MURUK

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THE JOURNAL OF THE PAPUA NEW GUINEA BIRD SOCIETY

Contents

MURUK

EDITORIAL

Unfortunately it has taken a very long time indeed to get this issue of Muruk completed, printed and distributed, and we thank all our readership for their patience, and we apologise to the authors for the delays.

To alleviate one of the major problems in production, the Society has purchased a computer which is dedicated to the production of Muruk. Thus the editor will no longer need to scrape time after hours on shared or borrowed computers. The purchase was made partly from Society funds and also with substantial donations from Pryde Furniture Limited and from Synergen Computer Systems Limited. We hope to further speed up the production of camera-ready material by purchasing a dedicated laser-printer in the near future.

This issue was largely prepared by Roger Hicks before he and Jenny Hicks went finish from P.N.G. after five years as stalwarts, and in many ways the driving forces behind the PNGBS. Their enthusiasm, organisation, and ornithological skills are greatly missed by the Society. While we wish Roger, Jenny, Andrew and Matthew the very best for their futures in Britain or elsewhere, we deeply feel the gap they leave in the Society's ranks.

Issue 5.3 should appear within two months of this issue, and material for issues in volume six are already largely ready for composition. That will clear the backlog of unpublished material, so please continue to support Muruk by sending in your contributions and observations.

EDITORS of the issue: Roger Hicks and Mike Hopkins.

COVER: Head study of Southern Cassowary by Jonas Hiaso

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ACQUISITION OF ADULT MALE PLUMAGE IN SOME BIRDS OF PARADISE AT BAIYER RIVER SANCTUARY

AKIA ARUAH AND ANDREW YAGA

No records have been published to date of the ages at which dimorphic birds of paradise acquire their adult plumages or the duration of the transition period. Estimates given in Cooper & Forshaw (1977) include the following for the genera *Epimachus*, *Paradisaea*, *Cicinnurus*, and *Diphyllodes*:

Epimachus meyeri "Acquisition of adult plumage by young males takes at least four years."
Paradisaea minor, *P. decora* & *P. guilielmi* "males acquire adult plumage slowly."
Paradisaea rudolphi "males acquire adult plumage slowly, over at least three and possibly five or more years."
Paradisaea apoda "males acquire adult plumage slowly, possibly over four or five years."
Paradisaea raggiana "males acquire adult plumage slowly, possibly over five or six years."
Paradisaea rubra "males acquire adult plumage slowly, possibly over six years."
Cicinnurus regius "Young males acquire adult plumage slowly.....until full adult plumage is attained in the fourth year."
Diphyllodes magnificus "acquisition of adult plumage by males is slow."

No information is given about sources on which the foregoing estimates were based. However, for *Diphyllodes republica* it is stated - "from specimens available it appears that young males acquire adult plumage gradually."

RECORDS OF ACQUISITION OF ADULT PLUMAGES AT BAIYER RIVER SANCTUARY

Brown Sicklebill *Epimachus meyeri*

On 13 September 1978 the Sanctuary received a young wild-caught Brown Sicklebill (band 6-031) from Wabag, Enga Province. Its sex was recorded at the time as 'female'. Nearly four years later, on 29 July 1982 the typical male calls of this species, a low gobbling followed by a sharp machine-gun-like rattle, were first made by this bird. A year later, on 1 August 1983, the commencement of its plumage change was first seen. A close examination on 25 August that year revealed black wing covert, upper leg, under chin and nape feathers; all other plumage being brown. A further examination in November, 1983 showed - **wings**: iridescent dark purplish black; **head & chin**: black; **forehead**: iridescent light blue; **back**: spangled iridescent blue; **underwing body feathers**: soft lavender; **side breast plumes**: blue-black; **flank plumes**: fawn; **tail**: two long brown inner feathers above shorter black feathers; **iris**: pale blue.

A similar plumage pattern was noted when the bird was closely examined on 26 July 1984. Full adult plumage was recorded on 13 May 1985.

Measurements (in mm) recorded for this bird are:

	26 July 1984	13 May 1985	10 August 1989
Overall length	740	980	980
Wing	168	165	170
Tail including long central feathers	467	710	710
Bill from gape to tip (chord)	78	75	80
Exposed culmen (chord)	74	79	74
Tarsus	48	52	52
Weight (grams)	294	294	(not recorded)

Lesser Bird of Paradise ***Paradisaea minor***

A Lesser Bird of Paradise (band 8-073) was acquired as a nestling in December 1979 and successfully reared by Sanctuary staff. During 1981 this bird was seen dancing and imitating a hand reared, fully plumed male *P. raggiana* in the adjoining aviary. In March 1983 the first signs of adult plumage were evident in broken yellow colour on the head, green throat and two longer tail feathers. By 1985 it had acquired half-length yellow flank plumes. In 1987 it was noted to be in three-quarter adult plumage and in full male regalia in 1988.

In this individual transition began at age 4 years and continued for a further 4 to 5 years, the bird being between 8 and 9 years old when first fully plumed. This particular bird is also of interest in that it is a fraction albino with a single white primary in one wing.

Raggiana Bird of Paradise ***Paradisaea raggiana***

The only three relevant Sanctuary records for Raggiana Bird of Paradise indicate transition in this species may begin as early as 4 years 8 months. Details of these records are -

P. r. augustaevictoriae x *salvadori* (band 8-111) hatched in the aviaries on 6 November 1984. It commenced plumage transition at about 29 June 1989 when "it started getting neck colour". By 24 August the new neck feathers were noted as "intermediate between immature and adult with green sheen"; there were no signs of other plumage colour changes.

P. r. salvadori (band 8-167) was noted to be "young" when it was acquired on 10 January 1985. In March 1988 it had "Colour on head, green throat, 2 long wires in tail". The following adult male plumage was acquired during the 1989 transition - **crown**: yellow; **forehead**: black in centre, green either side; **chin**: black; **neck**: green with a narrow yellow band between it and the breast.

Measurements (in mm) on 24 August 1989 were:

Length overall	420
Wing	179
Tail (includes 60 mm elongation of the two central tail feathers)	187
Bill from gape to tip	37
Exposed culmen	32
Tarsus	40
Weight (grams)	262

Magnificent Bird of Paradise ***Cicinnurus magnificus***

The two available records for the Magnificent Bird of Paradise are:

C. magnificus (band 6-007) was netted in the Trauna Valley not far from the Sanctuary in August 1969 and was recorded at the time as an immature. On 20 September 1975 it was noted to have started to acquire adult male plumage. No record was kept of the progress of the transition.

C. m. chrysopterus x *hunsteini* (band 6-105) was bred in the Sanctuary aviaries on 19 June 1986. When closely examined on 21 August 1989 this bird was in heavy moult around the head but new feathers were not yet showing. However, it did have two large, apparently new, pin feathers, each about 10 mm long, in the centre of the tail and which appeared to be the beginnings of tail wires. A close watch will be kept on this bird to ascertain whether this assumption is correct, and if so, the annual extent of development of those wires.

Comparative measurements (in mm) of this bird and the presumed female from the same clutch are:

	band 6-105 (presumed male)	band 6-106 (presumed female)
Length overall	225	215
Wing	112	110
Tail	68	73
Bill from gape to tip	31	31
Exposed culmen	22	21
Tarsus	29	28
Weight (grams)	92	88

The first of these two incomplete records indicate that, in this species, visible transition begins at age 6 years; however, it would seem from the second record that plumage changes may commence in some individuals as early as age 2 years 2 months.

It should be recognised that all of the above records concern aviary birds and that their captive environments are very different to those of the 'wild'. Nevertheless, these records

presumably provide some indication of the average times taken in some bird of paradise species for female clad immature males to commence visible plumage transition, and of the duration of some transition periods.

Paradisaea raggiana, *P. minor* and *Cicinnurus magnificus* have been, and continue to be bred successfully in captivity at the Baiyer River Sanctuary. This achievement in itself indicates a well balanced and close-to-natural diet, but this diet is one that is undoubtedly less varied than that enjoyed by the same species in the wild. Any possible effects of a limited variety in diet on plumage transition rates are, of course, unknown.

In the wild other factors may come into play as LeCroy (1981) has suggested. If plumage stages reflect individual hormone levels rather than age, subordinate males in a population may not develop fully adult plumage until they are sufficiently dominant to join a display arena. Thus the age at which captive birds acquire fully adult plumage may be a minimum age as they are usually without a dominance framework.

This paper was researched and written at the suggestion of Cliff and Dawn Frith, and their advice and encouragement are gratefully acknowledged. We are also grateful to Mary LeCroy of the American Museum of Natural History, and to Bill Peckover for their helpful comments, suggestions and editorial assistance.

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LeCroy, M. 1981. The genus *Paradisaea*, display and evolution. **American Museum Novitates** 2714: 1-52.

Address: Baiyer River Sanctuary, P.O. Box 490, Mount Hagen, W.H.P., P.N.G.

PAPUASIAN ORNITHOLOGY: THE PAPUA NEW GUINEA BIRD SOCIETY AND ITS NEWSLETTER

BILL PECKOVER

NEWSLETTER HISTORY

The newsletter was born in December 1965 and christened "New Guinea Bird Society Circular No.1", with the June 1966 issue (No.8) it was renamed "New Guinea Bird Society Newsletter" and was issued under that name until No.145, which appeared in July 1978.

On July 4 1978 the name of the Society was changed to the Papua New Guinea Bird Society. Newsletters from No.1", went under that title.

EDITORS	PERIODS OF RESPONSIBILITY
Harry Bell	No. 1, December 1965, No.3, February 1966, Nos. 6 & 7, May & June 1966.
Roy Mackay	No.2, January 1966, Nos.4 & 5, March & April 1966, Nos.8 - 45, June 1966 - August 1969, Nos.48 - 52, November 1969 - March 1970, Nos.65 - 72, April 1971 - January 1972.
Win Filewood	Nos.46 & 47, September & October 1969, Nos.53 - 61, April - December 1970, No.64, March 1971, Nos. 73 - 75, March - May 1972, Nos.85 & 86, April & May 1973.
Bill Peckover	Nos.62 & 63, January & February 1971.
Warwick Dyson	Nos.76 & 77, June & July 1972.
Tony Layton	Nos.78 - 83, August 1972 - February 1973, No.91, September 1973.
Brian Coates	No.84, March 1973, Nos.87 - 90, June - September 1973, Nos.92 - 96, November 1973 - April 1974, Nos.100 - 106, August 1974 - March 1975.
Charles Nicholson	Nos.97 - 99, May - July 1974.
Ted Patterson	No.107, March 1975.
Inez Weston	Nos.108 - 129, April 1975 - February 1977.
John Hansen	Nos.130 - 138, April - December 1977, Nos.142 - 152, April 1978 - February 1979.
John Seale	Nos.139 - 141, February - March 1978.
Brian Finch assisted by Alison Pound	Nos.153 - 174, March 1979 - December 1980.
Brian Finch assisted by Joan Lipscombe	Nos.175 - 186, January - December 1981.
Brian Finch	Nos.187 - 202, January 1982 - April 1983.
Nigel Hartley	Nos.203 - 210, May 1983 - August 1984.

Judith Hornabrook	Nos.211 - 218, September 1984 - December 1985, Nos.222 - 228, July 1986 - August 1987.
Mike Hopkins	Nos.219 & 220, January/February & March/April 1986.
Helen Hopkins	No.221, May/June 1986.
Jenny Hicks	Nos.229 - 232, November 1987 - March 1988.
Bill Cooper	Nos.233 - 253, March 1989 - January 1990.
Roger Hicks	No.254, March 1990.
Bill Eddie	Nos.255 - 261, April - December 1990.

Note: from No.189/190 (March/April 1982) until No.228 (August 1987) inclusive the Office (later Department) of Environment and Conservation assumed responsibility for publishing the Newsletter.

The first name change, from 'Circular' to 'Newsletter' when the Society was only seven months old was six months overdue! Circular No.2 was in fact a Newsletter, in that it recorded a 'first' and a doubtful first for New Guinea, the Redshank, *Tringa totanus*, and the Marsh Sandpiper, *Tringa stagnatilis*. The Redshank record was the doubtful one. Its rare presence in New Guinea was later confirmed by Brian Coates (Newsletter 81:3, Nov. 1972).

The second name-change, to the 'Papua New Guinea Bird Society Newsletter', was also overdue, not only because there was a need to recognise the Society's activities and members in the Bismarck Archipelago and Bougainville, but also to be in keeping with the independent status of Papua New Guinea.

In Newsletter 207 (Sept. 1983), Brian Finch foreshadowed the demise of the Newsletter as such and the birth of a quarterly ornithological journal the Muruk. To those looking on from afar it seemed to have been a long, difficult gestation that culminated with a premature birth more than two years later (the publication date of Volume 1 No.1 is not known). Unhappily all three issues of Volume 1 were poorly presented. Volume 2 No.1 was a tremendous improvement, and from here on, Muruk looked like an ornithological journal. Perhaps the Society should consider a reprint of those first issues in the present format. [The Society did reprint volume 1 as a single issue in late 1990, after this article was written, Ed.]

Maybe to some small degree caused by delays in getting out the first issue of Muruk, there was obvious confusion between the respective Editors as to whether an item should appear in Muruk or the Newsletter. This unresolved dichotomy continued until Newsletter No.228, July/August 1987.

The Editorial in MURUK Volume 2 No.1 announced changes which in effect rechristened the Newsletter minus "Society business" the Muruk and confined the contents of future Newsletters to "Society business". One can only have praise for the persons responsible for the speed and decisiveness with which this was done, and it was a decision which puts

Muruk on a similar footing to that of some older international journals during their formative years; it put down a good base on which Muruk may grow.

BEFORE THE NEWSLETTER

A short review of the history of Papuasian ornithology before the Society was formed provides helpful background information to a review of the achievements of the Society.

The first published use of 'Papuasian' I have found is in the title of Count Tommaso Salvadori's 1875 paper -"*Catalogo di una collezione di Uccelli gruppo di Halmahera e di varie localita della Papuasia, inviata in dona al Musse Civica di Geneva dal Sig.* A.A. Bruijn". Salvadori used the term to describe in one word New Guinea, the Bismarck Archipelago, the Solomon Islands and the Kei Islands. Today the Kei Islands are considered to have 'Moluccan' not 'Papuasian' fauna.

Papuasian Ornithological History: Phase I (From 1521 to 1850)

For the 330 years after the explorers had returned to Spain from the Magellan circumnavigation in 1521, carrying their treasured mutilated skins of *Paradisaea minor*, Papuasian ornithology was almost solely concerned with male bird of paradise skins taken by traditional hunters. Other than to establish that New Guinea was the 'home' of birds of paradise this 330-year period contributed little to the knowledge of Papuasian bird life.

Papuasian Ornithological History: Phase II (From 1851 to 1965).

Activities during Phase II were concerned with the gathering of representative bird-skin collections in the areas worked by independent collectors and the collectors associated with institutional expeditions.

