Latin American Falconiformes

Conservation Assessment & Management Plan

Working Draft Report

Edited by

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A Collaborative Initiative

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August 2000

Latin American Falconiformes Conservation Assessment and Management Plan

Working Draft

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Section 1
Introduction and Overview

Latin American Falconiformes Conservation Assessment and Management Plan

Introduction

Reduction and fragmentation of wildlife populations and habitat are occurring at a rapid and accelerating rate worldwide. For an increasing number of taxa, the results are small and isolated populations at risk of extinction. A rapidly expanding human population, now estimated at 5.25 billion, is expected to increase to 8 billion by the year 2025. This expansion and concomitant utilisation of resources has momentum that cannot be stopped, the result being a decreased capacity for all other species to exist simultaneously on the planet.

In many parts of the Southern Hemisphere, habitat destruction and the over-exploitation of wildlife have become increasing threats to the survival of natural environments. As wildlife populations diminish through habitat loss, fragmentation, environmental change and other factors, their ecological roles in ensuring a well-balanced, regulated and sustainable ecosystem also are reduced. Still, most conservation actions are directed toward the protection of habitat and reserves, rather than the conservation and management of the wildlife components that also are critical to the long-term survival of ecosystems.

To ensure viable ecosystem functions, biologists and wildlife managers realise that management strategies must be adopted that will reduce the risk of extinction. These strategies will be global in nature and will include habitat preservation, intensified information gathering in the field, investigations regarding the ecological roles of key species, the development of improved biological monitoring techniques, and in some cases, scientifically managed captive populations that can interact genetically and demographically with wild populations.

Conservation Assessment and Management Plans (CAMPs)

Within the Species Survival Commission (SSC) of IUCN-The World Conservation Union, the primary goal of the Conservation Breeding Specialist Group (CBSG) is to contribute to the development of holistic and viable conservation strategies and management action plans. Toward this goal, CBSG is collaborating with agencies and other Specialist Groups worldwide in the development of scientifically based processes, on both a global and regional basis, with the goal of facilitating an integrated approach to species management for conservation. One of these tools is called Conservation Assessment and Management Plan (CAMP).

CAMPs provide strategic guidance for the conservation of threatened taxa. This may include recommendations for field investigations and improved data-gathering methods, as well as the

application of intensive management techniques that are increasingly required for survival and recovery of threatened taxa. The CAMP process ensures an objective overall view of the status of the taxa in question with the intent of improving the effectiveness and synergy of conservation efforts. CAMPs are also one means of testing the applicability of the new IUCN Red List criteria for threat (Mace and Stuart 1994) as well as the scope of their applicability. Additionally, CAMPs are an attempt to produce ongoing summaries of current data for groups of taxa, providing a mechanism for recording and tracking of species status.

CAMP recommendations are broad-based: of paramount importance are those recommendations related to field surveys, applied investigations and *in situ* conservation and management programs. Ultimately, the survival of taxa in the wild will depend on the availability of field data regarding the status of natural populations, the ecological role of the species (and its interdependence on other taxa), life history parameters, and applied investigations related to management and conservation. Where such data are lacking, a primary recommendation of the CAMP will be to stimulate their collection.

In addition to management of taxa in their natural habitat, conservation programs leading to viable populations of threatened species may sometimes need a captive component. In general, captive populations and programs can serve several roles in holistic conservation: 1) as genetic and demographic reservoirs that can be used to reinforce wild populations either by revitalising populations that are languishing in natural habitats or by re-establishing by translocation populations that have become depleted or extinct; 2) by providing scientific resources for information and technology that can be used to protect and manage wild populations; and 3) as living ambassadors that can educate the public as well as generate interest in and funds for *in situ* conservation.

Captive management programs should only be developed in conjunction with ongoing field investigations and holistic conservation initiatives. It should be emphasised that captive breeding is not the answer to the extinction crisis and should not be viewed as a complete solution. It is one option along a continuum of strategic options for population recovery. If implemented, these programs should be part of an integrated species management plan that includes habitat management, limiting factors management, field research, and public education. A recovery effort that is not part of a holistic population management program in the wild does not have a high probability of making a meaningful contribution to conservation.

This document does not intend to promote the establishment of captive programs in isolation from *in situ* programs. Rather, it is proposed that, when captive populations can assist species conservation, captive and wild populations should, and can be, intensively and interactively managed together. For instance, with the development of appropriate techniques, interchanges of animals between captive and wild populations can be undertaken as needed and as feasible to maintain genetic and demographic viability of the species in the wild.

Latin America

Over the past 20 years, the Neotropics have become a focal point for conservation efforts. Most species inhabiting this ecologically important region are particularly susceptible to human disturbance (both hunting and habitat destruction), and a significant number now are considered threatened. Many of these species are candidates for use as bio-indicators for monitoring and management of protected areas throughout Latin America, as well as for flagship species for the conservation of Neotropical rainforests.

The loss of habitat is the most widespread threat and affects the majority of endemic species. Habitat loss is directly associated with human activities such as logging, burning, ranching, agriculture, road construction, and industrial development. Pesticides affect a high proportion of species, particularly those with ranges extending into areas of agriculture where these products are used. Human persecution, equally, affects the population status and trends of many raptor species.

Future conservation efforts must focus on investing resources in the preservation of habitat, resolving conflict and minimising pesticide impacts.. The present document provides an excellent platform for assessing the status and prioritising the conservation requirements of Latin American raptors, and provides a basic reference for any conservationist or biologist with an interest in the conservation of raptors.

The Latin American Falconiformes CAMP Process

The CAMP process assembles expertise on wild and captive management for the taxonomic group under review in an intensive and interactive workshop format. The purpose of the Latin American Falconiformes Conservation Assessment and Management Plan (CAMP) workshop was to assemble all relevant data on status and trends of African raptor populations in light of the threats they face and thereby to assist in developing a conservation strategy for these species.

This report is a result of several years of effort, commencing with discussions held at the 1993 Raptor Research Foundation meetings during which a Memorandum of Understanding (MOU) was signed among BirdLife International, Fonds d'Intervention Pour les Rapaces, The Hawk and Owl Trust, Hawk Mountain Sanctuary, the IUCN/SSC Conservation Breeding Specialist Group, The Peregrine Fund, The Raptor Conservation Group, The Raptor Research Foundation, the National Birds of Prey Centre and the World Working Group on Birds of Prey and Owls. This MOU provided a framework for co-operation among the signatories as they work together to develop a Conservation Action Plan for the world's raptors. It was agreed that the group would collaboratively carry out a CAMP process for this taxon, as one of the first steps in the development of this Plan.

In April 1995, a group of representatives from each of the above organisations met in Badajoz, Spain to review a 500-page draft workbook Susie Ellis of CBSG had compiled based on

information in the recently-published *Handbook of the Birds of the World Volume 2* (del Hoyo et al., 1994) and decided on a procedure for updating the taxon data sheets (i.e., species-by-species accounts of the conservation status of the world's raptors) that comprise the bulk of the workbook. Initially, taxon data sheets were reviewed by selected 'geographic editors' who circulated them to experts in their region for review; regional reviewers were asked to add comments and refine the draft taxon data sheets and return them to the 'geographic editors.' These editors will then send their sheets to 'taxonomic editors' who will draft the final edits. For Latin American Falconiformes, the geographic editor was Cesar Márquez Reyes, who convened a Raptor CAMP workshop for Latin American regional experts at the V Congress of Neotropical Ornithology in Asunción, Paraguay in August 1995. More than 30 specialists participated in the workshop, which yielded a considerable amount of new information regarding the distribution, abundance and conservation status of 100 South and Central American Falconiformes. This document is a compilation of the data assembled at this workshop and in subsequent review by Cesar Márquez Reyes and the other editors of this document.

CAMP Workshop Goals

The goals of the CAMP workshop were:

1. To review the population status and demographic trends for South and Central American Falconiformes, to apply the New IUCN Red List criteria for threat.

2. To provide recommendations for *in situ* management, research and information-gathering for all reviewed taxa, including: field investigations; surveys, population monitoring and investigation of limiting factors; taxonomic studies; recommendations for Population and Habitat Viability Assessment workshops; more intensive management in the wild; or other specific research.

3. To provide recommendations, where appropriate, for *ex situ* management and research for the taxa, including husbandry, maintenance of viable captive populations of the more threatened species (where appropriate, feasible, and desirable) and the development of collaborative captive/field programs.

4. Produce a Conservation Assessment and Management Plan, presenting the assessments and recommendations for distribution and review by all parties interested in raptor conservation.

The New IUCN Red List Categories

The threatened species categories previously used in IUCN Red Data Books and Red Lists were in place, with some modification, for almost 30 years (Mace *et al.* 1992). The Mace-Lande criteria (Mace and Lande 1991) were one developmental step in an attempt to make those

categories more explicit. These criteria subsequently have been revised and formulated into the new IUCN Red List Categories (IUCN 1996) which currently are being used in the CAMP process. BirdLife International used a very similar version of the criteria to prepare *Birds to Watch 2* (Collar et al. 1994), from which bird listings were derived for the 1996 IUCN Red List of Threatened Species (IUCN 1996).

The Latin American Falconiformes CAMP evaluated 100 taxa on a taxon-by-taxon basis in terms of their current and projected status in the wild to assign priorities for conservation action or information-gathering activities. Data used in this evaluation were based primarily on a best-estimate basis as gathered by CAMP organisers, and may be subject to further review by other experts in the field.

The New IUCN Red List Categories provide a system that facilitates comparisons across widely different taxa, and is based both on population and distribution criteria. These criteria can be applied to any taxonomic unit at or below the species level, with sufficient range among the different criteria to enable the appropriate listing of taxa from the complete spectrum of taxa, with the exception of micro-organisms (Mace and Stuart 1994).

Specific information on the categories (1994 version) and their use are presented in Section 2, with the complete reference found in Section 5. The New IUCN Red List Categories are: Extinct (EX); Extinct in the Wild (EW); Critically Endangered (CR); Endangered (EN); Vulnerable (VU); Conservation Dependent (CD); Lower Risk (LR); Data Deficient (DD); Not Evaluated (NE).

Definitions of these criteria are based on population viability theory. In assessing threat according to the New IUCN Red List criteria, the taxon reviewers also used information on the status and interaction of habitat and other characteristics. Information about population trends, fragmentation, range, and stochastic environmental events, real and potential, also were considered.

To assist in making recommendations, taxon editors were encouraged to be as quantitative or numerate as possible for two reasons: 1) CAMPs ultimately must establish numerical objectives for viable population sizes and distributions; 2) numbers provide for more objectivity, less ambiguity, more comparability, better communication, and, hence, co-operation. During the workshop, there were many attempts to estimate if the total population of each taxon was greater or less than the thresholds for the numeric criteria for the IUCN Categories of Threat. In some cases, current population estimates for taxa were unavailable or available for species/subspecies within a limited part of their distribution. In all cases, if presented, conservative numerical estimates were used. **When population numbers were estimated, these estimates represented first-attempt, order-of-magnitude educated guesses that were hypotheses for falsification. As such, the workshop participants emphasised that these estimates should not be authoritative for any other purpose than was intended by this process.** The New IUCN Red List categories for the taxa examined during this CAMP exercise are presented in Table 1.

Table 1. Latin American Falconiformes -- Assigned IUCN Red List Categories.

NEW IUCN RED LIST CATEGORY	TAXA	PERCENT OF TOTAL
Endangered	4	4%
Vulnerable	9	11%
Near Threatened	7	7%
Lower Risk	74	74%
Data Deficient	6	6%
TOTAL	100	100%

Threats to Latin American Falconiformes

Raptors should not be viewed in isolation from their environment. The situation facing these and other organisms throughout Latin America is a foretaste of that which will be faced in the future. A variety of factors combine to make birds of prey particularly susceptible to population declines -- even extinction -- resulting from the unprecedented levels of human activity occurring today. Perhaps one of the biggest problems is simply a lack of information, both on the part of scientists as well as the general public, about the interactions of the various factors at play in the community ecosystems as well as how they affect the organisms living within that environment.

Threats to Latin American Falconiformes by IUCN Category of Threat and as determined by CAMP participants and editors are presented in Table 2.

Table 2. Threats facing selected African Falconiformes according to IUCN Red List Category of Threat.

IUCN RED LIST CATEGORY OF THREAT	H abitat Loss	Habitat Fragmentation	Hunting	Pesticides	Poisoning	Human Interference	Decline in Prey Species	Trade	Interspecific Competition	Interspecific Coompetition with Exotics	Power lines
Endangered	4	3				1		1			
Vulnerable	7	7	7		1				1		
Near Threatened	6	6				4					
Lower Risk	45	29	16	11	4		2	2		2	1
Data Deficient	6	4					1				
TOTAL	68	49	23	11	5	5	3	3	1	2	1

Recommendations for Intensive Management and Research Actions

There is insufficient information about many of the interactive factors affecting the survival of Falconiformes in Latin America, as well as globally. For this reason, many of the recommendations for research and management activities for taxa reviewed in this CAMP process include surveys and monitoring, along with investigations into limiting factors. For many species, additional measures also were recommended. These include the management and protection of habitat, as well as research and management aimed at controlling or eliminating the factors that limit species populations.

The development of coordinated efforts (possibly with governmental assistance and integrated management programs) to ameliorate or even negate the effects of threats such as habitat loss need to be carried forward. Combined with these, community-based environmental education programs can be a useful tool to augment the effectiveness of conservation initiatives.

For all taxa reviewed in this Falconiform CAMP, recommendations were generated for the kinds of intensive action necessary for conservation, both in terms of management and research. Population and Habitat Viability Assessment (PHVA) workshops, to develop comprehensive and achievable management plans also were recommended for some species. PHVA workshops provide a means of assembling available detailed biological information on the respective taxa,

evaluating the threats to their habitat, development of management scenarios with immediate and 100-year time-scales, and the formulation of specific management plans with the aid of simulation models.

CAMP editors attempted to develop an integrated approach to the management and research actions needed for the conservation of the species under review. In all cases, an attempt was made to make management and research recommendations based on our knowledge of the various threats affecting the taxa.

With only partial understanding of underlying causes for decline in some taxa, it is sometimes difficult to clearly define specific management actions needed for the conservation. Therefore, "research management" increasingly will become a component of conservation and recovery activities. Research management can be defined as a management program which includes a strong feedback between management activities and an evaluation of the efficacy of the management, as well as response of the taxa to that activity. The frequent need for survey information to evaluate population status emphasises the need to quickly implement intensive survey methodologies, especially for threatened species. Other types of research activities that can enhance our ability to manage these species in the future, such as investigation of foraging locations and ranges, also were identified. The highest priority research and management activities as identified by workshop participants for Falconiformes taxa are listed in Table 3. Longer-term priority activities are listed on the individual taxon data sheets for each species in Section 2.

CAMP editors wish to emphasise that further investigation into population status, demography, and dynamics is urgently needed and will help to develop further management activities that will minimise threats and their effects on these species. For those species that were indicated as being in need of a PHVA workshop in the near future, we wish to urge immediate planning for those evaluations.

Table 3. Research management recommendations for Latin American Falconiformes by IUCN Red List Category of Threat.

New IUCN Red List Category of Threat	Monitoring	Survey	Habitat Management	Limiting Factors Research	Life History Research	Taxonomic Research	Limiting Factors Management	Other	PHVA Pending More Information	PHVA
Endangered	4	4	4	3	4	1	3	2		4
Vulnerable	9	9	5	6	4		6	2	4	3
Near Threatened	7	7	3	5	4		1	1		
Low Risk	69	40	29	16	15	21	11	10	2	1
Data Deficient	6	6	5	6	6	2	1		4	
TOTAL	95	66	46	36	33	24	22	15	10	8

Captive Breeding Recommendations

During the CAMP workshop, all taxa were evaluated relative to their current need for captive propagation. Recommendations were based upon a number of variables, including: immediate need for conservation (population size, IUCN Red List status, population trend, type of captive propagation program), need for or suitability as a surrogate species, existing captive populations, and determination of difficulty as mentioned above. Based on all of the above considerations, in addition to threats and population trends, 25 recommendations for captive programs were made, and 11 were recommended as "pending" more information or the results of a PHVA process (Table 4). For an excellent review of extant Falconiform captive breeding programs, please see Parry-Jones et al. (1998).

CAMP Document Review

This working draft CAMP document was generated as part of the process described earlier in this introduction and summary. Further review and comment will take place after the distribution of this report to a broader audience that includes raptor biologists, wildlife managers, Specialist Group members, academic scientists, regional captive programs, and other interested parties worldwide. This document may be revised and updated as new information

becomes available on the species reviewed.

Table 4. Captive propagation program recommendations by IUCN Red List Category of Threat.

New IUCN Red List Category of Threat	LEVEL OF CAPTIVE PROGRAM				
	LEVEL 1	LEVEL 2	LEVEL 3	Pending	No
Endangered				4	
Vulnerable	1	9		1	
Near Threatened			1	1	5
Lower Risk		1	13	2	58
Data Deficient				4	2
TOTAL	1	10	14	12	65

Editors' Postscript

This CAMP process has provided a platform for assessing the status and prioritising the conservation requirements of Latin American raptors. This document can serve as the basic reference for any conservationist or biologist with an interest in the conservation of raptors. It also is intended to be a living document to be reviewed on a regular basis in order to evaluate the success and/or failure on conservation efforts for Latin American raptors.

The information collated in this CAMP document is an accumulation of many thousands of hours dedicated by raptor biologists, conservationists and enthusiasts from all over the world. The editors would like to express sincere gratitude to all contributors to the vast amount of scientific and anecdotal information that was essential for this initiative, and to the participants in the workshop for taking time away from the V Congress of Neotropical Ornithology to attend the workshop sessions.

We hope that this document will be used to the benefit of Latin American raptors and that in a few years from now the conservation status of at least a few taxa would have improved. We also recognize that the successful conservation of wild species and ecosystems necessitates the development and implementation of active management programs by people and governments living alongside that ecosystem. The recommendations contained within this document are based on conservation need only; adjustments for political and other constraints are the responsibility of the various national and international agencies charged with the preservation of

flora and fauna.

We wish to emphasise that we do not view any of the recommendations contained in this document as "stand-alone" initiatives. Rather, the reader is encouraged to see these activities as components of the overall, urgent need for the conservation of whole ecosystems. Many of the Falconiform species are excellent candidates (as bio-indicators, key species, or flagship species) to help facilitate larger-scale conservation programs. We therefore urge continuing and heightened levels of research, monitoring, and management of protected areas and other natural ecosystems within all range areas in which these unique and wondrous raptors are found.

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Latin American Falconiformes Conservation Assessment and Management Plan

Working Draft

Section 2
CAMP Taxon Data Sheet Categories

CONSERVATION ASSESSMENT AND MANAGEMENT PLAN (CAMP)
TAXON DATA SHEET CATEGORIES
20 April 1995

The Conservation Assessment and Management Plan (CAMP) taxon data sheet is a working document that provides information that can be used to assess the degree of threat and recommend conservation action. The first part of the sheet summarizes information on the status of the wild and captive populations of each taxon. It contains taxonomic, distributional, and demographic information useful in determining which taxa are under greatest threat of extinction. This information can be used to identify priorities for intensive management action for taxa.

SCIENTIFIC NAME: Scientific names of extant taxa: genus and species (or subspecies where appropriate).

NEW IUCN: Tentative new status according to the New IUCN Red List criteria (1994).
- CR = Critically Endangered
- EN = Endangered
- VU = Vulnerable
- CD = Conservation Dependent
- LR = Lower Risk
- DD = Data Deficient
- NE = Not Evaluated

CRITERIA BASED ON: Indicate which of the New IUCN Red List criteria were used to assign a category of threat (see Table 5 this document, as well as Appendix II for the IUCN Red List Reference):
- PR = Population reduction (A1a, or A2b, etc.)
- EO = Extent of occurrence (B1, or B2a, B3c, etc.)
- PE = Population estimates (C1, or C2a, etc.)
- NM = Number of mature individuals (D)
- PX = Probability of extinction (E)

CITES: List the CITES Appendix on which the species is listed, if appropriate.

OTHER: List whether the species has been assigned threatened status in other venues, e.g., nationally or in other conservation assessments.

TAXONOMIC STATUS: This indicates the taxonomic status of the extant taxa. Taxonomic uncertainties may be discussed in this section. Subspecies not considered separately should be listed here along with their distribution.

CURRENT DISTRIBUTION (BREEDING AND WINTERING): List the geographical extent of the breeding and wintering locations of the species.

CONCENTRATED MIGRATION REGIONS: List the regions in which migration is concentrated, especially those in which the birds may face some degree of threat.

HISTORICAL DISTRIBUTION: List the historical distribution of the species

EXTENT OF OCCURRENCE: List the actual size of the area in which the species occurs, if possible. Also list the area contained within the shortest continuous imaginary boundary which can be drawn to encompass all the known, inferred, or projected sites of present occurrence of a taxon, excluding cases of vagrancy (Figure 1). This measure does not take account of discontinuities or disjunctions in the spatial distributions of taxa. Extent of occurrence can often be measured by a minimum convex polygon (the smallest polygon in which no internal angle exceeds 180 degrees and which contains all the sites of occurrence).

A: < 100 km2
B: 101 km2 - 5,000 km2
C: 5,001 km2 - 20,000 km2
D: larger than 20,001 km2

AREA OF OCCUPANCY: List the area within the 'extent of occurrence' which is actually occupied by a taxon, excluding cases of vagrancy. The measure reflects the fact that a taxon will not usually occur throughout the area of its extent of occurrence, which may, for example, contain unsuitable habitats. The area of occupancy is the smallest area essential at any stage to the survival of a taxon (e.g., colonial nesting sites, feeding sites for migratory taxa). The size of the area of occupancy will be a function of the scale at which it is measured, and should be at a scale appropriate to relent biological aspects of the taxon. The criteria include values in km2, and thus to avoid errors in classification the area of occupancy should be measured on grid squares or equivalents which are sufficiently small (see Figure 1).

A: < 10 km2
B: 11 km2 - 500 km2
C: 501 km2 - 2,000 km2
D: larger than 2,001 km2

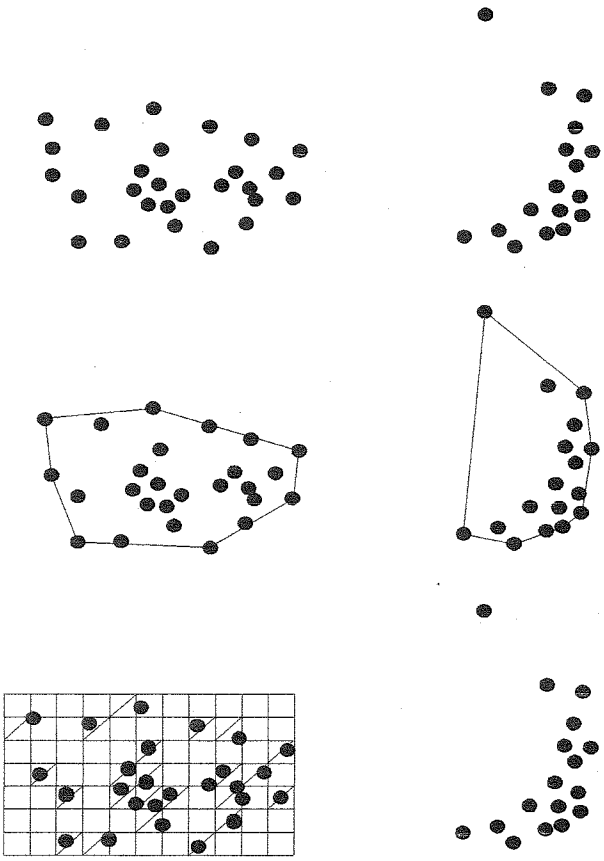

Fig. 1. Two examples of the distinction between the extent of occurrence and area of occupancy. (a) and (b) are the spatial distribution of known, inferred, or projected sites of occurrence. (c) and (d) show one possible boundary to the extent of occurrence, which is the measured area within this boundary. (e) and (f) show one measure of area of occupancy which can be measured by the sum of the occupied grid squares.

LOCATIONS: Note the number of locations in which the taxon is found. If the population is fragmented, indicate "F" after the number of locations.

POPULATION TRENDS - % CHANGE IN YEARS OR IN GENERATIONS: If possible, list the trend of the population (stable, declining, or increasing). If possible, list the percent of change over a particular time frame (e.g., 10 or 20 years) or number of generations. Specify the number of years or generations over which the decline has occurred, e.g., 10%/2g or 20%/20 yrs.

GENERATION TIME: Indicate the number of years in a generation. A generation is defined as the average age of parents in the population.

WORLD POPULATION: List the estimated numbers of pairs in the wild. If specific numbers are unavailable, estimate the general range of the population size.

REGIONAL POPULATION(S): List the estimated number of pairs in any particular region for which there are data, followed by the location.

DATA QUALITY:
List the actual age of the data used to provide the population estimates. Also list the type of data from which the estimates are provided.
1 = Reliable census or population monitoring
2 = General field study
3 = Informal field sightings
4 = Indirect information (trade numbers, habitat availability).

Any combination of above = different data quality in parts of range.

RECENT FIELD STUDIES: List any current or recent field studies, the name of the researcher and the location of the study.

THREATS: List immediate or predicted events that are or may cause significant population declines. These may include:

A = Aircraft
C = Climate
D = Disease
Dp = Decline in prey species
Dr = Drowning
F = Fishing
G = Genetic problems
H = Hunting
Hf = Hunting for food

Hm = Hunting for medicine
Ht = Hunting for trophies
Hyb = Hybridization
I = Human interference, persecution, or disturbance
Ic = Interspecific competition
Ice = Interspecific competition from exotics
Il = Interspecific competition with domestic livestock
L = Loss of habitat
La = Loss of habitat because of exotic animals
Lf = Loss of habitat because of fragmentation
Lp = Loss of habitat because of exotic plants
M = Marine perturbations, including El Ni¤o and other shifts
N = Nutritional disorders or problems
P = Predation
Pe = Predation by exotics
Ps= Pesticides
Pl= Powerlines
Po= Poisoning
Pu= Pollution
S = Catastrophic events
  Sd: drought
  Sf: fire
  Sh: hurricane
  St: tsunami
  Sv: volcano
T = Trade for the live animal market
  Tp: trade for parts, including skins
W = War

TRADE:
Was the species present in Trade according to CITES records? If so, list year(s).

COMMENTS: Note any additional information that is important with respect to the conservation of the species.

RECOMMENDATIONS:
RESEARCH MANAGEMENT:
It should be noted that there is (or should be) a clear relationship between threats and subsequent outlined research/management actions. The "Research/Management" column provides an integrated view of actions to be taken, based on the listed threats. Research management can be defined as a management program which includes a strong feedback between management activities and an evaluation of the efficacy of the management, as well as response of the bird species to that activity. The categories within the column are as

follows:

T = Taxonomic and morphological genetic studies
Tl = Translocations
S = Survey - search and find
M = Monitoring - to determine population information
H = Husbandry research
Hm = Habitat management - management actions primarily intended to protect and/or enhance the species' habitat (e.g., forest management)
Lm = Limiting factor management - "research management" activities on known or suspected limiting factors. Management projects have a research component that provide scientifically defensible results.
Lr = Limiting factor research - research projects aimed at determining limiting factors. Results from this work may provide management recommendations and future research needs
Lh = Life history studies
O = Other (record in detail on taxon data sheet)

PHVA: Is a Population and Habitat Viability Assessment Workshop recommended to develop an intensive management/recovery plan for the species?

Yes, No or Pending further data from surveys or other research.

NOTE**A detailed model of a species' biology is frequently not needed to make sound management decisions.

