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# Asia

## CONTINENTAL ASIA

### Overview

*Philip McGowan*

The distribution of Asia's parrots falls into two categories: species-poor continental Asia, and the species-rich islands of the Philippine and Indonesian archipelagos. The latter countries are so diverse, and contain such large numbers of species that are (or have recently been) considered threatened and face such acute conservation problems, that they are treated separately below.

Continental Asia and Sri Lanka is home to few parrot species with only species belonging to the genera *Psittacula* and *Loriculus* occurring between Afghanistan in the west, south China in the north-east, and the Malay Peninsula in the south. These genera have large distributions and link the African parrot fauna to that of the south-east Asian islands. Only three of the 10 (Forshaw 1989) to 13 (Juniper and Parr 1998) species of *Loriculus* occur in continental Asia and Sri Lanka. As the threatened forms of *Loriculus* are endemic to Indonesian islands, they are treated in detail in that section.

There are 13 or 14 surviving species of *Psittacula* parakeet (Forshaw 1989, Juniper and Parr 1998), including the species of the Indian Ocean islands, covered in Chapter 6 of this Action Plan (e.g., echo parakeet *P. eques*). Two other Indian Ocean species became extinct by the turn of the century: the Seychelles parakeet *P. wardi* and Newton's parakeet *P. exsul* which was endemic to Rodriguez Island (Forshaw 1989). In contrast, the ring-necked or rose-ringed parakeet *P. krameri* is arguably the most widespread (naturally and as the result of introductions) parrot in the world.

The only member of this genus considered threatened is the intermediate parakeet *P. intermedia* of northern India where it is only known from skins and bird markets: no confirmed wild records exist. As indicated in the species account below, a recent thorough evaluation of all available evidence suggests that the "species" is in fact a hybrid. It is retained here on the list of threatened parrots until this evaluation is completed and published.

### Threats

There are few pressing conservation issues facing the parrots of continental Asia because they are typically

found in large numbers and appear adaptable to changed landscapes. This is typified by the ring-necked parakeet, which breeds well close to human habitation. However, this should not lead to complacency about their future. Trapping is thought to have led to declines of both Finsch's parakeet *P. finschii* and the blossom-headed parakeet *P. roseata* in parts of Thailand (Juniper and Parr 1998) and the increasing intensification of agriculture throughout much of continental Asia may well impact on populations.

### Species account

#### Intermediate parakeet *Psittacula intermedia*

**Contributor:** Pamela Rasmussen.

**Conservation status:** IUCN: Vulnerable (D1).

CITES: Appendix II.

National protection status: Information unavailable.

**Distribution and status:** *P. intermedia* is known from six (Biswas 1959) skins of unknown origin (Ali and Ripley 1987). Also, a small number of live birds, reputed to have come from the plains of Uttar Pradesh, India, appeared in Indian bird markets during the 1980s (Sane *et al.* 1986).

It is very rarely reported in bird markets. No published records of free-flying wild birds are known (Inskipp and Inskipp 1995). Originally described as a distinct species (Rothschild 1895), it has been variously considered a hybrid of *P. himalayana* and *P. cyanocephala* (Husain 1959, Forshaw 1989) or a distinct species (Biswas 1959, Walters 1985), but work in progress corroborates the view that it is of hybrid origin (P.C. Rasmussen *in litt.* 1997). It is retained here until that work in progress is completed.

**Threats:** If a species, nothing is known of its habitat requirements, status, and any threats, although it is presumably rare. It is still reported that trappers offer the bird for sale, although infrequently (Inskipp and Inskipp 1995).

**Action:** The nearly completed taxonomic reappraisal of this species should indicate whether it is a distinct species or a hybrid. If it is a distinct species, then survey work to determine its distribution, status, and any threats is clearly urgent.

# INDONESIA

## Overview

Paul Jepson  
(with boxed contributions by Stuart Marsden,  
Jon Riley, Tim O'Brien, and Philip McGowan)

Indonesia, an archipelago of 13,500 islands spanning 5,000km<sup>2</sup> of ocean and connecting the Oriental and Australasian faunal realms, has an exceptionally diverse Psittacine fauna; 76 species occur, of which 30 are endemic to the Republic. Psittacines are prominent components of the avifauna east of Wallace's Line – in the Indonesian bio-regions of Sulawesi, Nusa Tenggara, Maluku, and Irian Jaya. Maluku, with 32 species (of which eight are endemic), and Irian Jaya (the Indonesian territory on the island of New Guinea), with 33 species (including three endemics), are particularly diverse regions.

## Threats

At present, most of Indonesia's parrot populations are reasonably healthy, although 15 species have recently been considered threatened, (four Endangered, 11 Vulnerable: Collar *et al.* 1994). One of these, the blue-naped parrot *Tanygnathus lucionensis*, which has a large distribution in the Philippines and which in Indonesia occurs only in the Talaud islands, is now thought to be less at risk and has been removed from the list of threatened birds. Nevertheless, Indonesia has the highest number of threatened Psittacines of any country and around 15% of the world total.

Indonesia is a rapidly developing nation and landscapes are being fundamentally altered. It is preparing to feed an extra 35 million people, making a total population of 235 million, by the year 2015. In Sulawesi, Maluku, and Irian Jaya, Indonesia's three most diverse parrot regions, habitats in the lowland and coastal zone areas are being converted to wet-rice cultivation, plantation and timber crops, and shrimp-ponds. In addition, people are being relocated from elsewhere in Indonesia to populate these areas. Such changes will impact any Psittacine species with specialist lowland habitat requirements. Furthermore, all forest outside nature reserves, at altitudes below 1,000m, and on slopes of a grade less than 40%, will have been selectively logged by the year 2010. This may be critical for some parrot populations because it involves the removal of large trees, which may reduce nest site availability and hence the reproductive potential of parrots.

As natural habitats decline or become degraded, additional pressures associated with increased human population and agricultural intensification may become more significant. Such pressures include excessive use of

pesticides, the popular pastimes of shooting birds with air-rifles, capture of birds for the domestic and international trade, and, in east Indonesia, buying parrots as souvenirs or pets. In Java, Indonesia's most densely populated and developed island, the red-breasted parakeet (=moustached parakeet) *Psittacula alexandri* and blue-crowned hanging-parrot *Loriculus galgalus* are now rare birds. With the increasing human population and development in east Indonesia, other species may soon follow unless preventative actions are started now.

## Conservation solutions

### Obtaining sufficient information

Until recently, the knowledge base for setting parrot conservation priorities in Indonesia was derived from the largely anecdotal, qualitative, and sometimes prejudiced reports of short-term visitors. Thus, some threat assessments have underestimated the area of available habitat and over-stated the impact of trade in wild caught birds. Recently, systematic surveys have clarified the conservation status of some of Indonesia's parrots that were thought to be most threatened. As a result, the quality of information available for determining the risk of extinction facing parrot species is quite variable, ranging from detailed data, in a few cases, to, more commonly, inferences drawn from patchy knowledge of habitat and distribution.

Limited knowledge of species' status and the pressures that they face are often cited as major obstacles to conservation. In Indonesia where there are many endemic species distributed across many islands covering a huge area, there is a need to improve the capacity to undertake conservation-orientated psittacine studies (see Box 8).

Fieldwork by the Directorate-General of Forest Protection and Nature Conservation (PHPA)/BirdLife International-Indonesia Programme has confirmed that yellow-crested cockatoo *Cacatua sulphurea* populations have collapsed (see Box 9) and has also failed to locate the blue-fronted lorikeet *Charmosyna toxopei*, for which no confirmed reports exist since its discovery in 1927 (see Box 10). However, other status assessments by PHPA/BirdLife in Maluku have revealed that white cockatoo *Cacatua alba*, Tanimbar corella, and the chattering *Lorius garrulus*, blue-streaked *Eos reticulata*, and violet-necked *Eos squamata* lorries, all once believed to be threatened by trade, are still common birds within their limited ranges. A recent York University, UK/Universitas Sam Ratulangi expedition has found that Sangihe hanging-parrot *Loriculus catamene* is widespread in plantations and agricultural gardens, as well as in natural forest (University of York 1995). Lambert (1997) estimated that the red-and-blue lory population on Talaud numbers several thousand

rather than just 500 as reported in the early 1990s. The possibility that the hanging parrot population may be dependent on recruitment from natural forest and that the lory may be declining rapidly requires clarification (see Box 11).

In the case of other species that are thought to be at risk, notably the black-lored parrot *Tanygnathus gramineus* (see Box 10), purple-naped lory *Lorius domicella* (see Box 12), Wallaces' hanging-parrot *Loriculus flosculus*, Moluccan cockatoo (see Box 12), Salvadori's fig-parrot *Psittaculirostris salvadorii*, and Pesquet's parrot *Psittirichas fulgidus*, the information cited to support "threatened" status is inferential and based on limited field data. Thorough status assessments of these species are needed.

## Resource allocation and the parrot trade

Because of Indonesia's size there will always be a need to target scarce conservation resources to the richest parrot areas, and the conservation of endemic island species is likely to remain a key issue. For this reason a revision of the taxonomic status of a number of species complexes is highly desirable (see Box 13). Two examples illustrate why.

The rainbow lorikeet *Trichoglossus haematodus* superspecies extends from Lombok east to New Guinea and New Caledonia, and to northern and eastern Australia, including Tasmania, and has 21 recognised taxa (Forshaw 1989). The two taxa occurring in Australia are now classed as separate species, but the 14 taxa occurring in Indonesia are considered to be one species. Whilst the species group is widespread and, in places, abundant, if any taxa is sufficiently distinct (e.g., *T. h. weberi* on Flores) to merit species status then they may require attention.

The Tanimbar corella illustrates the converse problem. It has been considered as a subspecies of the little corella *C. sanguinea* and split purely for convenience (see Forshaw 1989). Because it was classed as an endemic island species, international attention focused on the levels of off-take for the wild bird trade and it was assumed to be endangered. This led to a damaging argument over the need for CITES I listing, between the Indonesian government, trade and animal welfare non-governmental organisations (NGOs), and BirdLife International, which would probably have never happened if *goffini* had been treated as a subspecies with the super-abundant *sanguinea*, the favoured historical approach. Subsequent surveys have shown that *goffini*, like *sanguinea*, is an agricultural pest, although this characteristic is unlikely to guarantee its survival. Other superspecies and species groups where taxonomic reviews are needed to help guide conservation planning are the yellow and sulphur crested cockatoos, eclectus parrot, black-capped lory *Lorius lory*, and Amboina king parrot *Alisterus amboinensis*.

Nine parrot species are protected in Indonesia, including the sulphur-crested cockatoo *Cacatua galerita* and the eclectus parrot *Eclectus roratus*, which are not considered to be globally threatened. The Moluccan cockatoo *Cacatua moluccensis*, Tanimbar corella (=Goffin's cockatoo) *Cacatua goffini*, and red-and-blue lory *Eos histrio* are listed on CITES Appendix I, and international trade (but not domestic trade) is prohibited except under strict circumstances. The remainder of Indonesia's parrots are included on Appendix II of CITES and the export of wild-caught parrots is subject to quotas. Table 3 provides a list of threatened parrot species in Indonesia.

Interventions to control or ban the capture and trade of parrots should be carefully evaluated before they are implemented. For example, recent studies by social anthropologists of forest peoples in Seram and Halmahera showed that parrot catching accounts for 25–30% of their cash income (S. Badcock *in litt.* 1997). Among the Halafara people of the Manusela valley, Seram, young men catch and sell parrots to raise their bride price (S. Badcock *in litt.* 1997). Intervention without careful preparation runs the risk of alienating non-government agencies which are advocating the rights of traditional people and, in extreme cases, unwittingly initiating new and unforeseen problems. A good example of the latter is the case of the Tanimbar corella. When the trade was open, farmers gained compensation for crop damage by selling corellas snared on their maize crop. Now that there is no market, they have started burning tyres to keep the flocks away; increasing the risk of wildfires in Tanimbar's natural vegetation of dry monsoon forests (D. Pursima pers. comm. 1997).

The majority of Indonesia's parrots are forest species and Indonesia's natural forest covers 1,090,000km<sup>2</sup>, of which 303,000km<sup>2</sup> is classed as protection forest and 167,000km<sup>2</sup> is contained within nature reserves. Furthermore, several major reserves have been established in key centres of psittacine diversity, notably the 25,000km<sup>2</sup> Lorentz National Park in Irian Jaya, the 2,290km<sup>2</sup> Lore Lindu National Park in Sulawesi, and the 1,890km<sup>2</sup> Manusela National Park in Maluku. Continued work to ensure that all species are adequately represented in protected areas is necessary.

## Recognition of cultural diversity

Conservation measures must bear in mind that Indonesia has great cultural diversity and the values and perceptions of many differ from those of western conservationists. For example, many rural people in Indonesia are unaware that birds have restricted distributions and have difficulty with the concept of extinction; as a result they may rationalise population declines in terms of birds moving into the hills

(which they may do if lowland forest is lost) or getting “cleverer” and therefore harder to catch. Furthermore, utilising and trading natural resources is fundamental to Indonesian culture and economy.

## Lateral and vertical approaches

Initiatives focusing on threatened species, such as those outlined in this Action Plan, are important. In the longer term, however, there is a need to widen the scope from single-species, crisis-driven interventions to broad-based, sustained efforts to create the conditions for psittacine assemblages to flourish in the human dominated landscape of the future. Such a reassessment of parrot conservation priorities in Indonesia will be a challenging task and its formulation will require a deeper understanding of areas such as psittacine taxonomy and ecology, cultural perceptions towards parrots, habitat status, development planning, forestry and agricultural policy, and institutional capacities. The current portfolio of conservation and development projects in Indonesia is expanding the knowledge base of the latter, general subject areas, but progress in areas specific to parrots will require the initiation of targeted projects.

Status assessments, taxonomic, and social anthropological studies will not in themselves save parrots in Indonesia. The real challenge for the future is translating knowledge into interventions with lasting impact. Promising areas include public awareness, local-level spatial planning, working with the forestry sector, and (for threatened species) inter-agency recovery plans. In each of these areas there are exciting opportunities to build parrot conservation into ongoing activities. For example, the WWF-Indonesia Programme distributes a “radio bulletin” which syndicates environmental news stories to local-language radio stations; WWF, BirdLife, and Conservation International are developing projects to work with local planning agencies on spatial planning; the eco-labelling of tropical hardwood initiative has opened avenues to explore the potential of working with forestry concessionaires on ways to reduce the impact of logging on parrot populations; and BAPA/BirdLife’s yellow-crested cockatoo recovery plan provides an exciting model of how inter-agency support and government resources can be mobilised for the protection of an endangered parrot species. It may be possible to

reduce the impact of logging which removes nest trees by providing artificial nest sites. There are a number of professional and image-conscious logging companies in Indonesia that might be interested in exploring restoration approaches.

Sadly, human capacity or resources do not match opportunities. It may be that fewer than 10 people in Indonesia will look at this Action Plan. In general, the Indonesian conservation community views parrots either as a non-issue or a specialist and thankless conservation activity that runs the risk of embroiling an agency in politics. Opportunities for outside agencies and individuals to make a useful contribution in Indonesia without a strong local partner are limited. Regulations governing foreign agencies and individuals wishing to conduct surveys, research or other conservation activities are complex. A collaborative conservation project (other than short inputs such as training or an awareness poster) with PHPA normally requires a formal agreement approved by the Secretariat to the Cabinet of the Republic of Indonesia which will involve a major investment over two years to conclude.

For parrot conservation to move forward in Indonesia there is a real need for different agencies and interest groups to work together, to pool resources and opportunities, and to recognise that no one agency can succeed meaningfully alone.

## Priority projects in Indonesia

- **Provision of training materials and courses in parrot conservation in Indonesia.** (Box 8)
- **Assessment of the ecological requirements and populations dynamics of the yellow-crested cockatoo *Cacatua sulphurea* and other parrots in the Lesser Sundas and Sulawesi.** (Box 9)
- **Search for the blue-fronted lorikeet and black-lored parrot on Buru, Maluku Province, Indonesia.** (Box 10)
- **A strategy for the conservation of the red-and-blue lory *Eos histrio* and the Sangihe hanging-parrot *Loriculus catamene* in the Talaud Islands, Indonesia.** (Box 11)
- **Assessment of the conservation status and needs of the Moluccan cockatoo and purple-naped lory on Seram, Indonesia.** (Box 12)
- **Clarification of parrot taxonomy in Indonesia.** (Box 13)

### **Box 8. Provision of training materials and courses in parrot conservation in Indonesia.**

*Paul Jepson and Philip McGowan*

**Aim:** To build local expertise within Indonesia to undertake extensive surveys and intensive research so that the status of parrot populations can be determined reliably and the threats facing them understood.

