

**EDITORIAL**

We are pleased to publish in this issue, the first one for Volume 8, a miscellany of material:

A paper about the Middle Fly waterbird survey, some valuable nesting records from the Lakekamu basin including first documented nests of Sooty Thicket-Fantail and Yellow-eyed Starling, travelogues from Irian Jaya, the Middle Sepik and the Bismarck Archipelago, and a variety of notes and observations on Papua New Guinea species.

We welcome this variety and are grateful to our sponsors, Ok Tedi Mining for their continued support in 1996. We hope to continue with three issues per year, but are dependent on contributions for the publishing schedule, which is of necessity flexible. Due to a lack of material we are only able to publish a single issue this year, but hope to continue Volume 8 as items are submitted.

Contributors of sightings have been very few in recent years, and we urge both residents and visitors to submit their records. We particularly welcome copies of tour group reports, as many interesting sightings lie hidden in these inaccessible databases and it is a courtesy to the host country to make copies available to the PNGBS. Feedback about notes and papers is welcomed, if you know more or indeed better please write and tell us, we will be happy to publish, a major aim being to stimulate study and increase the knowledge of New Guinea birds.

**Editor:** Phil Gregory.

Please continue to send submissions (preferably on disk in the specified format) to:

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All contributions will be acknowledged.

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**Cover:** *Southern Cassowary head study by Jones Hiaso*

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**THE MIDDLE FLY WATERBIRD SURVEY 1994-95**

*By P. Gregory, S. A. Helse, R. P. Jaensch, W. R. Kay, P. Kulmoi, G. B. Pearson and A. W. Storey*

Ok Tedi Mining Limited commissioned waterbird surveys of the grassed floodplain of the Middle Fly River during both wet and dry seasons, as a part of its program to document the biology of the Fly River ecosystem and to expand the range of organisms monitored. These surveys were made at the end of the dry season (2-7 December 1994) when birds were concentrated at ox-bows and lakes, and near the end of the wet season (25-30 April 1995) when most of the floodplain was inundated.

The area surveyed comprises the Fly River floodplain due west of Lake Murray, from Adopted River Mile 350 in the north to ARM 150 in the south (ARM is the distance in river miles from the estuary mouth). Major water bodies therein include Bosset Lagoon, Lake Daviumbu, Lake Pangua and Lake Ambuve plus a variety of ox-bow lakes. Larger settlements exist at Suki, Obo Station and Bosset, as well as smaller villages at many other sites. The Fly / Strickland River confluence is located just south of Obo.

Two teams of three observers counted from boats and on foot in the accessible areas for the first 3 days of each survey, followed by two days of aerial transects conducted by SAH and GBP. Ground counts gave detailed species lists and were able to distinguish species that would be missed or be unidentified from a helicopter. The survey area was divided into 786 transects 200m wide, located perpendicular to the river channel. Every 23rd transect (36 in total at 4-6 km intervals) was surveyed at a height of 25 m in December and 15 m in April, at a speed of about 90 km/h. Transects were flown at a lower height in April as species were less easy to flush. Each observer counted all waterbirds in a 100m strip along either side of the helicopter, with length of transects varying from 24-46 km.

The overall area divided into transects was 5,957 km<sup>2</sup>, encompassing the Papua New Guinean portion of the middle Fly floodplain, but omitting a small area that is in Irian Jaya territory. 58 species of waterbird were recorded in total and estimated totals are given at the end of the table. The most abundant species were egrets, particularly Great White and Intermediate Egrets, Glossy Ibis, Australian White Ibis, and Magpie Geese. Based on the relative proportions related to ground level counts, it can be estimated that in December 1994 there were 130,000 Intermediate Egrets, 90,000 Great White Egrets and 1500 Little Egrets, with just a single Cattle Egret being recorded. Waterbird numbers in December were estimated at 58,7249 (+62,741), such a number making these wetlands of international significance.