CAPTIVE PROGRAM RECOMMENDATIONS:

Level 1 (1) - A captive population is recommended as a component of a conservation program. This program has a tentative goal of developing and managing a population sufficient to preserve 90% of the genetic diversity of a population for 100 years (90%/100). The program should be further defined with a species management plan encompassing the wild and captive populations and implemented immediately with available stock in captivity. If the current stock is insufficient to meet program goals, a species management plan should be developed to specify the need for additional founder stock. If no stock is present in captivity then the program should be developed collaboratively with appropriate wildlife agencies, SSC Specialist Groups, and cooperating institutions.

Level 2 (2) - Similar to the above except a species/subspecies management plan would include periodic reinforcement of captive population with new genetic material from the wild. The levels and amount of genetic exchange needed should be defined in terms of the program goals, a population model, and species management plan. It is anticipated that periodic supplementation with new genetic material will allow management of a smaller captive population. The time period for implementation of a Level 2 program will depend on recommendations made at the CAMP workshop.

Level 3 (3) - A captive program is not currently recommended as a demographic or genetic contribution to the conservation of the species/subspecies but is recommended for education, research, or husbandry.

No (N) - A captive program is not currently recommended as a demographic or genetic contribution to the conservation of the species/subspecies. Taxa already held in captivity may be included in this category. In this case species/subspecies should be evaluated either for management toward a decrease in numbers or for complete elimination from captive programs as part of a strategy to accommodate as many species/subspecies as possible of higher conservation priority as identified in the CAMP or in SSC Action Plans.

Pending (P) - A decision on a captive program will depend upon further data either from a PHVA, a survey, or existing identified sources to be queried.

LEVEL OF DIFFICULTY: What is the level of difficulty in maintaining the species in captive conditions?

1 = Least difficult. Techniques are in place for capture, maintenance, and propagation of similar taxa in captivity, which ostensibly could be applied to the taxon.

2 = Moderate difficulty. Techniques are only partially in place for capture, maintenance, and propagation of similar taxa in captivity, and many captive techniques still need refinement.

3 = Very difficult. Techniques are not in place for capture, maintenance, and propagation of similar taxa in captivity, and captive techniques still need to be developed.

EXISTING CAPTIVE POPULATION: Number of individuals in captivity according to the International Species Information System. Please add other information, when available, as the numbers listed consist of only a portion of the captive population.

SOURCES: List sources used for information for the above data. (Author's name, year, title of article or book, journal, issue, and page numbers).

COMPILERS: List the names of the people who contributed information for this taxon data sheet, including the author of the data for the Handbook of Birds of the World.

Table 4. Assigning New IUCN Red List Categories of Threat

ANY of the following criteria may be used to assign categories:	CRITICAL	ENDANGERED	VULNERABLE
A. Population reduction	1) ≥ 80% decline in last 10 yrs or 3 generations based on:	1) ≥ 50% decline in last 10 yrs or 3 generations based on:	1) ≥ 50% decline in last 20 yrs or 3 generations based on:
	a) direct observation OR b) index of abundance appropriate for the taxon OR c) decline in area of occupancy, occurrence and/or habitat quality OR d) actual or potential levels of exploitation OR e) introduced taxa, hybridization, pathogens, pollutants, competitors or parasites		
	OR	OR	OR
	2) ≥ 80% decline/10yrs or 3 generations predicted in near future based on (b), (c), (d), or (e) above	2) ≥ 50% decline/10 yrs or 3 generations predicted in near future based on (b), (c), (d), or (e) above	2) ≥ 50% decline/20 yrs or 3 generations predicted in near future based on (b), (c), (d), or (e) above
B. Extent of occurrence	Est. <100 km² or area of occupancy est. <10 km², AND TWO of the following:	Est. <5,000 km² or area of occupancy est. <500 km², AND TWO of the following:	Est. <20,000 km² or area of occupancy est. <2,000 km², AND TWO of the following:
	1) Severely fragmented OR single location.	1) Severely fragmented OR ≤ 5 locations	1) Severely fragmented OR ≤ 10 locations
	2) Continuing decline observed, inferred, or projected in ANY of the following: a) extent of occurrence b) area of occupancy c) area, extent, and/or quality of habitat d) # of locations or subpopulations e) # of mature individuals		
	3) Extreme fluctuations in ANY of the following: a) extent of occurrence b) area of occupancy c) # of locations or subpopulations		
C. Population estimates	Est. <250 mature indivs. AND:	Est. <2,500 mature indivs. AND:	Est. <10,000 mature indivs. AND:
	1) Decline ≥25% within 3 yrs or one generation, whichever is longer	1) Decline ≥15% within 5 yrs or 2 generations, whichever is longer	1) Decline ≥20% within 10 yrs or 3 generations, whichever is longer
	OR	OR	OR
	2) Continuing decline, observed, projected, or inferred in mature individuals AND population structure EITHER a) no pop. w/>50 mature indivs. OR b) all indivs. in single subpop.	2) Continuing decline, observed, projected, or inferred in mature individuals AND population structure EITHER a) no pop. w/>250 mature indivs. OR b) all indivs. in single subpop.	2) Continuing decline, observed, projected, or inferred in mature individuals AND population structure EITHER a) no pop. w/>1,000 mature indivs. OR b) all indivs. in single subpop.
D. # of mature individuals	Est. < 50 mature individuals	Est. < 250 mature individuals	1) Est. < 1,000 mature individuals OR 2) Area of occupancy < 100km² or <5 locations
E. Probability of extinction	≥ 50% within in 5 yrs or 2 generations, whichever is longer	≥ 20% within 20 yrs or 5 generations, whichever is longer.	≥ 10% within 100 yrs

Latin American Falconiformes Conservation Assessment and Management Plan

Working Draft

Section 3
CAMP Taxon Data Sheets

TAXON DATA SHEET

SPECIES: 1. *Cathartes aura* Turkey Vulture

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Not listed

Taxonomic status: Five subspecies. Taxonomic status of all three *Cathartes* species merits investigation.
C. a. aura - W North America S to Costa Rica; Greater Antilles. Introduced to Puerto Rico from Cuba in 1880
C. a. septentrionalis - E North America
C. a. ruficolllis - S Central America (from Costa Rica S) and lowland South America; Trinidad
C. a. jota - Pacific coast of South America (from Ecuador S), E Andes, Patagonia, Falkland Is
C. a. magellanicus - Pacific Coast of South America

Current Distribution (breeding and wintering): N America S to Patagonia
Concentrated Migration Regions: Atlantic Coast in Costa Rica, Panamá. Local migrations in Chaco.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2. Range has increased recently; birds more abundant in disturbed than in undisturbed habitat.
Area Occupied: Unknown
Number of Locations: 1; continuous distribution from United States to Patagonia

Population Trends - % Change in Years or Generations: Stable
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Abundant; more than 230,000 counted over Panama City (October - November 1973)
Regional Population(s): c. 1,000,000 counted recently over Veracruz, Mexico
Data Quality: 4

Recent Field Studies: Well-studied in North America, very poorly known in tropical areas.

Threats: None known

Trade: No

Comments: Threatened by habitat loss and monocultures in E of Costa Rica (Hidalgo et al. in press).

RECOMMENDATIONS:

Research Management: Taxonomic research and revision between *C. a. meridionalis* and *C. a. falklandi*

PHVA: No

Captive Program Recommendation: Level 3

Level of Difficulty: 1

Existing Captive Population (ISIS): 23.25.80 = 128

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 2. *Cathartes burrovianus* Yellow-headed Vulture

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Not listed

Taxonomic status: Two subspecies. Species has been placed in superspecies with *C. melambrotus*, but the two are widely sympatric. Taxonomic status of all three *Cathartes* species merits investigation.
C. b. burrovianus - Central America S to C Colombia and NW Venezuela
C. b. urubitinga - lowland South America

Current Distribution (breeding and wintering): E Mexico to N Argentina
Concentrated Migration Regions: Partial migration between Yucatán & Panamá Clinton-Eitniear 1985. Koester 1982.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1; fairly continuous distribution from Central America to N Argentina

Population Trends - % Change in Years or Generations: Population appears to be stable
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: 1

Recent Field Studies: Not well-studied

Threats: None known

Trade: No

Comments: Status and distribution poorly known, but seems to be widespread and relatively numerous. Fairly common to common in suitable habitat in Panamá and Colombia, outnumbering C. aura at Carimagua, Meta (C Colombia). Also common along coastal parts of French Guiana. In Brazil, most common in NE and Amazonia. Apparently rare in tropical dry forest in Costa Rica.

RECOMMENDATIONS:
Research Management: Taxonomic research, life history studies

PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 1
Existing Captive Population (ISIS): 0.0.1 = 1

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela EsquIvel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 3. *Cathartes melambrotus* Greater Yellow-headed Vulture

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Not listed

Taxonomic status: Taxonomic status of all three *Cathartes* species merits investigation. Has been regarded as an allospecies of *C. burrovianus,* but the two have widely sympatric ranges.

Current Distribution (breeding and wintering): Amazonia, including S Venezuela and the Guianas
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 5

Population Trends - % Change in Years or Generations:
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: 3

Recent Field Studies: Not well-studied

Threats: Habitat loss, decrease in food availability due to hunting pressure

Trade: No

Comments: Seems to be confined to undisturbed lowland tropical forests in South America, and does not occur in more open habitats. Not found in disturbed forests, and apparently confined to remote areas. Feeds on carcasses of forest animals e.g., monkeys, sloths, and opossums. Most common vulture away from heavily inhabited areas. In French Guiana it is reported to be common in undisturbed forest, but becoming less frequent where food supply is impoverished by heavy hunting pressure.

RECOMMENDATIONS:

Research Management: Habitat management, taxonomic research, life history studies
PHVA: No

Captive Program Recommendation: No
Level of Difficulty: 1
Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela EsquIvel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 4. *Coragyps atratus* American Black Vulture

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Not listed

Taxonomic status: Three subspecies sometimes recognized.
C. a. atratus - S USA and N Mexico
C. a. brasiliensis - Central America and N & E South America
C. a. foetens - W South America

Current Distribution (breeding and wintering): S USA S to N, E, & W South America
Concentrated Migration Regions: Central Valley in Costa Rica (Skutch 1969).
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1; continuous distribution from S USA to S South America

Population Trends - % Change in Years or Generations: Stable
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: >1,000,000
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Pesticides residues studies by Eduardo Iñigo.

Threats: None known

Trade: No

Comments: Widespread and common; has benefited from human activities, and now far more abundant in disturbed habitats than in natural wildlife areas. Suffers occasional persecution because of suspected transmission of human diseases, e.g., salmonella and cattle diseases. Expanding range in North America. Increasing in eastern Bolivia also in altitudinal range. Detected decline Uruguay in the last decade.

RECOMMENDATIONS:

Research Management: None
PHVA: No

Captive Program Recommendation: Level 3
Level of Difficulty: 1
Existing Captive Population (ISIS): 10.11.39 = 60

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela EsquIvel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 5. *Sarcoramphus papa* King Vulture

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix III (Honduras)

Taxonomic status: Monotypic.

Current Distribution (breeding and wintering): Tropical forest and savanna regions of Central and South America, from Mexico to N Argentina, Rio Grande do sul to be confirmed.

Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1; continuous distribution from S Mexico to N Argentina

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: 3

Recent Field Studies: Little field information available; some data available from captive studies.

Threats: Habitat loss, decrease in food availability.

Trade: Yes - 1989, 1990, 1991, 1992, and 1993

Comments: Not globally threatened. Very little information available. Status is reported to be best determined by baiting birds with carcasses; using this system, several areas where birds were unrecorded for some years have been shown to have healthy populations. Species can survive in areas of cattle ranching, presumably provided it has access to some undisturbed forest areas for breeding. In forests seems to be particularly susceptible to human disturbance and rarely recorded in areas where mammal populations have been reduced. Rare in tropical dry forest in Costa Rica. Rare in west Ecuador.

RECOMMENDATIONS:

Research Management: Life history studies

PHVA: No
Captive Program Recommendation: Level 3
Level of Difficulty: 1
Existing Captive Population (ISIS): 63.69.23 = 155

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 7. *Vultur gryphus* Andean Condor

STATUS: Tentative IUCN: Vulnerable
Criteria based on: A2a, A2b, E
CITES: Appendix I

Taxonomic status: Monotypic.

Current Distribution (breeding and wintering): Andes, from Venezuela to Tierra del Fuego, descending to sea level in Perú and Chile and to the Chaco in Bolivia
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1; continuous distribution from Venezuela to Tierra del Fuego

Population Trends - % Change in Years or Generations: Unknown, but thought to be declining
Trend over past 100 years: Unknown
Generation Time: ~8 years

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Poorly known

Threats: Human persecution, poisoning, hunting

Trade: Yes - 1989, 1990, 1991, 1992, and 1993

Comments: Poorly known, but threatened over most of range. Now exceedingly rare in N of range, in Venezuela and Colombia; reintroduction program using captive-bred birds currently underway in Venezuela and Colombia. Most frequently seen in Perú, Chile, Argentina and Bolivia where in some areas species remains common. Status of population is difficult to determine because so little is known about mortality, breeding frequency, and success. Species highly k-selected. Almost extinct in Venezuela and very reduced populations in Colombia (40 or less).

RECOMMENDATIONS:

Research Management: Limiting factors management, life history studies, survey, monitoring, studies on population dynamics
PHVA: Yes

Captive Program Recommendation: Level 2
Level of Difficulty: 1
Existing Captive Population (ISIS): 78.68.2 = 148

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esqulvel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 8. *Pandion haliaetus* Osprey

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Four subspecies currently recognized.
P. h. haliaetus - Scandinavia E to Japan and S to Mediterranean, Red Sea and Cape Verde Is; winters S to S Africa, India, W Indonesia and Philippines
P. h. carolinensis - Labrador W to Alaska and S to Florida and Arizona; winters S to Perú, S Brazil, S to Uruguay, N of Argentina and C Chile.
P. h. ridgwayi - Caribbean including Bahamas, Cuba, and Belize
P. h. cristatus - Australia E to New Caledonia, and N through New Guinea to Java and Sulawesi

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Atlantic Coast in Costa Rica, Pacific Coast in Colombia. Wintering areas in the Atlantic Coast of Colombia.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: >10

Population Trends - % Change in Years or Generations:
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population:
Regional Population(s): Known populations are >6,000 in European Russia, 240-360 in Byelorussia, very low numbers reported in other areas within the former Soviet Union. Recovering strongly in NE USA and in Scotland (>160); 40 (Corsica); 12-20 (Algeria); 40-50 (Morocco); 20-30 (Balearic Is); ~50 (Cape Verde Is); 20-30 (Canary Is); 4 (Portugal); 100 (New South Wales).
Data Quality: 1/2

Recent Field Studies: Fairly well-studied. Migration studies to the Neotropics by Mark Martell, the Raptor Center at University of Minnesota.

Threats: Pesticides, habitat loss, hunting and shooting on migration or wintering areas at fish farms in Colombia.

Trade: Yes - 1990, 1991, 1992, and 1993

Comments: Reintroduction techniques can help restore vulnerable populations.

RECOMMENDATIONS:

Research Management: Monitoring, habitat management, limiting factors management. Taxonomic studies to determine degree of affinity.
PHVA: No
Captive Program Recommendation: No
Level of Difficulty:
Existing Captive Population (ISIS): 1.0.6 = 7

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2*. Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquível, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 14. *Leptodon cayanensis* Grey-headed Kite

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: In past alternatively known as *Odontriorchis palliatus.* Until recently considered to include L. forbesi, which was thought to represent another variant on immature plumage of this species. Two subspecies recognized.
L. c. cayanensis - S Tamaulipas and Oaxaca (Mexico) S to W Ecuador, Amazonia, Guaianas, and Trinidad.
L. c. monachus - C Brazil to E Bolivia, N Argentina and Paraguay.

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1; continuous distribution from S Mexico to Paraguay and N Argentina

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown.
Regional Population(s): Estimated average density of at least 3 individuals/10,000 ha at one forest site in French Guiana.
Data Quality: Unknown

Recent Field Studies: Not well-studied. The Peregrine Fund Maya Project may be conducting field research.

Threats: Habitat loss

Trade: No

Comments: Uses gallery forest, forest edge and disturbed, fragmented habitat. Uncommon to fairly common throughout extensive range. In Colombia, commonest in Amazonian zone. Does not persist in heavily cleared areas.

RECOMMENDATIONS:

Research Management: Survey, monitoring, habitat management
PHVA: No
Captive Program Recommendation: No
Level of Difficulty:
Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 15. *Leptodon forbesi* White-collared Kite

STATUS: Tentative IUCN: Endangered
Criteria based on: B1, B2c
CITES: Appendix II
Other: 1994 IUCN Red List - Insufficiently Known

Taxonomic status: Monotypic.

Current Distribution (breeding and wintering): NE Brazil
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: <5,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Not studied

Threats: Habitat loss

Trade: No

Comments: Not rare locally but has a very limited range. Continuing destruction of its forest habitat, which has now been reduced to 1% of its former extent, combined with limited range contributes to Endangered status.

RECOMMENDATIONS:

Research Management: Survey, monitoring, life history studies, habitat management, limiting factors research, limiting factors management
PHVA: Yes
Captive Program Recommendation: Pending
Level of Difficulty: 2/3
Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 16. *Chondrohierax uncinatus* Hook-billed Kite

STATUS: Tentative IUCN: Lower Risk (subspecies *C. u. mirus* and *wilsonii* Critically Endangered)
Criteria based on: For subspecies *C. u. mirus* and *wilsonii* - Extent of occurrence, population reduction, probability of extinction
CITES: Appendix II except *C. u. wilsonii* (Appendix I)

Taxonomic status: Large-billed forms have been suggested to form a separate *species (C. megarhynchus*), but this view now discredited. Race *wilsonii* of Cuba also recognized by some as full species. Mexican birds traditionally awarded separate race, *aquilonis*, but not considerable individual variation (both in Mexico and elsewhere) indicates that subspecific status is not merited. Three subspecies recognized.
C. u. uncinatus - W Mexico (Sinaloa) and extreme S USA (S Texas) S through Central America, Trinidad, the Guianas, and Brazil to E Perú and E Bolivia, Paraguay, N Argentina and W Ecuador.
C. u. mirus - Grenada
C. u. wilsonii - E Cuba

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Recorded as migrant in Veracruz (E Mexico).
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: >3

Population Trends - % Change in Years or Generations:
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): at least 20-40 (S Texas); 30-60 (Grenada)
Data Quality: 1

Recent Field Studies:

Threats: Habitat loss, interspecific competition with exotics (introduced snails which compete with primary prey snail species).

Trade: No

Comments: Not globally threatened. Widespread and unobtrusive and generally appears to be

uncommon. Has colonized S Texas in fairly recent times.

RECOMMENDATIONS:

Research Management: Survey, monitoring, limiting factors management (eradication of introduced snail species)
PHVA: Yes
Captive Program Recommendation: Pending
Level of Difficulty: 2/3
Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 24. *Elanoides forficatus* American Swallow-tailed Kite

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Two subspecies recognized.
E. f. forficatus - coastal SE USA to N Mexico
E. f. yetapa - S Mexico (except Yucatán) S through Central America (excluding El Salvador) to E Bolivia, Paraguay and NE Argentina (Misiones) W Ecuador, W Colombia, NW Perú

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Pacific Coast Colombia, Foz do Iguazu, Amboro National Park.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1; continuous distribution from coastal SE USA to NE Argentina

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Relatively common over much of its extensive distribution.
Regional Population(s): Estimated average density of at least 10 individuals/10,000 ha at one forest site in French Guiana.
Data Quality: Unknown

Recent Field Studies: K. Meyer US Fish & Wildlife Service on Migration of the Florida Subspecies to the Neotropics.

Threats: Habitat loss and fragmentation, hunting

Trade: No

Comments: Formerly occurred further inland in USA to Oklahoma, Minnesota, and North Carolina; probable causes of decline include direct persecution and possibly habitat transformation for agriculture. Slight recovery since 1950's.

RECOMMENDATIONS:

Research Management: Survey, monitoring, habitat management

PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2/3
Existing Captive Population (ISIS): 0.1.0 = 1

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 26. *Gampsonyx swainsonii* Pearl Kite

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Three subspecies recognized.
G. s. leonae - Nicaragua; N Colombia through Venezuela and Trinidad to Guyana and Surinam, and S to R Amazon
G. s. swainsonii - Brazil S of R Amazon to E Perú, E Bolivia, Paraguay and N Argentina
G. s. magnus - W Colombia, Ecuador and N Perú

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Perhaps austral migrations (Argentina, Bolivia and Brazil).
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: >4

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Unknown

Threats: Not known, potential threat may be pesticides.

Trade: No

Comments: Locally distributed and not generally common. Probably benefits from forest destruction, e.g., numerous in partly deforested areas of S Cordoba (NW Colombia), which may only have been colonized quite recently. The only carefully studied nest was in an extensive suburban housing development. In general fairly common in suitable habitats in Colombia. Recently observed in the Patia River valley in Colombia and also in the Middle Magdalena River Valley where it is fairly common in Departamento del Tolima in heavy agricultural areas. Observed in urban areas of Guayaquil Ecuador.

RECOMMENDATIONS:

Research Management: Survey, monitoring
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2/3
Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 29. *Elanus leucurus* White-tailed Kite

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Two subspecies recognized.
E. l. majusculus - W and S USA (from Oregon to C Florida, occasionally to South Carolina) and N Mexico; also most of Central America (race uncertain)
E. l. leucurus - Panamá, S through Amazonia to C Argentina (Mendoza and Buenos Aires) and C Chile (Valdivia)

Current Distribution (breeding and wintering): W & S USA to C Argentina
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1; fairly continuous distribution throughout range

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown; population thought to be increasing
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Unknown

Threats: Not known

Trade: No

Comments: Seems to be increasing over much of its range, especially from S Mexico to Panamá, with Nicaraguan birds apparently of Californian origin. Boom apparently because of intensified agriculture, especially year-round irrigation in California; also because of road building in Central America, which opened the way for agriculture. Very rare E of Mississippi R but appears to be spreading, with recent breeding records in S USA and sightings in much of USA. In mid-1970's dramatic rise in winter in Oregon, where first nesting in late 1970's. Nearly extirpated from California in early 20th century, but increased exponentially in period 1949-1978, although with strong fluctuations; population in Texas growing since 1965. In Costa Rica, numbers increased

between late 1950's and 60's. Increasing in Brazil and has recently spread into Bolivia from N Argentina where it is quite common. Able to breed in winter in Argentina and Brazil. Increasing altitudinal range in Bolivia. Increasing its range from south to north in S of South America.

RECOMMENDATIONS:

Research Management: Monitoring, pesticides
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2/3
Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 32. *Rostrhamus sociabilis* Snail Kite

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Highly specialized genus with no clear taxonomic affinities to other genus. Three subspecies currently recognized.
R. s. plumbeus - Florida Everglades (SE USA), Cuba, and I of Pines
R. s. major - E Mexico and Petén (Guatemala)
R. s. sociabilis - Honduras and Nicaragua through Panamá to South America, occurring W of Andes in Colombia and Ecuador, and E of Andes throughout to NE Argentina, except Guyana Massif and Brazilian Plateau

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Partial migrant.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: >4

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): c. 500 (Florida population only)
Data Quality: 1

Recent Field Studies: Unknown

Threats: Pesticides (high concentrations have been found in nestlings and eggs in Florida; in Surinam, 50 birds found dead after spraying of rice fields), interspecific competition with exotics (Tilapia fish in Brazil which remove vegetation on which prey snail species live), habitat loss through drainage or deterioration of wetlands.

Trade: Yes - 1990

Comments: Often abundant in suitable habitat throughout most of range. "Boom or bust" cycles closely tied to droughts in Florida, where population c. 500 individuals, surveyed annually. Rare through much of Central America; increasing in Cuba, where now widespread. Locally fairly

common in Colombia where concentrations of 300 individuals are observed in Arauca, reduced populations in Valle del Cauca; large numbers congregate in Chaco-Pantanal zone outside breeding season. Nomadic habits make it difficult to protect species with "key" areas, as birds will move off when droughts hit. Florida population was down perhaps to fewer than 50 individuals in mid-1960's, but now seems to have recovered significantly with eightfold increase from lowest levels by 1980, when most of population confined to areas around three freshwater containment areas; breeding success entirely dependent upon water levels in swamps, now largely controlled by humans. During drought periods, some areas can be maintained flooded to support the population.

RECOMMENDATIONS:

Research Management: Survey, monitoring, limiting factors management, habitat management
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 3
Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 33. *Rostrhamus hamatus* Slender-billed Kite

STATUS: Tentative IUCN: Data Deficient
Criteria based on:
CITES: Appendix II

Taxonomic status: Traditionally and perhaps more appropriately placed in its own genus *Helicolestes*, due to marked differences with *R. sociabilis* in proportions and shape (especially in flight style, calls, display, and habitat). Monotypic.

Current Distribution (breeding and wintering): E Panamá, through N and E Colombia, to W, N, and SE Venezuela and Guyanas; NW of Colombia in the Atrato River, Amazonian Brazil to E Perú and N Bolivia (Beni); limits of range poorly documented, in part due to confusion with R. sociabilis.
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: Fairly continuous distribution

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s):
Data Quality: 2

Recent Field Studies: Not well-studied. Few data.

Threats: Habitat loss, pesticides (which affect prey snail species)

Trade: No

Comments: Poorly known and requires further study. Restriction to gallery forest and flooded forest thought to make species very susceptible to effects of deforestation; highly specialized diet.

RECOMMENDATIONS:

Research Management: Survey, monitoring, habitat management, limiting factors research, life history studies, limiting factors management, and taxonomic research
PHVA: Pending

Captive Program Recommendation: Pending
Level of Difficulty: 3
Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2*. Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 34. *Harpagus bidentatus* Double-toothed Kite

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Distinct genus. Two subspecies recognized.
H. b. fasciatus - E Mexico (Oaxaca and Veracruz) to W Colombia and W Ecuador
H. b. bidentatus - E Colombia and E Ecuador through Amazonia to E Bolivia and SE Brazil; Trinidad

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: >2

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Estimated average density of at least 15 individuals/10,000 ha at one forest site in French Guiana.
Data Quality: 1

Recent Field Studies: No

Threats: Habitat loss and fragmentation

Trade: No

Comments: No immediate cause for concern but note that the species will not persist in areas of extensive deforestation. Relatively common in appropriate habitat.

RECOMMENDATIONS:

Research Management: Survey, monitoring, habitat management
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2/3

Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 35. *Harpagus diodon* Rufous-thighed Kite

STATUS: Tentative IUCN: Data Deficient
Criteria based on:
CITES: Appendix II

Taxonomic status: Monotypic.

Current Distribution (breeding and wintering): Locally in the Guianas, through E Brazil (Amazonia), SE Bolivia, Paraguay, and N Argentina (Misiones, Jujuy and Salta)
Concentrated Migration Regions: Austral migrations. June - July? in Bolivia.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: Discontinuous distribution

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Estimated average density of at least 4 individuals/10,000 ha at one site in French Guiana.
Data Quality: 1

Recent Field Studies: Not well-studied. Few data.

Threats: Habitat loss and fragmentation

Trade: No

Comments: Very little known. Inhabits primarily lowland rain forest and gallery forest.

RECOMMENDATIONS:

Research Management: Survey, monitoring, limiting factors research, life history studies, habitat management
PHVA: Pending
Captive Program Recommendation: Pending
Level of Difficulty: 2/3
Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2*. Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 36. *Ictinia mississippiensis* Mississippi Kite

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Monotypic.

Current Distribution (breeding and wintering): Southern tier of USA from Arizona to Florida; winters in South America, to N Argentina and Paraguay
Concentrated Migration Regions: Concepcion in N Argentina, Sta. Cruz de la Sierra in Bolivia.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: >274,000
Regional Population(s): Unknown
Data Quality: 1 (migration count)

Recent Field Studies: Unknown

Threats: Habitat loss, pesticides during migration. Several individuals found dead (30) in agricultural areas near Bogotá, Colombia.