**Justification:** Indonesia is home to 76 species of parrot (Andrew 1992), of which 14 species are considered threatened with extinction. This comprises some 15% of the world's threatened parrots and indicates the importance of conservation efforts in this country during the next five years. A major obstacle to conservation in many countries is understanding whether species are at risk and if so what are the limiting factors. This is especially so in Indonesia, a large country consisting of many islands which are home to endemic species and subspecies. Consequently, there are many species that are believed threatened, have small ranges, and are widely separated from each other. This means that the expertise existing within the country is not able to address the conservation-orientated research needs of these species. Therefore, there is a great need to build local capacity for undertaking work that will help our understanding of the plight facing Indonesia's parrots and what might be done to ensure their survival.

**Project description:** Determining priority areas and personnel for a long-term training initiative should be undertaken in collaboration with the BirdLife-Indonesia Programme, the Directorate-General of Forest Protection and Nature Conservation (PHPA), and the Indonesian Institute of Science (LIPI). Personnel from universities who are attached to Environmental Study Centres (PSL), PHPA field offices (SSKSDA), and national parks should be offered the chance of field training. Training materials could be distributed more widely to national level PHPA and LIPI staff together with universities and non-governmental organisations. Establishing a parrot conservation capacity within a university might prove the most effective way of developing skills within Indonesia.

Personnel thus identified will require resources to allow them to understand parrot status assessments. These resources should include materials such as a parrot identification key (for all species, not just those which are threatened), pictures and tapes, and a manual of field techniques. Provision of a set of standard packs could be supplemented by items specific to some areas and/or species. The provision of stand-alone training packs should be supported by local training courses in which general conservation issues are discussed. Within this context the plight of parrots can be raised and then training given in techniques that can be used in understanding the problems in particular areas. For example, a survey and inventory workshop might draw on staff from LIPI, BirdLife International-Indonesia Programme, and local NGO conservation biologists.

This initiative should be co-ordinated by a training officer whose responsibility it would be to bring together the materials for the standard pack, consider the necessity for additional material for particular areas, and to draw up and begin the training workshops. A period of one year would be sufficient to start the programme and thereafter it could co-ordinated by BirdLife International-Indonesia Programme, PHPA, and LIPI.

**Contact:** BirdLife International-Indonesia Programme.

**Box 9. Assessment of the ecological requirements and populations dynamics of the yellow-crested cockatoo *Cacatua sulphurea* and other parrots in the Lesser Sundas and Sulawesi.**

Stuart Marsden

**Aims:** i) To determine the effects of habitat alteration and direct harvesting on the population size and structure, and the nesting ecology of the yellow-crested cockatoo; (ii) to use available data to identify strategies to ensure the long-term viability of cockatoo and other parrot populations in Wallacea. (iii) to conduct experiments on the use of artificial nest boxes for the yellow-crested cockatoo.

**Justification:** The yellow-crested cockatoo *Cacatua sulphurea* has suffered large declines throughout much of its natural range (see species account) and other parrots of the subregion, such as eclectus parrot *Eclectus roratus* and great-billed parrot *Tanygnathus megalorynchos*, have also shown dramatic recent declines (Jones *et al.* 1995). The causes of these declines are not properly understood, but populations have no doubt been seriously affected by habitat alteration and, in most cases (e.g., *C. sulphurea* and *E. roratus*), by direct harvesting of the birds themselves. Following recommendations made by the CITES Animals Committee as a result of its review of significant trade in Appendix II listed animal species, Indonesia has instituted an export moratorium pending surveys.

While very little detailed ecological work has been carried out on any of these species, studies of all three species on Sumba have shown that all occurred at higher densities in primary forest than in disturbed forest (Marsden 1995); in all cases densities in non-forested areas were extremely low. Effective strategies are to be developed for the long-term conservation of the yellow-crested cockatoo. Other species of parrot require a much greater understanding of the factors that naturally affect recruitment and mortality. In addition, it is necessary to understand more fully the impacts of habitat alteration on population dynamics (particularly in relation to loss of critical food sources and nesting trees), and the implications of different levels of harvesting. Almost nothing is known of these critical factors in relation to any Indonesian parrot.

The population of the cockatoo is now at such a critically low level throughout its range that there is a need for innovative conservation strategies, such as the provision of nest boxes. If nest sites are limiting population size, provision of acceptable boxes should eliminate this limiting factor.

**Project description:** Work would be focused on the yellow-crested cockatoo, but data should also be collected on sympatric species such as great-billed and eclectus parrots, and would concentrate on four study areas on Sumba, Sumbawa (Moyo), Komodo, and Sulawesi. Preliminary data on population density, habitat associations, and nesting ecology of Sumba's parrots are already available from previous studies (e.g., Marsden 1995, Marsden and Jones 1997) and should be built upon. Komodo, with high cockatoo density (see species accounts), and the areas on Sumbawa where cockatoos still occur, provide a suitable contrast to Sumba's low density. Comparatively little is known of the population status of cockatoos or other parrots on Sulawesi.

Baseline data would be collected at all sites, including accurate assessments of population densities of all parrot species (reassessed, in some cases), within different habitat types (following Jones *et al.* 1995; Marsden 1999). The densities of active nest sites should be similarly assessed for cockatoos and other selected species, and their abundance determined in relation to patterns of human habitat alteration (though not necessarily on all islands mentioned above). These data will allow an assessment of current population levels for the selected species, as well as an indication of the proportion of non-breeders in each population. In each area, a large sample of active nests should then be monitored to determine their productivity per annum (eggs laid, young fledged). Characteristics of the nest site and variation in productivity should be related to habitat characteristics and other environmental factors and patterns of human nest predation.

Data on population densities and structure in different habitats, nest availability, and productivity could be compared with those data available for related species e.g., galah *C. roseicapilla*: (Rowley 1983); Carnaby's cockatoo *Calyptorhynchus funereus latirostris*: (Saunders 1982, 1986); and three cockatoo species: (Smith and Saunders 1986). Combined with information on bird capture patterns and harvest rates, these data can be used to develop a simple general population model, sensitive to elements both of loss of nesting trees and direct illegal harvest. It is anticipated that this model could be used to predict likely changes in the population size of cockatoos in relation to different levels of habitat loss and harvesting. The model may also be used, with limited field data, for other populations of ecologically similar parrots in Indonesia: in this instance it may help to identify those taxa at risk and help prevent unsustainable harvest from populations by taking account of current habitat loss rates.

Using nest site data collected during the initial course of fieldwork, artificial nest boxes should be designed and tested in appropriate localities in the field.

**Contact:** S. Marsden, BirdLife International-Indonesia Programme.

The project is designed to fit into the framework of the *Yellow-crested cockatoo Cacatua sulphurea Recovery Plan* that is being developed by PHPA/BirdLife International.

**Box 10. Search for the blue-fronted lorikeet and black-lored parrot on Buru, Maluku Province, Indonesia.**

*Philip McGowan and Stuart Marsden*

**Aim:** To find one or more populations of the blue-fronted lorikeet and black-lored parrot and propose recommendations for the long-term survival of these species.

**Justification:** The blue-fronted lorikeet *Charmosyna toxopei* and the black-lored parrot *Tanygnathus gramineus* are endemic to Buru, an island of less than 2,500km<sup>2</sup> to the east of Sulawesi in central Maluku Province, Indonesia. The only certain records of the former species are seven specimens collected by Toxopeus using bird lime and described by Siebers (1930). The specimens were caught to the west of Lake Rana, in the centre of the island and remain the only definitive records despite intensive searches by the BirdLife International-Indonesia Programme in 1995 (Gunung Kelapat Mada proposed protected area, Lake Rana, and Teluk Bay) and 1996 (central north-east Buru and in the mangroves of Kayeli Bay). The only trace of this species followed claims by two hunters who reported catching it for food to the north-west of Lake Rana. Reports by Smiet (1985) that the species was common in Teluk Bara in 1980 are thought questionable (e.g., Forshaw 1989) and were not confirmed in either 1989 or 1995, although it may have been encountered above Teluk Bara in 1989 (Marsden *et al.* 1997). There is only one recent record of the black-lored parrot (Smiet 1985) and it was not found during the 1989 survey, but calls which may be this species were heard in western Buru in 1995 (BirdLife-IP *in litt.* 1997).

**Project description:** There is an urgent need to clarify the status of both species. The lack of records for these species might suggest that they occur at very low densities, are nomadic or have very specific habitat requirements. In the case of the black-lored parrot, the fact that it is nocturnal is probably part of the reason for the lack of confirmed records. Consequently, any survey should call on as much precise information as possible relating to locality, altitude, state of the habitat, time of year, and time of day when planning searches. For example, the search for the lorikeet might concentrate north-west of Lake Rana and in Teluk Bara, from where the only recent reports come from. Searches should be made at the same time of year as the hunters claim to have caught birds and any additional information should be sought that might reveal aspects of behaviour or ecology that make the birds difficult to detect. Results from as detailed a status assessment as is possible may then be used to propose the next stage in conservation planning for this species and its habitat. For the black-lored parrot, searches might concentrate in the Kelapat Mada Mountains at dusk.

**Contact:** BirdLife International-Indonesia Programme, Stuart Marsden.

**Box 11. A strategy for the conservation of the red-and-blue lory *Eos histrio* and the Sangihe hanging-parrot *Loriculus catamene* in the Talaud Islands, Indonesia.**

*Jon Riley*

**Aim:** To ensure the survival of the red-and-blue lory and the Sangihe hanging-parrot in the Talaud Islands by: increasing protection and reducing trapping levels of the red-and-blue lory on Karakelong and raising public awareness of its plight; assessing the status of both species on Sangihe.

**Justification:** The Endangered red-and-blue lory was formerly found in great abundance in the Talaud Islands and large flocks could regularly be seen moving between islands (Meyer and Wigglesworth 1898). It is now thought extinct from parts of its former range. Its stronghold is Karakelong the largest of the Talaud Islands (Riley 1995, Lambert 1997), and the only island in the Talaud group where trapping takes place. Trapping levels are very high, with at least several hundred birds trapped in a year (Lambert 1997). Approximately 1,200 birds are estimated to have been shipped from the island in 1996 (Wardhill and Riley 1997). This level of trapping is likely to have played an important role in the decline of the species and is probably the most immediate threat to its future. The species was included in CITES Appendix I in 1995.

Other potential factors are habitat loss, the use of the insecticide Azodrin and the potential for escaped captive birds to transmit diseases to wild birds. Habitat loss is thought to be responsible for the species' disappearance from Salibau and Kabaruan. Several areas are scheduled for logging on Karakelong. The insecticide Azodrin is applied to coconut trees leaving the coconuts unfit for human consumption for three months after application. Lories drink nectar from flowers in contaminated trees and it is not known whether the insecticide has any effect.

The Sangihe hanging-parrot is widespread at low densities on Sangihe, to which it is endemic, and has been recorded in small groups from a number of localities in different habitats. Almost all of Sangihe's original vegetation has been replaced by mixed crop plantations and secondary scrub although small remnant patches of forest survive on Mt. Sahengbalira in southern Sangihe and on Mt. Awu in the north. It is unlikely that Sangihe will prove important for the red-and-blue lory, as fewer than 50 birds are thought to survive there (Riley 1995, Lambert 1997).

**Project description:** A conservation strategy for the red-and-blue lory should address the three threats outlined above through:

- i) Increasing protection: protection is required at two levels. Firstly the red-and-blue lory should be placed on the Indonesian list of protected species. The legislation relating to this criteria should be strictly enforced; detailed recommendations are given in Lambert (1997). Secondly the status of protected areas on Karakelong should be clarified and possibly revised. Although the population on the island is centred on a hunting reserve, logging concessions have apparently been issued for part of this site. Whilst this situation is being clarified, it may be considered appropriate to revise the status of this reserve to a designation more compatible with the conservation requirements of this species.
- ii) Raising public awareness: legislation designed to reduce trapping and improve habitat protection will require partnership with district chiefs, village heads, and local communities. Workshops and educational material might concentrate on the need to conserve threatened parrots and forest resources, and increasing awareness of existing protected areas. For the lory specifically, its probable role as a controller of agricultural pests and in pollinating crop plants should be emphasised.
- iii) Improving knowledge: wherever possible, additional information should be sought, both for monitoring purposes and to provide an understanding of the species' ecological requirements, and the impacts of potential threats. Field surveys should be repeated and compared with Lambert (1997) after an appropriate time period. The numbers of birds recorded in trade should also be monitored. Two potential threats should be investigated: the possible impact of the insecticide Azodrin and whether escaped birds are transmitting diseases to wild birds.

A status assessment of both species on Sangihe is required, especially the hanging-parrot. This should involve determining the distribution of the species across the island and quantifying habitat use, to be followed by ecological assessments designed to understand factors currently affecting population size and identifying threats. For the hanging-parrot, this should include clarification of whether the species depends on forest patches because although it appears to be faring well in Sangihe's plantations (it feeds from coconut inflorescences), it is not known whether all of its requirements are met by this artificial habitat. Key factors are an assessment of its breeding success, roosting requirements, and determining whether any agricultural practices (e.g., the use insecticide Azodrin) are having a negative impact. These data will provide for recommendations concerning the appropriateness of habitat protection (including promoting the establishment of a protected area near Mt. Sahengbalira) and agricultural practices.

**Contact:** Jon Riley, BirdLife International-Indonesia Programme.

*Action Sampiri*, a year long conservation project in the Talaud and Sangihe Islands, begun in 1998.

**Box 12. Assessment of the conservation status and needs of the Moluccan cockatoo and purple-naped lory on Seram, Indonesia.**

Philip McGowan, Tim O'Brien and Paul Jepson

**Aim:** To assess the status of the Moluccan cockatoo and purple-naped lory on Seram and propose a strategy for their conservation.

**Justification:** The Moluccan cockatoo *Cacatua moluccensis* is endemic to Seram and the smaller islands of Saparua, Hariku, and Ambon in Maluku Province. The purple-naped lory *Lorius domicella* occurs only on Seram and Ambon. Most of Seram's forests, which are still extensive, are now under timber concessions and the island's Regional Development priority status means that forests over good soil may be converted to wet rice cultivation and other crops. At present far too little is known of either species to be sure that they can withstand such changes. What little information does exist on habitat use is largely anecdotal in nature, although it is known that they are unable to exist in wet rice cultivation.

Both species are forest inhabitants. The cockatoo is not thought to occur above 700m and does not tolerate selectively logged forest (Marsden 1998). It may tolerate traditional forest/garden mosaics. Crucially, however, there are no data on breeding success in either natural or human-modified habitats and so it is not known if they will survive in these altered habitats in the long-term. The lory is considered uncommon in hill forest between approximately 400 and 900m. Both species are traded and at least one species plays a significant part in the culture and economy of the inhabitants of Manusela National Park. For both species, there is a clear lack of information upon which to base recommendations that will ensure their survival in concert with regional development.

**Project description:** The first step is the assessment of the status of both species on Seram. Ideally this should attempt to determine relative abundance by habitat. In addition, information on the size and distribution of habitat blocks, and on trapping and timber extraction would be applicable to Regional Development Projects. These data would permit consideration of the needs of these species in appropriate management strategies, such as advocacy of reserve boundaries, land-use zoning, and possible new provincial forestry and agriculture policies. Furthermore, it will provide an adequate baseline for monitoring and a determination of the degree to which trade affects the status of the species. In response to the threat from international trade, *Cacatua moluccensis* was included in CITES Appendix I in 1990.

During the status assessment, it should be determined whether it is feasible to assess the breeding success of both species in different habitats. This is necessary before the species' presence in man-modified habitats can be interpreted as an indicator that it will survive in these habitats in the long-term.

**Contacts:** Wildlife Conservation Society-Indonesia Programme (lead agency on a planned survey), BirdLife International-Indonesia Programme, Stuart Marsden.

**Box 13. Clarification of parrot taxonomy in Indonesia.**

Paul Jepson and Philip McGowan

**Aim:** To clarify areas of uncertainty in the taxonomy of Indonesia's parrots in order to ensure distinct threatened taxa are not overlooked.

**Justification:** Knowledge of Indonesia's parrot fauna is very poor indeed compared with some other areas of the world. Many taxa have been recorded only a few times and much of their taxonomy is based on few specimens from an unevenly distributed sample of sites. Whilst the standard taxonomy seems adequate for many species and their subspecies, it is apparent that in some cases the existing nomenclature fails to reflect the variation in the "species" across its range. It is typically the degree of variation in plumage that has led to questions of taxonomic validity.

