



## INVASIVE ALIEN BIRD SPECIES A Stakeholders View

T.T.M. de Groot & N.M. Gerrits

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on behalf of*

Aviornis International, Division The Netherlands

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Cover (photo: P.J. Muss) male *Ithaginis cruentus* (Blood Pheasant)

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## **SUMMARY & CONCLUSIONS**

### **Concerning legislation**

Analysis of the species that might qualify as invasive alien (IAS) clearly shows that public institutions and private owners share responsibility for their escape into the wild. Moreover, several of these species were established in the wild in neighbouring countries, well-before the animals were observed in The Netherlands.

Prior to April 1, 2002, deliberate introduction into the wild of non-native plant or animal species was not prohibited under Dutch legislation.

The Flora and Fauna Act (FFW) does not contain the obligation to abate or eradicate IAS, but only articles under which licences can be granted to limit the population size of animals.

The possibility for an adequate national abatement strategy is seriously impaired by the structure of the FFW and by fragmentation of authoritative powers. Illustrative in this respect is that rather than through abatement, the FFW seeks to solve the problems of an identified IAS by imposing prohibition on trade, transport and possession.

If legislation is to be developed to support control, abatement and eradication of IAS, the efforts should be within a European framework. National eradication programs will be seriously compromised in the absence of coordinated activities in neighbouring countries.

### **Concerning prevention**

Aviornis International, division The Netherlands holds the opinion that introduction of non-native species into European nature should be prevented by means of housing requirements, pinioning, etc. Aviornis promotes the registration of birds by application of closed footrings.

It should be clearly established that alien (non-native) species only will create problems when they reach the wild. Import, trade and possession are not synonymous with introduction into nature. Therefore, prohibition of trade and/or possession should be considered as disproportional measures.

Risk-assessment should be directed at the imports of those species destined for deliberate release or for applications that might lead to unintended escape into the wild (biological pest control).

### **Concerning awareness and public support**

In order to generate support for developing and executing a policy concerning prevention, abatement and eradication of IAS, it will be necessary to create - in the public mind - a transition from simply protecting individual plants and animals towards understanding and protection of biodiversity.

The amount of information needed is very large and its transmission will require the concerted efforts of many governmental and private organizations. The participation of stakeholders like Aviornis will be of vital importance.

### **Concerning expertise and responsibility**

Members of Aviornis share an enormous, and almost unparalleled, reservoir of expertise and can offer a huge capacity in breeding (endangered) species for conservation purposes and for re-introduction programs.

Whenever new measures or new legislation are needed, it should be realized that stakeholders like Aviornis form an important platform. They can have a pivotal role in disseminating information in one direction, and channeling actual participation in conservation in the other.

As a stakeholder, Aviornis International intends to develop shared responsibility and to encourage private efforts and voluntary compliance with respect to animal welfare, species protection and conservation of biodiversity.

## 1 INTRODUCTION

The present report has been prepared in reaction to a study entitled “*European Strategy on Invasive Alien Species*” by P. Genovesi and C. Shine, and submitted as Draft Version at the 22<sup>nd</sup> meeting of The Standing Committee of the Bern Convention in Strasbourg

Alien species have been (and still are) introduced into the wild through deliberate release (game and wildfowl stocking, animals used for biological pest control), escape from controlled enclosures (pets, domestic and ornamental animals, fur-animals) or otherwise accidentally (ships ballastwater, transport of agricultural products).

A listing of specific examples and vectors of introduction could be exhaustive, but the purpose of even a brief overview is that it illustrates the multifaceted character of the alien species issue. Of course, all the trouble starts by (in)voluntary translocation of animals from their own habitat.

Considering the staggering amount of plants and animals that have been dragged around the world (and still are), it is surprising that so few species have gained an *invasive alien* status. The majority of aliens seem to linger on without an obvious detectable impact on the ecosystem. Unfortunately, it is difficult to predict when and where behavioral, physiological or environmental changes will occur in these “sleeping” populations to create an ecological and/or financial disaster.

The “*European Strategy on Invasive Alien Species*” recognizes the need to cooperate with key stakeholders (professional associations and NGO’s) to produce and disseminate information and guidance to those who are involved in any aspect of invasive alien species (IAS). The discussion on IAS seems to have been limited to conferences, symposia, reports by nature conservation NGO’s and other directly involved organizations. The voice of the keepers and breeders of alien species has rarely been heard.

The aim of the present report is to clarify the role of Aviornis International as a stakeholder with respect to the various problems concerning IAS. Simultaneously, it will be emphasized that stakeholders like Aviornis can play an important role in solving several IAS related problems.

The first chapters of this report contain the direct reaction to the above mentioned study by Genovesi and Shine, centered around the themes *Public Awareness and Support* (Chapter 2), *Preventing Introduction into the Wild* (Chapter 3), *Detection of Alien Species* (Chapter 4) and *Protection and Abatement* (Chapter 5)

Frequent reference will be made to subsequent more technical chapters which are considered necessary in order to discuss the (Dutch) IAS problems in a proper perspective. These technical chapters deal with *Conventions and Legislation* (Chapter 6) and *Alien Birds in The Netherlands* (Chapter 7)

A final chapter provides *A Profile of Aviornis* (Chapter 8) stressing among other things, the importance of stakeholders in the protection of nature and the conservation of species.

## 2 PUBLIC AWARENESS AND SUPPORT

Public awareness concerning (invasive) alien species (IAS) and public support for measures that seem imminent appear as important issues from the study “*European Strategy*”.

From the analysis and conclusion of Chapter 6 on current legislation, it will be evident that the understanding of IAS and the related problems is only very slowly growing in government circles. For instance, the new Dutch Flora and Fauna Act is still completely devoid of the concept “*alien species*” let alone “*invasive alien species*”.

As already has been mentioned in the Introduction, the subject IAS seems to be limited to conferences, symposia, reports by nature conservation NGO’s and other directly involved organizations. Knowledge and understanding of the subject in the (human) population seems virtually absent. Although unnerving, it is not altogether surprising .

### **Alienation of people from nature**

In the densely populated and strongly urbanizing Dutch society, progressively fewer people have a real contact with nature Time allotted to “nature” on primary schools is about 15 minutes per week on average. Consequently, teenagers do not score very well with knowledge on nature. According to a recent survey, 75% of the teenagers comes either never or less than one time a year at the most in protected nature area.

On the question to name species for which they would consider it a loss if they were to become extinct in Dutch nature, one out of three responded with either exotics like lions and elephants or domesticated cats and dogs. Basically, none of the respondents opposed to extermination of wasp, mosquito, ant or rat.

Simultaneous with the staggering absence of factual knowledge on virtually all aspects of “natural history”, almost 80% of this teenage group proclaimed a great “concern for nature”.

(Teenagers and biodiversity: worlds apart. (2003) J. Verboom, U. Meier, R. van Kralingen, K. Volker. Alterra, Wageningen)

A combination of “love for nature” with a lack of factual knowledge frequently leads to undesirable activities. Examples are manifold

- S “Cute” or “poor” animals are brought home from a holiday, to give them their “freedom” in Dutch nature.
- S Large numbers of non-native fur-animals are liberated and given their freedom.
- S To prevent overpopulation at several locations in The Netherlands, feral cats are caught, sterilized, and released again.

### **Absence of public support**

In the circles of animal welfare advocates, the need to abate invasive alien species will not be met with understanding. On the contrary, the slogan “*every (individual) animal has (a legal) right on a place in nature*”, indicates that attempts to pass legislation on abatement of IAS and enforcement of such measures will be strongly opposed.

Some animal welfare organizations advocate a complete import ban on

any non-native species, however not under the pretext of possible escape into the wild.

Many people with an interest in the facts of nature combine this with related knowledge, acquired either professionally (parkwardens, farmers, animal keepers and animal technicians) or as a hobby (birdwatchers, hunters, private animal keepers).

**Stakeholders  
are vital  
educators**

Especially for this last group, their hobby is the stimulant to study nature in a broader sense but of course also in-depth. Information on natural environments, food, breeding and housing requirements, etc needs to be gathered. If they are members of an organization, (breeding) results will at least be discussed and possibly be published. Very often there is a positive effect on the immediate (human) environment; children from the neighbourhood often make their first contact with “wild animals” in this way.

People who keep and breed animals in what could be called a “*proper setting*”, readily understand IAS issues like habitat and food competition, and hybridization and genetic pollution of native populations by invaders. It is more than justified that the “*European Strategy*” calls for involvement of stakeholders in the discussion on IAS.

Unfortunately, it is the stakeholder that feels threatened by the increasing pressure to start solving the problems created by IAS. Over and over again, the suggestion is made in all sorts of publications, that private keepers of non-native species and the trade therein are the major source of IAS.

*The conclusion from Chapter 7: Alien (Invasive) Birds in The Netherlands following a critical evaluation of the introductory vectors for several species, is rather contrary and implicates the public sector i.c. local governments as a principal contributor to avian IAS.*

The whole field, from animal welfare guardians through politicians to nature conservationists, seems focussed on proposals to restrict or even ban imports, transport, trade and possession.

*One of the conclusions from Chapter 6: Conventions and Legislation on (Invasive) Alien Species is that the Dutch legislator uses trade and possession bans as an excuse not to eliminate specific IAS from the wild.*

Apart from the fact that this provision in the Dutch Flora and Fauna Act is in direct conflict with the European Treaty, measures like this create the false impression that trade and private ownership are the source of all the trouble.

Alienation of the people who “par excellence” play an important role in education already, and who could play an important role in the recruitment of public support for abatement of IAS, is a strategy that should not be adopted by any government. Fortunately, the study by Genovesi and Shine recognizes this fact.

### 3 PREVENTING INTRODUCTIONS INTO THE WILD

Over the years, more and more attention has been drawn to the issue of IAS, particularly by nature conservation organizations. Through publication of recommendations and guidelines on how to deal with IAS, these organizations try to activate the policy makers. One aspect of these publications is the strikingly different interpretation of the term “introduction” and consequently the variety of recommendations for preventing such introductions. The suggested measures range from simple abatement of already existing IAS to import and trade restrictions for species that *might be able to survive* in the wild.

Suggestions like the latter should not be taken too seriously. The majority of established IAS have been introduced either deliberately or through vectors completely unrelated to the trade circuit.

It is useful to realize that an IAS problem only arises after a non-native species has established itself in the wild. Therefore, deliberate or accidental introduction into the wild should be prevented. Import, trade or possession are not synonymous with release or introduction of animals into the wild. Thus, prohibition of trade and possession must be considered as a disproportionate measure.