Trade: No

Comments: Declined in early century but currently (1993) on increase, perhaps because of habitat modifications involving tree planting in steppe regions and opening of forests elsewhere. Range expanding; has recently colonized towns in plains and moved into riparian regions in SW. Not threatened by pesticides. Lack of renesting, after clutch loss, and small clutch size reduced reproductive potential, which might be a threat if mortality increased.

RECOMMENDATIONS:

Research Management: Monitoring
PHVA: No
Captive Program Recommendation: No

Level of Difficulty: 2/3
Existing Captive Population (ISIS): 0.1.3 = 4

Sources:
del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2*. Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 37. *Ictinia plumbea* Plumbeous Kite

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Monotypic.

Current Distribution (breeding and wintering): NE Mexico (Tamaulipas) S through Central America to South America; W of Andes S to W Ecuador, E of Andes S to Paraguay and N Argentina
Concentrated Migration Regions: Partial migrant. Foz do Iguazu.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: Continuous distribution throughout range

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Estimated average density of at least ~9 individuals/10,000 ha at one forest site in French Guiana.
Data Quality: 1

Recent Field Studies: No

Threats: Habitat loss, pesticides?

Trade: No

Comments: Relatively common throughout range.

RECOMMENDATIONS:

Research Management: Survey, monitoring
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2/3
Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2*. Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 86. *Circus buffoni* Long-winged Harrier

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Formerly used name *C. brasiliensis* has page priority but unidentifiable.

Current Distribution (breeding and wintering): SW Colombia to the Guianas, Trinidad and Tobago, and NE Brazil (Campos Cimpos Roraimá and Maranhao), then S to E Bolivia, N and C Argentina, C Chile and Uruguay
Concentrated Migration Regions: Partial migrant (austral).
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: Continuous distribution throughout range

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Not studied

Threats: Habitat loss and fragmentation

Trade: No

Comments: Widespread, but apparently rather local. Very poorly known. Rare and local in E Brazil, more frequent in S Brazil. In Colombia fairly common in NE Meta, rare in Cauca Valley.

RECOMMENDATIONS:

Research Management: Survey, monitoring, life history studies, habitat management, limiting factors research
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2*. Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 89. *Circus cyaneus* Hen Harrier

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Forms superspecies with *C. cinereus,* with which it has been considered conspecific. Race *hudsonius* may be separate species. Two subspecies recognized.
C. c. cyaneus - Europe and N Asia E to Kamchatka; winters from Europe and NW Africa through S Asia to SE China and Japan
C. c. hudsonius - North America, S to NW Mexico and SE Virginia (USA); winters S to N South America

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Partial migrant. All North America populations migrate.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: >4

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: >100,000. See del Hoyo et al. (1995) for 1980's population estimates.
Regional Population(s): Unknown
Data Quality: 1

Recent Field Studies: Unknown

Threats: Habitat loss and fragmentation (intensification of agriculture, disappearance of marshes, reforestation, etc.), human persecution, hunting. Pesticides in the Pacific Coast of Costa Rica.

Trade: No

Comments: Population trends vary regionally, but generally seems to be in decline. Notable changes since 19th century: population has increased and expanded widely in British Is, where in early 20th century nested only in Orkney Is and outer Hebrides; however, in other regions, such as Poland and Ukraine, species has become local.

RECOMMENDATIONS:

Research Management: Taxonomic research, monitoring, habitat management, limiting factors management. Distribution Studies. Taxonomic studies, *C. c. hudsonious* might be a true species.

PHVA: No

Captive Program Recommendation: No

Level of Difficulty: 2

Existing Captive Population (ISIS): 0.3.1 = 4

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 90. *Circus cinereus* Cinereous Harrier

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Formerly considered race of *C. cyaneus,* with which it forms superspecies. Monotypic.

Current Distribution (breeding and wintering): Colombia and Ecuador (above tree line) S through Perú, Bolivia and Paraguay to extreme S Brazil, then S to Tierra del Fuego and Falkland Is North of Uruguay
Concentrated Migration Regions: Austral migrant.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 2

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: 1

Recent Field Studies: F. Jacksick. Revista Chilena de Historia Natural.

Threats: Habitat loss and fragmentation, hunting, nest destruction?

Trade: No

Comments: Overall, thought to be in no danger. In S portions of range can be fairly common, in some areas second most abundant raptor after Chimango Caracara *(Milvago chimango).* Particularly common in Tierra del Fuego. Apparently has suffered some decline in Chile and Argentina; in contrast, has increased elsewhere, where forest has been removed. Almost extirpated from Falkland Is, probably as a result of destruction of natural grasslands, and also shooting. Now seen only rarely and may no longer breed there. Thought to be very local in upland Colombia.

RECOMMENDATIONS:

Research Management: Monitoring, limiting factors management, habitat management

PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2*. Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 99. *Accipiter poliogaster* Grey-bellied Goshawk

STATUS: Tentative IUCN: Vulnerable
Criteria based on: E
CITES: Appendix II

Taxonomic status: Birds in the very distinctive immature plumage formerly classified as separate species, *A. pectoralis.* Monotypic.

Current Distribution (breeding and wintering): E of Andes from Colombia and NE Ecuador (perhaps only migrants), S Venezuela and the Guianas S through Brazil (except NE), E Perú, Bolivia and Paraguay to N Argentina (Misiones); not recorded between R Negro and R Madiera in W Amazonia.
Concentrated Migration Regions: Partial migrant (requires confirmation).
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Little studied

Threats: Habitat loss and fragmentation

Trade: No

Comments: Very little information available. Generally seems to be rare but wide distribution suggests possibly no immediate threat. No recent records from NE Argentina. Estimated average density of 3 individuals/10,000 ha at one forest site in French Guiana.

RECOMMENDATIONS:

Research Management: Survey, monitoring, habitat management, limiting factors research, life history studies
PHVA: No

Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2*. Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 122. *Accipiter superciliosus* Tiny Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Forms superspecies with *A. collaris*. Two subspecies recognized.
A. s. fontanieri - Nicaragua S to W Colombia and W Ecuador
A. s. superciliosus - E of Andes, from Colombia E through Venezuela (except NW) to the Guianas, and S through Ecuador, E Perú, Bolivia (Beni, Santa Cruz) and Brazil to Paraguay and N Argentina (Misiones).

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1; continuous distribution throughout range

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Unknown

Threats: Not known, potential threat habitat loss.

Trade: No

Comments: Status very poorly known, but large range and tendency to use second growth forest suggests species in no immediate danger.

RECOMMENDATIONS:

Research Management: Survey, monitoring, limiting factors research
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2

Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 123. *Accipiter collaris* Semi-collared Hawk

STATUS: Tentative IUCN: Data Deficient
Criteria based on:
CITES: Appendix II
Other: Listed in Birds to Watch (Collar & Andrew, 1988)

Taxonomic status: Subtropical counterpart of *A. superciliosus*, with which forms superspecies. Monotypic.

Current Distribution (breeding and wintering): SW Venezuela (Mérida, Táchira) S, on W and E slopes of Andes, through Colombia to Ecuador; recent range extension of 1,500 km S to Perú
Concentrated Migration Regions: Not known migratory movements.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Not studied

Threats: Not known, potential threat may be deforestation.

Trade: No

Comments: Very little known. Could be relatively abundant within its altitudinal range. According to del Hoyo et al. (1994), considered Near Threatened.

RECOMMENDATIONS:

Research Management: Survey, monitoring, limiting factors research, life history studies
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): None

Sources:

Collar, N.J. and Andrew, P. 1988. *Birds to Watch: the ICBP world checklist of threatened birds.* Cambridge: International Council for Bird Preservation. Technical Publication No. 8.

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 137. *Accipiter striatus* Sharp-shinned Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Forms superspecies with *A. chionogaster, A. ventralis,* and *A. erythronemius,* all of which have traditionally been included within present species, but differ on morphology, ecology, and probably behavior. Also close to *A. nisus* and associated species. Seven subspecies recognized.
A. s. perobscurus - Queen Charlotte Is; possibly also mainland coast of British Columbia.
A. s. velox - Alaska and Canada S to California, Arizona, New Mexico, and Alabama; winters S to Panamá
A. s. suttoni - extreme S New Mexico (USA) S locally to Veracruz, Mexico
A. s. madrensis - Guerrero and perhaps W Oaxaca (Mexico)
A. s. striatus - Hispaniola, in both Haiti and Dominican Republic
A. s. fringilloides - Cuba
A. s. venator - Puerto Rico

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Highly migratory.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: >5

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Unknown

Threats: Habitat loss and fragmentation, pesticides.

Trade: No

Comments: Race *velox* affected by organochlorine chemicals in 1960's and 1970's; some general declines. Habitat alteration continues to affect populations, although species capable of adapting to

urban areas. Migration data suggest *velox* increasing (1980's - 1990's). No reliable data on numbers of any population, but races *venator* and *fringilloides* reportedly rare; total population of former estimated at 155 individuals remaining in five forests, and this race currently proposed for listing as Endangered.

RECOMMENDATIONS:

Research Management: Survey, monitoring, habitat management
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): 1.0.3 = 4

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 138. *Accipiter chionogaster* White-breasted Hawk

STATUS: Tentative IUCN: Data Deficient
Criteria based on:
CITES: Appendix II

Taxonomic status: Often considered a race of *A. striatus,* or alternatively of *A. erythronemius,* forming superspecies with these two and *A. ventralis;* group split on grounds of differences in morphology, ecology, and probably also behavior. Monotypic.

Current Distribution (breeding and wintering): Highlands of Central America, from S Mexico (Chiapas, Oaxaca) through Guatemala, Honduras and El Salvador to NC Nicaragua
Concentrated Migration Regions: Not known migratory movements.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Not studied

Threats: Habitat loss and fragmentation

Trade: No

Comments: Status uncertain; relatively restricted range and extensive deforestation within this range suggest that careful monitoring needed.

RECOMMENDATIONS:

Research Management: Survey, monitoring, life history studies, habitat management, limiting factors research
PHVA: Pending
Captive Program Recommendation: Pending
Level of Difficulty:

Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 139. *Accipiter ventralis* Plain-breasted Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Often considered race of *A. striatus* or alternatively of *A. erythronemius*, forming superspecies with these two and *A. chionogaster*; group split on grounds of differences in morphology, ecology, and probably also behavior. Monotypic.

Current Distribution (breeding and wintering): Hills and mountains from N and SE Venezuela and Colombia through Ecuador and Perú to C Bolivia (Sta. Cruz)
Concentrated Migration Regions: Not known migratory movements.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Not well-studied

Threats: Habitat loss and fragmentation

Trade: No

Comments: Currently fairly common in parts of range; propensity to use second growth forests suggests no grounds for immediate concern.

RECOMMENDATIONS:

Research Management: Survey, monitoring, life history studies
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 140. *Accipiter erythronemius* Rufous-thighed Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Often considered race of *A. striatus* or alternatively of *A. ventralis*, forming superspecies with these two and *A. chionogaster;* group split on grounds of differences in morphology, ecology, and probably also behavior. Monotypic.

Current Distribution (breeding and wintering): S Brazil (S from Mato Grosso and Bahia) to Uruguay, and SE Bolivia (Santa Cruz to Tarija) through Chaco of Paraguay to N Argentina (La Rioja and Córdoba)
Concentrated Migration Regions: Partial austral migrant.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1; continuous distribution throughout range

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Not well-studied

Threats: Habitat loss and fragmentation

Trade: No

Comments: In general fairly common but locally threatened where extensive monocultural agriculture removes all stands of woodland; otherwise probably fairly adaptable and no apparent grounds for concern.

RECOMMENDATIONS:

Research Management: Survey, monitoring, life history studies
PHVA: No
Captive Program Recommendation: No

Level of Difficulty: 2
Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 141. *Accipiter cooperii* Cooper's Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Forms superspecies with *A. gundlachi, A. bicolor,* and *A. chilensis.* Monotypic.

Current Distribution (breeding and wintering): USA and S Canada; winters from N USA to C America, regularly as far S as Honduras, occasionally to Colombia
Concentrated Migration Regions: Partial migrant.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1; continuous distribution throughout range

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Unknown

Threats: Not known

Trade: Yes - 1989, 1990, 1991, 1992, and 1993

Comments: Widespread and common; perhaps one of the commonest hawks in W USA. Seriously affected by organochlorines in 1940's and 1950's, with calculated annual rate of population decline of 25% in E, after 1948. Less severely affected in W, but pre-1945 fledging rate of 3.53 declined to 2.67 during period of pesticide usage (1949-1967). Significant correlation between percentage of birds in diet and DDT content found in eggs. Greatest eggshell thickness decrease was 19%; 15-17% eggshell decrease produced serious reproductive difficulty. Migration counts in 1993 indicate that population is increasing. No records in Costa Rica in the last 5 years.

RECOMMENDATIONS:
Research Management: Monitoring
PHVA: No

Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): 1.2.2 = 5

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2*. Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 142. *Accipiter gundlachi* Gundlach's Hawk

STATUS: Tentative IUCN: Endangered
Criteria based on: C2a, D1, E
CITES: Appendix II
Other: Listed in *Birds to Watch* (Collar & Andrew, 1988)
Birds to Watch 2 (Collar et al., 1994) Endangered

Taxonomic status: Closely related to *A. cooperii, A. bicolor,* and *A. chilensis,* forming superspecies with all three; at present no indications as to which of first two species is ancestral to present species. Two subspecies recognized.
A. g. gundlachi - W and C Cuba
A. g. wileyi - E Cuba

Current Distribution (breeding and wintering): Cuba
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Estimated 300-400
Regional Population(s): 150-200 pairs, mostly in E Cuba
Data Quality: 1

Recent Field Studies: Not well-studied

Threats: Habitat loss and fragmentation, human interference or persecution, trade for the live animal market

Trade: Yes - 1989

Comments: Three additional populations in W Cuba, in provinces of Las Villas, Matanzas (Zapata Swamp), and Pinar. Some populations occur within protected areas, but recent recognition of subspecifically distinct E population argues for further inventories. Although apparently never common, formerly much more widely distributed on the island. Human persecution is aggravated by the fact that the species is known to take poultry. Recently more woodland is being cut in Cuba as a

consequence of fuel shortage. There are records of young birds taken for captivity, or for international raptor trade.

RECOMMENDATIONS:

Research Management: Survey, monitoring, habitat management, limiting factors management, life history studies, other (stop trade)
PHVA: Yes
Captive Program Recommendation: Pending
Level of Difficulty: 2
Existing Captive Population (ISIS): None. Although there might be some individuals in aviaries within the island.

Sources:

Collar, N.J. and Andrew, P. 1988. *Birds to Watch: the ICBP world checklist of threatened birds.* Cambridge: International Council for Bird Preservation. Technical Publication No. 8.

Collar, N.J., Crosby, M.J., and Stattersfield, A.J. 1994. *Birds to Watch 2: the world list of threatened birds.* Cambridge: BirdLife International. BirdLife Conservation Series No. 4.

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 143. *Accipiter bicolor* Bicolored Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Normally considered to include *A. chilensis* as a race, but differs in ecology, especially in habitat preferences; also closely related to *A. cooperii* and *A. gundlachi,* and these four form a superspecies. Race *guttifer* has been considered full species; alternatively a race of *A. chilensis,* but isolated range of *A. chilensis* and intergradation of *guttifer* with *A. b. pileatus* suggest *guttifer* closer to *A. bicolor.* Race *schistochlamys* of W Ecuador incorporated in nominate. Four subspecies currently recognized.
A. b. fidens - S Mexico, N of Yucatán, in Oaxaca and Veracruz
A. b. bicolor - S Mexico (Yucatán) to Amazonia and the Guianas, S to E Bolivia and W of Andes S to NW Perú (Lambayeque)
A. b. pileatus - Brazil S of Amazonia (E Mato Grosso to S Maranhao and Ceará) and S to NE Argentina (Misiones)
A. b. guttifer - Brazil (W Mato Grosso) and Bolivia through Chaco of Paraguay to N Argentina and Uruguay.

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Not known migratory movements.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1; fairly continuous distribution throughout range

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): average estimated density of at least 4 individuals/10,000 ha at one French Guiana forest site
Data Quality: 1

Recent Field Studies: The Peregrine Fund Maya Project in Guatemala.

Threats: Habitat loss and fragmentation

Trade: Yes - 1989

Comments: Widespread but generally rare. In Petén, average distance between nests was 3.1 km.

RECOMMENDATIONS:

Research Management: Survey, monitoring, habitat management, taxonomic research
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 144. *Accipiter chilensis* Chilean Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Forms superspecies with *A. bicolor, A. cooperii,* and *A. gundlachi.* Often considered (mega)subspecies of *A. bicolor,* but isolated range with no geographical variation, and use of temperate forests, unlike *A. bicolor,* suggest treatment as full species is merited. Sometimes held to include *A. bicolor guttifer.* Monotypic.

Current Distribution (breeding and wintering): Andes of C Chile (O'Higgins) and adjacent Argentina S to Tierra del Fuego and Staten I; winters N to NW Argentina (Catamarca)
Concentrated Migration Regions: Austral migrant following passerines to NW Argentina.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Not well-studied

Threats: Not known

Trade: No

Comments: Status very poorly known. Reportedly declining in much of Chile, but said to be little influenced by moderate levels of forest clearing.

RECOMMENDATIONS:

Research Management: Survey, monitoring, limiting factors research, life history studies, taxonomic research
PHVA: No
Captive Program Recommendation: No

Level of Difficulty: 2
Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 157. *Geranospiza caerulescens* Crane Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix

Taxonomic status: Genus *Ischnosceles* is best regarded as forgotten name. Relation of genus unclear; probably allied to Neotropical sub-buteonines, rather than Afrotropical *Polyboioides.* Substantial geographical variation, with three well-defined groups, perhaps approaching separate species status: *nigra* group, including races *livens* and *balzarensis; caerulescens* group; and *gracilis* group, including race *flexipes.* However, extensive intergradation between *nigra* group and *caerulescens.* At other extreme, some authorities recognize only two or three races. Six subspecies normally recognized.
G. c. livens - NW Mexico
G. c. nigra - N Mexico (Sinaloa and Tamaulipas) S to zone of Panama Canal
G. c. balzarensis – Panamá E of canal zone on Pacific slope to W Colombia, W Ecuador, and NW Perú (Lambayeque)
G. c. caerulescens - E slope of Colombia and Ecuador to the Guianas and Amazonian Perú and Brazil
G. c. gracilis - NE Brazil from Maranhao, Ceará, and Piau to C Goias and Bahia
G. c. flexipes - S Brazil (Minas Gerais, S Goias, and Mato Grosso) and Bolivia through Chaco of Paraguay, to NC Argentina (S to La Roja, Cordoba, and Buenos Aires) and Uruguay

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 2

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Unknown

Threats: None known

Trade: No

Comments: Generally not common, but extensive geographical range and broad habitat tolerance suggest little grounds for immediate concern. In Colombia, widespread but local and rarely common.

RECOMMENDATIONS:

Research Management: Taxonomic research, monitoring
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 158. *Leucopternis plumbea* Plumbeous Hawk

STATUS: Tentative IUCN: Near Threatened
Criteria based on:
CITES: Appendix II
Other: Listed in *Birds to Watch* (Collar & Andrew, 1988)
Near Threatened (BirdLife International)

Taxonomic status: Forms superspecies with *L. schistacea,* of which it was formerly considered a subspecies. Monotypic.

Current Distribution (breeding and wintering): E Panamá through W Colombia and W Ecuador to extreme W Perú
Concentrated Migration Regions: Not known migratory movements.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: 3

Recent Field Studies: Unknown

Threats: Habitat loss and fragmentation

Trade: No

Comments: Status poorly known, but in general rare to uncommon. May have been extirpated from W Panamá; apparently rare in Colombia. Low density and relatively restricted range in a region where deforestation is on the increase are grounds for concern; surveys and research required. May be affected by construction of Pan American Highway linking Panamá and Colombia. Also by the construction and colonization process along the Pasto-Tumaco Road in the south-west of Colombia.

RECOMMENDATIONS:

Research Management: Survey, monitoring, habitat management, limiting factors research, life history studies
PHVA: Pending
Captive Program Recommendation: Pending
Level of Difficulty: 2
Existing Captive Population (ISIS): None

Sources:

Collar, N.J. and Andrew, P. 1988. *Birds to Watch: the ICBP world checklist of threatened birds.* Cambridge: International Council for Bird Preservation. Technical Publication No. 8.

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 159. *Leucopternis schistacea* Slate-colored Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Previously placed in *Buteogallus.* Forms superspecies with *L. plumbea,* with which it has been considered conspecific. Monotypic.

Current Distribution (breeding and wintering): Amazonia, from SE Colombia and SW Venezuela S through E Ecuador and E Perú to N and E Bolivia, and E to E French Guiana and CN Brazil
Concentrated Migration Regions: Not known migratory movements.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Not studied

Threats: Habitat loss and fragmentation

Trade: No

Comments: Generally fairly common. Status uncertain but extensive range suggests that there is no need for immediate concern. Surveys required to assess situation more definitely. Biology very poorly known.

RECOMMENDATIONS:

Research Management: Survey, monitoring, habitat management, life history studies
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2*. Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 160. *Leucopternis princeps* Barred Hawk

STATUS: Tentative IUCN: Data Deficient
Criteria based on:
CITES: Appendix II

Taxonomic status: Populations of Ecuador and Colombia have been assigned to separate race, *zimmeri*, based on differences in size, but this is unsubstantiated. Monotypic.

Current Distribution (breeding and wintering): Costa Rica and Panamá, and locally into W Colombia and N Ecuador on both sides of the Andes
Concentrated Migration Regions: Not known migratory movements.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Not studied

Threats: Presumably habitat loss and fragmentation

Trade: No

Comments: Too little known to permit accurate assessment of status, but propensity to use forest edge suggests it is not a species of imminent concern. Conspicuous because of habit of soaring and relatively frequently seen within its altitudinal range at one site in NW Colombia. Also in the south-west of Colombia in Cauca Department (Tambito Reserve). Recently recorded in the west of Colombia for the first time (Stiles per. comm).

RECOMMENDATIONS:

Research Management: Survey, monitoring, taxonomic research, limiting factors research, life history studies, habitat management
PHVA: No

Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2*. Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 161. *Leucopternis melanops* Black-faced Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Forms superspecies with *L. kuhli.* Monotypic.

Current Distribution (breeding and wintering): The Guianas and Amazonia N or Amazon R to E Colombia and E Ecuador. Specimens from R Tapajos (S of Amazon) may refer to *L. kuhli.*
Concentrated Migration Regions: Not known migratory movements.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Not studied

Threats: Presumably habitat loss and fragmentation

Trade: No

Comments: Status very poorly known. Apparently rare throughout range, but very secretive and often overlooked; most of forest in extensive range persists, so probably not of immediate concern.

RECOMMENDATIONS:

Research Management: Survey, monitoring, life history studies, habitat management, limiting factors research, taxonomic research
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2*. Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 162. *Leucopternis kuhli* White-browed Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Forms superspecies with *L. melanops,* with which has been considered to be conspecific, but the two may be sympatric on lower R Tapajos, Brazil (validity of *melanops* specimens from Tapajos have been questioned). Monotypic.

Current Distribution (breeding and wintering): E Perú (C Loreto S to Madre de Dios), N Bolivia (Pando), and Amazonian Brazil S of R Amazon (from R Madiera E to E Pará)
Concentrated Migration Regions: Not known migratory movements.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Not studied

Threats: Not known

Trade: No

Comments: Very poorly known, but so much forest in its extensive range remains intact that species can not be considered of immediate concern. Surveys and research required.

RECOMMENDATIONS:

Research Management: Survey, monitoring, limiting factors research, life history studies, taxonomic research
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2

Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2*. Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 163. *Leucopternis lacernulata* White-necked Hawk

STATUS: Tentative IUCN: Vulnerable
Criteria based on: C1, C2a, D1
CITES:
Other: 1994 IUCN Red List - Vulnerable/Rare
Listed in *Birds to Watch* (Collar & Andrew, 1988)
Birds to Watch 2 (Collar et al., 1994) Vulnerable

Taxonomic status: Probably most closely allied to *L. kuhli* and *L. melanops* of Amazonia. Monotypic.

Current Distribution (breeding and wintering): E Brazil from Alagoas to Sta. Catarina and S Bahia to Sao Paulo and Santa Catarina
Concentrated Migration Regions: Not known migratory movements.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 2 or more? Patchy distribution

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Not studied

Threats: Habitat loss and fragmentation and subsequent populational effects, hunting

Trade: No

Comments: Although reported in a number of protected reserves, species should be considered Vulnerable owing to low population densities, significant distances between protected areas and massive deforestation of its habitat outside protected areas. Surveys and research required.

RECOMMENDATIONS:

Research Management: Survey, monitoring, limiting factors management, habitat management, life history studies, distribution research

PHVA: Pending
Captive Program Recommendation: Pending
Level of Difficulty:
Existing Captive Population (ISIS): None

Sources:

Collar, N.J. and Andrew, P. 1988. *Birds to Watch: the ICBP world checklist of threatened birds.* Cambridge: International Council for Bird Preservation. Technical Publication No. 8.

Collar, N.J., Crosby, M.J., and Stattersfield, A.J. 1994. *Birds to Watch 2: the world list of threatened birds.* Cambridge: BirdLife International. BirdLife Conservation Series No. 4.

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 164. *Leucopternis semiplumbea* Semiplumbeous Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Monotypic.

Current Distribution (breeding and wintering): Honduras S to W Colombia (E to Magdalena Valley) and NW Ecuador (Esmeraldas)
Concentrated Migration Regions: Not known migratory movements.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Not studied

Threats: Habitat loss and fragmentation

Trade: No

Comments: Currently considered Near Threatened according to del Hoyo et al. (1994). Perhaps of little concern at present, as is the commonest hawk in some areas of primary forest, and is tolerant of secondary growth.

RECOMMENDATIONS:

Research Management: Survey, monitoring, limiting factors research, life history studies
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): None; 1 in Leticia Zoo, Colombia.

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 165. *Leucopternis albicollis* White Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Forms superspecies with *L. occidentalis* and *L. polionota,* both of which have been considered races of present species. Four subspecies recognized.
L. a. ghiesbreghti - S Mexico (Oaxaca and Veracruz) to Guatemala and Belize
L. a. costaricensis - Honduras to Panamá and W Colombia
L. a. williaminae - NW Colombia (upper Sinú and lower Magdalena Valleys S to Valle) and extreme NW Venezuela (Perija)
L. a. albicollis - E Colombia, NW Venezuela in Zulia, Trinidad and the Guianas through Amazonia to E Perú, E Ecuador, N and E Bolivia and C and N Brazil (C Mato Grosso and N Maranhao)

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Not known migratory movements.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1; fairly continuous distribution throughout range

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: The Peregrine Fund Maya Project in Guatemala.

Threats: None known

Trade: No

Comments: In no apparent danger; one of the commonest and most conspicuous forest raptors, occurring over a vast range. Tolerates areas of disturbed forest. Apparently local in Colombia, where only known to be fairly common in extreme E along R Orinoco.

RECOMMENDATIONS:

Research Management: Monitoring
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): 0.1.0 = 1

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2*. Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 166. *Leucopternis occidentalis* Grey-backed Hawk

STATUS: Tentative IUCN: Endangered
Criteria based on: C2a, D1
CITES: Appendix II
Other: Listed in *Birds to Watch* (Collar & Andrew, 1988)
Birds to Watch 2 (Collar et al., 1994) Endangered

Taxonomic status: Has been considered a race of *L. albicollis,* to which it is closely allied; forms superspecies with *L. albicollis* and *L. polionota.* Monotypic.

Current Distribution (breeding and wintering): W Ecuador and adjacent NW Perú. Single record from E Andean slope now questioned. Records in Chongon-Colonche Cordillera in Ecuador.
Concentrated Migration Regions: Not known migratory movements.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Hernán Vargas (Ecuadorian now working for the Charles Darwin Station did research on Natural History).

