



Plate 1. Talaud Rail *Gymnocrex talaudensis* painted from the holotype (Martin Woodcock).



Plate 2. Photographs of the live holotype of *Gymnocrex talaudensis* in Beo, 6 September 1996 (F. R. Lambert).



Plate 4. Photograph of a live *Gymnocrex plumbeiventris* taken in Papua New Guinea, December 1995 (Phil Gregory). This individual appears to be brighter than specimens in museum collections and other photographs taken in New Guinea (see, for example, Gregory 1995).



Plate 3. Comparison of holotype of *Gymnocrex talaudensis* (centre) with specimens of *G. plumbeiventris* in the Natural History Museum, Tring.

A new species of *Gymnocrex* from the Talaud Islands, Indonesia

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In August 1996, an unidentified rail, resembling the three described species of *Gymnocrex*, was encountered on the Indonesian Island of Karakelong, which lies between the island of Mindanao (Philippines) and Sulawesi. One specimen of the bird was subsequently collected, after local people had trapped it for food. Comparison with other species of *Gymnocrex* shows that this rail is a previously undescribed species, most closely related to *G. plumbeiventris* of the Moluccas to New Guinea. The proposed name for this species is *Gymnocrex talaudensis*, sp. nov., the Talaud Rail. It is a secretive but probably not rare inhabitant of wet grassland and rank vegetation habitats at the edge of forest. Whilst it may also occur on the other islands in the Talaud archipelago, it is in all likelihood endemic to the archipelago, and this, therefore, raises the conservation significance of these small islands. It is not considered threatened at the present time, since Karakelong still has abundant suitable habitat for the species, but the species should be classified as Data Deficient based on the criteria developed for the IUCN Red List Categories.

INTRODUCTION

The genus *Gymnocrex*

Three species in the genus *Gymnocrex* have been previously described. One is the Bare-eyed Rail *G. plumbeiventris* G. R. Gray 1862, known from the north Moluccan islands of Morotai, Bacan and Halmahera, and from New Guinea, Misol, the Aru Islands, Karkar and New Ireland. It is reported to inhabit the floor of forest as well as swamps and wet grassy areas near lakes and rivers (White and Bruce 1986, del Hoyo *et al.* 1996). In New Guinea, this species has been found from sea level to at least 2,000 m (P. Gregory *in litt.*). The second species is the Intact Rail *G. intactus* Sclater 1869, known from one specimen from the Solomon Islands, which is probably conspecific with *G. plumbeiventris* (Knox and Walters 1994). The third species is the Blue-faced Rail *G. rosenbergii* Schlegel 1866, an endemic of central and northern Sulawesi and the satellite island of Peleng in the Banggai Archipelago (White and Bruce 1986). This last species is a rarely observed and very poorly known inhabitant of forest (Coomans de Ruiter 1947, Lambert 1989). Although Ripley (1977) included both *Gymnocrex* and *Aramides* in the genus *Eulabeornis*, many recent authors (e.g. White and Bruce 1986, Inskipp *et al.* 1996) have followed Olsen (1973) who considered that *Gymnocrex* was a distinct genus. Olsen (1973) based this on the peculiarly shaped, sharply tapering bill, bare orbital skin and short toes of *Gymnocrex* when compared to *Aramides*. He also noted that there were differences in the shape of the pelvis.

Discovery of the new *Gymnocrex*

Just after dawn on 15 August 1996, near Tarohan on Karakelong Island in the Talaud archipelago, Indonesia (Figure 1), Christian Mamengko and I had clear, but brief and unaided, views of a distinctive rail walking casually

across a tarmac road in front of our vehicle. The bird then entered rather short grass underneath some dispersed, small cocoa trees, where it paused for about 30 seconds, some 10 m distant, before running off into wet grassland and scrub at the edge of swampy forest. I followed the rail immediately but the bird was not seen again, and nor was it observed in the early morning of 16 August or on 2 September when I revisited the site.

Upon questioning (in Indonesian, by the author), villagers on the island confirmed that there was a bird that lived on the ground that had a 'chocolate-red' head, long yellowish bill and white around the eye which was locally known as the *Tuu-a*. This bird was reported to be extremely shy but occasionally eaten by villagers, who caught it in traps set for terrestrial birds, or using their dogs. It was said to frequent very wet grassland and scrub at the edge of forest, and one villager said that he had also observed it in primary forest.

