, estimates of mortality and natality simply cannot be there one year and gone the next.

In fact, those UMAs did not meet the requisites during those years. In 2002, Profepa Veracruz informed: "In 2000 and 2001 quotas for capture were authorized to UMAs in the south of the state of Veracruz for different species of parrot like the blue headed parrot (*Amazona farinosa*) and white crowned parrot (*Pionus senilis*) which are classified as threatened. In both seasons the quotas were authorized albeit the UMAs do not have an authorized management plan and they have no records of activity

reports."(Profepa 2002)(see Chap. 5 - Normativity). Unfortunately, the Psittacine Subcommittee of experts did not review all of the UMAs that had been issued authorizations before, but it is very probable that these UMAs did not meet the law's requisites either.

In sum, ever since the year 2003 the DGVS has consulted the Psittacine Subcommittee to review the requests to capture parrots and no authorizations have been issued. Not one of the UMAs had been able to meet the Wildlife Law's requisites to ensure a sustainable use of this natural resource. **In other words, all the parrot trapping actually done in Mexico from 2003 through October 2006, and likely longer, has violated the applicable laws.** The general lack of population studies, lack of documented harvest levels, and the numerous permit violations makes it impossible to say that the current regulations guarantee a sustainable use for individual species.

Chapter 7 - Illegal Trade

Illegal capture in Mexico

One of the most important but least known aspects of the illegal parrot trade is the volume of the capture itself. This was difficult to estimate because the only ones who truly know how many parrots are captured each year are the trappers. Similarly, the only ones who know how many illegal parrots are traded each year are the traffickers. Our estimates are necessarily based on diverse sources of information, discussed below. The task of quantifying this accurately was exacerbated by the fact that Mexico has 22 species of parrots, most of which are affected by illegal trade. Parrots are not confined to a small area, rather, are distributed widely in 26 out of 31 states.

As a starting point, we observed that during the late 1980s it was estimated by the U. S. Department of Justice that as many as 150,000 birds, mostly parrots, were smuggled into the USA from Mexico every year (Thomsen and Hemley 1987). An estimate of 25,000 birds per year during the 1980s was used by the U.S. Agriculture Animal and Plant Health Inspection Service responsible for quarantine of live animal imports (Gobbi 1996). In 1991, Thomsen estimated that 50,000 neotropical parrots were smuggled into the USA each year (Thomsen in James, 1991). There is a 100,000-125,000 bird difference between these three estimates, which shows how difficult it is to quantify illegal trade.

Profepa has estimated that 115,000 parrots are in trade including Mexican and imported specimens (Profepa 2002). The annual average number of imported psittacine specimens from 1995-2004 is 9,600 (see Chap. 15 - Imports), which subtracted from the total would leave 105,400 Mexican parrots in trade. Between 1998-2002, an annual average of 4,901 parrots were authorized for "legal" capture (see Chap. 6 - Trapping Authorizations), which would leave a figure of 100,499 parrots total captured illegally in the average year. TRAFFIC México also estimated 100,000 parrots in trade, 75% of them being illegal (Reuter cited by Cardoso 2002). A parrot expert estimated from conversations with street salesmen that 15,000 parrots a year entered Mexico City and were distributed among street salesmen from the south and north of the city (Acevedo per. com.). This is an impressive figure which only accounts for a portion of the city.

Our most important and unprecedented source of information is that we conducted detailed interviews with leaders of the two most important unions of bird trappers and with many trappers themselves to reach an estimate of the total capture of psittacines in Mexico. It took a lot of time, effort and patience for our field researchers to gain the trust of the union leaders and trappers. But, we consider the information we received in the end to be reliable. We first got general estimates of the capture, by state and by species, from the union leaders, which were used as the basis for the total capture data. Their capture data comes from the last few years. To corroborate their data we used individual information from trappers on the number of specimens they capture by species annually and we extrapolated it to the number of parrot trappers in the state. We also got information that was given to Profepa inspectors by illegal traffickers when detained by Profepa. Further, a producer of bird bands gave us the information bird trappers have confided in him throughout the years. We interviewed 43 Profepa inspectors, 22 parrot trappers, 3 union leaders and 1 bird ring producer (69 individuals

total). All of this information was gathered between 2005 and 2006. **Altogether we roughly estimated the typical annual parrot illegal capture in Mexico to be in the range of 65,000 to 78,500** (Tables 7.1 and 7.2).

Table 7.1

Rough estimate of parrots captured annually typically, by state

State	Parrots captured annually
Sinaloa	4500
Nayarit	12500
Jalisco	4200
Oaxaca	15000
Chiapas	15000
Campeche	10000
Tabasco	2300
Michoacan	1500
Puebla	2000
Guerrero	5000
Yucatan	500
Veracruz	4000
Tamaulipas	2000
Total:	78,500

Source: Trapper unions, individual trappers, Profepa and inspectors, bird band maker

Table 7.2

Rough estimate of parrots captured annually typically, by species

Species	Parrots captured annually
Orange fronted parakeet (<i>Aratinga canicularis</i>)	23500 ^a
White fronted amazon (<i>Amazona albifrons</i>)	8000 ^a
Blue rumped parrotlet (<i>Forpus cyanopygius</i>)	8000 ^a
Aztec parakeet (<i>Aratinga nana</i>)	7000 ^a
Red lored amazon (<i>Amazona autumnalis</i>)	5000 ^a
Lilac crowned amazon (<i>Amazona finschi</i>)	5000 ^a
Mealy amazon (<i>Amazona farinosa</i>)	< 1000 ^a
Green parakeet (<i>Aratinga holochlora</i>)	< 1000 ^a
Yellow naped amazon (<i>Amazona auropalliata</i>)*	< 1000 ^a
Yellow headed amazon (<i>Amazona oratrix</i>)	< 1000 ^b
Red crowned amazon (<i>Amazona viridigenalis</i>)	< 600 ^{ab}
Yucatán parrot (<i>Amazona xantholora</i>)	< 500 ^{ab}
White capped parrot (<i>Pionus senilis</i>)	< 500 ^b
Military macaw (<i>Ara militaris</i>)	< 500 ^b
Orange chinned parakeet (<i>Brotogeris jugularis</i>)*	< 500 ^b
Barred parakeet (<i>Bolborhynchus lineola</i>)	< 500 ^b
Pacific parakeet (<i>Aratinga strenua</i>)	< 500 ^b
Red fronted parrot (<i>Rhynchopsitta Pachyrhyncha</i>)	< 100 ^{ab}
Scarlet macaw (<i>Ara macao</i>)*	< 50 ^{ab}
TOTAL	65,000

Source: **a** = Trapper unions, individual trappers, Profepa and inspectors, bird ring maker, personal observation by researchers. **b**= estimates on seizures, Profepa reports and inspectors, historical. *Includes specimens smuggled from Central America

The differences between the two capture estimates, by state and by species, are for several reasons. The estimates by state in Table 7.1 may be higher than the estimates by species in Table 7.2 because many trappers capture both inside and outside their own states. For example, Nayarit trappers capture there and also cross over to Sinaloa, Jalisco and Durango to trap. However, we extrapolated the totals given to us by individual trappers to the number of parrot trappers estimated to reside in that state on the assumption that they trapped only in their state of residence. Union leaders gave us their estimates in general figures which more or less corresponded to what we corroborated and estimated with the overall data. Nevertheless, our estimates for some species are very conservative and may be underestimated. We only got information for half the states where parrots occur albeit these were the states where most of the species and biggest populations of parrots exist.

Union leaders were less accurate when giving estimates by species; they only gave us information for 13 of 19 species in Table 7.2. We do not have information from all unions, although the two unions that gave us information represent almost 90% of registered parrot trappers (see Chap. 3 - Parrot Trappers).

An unknown number of smaller unions that have not registered with the Environment Ministry and an unknown number of parrot trappers who only trap opportunistically are not accounted for in this report. These opportunistic trappers work most of their time in other activities like farming, ranching, etc. (Quintana Roo trappers). The number of opportunistic bird trappers has been estimated as high as 20,000 (Groselet cited in Velazquez 2004), but the number of parrots they capture is unknown. Because of these unknowns we believe the capture data given above represent conservative estimates.

Illegal trade in Mexico

Legal and illegal trade of wild birds and parrots in Mexico is mostly controlled by bird trapper and salesmen unions (Profepa 2002). The Environment Ministry has been reaching agreements with the unions whereby they accept a series of voluntary commitments to pursue their activity in a sustainable and legal manner. The purpose of the agreements is to establish that:

- all capture of parrots must be done inside UMAS which have to abide the rules of the Wildlife Law (i.e., management plan, population studies, activity reports, etc.),
- all birds must be ringed at the moment of capture to certify legality of each specimen,
- capture can only be done by nets, cages and traps that do not harm birds,
- capture inside natural protected areas is not allowed,
- capture inside private, communal, federal, state or municipal lands without express authorization by owner or administrator is not allowed,
- cannot mutilate, paint or bleach plumage,
- cannot collect eggs or nests, or nestlings,

- and various other provisions (Semarnap 2000 d).

The unions signed these agreements mostly to get official authorizations for capture. The union leaders receive the capture authorizations and then distribute them among their members (Semarnap 2000 d). In the case of parrots they must present all the information that the Wildlife Law establishes to the Environment Ministry and the authorizations go to the UMA. In some cases the union would make agreements with private or communal owners of land and then bring in trappers, or they would buy the birds directly from the land owners (Profepa 2002).

Unfortunately, many members of the unions as well as their leaders do not respect the terms of the agreements and practice illegal trade with birds. Many union leaders have been identified as the ringleaders of the trafficking by controlling the prime capture sites in the UMAs, as well as controlling trappers, hoarders, transporters, distributions sites, salesmen and markets (Profepa 2002).

There is a list of about 35 frequent techniques tried by illegal traffickers, trappers, transporters and salesmen to carry out their illicit trade without getting caught (Profepa 2002 and Profepa inspectors). An example: "...using their union credentials, they falsify the trapping permits fooling and bypassing roadblocks from Nayarit to Baja California" (Profepa 2002). Similarly, we are aware about 20 specific techniques used to avoid detection when transporting birds, such as drugging them, taping their beaks shut, and so on. (We do not list all the techniques here to avoid spreading them further.)

Illegal trade is not limited to illegal capture; it also involves parrots that come from imports and breeding centers that are traded outside the law. Some of the breeding centers are used to launder Mexican wild species including exotic species (Profepa 2002). But most of the problem with exotic and captive bred species has to do with not having the proper documents for transport and sale.

Most of the legal species are sold in pet stores, but some are finding their way into the mainstream of the illegal trade. A big percentage of the seizures by Profepa are exotic species and some of these species are being seized in higher numbers than many Mexican wild species. Several of these exotic species are now bred in Mexico, like love birds, cockatiels, budgerigars, macaws, etc., and the prices for some of the common species have made them accessible for the wider public (see Chap. 14 - Prices). Illegal traffickers are selling love birds in crossroads and passing them to the unsuspecting customers as Mexican species from the jungles of Chiapas (Profepa Jalisco).

Most buyers do not even know what the right documentation is that certifies the legality of a parrot. Huge numbers of unsuspecting customers buy parrots and do not get any documents or even a bill of sale. Many people, once they buy their parrot, then decide to re-sell it themselves for a variety of reasons. If they get denounced and they cannot prove their bird is legal it can be seized by Profepa.

Illegal trade with authorized species

Allowing species to be legally trapped does not stop illegal trade. In fact, based on Profepa's seizure rates, illegal trade from 1995 to 2002 was higher with authorized

species than with non-authorized species (Table 7.3) (keeping in mind that no authorized trade in Mexican parrot species occurred from 2003 through late 2006). Illegal trade with authorized species was on average 4 times higher than with non-authorized species even though the former were less numerous. Also, non-authorized species include the most sought after like macaws and yellow headed parrot. They also include the most expensive species and still illegal trade with them was less than with authorized species.

Table 7.3

Comparison of Profepa's seizures of authorized and non-authorized species

Year	Seizures of authorized species	Seizures of non-authorized species	Difference**
1995	1931 (5)*	121 (10)	15.95
1996	2231 (6)	231 (13)	9.6
1997	745 (5)	273 (10)	2.7
1998	453 (5)	151 (14)	3
1999	958 (5)	309 (13)	3.1
2000	1133 (6)	63 (9)	17.9
2001	281 (7)	222 (10)	1.2
2002	458 (3)	652 (16)	0.3
Totals	8,190	2,022	4.05

Source: Profepa 1996a, 1996b, 1997, 2001, 2002, 2005

* Number of separate species seized is in parenthesis; ** Difference is multiple of authorized compared to non-authorized species seized.

The reason for this seemingly contradictory situation is that it is much easier to cheat with authorized species. It would be almost impossible for a trapper to forge documents that would certify legal trapping of a macaw or a yellow headed parrot, because there have not been any authorizations for the former in the last 30 years. Unions could get their hands more easily on permits for authorized species, such as an orange fronted parakeet or a white fronted parrot, or forge such permits, which afterwards they could use illegally all over Mexico and for several years. Illegal trade in these parrots thrived under the appearance of legality.

One may argue that authorized species were more abundant, but be that as it may, they were being captured above the authorized quotas likely at unsustainable levels, outside authorized UMAs, in unauthorized states, and being transported and traded illegally and thus were seized.

Smuggling

Seizures in the USA and Mexico reveal that most wild caught parrots stay in Mexico. Taking into account the number of seizures in the USA and based on the estimate of numbers captured annually in Mexico, a range of 3,133 to 9,400 Mexican parrots are being smuggled annually across the border (see Chap. 9 - Seizures).

Several factors, such as increased border vigilance since September 11, 2001, and changes in national and international laws, have made smugglers change their routes. The California border is still one of the main routes for smuggling as can be inferred from the amount of seizures in Baja California. Many shipments from Tamaulipas and Nuevo León are now transported by car across Coahuila into Chihuahua to be smuggled through less patrolled areas into the USA (Profepa Tamaulipas) (see Chap. 8 - Trade Routes). It is interesting that the state of Sonora is the fifth in number of seizures, mostly due to some high volume shipments. Sonora is not only being used as a pathway to Baja California, but also its border is becoming another point of entry of parrots into the USA.

Parrots also are smuggled into Mexico. At least three species are continually brought in from Central America, like the yellow naped parrot, yellow chinned parakeet and scarlet macaw. Yellow naped parrot seizures are very small in Mexico and it is not easy to find this bird for sale. The majority of yellow naped parrot smuggled shipments are destined for the USA, while most shipments of the other two species are for Mexico's internal trade.

Chapter 8 - Trade Routes

The trafficking routes for parrots generally are well known. Several bird distribution centers exist. For example, in Oaxaca there are two in Santiago Niltepec and Pinotepa Nacional; in Veracruz two more, Acayucan and Minatitlán. In these four sites birds from Quintana Roo, Yucatan, Campeche, Tabasco, Oaxaca and southern Veracruz are hoarded and distributed for the northern routes of distribution inside Mexico and for the USA (Profepa 2002).

Trafficking mostly occurs via main highways in cars, pickups, trucks, busses, etc. Traffickers only use side roads or dirt roads when they want to avoid a check point by the Army or PGR. Profepa inspectors of every state know the roads used by traffickers, but lack the manpower or time to intercept them.

International trade route

The international trade route for imported parrots typically starts deep in Central America where birds are captured, often for the USA market (Fig 8.1). These come into Mexico through the southern border between Guatemala and the state of Chiapas. This border is so open as to be practically non-existent. Traffickers come into the city of Tapachula where they cross the state north to Oaxaca following the coastal highway. In southern Oaxaca at the Isthmus of Tehuantepec they decide if they will cross the Isthmus into Veracruz to take the Gulf Coast trade route going to southern Texas, or take the Pacific route hugging the coastline for the Arizona and California border (Profepa inspectors).

When traffickers take the Pacific route they reach the state of Guerrero, where they will make another decision. They sometimes go northeast to Mexico City where they can get to another large hoarding and distribution center, and take the route north to southern Texas again crossing through Mexico's highlands. When they keep to the coastal highway they reach Sinaloa and at the mouth of the Gulf of California they sometimes cross by ferry to La Paz in Baja California Sur to go north up the Peninsula of Baja California to reach the border in Tijuana. Sometimes they keep to the coastline until they reach northern Sonora and they will leave the birds in Nogales for someone to take them through the border to Tucson or they will continue west along the border to Tijuana (Profepa inspectors).

The Gulf of Mexico route starts deep in the Yucatan Peninsula which goes south east until it reaches southern Veracruz (Fig 8.1). When using this route or the one across central Mexico's highlands, most of the birds will be smuggled over into the USA through southern Texas, by way of Brownsville, McAllen or Laredo. A few will be taken to Coahuila to be crossed through Eagle Pass. For some years now it has been more difficult for traffickers to use the more southerly Texas crossings so some of the birds will be taken all the way through Chihuahua to be crossed at El Paso (Profepa Tamaulipas).

These are the main routes but the transport of birds for the USA can start at any point of the route. For example in the Gulf of Mexico route, birds can be trapped in Veracruz,

Puebla, Sal Luis Potosí or Tamaulipas which will be taken north. In the Pacific route birds are trapped mostly in Chiapas, Oaxaca, Guerrero, Jalisco, Nayarit and Sinaloa for smuggling into the USA (Profepa inspectors).

Another major international parrot trade route comes from South America and some Caribbean countries by airplane to Quintana Roo in the Mexican Caribbean, where they will be re-routed by air into Miami, Florida (USFWS special agent Picón, per. com.). Mexican parrots are sometimes transported by air directly into the USA; the main ports of entry are Los Angeles, San Francisco, New York, Miami, Chicago and even Honolulu (Cantu et al 1996b).

Regional trade routes

Most of the illegal trade in parrots stays within Mexico (see Chap. 7 - Illegal Trade). In most states, a large part of the captured parrots will be taken to the nearest big city to be sold or distributed. A bigger part of the parrots will be taken outside the state to be distributed among inland states.

For example, in Chiapas, most trapping is done near or inside natural protected areas like the biosphere reserves of La Encrucijada, El Triunfo, Montes Azules, Lacantún and El Ocote (Profepa Chiapas and 2002). Four routes of transport occur in the state: the southern route along the coastline called the Costa-Soconusco route, the Central state route, the Jungle route near the border with Guatemala and the Northern route (Fig. 8.2). These take birds to different cities inside Chiapas where they are sold in markets, veterinarian clinics, aquariums and by street salesmen (Profepa 2002). Also, many will be bought by hoarders from Oaxaca that will take them to the southern distributions centers or to the route to Mexico City.

Another example: in Nayarit trappers work inside the state and outside in neighboring states like Sinaloa, Jalisco, and Durango (Profepa 2002) (Fig. 8.3). They trap in the municipalities of San Blas, Compostela, Santiago Ixcuintla all near the coast, Ruiz and Huajicori in Nayarit. They sell inside the state in Tepic, Compostela and Bahía de Banderas. They also sell to hoarders from Guadalajara, Jalisco; León, Guanajuato; Aguascalientes, Sinaloa and Mexico City (Profepa 2002 and Nayarit trappers).

Figure 8.1

International trafficking routes



Figure 8.2

Trafficking routes in Chiapas



Figure 8.3

Trafficking routes in Nayarit



Chapter 9 - Seizures

Seizures in Mexico

According to the Penal Code any illicit activity with wildlife, their products and byproducts, for the purpose of traffic, capture, harming, possession, transport, hoarding, introduction into the country or extraction from the country, especially with species that are endemic, threatened, endangered, especially protected or regulated by any international treaty that Mexico is party to, is a crime punishable by up to 12 years of jail (DOF 2002). These activities are considered severe federal crimes, without the opportunity of bail. Any police agency in the country can make an arrest of parrot traffickers and illegal trappers. However, the onus falls on Profepa, the agency of the Environment Ministry in charge of policing environmental laws. Other agencies that on occasion make seizures of illegal shipments of wildlife and make arrests are the Procuraduría General de la República (PGR) (General Attorney of the Republic) and the Army. More rarely will the state and municipal police agencies get involved.

Profepa has its main office in Mexico City and individual offices in each state. Profepa inspectors do not carry guns and so when a big operation is done in some market or distribution center they need to be reinforced by officers of the PGR for their own security. Profepa has a very small force of inspectors (513 for the whole country) but it becomes smaller still when considering that they are divided into different areas like industrial pollution, forestry, wildlife, marine, etc. In reality, Profepa does not have the manpower to monitor, inspect and control activities related to wildlife to ensure that environmental regulations are complied with. “Without a doubt the most serious difficulty the Profepa faces in the combat against illegal bird trade is the small number of inspectors it has for the whole country” (Profepa 2002). Their budget was cut by 2.5% in 2006 and 5% in 2007 (www.profepa.gob.mx; www.planetaazul.com.mx/www/2006/12/11/doblan-gasto-a-conafor-y-reducen-el-de-profepa).

