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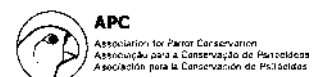
# Parrots

Edited by Noel Snyder, Philip McGowan,  
James Gilardi, and Alejandro Grajal



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*The Wildlife Conservation Society (WCS) formerly the New York Zoological Society* has been dedicated to preserving the earth's wildlife and ecosystems since its establishment in 1895. WCS relies on long-term field studies to gather information on wildlife needs, and has forged numerous productive relationships with governments and local conservation organisations. WCS provided staff, communications, and administrative assistance for the production of this Action Plan. WCS also provided funding for editorial interns, and logistics for the second and final editorial meeting in New York.

*The British Airways Assisting Conservation (BAAC)* scheme was established in 1983 and provides logistical support for specific conservation projects, focusing on preserving the essential variety of life on Earth and encouraging the responsible use and sustainable management of the Earth's natural resources. BAAC provided air travel for delegates from Australia, Africa, Europe, and the USA to the Parrot Action Plan meeting where the framework of the plan was discussed and agreed. BA also provided travel for the final editorial meeting.

*The National Audubon Society (NAS)* founded in 1905 and with over 550,000 members in 518 chapters throughout the Americas, the National Audubon Society advances its mission to conserve and restore natural ecosystems, focusing on birds, other wildlife and their habitats for the benefit of humanity and the earth's biological diversity. NAS provided staff, communications, and editorial assistance for the production of this Action Plan.

*The Association for Parrot Conservation (APC)* was founded in 1993. Its mission is to promote the conservation of wild parrot populations through scientific research, policy recommendations, communication, and education. As a volunteer scientific organisation, the guiding principle of the APC is to promote techniques and strategies that maximise the conservation of biological diversity. APC provided time and communications support for this Action Plan.

*The Research Centre for African Parrot Conservation (RCAPC)* has recently been established to provide biological information that will underpin efforts to conserve the threatened parrots of Africa and its islands. As a research centre, RCAPC seeks to apply contemporary principles of conservation biology to issues in the management of parrot populations, both in the wild and captivity. Pan African collaboration and co-operation is central to this work. RCAPC was the focus for African input to the plan.

*The Birds Australia Parrot Association (BAPA)* is a specialist group attached to Birds Australia (formerly Royal Australian Ornithologists Union), with aims to promote an interest in parrots of the Australian region and their conservation. It is a strong supporter of the Parrot Action Plan and has provided extensive input into the sections relating to Australia, New Zealand, and the south-west Pacific region.

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# Foreword

Parrots have, for centuries, been taken into our homes because of their beauty, charm, hardiness, and supposed ability to “talk”. This has created a domestic demand, involving hundreds of thousands of birds annually on a global basis, resulting in many parrot taxa having a high monetary value. The large charismatic mammals: whales, tigers, elephants, rhinoceroses, gorillas, and pandas have to contend with a host of threats directly related to their rarity and monetary value, but none of these are subject to capture for live domestic use. No other group of birds has been subjected to more exploitation, numerically and financially, than parrots.

Parrots are also exposed to hunting pressures but above all to habitat loss, alteration and fragmentation. As ecosystems around the world are destroyed or degraded, so the survival prospects of the parrots decline. And yet parrots have the potential to act as charismatic “flagship species” to highlight the urgent need to preserve habitats. In doing so habitat protection can be afforded to a multitude of species.

There is an urgent need to change the attitudes of two special interest groups. Firstly, the many millions of owners that keep parrots as pet or companion animals, or for breeding for the pet trade, should be urged to accept more responsibility for the survival of parrots in the wild and the welfare of existing captive parrots. The second category pertains to the many businesses that are unquestionably built upon the “parrot phenomenon”: the tens of millions of parrots being kept in captivity. These companies that trade parrots, their food, cages and other goods, should be encouraged to donate a proportion of their global annual income to parrot conservation. But with only one or two commendable exceptions, few of these companies donate anything to the conservation of the birds that support their wealth. If parrots are to survive, these attitudes must change.

Governments of the parrot range countries also need to address the unsustainable nature of parrot markets operating within their borders. And whilst it is difficult to propose a species for which a convincing scientific case for sustainable use can be made, current harvesting levels are threatening a number of species and should be addressed.