On 6 September 1996, a man was encountered in Beo, selling various birds, which had apparently been caught near his home village of Rainis. He had in his possession several rallids, including one live specimen of the unidentified *Gymnocrex* seen on 15 August (Plate 2). The *Gymnocrex* was photographed but died within an hour. After consultation with officers from the local office of the Directorate of Forest Protection and Nature Conservation (PHPA), this individual was made into a specimen.

Subsequent literature research indicated that the unidentified *Gymnocrex* most closely resembles Bare-eyed Rail *Gymnocrex plumbeiventris*. After examination of six specimens of *G. plumbeiventris* from the Aru Islands, Misol and New Guinea in the British Museum, as well as photographs of three live birds from New Guinea, I concluded that, based on significant differences in both plumage and biometrics, and using the biological species concept, that the *Gymnocrex* from Karakelong should be considered a separate species.

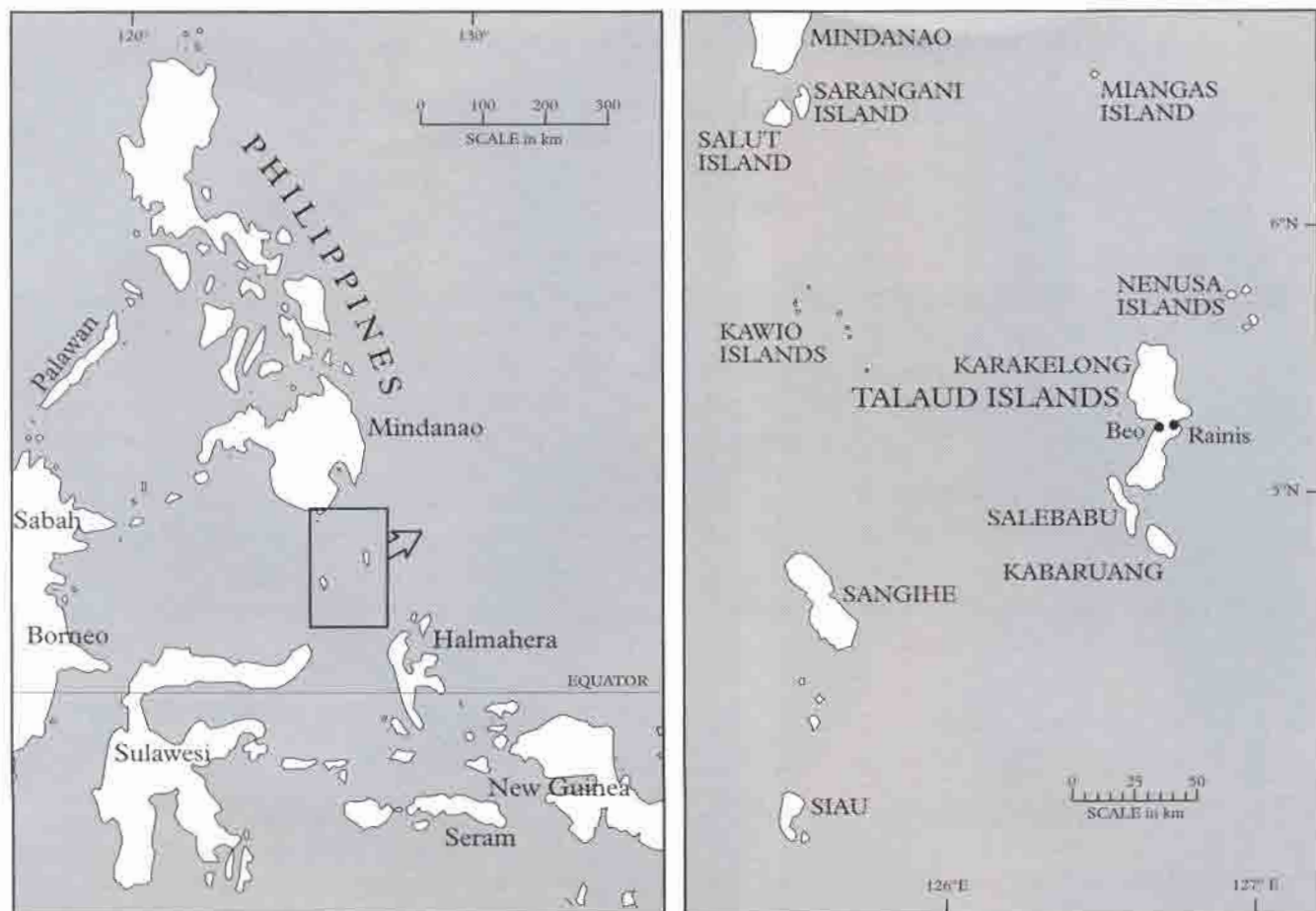


Figure 1. Map showing the Talaud Islands and places mentioned in the text.