Missing from Papuasian ornithology for the whole 115 years of Phase II is first-hand information that comes only from the studies and observations by short- and long-term resident ornithologists, whether they be ornithologists by vocation or avocation.

P.L. Sclater's 1858 paper "On the Zoology of New Guinea", was possibly the first 'technical' paper about New Guinea fauna. It was during the decade commencing about 15 years later (1873 to 1882) that the foundation documentation of Papuasian ornithology was laid down. Daniel Giraud Elliot published his important "A Monograph of the Paradiseidae or birds of paradise" in 1873. This was followed in 1875 with the first parts of John Gould's "Birds of New Guinea and the adjacent Papuan Island" which was completed after Gould's death by R. Bowdler Sharpe. Both of these works were important but were completely overshadowed in their importance by Tommaso Salvadori's monumental works, "*Prodromus ornithologiae Papuasiae et Moluccarum*" in 15 parts, and "*Ornitologia della Papuasia e delle Molucche*" in 3 volumes (supplements to each of the

three volumes followed between 1889 and 1891). It is this latter work which established Tommaso Salvadori as the indisputable founding father of Papuasian ornithology.

Practically all of the early knowledge about Papuasian birds was based on museum collections made by "professional" collectors.

Between 1909 and 1964 there were five important 'Institutional' expeditions or groups of expeditions to New Guinea. These were i) The British Ornithologists' Union and the Wollaston Expedition to Dutch New Guinea, 1909 - 1911 and 1912 - 1913, the subject of an extensive report by W.R. Ogilvie-Grant (1915); ii) The 1933 - 1934 Archbold Papuan Expedition; iii) The 1936 - 1937 Archbold New Guinea Expedition; iv) The 1938 - 1939 Archbold New Guinea Expedition. The three Richard Archbold Expeditions are the subjects of many reports in the Bulletins and Novitates of the American Museum of Natural History, New York, by Richard Archbold, Ernst Mayr, Austin Rand and Leonard Brass; v) The 1948 - 1964 E. Thomas Gilliard/American Museum of Natural History Expeditions to New Guinea. These are the subjects of a number of Novitates and Bulletins of American Museum reports by Gilliard, Mayr & Gilliard, and Gilliard & LeCroy.

THE NEWSLETTER: ITS CONTENTS

It is the missing element of Phase II that the Society and the Newsletter have provided. An indication of the relevance of the Newsletter to Papuasian ornithology is the listing for the New Guinea Subregion* of no less than 83 references by author and title published in the Newsletter, plus 126 localities for which one or more bird lists are referenced, for the 12 years to 1977 in Clifford Frith's bibliography (Frith 1979). An update of that bibliography would, no doubt, double the number of New Guinea Subregion references therein.

The Newsletter is not unique in ornithological literature by being free from errors of fact and/or opinion. Harry Bell's (1978) outstanding review of J.P. Croxall's feeding and ecology paper in **The Ibis** (Croxall 1977) shows that even the most prestigious of journals sometimes propagate what appears to some others to be ornithological misinformation. That particular example was selected because first, it is a high-quality piece of work, and second, because it shows no-one is infallible. Throughout that review, Harry was guilty of consistently misspelling Croxall's name. The point being made here is that there are some errors and misinformation in the Newsletters, as there are in every other ornithological journal. Some of those in the Newsletters have been 'noticed'; others are unnoticed, lie dormant and at some time in the future may catch the unwary. That gentle warning is not

* The so called "Papuan Subregion" is a misnomer and should not be confused with the term Papuasian. For some unknown reason the New Guinea Zoogeographical Subregion was called the Papuan Subregion in Rand & Gilliard's Handbook (1967). This change of title has found little acceptance. The island described is New Guinea not Papua; also in view of the increasing acceptance of 'Papuasian' it is a confusing term.

meant to detract in any way from the vast resource of factual data, reliable ornithological information and good opinions recorded in the Newsletter throughout its 25 year life.

The importance of the Newsletter as a unique Papuasian ornithological resource is demonstrated below by the simple expedient of listing just ten of its early milestone papers.

1. John Beach. The display and mating of the King of Saxony Bird of Paradise 109: 1-2.
2. Harry Bell. Some results of the study of a bird community in lowland rainforest. 147: 3-20.
3. George Clapp. Selected unusual observations in Popondetta Town 1976-1979. 158: 5-14.
4. Brian Coates. Magnificent Riflebirds in display (an adult male-male display). 87: 3.
5. Bob Draffan. A defence of his display ground by the Magnificent Bird of Paradise. 156: 2-3.
6. Steve Feld. Ethno-ornithology of the Mount Bosavi Region. 132:9-10
7. Brian Finch. Observations and notes on the Bat Hawk *Machaerhamphus alcinus* in Papua. 146:8-12
8. Chris Healey. Exploitation of birds of paradise in the Bismarck Mountains. 115:14-15, 116:9-10, 117:8
9. Karol Kisokau. A study of the biology of the megapodes of West New Britain. 121:18-20
10. Mary Stringer. Taxonomical ordering of birds by the Waffa. 156:3-7

These few examples are from 'skipping' through early issues of the Newsletter, having first decided to stop at ten and not list an author more than once.

In the early days of the Society not all observations or extensions of ranges given in Rand & Gilliard (1967) were reported in the Newsletter. A classic example was that of the Common Kingfisher *Alcedo atthis*, enthusiastically reported by Brian Finch as a 'first' for Papua in Newsletter 145: 6-7 and 146:13. This species was discovered to be a visitor to Ilimo Farm pond soon after the society was formed and before long it was also recorded at the Brown and Veimauri Rivers. Early observations of this species missed being reported at the appropriate times during meetings for inclusion in a Newsletter. Fortunately for the record though, Win Filewood reported it as "common here" in the Port Moresby Post-Courier in May 1970 and later that year, referring to the Dwarf *Ceyx lepidus*, Azure *Alcedo azurea*, Little *Alcedo pusilla*, and Common Kingfishers, he wrote "Only one species occurs in Europe, and the same bird occurs right across to P.N.G., and the Solomons, where we call it the River Kingfisher (*Alcedo atthis*)", and "All these birds occur together at Brown River, but the Dwarf is the commonest, especially away from water" (Filewood 1970a and 1970b).

The Filewood articles in the Post-Courier ran from mid-1969 to about May 1973 and were a major source of funds since Win donated all of the proceeds to the Society. Furthermore, they played an important role in popularizing the Bird Society and bird watching throughout Papua New Guinea.

THE 'ALPHA HELIX' EXPEDITION.

The most significant event of the Society's first quarter of a century - and perhaps for the next century - was its support of the 1969 "Alpha Helix" Expedition to New Guinea. The scientific work using the biological material collected during that expedition culminated in the discoveries by Charles Sibley and Jon Ahlquist that put beyond any doubt Papuasian/ Australian passerine avifauna has two (not one) geographic sources of origin. An ancient source (the 'old endemics') and a more recent Eurasian invasion source (Sibley & Ahlquist 1985). The material was also used by Sibley and Ahlquist in developing a more objective basis (i.e., one requiring less subjective judgement) for the classification of birds into orders, families, genera, etc. (Sibley, Ahlquist & Monroe 1988) using DNA-DNA hybridisation. This new basis for classification is arguably the most significant advance in systematic ornithological theory in more than 200 years.

In June 1968 Charles G. Sibley, Professor of Biology at Yale University, led a three-man team to arrange for a U.S. natural history research vessel the "Alpha Helix" to be the base for a scientific collecting expedition in New Guinea in the next year. Sibley addressed a combined meeting of the Papua and New Guinea Scientific Society and the New Guinea Bird Society about the proposed expedition (Newsletter 32, June 1968). In Government circles there was much cynicism about the proposed expedition and some quite active lobbying against it. However, that opposition was overwhelmed by the strong unanimous support of members in government of both the Scientific and Bird Societies. Years later Sibley told me it was the enthusiasm of members of both these societies that persuaded him and his colleagues to go ahead with New Guinea despite its much higher costs in preference to the 'second choice', South America, when their budget for the expedition was cut in half early in 1969.

A number of Bird Society members participated in the expedition and all benefited from the experience.

"Knockers" there were: before, during and after the event; they were both vocal and annoying! Their one and only persistent cry was that the only result of the expedition would be bigger and better bird skin and other natural history collections in American museums.

Blood and tissue samples were taken from the birds that were collected and the carcases were frozen for later preparation as voucher specimens at the Peabody Museum of Natural History at Yale. The blood and tissue samples provided proteins and DNA for extensive

comparative studies using several methods, including DNA-DNA hybridisation. The laboratory studies were undertaken at Yale over many years - the processes involved were complex, precise, tedious and slow. Supplemented by comparative material from Australia, New Zealand, Asia and other parts of the world, the results were published over a number of years by Sibley & Ahlquist, and formed the basis for the two major papers cited above.

A 'minor' paper of great interest increased the bird of paradise family by one, and possibly two, species (the Lesser and Greater Melampittas) and also rearranged the taxonomic order of nine genera (material for the remaining genera was not available) (Sibley & Ahlquist 1987)

THE SOCIETY AND SOME ACHIEVEMENTS

From the very beginning - the inaugural meeting - and throughout its life, the Society has had a broad membership with a mixture of experienced ornithologists and beginners. Even from the first day it has never been a forum for the benefit of 'experts'. I went along to that first meeting with practically no knowledge of birds anywhere let alone those of New Guinea. There were others too who had come along out of curiosity and probably, like me, to satisfy a latent desire to learn a little about something called a bird of paradise! (The meeting had been advertised by Roy Mackay with an open invitation to the public.)

In those early days, as I have no doubt is the case today, it was the beginners who benefited most from the Society's activities. Harry Bell, the Mackays and Win Filewood each brought with them a virtual lifetime of practical ornithological experience; this knowledge they willingly and generously shared - their enthusiasm was even more catching than a common cold. Another important 'player' of those early times was the indefatigable Lady C., who used her well honed ability to get people doing the things which would broaden their knowledge or ability and/or be of benefit to other members. (The wife of the administrator of Papua New Guinea, Lady Cleland, now Dame Rachel Cleland, was then affectionately known throughout PNG as Lady C.)

This enthusiasm for the 'work' of increasing the record knowledge of Papuasian birds is a continuing feature and the great strength of the Society. Inez and Tom Weston's team work resulted in reformatting the Newsletter toward a more professional product, and Tom produced the species index upon which all subsequent indexes have been based. Alison Pound and then Joan Lipscombe produced the Newsletters 153 through 186 edited by Brian Finch. Brian's own prolific output of articles and observations throughout the four years of his editorial reign are examples of the continuing enthusiasm. Membership changes, but the enthusiasm lives on.

'Before Society' practically everything known about New Guinea birds was based on collections in museums and the field notes kept by some collectors. The data base of first-

hand knowledge about Papuasian birds in the wild which has been created by Bird Society members is undoubtedly the Society's greatest achievement. This data base is not confined to information in the Newsletter. Roy Mackay (1970) led the continuing book and booklet output by members. Harry Bell still, by a very wide margin, leads the field in the production of technical papers in overseas journals, probably with Matt Heron running second. Win Filewood is in front in popular articles. These, plus works in preparation are all part of that data base.

The very helpful suggestions and comments on early drafts of this paper by Brian Coates, Alison Pound and Inez Weston are gratefully acknowledged.

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A COMMENT ON THE SLATY-BACKED GOSHAWK *ACCIPITER LUTEOSCHISTACEUS*

STEPHEN DEBUS

Finch & McKean (1987) recorded observations on the Slaty-backed Goshawk *Accipiter luteoschistaceus* on New Ireland. Their description of the wings "projecting slightly beyond the short, squared tail" is puzzling and would certainly not be a general field character for the species. The individual described must have had a damaged or regrowing tail, because the tail projects beyond the wing tips at rest in all *Accipiter* species, including the Slaty-backed Goshawk (D. Mead pers. comm.). The Slaty-backed Goshawk is described by Wattel (1973) as having wing and tail proportions of the *A. novaehollandiae* type, but with a comparatively long tail. Even the other small *A. accipiter* of the Bismarcks, the New Britain Sparrowhawk *A. brachyurus* (literally "short tail"), has the tail projecting beyond the wing tips at rest, as revealed by the museum skins (D. Mead pers. comm.; see also Wattel 1973).

A small hawk with white underparts and slaty wings projecting slightly beyond a short, squared tail would suggest the Black-winged Kite *Elanus caeruleus* perched individuals of which may have the black shoulders hidden by scapular and breast feathers. It is possible that a Black-winged Kite could stray into the Bismarcks. I take this opportunity to draw attention to a useful paper on the Black-winged Kite in New Guinea (Wood 1970), not mentioned by Coates (1985).

I will conclude by saying that much remains to be learned about the raptors of PNG, particularly those on the islands. For instance, the juvenile plumage of the New Britain Goshawk *A. princeps* still remains to be satisfactorily described. Now that the PNGBS has assumed the role of PNG area co-ordinator for the Australasian Raptor Association, perhaps some detailed raptor studies and publications will result.

I thank David Mead for helpful discussion on *Accipiter* species.

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AN UNKNOWN RAIL SIGHTED IN WEST NEW BRITAIN

TONY PALLISER

On 24 December 1987, after several days birding in lowland rainforest within the confines of Pokili Wildlife Management Area, situated near Levege (West New Britain), I decided to conduct a "forest watch" in search of Rufous-faced Thicket-W arbler *Ortygocichla rubiginosa*. A forest watch simply involves sitting almost motionless for periods of up to two hours in habitat that looks productive and waiting to see what comes by. In this particular case it was in a dark, damp rain forest gully with plenty of ground cover such as ferns, roots and fallen branches. At approximately 08:00 my attention was drawn to movement in the undergrowth some 12 - 15 m away. Having focused my binoculars (Zeiss 10x, 50) the bird came into view as it foraged for food amongst the leaf litter.

First impressions were of a small rail, similar in size, shape, and manner to Red-necked Rail *Rallina tricolor*, with constant tail flicking and occasional darting movements when alarmed. Although the bird was only viewed clearly for some 10 - 20 seconds, it was glimpsed four times in ten minutes. Some rather startling features were noted. A brief description was taken in the field from which the following notes were compiled.

Size and shape: estimated to be similar in size and shape to a Red-necked Rail with a short neck and tail giving the bird a rather plump appearance, although when it ran for cover its neck would stretch giving a more elongated shape. **Head and bill**: the head including the crown, nape and throat was entirely uniform grey, with a prominent broad eye-ring surrounding a dark eye. This eye-ring was a most striking feature, contrasting strongly with the grey head. The bill looked short and dark, possibly greenish, again similar in shape and size to Red-necked Rail. **Upperparts**: uppertail, back and wing coverts were entirely rufous and contrasted strongly with the grey head and nape. **Underparts**: the breast was the same colour as the throat and head, uniform grey with the belly being paler; the undertail was not seen clearly except that it appeared pale as the bird flicked its tail. The legs were dark, although again not seen clearly.