A great reduction was evident in the wet season, with an estimated population of 54,914 (+9,790) individuals of just 36 species (57 in December). The most abundant were Magpie Geese, egrets, Darters and Comb-crested Jacanas. Based on ground count proportions numbers of egrets worked out to about 16,000 Great White and 2,000 Intermediate Egrets. Significant numbers of northern migrants were present in December, with Garganey being quite frequent (176 recorded) as well as Palearctic waders. Glossy Ibis, Radjah Shelduck and Pied Heron showed a major departure amounting to almost total absence by April, whilst Intermediate Egret, Green Pigmy-goose, Nankeen Night Herons and Wandering Whistle-Duck were recorded much less often in April, at

approximately 1-4% of the December abundance. A third group, consisting of Great White Egret, Jacanas, Darters and Magpie Geese and Spotted Whistle-Ducks occurred in April at 17-52% of the December numbers.

During April, Magpie Geese were nesting in areas of thick grass, and this habitat is likely to hold hundreds of pairs. Blocked valley lakes were the richest habitat in terms of number and variety of waterbird species, with *Melaleuca* and sago swamps recording few species. Jacanas and Spotted Whistle-Ducks were also nesting in April.

Interesting sightings included good numbers (45+) of Yellow Wagtails (*Motacilla flava*) along burned grassland around lake edges in December, previously thought to be a scarce migrant in Papua New Guinea. A single Oriental (Great Reed) Warbler was found by PG, PK and RPJ on 4th December 94, singing in the tie-channel of Owa Creek leading to Lake Ambuve in December 1994, the harsh "Karra karra kik kik gurk gurk gurk" song being quite different to that of Clamorous Reed Warbler, and the bird being large and stout with well defined breast streaks. This is one of the few Papua New Guinea records, but the species may well be greatly under-recorded.

The sightings of Restless Flycatcher (*Myiagra inquieta*) extended the known range significantly northward, being previously known in New Guinea only from the Merauke and Bensbach River areas. A nest was found in December 94 on a wooden roof support of an abandoned bush hut at Lake Ambuve, being a simple cup of grass stems and fibres containing one whitish egg with brown and grey spottings. This is the first proof of breeding in Papua New Guinea. The bird was also seen at Obo station, and along *Melaleuca* forest edge at Lake Pangua.

Swamp Harrier was recorded only once by PG, PK and RPJ in April 95, the Eastern Marsh Harrier being much more frequent and identification concerns leading to caution, the two species being readily confused. Black-winged Kite (*Elanus caeruleus*) were also recorded in April 1995 as well, though unfortunately not close enough to distinguish from a possible vagrant Black-shouldered Kite (*E. notatus*).

SAH and GBP recorded New Guinea Flightless Rail from their sector, and also what would be the first Papua New Guinea records of Little Grassbird, otherwise only known in New Guinea from a subalpine population from the Wissel lakes in Irian Jaya. They recorded 2 at Bosset Lagoon in December 1994 and a single bird in April 1995 on a backwater of the Kai River. Migrants from Australia are possible and it would be instructive to check all the *Megalurinus* species here as 3 species may conceivably be present. PG and RPJ found new sites for Fly River Grassbird at Lake Ambuve and Deep Creek lagoon at Lake Pangua, as well as from the original PNG site at Lake Daviumbu (Gregory and Jaensch, 1995). Little Bitterns were recorded in small numbers on both counts (Jaensch, 1995) and suggest a resident population.

Wetland bird numbers are clearly very significant here, with counting accuracy believed to be 89-95%. Some movement may occur between the Bensbach plains and this area, with White Ibis and Radjah Shelduck likely to move to Bensbach during the wet season (Stronoch, 1981). The Middle Fly seems to be particularly significant in a dry season with low water levels, as was the case in 1994. Dispersal from the Middle Fly between December and April is probably due to movements to the Bensbach River area, and to northern Australia, though limited data from the two areas make comparisons difficult.

Conditions in Australia would be very likely to affect the numbers of birds moving to the Trans-Fly, and the significant decrease in the numbers of Glossy Ibis, Radjah Shelduck, White Ibis and Pied Herons suggest that the December counts consisted mostly of migrants from Australia, and the same is likely to apply to Nankeen Night Herons, Intermediate Egrets, Green Pigmy-geese and Wandering Whistle-Ducks. There are no known breeding colonies of Intermediate Egret in Papua New Guinea, while the other species have local resident populations as well as likely Australian migrants. Much more field work is needed to determine the details of New Guinea breeding seasons. The Middle Fly is likely to be an important dry season refuge for Australian waterbirds, with complex patterns of movement, and it is clear that the area is an internationally significant wetland for fish-eating waterbirds.

