

EDITORIAL

Regretfully there will be the last issue in 1988. It was further delayed by a breakdown of the computer. Next year we will make every effort to get out a full four issues, and to produce them at approximately three month intervals.

This is a theme-issue, with three contributions dealing with the Kiunga and Tabubil areas of Western Province. The main paper is Anne Murray's, and is the result of several years bird-watching in the area of the giant Ok Tedi gold and copper mine.

The cover picture on this issue is the last of the Kauage illustrations. The originals of several of these are still on sale. Contact Mike Hopkins for details.

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A STUDY OF THE BIRDS OF THE TABUBIL REGION,
WESTERN PROVINCE, PAPUA NEW GUINEA

ANNE MURRAY

SUMMARY

An annotated list of the 269 bird species of the Tabubil and Ok Tedi areas, with observations from July 1985 to October 1987. Comparison with the 1978 survey of the Ok Tedi region made by Coates and Lindgren indicates some changes in the avifauna due to the development of the town of Tabubil and surroundings. Thirty-one species had not previously been recorded in the area and many of these were found to be resident or regular migrants to the town; eg. Lesser Black Coucal, Crested Hawk, Australian Kestrel. These and other species were colonising the newly created grassland and open garden habitats. Many highland species, formerly present on Mt Fubilan, site of the Ok Tedi mine, and recorded by Coates and Lindgren in 1978, were not observed in the present survey. This may in part be due to the fact that the majority of field work was done in the areas below 1000 m as access to the mine and surrounding mountains is extremely limited. Several lowland birds, notably Magnificent Bird of Paradise, male *Paradisaea*, and Golden Cuckoo-Shrike are now scarce around Tabubil. Migration dates for a number of species are presented for the first time for this region and several new breeding records are given.

INTRODUCTION

This paper presents a complete species list of birds for the Tabubil area of Western Province up to October 1987. It is hoped that it will be of aid to visitors and subsequent ornithological studies as well as serving as a follow-up to Coates and Lindgren's 1978 paper, which studied the area prior to the development of the Ok Tedi mine.

It is based on irregular, though frequent, personal observations. I lived in Tabubil for two and a half years and compiled extensive monthly notes. Most observations were made in the town of Tabubil and the valleys to the west and south (Fig. 1). This covered an altitude range 300 - 1400 m. Access to the mountains above 1400 m was limited to approximately six trips to Mt Fubilan and Mt Binnie and one to Lake Wangbin. The two latter sites involved long bush hikes, preventing more frequent field studies.

Tabubil is a mining town developed mostly in the last decade to service the Ok Tedi gold mine, one of Papua New Guinea's major mining schemes. The Ok Tedi [Ok = small river] is one of the tributaries of the Upper Fly River which drains the south-eastern slopes of the Star Mountains and the south-western slopes of the Hindenburg Range, a series of massive limestone escarpments. Tabubil itself is situated on a plateau in the Ok Tedi valley at an altitude of 600 m. The area surveyed covered an approximate radius of 15 km around Tabubil with by far the greatest number of observations being made on the plateau and in the river valleys.

PREVIOUSWORK

Previous surveys of the area are very limited. D'Albertis reached the Upper Fly and the lower Ok Tedi (Alice) River in the 1870s and the Archbold Expedition (Rand & Brass 1940) explored the Upper Fly south-east of Ok Tedi, in 1936/37. Coates and Lindgren (1978) produced *OkTedi Birds* as a preliminary survey of the avifauna of the Ok Tedi region for the Ok Tedi Environmental Task Force. They drew on their own observations made over an intensive two-week period in February 1978, and on the observations of people living in the area. They also referred to observations made by Gilliard and LeCroy (1961) in the Victor Emanuel and Hindenburg Ranges, north of the mine, and by H.L. Bell in the Ok Tedi valley from March to May 1966 (Bell 1969). All these surveys were made before the Tabubil plateau was cleared and the town established. They were also very short and although large numbers of birds were seen, few details of status, breeding seasons, migrants, etc. could be ascertained.

The Tabubil and Ok Tedi valley area, therefore, remains scarcely studied ornithologically. Furthermore, with the present rate of development, habitats are undergoing rapid alteration, resulting in some species being displaced and new species added. The environment is subject to the stress of an increasing population, land clearance for major works and new gardens, and new hunting methods. The present survey can only begin to look at the effects of these changes on the avifauna of the region.

CLIMATE

The climate of the survey area is wet tropical. The Tabubil plateau receives a mean annual rainfall of 8000 mm, while the mine site receives approx. 10,000 mm. Two climatic features affect the region; from May to October the south-easterly trade winds blow, and from December to March the north-westerlies bring the monsoon. However the mean monthly rainfall is uniform throughout the year. The mean maximum and minimum temperatures are 31°C and 17.3°C respectively, and are also uniform throughout the year. Average daily sunshine is about 2.5 hours, with February the sunniest (3.5 hrs/day) and July the least sunny (1.1 hr/day). July also has the greatest number of rainy days per month (30.4) and November the least (25.5). (These data are based on mine records over a period of about 12 years.)

TOPOGRAPHY

The terrain is extremely rugged, the predominant rocks being deeply fissured Darai limestone and silt and sandstone of the Pnyang formation, which is subject to constant landslides. The area around Mt. Fubilan is heavily mineralised with the gold, copper and porphyry ores. The relatively flat gravel area of the Tabubil plateau is cut by the gorge of the Ok Tedi, a fast flowing mountain river, and is surrounded by heavily wooded peaks and escarpments, rising to 1500 m. The Ok Menga cuts through the Hindenburg Wall, (a 500 m limestone escarpment) and through a narrow gorge before joining the Ok Tedi 10 km south of Tabubil. A hydro-electricity scheme is being constructed near the Ok Menga gorge.

HABITATS

The hills around Tabubil are covered with dense oak forests at the lower altitudes and dripping mossy beech forest at 1000 m and above. The moss forest is present at a much lower altitude than at other areas in PNG and this results in a number of bird species being present below their normal altitudinal range. The Tabubil plateau has considerable secondary growth and some grassy areas. Extensive secondary growth and forest edge habitats are also to be found along roads (south to Ningerum and Kiunga, around Ok Menga and north to the mine).

In addition to the areas cleared in connection with the mine, small gardens have been cleared in the oak forest by the local population. In particular they ring-bark trees which then die but are left standing, thus providing habitats for a number of species, eg. Yellow-faced Myna, Great Wood-Swallow, Moustached Tree-Swift and raptors.

Mountain streams are fast-flowing, full of boulders and subject to frequent changes in water level. They make an ideal habitat for Torrent Flycatchers, Torrent Larks and the occasional Salvadori's Teal.

An area known as Sawmills, 15 km south of Tabubil, at an altitude of 300 m, is in more typical lowland forest and has slow-moving streams and a fresh-water pond. This is visited by two species of whistling duck, egrets and Darter as well as a number of other lowland species.

The only other lake in the immediate area is Lake Wangbin (formerly Lake Sogolomik) which lies at 1400 m in the hills east of Tabubil.

A limestone ridge at Lukwi, 500 m, a proposed site for a tailings dam, gave access to a relatively undisturbed area of lowland forest which is home to the Vulturine (or Pesquet's) Parrot, Palm and Sulphur-crested Cockatoos and Raggiana and Greater Bird of Paradise, among many other species.

REVIEW OF COATES AND LINDGREN'S SURVEY 1978

The authors described the bird fauna of the Ok Tedi area and established details of the local and regional status of each species. They proposed a total list of 262 species for the area between 570 m and 2370 m. They attempted to predict the nature and extent of the disturbance likely to result from the development of the mine and suggested ways in which potential adverse effects might be reduced.

In particular they looked at the status of two endangered species, the Black Sicklebill, *Epimachus fastuosus*, and the Vulturine Parrot, *Psitttrichas fulgidus*. They found the Black Sicklebill to be absent from the Ok Tedi region though probably still present in the mountains to the north. It had originally been common in the higher forests of the Ok Tedi area, according to verbal reports. Excessive hunting for plumes by Highlanders in the work force was thought to have caused this local extinction. The Vulturine Parrot was found to be still plentiful locally in undisturbed areas between 750 and 1200 m.

They also recorded three species with limited distributions in PNG: Carola's Parotia, *Parotia carolae*, Western Mountain White-Eye, *Zosterops fuscicapillus*, and Streaked Lorikeet, *Charmosyna multistriata*.

For future protection of the avifauna of the area they suggested a total ban on firearms in the area, the education of the community and establishment of regular environmental monitoring.

DISCUSSION

The list of 269 species includes some which have only been recorded to date from Telefomin, to the north, or Ningerum to the south, but which might be expected to occur in the Tabubil and Ok Tedi area. Usually only good visual sightings have been included. Data from the previous literature have been relied upon for many species, including 55 exclusively highland species, as my survey looked mainly at the region below 1000 m.

A conservative count of 82 birds are presumed to breed in the altitude range 300 to 1700 m, with confirmed breeding for 20 species; (Appendix 1). In addition, 67 highland species are presumed resident above 1700 m (Coates and Lindgren confirmed breeding for four of these).

16 species migrate regularly to or through the region and 19 species are vagrants to the area, of which 11 were seen in the two year study. It is clear that the Ok Tedi valley serves as a route to the north through the foothills.

31 of the species observed had not previously been recorded from the Ok Tedi and Tabubil area. These included Crested Hawk, Grey Goshawk, Australian Kestrel, Buff-banded Rail, Brush Cuckoo, Lesser Black Coucal and Shining Flycatcher, which are all regularly seen on the Tabubil plateau. It appears that these species are successful colonisers. Others, like the Red-rumped Swallow and the Brown Oriole, are more common than formerly and appear to be extending their range.

A total of 34 species are common residents of the plateau and developed areas south of Tabubil. Many of these seem to thrive in the gardens and secondary growth around houses. Notable among these are Willie Wagtail, Crested Hawk, Great Wood-Swallow, Scrub White-eared Meliphaga, Buff-banded Rail, White-shouldered Fairy-Wren, Pacific Swallow, Helmeted Friarbird, Uniform Swiftlet, and Brahminy Kite.

Species which have not adapted to secondary growth areas include Golden Cuckoo-Shrike, Grey-headed Goshawk, New Guinea Harpy-Eagle, Trumpet Manucode and Wompoo Fruit-Dove.

The brightly coloured parrots and birds of paradise are still in great demand locally for plumes but numbers for most species seem to be reasonably stable, since the 1978 survey. In particular the Vulturine Parrot is still found in good numbers from 500 to 1000 m, even occasionally at the edge of the plateau. The Magnificent Bird of Paradise, *Cicinnurus magnificus*, gives cause for concern as it is now apparently scarce. Males of the genus *Paradisaea* are also seldom seen. It is most important that only traditional methods are used for hunting, but shot-guns are seen in the villages. Education could also generate more interest and care for wildlife as local knowledge is becoming lost and devalued as development destroys the old way of life.

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ANNOTATED LIST OF SPECIES PRESENT IN THE TABUBIL AND OK TEDI VALLEY REGION

Notes: Previous work is cited by the author's name only, the relevant references may be found in the reference list. Cole sightings are to be found in Coates and Lindgren.