Understanding the taxonomy of these complexes is important because scarce resources for conservation are more likely to be targeted towards species than subspecies. Therefore, it is crucial to understand whether taxa described as species accurately reflect genetic variation. There are several cases worthy of investigation among Indonesia's parrots, but the priorities are perhaps the rainbow lory *Trichoglossus haematodus* and the yellow or lesser sulphur-crested cockatoo *Cacatua sulphurea*. The former is distributed from Bali eastwards through Indonesia to New Caledonia and the Loyalty Islands, and southwards to northern and eastern Australia. It has been assigned to 21 subspecies (Forshaw 1989), but the distinctness of the forms that inhabit the Indonesian islands from Bali to Biak in particular require clarification. The key issue within the subspecies of the lesser sulphur-crested cockatoo is whether *C. s. citrinocristata* from Sumba is sufficiently distinct to be considered a species.

Other issues that require resolution include relationships within the pygmy parrots *Micropsitta*, fig parrots *Cyclopsitta* (= *Opopsitta*), Desmarest's fig-parrot *Psittaculirostris desmaresti*, blue-rumped parrot *Psittinus cyanurus*, painted parrot *Psittacella picta*, red-cheeked and singing parrot *Geoffroyus geoffroyus* and *G. heteroclitus*, golden-mantled racquet-tail, *Prioniturus platurus*, Amboina king parrot *Alisterus amboinensis*, and the eclectus parrot *Eclectus roratus*.

**Project description:** Comparisons of the base pair sequences in the rapidly evolving parts of the mitochondrial deoxyribonucleic acid (DNA) provide an objective way of comparing degrees of genetic difference between populations within the same species, by reference to another recognised species that is closely related (i.e., the control or outgroup). Suitable outgroups for the rainbow lory forms might be *T. h. moluccanus* from Tasmania and the ornate lory *T. ornatus* from Sulawesi. With the lesser sulphur-crested cockatoo, the monotypic salmon-crested *Cacatua moluccensis* or white cockatoo *C. alba* seem appropriate. Ideally, blood or other fresh tissue samples from many individuals in each group are required to provide a sufficient sample from their populations for these DNA tests. To achieve this in these cases, it will probably also be necessary to amplify minute and degraded DNA samples from moulted feather shafts collected in the wild, and from captive birds (if they are known to be pure and not hybridised).

**Contact:** Museum Zoologi Bogor, LIPI.

## Species accounts

**Table 3. A list of Indonesian parrot species that are considered threatened using IUCN Red List criteria.**

Also included is one species removed from the Red List. Species are listed in alphabetical order by their scientific name, together with their distribution and threat status. The criteria under which each species qualifies are given in the appropriate species account. Where two English names are given, the first is that widely used in Australia and the second, in parentheses, is the name used in *Birds to Watch 2* (Collar *et al.* 1994). \*Denotes changes from *Birds to Watch 2* (and, therefore, the 1996 IUCN Red List of Threatened Animals), which have been agreed to by BirdLife International who maintain the IUCN list of threatened birds.

English name	Scientific name	Distribution	Threat category
White cockatoo	<i>Cacatua alba</i>	North Moluccas	Vulnerable
Moluccan cockatoo (Salmon-crested cockatoo)	<i>Cacatua moluccensis</i>	Seram and satellite islands, Moluccas	Vulnerable
Yellow-crested cockatoo	<i>Cacatua sulphurea</i>	Lesser Sundas, Sulawesi and Masalembu Islands	Endangered
Blue-fronted lorikeet	<i>Charmosyna toxopei</i>	Buru	Vulnerable
Black-winged lory	<i>Eos cyanogenia</i>	Islands in Geelvink Bay, Irian Jaya	Vulnerable
Red-and-blue lory	<i>Eos histrio</i>	Miangas, Talaud and Sangihe Islands	Endangered
Sangihe hanging-parrot	<i>Loriculus catamene</i>	Sangihe Island	Endangered
Wallace's hanging-parrot	<i>Loriculus flosculus</i>	Flores	Vulnerable
Purple-naped lory	<i>Lorius domicella</i>	Seram and Ambon, Moluccas	Vulnerable
Chattering lory	<i>Lorius garrulus</i>	North Moluccas	Vulnerable
Salvadori's fig-parrot	<i>Psittaculirostris salvadorii</i>	Northern Irian Jaya	Vulnerable
Iris lorikeet	<i>Psitteuteles iris</i>	Timor and Wetar	Vulnerable
Pesquet's parrot	<i>Psittrichas fulgidus</i>	New Guinea	Vulnerable
Black-lored parrot	<i>Tanygnathus gramineus</i>	Buru	Vulnerable
<b>Red List removal</b>			
Blue-naped parrot*	<i>Tanygnathus lucionensis</i>	Philippines, Talaud islands in Indonesia, and islands off Sabah, Malaysia	Lower Risk

### White cockatoo *Cacatua alba*

**Contributor:** BirdLife International-Indonesia Programme.

**Conservation status:** IUCN: Vulnerable (A2c,d).

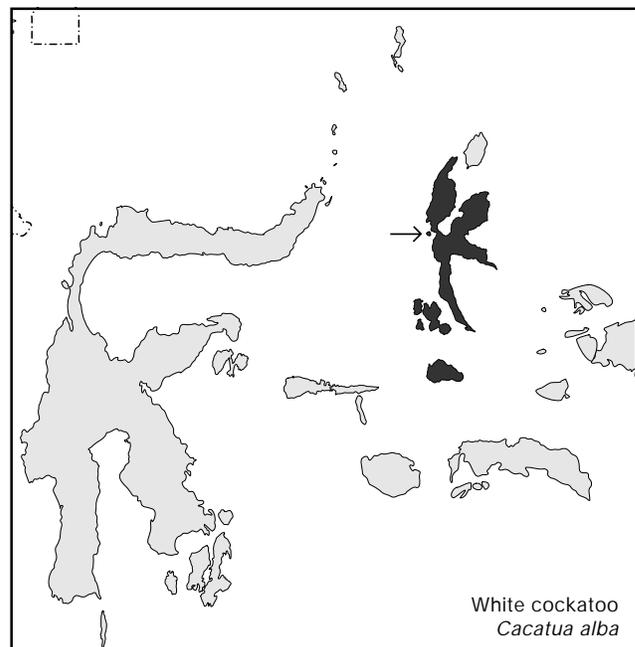
CITES: Appendix II.

National protection status: Information unavailable.

**Distribution and status:** This species is endemic to Halmahera, Bacan, Kasiruta, and Mandiole in the north Moluccas, Indonesia (specimens from Bisa and Obi seem most likely to derive from captive birds, or a feral population on Bisa, now extinct; Lambert 1994a), where it is found in primary and logged forest visiting tall trees within recently cleared areas in the lowlands to 600m. It is apparently absent from lowland forest areas, with few records from forest over nutrient deficient soil near Foli (Lambert 1994a), and no records from Gunung Gamkonorna or in forest over super-alkaline soils inland from Buli (BirdLife-IP *in litt.* 1997).

Survey work carried out in 1991 and 1992 resulted in a population estimate of 49,765–212,430 birds (Lambert 1993a). It has been suggested that the proposed Lalobata protected area on Halmahera may contain as many as

28,500–42,900 individuals (MacKinnon *et al.* 1995), although they did not survey lowland forest on rich volcanic soil which reportedly contains the highest densities (BirdLife-IP *in litt.* 1997).





**Threats:** It is believed that the levels of legal and illegal trade in this species in the early 1990s (a minimum of 5,120–7,500 individuals are estimated to have been captured in 1991) were not sustainable, particularly when combined with current levels of habitat loss and degradation (Lambert 1993a). There were 17,362 wild caught specimens recorded in international trade between 1991 and 1995; 6,855 in 1991, 5,766 in 1992, 3,563 in 1993, 995 in 1994 and 183 in 1995 (CITES Annual Report database). Following an export moratorium recommended by the CITES Animals Committee as a result of their review of significant trade in Appendix II listed species, PHPA revised its quota to the level recommended by Lambert (1993a: see Collar *et al.* 1994). The export quota for 1997 was set at 720 individuals (CITES Notification to the Parties No. 980, June 1997) and reduced to 380 individuals for 1998 (CITES Notification to the Parties No. 1998/07).

**Action:** The reduction of the CITES quota should help reduce the number of wild white cockatoos in international trade, but ways of reducing all exploitation (i.e., domestic trade as well) should be found. A clear priority is improved law enforcement, with all responsibility for quotas being centralised at the Department of Forestry in Ambon (Lambert 1993c). Additional approaches might include provision of incentives for not overexploiting cockatoo populations. This might be achieved through the introduction of cockatoo concessions in which particular areas would be allocated for cockatoo collection each year. Such an approach should allow better monitoring and would clearly involve considerable public awareness input if it were to succeed (Lambert 1993c).

## Moluccan cockatoo *Cacatua moluccensis*

(Salmon-crested cockatoo in Collar *et al.* 1994. Name changed here to conform to Indonesian usage.)

**Contributors:** BirdLife International-Indonesia Programme and Frank Lambert.

**Conservation status:** IUCN: Vulnerable (A1c,d; A2c,d; B1+2c,e).

CITES: Appendix I.

National protection status: Information unavailable.

**Distribution and status:** This species was endemic to Seram and its satellite islands (Saparua, Haruku, and Ambon), in the Moluccas, Indonesia (White and Bruce 1986), but apparent extinctions on Saparua and Haruku and the persistence of only a small population in north-east Ambon (see Poulsen and Jepson 1996) leaves it almost restricted to Seram (BirdLife-IP *in litt.* 1997). It is found in lowland forest to 1,000m.

Surveys in central and north-east Seram, including the Manusela National Park, in 1989, found that it occurs at highest densities in primary ( $9.1 \pm 6.3$  per km<sup>2</sup>) and disturbed primary forest ( $9.8 \pm 7.7$  per km<sup>2</sup>), rather than in secondary forest ( $6.4 \pm 6.2$  per km<sup>2</sup>) and much lower in recently logged forest ( $1.9 \pm 1.8$  per km<sup>2</sup>) (Marsden 1992), suggesting that large-scale logging could considerably reduce its total population (Collar *et al.* 1994).

**Threats:** It is not clear whether the above figures reflect its specialised habitat requirements or the pattern and volume of bird capture: evidence that trade levels in this species were not sustainable and that its population was declining



led to a complete ban on trade being imposed by CITES in 1989 (Marsden 1992; see Inskipp *et al.* 1988, Bowler and Taylor 1989) and inclusion in Appendix I in 1992. The species also received protected status in Indonesia (Collar *et al.* 1994). Illegal trade could, however, still be a threat (Collar *et al.* 1994) and still occurs (F. Lambert *in litt.* 1997). There were 235 wild caught specimens recorded in international trade between 1991 and 1995, with an annual maximum of 131 individuals in 1992 (CITES Annual Report database). These refer mainly to movement of pre-CITES held birds and pets.

**Action:** The status of the species on Seram should be clarified and relative abundance in each habitat type determined. In addition, information on the size of and distribution of habitat blocks, and on trapping and timber extraction should be collected. Once such data have been collected, future action should be considered. These data will also provide an adequate baseline for monitoring and a determination of the degree to which trade affects the status of the species. A BirdLife/Wildlife Conservation Society project is addressing these needs. (See Box 12.)

### Yellow-crested cockatoo *Cacatua sulphurea*

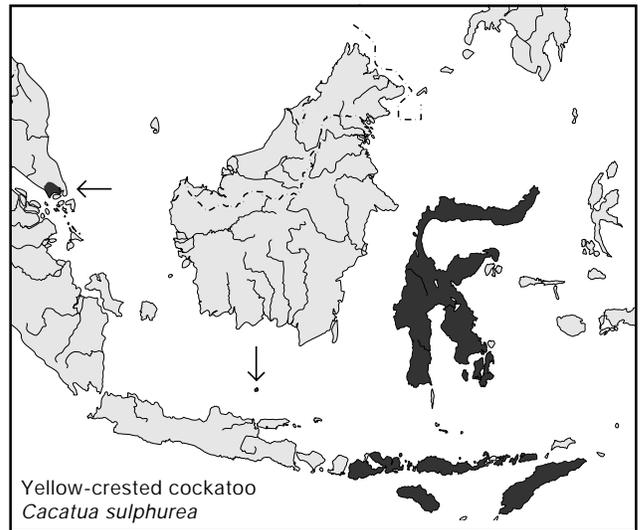
**Contributor:** BirdLife International-Indonesia Programme.

**Conservation status:** IUCN: Endangered (A1c,d; A2c,d).  
CITES: Appendix II.

National protection status: Information unavailable.

**Distribution and status:** The yellow-crested cockatoo is endemic to Indonesia (and introduced to Singapore and Hong Kong), where it occurs virtually throughout the Lesser Sundas, on Sulawesi and its satellite islands, and off Nusa Penida (off Bali) and the Masalembu islands (in the Java Sea). It is found in forested habitat in the lowlands to 500m on Sulawesi and to 800m, sometimes 1,200m, in the Lesser Sundas (White and Bruce 1986, MacKinnon and Phillips 1993, Collar *et al.* 1994).

It was formerly locally common throughout much of its range, but numbers have declined. It is extinct on Lombok (BirdLife-IP *in litt.* 1997) and thought to be potentially beyond recovery on Sulawesi (Andrew and Holmes 1990, Collar *et al.* 1994). There is evidence of substantial population declines in South Sulawesi (Cahyadin *et al.* 1994a) and North Sulawesi (BirdLife-IP *in litt.* 1997). It survives, but is rare, on Flores (Dutson 1995). In the Masalembu Islands in the Java Sea only 8–10 individuals of the endemic subspecies *abbotti* were located in 1993 and 1994 (Cahyadin *et al.* 1994b) and only three breeding pairs now remain (BirdLife-IP *in litt.* 1997). On



Nusa Penida (where it may be irruptive) it was last recorded in 1986 (see Collar *et al.* 1994). In the Lesser Sundas it was thought very threatened on Sumba (Collar *et al.* 1994), although this island might constitute one of its remaining strongholds, along with Komodo and Sumbawa (BirdLife-IP *in litt.* 1997). However, the paucity of records from the latter in July–September 1993 led to concerns about its survival on the island (Butchart *et al.* 1996). It was still common in the Komodo National Park in 1993 (Butchart *et al.* 1996; see also Collar *et al.* 1994), and on Sumba the endemic subspecies *citricristata* was estimated to number 2,376 birds in 1992 (Jones *et al.* 1995). Intensive studies on Sumba indicate that the species select very large *Datisceae* trees for nesting and that there is a significant positive correlation between nest hole availability and cockatoo abundance (Marsden and Jones 1997).

**Threats:** The reason for the continuing decline is believed to be a combination of habitat destruction and the unsustainable levels of trapping for the bird trade (see Collar *et al.* 1994). Cockatoo nests seem to be safe from trappers if they are sufficiently high and the lack of such trees may have played an important role in the species' decline (Marsden and Jones 1997). PHPA and BirdLife-IP have an active conservation programme for the species (BirdLife-IP *in litt.* 1997). There were 13,901 wild caught specimens recorded in international trade between 1991 and 1995: 5,880 in 1991, 4,668 in 1992, 2,409 in 1993, 461 in 1994, and 483 in 1995 (CITES Annual Report database). In March 1993, as part of the CITES Significant Trade Process, the CITES Standing Committee recommended countries to suspend imports from Indonesia, pending field surveys to assess the status of the species (CITES Notification to the Parties No. 737).

**Action:** Information relating to the effects of habitat alteration and direct harvesting on the population size, structure and nesting ecology are required. Baseline data are required from selected sites. These data should include accurate assessments of population and active nest densities in each habitat type and in relation to habitat alteration. This should allow an estimate of current population level, proportion of non-breeding birds, and (if some nests are monitored) productivity. Assessment of nest site characteristics should aid the design of an experiment to determine the use of artificial nest boxes. The data collected from the study should be used to determine strategies for the long-term viability of cockatoo. Some of these initiatives are incorporated in the PHPA/BirdLife International-Indonesia Programme *Yellow-crested cockatoo* *Cacatua sulphurea* *Recovery Plan*. (See Box 9)

## Blue-fronted lorikeet *Charmosyna toxopei*

**Contributor:** BirdLife International-Indonesia Programme.

**Conservation status:** IUCN: Vulnerable (B1 + 2c; C1; C2b; D1).

CITES: Appendix II.

National protection status: Information unavailable.

**Distribution and status:** The blue-fronted lorikeet is endemic to Buru, Indonesia, where it is known from seven specimens collected by Toxopeus on the west side of Lake Rana at altitudes between 850 and 1,000m in the 1920s (Siebers 1930, White and Bruce 1986).