The proposed name for this new species of rail is:

Gymnocrex talaudensis, sp. nov.

Talaud Rail

Holotype

Museum Zoologicum Bogoriense No. MZB 30.271, Bogor, Indonesia, collected by Frank R. Lambert on 6 September 1996. The bird was obtained in Beo, Karakelong Island, Talaud (4°14'N 126°47'E), from a hunter who had trapped it near Rainis (4°14'N 126°51'E) at an altitude of less than 100 m. Unsexed, presumed to be adult, based on brightness and texture of plumage and bare part colours. See Plates 1-3.

DESCRIPTION OF HOLOTYPE

The bird is considered to be an adult, based on plumage coloration and texture, and bright coloration of bare parts, although it was not sexed. It was undergoing an extensive moult, with feathers of the body, remiges and rectrices in sheath, suggesting post-breeding plumage. Some feathers were damaged during capture and transportation, with the consequence that many of the flight feathers and the entire tail are now missing (note that the colour of the tail is therefore unknown, and that the shape and colour of the tail in Plate 1 is based on *G. plumbeiventris*, which is assumed to be similar in this respect).

(Where possible colour names and codes of swatches contained in Smithe (1975) have been used in the

preparation of the plumage description. It is hoped that this will aid future museum workers to make comparisons without reference to the type specimen. In addition, it provides some insurance against fading, or other deterioration, in the skin.)

Head, neck and breast Chestnut (32), with a slight maroon bloom; feathers of chin Sepia (219) (a dark brown colour) with some Chestnut (32) on feather tips. Entire mantle, back and upperwing-coverts bright Greenish-Olive (49) with the distal third of mantle feathers iridescent, forming a bright shining green (with blue-grey and green elements depending on the light) patch across the mantle. Feathers of rump more Olive-Brown (28), with uppertail-coverts Sepia (119) (a blackish colour). Tail feathers missing. Belly to undertail-coverts Sepia (119), like uppertail-coverts. Most flight feathers missing, but those present dull Tawny (38), becoming more Greenish-Olive (49) on outer webs. Underwing-coverts Sepia (119) with white tips of many feathers forming large white spots.

Iris bright red, surrounded by a large bare skin patch that is pink anteriorly and silvery-white at the rear (the silver colour disappeared after death). This patch is most extensive behind the eye. Bill bright yellow with dusky distal third and darker coloration around the large nares. Legs yellow, becoming pinkish on the feet.

Measurements

See Table 1 for measurements of the holotype. The bill of *G. talaudensis* is between 6.2% and 33.3% longer than those of specimens of *G. plumbeiventris* (n = 25), while the tarsus is between 13.3% and 29.4% longer than those

Table 1. Bill and tarsus measurements of the four species of *Gymnocrex*.