Threats: Habitat loss and fragmentation

Trade: No

Comments: Massive deforestation affecting 90% of former range has reduced the population to only a few areas; largest are Machalilla National Park in Ecuador and Tumbes National Forest in Perú, neither of which is well-protected, nor does Machalilla contain very suitable habitat. Some birds persist in very disturbed, fragmented forest mosaics in Ecuador.

RECOMMENDATIONS:

Research Management: Survey, monitoring, limiting factor research, habitat management, life history studies
PHVA: Yes
Captive Program Recommendation: Pending
Level of Difficulty: 2
Existing Captive Population (ISIS): None

Sources:

Collar, N.J. and Andrew, P. 1988. *Birds to Watch: the ICBP world checklist of threatened birds.* Cambridge: International Council for Bird Preservation. Technical Publication No. 8.

Collar, N.J., Crosby, M.J., and Stattersfield, A.J. 1994. *Birds to Watch 2: the world list of threatened birds.* Cambridge: BirdLife International. BirdLife Conservation Series No. 4.

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela EsquIvel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 167. *Leucopternis polionota* Mantled Hawk

STATUS: Tentative IUCN: Near Threatened
Criteria based on:
CITES: Appendix II
Other: Listed in *Birds to Watch* (Collar & Andrew, 1988)
Birds to Watch 2 (Collar et al., 1994) Near Threatened

Taxonomic status: Forms superspecies with *L. albicollis* and *L. occidentalis;* has been considered a subspecies of former. Monotypic.

Current Distribution (breeding and wintering): E Brazil (Alagoas and Bahia) S to E Uruguay and E Paraguay (Alto Paraná). Purported Argentinean distribution (in Misiones) apparently based on supposition, with no confirmed records or data.
Concentrated Migration Regions: Not known migratory movements.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: R. Bocon. Paper presented at the Brazilian Ornithological Congress 1994.

Threats: Habitat loss and fragmentation

Trade: No

Comments: Currently considered Near Threatened according to del Hoyo et al. (1994). Status poorly known: rare or locally distributed, with massive deforestation going on throughout range. Further surveys and careful monitoring of species is highly desirable; preference for more mountainous regions will probably result in at least some suitable habitat remaining.

RECOMMENDATIONS:

Research Management: Survey, monitoring, habitat management, life history studies
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): None
Sta. Catarina Zoo in Brazil.

Sources:

Collar, N.J. and Andrew, P. 1988. *Birds to Watch: the ICBP world checklist of threatened birds.* Cambridge: International Council for Bird Preservation. Technical Publication No. 8.

Collar, N.J., Crosby, M.J., and Stattersfield, A.J. 1994. *Birds to Watch 2: the world list of threatened birds.* Cambridge: BirdLife International. BirdLife Conservation Series No. 4.

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 168. *Buteogallus aequinoctialis* Rufous Crab-hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Genus allied to *Harpyhaliaetus*. Sometimes associated with *B. anthracinus* superspecies, but apparently more distantly related. Monotypic.

Current Distribution (breeding and wintering): Orinoco Delta in E Venezuela along coast to Paraná, S Brazil, E Argentina, C E Uruguay
Concentrated Migration Regions: Not known migratory movements.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown; common
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies:

Threats: Habitat loss and fragmentation

Trade: No

Comments: Commonest raptor (within its range) in mangroves of South America. Status of no immediate concern, but restricted habitat makes it highly susceptible locally to any form of deterioration or loss of this habitat.

RECOMMENDATIONS:

Research Management: Monitoring, habitat management, taxonomic research, natural history
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2

Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 169. *Buteogallus anthracinus* Common Black Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Taxonomy controversial; sometimes considered to include *B. subtilis;* race *gundlachii* may be valid species. Races *gundlachii* and especially *utilensis* sometimes included in nominate; populations of St. Vincent (Lesser Antilles) and SW USA sometimes awarded separate races, respectively *cancrivora* and *micronyx.* Forms superspecies with *B. subtilis.* Three subspecies currently recognized.
B. a. anthracinus - SW and S USA (S Utah and Arizona to Texas) through Central America to Panamá and N Colombia, then along Caribbean coast to NW Guyana, Trinidad, and St. Vincent (Lesser Antilles); penetrates inland to Huila, Colombia
B. a. gundlachii - Cuba and I of Pines
B. a. utilensis - Cancun I and Cozumel I, off Yucatán; Utila I and Guanaja I, in Gulf of Honduras; and perhaps other adjacent islands

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Partial migrant.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 3 or more

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Unknown

Threats: Habitat loss and fragmentation (especially island races)

Trade: No

Comments: Generally fairly common throughout much of range, e.g., Caribbean coast of Colombia; species in no apparent danger overall. In 1960's was commonest hawk in suitable

habitat in Honduras. Island races, with restricted ranges, naturally vulnerable.

RECOMMENDATIONS:

Research Management: Monitoring, habitat management, taxonomic research
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2*. Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 170. *Buteogallus subtilis* Mangrove Black Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Taxonomic status remains uncertain; until recently considered a race of *B. anthracinus*, but elevated to specific level based on apparent lack of hybridization with *anthracinus*. However, there may be contact in Panamá where the forms are practically indistinguishable, making detection of hybridization very difficult. Forms superspecies with *B. anthracinus*. Three subspecies normally recognized.
B. s. rhizophorae - Pacific coast of El Salvador and Honduras; probably from extreme SW Mexico (Chiapas) locally to Nicaragua
B. s. bangsi - Pacific coast of Costa Rica and Panamá, including Pearl Is
B. s. subtilis - Pacific coast of Colombia (and offshore islands), Ecuador and adjacent extreme N Perú (Tumbes)

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Not well-studied

Threats: Habitat loss and fragmentation

Trade: No

Comments: Status poorly documented, partly because of taxonomic confusion. In places is fairly common, but few records for Colombia; common in Pearl Is, off Panamá.

RECOMMENDATIONS:

Research Management: Taxonomic research, survey, monitoring, life history studies, limiting factors research, habitat management
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2*. Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 171. *Buteogallus urubitinga* Great Black Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Two subspecies recognized.
B. u. ridgwayi - Mexico (C Sonora and S Tamaulipas) S to W Panamá
B. u. urubitinga - E Panamá, W of Andes S to W Ecuador and E of Andes E to the Guianas, Trinidad and Tobago, and S through E Bolivia and Brazil to Paraguay, Uruguay, and N Argentina (Tucumán, Santiago del Estero, Santa Fe)

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: >3

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown. In French Guiana, estimated average density of 17 individuals/10,000 ha.
Regional Population(s): Unknown
Data Quality: 1

Recent Field Studies: Unknown

Threats: Powerlines

Trade: No

Comments: Very widely distributed and adapts well to human-modified habitats; no reason for concern at present. Habit of nesting on power poles in Argentina sometimes causes problems.

RECOMMENDATIONS:
Research Management: Monitoring
PHVA: No
Captive Program Recommendation: No

Level of Difficulty: 2
Existing Captive Population (ISIS): 1.1.0 = 2

Sources:
del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 172. *Buteogallus meridionalis* Savanna Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Often placed in monotypic genus *Heterospizias*, mainly because of longer legs and wings. Population of Paraguay, SE Brazil and Argentina has been awarded separate race, rufulus, but differs only in size and not generally considered valid. Argentinean birds have alternatively been in equally dubious race australis. Monotypic.

Current Distribution (breeding and wintering): W Panamá (Chiriquí) through tropical South America W of Andes to NW Perú, and E of Andes E to the Guianas and Trinidad, and S through Ecuador, E Perú, E Bolivia and Brazil to N Argentina (Tacumán, Córdoba, and Santa Fe)
Concentrated Migration Regions: Partial migrant.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: >2

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Unknown

Threats: None known

Trade: No

Comments: Generally common to very common in savanna situations further S. Species seems secure and numbers likely to increase as result of continuing deforestation.

RECOMMENDATIONS:

Research Management: Monitoring
PHVA: No
Captive Program Recommendation: No

Level of Difficulty: 2
Existing Captive Population (ISIS): 5-10 in Zoos in Colombia.

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 173. *Parabuteo unicinctus* Harris' Hawk, Bay Winged Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Population of SW USA and NW Mexico has been recognized as a distinct race, superior, but not generally accepted. Two subspecies normally recognized.
P. u. harrisi - SW USA (S California to Texas) through Mexico and Central America (except Belize and Honduras) to drier Pacific slope regions of W Colombia, Ecuador and Perú
P. u. uncinctus - NE Colombia and W Venezuela S through E Bolivia and C NE SE Brazil to S Argentina (Rio Negro) and SC Chile. Also possibly in Uruguay.

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Partial migrant.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 2

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Unknown

Threats: Poisoning

Trade: Yes - 1989, 1990, 1991, 1992, and 1993

Comments: Common in many parts of extensive range; broad tolerance in terms of both habitat and food suggest species secure. Fairly common in S USA; common in NE Colombia (Guajira Peninsula); not uncommon locally in NE Brazil; locally common in W Ecuador. Has declined in parts of S Argentina where strychnine used by sheep ranchers. Small population of SE California (USA) has been re-established by means of reintroduction. No recent records in Valle del Cauca, Colombia.

RECOMMENDATIONS:

Research Management: Monitoring, limiting factors management
PHVA: No

Captive Program Recommendation: Level 3
Level of Difficulty: 2
Existing Captive Population (ISIS): 80.

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquível, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 174. *Busarellus nigricollis* Black-collared Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Allied to *Buteogallus* and *Parabuteo.* Two subspecies recognized.
B. n. nigricollis - C Mexico (Sinaloa and Veracruz) S through Central America to Amazonia, W to E Ecuador and E Perú, E to the Guianas and Trinidad, and S through E Bolivia to S Brazil
B. n. leucocephalus - Paraguay, Uruguay, and N Argentina (S to Salta, Santa Fe and Corrientes)

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Unknown

Threats: Habitat loss and fragmentation (draining of wetlands)

Trade: No

Comments: Quite common in appropriate habitat in many parts of extensive range. Apparently declining in Panamá, because of draining of wetlands; same may well be true elsewhere.

RECOMMENDATIONS:

Research Management: Monitoring, habitat management, taxonomic research
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 175. *Geranoaetus melanoleucus* Black-chested Buzzard-eagle

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Mistakenly placed in *Buteo* formerly; closer to *Buteogallus* and *Leucopternis*, and clearly merits separate generic status. Two subspecies recognized.
G. m. australis - NW Venezuela (Mérida Andes) through W South America S to Tierra del Fuego
G. m. melanoleucus - C S E Brazil to Bolivia and Paraguay, N E Argentina and Uruguay.

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1 or 2?

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: A. Pavez in Chile.

Threats: Poisoning, shooting

Trade: Yes - 1989, 1991, and 1992

Comments: Generally fairly common, e.g., numerous in region of Torres del Paine National Park, S Chile. Range expanding in Brazil into decimated Atlantic forest in Alagoas. Declines reported in S Argentina in areas where strychnine used by sheep ranchers. Common in Colombian and Venezuelan Paramos.

RECOMMENDATIONS:

Research Management: Monitoring, limiting factors management
PHVA: No
Captive Program Recommendation: Level 3

Level of Difficulty: 2
Existing Captive Population (ISIS): 7.8.4 = 19
15 in Colombia in different Zoos.
30-40 in Chile in Zoos and rehabilitation centers.

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 176. *Harpyhaliaetus solitarius* Black Solitary Eagle

STATUS: Tentative IUCN: Near Threatened
Criteria based on:
CITES: Appendix II
Other: Listed in *Birds to Watch* (Collar & Andrew, 1988)

Taxonomic status: Closely allied to *Buteogallus*. Formerly considered race of *H. coronatus*. Two subspecies recognized.
H. s. sheffleri - locally in highlands from W Mexico (Sonora) to Panamá
S. h. solitarius - locally from Colombia (Santa Maria Mts) E to N Venezuela and S through humid Andes to NW Argentina; also occurs in the Guianas, where limits of range virtually unknown.

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Not known migratory movements.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Not well-studied

Threats: Habitat loss and fragmentation, shooting

Trade: No

Comments: According to del Hoyo et al. (1994), currently considered Near Threatened. Status poorly known; apparently rare throughout its broad latitudinal range. In no immediate danger, but surveys and research required.

RECOMMENDATIONS:

Research Management: Survey, monitoring, life history studies, limiting factors research
PHVA: No

Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): 1 in a rehabilitation center in Colombia.

Sources:

Collar, N.J. and Andrew, P. 1988. *Birds to Watch: the ICBP world checklist of threatened birds.* Cambridge: International Council for Bird Preservation. Technical Publication No. 8.

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 177. *Harpyhaliaetus coronatus* Crowned Solitary Eagle

STATUS: Tentative IUCN: Vulnerable
Criteria based on: C2b, E
CITES: Appendix II
Other: 1994 IUCN Red List - Vulnerable
Listed in *Birds to Watch* (Collar & Andrew, 1988)
Birds to Watch 2 (Collar et al., 1994) Vulnerable

Taxonomic status: Closely related to *Buteogallus.* Sometimes considered to include *H. solitarius.* Monotypic.

Current Distribution (breeding and wintering): E Bolivia, W Paraguay and C S Brazil to S Argentina (Mendoza and Rio Negro); W SW Uruguay
Concentrated Migration Regions: Not known migratory movements.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1; continuous distribution throughout range

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Not well-studied

Threats: Habitat loss, fragmentation and shooting

Trade: No

Comments: Occurs over large area but at very low densities. Little hard evidence available on populations and trends; further documentation required. There are a few records from protected areas, including Emas and Brasilia National Parks, in Brazil, and Beni Biosphere Reserve in Bolivia. An active nest has been detected at Fazenda San Miguel (Brazil) in the past three years.

RECOMMENDATIONS:

Research Management: Survey, monitoring, life history studies, limiting factors research
PHVA: Pending

Captive Program Recommendation: Pending
Level of Difficulty: 2
Existing Captive Population (ISIS): 2.0.0 = 2

Sources:

Collar, N.J. and Andrew, P. 1988. *Birds to Watch: the ICBP world checklist of threatened birds.* Cambridge: International Council for Bird Preservation. Technical Publication No. 8.

Collar, N.J., Crosby, M.J., and Stattersfield, A.J. 1994. *Birds to Watch 2: the world list of threatened birds.* Cambridge: BirdLife International. BirdLife Conservation Series No. 4.

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela EsquIvel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 178. *Buteo nitidus* Grey Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Sometimes place in *Asturina*, partly due to distinctive moult pattern. Appears to form clade with *B. magnirostris, B. ridgwayi,* and *B. lineatus,* and this group may be more closely allied to *Leucopternis* than to *Buteo.* Race *plagiatus* sometimes awarded specific status, because of differences in size and plumage, but evidence remains rather weak. Four subspecies usually recognized.
B. n. plagiatus - SW USA (Texas to New Mexico) to NW Costa Rica
B. n. costaricensis - SW Costa Rica to N Colombia and W Ecuador
B. n. nitidis - E Colombia and E Ecuador, E to Venezuela and the Guianas, and S through Amazonian Brazil to N Maranhao
B. n. pallidus - SC Brazil (Piaui to Rio de Janeiro and Mato Grosso) and E Bolivia, S to Paraguay and NC Argentina (Tucumán and Chaco)

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Partial migrant.
Historical Distribution: Unknown
Extent of Occurrence: Unknown
Area Occupied: Unknown
Number of Locations: 1; fairly continuous distribution throughout range

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): c. 45 pairs in Arizona; fairly common in Costa Rica
Data Quality: Unknown

Recent Field Studies: Unknown

Threats: Not known, presumably habitat loss and fragmentation. Pesticides in Costa Rica.

Trade: No

Comments: Generally widespread and relatively numerous. Adaptable, using a variety of habitats.

RECOMMENDATIONS:

Research Management: Taxonomic research, monitoring, distribution in Costa Rica
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): 0.0.3 = 3
1 in San Jose Zoo in Costa Rica

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela EsquIvel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 179. *Buteo magnirostris* Roadside Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Sometimes placed in genus *Rupornis,* or alternatively in *Asturina.* Appears to be closely allied to B. *ridgway, B. lineatus,* and *B. nitudus*, all of which may be more closely tied to *Leucopternis* than to *Buteo.* Many more races have been recognized: race *griseocauda* includes *argutus, direptor, santusi,* and *petersi;* race *magnirostris* includes *insidiatrix* and *ecuadoriensis;* race *occiduus* includes *inca;* and race *pucheroni* includes *gularis.* Twelve subspecies recognized.
B. m. griseucauda - Mexico (S from Colima, Nuevo León and Tamaulipas, except Yucatán and Tabasco) S to NW Costa Rica and W Panamá (Chiriquí)
B. m. conspectus - SE Mexico (Tabasco and Yucatán Peninsula) and N Belize
B. m. gracilis - Cozumel I and Holbos I, near Yucatán (Mexico)
B. m. sinushonduri - Bonacca I and Rustan I, off Honduras
B. m. petulans - SW Costa Rica and Pacific slope of W Panamá to R Tuira and adjacent islands
B. m. alius - San José, and San Miguel, in Pearl Is (Gulf of Panama)
B. m. magnirostris - Colombia S to W Ecuador, E to Venezuela and the Guianas and S to Amazonian Brazil (R Madiera E to Atlantic coast)
B. m. occiduus - E Perú, W Brazil (S of Amazon, W of R Madiera) and N Bolivia
B. m. saturatus - Bolivia, through Paraguay and SW Brazil (SW Mato Grosso) to W Argentina (S to La Rioja)
B. m. nattereri - NE Brazil S to Bahia
B. m. magniplumis - S Brazil, N Argentina (Misiones) and adjacent Paraguay
B. m. pucherani - Uruguay and NE Argentina (S to Buenos Aires Province)

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1; continuous distribution throughout range

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown; common
Regional Population(s): Unknown
Data Quality:

Recent Field Studies: The Peregrine Fund Maya Project in Guatemala.

Threats: None known

Trade: No

Comments: Widespread and generally very common; commonest hawk in wide variety of habitats throughout much of extensive range, e.g., Brazil, most of Colombia, and generally throughout much of Amazonia.

RECOMMENDATIONS:

Research Management: Monitoring
PHVA: No
Captive Program Recommendation: Level 3
Level of Difficulty: 2
Existing Captive Population (ISIS): 3.3.9 = 15

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 180. *Buteo lineatus* Red-shouldered Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Sometimes placed in *Asturina.* Apparently close to *B. ridgwayi, B. magnirostris,* and, to lesser extent, *B. nitidus.* Five subspecies normally recognized.
B. l. elegans - S Oregon (NW USA) to N Baja California (Mexico)
B. l. lineatus - E North America from S Canada to C USA
B. l. texanus - S Texas (USA) to Veracruz (CE Mexico)
B. l. alleni - SC Texas to South Carolina and N Florida
B. l. extimus - Florida and Florida Keys

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 2

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: At University of Florida

Threats: Habitat loss and fragmentation

Trade: Yes - 1989

Comments: May have undergone slight overall decline since 146; thought to be result of alterations and loss of habitat. Christmas Bird Counts show winter populations have declined, except in California. Range expansion out of California into S Oregon; in California increasingly adapted to urban settings.

RECOMMENDATIONS:

Research Management: Monitoring, habitat management, distribution in Costa Rica
PHVA: No
Captive Program Recommendation: Level 3
Level of Difficulty: 2
Existing Captive Population (ISIS): 1.3.10 = 14

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 181. *Buteo ridgwayi* Ridgway's or Hispanolan Hawk

STATUS: Tentative IUCN: Vulnerable
Criteria based on: C2a, D1, E
CITES: Appendix II
Other: 1994 IUCN Red List - Indeterminate
Listed in *Birds to Watch* (Collar & Andrew, 1988)
Birds to Watch 2 (Collar et al., 1994) Endangered

Taxonomic status: Appears closely allied to *B. nitidus, B. magnirostris,* and especially *B. lineatus;* this group perhaps more closely tied to *Leucopternis* than *Buteo.* Monotypic.

Current Distribution (breeding and wintering): Hispaniola and several adjacent islets
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: At University of Florida (researcher's name not known).

Threats: Habitat loss and fragmentation, hunting

Trade: No

Comments: Conflicting evidence, situation might be urgent. Locally common, yet rare over its entire range, which itself is limited to a few islands. Formerly widespread, but shooting and extensive deforestation must have taken substantial toll on population, despite tolerance of disturbed areas. Continuing deforestation suggests species in decline; rate and extent of habitat destruction in Haiti leave little hope for future of species there. May persist in good numbers on some outlying islands, although most are now densely populated and heavily disturbed. Best populations now found in Los Haitises range, including a nominally, but poorly protected national park.

RECOMMENDATIONS:

Research Management: Survey, monitoring, habitat management, limiting factors research
PHVA: Pending

Captive Program Recommendation: Pending
Level of Difficulty: 2
Existing Captive Population (ISIS): None

Sources:

Collar, N.J. and Andrew, P. 1988. *Birds to Watch: the ICBP world checklist of threatened birds.* Cambridge: International Council for Bird Preservation. Technical Publication No. 8.

Collar, N.J., Crosby, M.J., and Stattersfield, A.J. 1994. *Birds to Watch 2: the world list of threatened birds.* Cambridge: BirdLife International. BirdLife Conservation Series No. 4.

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 182. *Buteo platypterus* Broad-winged Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Six subspecies normally recognized.
B. p. platypterus - C and S Canada to S USA; winters S to Brazil
B. p. cubanensis - Cuba
B. p. brunnescens - Puerto Rico
B. p. insulicola - Antigua (Lesser Antilles)
B. p. rivierei - Dominica, Martinique and St. Lucia (Lesser Antilles)
B. p. antillarum - St. Vincent and Grenada to Tobago

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Atlantic coast in Costa Rica during Boreal Fall. Pacific Coast during Boreal Spring. Central Valley, Talamanca. At Easter time in the Combeima River valley in Colombia.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: >10

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): >1,000,000 in North America alone; race brunnescens (Puerto Rico) estimated 124 birds
Data Quality: 1

Recent Field Studies: Unknown

Threats: Habitat loss and fragmentation, hunting in Combeima, Colombia every year there is evidence that this also occurs in other sites of the Central Andes in this country.

Trade: No

Comments: Common, with no evidence of decline in North American range during pesticide era. Caribbean populations may be under threat because of habitat alterations and loss of primary

forests; *cubanensis* has also been reduced by shooting. Race *brunnescens* has been proposed for listing as Endangered.

RECOMMENDATIONS:

Research Management: Monitoring, habitat management, limiting factors management
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): 3.4.0 = 7

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2*. Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 183. *Buteo leucorrhous* White-rumped Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Monotypic.

Current Distribution (breeding and wintering): mountains of Venezuela and Colombia through Ecuador and Perú to NW Bolivia (Cochabamba, La Paz); Paraguay, S Brazil (N to Minas Gerais) and N Argentina
Concentrated Migration Regions: Not known migratory movements.
Historical Distribution: (Salta, Tucumán, Chaco and Misiones)
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 2

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Not well-studied

Threats: Habitat loss

Trade: No

Comments: Very little known, and status uncertain. Generally rather local and nowhere common, but tolerates somewhat disturbed forest, so probably not threatened. In Argentina, seems to have decreased in response to deforestation; no recent records in NE Argentina. More data needed.

RECOMMENDATIONS:

Research Management: Survey, monitoring, habitat management, natural history studies, limiting factors research
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2

Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 184. *Buteo brachyurus* Short-tailed Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Has been considered to include *B. albigula,* either as subspecies or within single monotypic species, but no intergradation reported, despite possible overlap of ranges; these two form superspecies. Two subspecies normally recognized.
B. b. fuliginosus - S Florida (USA); E Mexico to Panamá
B. b. brachyurus - Colombia S to W Ecuador, E to the Guianas and Brazil, and S through E Perú and E Bolivia (La Paz and Cochabamba) to Paraguay and N Argentina (Jujuy, Tucumán, Misiones)

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Partial migrant.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 2

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Unknown

Threats: None known

Trade: No

Comments: Nowhere common, e.g., uncommon and thinly spread over Colombia; uncommon to rare in Florida (USA). Occurs over very large range and is tolerant of disturbed habitat; situation likely secure.

RECOMMENDATIONS:
Research Management: Survey, monitoring
PHVA: No

Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): 0.1.0 = 1
1 in Barranquilla Zoo in Colombia.

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2*. Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 185. *Buteo albigula* White-throated Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Higher altitude representative of *B. brachyurus,* with which forms superspecies, and in which present species is sometimes included, but not hybridization reported, despite possible range overlap. Monotypic.

Current Distribution (breeding and wintering): Andes, from Venezuela and Colombia S to C Chile and WC Argentina
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Unknown

Threats: Not known

Trade: No

Comments: Very poorly known. Generally rare and local throughout range, e.g., in Colombia. Preferred altitudinal range relatively less affected by human activities, especially transformation; also shows tolerance of disturbed habitat. Surveys and research required.

RECOMMENDATIONS:

Research Management: Survey, monitoring, limiting factors research, natural history
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2

Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 186. *Buteo swainsoni* Swainson's Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Monotypic.

Current Distribution (breeding and wintering): W and C North America from Alaska SE to Minnesota, and S to N Mexico; winters mostly in South America, especially in N Argentina, S Brazil and Paraguay. Also some birds in S and W USA
Concentrated Migration Regions: Boreal Fall Atlantic Coast in Costa Rica, Boreal Spring Pacific Coast of Costa Rica, Talamanca to Valle Central. In Easter time Combeima Valley in Colombia.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: >4

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: >80,000; estimated 40,000-55,000 breeding pairs, but much higher numbers counted on migration through Mexico and Panamá.
Regional Population(s): Unknown
Data Quality: 1

Recent Field Studies: Migration routes, habitat use and pesticides impact in wintering areas by Marc Bechard, Boise State University. Veracruz Counts by E. Ruelas, Pronatura.

Threats: Habitat loss and fragmentation, shooting in Combeima, Colombia.

Trade: Yes - 1989, 1990

Comments: Serious local declines, e.g., in California (90%) and Oregon; often attributed to pesticides but local habitat problems more likely. Listed as possibly threatened (although with insufficient data) in USA in 1982, but removed from list in 1991.

RECOMMENDATIONS:

Research Management: Monitoring, habitat management
PHVA: No

Captive Program Recommendation: Level 3
Level of Difficulty: 2
Existing Captive Population (ISIS): 5.7.18 = 30
10 in Colombian Zoos.

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2*. Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 187. *Buteo albicaudatus* White-tailed Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Closely allied to *B. galapagoensis,* with which forms superspecies, possibly also including *B. polysoma,* which present species may replace at lower altitudes, *and B. poecilochrous.* Three subspecies recognized.
B. a. hypospodius - SC USA (S Texas) and NW Mexico (Sonora) to N Colombia and NW Venezuela,
B. a. colonus - E Colombia E to Surinam (except NW Venezuela), and S to Amazon, E from at least Manaus to Atlantic coast; Aruba, Curacao, Bonaire, and Trinidad
B. a. albicaudatus - extreme SE Perú and S Brazil (S from Mato Grosso, Goiás and Bahia) through N and E Bolivia, Paraguay, and Uruguay to N and C Argentina (S to Rio Negro)

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: >8

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Unknown

Threats: Poisoning, hunting

Trade: No

Comments: Extensive range, apparently on increase as result of deforestation. Relatively common in open areas in Brazil; expanding in E due to deforestation, and occurs near some large cities, e.g., Rio de Janeiro. Locally common in Colombia although extirpated from Cauca Valley. Declines reported in S Argentina in areas where strychnine used by sheep ranchers.

RECOMMENDATIONS:

Research Management: Monitoring, limiting factors management
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): 3.2.1 = 6
3 in Zoos of Colombia

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 188. *Buteo galapagoensis* Galapagos Hawk

STATUS: Tentative IUCN: Vulnerable
Criteria based on: A1a, B1, B2a, D1
CITES: Appendix II
Other: 1994 IUCN Red List - Rare
Listed in *Birds to Watch* (Collar & Andrew, 1988)
Birds to Watch 2 (Collar et al., 1994) Vulnerable

Taxonomic status: Closely related to *B. albicaudatus,* with which forms superspecies; perhaps also including *B. polyosoma* and *B. poecilochrous*. Monotypic.