The seven specimens are thought to be the only definite records of this species as intensive searches by BirdLife-IP in 1995 (Gunung Kelapat Mada proposed protected area, Lake Rana and Teluk Bara) and 1996 (central north-east

Buru and the mangroves of Kayeli Bay) failed to record the species. The locals who brought the birds to Toxopeus did not know other areas that the species inhabited. The inhabitants of ten villages in western Buru were not generally familiar with the species in 1996 (BirdLife-IP *in litt.* 1997), although two hunters had caught it for food in the mountains of the sacred Garan area north-west of Lake Rana, an area which includes similar habitat to that on the west of the lake (BirdLife-IP *in litt.* 1997). Smiet's (1985) records are thought uncertain: he described it as quite common in plantations, secondary, and primary forest around Teluk Bara in 1980 but intensive searches in this area in 1989 and 1995 failed to find it (BirdLife-IP *in litt.* 1997), although two flocks of five and six birds that were seen were thought to be this species (Marsden *et al.* 1997). Smiet's observations have also been attributed to the more widespread red-flanked lorikeet *C. placentis* by Forshaw (1989), but there is no firm evidence that the latter occurs on Buru (Jepson 1993, see van Bemmelen 1948). The paucity of historical records suggests that *C. toxopei* is rare, nomadic or is restricted to a specific habitat. Marsden *et al.* (1997) considered that the species should be treated as data deficient.

**Threats:** If it proves to be confined to lowland forest, it could be seriously threatened by deforestation (Jepson 1993). Despite the lack of recent reliable field records of this species seven wild caught specimens were recorded in international trade between 1991 and 1995, all in 1991 (CITES Annual Report database).

**Action:** Information is urgently required on the distribution (including habitat use), status, and threats to this species. (See Box 10)

## Black-winged lory *Eos cyanogenia*

**Contributor:** BirdLife International-Indonesia Programme.

**Conservation status:** IUCN: Vulnerable (A1c,d; B1+2c; C1). CITES: Appendix II.

National protection status: Information unavailable.

**Distribution and status:** The black-winged lory is known from Biak-Supiori, Numfor, Manim, and Meos Num islands in Geelvink Bay, Irian Jaya, Indonesia (Beehler *et al.* 1986). On Biak it is considered generally uncommon (but sometimes in flocks of 40–60 individuals), feeding in inland forest (up to 460m) and thought to roost in coconut plantations and nearby coastal forest (Collar *et al.* 1994). It was thought to be quite common in January 1997 (BirdLife-IP *in litt.* 1997); on adjacent Supiori it was common in 1982 along the coast and inland to



## Red-and-blue lory *Eos histrio*

**Contributors:** BirdLife International-Indonesia Programme, Frank Lambert and Jon Riley.

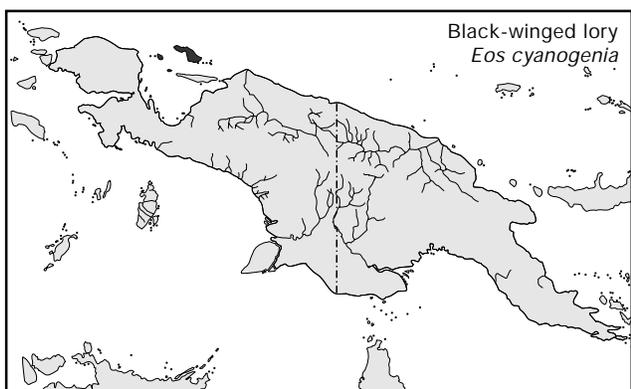
**Conservation status:** IUCN: Endangered (A1c,d; A2c,d; B1+2c,d,e; C1).

CITES: Appendix I (transferred from Appendix II in 1995).

National protection status: Information unavailable.

**Distribution and status:** This species is known from Miangas (although this is doubted: F.R Lambert *in litt.* 1997) and Talaud and Sangihe Islands, between Sulawesi, Indonesia and Mindanao, Philippines (White and Bruce 1986). It has also been reported from the Nenusa Islands (Anon 1993).

In 1978, its status on Sangihe was reported to be similar to that in the last century (White and Bruce 1986). Since then several ornithologists have visited the islands (Lambert 1997). The indigenous nominate subspecies was not recorded until 1995 when a maximum of six birds were seen in northern Sangihe (Riley 1995, University of York 1996). A proportion of these birds were escapees as ring markings were observed and were of the subspecies *E.h. talautensis*, rather than the native subspecies, which probably numbers fewer than 50 birds (Lambert 1997) and that are centred on Sangihe's only remaining forest on Mt. Sahengbalira. Riley (*in litt.* 1997) reports that there may only be one voice record from this area since 1995. The species may now be extinct on the three other islands in this group from which it was previously known, Siau,

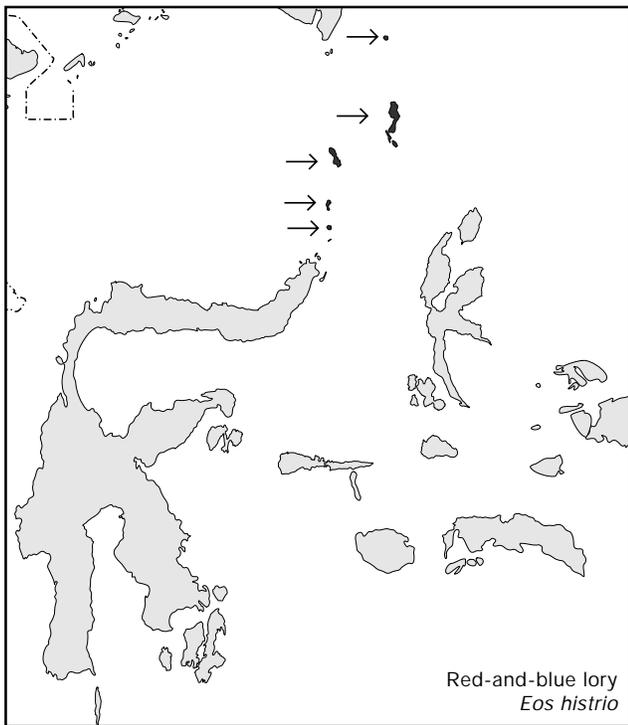


approximately 200m, but less common at higher altitudes (Bishop 1992). Like many lorries it is thought to be highly nomadic, making it difficult to assess true numbers.

**Threats:** The species is threatened by the destruction of large areas of primary lowland forest on Biak (Collar *et al* 1994, see also Arndt 1992). It has been trapped for nearly 20 years (BirdLife-IP *in litt.* 1997). The effect this has had on the population is unknown. There were 223 wild caught specimens recorded in international trade between 1991 and 1995, with an annual maximum of 215 individuals in 1991 (CITES Annual Report database). Following a review under the CITES Significant Trade Process, Indonesia was recommended by the CITES Animals Committee in 1993 to suspend exports pending the development of a population monitoring programme. This moratorium is still in place.

**Action:** Information is urgently required on distribution (including habitat use), status, and threats.





Annual Report database) and none in 1995 when the species was listed in Appendix I.

**Action:** A conservation strategy for the red-and-blue lory should address the threats outlined above through legislation and raising public awareness, and by providing appropriate ecological knowledge. The species should be included on the Indonesian list of protected species and the status of protected areas on Karakelong should be clarified. A registration scheme for captive birds is also desirable. Workshops and educational material designed to raise public awareness might concentrate on the negative impacts of over-exploitation such as the lory's probable role as a controller of agricultural pests and in pollinating crop plants. Additional ecological information provides the knowledge upon which to refine conservation strategies and monitor populations. (See Box 11)

### Sangihe hanging-parrot *Loriculus catamene*

**Contributors:** Frank Lambert and Jon Riley.

**Conservation status:** IUCN: Endangered (B1+2c; C1; C2b; D1; D2).

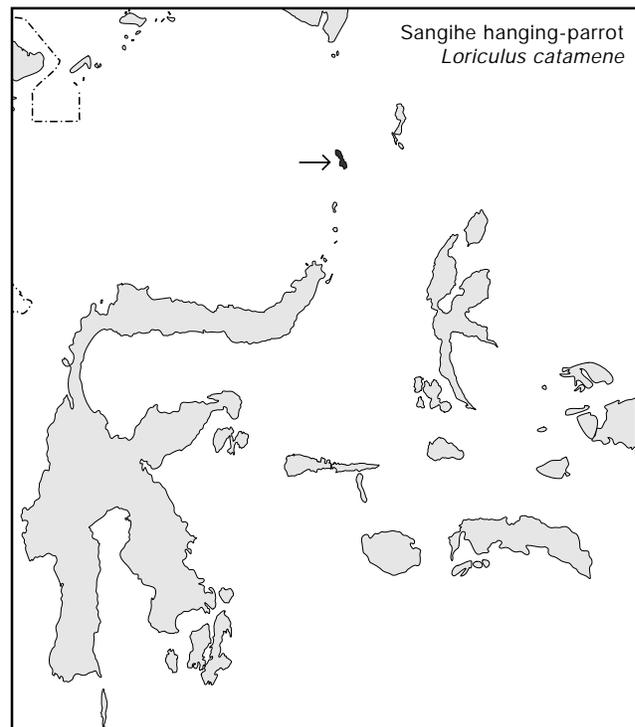
CITES: Appendix II.

National protection status: Information unavailable.

**Distribution and status:** This species is endemic to Sangihe Island, north of Sulawesi, Indonesia (White and Bruce

Ruang, and Tagulandang (Riley *in litt.* 1997). Karakelong, in the Talaud Islands is the stronghold: the population was estimated at less than 2,000 birds in the early 1990s (Collar *et al.* 1994). In 1995 up to 250 birds were seen in a day (Riley 1995) and in 1996 the population was estimated at 9,400–24,160 individuals. A single bird was recorded from Salebabu (Talaud Islands) in 1995 (Riley 1995) and six birds which may be of this species were noted in November 1996 (Lambert 1997). No birds were found on Kabaruang (Talaud Islands) in November 1996 (Lambert 1997) but locals reported birds visiting the island for part of the year. The species is thought unlikely to occur in the Nenusa Islands or Miangas (Lambert 1997), the former being the supposed range of the questionable third subspecies *challengeri* (Riley *in litt.* 1997).

**Threats:** Several hundred birds, perhaps as many as 700, were being illegally traded in 1992 and early 1993 (Nash 1993). There are two estimates, both made in 1996, for numbers trapped on Karakelong: Lambert (1997) estimated that several hundred birds (possibly over 1,000) were trapped each year and Riley (*in litt.* 1997), using figures provided by trappers, estimated that some 1,335 individuals were trapped in 1996. Logging may become a serious threat in the future (operations were started on Karakelong in 1996: Riley *in litt.* 1997). It has been speculated that insecticide may affect the parrots directly in coconut plantations, and that disease might be introduced to wild birds through releases of captive birds (Lambert 1997). There were 648 wild caught specimens in international trade between 1991 and 1995, with an annual maximum of 475 individuals in 1992 (CITES



1986). In the mid-1980s, it was found to be not uncommon outside forest and was regularly observed in coconut groves (Collar *et al* 1994). At least two pairs were observed on steep, tree-cropped, volcanic slopes in 1986, but further investigation is required to determine whether it can survive in purely secondary habitats (Bishop 1992). Recently it has been considered widespread at low densities with groups of one to six birds being most commonly encountered, although 19 birds have been recorded in a flock (Riley *in litt.* 1997). It was commonly seen and heard in 1996 in the Mt. Awu and Mt. Sahengbalira areas (F. Lambert *in litt.* 1997).

**Threats:** Sangihe's original vegetation has been almost completely replaced by coconut and nutmeg plantations, and the secondary vegetation of abandoned gardens (Whitten *et al.* 1987a,b). Although Riley (*in litt.* 1997) and Lambert (1997) have recorded birds regularly in plantations and cultivated areas adjacent to forest areas, it is not clear whether birds can survive in the absence of forest. Other possible threats include the accidental transmission of disease from captive birds and the use of insecticides on trees from which birds take nectar (Riley *in litt.* 1997).

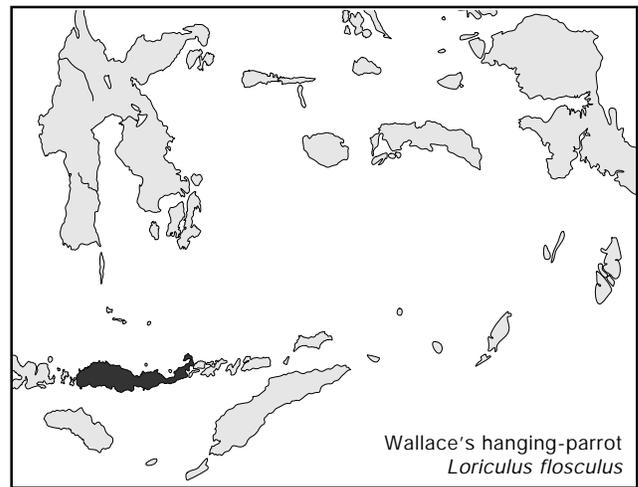
**Action:** Information is urgently required on distribution (including habitat use), status, and threats to the species. This should include clarification of whether the species depends on forest patches because although it appears to be faring well in Sangihe's plantations (it feeds from coconut inflorescences), it is not known whether all of its requirements are met by this artificial habitat. Key tasks include assessing its breeding success and roosting requirements, and determining whether any agricultural practices are having a negative impact. For example, use of the insecticide Azodrin is a cause for concern for red-and-blue lorries on Karakelong; it should be determined whether any chemicals applied to coconut trees on Sangihe may be affecting *L. catamene*. These data will provide for recommendations concerning the appropriateness of habitat protection and agricultural practices. (See Box 11)

### Wallace's hanging-parrot *Loriculus flosculus*

**Contributors:** BirdLife International-Indonesia Programme and Frank Lambert.

**Conservation status:** IUCN: Vulnerable (B1+2c; C1; C2a).  
CITES: Appendix II.  
National protection status: Information unavailable.

**Distribution and status:** Wallace's hanging-parrot is endemic to Flores in the Lesser Sundas, Indonesia (White and Bruce 1986), where it was historically known from just



one documented locality (Schmutz 1977, Forshaw 1989). Surveys in 1993 found it to be locally common in primary semi-evergreen rainforest between 450 and 1,000m (most sightings in fruiting fig trees occurred between 850 and 1,000m) in the Tanjung Kerita Mese proposed protected area, near Paku, west Flores (Butchart *et al.* 1996). It was also seen at 1,000m on Gunung Egon in east Flores in 1987, and along a roadside in west Flores in 1995 (F. Lambert *in litt.* 1997; see Butchart *et al.* 1996).

**Threats:** Little evergreen forest below 1,000m is included within the gazetted protected areas on Flores (Collar *et al* 1994), so this species is vulnerable to habitat destruction (Butchart *et al.* 1996). There were 55 wild caught specimens recorded in international trade between 1991 and 1995, all in 1991 (CITES Annual Report database). Following a review under the CITES Significant Trade Process, in 1992, Indonesia was recommended by the CITES Animals Committee to suspend exports pending the development of a population monitoring programme, and this moratorium is still in place.

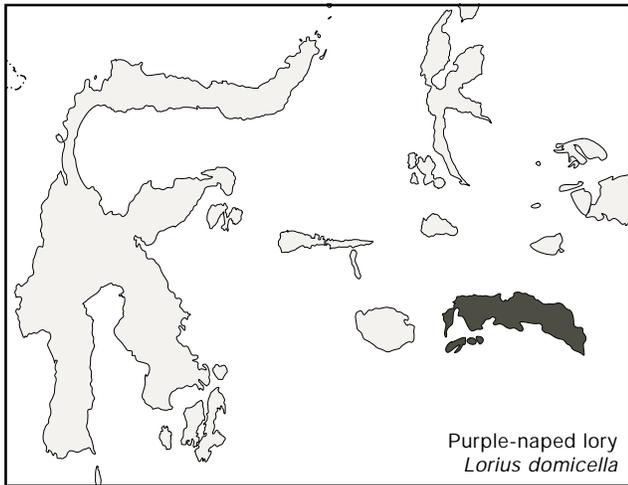
**Action:** BirdLife-IP and WWF are undertaking biodiversity surveys with the aim of strengthening the protected area network on the island (BirdLife-IP *in litt.* 1997).

### Purple-naped lory *Lorius domicella*

**Contributor:** BirdLife International-Indonesia Programme.

**Conservation status:** IUCN: Vulnerable (B1+2e; C1).  
CITES: Appendix II.  
National protection status: Information unavailable.

**Distribution and status:** The purple-naped lory is endemic to Seram and Ambon in the Moluccas, Indonesia (White and Bruce 1986).