Although this sighting and my notes are brief, there is no doubt that this bird was a rail, probably a *Rallina*. Upon returning to Port Moresby I consulted Coates (1985) and Beehler *et al.* (1986) to consider the possibility of the bird being a juvenile. This possibility was ruled out by the lack of any forest-type rails of this size being recorded for New Britain.

After consulting other references in Australia, Pratt *et al.* (1987), Haddon (1981), White & Bruce (1986) and Ripley (1977), this bird still remains a mystery, and I offer this short note in the hope of alerting other observers to an unidentified rail in West New Britain.

Should anyone require a precise location of this sighting, please contact me.

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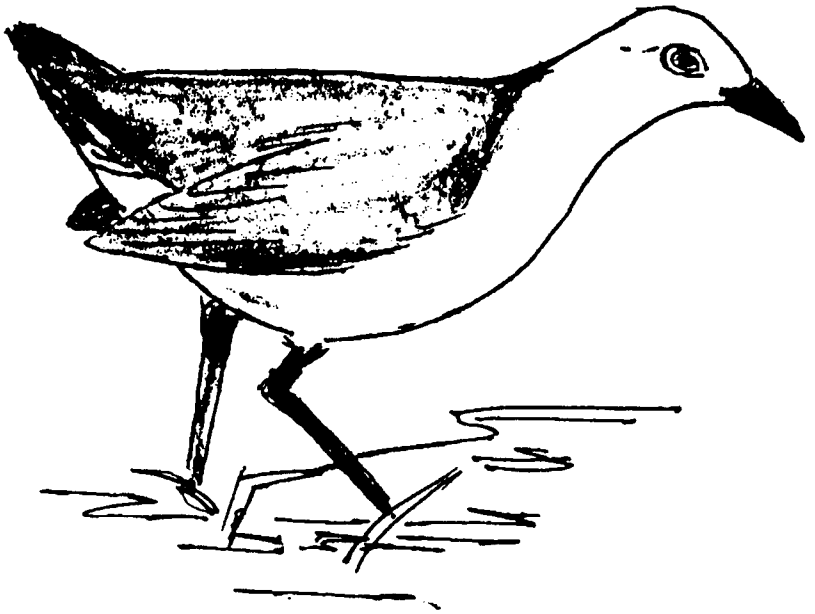

WHITEHEAD'S SWIFTLET *COLLOCALIA WHITEHEADI* ON MANUS?

ROGER K. HICKS

On a visit to Manus, 11 - 14 May 1989, three types of swiftlet *Collocalia* spp. with white rumps were observed, where only two had previously been recorded (Coates 1985). These were identified as follows.

1) The commonest swiftlet was small, with narrow pointed wings and a pointed tail. It had dark brown upperparts except for a neat, small, oblong (broader across the body than along it) white rump. The underparts were paler brown and a bit smudgy on the belly. This was identified as White-rumped Swiftlet *C. spodiopygia*, a species I had previously seen on New Britain and Bougainville. On Manus it was recorded in all habitats visited, from Lorengau at sea-level to rain forest at 200 m. It was the most numerous bird I recorded.

2) The second form was similar in size and shape to the White-rumped Swiftlet and also with a small, neat white rump. This was distinguished by a glossy sheen on the upperparts (not always discernible) and a clean white belly sharply demarcated from a darker breast, which I find is a more reliable field characteristic. This was identified as a white-rumped form of Glossy Swiftlet *C. esculenta*, probably *C. e. stresemanni*. It was much less numerous than White-rumped Swiftlet and seemed to favour valleys with running water through forest or secondary growth.

3) The third form was larger than the preceding two, having a stockier body, broader wings and a square tail. Its upperparts were dark brown with a large, square, smudgy, ill-defined white rump. The belly was smudgy brown on dirty white, becoming more uniform on the breast. It was regularly recorded in small numbers along ridge-tops in the interior of the island and always associated with White-rumped Swiftlets.

In shape and size it closely resembled the Uniform Swiftlet *C. vanikorensis*, which has been recorded on Manus, although I did not see it on this trip. Four very similar swiftlets have been recorded in PNG, although two of these, Mountain Swiftlet *C. hirundinacea* and Three-toed Swiftlet *C. papuensis*, are endemic to mainland New Guinea (Beehler *et al.* 1986, Coates 1985). Both Uniform Swiftlet and Whitehead's Swiftlet *C. whiteheadi* have ranges extending north of Papua New Guinea (Beehler *et al.* 1986) although only Whitehead's Swiftlet has a white-rumped form, the New Ireland subspecies, *C. w. leletensis*. This subspecies is known only from a single specimen from the Lelet plateau, New Ireland (Coates 1985).

I think this third type of swiftlet I observed on Manus may be Whitehead's Swiftlet of the New Ireland subspecies. This would extend the subspecies' range 250 km westwards and would be a new record for Manus. However swiftlets are not the easiest birds to identify

in the field. These observations are presented in the hope that subsequent bird watchers will carefully observe the swiftlets on Manus and either confirm or refute this identification.

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BUSH-HENS *AMAURORNIS OLIVACEUS* BREEDING IN THE DRY SEASON.

LEN P. TOLHURST

Since early 1990 Bush-Hens *Amaurornis olivaceus* have been heard calling in the tall grass on the flat behind the faculty village at Pacific Adventist College, National Capital District. The birds have usually been heard calling at dusk, but also at midnight and into the early hours of the morning. Despite frequent attempts to see the birds when heard calling during daylight hours, I was unable to do so because of thick cover of grass and weeds.

However, on the morning of 16 September 1990 I heard Bush-Hens calling and saw four making their way through and over the grass and weeds. I considered them a family party, two adults and two young. A view of one adult bird revealed its yellow legs, while one bird, presumed to be a juvenile, did not have yellow legs. None of the field guides consulted mentioned this as a feature of juvenile Bush-Hen plumage (Beehler *et al.* 1986, Coates 1990, Macdonald 1973, Pizzey & Doyle 1980, Simpson & Day 1989, Slater *et al.* 1986).

Nesting is reported to occur during the wet season in the Port Moresby area (Coates 1985). However, this pair must have nested during what is normally considered Port Moresby's dry season. Unseasonal rainfall in June and September 1990 probably created conditions like the wet season and prompted this pair to breed.

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PORT MORESBY RINGING REPORT : 1988

ROGER K. HICKS AND IAN BURROWS

This paper presents a summary of our ringing activities in the Port Moresby area during 1988. We are licensed to ring birds by the Department of Environment and Conservation (DEC) and by the Australian National Parks and Wildlife Service (ANPWS). The ANPWS administer the Australian Bird and Bat Banding Scheme (ABBBS) and supply us with all our rings. This is the second annual ringing report we have produced (Hicks & Burrows 1989).

RINGING SITES

Thirteen ringing sites were used in the Port Moresby area in 1988, (this includes the more distant Lake Omha at English Peaks and Myola). Nine of these sites had been used in 1986-87 while four sites had not been used before. Two sites used in 1986-87 (Ilimo Farm and Pacific Adventist College) were not revisited in 1988. A brief description of each site is given below. The two numbers after each site refer to the PNG 1:100,000 topographical survey map sheet number and the eight figure map reference number.

a) Brown River (8379, EK213857)

North of the Hiritano Highway, *c.*5 km beyond the Brown River bridge and *c.*40 km from Port Moresby. During 1988 many of the trails from logging activities in early 1987 had become overgrown. We set mist nets along the few trails which we managed to keep open. This area is a mixture of dense secondary growth and disturbed rainforest. Approximately 150 species of birds have been recorded here in the past three years.

b) Maui Islet, Fisherman's Island (8378, EK045472)

Maui Islet is a raised coral platform, lying *c.*500 m to the south-west of Fisherman's Island, that protrudes at most 4 m above sea-level at low tide. Various species of seabirds have been recorded nesting amongst the sparse vegetation on top of the island.

c) Ilimo Farm/Pacific Adventist College (8379, EK298620/EK303612)

Not used in 1988. These two sites lie either side of the Hubert Murray Highway about 8 km from the Nine-Mile (Hubert Murray/Hiritano Highway) junction.

d) Lake Omha (8380, EL543317)

This site lies at approximately 3620 m on English Peaks in the Owen Stanley mountain range, between Mount Victoria and Mount Albert Edward. Ringing activities have been carried out here as part of an investigation into the breeding biology, food and habitat

preferences of Macgregor's Bird of Paradise *Macgregoria pulchra*. The habitat consists of extensive areas of sub-alpine grassland and bog, with large stands of the podocarp tree *Dacrycarpus compactus* on drier ground. Trapping has been concentrated in and around the forested areas. Evidence is accumulating that many species occuring here lead a nomadic existence, invading these areas at times of rich food supply.

e) Moitaka Settling Ponds (8379, EK213623)

The sewage settling ponds lie to the north of Port Moresby, at the southern end of Waigani Swamp. There are five settling ponds of varying size separated by grassy banks. Around the edges of the ponds exposed sludge attracts palearctic waders on passage. Between the settling ponds and Waigani Swamp there are extensive reed beds.

f) Motupore Island (8378, EK311470)

Motupore is a small hilly island located about 15 km south-east of Port Moresby in Bootless Bay, 1 km from the mainland. Most of the land is eucalypt savanna, but there are some pockets of monsoonal woodland, extensive mangroves and a limited strand formation. Netting has been carried out in all these habitats with the range of species caught reflecting the impoverished nature of this small island's avifauna.

g) Myola (8479, EK842894)

Myola is a village-style lodge, situated at 2080 m in the Owen Stanley Mountain range, a short distance from the Kokoda trail and less than half an hours flying time from Port Moresby. The village is on the edge of a large marshy grassland basin which is surrounded by extensive montane moss forest. Close to the village are some old gardens, and where the forest has been cleared, but the land is not utilised, and there is dense secondary growth. Mist nets have been set in all these habitats, although most netting has been done in the forest and secondary growth.

h) University of PNG (UPNG) Campus (8379, EK197591)

This site is IB's back garden on UPNG campus. Mist nets have been set occasionally, but the success rate has been low. Persistence pays however, and this is the sole site of capture for 5 species.

i) Varirata National Park (8379, EK395560)

This national park lies 40 km east of Port Moresby, on the scarpe of the Astrolabe mountain range at *c.*750 m. The habitat is mainly rainforest with savanna on the drier ridge tops. Three ringing sites have been used: in a stream valley south-east of the Gare's Lookout trail; along the Boundary trail which lies south of the access road and begins about 0.5 km before the toll gate; and on a low ridge alongside the Varirata Lookout trail about 0.5 km from the

lookout. Permission to trap and ring within the park was granted by the DEC. Nearly 200 species of bird have been recorded in the park in recent years.

j) Veimauri (8379, EL050100)

Another area of lowland rainforest that has become accessible as a result of logging operations. Many of the logging trails remain to be explored but already some rarely recorded species, most notably Banded Yellow Robin *Poecilodryas placens*, have been captured.

k) Bootless Bay (8379, EK291510)

Bootless Bay lies *c.*10 km south-east of Port Moresby along the Magi Highway. Our ringing site has been amongst the mangroves and savanna at the head of Dogura inlet. Not many species have been caught, but it has been the sole site of capture for Mangrove Gerygone *Gerygone levigaster* and Large-billed Gerygone *Gerygone magnirostris*.

l) Mount Diamond (8379, EK322534)

The shafts of the old copper mines near Mount Diamond are used as nest sites by Glossy Swiftlets *Collocalia exculenta*. A mist net was strung across the mouth of one mineshaft to catch adults entering and leaving the mine. Some unfledged young were also ringed.

m) Madilogo Ridge (8479, EK585817)

Madilogo Ridge lies above a village of the same name in the fooothills of the Owen Stanley Ranges. This area has recently become accessible along a private road that runs parallel to the Kokoda trail and connects the upper Koiari villages with Port Moresby. Our ringing site is on a ridge top at *c.*1200 m where the habitat is lower montane forest, predominantly *Castanopsis* forest.

Two further sites, Mount Bosavi and Ambua Lodge, Tari, both in Southern Highlands Province were used in 1988 by M.J.G. Hopkins.

SPECIES ACCOUNTS

In 1988, 542 birds of 105 species were ringed compared to 360 birds of 95 species in 1986-87 (Hicks & Burrows 1989). Ringed individuals of two further species were retrapped so 107 species were processed in 1988. We had not handled 45 of these species previously (Appendix 1) but 32 species ringed in 1986-87 are not represented in the 1988 totals (Appendix 2). For 38 species only one individual was ringed and for 79 species five or fewer birds were ringed. More than 20 birds were ringed for only six species: Island Thrush, Large Scrub-Wren, Little Shrike-Thrush, Fan-tailed Berrypecker, Crested Berrypecker and Rufous-banded Honeyeater. Twenty-eight species were caught at more than one site. Little

Shrike-Thrush, Dwarf Honeyeater and Slaty-chinned Longbill were each caught at five sites. Ninety birds of 32 species have been retrapped, none away from the original site of capture.

Since we began ringing in PNG in October 1986 we have ringed 902 birds of 138 species. For 48 species only one bird was processed, while for 98 species five or fewer were ringed. More than 20 birds have been ringed for only eleven species, the above six plus Sharp-tailed Sandpiper, Sacred Kingfisher, White-ringed Robin, Dwarf Honeyeater and Sooty Melidictes.

In the list of species caught in 1988, presented below, the numbers after each name refer to the following

- Royal Australasian Ornithologists Union species number;
- Ring size used: where this differs from the ABBBS recommended size the latter number is shown in brackets;
- Number of birds ringed;
- Number of birds retrapped;
- Number of sites at which that species was trapped.

The name of the site(s) where the bird was caught is the first item in the species account. Where applicable the "age" (time from original capture to latest retrapping) of the "oldest" bird is given (when this exceeds one year). No analysis of the biometric data collected has been attempted if less than ten birds of that species were ringed since we began ringing in P.N.G. All weights are in grams and lengths in millimetres. Significance tests given are all 2-tailed, 2-sample t-tests.

The following abbreviations have been used in the species list:

ad = adult; CL = exposed culmen length; Diamond = Diamond (1972); HB = head and bill length; I = island; imm = immature; NP = National Park; R&G = Rand & Gilliard (1967); Rogers = Rogers *et al.* (1986); SP = Settling Ponds; Wt = weight; WL = wing length.

Wedge-tailed Shearwater *Puffinus pacificus*
69, 16, 1, 0, 1. Motupore I. Found entangled in an old fishing net at the nearby Loloata I resort and brought into UPNG where it was fed and subsequently released at Motupore I.

Grey-headed Goshawk *Accipiter poliocephalus*
3067, 8, 1, 0, 1. Brown River.

White-headed Stilt *Himantopus leucocephalus*
147, 8, 1, 0, 1. Moitaka SP.