- Dwarf Cassowary *Casuarius bennetti*
Resident, probably in low numbers. Eggs and young birds are sometimes brought into town. Adult birds were not seen in this survey but occasional sightings were reported by other residents.
- Australasian Grebe *Tachybaptus novaehollandiae*
Bell found 3 pairs nesting at Lake Wangbin; they have not been recorded in the area since then.
- Lesser Frigatebird *Fregata ariel*
Rare vagrant. An immature glided over Tabubil town on 4 June 1987. Cole saw one in October 1972, following storms.
- Little Pied Cormorant *Phalacrocorax melanoleucos*
Rare vagrant. Coates & Lindgren recorded one at Lake Wangbin in 1978.
- Darter *Anhinga melanogaster*
Possible resident; sightings were in July and August 1985 and February 1987; also March 1978 (Coates & Lindgren). All records are from the Ok Ma and Sawmills area.
- Great Egret *Egretta alba*
Regular non-breeding visitor. Most records are for the July - October period but also one in January 1986. Hitchcock recorded one shot on the Ok Tedi in 1962 which had been banded at Koondrook, Victoria, Australia.
- Pied Heron *Egretta picata*
Rare vagrant. One was present in Tabubil 3 to 7 August 1987. Not previously recorded in the region.
- Intermediate Egret *Egretta intermedia*
Vagrant. 2 were seen 14 September 1986. Bell recorded one at Ningerum in 1966. Gilliard & LeCroy report them from Telefomin as vagrants.
- White-faced Heron *Egretta novaehollandiae*
Vagrant. 2 seen 21 July 1985 on the Ok Ma. Recorded occasionally by Cole on the Tabubil plateau.
- Little Egret *Egretta garzetta*
Vagrant. Individuals seen in August 1985, September and November 1986 and June 1987. Not previously recorded for the region.
- Royal Spoonbill *Platalea regia*
Rare vagrant. The only records are for odd birds in 1973 by Cole.
- Crested Hawk *Aviceda subcristata*
Resident. This species has benefited from the clearing of the valley and the following sightings suggest a notable increase in the population. Individuals were seen at Ok Menga in November and December 1985 and in March 1986. A family party was seen south of Tabubil in February 1987, and an immature and an adult frequented the plateau in February and March 1987. On 5 April 1987 an adult was seen performing a display flight south of Tabubil in the Ok Tedi

valley. Another adult was present a few km down the road. This species was also seen in May and August 1987.

- Long-tailed Buzzard *Henicopernis longicauda*
Presumed resident. Individuals have been recorded all months of the year except August and September. Generally seen in the major river valleys, occasionally on the plateau. Also recorded by Coates & Lindgren.
- Whistling Kite *Haliastur spheurnus*
Vagrant. One in flight over Yuk Creek on 8 March 1987. Bell recorded one on 28 April over the Ok Tedi at Ningerum.
- Brahminy Kite *Haliastur indus*
Resident and fairly common below about 1500 m. Recorded every month of the survey, generally in the Ok Tedi valley and the plateau. Also recorded by Bell, and Coates & Lindgren.
- Brown Goshawk *Accipiter fasciatus*
Uncommon but probably resident. Immature birds seen December 1985 and July 1986; other sightings were adults in May, June and November 1986. Only present in the major valleys of the Ok Tedi and Ok Menga. Gilliard & LeCroy collected a male in April 1954 at Telefomin; Coates & Lindgren did not record this species.
- Grey Goshawk *Accipiter novaehollandiae*
Common and presumed resident on the Tabubil plateau. Only the grey-brown phase has been recorded. Observations have been made in every month except March and April. It frequents garden and remnant forest patches below 600 m. This species was not recorded by any of the other surveys around the region and may have become more common as the valley has been opened up. It is more often seen around town during July to September.
- Black-mantled Goshawk *Accipiter melanochlamys*
Status uncertain. This is a montane species and a suspected sighting was made by Coates & Lindgren in February 1978 at 2185 m. The only observation made in the present survey was of an adult bird sitting for half an hour on a dead tree near the edge of the plateau, at 600 m, on 1 April 1986. It was apparently passing through as this is well below its normal altitudinal range, and was not seen there subsequently.
- Grey-headed Goshawk *Accipiter poliocephalus*
Status unknown. Two separate individuals were observed near Lukwi in undisturbed forest edge habitats on 9 November 1986. Not recorded in the area previously.
- Collared Sparrowhawk *Accipiter cirrocephalus*
Status unknown. A female was perched in secondary growth near Ok Menga ridge on 5 April 1987. No previous records for this species.
- Meyer's Goshawk *Accipiter meyerianus*
Status unknown. A large accipiter with black wings, back and head was observed perched near the mine at 1750 m, in January 1986. The underparts were not visible and the light was poor, so this sighting is unconfirmed. Coates & Lindgren had a suspected sighting at 570 m.
- New Guinea Harpy-Eagle *Harpyopsis novaeguineae*
Confined to undisturbed forest and thus not likely to be sighted around Tabubil now. A large raptor with very light-coloured underparts seen distantly from the Lukwi ridge in undisturbed forest in August 1985, was almost certainly this species. This was seen again, briefly, in the same locality on 30 March 1987. Bell reports a bird shot on the Hindenburg Range in 1966 and Gilliard & LeCroy saw one in May 1954 at 1800 m in the Victor Emanuel Range.
- Little Eagle *Hieraetus morphnoides*
Uncertain status. It was observed in July and August 1985, September 1986 and April and May 1987. All sightings were in the Ok Tedi valley, mostly south of Tabubil. Coates and Lindgren also reported one from this area in February 1978.
- Black Kite *Milvus migrans*
Vagrant. Not recorded in this survey. Bell saw one at 600 m on 5 April 1966, and presumably the same bird at 1600 m on the 14th.

- Brown Falcon** *Falco berigora*
Status uncertain. Single birds seen 20 and 25 April and in November 1986 and on 1 March 1987. All sightings were on the Tabubil plateau or just south of Tabubil. Not recorded previously in the area.
- Australian Kestrel** *Falco cenchroides*
A regular migrant to the area from Australia. It arrives in late April or May (28 April 1986, 23 May 1987) and stays until September or October; (last date for 1985 was mid-October; last date for 1986 was late September, during an very dry hot spell). Interestingly, only females have been recorded even though a large number of observations have been made, which agrees with Coates (1986). Also the numbers of birds present fluctuates from year to year; while they were abundant in 1986, only a few were seen in 1987. They frequent the cleared areas of the plateau around roads and the airstrip, and cleared areas south of Tabubil, eg. Sawmills and in 1986 Ok Menga. It had not previously been recorded in the area; either survey dates were unsuitable for the winter migrants or this species has increased with the clearance of the plateau.
- Oriental Hobby** *Falco severus*
Regularly observed but not common. Probably resident. Individuals were recorded from Lukwi (August 1985, and March 1986), from forest edge along the Lukwi Road (October 1985 and February 1987), and from the confluence of the Ok Tedi and the Ok Menga (March 1987). Coates & Lindgren recorded them from south of Tabubil on two occasions in February 1978.
- Spotted Whistling Duck** *Dendrocygna guttata*
This lowland species has been recorded on several occasions at the pond near Sawmills. A pair was present on 8 September 1985 and two birds in February 1987. There was a flock of 11 on the 1 March 1987, 4 or 5 on 24 May 1987 and 30 on 28 June 1987. It has not yet been ascertained whether breeding occurs. This species has not previously been recorded for the Ok Tedi region.
- Wandering Whistling Duck** *Dendrocygna arcuata*
Vagrant. Two were present at Sawmills pond on 8 February 1987, the only ones seen in this survey. Cole once saw a flock of 20 near the Tabubil airstrip.
- White-headed Shelduck** *Tadornarajah*
Vagrant and usually only found near the coast. One was seen by L.M. Murray on 24 September 1987 6 km south of Tabubil. Bell reports seven on the river at Ningerum, 16 January 1966.
- Salvadori's Teal** *Anas waigiensis*
Uncommon resident of the mountain streams. Two were at Lake Wangbin on 14 November 1985, where it was also recorded by Bell. It has also been regularly seen on the higher stretches of the Ok Menga (above the gorge). Bell recorded one pair per 160 m of stream, and suspected nesting. It is certainly less common than this now, probably because of the hydro-electricity project, but has possibly moved upstream into less disturbed areas.
- Pacific Black Duck** *Anas superciliosa*
Presumed resident. Seven were seen in November 1985 at Lake Wangbin, compared with 10 seen by Bell in 1966 and 2 by Coates & Lindgren in 1978. A single female was seen at Sawmills pond on 14 September 1986. It does not seem to be facing extinction in the area as feared by Coates & Lindgren, but there is a lack of suitable habitat for large numbers.
- Common Scrubfowl** *Megapodius freycinet*
Very large mounds were reported to be present in lowland forest at Golgobip, a short distance east of the study area, and the eggs in them regularly collected by the villagers. It is assumed these belonged to this species.
- Black-billed Brush-Turkey** *Talegalla fuscirostris*
Feathers from this species are sometimes used on bilums or for body decoration. No live birds were seen on this survey. Cole saw a juvenile specimen in September 1974; other records are only of feathers (Coates & Lindgren) and mounds (Bell). Both of the above species occur on the Upper Fly river according to Rand & Brass.
- Brown Quail** *Coturnix australis*
Status unknown. Several small groups were seen near the Tabubil airstrip in July, August and

- September 1985 but not subsequently. This was originally an area of grass and low secondary growth (ferns, bushes, some kunai grass), but it was allowed to grow and by mid-1987 was mainly tall bushes and secondary growth trees. Coates & Lindgren heard it calling from grass on Mt. Fubilan, 2100 m. This population has no doubt moved on since mining has taken place.
- King Quail** *Coturnix australis*
Not recorded. Gilliard & LeCroy collected it at Telefomin where it was resident and not uncommon.
- Buff-banded Rail** *Rallus philippensis*
Resident on the Tabubil plateau in at least three localities. This species nested close to my house so observations were possible all year. Nesting occurred in 1985 and 1986 in the same place, and young hatched each year in mid-September. There were two downy young in 1985, three the following year, two of which survived to adulthood. The family group stays together until the young are fully grown when they appear to wander off, but reappear periodically. Courtship displays were seen in mid-June 1986. This abundant Australasian bird had surprisingly not been recorded by any of the previous surveys.
- Chestnut Forest-Rail** *Rallina rubra*
Forbes' Forest-Rail *Rallina forbesi*
Lewin's Rail *Rallus pectoralis*
These three species were collected by Gilliard & LeCroy but not recorded by any other survey. The Chestnut Forest-Rail was considered very uncommon, and would be at the eastern extent of its range in the Victor Emanuel and Hindenburg Ranges. Forbes' Forest-Rail was not uncommon in the mid-mountain forest and Lewin's Rail was described as abundant in the Telefomin grasslands.
- Bush-Hen** *Amaurornis olivaceus*
Resident. Common around the plateau and south of Tabubil in the Ok Tedi valley. Usually heard calling but several individuals have been seen, especially near the road at night. Also recorded by Coates & Lindgren.
- Eurasian Coot** *Fulica atra*
Not recorded. Bell found this species breeding at Lake Wangbin, but it is now extinct.
- White-headed Stilt** *Himantopus leucocephalus*
Vagrant. Not recorded. Seen by Cole at Tabubil.
- Australian Pratincole** *Stiltia isabella*
Vagrant. Not recorded. Cole saw 2 or 3 at Tabubil airstrip.
- Lesser Golden Plover** *Pluvialis dominica*
Passage migrant. Four birds recorded on 26 April 1986 at Tabubil airstrip. It breeds in the arctic and winters south. Gilliard & LeCroy reported a small flock at Telefomin in March 1954.
- Little Ringed Plover** *Charadrius dubius*
Presumed resident, (subsp. *Charadrius d. dubius*). It is present year-round on gravel areas near water, eg. Sawmills, the Ok Tedi, the Ok Menga confluence, and south Tabubil. Occasional small groups gather on the Tabubil airstrip; these appear to be local movements; (March and April 1986, and August 1987). This species was recorded by Coates & Lindgren at Tabubil and Bell at Ningerum and breeding was suspected in both instances.
- Little Curlew** *Numenius minutus*
Passage migrant. It breeds in Siberia and winters in northern Australia. It is regularly observed on the southward passage in September and October but return passage sightings are rare. Dates observed in Tabubil (at the airstrip) are: 2 - 27 October 1985, from 5 to 13 birds; 15 - 28 September 1986, from 2 to 8 birds, and one in flight on 24 October 1986. Also one solitary bird was seen on 19 April 1986 on the return passage. It was disturbed and took flight briefly but soon settled down into some long grass bordering the airstrip. It could easily have been overlooked unlike the southward passage birds which walk around in the middle of the runway.
- Common Sandpiper** *Tringa hypoleucos*
Regular non-breeding visitor. It arrives in mid-July (1986) or August (1985) and is present