Unintentional introductions can be minimized with a series of preventive measures. Particularly important are rules for housing and transport, identification of animals and pinioning. But of course, no measure will be effective in the absence of education.

Aviornis has always advocated a strict policy on preventive measures. It advised all captive bred birds to be ringed, even though this is not legally prescribed. The practice of pinioning of birds kept in semi-enclosed circumstances has been compromised by limiting provisions in the Dutch Animal Health & Welfare Act since September 1, 2001.

Deliberate introduction of species for hunting or fishing purposes, or for pest control should be subject to a risk assessment.

## 4 DETECTION OF ALIEN SPECIES

**Early warning** A prerequisite for an effective abatement is that alien species must be detected and reported as soon as they get into the wild. The “European Strategy” suggests to set up an Early Warning System in which stakeholders with relevant expertise should cooperate to generate information: “*A network of professionals and volunteers should be established to rapidly report observations of potential incursions*”.

Aviornis International unites 2,500 Dutch members, distributed over the entire country. They have expert knowledge on non-native species of birds from families that typically may produce IAS. In addition, there is a fast exchange of information within Aviornis as well as with sister-organizations elsewhere in Europe.

It would be wise to cherish the expertise and enthusiasm of Aviornis members in order to be able to call upon them in the future in case an early warning system will be effectuated.

**Rapid response** An Early Warning System is the first element in the process of abating IAS, but it will only be useful if the detection is followed by a rapid response by the Authorities. There is only a limited period of time in which eradication is a practical option. After the population has increased and animals become widely distributed, abatement becomes more problematic.

Due to the absence of a detection and abatement strategy in The Netherlands, Nile Geese and Rose-ringed Parakeets have managed to expand beyond belief. The latter species has not even been assigned to any category that can be legally abated under the Flora and Fauna Act.

Currently, a small number of specimens of Reeve’s Muntjac (*Muntiacus reevesi*) have been reported from the wild. The Dutch Provincial Authorities can decide whether or not abatement will be permitted. Despite draconic legal measures regarding this species, a nationwide strategy is absent (see also Chapter 6.3).

Aviornis International is in favor of a detection system for IAS and will encourage its members to participate. However, it is conditional that such detection system must be an integral element of a legally-based (national) strategy for control, containment or eradication of IAS.

## 5 PROTECTION AND ABATEMENT

During the past decades, a lot of energy has been spent to convince people of the necessity to protect wildlife. Many animal and plant species were collected on “Red Lists”, with qualifications like “vulnerable” or “endangered” and through the Convention of Washington (CITES) trade in endangered species has been regulated. Zoological gardens and other institutions created special breeding programs to maintain captive populations of threatened species. Over the years, fantastic amounts of money were raised in campaigns for nature conservation; it has practically been a “must” to contribute.

As a result, a general opinion has developed among the public and the civil authorities to show considerable respect for wildlife and for animal welfare. This respect has been translated into legal provisions to protect *all individual* animals (and plants) against all sorts of human activities and exploitation, rather than into measures directed at protection of ecosystems and biodiversity.

The legal prohibitions on practically all activities with wild plants and animals form a serious threat towards an adequate abatement of IAS and for building public awareness and support.

### **Conflicting interest**

Organizations devoted to either animal welfare or nature conservation operate with a different agenda and a clearly different interpretation of the concept “protection”. Both, the general public as well as the authorities apparently become confused by the conflicting interests and interpretations:

- S Pinioning is largely prohibited in The Netherlands, based on arguments of animal welfare, but should be prescribed as a means to prevent introduction into the wild.
- S The animal welfare lobby advocates a complete prohibition of trade and possession of CITES-animals, while CITES tries to regulate trade and pursues “sustainable use” through ranching and farming operations.
- S The legal punishment for illegal possession of a protected animal (species protection) is much stronger than for deliberate introduction of animals into the wild (nature protection).

Approximately half the number of species kept by members of Aviornis is native to Europe and fall under the provisions of the Birds Directive (see Chapter 6.2). Captive bred birds can be kept legally in The Netherlands, provided that the animals are ringed.

For other taxa the situation is different. The Dutch Law prohibits possession of all native reptiles and amphibia, and a considerable number of fish species, while only a small number of native mammals can be kept under strict rules. People who want to keep and breed these animals must turn to non-native species.

The result is that whereas the Dutch Law prohibits the possession of Red Squirrels (*Sciurus vulgaris*) it does not object in any way to possession of the Grey Squirrel (*Sciurus carolinensis*). The latter species is a qualified IAS, currently spreading through Europe, that has driven the Red Squirrel in the United Kingdom almost into extinction.

**Genetic  
pollution:  
a result of  
“protection”**

A much more serious threat for native species is the risk of genetic pollution as a result of protective measures. This problem is created when on a national level prohibitions (trade and/or possession) are adopted for species that do not require European or international protection.

Member States cannot prohibit the import and trade of such species into the European Community. Consequently, The Netherlands have to allow imports of Red Squirrels, Hamsters and various amphibians and fish from Asia. The majority of Asian subspecies is difficult to distinguish from European ones. Escape and interbreeding would lead to irreversible genetic pollution.

Thus, it is possible that the strict Dutch protection of the European subspecies of the Red Squirrel would result in its disappearance.

## 6 CONVENTIONS AND LEGISLATION ON (INVASIVE) ALIEN SPECIES

### 6.1 International Conventions

The intention to prevent introductions of, or to control established populations of alien species is expressed in a number of international Conventions. The most important agreements related to invasive alien species are:

#### **Convention on the Conservation of European Wildlife and Natural Habitats**

Council of Europe, Bern, September 19, 1979

The relevant text is provided by Article 11 under 2b:

*“Each Contracting Party undertakes to strictly control the introduction of non-native species”*

Later Council Meetings adopted the following recommendations:

*The Council of Europe calls on member states to prohibit the introduction of non-native species into the natural environment, with possible exceptions only if an expert study of the consequences has been carried out. Accidental introductions should be prevented as far as possible (1984)*

*“Introduction” means deliberate or accidental release, into the environment of a given territory, of an organism belonging to a non-native taxa (1997).*

These provisions of the Bern Convention are expressed in the legislation of the European Community in two EC Directives (see Chapter 6.2)

#### **Convention on Biological Diversity**

UNEP, Rio de Janeiro, June 5, 1992

The relevant text is provided by Article 8h:

*“Each Contracting Party shall, as far as possible and as appropriate: prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species.”*

During the 6<sup>th</sup> Conference of Parties in The Hague in 2002, Guiding Principles for the implementation of Article 8h were adopted:

- the Precautionary Approach
- the Three-stage hierarchical approach: [1] prevention of introduction, [2] detection, and [3] eradication or control.

*“If an invasive alien species has been introduced, early detection and rapid action are crucial to prevent its establishment. The preferred response is often to eradicate the organisms as soon as possible. In the event that eradication is not feasible or resources*

*are not available for its eradication, containment and long-term control measures should be implemented”.*

## 6.2 European Legislation

### **EC Directive of the Conservation of Wild Birds (79/409/EEC).**

European Birds Directive, April 2, 1979

The relevant text is provided by Article 11:

*“Member States shall see that any introduction of species of birds which do not occur naturally in the wild state in the European territory of the Member States does not prejudice the local flora and fauna. In this connection they shall consult the Commission”*

### **EC Directive on the Conservation of Habitats (92/43/EEC)**

European Habitats Directive, May 22, 1992

The relevant text is provided by Article 22:

*“Member States ensure that the deliberate introduction into the wild of any species, which is not native to their territory, is regulated so as not to prejudice natural habitats within their natural range or the wild native fauna and flora and, if they consider it necessary, prohibit such introduction. The results of assessment undertaken shall be forwarded to the Committee for information.”*

### **Detection, eradication and control**

The issues detection, eradication and control of IAS are not represented in European Community legislation, basically because the appropriate legislative tools are absent. Member States can make the necessary provisions in addition to implementation of both the Birds and Habitats Directives. Unfortunately, practical execution of measures related to IAS does not seem a priority for many countries. This may change in the future since the obligations resulting from the Convention on Biological Diversity have far-reaching consequences.

## 6.3 Dutch National Legislation

Provisions related to (invasive) alien species in The Netherlands can be found in the “*Act on Flora and Fauna*” (FFW, dated 25<sup>th</sup> May 1998 and entered into force on April 1<sup>st</sup>, 2002). The following aspects have been analysed:

### **Definition and Assignment**

The FFW does not contain any reference to the concept of *alien species* or *invasive alien species*. In the absence of a proper definition of IAS it is not surprising that the FFW does not contain provisions for assigning IAS or listing them.

### **Detection**

Consequently, the FFW does not contain procedural measures concerning detection or notification of (invasive) alien species.

### **Introduction or Release**

The following provisions are in effect under Article 14:

- S** releasing animals or eggs into the wild is prohibited without permission;
- S** to plant or sow certain assigned plant species is prohibited without permission. Only one species has been assigned: *Hydrocotyle ranunculoides* (Floating Pennywort).

Prior to April 1, 2002, introduction into the wild of only 11 native species was prohibited or subject to licencing under the Hunting Act. Neither Article 11 on introduction of species from The Birds Directive (dating back to 1979) nor the similar Article 22 from the Habitats Directive (1992) had been implemented.

### **Trade and Possession**

Article 14 of the FFW prohibits the possession, trade and even the import and/or export of assigned species. Assignment is restricted to species that are potentially harmful towards protected (!) endemic plant and animal species. Putting aside the manifold problems created for private owners, this prohibition on trade and transport is in direct conflict with the execution of intra-communautary trade and transport rules under articles 28-29 of the EC Treaty.

**Despite the severeness of the provision, a concomitant national eradication program for the species assigned is absent.**

Two species have been assigned: *Hydrocotyle ranunculoides* (Floating Pennywort) and *Muntiacus reevesi* (Reeve's Muntjac).

### **Control and Abatement**

Article 67 of the FFW contains provisions for the abatement of assigned species. The Article offers the possibility *to limit the population size* of species. It allows the use of "normal" (legally defined) hunting methods, provided that "*other satisfying options*" to control or limit the population size are not available.

Assignment of species under this Article can be:

- S for reasons of safety
  - at airports (birds)
  - with respect to dikes (*Myocastor coypu* - Coypu, *Ondatra zibethica* - Musk Rat)
- S to prevent economical damage (agriculture)
- S to prevent damage to nativa flora and fauna.

Among the assigned species are several birds that might qualify as invasive alien species: *Alopochen aegypticus* (Nile Goose) and *Branta canadensis* (Canadian Goose).

Important to notice is that the execution of the measures is decentralized. Each of the 12 Provinces has the authority to grant permission for abatement on its own territory. The decision of the Province offers the possibility for appeal against the decision. Nation-wide coordination and strategy are absent.