Table 1. Estimates of the abundance of each species of waterbird/wetland species on the floodplain of the middle Fly River, based on aerial transects, aerial counts and ground counts are shown below. Actual numbers are shown where possible, with the aerial transect counts given with estimates of error in parentheses.

<u>Waterbird / Wetland Species</u>	<u>December 1994</u>	<u>April 1995</u>
Magpie Goose <i>Anseranas semipalmata</i>	47,976 (+- 15,774)	18,670 (+- 4,770)
Spotted Whistle-Duck <i>Dendrocygna guttata</i>	23,218 (+-11,244)	3,666 (+-1,029)
Wandering Whistle-Duck <i>D. arcuata</i>	23,218 (+-12,044)	44
Radjah Shelduck <i>Iadorna radjah</i>	1,358 (+- 527)	-
Pacific Black Duck <i>Anas superciliosa</i>	12,809 (+-3,215)	6
Grey Teal <i>A. gibberifrons</i>	38	-
Garganey <i>A. querquedula</i>	176	-
White-eyed Duck <i>Aythya australis</i>	14	-
Green Pigmy-geese <i>Nettion pulchellus</i>	28,152 (+-8,642)	84
Duck spp	10,953	-
Australian Dabchick <i>Tachybaptus novaeollandiae</i>	16	-
Darter <i>Anhinga novaeollandiae</i>	26,070 (+-4,773)	4,684 (+-1147)
Little Pied Cormorant <i>Phalacrocorax melanoleucos</i>	9,278(+2,000)	724 (+-273)
Little Black Cormorant <i>P. sulcirostris</i>	12,628 (+- 2,518)	2,532 (+-1,336)
Cormorant spp	543	-
Australian Pelican <i>Pelecanus conspicillatus</i>	3,213 (+-1,697)	8
White-faced Heron <i>Ardea novaeollandiae</i>	13	-
Little Egret <i>Egretta garzetta</i>	19	-
Great White Egret <i>E. alba</i>	1,025	482
Intermediate Egret <i>E. intermedia</i>	1,531	63
Pied Heron <i>E. picata</i>	22,358 (+-7,490)	19
Cattle Egret <i>Ardeola ibis</i>	1	-
Egret spp	231,052 (+-44,718)	17,923 (+-5,743)
Striated Heron <i>Ardeola striata</i>	26	1
Great-billed Heron <i>Ardea sumatrana</i>	4	8
Nankeen Night Heron <i>Nycticorax caledonicus</i>	9,437 (+-3,798)	9
Little Bittern <i>Ixobrychus minutus</i>	2	2
Black Bittern <i>Impetor flavicollis</i>	10	15
Glossy Ibis <i>Plegadis talmellus</i>	60,332 (+-28,589)	1
Australian White Ibis <i>Threskiornis aethiopicus</i>	50,420 (+-15,054)	4
Royal Spoonbill <i>P. nuda regia</i>	8	-