Masked Lapwing *Vanellus miles*

133, 8, 1, 0, 1. Moitaka SP. Prater *et al.* (1977) was used to age all birds caught. To date 11 have been ringed (8 in 1986-87 & 3 in 1988). Ten were in adult winter plumage, retaining the juvenile inner median coverts.

Swinhoe's Snipe *Gallinago megala*

169, 6, 2, 0, 1. Moitaka SP. Identified in the hand by number of tail feathers and wing length (<150 mm) (after Prater *et al.* 1977).

Rufous Woodcock *Scolopax saturata*

?, 7, 1, 0, 1. Lake Ohma.

Sharp-tailed Sandpiper *Calidris acuminata*

163, 4/5, 16, 0, 1. Moitaka SP. 8 males & 8 females, sexed on wing length. All first winter birds, as shown by their buff inner median coverts (sexed and aged after Prater *et al.* 1977). Since 1986 we have caught 22 birds, 11 males and 11 females, all in first winter plumage. Measurements agree closely with Prater *et al.* who give mean wing length for males 140.1 mm (adults) and 139.9 mm (juvs), and for females 131.2 mm (adults) and 130.2 mm (juvs).

	Wt	HB	WL	TL	CL
Male mean	58.9	52.5	140.7	29.1	26.34
(n=11) range	51-71	51.1-53.7	136-146	26.3-33.4	24.7-29.8
Female mean	48.2	49.1	131.9	26.7	24.5
(n=11) range	36-64	46.2-52.1	127-135	24.7-30.2	22.9-25.8

Red-necked Stint *Calidris ruficollis*

162, 3, 2, 0, 1. Moitaka SP.

Curlew Sandpiper *Calidris ferruginea*

161, 4, 2, 0, 1. Moitaka SP. One male and one female, sexed on bill length (Prater *et al.* 1977).

Brown Noddy *Anous stolidus*

122, 6, 1, 0, 1. Maui I.

Emerald Ground-Dove *Chalcophaps indica*

33, 7, 1, 0, 1. Brown River.

Peaceful Dove *Geopelia striata*

30, 5, 1, 0, 1. UPNG.

Bronze Ground-Dove *Gallicolumba beccarii*

3211, 6, 6, 0, 1. Myola. 2 males and 4 immatures.

Plum-faced Lorikeet *Oreopsittacus arfaki*

3237, 3, 1, 0, 1. Lake Omha.

Orange-billed Lorikeet *Neopsittacus pullicauda*

?, 5, 1, 0, 1. Lake Omha.

Painted Tiger-Parrot *Psittacella picta*

?, 5, 4, 1, 1. Lake Omha.

Mountain Owlet-Nightjar *Aegotheles albertisi*

3301, 4, 3, 1, 1. Lake Omha & Myola.

Glossy Swiftlet *Collocalia esculenta*

882, 1, 9, 0, 1. Mount Diamond. Three nestlings ringed.

Common Paradise-Kingfisher *Tanysiptera galatea*

334, 5, 10, 5, 2. Brown River & Veimauri. Eighteen have been ringed since 1987 (9 in 1987 & 9 in 1988). One bird (ring no. 051 34710) was retrapped four times between 14 Feb & 29 May 1988. Five immatures have been caught; two in May 1987 and three in May 1988. None have been retrapped. Immatures tended to be smaller than adults, particularly lighter, with shorter head and bill length, and wing length. Males and females may differ in wing length, but further data is required to confirm this.

	Wt	HB	WL	TL	CL
Adult mean	53.44	61.72	106.73	16.47	32.12
(n=5) range	48-64	59.5-64.3	104-112	11.8-19.2	27.3-35.4
Imm. mean	46.4	54.46	98.4	16.63	26.18
(n=5) range	39-53	44.4-57.8	91-105	14.8-19.3	23.75-28.30

Sacred Kingfisher *Halcyon sancta*

326, 5, 13, 6, 2. Motupore I & UPNG. "Oldest" bird 551 days (1 year 6 months 4 days), Motupore I. Twenty-eight have now been ringed (15 in 1986-87 & 13 in 1988). All six retraps were originally ringed in 1987. One bird was retrapped once in 1987 and twice in 1988, each time on Motupore I. We have tried to sex the birds using the colour of the back under refractive light (Disney *et al.* 1974). However, using this method two of the six retraps changed sex. Eleven of the birds ringed in 1988 were first winter birds and seven were adults. The first winter birds were generally smaller. The means of head and bill length ($t = 4.56$, $p < 0.01$), wing length ($t = 3.604$, $p < 0.01$) and culmen ($t = 3.173$, $p < 0.01$) were significantly different, although it would not be possible to separate adults from first year birds on these measurements. There is no evidence to suggest sexual dimorphism in our sample.

	Wt	HB	WL	TL	CL
All birds (n=28)					
mean	43.27	67.44	92.39	13.21	36.15
range	37-52	61-72	85-96	10.4-18.4	32.3-40.9
1988					
adult mean	43.00	68.79	93.57	13.51	37.97
(n=7) range	40-49	66.2-70.0	91-96	12.4-14.5	36.5-39.0
imm. mean	41.46	67.17	91.73	13.53	35.24
(n=11) range	37-45	65.2-69.0	89-96	10.4-18.4	32.3-37.0
Rogers ad.	40-51	66.7-72.7	91-98	-	-
imm.	38.7-43.0	62.4-66.7	93-96	-	-

Dwarf Kingfisher *Ceyx lepidus*

3321, 2, 1, 0, 1. Veimauri.

Alpine Pipit *Anthus gutturalis*

?, 4, 3, 0, 1. Lake Omha.

Island Thrush *Turdus poliocephalus*

3374, 5, 23, 3, 1. Lake Omha. The following figures include four birds caught at Myola in 1987.

	Wt	HB	WL	TL	CL
(n=27)					
mean	74.93	52.89	126.25	38.35	20.97
range	62-89	50.9-55.4	114-132	35.5-41.2	19.1-22.9
R&G (size varies with subspecies)			120-140	33-40	-

Blue Jewel-Babbler *Ptilorrhoa caerulescens*

3385, 4, 2, 1, 1. Brown River. This species appears to suffer stress when being extracted from the net and/or while being handled in bright sunlight. We suggest handling of this species is kept to a minimum, i.e., only take weight and wing length, ring birds as close to the site of capture as possible and release promptly.

Chestnut-backed Jewel-Babbler *Ptilorrhoa castanonotus*

3384, 4, 1, 0, 1. Varirata NP.

Blue-capped Ifrita *Ifrita kowaldi*

3387, 4, 2, 0, 1. Myola.

Rusty Mouse-Warbler *Crateroscelis murina*

3410, 2, 2, 0, 2. Varirata NP & Mount Bosavi.

Mountain Mouse-Warbler *Crateroscelis robusta*

3412, 2, 6, 1, 3. Lake Omha, Myola & Ambua Lodge, Tari. Eleven have been caught since 1987, three at Myola, seven at Lake Omha and one at Ambua Lodge, Tari. As the latter probably belongs to a different subspecies (Rand & Gilliard 1967) it is omitted from the following calculations. Birds from higher elevations are supposedly noticeably larger (Rand & Gilliard 1967) but there is no evidence of this in our albeit small sample.

	Wt	HB	WL	TL	CL
mean	16.45	35.69	62	28.44	14.9
range	13.5-18.7	33.4-37.0	61-66	25.6-32.0	11.7-18.8
R&G	-	-	60	28	-

Pale-billed Scrub-Wren *Sericornis spilodera*

3401, 1, 1, 0, 1. Mt Bosavi.

Large Scrub-Wren *Sericornis nouhuysi*

3405, 2, 20, 5, 3. Lake Omha, Myola & Ambua Lodga, Tari. "Oldest" bird 421 days (1 year 1 month 23 days), Lake Ohma. Eighteen birds have been caught at Lake Omha and nine at Myola. We had expected the birds at Lake Ohma to be larger than those at Myola in keeping with the traits of the subspecies to be found at different altitudes. In SE New Guinea *S.n. oorti* should occur from 4000' - 9000' (1230 - 2800 m) (Rand & Gilliard 1967). Myola lies in the middle of this range at 2080 m. *S.n. monticola* occurs at higher altitudes, > 10,000' (> 3080 m) (Rand & Gilliard 1967). Lake Omha is at 3660 m. However, there was no significant difference between the samples in any measurement: weight ($t = 1.915$, d.f. = 24), wing length ($t = 0.551$, d.f. = 24), head and bill length ($t = 0.272$, d.f. = 21), exposed culmen length ($t = 1.96$, d.f. = 21) and mean tarsus length ($t = .237$, d.f. = 21). Females are smaller than males in the Eastern Highlands (Diamond 1972) but such dimorphism is not apparant in our sample.

	Wt	HB	WL	TL	CL
Lake Omha					
n	17	14	17	14	14
mean	15.83	33.59	67.94	25.99	13.21
range	13.9-17.0	32.2-39.0	64-71	24.3-28.3	11.90-15.25
Myola					
n	9	9	9	9	9
mean	14.92	33.29	66	25.76	14.6
range	12.5-17.0	32.3-35.3	62-69	24.00-27.15	12.85-18.90
R&G *S.n. monticola*		-	69	-	-
S.n. oorti		-	62	-	-

Buff-faced Scrub-Wren *Sericornis perspicillatus*

3406, 1, 4, 0, 2. Myola & Ambua Lodge, Tari.

Papuan Scrub-Wren *Sericornis papuensis*

3408, 1, 5, 0, 2. Lake Omha & Myola. The following figures include data from five birds caught in 1986-87 (one from Lake Omha and four from Myola). It is not possible to differentiate between the sexes using the measurements from our sample although data from the Eastern Highlands (Diamond 1972) suggests the wing length of the female may be shorter than that of the male.

	Wt	HB	WL	TL	CL
n	10	9	10	9	9
mean	9.79	29.67	57.81	21.67	10.17
range	8.55-9.40	28.10-30.75	53.1-61.0	20.15-23.45	9.55-11.60
R&G male	-	-	55-61	20-21	-
Diamond male	10.7	-	55-61	-	-
female	10.3	-	52-53	-	-

New Guinea Thornbill *Acanthiza murina*

3414, 1, 10, 2, 1. Lake Omha. "Oldest" bird 506 days (1 year 4 months 19 days). Three caught in 1986, also at Lake Omha, are included in the following calculations.

	Wt	HB	WL	TL	CL
n	13	10	12	10	10
mean	9.09	28.39	61.3	20.95	9.15
range	7.9-10.0	27.2-30.9	57-64	19.9-23.6	8.45-10.50
R&G	-	-	62	19	-
Diamond	-	-	62	-	-

Yellow-bellied Gerygone *Gerygone chrysogaster*

3416, 1, 2, 0, 1. Brown River.

Large-billed Greygone *Gerygone magnirostris*

457, 1, 2, 0, 1. Bootless Bay.

Mangrove Gerygone *Gerygone levigaster*

?, 1, 1, 0, 1. Bootless Bay.

Sooty Thicket-Fantail *Rhipidura threnothorax*

3452, 2, 6, 2, 2. Brown River & Veimauri. "Oldest" bird 13 years 3 days. This is the oldest ever recorded for this species.

Black Thicket-Fantail *Rhipidura maculipectus*

3426, 2, 0, 2, 1. Brown River. "Oldest" bird 384 days (1 year 18 days).

Black Fantail *Rhipidura atra*

3432, 1, 5, 1, 2. Myola & Ambua Lodge, Tari. Seven males and five females have been ringed since 1987.

Chestnut-bellied Fantail *Rhipidura hyperthra*

3433, 1, 1, 0, 1. Veimauri.

Friendly Fantail *Rhipidura albolimbata*

3434, 1, 4, 0, 1. Myola.

Northern Fantail *Rhipidura rufiventris*

363, 1, 1, 0, 1. Veimauri.

Willie Wagtail *Rhipidura leucophrys*

364, 2/3, 4, 0, 2. UPNG & Motupore I. The following calculations include data from 8 birds caught in 1986-87. No size dimorphism is discernible in this sample.

	Wt	HB	WL	TL	CL
n	12	5	12	5	5
mean	23.59	38.95	97.33	24.99	13.23
range	22-26	38.2-39.4	93-101	23.3-26.4	11.9-14.5
R&G	-	-	99-108	25	-
Diamond	23.0-29.5	-	95-103	-	-

Black Monarch *Monarcha axillaris*

3437, 1, 4, 0, 2. Myola & Mount Bosavi.

Spot-winged Monarch *Monarcha guttula*

3443, 2, 10, 1, 2. Brown River & Veimauri. The following calculations include four birds caught in 1987 (three at Brown River and one at Veimauri). There is no evidence of size dimorphism in this sample (n = 14).

	Wt	HB	WL	TL	CL
mean	16.02	36.06	78.96	17.53	14.2
range	14-17	33.8-37.5	73-81	12.7-19.0	12.4-17.8
R&G	-	-	80	17	-
Diamond	14.0-18.3	-	77-83	-	-

Frilled Monarch *Arses telescophthalmus*

371, 2, 1, 0, 1. Brown River One female.

Shining Flycatcher *Myiagra alecto*

372, 2, 2, 0, 1. Motupore I. One male and one female.

Black-breasted Boatbill *Machaerirynchus nigripectus*

3456, 1, 1, 0, 1. Myola. One female.

Olive Flycatcher *Microeca flavirescens*
3461, 1, 1, 0, 1. Veimauri.

White-faced Robin *Tregellasia leucops*
397, 1, 7, 1, 3. Varirata NP, Madilogo Ridge & Mount Bosavi.

Ashy Robin *Poecilodryas albispecularis*
389, 3, 4, 5, 1. Myola. "Oldest" bird 388 days (1 year 22 days). Seventeen have now been caught at Myola, the only site of capture. Two birds retrapped in Oct 1988 were originally ringed in Sept 1987. Males are larger than females and we think this size dimorphism is evident in our sample, e.g., six birds could be considered small (and therefore probably female) and ten large (and probably male) based on four measurements: weight, wing length, head and bill length, and tarsus length. However, the sample is too small for further analysis. The majority of birds caught (11/17) have had pale tips to their bills. Rand & Gilliard (1967) imply this is a rare feature. It appears to remain consistent with time, i.e., birds that had pale tips when originally caught were the same when retrapped (2 birds) and the single dark-tipped retrap was also dark-billed when first ringed.

Black-sided Robin *Poecilodryas hypoleuca*
3469, 2, 2, 0, 1. Brown River.

Banded Yellow Robin *Poecilodryas placens*
3470, 3, 5, 0, 1. Veimauri.

Northern Scrub-Robin *Drymodes superciliaris*
442, 3, 1, 0, 1. Varirata NP.

Lesser Ground-Robin *Amalocichla incerta*
3377, 3, 1, 0, 1. Myola. One adult and one immature.