Apart from feral cats, no other domesticated animals have been assigned, although white geese (serious risk of genetic pollution of the native population of *Anser anser* (Greylag Goose)), white ducks (see Chapter 7.2) chicken and even Vietnamese pigs have found their way into the wild. Although there is an urgent need for it, these animal cannot be abated with “normal” hunting methods.

In addition, the Red-eared Slider (*Trachemys scripta elegans*), the Bullfrog (*Rana catesbeiana*) and the Rose-ringed Parakeet (*Psittacula krameri*), species considered IAS elsewhere in Europe, are absent from the list.

**Not only can these three species not be abated, they enjoy protection under Article 13 of the FFW.**

#### **Eradication**

The FFW does not contain provisions enabling eradication of assigned species.

## **6.4 Evaluation and Conclusion**

The fact that in the Dutch national legislation provisions related to the different aspects of IAS are not abundantly present is not unique; it is not really different in other EC Member States.

Thusfar, Community legislation revolves around two issues. One is the European implementation of the CITES Convention, through a Council Regulation 338/97 and aimed at the protection of internationally endangered species. The other is the protection of European species and ecosystems through the Birds and Habitats Directives.

EC Regulation 338/97 offers the European Commission the possibility to suspend the import of certain species for which it has been established (i.c. identified IAS) that they present an ecological threat to European flora and fauna. But together with the urgent request to the Member States to implement the Directives in the national legislation, this is as far as the present legal framework allows the Community to go.

Based on the proposals from the Convention on Biological Diversity as well as from the Convention of Bern, the pressure to act against IAS is mounting. Indeed, the proposed measures and recommendations put forward in the “*European Strategy on Invasive Alien Species*” may seem necessary but are far-reaching and rather in contrast with current opinions and the current legal framework.

***The current community legislation does not contain any provisions regarding control, abatement or eradication of already established non-native species in the wild in the European territory.***

There are several arguments that favor development of (uniform) EC provisions

- S the IAS are typically border-crossing in nature
- S abatement should be based on a border-crossing strategy
- S member state efforts to prevent or abate IAS can easily become in conflict with international and European provisions and regulations with respect to free transport (EC), species protection (CITES) and international trade (WTO).
- S abatement of IAS touches upon a variety of member state national legal provisions related to agriculture, animal welfare, property rights and liability. Therefore, supra-national coordination seems vitally important.

## 7 ALIEN (INVASIVE) BIRDS IN THE NETHERLANDS

### 7.1 Overview of the current situation in the wild

In order to focus on the position of Aviornis International in the discussion on invasive alien species, the list of alien bird species with a confirmed presence in the wild in The Netherlands has been divided into “non-Aviornis” and “Aviornis” species (see Chapter 8.2, The Bird Species)

#### List of Alien Bird Species with a confirmed presence: Non-Aviornis Species

<b>Species</b>	<b>Pop size</b>	<b>Year</b>	<b>Comment</b>
<i>Agelaius phoeniceus</i> (Red-winged Blackbird)	S	?	
<i>Ara macao</i> (Scarlet Macaw)	<10 (b)	1980	
<i>Bubo virginianus</i> (Great Horned Owl)	S	?	
<i>Cardinalis cardinalis</i> (Northern Cardinal)	S (b)	1979	
<i>Carpodacus mexicanus</i> (House Finch)	S	?	
<i>Carpodacus roseus</i> (Pallas’s Rosefinch)	S	1991	
<i>Cathartes aura</i> (Turkey Vulture)	2	2000	
<i>Charadrius pecuarius</i> (Kittlitz’s Plover)	S	1999	
<i>Carduelis sinica</i> (Grey-capped Greenfinch)	S	?	
<i>Coragyps atratus</i> (Black Vulture)	S	?	
<i>Corvus splendens</i> (House Crow)*	<20 (b)	1994	[ 1 ]
<i>Gypaetus barbatus</i> (Lammergeier)	2	1997	
<i>Myiopsitta monachus</i> (Monk Parakeet)*	<20 (b)	?	[ 2 ] EBD
<i>Passerina amoena</i> (Lazulu Bunting)	S	?	
<i>Psittacula krameri</i> (Rose-ringed Parakeet)*	<2000 (b)	1972	[ 3 ] EBD
<i>Rhodopechys obsoleta</i> (Desert Finch)	S	?	
<i>Sturnus sinensis</i> (White-shouldered Starling)	S	?	
<i>Strunus cineraceus</i> (White-cheeked Starling)	S	?	
<i>Sturnus struninus</i> (Purple-backed Starling)	S	1999	
<i>Turdus hortulorum</i> (Grey-backed Thrush)	S	?	
<i>Uragus sibiricus</i> (Long-tailed Rosefinch)	S	1996	
<i>Xanthocephalus xanthocephalus</i> (Yellow-headed Blackbird)	S	?	

**Pop size:** Estimated population size in the wild in The Netherlands (source: SOVON, Stichting Vogel Onderzoek Nederland), (b = breeding; S = single observation; A = accidental visitor)

**Year:** year of (first) observation in the wild

**Comment:** Recognized in the European Birds Directive (EBD) as Introduced Species. [ # ] refers to discussion of introduction vectors, Chapter 7.2.

Species marked with asterisk might qualify for an IAS status

### List of Alien Bird Species with a confirmed presence: Aviornis Species

<i>Species</i>	<i>Pop size</i>	<i>Year</i>	<i>Comment</i>
<i>Aix galericulata</i> (Mandarin Duck)*	<1000 (b)	1993	[ 4] EBD
<i>Aix sponsa</i> (Wood Duck)*	<20 (b)	1994	[ 5]
<i>Alectoris rufa</i> (Red-legged Partridge)	<20 (b)	1998	
<i>Alopochen aegypticus</i> (Egyptian Goose)*	>10000 (b)	1967	[ 6] EBD, FFW
<i>Anas bahamensis</i> (White-cheeked Pintail)	<10	1997	
<i>Anas capensis</i> (Cape Teal)	S (b)	1999	
<i>Anas platyrhynchos f. domestica</i> (Mallard)	>100000 (b)		[ 7]
<i>Anser anser f. domestica</i> (Greylag Goose)	>10000 (b)		[ 7]
<i>Anser cygnoides</i> (Swan Goose)*	<50 (b)	?	
<i>Anser canagica</i> (Emperor Goose)	<10	?	
<i>Anser indicus</i> (Bar-headed Goose)*	<500 (b)	1973	[ 8]
<i>Branta canadensis</i> (Canadian Goose)*	<5000 (b)	1973	[ 9] FFW
<i>Bucephala albeola</i> (Bufflehead)	<10	1960	
<i>Cairina moschata</i> (Muscovy Duck)*	<100 (b)	?	[10]
<i>Chloephaga picta</i> (Upland Goose)*	<20 (b)	1980	[11]
<i>Cygnus atratus</i> (Black Swan)*	<500 (b)	1978	[12]
<i>Grus virgo</i> (Demoiselle Crane)	<10	1993	
<i>Lophodytes cucullatus</i> (Hooded Merganser)	S	?	
<i>Marmoretta angustirostris</i> (Marbled Teal)	S	1980	
<i>Oxyura jamaicensis</i> (Ruddy Duck)*	<200 (b)	1977	[13] EBD, FFW
<i>Pelecanus rufescens</i> (Pink-backed Pelican)	S	?	NA
<i>Porphyrio madagascariensis</i> (African Swampphen)	S	?	NA
<i>Porphyrio poliocephalus</i> (Indian Swampphen)	S	1988	NA
<i>Phoenicopterus chilensis</i> (Chilean Flamingo)*	<100 (b)	1958	[14]
<i>Phoenicopterus minor</i> (Lesser Flamingo)	S	?	
<i>Platalea albe</i> (African Spoonbill)	S	1993	
<i>Pluvianus aegypticus</i> (Crocodile-bird)	S	?	
<i>Streptopelia senegalensis</i> (Laughing Dove)	<10	1966	
<i>Threskiornis aethiopicus</i> (Sacred Ibis)	<10	?	EBD
<i>Vanellus spinosus</i> (Spur-winged Lapwing)	S	1997	

**Pop size:** Estimated population size in the wild in The Netherlands (source: SOVON, Stichting Vogel Onderzoek Nederland), (b = breeding; S = single observation)

**Year:** year of (first) observation in the wild

**Comment:** Recognized in the European Birds Directive (EBD) or the Dutch Flora and Fauna Act (FFW) as Introduced Species. [#] refers to discussion of introduction vectors, Chapter 7.2. NA not in the (annexed) Aviornis Species List

Species marked with asterisk might qualify for an IAS status

## 7.2 Analysis of some Introduction Vectors

- [ 1] *Corvus splendens* (House Crow). Upon arrival by ship in the Rotterdam port area this originally Asian species successfully bred in 1997 and 1998. It has apparently gained foothold and has been observed at different locations along the coast. The species has turned into a pestilence in different ports around the world.
  
- [ 2] *Myiopsitta monachus* (Monk Parakeet) This South American species has been able to establish breeding populations in the wild in several European countries. The origin of the Dutch birds is unknown, they could be either escapees or deliberately released private animals. Listed as Introduced Species in the Birds Directive.
  
- [ 3] *Psittacula krameri* (Rose-ringed Parakeet) This Afro-Asian species has been observed in the wild since 1972, either escapees or deliberately released birds. Moreover, an influx of birds from the United Kingdom (pop. size >6000) or Belgium (first breeding in 1966, pop. size >1500) can not be excluded. The first confirmed breeding case was in 1978. Their number is increasing and the birds have spread from the original location to public parks in The Hague, Leiden, Amsterdam and Rotterdam, where food to survive the winter is readily available. Their assertive behavior might out-compete other treebreeders like Woodpeckers or even Jackdaws. Listed as Introduced Species in the Birds Directive.
  