<u>Waterbird / Wetland Species</u>	<u>December 94</u>	<u>April 95</u>
Black-necked Stork <i>Xenorhynchus asiaticus</i>	24	13
Osprey <i>Pandion haliaetus</i>	-	3
White-bellied Sea-Eagle <i>Haliaeetus leucogaster</i>	23	49
Swamp Harrier <i>Circus approximans</i>	5	1
Eastern Marsh Harrier <i>C. spilonotus</i>	11	9
Harrier <i>Circus</i> sp.	-	2
White-browed Crake <i>Porzana cinerea</i>	28	44
Unidentified crake or rail	430	68
New Guinea Flightless rail <i>Megacrex inepta</i>	2	1
Purple Swampphen <i>Porphyrio porphyrio</i>	1	2
Swinhoe's Snipe <i>Gallinago megala</i>	12	-
Little Whimbrel <i>Numenius minutus</i>	2	-
Whimbrel <i>N. phaeopus</i>	-	1
Marsh Sandpiper <i>Tringa stagnatilis</i>	70	-
Common Greenshank <i>T. nebularia</i>	37	-
Wood Sandpiper <i>T. glareola</i>	40	-
Common Sandpiper <i>T. hypoleucos</i>	54	8
Sharp-tailed Sandpiper <i>Calidris acuminata</i>	249	-
Comb-crested Jacana <i>Irediparra gallinacea</i>	6,404 (+2,572)	3,394 (+735)
Black-winged Stilt <i>Himantopus (h.) leucocephalus</i>	656 (+656)	-
Pacific Golden Plover <i>Pluvialis fulva</i>	7	-
Little Ringed Plover <i>Charadrius dubius</i>	1	-
Lesser Sand-Plover <i>C. mongolus</i>	2	-
Greater Sand-Plover <i>C. leschenaultii</i>	3	-
Masked Lapwing <i>Vanellus miles</i>	3,259 (+542)	588 (+374)
Wader spp	950	45
Little Tern <i>Sterna albifrons</i>	7	-
Whiskered Tern <i>Chlidonias hybrida</i>	1422	105
White-winged Black Tern <i>C. leucopterus</i>	2	4
Clamorous Reed Warbler <i>Acrocephalus stentoreus</i>	16	36
Oriental Reed Warbler <i>A. (arundinaceus) orientalis</i>	1	-
Little Grassbird <i>Megalurus grammacus</i>	2	1
Fly River Grassbird <i>M. albolimbatus</i>	4+	11
Tawny Grassbird <i>M. timorensis</i>	10	10
Zitting Cisticola <i>Cisticola juncidis</i>	11	19
Golden-headed Cisticola <i>C. exilis</i>	5	5
Total	587,219 (+62,741)	54,915 (+9,790)

**Appendix 1**Landbird counts Lake Daviumbu and Lake Pangua 2-12-94

Bar-shouldered Dove (*Ceopelia hemeralis*) 2, Pied Imperial Pigeon (*Ducula bicolor*) 2, Double-eyed Fig-Parrot (*Cyclopsitta diopthalma*) 2, Brush Cuckoo (*Cacomantis variolosus*) hrd, Pheasant Coucal (*Centropus phasianus*) hrd, Barking Owl (*Ninox connivens*) hrd at Obo, Large-tailed Nightjar (*Caprimulgus macrurus*) 2 at Obo, Fork-tailed Swift (*Apus pacificus*) 30.

Blue-winged Kookaburra (*Dacelo leachii*) 1, Dollarbird (*Eurystomus orientalis*) 1, Barn Swallow (*Hirundo rustica*) 2, an interesting record of this Palearctic species, Yellow Wagtail 10 at Lake Pangua, Clamorous Reed Warbler, Tawny Grassbird 6+, Fly River Grassbird 2 at Lake Pangua, Golden-headed Cisticola, Zitting Cisticola, Yellow-bellied Gerygone (*G. chrysogaster*) nesting at Lake Ambuve, Willie Wagtail (*Rhipidura leucophrys*), Shining Flycatcher (*Myiagra alecto*) 1f, Tawny-breasted Honeyeater (*Xanthotis flaviventer*) hrd, Rufous-banded Honeyeater (*Conopophila albogularis*), Grey-crowned Mannikin (*Lonchura nevermanni*) 30 at Lake Pangua and 4 at Lake Daviumbu, Crimson Finch (*Neochmia phaeton*) 10 at Lake Pangua and 4 at Lake Daviumbu.

**Appendix 2**Landbird counts 24-27. 4. 1995

1 Fly River, Obo- Ambuve entrance channel 24.4.95, late p.m. from deck of *Western Venturer* Crested Hawk (*Aviceda suberistata*) 2, Long-tailed Buzzard (*Hemcopernis longicauda*) 1, Brahminy Kite (*Haliastur indus*) 2, Whistling Kite (*H. spheerurus*) quite common, Blyth's Hornbill (*Rhyticeros plicatus*) 2, Sulphur-crested Cockatoo (*Cacatua galerita*) 2, Palm Cockatoo (*Probosciger aterrimus*) 2, Pacific Swallow (*Hirundo tahitica*), Tree Martin (*H. nigricans*), Dollarbird 1, Rainbow Bee-eater (*Merops ornatus*) few, Blue-tailed Bee-eater (*M. philippinus*) 1, Bar-shouldered Dove 3, Pied Imperial Pigeon 30, Black-collared Imperial Pigeon (*Ducula muelleri*) 5, Spangled Drongo (*Dicrurus hottentottus*) 2, Metallic Starling (*Aplous metallicus*) several thousand (3,000+) at roost in patch of riparian forest, Pheasant Coucal 4, Torresian Crow (*Corvus orru*) 1, Grey Crow (*C. tristis*) 3, Spotted Cuscus (*Spilogiscus maculatus*) 1 in a bare riverside tree in broad daylight!