In Manusela National Park (central Seram) it is rare to uncommon in hill forest within a narrow altitude range from 400 to 900m (BirdLife-IP *in litt.* 1997). It was found to be more common on ridges above 900m in the Way Bala area of eastern Seram in 1996. Here 10–14 individuals were recorded along 1–2km of ridge (Isherwood *et al.* 1996). The species is either very rare or extinct on Ambon (BirdLife-IP *in litt.* 1997).

**Threats:** It is a popular cagebird in Maluku where it is considered the most intelligent parrot. Although it has been suggested that any external trade in this species would pose a serious threat to its survival (Bowler and Taylor 1989, Bishop 1992), as population size and volume of trade have not been quantified it is not clear what the impact of trade is (BirdLife-IP *in litt.* 1997). There were three wild caught specimens reported in international trade between 1991 and 1995, two in 1991 and one in 1994 (CITES Annual Report database).

**Action:** The status of the species on Seram should be clarified and relative abundance in each habitat type determined. In addition, information on the size and distribution of habitat blocks, and on trapping and timber extraction should be collected. Once such data have been collected, future action should be considered. Furthermore, it will provide an adequate baseline for monitoring and a determination of the degree to which trade affects the status of the species. (See Box 12)

### Chattering lory *Lorius garrulus*

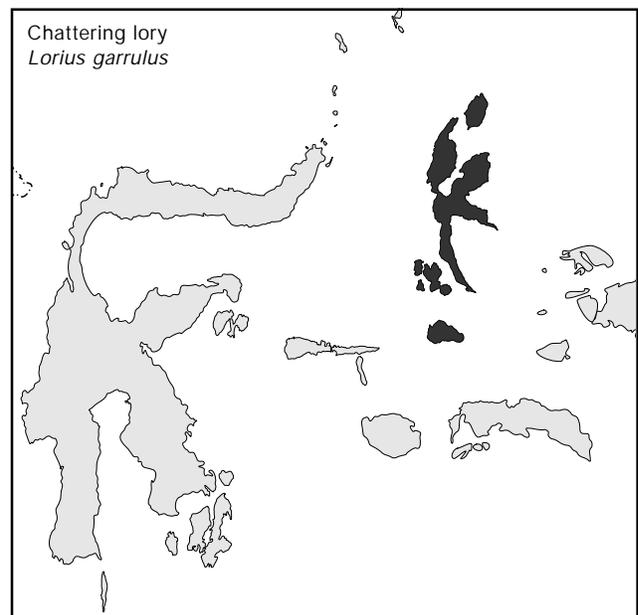
**Contributor:** BirdLife International-Indonesia Programme.

**Conservation status:** IUCN: Vulnerable (A2c,d).  
CITES: Appendix II.

National protection status: Information unavailable.

**Distribution and status:** This species is endemic to the north Moluccas, Indonesia where it is known from Halmahera, Widi, Morotai, Rau, Bacan, Obi and possibly Ternate (White and Bruce 1986). It is found in forest, including logged forest, but not normally in agricultural land, from the lowlands to 1,300m. It is rarely encountered in forest on extremely alkaline soils (BirdLife-IP *in litt.* 1997).

The highest population densities are found in lowland forest on rich volcanic soils (BirdLife-IP *in litt.* 1997). Survey work carried out in 1991 and 1992 resulted in a population estimate of 46,360–295,540 birds (Lambert 1993a). It has been suggested that the proposed Lalobata protected area on Halmahera may contain as many as 56,600–105,900 individuals (MacKinnon *et al.* 1995) and BirdLife International-Indonesia Programme (*in litt.* 1997).



reports similar figures. Four to six birds were seen on each of six days in the Danau Mantis catchment in west Obi (Linsley 1995).

**Threats:** This is a very popular cagebird throughout Indonesia and is one of the target species for bird trappers (it was not recorded in easily accessible areas: MacKinnon *et al.* 1995, BirdLife-IP *in litt.* 1997) and it is believed that the levels of legal and illegal trade in this species at that time (a minimum of 9,600–9,927 are estimated to have been captured in 1991) were not sustainable, particularly when combined with current levels of habitat loss and degradation (Lambert 1993a, BirdLife-IP *in litt.* 1997). However, PHPA has revised its (legal) quota to the level recommended by Lambert (1993a) (Collar *et al.* 1994). There were 19,060 wild caught specimens recorded in international trade between 1991 and 1995, with an annual maximum of 7,725 individuals in 1992 followed by 6,305 individuals in 1991 and 4,331 individuals in 1993 (CITES Annual Report database). Following the CITES Significant Trade Review, the Animals Committee made recommendations to Indonesia to suspend exports pending establishment of a population monitoring programme. In 1997 and 1998, Indonesia established export quotas of 450 birds each year for this species (CITES Notification to the Parties No. 994 and No. 1998/07).

**Action:** Approaches to reduce the exploitation of wild chattering lorries should be found. A clear priority is improved law enforcement, with all responsibility for quotas being centralised at the Department of Forestry in Ambon (Lambert 1993c). Additional approaches might include provision of incentives for not overexploiting parrot populations. This might be achieved through the introduction of parrot concessions in which particular areas would be allocated for parrot collection each year. Such an approach should allow better monitoring and would clearly involve considerable public awareness input if it were to succeed (Lambert 1993c).

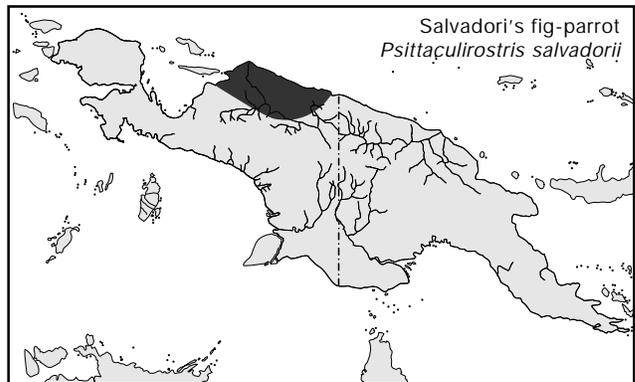
### Salvadori's fig-parrot *Psittaculirostris salvadorii*

**Conservation status:** IUCN: Vulnerable (A2c,d).

CITES: Appendix II.

National protection status: Information unavailable.

**Distribution and status:** This species occurs in northern Irian Jaya, Indonesia, from the Cyclops Mountains to the eastern shore of Geelvink Bay, where it inhabits evergreen forest from the lowlands to 400m (Rand and Gilliard 1967, Beehler *et al.* 1986). It is locally common (Diamond 1985, Collar *et al.* 1994), for example in the flat lowlands west of Jayapura (Collar *et al.* 1994).



**Threats:** Large numbers have been trapped for the cage bird trade (Collar *et al.* 1994). It is also likely to decline locally owing to extensive logging and land clearance for the increasing human population (the result of transmigration policy) (Collar *et al.* 1994), although much of its range is remote and inaccessible (Collar *et al.* 1994). There were 1,288 wild caught specimens in international trade between 1991 and 1995, only 23 of which were traded in the last two years (1994 and 1995: CITES Annual Report database). Following the CITES Significant Trade Review in 1993, the CITES Animals Committee recommended that Indonesia inform the CITES Secretariat of the biological basis for allowing exports. In 1998 Indonesia established an annual export quota of 190 birds for this species (CITES Notification to the Parties No. 1998/07).

**Action:** Information is urgently required on distribution (including habitat use), status, and threats to the species.

**Iris lorikeet**  
***Psitteuteles iris***

**Contributors:** Frank Lambert and Richard Noske.

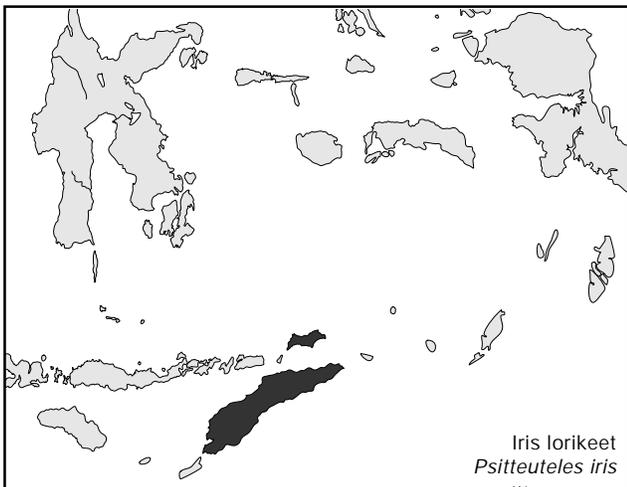
**Conservation status:** IUCN: Vulnerable (C1; C2a).

CITES: Appendix II.

National protection status: Information unavailable.

**Distribution and status:** This species is endemic to Timor and Wetar, Indonesia, in monsoon and evergreen forest from the lowlands to 1,500m (White and Bruce 1986), but more recently it has been recorded as high as 1,800m (R. Noske *in litt.* 1997).

Collar *et al.* (1994) considered it scarce as it was seen at only two localities during a nine-week survey of west Timor's remnant lowland forest in 1993 (Noske and Saleh 1993), but the species may occur at higher altitudes (R. Noske *in litt.* 1997). Many were seen with olive-headed lorikeets *Trichoglossus euteles* in June 1993 at 840m near Kefamenanu in remnant evergreen and secondary forest.



During December 1995 many small flocks were noted in lower montane *Eucalyptus urophylla* forest at 1,300m near Lelobatan (R. Noske *in litt.* 1997). Several observers have recorded it on Gunung Mutis (at 1,800m or higher) in recent years. F. Verbelen (*per* R. Noske *in litt.* 1997) found them with olive-headed lorikeets at Bipolo (30m altitude) and Camplong (200m) in September–October 1995, but they were not recorded at these sites in September 1996 when hundreds of olive-headed lorikeets were found feeding on nectar of *Syzygium* flowers (R. Noske *in litt.* 1997). These observations suggest that these birds are very mobile, as is typical for nectarivores. During a two-week visit in November 1997, only two were seen at Bipolo whilst huge numbers of olive-headed lorikeets were recorded in lower montane forest around Gunung Mutis (R. Noske 1998). Although trapped, it is not considered uncommon in west Timor (Noske 1995). It was not recorded on a short visit to Wetar in 1990 (F. Lambert *in litt.* 1997), but extensive forest remains there (see RePProT 1990). It is, however, quite unobtrusive and so may have escaped detection in the few areas visited (F. Lambert *in litt.* 1997). Also, familiarity with the calls is required to distinguish them from those of the olive-headed lorikeet (R. Noske *in litt.* 1997) as confusion is possible if birds are flying overhead. However, separation is easy if birds are feeding (R. Noske *in litt.* 1998).

**Threats:** Loss and fragmentation of the forests at lower altitudes are two of the threats to this species. It is also trapped; 510 wild caught specimens were recorded in international trade between 1991 and 1995, 470 of which were in caught 1991 and 1992 (CITES Annual Report database). Following the CITES Significant Trade review, in 1993, the Animals Committee made recommendations to Indonesia to suspend exports pending establishment of a population monitoring programme.

**Action:** A systematic assessment of the species' status is now required to build upon the information obtained. This should seek to determine what the species' distribution is, and thus whether it is localised on the island, or whether its apparent scarcity is a result of natural movement patterns. The impact of habitat alteration at lower altitudes should be determined.

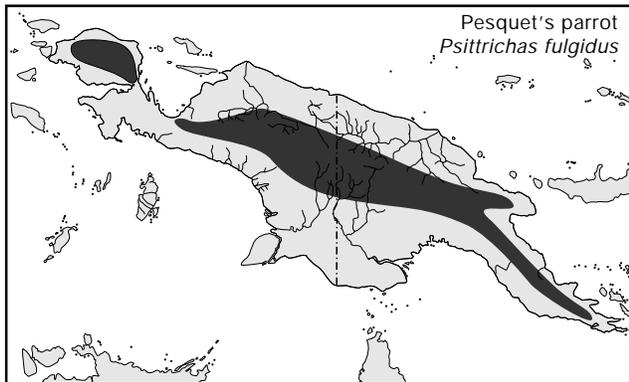
**Pesquet's parrot**  
***Psitttrichas fulgidus***

**Conservation status:** IUCN: Vulnerable (A1c; A2c,d).

CITES: Appendix II.

National protection status: Information unavailable.

**Distribution and status:** Pesquet's parrot inhabits primary and secondary forest, mostly at 600–1,200m in New Guinea



(Irian Jaya, Indonesia, and Papua New Guinea), needing to forage widely for fruits. It is patchily distributed and absent from many areas. It was occasionally seen flying over the Fly River and also along the Magazine Road north of the town in Kiunga area, Western Province (Gregory 1997).

**Threats:** Its absence from many areas is due to hunting for feathers and food. This is especially true in Papua New Guinea (Coates 1985, Beehler *et al.* 1986, Collar *et al.* 1994), where skins are in high demand, being used as a “bride” price in the highlands (Schmid 1993) and being even more valuable than those of birds-of-paradise (Collar *et al.* 1994). The species is threatened to a lesser degree by trapping for the bird trade (Collar *et al.* 1994). There was

one wild caught specimen recorded in international trade between 1991 and 1995, in 1991 (CITES Annual Report database).

**Action:** Information is urgently required on distribution (including habitat use), status, and threats to the species.

**Black-lored parrot**  
***Tanygnathus gramineus***

**Contributor:** BirdLife International-Indonesia Programme.

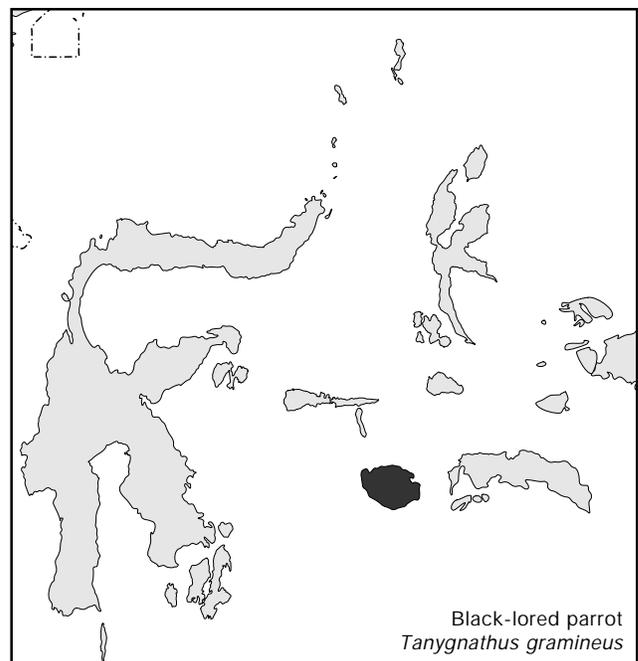
**Conservation status:** IUCN: Vulnerable (D2).

CITES: Appendix II.

National protection status: Information unavailable.

**Distribution and status:** This species is endemic to Buru in the Moluccas, Indonesia, where it is known from forest above about 600m but has rarely (four times) been collected, being at least partly nocturnal (Forshaw 1989).

It is not uncommonly heard in montane forest at night, although there is only one recent record, of two birds perched in treetops in daytime in 1980 (Smiet 1985, White and Bruce 1986). It was not found during a one-month survey in 1989, perhaps because suitable habitat was not visited at night (Jepson 1993), so its current status remains unknown. Large parrots perched in the canopy of tall *Agathis* trees or flying downhill above the forest just after dusk were commonly heard at 1,100–1,500m in the Kelapat Mada Mountains, western Buru, during 1995; voice and altitude suggesting that they belong to this species (BirdLife-IP *in litt.* 1997).



**Threats:** Montane forests on Buru are likely to be relatively secure (Collar *et al* 1994).

**Action:** Information is urgently required on distribution (including habitat use), status, and threats to the species. (See Box 10)

## Species removed from the Red List

### Blue-naped parrot *Tanygnathus lucionensis*

The species account for the blue-naped parrot, Indonesia, is the same as that for the Philippines. Please refer to page 88.

## THE PHILIPPINES

### Overview

James Lowen (with boxed contributions by Des Allen, Tom Brooks, Guy Dutson, and Frank Lambert)

The psittacine fauna of the Philippines is characterised by endemism and endangerment. Of the 13 species that have occurred in a wild state, all but three (all *Tanygnathus* parrots) are endemic to the country, four are globally threatened and four near-threatened. Almost all threatened species were abundant and widespread at the turn of the century, but subsequently have undergone a catastrophic reduction in population and range. Although no species have become extinct, there is a very strong possibility that perhaps two (specifically the Philippine cockatoo *Cacatua haematuropygia* [see Box 14] and perhaps the blue-winged racquet-tail *Prioniturus verticalis*) will soon do so, unless measures to conserve them are rapidly implemented. Table 4 provides a list of threatened parrot species in the Philippines.