Museum No.	Museum data		Measurements in mm			
	Sex	Locality	Bill length*	Nares to tip	Tarsus	Notes
<i>G. plumbeiventris</i>						
BMNH 1873.5.12.2356	U	Misol ('Morty Is' on label)	51-52	30	53	Holotype, adult
NMNH Cat no. 1	F	Morotai, Moluccas	51.3	29.7	^b	
NMNH Cat no. 2	F	Morotai, Moluccas	52.5	29	^b	
NMNH Cat no. 3	F	Halmahera, Moluccas	52.3	31.1	^b	
AMNH 467445	F	Halmahera	49	30	58	
AMNH 545548	U	Halmahera?	50	30	61	
AMNH 545544	U	North Moluccas	53	31	57	
AMNH 545545	M	Waigui (Waigeo)	49	31	59	
NMNH Cat no. 5	F	Misol	54.6	29.7	^b	
NMNH Cat no. 6	F	Irian Jaya (New Guinea)	49.4	31.1	58.2	Legs scarlet, bill black with yellow base
AMNH 338637	U	Irian Jaya (New Guinea)	50	31	59	
AMNH 545547	M	Irian Jaya (New Guinea)	46	29	58	Iris light brown; bill dark horn; feet brick red
BMNH 1880.9.13.55	F	Papua New Guinea	50.1	27.5	55.6	
AMNH 425159	M	Papua New Guinea	45	30	58	
AMNH 425160	F	Papua New Guinea	49	28	59	Iris brown; skin above eye pink; nostril light yellowish-green; feet salmon
AMNH 425161	F	Papua New Guinea	47.5	29	56	
AMNH 425162	F	Papua New Guinea	51	31	59	
AMNH 529383	M	Papua New Guinea	47	30	59	Iris brown; bill blackish, yellow nostrils; feet red
AMNH 766163	M?	New Guinea	48	29.5	59	Iris sienna brown; feet salmon with brown; facial skin dark flesh
AMNH 545546	F	Dampier Island	42	26	51	Iris brown; bill blackish-horn, greenish-yellow base; feet red
BMNH 1881.11.7.172	U	Aru Islands (' Queensland' in error, see Warren 1966)	52.2	30	55.4	Syntype of <i>Eulabeornis griseoventris</i> Diggles 1878
BMNH 1881.11.7.171	U	Aru Islands	()	()	59.1	Bill tip damaged
BMNH 1881.11.7.705	U	Aru Islands	()	()	55.8	Bill tip damaged
BMNH 1881.11.7.706	U	Aru Islands	50	27.8	56	
AMNH 545553	U	no data	48	29.5	58	
AMNH 545553	U	no data	49	30	60	
AMNH 545553	U	no data	50	30	60	
Mean			49.4	29.6	57.6	
<i>G. intactus</i>						
BMNH 1887.1.20.12	U	Solomon Islands	48.3	()	56.4	Holotype. Nares damaged
<i>G. talaudensis</i>						
MZB 30.271	U	Karakelong Island	58	33.5	68	Iris bright red; bill bright yellow with dusky distal 1/3 and darker around nares; legs yellowish, becoming pinkish on feet
<i>G. rosenbergii</i>						
USNM 250058	M	Sulawesi	41.4	25.0	69.6	Dried bill: upper mandible dark yellowish horn, lower mandible pale dusky yellowish-horn.
BMNH 1894.12.14.40	U	Sulawesi	46.2	26.1	64.9	Both BMNH specimens have dried bill with extensive yellow and with dusky distal half to third
BMNH 1890.4.22.2	M	Sulawesi	48.2	27.5	^b	
Mean			45.3	26.2	67.3	

*Bill length is here measured as the distance from the corner of the gape (where the upper and lower mandible meets) to the bill tip (as illustrated in Lambert and Woodcock 1996).

^b Tarsi could not be accurately measured on mounted specimens.

Museum codes: BMNH - The Natural History Museum, Tring; NMNH Leiden - National Museum of Natural History, Leiden (measurements made by René Dekker); AMNH - American Museum of Natural History, New York (measurements made by Paul Sweet); USNM - United States National Museum (Smithsonian Institution), Washington (measurements made by Pamela Rasmussen). For collection locality of BMNH type specimen from Misol (= Mysol), see Warren (1966). Sex: M - male, F - female, U - unsexed.

of *G. plumbeiventris* ($n = 23$) for which measurements were available (Table 1). The longest-billed specimen of *G. plumbeiventris*, from Misol, has a bill length of 54.6 mm compared with 58 mm for the *G. talaudensis* holotype; the longest tarsus measurement for the former species was 60 mm, compared with 68 mm for the *G. talaudensis* holotype. Even the relatively long-legged *G. rosenbergii* apparently can have a shorter tarsus (Table 1). Wing measurements are not compared because the wings of the specimen of *G. talaudensis* are not complete, being both in heavy moult and damaged during transportation to market or during capture.