The few countries still allowing “quotas” of parrots for export should be required to provide appropriate scientific justification for this.

Most governments, however, seek, in principle, to protect and preserve their wildlife, and have considerable expertise at their disposal. This was clearly demonstrated when the joint compilers of this Action Plan sent out requests for updated information on threatened parrot species. The response from all quarters was swift and positive, and the result is an effective document that will guide conservation efforts for several years.

Special thanks are due to the editors, Noel Snyder, Phil McGowan, Jamie Gilardi, and Alejandro Grajal, for their extended commitment to the project and their determination to achieve the highest standards. Needless to say, the contributions of the many experts around the world were invaluable. Thanks are also due to Rod Hall MBE of British Airways Assisting Conservation (BAAC), now part of British Airways Environment Department. It was Rod’s idea to bring together the world’s leading parrot people to start this Parrot Action Plan process, and British Airways (BA) provided flights to bring ten key participants to the conference organised by the World Parrot Trust in London in 1995. BA also provided flights to Africa, and to the final review meeting in New York.

There is no shortage of field biologists interested in working with the parrots and people prepared to commit themselves to the fascinating and often urgent tasks at hand. Priorities for many of these projects emerge clearly from this Action Plan. Given that the interest and expertise exist, we must ensure that the next steps, which are the provision of the necessary funds, and the support of the relevant authorities, are taken.

The sheer enthusiasm that has carried this Action Plan to completion must be sustained. Readers may well be able to help support the many ongoing activities discussed in this Plan, or initiate action where no work is currently under way. The authors and the World Parrot Trust are available to advise and co-ordinate these efforts.

Michael Reynolds  
Hon. Director, World Parrot Trust

# Acknowledgements

This Action Plan is dedicated to the many specialists who have sought to promote the cause of parrot conservation throughout the world, and who have unhesitatingly shared their knowledge and spared their time so that this Action Plan may help that cause. In particular, we dedicate this plan to the late Olaf Wirminghaus who died from cancer in the final stages of his PhD study on the Cape parrot in South Africa, and to the late Gabriel Charles of St Lucia, whose successful efforts to rescue the St Lucia parrot from extinction stand as an inspiration to all.

The plan was stimulated by a meeting chaired by Joe Forshaw, arranged by the World Parrot Trust, and extensively supported by British Airways Assisting Conservation in June 1995. The meeting was proposed by Rod Hall (British Airways Assisting Conservation) and Mike Reynolds (World Parrot Trust) as the starting point for the production of an Action Plan for the parrots of the world. This followed a previous attempt to prepare an Action Plan in the early 1990s which has been widely cited. We gratefully acknowledge the support provided by Rod and Mike throughout the compilation of this plan. At the June 1995 meeting, the Association for Parrot Conservation, BirdLife International, the Species Survival Commission, and the World Parrot Trust committed themselves to the publication of an Action Plan. These organisations have been joined by the Wildlife Conservation Society, Wildlife Preservation Trust International, National Audubon Society, Birds Australia Parrot Association, and the Research Centre for African Parrot Conservation to ensure representative coverage from all parts of the world where parrots are found. Without the commitment of any one of these organisations the Action Plan would be of limited value and their continued support is readily acknowledged.

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Noel Snyder, Philip McGowan, James Gilardi, and Alejandro Grajal

# Executive Summary

Of the approximately 330 known parrot species, 95 are listed in this Action Plan. Approximately half of these occur in the Western Hemisphere and half in the Eastern Hemisphere. The majority are found in tropical regions. The proportion of extant parrot species that are threatened (28 %) is one of the highest for any major family of birds. Yet the number of parrot species that have been given careful field study to determine the best means of conservation remains low. Comprehensive conservation strategies are not yet possible for many species because not enough information is available to allow rigorous identification of causes of endangerment with confidence. Because of this relative dearth of information, Chapters 1 and 2 of this Action Plan place substantial emphasis on conservation research methods and strategies applicable to parrots in general.