- [ 4] *Aix galericulata* (Mandarin Duck) Transmigrations with a large (>7000) population in the United Kingdom have been documented. Apart from an influx from that population, this highly attractive East Asian bird is among the favorites for display in private and public ponds. A careless attitude towards pinioning may have led to a large number of escapees throughout Europe. Listed as Introduced Species in the Birds Directive. (Aviornis-Nederland population size 2000-5000)
  
- [ 5] *Aix sponsa* (Wood Duck) Although transatlantic migrations occur, most of the individuals in the wild may have a similar history as the previously mentioned species, since this North American species is also kept frequently in private and public collections. (Aviornis-Nederland population size 1000-2000)
  
- [ 6] *Alopochen aegypticus* (Egyptian Goose) The first official breeding case of this African species in the wild was reported in 1967. Before this date several escapes occurred from public facilities in The Hague. Their number is still rising quickly and the Dutch population is considered as the source of migration to neighbouring countries. Breeding couples are notoriously aggressive towards any nesting bird in a considerable area around their own nest. Because of its aggressiveness the species is not fancied in private collections. It has been listed in article 67 of the Dutch Flora and Fauna Act which allows for control

and abatement (see Chapter 6.3). Listed as Introduced Species in the Birds Directive. (Aviornis-Nederland population size 20-50)

- [ 7] ***Anas platyrhynchos*** (Mallard) The reason for including the Mallard in this listing is the fact that a domesticated, most frequently white form, the Dutch Dwarf Duck, has been introduced on a very large scale. There is virtually no Dutch Community where they have not been released by the Community Authority. Together with an also large number of privately “released” or “semi-free living” Dwarf Ducks and other domesticated forms, they have caused a *dramatic genetic pollution* of the wild Mallard population. It may be questioned whether “pure” Mallards still exist. (Aviornis-Nederland population size 200-500)

***Anser anser*** (Greylag Goose) The reason for including this species is similar as for the Mallard. Genetic pollution of the wild population by interbreeding with (white) domesticated animals has become a serious problem since the species has expanded its breeding range to The Netherlands. (Aviornis-Nederland population size 50-100)

- [ 8] ***Anser indicus*** (Bar-headed Goose) This Asian species is a frequent inhabitant of semi-enclosed public and private displays. The population may very well exist through escaped animals. (Aviornis-Nederland population size 200-500).

- [ 9] ***Branta canadensis*** (Canadian Goose) This North American species is a frequent inhabitant of semi-enclosed public displays. The species that was formerly listed as game animal in the Hunting Act (article 2 sub 1c) has been listed in article 67 of the Dutch Flora and Fauna Act which allows for control and abatement (see Chapter 6.3) The species has been deliberately introduced into the wild as a game-bird in several countries. The population in the United Kingdom has probably surpassed the staggering amount of 100,000 individuals. (Aviornis-Nederland population size 500-1000)

- [10] ***Cairina moschata*** (Muscovy Duck) A Central and South American species, common in private and public semi-enclosed displays, mostly the domesticated form. (Aviornis-Nederland population size 200-500)

- [11] ***Chloephaga picta*** (Upland Goose) This South American species is a frequent inhabitant of semi-enclosed private and public displays. (Aviornis-Nederland population size 100-200)

- [12] ***Cygnus atratus*** (Black Swan) This Australian species is a frequent inhabitant of semi-enclosed public and private displays. (Aviornis-Nederland population size 200-500)

- [13] ***Oxyura jamaicensis*** (Ruddy Duck) This species from North and Central America. Has been deliberately introduced into the wild in the United Kingdom and has a current population size of >4000 animals..The continental population

is thought to consist of birds migrated from the UK. The particular danger posed by this species is interbreeding with *Oxyura leucocephala* (White-headed Duck), native to Europe. Listed as Introduced Species in the Birds Directive..Listed in article 67 of the FFW, which allows for control and abatement (see Chapter 6.3) (Aviornis-Nederland population size 200-500).

- [14] *Phoenicopterus chilensis* (Chilean Flamingo) This South American species has established a breeding colony in Germany, close to the Dutch border. They hibernate in the Dutch Rhine delta. The species is suspected to hybridize with the European Flamingo (*Phoenicopterus r. roseus*). The European population undoubtedly consists of escapees from private collections and Zoos. (Aviornis-Nederland population size 20-50)

### 7.3 Evaluation and Conclusion

The common denominator for the bird species listed under “Non-Aviornis” is that they, if captive, are confined to (closed) aviaries. Not surprisingly, escapes do happen, but the number of species and individuals observed in the wild is surprisingly small. In this category 3 species might qualify for an IAS status. Two of them, the Monk Parakeet and the Rose-ringed Parakeet, already had established breeding populations in neighbouring countries before they were observed in The Netherlands..

The majority of “Aviornis” species are kept in semi-closed environments where pinioning is the only method to prevent animals from escaping into the wild. In this category 11 species might qualify for an IAS status, being mainly ducks and geese. A large number of Local Communities own facilities where such birds are on display, usually in combination with Fallow Deer. It is remarkable that 6 out of the 11 possible IAS are the regular inhabitants of such displays. It can be questioned if all these Communities (and with them in-experienced private owners) have the manpower, experience and knowledge to pinion hatchlings in order to prevent later escapes. It would be fair to state that **both, the Authorities and private owners share a responsibility for the escape into the wild** of many of the birds belonging to these species.

It must be stressed here, that prior to the provisions of the Flora and Fauna Act (2002) prohibiting deliberate introduction of any species into the wild, the only bird species for which introduction was prohibited, according to the Hunting Act (1954) articles 8 sub 1 and 58 sub 1, were *Corvus corone* (Carrion Crow), *Corvus monedula* (Eurasian Jackdaw) *Garrulus glandarius* (Eurasian Jay) and *Pica pica* (Black-billed Magpie). Therefore,

*deliberate or accidental introduction into the wild of any other bird species, native or non-native, was not illegal before 2002.*

In addition to the occurrence of local introductions, attention should be paid to migration of birds between The Netherlands and surrounding countries. The table below illustrates that most of the species that might qualify as IAS, have large (breeding) populations at flying distance elsewhere in Europe. Many of these populations were established well-before the species was observed in the wild in The Netherlands.

**Illustration of the possible current magnitude of several alien bird populations in The Netherlands and neighbouring countries.**

*NB the figures are not based on actual counts, but are extrapolated data from different sources!*

	BE	DE	FR	GE	NL	UK
<i>Aix galericulata</i>	200	50	500	500	500	10000
<i>Aix sponsa</i>	50	-	-	50	20	+
<i>Alopochen aegypticus</i>	1000	-	200	2000	10000	2000
<i>Anser cygnoides</i>	50	-	-	+	10	+
<i>Anser indicus</i>	50	-	-	50	500	+
<i>Branta canadensis</i>	1000	50	1000	500	5000	100000
<i>Cairina moschata</i>	-	-	-	20	20	+
<i>Chloephaga picta</i>	50	-	-	-	10	+
<i>Cygnus atratus</i>	50	-	-	100	500	+
<i>Myiopsittacus monachus</i>	200	100	50	200	20	100
<i>Oxyura jamaicensis</i>	50	50	20	20	20	5000
<i>Psittacula krameri</i>	2000	-	+	1000	1500	10000

BE: Belgium, DE: Denmark, FR: France, GE: Germany, NL: The Netherlands, UK: United Kingdom. Category boundaries are at 10, 20, 50, 100, 200, 500, 1000, etc  
 + = no quantitative data available, - = not reported.

It will be obvious that if legislation is to be developed to support control, abatement and eradication of invasive alien species, the efforts should be within a European framework. National eradication programs will be seriously compromised in the absence of coordinated activities in surrounding countries.

## 8 AVIORNIS INTERNATIONAL - A PROFILE

Aviornis International was founded in 1974 as an initiative of Belgian and Dutch bird breeders. Although separate Dutch and Belgian divisions were established in 1978, the cooperation is intimate. Together they share the responsibility for the publication of a bimonthly magazine in the Dutch language, and frequently organize meetings and symposia with international guest speakers.

In several other countries (France, Spain-Portugal, England, Germany) divisions of Aviornis have been founded in the mean time. The total number of members is more than 8000 and increasing.

Aviornis International is a member of the Commission Ornithologique Mondiale (COM)

### 8.1 Goals and Intentions

The goal of Aviornis International is to provide actual support and cooperation to the development and execution of scientifically based programs for the conservation of all non-domesticated orders of birds, but particularly those from the Galliformes, Anseriformes and Columbiformes.

A full analysis of *The Bird Species* is provided for in Chapter 8.2 and in the annexed *Species List*.

Aviornis is trying to reach its objectives:

- S by providing its members with specific training, material and services to facilitate the successful execution of their task in conservation by creating a sufficiently large captive stock of birds which are endangered in nature.
- S through exchanging birds
  - S among members of Aviornis International, Division The Netherlands
  - S between members of Aviornis The Netherlands and members of other unions or scientific institutions which seek to further the same goals, abiding national and international legal provisions.
- S by organizing and/or supporting re-introduction programs in collaboration with national or international organizations promoting nature conservation and education.
- S by ensuring distribution of information among its members by means of publication of a (bimonthly) magazine.
- S by acquiring or establishing user rights on property (parks, ponds) and management of such acquisitions
- S by providing public information concerning goals and activities related to Aviornis conservation programs. General and specific information is made available through the website: [www.aviornis.nl](http://www.aviornis.nl)
- S by promoting on a wider scale keeping and breeding of birds, in order to expand the size of the captive stock.

Within Aviornis several *Specialist Groups* have been formed, which can provide specific support for conservation programs. They try to establish studbooks for genetically pure birds and are working on recommendations for housing and breeding. Six groups have been formed sofar:

- S Ibises and Spoonbills
- S Jungl Fowl
- S Peacock-pheasants
- S Collared Pheasants
- S Pigeons

## 8.2 The Bird Species

The significance of the captive bird population kept by Aviornis, is best illustrated by two tables summarizing data from a survey in 1998, provided by approximately 1200 Aviornis members keeping 57500 birds belonging to 446 species.

The first table shows the protection status of the captive species within Aviornis, the second shows the degree of representation of species from different families.