Diagnosis

Most similar to *Gymnocrex plumbeiventris*, and presumably forming a superspecies with it, but differs significantly from that species in biometrics, plumage pattern and coloration, and bare part colour (Plates 1–4). Despite their allopatry, these differences are of sufficient magnitude that treatment of this new taxon as a full species is warranted. Firstly, the entire pattern and colour of the upperparts differ, except for the presence of blackish (i.e. Sepia 119) on the uppertail-coverts, which is shared. The upperparts of *G. plumbeiventris* are a dull ochraceous brown (closest to Raw Umber 123), with a golden tinge in bright light, but those of *G. talaudensis* are Greenish-Olive (49) with a brighter, iridescent mantle. The pattern differs also, with the rich colour of the head and neck extending onto the mantle in *G. plumbeiventris*, but not in *G. talaudensis*, while the area of dark Sepia on the uppertail-coverts is more extensive in *G. plumbeiventris*, extending onto the lower back. *G. talaudensis* has a deeper chestnut colour to the head, neck and breast than *G. plumbeiventris* (which has a colour closest to Brick Red 132A), even when compared to the unusually bright bird shown in Plate 4. The belly to undertail-coverts and tarsus feathers of *G. plumbeiventris* are leaden grey or slaty (Dark Neutral Gray 83), becoming blacker (Blackish Neutral Gray 82) towards the rear, while this entire area is uniform Sepia (119) in *G. talaudensis*. The pattern on the underparts also differs, with the rufous breast of *G. plumbeiventris* usually neatly demarcated from the slaty grey, while the pattern on *G. talaudensis* is apparently much more ragged. Furthermore, the chin of *G. talaudensis* is Sepia (219), while that of *G. plumbeiventris* is pale rufous (Raw Umber 23). Finally, the few flight feathers of *G. talaudensis* available for comparison with those of *G. plumbeiventris* suggest that the former are more olive, particularly on the outer webs.

The limited information available on bare-part colour of *G. plumbeiventris* suggests that the bill is usually basally dull yellow or greenish-yellow in colour, while that of the specimen of *G. talaudensis* is a striking bright yellow for the basal two-thirds of its length. However, it should be noted that the unsexed type specimen of *G. plumbeiventris*, collected by A. R. Wallace on Misol, still shows a distinct bright yellow colour at the base of upper mandible, suggesting that bill colour may vary according to sex or season. Furthermore, the live *G. plumbeiventris* shown in Plate 4 has extensive bright yellow on the basal half of the bill.

The legs of the dried specimens of *G. plumbeiventris* in BMNH are generally yellowish, becoming pinkish on the feet. However, *G. plumbeiventris* clearly has pinkish-red to scarlet legs in life (Ripley 1977, Beehler *et al.* 1986, del Hoyo *et al.* 1996), as demonstrated by data on specimen

labels (see Table 1) and confirmed by three photographs of birds from New Guinea (P. Gregory, pers. comm.; see Plate 4). In life, the legs of *G. talaudensis* are yellow, particularly the upper legs, but becoming yellowish-pink on the feet.

Both *G. plumbeiventris* and *G. talaudensis* have a bare patch of skin around the eye (a characteristic of the genus) but, while this is reported to be pink in *G. plumbeiventris*, that of *G. talaudensis* is anteriorly pink but broadly white at the rear, giving the patch the appearance of being silvery-white in the field. As far as can be judged, the bare eye-patch of *G. talaudensis* is larger than that of *G. plumbeiventris*.

The iris colour of the *G. talaudensis* collected was bright red, while that of *G. plumbeiventris* is most often reported to be brown. One of the two photographs of live *G. plumbeiventris* from New Guinea confirms this brown coloration, although the iris colour of the brighter bird shown in Plate 4 cannot be determined. Taylor and van Perlo (in press) state that the iris colour of *G. plumbeiventris* is red, red-brown or brown.

ETYMOLOGY

This species is named after the Talaud (=Talaut) Islands, to which it is presumably endemic. Emphasizing the name of this little-known archipelago will hopefully draw some attention to its ornithological importance. There are several endemic subspecies that have the trinomial *talautense* or *talautensis*, but this is the first species that has been named after the islands. The common name of *G. talaudensis*, Talaud Rail also draws attention to this distribution.

DISTRIBUTION, HABITAT AND STATUS

Gymnocrex talaudensis is presently known only from Karakelong, the largest island in the Talaud Archipelago, which is situated between the island of Mindanao (Philippines) and Sulawesi (see Figure 1). The topography and vegetation of the island are briefly described by Lambert (1997).