In 1995 the Natural Resources Office was created inside Profepa. Before that, wildlife seizures were made by wildlife authorities within the different ministries in charge of the environment; Urban Development and Ecology ministry (SEDUE), Agriculture ministry (SARH), and Social Development Ministry (SEDESOL). None of these ministries had a real enforcement force, just a small office in charge of a group of inspectors which occasionally got the help of personnel from state offices. They did not keep good records of seizures; we could only find general listings of seizures for SEDUE, but none at the species level (Table 9.1).

Table 9.1

Parrot seizures by SEDUE, 1987-1992

Year	1987	1988	1989	1990	1991	1992	Total
Seizures from street salesmen	248	204	295	182	14	32	975
Seizures from established shops and markets			162	66	34	10	272
Voluntary deposit		5	8	25	2		40
Total	248	209	465	273	50	42	1,287

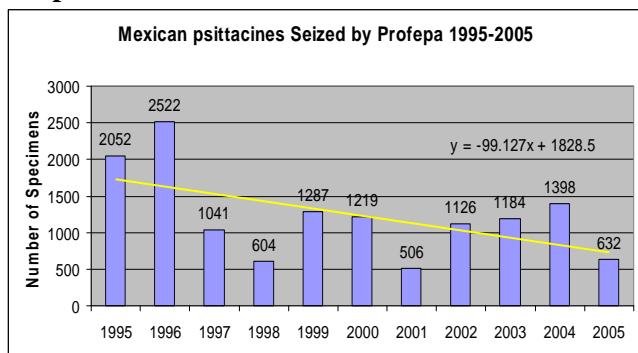
Source: Hernández 1996

Seizures by Profepa

The information on Profepa's seizures comes from their database. Nevertheless Profepa's record keeping of seizures is as bad as in the times of SEDUE. It is inaccurate, incomplete and often contradictory. The totals we received per year don't match the totals per state, and the totals don't match the number of specimens seized per species per state. We considered it more reliable to choose state figures over central office figures, considering that the people who made the seizure would know better what they seized.

The first coordinated effort to police activities in relation to wildlife use started in 1995. Profepa hired and trained inspectors to monitor, inspect, patrol, verify and seize any specimen of wildlife that was being illicitly captured, transported, possessed, traded, etc. For the first time ever, trappers and traders were faced with an aggressive national effort to control illegal wildlife trade. The new Natural Resources office and the newly trained inspectors made many seizures during 1995 and 1996 (Graph 9.1).

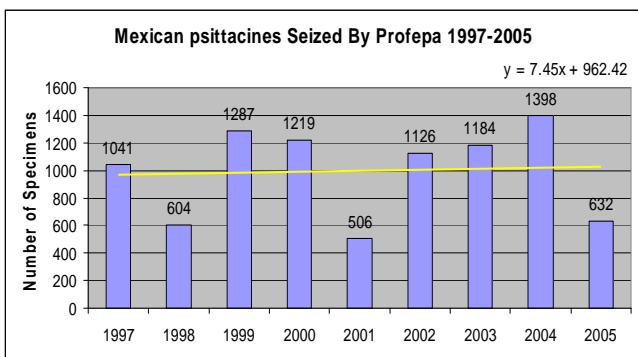
Graph 9.1



Source: Profepa 1996a, 1996b, 1997, 2001, 2002, 2005, 2006 a-e

After the initial two year onslaught, the surprise was over, illegal traders adapted, Profepa as a whole got into the working pace of things and from 1997 onwards, the seizure pace stabilized, as depicted below by excluding consideration of the years 1995 and 1996 (Graph 9.2).

Graph 9.2

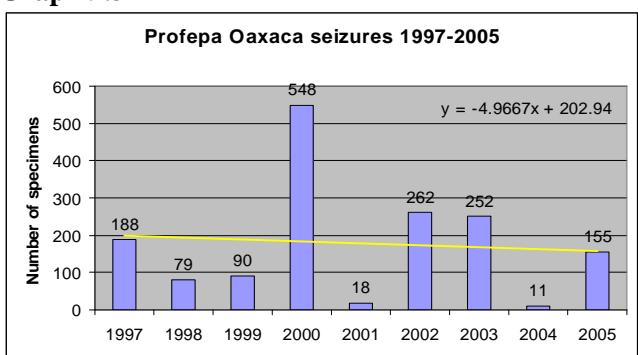


Source: Profepa 1997, 2001, 2002, 2005, 2006 a-e

The overall trend from 1995 to 2005 suggests a clearly decreasing number of seizures. But, the second graph from 1997 to 2005 suggests a stable trend with a slight increase. The figures from 1997 to 2005 on the whole appear to correlate with Profepa's effort level, and perhaps to other chance factors.

We can support this conclusion by analyzing the seizures of one of the states, Oaxaca. The state of Oaxaca is by far the first in total number of seizures (Table 9.3), and one of only two states that had parrot seizures every year from 1995 to 2005 (the other one being Veracruz) (Profepa 1996a, 1996b, 1997, 2001, 2002, 2005). Oaxaca had a more or less stable trend of seizures with a slight decrease from 1997 to 2005 (Graph 9.3). Nevertheless, in 2001 and 2004 they had a sharp decrease in numbers of seizures. In 2001 Profepa's office in Oaxaca focused its attention to the illegal timber trade in the sierras, thus its inspectors lacked much time to do bird seizures (Ruiz, G., former head of Profepa Oaxaca, per. com.). In 2004 a series of changes in the state's organization especially the uppermost tiers including the head, disrupted work and the efficiency of the office (Bernal, J. per. com.).

Graph 9.3



Source: Profepa 1997, 2001, 2002, 2005, 2006 a-e

It is apparent that a correlation exists between agency effort and the number of seizures, and that annual total seizures do not necessarily reflect illegal trade levels or parrot population levels. Nevertheless, if we were to assume effort as a constant variable for

the period of 1997-2005, a very general view of illegal trade could be surmised. In this case, illegal trade has been functioning relentlessly for the past 9 years or so.

We can compare Profepa's seizures (1997-2002) with SEDUE's seizures (1987-1992) ten years apart and see that Profepa seized 6 times more parrots than SEDUE did during a comparable 6-year period (Table 9.2). Again, if we erroneously assumed these numbers correlated directly to illegal trade levels, we could presume illegal trade in parrots had increased six fold, which is not true. The six time increase in seizures is only indicative of more regulation, more effort and more coordination between enforcement agencies.

Table 9.2

Comparison of seizures by Profepa and SEDUE

Year	SEDUE seizures	Year	Profepa seizures
1987	248	1997	1041
1988	204	1998	604
1989	295	1999	1287
1990	182	2000	1219
1991	14	2001	506
1992	32	2002	1126
Total	975		5,783

Source: Profepa 1997, 2001, 2002, 2005, 2006 a-e, Hernández 1996

State seizures

Oaxaca is first among total seizures for all states for several reasons: it is a parrot producing state for many species, it is the natural pathway for illegal trade coming from Chiapas and Central America, it has two nationally important hoarding and distribution centers and it had one the most active group of inspectors of Profepa for many years (Table 9.3). Among the top seven states we find most of the parrot producing states of southern Mexico that have seizures most of the years, but surprisingly there is also a northern state in this list, Sonora. This is due to the seizure of two big shipments in 1999 and 2004 in Sonora and not because of constant seizures throughout the years, although this state is a natural pathway for shipments of the Pacific route going north to the border with the USA (see Chap. 8 - Trade Routes). It is curious that Mexico City (D.F.) is not higher up when a good part of all the volume of illegal trade ends up there or is stocked for distribution to other states or the USA border, but see below.

Table 9.3

Mexican and exotic specimens seized by Profepa by state, 1995-2005

State	Total seizures	Percentage of total
Oaxaca	4196	28.65
Sinaloa	1058	7.22

Nayarit	717	4.89
Campeche	679	4.63
Sonora	642	4.38
Veracruz	637	4.35
Tabasco	623	4.25
D.F.	537	3.66
Guanajuato	502	3.42
Chiapas	467	3.18
Quintana Roo	419	2.86
SLP	403	2.75
BC	392	2.67
Nuevo León	387	2.64
Jalisco	368	2.51
Puebla	320	2.18
Querétaro	288	1.96
Yucatán	255	1.74
Michoacan	242	1.65
Morelos	238	1.62
Aguascalientes	230	1.57
Guerrero	220	1.5
Durango	216	1.47
Tamaulipas	188	1.28
EdoMex	93	0.63
Coahuila	81	0.55
BCS	66	0.45
Colima	64	0.43
Hidalgo	49	0.33
Chihuahua	30	0.2
Zacatecas	22	0.15
Tlaxcala	13	0.08
TOTAL	14,642	100

Source: Profepa 1996a, 1996b, 1997, 2001, 2002, 2005, 2006 a-e

Profepa's effectiveness

How much of the illegal trade in parrots is Profepa seizing each year? How effective are they in stopping illegal capture, transportation, distribution and sale of parrots? These are very difficult questions to answer because there has never been an illegal trade parameter to compare it with parrot seizures. Nobody knew how large illegal trade in parrots was. Profepa had an estimate but it seemed more of a ballpark figure than anything else. In this report we have made the first-ever estimate of the illegal trade volume using information directly from the trappers and bird trapper unions, as well as other data. From this information, a low range of 65,000 to a high range of 78,500 parrots trapped a year was calculated (see Chap. 7 - Illegal Trade).

Using these estimates and assuming the low range as the annual constant take for 1995 to 2005, we were able to conservatively determine the effectiveness of Profepa's seizures to be roughly 2% of the annual take (Table 9.4). That is, Profepa's seizures represent a very small portion of the number of parrots taken each year.

Table 9.4**Profepa's seizure effectiveness, 1995-2005**

Year	Seizures	Rate of seizure, assuming constant low range estimate of 65,000 wild parrots trapped annually
1995	2053	3.10%
1996	2555	3.90%
1997	1054	1.62%
1998	621	0.95%
1999	1542	2.37%
2000	1258	1.93%
2001	673	1.03%
2002	1276	1.96%
2003	1307	2.01%
2004	1558	2.39%
2005	745	1.14%
Average	1,331	2.04%

Source: Profepa 1996a, 1996b, 1997, 2001, 2002, 2005, 2006 a-e

Profepa's 2% seizure effectiveness can be compared with the USFWS service seizure effectiveness of 1% to 3% for illegal wildlife shipments reported from the early 1990s (GAO 1994). It seems apparent that this amount of effort and effectiveness is not enough to put a stop to illegal trade or even to decrease it.

Seizures by other agencies

Other agencies like the PGR and the Army have made some parrots seizures in the past few years although their effort is very small since wildlife seizures are not their main objective; they only do it when asked by Profepa for their support or incidentally while doing other work. Their information is scarce and most of the time they do not identify the species or genus. The Army stated it only had information for the years 2003 to 2005 and that seizures of only 12 parrots total occurred when vehicles were inspected at the road blocks they have on several highways (most of these are part of their work against drug trade) (SEDENA 2006).

The PGR does participate with Profepa in wildlife operations and during all of its work of fighting crime and illegal trade, especially the drug trade, it encounters all kinds of species and products from the wild. The PGR had data only since 2001. It has seized 303 parrots in 8 different states (Tables 9.5 and 9.6).

Table 9.5**Total parrots seized by PGR, 2001-2006**

Year	2001	2002	2003	2004	2005	2006	Total
Quantity	2	6	160	0	101	34	303

Source: PGR 2006

Table 9.6**PGR parrot seizures by state, 2001-2006**

State	Quantity
Tabasco	151
Durango	88
Hidalgo	23
Morelos	14
Guanajuato	12
Querétaro	8
Sonora	4
Chiapas	3
Total	303

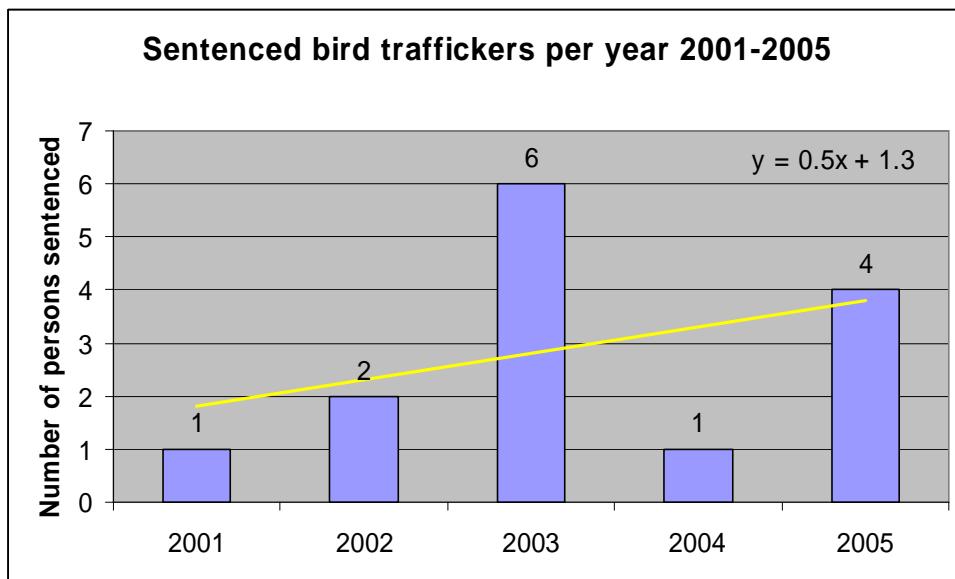
Source: PGR 2006

Profepa can only issue administrative penalties, but the PGR can prosecute criminals. Since 1990, the PGR has prosecuted 14 bird traffickers of whom 11 were parrot traffickers who were finally sentenced (Table 9.7). It was not until February, 2002, that penalties for wildlife trafficking were increased to become a severe crime without bail (DOF 2002). Before that, it was very difficult to put a wildlife trafficker in jail, thus since 2002 convicted and sentenced bird traffickers have increased (Graph 9.4).

Table 9.7**Persons sentenced for illegal trade of birds, 1990-2006**

State	Year	Persons sentenced for illegal trade of all birds, 1990-2006	Persons sentenced for illegal trade of parrots, 1990-2006
Chiapas	2002	1	1
	2003	1	1
Durango	2005	1	1
Hidalgo	2001	1	
Morelos	2003	1	
	2004	1	
Querétaro	2003	2	2
Sonora	2003	2	2
Tabasco	2002	1	1
	2005	3	3
Total		14	11

Source: PGR 2006

Graph 9.4

Source: PGR 2006

Species seized

During 1995-2005, Profepa seized a total of 13,571 Mexican parrots belonging to 21 different species (Table 9.8). Only one of the 22 species in Mexico was not seized, the Socorro parakeet (*Aratinga brevipes*). The orange fronted parakeet (*Aratinga canicularis*) is the most seized species representing 44.8% of the total, twice as much as the second most seized species the white fronted parrot (*Amazona albifrons*) with 22.5% of the total. These two species represent 67% of all seizures. The rest of the species are far behind them.

Table 9.8**Seized Mexican specimens per species by Profepa, 1995-2005**

Species	Quantity	Percentage of total
<i>Aratinga canicularis</i>	6085	44.83
<i>Amazona albifrons</i>	3062	22.56
<i>Amazona autumnalis</i>	891	6.56
<i>Aratinga nana</i>	654	4.81
<i>Ara militaris</i>	451	3.32
<i>Amazona finschi</i>	415	3.05
<i>Aratinga holochlora</i>	391	2.88
<i>Amazona oratrix</i>	274	2.01
<i>Brotogeris jugularis</i>	200	1.47
<i>Aratinga strenua</i>	164	1.20
<i>Ara macao</i>	144	1.06
<i>Amazona viridigenalis</i>	111	0.81
<i>Forpus cyanopygius</i>	97	0.71

<i>Bolborhynchus lineola</i>	88	0.64
<i>Amazona farinosa</i>	85	0.62
<i>Pionus senilis</i>	83	0.61
<i>Amazona xantholora</i>	74	0.54
<i>Amazona auropalliata</i>	72	0.53
<i>Rhynchopsitta pachyrhyncha</i>	25	0.18
<i>Pionopsitta haematonotis</i>	8	0.05
<i>Rhynchopsitta terrisi</i>	1	0.007
<i>Aratinga brevipes</i>	0	0
Unidentified species	196	1.44
Total	13,571	100

Source: Profepa 1996a, 1996b, 1997, 2001, 2002, 2005, 2006 a-e

A surprising number of exotic species were seized by Profepa during 1995-2005 totaling more than 36 species and 1,071 specimens. Half of the seizures were love birds (*Agapornis spp.*) and 79% to three groups of species, love birds, cockatiels and budgerigars. There is an increasing trend in seizures of exotic species which corresponds directly with the increasing trend of exotic psittacine imports (see Chap. 15 - Imports). In fact some of these species are being seized in greater quantities than Mexican species; love birds are the fifth-most seized parrots in Mexico.

Seizures by species can reveal something of the abundance of the species in the wild. The orange fronted parakeet (*Aratinga canicularis*) could be the most abundant parrot in the Pacific slope of Mexico. Its range includes some of the more trapped states like Chiapas, Oaxaca, Jalisco, Nayarit and Sinaloa. It is very prolific with a clutch size of 3 to 5 eggs (Forshaw 1977, Low 1992) and their nests in termitaria are easily accessible even by children. The white fronted parrot (*Amazona albifrons*) is also very prolific with a clutch size of 3 to 4 eggs (Forshaw 1977, Low 1992) and its range includes all of the southern states in the Yucatan Peninsula and up north to Veracruz (Howell 1995). In the Pacific slope it has a disjunct distribution being present in Chiapas, Oaxaca and Guerrero, mostly absent in Michoacan, Colima and Jalisco, but present in Nayarit and Sinaloa up to Sonora (Howell 1995). These two are also the species with the longest record of legal trapping with 24 and 23 years respectively (see Chap. 6 - Trapping Authorizations).

Not surprisingly, the PGR data on species seized show the orange fronted parakeet (*Aratinga canicularis*) as the number one seized species as well (Table 9.9). Interestingly, they have no seizures for the white fronted parrot (*Amazona albifrons*) which may be due to having 146 unidentified specimens.

Table 9.9

Seized species by PGR, 2001- 2006

Species	Quantity
<i>Aratinga canicularis</i>	110
<i>Pionus senilis</i>	23
<i>Ara ararauna</i>	6

<i>Ara militaris</i>	4
<i>Amazona europalliata</i>	3
<i>Amazona oratrix</i>	4
<i>Amazona autumnalis</i>	2
<i>Amazona finschi</i>	2
<i>Amazona viridigenalis</i>	1
<i>Amazona farinosa</i>	1
"Macaw"	1
"Parrot"	146
Total	303

Source: PGR 2006

The graphs for total seizures likely mostly reflect Profepa's effort level, but since the effort appears to have been relatively steady from 1997 to 2005 we may consider the seizure data for the individual species in that period as independent of the effort. This is so because Profepa does not direct its enforcement effort toward seizing specific species. Thus, the species seized are basically random. For the three most-seized species a different trend occurs for each one. For the orange fronted parakeet (*Aratinga canicularis*) the seizure trend is stable, while for the white fronted parrot (*Amazona albifrons*) the trend is decreasing and for the yellow cheeked parrot (*Amazona autumnalis*) the trend is increasing (see Appendices for seizure graphs for all species). These facts could be interpreted as the capture rates also being stable, decreasing and increasing, respectively, for each species.

Seizure work by Profepa

Profepa has a written policy for monitoring the wild bird trade and making seizures (Profepa 2002). Elements of the seizure policy are quoted below, followed by our comments:

1. "Attending direct denunciations from the public which inform Profepa of place and time where wild birds are being sold. Profepa has the legal obligation to attend each denunciation, inspect and make a report."

Comment – Many seizures are made through this process but the quantity of birds seized is usually small, although they do add up, making it an important process.

2. "A permanent program of inspections, which covers visits to markets, street markets, pet shops, zoos, exhibition centers, circuses, etc."

Comment – Some of the largest seizures by Profepa have come from markets and street markets.

3. "Special operations at critical points of sale and transport."

Comment – From these operations big shipments of birds are usually seized.

4. “Inspection of breeding centers and capture sites (UMAs)”

Comment – Few if any seizures result from these inspections.

5. “Inspection in ports, airports and borders”

Comment – A small number of exotic species seizures result from these inspections, but most of the exotic seizures occur elsewhere.

Neither Profepa nor any other agency actually monitors the activities of trappers (see Chap. 3 - Parrot Trappers). Profepa does not have a systematic program of UMA inspections, usually a theme (circuses, zoos, breeding centers, etc) or group of species (bighorn, singing birds, parrots, etc.) is selected on an annual basis and UMAs that fall into these categories are visited. Also UMAs are visited when an irregularity or illegality is denounced (Bernal, per. com.). Semarnat makes annual random visits to UMAs, but with 6,446 UMAs in the country (in 2005) they only did 54 visits to UMAs from 2001-2005, of which only three are related to parrots in that they are UMAs for breeding or exhibition (Semarnat 2006 IFAI folio 0001600040406). So there is no systematic annual inspection of UMAs that trap parrots.