- until early May. It frequents stony ground, usually near water, eg. Ok Wei, Ok Menga, but also near roadsides and around the airstrip. This common visitor was recorded by Bell and Coates & Lindgren in the Ok Tedi valley.
- Swinhoe's Snipe *Gallinago megala*
Migrant from Asia wintering south. Only individual birds have been recorded in this survey; one flushed from a grassy area near the airstrip on 10 February 1986 and again on 8 March 1986. One flushed from a marshy area south of the airstrip on 10 November 1986. It is possibly present in larger numbers but is only observed when flushed in this way. Cole saw several in December 1974; Gilliard & LeCroy found them common between 26th March and 17 April 1954, at Telefomin and definitely *G. megala*. All the other observations are assumed to be this species rather than *G. hardwickii* but certain identification in the field is not possible. The ones seen in the present survey had noticeably long bills.
- Rufous Woodcock *Scolopax saturata*
Status unknown. A possible sighting of this species was made on 14 November at Lake Wangbin, 1400 m, in an area of dense undergrowth and muddy ground. It was running on the ground but only allowed a limited view. A strange, breathy "nhnnn" noise was emitted. The altitude is rather low for this species so possibly it was some species of forest-rail, though it lacked the red colouring.
- Sooty Tern *Sterna fuscata*
Vagrant. Not recorded. Two were seen by Cole in October 1973 following a cyclone.
- White-throated Pigeon *Columba vitiensis*
Status uncertain. Probably resident but in very low numbers. A pair was seen perched in the canopy below the ridge at Ok Menga on 17 May 1986. They remained in the same spot for 15 minutes, in company with a Yellow-faced Myna and a Magnificent Riflebird. Another possible sighting at Lukwi on 22 June 1986. This bird has not been recorded previously in the area and is generally rather scarce in PNG.
- Brown Cuckoo-Dove *Macropygia amboinensis*
Resident. This is a common and conspicuous inhabitant of the Ok Tedi area up to about 1500 m. It prefers taller trees and has gradually returned to the Tabubil plateau as the trees grow up again after the initial clearance for house building. It was observed every month of the year with nesting occurring in March (Gilliard & LeCroy). It is mainly a fruit eater and eats the red berries of *Homolanthus* sp. and was also seen taking blue berries, species unknown.
- Black-billed Cuckoo-Dove *Macropygia nigrirostris*
Presumed resident. Less common than *M. amboinensis* but regularly observed on the plateau and in the Ok Tedi and Ok Menga valleys. Most conspicuous between September and December (both 1985 and 1986), possibly the breeding season. Prefers more established woodland than *M. amboinensis*. Also recorded by Bell and Coates & Lindgren, but not by Gilliard & LeCroy.
- Great Cuckoo-Dove *Reinwardtoena reinwardtii*
Presumed resident. Fairly common and well-distributed in the area. It has been recorded most months of the year, being most conspicuous from March to August; usually only single birds are seen. Recorded by Bell, Coates & Lindgren, and Gilliard & LeCroy, who found squabs in late April.
- Thick-billed Ground-Pigeon *Trugon terrestris*
Status uncertain. One seen in October 1985 in forest at Ok Menga, prior to the road being cut. Not previously recorded in the area.
- Pheasant Pigeon *Otidiphaps nobilis*
Presumed resident. The mournful whistled call of this species has been heard in forest around Tabubil and Ok Menga at various times of year. Unfortunately no sightings have been made. Coates & Lindgren saw and heard birds at Ok Tedi Tau and also report that one was shot near Tabubil airstrip. It appears that this species has moved away from the disturbed areas but is still present in the primary forest around Tabubil.

- Wompoo Fruit-Dove *Ptilinopus magnificus*
Status uncertain. This species has been seen at Lukwi, 500 m, in August 1985 and July 1986. It has not been recorded in disturbed areas and does not appear to be common even in the lowland hill forest. Bell recorded it in 1966, up to 700 m, but Coates & Lindgren did not see any in February 1978. Possibly it only moves into the area when fruit is available.
- Ornate Fruit-Dove *Ptilinopus ornatus*
Resident and fairly common. It cannot always be distinguished in the field from the Pink-spotted Fruit-Dove which may also be present. Most sightings are of yellow-headed fruit-doves flying overhead or perched in the canopy. An adult Ornate Fruit-Dove was found on the plateau and kept captive for a few days. Coates & Lindgren made a positive identification of *P. ornatus* at Edinburgh, 2000 m; they also considered doves attracted to the mine lights were this species. They recorded pairs at 1700 m, and 1210 m; however birds seen at lower altitudes, eg. Ok Tedi valley may have been *P. perlatus*.
- Superb Fruit-Dove *Ptilinopus superbus*
Presumed resident and fairly common. It is inconspicuous and not often observed but birds are occasionally caught and brought into town by villagers. A captive male could not be persuaded to take any of the wild fruits growing around the houses so was released; probably this species requires fruits from the primary forest. In this and previous surveys it was recorded to about 700 m, mainly south of Tabubil; however Gilliard & LeCroy record it up to 1400 m.
- Beautiful Fruit-Dove *Ptilinopus pulchellus*
Status uncertain. One seen in March 1986 in undisturbed forest at Lukwi. The only other record from the area is by Bell at Ningerum, also in March.
- Pinon Imperial Pigeon *Ducula pinon*
Presumed resident. Groups of two or three were present in June and July at Lukwi and one south of Tabubil in December 1986. Their range does not appear to cover the disturbed areas of the valley. Coates & Lindgren have one unconfirmed sighting south of Tabubil in 1978.
- Collared Imperial Pigeon *Ducula muellerii*
Presumed resident. The only records are of birds in flight through the forest at Lukwi, 500 m. Bell recorded one at Ningerum. They are probably at the limit of their altitudinal range in the Tabubil area.
- Zoe Imperial Pigeon *Ducula zoeae*
Presumed resident and fairly common. Recorded at various times throughout the year. It appears to be the commonest *Ducula* species in the area. It is generally found at the forest edge, mainly below 700 m. Bell and Coates & Lindgren also found it common in these localities; Gilliard & LeCroy record it at 1200 m.
- Papuan Mountain Pigeon *Gymnophaps albertisii*
Resident but probably nomadic. Usually seen in large flocks flying above the forest, but also perched, eg. a single bird at Ok Menga on 17 May 1986 and flocks of up to 10 birds on 22 June 1986 at Lukwi. Common and frequently seen away from the main town area. Bell recorded them at 1400 m and Coates & Lindgren from 640 - 2370 m. Gilliard observed them regularly in the Hindenburg Mountains.
- Greater Streaked Lory *Chalcopsitta scintillata*
Status uncertain. On 22 June 1986 many flocks of about five or six birds per flock were observed flying over the ridge at Lukwi in a southerly direction, together with flocks of Rainbow Lorikeets and *Charmosyna* species. Underwing coverts were green (race *C. s. chloroptera*) and calls were screechy but weaker than those of Rainbow Lorikeets. Flocks were again seen on 5 July at Lukwi. Not previously recorded in the area.
- Dusky Lory *Pseudeos fuscata*
Resident and common. In 1985 and 1986 it was not recorded around the plateau but was observed in forest, either in small groups of three or four birds or in big noisy flocks. In February 1987 small groups were observed at flowering trees in Tabubil town and large flocks of about 100 were also seen in forest east of Tabubil on 21 February, feeding at a flowering tree

- and wheeling overhead. Recorded by Bell, once at Ningerum, and by Coates & Lindgren, in flocks, up to 2000 m.
- Rainbow Lorikeet *Trichoglossus haematodus*
Common resident up to about 1400 m. It is a conspicuous feeder at flowering trees in the forest and secondary growth and is quite often to be seen on the plateau. Generally it is in noisy groups of up to 20 birds. Mating was observed on 29 December 1985 accompanied by much acrobatics, flapping of wings and fanning of tails. Bell recorded this species commonly up to 600 m. Coates & Lindgren found them scarce above Tabubil.
- Goldie's Lorikeet *Trichoglossus goldiei*
Status unknown. A flock of about 20 birds was observed on 29 December 1985 feeding actively and acrobatically at a flowering tree in undisturbed forest edge. Scores of other lorikeets and parrots were also present. The altitude was about 700 m which is well below the normal altitudinal range for this species (1500 - 2300 m according to Bechler *et al.* (1986)). Coates & Lindgren saw one at 2180 m in company with *Charmosyna* and *Oreopsittacus* species. Gilliard & LeCroy recorded it uncommonly at 2200 m.
- Western Black-capped Lory *Lorius lory*
Resident and common. Normally encountered in pairs or parties of four. They have been seen at all times of year and are well-distributed through the survey area. Since March 1987 they were observed around the plateau. The race present in the area is *L. l. somu* which has extensive red plumage on the face, neck and underparts. It is extremely vocal with a wide repertoire of very unparrot-like calls. Recorded commonly by Bell and Coates & Lindgren but not by Gilliard & LeCroy in the mountains.
- Streaked Lorikeet *Charmosyna multistriata*
Status unknown. None were positively recorded on this survey. Small, all-green lorikeets were seen in flight at the escarpment edge north of Tabubil on 22 February, 9 March and 25 May 1986 and 7 June 1987. This is a locality where lorikeets are regularly seen flying across the valley to roost in trees on the eastern side. However the diagnostic bill colour and streaked breasts were not discernible so these identifications are not conclusive. Recorded by Coates & Lindgren in the Ok Tedi valley in February 1978 and by Rand in the Upper Fly River area. It is a rare species mainly confined to western New Guinea (Irian Jaya).
- Red-flanked Lorikeet *Charmosyna placentis*
Presumed resident, fairly common. Seen in pairs and small groups in flight over the forest and at flowering trees. Observations range from 300 - 700 m in this survey. Coates & Lindgren saw scores at flowering trees in company with *C. multistriata* south of Tabubil; also a pair at a possible nest hole. This species appears to be less numerous now in the Tabubil region.
- Little Red Lorikeet *Charmosyna pulchella*
Presumed resident. Mainly recorded at the escarpment edge north of Tabubil where a number of lorikeet species have been seen throughout the year flying to roost from west to east across the Ok Tedi valley. This species flies in small groups and flocks of about 20. They make a sweet squeaky "tweet" call. Coates & Lindgren record them from 570 - 2180 m, not uncommonly where there were suitable food trees. Gilliard & LeCroy found them uncommon at 1800 - 2000 m.
- Joséphine's Lorikeet *Charmosyna josephinae*
Status unknown. Appears to be confined to the higher altitudes, particularly above 1450 m around the Ok Tedi mine site. It was recorded here on 11 January 1986 (two in flight seen from above at the cliff edge) and by Finch in 1985 and Coates & Lindgren in 1978. It may be quite common in this area.
- Papuan Lorikeet *Charmosyna papou*
Status unknown. The only observation was a fleeting view of a lorikeet with a long floating tail at Ok Menga ridge, 600 m, which would be well below its altitudinal range. Coates & Lindgren observed several at 1700 m in the moss forest and Gilliard & LeCroy found it fairly common at 1950 - 2200 m. These observers found both red and melanistic phases.