Parrots face a great variety of threats, ranging from the impacts of introduced predators and competitors to habitat destruction and shooting for food. For nearly 78 species of this Action Plan, habitat destruction and fragmentation are the principal causes of endangerment. Perhaps more than any other bird group, parrots also face the considerable extra pressures of the bird trade. In this Action Plan, 36 species are threatened primarily by insufficiently controlled and unsustainable harvest from the wild. Much of this harvest is fuelled by local demand, although international trade (both legal and illegal) plays a significant role for some species. Between 1990 and 1994 nearly two million parrots were traded on the world market (TRAFFIC 1999). International trade also poses additional threats of establishment of feral parrot populations in non-native countries and the global spread of exotic avian diseases. Dealing with the problems posed by the bird trade involves addressing complex internal and external regulation dilemmas within the affected countries.

Chapters 3 through 7 concern the threatened parrots of the world. For convenience, the world is split into four regions:

- Australia, New Zealand, and the south-west Pacific,
- Asia, including continental Asia, Indonesia, and the Philippines,
- Africa, and
- The Neotropics (Americas)

Each regional account outlines broad issues that affect the parrots of the region and then discusses potential conservation solutions. In the first three regions, there are also outlines of specific projects that address the most threatened species and some other regional priorities. For the Neotropical region, the majority of priority projects are included in the “actions” section of each species account. The regional accounts are followed by individual species accounts for all threatened species. They include information on current status, distribution, threats and actions necessary to ensure continued survival.

General recommendations and conclusions include:

- An urgent need to obtain reliable information on causes of endangerment for many species that have not yet been carefully studied. Effective conservation strategies should be solidly based on reliable science.
- All solutions to the conservation problems of parrots present tradeoffs and each particular solution must be tailored to the species’ individual requirements and limitations.
- Parrots often offer special potential to serve as flagship species for the protection of crucial ecosystems.
- Parrots also offer great potential for the development of environmental education and ecotourism programmes.
- The detrimental effects of bird trade pose major threats to parrots. Developing effective solutions to these threats represents an especially high priority.
- Substantial biological, social, political and economic difficulties pose major hurdles for achieving sustainable harvest of wild parrot populations. No demonstrable successful harvesting projects with free-flying parrots have been established to date.

This plan is designed to aid managers and researchers entrusted with the conservation of parrot species to understand both how best to evaluate the threats faced by individual species and how best to design appropriate conservation strategies to counter the threats involved. It is intended as much to be an evaluation of conservation techniques as to be a set of specific recommendations for individual species.

# List of abbreviations

APC	Association for Parrot Conservation	IUCN	International Union for Conservation of Nature and Natural Resources
BirdLife-IP	BirdLife Indonesia Programme	JWPT	Jersey Wildlife Preservation Trust
BA	British Airways	LIPI	Indonesian Institute of Science
BAAC	British Airways Assisting Conservation	MTI	Monterrey Technological Institute
BAPA	Birds Australia Parrot Association	NAS	National Audubon Society
BPCBR	Bosque Protector Cerro Blanco Reserve	NGOs	Non-governmental organisations
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora	NIPAS	National Integrated Protected Area System
CMC	Centre for Marine Conservation, USA	PHPA	Forest Protection and Nature Conservation
COA	Council of Agriculture, Taiwan	PHVA	Population and Habitat Viability Analysis
CONABIO	Mexican Commission on Biodiversity	PSL	Environmental Study Centres
CPRAA	Permanent Committee for the Recovery of the Spix's Macaw	RCAPC	Research Centre for African Parrot Conservation
CZS	Chicago Zoological Society	SSC	Species Survival Commission
DENR	Department of Natural Resources, the Philippines	SSKSDA	PHPA Field Offices
DETR	Department of the Environment, Transport and the Regions, UK	UMAs	Units for Wildlife Use and Conservation, Mexico
DINAMI	Ministry of Mining, Ecuador	UNEP	United Nations Environment Programme
DNA	Deoxyribonucleic acid	WCMC	World Conservation Monitoring Centre
IADB	Inter American Development Bank	WCS	Wildlife Conservation Society
IBAMA	Institute for the Environment and Natural Renewable Resources	WPT	World Parrot Trust
		WPTI	Wildlife Preservation Trust International
		WWF	World Wildlife Fund for Nature

# Introduction

Parrots (Psittaciformes) are one of the most endangered groups of birds in the world, due in part to their popularity in the bird trade. Yet the bird trade is not the only threat currently facing this group, and conservation efforts on behalf of parrots must address stress factors that are as complex as those found with any other wildlife group. Unfortunately, many of the most threatened parrot species have not yet received the comprehensive field study that would allow identification of the most appropriate strategies for their conservation. Nevertheless, it is valuable to review the status of knowledge concerning the threatened parrots of the world to:

1. Provide a summary of existing knowledge.
2. Identify the most pressing gaps in information.
3. Offer some general recommendations on conservation techniques.
4. Recommend conservation actions where appropriate.