The preparation of conservation strategies, or even recovery plans, for Philippines endemic parrots, is problematic given the poor knowledge of their distribution, status, and ecological requirements. Further surveys are indicated in this plan (see also Collar *et al.* 1998). Yet, there remains the real possibility that one or more of these target species, figureheads for Filipino conservation, may no longer be a part of the Philippines' biological heritage by the time such surveys take place.

### Threats

Parrots in the Philippines are threatened solely by human activity, both direct (extraction of wild birds for trade and food) and indirect (habitat destruction). The relative severity

varies between species and islands, but the one exacerbates the other, forming a potent combination.

The ensuing drop in numbers and range has been dramatic. The blue-winged racquet-tail was found to be "exceedingly common" on Sulu Island in 1883 (see Collar *et al.* 1998), but the species could not even be located on Tawi Tawi and the Tandubas Island group in 1995 (see Collar *et al.* 1998). On Palawan, anecdotal evidence suggests that the Philippine cockatoo has declined by up to 90% since 1980 (Lambert 1994b).

Almost all Philippine endemic psittacids are (at least partially) dependent on forests, the dominant (and natural) vegetation in the archipelago until recent decades. More than 80% of the natural vegetation has been removed (Forest Management Bureau 1988), and just 8% primary forest remains (Danielsen *et al.* 1994) see Box 15. The situation is particularly severe on the smaller islands, such as Cebu, Negros, and Mindoro (Evans *et al.* 1993). Commercial logging, whether under licence or illegal, and subsistence shift-and-burn agriculture (locally known as "kaingin"), play equally severe roles.

### Logging

The destruction of lowland forest, the first vegetation to be decimated by human colonisation, has caused the green racquet-tail *Prioniturus luconensis* to become locally extinct in parts of Luzon (Poulsen 1995). The removal of low elevation forests in the Sulu Islands leaves just a few hundred Philippine cockatoos there (Lambert 1994b, Collar *et al.* 1998). On Palawan, logging activities target the same tree size and species in which the hole-nesting cockatoo and the blue-naped parrot *Tanygnathus lucionensis* breed (Lambert 1994b), and the incessant clearance of mangroves on Palawan and other islands for fishpond construction presents a further threat to the former (Quinnell and Balmford 1988, Collar *et al.* 1998). Montane forest is not exempt from logging activities, with forest generally only left on inaccessible mountain tops and steep slopes. On Mt. Kitanglad, Mindanao, the Mindanao racquet-tail *Prioniturus waterstradti* and the Mindanao lorikeet *Trichoglossus johnstoniae* suffer from large tracts of forest being cleared by immigrants to plant crops such as potato and cabbage that do not thrive in lowlands (Collar *et al.* 1998: see Box 16).

### Trapping and hunting

Trapping pressure is substantial, afflicting all psittacids to various degrees. Trade, both internal and international, has a crucial deleterious effect on species with already low and ever-declining populations. The green racquet-tail no longer occurs close to population centres in Luzon's Sierra

Madre mountains (Poulsen 1995). Particularly susceptible are the Philippine cockatoo and the blue-naped parrot: the latter forms 55% of all birds traded in Palawan, and a basketful of nestlings was being sold for Philippine Pesos (PhP) 200 each in Cubao Farmers Market in December 1995 (Collar *et al.* 1998).

On Palawan, cockatoo chicks are taken from virtually every known and accessible nest, with Palawan tribesmen purposely leaving *Koompassia excelsia* nest-trees in otherwise cleared land in order to harvest nestlings (and, increasingly, adults) on an annual basis (Boussekey 1993, Lambert 1994b). The cockatoo can be sold for up to 10 times the price of other hole-nesting birds such as the blue-naped parrot and the hill myna *Gracula religiosa*. In 1991, the Manila street price reached US\$640 (Lambert 1994b).

Parrots are also exploited directly for other ends, being hunted for food (e.g., Philippine cockatoo: Lambert 1994b), persecuted for their depredation of maize and rice fields just prior to ripening (e.g., again, the cockatoo: see Collar *et al.* 1998), and used for target practice by sportsmen and the military (e.g., the unfortunately tame blue-winged racquet-tail: Lambert 1993b).

## Mining and disease

Other potential threats include the explorations of mining companies, as may already be affecting the Mindanao lorikeet and the Mindanao racquet-tail on Mt. Matutum, Mindanao (Collar *et al.* 1998); and viscerotropic velogenic Newcastle disease which could spread into wild populations of the Philippine cockatoo and the blue-headed racquet-tail *Prioniturus platenae* by the release of infected captive birds (Lambert 1994b).

## Conservation solutions

Action to conserve the Philippines' threatened parrot fauna has taken several forms; all, however, need to be strengthened if the extinction of one or more species is not to result.

## Protected areas

Since December 1993, 200 sites covering nine percent of the country's land area have been incorporated into the National Integrated Protected Areas System (NIPAS). The ten sites selected for priority action include the Northern Sierra Madre, Luzon (important for the Luzon racquet-tail *Prioniturus montanus* and the green racquet-tail), Mt. Kitanglad, and Mt. Apo (significant sites on Mindanao for the Mindanao lorikeet and the Mindanao racquet-tail). The subsequent National Integrated

Protected Areas Programme aims to afford *de facto* protection to Mt. Pulog National Park, Luzon (where the green racquet-tail occurs).

All but one threatened psittacid species occur in one or more protected area; immediate intervention is required in the Sulus to conserve remaining forests, and thus the blue-winged racquet-tail (see Box 17). Several protected areas should be extended or otherwise modified, to conserve, for example, montane forest in Palanan Wilderness Area, Luzon, for the Luzon racquet-tail and the Babuyan valley, adjacent to St Paul's National Park, Palawan, for the Philippine cockatoo.

## Trade

Measures to combat trade have been of uncertain success. The Philippine cockatoo has been included on Appendix I of CITES since 1992. Palawan has been decreed a "game reserve" in which it is illegal to capture wild animals. However, the continuing illegal trade is likely to decline only with the introduction of locally-based, economically viable alternatives that lessen threats to birds and their habitats. These could include financial rewards to those who report and protect nest holes of the blue-naped parrot and the cockatoo. More drastic measures, such as Department of Natural Resources (DENR)-manned controls at major transport terminals, may be required to enforce CITES legislation for the cockatoo (Lambert 1994b, Collar *et al.* 1998).

## Education

Awareness campaigns are an urgent requirement of any parrot conservation strategy. Such initiatives for the cockatoo have met with considerable success on Palawan and Mindanao (Tabaranza 1992, Low 1996). An expansion of these projects, managed by an internationally funded Philippine cockatoo Campaign Officer, and incorporating components of the successful *Amazona* parrot projects in the Caribbean (see Butler 1992), has been recommended (Lambert 1994b, Collar *et al.* 1998).

## Captive breeding

Experiments with captive breeding are in their infancy, and the cockatoo forms the main subject (Boussekey 1995, Low 1996). There have been few successful breeding attempts and, although an internationally co-ordinated programme could complement *in-situ* conservation initiatives, there is no guarantee that captive-bred birds would survive once released into the wild (Lambert 1994b, Collar *et al.* 1998).

## Priority projects in the Philippines

- **Conservation of the Philippine cockatoo throughout the Philippines.** (Box 14)
- **Assessing extinction risk of Philippine parrot populations following deforestation.** (Box 15)
- **Provision of a management plan for the parrots of Mt. Kitanglad Range National Park and environs in Mindanao, Philippines.** (Box 16)
- **Assessment of the conservation needs of the parrot fauna in the Sulu Archipelago, Philippines.** (Box 17)

### Box 14. Conservation of the Philippine cockatoo throughout the Philippines.

Based on Lambert (1994b)

**Aim:** To implement actions that are urgently required to save the Philippine cockatoo *Cacatua haematuropygia* from extinction.

**Justification:** The Philippine cockatoo is a Critically Endangered species that is endemic to the Philippines. It is one of the most threatened parrots in the world and has already disappeared from many islands throughout its former range (Lambert 1994b). The species account in this Action Plan indicates the scarcity of recent records. Palawan Province is probably the stronghold for this species with an important population on Tawi Tawi.

Whilst further information is necessary to build a long-term conservation plan for the cockatoo, there is the risk that the species may disappear whilst such biological information is being collected. This is because the populations are so small and fragmented and are continuing to be depleted by trapping. Although habitat destruction in the past has contributed substantially to the species' decline, the current level of exploitation for the pet trade is also now threatening the species' survival in the immediate future.

**Project description:** Action on behalf of this species falls into three areas. First, is the clear need to raise awareness of the species' plight and the fact it is endemic to the Philippines. A poster campaign highlighting endemic species has been initiated through Fauna and Flora International and includes the cockatoo. This should be expanded and followed up using the expertise available in organisations such as the Haribon Foundation in Manila.

The second area where action is urgently needed is the protection of known breeding sites. These sites hold the key to the species' future as they are often in commercially valuable emergent dipterocarps (resinous hardwoods typically found in Southeast Asia) (Lambert 1994b), and they are also the sites where birds can be caught for the pet trade. In some cases, nesting trees are left uncut so that chicks can be regularly harvested. Although parents are now also being taken (Lambert 1994b), the direct result of this chick harvesting can be seen in the increasing proportion of aged individuals in cockatoo populations. Protecting these sites, either through law enforcement or by some sort of subsidy is crucial to the survival of the species. The latter would also contribute to the protection of other hole-nesting species that are caught for trade, such as other parrots, including the blue-naped parrot *Tanygnathus lucionensis*, the endemic Palawan hornbill *Anthracoceros marchei*, and the hill myna *Gracula religiosa*. A proposed extension to St Paul's Subterranean River National Park on Palawan should be implemented urgently, as trade does not currently threaten this population of some 200 birds.

The third area of action involves addressing legislation designed to protect the cockatoo. This includes the listing on Appendix I of CITES in 1992 and, in light of this, the drafting of new laws that will ban the export of the species unless individuals are on the DENR inventory of birds held before the CITES listing. The cockatoo is also protected by the designation of Palawan as a "Game Reserve", under Presidential Proclamation 219, in which it is illegal to catch any wild animals. This legislation should be implemented through establishment of DENR check-points at all major ports of entry to the key islands.

**Contacts:** Tom Brooks, Guy Dutson, Frank Lambert.

### Box 15. Assessing extinction risk of Philippine parrot populations following deforestation.

**Aim:** To assess the tolerance of Philippine endemic parrots to deforestation, and to assess the rate at which parrot populations are becoming extinct.

**Justification:** Only 24% of the Philippines' rainforest remains, and clearance continues (Brooks *et al.* 1997). Since deforestation inevitably opens forests up to allow access to trappers and hunters (e.g., Diamond 1984) all of the endemic Philippine parrots are probably subject to some human pressure. Many Philippine parrots are also thought to make seasonal movements (Dickinson *et al.* 1991) which may indicate that more than a single block of suitable habitat is required to meet all of their needs.

**Project description:** Forest cover data available from the World Conservation Monitoring Centre in Cambridge, UK (on CD-ROM: Iremonger 1997) and the National Mapping Resource Information Agency, Manila, Philippines, should be obtained. With this information, brief visits by skilled ornithologists should be paid to as many of the surviving forest tracts as possible, with the aim of locating parrot populations. Intensive sites should be identified where repeat visits can be concentrated to investigate within and between year movements. Surveys should concentrate on observation of parrots from vantage points (e.g., hill-tops) supplemented by aural surveys and location of key feeding and roosting trees. All surveys should also include interviews with residents to provide local reports and an indication of the extent of the parrot-trade on a local scale.

This project should be designed to complement other initiatives, such as the proposed Sulu Archipelago project (see Box 17), and should build upon the results of recent forest surveys on Luzon, Mindoro, Panay, Negros, Cebu, Siquijor, Bohol, Tawi Tawi, and parts of Mindanao and Palawan. This will allow the most efficient use of resources so that areas not recently surveyed may be covered, including forests on Samar and Leyte, Jolo, Basilan, and much of Mindanao and Palawan. This combination of extensive surveys and intensive work at selected sites will provide an indication of the rate at which parrot populations are lost as deforestation progresses throughout the Philippines.

**Contact:** T. Brooks.

### Box 16. Provision of a management plan for the parrots of Mt. Kitanglad Range National Park and environs in Mindanao, Philippines.

*Philip McGowan*

**Aim:** To survey the parrots of the Mt. Kitanglad area, assess their status and whether their conservation needs are being met. A management plan for the protected area and surrounds should follow.

**Justification:** Two Lower Risk parrot species, the Mindanao lorikeet *Trichoglossus johnstoniae* and the Mindanao racquet-tail *Prioniturus waterstradti* are known from the recently gazetted Mt. Kitanglad Range National Park. Current information on these species is patchy and leads to varying assessments of threat, the most pessimistic of which is that the species are at risk. Coming into existence in 1990, the park covers over 10km<sup>2</sup> (IUCN 1994) in the north-east of the island. Most of Mindanao's montane endemics have been recorded from this mountain range and, as such, it is probably one of the most important areas for endemic birds on Mindanao (Lambert 1993a).

Both parrot species inhabit forest above 1,000m (Dickinson *et al.* 1991) and are suffering from forest destruction in the lower altitudes of their range (Collar *et al.* 1994). On the southern slope of Mt. Kitanglad, especially in the Lantapan and Basak areas, and in the neighbouring Pangantukan Mountains, "gardening technology" is considered a very serious threat (Collar *et al.* 1998). Brought by migrant Igarots from Luzon, this results in large tracts of montane forest being cleared and replaced with crops that do not grow well in the lowlands. What is needed now is an assessment of how well this protected area is serving the conservation of these threatened parrots, and other montane endemics, and recommendations for its future management. In addition, other sites where these species are known to occur should be surveyed so that additional sites for their conservation can be targeted.

**Project description:** Any management plan will rely on the findings of both extensive surveys and intensive research. For surveys, suitable blocks of forest should be identified from existing vegetation maps. While some sites can be identified from Kennedy *et al.* (1997), the World Conservation Monitoring Centre (WCMC) should also be contacted. Each site thus identified would then be visited and searched for the two parrots (as well as other montane endemics). The state of the forest should be evaluated and pressures on the parrots determined.

Detailed ecological work will probably be centred on Mt. Kitanglad and will attempt to determine habitat use for various activities, abundance of nesting sites and breeding success. Based on the results obtained and the numbers of birds on other habitat patches (from the survey), predictions can be made about the survival of various populations. The most urgent needs can be addressed through a management plan.

**Contacts:** Tom Brooks and Frank Lambert.

**Box 17. Assessment of the conservation needs of the parrot fauna in the Sulu Archipelago, Philippines.**

*Des Allen, Tom Brooks, and Guy Dutson*

**Aim:** To provide the biological information necessary for the survival of the Philippine cockatoo, blue-winged racquet-tail, and blue-naped parrot in the Sulu Archipelago through the identification of key sites and the assessment of their management needs.

**Justification:** Habitat destruction and trapping for the cagebird trade are problems facing parrots throughout the Philippines. As forest loss continues and lowland forest birds become confined to increasingly isolated and ever smaller areas of suitable habitat, the impact of trapping almost certainly increases on dwindling populations. The Philippine cockatoo *Cacatua haematuropygia* is one of the most threatened parrots in the world (Collar *et al.* 1994). The blue-winged racquet-tail *Prioniturus verticalis* is endemic to the Sulu Archipelago (Dickinson *et al.* 1991), where it is threatened by habitat destruction. The need for an assessment of the status of these parrots should act as a catalyst for a systematic avifauna survey of Tawi Tawi and adjacent islands and which should identify which areas could be protected. The Sulu Archipelago has no protected areas. See Allen (1998).

**Project description:** A comprehensive effort to conserve these species in the Sulu Archipelago requires both extensive surveys and intensive study, and attempts to minimise the effects of direct human exploitation (trapping, shooting, and habitat loss). Such a project should also focus on the distinctive subspecies of the Philippine hanging-parrot *Loriculus philippensis bonepartei*.

i). Further surveys. The key problem with understanding the distribution and abundance of these parrots and other bird species throughout the Sulu Archipelago is the difficulty in travelling safely around Tawi Tawi and to other islands (Dutson *et al.* 1996). What little area of Tawi Tawi that has been visited (the southern part of Tawi Tawi and Bongao) is known to hold these species, but possibly in small numbers. However, the prevalence of cockatoos in captivity on the island, and the difficulty of identifying the racquet-tail from calls alone in many areas, together with the extent of mangrove forest on the island suggest that these species might be widespread in areas not yet visited. Consequently, surveys should target areas known to hold suitable habitat, which possibly include mangroves adjacent to lowland forest.