### Protection status of bird species in possession by Dutch members of Aviornis

<i>Type of protection</i>	<i># species</i>	<i>%</i>	<i>Commentary</i>
ECR-A	44	10	highly endangered species
ECR-B	64	14	endangered, vulnerable
ECR-C	34	8	locally vulnerable
ECR-D	8	2	trade to be monitored
ECR total	150	34	
EBD	101	23	
FFW	234	52	all ECR and EBD species
protected (total)	234	52	
non-protected	212	48	

ECR	European Council - Regulation 338/97: On the Protection of Species and the Regulation of Trade therein (European implementation of CITES)
EBD	European Council - Directive 79/409/EC: On the Conservation of Wild Birds (European Birds Directive)
FFW	Dutch Flora and Fauna Act (April 1, 2002)

### Representation within Aviornis of captive bird species from different families

Order	Family		Total # gen.	Total # spec.	AN # spec.	AN %
<b>Struthioformes</b>						
	Struthionidae	<i>Ostrich</i>	1	1	1	100
	Rheidae	<i>Rheas</i>	1	2	2	100
	Casuariidae	<i>Cassowaries</i>	2	4	1	25
<b>Tinamiformes</b>						
	Tinamidae	<i>Tinamous</i>	9	47	5	11
<b>Craciformes</b>						
	Cracidae	<i>Chachalacas, Guans</i>	11	50	12	24
<b>Galliformes</b>						
	Phasianidae	<i>Grouse, Pheasants</i>	44	176	90	51
	Numididae	<i>Guineafowls</i>	4	6	4	67
	Odontophoridae	<i>New World Quails</i>	9	31	9	29
<b>Anseriformes</b>						
	Anseranatidae	<i>Magpie Goose</i>	1	1	1	100
	Dendrocygnidae	<i>Whistling Ducks</i>	3	9	9	100
	Anatidae	<i>Ducks, Geese</i>	43	148	131	89
<b>Piciformes</b>						
	Ramphastidae	<i>Toucans</i>	9	55	5	9
<b>Bucerotiformes</b>						
	Bucerotidae	<i>Typical Hornbills</i>	8	54	3	6
<b>Musophagiformes</b>						
	Musophagidae	<i>Turacos</i>	5	23	14	61
<b>Columbiformes</b>						
	Columbidae	<i>Pigeons, Doves</i>	40	313	112	36
<b>Gruiformes</b>						
	Otididae	<i>Bustards</i>	6	25	2	8
	Gruidae	<i>Cranes</i>	2	15	10	67
	Psophiidae	<i>Trumpeters</i>	1	3	1	33
	Rallidae	<i>Rails, Coots</i>	34	143	6	4
<b>Ciconiiformes</b>						
	Pteroclididae	<i>Sandgrouse</i>	2	16	4	25
	Scolopacidae	<i>Snipes, Sandpipers</i>	21	88	3	3
	Burhinidae	<i>Thick-knees</i>	1	9	1	11
	Charadriidae	<i>Plovers, Lapwings</i>	16	88	14	16
	Glareolidae	<i>Coursers</i>	6	18	1	6
	Ardeidae	<i>Herons, Egrets</i>	21	65	3	5
	Phoenicopteridae	<i>Flamingos</i>	1	5	2	40
	Threskiornithidae	<i>Ibises, Spoonbills</i>	14	33	17	52
	Pelecanidae	<i>Pelicans</i>	2	9	2	22
	Ciconiidae	<i>Storks</i>	11	26	2	8
Total:			328	1463	446	

Total #gen, Total #spec: total number of genera and species in each Family  
AN #spec, AN %: number of species and percentage from kept by members of Aviornis.

The fact that one-third of the kept species enjoys protection under the CITES Convention and that more than half of the total number of kept species have a protection status, gains even more importance considering that breeding results are recorded annually for practically each of these species.

An interesting example are the breeding results with the Socorro Dove (*Zenaida graysoni*). The species is considered extinct in nature and does not enjoy any protected status. In 1995 the EAZA (European Association of Zoos and Aquaria) started an EEP (European Endangered Species Program) breeding program for this species. In one Dutch Zoo, participating since 1997, the breeding results were one young dead in 2001 and one successfully raised in 2002. Over the same years the number of animals raised by Aviornis Pigeon Specialist Group members was more than 30. Successful breeding with this species is very time-consuming; it requires intensive observation of the animals, as well as proper housing and handling.

Yet another example is the production a large number of fertilized eggs of the Lesser White-fronted Goose (*Anser erythropus*) for an international re-introduction and conservation program.(see: Aviornis, vol.161, October 2001; Aviornis, vol. 168, December 2002)

Members of Aviornis share an enormous, and almost unparalleled, reservoir of expertise. Contrasting the situation in official institutions and Zoos, they can offer a huge capacity in breeding species for conservation purposes and for re-introduction programs.

## ANNEX

### List of Bird Species in Possession of Dutch Members of Aviornis - International

Data from a survey in 1998, provided by approximately 1200 Aviornis members keeping 57500 birds belonging to 446 species.

CITES	Convention on International Trade in Endangered Species. Categories I, II and III refer to different levels of endangerment and protection
ECR	European Council - Regulation 338/97 On the Protection of Species and the Regulation of Trade therein. Categories A, B, C and D refer to different levels of endangerment and protection
EBD	European Council - Directive 79/409/EC On the Conservation of Wild Birds (European Birds Directive) Intro: officially recognized as <i>species introduced into the wild</i> .
FFW	Dutch Flora and Fauna Act (April 1, 2002)
AN pop	Estimated size of the captive species population among members of Aviornis - The Netherlands. Category borders are set at resp. 10, 20, 50, 100, 200, 500, 1000, 2000; e.g. the figure 200 in the table means a population between 100 and 200 individuals.

<i>Scientific name</i>	<i>English name</i>	<i>Cites</i>	<i>ECR</i>	<i>EBD</i>	<i>FFW</i>	<i>AN pop.</i>
<b>Struthioformes</b>						
<b>Struthionidae</b>		<b>Ostriches</b>				
<i>Struthio camelus</i>	Ostrich	I	A		+	200
<b>Rheidae</b>		<b>Rheas</b>				
<i>Rhea americana</i>	Greater Rhea	II	B		+	200
<i>Rhea pennata</i>	Lesser Rhea	I	A		+	10
<b>Casuariidae</b>		<b>Cassowaries</b>				
<i>Dromaius novaehollandiae</i>	Emu					100
<b>Tinamiformes</b>						
<b>Tinamidae</b>		<b>Tinamous</b>				
<i>Crypturellus parvirostris</i>	Small-billed Tinamou					50
<i>Eudromia elegans</i>	Elegant Crested-Tinamou					20
<i>Nothoprocta pentlandii</i>	Andean Tinamou					20
<i>Nothoprocta perdicaria</i>	Chilean Tinamou					20
<i>Rhynchotus rufescens</i>	Red-winged Tinamou					20
<b>Craciformes</b>						
<b>Cracidae</b>		<b>Chachalacas, Guans</b>				
<i>Crax alector</i>	Black Curassow		B		+	20
<i>Crax fasciolata</i>	Bare-faced Curassow		B		+	20
<i>Crax rubra</i>	Great Curassow	III	B		+	20
<i>Mitu mitu</i>	Alagoas Curassow	I	A		+	10
<i>Ortalis canicollis</i>	Chaco Chachalaca					10
<i>Ortalis ruficauda</i>	Rufous-vented Chachalaca					10
<i>Pauxi unicornis</i>	Horned Curassow		B		+	10
<i>Penelope jacquacu</i>	Spix's Guan					10
<i>Penelope montagnii</i>	Andean Guan					10
<i>Penelope purpurascens</i>	Crested Guan	III	C		+	10
<i>Pipile pipile cumanensis</i>	Trinidad Piping-Guan	I	A		+	20
<i>Pipile pipile grayi</i>	Gray's Piping-Guan	I	A		+	10
<b>Galliformes</b>						
<b>Phasianidae</b>		<b>Grouse, Pheasants</b>				
<i>Afropavo congensis</i>	Congo Peafowl					10
<i>Agriocharis ocellata</i>	Ocellated Turkey	III	C		+	50
<i>Alectoris barbara</i>	Barbary Partridge				+	100
<i>Alectoris chukar</i>	Chukar				+	200
<i>Alectoris melanocephala</i>	Arabian Partridge					50
<i>Alectoris philbyi</i>	Philby's Partridge					50
<i>Alectoris rufa</i>	Red-legged Partridge				+	200
<i>Ammoperdix griseogularis</i>	See-see Partridge					50
<i>Arborophila brunneopectus</i>	Bar-backed Partridge					100
<i>Arborophila gingica</i>	White-necklaced Partridge		D		+	200
<i>Arborophila javanica</i>	Chestnut-bellied Partridge					50
<i>Arborophila o. orientalis</i>	White-headed Partridge	III	B		+	50
<i>Arborophila o. rolli</i>	Grey-breasted Partridge	III	B		+	100
<i>Arborophila torqueola</i>	Hill Partridge					50
<i>Argusianus argus</i>	Great Argus	II	B		+	100
<i>Bambusicola fytchii</i>	Mountain Bamboo-Partridge					50

<b>Scientific name</b>	<b>English name</b>	<b>Cites</b>	<b>ECR</b>	<b>EBD</b>	<b>FFW</b>	<b>AN pop.</b>
Bambusicola thoracica	Chinese Bamboo-Partridge					200
Bonasa bonasia	Hazel Grouse			+	+	10
Bonasa umbellus	Ruffed Grouse					20
Caloperdix ocellata	Ferruginous Partridge	III	C		+	10
Catreus wallichi	Cheer Pheasant	I	A		+	50
Chrysolophus amherstiae	Lady Amherst's Pheasant		D	<b>Intro</b>	+	1000
Chrysolophus pictus	Golden Pheasant		D	<b>Intro</b>	+	1000
Coturnix chinensis	Blue-breasted Quail					1000
Coturnix coromandelica	Rain Quail					200
Coturnix coturnix	Common Quail			+	+	500
Coturnix delegorguei	Harlequin Quail					500
Coturnix japonica	Japanese Quail					1000
Crossoptilon auritum	Blue Eared-Pheasant					200
Crossoptilon crossoptilon	White Eared-Pheasant	I	A		+	200
Crossoptilon harmani	Tibetan Eared-Pheasant	I	A		+	10
Crossoptilon mantchuricum	Brown Eared-Pheasant	I	A		+	200
Dendragapus canadensis	Spruce Grouse					10
Francolinus afer	Red-necked Spurfowl					10
Francolinus bicalcaratus	Double-spurred Francolin					10
Francolinus camerunensis	Cameroon Francolin					10
Francolinus erckelii	Erckel's Francolin					50
Francolinus francolinus	Black Francolin			+	+	100
Francolinus hildebrandti	Hildebrandt's Francolin					10
Francolinus leucoscepus	Yellow-necked Spurfowl					10
Francolinus pintadeanus	Chinese Francolin					10
Francolinus pondicerianus	Grey Francolin					50
Gallus gallus	Red Junglefowl					100
Gallus lafayetii	Ceylon Junglefowl					20
Gallus sonneratii	Grey Junglefowl	II	B		+	100
Gallus varius	Green Junglefowl					20
Ithaginis cruentus	Blood Pheasant	II	B		+	20
Lagopus lagopus	Willow Ptarmigan			+	+	50
Lagopus l. scoticus	Scottish Willow Ptarmigan					10
Lagopus mutus	Rock Ptarmigan			+	+	20
Lagopus m. helveticus	Alpine Rock Ptarmigan			+		10
Lophophorus impejanus	Himalayan Monal	I	A		+	200
Lophophorus lhuysii	Chinese Monal	I	A		+	100
Lophophorus sclateri	Sclater's Monal	I	A		+	50
Lophura diardi	Siamese Fireback		B		+	200
Lophura edwardsi	Edwards's Pheasant	I	A		+	200
Lophura erythrothalma	Crestless Fireback	III	B		+	50
Lophura e. erythrothalma	Malayan Crestless Fireback		B		+	50
Lophura e. pyronota	Bornean Crestless Fireback		B		+	20
Lophura hatinhensis	Vietnam Fireback		B		+	10
Lophura ignita	Crested Fireback	III	B		+	10
Lophura i. ignita	Lesser Crested Fireback					10
Lophura i. macartneyi	Delacour's Fireback					10
Lophura i. nobilis	Greater Crested Fireback					100
Lophura i. rufa	Vieillot's Fireback					100
Lophura imperialis	Imperial Pheasant	I	A		+	10
Lophura inornata	Salvadori's Pheasant		B		+	20