It is not currently feasible for Profepa to thoroughly check that trappers do not trap outside UMAs, only trap authorized species and take only their allocated quotas, and further that they do not enter forbidden areas such as natural reserves, private and community properties without authorization.

Most of the small amount of inspection work done by Profepa focuses just on the last stage of the capture and trade process, the point of sale. This unfortunately is after extensive mortality, typically higher than 50%, has occurred in the earlier stages of the trade (see Chap. 10 – Mortality). This is due to lack of personnel and budget to do otherwise. For example, once the parrots enter huge Mexico City, with its 20 million people, they are dispersed into secret warehouses, houses and markets. Although Profepa knows about some of these places like the Sonora Market, they cannot just walk in and start seizing parrots. The markets have narrow aisles blocked by cages and customers that can become real traps for inspectors, who can and have been mobbed. Bird sellers are organized and can function as mobs and become violent against intrusions into their territory.

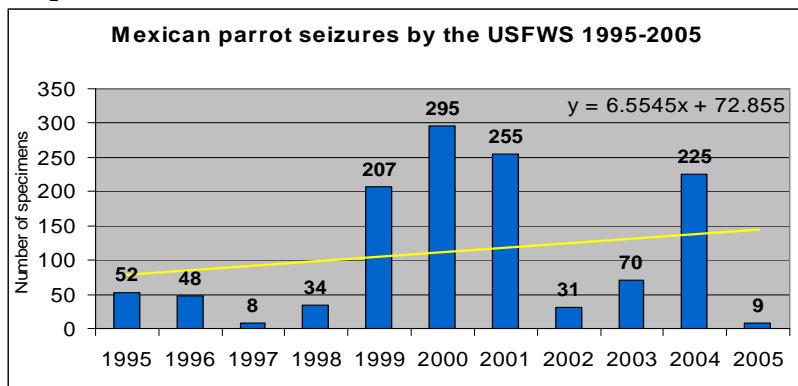
To do an operation in these places Profepa needs to be accompanied by heavily armed policemen for their protection. But, organizing an operation that involves two different agencies is always problematic and birders unions always have insiders that can tip them off of any raid. For example during the biggest raid Profepa has ever done in the Sonora Market in 1995 (the first ever done in the market by any wildlife agency), the bird sellers were tipped off and more than half of the specimens were hidden before Profepa arrived (Cantu et al 1996a).

USA Seizures

The information on USA seizures comes from the LEMIS (Law Enforcement Management Information System) database of the USFWS Office of Law Enforcement. Just as with Profepa's information, the overall data quality has tended to be poor:

“...FWS officials told us that it [LEMIS report information] is often inaccurate and incomplete...” (GAO 1994). Like with Profepa's data, depending on the year one uses for analysis, the seizure trend varies. When using the data from 1992-2005 the trend is a decreasing curve but from 1995-2005 the trend changes toward an increasing curve (Graph 9.5).

Graph 9.5



Source: USFWS LEMIS reports, 1995-2005

As with the Profepa's graphs on total seizures, these likely mostly represent USFWS's effort or effectiveness levels. And as with Profepa's graphs on total seizures they do not represent observable significant trends towards an increase or decrease in smuggling, as discussed more below. The huge drop-off in 2002 likely represents the effect of increased USA focus on terrorism plus the effect of major border agency reorganization in response to the events of September 11, 2001.

In 1994 the US General Accounting Office reported that: “...wildlife inspectors are detecting only about 1 to 3 percent of the illegal wildlife shipments carried by passengers” (GAO 1994). If we recall from above that the average seizure efficiency of Profepa is about 2%, then if we assume that annual parrot seizures in the USA shown in Graph 9.5 are in this range of 1% to 3% of the actual trade volume, we then can make very rough estimates of the past annual smuggling levels (Table 9.10).

Table 9.10**Estimated past annual smuggling of Mexican parrots into the USA***

Year	Assuming low range of 1% of smuggled parrot detection	Assuming high range of 3% of smuggled parrot detection
1995	5200	1733
1996	4800	1600
1997	800	266
1998	3400	1133
1999	20700	6900
2000	19500	6500
2001	15500	5166
2002	3100	1033
2003	7000	2333
2004	22500	7500
2005	900	300
Average	9,400	3,133

*These are rough estimates.

Using these high and low ranges of 9,400 to 3,133 parrots smuggled annually between 1995 to 2005, and our low range annual capture estimate of 65,000 parrots, we then can conservatively, although admittedly roughly, estimate the percentage of wild-caught Mexican parrots being smuggled (Table 9.11). The result is that between about 4% to 14% of the parrots captured in Mexico are smuggled into the USA, or inversely, about 86% to 96% of the parrots captured in Mexico stay in Mexico. These rough estimates include the mortality through the capture-sale process (see Chap. 10 - Mortality)

Table 9.11**Percentage of Mexican wild-captured parrots smuggled into the USA, 1995-2005***

Assumed average annual number of Mexican parrots smuggled into USA	Percentage smuggled assuming low range estimate of 65,000 wild parrots captured annually
High range: 9,400	14%
Low range: 3,133	4%

*These are rough estimates.

We cannot know the actual percentage of Mexican parrots that illegally enter the USA, but we can be confident that the majority of the parrots captured in Mexico stay in Mexico. But, is smuggling increasing, decreasing, or stable? We cannot say from the annual total seizure numbers because we have already established that they likely mainly correlate with the level of enforcement effort. And using individual species seizure data cannot tell us either because each individual species trend is distinct; some are stable, others decreasing, and others increasing. But we can examine other data to look for trends.

In the 1980s and early 1990s it was estimated that between 25,000 to 150,000 birds, mostly parrots from the neotropics, were being smuggled into the USA every year (see

Chap. 7 - Illegal Trade). A big part of these estimates were Mexican parrots. Fifteen years after these estimates were made, some parrot populations have decreased dramatically (see Chap. 2 - Mexican Parrot Species), national and international regulations have become stricter, and enforcement agencies have grown and improved their efficiency. All of these factors put together argue that a decrease in smuggling has occurred.

Furthermore, current Mexican parrot populations cannot sustain a 25,000 to 150,000 extraction rate for smuggling into the USA, in view of the annual total extraction rate of 65,000-78,500 specimens estimated in this report. Several species likely would have been totally extirpated from the wild in the past few years if the past high estimated smuggling rates were still occurring.

In 2006 we interviewed three experienced special agents of the USFWS Law Enforcement division, stationed in Texas, New Mexico and California, seeking their opinions on parrot smuggling trends. All three stated they believed parrot smuggling had decreased at least 50% to 60% in the last 5 to 6 years with a more pronounced decrease in the last 2 to 4 years (Rodriguez, Brooks, Karabanoff 2006, per. com.). They stated this could be due to several factors such as the increase in border security and patrolling since September 11 (although one said the decrease started earlier) or the increase in fines and penalties of up to \$750,000 dollars and 20 years in prison; one was concerned that the decrease meant that Mexican parrot populations were collapsing.

Species seized in the USA

Of the top ten Mexican species seized in the USA we find 5 endangered species, two threatened and one in special protection (Table 9.12). Thousands of parrots from these species are still being smuggled into the USA, and for some, that market is still a main reason for their capture, for example, the yellow naped parrot (*Amazona auropalliata*) and the yellow headed parrot (*Amazona oratrix*), both of which are endangered.

Most of the yellow naped parrots captured in Mexico and Central America just pass north through Mexico. It is uncommon to see this species sold in Mexico and it is one of the least-seized species in the country. Thus, although the overall number of specimens smuggled into the USA may be small compared to what stays in Mexico, the reality is that smuggling's impact may be profound for some species.

Table 9.12

USA seizures by species, 1992-2005

Species	TOTAL	Percentage
<i>Amazona oratrix</i>	546	34.00 %
<i>Aratinga canicularis</i>	486	30.28
<i>Amazona finschi</i>	173	10.77
<i>Amazona autumnalis</i>	110	6.85
<i>Amazona albifrons</i>	100	6.23
<i>Amazona viridigenalis</i>	59	3.67
<i>Amazona auropalliata</i>	37	2.30
<i>Rhynchopsitta pachyryncha</i>	26	1.61

<i>Ara militaris</i>	16	0.99
<i>Aratinga holochlora</i>	13	0.80
<i>Pionus senilis</i>	6	0.37
<i>Amazona farinosa</i>	5	0.31
<i>Ara macao</i>	4	0.24
<i>Forpus cyanopygius</i>	4	0.24
<i>Aratinga nana</i>	2	0.12
<i>Brotogeris jugularis</i>	2	0.12
<i>Bolborhynchus lineola</i>	2	0.12
<i>Pionopsitta haematocephala</i>	2	0.12
<i>Pionus spp</i>	2	0.12
<i>Pionopsitta spp</i>	2	0.12
<i>Forpus spp</i>	2	0.12
<i>Aratinga spp</i>	2	0.12
“Parrot”	2	0.12
<i>Rhynchopsitta terrisi</i>	1	0.06
<i>Rhynchopsitta spp</i>	1	0.06
TOTAL	1605	100

Source: USFWS LEMIS reports, 1992-2005

Although in general the volume of smuggled parrots is decreasing there are some species whose individual trend is on the rise (see Appendices for all species graphs). Specifically, smuggling of the orange fronted parakeet (*Aratinga canicularis*), white fronted parrot (*Amazona albifrons*), yellow cheeked parrot (*Amazona autumnalis*), lilac crowned parrot (*Amazona finschi*) and red crowned parrot (*Amazona viridigenalis*) appear to be increasing. Information from USFWS special agents on the border corroborates that these are some of the most frequently seized species (Rodriguez, Brooks, Karabanoff 2006 per. com.). The first three species are the most widely trafficked in Mexico and the red crowned parrot’s natural distribution in northeast Mexico is a short distance from the border, making it easy to transport it there.

In sum, information from the seizures in Mexico and USA demonstrate the difficulty law enforcement agencies have in stopping illegal trade. Their seizure effectiveness is very low. Other factors besides law enforcement are the primary drivers of trends in this illegal activity, such as supply and demand, population declines, captive breeding, exotic species imports, comprehensive domestic and international bans, and so on.

Chapter 10 - Mortality

In 1991 Iñigo and Ramos estimated mortality rates for nestling psittacines at various stages of the legal trade within Mexico. They estimated 10% mortality during nestling capture, 30% mortality during confinement by trappers, 20% during transportation en route for export, 10% during confinement by exporter and a further 10% during transportation and quarantine. In total, about 80% mortality of nestlings occurred before reaching a pet store (Iñigo and Ramos 1991). Similarly, Enkerlin (2000) estimated that about 66% parrots die before reaching a home to become a pet.

We interviewed trappers and Profepa inspectors to estimate mortality of the illegal trade within Mexico. We found very similar results as the above researchers did for each stage, estimating a 77% cumulative mortality rate before parrots reach the customers (Table 10.1). It has been assumed that mortality in the illegal trade must be higher than in the legal trade because of the steps needed to hide the birds from authorities (Brookland et al 1985 quoted in Iñigo and Ramos 1991; Gobbi et al 1996). Our estimate does not necessarily contradict this assumption. Iñigo and Ramos' estimate of 80% mortality is based solely on nestlings, which have a higher mortality than adults, while our estimate combines the figures for nestlings and adults.

Table 10.1

Typical mortality of 100 wild-caught parrots during stages of illegal trade

Stage	Number of parrots at start of each stage	Average mortality	Parrots surviving stage
Captured	100	7% ^a	93
Confinement	93	25% ^b	69
Transportation	69	31% ^c	47
Distribution and sale	47	50% ^d	23

^a and ^b from trappers data

^c trappers, Profepa mortality averages during seizures

^d Markets, street salesmen and Cantu et al 1996a

Trappers informed us that the method of capture determines mortality during this stage. When using cage-like traps the resulting death rate is low, at most about 2% from stress (trappers Nayarit). When they use nets, mortality can reach 10% depending on the number of parrots captured and the time it takes them to release the birds (trappers Sinaloa, Jalisco and Nayarit). Parrots can strangle in the net and many die from stress.

During confinement by the trappers mortality increases to an average of 25% (trappers Sinaloa, Jalisco and Nayarit) and can reach as high as 60%, especially with nestlings (trappers Quintana Roo). This is due to injuries, inadequate feed quantity and quality, sickness, specimens refusing to eat, stress, overcrowding, bad conditions of temperature and humidity, etc. Trappers try to take care of the birds because each one represents

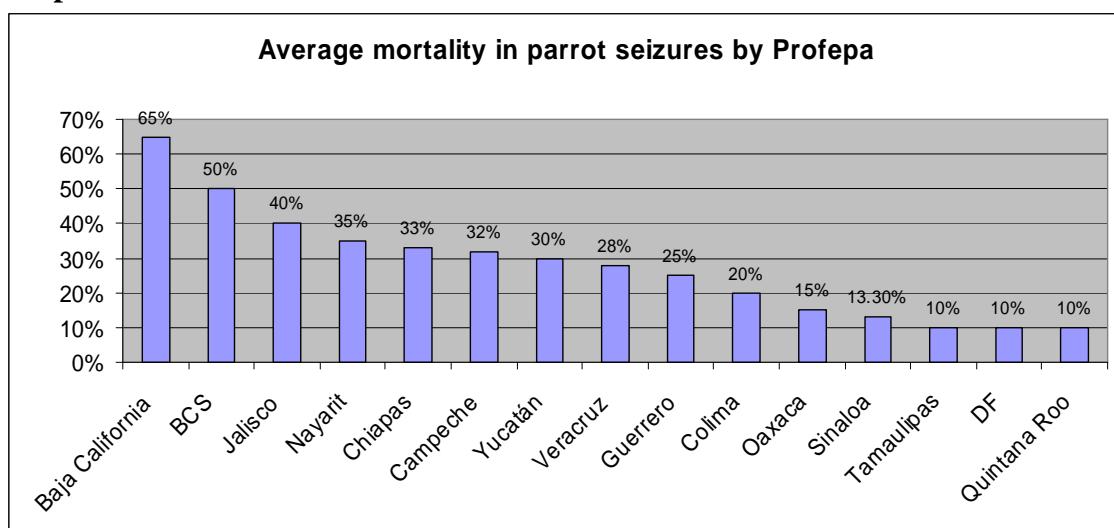
income, but still mortality is high. Deaths are most frequent when trappers are not professionals, trapping only occasionally or opportunistically. These trappers lack the knowledge to take care of their catch.

Transportation is one of the highest causes of mortality with a 31% average. Parrots have to be transported across the country without being detected by authorities and during the trip they are rarely fed or taken care off. Transporters rely on volume to make a profit so they can withstand high mortalities. Sometimes deaths can reach 100% during transport. One trapper said they used a drug to calm the parrots so they would not make noise; once in 2004 a large shipment of 600 parrots all died from an overdose (former Profepa inspector of Oaxaca).

Profepa inspectors revealed that when they seize shipments of parrots many are already dead or dying due to stress, rough handling, sickness, crushing, asphyxiation, temperature shock, dehydration, diarrhea, etc. The conditions of transport are appalling; 50 parrots will be stuffed into an 18 in. x 12 in. x 6 in. wooden box where they can barely move, much less seek food and water (Profepa Campeche). They are carried in small metal or wood cages, cardboard boxes, plastic buckets and bags hidden away in strange places in all kinds of vehicles – cars, trucks, motorcycles, etc. (Profepa 2002 and inspectors). Nestlings and juveniles are most prone to die then; some estimated a 70% - 90% mortality of nestlings (Profepa Baja California and Jalisco).

The further away the parrots have to be transported the worse their survival. Thus, the highest mortality occurs in the Baja California Peninsula (Graph 10.1). Sometimes shipments don't have to travel that far to have a high mortality; one shipment of 300 Aztec parakeets captured in the state of Campeche and seized on the border of Campeche and Tabasco had a 60% mortality rate because of terrible overcrowding (Profepa Campeche).

Graph 10.1



Source: Profepa inspectors

Nearly 70% of the captured parrots reach the stage of distribution and sale which accounts for the highest average mortality rate of 50%. This is not surprising as the parrots have already suffered the hardships of capture, confinement and transportation and are undernourished, sick, injured or stressed. During this stage, they are confined in houses, warehouses and markets with many other species of birds and other animals. They are distributed to different markets, street markets and street salesmen. In some cases, they just reach a national distribution center like Mexico City, where they will be transported again to other cities or to the USA border.

In this stage they may linger on awaiting sale in unhealthy conditions, poor care and feeding while they are carried from the place of confinement to the place for sale (permanent market or temporary street market) or even carried around day after day by street salesmen in cloth or paper bags or small wooden cages. These parrots never receive any veterinary care. During one visit to the Sonora Market in 2006, out of 37 wild parrots from 6 different species being offered for sale, 15 showed evident signs of sickness (Cantu, per. obs.). Parrots that reach this stage can be compared to those seized specimens by Profepa which are taken to rescue centers. The mortality rate of parrots in rescue centers from 1995-2005 was almost 45% (see Chap. 11 - Rescue Centers).

Taking into account our previous illegal capture estimate of 65,000 to 78,500 per year and our estimate of a 77% mortality before parrots reach a customer, **the overall mortality of parrots in the illegal trade is in the range of 50,050 to 60,445 annually. This is obviously terribly inhumane and wasteful.**

(A training video for Profepa inspectors on how to handle and feed parrots to decrease mortality has been made by Teyeliz and Defenders of Wildlife. For more information on this video: teyeliz@terra.com.mx)

Chapter 11- Rescue Centers

The Environment Ministry has been operating wildlife rescue centers since 1988 when the first one was created in Mexico City. About 1991, Mexico received financial aid from the World Bank to create six centers. These were built in Jalisco, Tabasco, Yucatan, State of Mexico, Tamaulipas and Chiapas and were called Centers of Rescue and Rehabilitation of Wildlife (Cereres) (Benitez et al 1999). Of these six centers only four are still in operation, in Jalisco, Tabasco (status of this one is uncertain), State of Mexico and Tamaulipas, and are called Integral Centers for Wildlife (CIVS). They receive wildlife seized by Profepa, which then awaits final disposition. That is, the animals can be redirected to other government centers of wildlife for investigation or breeding, to UMA's for breeding, to zoos or circuses for exhibition, etc. They can be liberated back to the wild, they can die in the rescue center, or can be returned to the suspected infractor if he or she demonstrates legality of ownership and legal source of the animals (Table 11.1).

In actuality very few specimens are ever returned to bird trappers, transporters or salesmen. Most of the time these are abandoned by the suspected traffickers and only a few pet owners will seek their parrots returned. One estimate is that up to 47% of the parrots will die in these centers and some former workers say that for some shipments up to 100% die (Profepa Jalisco). An estimated 27% will be liberated and 17% will be redirected.

As with other government data, the rescue center data is incomplete and contradictory. For example, in 2002 they have 24 parrots total admitted but 160 dying. The total of parrots being redirected, liberated, dying or returned does not match the total of admitted parrots, leaving 150 birds unaccounted for.

Table 11.1

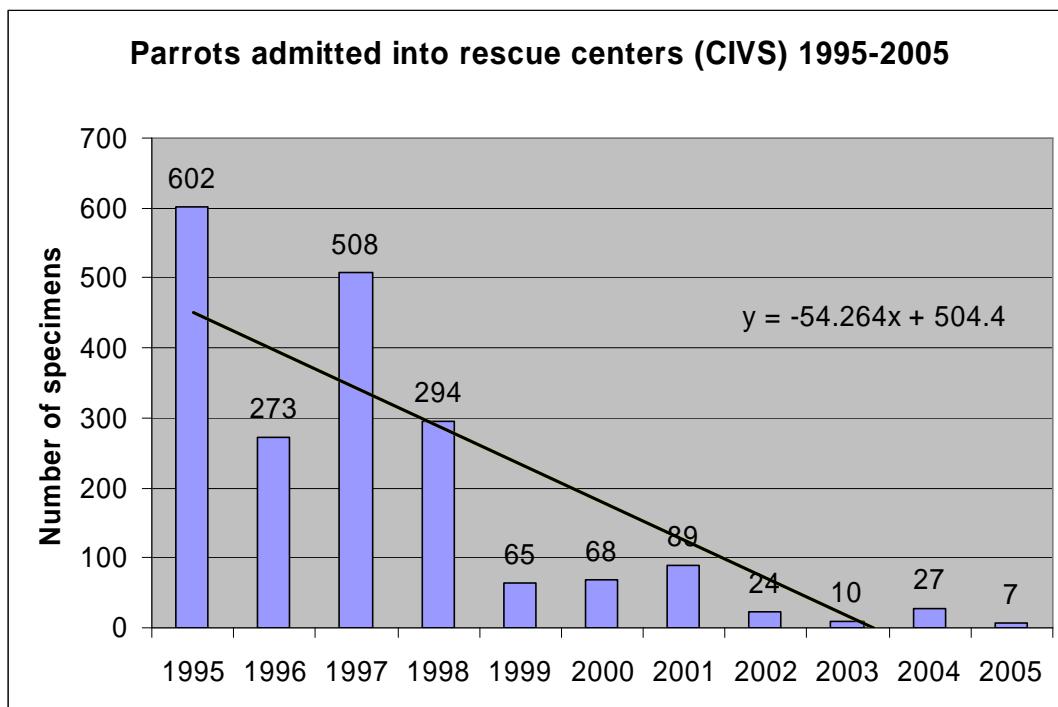
Quantity of parrots admitted into government rescue centers, 1995-2005

Year	Admitted	Redirected	Liberated	Mortality (returned)	Total of Redirected, Liberated, Mortality
1995	602	45	296	187	528
1996	273	47	0	293	340
1997	508	105	193	194	492
1998	294	31	17	42	90
1999	65	22	17	14	53
2000	68	33	8	13	54
2001	89	46	3	14	63
2002	24	0	0	160	160
2003	10	4	0	4	8
2004	27	10	0	17	27
2005	7	0	0	2	2
TOTAL	1,967	343	534	940	1,817

Source: Semarnat 2005 (g)

The number of parrots admitted or sent by Profepa to the rescue centers has decreased dramatically in the past 7 years (Graph 11.1). This decrease does not correspond with the numbers of parrot seizures which have remained fairly stable since 1997 (see Chap. 9 - Seizures, Graph 9.2).

