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BY

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LAND BIRDS OF GUADALCANAL AND THE SAN CRISTOVAL GROUP, EASTERN SOLOMON ISLANDS

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SYNOPSIS

A collection from Guadalcanal, San Cristoval and Ugi is reported upon, with systematic and distributional notes covering also the land and freshwater forms not collected. A new subspecies of *Halcyon chloris* is described from the Three Sisters group; a recently-described race of *Tyto alba* is synonymized; changes of arrangement, affecting the nomenclature of forms currently placed in *Coracina tenuirostris*, *Monarcha barbatus*, *Myiagra ferrocyanea* and *Myzomela nigrita*, are suggested; and the application of the the names *Pachycephala pectoralis* and *Zosterops rendovae* is discussed.

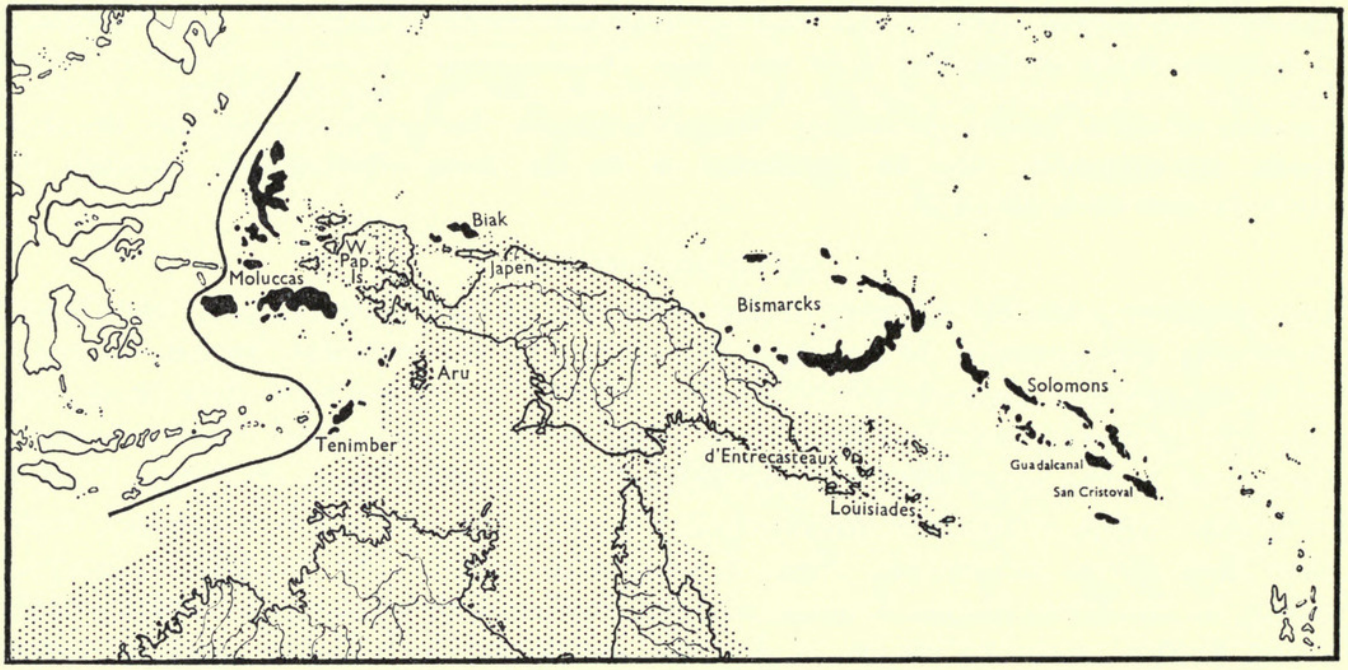
INTRODUCTION

THIS paper is primarily a report on the collection of bird-skins made by the Oxford University (Department of Zoology) Expedition to the Solomon Islands in 1953; but is expanded to cover islands in the San Cristoval group not visited by the expedition, and land and freshwater forms unrepresented in the collection. New subspecies discovered in the mountains of Guadalcanal have already been described (Cain & Galbraith, 1955), while new distributional information and a few taxonomic notes have been given incidentally (Cain & Galbraith, 1956). The expedition, financed mainly by the Percy Sladen Trustees and the Parliamentary Grants Committee of the Royal Society, was led by Dr. A. J. Cain, supported by I. C. J. G. and by native assistants from the Malanggo district of Guadalcanal and the Ravo district of San Cristoval. Almost all the linear measurements presented here were taken by E. H. G., while I. C. J. G. is responsible for the rest of the paper.