White-winged Robin *Peneothello sigillatus*
?, 2/3, 15, 5, 1. Lake Omha. "Oldest" bird 494 days (1 year 5 months 6 days). Eighteen adults and 3 immatures ringed including 6 adults ringed in 1986, also at Lake Omha.

		Wt	HB	WL	TL	CL
Adult	n	18	14	17	15	15
	mean	23.21	38.2	96.88	31.36	11.73
	range	31-47	39.8-53.0	91-109	29.1-39.8	14.2-19.0
Imm.	n	3	3	3	3	3
	mean	23	38.38	95.67	30.5	11.55
	range	22-24	38.0-38.6	94-98	30.25-31.00	10.85-12.10
R&G	male	-	-	94-100	27-31	-
	female	-	-	86-99	-	-

Blue-grey Robin *Peneothello cyanus*
3475, 3, 3, 0, 1. Ambua Lodge, Tari.

White-eyed Robin *Pachycephalopsis poliosoma*
3479, 4, 2, 0, 1. Mt. Bosavi.

Mottled Whistler *Rhagologus leucostigma*
3481, 2, 2, 0, 1. Myola.

Regent Whistler *Pachycephala schlegelii*
3484, 2/3, 6, 1, 1. Lake Omha. "Oldest" bird 414 days (1 year 1 month 17 days). Eleven females and 3 males, including 7 females and 1 male ringed in 1986-87. Two males were caught at Lake Omha and one at Myola. Six females were caught at Lake Omha and 5 at Myola. Birds above 2800 m have been shown to be larger than birds from lower altitudes (Rand 1937, 1942). Our sample is small but the mean wing length of females caught at Lake Omha is significantly greater than that of females caught at Myola ($t = 5.153$, $p < 0.01$, d.f. = 9).

	Wt	HB	WL	TL	CL
Males					
Myola (n=1)	21.8	37.0	84	25.1	15.1
Omha (n=2)	21-27	39.0-39.4	93-94	24.4-27.6	12.3-12.4
R&G	-	-	85-94	24	-
Diamond	20.5-24.5	-	81-89	-	-
Females					
Myola mean	22.26	38.71	86.6	26.44	13.06
(n=5) range	20.1-24.5	38.0-39.5	84.5-90.0	24.2-28.1	11.85-14.2
Ohma mean	24.06	37.76	91.83	27.7	12.45
(n=6) range	21.0-26.3	35.6-39.9	89-95	27.2-28.5	11.5-13.0
Diamond	19.4-24.8	-	81-86	-	-

Grey Whistler *Pachycephala simplex*
406, 2, 3, 0, 2. Brown River & Veimauri.

Rufous-naped Whistler *Pachycephala rufinucha*
3494, 4, 1, 1, 1. Myola.

Little Shrike-Thrush *Colluricincla megarhyncha*
413, 3/4, 21, 4, 4. Brown River, Varirata NP, Veimauri & Madilogo Ridge. The following calculations include 5 birds caught in 1987 (4 Brown River and 1 Varirata).

	Wt	HB	WL	TL	CL
n	26	26	26	26	26
mean	32.90	44.42	90.62	25.51	18.36
range	30-40	42.15-45.8	84-97	21.5-28.3	16.8-20.2
R&G	-	-	89-105	27	-

Grey Shrike-Thrush *Colluricincla harmonica*
408, 5, 1, 0, 1. UPNG.

Hooded Pitohui *Pitohui dichrous*
3499, 5, 1, 0, 1. Madilogo Ridge.

Rusty Pitohui *Pitohui ferrugineus*
3501, 6, 2, 0, 2. Brown River & Veimauri.

Crested Pitohui *Pitohui cristatus*
3502, 6, 1, 0, 2. Brown River.

Black Berrypecker *Melanocharis nigra*
3512, 2, 10, 2, 3. Brown River, Veimauri, Varirata NP. "Oldest" bird 393 days (1 year 1 month 2 days).

Mid-mountain Berrypecker *Melanocharis longicauda*
3513, 2, 1, 0, 1. Madilogo Ridge.

Fan-tailed Berrypecker *Melanocharis versteri*
3514, 1/2, 46, 10, 1. Myola. "Oldest" bird 383 days (1 year 17 days). 13 males and 33 females caught in 1988. The following calculations include 34 birds caught in 1987, all at Myola. The total for 1987-88 is 80 birds (23 males, 48 females, 9 immatures). One female (023 57351) has been retrapped three times since originally ringed in September 1987 (Dec 87, Jun 88, Oct 88) . Two males caught at Ambua Lodge, Tari, have been omitted from the following calculations as they probably belong to a different subspecies. *M. v. maculiceps* should occur at Myola and *M. v. virago* at Tari (Rand & Gilliard, 1967).

	Wt	HB	WL	TL	CL
Males (n=23)					
mean	12.89	30.59	64.04	24.88	11.97
range	10.5-17.6	27.9-39.9	59-69	22.5-26	10.1-13.6
R&G	-	-	61	23	-
Diamond	9.7-13.7	-	59-64	-	-
Females					
n	48	46	47	46	46
mean	1 5.49	30.42	67.65	25.68	12.19
range	11-20	27.5-33.0	63-79	21.8-30.0	9.4-14.5
R&G	-	-	68	-	-
Diamond	16.7-20.0	-	63-72	-	-
Immatures (n=9)					
mean	14.72	30.78	67.44	24.46	11.54
range	11-17	29.7-31.6	64-72	23.0-25.5	10.5-13.2

Crested Berrypecker *Paramythia montium*
3518, 3, 68, 6, 1. Lake Omha. The following figures include five birds ringed in 1986, also at Lake Omha. Males are larger than females (Rand & Gilliard 1967) although there is no evidence of this in our sample.

	Wt	HB	WL	TL	CL
n	72	72	71	73	71
mean	39.44	41.99	99.85	33.82	16.05
range	31-47	39.8-53.0	91-109	29.2-39.8	14.2-19.0
R&G male	-	-	102-123	31	-
female	-	-	98	-	-
Diamond					
male	41	-	97-103	-	-
female	43	-	97	-	-

Yellow-bellied Sunbird *Nectarinia jugularis*
572, 1, 5, 1, 1. Motupore I. Four females & one male caught in 1988.

Tawny Straightbill *Timeliopsis griseigula*
3528, 3, 1, 0, 1. Brown River.

Long-billed Honeyeater *Melilestes megarhynchus*
3548, 4, 2, 3, 2. Varirata NP & Brown River.

Slaty-chinned Longbill *Toxorhamphus poliopterus*
3547, 1/2, 8, 1, 5. Varirata NP, Myola, Mt. Bosavi, Ambua Lodge (Tari), Madilogo Ridge. One of our most widely caught species. Caught at five sites ranging from Central to Southern Highlands Provinces and from 700-2700 m.

Dwarf Honeyeater *Oedistoma iliolophus*
3546, 2, 14, 3, 5. Brown River, Madilogo Ridge, Varirata NP, Veimauri & Mt. Bosavi. Another wide ranging species, but generally lower than Slaty-chinned Longbill, from sea-level - 1000 m. the following calculations include 13 birds ringed in 1986-87. Two birds ringed at Mt. Bosavi, SHP have been omitted, as they probably belong to a different subspecies (Rand & Gilliard, 1967). According to Rand & Gilliard, sexes are similar although Diamond (1972) notes male wing length and weight were larger than the females with no overlap in weight. Diamond (1972) considered the birds in the Eastern Highlands were the same subspecies as occurs in SE New Guinea. We are unable to discern any size dimorphism in our sample.

	Wt	HB	WL	TL	CL
n	24	24	25	24	24
mean	12.13	36.59	64.04	20.66	19.11
range	9.1-14.0	34.0-38.9	60-71	17.5-23.2	17.4-21.7
R&G	-	-	64-72	19	-
Diamond					
male	13.0-15.7	-	65-72	-	-
female	11-12	-	61-65	-	-

Dusky Myzomela *Myzomela obscura*
590, 1, 1, 0, 1. UPNG.

Spot-breasted Meliphaga *Meliphaga mimikae*
3571, 3, 1, 0, 1. Mt. Bosavi.

Mountain Meliphaga *Meliphaga orientalis*
3572, 3, 2, 0, 1. Mt. Bosavi.

Puff-backed Meliphaga *Meliphaga aruensis*
3569, 3, 4, 0, 1. Brown River, Varirata NP, Veimauri.

Mimic Meliphaga *Meliphaga analoga*
3575, 2/3, 6, 1, 4. Brown River, Varirata NP, Veimauri.

Graceful Meliphaga *Meliphaga gracilis*
612, 2/3, 6, 0, 4. Bootless Bay, Brown River, Varirata NP (2 sites). Three species of Meliphaga, Puff-backed, Mimic and Graceful, were caught in one net at the same time in Varirata NP.

Spotted Honeyeater *Xanthotis polygramma*
3566, 3, 12, 0, 1. Veimauri.

Helmeted Friarbird *Philemon buceroides*
642, 7, 2, 0, 2. Motupore I. & UPNG.

Rufous-backed Honeyeater *Ptiloprora guisei*
3581, 2, 4, 6, 1. Myola. The six retraps were all originally ringed in 1987. Females are smaller than males (Rand & Gilliard 1967, Diamond 1972). There was found to be no overlap of wing length between 10 males and 10 females of the same subspecies *P.g. umbrosa* (Diamond 1972) whereas the subspecies at Myola is probably *P.g.guisei* (Rand & Gilliard 1967). The wing lengths of our sample would appear to be bi-modal with small birds (presumably females) ranging from 78-84 mm and large birds (presumably males) ranging from 90.5-95 mm. These ranges are similar to those found in the Eastern Highlands (Diamond 1972). By sexing the birds along these lines, means are obtained for males and females as given below. All six birds retrapped in 1988 were male using these guide-lines and all were males, by measurements, when originally ringed.

	Wt	HB	WL	TL	CL
Males (n=8)					
mean	24.25	45.68	92.2	28.78	23.61
range	21.5-25.5	43.4-47.9	90.5-95.1	27.4-31.0	21.4-24.9
R&G	-	-	89	27	-
Diamond	21.3-27.7	-	85-94	-	-
Females (n=9)					
mean	19.78	43.16	81.22	26.82	21.57
range	16-25	41.1-46.8	78-84	24.3-29.4	20.1-23.0
R&G	-	-	81	-	-
Diamond	17.6-24.0	-	76-84	-	-

Sooty Melidectes *Melidectes fuscus*
3552, 4, 12, 7, 1. Lake Omha. "Oldest" bird 491 days (1 year 4 months 4 days). A formula was devised using the 1986 data by which it would be possible to sex 90 % of birds using head and bill length and wing length (Hicks & Burrows, 1989), i.e.:
Wing length: female < 106 mm < male, head & bill: female < 55 mm < male.
Only four of the seven retrapped in 1988 had both head and bill length and wing length measurements taken. However, using the formula, these four birds worked out as 5 males and 7 females. The following calculations include 30 adults (14 males & 16 females) ringed in 1986.

	Wt	HB	WL	TL	CL
1986					
male mean	39.94	58.37	112	38.12	30.93
(n=16) range	36.7-42.9	56.0-61.9	108-115	35.8-40.6	28.3-32.3
female mean	30.94	58.37	100.9	34.36	27.89
(n=16) range	27.9-33.1	50.3-54.9	96-105	32.0-38.2	25.9-29.9
Total					
male mean	38.48	58.05	111.32	38.03	30.81
(n=21) range	32.0-42.9	50.0-61.9	106-116	34.6-41.8	28.3-32.3
female mean	30.61	52.92	101.13	34.25	27.64
(n=23) range	25.0-33.1	50.3-54.9	96-105	32.0-38.2	25.9-29.9
R&G male	-	-	106	34	-
female	-	-	99	-	-

Belford's Melidectes *Melidectes belfordi*
3557, 6, 9, 0, 1. Lake Omha. Fifteen (including 6 caught in 1986, also at Lake Omha) have been ringed so far. Males are *c.*10% larger than females (Rand & Gilliard, 1967) but that is not evident from our sample so no means are presented here.

Common Smoky Honeyeater *Melipotes fumigatus*
3550, 4, 1, 0, 1. Myola.

Rufous-banded Honeyeater *Conopophila albogularis*

600, 2, 25, 1, 1. UPNG. The following figures include two adults ringed in 1987, also at UPNG. So far 20 adults and 7 immatures have been ringed. The one retrap, an adult was in immature plumage when originally ringed.

	Wt	HB	WL	TL	CL
Adult					
n	19	20	20	20	20
mean	11.72	30.35	65.6	18.81	12.8
range	10.2-13.9	29.5-32.7	62-70	17.4-19.7	11.7-14.7
Immatures (n=7)					
mean	11.61	30.75	65.29	18.39	12.36
range	10.5-12.5	29.8-31.8	62-67	17.4-19.1	11.3-13.1
R&G	-	-	68	18	-

Blue-faced Parrot-Finch *Erythrura trichroa*

3591, 1, 2, 0, 1. Lake Omha.

Chestnut-breasted Mannikin *Lonchura castaneothorax*

3602, 1, 1, 0, 1. UPNG.

Mountain Firetail *Oreostruthus fuliginosus*

?, 2/3, 5, 0, 1. Lake Omha. Two males and two females.

Mountain Drongo *Chaetorhynchus papuensis*

3618, 3, 1, 0, 1. Mount Bosavi.

White-breasted Wood-Swallow *Artamus leucorhynchus*

543, 5, 2, 0,1. UPNG.

Black Butcherbird *Cracticus quoyi*

701, 7, 1, 0, 1. Varirata NP.

White-eared Catbird *Ailuroedus buccoides*

3629, 7, 2, 0, 1. Brown River.

Macgregor's Bowerbird *Amblyornis macgregoriae*

3633, 6, 0, 1, 1. Myola.

Crested Bird of Paradise *Cnemophilus macgregorii*

3642, 5, 2, 0, 1. Lake Omha. Two females.

Loria's Bird of Paradise *Cnemophilus loriae*

3640, 5, 2, 0, 1. Myola. One male and one female. Pale gape line shown extending just beyond the eye, on the male bird in Beehler *et al.* (1986) was not always visible on the male in the hand. He appeared to be able to expose and cover it at will.

MacGregor's Bird of Paradise *Macgregoria pulchra*

?, 7, 2, 0, 1. Lake Omha.

Magnificient Riflebird *Ptiloris magnificus*

688, 7, 1, 0, 1. Varirata NP. One female.

Twelve-wired Bird of Paradise *Seleucidis melanoleuca*

3650, 7, 1, 0, 1. Brown River. One female.