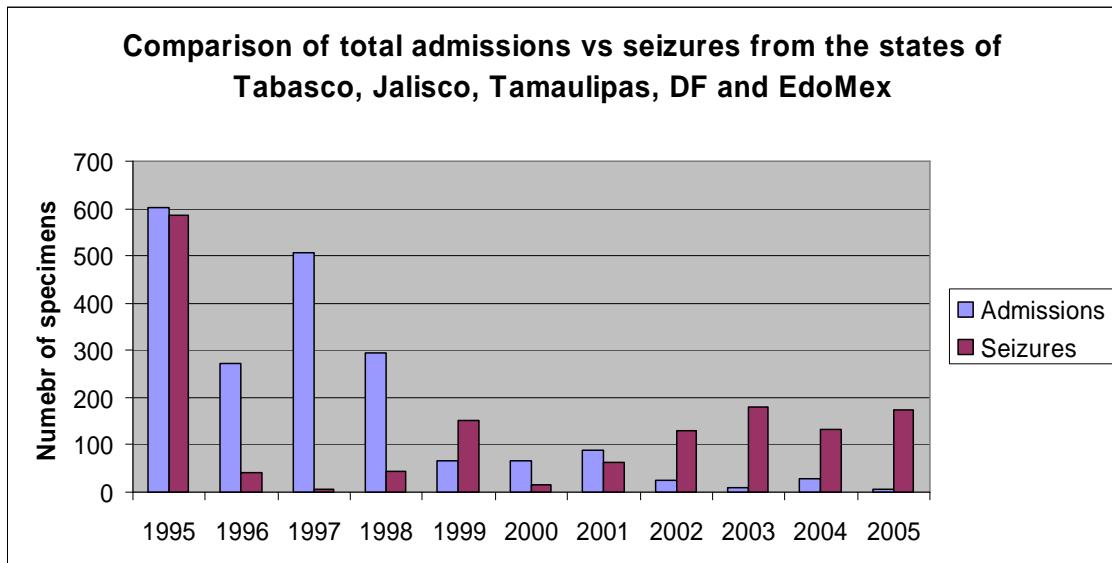
Graph 11.1



Source: Semarnat 2005 (g)

While the number of parrot admissions has decreased the number of seizures for the states that supply most of the parrots to the rescue centers has increased (Graph 11.2).

Graph 11.2



Source: Semarnat 2005 (g)

We asked Profepa inspectors why they were not sending many seized parrots to the rescue centers. Some said the rescue centers were too far away and they did not have the means to transport birds there. Some mentioned that because seized parrots had to undergo the whole administrative and legal process to determine whether to permanently confiscate a bird or return it to its owner, the inspectors had to keep them nearby. Others mentioned that the rescue centers were mostly full or that bureaucratic problems always arose, while some said they lacked trust in the centers' abilities to keep animals alive. Some referred to the centers as "muereres" - or death places - a play on the original name "Cereres".

These rescue centers have had a long history of problems which include:

1. "Lack of, insufficient or late funding;"
2. "Use of funding for other purposes"
3. "Incomplete or reduced installations"
4. "Lack of or obsolete equipment"
5. "Unclear lines of work for particular species," and
6. "Lack of training or capacity of center personnel" (Benitez et al 1999).

So what is happening to the seized, but unaccounted for, parrots? Profepa inspectors informed us that most of them are taken to local zoos and UMAs, some of them are even kept in Profepa's offices for some time and others are kept by inspectors themselves. In some dire cases, the parrots are given back in deposit to the infractor! It appears likely that in other cases the seized birds are simply given away or they die.

Chapter 12 - Captive Breeding

The Environment Ministry has a registry of 144 psittacid captive breeding centers (Semarnat 2006 h). Most are not true captive breeding centers but are private collections or exhibition centers. Any bird collection has to be registered and those that have parrots are registered as parrot captive breeding centers. Of the 144 centers, 49 carry only Mexican psittacines while 6 carry only exotics and 89 carry both. Of all breeding centers, a maximum of 14 received authorizations to sell parrot specimens from 2002 to 2005 (Semarnat 2005b, d; 2006 h). The number of parrots authorized to be sold from these centers from 2002 to 2005 totaled 907; an average of 226 specimens per year (Table 12.1 and Graph 12.1). The top three species are the two macaws and the yellow headed parrot representing 53.5% of the total, which are among the most expensive Mexican parrots. It is interesting that among the top ten species are the Aztec parakeet and green parakeet. These smaller species are very common in the illegal trade so the price competition would be extreme. The prices for legal, captive bred species are generally six times higher than in the illegal trade (see Chap. 14 - Prices).

Table 12.1

Number of captive bred parrots authorized for sale, 2002-2005

Species	Number	Percent of total
<i>Ara militaris</i>	232	25.50%
<i>Ara macao</i>	172	18.96
<i>Amazona oratrix</i>	82	9.04
<i>Amazona viridigenalis</i>	55	6.06
<i>Aratinga nana aztec</i>	52	5.73
<i>Amazona xantholora</i>	52	5.73
<i>Pionus senilis</i>	42	4.63
<i>Aratinga holochlora</i>	35	3.85
<i>Amazona autumnalis</i>	35	3.85
<i>Aratinga canicularis</i>	20	2.2
<i>Amazona albifrons</i>	19	2.09
<i>A. militaris x A. Macao</i>	18	1.98
<i>Amazona finschi</i>	16	1.76
<i>R. pachyrhyncha</i>	12	1.32
<i>R. terrisi</i>	12	1.32
<i>Amazona auropalliata</i>	11	1.21
<i>Ch. Unicolor</i>	10	1.1
<i>Amazona farinosa</i>	9	0.99
<i>Ara ararauna</i>	9	0.99
<i>A. o. Tresmariae</i>	4	0.44
<i>Ara nobilis</i>	3	0.33
<i>Aratinga brevipes</i>	3	0.33
<i>Forpus cyanopygius</i>	2	0.22
<i>Ara chloroptera</i>	1	0.11
<i>Amazona ochrocephala</i>	1	0.11
Total	907	100%

Source: Semarnat 2005b, d; 2006 h

Authorizations for sales per year show that for some species, e.g., the military macaw (*Ara militaris*), the trend has been towards an increase from 2002-2005 (Table 12.2). But, several others decreased.

Table 12.2

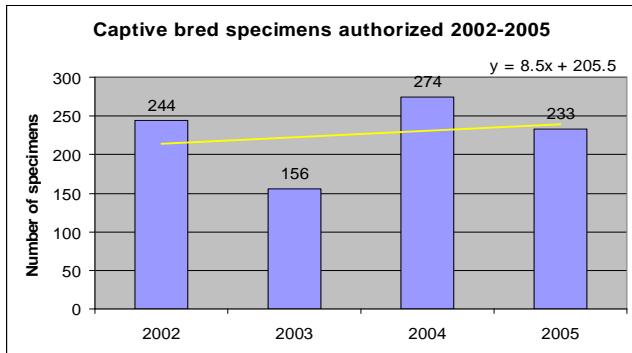
Captive bred species authorized for sale per year, 2002-2005

Species	2002	2003	2004	2005	Total
<i>Ara militaris</i>	34	27	29	142	232
<i>Ara macao</i>	60	21	52	39	172
<i>Amazona oratrix</i>	21	19	40	2	82
<i>Amazona viridigenalis</i>	24	14	17		55
<i>Aratinga nana</i>	18		34		52
<i>Amazona xantholora</i>	14	15	17	6	52
<i>Pionus senilis</i>	4	11	27		42
<i>Aratinga holochlora</i>	18	3	12	2	35
<i>Amazona autumnalis</i>	10	12	11	2	35
<i>Aratinga canicularis</i>	7		7	6	20
<i>Amazona albifrons</i>	15	3	1		19
<i>Amazona finschi</i>	4	8	2	2	16
<i>Rynchopsitta pachyrhyncha</i>	4	5	2	1	12
<i>Rynchopsitta terrisi</i>	1	4	7		12
<i>Amazona auropalliata</i>	2	1	3	5	11
<i>Amazona farinosa</i>				9	9
<i>Aratinga brevipes</i>				3	3
<i>Forpus cyanopygius</i>				2	2

Source: Semarnat 2005b, d; 2006 h

Captive breeding production is mostly stable with a slight increase (Graph 12.1). Nevertheless, the total authorized for sale per year is very small compared to the tens of thousands of parrots captured annually or to the thousands imported annually. Looking at several species and the totals per year there appears to be a good year followed by a not-so-good year and back to a good a year and so on, raising doubts as to the feasibility of steady growth in captive breeding..

Graph 12.1



Source: Semarnat 2005b, d; 2006 h

Unlike the USA where prices have come down due to high supply from captive breeding centers, in Mexico several factors are lined up against this happening in the near future:

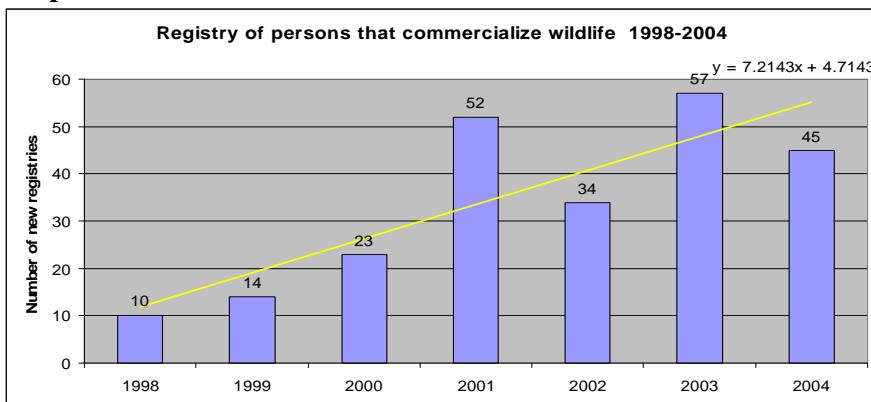
- Although Mexico is going through a stabilization of the economy where inflation has been under control since 2001, there is always the fear that any given year an economic crisis can occur (as has happened several times in the recent past), tumbling the economy back into high inflation and making the sizeable investments needed to breed and raise parrots uneconomical.
- Unlike the USA, Mexico has 22 native species of wild parrots, many of which are being captured continuously, although illegally. These are priced very low in comparison to captive bred specimens.
- Many native species are not important or economically interesting for captive breeding centers, and breeding them competitively would need to involve high volumes, which may not be feasible.
- There is an increase in imports of a large number of exotic psittacines which are more and more present in captive breeding centers. These can be more colorful and marketable than many Mexican species and some can be easily bred in high volumes to compete with the cheapest Mexican species.
- Captive breeding centers are business oriented not conservation oriented, that is, they survive by making a profit. They will breed the species that are most in demand, are easier to breed and can be placed in the domestic or international markets. They will not make a concerted effort on behalf of a conservation goal to produce high volumes of endangered or threatened Mexican species, which can be hard to breed and which may or may not be sellable at prices within reach of many Mexican purchasers.
- Finally, government authorities have not been able to ensure control of the illegal trade so breeders face uneven price competition that puts their business at risk.

The small number of parrot breeding centers, the concentrated effort in a few species, the small number of birds produced a year and the high prices indicate that captive breeding of Mexican species is not a short or medium term option to substitute for legal or illegal capture. The niches for captive bred parrots are the small segment of Mexican society that can afford expensive birds or the export markets in which they may be competitive.

Chapter 13 - Pet Shops, Internet Sales, and Shows

Although it is impossible to know how many pet shops exist in Mexico, the Environment Ministry does have a registry of those who commercialize wildlife (Graph 13.1). The number of new registrations per year has been increasing.

Graph 13.1



Source: Semarnat 2006 h

On the other hand, the number of known importers of wild birds declined from 30 in 2000 to 17 in 2005 (Semarnat 2006 e). Thus, the number of people selling wild birds increased, while the number importing wild birds decreased, and the overall number of imported wild birds increased (see Chap. 15 - Imports). In short, fewer people are importing more wild birds than before and more people are selling them. This translates into more pet shops in Mexico.

In fact, the first ever chain of pet shops was created some years ago called “+kota” (pet) that now has 40 stores in Mexico City and 22 in the rest of the country, with new ones opening every month (www.maskota.com.mx). In 1994 to 1996 our parrot trade survey found very few pet shops in Mexico City and fewer still that sold wild parrots or exotic ones. Only 14 pet shops carried Mexican parrots in Mexico City (Cantú, et al. 1996b). Ten years later we have at least 40 pet shops just from one chain, all of which sell both imported exotic and captive bred Mexican parrots, plus many more that appear to be part of a booming business of selling exotic species. Now there must be nearly 100 pet shops in Mexico City.

More people are buying non-Mexican parrots even though some of the species are very expensive. The pet shops have solved that problem by offering monthly payment plans and even guaranteeing a replacement if the bird dies. Some department stores offer parrots at six months to one year without interest. There is no registry of the number of pet sellers inside markets or in temporary street markets. But, it has become common to find exotic species for sale in them, especially the smaller, cheaper species (Sánchez, per. obs.).

Internet sales

Buying a parrot is a long term investment and some people realize after a few months they do not want the bird anymore and try to re-sell it. The easiest way to do it is by placing an ad in a newspaper or on the internet. There are several sites where one can put ads, like “segundamano.com” or “buscape.com,” and we have found many parrots for sale. Although one can find parrots on EBay there is the problem of import and export of a CITES listed species. So in Mexico there is the possibility of using another auction site called “Mercadolibre.com”.

The problem with selling and buying through the internet is that not only do customers have no idea whether the parrot is legal, but they do not get the information that a permit is needed to transport wildlife inside Mexico. Most of the time they do not even get a bill of sale much less any document that certifies the bird is from a legal source.

Some sellers advertise they can ship a parrot anywhere in Mexico in one day and some even say they can export a parrot to another country in one day. Although selling parrots through the internet in Mexico is in its infancy, it could become a serious illegal wildlife trafficking problem.

Shows

Fifteen traveling shows with parrots are registered with the Environment Ministry. Of these, 11 have Mexican and exotic species of parrots, two have only Mexican species and two carry only exotics. Ten established shows carry parrots; four have Mexican and exotic species, four have only Mexican species and two have only exotic parrot species. Finally, three traveling circuses have Mexican parrots: Circo Del Oso Ruso, and Circo De Los Oscares, Circo Ibarra II. All three have the same two species, the yellow headed and the yellow cheeked parrot (Semarnat 2006 e).

Thus, the total number of shows that carry parrots and are registered with the Environment Ministry is 28. Many smaller shows also exist that are not registered. Although the number of shows with parrots is not large, the number of people that visit them annually is very large. Many show visitors want to buy a parrot after they see their intelligence and how many tricks they can perform.

To review, ten years ago there were few pet shops that carried wild parrots, much less exotic species. Markets usually carried wild species and very few exotic species. Shows with parrots were few also and internet sales were just starting. Now, it is very easy to see parrots nationwide in malls, markets, street markets, pet shops, animal shows and the internet, and many of these parrots are exotic species. In short, the market is much bigger and broader than it used to be. Further, it appears clear that as Mexico opened up to world trade through NAFTA in the middle 1990s and many other free trade agreements after that, a globalized parrot trade also has become part of Mexico's wildlife commerce.

Chapter 14 - Prices of Mexican Parrots

Price is one of the most important features of the parrot trade. The price can indicate whether a specimen is legal or illegal, imported or bred in captivity, male or female, nestling, juvenile or adult, and it can signal trade trends. Price also has been invoked in the arguments for and against conservation policies. For example, some aviculturists and supporters of national and international trade have said that trade bans only foster black markets in the species, and thus price increases in addition to illegal trade (Gobbi et al, 1996). Even wildlife trade experts have in the past stated the conclusion that specimens of species protected by law become more expensive (USFWS special agent Ramos cited in Nat. Geog. 1994, Nilsson 1981). However, we found this not to be the case for the illegal trade in Mexican parrots over the last 10 years.

Prices in the USA

We searched the internet and trade reports for prices of Mexican parrot species in the USA. Using information from 1996-2004, we were able to compare it with prices in 2006. We found that in the last ten years prices have generally decreased for many species (Table 14.1).

Table 14.1

Average USA prices of parrots, 1996-2006

Year	1996-2004	n	2006	n	Behaviour
Yellow naped amazon (<i>Amazona auropalliata</i>)	\$1349 (1996*)	14	\$988	11	Decreased
Yellow headed amazon (<i>Amazona oratrix</i>)	\$1368 (1996*)	11	\$957	16	Decreased
White fronted amazon (<i>Amazona albifrons</i>)	\$333 (2004*)	3	\$300	2	Decreased
Red crowned amazon (<i>Amazona viridigenalis</i>)	\$650 (1997*)	2	\$605	4	Decreased
Red lored amazon (<i>Amazona autumnalis</i>)	\$600 (1997*)	2	\$592	6	Decreased
Lilac crowned amazon (<i>Amazona finschi</i>)	\$450 (2003*)	1	\$575	5	Increased

Source: n = number of advertisements; see Appendix for list of internet sites consulted

* year

This trend is not recent; even in the 1980s prices decreased as some species were bred in large enough numbers to create a market glut (Clubb, 1992). For example, captive bred blue and yellow macaws were sold for around \$1,800 dollars in the early 1980s and for \$650 to \$900 in the early '90s (Clubb, 1992). The same trend is happening in 2006 as warned by one parrot organization in the internet to potential breeders: "One problem you might not be aware of is presently in many parts of the USA there is a glut of certain species on the market and you might not sell the excess babies. Prices of some

species have dropped considerably in the past few years. Blue-fronted babies used to sell for about \$1200.00 five years ago. Now you can buy them for much less than that figure. The supply has exceeded the demand." (2006, www.amazonasociety.org). On one pet bird breeder list on the internet we found over 530 breeders that carried one or several Mexican parrot species (Table 14.2). By far the most bred are the yellow headed amazon, scarlet macaw, yellow naped amazon and military macaw, which also are the four most expensive Mexican species.

Table 14.2

USA bird breeders with Mexican parrots listed on the internet

Number of Breeders *	Species	Average price 2006	n
146	Yellow headed amazon (<i>Amazona oratrix</i>)	\$957	16
104	Scarlet macaw (<i>Ara macao</i>)	\$1400	10
98	Yellow naped amazon (<i>Amazona auropalliata</i>)	\$988	11
52	Military macaw (<i>Ara militaris</i>)	\$850	4
36	White fronted amazon (<i>Amazona albifrons</i>)	\$300	2
36	Lilac crowned amazon (<i>Amazona finschi</i>)	\$575	5
18	White capped parrot (<i>Pionus senilis</i>)	\$340	6
13	Red crowned amazon (<i>Amazona viridigenalis</i>)	\$605	4
12	Red lored amazon (<i>Amazona autumnalis</i>)	\$592	6
11	Orange fronted parakeet (<i>Aratinga canicularis</i>)	-	-
4	Mealy amazon (<i>Amazona farinosa</i>)	\$730	2
4	Green parakeet (<i>Aratinga holochlora</i>)	-	-
3	Blue rumped parrotlet (<i>Forpus cyanopygius</i>)	\$200	1
2	Barred parakeet (<i>Bolborhynchus lineola</i>)	-	-

Source: * www.birdsnways.com/birds/breeders.htm

n = number of advertisements; see Appendix for list of internet sites consulted

Breeding parrots for profit is difficult and the final sales price depends on many factors. Cost of maintenance is most critical. Back in 1989, it was estimated from the data of two breeders that the cost to keep one parrot in captivity was from \$0.80 to \$1.50 per bird per day, which included feed, labor, insurance, advertising, veterinary care, etc., totaling around \$350 dollars per year, in 1989 dollars (Clubb 1992). In 2006, the estimated cost to raise one blue and gold macaw from baby to weaned was \$1,436.00 in time and costs (www.avianelites.com/index.php?page_id=33 2006).