Avifaunal Geography

A study of the Solomons avifauna, with special emphasis on the geographical variation for which it is remarkable, is in preparation by I. C. J. G., and only the barest outline will be given here. Grover gives geographical and general accounts (1955 : 3–26 ; 1957 ; 1958 : 3–10), and much detailed geological information with valuable general references (1955 ; 1958 ; 1960), for the British Protectorate. Nissan, Buka and Bougainville, with the Bismarck Archipelago, belong politically to the Territory of Papua and New Guinea (see Australia 1950–1951). The area is shown to a convenient scale, and all but the smallest islands named, in the new *Times Atlas* (1958, pl. 15). Apart from minor differences in spelling, only the following names used here for islands in the Solomons are not to be found in the Atlas: Buena Vista = Vatilau; Gower = Ndai; Murray = Buraku; Ranongga = Ganongga; San Jorge = St. George; Sikaiana = Stewart; Simbo, five miles south of Ranongga; Small Malaita = Maramasike.

The Solomons form the easternmost extension of a zone of islands round the western, northern, and eastern coasts of New Guinea, beyond the continental shelf but accessible by island-hopping across gaps of less than two hundred miles (mainly less than eighty). The avifaunas of these islands—the Tenimber and Kei groups, the Moluccas, Biak and Numfor, and the Bismarcks and Solomons—place them in the Papuan region, and have clearly been derived mainly from New Guinea by colonization across the sea. The Moluccas have a considerable Malaysian component, and the Solomons a smaller Polynesian one. Enclosed by this " Molucco-Melanesian " zone is that of the islands on the Papuan continental shelf—Aru, the Western Papuan Islands, Japen, and less certainly the d'Entrecasteaux and Louis-



MAP 1. The Papuan region, showing islands of the " Molucco-Melanesian " zone (black), in relation to the Papuan continental shelf (stippled to the 200-metre isobath, from B.H.I. 1942), Weber's Line of faunal balance (from Mayr, 1944*d*), and the wider water-gaps of the Polynesian region.

iades—with richer faunas perhaps largely derived by direct colonization at periods of lower sea-level, yet lacking many birds characteristic of the mainland. Further out, Micronesia to the north and Southern Melanesia (including the Santa Cruz group and New Hebrides) to the southeast, form a zone with the much poorer faunas characteristic of the Polynesian Region (Mayr, 1941*b*). All three zones are avifaunally characterized not merely quantitatively but qualitatively; though even the continental islands can have had land connections with one another only through mainland New Guinea. The remarkable avifaunal resemblances, in the representation or otherwise of Papuan stocks, between (say) Biak and the Solomons, thirteen hundred miles apart, must be almost wholly due to the different colonizing potentials of the various stocks, across similar barriers and into ecologically similar habitats.

Within the middle zone, the Bismarcks and Solomons together form a rather homogeneous unit, distinguished as Northern Melanesia (Mayr, 1941*b*). As might be

expected, avifaunas progressively poorer in species are encountered in passing from the Huon Peninsula of New Guinea, through New Britain and New Ireland to the Solomons. The geography of the area suggests this as the most important colonization route, while some direct evidence for it in the patterns of distribution and variation of some (apparently rather recent) arrivals is not convincingly paralleled for the possible route to the Solomons through the Louisiades. However, the faunal parallelism characteristic of the three zones is shown within Northern Melanesia also. In many stocks, the representative populations in the Solomons are more distinct and diverse, and thus probably older, than those in the Bismarcks. The striking endemism of the Solomons avifauna is exemplified by *Haliaeetus*. *H. leucogaster* occurs, without appreciable geographical variation, from India to Australia, New Guinea and the Bismarcks ; but is represented in the Solomons by the very distinct *H. sanfordi*.

