Ringing and birding experiences in paradise: a trip to Papua New Guinea

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New Guinea, the second largest island after Greenland, is situated just south of the equator north of Australia. It is incorporated as part of the Australasian zoogeographic region, lying east of Wallace's Line. It has a unique avifaunal assemblage and is home to approximately 42 species of birds of paradise (Paradisaeidae) (Frith & Beehler 1998). Parrot species are plentiful with approximately 46 species found in New Guinea (Beehler *et al.* 1986). The larger, conspicuous and charismatic species include the Palm Cockatoo *Probosciger aterrimus*, the sexually dichromatic Eclectus Parrot *Eclectus roratus*, the Vulturine or Pesquet's Parrot *Psittrichas fulgidus* and the Sulphur-crested Cockatoo *Cacatua galerita*. It is a wonderland of strange and obscure creatures, many of them sharing close affinities with the Australian mainland. Tree kangaroos *Dendrolagus* spp. occur throughout most parts of the country and include some recently discovered species. It is devoid of large predators with possibly the most 'dangerous' being pythons and the New Guinea Harpy Eagle *Harpyopsis novaeguineae*. Although large predators are absent a stroll through the jungle is no 'stroll in the park'. Malaria is common at lower and warmer altitudes and leeches abound. Together with the rugged terrain and drenching humidity these factors try the hardiest of field researchers.

In April 2002 I arrived in this mysterious country to conduct a seven-month study on the effects of homegarden practices on bird communities in the Eastern Highlands Province. I set up a base at Haia, a village centred around a small airstrip about 80 km south of the Eastern Highlands Province capital, Goroka. Haia has a population of approximately 1000 people and is only accessible from Goroka by small plane (Igag 2002). The airstrip acts as an entry into the Crater Mountain Wildlife Management Area, a 2700 km^2 region dedicated to sustainable utilisation of the environment and natural resources (Igag 2002, Igag & Murphy 2002). Through the support of the Research and Conservation Foundation of Papua New Guinea (RCF) local communities are encouraged and advised in maintaining a sustainable environment. This is done by encouraging ecotourism and promoting research opportunities in the region (Igag & Murphy 2002).

My research involved censussing birds in different habitat types; from pristine forest to active gardens and clear felled areas. An extensive survey was covered in a wide area around Haia and Soliabedo, a settlement approximately 2–3 days walk west of Haia. It was near Soliabedo, during the late 1960s, that Jared Diamond conducted some of his early avifaunal research in the region (Diamond 1972). He appeared to have accessed Soliabedo from Karamui in the north, and although Soliabedo is now abandoned and two new settlements have been formed, I became familiar with his descriptions of the region. The second part of my study involved censussing on a local scale, with more detailed data collection in a 2.5 × 0.5 km grid established north of Haia. Maintaining data collection in a climate where seven metres of rain falls a year was difficult, but by the end of my stay in October, I had completed most of my work. Although not part of my study, I did hope to do some bird ringing and observe close-up some of the elusive forest birds I'd detected while censussing.

In the late 1980s a study of the Dwarf

Cassowary *Cassuarius bennetti* was initiated by Drs Andy Mack and Debra Wright. They established the Crater Mountain Biological Research Station (CMBRS) at Wara Sera and initiated a long-term bird-ringing program. During 1989–1993, 170 species were observed at the CMBRS and 1787 individuals captured (Mack & Wright 1996). I spent about 10 days at the station and caught 19 species of eight families. Of the 46 birds caught 26 (56.5%) were recaptures (Table 1). This high recapture rate gives some indication of the high site fidelity of many understorey forest species. On Mt Albert Edward (PNG) during a two-day trip (11–12 August 1969) Jared Diamond recaptured 5 of 17 birds that Harry Bell had ringed almost two years previously, indicating high site fidelity for those species (Bell 1971). During the four days I ringed for a total 1945 minutes (32.4 hrs). The length of the net erected ranged from 120 to 200 m and capture rate was calculated at 1.24 birds.100 m-net^{-1}.hr^{-1}. This was slower than at two montane forests in KwaZulu-Natal where I'd ringed previously (2.23±0.34 and 2.92±0.35 birds per 100 m-net per hour) (Symes *et al.* 2001). A Dwarf Kingfisher *Ceyx lepidus* was released without a ring as no rings of the correct size were available. An additional two Sulphur-crested Cockatoos *Cacatua galerita* were colour-ringed at Haia. These were two juveniles that had been removed from a nest, were relatively tame, and allowed to fly freely around