Based on the single brief observation, and discussion with local rural people on Karakelong who might come into contact with *G. talaudensis*, the species would appear to be relatively widespread on the island and is reported to be not uncommon in wet grassland habitats at the edge of forest and rank vegetation. Many villagers knew this species by its local name, *Tuu-a*, although in a couple of instances, it was not clear if the name was being misapplied to another terrestrial species. Nevertheless, most villagers questioned mentioned the 'chocolate' or 'chocolate-red' (*coklat mera*) head and silvery-white eye-patch, which is here considered as conclusive that they knew the species (it seems unlikely that there is yet another undescribed railid with a pale eye-patch). A bus driver claimed that he regularly saw this species cross the road, at the site where the individual was observed on 15 August, but that he had not seen the bird elsewhere on the island. However, it is possible that he could have been seeing bush hens *Amaurornis* also, since they were present in this vicinity, on both sides of the road.

At this site there are wet roadside ditches with lush grass, several nearby streams, two permanent marshy areas and, perhaps also of importance, small remnant patches of forest close to the road on both sides. Littoral swamp forest was

also present some 150 m from the locality (which was itself within 100 m of the sea). Local people associate *G. talaudensis* with long wet grass in swampy ground at the forest edge. Indeed, in March 1997, F. Verbelen (*in litt.*) briefly observed this species in a swampy area of rank herbage and second growth near the forest edge, bordering a small river just south of Beo.

Only one villager mentioned that this species occurred in primary forest. The area where he claimed to have seen the birds was some 6–8 km from the coast in tall primary forest with a dense understory of saplings and herbs along a shallow stream. His records could not be verified, although it should be noted that at least two other rallids were observed by the author in this area; one was tentatively identified as Red-necked Crake *Rallina tricolor*, which has a similarly coloured head, so the villager may have seen these rather than *G. talaudensis*.

VOCALIZATIONS

A series of at least fifteen rapid, high-pitched *peet-peet-peet* calls were heard when the Talaud Rail was observed on 15 August. Although it could not be ascertained conclusively that these calls were made by *G. talaudensis*, the calls seemed to be coming from the individual as it ran off, and these calls rapidly became quieter. No tape recordings were made.

FOOD

The stomach of the specimen collected contained small fragments of snail shell and what appeared to be the remains of a very small beetle.

DISCUSSION

Additional notes on plumage of *Gymnocrex* species

Examination of skins (in BMNH) and published descriptions and paintings lead to the conclusion that the head and breast of *G. talaudensis* is considerably darker and richer in colour than that of *G. plumbeiventris*, and would best be described as being deeper and darker chestnut rather than the rusty or vinous-chestnut of the latter. However, whilst two photographs of *G. plumbeiventris* from New Guinea (taken by P. Gregory, in September 1993 and September 1994; see also Gregory 1995) seem to confirm this, a third, previously unpublished photograph (Plate 4), taken in December 1995, shows a live *G. plumbeiventris* that appears brighter than any other birds photographed, illustrated or in the BMNH collection, with a darker, more chestnut head and neck (though still not as dark, deep or rich in colour as that of *G. talaudensis*), as well as extensive bright yellow on the bill. Although photographs can be unreliable in portraying colour and brightness, these differences suggest, perhaps, that there is a distinctive breeding plumage of *G. plumbeiventris* that may not be represented by birds in collections (I have personally examined only those in BMNH) or described in the ornithological literature. It is therefore possible that the *G. plumbeiventris* photographed in December 1995 may refer to an individual in breeding plumage. The *G.*

talaudensis collected in September, although with similarly very bright plumage, seems likely to have been in post-breeding plumage since it was undergoing extensive, heavy moult.

The single specimen of Intact Rail *G. intactus* resembles *G. plumbeiventris*, but 'differs in that the brown of the neck is darker and less chestnut with a slight maroon "bloom", the wings and back are slightly darker, and the belly very slightly paler' (Knox and Walters 1994).

While *G. talaudensis* differs in many respects from Blue-faced Rail *G. rosenbergii* of Sulawesi, direct comparison of specimens in BMNH showed that the deep chestnut colour of the head, neck and breast of *G. talaudensis* is almost the same as the colour of the upperparts of *G. rosenbergii* (the colour being between Maroon 31 and Chestnut 32).