Though a fairly compact and homogeneous archipelago—seven hundred and twenty miles across, with no water gaps of much more than fifty miles, and mostly covered by tropical rain forest—the Solomons proper show considerable avifaunal diversity, in both the representation and the geographical variation of species and superspecies. The most striking discontinuity is met in crossing the thirty-five mile strait from Guadalcanal to San Cristoval : no fewer than 29 of about 95 breeding species are unrepresented, including such widespread and common birds as *Accipiter novaehollandiae, Ptilinopus superbus, Coracina papuensis, Aplonis cantoroides, Mino dumontii* and *Nectarinia jugularis*. The internal richness in geographical variation is still more striking : perhaps in no other archipelago does such a high proportion of the avifauna break up into so many and so diverse representatives across such narrow barriers. The most celebrated example is the *Zosterops kulambangrae* (=*rendovae*) superspecies in the New Georgia or Central Solomons group (see Mayr, 1942 : 227—in which the narrowness of the straits is exaggerated—and Mees, 1961 : 143–151). The discontinuities and affinities are not geographically random but express themselves in a rather clear-cut pattern, which may be formalized in a system of avifaunal districts and sections (Mayr, 1945*a* : 275—expanded from Rothschild & Hartert, 1905 : 244). This system is reproduced here with only minor emendations, though a modified form is in preparation. The possibilities of confusion in the avifaunally misleading term " Central Solomon Islands" have been pointed out (Cain & Galbraith, 1956 : 102), and it has since been adopted in yet another sense (Grover, 1957 ; 1958). Here it is replaced by " New Georgia Group ", as used by Grover and the *Times Atlas* (1958). Names and spellings in this paper are as far as possible those officially current in the Protectorate.

A. Main Chain

a. Northern Islands—(Buka), Bougainville, Shortland Is., (Fauro), Choiseul, (Robroy, Wagina, Gagi, Barola, Baroraite), Ysabel, (San Jorge)
b. Guadalcanal Group—Florida Is., (Savo), Guadalcanal
c. Russell Is.
d. Malaita Group—Malaita, (Small Malaita), ? Ulawa

B. New Georgia Group

a. Western Section—Vella Lavella, (Ranongga), ? Simbo

b. Main Section—Gizo, Kolombangara, (Wanawana, Arundel), New Georgia, (Vangunu, Gatukai)

c. Rendova Section—Rendova, (Tetipari)

C. San Cristoval Group—San Cristoval, Ugi, (Bio), Three Sisters Is., Santa Ana, (Santa Catalina)

Parentheses indicate small or moderate-sized islands, lying close to the groups with which they are associated, for which avifaunal lists are not available. Unpublished distributional information from the Whitney Expedition was no doubt used by Mayr (1945*a*) in associating some of them with districts and sections. Smaller offshore islands probably resemble the more isolated ones—Nissan, Treasury, Murray, Buena Vista, Ramos, Gower, Sikaiana and Ongtong Java ; and perhaps Simbo (Sibley, 1951 : 83) and Ulawa (Cain & Galbraith, 1956 : 104)—in having such depleted avifaunas, composed almost entirely of widespread forms, that they cannot be associated faunally with any particular subdivision of the Solomons (nor indeed with one another, within the unity imposed by the ecologically-limited range of potential colonists).

Rennell, with Bellona, has a very distinct avifauna, somewhat intermediate in its affinities between Northern and Southern Melanesia (Mayr, 1931*c* ; Bradley & Wolff, 1956 ; Braestrup, 1956), while the Santa Cruz group is associated with the Solomons only politically, and has a largely Southern Melanesian avifauna.