- Plum-faced Lorikeet *Oreopsittacus arfaki*
A highland species not recorded by this survey. It has been recorded in the mine site area by Coates & Lindgren, and in the Victor Emanuel and Hindenburg Ranges by Gilliard & LeCroy. Both surveys found it common at the higher altitudes.
- Yellow-billed Lorikeet *Neopsittacus musschenbroekii*
A highland species not recorded by this survey. Recorded by Coates & Lindgren at 1535 m near the mine and by Gilliard & LeCroy commonly in the Victor Emanuel and Hindenburg mountains.
- Orange-billed Lorikeet *Neopsittacus pullicauda*
A highland species confined to the highest ranges. Coates & Lindgren saw a pair at 2180 m at Edinburgh; Gilliard & LeCroy found it common in flocks above Telefomin.
- Palm Cockatoo *Probosciger aterrimus*
Presumed resident but locally nomadic. It is usually recorded from undisturbed forest areas but one was seen flying over the Ok Tedi valley at Tabubil on 2 November 1985. One was seen giving an elaborate display at Ok Menga ridge on 17 May 1986, and another at Lukwi in January 1987. Other sightings were in September 1985, June and July 1986, and June 1987; they were also present at Lukwi in 1984 (L.M. Murray, pers. comm.). Bell found them most numerous in the oak forests at Derongo. They were not observed by Coates & Lindgren.
- Sulphur-crested Cockatoo *Cacatua galerita*
Resident in the Ok Tedi valley and around Lukwi. Two or three pairs have been resident on the west bank of the Ok Tedi opposite Tabubil since 1984 at least, and are regularly seen flying to roost together. Small groups are present further south, near Sawmills and near the Ok Menga. Birds are kept as pets in Tabubil and plumes are used for decoration. Recorded by Bell around Ningerum. Coates & Lindgren found it scarce but their survey concentrated on the higher altitudes where it is not present. Gilliard & LeCroy record them south of Telefomin at 900 m, probably the maximum altitude in the area.
- Red-breasted Pygmy-Parrot *Micropsitta bruijnii*
Uncertain status. Small flocks were observed on limbs of trees at the edge of the escarpment north of Tabubil, in December 1985 and January 1986, at 650 m which is much lower than the normal altitude (1600 - 2300 m, Bechler *et al.* (1986)). The birds seen had red crowns so were of the race *M. b. bruijnii*. Coates & Lindgren and Gilliard & LeCroy report them in the higher altitudes but as uncommon.
- Orange-breasted Fig-Parrot *Cyclopsitta guiliemiterti*
Uncertain status. Probably resident in small numbers. Many sightings were at the escarpment edge of the plateau, near the town but in tall remnant woodland. Pairs and small groups were seen feeding in the canopy in May, September and October 1986. They have also been seen at Lukwi in March 1987 and the intake area at Ok Menga in May 1987. Coates & Lindgren record them south of Tabubil. Their normal altitudinal range is sea level to 300 m so Tabubil is slightly higher than normal.
- Double-eyed Fig-Parrot *Cyclopsitta diophthalma*
Uncertain status. Mostly exclusive of *C. guiliemiterti* in range. Two fig-parrots seen at a flowering tree at Ok Menga intake area appeared to be this species. It is possible this species inhabits the forest while *C. guiliemiterti* has moved up the valley, though there appears to be some overlap at the Ok Menga intake area. Not previously recorded from the region but occurs on the Upper Fly River, (Rand & Brass).
- Painted Tiger-Parrot *Psittacella picta*
Modest Tiger-Parrot *Psittacella modesta*
Madarasz's Tiger-Parrot *Psittacella madaraszii*
These three highland species were not recorded. All were recorded by Coates & Lindgren above 1700 m.
- Red-cheeked Parrot *Geoffroyus geoffroyi*
Nomadic visitor. Flocks of up to 30 birds, constantly calling, were seen crossing the Tabubil

- plateau in October and November 1986. A group were also seen going to roost in a large shade tree at the forest edge on 18 October 1986. Bell recorded this species at Ningerum.
- Blue-collared Parrot** *Geoffroyus simplex*
Nomadic visitor. Flocks of more than 70 birds flying very high and calling constantly passed over the Tabubil plateau several mornings in October 1986. Call notes were also heard in March and April. Coates & Lindgren heard this species regularly but did not see many.
- Eclectus Parrot** *Eclectus roratus*
Resident. A common parrot of the forest which is also often seen in flight over the open areas of the Tabubil plateau. Usually seen singly and most sightings are of males. This unexplained phenomenon was also noticed by Coates & Lindgren who observed 20 males and no females. It is possible that February is the middle of the breeding season as single males were seen in the present survey in February, March and April, and also September. Sometimes kept as a pet. Bell found it abundant in lowland forest.
- Vulturine Parrot** *Psittichas fulgidus*
Resident and common from about 400 m (Ok Menga/Ok Tedi confluence) to about 800 m (north of the Tabubil plateau). It is found regularly in small numbers on the ridge at Lukwi, also at Ok Menga. On several occasions it has been seen at the escarpment edge in Tabubil in remnant stands of forest. It is noisy and conspicuous and generally only found in the forest and forest edge. It gathers in flocks of up to 8 birds at fruiting trees and at dusk, for roosting. This species has a very restricted distribution but still has a strong hold in the Tabubil area. Bell and Coates & Lindgren also recorded it in several areas.
- Papuan King Parrot** *Alisterus chloropterus*
Status uncertain. Only two sightings, in October and November 1985, at Lukwi. Both were birds in flight. Bell recorded them commonly in the Amdid Range, to 1000 m and near the lower Ok Tedi. Gilliard & LeCroy found two males, below 1350 m.
- Oriental Cuckoo** *Cuculus saturatus*
Migrant during the Austral summer, breeding in Asia. One seen 15 February 1987 perched in low trees near the airstrip. Coates & Lindgren recorded one south of Tabubil on 18 February 1978.
- Brush Cuckoo** *Cacomantis variolosus*
Resident. Present on the plateau and in secondary growth and has probably increased with this habitat. It has been observed perched on wires and on medium-sized trees in gardens, occasionally in the undergrowth. It has not been recorded in the forest. Observations on the plateau include birds seen or heard from October 1985, in every month of the survey. Sub-adult and moulting birds were seen in late October 1986. Most calling was also around September and October, with birds calling incessantly all day. Quietest months were February to April, which probably explains why this species was not recorded by Coates & Lindgren.
- Chestnut-breasted Cuckoo** *Cacomantis castaneiventris*
Presumed resident. It prefers less disturbed areas than *C. variolosus* and occurs in overgrown gardens, forest edge and gardens. It has been recorded at various times of year, suggesting a stable resident population. It was particularly vocal in May and June 1987. Coates & Lindgren heard it at higher localities up to 1940 m. Gilliard & LeCroy found it below 1800 m.
- Fan-tailed Cuckoo** *Cacomantis flabelliformis*
Not recorded. Bell heard it calling constantly at Lake Wangbin in 1966. It may be difficult to distinguish this call from that of *C. castaneiventris*, however. A female was collected by Gilliard & LeCroy near Telefomin.
- White-eared Bronze-Cuckoo** *Chrysococcyx meyerii*
Not recorded. Gilliard collected two in the Eliptamin valley, north of the Hindenburg Range.
- White-crowned Koel** *Caliechthrus leucolophus*
Presumed resident. A single bird was observed in mid-storey at Lukwi on 5 July 1986 and another on 5 April 1987 at the forest edge south of Tabubil. Cole saw one brought into Tabubil Camp in January 1974.

- Common Koel** *Eudynamys scolopacea*
Presumed resident in small numbers around plateau, and in the Ok Tedi valley south of Tabubil. It has been heard calling from February (1986) or March (1987) until July; occasionally outside this period. Also recorded by Bell and Coates & Lindgren.
- Channel-billed Cuckoo** *Scythrops novaehollandiae*
Uncommon migrant. A single bird seen in flight over the Ok Tedi valley on 24 May 1986, flying towards the northern end of the Hindenburg Wall. Bell saw one in late March 1966 and Coates & Lindgren saw one on 16 February 1978. This species winters in northern New Guinea from Australia and may be expected to occur on passage in Tabubil.
- Lesser Black Coucal** *Centropus bernsteini*
Resident. Frequents bushes and tall grasses in secondary growth around the plateau and at Ok Menga. It is very noisy between August and December, and silent from January to May; this may be why Coates & Lindgren did not record it in 1978. Displays consisting of spread wings, arched back, fanned tail accompanied by calling and head bowing, occurred on 21 December 1985, and 13 July, 28 September and 10 October 1986. Not previously recorded in the area.
- Owl species**
No definite identification has been made of the owls seen occasionally on the plateau. "Barking dog" calls heard once or twice may belong to the Barking Owl *Ninox connivens* or possibly the Rufous Owl *N. rufa*. Bell heard the Papuan Boobook *N. theomacha* and possibly *N. rufa*.
- Papuan Frogmouth** *Podargus papuensis*
Not recorded. Possible sighting by Cole.
- Feline Owlet Nightjar** *Aegotheles insignis*
Archbold's Owlet-Nightjar *Aegotheles archboldi*
Not recorded. Gilliard & LeCroy found these in the mountains north of the area. Rand recorded them in the Upper Fly region. Both occur in mountain forest.
- Wallace's Owlet-Nightjar** *Aegotheles wallacii*
Single birds seen in flight in a garden area of the plateau on 4 January and 6 September 1986 are thought to be this species. They were too small to be *A. insignis*. Not recorded from the region previously.
- Large-tailed Nightjar** *Caprimulgus macrurus*
Presumed resident. It has been recorded from south of the airstrip on the Tabubil plateau both by the present survey and by Cole. Also seen in remnant stands of woodland elsewhere on the plateau but not very common.
- Moustached Tree-Swift** *Hemiprocne mystacea*
Resident and fairly common. It inhabits cleared areas in the forest, roadsides and gardens, but is not normally seen in the town area of Tabubil. It is present regularly at Ok Menga, Yuk Creek, along the Lukwi Road and in the Ok Tedi valley north and south of Tabubil; to about 1500 m. Recorded previously by Bell and Coates & Lindgren.
- Uniform Swiftlet** *Collocalia vanikorensis*
Mountain Swiftlet *Collocalia hirundinacea*
Resident. These two species are indistinguishable in the field. It has been assumed that *C. vanikorensis* is the common species around the Tabubil plateau and *C. hirundinacea* occurs around the mine site. Possibly there is some overlap as swiftlets have been observed at all localities between the two areas.
- Glossy Swiftlet** *Collocalia esculenta*
Resident. Seen at nest sites in limestone caves in the Ok Ma valley in November 1985. It is abundant in forest areas, often near rivers. Flocks occur in the Ok Menga gorge and the waterfall east of Tabubil. It does not occur in Tabubil town but odd birds occur on the edge.
- White-throated Needletail** *Hirundapus caudacutus*
Vagrant. Not recorded in this survey but Bell found a small party at Ningerum where it possibly occurs on migration between Asia and Australia.