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APPENDIX 1. Species ringed for the first time in 1988. 43 species

Wedge-tailed Shearwater *Puffinus pacificus*
Grey-tailed Goshawk *Accipiter poliocephalus*
White-headed Stilt *Himantopus leucocephalus*
Masked Lapwing *Vanellus miles*
Swinhoe's Snipe *Gallinago megala*
Rufous Woodcock *Scolopax saturata*
Curlew Sandpiper *Calidris ferruginea*
Brown Noddy *Anous stolidus*
Emerald Ground-Dove *Chalcophaps indica*
Plum-faced Lorikeet *Oreopsittacus arfaki*
Orange-billed Lorikeet *Neopsittacus pullicauda*
Painted Tiger-Parrot *Psittacella picta*
Glossy Swiftlet *Collocalia esculenta*
Alpine Pipit *Anthus gutturalis*
Chestnut-backed Jewel-Babbler *Ptilorrhoa castanonotus*
Blue-capped Ifrita *Ifrita kowaldi*
Pale-billed Scrub-Wren *Sericornis spilodera*
Large-billed Gerygone *Gerygone magnirostris*
Chestnut-bellied Fantail *Rhipidura hyperthra*
Northern Fantail *Rhipidura rufiventris*
Black Monarch *Monarcha axillaris*
Frilled Monarch *Arses telescophthalmus*
Shining Flycatcher *Myiagra alecto*
Black-breasted Boatbill *Machaerirhynchus nigripectus*
Mountain Robin *Petroica bivittata*
Banded Yellow Robin *Poecilodryas placens*
Northern Scrub-Robin *Drymodes superciliaris*
White-eyed Robin *Pachycephalopsis poliosoma*
Grey Whistler *Pachycephala simplex*
Hooded pitohui *Pitohui dichrous*
Rusty Pitohui *Pitohui ferrugineus*
Crested Pitohui *Pitohui cristatus*
Mid-mountain Berrypecker *Melanocharis longicauda*
Dusky Myzomela *Myzomela obscura*
Spot-breasted Meliphaga *Meliphaga mimikae*
Spotted Honeyeater *Xanthotis polygramma*
Blue-faced Parrot-Finch *Erythrura trichroa*

Mountain Firetail *Oreostruthus fuliginosus*
White-breasted Wood-Swallow *Artamus leucorhynchus*
Black Butcherbird *Cracticus quoyi*
Loria's Bird of Paradise *Cnemophilus loriae*
Magnificent Riflebird *Ptiloris magnificus*
Twelve-wired Bird of Paradise *Seleucidus melanoleuca*

APPENDIX 2. SPECIES RINGED IN 1986-87 BUT NOT IN 1988. 32 SPECIES.

Eastern Reef-Egret *Egretta sacra*
Black-mantled Goshawk *Accipiter melanochlamys*
Comb-crested Jacana *Irediparra gallinacea*
Lesser Golden Plover *Pluvialis fulva*
Whimbrel *Numenius phaeopus*
Terek Sandpiper *Tringa terek*
Black-billed Cuckoo-Dove *Macropygia nigrirostris*
Stephan's Ground-Dove *Chalcophaps stephani*
Large-tailed Nightjar *Caprimulgus macrurus*
Brown-headed Paradise-Kingfisher *Tanysiptera danae*
Hook-billed Kingfisher *Melidora macrorrhina*
Gray's Grasshopper-Warbler *Locustella fasciolata*
Clamorous Reed-Warbler *Acrocephalus stentoreus*
Tawny Grassbird *Megalurus timoriensis*
Golden-headed Cisticola *Cisticola exilis*
Emperor Fairy-Wren *Malurus cyanocephalus*
Orange-crowned Fairy-Wren *Clytomyias insignis*
Bicoloured Mouse-Warbler *Crateroscelis nigrorufa*
White-bellied Thicket-Fantail *Rhipidura leucothorax*
Rufous-backed Fantail *Rhipidura rufidorsa*
Golden Monarch *Monarcha chrysomela*
Canary Flycatcher *Microeca papuana*
Garnet Robin *Eugerygone rubra*
Greater Ground-Robin *Amalocichla sclateriana*
New Guinea White-Eye *Zosterops novaeguineae*
Olive Straightbill *Timeliopsis fulvigula*
Scrub White-eared Meliphaga *Meliphaga albonotata*
Yellow-gaped Meliphaga *Meliphaga flavirictus*
Black-throated Honeyeater *Lichenostomus subfrenatus*
Grey-headed Mannikin *Lonchura caniceps*
Singing Starling *Aplonis canteroides*
Black-backed Butcherbird *Cracticus mentalis*

RANGE EXTENSION FOR THE CLARET-BREASTED FRUIT-DOVE *PTILINOPUS VIRIDIS*

ROGER K. HICKS

On a visit to Manus in May 1989, Claret-breasted Fruit-Doves were noted on two occasions. As this species had not previously been recorded from Manus (Coates 1985) details of these observations are presented here.

On the evening of 11 May 1989, while bird-watching *c.* 3 km from Lorengau on the Trans-Island Highway, a pair of Claret-breasted Fruit-Doves were observed for nearly 20 minutes while they sat in an unidentified fruiting tree, in the company of a pair of Cicadabirds *Coracina tenuirostris*, Black-headed White-Eyes *Zosterops hypoxantha* and a Singing Starling *Aplonis cantoroides*. The fruit-doves were in view nearly the whole time and I watched them using 10x binoculars from a distance of less than 30 m. The following notes were made: both birds were mainly "fruit-dove" green with a broad, triangular-shaped (apex uppermost) claret patch extending from the throat onto the breast. The head was greyer than the body and the undertail coverts were off-white. I did not note the colour of the bill nor any markings on the inner wing. This breast patch was smaller on the presumed female, but was not a small crescentic mark as in the northern New Guinea race *P. v. salvadorii*, suggesting these birds are one of the eastern races *P. v. vicinus* or *P. v. lewisii*. The second observation on 12 May 1989, *c.* 10 km from Lorengau along the Trans-Island Highway was brief, but long enough to identify the species. Other fruit-doves were seen but not identified. I have previously seen Claret-breasted Fruit-Dove once, on Bougainville in June 1986.

The Superb Fruit-Dove *P. superbus*, with which I am familiar from the Port Moresby area and the Yellow-bibbed Fruit-Dove *P. solomonensis*, which I have seen once on Bougainville, have both been recorded on Manus. I identified neither during my stay on Manus, but do not think either could be mistaken for a Claret-breasted Fruit-Dove.

In PNG the Claret-breasted Fruit-Dove has a disjointed range, being found along the north coast of New Guinea east to Madang, in the D'Entrecasteaux islands (Goodenough, Fergusson and Normanby) and the North Solomon Islands (Nissan, Buka and Bougainville) (Coates 1985). In the Bismarck Archipelago it is known only from Lihir Island, north of New Ireland (Coates 1985, Burrows 1987). Manus lies *c.* 250 km north of Madang and *c.* 600 km west of Lihir, so this observation represents a considerable range extension for this species.

Burrows, I. 1987. Some notes on the birds of Lihir. **Muruk** 2: 40-42.
Coates, B.J. 1985. **The Birds of Papua New Guinea**. Vol 1. Dove Publications.

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SOME RECORDS OF BIRDS FEEDING ON FLOWERS AND FRUITS IN MONTANE FOREST, NEAR MYOLA, ORO PROVINCE, AND TARI GAP, SOUTHERN HIGHLANDS PROVINCE, PAPUA NEW GUINEA.

HELEN FORTUNE HOPKINS

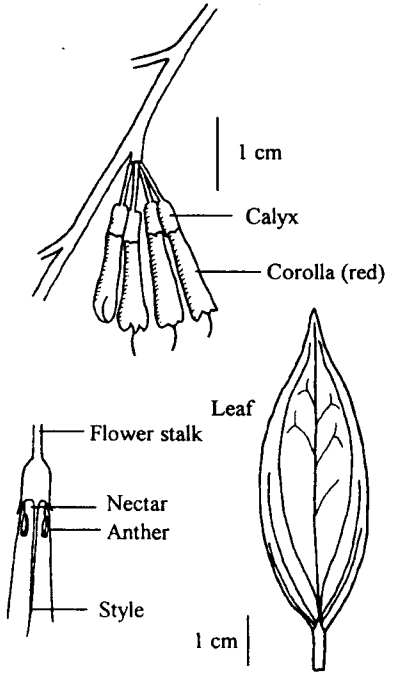
The following incidental observations of birds feeding on fruits or nectar were made while bird-watching and plant-collecting near Myola, in the Owen Stanley Mountains, Oro Province and near Tari Gap, in Southern Highlands, while staying at Ambua Lodge. The general avifauna of both these localities has been described elsewhere (Myola: Hicks 1988a,b,c; Ambua Lodge: Hicks 1988e, Finch *et al.* 1987). Although the forest at these two places is not identical, for instance there is no *Nothofagus* forest at Myola while there is above Tari, both are in the montane forest zone and have many species or genera of plants in common. Voucher specimens are deposited in the herbarium at UPNG.

1) *Dimorphanthera c.f. cornuta* J.J. Smith (Ericaceae) (Fig. 1.)
2800 m, Tari Gap road, 18-19 Nov 1989. Voucher HCFH 1027.

This is a common shrub about 3 m high by the roadside and forest edge, with pendant flowers in groups of *c.*5 in the leaf axils. Each flower is about 3 cm long, with a tubular, waxy, coral-red corolla. Red-collared Myzomela *Myzomela rosenburgii* and Grey-streaked Honeyeater *Ptiloprora perstriata* were frequent visitors, poking their bills into the flowers from below.

On one occasion, two Plum-faced Lorikeets *Oreopsittacus arfaki* were observed from about 2 m, biting and pulling at the side of the corollas, and either detatching the corolla tube completely, or tearing away about half. They then fed on the nectar (and perhaps also pollen) which was exposed between the ring of anthers and the long central style (Fig.1). This behaviour, unlike that of the two honeyeaters, would be unlikely to bring about pollination, as the lorikeets would not contact the stigmas of the flowers, even if their heads became dusted with pollen.

Fig. 1. *Dimorphanthera c.f. cornuta*



This species of *Dimorphanthera*, or a similar one also with red flowers, grows as an epiphyte at Tari Gap, and Belford's Melidictes *Melidictes belfordi* was seen feeding at its flowers in the forest canopy. Belford's Melidictes also visited the flowers of an epiphytic, red-flowered *Rhododendron*, a bright crimson orchid (probably a species of *Dendrobium*), and a *Saurauria* sp. with nodding clusters of white flowers, surrounded by bracts and slime.

Another species of *Dimorphanthera*, with larger, pale-pink flowers and larger leaves, was also in flower at Tari Gap, but no visitors were observed.

2) *Polygonum nepalense* Meissn. (Polygonaceae)
2800 m, Tari Gap road, 18-19 Nov 1989. Voucher HCFH 1028.

I observed a Mountain Firetail *Oreostruthus fuliginosus* feeding on the seeds of this herb which was growing on open ground by the roadside. The plant was only 20 cm tall, with reddish stems and leaves, and its dry, hard, black fruits, 1 - 2 mm in diameter, are arranged in clusters surrounded by numerous small white bracts.

3) *Sericolea pullei* (Laut.) Schltr. (Elaeocarpaceae)
2200 m, grounds of Ambua Lodge, 18-19 Nov 1989. Voucher HCFH 1025.

Two neighbouring *Sericolea* trees, growing by the path to the bridge, attracted a considerable number of birds. Common Smoky Honeyeaters *Melipotes fumigatus* were the most numerous, accompanied by Mid-mountain Berrypeckers *Melanocharis longicauda*, Orange-billed Lorikeets *Neopsittacus pullicauda*, and 3 female (-plumaged?) Loria's Bird of Paradise *Cnemophilus loriae*. All of these fed on the small spherical fleshy berries, about 3 mm in diameter, which are borne on short stalks among the leaves. There are fruits at different stages of ripeness in each group and varying in colour from green, to red, to black.

A large green pigeon, probably White-breasted Fruit-Dove *Ptilinopus rivoli* and white eyes (probably New Guinea White-Eye *Zosterops novaeguineae*) were also seen in the trees. The pigeon was resting. The white-eyes may have been taking fruit or looking for insects since Beehler *et al.* (1986) record fruit, insects, and nectar in their diet. Hicks and Hicks (1988) recorded Short-tailed Paradigalla feeding on the fruits of the same species of tree at Ambua Lodge.

4) *Homolanthus* sp. (Euphorbiaceae)
1900 m, Benari road, below Ambua Lodge, 18-19 Nov 1989. Voucher HCFH 1026.

A female (-plumaged?) Blue Bird of Paradise *Paradisaea rudolphi* was seen apparantly feeding on the green fruits of a small *Homolanthus* tree in a patch of forest by the road side. The fruits were more or less spherical, *c.* 1.5 cm in diameter, hanging down on stalks about 5 cm long, and somewhat inconspicuous amongst the leaves.

I also observed a Brehm's Tiger-Parrot *Psittacella brehmii* feeding in a *Homolanthus* tree on the Tari Gap road. I could not see any fruits in the crown, and the bird appeared to be eating the buds.

5) Sapotaceae sp. (Fig.2)
2100 m, Myola, 13 Jan 1988.

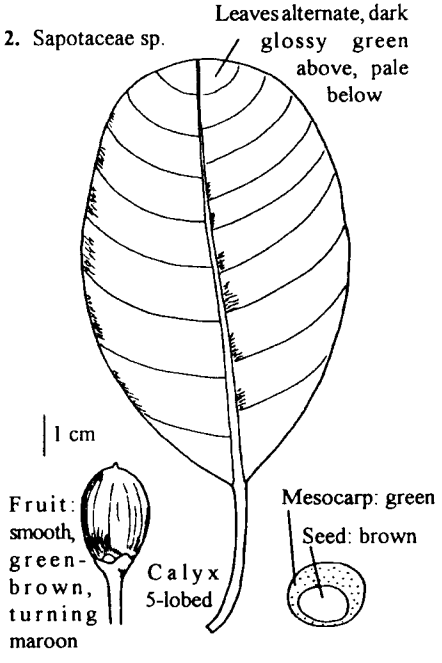


Fig. 2. Sapotaceae sp.

A Stephanie's Astrapia *Astrapia stephaniae* perched at the edge of the crown of this tree was seen feeding on its fruits. The bird had female plumage, but its tail was rather long (*c.f.* Beehler *et al.* (1986)), and so it may have been a sub-adult male. The tree was 25-30 m high and growing at the forest edge behind the gardens near Myola village. The fruits, borne singly amongst the leaves, were *c.* 3 m long, and ellptical in shape (Fig.1b). Each contained a single seed with a scar down one side, identifying it as a species in the family Sapotaceae.

6) *Dimorphanthera c.f. amplifolia* (F. Muell.) Stevens (Ericaceae)
3200 m, path to Mt Kenavi, behind Myola, 31 Jul 1988. Voucher HCFH 947.