Within the Solomons proper, the most fundamental cleavage is between the Main Chain and New Georgia Group on the one hand, and the San Cristoval Group on the other. Failure of almost a third of Guadalcanal species to colonize San Cristoval has already been mentioned ; while of 67 San Cristoval species whose distribution is sufficiently known, 17 are represented on Guadalcanal by different (mostly very distinct) subspecies, 5 by different species, and 7 are not represented. Between Guadalcanal and San Cristoval there is a major break in the southeastwards spread of Papuan birds, comparable to that between the Bismarcks and Solomons, and a lesser one in the northwestwards spread of Polynesian forms. Although evident in Mayr's (1945*a*) summary of the Solomons avifauna, this striking discontinuity has not been especially remarked ; largely because most of the San Cristoval endemics were discovered early and only gradually localized within the Solomons, while the absence of otherwise characteristic species has also been only slowly recognized. Ugi and the other small islands have reduced but distinctively San Cristoval avifaunas, with some specialization. The presence of *Aplonis cantoroides* and *Nectarinia jugularis* on these islands, though not on San Cristoval itself, supports other evidence in suggesting that the latter is not an avifaunal vacuum preserved by physical isolation ; but that the endemic forms have redeployed ecologically to form a thin but harmonious avifauna which presents an effective barrier to colonization. This in turn suggests that the island may have had a distinctive history as a terrestrial biotope during the Caenozoic—which the bathygraphy, relief, stratigraphy and tectonics of the Solomons (Grover, 1955 ; 1958 ; 1960) do not contradict.

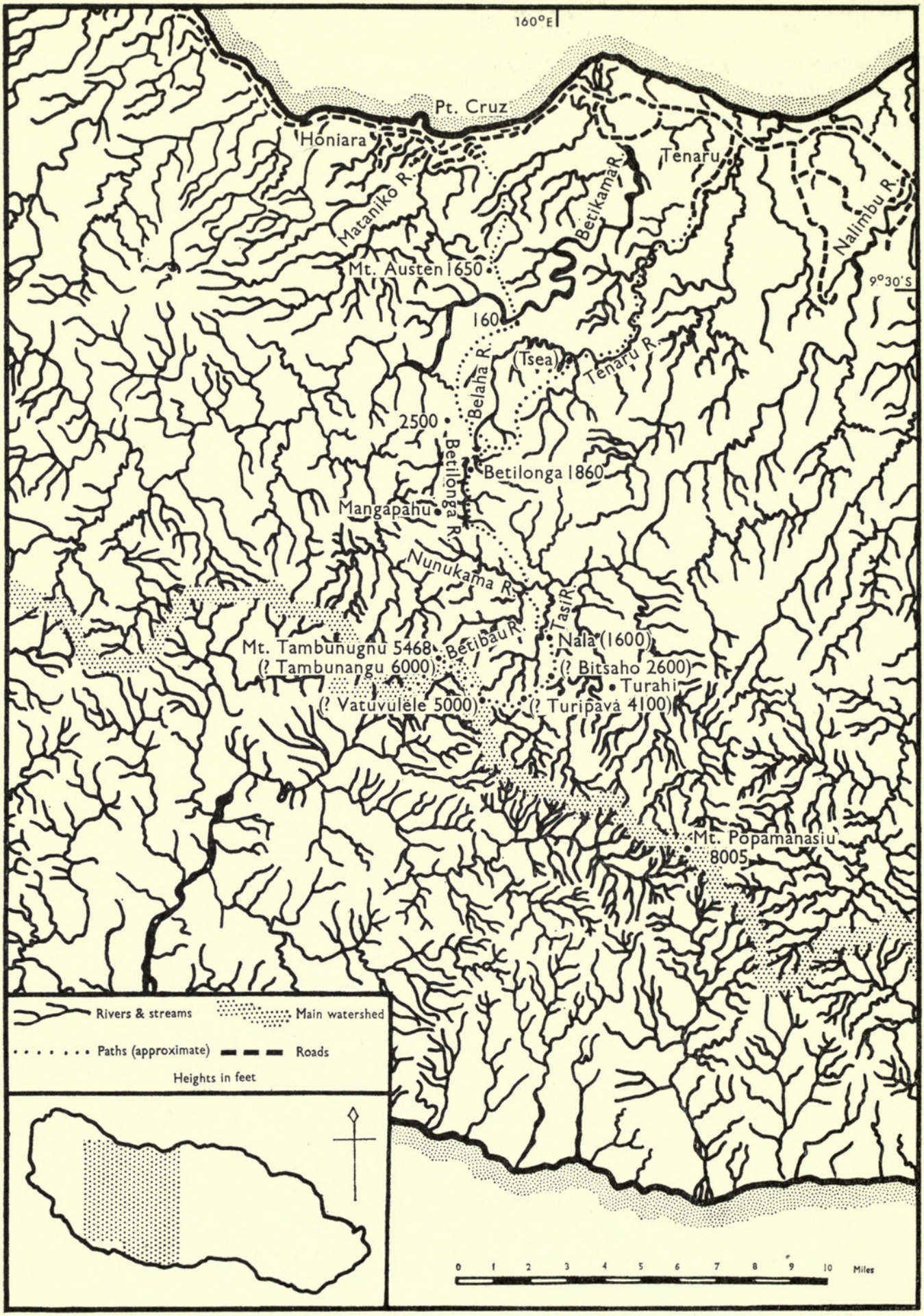
Whereas the San Cristoval forms *Coracina salomonis*, *Monarcha vidua* and *Myiagra cervinicauda* have recently been regarded as conspecific with their representatives elsewhere in the Solomons (Mayr, 1945*a* ; 1955), we treat them as full species. Some of Mayr's species-arrangements of allopatric forms are too much influenced by geography rather than characters, and so may be misleading when faunal affinities are to be considered. Possibly we have fallen into the opposite error through over-preoccupation with the peculiarity of San Cristoval. However, other recent authors have divided some of Mayr's (1945*a*) polytypic species on similar grounds (e.g. Mayr, 1955 : 23 ; Amadon, 1956 : 23 ; Mees, 1961 : 132).