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Lophura leucomelanos	Kalij Pheasant		B		+	200
Lophura l. crawfurdi	Crawfurd's Pheasant		B		+	10
Lophura l. hamiltoni	Hamilton's Pheasant		B		+	100
Lophura l. leucomelanos	Kalij Pheasant		B		+	50
Lophura l. lineatus	Striped Pheasant		B		+	50
Lophura l. melanotus	Black-baked Pheasant		B		+	20
Lophura l. moffitti	Moffitt's Pheasant		B		+	10
Lophura l. oatesi	Oate's Pheasant		B		+	10
Lophura nycthemera	Silver Pheasant					500
Lophura n. berliozii	Berloiz' Pheasant					10
Lophura n. jonesi	Jones' Silver Pheasant					10
Lophura n. lewisi	Lewis' Silver Pheasant					10
Lophura n. nycthemera	Silver Pheasant					20
Lophura swinhoii	Swinhoe's Pheasant	I	A		+	500
Margaroperdix madagascarensis	Madagascar Partridge					100
Meleagris gallopavo	Wild Turkey					50
Pavo cristatus	Indian Peafowl					1000
Pavo muticus	Green Peafowl	II	B		+	100
Perdica asiatica	Jungle Bush-Quail					10
Perdix dauurica	Daurian Partridge					20
Perdix perdix	Grey Partridge				+	500
Phasianus colchicus	Common Pheasant				+	500
Phasianus c. bianchii	Common Pheasant				+	10
Phasianus c. chrysomelas	Common Pheasant				+	10
Phasianus c. colchicus	Common Pheasant				+	20
Phasianus c. formosanus	Common Pheasant				+	50
Phasianus c. hagenbecki	Common Pheasant				+	10
Phasianus c. karpowi	Common Pheasant				+	10
Phasianus c. mongolicus	Common Pheasant				+	50
Phasianus c. pallasi	Common Pheasant				+	20
Phasianus c. persicus	Common Pheasant				+	10
Phasianus c. robustipes	Common Pheasant				+	50
Phasianus c. septentrionalis	Common Pheasant				+	20
Phasianus c. strauchi	Common Pheasant				+	10
Phasianus c. torquatus	Common Pheasant				+	50
Phasianus c. zarudnyi	Common Pheasant				+	10
Phasianus c. zerafshanicus	Common Pheasant				+	10
Phasianus versicolor	Green Pheasant					100
Polyplectron bicalcaratum	Grey Peacock-Pheasant	II	B		+	500
Polyplectron chalcureum	Bronze-tailed Peacock-Pheasant					50
Polyplectron emphanum	Palawan Peacock-Pheasant	I	A		+	200
Polyplectron germaini	Germain's Peacock-Pheasant	II	B		+	50
Polyplectron inopinatum	Mountain Peacock-Pheasant	III	C		+	50
Polyplectron malacense	Malayan Peacock-Pheasant	II	B		+	50
Pucrasia macrolopha	Koklass Pheasant					200
Rheinardia ocellata	Crested Argus	I	A		+	10
Rollulus roulroul	Crested Partridge	III	C		+	500
Syrnaticus ellioti	Elliot's Pheasant	I	A		+	500
Syrnaticus humiae	Hume's Pheasant	I	A		+	100
Syrnaticus mikado	Mikado Pheasant	I	A		+	200
Syrnaticus reevesii	Reeves's Pheasant		D	<b>Intro</b>	+	200

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<i>Syrmaticus soemmerringii</i>	Copper Pheasant					10
<i>Syrmaticus s. ijimae</i>	Ijima Copper Pheasant					100
<i>Syrmaticus s. scintillans</i>	Scintillan Copper Pheasant					50
<i>Syrmaticus s. soemmerringii</i>	Soemmerring's Copper Pheasant					20
<i>Tetrao tetrix</i>	Black Grouse			+	+	200
<i>Tetrao urogallus</i>	Western Capercaillie			+	+	100
<i>Tetraogallus himalayensis</i>	Himalayan Snowcock					50
<i>Tragopan blythii</i>	Blyth's Tragopan	I	A		+	20
<i>Tragopan caboti</i>	Cabot's Tragopan	I	A		+	50
<i>Tragopan satyra</i>	Satyr Tragopan	III	C		+	1000
<i>Tragopan temminckii</i>	Temminck's Tragopan		D		+	1000
<i>Tympanuchus cupido</i>	Greater Prairie-chicken					10
<b>Numididae</b>		<b>Guineafowls</b>				
<i>Acryllium vulturinum</i>	Vulturine Guineafowl					100
<i>Guttera plumifera</i>	Plumed Guineafowl					200
<i>Guttera pucherani</i>	Crested Guineafowl					50
<i>Numida meleagris</i>	Helmeted Guineafowl					50
<b>Odontophoridae</b>		<b>New World Quails</b>				
<i>Callipepla californica</i>	California Quail			Intro		200
<i>Callipepla douglasii</i>	Elegant Quail					100
<i>Callipepla gambelii</i>	Gambel's Quail					200
<i>Callipepla squamata</i>	Scaled Quail					200
<i>Colinus nigrogularis</i>	Black-throated Bobwhite					100
<i>Colinus virginianus</i>	Northern Bobwhite			Intro		200
<i>Colinus v. ridgwayi</i>	Mexican Bobwhite	I	A		+	100
<i>Cyrtonyx montezumae</i>	Montezuma Quail					50
<i>Oreortyx pictus</i>	Mountain Quail					100
<b>Anseriformes</b>						
<b>Anseranatidae</b>		<b>Magpie Goose</b>				
<i>Anseranas semipalmata</i>	Magpie Goose					10
<b>Dendrocygnidae</b>		<b>Whistling Ducks</b>				
<i>Dendrocygna arborea</i>	West Indian Whistling-Duck	II	B		+	50
<i>Dendrocygna arcuata</i>	Wandering Whistling-Duck					200
<i>Dendrocygna autumnalis</i>	Black-bellied Whistling-Duck	III	C		+	200
<i>Dendrocygna a. autumnalis</i>	Black-bellied Whistling-Duck					20
<i>Dendrocygna a. discolor</i>	Black-bellied Whistling-Duck					10
<i>Dendrocygna bicolor</i>	Fulvous Whistling-Duck	III	C		+	200
<i>Dendrocygna eytoni</i>	Plumed Whistling-Duck					200
<i>Dendrocygna guttata</i>	Spotted Whistling-Duck					50
<i>Dendrocygna javanica</i>	Lesser Whistling-Duck					50
<i>Dendrocygna viduata</i>	White-faced Whistling-Duck	III	C		+	500
<i>Thalassornis leuconotus</i>	White-backed Duck					50
<b>Anatidae</b>		<b>Ducks, Geese, Swans</b>				
<i>Aix galericulata</i>	Mandarin Duck			Intro		5000
<i>Aix sponsa</i>	Wood Duck					2000
<i>Alopochen aegyptiacus</i>	Egyptian Goose	III	C	Intro	+	50
<i>Amazonetta brasiliensis</i>	Brazilian Teal					200
<i>Anas acuta</i>	Northern Pintail	III	C		+	500
<i>Anas albogularis</i>	Andaman Teal					10
<i>Anas americana</i>	American Wigeon				+	200

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Anas aucklandica	Brown Teal	I	A		+	10
Anas bahamensis	White-cheeked Pintail					1000
Anas capensis	Cape Teal	III	C		+	200
Anas castanea	Chestnut Teal					200
Anas clypeata	Northern Shoveler	III	C	+	+	500
Anas crecca	Common Teal	III	C	+	+	1000
Anas c. carolinensis	American Common Teal					500
Anas c. crecca	Eurasian Common Teal					100
Anas cyanoptera	Cinnamon Teal					1000
Anas discors	Blue-winged Teal			+	+	500
Anas erythrorhyncha	Red-billed Duck					500
Anas falcata	Falcated Duck			+	+	500
Anas flavirostris	Speckled Teal					500
Anas formosa	Baikal Teal	II	B	+	+	2000
Anas fulvigula	Mottled Duck					50
Anas georgica	Yellow-billed Pintail					100
Anas gracilis	Grey Teal					10
Anas hottentota	Hottentot Teal					1000
Anas laysanensis	Laysan Duck	I	A		+	200
Anas luzonica	Philippine Duck					100
Anas melleri	Meller's Duck		D		+	10
Anas nesiotis	Campbell's Teal					10
Anas penelope	Eurasian Wigeon	III	C	+	+	1000
Anas platalea	Red Shoveler					100
Anas platyrhynchos	Mallard			+	+	500
Anas poecilorhyncha	Spot-billed Duck					100
Anas puna	Puna Teal					200
Anas querquedula	Garganey	III	A	+	+	500
Anas rhynchotis	Australian Shoveler					100
Anas rubripes	American Black Duck			+	+	10
Anas sibilatrix	Chiloe Wigeon					500
Anas smithii	Cape Shoveler					50
Anas sparsa	African Black Duck					10
Anas specularioides	Crested Duck					10
Anas specularis	Spectacled Duck					100
Anas strepera	Gadwall			+	+	100
Anas superciliosa	Pacific Black Duck					10
Anas undulata	Yellow-billed Duck					100
Anas versicolor	Silver Teal					1000
Anas wyvilliana	Hawaiian Duck					50
Anser albifrons	Greater White-fronted Goose			+	+	200
Anser anser	Greylag Goose			+	+	100
Anser brachyrhynchus	Pink-footed Goose			+	+	100
Anser caerulescens	Snow Goose			+	+	200
Anser c. atlanticus	Greater Snow Goose					50
Anser c. caerulescens	Lesser Snow Goose					50
Anser canagica	Emperor Goose					1000
Anser cygnoides	Swan Goose					50
Anser erythropus	Lesser White-fronted Goose			+	+	500
Anser fabalis	Bean Goose			+	+	100
Anser indicus	Bar-headed Goose					500