Current Distribution (breeding and wintering): Galapagos Is
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: <10,000 km^2 (C)
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: As many as 250 nesting pairs on Santa Cruz in past now reduced to just a few pairs. Need time frame to calculate rate of decline.
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: T. de Vries et al. in Ecuador, Charles Darwin Station.

Threats: Not known

Trade: Yes - 1989

Comments: According to early reports was very common but subjected to severe persecution by settlers. Formerly on all large islands and many of the smaller islands, but range now greatly reduced and may now have been extirpated from five islands. Seems secure on Santiago and Santa Fe. Might be a species readily responsive to manipulative intervention, at such time or prior to the time populations reach dangerously low levels.

RECOMMENDATIONS:

Research Management: Survey, monitoring, limiting factors research, limiting factors management
PHVA: Yes
Captive Program Recommendation: Pending
Level of Difficulty: 2
Existing Captive Population (ISIS): None

Sources:

Collar, N.J. and Andrew, P. 1988. *Birds to Watch: the ICBP world checklist of threatened birds.* Cambridge: International Council for Bird Preservation. Technical Publication No. 8.

Collar, N.J., Crosby, M.J., and Stattersfield, A.J. 1994. *Birds to Watch 2: the world list of threatened birds.* Cambridge: BirdLife International. BirdLife Conservation Series No. 4.

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 189. *Buteo polyosoma* Red-backed Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Forms superspecies with *B. poecilochrous*, with which sometimes considered conspecific; much remains to be resolved about taxonomy of these species. May also be closely related to *B. galapagoensis* and *B. albicaudatus,* and all four sometimes included in superspecies; said to replace *B. albicaudatus* at medium altitude. Race *exsul* may be approaching species status. Nominate race includes possible races *erythronotus, aerthiops,* and *peruviensis.* Two subspecies recognized.
B. p. polyosoma - C Andes of Colombia S through Andes to Patagonia and Tierra del Fuego; also Falkland Is. Recent records in Punta Santa Helena coastal Ecuador.
B. p. exsul - Alejandro Selkirk I (Más Afuera) in Juan Fernández Is, off SC Chile

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: >3

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Faaborg and De Vries in Ecuador.

Threats: Not known

Trade: Yes - 1990, 1991, 1992, and 1993

Comments: Status poorly known, but in general appears to be relatively secure, and locally common, e.g., EC Ecuador. Apparently declining in Chile.

RECOMMENDATIONS:

Research Management: Survey, monitoring, limiting factors research, taxonomic research
PHVA: No

Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): 1.1.1 = 3
10-15 in Chile Zoos and rehabilitation centers.

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 190. *Buteo poecilochrous* Puna Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Forms superspecies with *B. polyosoma,* of which sometimes considered a race; taxonomy of these species uncertain. May also be related to *B. galapagoensis* and *B. albicaudatus,* and all four sometimes included in superspecies. Monotypic.

Current Distribution (breeding and wintering): Andes from S Colombia (C Andes and Cauca) S to N Chile and NW Argentina
Concentrated Migration Regions: Partial migrant.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Unknown

Threats: Habitat loss, hunting in Ecuador

Trade: Yes - 1990

Comments: Generally common; particularly common in region of Mt. Antisana (NC Ecuador), where several breeding groups have been subject of detailed research in recent years; rare in Chile. Relatively extensive range in habitat that is not subject to excessive human encroachment suggests species secure at present.

RECOMMENDATIONS:

Research Management: Monitoring, taxonomic research
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2

Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 191. *Buteo albonotatus* Zone-tailed Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Populations from E Panamá and South America sometimes awarded separate race, abbreviatus, but not generally accepted. Monotypic.

Current Distribution (breeding and wintering): Range disjunct or incompletely known: NW and NC Mexico (from Baja California) and adjacent USA, S through Yucatán (not recorded in Belize) and Guatemala (including W highlands) to Panamá, including Pearl Is. In South America, distribution incompletely encircles Amazon Basin: W Ecuador, C Perú, near Lima; N Colombia (Sta Marta Mts. to Magdalena) E through N and SE Venezuela to the Guianas and Trinidad; N, E, and SE Brazil (from Amazon Delta and I de Marajó, S and E through Ceará, Pernambuco, Alagoas and Habia to Paraná) W through Paraguay to N and E Bolivia (Beni, Santa Cruz)
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: >5

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Unknown

Threats: Not known

Trade: Yes - 1990

Comments: Rather patchy distribution, but widespread and locally common. Relatively common in NE Brazil; apparently local in Colombia, recently recorded in NE in Katios Natural Park as well in Tinigua N.P. (La Macarena SW of Colombia). Tendency to use wide variety of habitats, together with extensive range suggests species secure at present.

RECOMMENDATIONS:

Research Management: Monitoring
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): 1.0.0 = 1

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 193. B*uteo jamaicensis* Red-tailed Hawk

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Forms superspecies with *B. ventralis.* Some authors include *B. buteo, B. oreophilus,* and *B. brachypterus* in same superspecies. Race *harlani* has variously been treated as full species or color morph of *calurus*. Likewise, *kriderii* sometimes considered a morph, mainly within range of *calurus*, but also in boundary region between *calurus* and *borealis;* however, kriderii is a pale form inhabiting an area also occupied by similarly pale race *richardsoni* of Merlin *(Falco columbarius*). Fourteen subspecies normally recognized.
B. j. alascensis - SE Alaska (USA) and coastal British Columbia (W Canada)
B. j. harlani - interior of Alaska, SW Yukon, and N British Columbia
B. j. calurus - W North America W of Great Plains
B. j. borrealis - N America E of Great Plains of C USA and Canada
B. j. kriderii - plains of SC Canada S to Wyoming (NC USA)
B. j. fuertesi - Texas (S USA) to N Mexico
B. j. hadropus - highlands of C Mexico
B. j. kemsiesi - Chiapas (S Mexico) to N Nicaragua
B. j. costaricensis - Costa Rica Cordillera Central, Talamanca, Chiriquí, Nesting record in Cerro Pitier, Costa Rica.
B. j. fumosus - Tres Marias Is, off WC Mexico
B. j. socorroensis - Socorro I (Revillagigedo Is), off W Mexico
B. j. umbrinus - Florida (SE USA)
B. j. solitudinis - Bahamas and Cuba
B. j. jamaicensis - Jamaica, Puerto Rico and Hispaniola E to N Lesser Antilles

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: >7

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: >350,000
Regional Population(s): Unknown

Data Quality: more than 10 years old

Recent Field Studies: Unknown

Threats: None known

Trade: Yes - 1989, 1990, 1991, 1992, and 1993

Comments: Commonest *Buteo* over most of North America; locally increasing and expanding range, at expense of *B. lineatus* and perhaps *B. swainsoni*, in areas where habitats are modified. Between 1970's and 1980's numbers in winter estimated to have increased by 33% in S Canada and USA to 350,000 birds. No comprehensive estimates for S part of range.

RECOMMENDATIONS:

Research Management: Monitoring
PHVA: No
Captive Program Recommendation: Level 3; but down-size population
Level of Difficulty: 2
Existing Captive Population (ISIS): 95.67.96 = 258

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2*. Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquível, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 194. *Buteo ventralis* Rufous-tailed Hawk

STATUS: Tentative IUCN: Near Threatened
Criteria based on:
CITES: Appendix II
Other: Listed in *Birds to Watch 2* (Collar et al., 1994) as Near Threatened

Taxonomic status: Long considered color morph of *B. polyosoma*; alternatively race *of B. jamaicensis*, with which forms superspecies. Some authors also including *B. buteo, B. oreophilus,* and *B. brachypterus.* Includes synonymous *B. pictus.* Monotypic.

Current Distribution (breeding and wintering): From SC Chile (Nuble) and SC Argentina (Rio Negro) S through Patagonia to Straits of Magellan
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Not well-studied

Threats: Not known, possibly habitat loss and fragmentation

Trade: No

Comments: Until recently Red-Listed in category Insufficiently Known, but currently considered Near Threatened. Apparently rare throughout range; status remains poorly known, but species does not appear to be in immediate danger. Lack of sightings in one area that had been logged might suggest that species requires fairly undisturbed areas, but elsewhere recorded in more humanized habitats. Holocene material indicates former presence on Tierra del Fuego, where species not otherwise recorded.

RECOMMENDATIONS:

Research Management: Survey, monitoring, life history studies, limiting factors research
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): None

Sources:

Collar, N.J., Crosby, M.J., and Stattersfield, A.J. 1994. *Birds to Watch 2: the world list of threatened birds.* Cambridge: BirdLife International. BirdLife Conservation Series No. 4.

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela EsquIvel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 206. *Morphnus guianensis* Guiana Crested Eagle

STATUS: Tentative IUCN: Vulnerable
Criteria based on: E (also possibly extent of occurrence if area occupied data available)
CITES: Appendix II
Other: Listed in *Birds to Watch 2* (Collar et al., 1994) as Near Threatened

Taxonomic status: Includes *M. taeniatus*, a variant of dark morph with heavily banded underparts. Monotypic.

Current Distribution (breeding and wintering): Guatemala and Belize (possibly extreme SE Mexico) S locally through Central America to Colombia and S to Paraguay; extreme NE Argentina (Misiones) and S Brazil; W of Andes, ranges S only to Serranía de Baudó (W Colombia)
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1; fairly continuous distribution throughout range

Population Trends - % Change in Years or Generations: Unknown, but rate of decline probably at least as fast as rate of loss of primary forest.
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Study underway at Tikal, Guatemala by Peregrine Fund's "Maya Project" since 1994; two nests to date, one successful. Only prior study is that of Bierregaard in Brazil.

Threats: Habitat loss and fragmentation, hunting (all large raptors are occasionally shot and eaten, at least in Central America.

Trade: No

Comments: Formerly red-listed in category Rare, but currently considered Near Threatened (Collar et al., 1994). Sparsely distributed throughout extensive tropical forests and gallery forests in S of range. Not immediately threatened but large size and low population densities make species particularly sensitive to hunting pressure that accompanies any human incursions into forests. Many old records from Chocó region (NW Colombia), which is now widely deforested; similar extensive deforestation in

Central American parts of range suggest that local contraction of range or serious declines in population density may already have occurred. Thought to be able to sustain small amounts of human pressure slightly better than *H. harpyja,* although apparently rarer than that species in several areas, e.g., Venezuela, Surinam.

RECOMMENDATIONS:

Research Management: Survey, monitoring, habitat management, limiting factors research, limiting factors management

PHVA: Pending

Captive Program Recommendation: Pending

Level of Difficulty: 2

Existing Captive Population (ISIS): None

2 in Panamá, 1 in Colombia at a rehabilitation center.

Sources:

Collar, N.J., Crosby, M.J., and Stattersfield, A.J. 1994. *Birds to Watch 2: the world list of threatened birds.* Cambridge: BirdLife International. BirdLife Conservation Series No. 4.

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, David Whitacre, Juventine Lopez, Gregorio Lopez, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela EsquIvel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 207. *Harpia harpyja* Harpy Eagle

STATUS: Tentative IUCN: Vulnerable
Criteria based on: E (also possibly extent of occurrence if area occupied data available)
CITES: Appendix II
Other: Listed in *Birds to Watch* (Collar et al., 1994) as Near Threatened

Taxonomic status: Only close relative appears to be *Morphnus guianensis.* Monotypic.

Current Distribution (breeding and wintering): S Mexico (from S Veracruz, Oaxaca, and apparently Campeche) through Central America to Colombia, then E through Venezuela to the Guianas and S through E Bolivia and Brazil to extreme NE Argentina (Misiones)
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Alvarez (Venezuela - 1993; 1994)

Threats: Habitat loss and fragmentation, hunting

Trade: Yes - 1990, 1991, 1992, and 1993

Comments: Formerly red-listed in category Rare, but currently considered Near Threatened, according to del Hoyo et al. (1994). Sparsely distributed throughout extensive range and generally rare. Has disappeared from large parts of former range, notably from most of N and C Central America; in Colombia, rare and local and possibly will decline further with the construction of the proposed Pan American Highway linking Panamá and Colombia. In Brazil, still reasonably common in Amazonia, but rare elsewhere, with major decline (and possible extinction) in Rio Grande do Sul. Persists in N Argentina, where there have been three recent nest records. Former range has undoubtedly been reduced to some extent due to hunting and deforestation. Accurate knowledge of breeding density and home range size essential for planning conservation of species. Published estimates of home range size

based mostly on speculation. The Peregrine Fund has brought various birds together in captive breeding program; satellite transmitters now placed on 5 young birds, but no adults to date. Active nests reported to be as close together as 5 km in Venezuela, and only 3 km apart in both Guyana and Panamá. Obviously susceptible to deforestation, and consequently now missing from parts of former range in S Brazil, but could perhaps survive in disturbed forests or even perhaps forest mosaics, if large size and boldness in face of humans did not make them irresistible targets for hunters. Low overall population densities and slow reproductive rates make shooting the most significant threat over entire range; of the 5 young carrying transmitters in Venezuela, one has already been shot.

RECOMMENDATIONS:

Research Management: Survey, monitoring, limiting factors management, habitat management
PHVA: Yes
Captive Program Recommendation: Level 2
Level of Difficulty: 2
Existing Captive Population (ISIS): 6.7.3 = 16

Sources:

Collar, N.J. and Andrew, P. 1988. *Birds to Watch: the ICBP world checklist of threatened birds.* Cambridge: International Council for Bird Preservation. Technical Publication No. 8.

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 229. *Spizastur melanoleucus* Black-and-white Hawk-eagle

STATUS: Tentative IUCN: Near Threatened
Criteria based on:
CITES: Appendix II
Other: Birds to Watch 2 (Collar et al., 1994) Near Threatened

Taxonomic status: Monotypic genus, very similar to Old World *Hieraaetus*. Monotypic.

Current Distribution (breeding and wintering): E and S Mexico (Veracruz, Oaxaca) through Central America to Colombia, whence S of Pacific slope to W Ecuador, and E through N Venezuela to the Guianas, then S through E and S Brazil to NE Argentina and Paraguay; E Perú (Loreto) and N and E Bolivia (Beni to Santa Cruz)
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 2

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Unknown

Threats: Hunting, habitat loss and fragmentation

Trade: No

Comments: Currently considered to be Near Threatened, according to del Hoyo et al. (1994). Extensive range, but spotty distribution. Rare in most areas, but relatively common at one forest site in French Guiana, with estimated average density of at least 7 individuals/10,000 ha. Rare and very local in Colombia; sparsely distributed throughout Brazil. Tolerance of diverse habitat types suggests species should not be too seriously affected by transformation of habitat.

RECOMMENDATIONS:

Research Management: Survey, monitoring, limiting factors research

PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): 0.1.0 = 1

Sources:

Collar, N.J., Crosby, M.J., and Stattersfield, A.J. 1994. *Birds to Watch 2: the world list of threatened birds.* Cambridge: BirdLife International. BirdLife Conservation Series No. 4.

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 239. *Spizaetus tyrannus* Black Hawk-eagle

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Like *S. ornatus,* not clearly related to Old World species of the genus. Two subspecies recognized.
S. t. serus - C Mexico S to Colombia, whence E of Andes to the Guianas, Trinidad and Brazil, and S to Paraguay and NE Argentina; recent records W of Andes in Ecuador and Perú (but not Colombia)
S. t. tyrannus - E and S Brazil and extreme NE Argentina (Misiones)

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown but probably declining at the same rate as loss of mature, moist and subhumid tropical forest; apparently can use altered areas some, but must add effects of shooting.
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Four nestings have been studed at Tikal, Guatemala by the Peregrine Fund's "Maya Project". Diet documented – mostly bats, squirrels and mouse opossums (bats and opossums are taken throughout the day, apparently taken from roosts), a few birds. There is a conspicuous lack of reptiles in the diet. A pair in Quintana Roo took more birds, especially toucans. One egg in clutch at Tikal. Nest every other year, as young take 1 year to reach independence. One juvenile dispersed 19.7 km from natal nest at 1 year of age.

Threats: Habitat loss and fragmentation (mainly because of cattle ranching and slash-and-burn farming). Effects of selective logging (which predominates in Latin America) are unknown but no doubt dependent on the intensity of logging.

Trade: No

Comments: Fairly common in suitable habitat but not in areas that have been heavily disturbed by agriculture. Locally fairly common in Colombia. Declining in Mexico and Central America because of habitat loss, mainly from cattle ranching and slash-and-burn farming. At Tikal, Guatemala, this is truly a forest raptor. Some reports in the literature (e.g., Slud, in Costa Rica) suggest it is not a bird of continuous forest, but inhabits only open areas and forest edge. This is not true in Guatemala,m where it is found in edxdtensive forest and is uncommon in fragmented forest. A Mexican researcher located several nests in southern parts of Campeche and/or Quintana Roo; probably more widespread in the Yucatan Peninsula than realized. Censuses at Tikal suggest it is more abundant than *S. ornatus*, but this apparently is not true (based on nest searches). It simply is more conspicuous because of frequent, vocal soaring. Diet suggests that it often h unts below the forest canopy, which may increase reliance on the forest. Recently recorded in the Magdalena Valley in Colombia.

RECOMMENDATIONS:

Research Management: Survey, monitoring, habitat management
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, David Whitacre, Juventino Lopez, Gregorio Lopez, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel
Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 240. *Spizaetus ornatus* Ornate Hawk-eagle

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: As with *S. tyrannus*, relationship to Old World species of genus unclear. Two subspecies recognized.
S. o. vicarius - SE Mexico through Central America to W Colombia and Ecuador
S. o. ornatus - E Colombia E to the Guianas and Trinidad, and S through E Ecuador, NE Perú, N and E Bolivia and Brazil to Paraguay and N Argentina (Jujuy to Misiones)

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): average density of at least 13 individuals/10,000 ha estimated at one forest site in French Guiana; in Petén, density estimated at 1 nest/787 ha, or 50 to 80 pairs in 576 km^2 Tikal National Park.
Data Quality: 1

Recent Field Studies: Long-term study undereay at Tikal, Guatemala by the Peregrine Fund's "Maya Project"; 5 banded females, three other pairs monitored since 1989/91.

Threats: Habitat loss and fragmentation, mainly due to cattle ranching and slash-and-burn farming; some hunting.

Trade: Yes - 1991

Comments: Relatively common. While thought in some cases to be outnumberd by *S. tyrannus,* where the two co-exist, it is apparently more common than *tyrannus* at Tikal Guatemala where *tyrannus* is more often detected on cneuses (more frequent and vocal soaring than *ornatus*), but nest searches suggest *ornatus* is more common. Has decreased at S limit of range in Argentina, and in areas of heavy

deforestation in S Brazil. Very few records from W Ecuador. At Tikal, lays one egg and nests every other year, unless prior young dies; young reach independence at 12-18 (usually 12-14) months of age. Broad nesting season, but still a seasonal peak. Diet is half birds, half mammals in Tikal. Three nests known (Peten and Belize) that have been occupied for a time in fragmented landscapes; one of these nest trees since cut down (this and shooting probably become significant factors in highly fragmented landscapes). At Tikal, tall forest habitat is saturated with neighboring pairs; highly K-selected. One instance of a subadult being killed and eaten by a pair of subadults. Movement of one pair to an alternate nest site sometimes leads to spatial adjustments by neighboring pairs.

RECOMMENDATIONS:

Research Management: Survey, monitoring, habitat management
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): 2.3.0 = 5

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, David Whitacre, Julio Madrid, Hector Madrid, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 242. *Oroaetus isidori* Black-and-chestnut Eagle

STATUS: Tentative IUCN: Near Threatened
Criteria based on:
CITES: Appendix II
Other: Birds to Watch 2 (Collar et al., 1994) Near Threatened

Taxonomic status: Monotypic genus closely related to *Spizaetus*, in which sometimes included. Monotypic.

Current Distribution (breeding and wintering): Coastal ranges of NW Venezuela (Carabobo) and NE Colombia (Santa Marta Mts) and S on subtropical slopes of Andes from Venezuela (Mérida) through Colombia, Ecuador and Perú to WC Bolivia and (formerly?) NW Argentina
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies:

Threats: Habitat loss and fragmentation, hunting

Trade: No

Comments: Currently considered to be Near Threatened, according to del Hoyo et al. (1994). Rare and patchily distributed; status very poorly known. Probably susceptible to loss of continuous forest habitat; observed in some partially logged tracts of forest, but perhaps as direct result of loss of extensive primary forest in subtropical zone. No records in NW Argentina since 1957.

RECOMMENDATIONS:

Research Management: Survey, monitoring, habitat management, limiting factors research,

natural history
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): None
3 individuals in Colombia: 1 Medellin Zoo, 1 rehabilitation center, and 1 Private collection.

Sources:
Collar, N.J., Crosby, M.J., and Stattersfield, A.J. 1994. *Birds to Watch 2: the world list of threatened birds*. Cambridge: BirdLife International. BirdLife Conservation Series No. 4.

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2*. Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela EsquIvel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 244. *Daptrius ater* Black Caracara

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: May merit generic differentiation from *D. americanus,* due to differences in morphology, habitat and behavior. Monotypic.

Current Distribution (breeding and wintering): E Colombia, S Venezuela, and the Guianas S through Amazonia to E Perú, NE Bolivia and C Brazil
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Unknown

Threats: Habitat loss

Trade: No

Comments: Status very poorly known. Extensive range and flexibility in terms of habitat and feeding habits suggest species fairly secure. Generally fairly common in suitable habitat in Colombia; locally common in parts of Amazonian Ecuador.

RECOMMENDATIONS:

Research Management: Survey, monitoring, life history studies, limiting factors research, taxonomic research
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2

Existing Captive Population (ISIS): 1.0.1 = 2

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 245. *Daptrius americanus* Red-throated Caracara

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: May merit separation from *D. ater* in genus *Ibycter*, on grounds of differences in morphology, habitat and behavior. Populations from Central America and SE Brazil have been recognized as races *guatemalensis* and *pelzelni* respectively, based primarily on size, but substantial overlap with intervening populations. Monotypic.

Current Distribution (breeding and wintering): Extreme SE Mexico (Chiapas) S to Colombia, S on Pacific slope to W Ecuador, and E of Andes to C Perú, N and E Bolivia and S Brazil (NW Paraná, Mato Grosso and Sao Paulo)
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Reported average density of at least c. 200 individuals/10,000 ha reported in French Guiana.
Data Quality: 2

Recent Field Studies: Unknown

Threats: Habitat loss and fragmentation, hunting

Trade: No

Comments: Populations of Panamá, and perhaps much of Central America, have declined dramatically since 1950's and 1960's, in part due to deforestation but also in areas where extensive forest remains. No recent records in N of Costa Rica; has declined greatly on Caribbean slope of Panamá, where now rare. Likely will be negatively affected by construction of the proposed Pan American Highway between Panamá and Colombia. Occurs in many forest areas of South America at population densities perhaps surpassed by other tropical forest raptors only by some forest-falcons (Micrastur).

RECOMMENDATIONS:

Research Management: Survey, monitoring, habitat management, limiting factors research
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 246. *Phalcoboenus carunculatus* Carunculated Caracara

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Formerly treated as race of *P. megalopterus,* as was *P. albogularis;* these three form superspecies, in which some authors also include *P. australis.* Genus closely related to *Polyborus,* and sometimes even merged with it. Monotypic.

Current Distribution (breeding and wintering): Andes of Ecuador and SW Colombia, possibly in N Perú.
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Unknown

Threats: None known

Trade: No

Comments: Uncommon to locally common; in Colombia, commonest in Cumbal area of S Nariño, near border with Ecuador; currently spreading into Cauca valley. In Ecuador, common in páramo zones around Mt. Antisana, and fairly common in some other protected areas. Probably relatively secure at present, as habitat not under significant pressure; no reports of persecution.

RECOMMENDATIONS:

Research Management: Survey, monitoring, natural history
PHVA: No
Captive Program Recommendation: No

Level of Difficulty: 2
Existing Captive Population (ISIS): None
2 In Jaime Duque Zoo in Colombia.

Sources:
del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2*. Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 247. *Phalcoboenus megalopterus* Mountain Caracara

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Formerly considered to include *P. albogularis* and *P. carunculatus* as races; these three form superspecies, in which some authors also include *P. australis.* Possibly hybrids with *P. albogularis* reported. Monotypic.

Current Distribution (breeding and wintering): Andes from N Perú (Piura) through Bolivia to NW Argentina and C Chile (Colchagua)
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Unknown

Threats: None known

Trade: No

Comments: A common bird in suitable habitat; of no conservation concern. Abundant in N Altiplano of Perú and Bolivia.

RECOMMENDATIONS:

Research Management: Survey, monitoring
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): 0.1.0 = 1

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2*. Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 248. *Phalcoboenus albogularis* White-throated Caracara

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Formerly treated as race of *P. megalopterus*, as was *P. carunculatus*; these three form superspecies, in which some authors also include *P. australis*. Possible hybrids *with P. megalopterus* have been reported. Monotypic.

Current Distribution (breeding and wintering): S Chile (Ñublé) and S Argentina (S Mendoza) S to Tierra del Fuego
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Unknown

Threats: None known

Trade: Yes - 1989

Comments: Indeterminate, said to be common in Nothofugus beech forest. Common at rubbish dump near Ushuaia (S Tierra del Fuego) but occurs at very low density in forests of adjacent national park. Habitat not subject to much disturbance, and no persecution reported, so presumably not a species of immediate concern.

RECOMMENDATIONS:

Research Management: Survey, monitoring
PHVA: No
Captive Program Recommendation: No

Level of Difficulty: 2
Existing Captive Population (ISIS): None

Sources:
del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 249. *Phalcoboenus australis* Striated Caracara

STATUS: Tentative IUCN: Near Threatened
Criteria based on:
CITES: Appendix II
Other: Listed in *Birds to Watch 2* (Collar et al. 1994) Near Threatened

Taxonomic status: Sometimes considered to form part of the P. megalopterus superspecies, but apparently more distinctive than congeners. Monotypic.

Current Distribution (breeding and wintering): Isles off extreme S South America, including Staten (Isla de los Estados), Navarino and Cape Horn, and Falkland Is; irregularly to S and E coasts of Isla Grande, Tierra del Fuego
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: >6

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Unknown

Threats: Hunting, human persecution

Trade: Yes - 1989, 1990, and 1991

Comments: According to del Hoyo et al. (1994), currently considered Near Threatened. Rare overall. Heavily persecuted in past on main Falkland Is, due to its attacks on weak or stranded sheep. Bounty paid for its destruction, leading to extinction from East Falkland I; now mostly restricted to smaller islands of the group, especially in W where reported to be locally numerous. Maybe similarly numerous on small islands near Cape Horn; surveys desirable.

RECOMMENDATIONS:

Research Management: Survey, monitoring, limiting factors management
PHVA: No
Captive Program Recommendation: Level 3
Level of Difficulty: 2
Existing Captive Population (ISIS): 5.6.4 = 15

Sources:

Collar, N.J., Crosby, M.J., and Stattersfield, A.J. 1994. *Birds to Watch 2: the world list of threatened birds.* Cambridge: BirdLife International. BirdLife Conservation Series No. 4.

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 250. *Polyborus plancus* Crested Caracara

STATUS: Tentative IUCN: Lower Risk
Criteria based on: Distribution and population
CITES: Appendix II

Taxonomic status: Recent proposal to replace traditional genus name *Polyborus* with *Caracara* on grounds of indeterminate type description, but *Polyborus* should be retained (see del Hoyo et al., 1994, pp. 219). Closely related to *Phalcoboenus*, and less closely to *Milvago*, both of which genera sometimes included within *Polyborus*. Extinct form lutosus of Guadalupe I (off W Mexico) frequently treated as full species, but now generally considered a race of *P. plancus*. Race *audubonii* of doubtful validity, and often merged with *cheriway*; race *ammophilus* described from W Mexico, but even more dubious, and normally included within *audubonii*. Four extant subspecies usually recognized.
P. p. pallidus - Tres Marías Is, off W Mexico
P. p. audubonii - S USA (Florida; Texas to Arizona) through Central America to W and R Panamá, Cuba, I of Pines
P. p. cheriway - E Panamá through C W and E Colombia, W Ecuador to the Guianas and S to N Perú and R Amazon; Aruba (Netherlands Antilles) E to Trinidad
P. p. plancus - C Perú and C Bolivia E to Amazon Delta and S to Tierra del Fuego; Falkland Is

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: >7

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Joan Morrison, University of Florida.