Avifaunal differences between and within the Main Chain and New Georgia Group are much less profound than those which separate the San Cristoval Group. Bougainville and Guadalcanal, the largest and most massive islands, have the richest and most typical avifaunas, with surprisingly little differentiation between them. The long but narrow and rather low islands of Choiseul and Ysabel lack many species common to Bougainville at one end and Guadalcanal at the other, while the few differentiating forms which they do possess link them rather more with the former. The low-lying Russell group has a poorly-differentiated fauna reminiscent of those of the more isolated islands, but with a surprising number of endemic subspecies. The avifauna of Malaita can be derived almost entirely from that of Guadalcanal, but has many very distinct representatives. Still more distinct, and showing some special affinities both with the Northern Islands and with Guadalcanal, the New Georgia Group is distinguished by marked internal variation, in five species and superspecies, upon which its subdivision is largely based. Though New Georgia is the largest island of the group, the taller volcanic cone of Kolombangara supports the richest avifauna.

Ornithological Literature

The avifauna of the Solomons is admirably summarized (Mayr, 1945*a*), in a work indispensable in the field or study which embodies otherwise unpublished records and taxonomic judgements. A series of papers on Northern Melanesia as a whole (Mayr, 1945*b* ; 1949*b* ; 1955 ; 1957) is unfortunately incomplete ; so that no comprehensive recent work treats the pigeons, parrots, kingfishers, or several other non-passerine groups, of the Bismarcks. The *Novitates Zoologicae* (to 1932) and the *American Museum Novitates* (from 1924) are the richest sources for revisions which include Northern Melanesian birds.

Mayr (1955) lists the most important regional works on Northern Melanesia, dating from 1899 to 1951. Several subsequent papers, some based largely on field observations, have to be added (Bradley, 1957 ; 1962 ; Bradley & Wolff, 1956 ; Cain & Galbraith, 1955 ; 1956 ; 1957 ; French, 1957). The latest development is the exploration of mountains on New Britain, which have already yielded two remarkable new species (Gilliard, 1960*a* & *b*). Mayr omits several papers based largely on field observations (Dahl, 1899 ; Donaghho, 1950 ; Hamlin, 1931 ; Meyer, 1927 ; 1930 ; 1933 ; 1937). Useful details may be gleaned from earlier works, and miscellaneous papers also omitted (Beecher, 1945 ; Danis, 1938 ; Davidson, 1929 ; 1934 ; Hartert, 1908 ; 1929 ; Mayr & Camras, 1938 ; Ogilvie-Grant, 1887 ; 1888 ; Ramsay, 1879*a* & *b* ; 1881 ; 1882*a*, *c* & *e* ; 1883 ; Schönwetter, 1935 ; Sharpe, 1888 ; Sibley, 1946 ; Stresemann,