The major goal of this Action Plan is to ensure the conservation of the world's parrot species. This is to be achieved by providing researchers, managers, and local groups with practical recommendations for conducting conservation programs for the threatened parrot species and populations endemic to their regions of the world.

The Parrot Action Plan is by definition action-oriented. It is built upon the most up-to-date assessments of distribution, status, and threats to endangered parrot species, and relates these data to the considerable experience that conservation biologists have gained in attempting to prevent threatened populations from becoming extinct. The plan is not intended to be a treatise on parrot biology. For enhanced understanding, it should be read in conjunction with general treatments of parrot biology and conservation available elsewhere (e.g., Collar and Stuart 1985, Forshaw 1989, Beissinger and Snyder 1992, Joseph 1992, Garnett 1992, Collar *et al.* 1992, and Juniper and Parr 1998).

## Parrots and humans

Parrots are among the most familiar of bird species to the general public, and are generally held in esteem and affection even by people uninterested in natural history or conservation. Ironically, it is our overwhelmingly positive responses to these birds that have been the root cause of the conservation woes of many species. Because of their attractive colours and abilities to imitate human speech, parrots have been kept in captivity by many different

cultures worldwide, ranging from the ancient Greeks and Romans to native tribes of the Caribbean. Captive rearing of parrots to obtain feathers for ceremonial purposes was a widespread activity many centuries ago among the native peoples of Mexico. Parrots have also been valued historically as objects of trade between cultures, leading to their distribution far beyond the boundaries of their natural ranges and the establishment of numerous feral exotic populations. Today, 95 of the approximately 330 extant species of parrots worldwide are considered at some risk of extinction (Collar *et al.* 1994). This proportion is higher than for almost all other major groups of birds.

Despite their familiarity as cage birds, most parrot species have not been the subject of detailed ecological and conservation studies. In part, this situation of relative neglect has resulted from an association of many species with remote habitats far from centres of learning. In part it is due to the difficulties in conducting studies on species that have large home ranges, are often difficult to capture for individual marking purposes, and are often canopy dwellers in tropical forests, nesting in elevated tree cavities that are challenging to reach.

A hand reared pet parrot (blue-fronted amazon).



Despite the difficulties involved in their study, parrots often present major conservation opportunities. As conspicuous and attractive birds, they can often serve as flagship species for the preservation of threatened ecosystems, and because their range needs are often large, they often can provide important justifications for the saving of quantitatively significant amounts of habitat. Their spectacular congregations at clay licks, waterholes, and mass roosts often present important potentials for ecotourism benefits for local communities, and for the development of conservation education efforts.

## Threats

The plight of parrots is due to many factors. Two threats stand out as especially important; habitat destruction and fragmentation, and trapping for the bird trade. Of the 95 species considered in this Plan, habitat destruction and fragmentation endanger 78 species while trade endangers 36 species. Diminished international trade has been dwarfed by significant growth in internal trade. For many species, the threats of habitat loss and trade act concurrently, so that it is difficult to determine which threat might be the most severe. For example, 29 species are currently threatened by a combination of habitat destruction and intense trade, and eight species are threatened by combined habitat destruction and introduced predators or competitors. However, these factors are clearly not the only causes of declining parrot populations. In other cases, large-scale reductions in parrot populations have occurred in spite of the persistence of natural habitats and an absence of trade. Introduced predators or competitors have apparently threatened 16 species, while others have suffered significantly from hunting for food or feathers, or to protect crops (nine species). Though not well documented, it is also reasonably likely that introduced diseases have been a major factor in the woes of some species, for example the extinct Carolina parakeet (see Snyder *et al.* 1987). It is thought that introduced diseases possibly endanger two species, and three are possibly hybridising with related taxa.