The sales price is not only related to the cost of breeding. It can differ with gender; males tend to be cheaper than females because there are usually more males available (2006 www.upatsix.com/faq/amazon.htm). Further, males tend to be more aggressive and hard to manage during breeding season, while females are valued higher for producing the eggs (Table 14.3).

Table 14.3**USA prices by gender**

Species/gender	Male	Female
Yellow headed Amazon (<i>Amazona oratrix</i>)	\$885	\$1385
Red crowned Amazon (<i>Amazona viridigenalis</i>)	\$385	\$785
Yellow naped Amazon (<i>Amazona auropalliata</i>)	\$885	\$1385

Source: www.foxfeatherfarm.com

Prices differ also with age, parrots become more and more expensive as they grow from hatchlings to weaned chicks. The price increase with age is related to cost of maintenance and survivability. Further, for breeders in search of a reproductive pair, the price will differ if the pair is just bonded or if it is proven they have reproduced, thus proven pairs will cost more. Also, wild pairs will cost much less than captive bred pairs. The price difference between wild caught and captive bred is huge (Table 14.4).

Table 14.4**USA prices of wild and captive bred pairs**

Species	Bonded (wild)	Proven (wild)	Proven (captive bred)
Yellow headed amazon (<i>Amazona oratrix</i>)	\$750	\$900	\$1500-1800
Yellow naped amazon (<i>Amazona auropalliata</i>)	\$750	\$900	\$1500
Red lored amazon (<i>Amazona autumnalis</i>)	\$400	\$550	\$1000
Lilac crowned amazon (<i>Amazona finschi</i>)	\$500	\$600	\$1200
Military macaw (<i>Ara militaris</i>)	\$600	\$850	\$1800
Scarlet macaw (<i>Ara macao</i>)	\$1500	\$2000	\$2400

Source: www.birdfinderinc.com ; www.parrothatch.com ;<http://home1.gte.net/impekabl/prices.htm>

Many USA breeding operations are family owned and many are practically hobbies. Only big breeders can hope to maintain themselves in business for a prolonged period, while small family-owned operations come and go. “Most breeders are actually loosing money and don't even realize it” (www.avianelites.com 2006). In sum, prices of parrots in the USA have not increased because apparently there is an oversupply.

Prices in Mexico

Retail prices of wild-caught parrots in Mexico are normally defined by supply and demand, but the particular factors affecting the market are in many ways different than in the USA. Gender is not so important in the price except maybe for breeders; age is not that important either in the final retail price although age is important for the trappers and hoarders.

Professional trappers generally sell their birds wholesale to hoarders or distributors, but opportunistic trappers exist who capture a few birds a year and sell them directly at retail. Most parrots are sold in markets or street markets, or by street salesmen, or from households, pet stores, vet clinics, or via the internet, home deliveries by request and so on. We obtained most of the prices here from trappers, Profepa inspectors, pet stores, markets, street salesmen and a few from the internet during 2005-2006 (Table 14.5). Prices typically vary depending on how far the bird is sold from the point of capture (Table 14.6). Parrots are cheaper in states where they are captured and more expensive in cities of the interior of Mexico. The costs of maintenance, transportation and taking steps to avoid being caught (including even paying bribes) are added to the price.

Table 14.5

Retail parrot prices in Mexico, 2005–2006 (U.S. dollars)

Species	Price range	Average	n
Green parakeet (<i>Aratinga holochlora</i>)	\$8.0 – 32	\$20	2
Pacific parakeet (<i>Aratinga strenua</i>)	\$4.5	\$4.5	1
Aztec parakeet (<i>Aratinga nana</i>)	\$7.0 – 36	\$22.7	2
Orange fronted parakeet (<i>Aratinga canicularis</i>)	\$4.5 – 41	\$17.7	10
Military macaw (<i>Ara militaris</i>)	\$136 - 727	\$373	5
Scarlet macaw (<i>Ara macao</i>)	\$455 – 1,090	\$563.6	5
Blue rumped parrotlet (<i>Forpus cyanopygius</i>)	\$4.5 - 7.0	\$5.3	3
Orange chinned parakeet (<i>Brotogeris jugularis</i>)	\$4.5 - 9.0	\$6.8	2
White capped parrot (<i>Pionus senilis</i>)	\$27 – 73	\$50	2
White fronted amazon (<i>Amazona albifrons</i>)	\$32 – 64	\$44.3	8
Yucatán parrot (<i>Amazona xantholora</i>)	\$14 – 27	\$20.4	2
Red crowned amazon (<i>Amazona viridigenalis</i>)	\$45 – 64	\$54.5	2
Lilac crowned amazon (<i>Amazona finschi</i>)	\$45 – 64	\$50	3
Red lored amazon (<i>Amazona autumnalis</i>)	\$23 – 114	\$75	4
Mealy amazon (<i>Amazona farinosa</i>)	\$90 – 180	\$142	4
Yellow headed amazon (<i>Amazona oratrix</i>)	\$90 - 272	\$195.4	10
Yellow naped amazon (<i>Amazona auropalliata</i>)	\$90 – 272	\$181.8	3

Source: trappers (retail), markets, street markets, street salesmen, Profepa inspectors, internet
n = number of prices obtained

Table 14.6**Price variation depending on distance**

Species	Point of capture	Town or city	Border with the USA	Across the USA border
Yellow headed amazon	\$15	\$15 - 20	\$250 - 350	\$400 - 500

Source: Profepa 2002

We compared prices of eleven species from 1995 to those in 2005-2006 and we found a price increase in five, price decrease in five and one that did not change (Table 14.7). However, Mexico suffered huge inflation rates during the 1990s; inflation did not stabilize until after 2001. Using the annual inflation rates we calculated the expected price from the 1995 prices. The expected price with inflation would be very much higher. In reality, a decrease, sometimes a large decrease, occurred for all species except for two for which a slight increase occurred.

Table 14.7**Observed and expected wild parrot prices, 1995–2006**

Species	1995 average price^a	2005-2006 average price^b	Expected price with 10 year accumulated inflation* from 1995 prices	% real price change from 1995 to 2005-2006
Scarlet macaw (<i>Ara macao</i>)	\$750	\$563.60	\$1094.30	- 48.50%
Military macaw (<i>Ara militaris</i>)	\$375	\$373	\$547	- 31.88%
Mealy amazon (<i>Amazona farinosa</i>)	\$92.50	\$142	\$133.70	+ 6.22%
Yellow headed amazon (<i>Amazona oratrix</i>)	\$147.50	\$195.40	\$218.80	- 10.70%
Yellow naped amazon (<i>Amazona auropalliata</i>)	\$132.50	\$181.80	\$194.50	- 6.55%
Lilac crowned amazon (<i>Amazona finschi</i>)	\$57.50	\$50	\$85	- 41.26
Red lored amazon (<i>Amazona autumnalis</i>)	\$50	\$75	\$73	+ 2.79%
Red crowned amazon (<i>Amazona viridigenalis</i>)	\$65	\$54.50	\$73	- 43.93%
White fronted amazon (<i>Amazona albifrons</i>)	\$41.50	\$44.30	\$60.70	- 27.03%
Blue rumped parrotlet (<i>Forpus cyanopygius</i>)	\$8	\$5.3	\$12	- 56%
White capped parrot (<i>Pionus senilis</i>)	\$50	\$50	\$73	- 31.47%

Source: a) Teyeliz, A.C. unpublished prices from the Sonora market in Mexico City and Semarnap 1995 and b) Trappers, markets, street markets, street salesmen, Profepa inspectors, internet.

*Annual inflation rate from 1996-2006 taken from Bank of Mexico
www.banxico.org.mx/eInfoFinanciera/FSinfoFinanciera.html

Thus, prices of parrots did not inflate much during the 1995-2006 period while other consumer product prices dramatically increased due to inflation. Parrot purchasers benefited from this trend.

According to the National Institute of Statistics, Geography and Informatics, in 2002 about 35% of the population earned an average of US\$163 per month; 65.5% earned less than \$405 per month; and 87.6% earned less than \$1440 a month. In short, the majority of Mexicans appear very unlikely to be able to afford a parrot costing \$50 or more. The prices of many of the higher-end wild-caught parrots put them far out of reach of all but a small segment of society. And prices for captive bred and imported parrots sold in Mexican pet stores generally are six times higher and eleven times higher still, respectively, compared to wild-caught parrots (Table 14.8). If many of the expensive wild-caught species are out of reach, then practically all of the captive bred

and imported species are beyond the means of most Mexicans. Only the upper classes of society can afford them and even they often buy them through monthly payment plans offered by pet stores and big department stores.

Table 14.8

Price comparison of wild-caught parrots with captive bred and imported pet store prices

Type	Wild-caught in Mexico	Captive bred in México*	Price multiple of captive bred compared to wild-caught	Imported and sold in pet stores **	Price multiple of imported compared to wild-caught
Year	2005-06	2006		2006	
Green parakeet (<i>Aratinga holochlora</i>)	\$32	\$180	5.62		
Aztec parakeet (<i>Aratinga nana</i>)	\$36	\$165	4.58	\$436	12.1
Orange fronted parakeet (<i>Aratinga canicularis</i>)	\$41	\$165	4.02		
Military macaw (<i>Ara militaris</i>)	\$727	\$1350	1.85	\$2909	4
Scarlet macaw (<i>Ara macao</i>)	\$1090	\$2700	2.47	\$3272	3
Blue rumped parrotlet (<i>Forpus cyanopygius</i>)	\$7	\$90	12.85		
White capped parrot (<i>Pionus senilis</i>)	\$73	\$230	3.15	\$1636	22.4
White fronted amazon (<i>Amazona albifrons</i>)	\$64	\$347	5.42		
Yucatán parrot (<i>Amazona xantholora</i>)	\$27	\$500	18.51		
Red crowned amazon (<i>Amazona viridigenalis</i>)	\$64	\$550	8.59		
Lilac crowned amazon (<i>Amazona finschi</i>)	\$64	\$550	8.59	\$909	14.2
Red lored amazon (<i>Amazona autumnalis</i>)	\$114	\$550	4.82		
Mealy amazon (<i>Amazona farinosa</i>)	\$180	\$730	4.05		
Yellow headed amazon (<i>Amazona oratrix</i>)	\$272	\$1100	4.04		
Yellow naped amazon (<i>Amazona auropalliata</i>)	\$272	\$1350	4.9		
Avg. price multiple			6.23		11.1

Source: * Ecological Breeding, ** pet store chain +maskota

Very few native Mexican wild-caught species are sold in pet stores; practically all of their stock comes from breeding centers or imports. Most parrots sold in pet stores are exotic species, which generally are far more expensive than native species.

Most parrot breeders in Mexico sell wholesale to stores. Practically none have web pages on the internet for direct sales or at least we could not find any. A few advertise through internet auction sites like “Mercadolibre.com”.

Price trends

Neither in the USA or Mexico did we find a trend towards an increase in parrot prices during the past ten years. The often-suggested hypothesis that bans serve to drive up prices of individual specimens appears incorrect. TRAFFIC USA surveyed parrot smuggling across the Texas-Mexico border in anticipation of the passage of the USA's Wild Bird Conservation Act of 1992 to look for possible increases in smuggling rates and/or prices as the ban reduced supply of wild specimens. They concluded: “In August 1996, TRAFFIC solicited bird prices from pet stores in California, Washington State, and Louisiana, compared them to price lists from the preceding five years, and detected no overall trend showing an increase in prices” (Gobbi et al 1996).

Similarly, during the past ten years, four species of Mexican parrots, i.e., the red crowned amazon, yellow headed amazon, yellow naped amazon and lilac crowned amazon, have been listed in Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which bans international trade in such species, with very limited exceptions. Except for the lilac crowned amazon, no increase in price in the USA was observed for these species (although we only have one price from 2003 for comparison for this species) (Table 14.1, above). In Mexico, average prices for all four of these CITES-protected species actually decreased (Tables 14.5 and 14.7).

Further, since 1995 capture permits have been issued for 10 of the 22 species in Mexico, but some of these species have been banned from capture since then (see Chap. 6 - Trapping Authorizations). The other 12 species had no capture permits issued in the past 10 years. From 2003 to late 2006 zero permits were issued for any species. Again, despite the bans, the sales prices generally decreased for all species; only a slight increase occurred for two (*Amazona farinosa*, *A. autumnalis*).

In sum, data for the past ten years for Mexico parrots show no price increase trend. Indeed, the data show a price decrease trend for most wild-caught species regardless of changes in trapping policy or legal bans on trading them.

Chapter 15 - Imports

The whole family of psittacines is listed in the three Appendices of CITES with the exception of the budgerigar, cockatiel and the peach faced love bird. All Mexican parrots are included in Appendix II with the exception of seven species that have been included in Appendix I (Table 15.1). Species in Appendix II can be traded internationally while those in Appendix I are essentially banned from all international trade with a few exceptions. All species listed in CITES need certificates of import, export or re-export to be traded internationally, which certificates bear codes that determine the source of the specimens (see below).

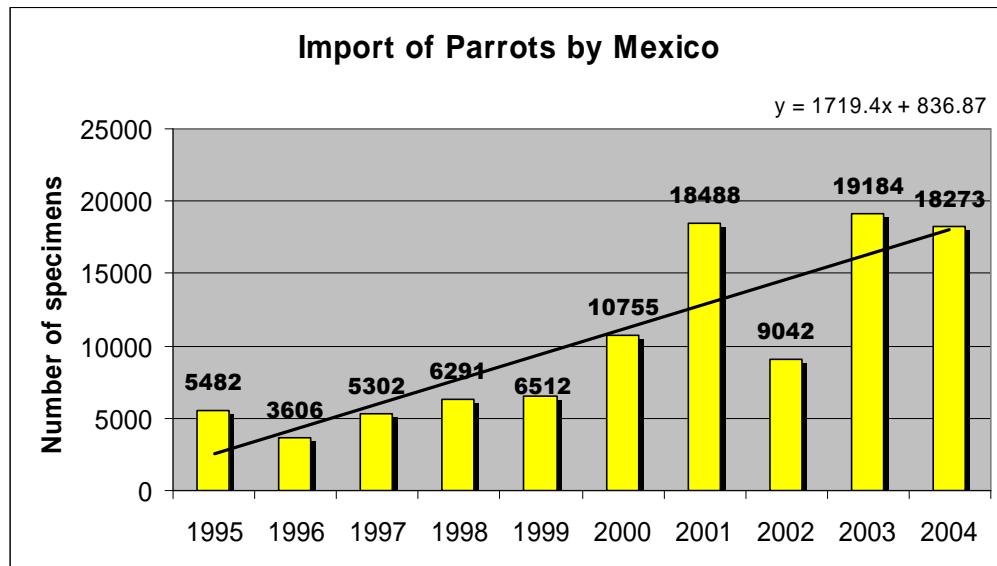
Table 15.1

Mexican species listed in Appendix I of CITES

Species	Year of listing
<i>Rhynchopsitta pachyrhyncha</i>	1975
<i>Ara macao</i>	1976
<i>Ara militaris</i>	1981
<i>Rhynchopsitta terrisi</i>	1981
<i>Amazona viridigenalis</i>	1997
<i>Amazona oratrix</i>	2002
<i>Amazona auropalliata</i>	2002
<i>Amazona finschi</i>	2004

In the last ten years Mexico has become an important importer of parrots from all over the world with a total of 102,935 specimens. There is a marked trend towards an increase in imports since 1995 (Graph 15.1).

Graph 15.1



Source: WCMC 2006

The increase from 2000 to 2004 was three times greater than in the prior five years, 1995 to 1999. While the overall volume was much higher in 2004, the diversity of imported species was much lower than in earlier years. This could indicate that importers and distributors have come to understand which species can be sold better and have higher demand. That is, they have adapted to the Mexican market for exotic psittacines.

From 1995 to 2005, 180 different exotic species were imported by Mexico. Of these, the peach faced love bird (*Agapornis roseicollis*) is clearly the first with 32,319 specimens which represent 31.4% of the total imported. It is 4 times the number of the second place, the African ringneck parakeet (*Psittacula krameri*), which with 8,145 specimens only represents 7.9% of the total (Table 15.2).

Table 15.2

Top 24 exotic species imported by Mexico, 1995-2005

<i>Agapornis roseicollis</i>	32,319
<i>Psittacula krameri</i>	8,145
<i>Agapornis personatus</i>	5,754
<i>Platycercus eximius</i>	5,415
<i>Poicephalus senegalus</i>	4,860
<i>Agapornis fischeri</i>	3,910
<i>Psittacus erithacus</i>	3,782
<i>Myiopsitta monachus</i>	2,931
<i>Cyanoliseus patagonus</i>	2,820
<i>Psephotus haematonotus</i>	1,864
<i>Platycercus elegans</i>	1,827
<i>Nandayus nenday</i>	1,664
<i>Amazona amazonica</i>	1,434
<i>Ara ararauna</i>	1,157
<i>Platycercus adscitus</i>	1,140
<i>Ara chloroptera</i>	846
<i>Aratinga acuticaudata</i>	897
<i>Trichoglossus haematodus</i>	795
<i>Neopsephotus bourkii</i>	732
<i>Psittacus erithacus timneh</i>	645
<i>Pionites melanocephala</i>	617
<i>Eos bornea</i>	602
<i>Neophema pulchella</i>	576
<i>Neophema splendida</i>	508

Source: WCMC 2006

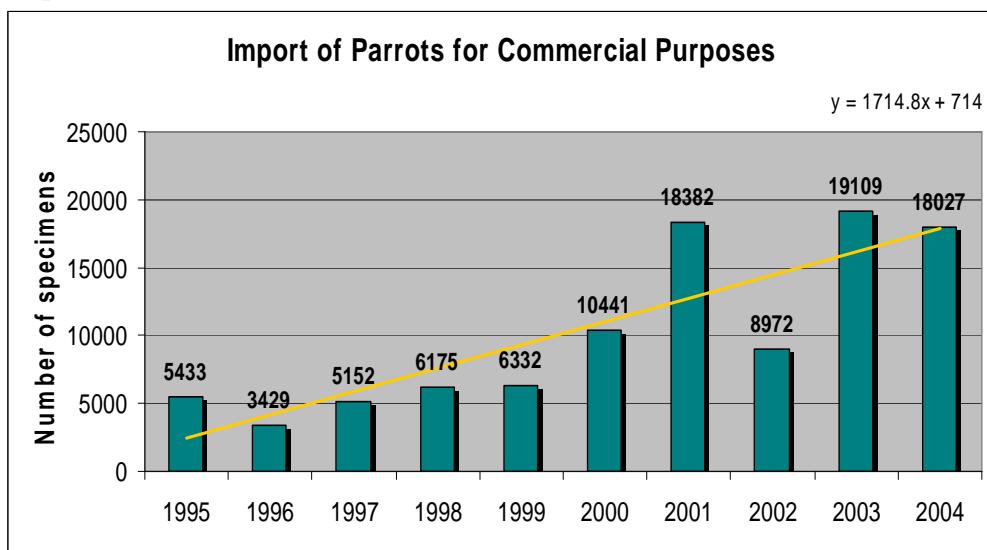
Purposes of psittacine imports

The main categories of psittacine imports are for these CITES purpose codes: (T) Commercial trade, (P) Personal Articles and (B) Breeding. These are addressed here in turn.

- Imports for Commercial Trade (T)

The most common purpose for imports is commercial trade, which accounts for the largest volume of specimens (Graph 15.2). It also shows a clear increasing trend, which explains the higher frequency of exotic species for sale in pet shops, markets, and by street salesmen, and in Profepa seizures.

Graph 15.2



Source: WCMC 2006

Most of the parrots in commercial trade (T) come either from the wild or from captive breeding facilities. According to CITES codification there are three main sources for captive bred specimens, with the source codes (C), (D) and (F):

- Code “C” indicates animals bred in captivity (specimens of species included in Appendix I that have been bred in captivity for *non-commercial* purposes and specimens of species included in Appendices II and III);
- Code “D” indicates Appendix-I animals bred in captivity for *commercial purposes* as well as parts and derivatives thereof.
- Code “F” indicates animals born in captivity (F1 or subsequent generations) that do not fulfill the definition of “bred in captivity” as well as parts and derivatives thereof (CITES 2004).

There are other source codes that apply to imported parrots like:

- Code “W” indicates specimens taken from the wild
- Code “R” indicates wild specimens originating from a ranching operation
- Code “U” indicates source unknown (must be justified)
- Code “P” indicates confiscated or seized specimens

- Code “O” indicates pre-CITES specimens (CITES 2004).

Imports declared to be for commercial purposes of captive bred species (“C”) for the period of 1995-2004 amount to 64.9% of total imports (Table 15.3). Second place belongs to declared wild “W” specimens with 33% of the total. Ranched “R” comes third with 1.05%. Under CITES, ranching means an operation that: “... bring [wild] young animal or eggs into a controlled environment to rear them until they are of a commercially exploitable size” (Wijnstekers, 1995). 100% of the parrot specimens imported by Mexico in this R category come from Nicaragua. This system has been very controversial and during the Conference of the Parties of 2002 the delegation of Nicaragua said they had many problems in controlling it (Cantú per. com.).