- Fork-tailed Swift *Apus pacificus*
Vagrant. Seen once by Cole.
- Papuan Spine-tailed Swift *Mearnsia novaeguineae*
Not recorded. Bell saw a flock at Hosanai and at Ningerum in 1966. A lowland species.
- Australian Paradise Kingfisher *Tanyiptera sylvia*
A bird described to me as having long white tail streamers was presumably this species. The locality was the Ok Ma valley at Lukwi, about 300 m and one of the lowest locations in the area. Unfortunately the date was not recorded by the observer. This migrant species has not been recorded elsewhere in the Tabubil region.
- Rufous-bellied Kingfisher *Dacelo gaudichaud*
Resident. Quite common in forest edge localities, eg. Ok Menga, Lukwi, Ok Ma. Noisy and conspicuous from September to about December; not recorded much in the monsoon season. The highest altitude this survey recorded them was 700 m; Bell found them up to 1000 m, and Coates & Lindgren found them in the Ok Tedi valley.
- Sacred Kingfisher *Halcyon sancta*
Winter visitor from Australia, present on the plateau from mid-March to mid-October. Common and frequently seen around gardens and the town; not in the forest. Dates of migration are: earliest arrival: 13 March 1986, 25 March 1987; latest departure: 13 October 1985, 8 October 1986. This species can be severely affected by insecticide spraying as in April 1986, several birds were found on the ground, unable to fly and obviously distressed after insecticide spraying had been carried out; the birds recovered after about 12 hours.
- Yellow-billed Kingfisher *Halcyon torotoro*
Status uncertain. A lowland species. One was seen near the creek at Sawmills on 11 May 1986. Coates & Lindgren recorded the Mountain Kingfisher *H. megarhyncha* at 1750 m at Bultem in 1978.
- Rainbow Bee-eater *Merops ornatus*
Regular passage migrant. Migrating flocks pass up the Ok Tedi valley, calling constantly, throughout April. Southward migration occurs in September but is less noticeable. Dates for migration: 20 - 30 April 1986; a few birds on 12 March then flocks regularly from 27 March - 22 April 1987, with the heaviest passage on 17 and 18 April. Southward passage was not observed in 1985. It occurred from 7 - 21 September 1986 and 30 August - 6 September 1987. The birds travel in groups of 4 to 25 and the flocks continue passing over at various times of day, even noon. Bell saw flocks going north from 25 March - 25 April in 1966.
- Dollarbird *Eurystomus orientalis*
Resident and migrant races. It is difficult to identify these with certainty, especially immatures. One at Ok Menga in October 1985, one on the Lukwi Road in June 1986 and one in the same locality in June 1987 were all very blue (presumed resident race *E. o. waigouensis*). One seen in March 1986 was of indeterminate colour. In February and March 1987 there were a number of brownish birds present, at Ok Menga, in the Ok Tedi valley and on the plateau. These were either *E. o. pacificus*, the migrant race, or immatures. An immature bird was seen closely on several occasions in early April 1987; it was almost entirely brown. Bell distinguished between the races and found both present in April 1966. Coates & Lindgren saw 3 in February 1978.
- Blyth's Hornbill *Rhyticeros plicatus*
Presumed resident. Still present in moderate numbers away from the plateau, eg. at Lukwi, Ok Ma, and the Ok Tedi valley south of Tabubil. Pairs were seen regularly in flight over the forest between July and December so they presumably breed some time between January and May, though pairs were also seen by Coates & Lindgren in February. Also recorded by Cole and Bell. It is sometimes brought into the market in Tabubil.
- Barn Swallow *Hirundo rustica*
Vagrant. A single bird seen 18 November 1985. Cole saw one in December.
- Pacific Swallow *Hirundo tahitica*
Resident. The breeding season is from October to February. During this time swallows are

found around houses and buildings and commonly nest in the eaves. Their behaviour becomes very aggressive and people and animals are often dive-bombed. Three young hatched from a nest which was observed from building to the fledgling stage. Young birds often perched on tree ferns and branches, which is unusual in the area at other times of year. Outside the breeding season Pacific Swallows mingle in flocks with Uniform Swiftlets or perch for extended periods on the wires. It is only found in cleared areas, mainly the plateau, and never in the forest.

- Red-rumped Swallow *Hirundo daurica*
Migrant visitor. This is a fairly common visitor in the summer months, wintering from Asia. Small groups, mingling with flocks of *H. tahitica*, have been observed on the plateau in November and December 1985, April and December 1986 and February, March and April 1987. Immature birds are commonly seen in December, adult birds in February to April. These swallows were first recorded from the area by Finch. He saw six at Tabubil in December 1984. They appear to have increased in numbers each year since then.
- Tree Martin *Hirundo nigricans*
Not recorded. Bell saw four at Ningerum in April 1966.
- Fairy Martin *Hirundo ariel*
Vagrant. A single bird seen on 26 September 1986 flying over Tabubil airstrip perimeter with Swiftlets (Murray *et al.* 1987).
- Yellow Wagtail *Motacilla flava*
Vagrant. Two birds at Ok Menga on 22 October 1986 were probably this species as they lacked the yellow rump. The only other record for the area is Bell, one at Lake Wangbin in April 1966.
- Grey Wagtail *Motacilla cinerea*
Migrant from the northern hemisphere, wintering south. Common in all localities while present in the area, even braving the heavy machinery of the mine to feed on the ground there. Migration dates are: arrival: 25 September 1985, 24 October 1986 (September and October were exceptionally hot and dry that year); departures: 1 April 1986, 15 April 1987. Also recorded by Coates & Lindgren.
- Hooded Cuckoo-Shrike *Coracina longicauda*
Not recorded. Coates & Lindgren saw a female of this highland species at 1980 m. Gilliard & LeCroy found them uncommon in the mossy beech forest above 2300 m.
- White-bellied Cuckoo-Shrike *Coracina papuensis*
Not recorded. Bell saw small parties at Ningerum.
- Black-faced Cuckoo-Shrike *Coracina novaehollandiae*
Migrant, present in the Australian winter. Flocks of three or four, occasionally more, are often observed around the secondary growth trees of the plateau. They are usually silent but on the day before they left in 1986 a soft "kerlooer" was heard, rather hoarse and high-pitched. They also completely stripped some trees of their red berries before departing. Migration dates: arrival: 25 May 1986, 28 May 1987; departure: 20 September 1985, 19 September 1986, 20 September 1987. Bell also recorded this species.
- Stout-billed Cuckoo-Shrike *Coracina caeruleo-grisea*
Status unknown. One seen at Yuk Creek and one at Ok Menga within a couple of days in early March 1987. Also one on 17 April 1987. Bell found them plentiful in secondary growth in the Arip valley in April 1966 and Gilliard & LeCroy reported it from the mid-mountain forest.
- Yellow-eyed Cuckoo-Shrike *Coracina lineata*
Status unknown. A group of four or five birds were calling and flying into the canopy in the forest east of Tabubil on 6 April 1986. No barring was observed on the underparts, suggesting that these birds belonged to the resident race rather than being Australian migrants. Not previously recorded from the area.
- Boyer's Cuckoo-Shrike *Coracina boyeri*
Status uncertain. A pair was seen feeding at the forest edge in Tabubil on 29th June 1986 and three were at Lukwi feeding on berries on 9 November 1986. There were other probable, but

- unconfirmed, sightings. Coates & Lindgren saw them at two localities south of Tabubil. It is essentially a lowland and hill forest species and is probably resident.
- Cicadabird *Coracina tenuirostris*
Not recorded. Bell saw one at 600 m, the only record for the Ok Tedi region.
- Black-shouldered Cuckoo-Shrike *Coracina morio*
Status uncertain. Occasionally seen at forest edge from 600 m (Yuk Creek) to 1450 m (Ok Ningi Dam). Coates & Lindgren found it at 700 m above Tabubil.
- Grey-headed Cuckoo-Shrike *Coracina schisticeps*
Presumed resident. Seen on a number of occasions throughout the year, at different places in the survey area. It is mainly a bird of the forest edge; commonly in pairs often with other canopy feeders. Also recorded by Bell and Coates & Lindgren.
- Black Cuckoo-Shrike *Coracina melaena*
Status unknown. A single female was seen in August 1986 at Ok Menga, and another in April 1987 with a mixed feeding flock at the escarpment edge. Coates & Lindgren saw a pair south of Tabubil.
- Black-bellied Cuckoo-Shrike *Coracina montana*
Not recorded. A montane species, recorded by Coates & Lindgren above 1100 m and commonly by Gilliard & LeCroy at Telefomin.
- Golden Cuckoo-Shrike *Campochaera sloetii*
Status unknown. It does not seem to be common in the area. The only observation is of two feeding in the canopy in the Ok Tedi valley, on 8 June 1986. This contrasts with the 10 seen by Coates & Lindgren and with Bell's observations of large numbers. Both Bell and Rand point out that this species requires mature timber, even remnant stands. Much of the primary forest around Tabubil has been lost.
- Varied Triller *Lalage leucomela*
Resident and fairly common. It was seen nesting high in the canopy at the forest edge. It was first found on 29 September 1985, when both birds were at the nest; it was still sitting on 4 October. Also commonly recorded by Bell and Coates & Lindgren, mainly in secondary growth.
- Chestnut-backed Jewel-Babbler *Ptilorrhoa castanonotus*
Not recorded. Coates & Lindgren heard this hill-forest species at 1340 m.
- Lesser Melampitta *Melampitta lugubris*
- Blue-capped Ifrita *Ifrita kowaldi*
These highland species were not recorded by this survey but are listed in Coates & Lindgren. The Lesser Melampitta was apparently abundant at Lake Wangbin in 1966 (Bell) but was not present in November 1985.
- Rufous Babbler *Pomatostomus isidorei*
Not recorded. Bell found it in lowland forest to 400 m.
- Tawny Grassbird *Megalurus timoriensis*
Presumed resident on grassland on the plateau, but uncommon. One seen displaying, fanning its tail and flicking it while calling, in undergrowth on 25 September 1986. Frequently heard calling especially from September to December. Coates & Lindgren found it as high as 1978 m. Gilliard & LeCroy record it at Telefomin.
- Wallace's Fairy-Wren *Sipodotus wallacii*
Coates & Lindgren saw a pair in secondary growth at 620 m.
- Emperor Fairy-Wren *Malurus cyanocephalus*
Bell recorded them throughout the lowland areas and in the Arip valley.
- White-shouldered Fairy-Wren *Malurus alboscapulatus*
Resident and common in grassy areas throughout the Ok Tedi valley and the Tabubil plateau to 1700 m (Coates & Lindgren). The female of the race present here is all black with very dark brown primaries, and white shoulders; it is almost identical to the male. Family parties with