2. Ambuve System tie-channel (River to Oxbow) 25.4.95, early a.m. and late p.m. Adopted River Mile (ARM) 192.5

Sacred Kingfisher (*Haleyon sancta*) 1, Australian Koel (*Eudynamis scolopacea*) 1 dark capped female of the *subcyaniocephala* form, Malay Bronze-Cuckoo (*Chrysoccyx russatus*) 1, Zoe Imperial Pigeon (*Ducula zoeae*) 1 with Pied overhead, Black-collared Imperial Pigeon 1, Pied Imperial Pigeon 4+, Rainbow Bee-eater, Grey Shrike-thrush (*Colluricincla harmonica*) Willie Wagtail White-bellied Cuckoo-shrike (*Coracina papuensis*) 2, Papuan Flowerpecker (*Dicaeum pectorale*) 3, Yellow-bellied Sunbird (*Nectarinia jugularis*) several, Brown-backed Honeyeater (*Ramsayornis modestus*) common, Leaden Flycatcher (*Myiagra rubecula*) 1f, Shining Flycatcher 1m, White-bellied Thicket-Fantail (*Rhipidura leucothorax*) hrd, Crimson Finch several, White-spotted Mannikin (*Lonchura leucosticta*) 5.

3. Floodplains around eastern side of Ambuve and Owa Lakes 25.4.95

Black-winged Kite 1 distant, Eastern Marsh Harrier 1f type with tail barred on upper surface, some white on the head and white bases to primaries on underwing, with rather cinnamon coloured underparts, Red-winged Parrot (*Aprosmictus erythropterus*) 5, Pheasant Coucal, Blue-tailed Bee-eater common, Tree Martin, White-shouldered Fairy-wren (*Mahurus alboscapulatus*) several, f of the brown and white form, Brown-backed Honeyeater in reed patches, Rufous-banded Honeyeater 1, Golden-headed Cisticola several calling, Zitting Cisticola fairly common, Tawny Grassbird several, Fly River Grassbird hrd and confirmed by same call and birds seen at Lake Pangua next day, Crimson Finch c.10, Grey-crowned Mannikin common esp. where *Phragmites* was near grasses, with a flock of 50 in the bamboo in the village, Black Mannikin (*Lonchura sylvia*) c.50, max. 6 in a flock.

4. Forest (Dry land and Swamp) fringing west side of Lake Ambuve and L. Owa

Lowland forest with *Melaleuca*, palms and *Terminalia* at wet edges.

White-bellied Sea-Eagle (*Haliaeetus leucogaster*), Brahminy Kite, Brush Cuckoo hrd., Red-winged Parrot feeding in *Phragmites* beds 1 Red-cheeked Parrot (*Geoffroyus geoffroyi*) 4, Double-eyed Fig-Parrot 2, Blue-tailed Bee-eater, Rainbow Bee-eater, Blue-winged Kookaburra Rufous-bellied Kookaburra (*Dacelo gaudichaud*) 1 in bamboo in village, Yellow-billed Kingfisher (*Halcyon torotoro*) hrd. Pheasant Coucal, Bar-shouldered Dove, Willie Wagtail, Grey Shrike-thrush several, Brown-backed Honeyeater common, Streak-headed Honeyeater (*Pycnopygus stictocephalus*) 1, Fawn-breasted Bowerbird (*Chlamydera cerviniventris*) 1, Black-backed Butcherbird (*Cracticus mentalis*), Torresian Crow 2, Grey Crow 1, Glossy-mantled Manucode (*Manucodia atra*) 6, frequently calling the plaintive, rising bell-like "zheee" note

26/4/95 Forest edge near Komavai Village, Pangua Lakes (ARM 225)

By boat along edges, punting much of the way

Whistling Kite, Pied Imperial Pigeon several, Rainbow Bee-eater, Blue-tailed Bee-eater common, Dollarbird 1, White-breasted Wood-swallow (*Artamus leucorhynchus*) 1, Red-cheeked Parrot 1, Sulphur-crested Cockatoo 1, Black-backed Butcherbird, Rufous-banded Honeyeater, Grey Shrike-thrush, Papuan Flowerpecker 1, Restless Flycatcher 1, Glossy-mantled Manucode 2