A Sooty Melidectes *Melidectes fuscus* was seen feeding on the flowers of this shrub at the boundary between a patch of grassland and the forest. The flowers are borne in clusters towards the ends of the twigs and amongst the leaves. They are *c.* 1 cm long, pendant, with rather thick green petals. Although the voucher keys out to *D. amplifolia* using van Royen (1982), the flowers of this variable species are more often pink.

7) *Papuacedrus papuanus* (F. Muell.) Li, syn. *Libocedrus papuanus* (Cupressaceae)
3100m, path to Mt Kenavi, behind Myola, 31 Jul 1988.

Orange-billed Lorikeets were seen feeding on the seed cones of this tall gymnosperm tree which is frequent in upper montane forest.

8) *Dacrycarpus* sp. (Podocarpaceae)
3100 m, path to Mt Kenavi, behind Myola, 31 Jul 1988.

I observed Crested Berrypeckers *Paramythia montium* taking the immature seed "cones" of *Dacrycarpus*. When ripe, the "cones" are lar ger and fleshy, but these were rather hard. They are produced at the tips of the twigs and are concealed from below by short, needle-like leaves.

9) *Rubus ferdinandi-muelleri* Focke (Rosaceae)
2080 m, Myola, 24 Dec 1990.

A female MacGregor's Bowerbird *Amblyornis macgregoriae* caught in a mist net in the forest by R. Hicks, produced a reddish faecal sample while being handled. This sample contained numerous seeds of *Rubus ferdinandi-muelleri*. Three species of *Rubus*, or wild raspberry, grow in the secondary vegetation at the edge of the forest beside the village, *c.* 100 m from where the bowerbird was caught. Two are scramblers and were not in fruit. *Rubus ferdinandi-muelleri* is a small, erect, much branched shrub with many thorns on the stems and leaves, white flowers with 5 petals and numerous stamens, and red, succulent fruits, *c.* 1 cm diameter, each composed of many tiny fleshy one-seeded druplets which adhere to one another on a conical core.

I thank the various members of the PNGBS with whom I made these observations, especially Mike Hopkins and Peter Lambley (Myola), Chris Eastwood and Alan Rogers (Tari).

Beehler, B.M., T.K. Pratt, & D.A. Zimmerman. 1986. **Birds of New Guinea**. Princetown University Press.
Finch, B.W., C. Frith & D. Frith. 1987. **The Birds of Ambua & Tari District - a Trans Niugini Tours Guide to the Birds in the Vicinity of Ambua Lodge**. Ambua Lodge.
Hicks, R.K. 1988a. Myola in June. **Muruk** 3:16.
Hicks, R.K. 1988b. Myola in Sept. **Muruk** 3:17.
Hicks, R.K. 1988c. Beyond Myola. **Muruk** 3:65-67.
Hicks, R.K. 1988d. Myola in December. **Muruk** 3:67-68.
Hicks, R.K. 1988e. Birdwatching at Ambua Lodge. **Muruk** 3:20.
Hicks, R.K. & J. Hicks. 1988. Feeding observations of Short-tailed Paradigalla. **Muruk** 3:14.
Van Royen, P. 1982. **The Alpine Flora of New Guinea**. Vol 3. J. Cramer, Vaduz.

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BLACK-FACED WOOD-SWALLOW, *ARTAMUS CINEREUS*, AT WAU (MOROBE PROVINCE)

FERNLEY B. SYMONS

On Sunday 15 July 1990, at 1 pm, I observed two adult plumaged Black-faced Wood-Swallows (*Artamus cinereus*) in a field at Wau, Morobe Province. This field was located close to the store at the turn-off to Wandumi village (on the Mount Missim Road). It contained short grassland and was backed by an extensive coffee plantation. Other vegetation in the vicinity included another coffee plantation, this time overgrown with grass (probably lowland pitpit, *Saccharium edule*) and a field of rank grassland from which a pair of Brown Quail, *Cortunix australis*, were flushed later the same day. The following description is based on notes taken at the time and scrutiny of two transparencies of one of the individuals which were also obtained. The photographic equipment used consisted of a Kowa TSN-4 telescope connected to a Minolta x-300 SLR camera by means of a camera attachment. Primary observations were made with a pair of Zeiss 7x42 BGAT binoculars.

At the time of the day the temperature was in the upper twenties centigrade. Both birds were observed sitting on the topmost strand of a barbed-wire fence on the far side of the field, some 50 m away. They remained motionless for much of the time, although they occasionally sallied forth from their perches, returning to approximately the same position soon afterwards. This behaviour was similar to that typically observed in bee-eaters, and is also typical of many members of the Artamidae.

The bird's underparts were a uniform light grey with slightly darker grey mantle and back. The wings were darker grey. Underparts were a uniform light grey. Mandibles were off-white with scarcely visible dark tips, making their thin bills appear strangely curtailed. The mandibles contrasted markedly with the dark grey/black facial masks which extended to encompass the eye - this gave the characteristic black-faced appearance referred to in the name. The dark chin, clearly visible in many illustrations of this species (e.g., Slater *et al.* 1986) was not particularly noteworthy in itself, serving only to give the impression that the breast was in a deep shadow apparently cast by the head. The tails were uniformly dark although the outer terminal white feather tips were infrequently highlighted as the light caught them. Although the birds were mostly perched with their backs to me it was sometimes possible to see the under tail coverts; these appeared to be pale, thus conforming to the description of race *albiventris* given by Day & Simpson (1986) and Slater *et al.* (1986). No vocalisations were noted from the birds, both of which appeared to be about 15 - 20 cm long (slightly hunched when perched). It was perhaps noteworthy that a number of horses were present in the immediate area.

Beehler *et al.* (1986) notes that *A. cinereus* is "a vagrant to the trans-Fly from Australia". Australian populations are regarded as being sedentary or only partially nomadic. The observation of the two birds, apparently of the north-east Queensland race, in Morobe Province therefore represents a considerable expansion in the known range of this species.

Based on the lack of records from the Torres Strait, Coates (1990) speculates that this species may maintain a small population on the southern New Guinea mainland. This may indeed be the case as the species favours "savannas and open plains studded with patches of *Pandanus* and scrubby trees" (Beehler *et al.* 1986). Certainly large areas of Wau's original climax rainforest have been replaced with anthropogenic grassland and scrub; in the valley bottom this growth may approximate the poor sedge grassland referred to by Coates (1990) as being a secondary habitat.

Beehler, B.M., T.K. Pratt & D.A. Zimmerman. 1986. **Birds of New Guinea**. Princeton University Press.

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Day, N. & K. Simpson. 1986. **The Birds of Australia**. 2nd Edition. Christopher Helm.

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SHORT NOTES

Altitude Range Extension for the Crested Bird of Paradise *Cnemophilus macgregorii*. *Niklas Wahlberg.* On 12 August 1990, Jeff Cheminck, Jim Melli and I were bird watching on the driveway to Ambua Lodge, near Tari (Southern Highlands Province). A medium-sized bird flew over our heads and landed in some bushes. We watched it for about one minute as it perched at eye-level, *c.* 4 m from us. I identified it as a female Loria's Bird of Paradise *Cnemophilus loriae*, but as I had only seen a male previously I examined it carefully and made the following notes without referring to Beehler (1986. The Birds of New Guinea): - Golden-green breast, browner wings and tail, bump of feathers on bill, pale iris, buff half eye-ring. When I consulted Beehler *et al.* (1986) I found that the bird looked exactly like the illustration of female Crested Bird of Paradise *C. macgregorii*. I did see a female Loria's Bird of Paradise a few days later and it appeared to be darker. As far as I am aware this is the first sighting of Crested Bird of Paradise in the grounds of Ambua Lodge. Brian Finch (pers. comm.) saw a female Crested Bird of Paradise visiting an unidentified fruiting tree in the grounds of Ambua Lodge in early October 1990. Ambua Lodge, at 2000 m, lies *c.* 100 - 200 m below the published altitude range for this species of 2400-3500 m (Beehler *et al.* 1986) or 2300 - 3650 m (Coates, B.J. 1990. The Birds of Papua New Guinea. Vol. 2). *Address: Jaaskentie 7B, 02140 Espoo 14, Finland.*

Gurney's Eagle *Aquila gurneyi* at Lae's City Centre. *Geoff Smith.* At 14:00 on 31 August 1989, while driving along Lae's Huon Road near the junction with Seventh Street in the town centre, I noticed a huge raptor, which I identified as Gurney's Eagle *Aquila gurneyi*. Its huge size contrasted with that of some flying foxes amongst which it was soaring lazily, with the occasional half-hearted attempt to attack them. The tail was rounded, and the wings were long and broad with prominent "fingers", held flat apart from the tips, which were splayed upwards. The wing tips and tail feathers were unusually mobile while making small flight adjustments - the outer tail feathers appeared to be able to move through 90 degrees. The colour was dark brown, but there were patches of mottling under the wings, which suggested that the bird may have been sub-adult. Soon it was joined by two Black Kites *Milvus migrans*, which it dwarfed with its massive shape. The Black Kites began mobbing the eagle, which flew off inland after a series of attacks. *Address: Language Dept, UNITECH, Private Mail Bag, Lae, Morobe.*

Extension to the range of the Lesser Black Coucal, *Centropus bernsteini*. *Len P. Tolhurst.* The range of the Lesser Black Coucal tends to extend further east along the north coast of New Guinea than the south. Beehler *et al.* (1986. The Birds of New Guinea) give its range as "Generally western and central NG, east in the North to Lae and Bulolo, in South to Fly R.; ..." It could be that this species is extending its range on the south coast as it is now known to be not only east of the Fly River, but also east of the Turama river. Both these

rivers present quite a barrier as the Fly is about 78 km, and the Turama some 16 km wide at their mouths. On 9 August 1989 I saw a Lesser Black Coucal near the airstrip at Kikori, Gulf Province. It was identified by size, plumage characteristics and its call. The call of the Lesser Black Coucal is shorter than that of the Pheasant Coucal *C. phasianus*, with which I am familiar, and descends the scale only. The call of the Pheasant Coucal rises and falls in pitch, and may consist of as many as 50 notes, though my experience would indicate that 20 or so is more common. This species has also been seen at Kikori by Ian Burrows, and in view of the sparsity of observers in Gulf Province may occur more widely on the south coast. *Address: c/o Pacific Adventist College, Private Mail Bag, Boroko, NCD.*

Yellow Sunbird *Nectarinia jugularis* bathing in dew. *Roger K. Hicks.* At 06:30 on 21 September 1990 in a garden in Port Moresby, a female Yellow-bellied Sunbird *Nectarinia jugularis* was observed bathing in the dew that had collected along the outer edge of a banana leaf. When first seen she was perched on the rib in the centre of the leaf. After a short while she slid, with wings spread but drooping at the tips, towards the edge of the leaf. The posture of the sunbird was similar to that adopted by some birds, e.g., Eurasian Jay *Garrulus glandarius* when anting. When the sunbird reached the dew at the edge of the leaf, she tried to maintain her position by scrabbling with her feet and flapping with her wings. This also splashed the drops of water, but was only successful for a few seconds. She then dropped off the banana leaf and flew to another where she landed for a brief preen of her body and wing feathers. The whole process was repeated three times before she flew off. By 07:20 all the dew had evaporated. *Address: 7 Newtown, Codicote, Herts., U.K.*

Extension of Altitude Range for the Dollarbird *Eurystomus orientalis*. *Martin Hale.* On 6 and 9 September 1990 a single Dollarbird was observed at Tari Gap (SHP). On 6 September it was noted *c.* 1 - 2 km below the tree line on the Tari side of the Gap at *c.* 2600 m. It was observed both perched and flying from a distance of *c.* 50 m through binoculars and telescope. Later the same day, a Dollarbird, possibly the same individual, was noted 1 km above the Bailey bridge at *c.* 2400 m. This is the first record of the Dollarbird for the Tari Gap area. The normal upper altitude range for the Dollarbird is given as 1500 m (Beehler *et al.* 1986, Birds of New Guinea) and 1700 m (Coates 1985, The Birds of Papua New Guinea) although two birds were found dead at 4500 m on the Carstensz Massif, Irian Jaya. They had presumably died whilst migrating accross the mountain range (Schodde *et al.* 1975, Emu 75: 65-72.). *Address: House 310, Marina Cove, Sai Kung, Hong Kong.*

RECENT OBSERVATIONS; JANUARY - MARCH 1990

COMPILED BY ROGER HICKS

All observations refer to the Port Moresby area unless the site name is followed by an abbreviated province name.

Contributors: Ian Burrows (IB); Bill Cooper (BC); Bill Eddie (BE); Roger Hicks (RH); Edel Kraayo (EK); John Silcock (JS); Geoff Smith (GS).

Abbreviations: ad = adult; Cen = Central Province; EHP = Eastern Highlands Province; Fm = Farm; I = Island; imm = immature; juv = juvenile; L = Lake; Mor = Morobe Province; NP = National Park; NSP = North Solomons Province; Oro = Northern Province; PAC = Pacific Adventist College; R = River; Rd = Road; SHP = Southern Highlands Province; SP = settling ponds; UPNG = University of PNG campus.

Great Frigatebird *Fregata minor*
23 Jan, 1, Port Moresby (JS).

Lesser Frigatebird *Fregata ariel*
19 Mar, 88, Motupore I (IB); 23 Jan, 4, Port Moresby (JS).

Great Cormorant *Phalacrocorax carbo*
11 Jan, 1 ad, Moitaka SP (RH); 1 Feb, 1, Moitaka SP (RH); 15 Feb, 1, Moitaka SP (RH).

Brown Booby *Sula leucogaster*
20 Mar, 1, off Ela beach, Port Moresby (JS).

Cattle Egret *Egretta ibis*
7 Jan, in bp, Ilimo Fm (RH).

Striated Heron *Ardeola striata*
24 Mar, 1, Bogio mangroves (JS).

Black Bittern *Ixobrychus flavicollis*
5 Jan, 1, Moitaka SP (RH); 1 Feb, 1 juv, Moitaka SP (RH).

Crested Hawk *Aviceda subcristata*
11 Mar, pair cruising Gawam Rd, Mor (GS).

Spotted Marsh Harrier *Circus spilonotus*
10 Feb, 1 subad male, nr Gaire (RH).

Grey Goshawk *Accipiter novaehollandiae*
4 Feb & 8 Mar, 1, UPNG (IB).

Gurney's Eagle *Aquila gurneyi*
10 Feb, 1 imm, gliding over Magi Highway, near Bogio (RH).

Grey Teal *Anas gibberifrons*
15 Feb, 1 female with 4 young (two-thirds ad size), Waigani Swamp (RH).

Garganey *Anas querquedula*
5 Jan, 2 males and 2 females, Moitaka SP (RH); 11 Jan, 9, Moitaka SP (RH); 1 Feb, c. 40, Moitaka SP (RH).

Australian White-eyed Duck *Aythya australis*
24 Mar, Moitaka SP (EK & JS).

White-headed Stilt *Himantopus leucocephalus*
24 Mar, c. 15, Moitaka SP (JS).