Table 1. List of bird species captured at CMBRS indicating number of individuals caught and number of recaptures. * indicates not ringed.

Common name	Scientific name	Captures	Recaptures
Alcedinidae (kingfishers & kookaburras)			
Dwarf Kingfisher *	*Ceyx lepidus*	1	0
Acanthizidae (Australian warblers)			
Rusty Mouse-Warbler	*Crateroscelis murina*	4	4
Pale-billed Scrub-wren	*Sericornis spilodera*	2	1
Rhipiduridae (fantails)			
Sooty Thicket-Fantail	*Rhipidura threnothorax*	1	0
Black Fantail	*Rhipidura atra*	1	0
Eopsaltriidae (Australian robins)			
White-rumped Robin	*Peneothello bimaculatus*	1	1
Pachycephalidae (whistlers, pitohuis & allies)			
Rusty Whistler	*Pachycephala hyperythra*	3	2
Little Shrike-thrush	*Colluricincla megarhyncha*	5	3
Rusty Pitohui	*Pitohui ferrugineus*	1	0
Crested Pitohui	*Pitohui cristatus*	1	0
Dicaeidae (flowerpeckers & berrypeckers)			
Black Berrypecker	*Melanocharis nigra*	1	0
Meliphagidae (honeyeaters)			
Long-billed Honeyeater	*Melilestes megarychus*	2	1
Slaty-chinned Longbill	*Toxoramphus poliopterus*	4	2
Dwarf Honeyeater	*Oedistoma iliolophus*	4	1
Spot-breasted Meliphaga	*Meliphaga mimikae*	10	9
Obscure Honeyeater	*Lichenostomus obscurus*	3	0
Tawny-breasted Honeyeater	*Xanthotis flaviventer*	1	1
Ptilonorhynchidae (bowerbirds)			
White-eared Catbird	*Ailuroedus buccoides*	1	1
Total		**46**	**26**

the village.

Many of these species were recorded regularly at my census points. A high proportion of species (and individuals) caught were nectarivores of the endemic Australasian family of honeyeaters (Meliphagidae) (Table 1). While handling these species I was reminded of southern Africa's endemic sugarbirds (Promeropidae). I've ringed numerous Gurney's Sugarbirds *Promerops gurneyi* and am always aware that their sharp claws are capable of piercing the skin like pins.

Because nectarivores require a constant source of sugar energy any delay in their feeding activity is likely to have implications on their daily energy intake. Therefore, when ringing sunbirds in South Africa, I usually mix up a small bottle of sugar water (with honey added if available) to offer any birds before being released. In most cases they will drink from the hand. Most of the nectarivores I caught drank the sugar water I offered them, with a couple of birds drinking for at least a minute.

The Australasian region is unique for its nectarivorous parrots, which usually feed in large mixed flocks in flowering canopy trees. Every so often I would come across a tree with hundreds of feeding birds, Rainbow Lorikeets *Trichoglossus haematodus*, Dusky Lories *Pseudeos fuscata*, and smaller species of the *Charmosyna* genus. What a spectacle it was to see these colourful birds, like typical nectarivores, darting around in the canopy. Unfortunately I never ringed any.