- three young were seen in July 1985 and in October and November 1986. Gilliard & LeCroy obtained a nestling in April.
- Orange-crowned Fairy-Wren *Clytomyias insignis*
One observed 2 September 1987 at 1500 m. Bell observed these regularly at Lake Wangbin where they were common and very tame.
- Rusty Mouse-Warbler *Crateroscelis murina*
Presumed resident. This species was heard regularly in hill forest around Ok Menga and south of Tabubil, but not in disturbed habitats. Coates & Lindgren recorded them at various localities between 570 m and 1535 m. Bell found them in vine thickets near Ningerum.
- Mountain Mouse Warbler *Crateroscelis robusta*
A montane species not recorded in this survey. Coates & Lindgren heard it at 1700 m and 1980 m, and Bell recorded it at 1600 m.
- Large Scrub-Wren *Sericornis nouhuysi*
Presumed resident. One in January 1986 at 1450 m and two in September 1987 at 2050 m. Also recorded by Bell, and Coates & Lindgren.
- Buff-faced Scrub-Wren *Sericornis perspicillatus*
Recorded by Bell.
- Papuan Scrub-Wren *Sericornis papuensis*
Recorded by Gilliard & LeCroy.
- Grey-green Scrub-Wren *Sericornis arfakianus*
Recorded by Gilliard & LeCroy.
- Grey Gerygone *Gerygone cinerea*
Recorded by Coates & Lindgren.
None of the above four montane species were recorded in this survey.
- Yellow-bellied Gerygone *Gerygone chrysogaster*
Not recorded. The only record is of a single bird at Ok Tedi Tau (Coates & Lindgren).
- Green-backed Gerygone *Gerygone chloronotus*
Presumed resident. A probable sighting was made in March 1986 in the canopy at the edge of the Tabubil plateau and it was heard here in June 1986, April and June 1987. One was also seen at Ok Menga in August 1986. Gilliard collected a female at Telefomin.
- Fairy Gerygone *Gerygone palpebrosa*
A single bird seen gleaning in secondary growth on the plateau in December 1985. Gilliard collected six near Telefomin.
- Sooty Thicket-Fantail *Rhipidura threnothorax*
Not recorded. Heard south of Tabubil by Coates & Lindgren.
- White-bellied Thicket-Fantail *Rhipidura leucothorax*
Presumed resident. Frequents undergrowth around the plateau and Ok Tedi valley. It has been seen at various times of the year. Also recorded by Bell and Coates & Lindgren.
- Rufous-backed Fantail *Rhipidura rufidorsa*
Presumed resident. One seen in undergrowth at the plateau edge on 28 September 1986 and its call heard. It was also heard in November 1986 at 700 m, and commonly in April, May and June 1987 in secondary growth around the forest edge near Tabubil and Ok Menga. It was also recorded by Coates & Lindgren.
- Black Fantail *Rhipidura atra*
Resident. A pair seen at 1400 m near Lake Wangbin in November 1985, two males at 1850 m at the mine in January 1986 and a pair at 2050 m in September 1987. Both Bell and Coates & Lindgren found this species common in montane forest.
- Chestnut-bellied Fantail *Rhipidura hyperythra*
Not recorded. A hill forest species only found by Gilliard & LeCroy near Telefomin.
- Friendly Fantail *Rhipidura albolimbata*
Three in September 1987 above Edinburgh. Apparently common in the montane forest (Bell and Coates & Lindgren).

- Northern Fantail *Rhipidura rufiventris*
Presumed resident. One observed in September 1986, one in April 1987 and one in June 1987, all flycatching in mid-storey forest at the edge of the Tabubil escarpment.
- Willie Wagtail *Rhipidura leucophrys*
Resident. This is the common fantail around Tabubil and along roads and rivers in the area. It has increased in numbers on the plateau in recent years, as there are numerous pairs compared with the one pair found by Coates & Lindgren. However Gilliard & LeCroy point out that the Telefomin population shows morphological differences which correlate with altitude, and could not therefore be an immigrant population with development of the area. It would be of interest to study the Tabubil population in this way.
- Black Monarch *Monarcha axillaris*
Status unknown. Only definite sighting was on 2 November 1986 at 700 m. This is well below its normal range as it was recorded by Bell and Coates & Lindgren in mid-montane and montane forest.
- Black-faced Monarch *Monarcha melanopsis*
Not recorded. Bell saw one on 30 April 1966 at Ningerum.
- Black-winged Monarch *Monarcha frater*
Not recorded. Only seen once, at 1025 m, by Coates & Lindgren.
- Spot-winged Monarch *Monarcha guttula*
Status unknown. Rather uncommon apparently; this survey recorded it only in September 1985 on the plateau, and Coates & Lindgren saw one south of Tabubil. Bell recorded it as common up to 600 m.
- Golden Monarch *Monarcha chrysomela*
Not recorded. Coates & Lindgren saw a pair at 620 m at Ok Teditau.
- Leaden/Satin Flycatcher *Myiagra rubecula/M. cyanoleuca*
A single female *Myiagra* species was seen in mid-stage foliage at Lukwi on 9 November 1986. It had a grey "square" head, brownish back, wings and tail, pale orange throat and breast and white underparts. It was also heard to give a "whita whita" call. Definite identification is difficult: both species migrate from Australia; neither has been recorded previously in the area.
- Shining Flycatcher *Myiagra alecto*
Possible resident. A male frequented secondary growth around the houses in Tabubil in September and October 1986, well away from any pond or river. Perhaps the change in habitat was because of the exceptional drought at that time. The male was noisy and territorial but when the rains resumed it left the area. However it re-appeared in mid-February and has been present since then. A second male was also heard in another part of the plateau. No females have been observed. Not recorded previously in the area.
- Yellow-breasted Boatbill *Machaerirhynchus flaviventer*
Status unknown. One seen in the canopy at Sawmills on 26 April 1987. Coates & Lindgren may have heard this species.
- Black-breasted Boatbill *Machaerirhynchus nigripectus*
Not recorded. This montane species was found to be common at 1400 m (Bell) and in the moss forest (Coates & Lindgren).
- Torrent Flycatcher *Monachella muelleriana*
Resident. Common around the rivers, eg. Ok Menga, near the gorge, Yuk Creek, Ok Ma, Ok Mani and in the Ok Tedi valley. Small groups of three or four birds are always present in these localities. Groups of 10 or more were originally to be found in the Ok Menga region but building has temporarily restricted their habitat here. Probably when the trees grow back the flycatchers will return as they are not a wary species. Bell also found them common.
- Lemon-bellied Flycatcher *Microeca flavigaster*
Not recorded. Gilliard & LeCroy state that this species was common in the open country at Telefomin. However it is not likely to occur in the Ok Tedi region as it requires open woodland.

- Yellow-legged Flycatcher *Microeca griseiceps*
Presumed resident. Observed most commonly from January to April in forest edge on the northern edge of the plateau, 600 m. Recorded previously by Coates & Lindgren, and by Gilliard & LeCroy at Telefomin.
- Canary Flycatcher *Microeca papuana*
One on Mt. Binnie, 2000 m, on 20 September 1987. A montane species found by Coates & Lindgren above 1400 m.
- White-faced Robin *Tregellasia leucops*
Status unknown. A hill forest species. A single bird was observed at the lowland forest/ moss forest interface at 1000 m, in the hills east of Tabubil in November 1985. It had a red, not black, bill and orange-red, not yellow, legs. This would suggest it was either the race *T. l. wahgiensis* described from the Eastern Highlands or *T. l. auricularis*, from the mouth of the Fly River, rather than *T. l. nigriceps* as expected (cf. Diamond 1985).
- Ashy Robin *Poecilodryas albispecularis*
Not recorded. A montane species confined to the moss forest and mainly seen and heard around Edinburgh by Coates & Lindgren.
- Black-throated Robin *Poecilodryas albonotata*
Not recorded. A high mountain species; Coates & Lindgren recorded only one at 2190 m.
- Black-sided Robin *Poecilodryas hypoleuca*
Status uncertain. A single bird was seen in remnant forest before the Golf Course was cleared at Tabubil and one near the road at Sawmills. Not recorded previously from the area, and mainly a lowland species.
- White-rumped Robin *Peneothello bimaculatus*
- Blue-grey Robin *Peneothello cyanus*
- White-eyed Robin *Pachycephalopsis poliosoma*
These three montane species were not recorded in the present survey but are listed by Coates & Lindgren for the mine area.
- Dwarf Whistler *Pachycare flavogrisea*
Not recorded. A montane species found by Coates & Lindgren.
- Mottled Whistler *Rhagologus leucostigma*
Not recorded. Coates & Lindgren observed one at 1750 m near Bultem (Coates pers. comm.).
- Slater's Whistler *Pachycephala soror*
Presumed resident. They have been observed in secondary growth east of the plateau on two occasions (600 m) and calls were heard at 1400 m. Also present above mine, September 1987. Coates & Lindgren recorded it several times in montane forest.
- Regent Whistler *Pachycephala schlegelii*
One male and 2 females on Mt. Binnie, 2000 m, in September 1987. Also recorded by Coates & Lindgren, and Gilliard & LeCroy, in the Star Mountains.
- Golden-backed Whistler *Pachycephala aurea*
Resident in a marshy area near the pond at Sawmills where it has been observed in 1985, 1986 and 1987. Not recorded elsewhere in the region nor previously in the literature.
- Lorentz's Whistler *Pachycephala lorentzi*
Not recorded. A montane species present at 1980 m above Edinburgh (Coates pers. comm.) and Star Mountains (Gilliard & LeCroy).
- Grey Whistler *Pachycephala simplex*
Not recorded in this survey, but found by Bell at 600 m and Coates & Lindgren at 620 m.
- Rusty Whistler *Pachycephala hyperythra*
Presumed resident. Two seen together, eating caterpillars, in August 1985. Probably also heard at Lake Wangbin. Coates & Lindgren found it well-distributed at a number of localities.
- Brown-backed Whistler *Pachycephala modesta*
Not recorded. A montane species recorded by Gilliard & LeCroy.