Lesser Golden Plover *Pluvialis fulva*
24 Mar, 2 in breeding plumage, Moitaka SP (JS).

Mongolian Plover *Charadrius mongolus*
18 Mar, 40+, Loloata I (IB).

Whimbrel *Numenius phaeopus*
18 Mar, 2, Loloata I (IB).

Red-necked Stint *Calidris ruficollis*
18 Mar, 20+, Loloata I (IB).

White-winged Black Tern *Chlidonius leucopterus*
24 Mar, 2, 1 killed by sling-shot, Moitaka SP (JS).

Common Tern *Sterna hirundo*
18 Mar, 65, Loloata I (IB).

Little Tern *Sterna albifrons*
18 Mar, 25, Loloata I (IB).

Lesser Crested Tern *Sterna bengalensis*
18 Mar, 8, Loloata I (IB).

Great Cuckoo-Dove *Reinwardtoena reinwardtii*
25 Feb, 1, Gawam Rd, Mor (GS).

Pinon Imperial Pigeon *Ducula pinon*
4 Mar, good view of calling bird, Bukawa Rd, Mor (GS).

Red-flanked Lorikeet *Charmosyna placentis*
25 Feb, several small parties, Musom village, Mor (GS).

Double-eyed Fig-parrot *Cyclopsitta diopthalma*
11 Mar, rare chance to observe a perched pair, Gawam Rd, Mor (GS); 18 Mar, Musom, Mor (GS).

Oriental Cuckoo *Cucuclus saturatus*
18 Feb, 1, Bogio mangroves (IB); 7 Mar, 1, Unitech campus, Mor (GS); 25 Mar, 1, King Bird Tree (JS).

Brush Cuckoo *Cacomantis variolosus*
24 Feb, 1 ad trapped, UPNG (IB).

Papuan Frogmouth *Podargus papuensis*
25 Mar, 1 caught a tree frog from a window grating at 02:00, UPNG. It took about 10 minutes to consume the frog. The frog stopped screeching after about 30 sec. (IB).

Barred Owlet-Nightjar *Aegotheles bennettii*
10 Feb, 1, Bogio mangroves (RH); 18 & 24 Feb, 1, Bogio mangroves (IB); 24 Mar, 1, Bogio mangroves (JS). IB & BE compared their excellent sighting of 24 Feb with skins in the collection of th National Museum and confirmed this bird's identity.

Collared Kingfisher *Halcyon chloris*
24 Mar, 1, Bogio mangroves (JS).

Sacred Kingfisher *Halcyon sancta*
15 Feb, first returning bird in Moresby area, 1 perched on tail of car, Moitaka SP (RH); 21 Feb, first returning bird in Lae, Mor (GS).

Azure Kingfisher *Alcedo azurea*
4 Mar, on two rivers on Bukawa Rd, Mor (GS).

Rainbow Bee-eater *Merops ornatus*
22 Feb, first migrants of the season observed, Lae, Mor (GS).

Blyth's Hornbill *Rhyticorus plicatus*
4 Mar, 8, feeding noisily nr Buso River, Bukawa Rd, Mor (GS); 11 Mar, pair flying, Gawam Rd, Mor (GS).

Pacific Swallow *Hirundo tahitica*
7 Feb, 15 at midday roost on Central Government Offices, Waigani (RH).

Large-billed Gerygone *Gerygone magnirostris*
4 Mar, Bukawa Rd, Mor (GS).

Mangrove Golden Whistler *Pachycephala melanura*
24 Mar, Bogio mangroves (JS).

Black-headed Whistler *Pachycephala monacha*
25 Mar, above Musom village, Mor (GS).

Grey Shrike-thrush *Colluricincla harmonica*
Continues to be common and conspicuous on Unitech campus, Mor. Only recently common here (GS).

Yellow-faced Myna *Mino dumontii*
4 Mar, small parties of up to 20, common Bukawa Rd, Mor (GS).

Crinkle-collared Manucode *Manucodia chalybata*
11 Mar, pair, Gawam Rd, Mor (GS).

Magnificent Bird of Paradise *Cicinnurus magnificus*
25 Feb, reasonable view high up tree, Gawam Rd, Mor. The bird seems quite common along the road judging by the calls, but sightings are uncommon, and so far no display areas have been located (GS).

Raggiana Bird of Paradise *Paradisaea raggiana*
A new lek located on Gawam Rd, Mor, just before the new bridge about 10 km past the Sankwep River. Four plumed males in extended display with 7 or 8 females in attendance (GS).

Emperor Bird of Paradise *Paradisaea guilielmi*
Heard calling above Musom village at the end of the Gawam Rd, Mor. This brings the Emperor within about 40 minutes drive of Lae. However, none were seen, and it does not seem to be as common here as nr Gain village on the Boana Rd. (GS).

Grey Crow *Corvus tristis*
25 Mar, *c.* 8, King Bird Tree (JS).

RECENT OBSERVATIONS; APRIL - JUNE 1990

COMPILED BY ROGER HICKS

All observations refer to the Port Moresby area unless the site name is followed by an abbreviated province name.

Contributers: Ian Burrows (IB); Roger Hicks (RH); Edel Kraayo (EK); Geoff Smith (GS); Len Tolhurst (LT); Niklas Wahlberg (NW).

Abbreviations: ad = adult; Cen = Central Province; EHP = Eastern Highlands Province; Fm = Farm; I = Island; imm = immature; juv = juvenile; L = Lake; Mor = Morobe Province; NP = National Park; NSP = North Solomons Province; Oro = Northern Province; PAC = Pacific Adventist College; R = river; Rd = Road; SHP = Southern Highlands Province; SP = settling ponds; UPNG = University of PNG campus.

Long-tailed Buzzard *Henicopernis longicauda*
2 Jun, 1, Varirata NP (RH).

Black Kite *Milvus migrans*
29 Jun, 4, Goroka airfield, EHP (RH).

Spotted Marsh Harrier *Circus spilonotus*
29 Jun, 1 male, Goroka airfield, EHP (RH).

Gurney's Eagle *Aquila gurneyi*
3 Jun, Large, round-tailed raptor soaring on flat wings over the Markham-Labu Rd, Mor. Colours would suggest an imm, brief flashes from the mantle were very pale (GS).

Brown Quail *Coturnix australis*
27 Apr, 1, Central Government Offices, Waigani (RH).

Blue-collared Parrot *Geoffroyus simplex*
19 May, flying high above the Gabensis logging Rd, Mor, at c. 7-800 m (GS)

Papuan Frogmouth *Podargus papuensis*
21 Jun, 2 ad & 1 juv, PAC - 1 ad was sitting at the nest site used Dec 1989 - Jan 1990 (LT)

Shovel-billed Kingfisher *Clytoceyx rex*
3 Jun, 1, sitting in the middle of the Highlands Highway, nr 7-mile, Lae, Mor. It was apparantly incapacitated although no injury was obvious. First record for this area (GS).

Blyth's Hornbill *Rhyticeros plicatus*
Small group of 2 or 3 regularly seen during this period both on the Gawam Rd and Markham-Labu Rd, Mor (GS).

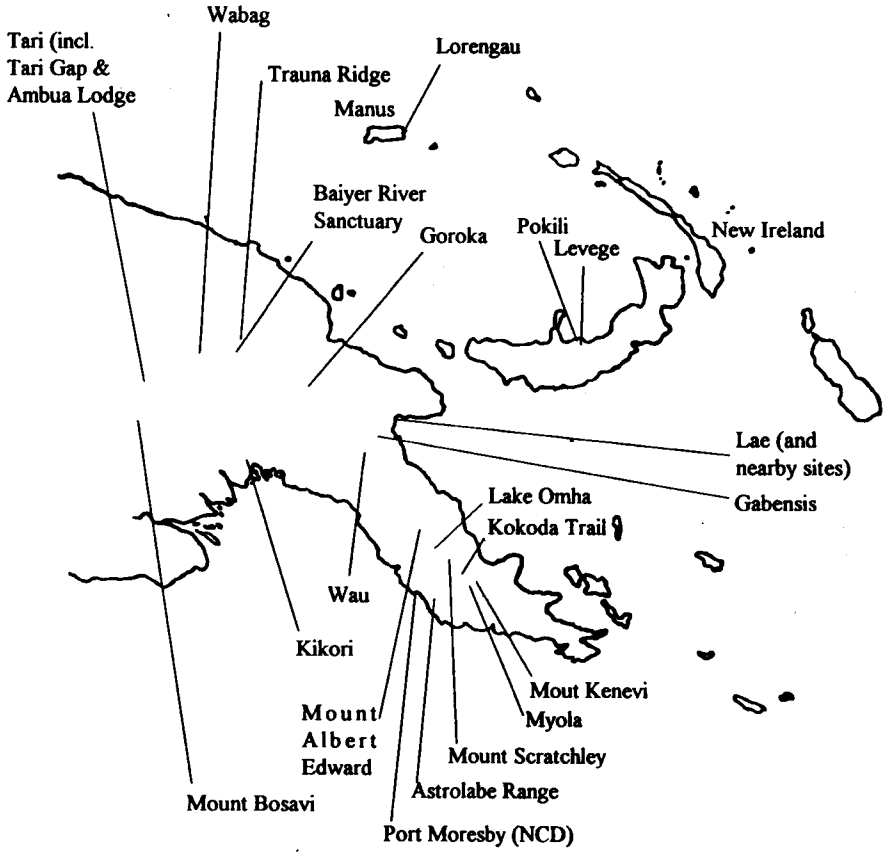
Black Thicket-Fantail *Rhipidura maculipectus*
2 Jun, 1, along stream, nr picnic site no.2, Varirata NP (RH).

Leaden Flycatcher *Myiagra rubecula*
19 May, 1 male, characteristically tail-shivering, on logging Rd past Gabensis on Mumeng Rd, Mor (GS).

Mangrove Golden Whistler *Pachycephala melanura*
One in an urban garden beside the Bambu R in Lae, Mor. There are mangroves at the mouth of the Bambu R about 2-3 km away (GS).

Raggiana Bird of Paradise *Paradisaea raggiana*

A new lek located on the Gawam Rd, just before the new bridge about 10 km past the Sankwep R has been a great success with visitors. Several groups of non-birders have been treated to early morning displays which has aroused an interest in birds among some (GS).



Book Review

Coates, Brian J., (1990), The Birds of New Guinea. Volume II. Dove Publications (P.O. Box 59, Alderley, Queensland 4051, Australia. Available from the PNGBS at 110 Kina. (Volume one is still available, priced at 85 Kina)

Brian Coates should be greatly congratulated on producing an absolutely magnificent second volume of his Birds of Papua New Guinea. This book is beautifully produced, and is generally of much better quality than volume I. One reason for the better quality is that he has used pictures from a wider variety of sources (twenty-one acknowledged instead of seven in volume 1), including many very fine portraits by specialist photographers Cifford and Dawn Frith, and Bill Peckover. This has also resulted in a better photographic coverage so that only a few species are not illustrated with colour photographs, most of these are island endemics. Many of the pictures are simply stunning, and the reproduction is excellent. To say that it is a bargain at 110 Kina is perhaps an overstatement, but it will certainly be avidly devoured by most birders with an interest in Papua New Guinea. Other aspects of the production are also an improvement over the first volume, and the whole has a more professional feeling. I have found no glaring errors of fact, or typographical misplacement, and the author has done a thorough checking of volume one picking up various minor errors. Apart from the main text there are some useful appendices giving notes on the birds which occur only in the Irianese half of the island, and those from the Solomon Islands. Altogether a very remarkable achievement.

As in volume I some of the birds are listed with different names from those which are become most widely used (i.e. those in Beehler et al, The Birds of New Guinea. Some of these are a little confusing (e.g. Goldenface for Dwarf Honeyeater, Black-cheeked Robin for Ashy Robin, Sharpe's Cicadabird for Black-shouldered Cuckoo-Shrike, etc) but alternative names are always listed. Certain changes in the ordering of the birds have been made to fit in with DNA hybridization evidence, which is in some eyes distinctly eqivocal (Blue-capped Ifrit and Papuan Whipbird with the Jewel-Babblers, Longbills with the Berrypeckers, Melampittas with the Birds of Paradise, etc.). There are also some splittings and lumpings which twitchers will want to take note of. Splittings include the Brown-capped Jewel-Babbler, split from the Blue Jewel-Babbler, the Ochre-collared Monarch split from the Frilled Monarch, and the Graceful Meliphaga is also split into two species. Lumpings include the various island thicket-warblers into the Melanesian Thicket-Warbler, Beccari's and Perplexing Scrub-Wren, and the Streak-headed and White-spotted Mannikins.

Altogether this book represents a very important contribution to the knowledge of Papua New Guinea's birds, and it will be a very long time before the breadth of information and excellence of photographic material are bettered.

Mike Hopkins.

INDEX TO PLACES MENTIONED IN THIS ISSUE

INDEX TO PLANT SPECIES MENTIONED IN THIS ISSUE

INSTRUCTIONS TO AUTHORS

MURUK welcomes any contributions which enlarge the body of knowledge of the birds of the New Guinea region. We welcome scientific papers, travelogues, regional lists, and casual observations. The recent observations section is compiled from submitted observations. Please send all contributions to:

The Editor, Muruk, PNGBS, PO Box 1598, Boroko, P.N.G.

Please type all manuscripts, double spaced. This makes it much easier for us to ensure accuracy. If you have access to a word processor then manuscripts can be submitted on disc (any type compatible with IBM standards). We edit initially in Microsoft Word 5, and later compose the final publication in Pagemaker IV. We can cope with documents from most other word-processing programs, but it may be advisable to create an ascii version of the document in case this proves difficult.

In general articles and notes should follow the style used in EMU (or see earlier issues of MURUK). Please pay special attention to the correct citation of references.

For english and scientific names use those in Beehler, B.M. *et al.* (1986) Birds of New Guinea, Princeton University Press, or the checklist produced by the Society (Hicks, R. (1987) Checklist of the Birds of Papua New Guinea, PNGBS). In listings of birds please follow the order used in these publications.

For place names, please make sure that they can be located using standard maps. If they do not occur on the standard PNG 1:100,000 maps then please give the nearest mapped locality. Always give the province after the name.

Illustrations should be neatly drawn in black ink. Illustrations are scanned into a computerised format. Try not to put in too much detail. For all maps etc. please submit two copies, one without any annotation and another with the place names (etc.) marked. Alternatively, mark the place names on a transparent overlay. Line drawings of birds are welcome. Again, use black ink, and use as few shades as possible, stippling prints well. Drawings of manoeuvres or related things for the covers are always welcome. The Society is considering the possibility of including black and white photographs in future issues if there is sufficient demand.

If you have any special requirements with regard to publication please let us know. The editor reserves the right to make any changes they see fit, and we do not normally return manuscripts for proof-checking unless this is specifically asked for by the authors.