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Anser rossii	Ross's Goose			+	+	500
Aythya affinis	Lesser Scaup			+	+	200
Aythya americana	Redhead			+	+	20
Aythya australis	Hardhead					50
Aythya baeri	Baer's Pochard					50
Aythya collaris	Ring-necked Duck			+	+	200
Aythya ferina	Common Pochard			+	+	500
Aythya fuligula	Tufted Duck			+	+	1000
Aythya innotata	Madagascar Pochard		A		+	10
Aythya marila	Greater Scaup			+	+	200
Aythya novaeseelandiae	New Zealand Scaup					100
Aythya nyroca	Ferruginous Pochard	III	A	+	+	500
Aythya valisineria	Canvasback			+	+	100
Biziura lobata	Musk Duck					10
Branta bernicla	Brent Goose			+	+	100
Branta b. bernicla	Russian Brent Goose					100
Branta b. hrota	White-bellied Brent Goose					50
Branta b. nigricans	Pacific Brent Goose					500
Branta canadensis	Canada Goose			+	+	200
Branta c. canadensis	Atlantic Canada Goose					20
Branta c. leucopareia	Aloeten Canada Goose	I	A		+	10
Branta c. maxima	Greater Canada Goose					50
Branta c. minima	Cackling Canada Goose					500
Branta c. occidentalis	Dusky Canada Goose					20
Branta c. parvipes	Lesser Canada Goose					50
Branta c. taverneri	Taverners Canada Goose					10
Branta leucopsis	Barnacle Goose			+	+	1000
Branta ruficollis	Red-breasted Goose	II	A	+	+	200
Branta sandvicensis	Nene	I	A		+	1000
Bucephala albeola	Bufflehead			+	+	500
Bucephala clangula	Common Goldeneye			+	+	1000
Bucephala islandica	Barrow's Goldeneye			+	+	500
Cairina moschata	Muscovy Duck	III	C		+	500
Callonetta leucophrys	Ringed Teal					2000
Cereopsis novaehollandiae	Cape Barren Goose					500
Chenonetta jubata	Maned Duck					1000
Chloephaga melanoptera	Andean Goose					100
Chloephaga picta	Upland Goose					200
Chloephaga poliocephala	Ashy-headed Goose					200
Chloephaga rubidiceps	Ruddy-headed Goose					200
Clangula hyemalis	Long-tailed Duck			+	+	50
Coscoroba coscoroba	Coscoroba Swan	II	B		+	200
Cyanochen cyanopterus	Blue-winged Goose					100
Cygnus atratus	Black Swan					500
Cygnus buccinator	Trumpeter Swan					50
Cygnus columbianus	Tundra Swan			+	+	10
Cygnus c. bewickii	Bewick's Swan			+	+	10
Cygnus cygnus	Whooper Swan			+	+	20
Cygnus melanocorypha	Black-necked Swan	II	B		+	500
Cygnus olor	Mute Swan			+	+	100
Heteronetta atricapilla	Black-headed Duck					20

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<i>Histrionicus histrionicus</i>	Harlequin Duck			+	+	50
<i>Lophodytes cucullatus</i>	Hooded Merganser			+	+	2000
<i>Malacorhynchus membranaceus</i>	Pink-eared Duck					50
<i>Marmaronetta angustirostris</i>	Marbled Teal			+	+	500
<i>Melanitta fusca</i>	Velvet Scoter			+	+	50
<i>Melanitta nigra</i>	Black Scoter			+	+	50
<i>Melanitta perspicillata</i>	Surf Scoter			+	+	10
<i>Mergellus albellus</i>	Smew			+	+	2000
<i>Mergus merganser</i>	Common Merganser			+	+	100
<i>Mergus octosetaceus</i>	Brazilian Merganser		A		+	10
<i>Mergus serrator</i>	Red-breasted Merganser			+	+	200
<i>Mergus squamatus</i>	Scaly-sided Merganser					10
<i>Neochen jubata</i>	Orinoco Goose					100
<i>Netta erythrophthalma</i>	Southern Pochard					50
<i>Netta peposaca</i>	Rosy-billed Pochard					500
<i>Netta rufina</i>	Red-crested Pochard			+	+	1000
<i>Nettapus auritus</i>	African Pygmy-goose	III	C		+	50
<i>Nettapus pulchellus</i>	Green Pygmy-goose					10
<i>Oxyura australis</i>	Blue-billed Duck					20
<i>Oxyura jamaicensis</i>	Ruddy Duck			<b>Intro</b>		500
<i>Oxyura leucocephala</i>	White-headed Duck	II	A	+	+	200
<i>Oxyura maccoa</i>	Maccoa Duck					50
<i>Oxyura vittata</i>	Lake Duck					200
<i>Plectropterus gambensis</i>	Spur-winged Goose	III	C		+	10
<i>Polysticta stelleri</i>	Steller's Eider			+	+	10
<i>Pteronetta hartlaubii</i>	Hartlaub's Duck	III	C		+	20
<i>Sarkidiornis melanotos</i>	Comb Duck	II	B		+	50
<i>Somateria fischeri</i>	Spectacled Eider					50
<i>Somateria mollissima</i>	Common Eider			+	+	200
<i>Somateria m. borealis</i>	Northern Eider					10
<i>Somateria m. dresseri</i>	American Eider					10
<i>Somateria m. mollissima</i>	European Eider					200
<i>Somateria m. v-nigra</i>	Pacific Eider					10
<i>Somateria spectabilis</i>	King Eider			+	+	20
<i>Tachyeres leucocephalus</i>	Chubut Steamerduck					10
<i>Tadorna cana</i>	South African Shelduck					100
<i>Tadorna ferruginea</i>	Ruddy Shelduck			+	+	200
<i>Tadorna radjah</i>	Radjah Shelduck					200
<i>Tadorna tadorna</i>	Common Shelduck			+	+	1000
<i>Tadorna tadornoides</i>	Australian Shelduck					200
<i>Tadorna variegata</i>	Paradise Shelduck					200
<b>Piciformes</b>						
<b>Ramphastidae</b>		<b>Toucans</b>				
<i>Pteroglossus viridis</i>	Green Aracari	II	B		+	10
<i>Ramphastos dicolorus</i>	Red-breasted Toucan	III	B		+	10
<i>Ramphastos sulfuratus</i>	Keel-billed Toucan	II	B		+	10
<i>Ramphastos swainsonii</i>	Chestnut-mandibled Toucan					10
<i>Ramphastos tucanus</i>	Red-billed Toucan	II	B		+	10
<b>Bucerotiformes</b>						

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<b>Bucerotidae</b>		<b>Typical Hornbills</b>				
<i>Tockus deckeni</i>	Von der Decken's Hornbill					10
<i>Tockus erythrorhynchus</i>	Red-billed Hornbill					10
<i>Tockus nasutus</i>	African Grey Hornbill					10
<b>Musophagiformes</b>						
<b>Musophagidae</b>		<b>Plantain-eaters, Turacos</b>				
<i>Corythaixoides personatus</i>	Bare-faced Go-away-bird					10
<i>Crinifer piscator</i>	Western Grey Plantain-eater	III	B		+	10
<i>Musophaga porphyreolopha</i>	Purple-crested Turaco	II	B		+	10
<i>Musophaga rossae</i>	Ross's Turaco					10
<i>Musophaga violacea</i>	Violet Turaco	III	B		+	50
<i>Tauraco erythrolophus</i>	Red-crested Turaco	II	B		+	10
<i>Tauraco fischeri</i>	Fischer's Turaco	II	B		+	20
<i>Tauraco hartlaubi</i>	Hartlaub's Turaco	II	B		+	50
<i>Tauraco leucolophus</i>	White-crested Turaco	II	B		+	10
<i>Tauraco leucotis</i>	White-cheeked Turaco	II	B		+	50
<i>Tauraco livingstonii</i>	Livingstone's Turaco	II	B		+	20
<i>Tauraco persa</i>	Guinea Turaco	II	B		+	20
<i>Tauraco schalowi</i>	Schalow's Turaco	II	B		+	10
<i>Tauraco schuettii</i>	Black-billed Turaco	II	B		+	10
<b>Columbiformes</b>						
<b>Columbidae</b>		<b>Pigeons, Doves</b>				
<i>Caloenas nicobarica</i>	Nicobar Pigeon	I	A		+	100
<i>Chalcophaps indica</i>	Emerald Dove					500
<i>Chalcophaps i. chrysochlora</i>	Australian Emerald Dove					100
<i>Chalcophaps stephani</i>	Stephan's Dove					50
<i>Claravis pretiosa</i>	Blue Ground-Dove					100
<i>Columba arquatrix</i>	African Olive-Pigeon					100
<i>Columba cayennensis</i>	Pale-vented Pigeon					10
<i>Columba corensis</i>	Bare-eyed Pigeon					50
<i>Columba fasciata</i>	Band-tailed Pigeon					50
<i>Columba guinea</i>	Speckled Pigeon	III	C		+	200
<i>Columba larvata</i>	Lemon Dove					50
<i>Columba leucocephala</i>	White-crowned Pigeon					20
<i>Columba livia</i>	Rock Pigeon	III	A	+	+	50
<i>Columba maculosa</i>	Spot-winged Pigeon					10
<i>Columba mayeri</i>	Pink Pigeon	III	C		+	50
<i>Columba oenas</i>	Stock Pigeon			+	+	100
<i>Columba oenops</i>	Peruvian Pigeon		D		+	100
<i>Columba palumbus</i>	Common Wood-Pigeon			+	+	50
<i>Columba picazuro</i>	Picazuro Pigeon					20
<i>Columba picturata</i>	Madagascar Turtle-Dove					50
<i>Columba pulchricollis</i>	Ashy Wood-Pigeon					200
<i>Columba punicea</i>	Pale-capped Pigeon					50
<i>Columba squamosa</i>	Scaly-naped Pigeon					20
<i>Columba vitiensis</i>	Metallic Pigeon					50
<i>Columbina buckleyi</i>	Ecuadorian Ground-Dove					10
<i>Columbina cruziana</i>	Croaking Ground-Dove					100
<i>Columbina inca</i>	Inca Dove					10