Ornithological exploration of the Talaud Archipelago

The Talaud Islands are a remote archipelago, and it is not surprising that previous ornithologists who have made observations or collected specimens on the island have failed to find *G. talaudensis*. Although a number of naturalists and ornithologists visited the Talaud Archipelago last century, including S. J. Hickson (1885–1886), W. Doherty (1887), C. W. Cursham (c. 1892), and J. Waterstradt (1896–1897) (Meyer and Wiglesworth 1898), there then seems to have been very little ornithological interest in the islands until M. D. Bruce visited them in 1978 (White and Bruce 1986). More recently, F. Rozendaal (*in prep.*) collected birds on Karakelong in 1985 and the University of York mounted an ornithological expedition there in 1995 and conducted follow-up work during 1996–1997 (Riley 1995, 1997, University of York 1996).

Affinities of the Talaud avifauna

Talaud is of great biogeographic interest. Presumably because of its rather isolated position, lying between Sulawesi, Mindanao and the north Moluccas, it has an unusual assemblage of birds. The known global distributions of various birds on Talaud strongly suggest that representatives of the distinctive avifaunas of these three quite different areas have reached Talaud. Breeding birds that have probably colonized from the Philippines, to the north, include Philippine Scrubfowl *Megapodius cumingi* *sanghirensis*, Blue-naped Parrot *Tanygnathus lucionensis talaudensis*, Rufous Paradise Flycatcher *Terpsiphone cinnamomea talaudensis*, Everett's White-eye *Zosterops everetti babelo* and perhaps also Malay Night Heron *Gorsachius melanolophus*, which is apparently breeding on Karakelong Island (F. Lambert, pers. obs.). Species of probable Sulawesi origin include Sulawesi Cicadabird *Coracina morio talaudensis*, Grey-sided Flowerpecker *Dicaeum celebicum talaudensis* and probably Golden-mantled Racquet-tail *Prioniturus platurus talaudensis*. Until now, the only species with clear Moluccan affinities were the Red-and-blue Lory *Eos histrio talaudensis* and probably Plain Bush Hen *Amaurornis olivaceus moluccanus* (I observed birds of this subspecies on the island in 1997). It is therefore of great interest to have found another species, *Gymnocrex talaudensis* that has clear affinities with *G. plumbeiventris* and has therefore presumably colonized from the Moluccas.

Although the Talaud Islands lie within the Sangihe-Talaud Endemic Bird Area (ICBP 1992, Sujatnika *et al.* 1995), no

undisputed endemic species were known to be confined to Talaud, although one taxon, Obscure Kingfisher, has been variously treated as a full species *Todiramphus (Halcyon) enigma* (e.g. White and Bruce 1986) or as a distinct subspecies of *T. chloris* (e.g. Fry *et al.* 1992, Inskipp *et al.* 1996). The discovery of a railid that is in all likelihood endemic to Talaud is, therefore, of great importance, elevating the conservation value of the islands. Whilst the Talaud Rail is presently known only from Karakelong Island, there is a possibility that it might also be found on the other larger islands in the archipelago. Although these islands, namely Salebabu and Kabaruang, have little natural forest, this does not necessarily preclude the presence of Talaud Rail, since its known habitat requirements indicate that it survives in rank vegetation and it may not be dependent on forest.

Conservation status of Talaud Rail

At present, *G. talaudensis* is probably not a threatened species, since the island of Karakelong still has a diversity and abundance of wetland habitats, in particular rank grasslands bordering forest. Nevertheless, present knowledge of the species would suggest that it should be classified as Data Deficient using the criteria developed for the IUCN Red List Categories (SSC 1994). While trapping for food occurs, locals noted that this is a difficult species to catch, and the pressure from trapping must be very low. Nonetheless, since its full ecological requirements are unknown, future changes in land use could conceivably alter habitats to the extent that it becomes threatened - the island is small, covering only c. 600 km². The forests of Karakelong are still relatively intact and include two protected areas totalling c. 21,800 ha that were established in 1979 (Sujatnika *et al.* 1995, Sujatnika *in lit.* 1997). Both areas are, however, under pressure from smallholder encroachment (Whitten *et al.* 1987), and evidence collected in 1996 suggests that forest clearance for transmigration may also pose a threat in the long term (Lambert 1997). The potential threat on the island from introduced rats needs to be investigated.