The principle threats vary geographically, temporally, and with the specific characteristics of the species involved; introduced predators and competitors have been a major threat primarily for parrot populations on oceanic islands; hunting for food is a principle threat for relatively large species; and trade has been extremely damaging for many highly charismatic or colourful species, especially for those that are extraordinarily talented in imitating human speech. While legal international trade has been declining in magnitude for the past decade (due to CITES regulations, passage of various national regulations, and increased law enforcement activities), internal trade still remains a major problem in many countries. Illegal internal and

international trade imposes grave threats on certain parrot species.

Some parrot species represent major conservation dilemmas, as their feeding habits make them competitors for agricultural crops. Finding acceptable solutions to crop damage problems without extermination of the parrots involved is one of the most difficult aspects of conservation of a significant number of species.

Most of the specific threats faced by parrots can be traced to various human activities. Consequently, lasting conservation of many species will entail changing various human practices that directly and indirectly affect the species in question. For this reason, education efforts and generation of public awareness and support are of major importance in the conservation of most species.

## Structure of the Action Plan

The second chapter of the Action Plan considers general aspects of parrot conservation, while the remaining chapters provide detailed species by species status accounts and conservation recommendations. Particular emphasis is placed on the need for sound knowledge of the problems faced by individual species and the potential conservation actions required. Such information should normally be gathered and evaluated before specific prescriptions are advanced. Premature judgements based on incorrect information can waste valuable time and resources and greatly diminish the prospects for effective conservation. This is not meant to sanction a lack of action on behalf of species that are critically threatened simply because all research answers are not yet in. For such species provisional recommendations should be developed and followed, but not as a continuing substitute for obtaining the scientifically rigorous data that will allow development of comprehensive conservation strategies.

Because resources for conservation are limited, it is extremely important to maximise the efficiency of each programme. Conservation approaches will necessarily vary among individual species. It is essential that every programme be continuously evaluated for effectiveness and that conservation actions be adaptively modified whenever success remains elusive.

Chapter 2 of the Action Plan also discusses principles that should apply to the conservation of all parrot species. Subsections include determinations of population sizes, ranges, and trends; determinations of causes of decline; and general evaluations of conservation alternatives. The principles involved are for the most part not specific to parrots, and some examples to illustrate principles are drawn from other groups. Nevertheless, emphasis is placed on the unique characteristics of parrots that pose special problems and opportunities in the application of conservation techniques.

Chapters 3 to 7 provide the most up-to-date information available on the status and distribution of, and threats to, 102 species which include 95 globally-threatened parrots, and seven removals from the original list (Collar *et al.* 1994). The species are organised into four main regions: Australia, New Zealand, and the south-west Pacific; Asia, (including continental Asia, Indonesia, and the Philippines); Africa; and the Neotropics (Americas). A general overview, including threats and conservation solutions, and detailed species accounts for all threatened taxa are provided for each region. Priority conservation projects are discussed as text boxes for Australia, Asia, and Africa. The majority of the priority projects within the Neotropical section are included in the “actions” section of each species account.

Initially, the species considered were those listed in *Birds to Watch 2: the world list of threatened birds* (Collar *et al.* 1994), which is also the official IUCN list of threatened birds (see IUCN 1996). Species included in *Birds to Watch 2* are drawn from the list of species proposed by Sibley and Monroe (1990, 1993). This list remains controversial but has been adopted by both BirdLife International and CITES. It is followed here more in the interests of standardisation than out of complete agreement with the species limits and sequence proposed.

The updated information in this Action Plan, itself a first edition, produced several changes to the original *Birds to Watch 2*. These changes fall into four categories: i) changes in the threat category for species which remain threatened; ii) removals from the Red List, which have been agreed with BirdLife International (7 species); iii) taxonomic reappraisals that suggest a threatened taxon might be most appropriately treated as a species, and hence should be added to the list (3 species); iv) species previously considered non-threatened, which are proposed here for inclusion on the Red List (4 species plus one group of populations).

Classifying species as to the degree of threat is a controversial endeavour, as it is commonly extremely difficult to predict how likely extinction may be, especially in cases where detailed studies of individual species have been lacking. Various efforts have been made to base classifications on numerical criteria for population sizes and trends and on range sizes. Although no numerical scheme has yet achieved consensus support of the conservation community, this Action Plan follows the IUCN Categories of Threat (IUCN, 1994). The Categories utilised are Extinct in the Wild, Critically Endangered, Endangered, and Vulnerable (see Appendix 2).