

# Rediscovery of the Critically Endangered Sumatran Ground Cuckoo *Carpococcyx viridis*

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A single individual Sumatran Ground-cuckoo *Carpococcyx viridis* was live-trapped, photographed and released, and this or another bird later seen, inside Bukit Barisan Selatan National Park at Sukaraja, Lampung, Sumatra, on 11 November 1997, apparently the first records in 81 years. These records were within c.100 m of each other, in hilly primary tropical evergreen forest at c.500 m elevation. In October 2000 there was a very probable but unconfirmed sighting of the species in Bukit Rimbang Baling Wildlife Sanctuary, Riau, Sumatra, at c.700 m in mixed primary/secondary hill forest.

## INTRODUCTION

Following an identity crisis lasting 118 years the Sumatran Ground Cuckoo *Carpococcyx viridis* was, in 1995, finally recognised as a full species, distinct from the Bornean form *C. radiatus* (Bornean Ground Cuckoo) with which it had long been lumped (Collar and Long 1995). A comprehensive review of the Sumatran Ground Cuckoo was published in that paper and in BirdLife International (2001). In the latter review, the species was assessed as being Critically Endangered, the highest degree of threat under the IUCN criteria, and it thus was registered as one of the most threatened bird species in Indonesia.

This large terrestrial cuckoo, discovered in 1878, is known by a total of nine specimens, eight of them taken in primary hill forest at 300–1,400 m along the Barisan Range in East Sumatra (Collar and Long 1995), the ninth having no label data (BirdLife International 2001). By contrast, the Bornean Ground Cuckoo occurs in undulating lowland and low hilly forest throughout Borneo (Long and Collar 2002). Several features distinguish the Sumatran Ground Cuckoo: it is about 20% smaller than the Bornean, oil-green rather than purplish-blue on the wing and tail, buff rather than off-white below, without the hood of Bornean birds and possessing a different periorbital skin colour (green in Bornean, green, pink and blue in Sumatran: Collar and Long 1995). There are no recent confirmed records. BirdLife International (2001) document several unconfirmed records including a sighting by a guide above Tapan, and by hunters also in Kerinci Seblat National Park.

Forest loss, both montane and lowland, is intensifying in Sumatra. It has been predicted that virtually all lowland dryland forest on the island will be lost by 2005 (Holmes and Rombang in press). Such concerns, combined with the fact the Sumatran Ground Cuckoo had not been documented since 1916, caused Collar and Long (1995) to remark that 'it is time this bird was rediscovered and learnt about'. The observations of the species by BZ and AR took place the year after this plea, but their significance was not appreciated at the time, and it was only when several ornithologists later visited the area in question and learnt of them from BZ that the impetus for this note was

generated, unfortunately at least a year too late for inclusion in the account of the species in BirdLife International (2001).

## SURVEY METHODS

In the years 1995–1999 the European Union–INTAG Forest Inventory and Monitoring Project undertook multi-disciplinary field surveys to build an Integrated Forest Resource Information System (IFRIS) for the Ministry of Forestry and Estate Crops, Jakarta. As part of this work intensive systematic biodiversity assessments were undertaken by a team that included AR and BZ at 17 sites in the provinces of Jambi, Bengkulu, Lampung and South Sumatra. At each site, three transects of 1.65 km were established; and vegetation and habitat plots of 0.1 ha were sampled every 100 m along the plots (totaling 45 per site). Each site, except those in Jambi, was surveyed for 20 days. Bird survey methods involved 90-minute counts (totaling 232.5 hours at ten sites) and '50-individual' counts (identity and number of individuals was noted, samples repeated after 50 individual birds were recorded) along the transects. In addition, ten small mammal traps were set in each of 45 vegetation plots at each site, and sampled for two consecutive days; effort was about 900 trap-nights per site.

In the period 15–30 October 2000 a local Indonesian NGO (Lembaga Kajian Ilmiah Lingkungan Hidup: LKILH) undertook a biological/bird survey of the Bukit Rimbang-Baling Wildlife Sanctuary in Riau, supported by BirdLife International–Indonesia Programme. The project aimed to document the avifauna of this very poorly known Important Bird Area (see Holmes and Rombang 2001, in press). The survey was led by Sri Mariati, with three assistants, who had participated in BirdLife–IP training on bird identification techniques.

## RESULTS

**Record 1** A single Sumatran Ground Cuckoo was found alive by AR inside a small mammal live-trap at around 08h00 on 11 November 1997 in the Kubu Lincik/Sukaraja area, Bukit Barisan Selatan National Park,

Tanggamus District, Lampung province, 5°30'31"S 104°25'53"E. The habitat in the general area was mainly primary tropical evergreen rainforest on gently sloping hills at around 500 m above sea-level (a coffee plantation patch was about 100 m away). No description or measurements were taken of this individual, but it was photographed before being released. The two photographs reproduced here, consisting of a frontal shot of head and chest (Fig. 1) and a lateral close-up of the head showing the bill, eye and periorbital area (Fig. 2)—a third shot of back and tail is too dark to be informative—clearly confirm the identity of the bird based on comparisons with the cover plate and specimen photographs in Collar and Long (1995) ('C&L' in the following paragraph) and plate in del Hoyo *et al.* (1997).