Of the other islands, Tumindao, Manuk Manka, and Jolo may offer the best prospects for additional sites for the species; unlike on Bongao, forest is thought to still remain here. However, contrasting reports suggest that Tumindao and Manuk Manka have few trees left. Forest cover maps, if available (e.g., from the WCMC), should be consulted so that logistically difficult surveys stand the best chance of locating these parrots. The easiest way of finding cockatoos is by checking maize fields in the harvest season, which they can devastate. Information on feeding, roosting, and nesting sites, as well as the level of exploitation for the cagebird trade, should be sought at each locality.

ii). Intensive studies. All nine racquet-tails are very poorly known and a study of the ecology (especially habitat use, feeding requirements, breeding biology, and movements) of the blue-winged racquet-tail would serve as the basis for a conservation plan for the species. Once a key site or sites have been found, intensive population surveys should be instigated urgently. These would attempt to determine numbers of parrots in each forest type present, bearing in mind that different forest blocks might be used for different activities. Subsequently, intensive study on roost and nest tree use, and of food requirements could be used in conjunction with the results of the survey to make a preliminary appraisal about the availability of these key resources throughout the islands and be used as the basis for proposing protected areas.

iii). Roost and nest sites should be protected from trappers, and it should be ensured that the impending development of the island does not destroy remaining forest. In the long-term, survival of these species and their habitat will be dependent upon raising public awareness and promotion of development that does not lead to habitat loss; for example, stimulation of the agar-agar industry. Consequently, there is a need for a strategy that incorporates conservation of habitats into development so that the global importance of this area can be reconciled with the real problems facing the human population. Improving protection and public awareness for the Philippine cockatoo is so clearly needed, and such a high priority, that a separate project is devoted to this issue (see Box 14).

**Contacts:** Des Allen, Tom Brooks, Guy Dutson, Frank Lambert.

## Species accounts

**Table 4. A list of Philippine parrot species that are considered threatened using IUCN Red List criteria.** Also included are four species removed from the Red List. Species are listed in alphabetical order by their scientific name, together with the islands on which they occur, and their threat status. The criteria under which each species qualifies are given in the appropriate species account. \*Denotes changes from *Birds to Watch 2* (and, therefore, the 1996 IUCN Red List of Threatened Animals), which arise from BirdLife International and the Haribon Foundation's work on *Threatened birds of the Philippines* (Collar *et al.* 1998). BirdLife International maintains the IUCN list of threatened birds.

English name	Scientific name	Distribution	Threat category
Philippine cockatoo	<i>Cacatua haematuropygia</i>	Now possibly as few as 10 islands in the Philippines	Critically Endangered
Green racquet-tail*	<i>Prioniturus luconensis</i>	Luzon and Marinduque, Philippines	Vulnerable
Blue-headed racquet-tail	<i>Prioniturus platenae</i>	Palawan Province, Philippines	Vulnerable
Blue-winged racquet-tail	<i>Prioniturus verticalis</i>	Sulu archipelago, Philippines	Endangered
<b>Red List removals</b>			
Luzon racquet-tail*	<i>Prioniturus montanus</i>	Luzon, Philippines	Lower Risk, nt
Mindanao racquet-tail*	<i>Prioniturus waterstradti</i>	Mindanao, Philippines	Lower Risk, nt
Blue-naped parrot*	<i>Tanygnathus lucionensis</i>	Philippines, Talaud islands in Indonesia, and islands off Sabah, Malaysia	Lower Risk, nt
Mindanao lorikeet*	<i>Trichoglossus johnstoniae</i>	Mindanao, Philippines	Lower Risk, nt

### Philippine cockatoo *Cacatua haematuropygia*

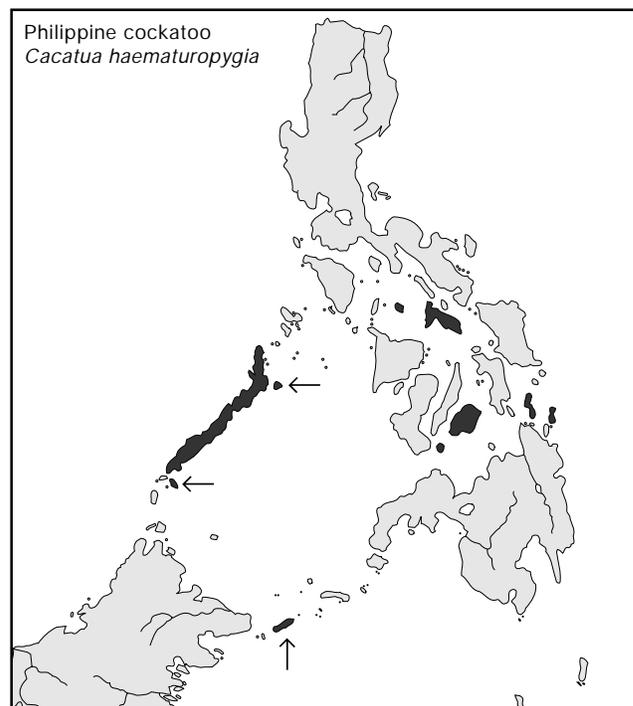
**Contributors:** Des Allen, Tom Brooks, Guy Dutton and Frank Lambert.

**Conservation status:** IUCN: Critically Endangered (A1c,d; C1; C2a).

CITES: Appendix I.

National protection status: Information unavailable.

**Distribution and status:** The Philippine cockatoo formerly occurred on all major and many minor islands (comprising



a total number of 45 areas) of the Philippines, but recent visits to roughly half of these have shown that very reduced and often possibly unviable numbers remain on as few as ten islands, chief among them being Palawan and its satellites, and Tawi Tawi (see below).

A six-week survey in August–September 1991 yielded a population estimate for Palawan of 800–3,000 birds, of which Pandanas, Bugsuk and Bancalan probably support 100–300 individuals and Dumaran 150–250 individuals, with Tawi Tawi possibly holding several hundred more

(Lambert 1993b, 1994b). A single pair survived on Siquijor in 1991 (Evans *et al.* 1993), a few remained at Mount Isarog, Luzon, in 1988 (Goodman and Gonzales 1990), and a few pairs reputedly hang on in Mindoro, chiefly at Malpalon (Dutson *et al.* 1992). Birds were observed on Masbate in 1993 (Curio 1994), and the species has been recorded a few times in singles or small numbers in Rajah Sikatuna National Park, Bohol since 1989 (Brooks *et al.* 1995b). Two pairs (G. Dutson *in litt.* 1997) were seen on Tawi Tawi in 1994 and it was considered widespread on Tawi Tawi in 1995/1996, although more often seen in captivity than in the wild (two singles in Batu-Batu and a single and a pair in Buan; D. Allen *in litt.* 1997). Three birds were noted on Simunul in 1996 (D. Allen *in litt.* 1997; see also Dutson *et al.* 1996), while a number of smaller islands, and those such as Samar and Leyte that have not been visited in recent years, may yet prove (or have been reported) to hold birds. So, the total population may lie between 1,000 and 4,000 birds (Lambert 1992, Tabaranza 1992). It is considered extinct on Cebu (Brooks *et al.* 1995a) and Negros (Brooks *et al.* 1992).

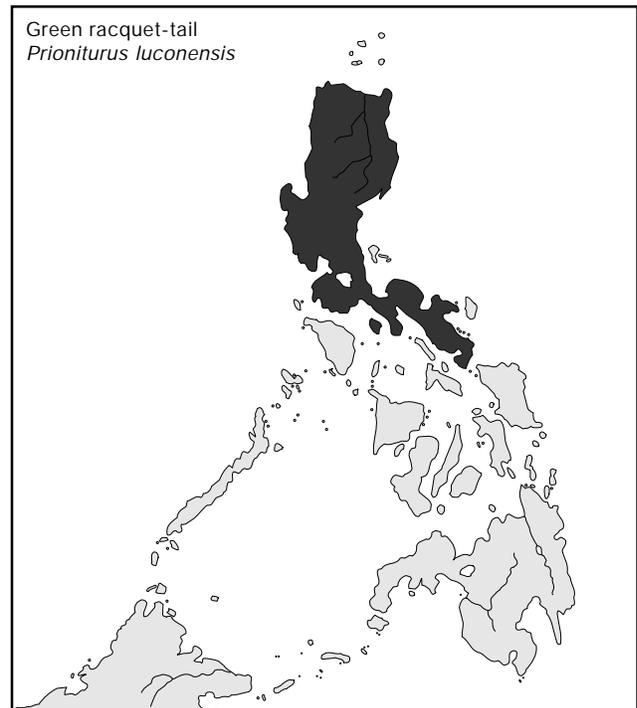
**Threats:** Intensive trapping (“the young of every known accessible nest are taken for the pet trade”: Dickinson *et al.* 1991, Lambert 1992) combined with destruction of its lowland forest habitat (amongst which mangrove may be critically important) suggests that this species may soon become extinct. Agriculture on Tawi Tawi has changed to agar-agar cultivation from maize (D. Allen *in litt.* 1997) and the possible beneficial impact of this should be investigated; the shift in emphasis away from forested areas to coastal ones may reduce habitat loss. Following the CITES Significant Trade Review in 1992, the Animals Committee made recommendations to the Philippines to suspend exports pending population surveys. Subsequently, the species was included in CITES Appendix I in 1992 and the Philippines prohibited the export of all terrestrial wildlife in 1997 (CITES Notification to the Parties No 980, 1997).

**Action:** Reducing the numbers of birds taken for the pet trade is the single most important action required. Achieving this is likely to require a combination of law enforcement and raising awareness. The cockatoo is already protected by the designation of Palawan as a “Game Reserve”, in which it is illegal to catch any wild animals. This legislation should be implemented, through establishment of DENR checkpoints at all major ports of entry to the key islands. It was listed in Appendix I of CITES in 1992 and new laws will ban the export of the species unless individuals are on the DENR inventory of birds held before the CITES listing. The proposed extension of St Paul’s Subterranean River National Park should be implemented as a matter of urgency as it contains the only population not immediately threatened by trapping (see Box 14, and also Box 17).

A poster campaign highlighting endemic species has been initiated through Fauna and Flora International and includes the cockatoo. Promoting sustainability amongst those collectors who take every nestling for the trade is imperative. Further work designed to protect nest sites is crucial to the survival of the species and is likely to require creative solutions, such as provision of a subsidy to local collectors.

**Green racquet-tail**  
***Prioniturus luconensis***

**Contributor:** Frank Lambert.



**Conservation status:** IUCN: Vulnerable (A1c,d; A2c,d; C2a). Formerly Endangered (A1b,c; A2b,c; C1; C2a: see Collar *et al.* 1994).  
CITES: Appendix II.  
National protection status: Information unavailable.

Full justification of revision to IUCN threat category is given in Collar *et al.* (1998).

**Distribution and status:** This species inhabits forest edge and cultivated areas of the lowlands and foothills of Luzon and Marinduque in the Philippines (Dickinson *et al.* 1991).

Although there is no news of its status on Marinduque (though it must be in very low numbers), evidence from Luzon since 1988 suggests that (other than in Subic Bay Naval Forest Reserve: Collar *et al.* 1994) it is now very rare throughout, with all records in the Sierra Madre originating from 300–700m, and none near habitation (Collar *et al.* 1994, Danielson *et al.* 1994, Poulsen 1995). Recorded from Subic Bay Forest Reserve and Quezon National Park, where it is now very rare (F. Lambert *in litt.* 1997). It has been found recently in Aurora Province in small numbers (F. Lambert *in litt.* 1997).

**Threats:** Habitat loss and trapping for the cagebird trade threaten this species (Collar *et al.* 1994). The export of wild taken specimens of all flora and fauna from the Philippines is prohibited (CITES Notification to the Parties No 980, 1997).

**Action:** Information is urgently required on distribution (including habitat use), status, and threats to the species. A study of the species' year-round ecological requirements may elucidate limiting factors and, if undertaken at the Subic Bay Naval Forest Reserve, could guide management of what appears to be the only known large population (see Collar *et al.* 1998).

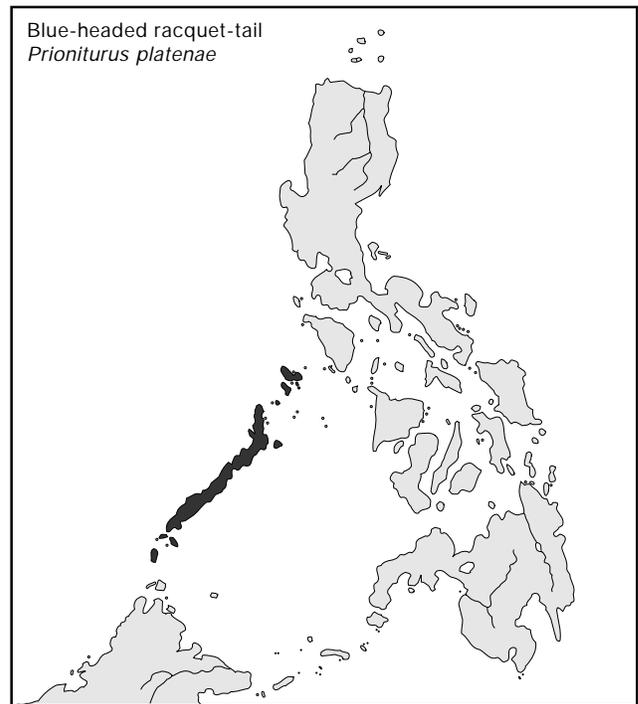
### Blue-headed racquet-tail *Prioniturus platenae*

**Contributor:** Frank Lambert.

**Conservation status:** IUCN: Vulnerable (C1; C2a).  
CITES: Appendix II.  
National protection status: Information unavailable.

**Distribution and status:** This species inhabits lowland forest and adjacent cultivation in the Calamian Islands, Palawan, and Balabac in the Philippines (Dickinson *et al.* 1991).

The blue-headed racquet-tail is uncommon and declining (Collar *et al.* 1994). It has been recorded from Iwahig Penal Colony in 1990 (Collar *et al.* 1998) and is



uncommon but regularly recorded in St Paul Subterranean National Park (Collar *et al.* 1994). It was regularly observed in forests, including secondary forests in Palawan during 1991 (F. Lambert *in litt.* 1997).

**Threats:** Rapid and extensive clearance of its habitat are among the threats to this species (Collar *et al.* 1994). The export of wild taken specimens of all flora and fauna from the Philippines is prohibited (CITES Notification to the Parties No 980, 1997).

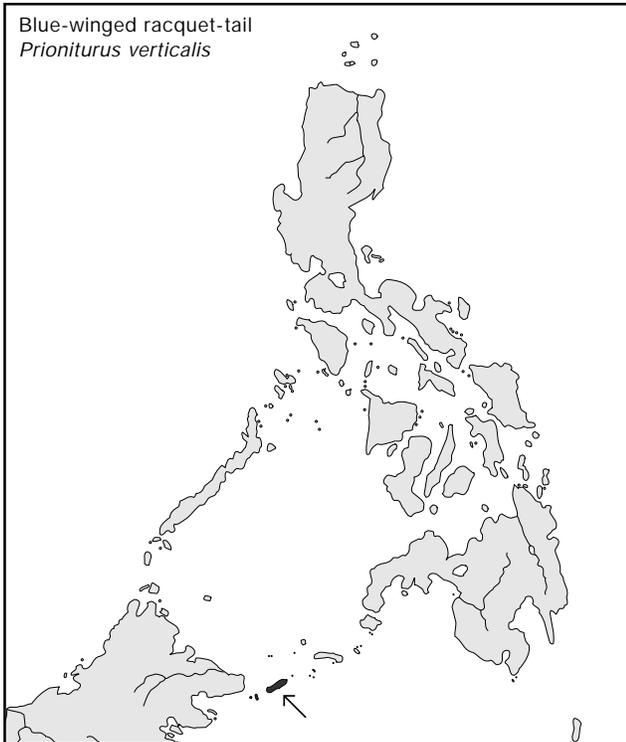
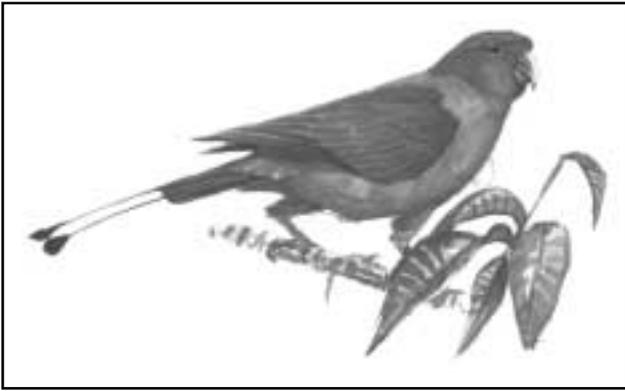
**Action:** Roosts and nest sites should be protected from trappers and a public awareness campaign should highlight the scarcity of this Palawan Province endemic. A survey of all remaining forest areas on the islands to determine the distribution of the species and assessment of its ecological needs are also required (see Box 15).