Table 15.3

Source codes of CITES Appendix I and II psittacines imported to Mexico, 1995-2004

Source	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	TOTAL	Percent
Bred in captivity, non-commercial (C)	4904	2881	3679	3441	2383	5990	11433	5669	12092	13387	65,859	64.9%
Wild (W)	526	547	1461	2691	3937	4077	6646	3245	5816	4596	33,542	33
Ranched (R)	0	0	0	14	0	90	185	0	745	41	1,075	1.05
Bred in Captivity (F)	0	1	10	27	12	229	88	58	456	3	884	0.8
Seized (I)	0	0	0	0	0	29	0	0	0	0	29	0.028
App. I bred in captivity, commercial (D)	0	0	0	0	0	26	0	0	0	0	26	0.025
Preconvention (O)	1	0	2	2	0	0	14	0	0	0	19	0.018
Unknown (U)	2	0	0	0	0	0	16	0	0	0	18	0.017
TOTALS	5433	3429	5152	6175	6332	10441	18382	8972	19109	18027	101,452	100%

Source: WCMC 2006

Imports of CITES Appendix I species

We found the majority of Appendix I specimens imported under the commercial trade purpose code (T) came from the source code “C”. CITES Resolution 12.3 clearly indicates that this source code can only be used for “specimens of species included in Appendix I that have been bred in captivity for *non-commercial* purposes” (CITES 2004). Nevertheless, from 1995 to 2004, 353 specimens from nine different species

were imported classified as “C” in what appears to be a violation of CITES (Table 15.4).

Table 15.4

Source codes of CITES Appendix I parrot species imported under purpose code (T) commercial trade, 1995-2005

Species	Source Code W	Source Code C	Source Code F	Source Code I	Source Code O	Source Code D
<i>Ara macao</i>	136					
<i>Cyanoramphus novaezelandiae*</i>		328				26
<i>Ara glaucogularis*</i>		2			2	
<i>Amazona leucocephala</i>			12			
<i>Amazona vinacea</i>			12			
<i>Amazona tucumana</i>			2			
<i>Cacatua goffini*</i>			4			
<i>Ara rubrogenys*</i>		2				
<i>Cacatua haematuropygia*</i>		2				
<i>Psephotus dissimilis</i>		2				
<i>Amazona oratrix</i>		1				
<i>Anodorhynchus hyacinthinus*</i>		4				
<i>Guarouba guarouba*</i>		4				
<i>Propyrrhura couloni*</i>		8				
<i>Ara militaris</i>				17		
Totals	161	353	30	17	2	26

*Re-export

We also found imports of wild specimens of Appendix I species for commercial purposes classified as “W”; 136 specimens of the scarlet macaw (*Ara macao*) were imported from Surinam. These do not come from captive bred or ranched specimens, and Surinam does not have any captive breeding facility registered with CITES (<http://www.cites.org/common/reg/cb/e-cb-beg.shtml>). This is another case where a CITES violation may have occurred.

- Imports as Personal Articles (P)

A source of imports of live parrots that cannot be overlooked is imported private pets, which are classified as Personal Articles. Although the volumes are far lower than for commercial purposes the category has an increasing trend, having jumped from 30 to 198 birds from 2003 to 2004. This anomalous rapid increase suggests the category deserves future monitoring to ensure it is not being abused to disguise CITES violations, that is, expensive birds imported for commercial sale that are falsely called personal pets.

- Imports for Breeding (B)

A clear decreasing trend is observable in psittacine imports for breeding purposes, from a high of 40 in 1996 to zero in 2004. This likely is attributable to several factors: the small number of captive breeding centers in Mexico may not be able to house any more birds; captive breeding centers may just be breeding the species they imported in the past and not need anymore breeding specimens; they can get their breeders from the parrots that are being imported for commercial purposes without needing to import with the specific (B) classification; or they are finding too much competition from the volume of commercial imports that precludes them from growing their breeding stock. Whatever the reason it is clear that imports of parrots for breeding purposes are dwindling to none.

Imports of Mexican native species

Almost 2% of all legal imports are species that Mexico shares with other countries. From 1995 to 2004, 1,947 specimens of 15 native Mexican species entered for commercial and other purposes. The increasing trend to import these species is noteworthy. The three main Mexican native species imported from abroad are the white fronted parrot, blue crowned parrot and white crowned parrot. There are 17 countries from which Mexico has imported these species: the top three are Nicaragua, Surinam and Guyana.

USA imports

This assessment focuses on illegal trade in Mexican species, so we limited our analysis of legal imports into the USA to native Mexican parrots. Of the 22 native species, 20 are reported as imported into the USA, excluding only the Socorro parakeet (*Aratinga brevipes*) and the Pacific parakeet (*Aratinga strenua*) (WCMC 2006) (Table 15.5).

Table 15.5

Mexican native parrots imported legally into the USA, 1981-2004

Species	Total imports ^a	Number of Mexican origin imports	Percentage Mexican origin
<i>Amazona ochrocephala</i> *	63451	2751	4.3%
<i>Amazona autumnalis</i>	32109	151	0.47
<i>Amazona albifrons</i>	21649	1168	5.3
<i>Amazona farinosa</i>	17103	14	0.08
<i>Aratinga canicularis</i>	11157	3756	33.6
<i>Pionus senilis</i>	8584	14	0.16
<i>Ara macao</i>	3248	8	0.24
<i>Aratinga holochlora</i> **	2891	31	1.07
<i>Amazona finschi</i>	1921	1860	96.8
<i>Amazona viridigenalis</i>	1824	1784	97.8

<i>Brotogeris jugularis</i>	1619	0	0
<i>Aratinga nana</i>	1169	1	0.08
<i>Bolborhynchus lineola</i>	764	8	1.04
<i>Ara militaris</i>	489	124	25.35
<i>Amazona auropalliata</i>	227	56	24.66
<i>Amazona oratrix</i>	112	62	55.35
<i>Pionopsitta haematonotis</i>	55	0	0
<i>Amazona xantholora</i>	16	6	37.5
<i>Forpus cyanopygius</i>	6	6	100
<i>Rhynchopsitta pachyrhyncha</i>	5	5	100
<i>Rhynchopsitta terrisi</i>	1	1	100
Total	168,400	11,806	7%

Source: WCMC 2006

*Includes *Amazona oratrix* and *Amazona auropalliata* which were considered subspecies of *A. ochrocephala*

** Includes *Aratinga strenua* and *Aratinga rubritorques* which were considered subspecies of *A. holochlora*

^a Only live specimens were considered

The distribution range of many native Mexican species reaches Central and South America and thus it is understandable that only 7% of the total legal imports into the USA originated in Mexico. The species which are endemic to Mexico have the highest percentage of the total imports by species originating there: red fronted parrot (*Rhynchopsitta pachyrhyncha*), maroon fronted parrot (*Rhynchopsitta terrisi*), blue rumped parrotlet (*Forpus cyanopygius*), red crowned parrot (*Amazona viridigenalis*) and lilac crowned parrot (*Amazona finschi*).

However, it is surprising that for some species like the yellow headed parrot (*Amazona oratrix*), which has more than 95% of its range within Mexico, only 55% of the imports originated in Mexico; or for the Yucatan parrot (*Amazona xantholora*), which has more than 90% of its range in Mexico, only 37.5% came from Mexico.

The 1980s were a period of open trade with parrots and large numbers were imported by the USA. A total of 155,138 live Mexican native parrots were legally imported in the 1980s while in the 1990s only 10,459 specimens were imported, that is, in the 1980s, almost 15 times more parrots were imported than in the 1990s. These totals of course exclude the illegal and smuggled trade and do not take into account the mortality during the various stages of legal trade, which Iñigo and Ramos (1991) calculated to be about 80% before reaching the USA markets. The resulting enormous unsustainable drain on the wild Mexican populations was one of the reasons for the enactment of the USA's Wild Bird Conservation Act (WBCA) in 1992 that severely restricted legal imports of wild birds.

Many aviculturists and law enforcement agents were concerned that the WBCA would promote illegal trade and increase prices (Gobbi, et al. 1996). We analyzed imports for five of the most widely owned and bred Mexican species in the USA prior to 1993 to see if the enactment of the WBCA brought in an increase in imports to offset the upcoming ban before it went into effect (Table 15.6)

Table 15.6**USA imports of five Mexican native species before and after the 1993 ban**

Species	Before 1993^a	Average per year	After 1993^b	Average per year	Two years before ban 1991-1992	Two years after ban 1993-1994
<i>Amazona ochrocephala</i> *	61,634	5,136	1,817	151	1574	677
<i>Amazona albifrons</i>	21,365	1,780	284	24	295	9
<i>Ara macao</i>	3,148	179	91	8	33	11
<i>Amazona finschi</i>	1,680	140	241	20	9	10
<i>Ara militaris</i>	461	38	28	2	2	12

Source: WCMC 2006

*Includes *Amazona oratrix* and *Amazona auropalliata* because they were considered subspecies of *A. ochrocephala*

^a From 1981 to 1992

^bFrom 1993 to 2004

Imports clearly decreased after the WBCA entered into force. If aviculturists and parrot enthusiasts had wanted to import large volumes of birds before the ban took effect it would have had to happen one or two years before 1993. The results show that there was no major increase in the average imports per year during the two years before 1993 in comparison to the yearly average of 1981 to 1992. There was an increase in the average per year for three of the five species soon after the ban went into effect in comparison to the yearly average for 1993 to 2004, but except for one species (*Amazona ochrocephala*) the numbers were insignificant.

The same concerns were expressed for species that were to be uplisted to Appendix I of CITES (Table 15.7). The changes in USA imports before and after being uplisted are insignificant and do not show a rush to import large volumes of these species to offset the upcoming ban.

Table 15.7**USA imports of four Mexican species before and after listing in Appendix I of CITES**

Species (year of listing)	Two years before Appendix I	Two years after Appendix I
<i>Amazona oratrix</i> (2002)	30	23
<i>Amazona viridigenalis</i> (1997)	10	12
<i>Amazona auropalliata</i> (2002)	48	60
<i>Amazona finschi</i> (2004)	84	-

Source: WCMC 2006

Neither the WBCA ban of 1992 nor the uplistings to Appendix I (1997-2004) created a rush to import large numbers of specimens. The data on seizures by the USFWS do not indicate that smuggling of those parrot species increased generally either (see Chap. 9 - Seizures). On the contrary, the overall data indicate smuggling has decreased.

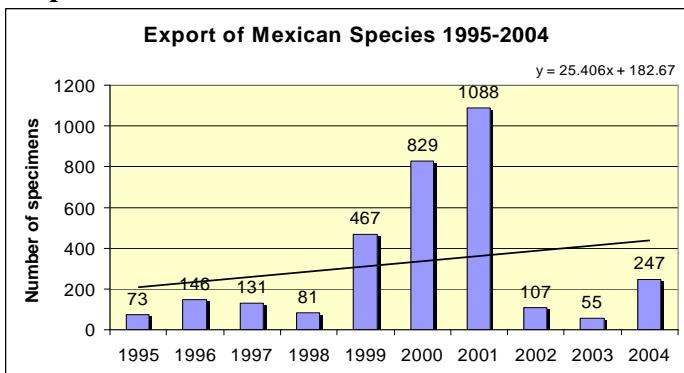
In short, we found no evidence that pending bans on trade in Mexican parrot species led USA consumers to rush to purchase more of those particular birds before the regulatory changes took effect. Nor did such bans lead to observable increases in smuggling of those species.

Chapter 16 - Exports

Legal and recorded exports of Mexican native species of parrots are not particularly large, an average of about 320 specimens per year in the last ten years. The top species with 37.3% of the total was the orange fronted parakeet (*Aratinga canicularis*). Interestingly, an endemic and threatened species, the lilac crowned parrot was a close second with 32.3% of the total (WCMC 2006, Semarnat 2005 f, j). Although captive breeding is slowly increasing in Mexico (see Chap. 12 - Captive Breeding), the majority of those specimens are destined for the domestic market, with only a handful exported annually.

Exports showed an increasing trend for the 1995-2004 period. Nevertheless, there was marked decrease after 2001 (Graph 16.1).

Graph 16.1



Source: WCMC 2006, Semarnat 2005 f, j

The 90% decrease in export from 2001 to 2002 can be explained by the suspension of all capture authorizations that began in 2002 (see Chap. 6 - Trapping Authorizations). About 65% of all exports had been wild-caught parrots and from 2002 onwards those that could be legally exported dropped to virtually zero. While the moratorium on authorizations has been effective in reducing these legal exports they have never represented more than a minor part (<1%) of the estimated overall volume of the Mexican parrot trade, and large numbers of illegal exports are continuing (see Chaps. 7 - Illegal Trade and 9 – Seizures, especially USA seizures).

It is clear from the small numbers presented in this chapter that Mexico is not a large legal exporter of parrots. If we compare the total exports of 3,859 specimens with the total legal imports of 102,935 specimens in the last ten years, we see that the country has become a major net parrot importer.

Chapter 17 - Discussion

Illegal trade of parrots is ongoing in Mexico and has been a problem for decades. Trappers capture all year long, they capture any species they feel they can sell, they capture anywhere they can find a parrot and they capture as many as they can. It is basically an unregulated free-for-all. Wildlife authorities appear unable to stop the illegal trade with their current staff and funding levels. Enforcement authorities merely scratch the surface with their annual seizure rates and minimal prosecutions of violators.

So what can be done? Some Mexican wildlife authorities maintain that one way to eliminate illegal trade in wildlife is by legalizing the trade again. They say that by banning trade illegal traffic then increases, and with a legalized trapping program illegal trade would decrease because the program would remove the incentive to act outside the law.

The present report shows that the premises of this idea are faulty. First, no legalized trapping program could freely issue permits for all the species and specimens that parrot trappers want to trap and do trap illegally now. Any regulatory program with a conservation purpose worthy of the name would need to limit the number of species and set up truly sustainable quotas, and strict seasons and use areas for registered trappers. Otherwise, legalized trapping would just continue to drive many Mexican parrots toward the brink of extinction.

A successful legalized parrot trapping program would have to be monitored and controlled by authorities to ensure legality and sustainability far more than has occurred in the past. Profepa's budget has been cut by 7.5% since 2005. The budget reduction makes it impossible to hire new personnel needed to enforce a sustainable trapping and trade program.

None of the trappers we interviewed said they had ever been monitored by environmental authorities. To be a successful conservation-oriented program this would have to change – the now virtually unrestricted practices would have to be restricted. Many trappers and traffickers could be left out of the trade altogether. A legalized trapping program would be more of a problem for the authorities who would need to regulate and monitor it, and for the taxpayers who would fund it, than a solution.

This legalizing approach to wildlife use was tried unsuccessfully with sea turtles in Mexico. It was documented that for every sea turtle captured legally three more were being captured illegally. Fishery authorities, recognizing that illegal trade was a problem, first tried seasonal bans in the 1960s during reproductive periods and letting fishermen capture the rest of the year. It did not work, so then at the start of the 1970s they decreed a one year ban, but nobody enforced it so they had to drop it. Then they decided to try the legalizing approach, working with the fishing cooperatives and increasing quotas to 100,000 turtles per year. That did not work, so then they decided to allow capture of banned species in the Atlantic through special permits. That did not work either.

In 1977, authorities decided to open harvest sea turtles during the reproductive season through special quotas called franchises. That did not work, so annual quotas were then

increased to 150,000 sea turtles per year. Again, no success; illegal trade abounded and by then populations were drastically declining. First, they reduced the quotas to 110,000 in the 1980s, and from then on quotas were reduced every year. One by one every species and state had to be banned from harvest, until the last quota of 23,900 for the olive ridley was issued in 1989. By then all of Mexico's sea turtle populations had collapsed, all of its species were endangered and a permanent ban was decreed in 1990 (Cantú et al 2000). Since the ban, the decline of those populations affected by illegal trade was stopped. Several populations from the Kemp's ridley, olive ridley, black, green and loggerhead have shown signs of recovery with increased nesting since 1990 (Semarnat 2005 oficio número DAJ.-421/2005).

Similar to sea turtles, Mexico's native parrot species have had to be banned from trapping one-by-one since the late 1970s. Quotas have also come down for those that were still allowed to be trapped. We have also documented that illegal trade with the authorized species of parrots has been consistently higher than with the non-authorized species. This fact alone demonstrates that legalization of an activity does not by itself reduce the illegal conduct of the same activity. In fact, this report shows the legal parrot trapping provides cover for illegal trapping in the form of permits that can be misused and forged, and other illicit "tricks of the trade".

Mexico is a developing country whose over 100 million population is mostly poor. This undeniable social and economic reality is at the back of most problems we face. Many people live under the poverty line and most survive just above it. They will buy what they can afford, whether legal or not. This affects all commerce and many legitimate business sectors have seen their sales cut in half by competition with illegal products (Table 17.1).

Table 17.1

Examples of illegal trade and contraband in Mexico

Product	Percentage of illegal products	Source
Alcohol	40%	PROFECO 2005
Clothing	50% -80%	Mayoral 2006; Senado 2004
Videos	65%	Cortes 1998
Computer programs	55%	Aguilera 2002; Cortes 1998
Records	70% -80%	Aguilera 2002; Cortes 1998
Shoes	40% -75%	Mayoral 2006; Cortes 1998
Toys	60%-70%	Mayoral 2006; Profeco Puebla 2005

If an illegal product is cheaper than its legal counterpart, and the consumer can only afford the cheaper one, he or she will choose it. This is why cheap native parrots find a market even if they are illegal. As long as there is an outlet for illegal parrots there will be a supplier. This is another reason why the legalization theory will not work in practice.

The Argentinean method has been proposed as an alternative. From 1998 to the present, Argentina has instituted *Proyecto Ele*, a project for the “conservation and sustainable use of the blue-fronted Amazon (*Amazona aestiva*).” The project involves agreements with land-owners to limit habitat destruction in exchange for a harvest of parrot fledglings—with at least one fledgling to be left in each nest after harvest. The project requires that a fee be paid for each bird captured, which is deposited in a conservation fund for management, enforcement and monitoring. In addition, the project allows the capture of free-flying juvenile and adult birds in agriculture areas (<http://www.ambiente.gov.ar/?IdArticulo=283>). This method has been resoundingly rejected by 97 parrot researchers from all over the world.

- In a long-lived species such as *Amazona* parrots, which have a relatively low reproductive rate, the take of reproductively valuable individuals has dramatic and long term impacts on productivity.
- Any species in decline makes a poor candidate for the harvest of chicks, free-flying juveniles, or adult birds
- The current plan to harvest nestlings seems likely to result in overexploitation and a declining population.
- Argentina's export plan expressly ignores the continued, uncontrolled capture of blue-fronted Amazons in other parts of the country and advancing habitat destruction.
- Exporters, who stand to gain the largest profit from the trade in the exporting country, are limited to six individuals in Argentina.
- The models for setting harvesting levels use virtually no life history data from wild blue-fronted Amazons. There are no data for survival of any free-flying age classes for these parrots. There are no prolonged censuses or surveys available to estimate population growth or similar measures.
- After almost ten years of operation, *Proyecto Ele* is unable to provide rigorous and independent assessments for the sustainability and overall impacts of the plan.

(Michaels 2007 per. com.; Scientists' Letter to FWS. 2003. *Comments to the US Fish and Wildlife Service regarding a proposal to import blue-fronted amazons into the USA under the Wild Bird Conservation Act*, worldparrottrust.org/news/usaamazon.htm; www.ambiente.gov.ar/?IdArticulo=283).

Except for the fee, this methodology is practically the same as the one used in Mexico since the main objective of the UMA system is the conservation of the habitat and a sustainable use. A lottery system has also been proposed whereby the number of trappers is reduced. Nevertheless this system would need a major reform of the Wildlife Law and would not address illegal capture by those many trappers left out.

Another approach to curb illegal trade has been to promote captive breeding, to substitute captive bred specimens for captured wild parrots (Conabio 2005). Again this sounds logical but it has problems in reality, as this report has demonstrated. Some authorities are promoting this as a way to curb international demand for wild Mexican parrots. The problem is that international demand is not as high as was once thought. The main threat to Mexican parrots is domestic demand. And captive breeding of these species in Mexico or abroad cannot compete with the prices of the illegal harvest, or of

the legal harvest when it occurred. Further, only a few captive breeding facilities are working with a variety of Mexican species; many prefer to work with exotic species.

When people see a captive bred Mexican species in a pet shop and they want to buy it, but cannot because it is too expensive, that likely encourages them to go out and look for a cheaper wild-caught one in a market or from a street salesman. So, the captive bred Mexican species may only be promoting the illegal trade. Further, Profepa has maintained that some captive breeding facilities act as laundering operations for wild-caught specimens. If a large international demand is created for captive bred Mexican parrots, unscrupulous traffickers may conspire to meet that demand illicitly with wild birds, which would produce more drain on wild populations.