Threats: Hunting, poisoning, habitat loss in Florida

Trade: Yes - 1989, 1990, 1991, 1992, and 1993

Comments: Fairly common to locally abundant. Locally persecuted in some farming regions (e.g., in S Chile) as accused of preying on lambs. Declines reported in S Argentina in areas where strychnine used by sheep ranchers. Conversion of farmland to citrus plantations and other forms of habitat loss threaten Florida population. Elsewhere, conversion of forest to cattle pastures almost certainly beneficial to species, and range probably expanding. Form lutosus became extinct around 1900, as a result of heavy persecution, mainly by shooting, often when birds gathered at waterholes.

RECOMMENDATIONS:

Research Management: Survey, monitoring, taxonomic research, limiting factors management, habitat management, distribution in Ecuador and Perú
PHVA: No
Captive Program Recommendation: Level 3
Level of Difficulty: 2
Existing Captive Population (ISIS): 24.28.20 = 72
Colombia: 10 in different Zoos.

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 251. *Milvago chimachima* Yellow-headed Caracara

STATUS: Tentative IUCN: Lower Risk
Criteria based on: Distribution and population
CITES: Appendix II

Taxonomic status: Genus related to *Polyborus* and *Phalcoboenus*, and has been included in former; closest of the caracara genera to *Falco*. Despite some areas of overlap, may be regarded as forming superspecies with *M. chimango*. Two subspecies recognized.
M. c. cordatus - S Costa Rica and Panamá (including Pearl Is) through Colombia to the Guianas and Trinidad and S (E of Andes) to Amazon
M. c. chimachima - E Bolivia and Brazil S of Amazon to Paraguay, N Argentina and Uruguay

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Unknown

Threats: None known

Trade: No

Comments: Widespread and very common. Perhaps colonizing deforested highlands in Andes, and will certainly move into lowland areas as they are converted from forest to cattle ranches or to small or to medium-scale farming.

RECOMMENDATIONS:
Research Management: Monitoring
PHVA: No

Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): 2.2.3 = 7

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 252. *Milvago chimango* Chimango Caracara

STATUS: Tentative IUCN: Lower Risk
Criteria based on: Distribution and population
CITES: Appendix II

Taxonomic status: May form superspecies with *M. chimachima;* has been placed (with *M. chimachima)* in Polyborus. Birds of Tierra del Fuego sometimes awarded separate race, fuegiensis. Possible race *azarae* normally included within nominate. Two subspecies recognized.
M. c. chimango - N and C Chile and N and C Argentina through Paraguay to Uruguay and adjacent Brazil
M. c. temucoensis - S Chile (from near Concepción) and S Argentina (from R Chubut) S to Tierra del Fuego and Cape Horn

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies:

Threats: None known

Trade: Yes - 1989, 1992

Comments: Currently thriving, and is commonest raptor through much of Chile and Argentina. In SC Chile, fairly common to abundant around many towns, and especially fishing villages; common in Rio Grande do Sul, S Brazil. Often closely associated with humans, feeding on discarded rubbish.

RECOMMENDATIONS:

Research Management: Monitoring
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 253. *Herpetotheres cachinnans* Laughing Falcon

STATUS: Tentative IUCN: Lower Risk
Criteria based on: Distribution and population
CITES: Appendix II

Taxonomic status: Distinctive genus, most closely allied with *Micrastur*, sometimes awarded its own tribe or even subfamily. Different authors recognize 2-6 races; possible race *excubitor* included within *chapmani; maestus* and *fulvescens* within nominate. Three subspecies normally recognized.
H. c. chapmani - Mexico (S Sonora and San Luis Potosí) S to Honduras
H. c. cachinnans - Nicaragua to Colombia and S to Perú and C Brazil
H. c. queribundus - E Bolivia and E Brazil (S to Sao Paulo) to Paraguay and N Argentina

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: The Peregrine Fund Maya Project in Guatemala.

Threats: Not known

Trade: No

Comments: Uncommon to fairly common within extensive range, e.g., Colombia, Surinam; local throughout most of Brazil. In primary forest seems to maintain lower densities than in disturbed forest.

RECOMMENDATIONS:

Research Management: Survey, monitoring

PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): None
1 San Jose Zoo in Costa Rica.

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquível, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 254. *Micrastur ruficollis* Barred Forest-falcon

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Distinctive genus specialized for life in dense forest; long tail and short wings for maneuverability; large openings and facial ruff indicate importance of hunting by sound. Most closely related to *Herpetotheres.* Until recently considered to include *M. gilvicollis*, but voice and morphology support specific status for *M. gilvicollis*, which is widely sympatric with present species. Possible races *oaxacae* and *kalinowskii* currently included in races *guerilla* and *zonothorax* respectively. Six subspecies normally recognized.
M. r. guerilla - S Mexico to Nicaragua
M. r. interestes - Costa Rica and Panamá to W Colombia and W Ecuador
M. r. zonothorax - Colombia and Venezuela, in E Andean foothills, S perhaps to Bolivia
M. r. concentricus - S Venezuela, the Guianas and Amazonia
M. r. ruficollis - S of Amazonia in Brazil, Paraguay, and NE and SE Argentina
M. r. olrogi - NW Argentina, in subtropical forests

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): average estimated density of at least c. 10 individuals/10,000 ha of forest in French Guiana; in Petén (Guatemala) c. 1 pair/100 ha
Data Quality: 2

Recent Field Studies: Ongoing work by The Peregrine Fund Maya Project in Petén (Guatemala), Proyecto Biopacifico in southwest Colombia.

Threats: Habitat loss, deforestation

Trade: No

Comments: Along with *M. gilvicollis*, probably one of the most abundant raptors in Amazonian forests. Locally fairly common in Colombia, especially in foothills and on lower slopes; reported to be uncommon in Panamá, although possibly due to fact that species is very unobtrusive. Virtually all data available on breeding biology is result of The Peregrine Fund Maya Project, involving studies of 38 nesting attempts in the Petén of Guatemala.

RECOMMENDATIONS:

Research Management: Monitoring, other (continuation of breeding studies), taxonomic studies
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2*. Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 255. *Micrastur plumbeus* Plumbeous Forest-falcon

STATUS: Tentative IUCN: Endangered
Criteria based on: A2b, C1, C2a
CITES: Appendix II
Other: 1994 IUCN Red List - Vulnerable
Listed in *Birds to Watch* (Collar & Andrew, 1988)
Birds to Watch 2 (Collar et al., 1994) Endangered

Taxonomic status: Has been included within *M. gilvicollis;* sympatric with *M. ruficollis interstes*, so when gilvicollis was included within *M. ruficollis, plumbeus* was elevated to species rank; now *that M. ruficollis* and *gilvicollis* have been shown to be separate species, status of plumbeus unclear, but generally retained as full species; further research required to clarify taxonomic status. Monotypic.

Current Distribution (breeding and wintering): SW Colombia (Cauca, Nariño), recently recorded in Laguna del trueno Nariño, Colombia, NW Ecuador
Concentrated Migration Regions: Unknown
Historical Distribution: Ecuador (Esmeraldas)
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Paul Salaman - Proyecto Biopacifico in Southwest Colombia.

Threats: Habitat loss and fragmentation. The construction and operation of the Pasto - Tumaco road might have severe adversal effects on its habitat in Colombia.

Trade: No

Comments: Suffering from deforestation and degradation of habitat within limited range, both in Colombia and Ecuador; surveys and protection required. Recorded within Munchique National Park, Colombia; also very near Cotacachi-Cayapas Ecological Reserve, Ecuador, which undoubtedly holds the species, but this large reserve is now being opened up for logging. Apparent rarity also may be due

to secretive nature of Micrastur, and confusion with similar sympatric M. ruficollis.

RECOMMENDATIONS:

Research Management: Survey, monitoring, limiting factors research, limiting factors management, habitat management, life history studies, taxonomic research, other (enhance protection within national parks)
PHVA: Yes
Captive Program Recommendation: Pending
Level of Difficulty: 2
Existing Captive Population (ISIS): None

Sources:

Collar, N.J. and Andrew, P. 1988. *Birds to Watch: the ICBP world checklist of threatened birds.* Cambridge: International Council for Bird Preservation. Technical Publication No. 8.

Collar, N.J., Crosby, M.J., and Stattersfield, A.J. 1994. *Birds to Watch 2: the world list of threatened birds.* Cambridge: BirdLife International. BirdLife Conservation Series No. 4.

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 256. *Micrastur gilvicollis* Lined Forest-falcon

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Recently split as valid species from *M. ruficollis.* Often considered to include *M. plumbeus* as race. Monotypic.

Current Distribution (breeding and wintering): E Colombia through S Venezuela to the Guianas, and S throughout Amazonia
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): average density of at least c. 70 individuals/10,000 ha of forest in French Guiana, where the only raptor species apparently more abundant was Daptrius americanus
Data Quality: 2

Recent Field Studies: Unknown

Threats: Habitat loss

Trade: No

Comments: Probably the most abundant diurnal raptor over much of lowland forests of Amazonia, where it attains very high densities; territories in central Amazon are c. 100 ha with fairly even distribution throughout forest.

RECOMMENDATIONS:

Research Management: Monitoring
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2

Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 257. *Micrastur mirandollei* Slaty-backed Forest-falcon

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Birds of NW of range have occasionally been placed in separate race, extimus, but not normally recognized. Monotypic.

Current Distribution (breeding and wintering): Costa Rica, Panamá, and Colombia (including W slope of Andes) through the Guianas and Amazonia to E Brazil (Espírito Santo) NE Bolivia, E Perú
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): estimated minimum average density of 4 birds/10,000 ha in French Guiana
Data Quality: 2

Recent Field Studies: Not studied

Threats: Habitat loss and fragmentation

Trade: No

Comments: Status very poorly known, perhaps in part because so easily confused with other species. Widely distributed but everywhere rare. One of rarest forest raptors in French Guiana.

RECOMMENDATIONS:

Research Management: Survey, monitoring, habitat management, limiting factors research, life history studies
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 2
Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 258. *Micrastur semitorquatus* Collared Forest-falcon

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Sometimes, especially in past, considered to include *M. buckleyi.* Two subspecies normally recognized.
M. s. naso - NC Mexico (Sinaloa to Tamaulipas) S through Central America to N and W Colombia and Ecuador
M. s. semitorquatus - E Colombia E to the Guianas, and S through E Perú, N and E Bolivia and Brazil to Paraguay and N Argentina

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): In French Guiana, average estimated density of at least c. 12 individuals/10,000 ha. Ask Peregrine Fund.
Data Quality: 2

Recent Field Studies: Ongoing work by The Peregrine Fund Maya Project in Tikal National Park, Petén (Guatemala)

Threats: Deforestation

Trade: No

Comments: Not uncommon over vast range; secretive nature presumably reduced threat from hunters. Non-breeders in Petén had home ranges of 2.3-8.8 km^2, breeding pairs of c. 11 km^2. First nest for genus only discovered in 1978; since then, virtually all data available on breeding biology of species is result of The Peregrine Fund Maya Project involving studies of 8 nests in Tikal National Park, Petén (Guatemala).

RECOMMENDATIONS:

Research Management: Survey, monitoring, continued life history studies, limiting factors research

PHVA: No

Captive Program Recommendation: No

Level of Difficulty: 2

Existing Captive Population (ISIS): None

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 259. *Micrastur buckleyi* Buckley's Forest-falcon

STATUS: Tentative IUCN: Data Deficient
Criteria based on:
CITES: Appendix II
Other: 1994 IUCN Red List - Insufficiently Known
Listed in *Birds to Watch* (Collar & Andrew, 1988)

Taxonomic status: Known only from about a dozen specimens and a few sightings; formerly considered a variant of *M. semitorquatus*. Monotypic.

Current Distribution (breeding and wintering): Amazonian reaches of Ecuador and Perú; single record from SE Colombia; apparent recent record from Brazil (R Juruá, Acre) has now been withdrawn.
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Not studied

Threats: Habitat loss and fragmentation

Trade: No

Comments: Status virtually unknown. Secretive nature of genus and sympatry with very similar *M. semitorquatus* render estimates of population levels very difficult. Surveys required to establish limits of range and densities. Evidence suggests that species is not immediately threatened; however at least in part of range, habitat is in process of being cleared.

RECOMMENDATIONS:

Research Management: Survey, monitoring, life history studies, habitat management, limiting factors research
PHVA: Pending
Captive Program Recommendation: Pending
Level of Difficulty: 2
Existing Captive Population (ISIS): None

Sources:

Collar, N.J. and Andrew, P. 1988. *Birds to Watch: the ICBP world checklist of threatened birds.* Cambridge: International Council for Bird Preservation. Technical Publication No. 8.

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela EsquIvel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 260. *Spiziapteryx circumcinctus* Spot-winged Falconet

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Taxonomic position unclear and species frequently placed in present subfamily or in Polyborinae; variously associated with Old World genus *Polihierax* or with aberrant Neotropical falconids *Micrastur, Herpetotheres* and *Caracara*; sometimes considered closest to caracaras but alternatively placed apart in separate subfamily alongside only *Herpetotheres.* Monotypic.

Current Distribution (breeding and wintering): E Bolivia (Santa Cruz) through Paraguay to N and C Argentina (S to Río Negro)
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Not well-studied

Threats: Presumably habitat loss and fragmentation

Trade: No

Comments: Status virtually unknown; habitat is not amongst most seriously devastated in the region. Single record from Paraguay.

RECOMMENDATIONS:

Research Management: Survey, monitoring, habitat management, limiting factors research, taxonomic research
PHVA: Pending
Captive Program Recommendation: Pending

Level of Difficulty: 2
Existing Captive Population (ISIS): None

Sources:
del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 275. *Falco sparverius* American Kestrel

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Has been placed in either *Cerchneis* or *Tinnunculus*. Often considered to form superspecies with *F. tinnunculus*. Seventeen subspecies normally recognized.
F. s. sparverius - North America, from Alaska to Newfoundland, and S to W Mexico, except SE USA and coastal W Mexico; winters S through C America to Panamá
F. s. paulus - South Carolina to Florida, USA
F. s. peninsularis - S Baja California, Sonora and Sinaloa, Mexico
F. s. tropicalis - S Mexico to N Honduras
F. s. nicaraguensis - lowland pine savannas in Honduras and Nicaragua
F. s. sparverioides - Cuba and I of Pines; Bahamas
F. s. dominicensis - Hispaniola
F. s. carbaearum - Puerto Rico to Grenada
F. s. brevipennis - Aruba, Curacao and Bonaire (Netherlands Antilles)
F. s. isabellinus - Venezuela to N Brazil
F. s. ochraceus - mountains of E Colombia and NW Venezuela
F. s. caucae - mountains of W Colombia
F. s. aequatorialis - subtropical N Ecuador
F. s. peruvianus - subtropical SW Ecuador, Perú, and N Chile
F. s. fernandensis - Robinson Crusoe I (Más a Tierra), in Juan Fernández Is, off WC Chile
F. s. cinnamominus - SE Perú, Chile and Argentina S to Tierra del Fuego
F. s. cearae - tablelands from NE Brazil S and W to E Bolivia

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: >10

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: >2,000,000; total breeding population estimated at 1,200,000 pairs
Regional Population(s): Wintering population of North America estimated at 236,000 birds.
Data Quality: 1

Recent Field Studies: Johngaerd, 1989.

Threats: Habitat loss and fragmentation

Trade: Yes - 1989, 1990, 1991, 1992, and 1993

Comments: Ubiquitous, and perhaps commonest New World falconid overall. Expanding range and increasing numbers in many regions; invading urban areas, readily occupying artificial nestboxes. No reliable population estimates for Neotropical range. Decreasing in parts of SE USA, e.g., Florida (with entire population of race paulus) because of habitat alterations; scarce or decreasing in some other regions of USA, e.g., Texas and Arkansas.

RECOMMENDATIONS:

Research Management: Monitoring
PHVA: No
Captive Program Recommendation: Level 3; but down-size population
Level of Difficulty: 1
Existing Captive Population (ISIS): 99.108.27 = 234

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 286. *Falco femoralis* Aplomado Falcon

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Has been known as *F. fuscocaerulescens*, but this form is unidentifiable. Closely allied to *F. deiroleucus* and *F. rufigularis*. Three subspecies recognized.
F. f. septentrionalis - S USA (Arizona, New Mexico, and Texas) S locally through Mexico and Guatemala
F. f. femoralis - Nicaragua and Belize through Panamá to Colombia, E to the Guianas, and S through E Bolivia and Brazil to Argentina, extending S to Tierra del Fuego
F. f. pichinchae - temperate zones of SW Colombia, Ecuador, Perú and W Bolivia S to N Chile and NW Argentina

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Partial migrant.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: The Peregrine Fund reintroduction project.

Threats: Habitat loss and fragmentation, pesticides

Trade: Yes - 1989, 1991, 1992, and 1993

Comments: Throughout most of its extensive range, populations stable or perhaps increasing, where deforestation is opening up new grassland habitat. Only occasionally reportedly from Guatemala. Virtually eliminated for poorly understood reasons in S USA and N Mexico; decline may have started as early as 1909, but species probably nested until 1950's. Probably related to habitat change associated with cattle grazing and invasion of mesquite, although recent improvements in the habitat have not led

to population increase. Significant DDT contamination and eggshell thinning reported in E Mexico. Increased area of sugar cane contamination and eggshell thinning reported in E Mexico. Panamá sugar cane cultivation and spreading human population may explain apparent recent slump there. Declines reported in S Argentina in areas where pesticide use has been poorly controlled (if at all). Captive breeding and reintroduction program being carried out in N of range by the Peregrine Fund.

RECOMMENDATIONS:

Research Management: Survey, monitoring, limiting factors research, limiting factors management
PHVA: No
Captive Program Recommendation: Level 2
Level of Difficulty: 1
Existing Captive Population (ISIS): None
The Peregrine Fund has a captive breeding population, numbers not known.

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2*. Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 287. *Falco columbarius* Merlin

STATUS: Tentative IUCN: Lower Risk
Criteria based on :
CITES: Appendix II

Taxonomic status: Formerly placed in genus *Aesalon.* Has been allied with *F. chicquera,* but no clear relationship. Nine subspecies normally recognized.
F. c. subaesalon - Iceland
F. c. aesalon - N Eurasia, from Faeroes E to C Siberia
F. c. insignis - Siberia, E of R Yenisey to R Kolyma
F. c. pacificus - Soviet Far E, including Sakhalin I
F. c. pallidus - steppes of Asia, from near Aral Sea to Altai Mts.
F. c. lymani - mountains of C Asia, in Turkestan, E Russia, NW China and Mongolia
F. c. suckleyi - Pacific coast of North America, from Alaska and British Colombia to N Washington
F. c. columbarius - North America, except Pacific coast and Great Plains
F. c. richardsoni - Great plains of North America, from C Alberta S to Wyoming

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Partial migrant.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: >10

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: >50,000
Regional Population(s): Estimates for 1993 include 250-300 pairs in Byelorussia and possibly as many as 30,000 pairs in European Russia; by 1993 U.K. population 1,300 pairs.
Data Quality: 1

Recent Field Studies: Unknown

Threats: Habitat loss and fragmentation, pesticides

Trade: Yes - 1989, 1990, 1991, 1992, and 1993

Comments: Status of Asian races not satisfactorily determined. Between 1960 and 1970's, significant

accumulations of chlorinated hydrocarbons caused some reproductive failure; eggshells showed 13% thinning in Europe and 23% in North America, with maximum record of 30% in Canadian prairies. Populations in Canada and Europe declined during that period; data insufficient to determine effects on Asian populations over same period. Currently (1993) pesticide residues are not significant; eggshells are returning to normal thickness, and European and North American populations are increasing, as indicated by breeding densities and distributions, migration counts, and wintering distributions and numbers. At the same time, at least in North America, alterations are reducing availability of suitable habitat, some habitat loss offset by habituation of species to humans and altered landscapes, and adaptation to urban nesting. Collision with man-made objects accounted for 43% mortality of 88 birds in Canada.

RECOMMENDATIONS:

Research Management: Survey, monitoring, habitat management
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 1
Existing Captive Population (ISIS): 2.4.0 = 6

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 288. *Falco rufigularis* Bat Falcon

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: May belong in *F. subbuteo* complex. Similarity to *F. deiroleucus* probably reflects a recent common ancestor rather than convergence. In past, alternatively labeled *F. albigularis*. Validity of race *ophryophanes* sometimes challenged. Northernmost populations sometimes awarded separate race, *petrophilus*. Three subspecies recognized.
F. r. petoensis - N Mexico (from Sonora E to Tamaulipas) S through Central America to Colombia, and W of Andes S to Ecuador
F. r. rufigularis - E Colombia E to the Guianas and Trinidad, and S to S Brazil and N Argentina
F. r. ophryophanes - tableland of C Brazil (Piauí S to Mato Grosso, Sao Paulo and Paraná) and adjacent Bolivia, Paraguay, and N Argentina

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): Unknown
Data Quality: Unknown

Recent Field Studies: Unknown

Threats: Habitat loss and fragmentation

Trade: Yes - 1989, 1990

Comments: Widespread and generally not uncommon in appropriate habitat. Tolerates, and may even benefit from patchy, small-scale deforestation (although this is uncertain). However, in Central America no longer breeds in several areas where forest extensively transformed to agriculture; this trend likely to be repeated elsewhere throughout range. Not recorded recently in the Valle del Cauca,

Colombia.

RECOMMENDATIONS:

Research Management: Survey, monitoring, habitat management
PHVA: No
Captive Program Recommendation: No
Level of Difficulty: 1
Existing Captive Population (ISIS): 1.0.0 = 1
One pair in a private Zoo in Ecuador.

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 289. *Falco deiroleucus* Orange-breasted Falcon

STATUS: Tentative IUCN: Vulnerable
Criteria based on: E
CITES: Appendix II
Other: Listed in Birds to Watch (Collar & Andrew, 1988)
Birds to Watch 2 (Collar et al., 1994) Near Threatened

Taxonomic status: Vocalizations most unusual among falcons, shared only with *F. rufigularis*, to which probably closely related. Sometimes associated with *F. peregrinus* complex, but now appears clearly related to "hobbies." Monotypic.

Current Distribution (breeding and wintering): S Mexico S through Central America to Colombia, E to the Guianas and Trinidad and E of Andes S through Brazil and Bolivia to Paraguay and N Argentina. Formerly thought to nest only around periphery of Amazon, but recent records of adults and juveniles in C Brazilian Amazonia suggest that species breeds throughout extensive range.
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: Unknown
Regional Population(s): 10 pairs in Belize (1992) and in and around Tikal National Park (Guatemala)
Data Quality: 1

Recent Field Studies: The Peregrine Fund Maya Project in Guatemala and Belize.

Threats: Habitat loss and fragmentation, interspecific competition (with black vultures for nesting sites)

Trade: Yes - 1992, 1993

Comments: Currently considered Near Threatened according to del Hoyo et al. (1994). Sparse distribution throughout range and apparent sensitivity to deforestation suggest species requires careful attention. Generally rare, but may be more abundant locally than normally believed. In two different cases, 3 pairs of birds nested within radius of 10 km. May be displaced from potential nest-sites by

American Black Vultures (Coragyps atratus), which arrive in association with human occupation and deforestation. Traditional nest at Tikal monuments in the Petén (Guatemala) now occupied by vultures; another traditional nest on nearby cliff no longer occupied by present species but supports a large number of vultures. Virtually all information available on breeding biology of species comes from long-term study in Ecuador and The Peregrine Fund Maya Project in Guatemala and Belize. The Peregrine Fund has established captive breeding program with a small number of birds. Population of Guatemala and Belize possibly disjunct now from South American population and may merit special concern.

RECOMMENDATIONS:

Research Management: Survey, monitoring, limiting factors management, life history studies (e.g., continuation of Peregrine Fund projects)
PHVA: ?
Captive Program Recommendation: Level 2
Level of Difficulty: 1
Existing Captive Population (ISIS): None
The Peregrine Fund captive breeding population.

Sources:

Collar, N.J. and Andrew, P. 1988. *Birds to Watch: the ICBP world checklist of threatened birds.* Cambridge: International Council for Bird Preservation. Technical Publication No. 8.

Collar, N.J., Crosby, M.J., and Stattersfield, A.J. 1994. *Birds to Watch 2: the world list of threatened birds.* Cambridge: BirdLife International. BirdLife Conservation Series No. 4.

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 302. *Falco mexicanus* Prairie Falcon

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix II

Taxonomic status: Formerly placed in *Gennaia* or *Hierofalco.* May form superspecies with *F. jugger* and *F. biarmicus,* and perhaps also with *F. cherrug* and *F. rusticolus*; but probably closer *to F. peregrinus.* Monotypic.

Current Distribution (breeding and wintering): SW Canada through W and WC USA to N Mexico; winters to EC USA and NC Mexico
Concentrated Migration Regions: Unknown
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown
Number of Locations: 1

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: >10,000; breeding population estimated at between 5,000-6,000 birds
Regional Population(s):
Data Quality: 1

Recent Field Studies: Bureau of Land Management in Boise, Idaho.

Threats: Pesticides, illegal trade?

Trade: Yes - 1989, 1990, 1991, 1992, and 1993

Comments: Widespread and common within breeding range. Eggshell thinning as result of DDT caused only minor local reductions, although greater thinning at lower DDT levels than in *F. peregrinus.* Greatest density of breeding population in Idaho. Widely used in falconry, with no apparent effect on population.

RECOMMENDATIONS:

Research Management: Survey, monitoring
PHVA: No
Captive Program Recommendation: Level 3 (to provide stock for falconry)

Level of Difficulty: 1
Existing Captive Population (ISIS): 3.4.2 = 9

Sources:
del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

COMPILERS: Cesar Márquez Reyes, Francois Sagat, Nocolas Renaudin, Keith Bildstein, Jorge Zalles, Estela Esquivel, María Susana Bó, Jim Bonner, Susan Boezio, Gladys Arzamendia de Montiel, Pedro Scherer Neto, Jose G. Tello, Daniel Hernández, Carole Griffiths, Maria Belen Ribapeneiro, Roberto Phillips Farfán, Miguel Lentino, Nancy Hilgert de Benavides, Miguel Angel Arribas, Pierre Reynaud, Roberto Bócon, Ana Maria Franco, Natalia Gómez Hayes.