### Blue-winged racquet-tail *Prioniturus verticalis*

**Contributors:** Des Allen, Tom Brooks, and Guy Dutton.

**Conservation status:** IUCN: Endangered (A2c,d, B1+2a–e, C1, C2a, D1). Formerly Endangered (A1b,c; C1; C2a: see Collar *et al.* 1994).  
CITES: Appendix II.  
National protection status: Information unavailable.

Full justification of additional IUCN threat criteria is given in Collar *et al.* (1998).



**Distribution and status:** This species is endemic to the islands of Tawi Tawi, Bongao, Manuk Manka, Tumindao, Sanga Sanga, and Sibutu in the Philippines (Dickinson *et al.* 1991). It may occur on Simunul (D. Allen *in litt.* 1998).

The blue-winged racquet-tail was reportedly abundant in mangroves on Tawi Tawi a century ago (Dickinson *et al.* 1991), where only a small part of its potential range has been visited recently (D. Allen *in litt.* 1997). In this area, the species was found only near undisturbed forest and in small numbers in September 1991 (Lambert 1993b). Only six racquet-tails were seen in August 1994 (Collar *et al.* 1994), and although none were recorded in July 1995 some were seen in May 1996 and December 1996/January 1997 (D. Allen *in litt.* 1998). The species' last patch of known habitat is about to disappear (Collar *et al.* 1994). However, the species is very difficult to see and calls can be difficult to separate in the field from other parrots (D. Allen *in litt.*

1997). There are extensive tracts of mangrove in the south and east of the island (D. Allen *in litt.* 1997) which may hold the species. No reports from Bongao, Tumindao, or Manuk Manka since the turn of the century exist (Collar *et al.* 1998). It is thought unlikely to survive on Bongao as almost all of the mangroves have been lost, but forest may still survive on Tumindao and Manuk Manka (D. Allen *in litt.* 1997).

**Threats:** Threats to this species include habitat clearance and previous use as target practice by men with high powered rifles (Lambert 1993b), although the latter is no longer thought to be a problem (T. Brooks *in litt.* 1997). None were seen in captivity in 1994 (G. Dutson *in litt.* 1997). The export of wild taken specimens of all flora and fauna from the Philippines is prohibited (CITES Notification to the Parties No 980, 1997).

**Action:** The extent and quality of forest on all islands in the Sulu Archipelago should be determined and considered urgently for protection. As part of this assessment process, forest patches should be surveyed for this and other endemics, starting with mangrove forest on Tawi Tawi and spreading to islands away from Tawi Tawi. Collar *et al.* (1998) state that whilst the other six Endemic Bird Areas in the Philippines now have protected areas, the Sulu Archipelago still has none and an integrated conservation strategy for these islands should consider the needs of several threatened endemic species (such as the Sulu Hornbill). (See Boxes 15 and 17)

## Accounts for species removed from the Red List

### Luzon racquet-tail *Prioniturus montanus*

**Conservation status:** IUCN: Lower Risk, nt (formerly Vulnerable: A2b,c; C1; C2a).

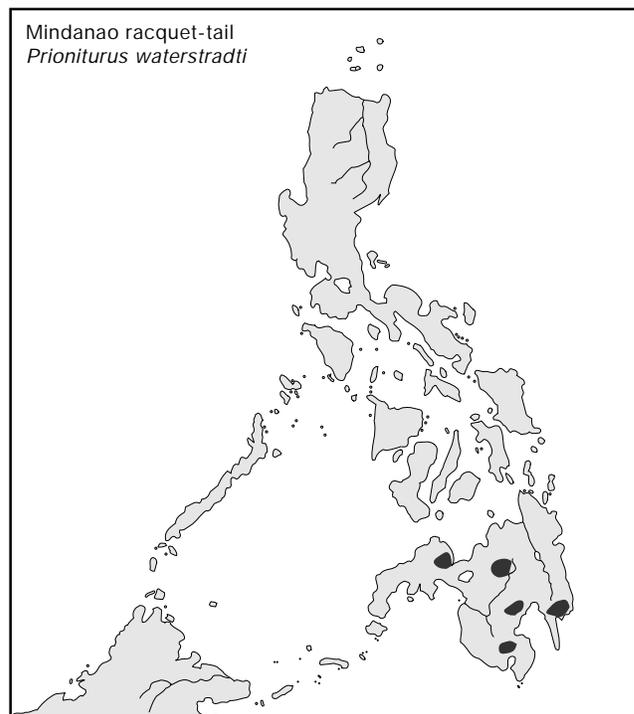
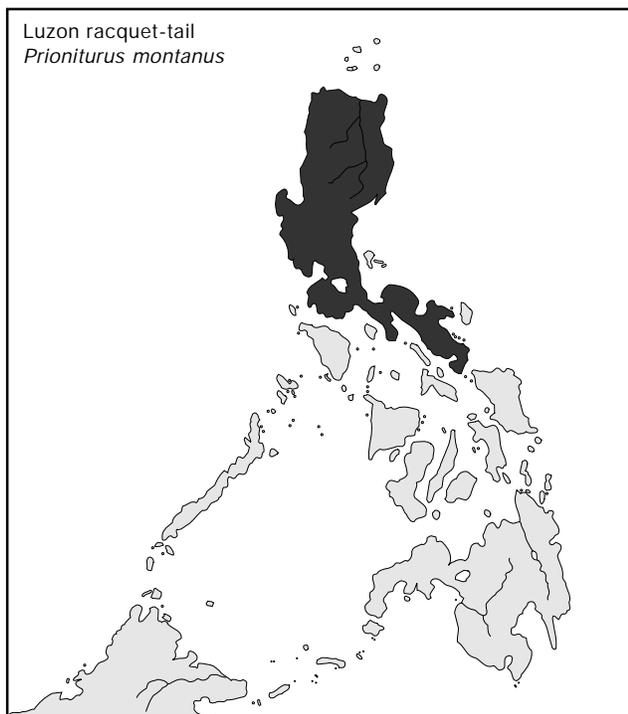
CITES: Appendix II.

National protection status: Information unavailable.

**Reason(s) for removal from the list:** The species is now believed to inhabit areas which are relatively inaccessible, suggesting that its numbers are stable (Collar *et al.* 1998).

**Distribution and status:** The Luzon racquet-tail is endemic to Luzon in the Philippines. It is possibly still common in parts of the Cordillera Central and Sierra Madre in primary forest above 700m (Collar *et al.* 1994).

**Threats:** The combination of habitat destruction, hunting, and trapping for the cagebird trade are threats and require continued monitoring (Danielson *et al.* 1994, Poulsen



1995). The export of wild taken specimens of all flora and fauna from the Philippines is prohibited (CITES Notification to the Parties No 980, 1997).

### Mindanao racquet-tail *Prioniturus waterstradti*

**Contributors:** Nigel Collar and Frank Lambert.

**Conservation status:** IUCN: Lower Risk, nt (formerly Vulnerable: C2a).



CITES: Appendix II.

National protection status: Information unavailable.

**Reason for removal from the list:** The assessment that this species is local and uncommon (Collar *et al.* 1994) has been revised because of information contained in old and new sources (see Collar *et al.* 1998). In addition, the species habitat (montane forest) is relatively safe at present.

**Distribution and status:** The Mindanao racquet-tail is known from nine mountain localities on Mindanao in the Philippines (see Collar *et al.* 1998). It is generally restricted to forest above 1,000m, but has been recorded at 820m and is thought to make daily vertical migrations (Collar *et al.* 1994, 1998).

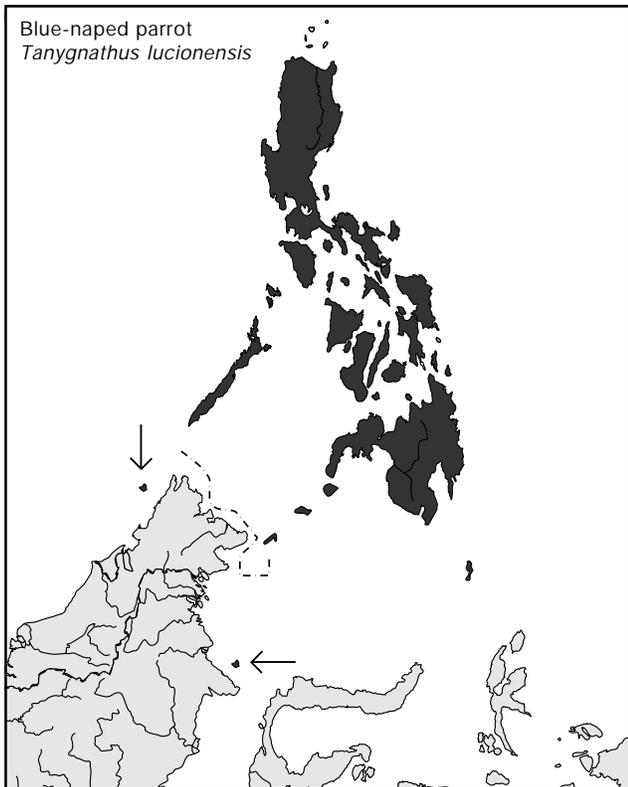
This species is thought to have been abundant in the first half of the century (N. Collar *in litt.* 1997) and is still found in good numbers in Mount Kitanglad National Park. However it is now certainly local and uncommon, apparently occurring at lower density than some of its congeners (Dickinson *et al.* 1991, Collar *et al.* 1994). There are recent records from several areas, including Mt. Apo (F. Lambert *in litt.* 1997).

**Threats:** This species is presumed to be threatened by habitat destruction (Collar *et al.* 1994) although this is now questioned (Collar *et al.* 1998) and should be investigated (see Boxes 15 and 16). The export of wild taken specimens of all flora and fauna from the Philippines is prohibited (CITES Notification to the Parties No 980, 1997).

**Blue-naped parrot**  
***Tanygnathus lucionensis***

The species account for the blue-naped parrot in the Philippines, is the same as that for Indonesia.

**Contributors:** Des Allen, Nigel Collar, Frank Lambert, and Jon Riley.



**Conservation status:** IUCN: Lower Risk, nt (formerly Endangered: A1b,c; A2b,c; C1; C2a).  
CITES: Appendix II.

National protection status: Information unavailable.

**Reason for removal from the list:** Determining this species' status is extremely problematic as it is thought to survive in small pockets of habitat on the smaller islands in its range (Collar *et al.* 1998). This makes assessment of numbers and inference or prediction of population trends difficult. However, its persistence in small numbers, together with the conclusion that it is still fairly numerous in some areas of Palawan and on Tawi Tawi (Lambert 1993, D. Allen *per* N. Collar *in litt.* 1997), and is found in large numbers in a large tract of forest on Talaud (Riley 1997), suggest that it may be best considered Lower Risk, nt (Collar *et al.* 1998).

**Distribution and status:** The blue-naped parrot formerly occurred in lowland forest up to 1,000m throughout the Philippines (in the subspecies *lucionensis* on Luzon and Mindoro, *hybridus* on Polillo, and *salvadorii* in the rest of its range, including 45 Philippine islands), the Talaud Islands, Indonesia, and islands off the north and east of Sabah, East Malaysia (Dickinson *et al.* 1991).

The species was considered common on the larger islands in the Sulu Archipelago in 1971 (du Pont and Rabor 1973) and on Salebabu, Talaud, in 1978 (White and Bruce 1986). It was seen occasionally on Talaud in 1996 where suitable habitat exists on Karakelong, suggesting that the island may support an important population (J. Riley *per* N. Collar *in litt.* 1997). The species was noted on Ticao in 1993 (Curio 1994) and in 1996 a pair was recorded on both Simunul and Sibutu. It was not uncommon around Tawawakan Agricultural Research Station, Tawi Tawi (considered widespread on Tawi Tawi: Dutson *et al.* 1996) and may occur on the small offshore island of Buan (D. Allen *in litt.* 1997). It was considered common wherever remnant forest patches exist (mostly in the mountains) around Mt. Awu and Mt. Sahengbalira on Sangihe in 1996 (F. Lambert *in litt.* 1997). Riley (*in litt.* 1997), however, recorded only a single bird, which may have been an escapee, in five months on Sangihe. Searches have failed to find it on Negros and Siquijor (Evans *et al.* 1993). It was thought rare on Mindoro (Dutson *et al.* 1992), although subsequently was considered quite common in Siburan Sub-prison of the Sablayan Prison and Penal Colony (Brooks *et al.* 1995c). It is thought to be rare on Luzon and elsewhere (Collar *et al.* 1994), in every case as a result of habitat loss and heavy trapping. It was seen regularly in small numbers on Palawan in 1991 in small numbers (especially in the southern half), in areas that still held small patches of forest (F. Lambert *in litt.* 1997). It is found in Bataan, Quezon, Minalungaw, and St Paul Subterranean River National Parks (N. Collar *in litt.* 1997).

**Threats:** Threats to this species include habitat loss and targeting for the pet trade (Lambert 1993b). Occasional sightings in cultivated areas on Talaud (Riley *in litt.* 1997) and in heavily disturbed areas on Tawi Tawi suggest that its tolerance to habitat alteration requires investigation. This would also help with interpreting the species' status given its presence in small habitat patches on many small islands. There were 22 wild caught specimens recorded in international trade between 1991 and 1995, with an annual maximum of 13 individuals in 1991 (CITES Annual Report database). In 1998, the annual export quota from Indonesia was for 190 birds (CITES Notification 1998/07). The export of wild taken specimens of all flora and fauna from the Philippines is prohibited (CITES Notification to the Parties No 980, 1997).

**Mindanao lorikeet**  
***Trichoglossus johnstoniae***

**Contributors:** Nigel Collar and Frank Lambert.

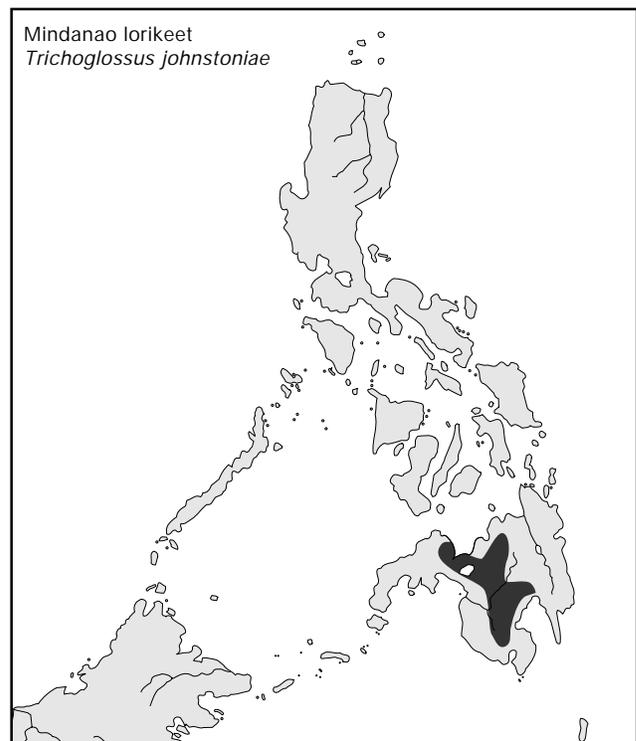
**Conservation status:** IUCN: Lower Risk, nt (formerly Vulnerable: C1; C2a).

CITES: Appendix II.

National protection status: Information unavailable.

**Reason for removal from the list:** The species is now thought to be numerous in montane forest above approximately 1,000m a habitat which is relatively secure at present (Collar *et al.* 1998).

**Distribution and status:** The Mindanao lorikeet inhabits montane forest and forest edge habitat including logged and degraded areas, above 800m on Mindanao in the Philippines. It occurs here as two subspecies, *johnstoniae* on five mountains, *pistra* on one (Dickinson *et al.* 1991).



Thought now to be reasonably secure, although its status away from Mt. Kitanglad is not well known (F. Lambert *in litt.* 1997).

**Threats:** Forest destruction was previously considered a problem (Collar *et al.* 1994), but is now thought unlikely to be a significant threat (Collar *et al.* 1998). Clarification of this would be useful (see Boxes 15 and 16). There were eight wild caught specimens recorded in international trade between 1991 and 1995, all in 1994 (CITES Annual Report database). The export of wild taken specimens of all flora and fauna from the Philippines is prohibited (CITES Notification to the Parties No 980, 1997).