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Columbina minuta	Plain-breasted Ground-Dove					50
Columbina passerina	Common Ground-Dove					50
Columbina picui	Picui Ground-Dove					10
Columbina squammata	Scaled Dove					10
Columbina talpacoti	Ruddy Ground-Dove					50
Ducula aenea	Green Imperial-Pigeon					10
Ducula bicolor	Pied Imperial-Pigeon					20
Ducula concinna	Elegant Imperial-Pigeon					10
Ducula forsteni	White-bellied Imperial-Pigeon					10
Ducula pinon	Pinon Imperial-Pigeon					10
Ducula rufigaster	Purple-tailed Imperial-Pigeon					10
Ducula spilorrhoa	Torresian Imperial-Pigeon					10
Gallucolumba criniger	Mindanao Bleeding-heart		D		+	100
Gallucolumba jobiensis	White-bibbed Ground-Dove					20
Gallucolumba luzonica	Luzon Bleeding-heart	II	B		+	200
Gallucolumba rufigula	Cinnamon Ground-Dove					100
Gallucolumba tristigmata	Sulawesi Ground-Dove					100
Geopelia cuneata	Diamond Dove					1000
Geopelia humeralis	Bar-shouldered Dove					100
Geopelia maugeus	Barred Dove					20
Geopelia placida	Peaceful Dove					10
Geopelia striata	Zebra Dove					200
Geophaps lophotes	Crested Pigeon					500
Geophaps plumifera	Spinifex Pigeon					20
Geotrygon montana	Ruddy Quail-Dove					100
Geotrygon mystacea	Bridled Quail-Dove					10
Geotrygon versicolor	Crested Quail-Dove					100
Goura cristata	Western Crowned-Pigeon	II	B		+	20
Goura scheepmakeri	Southern Crowned-Pigeon	II	B		+	10
Goura victoria	Victoria Crowned-Pigeon	II	B		+	50
Henicophaps albifrons	New Guinea Bronzewing					20
Leptotila verreauxi	White-tipped Dove					10
Leucosarcia melanoleuca	Wonga Pigeon					100
Macropygia amboinensis	Slender-billed Cuckoo-Dove					50
Macropygia emiliana	Ruddy Cuckoo-Dove					10
Macropygia magna	Dusky Cuckoo-Dove					10
Macropygia phasianella	Brown Cuckoo-Dove					20
Macropygia ruficeps	Little Cuckoo-Dove					50
Macropygia unchall	Barred Cuckoo-Dove					100
Metriopelia ceciliae	Bare-faced Ground-Dove					100
Metriopelia melanoptera	Black-winged Ground-Dove					10
Oena capensis	Namaqua Dove	III	C		+	20
Otidiphaps nobilis	Pheasant Pigeon					50
Phaps chalcoptera	Common Bronzewing					200
Phaps elegans	Brush Bronzewing					100
Ptilinopus aurantiifrons	Orange-fronted Fruit-Dove					10
Ptilinopus iozonus	Orange-bellied Fruit-Dove					20
Ptilinopus jambu	Jambu Fruit-Dove					10
Ptilinopus leclancheri	Black-chinned Fruit-Dove					10
Ptilinopus magnificus	Wompoo Fruit-Dove					10
Ptilinopus perlatus	Pink-spotted Fruit-Dove					10

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Ptilinopus pulchellus	Beautiful Fruit-Dove					20
Ptilinopus superbus	Superb Fruit-Dove					50
Reinwardtoena reinwardtsi	Great Cuckoo-Dove					10
Streptopelia bitorquata	Island Collared-Dove					20
Streptopelia chinensis	Spotted Dove					50
Streptopelia decaocto	Eurasian Collared-Dove			+	+	50
Streptopelia decipiens	Mourning Collared-Dove	III	C		+	50
Streptopelia hypopyrrha	Adamawa Turtle-Dove					10
Streptopelia orientalis	Oriental Turtle-Dove			+	+	20
Streptopelia risoria	Laughing Dove					2000
Streptopelia roseogrisea	African Collared-Dove	III	C		+	100
Streptopelia semitorquata	Red-eyed Dove	III	C		+	10
Streptopelia senegalensis	Laughing Dove	III	C	+	+	200
Streptopelia tranquebarica	Red Collared-Dove					200
Streptopelia turtur	European Turtle-Dove	III	A	+	+	200
Streptopelia vinacea	Vinaceous Dove	III	C		+	20
Treron bicincta	Orange-breasted Green-Pigeon					20
Treron curvirostra	Thick-billed Green-Pigeon					10
Treron sphenura	Wedge-tailed Green-Pigeon					50
Treron vernans	Pink-necked Green-Pigeon					50
Treron waalia	Bruce's Green-Pigeon	III	C		+	10
Trugon terrestris	Thick-billed Ground-Pigeon					10
Turacoena manadensis	White-faced Cuckoo-Dove					10
Turtur abyssinicus	Black-billed Wood-Dove	III	C		+	20
Turtur afer	Blue-spotted Wood-Dove	III	C		+	20
Turtur brehmeri	Blue-headed Wood-Dove	III	C		+	10
Turtur chalcospilos	Emerald-spotted Wood-Dove					10
Turtur tympanistria	Tambourine Dove	III	C		+	100
Zenaida asiatica	White-winged Dove					10
Zenaida auriculata	Eared Dove					50
Zenaida aurita	Zenaida Dove					10
Zenaida galapagoensis	Galapagos Dove					10
Zenaida graysoni	Socorro Dove					50
Zenaida macroura	Mourning Dove					10
<b>Gruiformes</b>						
<b>Otididae</b>		<b>Bustards</b>				
Ardeotis kori	Kori Bustard	II	B		+	10
Tetrax tetrax	Little Bustard	II	A	+	+	10
<b>Gruidae</b>		<b>Cranes</b>				
Balearica pavonina	Black Crowned-Crane	II	B		+	20
Balearica regulorum	Grey Crowned-Crane	II	B		+	200
Grus antigone	Sarus Crane	II	B		+	10
Grus canadensis	Sandhill Crane	II	B	+	+	10
Grus carunculatus	Wattled Crane	II	B		+	10
Grus grus	Common Crane	II	A	+	+	10
Grus japonensis	Red-crowned Crane	I	A		+	10
Grus paradisea	Blue Crane	II	B		+	20
Grus vipio	White-naped Crane	I	A		+	10
Grus virgo	Demoiselle Crane	II	B	+	+	100
<b>Psophiidae</b>		<b>Trumpeters</b>				

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Psophia crepitans	Grey-winged Trumpeter					10
<b>Rallidae</b>		<b>Rails, Coots</b>				
Amauornis flavirostra	Black Crake			+	+	10
Amauornis phoenicurus	White-breasted Waterhen					10
Gallinula chloropus	Common Moorhen			+	+	20
Gallirallus philippensis	Buff-banded Rail					10
Laterallus melanophaius	Rufous-sided Crake					10
Porphyrio porphyrio	Purple Swamphen			+	+	20
<b>Ciconiiformes</b>						
<b>Pteroclididae</b>		<b>Sandgrouse</b>				
Pterocles alchata	Pin-tailed Sandgrouse			+	+	10
Pterocles exustus	Chestnut-bellied Sandgrouse					10
Pterocles orientalis	Black-bellied Sandgrouse			+	+	50
Syrrhaptes paradoxus	Pallas's Sandgrouse			+	+	50
<b>Scolopacidae</b>		<b>Snipes, Sandpipers</b>				
Limosa limosa	Black-tailed Godwit			+	+	10
Philomachus pugnax	Ruff			+	+	20
Tringa totanus	Common Redshank			+	+	10
<b>Burhinidae</b>		<b>Thick-knees</b>				
Burhinus superciliosus	Peruvian Thick-knee					10
<b>Charadriidae</b>		<b>Plovers, Lapwings</b>				
Charadrius alexandrinus	Kentish Plover			+	+	10
Charadrius hiaticula	Common Ringed Plover			+	+	10
Haematopus ostralegus	Eurasian Oystercatcher			+	+	100
Himantopus himantopus	Black-winged Stilt			+	+	50
Recurvirostra avosetta	Pied Avocet			+	+	100
Vanellus armatus	Blacksmith Lapwing					20
Vanellus cayanus	Pied Lapwing					10
Vanellus coronatus	Crowned Lapwing					10
Vanellus lugubris	Senegal Lapwing					10
Vanellus malabaricus	Yellow-wattled Lapwing					20
Vanellus miles	Masked Lapwing					20
Vanellus senegallus	Wattled Lapwing					20
Vanellus spinosus	Spur-winged Lapwing			+	+	10
Vanellus vanellus	Northern Lapwing			+	+	100
<b>Glareolidae</b>		<b>Coursers</b>				
Pluvianus aegyptius	Crocodile-bird			+	+	20
<b>Ardeidae</b>		<b>Herons, Bitterns, Egrets</b>				
Bubulcus ibis	Cattle Egret	III	A	+	+	10
Egretta gularis	Western Reef-Egret			+	+	10
Nycticorax nycticorax	Black-crowned Night-Heron			+	+	10
<b>Phoenicopteridae</b>		<b>Flamingos</b>				
Phoenicopterus chilensis	Chilean Flamingo	II	B		+	50
Phoenicopterus minor	Lesser Flamingo	II	B		+	100
<b>Threskiornithidae</b>		<b>Ibises, Spoonbills</b>				
Ajaia ajaja	Roseate Spoonbill					10
Bostrychia hagedash	Hadada Ibis	III	C		+	10
Eudocimus albus	White Ibis					50
Eudocimus ruber	Scarlet Ibis	II	B		+	100
Geronticus calvus	Bald Ibis	II	A		+	10

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<i>Geronticus eremita</i>	Waldrapp	I	A	+	+	10
<i>Lophotibis cristata</i>	White-winged Ibis					10
<i>Platalea alba</i>	African Spoonbill					10
<i>Platalea leucorodia</i>	Eurasian Spoonbill	II	A	+	+	10
<i>Plegadis falcinellus</i>	Glossy Ibis			+	+	10
<i>Plegadis ridgwayi</i>	Puna Ibis					50
<i>Pseudibis papillosa</i>	Red-naped Ibis					10
<i>Theristicus melanopis</i>	Black-faced Ibis					10
<i>Threskiornis aethiopicus</i>	Sacred Ibis	III	C	<b>Intro</b>	+	50
<i>Threskiornis melanocephalus</i>	Black-headed Ibis					10
<i>Threskiornis molucca</i>	Australian Ibis					10
<i>Threskiornis spinicollis</i>	Straw-necked Ibis					20
<b><i>Pelecanidae</i></b>		<b><i>Pelicans</i></b>				
<i>Pelecanus erythrorhynchos</i>	American White Pelican					10
<i>Pelecanus occidentalis</i>	Brown Pelican					10
<b><i>Ciconiidae</i></b>		<b><i>Storks</i></b>				
<i>Ephippiorhynchus senegalensis</i>	Saddle-billed Stork					10
<i>Leptoptilos crumeniferus</i>	Marabou Stork					10