TAXON DATA SHEET

SPECIES: 303. *Falco peregrinus* Peregrine Falcon

STATUS: Tentative IUCN: Lower Risk
Criteria based on:
CITES: Appendix I

Taxonomic status: Formerly placed in separate genus, *Rhynchodon.* Race *pelegrinoides* often considered separate species, usually incorporating race *babylonicus,* although latter has, in turn, been considered independent species. Hybrids between *pelegrinoides* and other forms of present species are inter-fertile. Kleinschmidt's Falcon named as separate species, "*F. kreyenborgi*," but is actually color morph of race *cassini.* Nineteen subspecies normally considered.
F. p. tundrius - Arctic tundra of North America, from Alaska to Greenland
F. p. anatum - North America S of tundra to N Mexico, except NW Pacific coast
F. p. pealei - coastal W North America from Washington N to W Alaska, and W through Aleutian and Commander Is; possibly also coastal Kamchatka and Kuril Is
F. p. cassini - W South America from Ecuador (locally) S through Bolivia and N Argentina to S Chile, Tierra del Fuego, and Falkland Is. Austral migrant.
F. p. japonensis - NE Siberia S to Kamchatka and Japan (may not be race of coastal Kamchatka)
F. p. furuitii - Volcano Is and possibly Bonin Is
F. p. calidus - tundra of Eurasia, from Lapland E to NE Siberia, roughly to region of R Yana and R Indigirka
F. p. peregrinus - Eurasia S of tundra and N of Pyrenees, Balkans, and Himalayas from British Is E to Amurland and Ussuriland in Russian Far East
F. p. brookei - S France, Spain and coastal N Africa E through Mediterranean to Caucasus
F. p. babylonicus - Asia from E Iran to Mongolia
F. p. pelegrinoides - Canary Is E through inland N Africa to Iraq, and probably Iran
F. p. madens - Cape Verde Is
F. p. minor - Africa S of Sahara, and N into extreme S Morocco
F. p. radama - Madagascar and Comoro Is
F. p. peregrinator - Pakistan, India, and Sri Lanka E to SE China
F. p. ernesti - Indonesia and Philippines E to New Guinea and Bismarck Archipelago
F. p. nesiotes - Vanuatu and New Caledonia (race uncertain) E to Fiji
F. p. macropus - Australia (except SW)
F. p. submelanogenys - SW Australia

Current Distribution (breeding and wintering): see above
Concentrated Migration Regions: Peninsula de Sta. Helena Ecuador, Tortuguero in Costa Rica in the Neotropics.
Historical Distribution: Unknown
Extent of Occurrence: More than 20,000 km^2
Area Occupied: Unknown

Number of Locations: >10

Population Trends - % Change in Years or Generations: Unknown
Trend over past 100 years: Unknown
Generation Time: Unknown

World Population: >24,000
Regional Population(s): Currently, c. 700 pairs in European Russia with only 20-25 pairs over areas over 14,000 km^2 in extreme NE; 20-30 pairs in Azerbaijan. Estimated c.12,000-18,000 in 1980's
Data Quality: 1/more than 10 years old

Recent Field Studies: Unknown

Threats: Possibly trade for falconry

Trade: Yes - 1989, 1990, 1991, 1992, and 1993

Comments: Main concentrations of breeding population (in 1980's) in Australia, islands of N Pacific and Bering Sea, Spain and British Is. Populations have certainly increased since then. In 1989 in Scotland, +373 young raised to fledging at 375 known occupied nests. Historically populations very stable, and wide fluctuations were unknown. Serious declines occurred from mid-1960's to mid-1970's, as a result of eggshell breakage, mortality of embryos and some mortality of adults from chlorinated hydrocarbon contamination. Chemicals were banned in most countries and numbers currently returning, or have already returned, to pre-chemical levels, even overshooting historical population numbers. Race *madens* thought to number only 6-8 pairs; *furuitii* local and rare, thought to breed only on one island, and may be threatened. Race *nesiotes* very uncommon, with probably less than 100 pairs scattered over 51,610 km^2 of land, and much larger area of ocean. By 1972, races *anatum, tundrius,* and *peregrinus* listed as Endangered. Because of similarity of appearance, entire species still listed as Endangered (Appendix I) by CITES in 1990. Bred extensively in captivity worldwide; as many as 5,000 captive-bred birds released to wild. Used extensively in falconry; impacts continuously and heatedly debated, on meager data. Extinct in Byelorussia since 1974.

RECOMMENDATIONS:

Research Management: Survey, monitoring
PHVA: No
Captive Program Recommendation: Level 3 (to provide stock for falconry and reintroduction)
Level of Difficulty: 1
Existing Captive Population (ISIS): 27.38.11 = 81

Sources:

del Hoyo, J., Elliott, A. and Sargatal, AJ. (Eds.) 1994. *Handbook of the Birds of the World. Vol 2.* Barcelona: Lynx Edicions.

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Table 5. Summary of CAMP Taxon Data Sheet Data for Latin American Falconiformes

	TAXON		WILD POPULATION									CAPTIVE POPULATION		
Global CAMP Taxon #	SCIENTIFIC NAME		TENT IUCN	CURRENT DISTRIBUTION	EXT OCC	# LOC	World Pop	DQ	THREATS	TRA DE	RES MGMT	PHVA	REC	DIFF	Exist Pop
1	Cathartes	aura	LR	N America S to Patagonia	D	1 C	Common	4	None known	No	T,	No	3	1	23.25.80
2	Cathartes	burrovianus	LR	E Mexico to N Argentina	D	1 C	Unknown	1	None known	No	T, Lh	No	No	1	0.0.1
3	Cathartes	melambrotus	LR	Amazonia, including S Venezuela and the Guianas	D	5	Unknown	3	L, Dp	No	Hm,T,Lh	No	No	1	None
4	Coragyps	atratus	LR	S USA S to N, E, & W South America	D	1 C	>1,000,000		None known	No	None	No	3	1	10.11.39
5	Sarcoramphus	papa	LR	C and S America, from Mexico to N Argentina	D	1 C	Unknown	3	L, Dp	Yes	Lh	No	3	1	63.69.23
7	Vultur	gryphus	VU	Andes, from Venezuela to Tierra del Fuego, descending to sea level in Perú and Chile and to the Chaco in Bolivia	D	1 C	Unknown		I, Po, H	Yes	Lm, Lh, S, M, O	Yes	2	1	78.68.2
8	Pandion	haliaetus	LR	see above	D	> 10		1/2	Ps, L, H	Yes	M, Hm, Lm, T	No	No		1.0.6
14	Leptodon	cayanensis	LR	see above	D	1 C	Unknown		L	No	S, M, Hm	No	No		None
15	Leptodon	forbesi	EN	NE Brazil	C	1	Unknown		L	No	S, M, Lh, Hm, Lr, Lm	Yes	P	2/3	None
16	Chondrohierax	uncinatus	LR/CR	see above	D	> 3	Unknown	1	L, Ice	No	S, M, Lm	Yes	P	2/3	None
24	Elanoides	forficatus	LR	see above	D	1 C	Common		L, Lf, H	No	S, M, Hm	No	No	2/3	0.1.0
26	Gampsonyx	swainsonii	LR	see above	D	> 4	Unknown		Not known, Ps?	No	S, M	No	No	2/3	None
29	Elanus	leucurus	LR	W & S USA to C Argentina	D	1 C	Unknown		Not known	No	M, O	No	No	2/3	None
32	Rostrhamus	sociabilis	LR	see above	D	> 4		1	Ps, Ice, L	Yes	S, M, Lm, Hm	No	No	3	None
33	Rostrhamus	hamatus	DD	E Panamá, through N and E Colombia, to W, N, and SE Venezuela and Guyanas; NW of Colombia in the Atrato River, Amazonian Brazil to E Perú and N Bolivia	D	C	Unknown	2	L, Dp	No	S, M, Hm, Lr, Lh, Lm, T	Pending	P	3	None
34	Harpagus	bidentatus	LR	see above	D	> 2	Unknown	1	L, Lf	No	S, M, Hm	No	No	2/3	None
35	Harpagus	diodon	DD	Guianas, through E Brazil, SE Bolivia, Paraguay, and N Argentina	D	F	Unknown	1	L, Lf	No	S, M, Lr, Lh, Hm	Pending	P	2/3	None
36	Ictinia	mississippiensis	LR	Southern tier of USA from Arizona to Florida; winters in South America, to N Argentina and Paraguay	D	1	>274,000	1	L, Ps	No	M	No	No	2/3	0.1.3

	TAXON		WILD POPULATION										CAPTIVE POPULATION		
Global CAMP Taxon #	SCIENTIFIC NAME		TENT IUCN	CURRENT DISTRIBUTION	EXT OCC	# LOC	World Pop	DQ	THREATS	TRA DE	RES MGMT	PHVA	REC	DIFF	Exist Pop
37	Ictinia	plumbea	LR	NE Mexico S through Central America to South America; W of Andes S to W Ecuador, E of Andes S to Paraguay and N Argentina	D	C	Unknown	1	L, Ps ?	No	S, M	No	No	2/3	None
86	Circus	buffoni	LR	SW Colombia to the Guianas, Trinidad and Tobago, and NE Brazil then S to E Bolivia, N and C Argentina, C Chile and Uruguay	D	C	Unknown		L, Lf	No	S, M, Lh, Hm, Lr	No	No	2	None
89	Circus	cyaneus	LR	see above	D	> 4	>100,000	1	L, Lf, I, H, Ps	No	T, M, Hm, Lm, O	No	No	2	0.3.1
90	Circus	cinereus	LR	Colombia and Ecuador S through Perú, Bolivia and Paraguay to extreme S Brazil, then S to Tierra del Fuego and Falkland Is North of Uruguay	D	2	Unknown	1	L, Lf, H, I?	No	M, Lm, Hm	No	No	2	None
99	Accipiter	poliogaster	VU	E of Andes from Colombia and NE Ecuador, S Venezuela and the Guianas S through Brazil, E Perú, Bolivia and Paraguay to N Argentina	D	1	Unknown		L, Lf	No	S, M, Hm, Lr, Lh	No	No	2	None
122	Accipiter	superciliosus	LR	see above	D	1 C	Unknown		Not known, L?	No	S, M, Lr	No	No	2	None
123	Accipiter	collaris	DD	SW Venezuela S, on W and E slopes of Andes, through Colombia to Ecuador; S to Perú	D	1	Unknown		Not known, L?	No	S, M, Lr, Lh	No	No	2	None
137	Accipiter	striatus	LR	see above	D	> 5	Unknown		L, Lf, Ps	No	S, M, Hm	No	No	2	1.0.3
138	Accipiter	chionogaster	DD	C America, from S Mexico through Guatemala, Honduras and El Salvador to NC Nicaragua	D	1	Unknown		L, Lf	No	S, M, Lh, Hm, Lr	Pending	P		None
139	Accipiter	ventralis	LR	N and SE Venezuela and Colombia through Ecuador and Perú to C Bolivia	D	1	Unknown		L, Lf	No	S, M, Lh	No	No	2	None
140	Accipiter	erythronemius	LR	S Brezil to Uruguay, and SE Bolivia through Chaco of Paraguay to N Argentina	D	1 C	Unknown		L, Lf	No	S, M, Lh	No	No	2	None

	TAXON		WILD POPULATION									CAPTIVE POPULATION		
Global CAMP Taxon #	SCIENTIFIC NAME		TENT IUCN	CURRENT DISTRIBUTION	EXT OCC	# LOC	World Pop	DQ	THREATS	TRA DE	RES MGMT	PHVA	REC	DIFF	Exist Pop
141	Accipiter	cooperii	LR	USA and S Canada; winters from N USA to C America, regularly as far S as Honduras, occasionally to Colombia	D	1 C	Unknown		Not known	Yes	M	No	No	2	1.2.2
142	Accipiter	gundlachii	EN	Cuba	D	1	300-400	1	L, Lf, I, T	Yes	S, M, Hm, Lm, Lh, O	Yes	P	2	None
143	Accipiter	bicolor	LR?	see above	D	1 C	Unknown	1	L, Lf	Yes	S, M, Hm, T	No	No	2	None
144	Accipiter	chilensis	LR?	C Chile and adjacent Argentina S to Tierra del Fuego and Staten I; winters N to NW Argentina	D	1	Unknown		Not known	No	S, M, Lr, Lh, T	No	No	2	None
157	Geranospiza	caerulescens	LR	see above	D	2	Unknown		None known	No	T, M	No	No	2	None
158	Leucopternis	plumbea	NT	E Panamá through W Colombia and W Ecuador to extreme W Perú	D	1	Unknown	3	L, Lf	No	S, M, Hm, Lr, Lh	Pending	P	2	None
159	Leucopternis	schistacea	LR	Amazonia, from SE Colombia and SW Venezuela S through E Ecuador and E Perú to N and E Bolivia, and E to E French Guiana and CN Brazil	D	1	Unknown		L, Lf	No	S, M, Hm, Lh	No	No	2	None
160	Leucopternis	princeps	DD?	Costa Rica and Panamá, and locally into W Colombia and N Ecuador	D	1	Unknown		L, Lf ?	No	S, M, T, Lr, Lh, Hm	No	No	2	None
161	Leucopternis	melanops	LR	The Guianas and Amazonia N or Amazon R to E Colombia and E Ecuador	D	1	Unknown		L, Lf ?	No	S, M, Lh, Hm, Lr, T	No	No	2	None
162	Leucopternis	kuhli	LR	E Perú N Bolivia and Amazonian Brazil S of R Amazon	D	1	Unknown		Not known	No	S, M, Lr, Lh, T	No	No	2	None
163	Leucopternis	lacernulata	VU	E Brazil from Alagoas to Sta. Catarina and S Bahia to Sao Paulo and Santa Catarina	D	2 F	Unknown		L, Lf, H	No	S, M, Lm, Hm, Lh, O	Pending	P		None
164	Leucopternis	semiplumbea	LR?	Honduras S to W Colombia and NW Ecuador	D	1	Unknown		L, Lf	No	S, M, Lr, Lh	No	No	2	None
165	Leucopternis	albicollis	LR	see above	D	1 C	Unknown		None known	No	M	No	No	2	0.1.0
166	Leucopternis	occidentalis	EN	W Ecuador and adjacent NW Perú, Ecuador	D	1	Unknown		L, Lf	No	S, M, Lr, Hm, Lh	Yes	P	2	None
167	Leucopternis	polionota	NT	E Brazil S to E Uruguay and E Paraguay	D	1	Unknown		L, Lf	No	S, M, Hm, Lh	No	No	2	None

	TAXON		WILD POPULATION										CAPTIVE POPULATION		
Global CAMP Taxon #	SCIENTIFIC NAME		TENT IUCN	CURRENT DISTRIBUTION	EXT OCC	# LOC	World Pop	DQ	THREATS	TRA DE	RES MGMT	PHVA	REC	DIFF	Exist Pop
168	Buteogallus	aequinoctialis	LR	E Venezuela along coast to Paraná, S Brazil, E Argentina, C E Uruguay	D	1	Common		L, Lf	No	M, Hm, T, O	No	No	2	None
169	Buteogallus	anthracinus	LR	see above	D	≥ 3	Unknown		L, Lf	No	M, Hm, T	No	No	2	None
170	Buteogallus	subtilis	LR?	see above	D	1	Unknown		L, Lf	No	T, S, M, Lh, Lr, Hm	No	No	2	None
171	Buteogallus	urubitinga	LR	see above	D	> 3	Unknown	1	Pl	No	M	No	No	2	1.1.0
172	Buteogallus	meridionalis	LR	W Panamá through tropical South America W of Andes to NW Perú, and E of Andes E to the Guianas and Trinidad, and S through Ecuador, E Perú, E Bolivia and Brazil to N Argentina	D	> 2	Unknown		None known	No	M	No	No	2	5-10
173	Parabuteo	unicinctus	LR	see above	D	2	Unknown		Po	Yes	M, Lm	No	3	2	80
174	Busarellus	nigricollis	LR	see above	D	1	Unknown		L, Lf	No	M, Hm, T	No	No	2	None
175	Geranoaetus	melanoleucus	LR	see above	D	1–2?	Unknown		Po, H	Yes	M, Lm	No	3	2	7.8.4
176	Harpyhaliaetus	solitarius	NT	see above	D	1	Unknown		L, Lf, H	No	S, M, Lh, Lr	No	No	2	1
177	Harpyhaliaetus	coronatus	VU	E Bolivia, W Paraguay and C S Brazil to S Argentina W SW Uruguay	D	1 C	Unknown		L, Lf, H	No	S, M, Lh, Lr	Pendin g	P	2	2.0.0
178	Buteo	nitidus	LR	see above		1 C	Unknown		Not known, L, Lf, Ps?	No	T, M, O	No	No	2	0.0.3
179	Buteo	magnirostris	LR	see above	D	1 C	Common		None known	No	M	No	3	2	3.3.9
180	Buteo	lineatus	LR?	see above	D	2	Unknown		L, Lf	Yes	M, Hm, O	No	3	2	1.3.10
181	Buteo	ridgwayi	VU?	Hispaniola and several adjacent islets	D	1	Unknown		L, Lf, H	No	S, M, Hm, Lr	Pendin g	P	2	None
182	Buteo	platypterus	LR	see above	D	> 10		1	L, Lf, H	No	M, Hm, Lm	No	No	2	3.4.0
183	Buteo	leucorrhous	LR?	Venezuela and Colombia through Ecuador and Perú to NW Bolivia, Paraguay, S Brazil and N Argentina	D	2	Unknown		L	No	S, M, Hm, Lr, O	No	No	2	None
184	Buteo	brachyurus	LR?	see above	D	2	Unknown		None known	No	S, M	No	No	2	0.1.0
185	Buteo	albigula	LR?	Andes, from Venezuela and Colombia S to C Chile and WC Argentina	D	1	Unknown		Not known	No	S, M, Lr, O	No	No	2	None

	TAXON		WILD POPULATION										CAPTIVE POPULATION		
Global CAMP Taxon #	SCIENTIFIC NAME		TENT IUCN	CURRENT DISTRIBUTION	EXT OCC	# LOC	World Pop	DQ	THREATS	TRA DE	RES MGMT	PHVA	REC	DIFF	Exist Pop
186	Buteo	swainsonii	LR?	W and C North America from Alaska SE to Minnesota, and S to N Mexico; winters mostly in South America, especially in N Argentina, S Brazil and Paraguay; some in S and W USA	D	> 4	>80,000	1	L, Lf, H	Yes	M, Hm	No	3	2	5.7.18
187	Buteo	albicaudatus	LR	see above	D	> 8	Unknown		Po, H	No	M, Lm	No	No	2	3.2.1
188	Buteo	galapagoensis	VU	Galapagos Is	C	1	Unknown		Not known	Yes	S, M, Lr, Lm	Yes	P	2	None
189	Buteo	polyosoma	LR?	see above	D	> 3	Unknown		Not known	Yes	S, M, Lr, T	No	No	2	1.1.1
190	Buteo	poecilochrous	LR	Andes from S Colombia S to N Chile and NW Argentina	D	1	Unknown		L, H	Yes	M, T	No	No	2	None
191	Buteo	albonotatus	LR	NW and NC Mexico and adjacent USA, S through Yucatán and Guatemala to Panamá, including Pearl Is. W Ecuador, C Perú, N Colombia E through N and SE Venezuela to the Guianas and Trinidad; N, E, and SE Brazil W through Paraguay to N and E Bolivia	D	> 5	Unknown		Not known	Yes	M	No	No	2	1.0.0
193	Buteo	jamaicensis	LR	see above	D	> 7	>350,000	old	None known	Yes	M	No	3	2	95.67.96
194	Buteo	ventralis	NT	SC Chile and SC Argentina S through Patagonia to Straits of Magellan	D	1	Unknown		Not known, L, Lf ?	No	S, M, Lh, Lr	No	No	2	None
206	Morphnus	guianensis	VU	Guatemala and Honduras through Central America to Colombia and S to Paraguay; extreme NE Argentina and S Brazil; W of Andes, ranges S only to Serranía de Baudó	D	1 C	Unknown		L, Lf, H	No	S, M, Hm, Lr, Lm	Pendin g	P	2	None
207	Harpia	harpyja	VU?	S Mexico through Central America to Colombia, then E through Venezuela to the Guianas and S through E Bolivia and Brazil to extreme NE Argentina	D	1	Unknown		L, Lf, H	Yes	S, M, Lm, Hm	Yes	2	2	6.7.3

	TAXON		WILD POPULATION										CAPTIVE POPULATION		
Global CAMP Taxon #	SCIENTIFIC NAME		TENT IUCN	CURRENT DISTRIBUTION	EXT OCC	# LOC	World Pop	DQ	THREATS	TRA DE	RES MGMT	PHVA	REC	DIFF	Exist Pop
229	Spizastur	melanoleucus	NT	E and S Mexico, C America to Colombia, whence S of Pacific slope to W Ecuador, and E through N Venezuela to the Guianas, then S through E and S Brazil to NE Argentina and Paraguay; E Perú and N and E Bolivia	D	2	Unknown		H, L, Lf	No	S, M, Lr	No	No	2	0.1.0
239	Spizaetus	tyrannus	LR	see above	D	1	Unknown		L, Lf, H	No	S, M, Hm	No	No	2	None
240	Spizaetus	ornatus	LR	see above	D	1	Unknown	1	L, Lf, H	Yes	S, M, Hm	No	No	2	2.3.0
242	Oroaetus	isidori	NT	NW Venezuela and NE Colombia and S from Venezuela through Colombia, Ecuador and Perú to WC Bolivia and NW Argentina	D	1	Unknown		L, Lf, H	No	S, M, Hm, Lr, O	No	No	2	None
244	Daptrius	ater	LR	E Colombia, S Venezuela, and the Guianas S through Amazonia to E Perú, NE Bolivia and C Brazil	D	1	Unknown		L	No	S, M, Lh, Lr, T	No	No	2	1.0.1
245	Daptrius	americanus	LR?	SE Mexico S to Colombia, S on Pacific slope to W Ecuador, and E of Andes to C Perú, N and E Bolivia and S Brazil	D	1	Unknown	2	L, Lf, H	No	S, M, Hm, Lr	No	No	2	None
246	Phalcoboenus	carunculatus	LR	Andes of Ecuador and SW Colombia, N Perú	D	1	Unknown		None known	No	S, M, O	No	No	2	None
247	Phalcoboenus	megalopterus	LR	Andes from N Perú through Bolivia to NW Argentina and C Chile	D	1	Unknown		None known	No	S, M	No	No	2	0.1.0
248	Phalcoboenus	albogularis	LR?	S Chile and S Argentina S to Tierra del Fuego	D	1	Unknown		None known	Yes	S, M	No	No	2	None
249	Phalcoboenus	australis	NT	Isles off extreme S South America, including Staten, Navarino and Cape Horn, and Falkland Is; to S and E coasts of Isla Grande, Tierra del Fuego	D	> 6	Unknown		H, I	Yes	S, M, Lm	No	3	2	5.6.4
250	Polyborus	plancus	LR	see above	D	> 7	Unknown		H, Po, L	Yes	S, M, T, Lm, Hm, O	No	3	2	24.28.20
251	Milvago	chimachima	LR	see above	D	1	Unknown		None known	No	M	No	No	2	2.2.3
252	Milvago	chimango	LR	see above	D	1	Unknown		None known	Yes	M	No	No	2	None
253	Herpetotheres	cachinnans	LR	see above	D	1	Unknown		Not known	No	S, M	No	No	2	None

	TAXON		WILD POPULATION										CAPTIVE POPULATION		
Global CAMP Taxon #	SCIENTIFIC NAME		TENT IUCN	CURRENT DISTRIBUTION	EXT OCC	# LOC	World Pop	DQ	THREATS	TRA DE	RES MGMT	PHVA	REC	DIFF	Exist Pop
254	Micrastur	ruficollis	LR	see above	D	1	Unknown	2	L	No	M, O, T	No	No	2	None
255	Micrastur	plumbeus	EN	SW Colombia, NW Ecuador	D	1	Unknown		L, Lf	No	S, M, Lr, Lm, Hm, Lh, T, O	Yes	P	2	None
256	Micrastur	gilvicollis	LR	E Colombia through S Venezuela to the Guianas, and S throughout Amazonia	D	1	Unknown	2	L	No	M	No	No	2	None
257	Micrastur	mirandollei	LR?	Costa Rica, Panamá, and Colombia through the Guianas and Amazonia to E Brazil, NE Bolivia, E Perú	D	1	Unknown	2	L, Lf	No	S, M, Hm, Lr, Lh	No	No	2	None
258	Micrastur	semitorquatus	LR	see above	D	1	Unknown	2	L	No	S, M, Lh, Lr	No	No	2	None
259	Micrastur	buckleyi	DD	Amazonian reaches of Ecuador and Perú; single record from SE Colombia	D	1	Unknown		L, Lf	No	S, M, Lh, Hm, Lr	Pending	P	2	None
260	Spiziapteryx	circumcinctus	LR?	E Bolivia through Paraguay to N and C Argentina	D	1	Unknown		L, Lf ?	No	S, M, Hm, Lr, T	Pending	P	2	None
275	Falco	sparverius	LR	see above	D	> 10	>2,000,000	1	L, Lf	Yes	M	No	3	1	99.108.27
286	Falco	femoralis	LR?	see above	D	1	Unknown		L, Lf, Ps	Yes	S, M, Lr, Lm	No	2	1	None
287	Falco	columbarius	LR	see above	D	> 10	>50,000	1	L, Lf, Ps	Yes	S, M, Hm	No	No	1	2.4.0
288	Falco	rufigularis	LR	see above	D	1	Unknown		L, Lf	Yes	S, M, Hm	No	No	1	1.0.0
289	Falco	deiroleucus	VU	S Mexico S through Central America to Colombia, E to the Guianas and Trinidad and E of Andes S through Brazil and Bolivia to Paraguay and N Argentina	D	1	Unknown	1	L, Lf, Ic	Yes	S, M, Lm, Lh	?	2	1	None
302	Falco	mexicanus	LR	SW Canada through W and WC USA to N Mexico; winters to EC USA and NC Mexico	D	1	>10,000n	1	Ps, T ?	Yes	S, M	No	3	1	3.2.4
303	Falco	peregrinus	LR	see above	D	> 10	>24,000	1, old	T ?	Yes	S, M	No	3	1	27.38.11

Latin American Falconiformes Conservation Assessment and Management Plan

Working Draft

Section 4
Appendices

Appendix I.

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Appendix II.

IUCN Red List Categories (1994)
Prepared by the
IUCN Species Survival Commission

As approved by the
40th Meeting of the IUCN Council
Gland, Switzerland

30 November 1994

IUCN RED LIST CATEGORIES

I) Introduction

1. The threatened species categories now used in Red Data Books and Red Lists have been in place, with some modification, for almost 30 years. Since their introduction these categories have become widely recognised internationally, and they are now used in a whole range of publications and listings, produced by IUCN as well as by numerous governmental and non-governmental organisations. The Red Data Book categories provide an easily and widely understood method for highlighting those species under higher extinction risk, so as to focus attention on conservation measures designed to protect them.

2. The need to revise the categories has been recognised for some time. In 1984, the SSC held a symposium, 'The Road to Extinction' (Fitter & Fitter 1987), which examined the issues in some detail, and at which a number of options were considered for the revised system. However, no single proposal resulted. The current phase of development began in 1989 with a request from the SSC Steering Committee to develop a new approach that would provide the conservation community with useful information for action planning.

In this document, proposals for new definitions for Red List categories are presented. The general aim of the new system is to provide an explicit, objective framework for the classification of species according to their extinction risk.

The revision has several specific aims:

- to provide a system that can be applied consistently by different people;
- to improve the objectivity by providing those using the criteria with clear guidance on how to evaluate different factors which affect risk of extinction;
- to provide a system which will facilitate comparisons across widely different taxa;
- to give people using threatened species lists a better understanding of how individual species were classified.

3. The proposals presented in this document result from a continuing process of drafting, consultation and validation. It was clear that the production of a large number of draft proposals led to some confusion, especially as each draft has been used for classifying some set of species for conservation purposes. To clarify matters, and to open the way for modifications as and when they became necessary, a system for version numbering was applied as follows:

Version 1.0: Mace & Lande (1991)
The first paper discussing a new basis for the categories, and presenting numerical criteria especially relevant for large vertebrates.

Version 2.0: Mace *et al.* (1992)
A major revision of Version 1.0, including numerical criteria appropriate to all organisms and introducing the non-threatened categories.

Version 2.1: IUCN (1993)
Following an extensive consultation process within SSC, a number of changes were made to the details of the criteria, and fuller explanation of basic principles was included. A more explicit structure clarified the significance of the non-threatened categories.

Version 2.2: Mace & Stuart (1994)

Following further comments received and additional validation exercises, some minor changes to the criteria were made. In addition, the Susceptible category present in Versions 2.0 and 2.1 was subsumed into the Vulnerable category. A precautionary application of the system was emphasised.