There is no easy solution that can solve illegal trade. Captive breeding may have a chance if it is not focused on native Mexican species. There are several exotics that are bred in high volumes. These species can substitute for native species in the market because their price is competitive with the cheapest wild parrots. Trappers easily could learn how to breed these species, which could be helped along with a government educational program and some subsidizing.

Another approach that can help curb illegal trade is a well-publicized permanent ban on trapping. The 1990 permanent ban on taking sea turtles definitively helped many populations start the way towards recovery. The international commercial whaling moratorium of the early 1980s also brought back many species from the brink of extinction. Just like with the sea turtle ban, a permanent ban would not need increased enforcement efforts because with the announcement of it a decrease in illegal trade would occur as the legal cover disappears. It would allow for a national campaign to inform people not to buy any wild specimens since it would be unlawful. The campaign would reduce demand of wild specimens thus accelerating the decrease in the illegal capture and trade. Like with the sea turtle ban, a permanent ban would not eliminate all illegal trapping, but it would decrease it to a manageable level which could allow parrot species to recover.

So, during this assessment we asked several Profepa inspectors what they thought about a permanent ban on parrot trapping and, except for one who thought illegal trade would increase, all the rest said it would facilitate their work. They thought illegal trade would decrease because it would not be possible to hide it under the guise of legal trade using forged papers and the other tricks the traffickers have learned.

Some could argue that since no trapping authorizations had been issued from 2003 to late 2006, we were in fact under a moratorium. Nevertheless there was no clear ban or official moratorium on trapping. Indeed, just as we were preparing to print this report, we learned that permits have been issued for 2006. This is very alarming news.

The permanent ban on sea turtle harvest was not declared until all Mexican species were on the brink of extinction. The number of threatened and endangered parrots has steadily increased since classification lists started to be made in 1991. We now have six endangered species and ten threatened ones, and five more will be uplisted to endangered when the new list is published, likely by the end of 2006. Do we have to wait until all Mexican parrot species are declared endangered and face imminent

extinction in order to have permanent solution? That would not be a reasonable policy by any measure.

A more thorough review of the alternatives discussed above can be seen in the Appendix section.

Chapter 18 - Conclusions and Recommendations

Illegal trade continues to be a major threat for many of the 22 parrot species native to Mexico. An estimated annual range of 65,000 to 78,500 parrots total are being captured. From 2003 until late 2006 wildlife authorities had not issued any capture permit so all specimens captured in the prior three years were captured illegally. Before 2003 capture permits were issued for a handful of species but the dispositions established in the Wildlife Law for a sustainable and legal harvest were not complied with.

The majority of parrots captured in Mexico stay in the country for the domestic trade. A small percentage of this capture, 4% to 14%, is smuggled into the USA. Nevertheless, this percentage includes some species for which most the capture is destined for the USA pet market. Some of these specimens come from countries in Central America and are just crossing through Mexico to its northern border.

Pre-2003 capture permits were abused and misused by trappers. Wildlife authorities estimated that as many as five specimens were captured illegally for every specimen authorized to be trapped. Trappers were operating illegally outside authorized areas and inside natural protected areas.

Legalization of capture would not stop the illegal trade. Capture authorizations are used as an umbrella to hide illicit activity. Illegal trade with authorized species is higher than with non-authorized species because it is easier for trappers to cheat and be confident that they can fool enforcement authorities with forged documents and a variety of other deceptive measures.

Capture of parrots, be it legal or illegal, is a very inhumane and terribly wasteful practice. Mortality throughout the chain of capture, transportation, distribution and sale is extremely high. An estimated 77% of all parrots captured will die before reaching the hands of a consumer. No use of a natural resource with such a high percentage of waste can be called sustainable. The drain on wild populations is not limited to those specimens extracted for the pet trade. The eggs and nestlings that die because their parents were trapped and the destruction of nests and nesting sites also are important parts of this depletion.

Populations are declining in Mexico. Trappers recognize this and scientist's surveys corroborate the declines. The declines are due mainly to habitat loss and excessive illegal capture. Some parrots have been extirpated from areas where their habitat has remained intact, so for these populations capture plainly was their main threat.

Imports of exotics parrot species are increasing. Mexico is fast becoming a parrot importing country and leaving behind its status as a parrot producing country. Some of the imported species are becoming widespread in legal and illegal trade. The species that are easiest to breed are also some of the cheapest and can compete in prices with the cheapest Mexican native species. These cheap captive bred exotic species could in the future surpass the demand for Mexican native species, thus decreasing the incentive for their capture.

Breeding centers in Mexico are few and mostly focused on breeding the bigger expensive species. Their parrots are too expensive for the great majority of Mexicans. Thus, it is unlikely that breeding centers of Mexican species can offset demand of Mexican wild species in the short or medium term.

Breeding centers in the USA are producing enough specimens of some species to create an oversupply which has had an effect of decreasing prices. Supposedly, this would mean that breeding centers would not need a supply of more wild specimens, thus decreasing the incentive for capture and smuggling. Nevertheless this is not so because prices of wild parrots are lower than captive bred specimens and there will always be people who will prefer to buy the cheapest parrot available. Also aviculturists demand new blood to maintain their genetic lines healthy and there is always demand for the rarer or new species that keep smuggling going on. The prices of parrots just across the border are always higher than prices in Mexico, which will remain an incentive to smuggle birds across.

Seizures by enforcement authorities in Mexico and the USA are extremely small in comparison with the estimated annual capture. Their seizure effectiveness reflects institutional shortcomings to effectively address this problem, that is, lack of budgets personnel, and political and institutional commitments. Dramatically increased enforcement efforts in Mexico are urgently needed. Also, increased enforcement efforts by USFWS Law Enforcement agents would serve to reduce the illegal trade, which would be especially important for the orange fronted parakeet (*Aratinga canicularis*), white fronted parrot (*Amazona albifrons*), yellow cheeked parrot (*Amazona autumnalis*), lilac crowned parrot (*Amazona finschi*) and red crowned parrot (*Amazona viridigenalis*), for which smuggling appears to still be increasing, representing a continuing threat to these species' survival.

It is clear that overall smuggling numbers are not as high as back in the 1980s. Many factors have contributed to decrease smuggling. These include national and international trade bans, increased penalties in both countries, increased border enforcement from security programs after September 11, 2001, increased enforcement by agencies on both sides of the border especially after 1995 with the creation of the Natural Resources office inside Profepa, population decline of wild species, oversupply of some captive bred species in the USA, and so on.

National and international trade bans have not increased smuggling or increased prices so as to be an incentive for more capture or smuggling. Prices have decreased in Mexico and the USA in the last ten years for different reasons, but mostly because of the lack of ability to pay for expensive parrots in Mexico and oversupplies in the USA.

For Mexico to be able to control its illegal trade in parrots, an integral and coherent approach is needed where enforcement authorities are working together with wildlife authorities in charge of issuing trapping authorizations and conservation programs. Authorizations for trapping have been issued that do not comply with the law. This can be attributed to negligence, incompetence or even corruption.

Profepa inspectors on the whole agree that their work would be facilitated by a total ban on wild parrot captures. They also agree that illegal trade would decrease. Given their small budget and personnel to protect psittacines from illegal trade and enforce the law,

it would be advantageous for all of Mexico's threatened and endangered parrots if wildlife authorities decreed a total ban on trade of any kind until such time as protection and conservation programs can ensure their recovery. It is vital that Profepa's budget be increased and that the institution be given autonomy from Semarnat to be able to independently verify and monitor issuance of any permits relating to wildlife use. Profepa should also be in charge of the rescue centers to be able to guarantee transparency in the administration of seized specimens during the whole process from seizure to final destination.

Registered unions of bird trappers, transporters and salesmen have controlled a good part of the legal and illegal trade in parrots. And yet, the number of registered parrots trappers and salesmen is decreasing. The small number of professional parrot trappers need not be maintained at the cost of losing several parrot species to extinction, some of which are found only in Mexico. A temporary program to subsidize parrot trappers in other activities could be instituted. They could perhaps work as bird watching guides or even start their own breeding facilities with easy-to-breed exotic species supplied from seized specimens.

Parrots are icons of Mexican culture and deserve all of our efforts and funding to guarantee their survival. USA funding should assist in this as well, in view of the vast deleterious impact that demand from its consumers has had on these species over the last several decades especially in the 1970's and 1980's.

It is critical that a bi-national program of awareness be implemented to make the Mexican and USA consuming publics aware of how important it is to stop the demand for wild parrots for the pet trade. They need to know this trade represents a sure way to eventually wipe out Mexico's treasured native parrots. No conservation program will be successful without the help of the people to make it work. If enough people come to sincerely believe that these species need protection, then they will help government authorities, academic institutions, local communities and non-profit organizations achieve this goal.

APPENDICES

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Diario Oficial de la Federación 27-07-95 ACUERDO por el que se establece el calendario para la captura, transporte y aprovechamiento racional de aves canoras y de ornato, para las temporadas 1995-1996 y 1996-1997.

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Semarnat

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SEMARNAT 2005 (d) 10 de mayo de 2005 Respuesta a solicitud de información por IFAI Numero de Folio 0001600182705 <http://www.sisi.org.mx>

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SEMARNAT 2005 (g) 28 de julio de 2005 Respuesta a solicitud de información por IFAI Numero de Folio 0001600209605 <http://www.sisi.org.mx>

SEMARNAT 2005 (h) 1 de agosto de 2005 Respuesta a solicitud de información por IFAI Numero de Folio 0001600229605 <http://www.sisi.org.mx>

SEMARNAT 2005 (i) 14 de septiembre de 2005 Respuesta a solicitud de información por IFAI Numero de Folio 0001600256105 <http://www.sisi.org.mx>

SEMARNAT 2005 (j) 23 de noviembre de 2005 Respuesta a solicitud de información por IFAI Numero de Folio 0001600290505 <http://www.sisi.org.mx>

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Alternatives for Sustainable Use of Mexican Parrots

Alternative	Pros	Cons	Our view
Generalized Capture	<p>Has been legal for the past 50 years for most species.</p> <p>Has been legal for all species for the past seven years.</p> <p>Allows capture of all species if legal requisites are met</p> <p>The Wildlife law has enough requisites to guarantee its sustainability</p>	<p>Cannot be done for all species or states or UMAs</p> <p>Leaves out the majority of capturers</p> <p>Does not take into account illegal capture or trade and has not stopped or reduced them.</p> <p>It is used as a cover for illegal trade.</p> <p>Calls for a bigger budget for Profepa and Semarnat</p> <p>Authorities have not been able to guarantee legality of permits, captures and trade.</p> <p>Authorities do not have the personnel or budget to enforce its compliance.</p> <p>Has been abused and misused by trappers and bird unions</p> <p>Consumers don't have a way of distinguishing legal from illegal specimens</p> <p>Lack of population studies have led to overexploitation</p> <p>Has been done for the past 50 years for most species and has not helped to maintain the populations or their recovery.</p> <p>Has driven most parrot species to be at risk.</p> <p>Has led to extirpation of populations from several states from overexploitation and illegal trade</p>	X
Argentinean program	<p>Would allow legal capture of specimens</p> <p>Would allow payment for each specimen captured</p>	<p>Since it is basically the same as Generalized Capture it would have the same drawbacks plus:</p> <p>Payment for each species would not be enough for conservation programs.</p> <p>No legal guarantee that payment would be used for parrot conservation programs</p>	X
Lottery	Decrease in number of trappers	Extensive reforms of Wildlife Law are needed that would affect use	X

		<p>procedures for all wildlife species</p> <p>Would not address illegal capture</p> <p>Would have many of the same drawbacks as Generalized Capture</p>	
Captive breeding of Mexican species	<p>Can supply market with specimens</p> <p>If enough specimens are bred could diminish sale prices</p> <p>If enough specimens are bred could offset demand for some wild species nationally and internationally</p>	<p>Cannot be done for all species</p> <p>Is not economically feasible for many species</p> <p>Does not address the needs of trappers</p> <p>Cannot be done by most trappers</p> <p>Does not address illegal capture or trade</p> <p>Sale prices are out of reach for most Mexicans</p> <p>Cannot compete with prices of wild specimens</p> <p>High cost infrastructure is needed.</p> <p>Specialized training is needed to breed several of the species</p> <p>Would not stop illegal capture or trade</p>	X
Captive breeding of common exotic species	<p>At least three species breed easily in captivity</p> <p>No need of specialized training is required to breed these species</p> <p>Can be done by all trappers.</p> <p>No need of high cost breeding infrastructure is required.</p> <p>Are readily found in trade and have various color morphs</p> <p>No need to import breeding stock.</p> <p>Enough specimens are seized each year by Profepa to be able to supply trappers/breeders</p> <p>Sale prices are in the same range as wild specimens</p> <p>At least one of the species (Budgerigar) is a very good talker.</p> <p>Would reduce illegal capture and trade</p>	<p>Cannot be done for all exotic species.</p> <p>Many trappers would not be interested</p> <p>Would not stop all illegal capture or trade</p> <p>Needs funding and a full support of Semarnat</p>	✓
Total ban or moratorium	<p>Would stop harvesting of all species</p> <p>Would stop the cover for illegal traffic</p>	<p>Would not stop all illegal capture or trade.</p>	✓

	<p>Would reduce illegal capture and trade</p> <p>Would simplify enforcement for Profepa</p> <p>Would let the focus of authorities and society be on recovery and conservation of parrot species.</p> <p>Would allow simple communication messages be used to educate the public asking them not to buy wild specimens</p> <p>Would make trappers seek other alternatives like breeding, guides for birdwatchers, etc.</p> <p>Would facilitate funding for research, conservation, natural protected areas, etc.</p> <p>Would facilitate creation of natural protected areas for parrot species.</p> <p>Would facilitate promotion of sustainable non extractive uses like bird watching.</p> <p>Would allow species to recover from decades of legal harvesting.</p>	<p>Needs to be done with a thorough program of alternatives for the trappers which needs the full support of Semarnat</p> <p>Needs to be accompanied by a long lasting national educational campaign.</p> <p>Would be attacked by the bird unions</p>	
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Species scientific and common names, Spanish and English

	Scientific name	Spanish common name	English common name
1	<i>Aratinga holochlora</i>	perico mexicano o quila	Green parakeet
2	<i>Aratinga brevipes</i>	perico de Socorro	Socorro parakeet
3	<i>Aratinga strenua</i>	perico centroamericano	Pacific parakeet
4	<i>Aratinga nana</i>	perico pecho sucio o azteca	Aztec parakeet
5	<i>Aratinga canicularis</i>	perico frente naranja o atolero	Orange fronted parakeet
6	<i>Ara militaris</i>	guacamaya verde o militar	Military macaw
7	<i>Ara macao</i>	guacamaya roja	Scarlet macaw
	<i>Rhynchopsitta</i>	cotorra serrana occidental o	Thick billed parrot
8	<i>pachyrhyncha</i>	guacamaya enana	Maroon fronted parrot
9	<i>Rhynchopsitta terrisi</i>	cotorra serrana oriental	
	<i>Bolborhynchus</i>		
10	<i>lineola</i>	periquito barrado	Barred parakeet
11	<i>Forpus cyanopygius</i>	periquito catarina	Mexican parrotlet
12	<i>Brotogeris jugularis</i>	periquito ala amarilla o	Orange chinned parakeet
	<i>Pionopsitta</i>	señorita	
13	<i>haematotis</i>	loro cabeza obscura	Brown hooded parrot
14	<i>Pionus senilis</i>	loro cabeza blanca	White crowned parrot
15	<i>Amazona xantholora</i>	loro yucateco	Yucatan parrot
	<i>Amazona</i>		
16	<i>viridigenalis</i>	loro tamaulipeco o cabeza roja	Red crowned parrot
17	<i>Amazona finschi</i>	loro corona lila o montañez	Lilac crowned parrot
18	<i>Amazona farinosa</i>	loro corona azul o tehuano	Mealy parrot
19	<i>Amazona oratrix</i>	loro cabeza amarilla	Yellow headed parrot
	<i>Amazona</i>	loro nuca amarilla o de	
20	<i>europalliata</i>	Chiapas	Yellow naped parrot
21	<i>Amazona autumnalis</i>	loro cachete amarillo o cucha	Red lored parrot
22	<i>Amazona albifrons</i>	loro frente blanca o guayabero	White fronted parrot

List of acronyms

- CERERES**...Centers of Rescue and Rehabilitation of Wildlife
CITES.....Convention on International Trade in Endangered Species of Wild Fauna and Flora
CIVS.....Integral Centers for Wildlife
DGVS.....General Office of Wildlife of the Environment Ministry
DOF.....Official Diary of the Federation
GAO.....US General Accounting Office
INEGINational Institute of Statistics, Geography and Informatics
LEMISLaw Enforcement Management Information System
LGEESA...General Law of Ecological Equilibrium and the Protection of the Environment
NAFTA.....North American Free Trade Agreement
NOM-059...Mexican Norm 059 that determines species as endangered, threatened or under special protection
PGRGeneral Attorney of the Republic
ProfepaFederal Attorney Office for the Protection of the Environment
RACORegistry of Singing and Ornate Birds
SARHAgriculture Ministry
SEDESOL...Social Development Ministry
SEDUE.....Urban Development and Ecology Ministry
Semarnap ...Ministry of Environment, Natural Resources and Fishery
Semarnat ...Ministry of Environment and Natural Resources
UMAUnits of Management and Conservation established in General Law of Wildlife
USFWSUnited States Fish and Wildlife Service
WBCA.....Wild Bird Conservation Act
WCMC.....World Conservation Monitoring Center

Pet shops and bird breeders consulted for prices on the internet

jms8725@yahoo.com
Parrotlets Of Love*
Joyce's Birds *
Loveable Birds*
Top Flight Aviaries *
Island Forest Ranch & Aviary *
<u>Southern Charmers*</u>
http://www.parrots.com/
http://www.avesint.com
http://www.pickaparrot.net
http://www.parrotsupercenter.com/
http://www.feathert.com/prices.html
http://www.all4birds.com/prices.htm
http://www.parrothatch.com/
http://www.birdfinderinc.com/
http://sillytameparrots.com/
http://www.petbirdbreeder.com
http://www.bopahi.com/price.htm
http://www.foxfeatherfarm.com
http://www.hookbillhaven.com
http://www.emeraldforestbirds.com
http://pcaviaries.freeyellow.com
http://www.djfeathers.com
http://www.fullnestaviary.com
http://www.sncparrotdis.com
http://www.upatsix.com/faq/amazon.htm
http://www.birdcrazy.com price list,
http://www.parrotpro.com price list,
http://www.birdsandmore.com price list,
http://www.birdexchange.com price list

* in Michels A. 1996 Parrot trade report. Environmental Investigation Agency

Trappers and Profepa inspectors questionnaires

Trappers questionnaire

Date

Name

Where do you trap? (Region, state, municipality)

In what habitat do you trap? (forest, rainforest, etc)

Capture method (net, nest in tree, termitaria, hole in wall, cutting tree, etc.)

Capture season (dry, rain, nesting, month, weeks, all year, etc.)

Years trapping

Species you trap

Age of specimens trapped (Adult, juvenile, chick, egg)

Estimate of capture (how many, per season, year, per species)

Estimate of mortality (during capture, transportation, hoarding, etc)

Sale price (per species, per age, wholesale, retail)

Who did you sell to?

Where did you sell them?

How were they transported?

How were they fed?

How many parrot trappers exist and how many were there (municipality, state, region)

Have species decreased? (by species, area)

How much did you earn? (by specimen, species, season, annually)

Profepa inspectors questionnaire

Date

Name,

State Delegation

Years working as an inspector

Have you seized parrots?

General information of the seizures

What species?

Adults or chicks?

Season?

Where? (road, market, store, house, vehicle)

Caging (carton box, wood cage, wire cage, bag, etc.)

Transport method?

Where were they being taken to be sold?

From where did the traffickers come from?

Where were the parrots trapped? (Did they trap them? Where? Did they buy them?)

Where? Did they just transport them?, etc.)

What do you do to the parrots after seizure?