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New York. Robert Prys-Jones and Michael Walters gave me permission to examine skins, including the type specimens of *G. plumbeiventris*, at the Natural History Museum (Tring) and provided data on catalogue numbers. Craig Robson, Pamela Rasmussen, Jonathan Eames, James Lowen and Mark Pearman all examined the type specimen, when I visited Tring, and provided corroboration of my opinion as to its taxonomic status. Richard Grimmett kindly compared the plumage of the specimen of *G. talaudensis* with the swatches in Smithe (1975). Finally, I am very grateful to Phil Gregory for the loan of photographs depicting three *G. plumbeiventris* trapped in Papua New Guinea, and to Martin Woodcock for his excellent painting of *G. talaudensis*.

REFERENCES

- Coomans de Ruiter, L. (1947) Over de wederontdekking van *Aramidopsis plateni* (W. Blasius) in de Minahasa (Noord-Celebes) en het voorkomen von *Gymnocyrtus rosenbergii* (Schlegel) aldaar. *Limosa* 19: 65-75.
- Fry, C. H., Fry, K. and Harris, A. (1992) *Kingfishers, bee-eaters and rollers*. London: Christopher Helm.
- Gregory, P. (1995) *The birds of the Ok Tedi area*. Tabubil, Papua New Guinea: National Library of Papua New Guinea.
- del Hoyo, J., Elliott, A. and Sargatal, J. (eds) (1996) *Handbook of the birds of the world*, 3. Hoatzin to Auks. Barcelona: Lynx Edicions.
- ICBP (1992) *Putting biodiversity on the map: priority areas for global conservation*. Cambridge: International Council for Bird Preservation.
- Inskipp, T., Lindsey, N. and Duckworth, W. (1996) *An annotated checklist of the birds of the Oriental region*. Sandy, U.K.: Oriental Bird Club.
- Knox, A. G. and Walters, M. P. (1994) *Extinct and endangered birds in the collections of The Natural History Museum*. London: British Ornithologists' Club (Occasional Publication No. 1).
- Lambert, F. R. (1989) Some field observations of the endemic Sulawesi rails. *Kukila* 4: 34-36.
- Lambert, F. R. (1997) *Field assessment of the conservation status of Red-and-blue Lory *Eos histrio* in Indonesia*. Bangkok, Thailand: IUCN Species Survival Commission.
- Lambert, F. R. and Woodcock, M. (1996). *Pittas, broadbills and allies*. Mountfield, U.K.: Pica Press.
- Olson, S. L. (1973) A classification of the Rallidae. *Wilson Bull.* 85: 381-416.
- Meyer, A. B. and Wieglesworth, L. W. (1898) *The birds of Celebes and the neighbouring islands*. Berlin: Friedlander.
- Riley, J. (1995) Preliminary assessment of the status and utilization of the Red and Blue Lory *Eos histrio* on Talaud and Sangihe. BirdLife, Bogor: PHPA/BirdLife International-Indonesia Programme, Technical Report No. 10.
- Riley, J. (1997). Biological surveys and conservation priorities on the Sangihe and Talaud Islands, north Sulawesi, Indonesia. Cambridge: CSB Publications.
- Ripley, S. D. (1977) *Rails of the world*. Toronto: M. F. Feheley.
- Smithe, F. B. (1975) *Naturalist's color guide*. New York: American Museum of Natural History.
- SSC (1994) *IUCN Red List categories*. Gland, Switzerland: IUCN.
- Sujatnika, Jepson, P., Soehartono, T., Crosby, M. and Mardiatuti, A. (1995) *Conserving Indonesian biodiversity: the Endemic Bird Area approach*. Bogor, Indonesia: BirdLife International.
- Taylor, B. and van Perlo, B. (in press) *Rails: a guide to the rails, crakes, gallinules and coots of the world*. Mountfield: Pica Press.
- University of York (1996) The status and conservation of birds on the Sangihe and Talaud islands, Sulawesi, Indonesia. Summary report. University of York, UK.
- Warren, R. L. M. (1966) *Type specimens of birds in the British Museum (Natural History)*. Volume 1: Non-Passerines. London: Trustees of the British Museum (Natural History).
- White, C. M. N. and Bruce, M. D. (1986) *The birds of Wallacea*. London: British Ornithologists' Union (Checklist No. 7).
- Whitten, A. J., Bishop, K. D., Nash, S. V. and Clayton, L. (1987) One or more extinctions from Sulawesi, Indonesia? *Conservation Biol.* 1(1): 42-48.

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