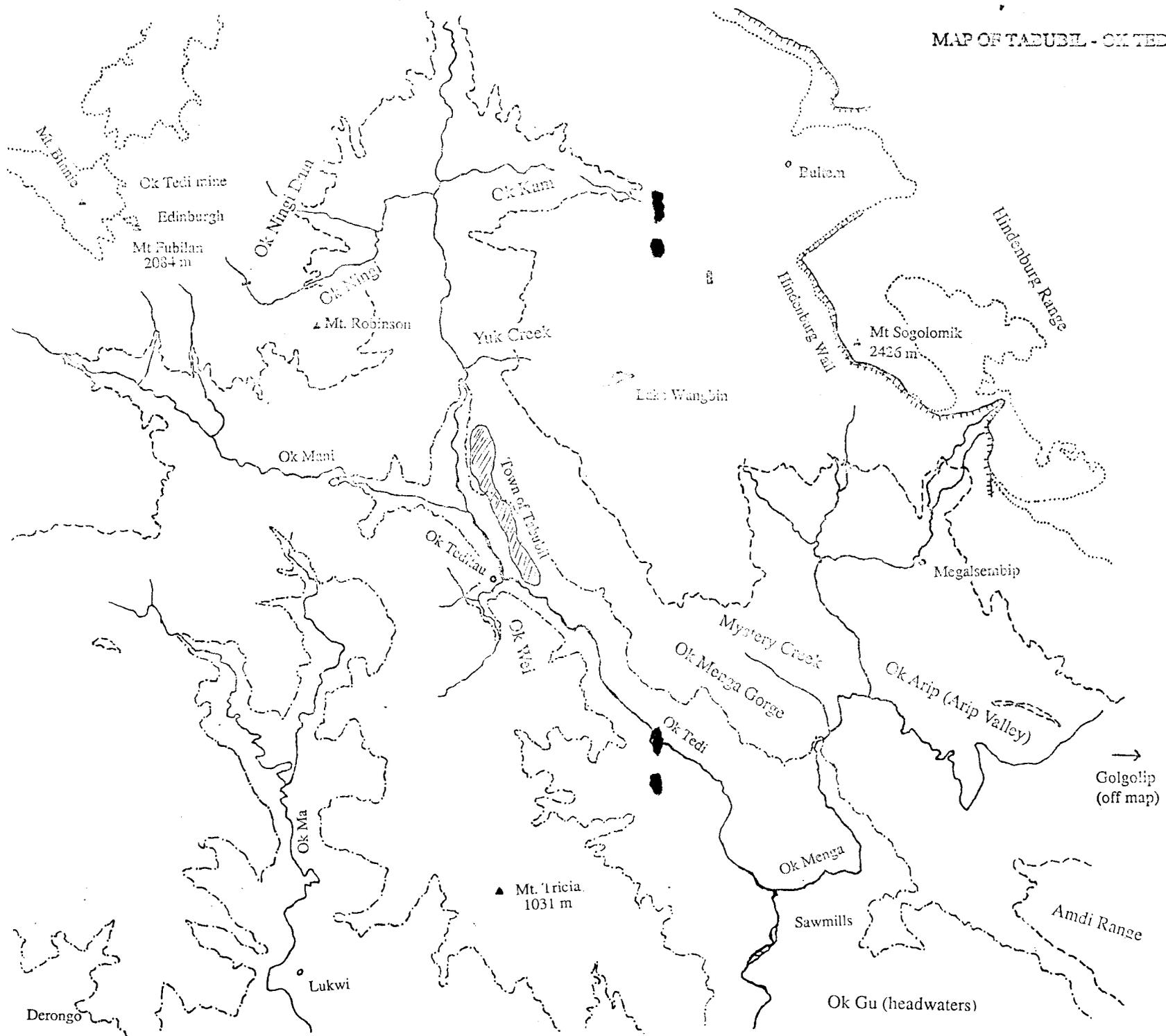
- Black-headed Whistler *Pachycephala monacha*
Not recorded. Bell saw pairs in the Arip Valley, the males constantly singing from dead trees. This habitat in the Ok Tedi valley does not appear to have attracted them however.
- Rufous-naped Whistler *Pachycephala rufinucha*
Not recorded. A montane species observed by Coates & Lindgren.
- Sooty Whistler *Pachycephala tenebrosa*
Not recorded. Bell (in Coates & Lindgren) observed one at Lake Wangbin. Finch found a pair nest-building at Edinburgh in December 1984.
- Little Shrike-Thrush *Colluricincla megarrhyncha*
Status unknown. Surprisingly not recorded in this survey though found throughout the area by Bell and Coates & Lindgren.
- Variable Pitohui *Pitohui kirhocephalus*
A bird of the brown-hooded race was seen briefly on 17 April on the plateau edge, in tall foliage, in a mixed feeding flock. Not previously recorded from the area but occurs in the Upper Fly.
- Hooded Pitohui *Pitohui dichrous*
Presumed resident, fairly common at forest edge from the plateau to the mine (600 m to 1800 m). Pairs and single birds seen in a variety of months. Also recorded by Bell and Coates & Lindgren.
- Rusty Pitohui *Pitohui ferrugineus***
Presumed resident. Occurs in forest and forest edge, eg. at Lukwi and the edge of the plateau. Not particularly common though heard and seen at various times of year, suggesting a resident population. Not recorded by Bell, while Coates & Lindgren only saw one.
- Crested Pitohui *Pitohui cristatus*
Not recorded. Coates & Lindgren heard the song of this species at 1070 m.
- Papuan Treecreeper *Climacteris placens*
Not recorded. Bell found it commonly at Lake Wangbin.
- Melanocharis* sp.
A female *Melanocharis* was seen at the plateau edge at Tabubil on 17 April 1987. It was dull brown above, creamy grey below and had conspicuous yellow pectoral tufts. It was possibly a Mid-Mountain Berrypecker *Melanocharis longicauda* although it did not appear to have the long tail. Coates & Lindgren described a similar bird, with proportions and size of Black Berrypecker, from the same spot, which they suspected could be an Obscure Berrypecker *Melanocharis arfakiana*. Further confirmation and study of these birds is required.
- Black Berrypecker *Melanocharis nigra*
Not recorded, but seen on several occasions by Coates & Lindgren.
- Fan-tailed Berrypecker *Melanocharis versteri*
Recorded by Coates & Lindgren.
- Spotted Berrypecker *Rhamphocharis crassirostris*
Recorded by Bell.
These two upland species were not recorded in the present survey.
- Papuan Flowerpecker *Dicaeum pectorale*
Resident and fairly common in secondary growth and forest edge throughout the area. Also recorded by Bell, and Coates & Lindgren.
- Tit Berrypecker *Oreocharis arfaki*
Not recorded. Apparently quite common above 1700 m (Coates & Lindgren). Gilliard & LeCroy found it uncommon in the Hindenburg Mountains; however the Crested Berrypecker *Paramythia montium* was common there.
- Black Sunbird *Nectarinia aspasia*
Presumed resident on the plateau and south of Tabubil in the Ok Tedi valley. Most commonly seen from October to June, singly or in pairs, on one occasion (8 February 1987) there were four males together. Recorded by Coates & Lindgren.

- Yellow-bellied Sunbird *Nectarinia jugularis*
Not recorded. A single bird seen by Cole at Tabubil seems to have been exceptional.
- Black-fronted White-Eye *Zosterops arifrons*
Status unknown. A flock of white-eyes, probably this species, was foraging at the interface of the forest and the moss-forest, 1000 m, in November 1985. Their call note was a squeaky "kutuk kutuk". Also found by Coates & Lindgren, and by Gilliard & LeCroy near Telefomin.
- Western Mountain White-Eye *Zosterops fuscicapillus*
Not recorded. A highland species recorded by Coates & Lindgren, and Gilliard & LeCroy.
- Long-billed Honeyeater *Melilestes megarrhynchus*
Resident and fairly common on the plateau and forest edge areas. An immature bird frequented the house balcony in November and December 1986. Call notes are remarkably like those of the Tawny-breasted Honeyeater; "whit tt whit". Bell also records this call as "whit whit whit" but this is not mentioned in Beehler *et al.* (1986). Also recorded by Coates & Lindgren.
- Slaty-chinned Longbill *Toxorhamphus poliopterus*
Presumed resident. Not often observed but recorded for a variety of months through the year at Lukwi and on the plateau. Always found in the remnant forest on the plateau, not in secondary growth. Also recorded by Bell and Coates & Lindgren.
- Dwarf Honeyeater *Oedistoma iliolophus*
Status uncertain. One seen briefly at Lukwi in December 1985; another possible sighting in June 1986 on the edge of town. Coates & Lindgren also saw several.
- Red-throated Myzomela *Myzomela eques*
Status uncertain. A single bird was feeding at the forest edge north of the plateau, in January 1986. Two with two immatures (no red throats) were in the canopy on the edge of town in November 1986. Not recorded previously in the area.
- Red Myzomela *Myzomela cruentata*
Status unknown, probably resident in the montane area. A pair seen at Ok Ningi Dam, 1450 m, in January 1986. Coates & Lindgren found them not uncommon at 1185 m and above.
- Papuan Black Myzomela *Myzomelanigrita*
Presumed resident. Seen most commonly January to June 1986, less commonly since. It frequents the plateau and other secondary growth areas; also forest edge at Lukwi. Most birds seen have been black but a female with forehead and throat red, was seen in December 1986. Coates & Lindgren recorded two or three males at 600 m.
- Red-collared Myzomela *Myzomela rosenbergii*
Resident. Common on Mt. Binnie above mine and recorded by Coates & Lindgren in all the montane forests of the area, 1400 m and higher.
- Mountain Meliphaga *Meliphaga orientalis*
Not recorded. A pair seen by Coates & Lindgren were lower than normal at 640 m.
- Scrub White-eared Meliphaga *Meliphaga albonotata*
Resident. The common meliphaga of the plateau and disturbed areas. Very vocal in May and also in September and October. Fully fledged young were observed in September 1986 and May 1987, the latter still being fed by the adults. Coates & Lindgren only recorded one or two in regrowth south of Tabubil.
- Meliphaga group
Meliphagas with yellow ear spots occur quite commonly in the forest. One at 700 m, east of the plateau, had a very conspicuous yellow rictal streak and a long slim bill, which suggests a Mimic Meliphaga *Meliphaga analoga*. Probably Yellow-gaped Meliphaga *Meliphaga flavirictus* and Puff-backed Meliphaga *Meliphaga aruensis* both occur but field identification is difficult. Bell and Coates & Lindgren found these species.
- Black-throated Honeyeater *Lichenostomus subfrenatus*
Not recorded. A montane species occurring commonly in moss forest according to Coates & Lindgren.

- Spotted Honeyeater *Xanthotis polygramma*
Not recorded. Coates & Lindgren saw one at 1070 m.
- Tawny-breasted Honeyeater *Xanthotis flaviventer*
Resident and common in forest edge, secondary growth and gardens particularly in the lower areas. Immature birds with very white eye-stripes were seen in November and December 1985 and in February 1987; the latter observation was a family party, two adults and two immatures in the southern part of Tabubil. They came regularly to a fruit tree close to the house. Coates & Lindgren found several in a number of localities.
- Streak-headed Honeyeater *Pycnopygius stictocephalus*
Not recorded. A single bird seen by Coates & Lindgren at 640 m is above the normal altitudinal range.
- Meyer's Friarbird *Philemon meyeri*
Bell found this species at 600 m in secondary growth at Megalsambip.
- Helmeted Friarbird *Philemon buceroides*
Resident and very common in forest, forest edge, gardens and regrowth below 1000 m. Often in pairs or three or four together, sometimes with other species. Loud and conspicuous caller, often duets; most vocal October, November and March. Bell, and Coates & Lindgren also recorded it to about 1000 m.
- Leaden Honeyeater *Ptiloprora plumbea*
Not recorded. Coates & Lindgren recorded this montane species.
- Grey-streaked Honeyeater *Ptiloprora perstriata*
Resident. Two on Mt Binnie, 2000 m, above the mine on both 20 and 25 September 1987. Also recorded by Coates & Lindgren.
- Sooty Melidectes *Melidectes fuscus*
One at 1140 m on Mt Binnie on 25 September 1987. A montane species, also recorded by Bell.
- Yellow-browed Melidectes *Melidectes rufocrissalis*
Resident. Presumably this species on Mt. Binnie, 2100 m, on 20 September 1987: a large black melidectes with a long bill and a pale eye patch (exact colour not observed). Also seen by Coates & Lindgren.
- Ornate Melidectes *Melidectes torquatus*
Presumed resident. Two calling loudly at the forest edge at 1450 m near the mine, in January 1986. Coates & Lindgren also recorded two and Gilliard & LeCroy report them up to 1800 m and saw young in March and April. This species prefers secondary growth but there is not much of this habitat above the plateau; the mine area is completely cleared with no regrowth as yet.
- Common Smoky Honeyeater *Melipotes fumigatus*
Resident in moss forest. Two were seen in November 1985 near Lake Wangbin and one above the mine, 2000 m, in September 1987. Quiet and tame. Bell and Coates & Lindgren both found this species well established and plentiful in mid-montane and moss forest.
- Blue-faced Parrot-Finch *Erythrura trichroa*
Not recorded. Coates & Lindgren encountered this species at a number of localities including the forest edge at Tabubil.
- Metallic Starling *Aplonis metallica*
Not recorded. This widespread lowland species appears to be absent. The only record is by Bell who recorded a flock of 200 roosting at the Ok Gu south-east of Ok Menga. There was no sign of nests so possibly these were nomads.
- Golden Myna *Mino anais*
Presumed resident. Particularly common at some times of year, eg. March and November 1986. Usually in pairs or groups of up to 10. It appears to be present from Tabubil southwards in forest edge habitats. Also recorded by Coates & Lindgren.
- Yellow-faced Myna *Mino dumontii*
Resident. Common and widespread. Pairs and small groups are frequently observed in disturbed areas, gardens and forest edges though not in the centre of town. One was seen