The upper mandible is black or perhaps dark greenish-brown (C&L mention dark green or greenish-black), while the lower mandible is a light bone colour (C&L give light green or greenish). The orbital skin at the lores is fawn/white or perhaps light green, although the quality of the photos makes this difficult to judge (C&L mention verditer green); behind the eyes is crimson and lilac purple (C&L mention pale lilac); and above the cheek appears to be crimson red (C&L mention pale indigo blue). Feathers on the chin are uniform brown-black, perhaps chestnut-brown (C&L for juvenile mention rich chestnut with mottling, rather than barring, matt black in adults). Throat and upper breast are brownish, with the rest of the underparts finely barred with cinnamon-brown or chestnut (much darker than the juvenile shown in C&L). The upperparts cannot clearly be seen but appear dark green.

**Record 2** For about a minute between 10h00 and 11h00 on the same day as record 1, and (as was determined by checking records much later) at a distance of only some 100 m from the position of the trap involved in that record, BZ observed a bird he first disturbed around 15 m away from him on the forest floor. Although unfamiliar with *Carpococcyx* (and entirely unaware of the live-trap record in the vicinity 2–3 hours before), he immediately recognised it as a type of ground cuckoo as it moved swiftly across the ground into thicker cover. He noted it as fairly large—roughly 60 cm, about the size of a coucal *Centropus*—with a metallic green back, wings and tail, brown and white bars across the chest, and some bright bluish coloration around the eyes. Comparison a few hours later with the illustration of the Bornean form of 'Sunda Ground Cuckoo' in MacKinnon and Phillipps (1993) immediately settled the identity of the bird as that species, the form *viridis* there being described as 'smaller and greener'.

Habitat along the transect line was lowland tropical rainforest at a mean elevation of 514 m (SE 33.3 m), on moderate steep slopes (average 33°). Palms, pandanus, large ferns and rattan were present but not frequent. The ten most dominant trees along the transect were (in descending order of number of individuals): *Stemonurus secundiflora* (Icacinaceae), *Pterocymbium tubulatus* (Sterculiaceae), *Dillenia indica* (Dilleniaceae), *Dipterocarpus kunstleri* (Dipterocarpaceae), *Xanthophyllum excelsum* (Polygalaceae), *Cinnamomum parthenoxylon* (Lauraceae), *Adina polycephala* (Rubiaceae) and *Pometia pinnata* (Sapindaceae).



Figure 1. Head and breast of Sumatran Ground Cuckoo *Carpococcyx viridis* (AR).



Figure 2. Close-up of Sumatran Ground Cuckoo *Carpococcyx viridis* (AR).

**Record 3** Participants in the LKILH survey of Bukit Rimbang-Baling Wildlife Sanctuary (1,460 km<sup>2</sup>) in Riau province reported sighting what they believed was a Sumatran Ground Cuckoo in a hilly area of open secondary forest with a dense undergrowth above 700 m at their fourth and last study site (0°22' S 101°07' E) at noon on 30 October 2000. WMR and CRT think it entirely possible that the survey team were correct in their identification (all other birds they reported have subsequently been confirmed at the site), but as no notes were provided, and given the great rarity of the species, they judge that this record is best left as provisional.

## DISCUSSION

The first two of these records confirm that the Sumatran Ground Cuckoo is still extant and is to be found further south than any previous record (see the map in BirdLife International 2001). Collar and Long (1995) stated that the 'Barisan Range is a major repository of biological value', and strongly recommended 'new initiatives to catalogue and study the avifauna of the region, with particular reference to its endemic and threatened birds and to the adequacy of the long-term conservation provided for them by existing protected areas'. This call is being carried forward at Bukit Barisan Selatan National Park by the Wildlife Conservation Society Indonesia Programme. Moreover, the European Union-INTAG project, during which these records (albeit very possibly of the same individual bird) were made, has resulted in a detailed database of bird records for the area which it is greatly hoped will duly be analysed and published. Forest in the national park is amongst the more secure areas along the Barisan Range to which the Sumatran Ground Cuckoo is endemic (see BirdLife International 2001: 1716-1718), but the capture of a specimen in a mammal trap is evidence of the species's susceptibility to capture by ground snares set by hunters for ground-dwelling birds and small mammals.

The third record strongly hints that it may occur at a key biodiversity site (identified as an Important Bird Area: see Holmes and Rombang 2001, in press) in central Sumatra. Few data were previously available for this site, but a total of 157 birds were observed including four globally threatened and 10 Near Threatened (using the classifications in Collar *et al.* 1994). Follow-up work specifically seeking the Sumatran Ground Cuckoo and other key birds, and evaluating forest status and threats in the region, would be valuable. Holmes and Rombang (2001, in press) note that illegal timber cutting, forest encroachment and infrastructure development are major threats to ecosystem viability at Bukit Baling.

CRT would like to thank Sujarwoko of FIMP for extracting details of avifaunal and habitat data, and the survey team for their quality fieldwork. They were supported by Forest Protection and Nature Conservation Department (PHKA). Work by the NGO LKILH was supported by BirdLife International-Indonesia Programme including the provision of a small grant from the 'Committee of Environmental Education Project for Indonesia' (from Japan). BZ wishes to thank Mistar, Ilhami and Sukianto Lusli for their help and company in the field, and Neville Kemp and Bas van Balen for helping to identify the significance of the observations. Thanks also go to Sri Mariati (LKILH), Seno Subroto (LKILH), Kokok Yulianto (Science Faculty, University of Riau), Budi Hartono (Science Faculty, University of Riau) and Rusli (PHKA regional office at Indragiri), for giving us details of their record from Bukit Rimbang-Baling Wildlife Sanctuary.

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