Most of the species captured are brown or black [except the catbird which was the largest (165 g), with a green back and pale below with black spots] making them camouflaged and inconspicuous in the forest under-storey. Unless one is patient in the forest, and has time to wait for them, only their calls are heard. The nectarivores are generally more active and their movements easier to detect. However, the similar looking meliphagas are difficult to identify unless one is familiar with what to expect in a region, has learnt their calls and gets a good view of individuals. Many areas of New Guinea remain under-researched so one never knows what to expect in an unvisited region. One of my most favourite birds, despite it also being one of the most common, was the Long-billed Honeyeater *Melilestes megarhynchus*, which was never shy in my presence. Its call was quite bulbul-like and I would often be alerted as it dashed through the undergrowth, passing close by. In the hand I became aware of how long the bill actually was (45–47 mm). The inner-side of the tip of the upper mandible is slightly serrated, much like the Malachite Sunbird *Nectarinia famosa*. This tended to get stuck on the mist-net threads, making birds difficult to remove.

While working in the area one is obliged to employ local guides and porters. By doing so the benefits of ecotourism, research and sustainability of the environment in the long term are encouraged. Set rates are established thereby preventing unnecessary disputes with local people over such matters. Logging concessions, where only short term benefits are realised, are in operation on lands bordering the CMWMA. Already decreases in certain animal species are evident. My guide, Ijenepe, had spent his whole life in the forest and was extremely knowledgeable of his environment. Like most of his community they are eager to learn and in a short time he became experienced in removing birds from the net. It was moving to watch his appreciation of birds seen close up, and his understanding of this aspect of research he'd had little experience of. Hopefully what he'd learnt from me would benefit future researchers in the area. I certainly benefited from his knowledge.

Certain birds responded to 'spishing' or call imitations and I offered Ijenepe an incentive for particular birds he could lure into the nets. Pheasant Pigeon *Otidiphaps nobilis* Greater Black Coucal *Centropus menbeki* and Blue-breasted (Red-bellied) Pitta *Pitta erythrogaster* responded well to call imitations and although some of these birds came close to Ijenepe, none were caught. The Crested Pitohui *Pitohui cristatus* makes a low mournful call that emanates through the forest. Imitating this call invokes an aggressive response from any territory holder. At one of

my census points I was 'teasing' a particular bird but, because of the ventriloquist characteristic of their calls in the forest, could not determine the location of the bird. In the next instance I felt a bird rush from behind as it brushed over the top of my head. This was a Crested Pitohui adamant on evicting any conspecific intruders, no matter what their size.

A group of birds I was disappointed not to catch was the birds of paradise (BOP's). However, observing King BOP *Cicinnurus regius*, Magnificent BOP *C. magnificus* and Raggiana BOP *Paradisaea raggiana* displaying was enough to whet my appetite. Malaria struck me at the end of my seven months and my plan to visit some higher altitude forests to observe *Parotia* spp. and *Astrapia* spp. was cut short. The closest I came to viewing an Astrapia was when I saw the feathers in the elaborate head-dresses at the annual Goroka Show Independence Day celebrations.

Another two of the many highlights of my trip were the observation of a Dwarf Cassowary and New Guinea Harpy Eagle. In villages hunters will catch cassowary chicks and raise them under domestic conditions. When they are fully grown they will eat, trade or sell them. At one of my census points I was waiting quietly and observing birds. My guide caught my attention and pointed to a cassowary moving slowly through the undergrowth. It came closer and at about 10 m noticed us. At that point it dashed away through the undergrowth with a grunt. Around Haia I would often hear the 'bowstring' call of the harpy eagle, but never saw one. Finally, at one of my census points, relatively close to the village I saw a lone bird perched on top of an emergent snag. A flock of Sulphur-crested Cockatoos were harassing it and it finally flew off. Moments like that became truly etched in my mind.

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For further information see:

- **http://www.rcf.org.pg/research.html** (RCF; research in PNG; ecotourism in CMWMA.)
- **http://www.nri.org.pg/visa.htm** (National Research Institute of PNG; research visas for PNG)
- **http://www.egs.mmu.ac.uk/users/mdobson/Marsden/Marsden.html** (Dr S. Marsden's research projects)

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