- carrying sticks in late October 1985. Flocks were common in November 1986. A pair seen at 800 m in November 1986 was the highest altitude sighting. Also recorded commonly by Bell and Coates & Lindgren.
- Brown Oriole *Oriolus szalayi*
Resident. Fairly common around the forest edge and the plateau, and frequently heard. Bell recorded them in a number of localities but they were not found by Coates & Lindgren, probably because they are primarily a lowland species (up to 1000 m).
- Mountain Drongo *Chaetorhynchus papuensis*
Status uncertain. One seen in November about 800 m in undisturbed forest. Bell saw one at Derongo and Coates & Lindgren found a pair at 990 m and two at 1340 m. Generally rather scarce.
- Spangled Drongo *Dicrurus hottentottus*
Status unknown; possibly resident and migrant birds present. One was seen in garden undergrowth on the plateau in October 1985 and one out in the open on the ridge at Lukwi in November 1986. In 1987 one was heard in May by the Ok Mani and one in June at Lukwi, calling from dense foliage. Both birds were vocal, with calls reminiscent of the Australian race. This species was not recorded by Bell and only seen south of Tabubil in February 1978 by Coates & Lindgren.
- Torrent-Lark *Grallina bruijnii*
Presumed resident. Rather uncommon and confined to the fastest rivers, mainly near Mystery Creek above the Ok Menga gorge; also once seen on the Ok Tedi. Bell recorded it on the Ok Menga and at Lake Wangbin; Coates & Lindgren also recorded one.
- White-breasted Wood-Swallow *Artamus leucorhynchus*
Not recorded. Bell saw them at Ningerum which is probably the highest extent of their range in this area.
- Great Wood-Swallow *Artamus maximus*
Resident in gardens and cleared areas especially on the plateau. It is common around the town and small groups gather on wires and dead trees, sometimes huddling close together. Also recorded by Bell and by Coates & Lindgren.
- Hooded Butcherbird *Cracticus cassicus*
Common resident of the forest and forest edge, eg. Lukwi, Sawmills, woodland east of Tabubil. It favours ridge tops and cleared gardens in the forest; often three or four may be seen in one area. Flocks were seen going to roost east of the plateau. Recorded by Bell and Coates & Lindgren.
- Black Butcherbird *Cracticus quoyi*
Not recorded, though possibly seen at Sawmills once. Coates & Lindgren found this species at 570 m, south of Tabubil.
- Mountain Peltops *Peltops montanus*
Presumed resident. Fairly common and widely distributed; prefers tall trees, often on a ridge with a good view. Also recorded by Coates & Lindgren and by Gilliard & LeCroy.
- Spotted Catbird *Ailuroedus melanotis*
Not recorded in this survey. It was seen and heard commonly by Bell and heard by Coates & Lindgren, all in hill forest.
- Macgregor's Bowerbird *Amblyornis macgregoriae*
This species was collected by Gilliard above 2000 m. Although listed by Coates & Lindgren there are no records for the Ok Tedi region to date.
- Yellow or Fawn-breasted Bowerbird *Chlamydera lauterbachii/C. cerviniventris*
A bowerbird seen on 14 September 1985 is presumed to be one of these two species. At the time it was thought to be a Fawn-breasted Bowerbird because of its colouring. However Bechler *et al.* (1986) give the range of *C. cerviniventris* as mainly coastal, while *C. lauterbachii* occurs in grasslands in the Star Mountains. Possibly it was an immature Yellow-breasted Bowerbird which lacks the yellow underparts. Its plumage was heavily streaked, which

MAP OF TABULI - OK TEDI AREA



suggests it was unlikely to be a female Flame Bowerbird *Sericulus aureus*. Unfortunately subsequent searching of the area where this bird was seen has not produced another sighting; probably it has moved elsewhere or been killed.

Loria's Bird of Paradise *Cnemophilus loriae*
Recorded by Coates & Lindgren and by Gilliard & LeCroy.

Yellow-breasted Bird of Paradise *Loboparadisea sericea*
Recorded as very rare by Gilliard & Lecroy.

These two montane species were not recorded in the present survey.

Glossy-mantled Manucode *Manucodia atra*

Manucodes with long tails, seen south of Tabubil and on the Lukwi Road, were probably this species. One was observed perched on a dead tree together with a Magnificent Riflebird and a Zoe Imperial Pigeon. Unfortunately it did not call. Coates & Lindgren saw two at this locality.

Trumpet Manucode *Manucodia keraudrenii*

Presumed resident. This species has been seen and heard calling in undisturbed forest at Lukwi and at the intake area at Ok Menga, usually in pairs in the canopy. Bell found it commonly in the Ok Tedi gorge.

Short-tailed Paradigalla *Paradigalla brevicauda*

Not recorded. Bell found it common at Lake Wangbin; Coates & Lindgren found one there and others at 1430 m and 2000 m.

Magnificent Riflebird *Ptiloris magnificus*

Resident. This species is fairly common in forest edge habitats in the lower part of the region. It has been observed near the road going south from Tabubil, on the ridge at Ok Menga and at Lukwi and the intake area of Ok Menga. Vocal at various times throughout the year. Observed by Bell and once by Coates & Lindgren.

Black Sickiebill *Epimachus fastuosus*

Not recorded though skins are sometimes seen in town and at the market; these are said to come from the mountains. The only record for the area is by Bell who saw a pair in mature beech forest above Lake Wangbin. Gilliard collected specimens below 2000 m and found the Brown Sickiebill *Epimachus meyeri* above 2000 m.

Superb Bird of Paradise *Lophorina superba*

Recorded by Bell and Coates & Lindgren.

Carola's Parotia *Parotia carolae*

Coates & Lindgren recorded one female.

King of Saxony Bird of Paradise *Pteridophora alberti*

Recorded by Coates & Lindgren.

These three montane species were not recorded in this survey.

King Bird of Paradise *Ciccinnurus regius*

Not found near Tabubil according to the local people but a male skin was brought into the market in February 1987; this probably came from the lowlands to the south.

Magnificent Bird of Paradise *Ciccinnurus magnificus*

Presumed resident. Apparently not as common as in the past. Single females were seen at the edge of the plateau in March and April 1986, and two in April 1987 with a mixed feeding flock. No males were seen. Clearance of habitat and increase in collection of skins seems to have affected the local population of this species.

Raggiana Bird of Paradise *Paradisaea raggiana*

Resident and fairly common in the Lukwi and Ok Menga areas. Usually only females and immatures are seen, commonly in groups of three or four, calling loudly. A display by immatures or females was observed at Ok Menga ridge on 17 May 1986. A single male was present but did not display. A good view of a fully-plumed male was obtained on the Lukwi Road in July 1985. Other observers report them from this area occasionally. Skins are traded locally so males tend to be scarce.

Greater Bird of Paradise *Paradisaea apoda*

Resident and fairly common in the Lukwi and Ok Menga areas. It occupies similar habitats as *P. raggiana* and hybrids are known from the upper Fly (Rand 1942). In the survey area it seems to be the most abundant bird of paradise, though females predominate. In September 1986 a female was seen taking food into a tangled mass of foliage and vines in the mid-story, presumably feeding young. The plumes are extensively used in local decoration, probably causing a reduction in adult males in developed areas. It was recorded by Coates & Lindgren at around 600 m.

Lesser Bird of Paradise *Paradisaea minor*

Not recorded. The nearest record is by Gilliard & LeCroy who described it as abundant up to 1500 m on the northern slopes of the central cordillera.

Grey Crow *Corvus tristis*

Resident. Common in lowland forest and forest edge, e.g. Ok Tedi valley, Sawmills. Usually in small flocks. Immatures seen in August 1985 and in May, September, and December 1986, and in February 1987. Also recorded by Coates & Lindgren.

APPENDIX

Breeding records for Tabubil and Ok Tedi 300-1700 m

Dwarf Cassowary	<i>Casuaris bennettii</i>	Eggs & young
Brahminy Kite	<i>Haliastur indus</i>	Fledged young, October (Cole)
Crested Hawk	<i>Aviceda subcristata</i>	Fledged young, February
Buff-banded Rail	<i>Rallus philippensis</i>	Young, September
Brown Cuckoo-Dove	<i>Macropygia amboinensis</i>	Display, April
Rainbow Lorikeet	<i>Trichoglossus haematodus</i>	Mating, end December
Red-flanked Lorikeet	<i>Charmosyna placensis</i>	Nesting (Coates & Lindgren)
Lesser Black Coucal	<i>Centropus bernsteinii</i>	Display, July, December
Glossy Swiftlet	<i>Collocalia esculenta</i>	Nesting, November
Pacific Swallow	<i>Hirundo tahitica</i>	Nesting, October-January
Varied Triller	<i>Lalage leucomela</i>	Nesting, September-October
White-shouldered Fairy-Wren	<i>Malurus alboscapulatus</i>	Fledged young, July, October & November.
Black Fantail	<i>Rhipidura atra</i>	Fledgelings, July (Coates & Lindgren)
Willie Wagtail	<i>Rhipidura leucophrys</i>	Nesting, October
Scrub White-eared Meliphaga	<i>Meliphaga albonotata</i>	Fledgeling, February
Tawny-breasted Honeyeater	<i>Xanthotis flaviventer</i>	Family group, February
Helmeted Friarbird	<i>Philemon buceroides</i>	Carrying food, May, June
Raggiana Bird of Paradise	<i>Paradisaea raggiana</i>	Display, May
Greater Bird of Paradise	<i>Paradisaea apoda</i>	Female with food, September
Grey Crow	<i>Corvus tristis</i>	Fledged Young, February, May, September, December

Breeding records for Tabubil and Ok Tedi above 1700 m

Canary Flycatcher	<i>Microeca papuana</i>	Fledgelings, February (Coates & Lindgren)
Grey-streaked Honeyeater	<i>Ptiloprora perstriata</i>	With nest material, February (Coates & Lindgren)
Yellow-browed Melidectes	<i>Melidectes rufocrissalis</i>	Fledgelings, February (Coates & Lindgren)
Short-tailed Paradigalla	<i>Paradigalla brevicauda</i>	With nest material, February (Coates & Lindgren).