Lake Pangua Floodplain By boat, middle of day

Swamp Harrier 1, Pacific Swallow, Tree Martin, Small cuckoo sp. 1, Forest Kingfisher 2, Blue-tailed Bee-eater, White-shouldered Fairy-wren, Rufous-banded Honeyeater, White-bellied Cuckoo-shrike 2, Grey Shrike-thrush Golden-headed Cisticola  
Fly River Grassbird 2, a new site and only the fourth known! Unstreaked bright tawny-orange crown, white supercilium, whitish underparts Orange rump, tail not long and raggedy and rather gently rounded. Tertiaries black edged white. Smaller than Tawny Grassbird. Monotonous quiet rising whistle "zeeee" call, also heard at Lake Ambuve yesterday. Habitat *Echinochloa* and *Leersia* sp. at Deep Creek lagoon, in midst of flooded plain, accessible only by boat at this time of year Grey-crowned Mannikin very few, less than 10 despite lots of seeding *Echinochloa*  
Crimson Finch 10

27.4.95 Lake Daviumbu Floodplain By boat from morning to mid-day, hot (ARM 223)

Blue-tailed Bee-eater, Golden-headed Cisticola, Crimson Finch, White-spotted Mannikin 10 feeding on *Echinochloa*, with a quite different call to the musical "tink tink" of Grey-crowned Mannikin, being a thin plaintive "seee". Fly River Grassbird heard near entrance to lake in *Echinochloa* beds

Daviumbu Forest Edge, mid to late morning

Black-billed Brush-turkey (*Talegalla fuscirostris*) hrd. Yellow-billed Kingfisher 1 hrd Blue-winged Kookaburra, Pied Imperial Pigeon, Orange-breasted Fig-Parrot (*Cyclopsitta gulielmiterti*) 4, Red-cheeked Parrot 2, Grey-Shrike-thrush, Rufous-banded Honeyeater, Shining Flycatcher 1m, Tawny-breasted Honeyeater 1, Puff-backed Meliphaga (*Meliphaga aruensis*) 2 medium size, large pale yellow ear patch and yellow gape line, in tall forest margin. Black Sunbird (*Nectarinia aspasia*) 1m

Obo Station :

Brush Cuckoo hrd. White-bellied Cuckoo-shrike 2 White-breasted Wood-swallow Restless Flycatcher 1 in mangoes by houses

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References

- Beehler, B. M., Pratt, T. K. and Zimmerman D. A. 1986. **Birds of New Guinea** Princeton University Press, Princeton
- Coates, B. J. 1985. **The Birds of Papua New Guinea** Vol. 1. Non-Passerines. Dove Publications, Alderley.
- Coates, B. J. 1990. **The Birds of Papua New Guinea** Vol. 2. Passerines. Dove Publications, Alderley.
- Gregory, P. 1995. Notes on the Black Mannikin (*Lonchura stygia*) and other mannikins (*Lonchura* sp.) at Lake Owa, Middle Fly River. **Muruk** 7 (3): 119-120
- Gregory, P. and Jaensch, R. 1995. Observations on the Fly River Grassbird (*Megalurus albolimbatus*) **Muruk** 7 (3): 120.
- Halse, S. A., Pearson, G. B., Jaensch, R. P., Kulmoi, P., Gregory, P., Kay, W. R. And Storey, A. W. 1996. Waterbird Surveys of the Middle Fly River Floodplain. Papua New Guinea **Wildlife Research** 23, 557-69.
- Jaensch, R. P. 1994. The Middle Fly wetlands. Papua New Guinea **Asian Wetland News** 7 (2): 14-15
- Jaensch, R. 1995. Little Bitterns (*Ixobrychus minutus*) in the Middle Fly wetlands. **Muruk** 7 (3): 117-118
- Simpson, D. M. 1994. Paradise Lost? Birdwatching along the Fly River, Papua New Guinea. **Sea Swallow** 39, 53-7.
- Stronoch, N. 1981. Notes on some birds of the Bensbach Region, Western Province. **Papua New Guinea Bird Society Newsletter** nos. 178-9 pp. 6-12.

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