Final Version

This final document, which incorporates changes as a result of comments from IUCN members, was adopted by the IUCN Council in December 1994.

All future taxon lists including categorisations should be based on this version, and not the previous ones.

4. In the rest of this document the proposed system is outlined in several sections. The Preamble presents some basic information about the context and structure of the proposal, and the procedures that are to be followed in applying the definitions to species. This is followed by a section giving definitions of terms used. Finally the definitions are presented, followed by the quantitative criteria used for classification within the threatened categories. It is important for the effective functioning of the new system that all sections are read and understood, and the guidelines followed.

References:

Fitter, R., and M. Fitter, ed. (1987) The Road to Extinction. Gland, Switzerland: IUCN.

IUCN. (1993) Draft IUCN Red List Categories. Gland, Switzerland: IUCN.

Mace, G. M. *et al.* (1992) "The development of new criteria for listing species on the IUCN Red List." Species 19: 16-22.

Mace, G. M., and R. Lande. (1991) "Assessing extinction threats: toward a reevaluation of IUCN threatened species categories." Conserv. Biol. 5.2: 148-157.

Mace, G. M. & S. N. Stuart. (1994) "Draft IUCN Red List Categories, Version 2.2". Species 21-22: 13-24.

II) Preamble

The following points present important information on the use and interpretation of the categories (= Critically Endangered, Endangered, etc.), criteria (= A to E), and sub-criteria (= a,b etc., i,ii etc.):

1. **Taxonomic level and scope of the categorisation process**

The criteria can be applied to any taxonomic unit at or below the species level. The term 'taxon' in the following notes, definitions and criteria is used for convenience, and may represent species or lower taxonomic levels, including forms that are not yet formally described. There is a sufficient range among the different criteria to enable the appropriate listing of taxa from the complete taxonomic spectrum, with the exception of micro-organisms. The criteria may also be applied within any specified geographical or political area although in such cases special notice should be taken of point 11 below. In presenting the results of applying the criteria, the taxonomic unit and area under consideration should be made explicit. The categorisation process should only be applied to wild populations inside their natural range, and to populations resulting from benign introductions (defined in the draft IUCN Guidelines for Re-introductions as "..an attempt to establish a species, for the purpose of conservation, outside its recorded distribution, but within an appropriate habitat and eco-geographical area").

2. **Nature of the categories**

All taxa listed as Critically Endangered qualify for Vulnerable and Endangered, and all listed as Endangered qualify for Vulnerable. Together these categories are described as 'threatened'. The threatened species categories form a part of the overall scheme. It will be possible to place all taxa into one of the categories (see Figure 1).

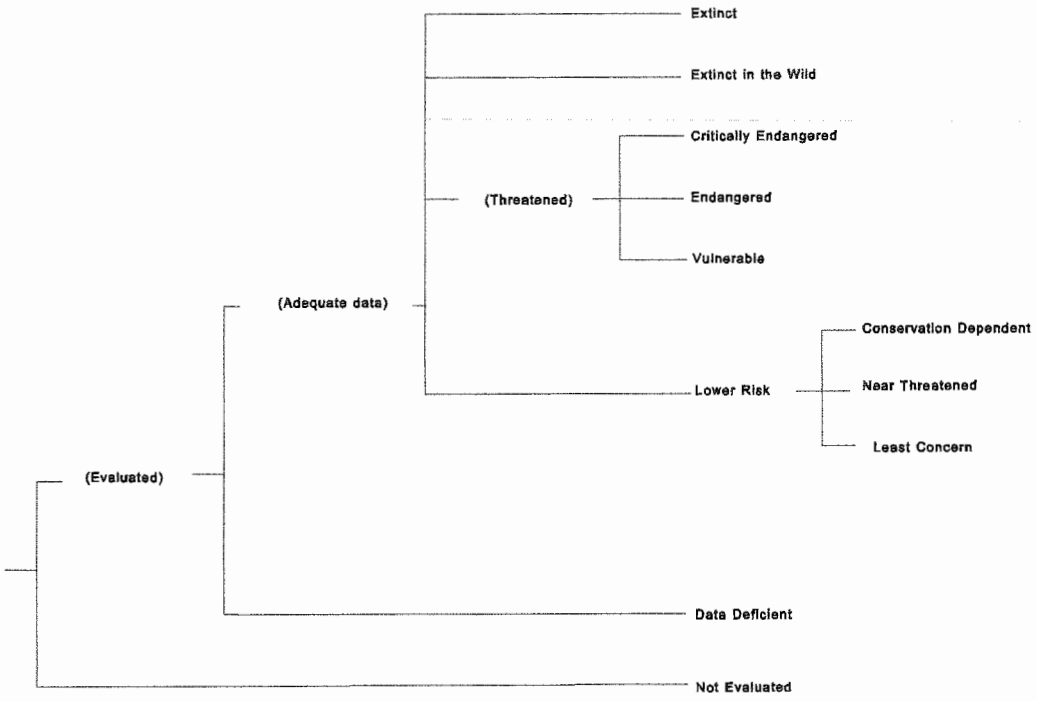
3. **Role of the different criteria**

For listing as Critically Endangered, Endangered or Vulnerable there is a range of quantitative criteria; meeting any one of these criteria qualifies a taxon for listing at that level of threat. Each species should be evaluated against all the criteria. The different criteria (A-E) are derived from a wide review aimed at detecting risk factors across the broad range of organisms and the diverse life histories they exhibit. Even though some criteria will be inappropriate for certain taxa(some taxa will never qualify under these however close to extinction they come), there should be criteria appropriate for assessing threat levels for any taxon (other than micro-organisms). The relevant factor is whether any one criterion is met, not whether all are appropriate or all are met. Because it will never be clear which criteria are appropriate for a particular species in advance, each species should be evaluated against all the criteria, and any criterion met should be listed.

4. **Derivation of quantitative criteria**

The quantitative values presented in the various criteria associated with threatened categories were developed through wide consultation and they are set at what are generally judged to be appropriate levels, even if no formal justification for these values exists. The levels for different criteria within categories were set independently but against a common standard. Some broad consistency between them was sought. However, a given taxon should not be expected to meet all criteria (A-E) in a category; meeting any one criterion is sufficient for listing.

Figure 1: Structure of the Categories



5. Implications of listing

Listing in the categories of Not Evaluated and Data Deficient indicates that no assessment of extinction risk has been made, though for different reasons. Until such time as an assessment is made, species listed in these categories should not be treated as if they were non-threatened, and it may be appropriate (especially for Data Deficient forms) to give them the same degree of protection as threatened taxa, at least until their status can be evaluated.

Extinction is assumed here to be a chance process. Thus, a listing in a higher extinction risk category implies a higher expectation of extinction, and over the time-frames specified more taxa listed in a higher category are expected to go extinct than in a lower one (without effective conservation action). However, the persistence of some taxa in high risk categories does not necessarily mean their initial assessment was inaccurate.

6. Data quality and the importance of inference and projection

The criteria are clearly quantitative in nature. However, the absence of high quality data should not deter attempts at applying the criteria, as methods involving estimation, inference and projection are emphasised to be acceptable throughout. Inference and projection may be based on extrapolation of current or potential threats into the future (including their rate of change), or of factors related to population abundance or distribution (including dependence on other taxa), so long as these can reasonably be supported. Suspected or inferred patterns in either the recent past, present or near future can be based on any of a series of related factors, and these factors should be specified.

Taxa at risk from threats posed by future events of low probability but with severe consequences (catastrophes) should be identified by the criteria (e.g. small distributions, few locations). Some threats need

to be identified particularly early, and appropriate actions taken, because their effects are irreversible, or nearly so (pathogens, invasive organisms, hybridization).

7. **Uncertainty**

The criteria should be applied on the basis of the available evidence on taxon numbers, trend and distribution, making due allowance for statistical and other uncertainties. Given that data are rarely available for the whole range or population of a taxon, it may often be appropriate to use the information that is available to make intelligent inferences about the overall status of the taxon in question. In cases where a wide variation in estimates is found, it is legitimate to apply the precautionary principle and use the estimate (providing it is credible) that leads to listing in the category of highest risk.

Where data are insufficient to assign a category (including Lower Risk), the category of 'Data Deficient' may be assigned. However, it is important to recognise that this category indicates that data are inadequate to determine the degree of threat faced by a taxon, not necessarily that the taxon is poorly known. In cases where there are evident threats to a taxon through, for example, deterioration of its only known habitat, it is important toattempt threatened listing, even though there may be little direct information on the biological status of the taxon itself. The category 'Data Deficient' is not a threatened category, although it indicates a need to obtain more information on a taxon to determine the appropriate listing.

8. **Conservation actions in the listing process**

The criteria for the threatened categories are to be applied to a taxon whatever the level of conservation action affecting it. In cases where it is only conservation action that prevents the taxon from meeting the threatened criteria, the designation of 'Conservation Dependent' is appropriate. It is important to emphasise here that a taxon require conservation action even if it is not listed as threatened.

9. **Documentation**

All taxon lists including categorisation resulting from these criteria should state the criteria and sub-criteria that were met. No listing can be accepted as valid unless at least one criterion is given. If more than one criterion or sub-criterion was met, then each should be listed. However, failure to mention a criterion should not necessarily imply that it was not met. Therefore, if a re-evaluation indicates that the documented criterion is no longer met, this should not result in automatic down-listing. Instead, the taxon should be re-evaluated with respect to all criteria to indicate its status. The factors responsible for triggering the criteria, especially where inference and projection are used, should at least be logged by the evaluator, even if they cannot be included in published lists.

10. **Threats and priorities**

The category of threat is not necessarily sufficient to determine priorities for conservation action. The category of threat simply provides an assessment of the likelihood of extinction under current circumstances, whereas a system for assessing priorities for action will include numerous other factors concerning conservation action such as costs, logistics, chances of success, and even perhaps the taxonomic distinctiveness of the subject.

11. **Use at regional level**

The criteria are most appropriately applied to whole taxa at a global scale, rather than to those units defined by regional or national boundaries. Regionally or nationally based threat categories, which are aimed at including taxa that are threatened at regional or national levels (but not necessarily throughout their global ranges), are best used with two key pieces of information: the global status category for the taxon, and the proportion of the global population or range that occurs within the region or nation. However, if applied at regional or national level it must be recognised that a global category of threat may not be the same as a regional or national category for a particular taxon. For example, taxa classified as Vulnerable on the basis of their global declines in numbers or range might be Lower Risk within a particular region where their populations are stable. Conversely, taxa classified as Lower Risk globally might be Critically Endangered within a particular region where numbers are very small or declining, perhaps only because they are at the

margins of their global range. IUCN is still in the process of developing guidelines for the use of national red list categories.

12. **Re-evaluation**

Evaluation of taxa against the criteria should be carried out at appropriate intervals. This is especially important for taxa listed under Near Threatened, or Conservation Dependent, and for threatened species whose status is known or suspected to be deteriorating.

13. **Transfer between categories**

There are rules to govern the movement of taxa between categories. These are as follows: (A) A taxon may be moved from a category of higher threat to a category of lower threat if none of the criteria of the higher category has been met for 5 years or more. (B) If the original classification is found to have been erroneous, the taxon may be transferred to the appropriate category or removed from the threatened categories altogether, without delay (but see Section 9). (C) Transfer from categories of lower to higher risk should be made without delay.

14. **Problems of scale**

Classification based on the sizes of geographic ranges or the patterns of habitat occupancy is complicated by problems of spatial scale. The finer the scale at which the distributions or habitats of taxa are mapped, the smaller will be the area that they are found to occupy. Mapping at finer scales reveals more areas in which the taxon is unrecorded. It is impossible to provide any strict but general rules for mapping taxa or habitats; the most appropriate scale will depend on the taxa in question, and the origin and comprehensiveness of the distributional data. However, the thresholds for some criteria (e.g. Critically Endangered) necessitate mapping at a fine scale.

III) Definitions

1. **Population**

Population is defined as the total number of individuals of the taxon. For functional reasons, primarily owing to differences between life-forms, population numbers are expressed as numbers of mature individuals only. In the case of taxa obligately dependent on other taxa for all or part of their life cycles, biologically appropriate values for the host taxon should be used.

2. **Subpopulations**

Subpopulations are defined as geographically or otherwise distinct groups in the population between which there is little exchange (typically one successful migrant individual or gamete per year or less).

3. **Mature individuals**

The number of mature individuals is defined as the number of individuals known, estimated or inferred to be capable of reproduction. When estimating this quantity the following points should be borne in mind:

- Where the population is characterised by natural fluctuations the minimum number should be used.

- This measure is intended to count individuals capable of reproduction and should therefore exclude individuals that are environmentally, behaviourally or otherwise reproductively suppressed in the wild.

- In the case of populations with biased adult or breeding sex ratios it is appropriate to use lower estimates for the number of mature individuals which take this into account (e.g. the estimated effective population size).

- Reproducing units within a clone should be counted as individuals, except where such units are unable to survive alone (e.g. corals).

- In the case of taxa that naturally lose all or a subset of mature individuals at some point in their life cycle, the estimate should be made at the appropriate time, when mature individuals are available for breeding.

4. **Generation**

Generation may be measured as the average age of parents in the population. This is greater than the age at first breeding, except in taxa where individuals breed only once.

5. **Continuing decline**

A continuing decline is a recent, current or projected future decline whose causes are not known or not adequately controlled and so is liable to continue unless remedial measures are taken. Natural fluctuations will not normally count as a continuing decline, but an observed decline should not be considered to be part of a natural fluctuation unless there is evidence for this.

6. **Reduction**

A reduction (criterion A) is a decline in the number of mature individuals of at least the amount (%) stated over the time period (years) specified, although the decline need not still be continuing. A reduction should not be interpreted as part of a natural fluctuation unless there is good evidence for this. Downward trends that are part of natural fluctuations will not normally count as a reduction.

7. **Extreme fluctuations**

Extreme fluctuations occur in a number of taxa where population size or distribution area varies widely, rapidly and frequently, typically with a variation greater than one order of magnitude (i.e., a tenfold increase or decrease).

8. **Severely fragmented**

Severely fragmented is refers to the situation where increased extinction risks to the taxon result from the fact that most individuals within a taxon are found in small and relatively isolated subpopulations. These small subpopulations may go extinct, with a reduced probability of recolonisation.

9. **Extent of occurrence**

Extent of occurrence is defined as the area contained within the shortest continuous imaginary boundary which can be drawn to encompass all the known, inferred or projected sites of present occurrence of a taxon, excluding cases of vagrancy. This measure may exclude discontinuities or disjunctions within the overall distributions of taxa (e.g., large areas of obviously unsuitable habitat) (but see 'area of occupancy'). Extent of occurrence can often be measured by a minimum convex polygon (the smallest polygon in which no internal angle exceeds 180 degrees and which contains all the sites of occurrence).

10. **Area of occupancy**

Area of occupancy is defined as the area within its 'extent of occurrence' (see definition) which is occupied by a taxon, excluding cases of vagrancy. The measure reflects the fact that a taxon will not usually occur throughout the area of its extent of occurrence, which may, for example, contain unsuitable habitats. The area of occupancy is the smallest area essential at any stage to the survival of existing populations of a taxon (e.g. colonial nesting sites, feeding sites for migratory taxa). The size of the area of occupancy will be a function of the scale at which it is measured, and should be at a scale appropriate to relevant biological aspects of the taxon. The criteria include values in km^2, and thus to avoid errors in classification, the area of occupancy should be measured on grid squares (or equivalents) which are sufficiently small (see Figure 2).

11. **Location**

Location defines a geographically or ecologically distinct area in which a single event (e.g. pollution) will soon affect all individuals of the taxon present. A location usually, but not always, contains all or part of a subpopulation of the taxon, and is typically a small proportion of the taxon's total distribution.

12. **Quantitative analysis**

A quantitative analysis is defined here as the technique of population viability analysis (PVA), or any other quantitative form of analysis, which estimates the extinction probability of a taxon or population based on the known life history and specified management or non-management options. In presenting the results of quantitative analyses the structural equations and the data should be explicit.

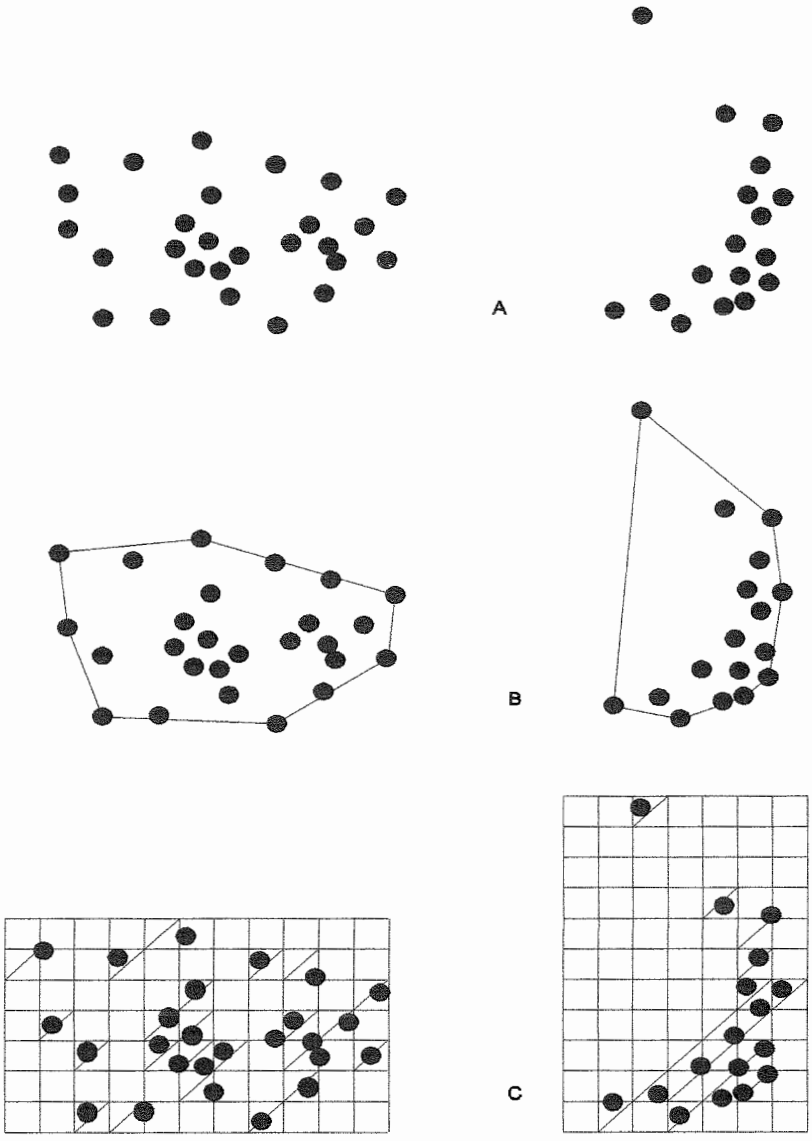


Figure 2:
Two examples of the distinction between extent of occurrence and area of occupancy (a) is the spatial distribution of known, inferred or projected sites of occurrence. (b) shows one possible boundary to the extent of occurrence, which is the measured area within this boundary. (c) shows one measure of area of occupancy which can be measured by the sum of the occupied grid squares.

IV) The categories [1]

EXTINCT (EX)
A taxon is Extinct when there is no reasonable doubt that the last individual has died.

EXTINCT IN THE WILD (EW)
A taxon is Extinct in the wild when it is known only to survive in cultivation, in captivity or as a naturalised population (or populations) well outside the past range. A taxon is presumed extinct in the wild when exhaustive surveys in known and/or expected habitat, at appropriate times (diurnal, seasonal, annual), throughout its historic range have failed to record an individual. Surveys should be over a time frame appropriate to the taxon's life cycle and life form.

CRITICALLY ENDANGERED (CR)
A taxon is Critically Endangered when it is facing an extremely high risk of extinction in the wild in the immediate future, as defined by any of the criteria (A to E) on pages 12 and 13.

ENDANGERED (EN)
A taxon is Endangered when it is not Critically Endangered but is facing a very high risk of extinction in the wild in the near future, as defined by any of the criteria (A to E) on pages 14 and 15.

VULNERABLE (VU)
A taxon is Vulnerable when it is not Critically Endangered or Endangered but is facing a high risk of extinction in the wild in the medium-term future, as defined by any of the criteria (A to D) on pages 16 and 17.

LOWER RISK (LR)
A taxon is Lower Risk when it has been evaluated, does not satisfy the criteria for any of the categories Critically Endangered, Endangered or Vulnerable. Taxa included in the Lower Risk category can be separated into three subcategories:

1. **Conservation Dependent (cd)**. Taxa which are the focus of a continuing taxon-specific or habitat-specific conservation programme targeted towards the taxon in question, the cessation of which would result in the taxon qualifying for one of the threatened categories above within a period of five years.

2. **Near Threatened (nt)**. Taxa which do not qualify for Conservation Dependent, but which are close to qualifying for Vulnerable.

3. **Least Concern (lc)**. Taxa which do not qualify for Conservation Dependent or Near Threatened.

DATA DEFICIENT (DD)

A taxon is Data Deficient when there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status. A taxon in this category may be well studied, and its biology well known, but appropriate data on abundance and/or distribution is lacking. Data Deficient is therefore not a category of threat or Lower Risk. Listing of taxa in this category indicates that more information is required and acknowledges the possibility that future research will show that threatened classification is appropriate. It is important to make positive use of whatever data are available. In many cases great care should be exercised in choosing between DD and threatened status. If the range of a taxon is suspected to be relatively circumscribed, if a considerable period of time has elapsed since the last record of the taxon, threatened status may well be justified.

NOT EVALUATED (NE)
A taxon is Not Evaluated when it is has not yet been assessed against the criteria.

V) The Criteria for Critically Endangered, Endangered and Vulnerable

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Note: As in previous IUCN categories, the abbreviation of each category (in parenthesis) follows the English denominations when translated into other languages.

CRITICALLY ENDANGERED (CR)

A taxon is Critically Endangered when it is facing an extremely high risk of extinction in the wild in the immediate future, as defined by any of the following criteria (A to E):

A) Population reduction in the form of either of the following:

1) An observed, estimated, inferred or suspected reduction of at least 80% over the last 10 years or three generations, whichever is the longer, based on (and specifying) any of the following:

a) direct observation
b) an index of abundance appropriate for the taxon
c) a decline in area of occupancy, extent of occurrence and/or quality of habitat
d) actual or potential levels of exploitation
e) the effects of introduced taxa, hybridisation, pathogens, pollutants, competitors or parasites.

2) A reduction of at least 80%, projected or suspected to be met within the next ten years or three generations, whichever is the longer, based on (and specifying) any of (b), (c), (d) or (e) above.

B) Extent of occurrence estimated to be less than 100 km^2 or area of occupancy estimated to be less than 10 km^2, and estimates indicating any two of the following:

1) Severely fragmented or known to exist at only a single location.

2) Continuing decline, observed, inferred or projected, in any of the following:

a) extent of occurrence
b) area of occupancy
c) area, extent and/or quality of habitat
d) number of locations or subpopulations
e) number of mature individuals.

3) Extreme fluctuations in any of the following:

a) extent of occurrence
b) area of occupancy
c) number of locations or subpopulations
d) number of mature individuals.

C) Population estimated to number less than 250 mature individuals and either:

1) An estimated continuing decline of at least 25% within 3 years or one generation, whichever is longer or

2) A continuing decline, observed, projected, or inferred, in numbers of mature individuals and population structure in the form of either:

a) severely fragmented (i.e. no subpopulation estimated to contain more than 50 mature individuals)
b) all individuals are in a single subpopulation.

D) Population estimated to number less than 50 mature individuals.

E) Quantitative analysis showing the probability of extinction in the wild is at least 50% within 10 years or 3 generations, whichever is the longer.

ENDANGERED (EN)

A taxon is Endangered when it is not Critically Endangered but is facing a very high risk of extinction in the wild in the near future, as defined by any of the following criteria (A to E):

A) Population reduction in the form of either of the following:

1) An observed, estimated, inferred or suspected reduction of at least 50% over the last 10 years or three generations, whichever is the longer, based on (and specifying) any of the following:

a) direct observation
b) an index of abundance appropriate for the taxon
c) a decline in area of occupancy, extent of occurrence and/or quality of habitat
d) actual or potential levels of exploitation
e) the effects of introduced taxa, hybridisation, pathogens, pollutants, competitors or parasites.

2) A reduction of at least 50%, projected or suspected to be met within the next ten years or three generations, whichever is the longer, based on (and specifying) any of (b), (c), (d), or (e) above.

B) Extent of occurrence estimated to be less than 5000 km^2 or area of occupancy estimated to be less than 500 km^2, and estimates indicating any two of the following:

1) Severely fragmented or known to exist at no more than five locations.

2) Continuing decline, inferred, observed or projected, in any of the following:

a) extent of occurrence
b) area of occupancy
c) area, extent and/or quality of habitat
d) number of locations or subpopulations
e) number of mature individuals.

3) Extreme fluctuations in any of the following:

a) extent of occurrence
b) area of occupancy
c) number of locations or subpopulations
d) number of mature individuals.

C) Population estimated to number less than 2500 mature individuals and either:

1) An estimated continuing decline of at least 20% within 5 years or 2 generations, whichever is longer, or

2) A continuing decline, observed, projected, or inferred, in numbers of mature individuals and population structure in the form of either:
a) severely fragmented (i.e. no subpopulation estimated to contain more than 250 mature individuals)
b) all individuals are in a single subpopulation.

D) Population estimated to number less than 250 mature individuals.

E) Quantitative analysis showing the probability of extinction in the wild is at least 20% within 20 years or 5 generations, whichever is the longer.

VULNERABLE (VU)

A taxon is Vulnerable when it is not Critically Endangered or Endangered but is facing a high risk of extinction in the wild in the medium-term future, as defined by any of the following criteria (A to E):

A) Population reduction in the form of either of the following:

1) An observed, estimated, inferred or suspected reduction of at least 20% over the last 10 years or three generations, whichever is the longer,, based on (and specifying) any of the following:

a) direct observation
b) an index of abundance appropriate for the taxon
c) a decline in area of occupancy, extent of occurrence and/or quality of habitat
d) actual or potential levels of exploitation
e) the effects of introduced taxa, hybridisation, pathogens, pollutants, competitors or parasites.

2) A reduction of at least 20%, projected or suspected to be met within the next ten years or three generations, whichever is the longer, based on (and specifying) any of (b), (c), (d) or (e) above.

B) Extent of occurrence estimated to be less than 20,000 km^2 or area of occupancy estimated to be less than 2000 km^2, and estimates indicating any two of the following:

1) Severely fragmented or known to exist at no more than ten locations.

2) Continuing decline, inferred, observed or projected, in any of the following:

a) extent of occurrence
b) area of occupancy
c) area, extent and/or quality of habitat
d) number of locations or subpopulations
e) number of mature individuals.

3) Extreme fluctuations in any of the following:

a) extent of occurrence
b) area of occupancy
c) number of locations or subpopulations
d) number of mature individuals.

C) Population estimated to number less than 10,000 mature individuals and either:

1) An estimated continuing decline of at least 10% within 10 years or 3 generations, whichever is longer, or

2) A continuing decline, observed, projected, or inferred, in numbers of mature individuals and population structure in the form of either:
a) severely fragmented (i.e. no subpopulation estimated to contain more than 1000 mature individuals)
b) all individuals are in a single subpopulation.

D) Population very small or restricted in the form of either of the following:

1) Population estimated to number less than 1000 mature individuals.

2) Population is characterised by an acute restriction in its area of occupancy (typically less than 100 km^2) or in the number of locations (typically less than 5). Such a taxon would thus be prone to the effects of human activities (or stochastic events whose impact is increased by human activities) within a very short period of time in an unforeseeable future, and is thus capable of becoming Critically Endangered or even Extinct in a very short period.

E) Quantitative analysis showing the probability of extinction in the wild is at least 10% within 100 years.