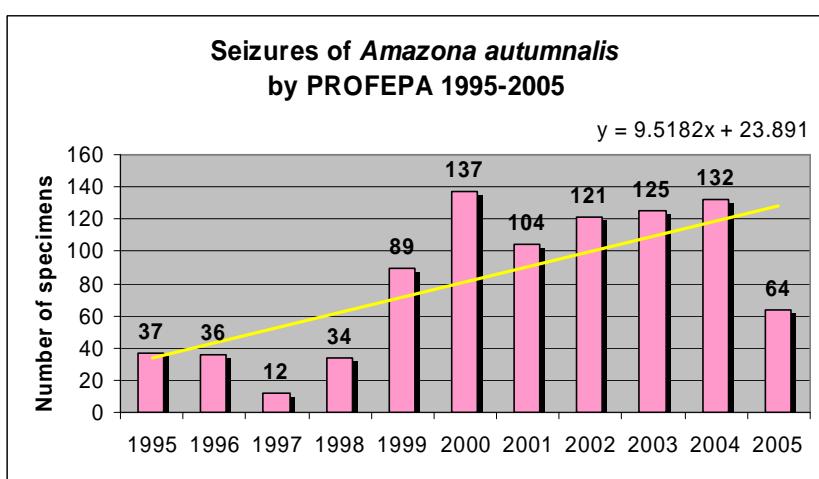
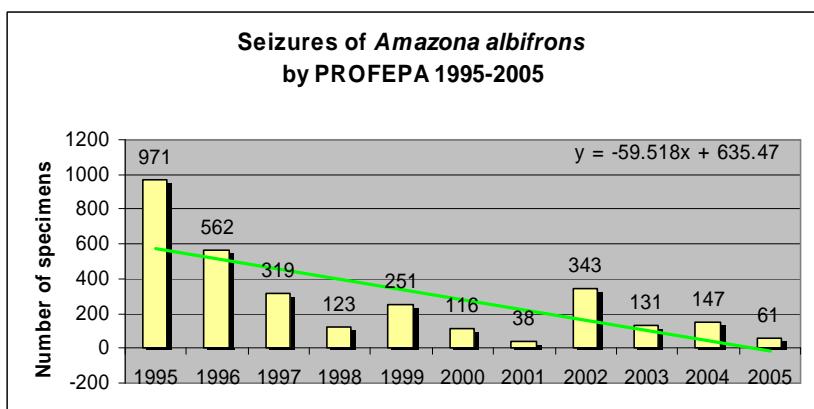
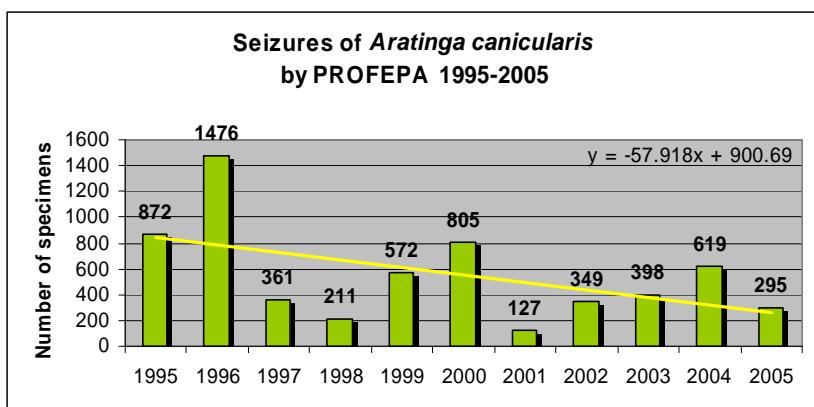
How many parrots die? Why?

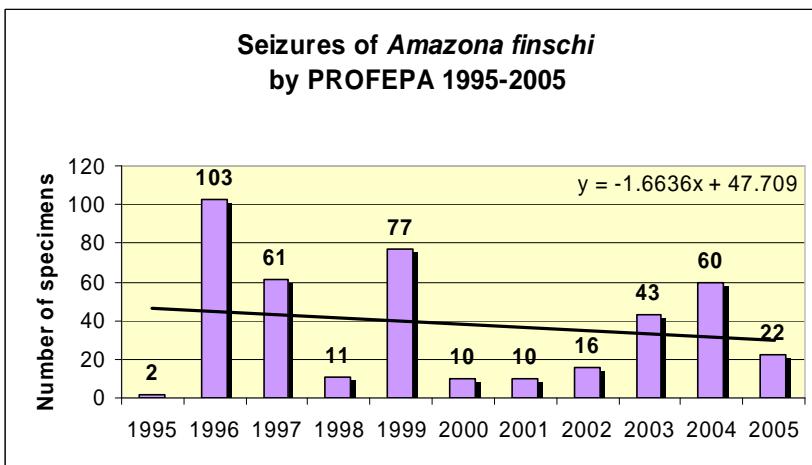
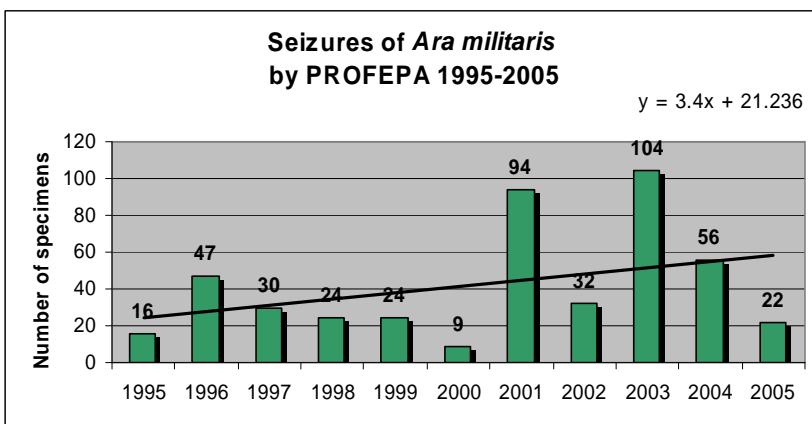
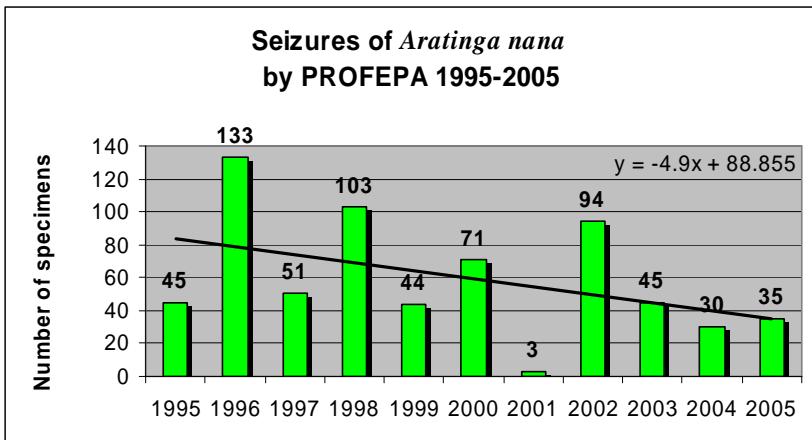
Any other information

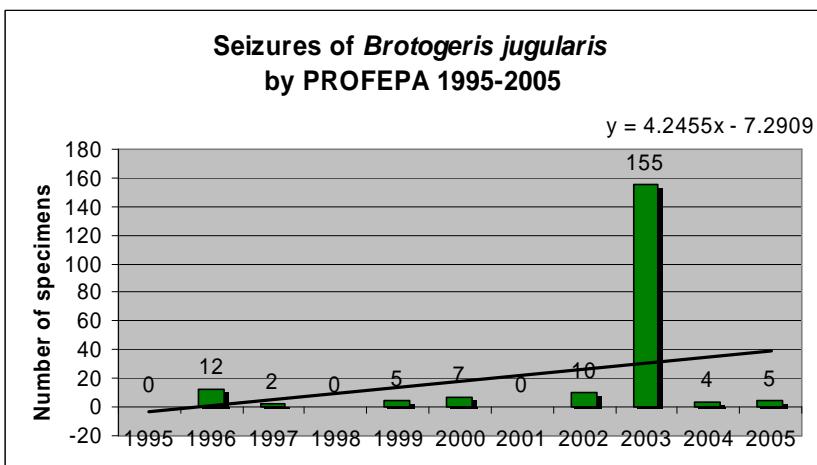
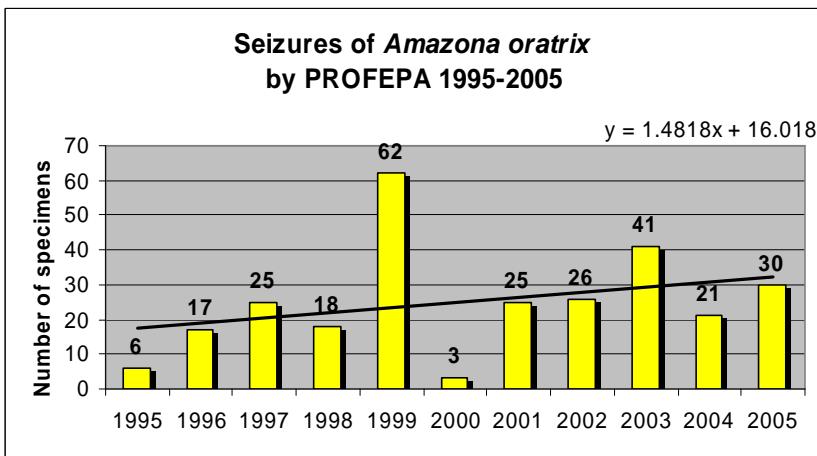
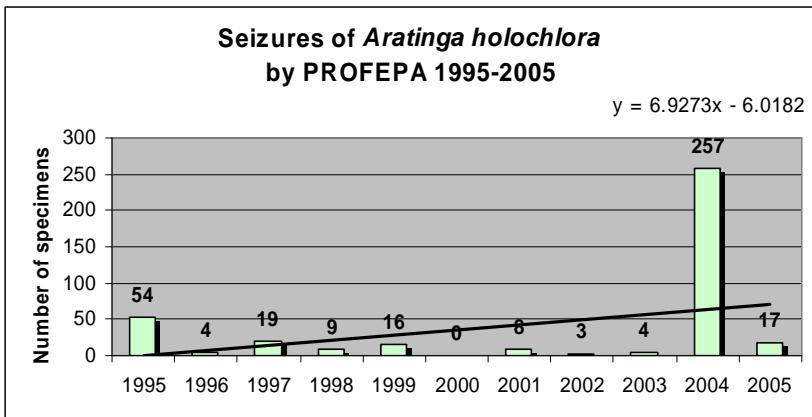
Would a ban help your job?

Parrot seizure graphs by species

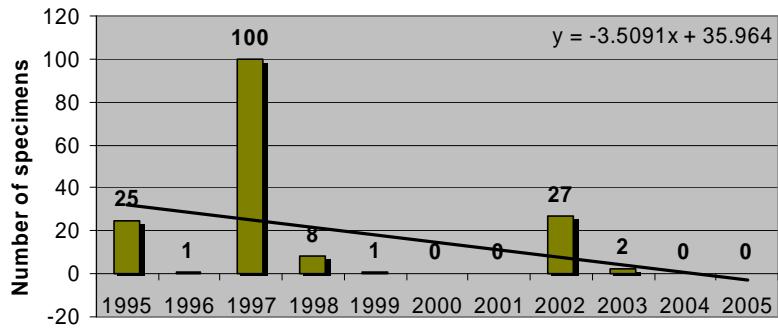
Mexico seizures



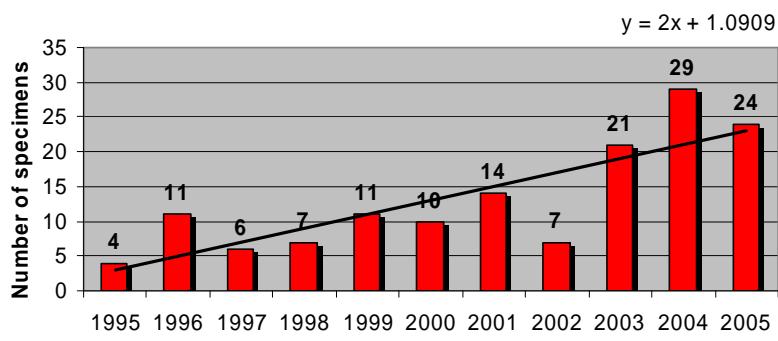




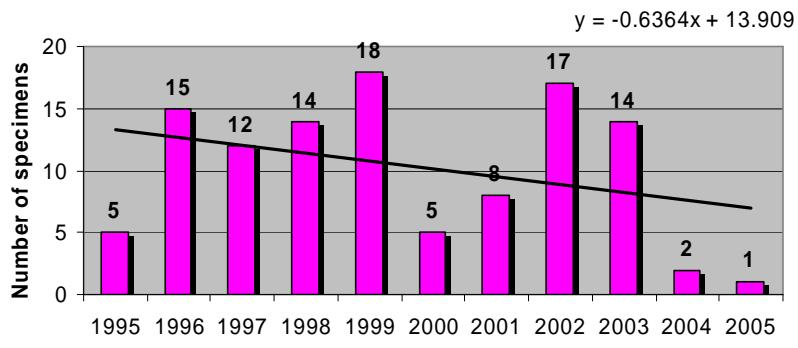
**Seizures of *Aratinga strenua*
by PROFEPA 1995-2005**

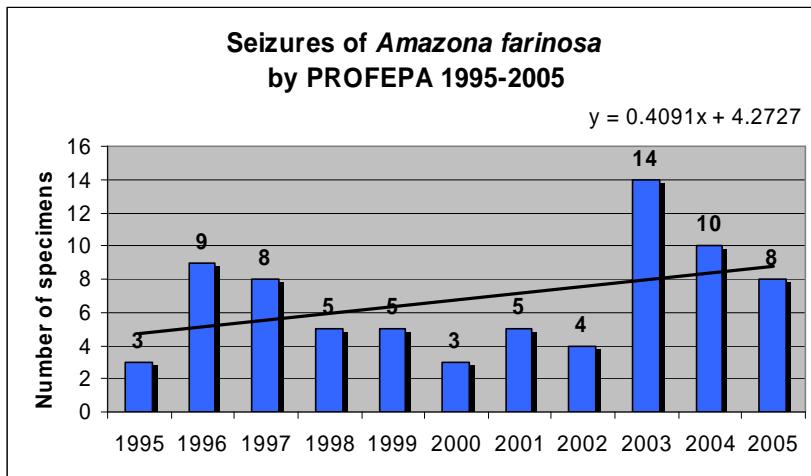
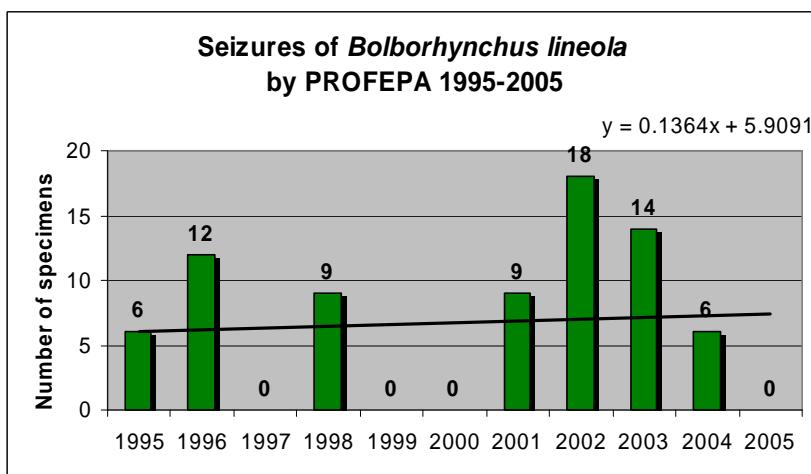
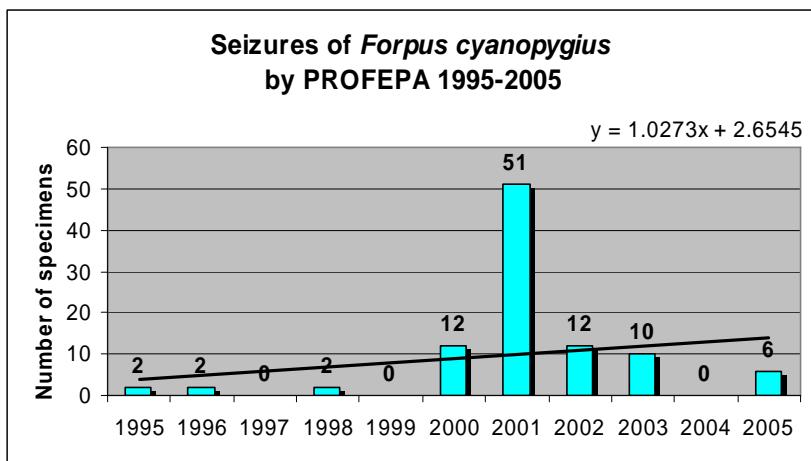


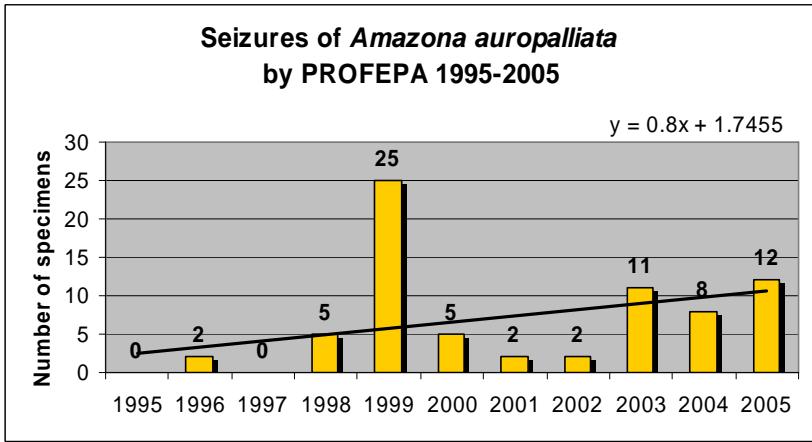
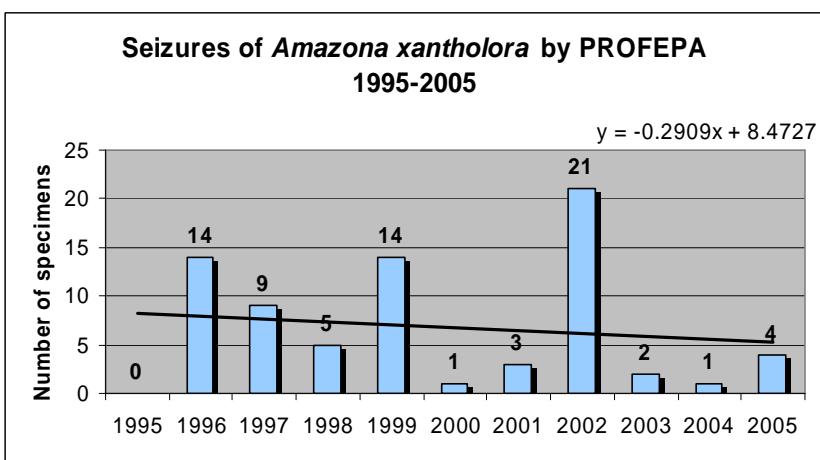
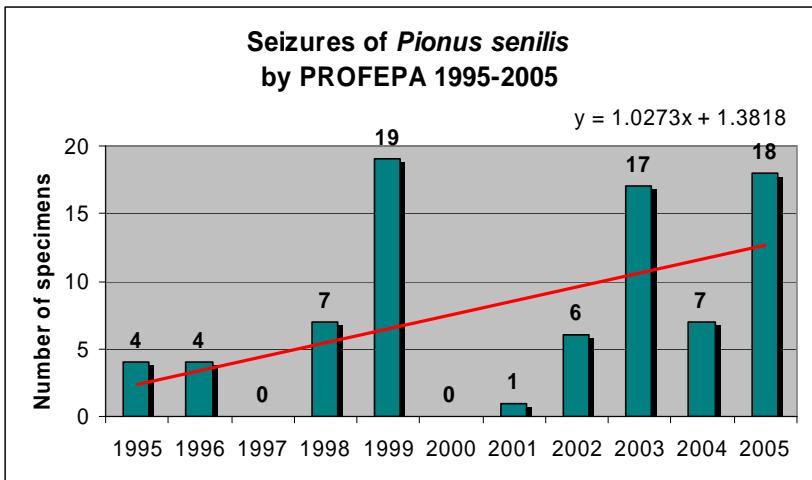
**Seizures of *Ara macao*
by PROFEPA 1995-2005**

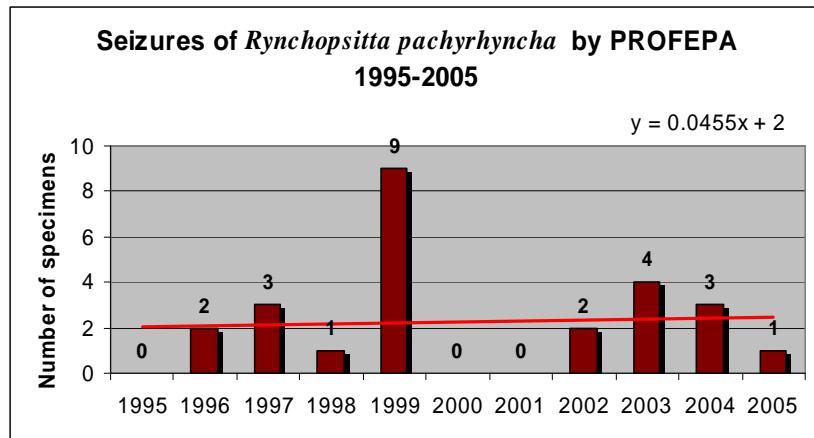


**Seizures of *Amazona viridigenalis*
by PROFEPA 1995-2005**









USA seizures