MAP 2. Localities visited on Guadalcanal (from D.C.S. 1955, sheets 2, 3, 6, 7, 10 and 11, with modifications from Grover, 1955 and 1960). Names and altitudes obtained by the expedition are shown in parentheses, and uncertain localities are indicated by queries.

1933 ; Tristram, 1879 ; 1882 ; 1892 ; 1894 ; 1895 ; White, 1938). However, the earlier locality records must be treated with reserve : Ramsay's unreliability in this respect has been repeatedly remarked. Still earlier reports are now of mainly nomenclatural importance (see Mayr (1933*b*) on Sclater's (1869) ostensible Solomons collection).

Though ecological interactions, and geographical variation in ecology and behaviour, present some of the most interesting problems in the Solomons avifauna, very little information is avilable. Field notes and locality records from the Whitney Expedition must be a rich source of unpublished data, especially on the geographical variation of altitudinal distribution (see Mayr, 1945*a* on *Rhipidura rufifrons* and *Pachycephala pectoralis*). Fairly comprehensive field-notes have been published for areas on Bougainville (Virtue, 1947), New Georgia (Sibley, 1951), Guadalcanal (Donaghho, 1950 ; Cain & Galbraith, 1956), San Cristoval and Ugi (Cain & Galbraith, 1956), and Rennell (Bradley & Wolff, 1957). Comparison of major islands, and of altitudinal zones, has been attempted only by Cain & Galbraith (1956).

Collecting Localities

At the time of the Oxford expedition, the best available maps of the Solomons were the American military series at 1 : 500,000 (A.M.S. X401), and larger maps of individual islands prepared by the Lands Department ; both useless for inland localities. Sketch maps at 1 : 50,000 are now available for Guadalcanal (D.C.S. 1955) and for San Cristoval, Ugi, Bio, the Three Sisters, Santa Ana, Santa Catalina, and Ulawa (D.O.S. 1958). Maps 2 and 3 are based on the appropriate sheets of these, with additions from Geological Survey maps of Guadalcanal (Grover, 1955 figs. 9 & 48 ; 1960 fig. 42), and a sketch-map of eastern San Cristoval provided by Mr. R. B. M. Thompson.

Only localities at which collections were made are listed here. Native collectors based at these localities ranged for several miles in search of specimens. Cain & Galbraith (1956 : 106) briefly describe all the localities visited. They use a more phonetic spelling than the official form, rendering the Melanesian " b " as " mb " and the San Cristoval " g " as " gh ".

Guadalcanal : Tenaru. Tenaru Mission School on coastal plain, among grassland, lowland forest, second-growth jungle, and cultivated land.

Guadalcanal : Tsea. Waterfall on Tenaru River near sea-level (see Grover, 1955 fig. 9 & pl. VIII), in lowland forest with gardens and second growth.

Guadalcanal : Betilonga. Village near floor of Betilonga basin at 1,800 ft (see Grover, 1955 Ch. XXIV ; Hill in Grover, 1960 Rept. 21). Hill forest on ridges rising to about 2,500 ft, with clearings and second growth.

Guadalcanal : Nala. Deserted village on spur above Tasi (? Baliai) River at about 1,600 ft, at foot of Kavo range (see Grover, 1960 fig. 42). Village clearing and extensive second growth in hill forest.

Guadalcanal : Turipava. Camp on spur of Kavo range above Nala, at about 4,000 ft in lower mist forest. The position of the spur was determined, from the drainage pattern of the area and compass bearings taken from about 5,000 ft at Vatuvulele, before publication of the map (Grover, 1960 fig. 42) confirmed the positions of the

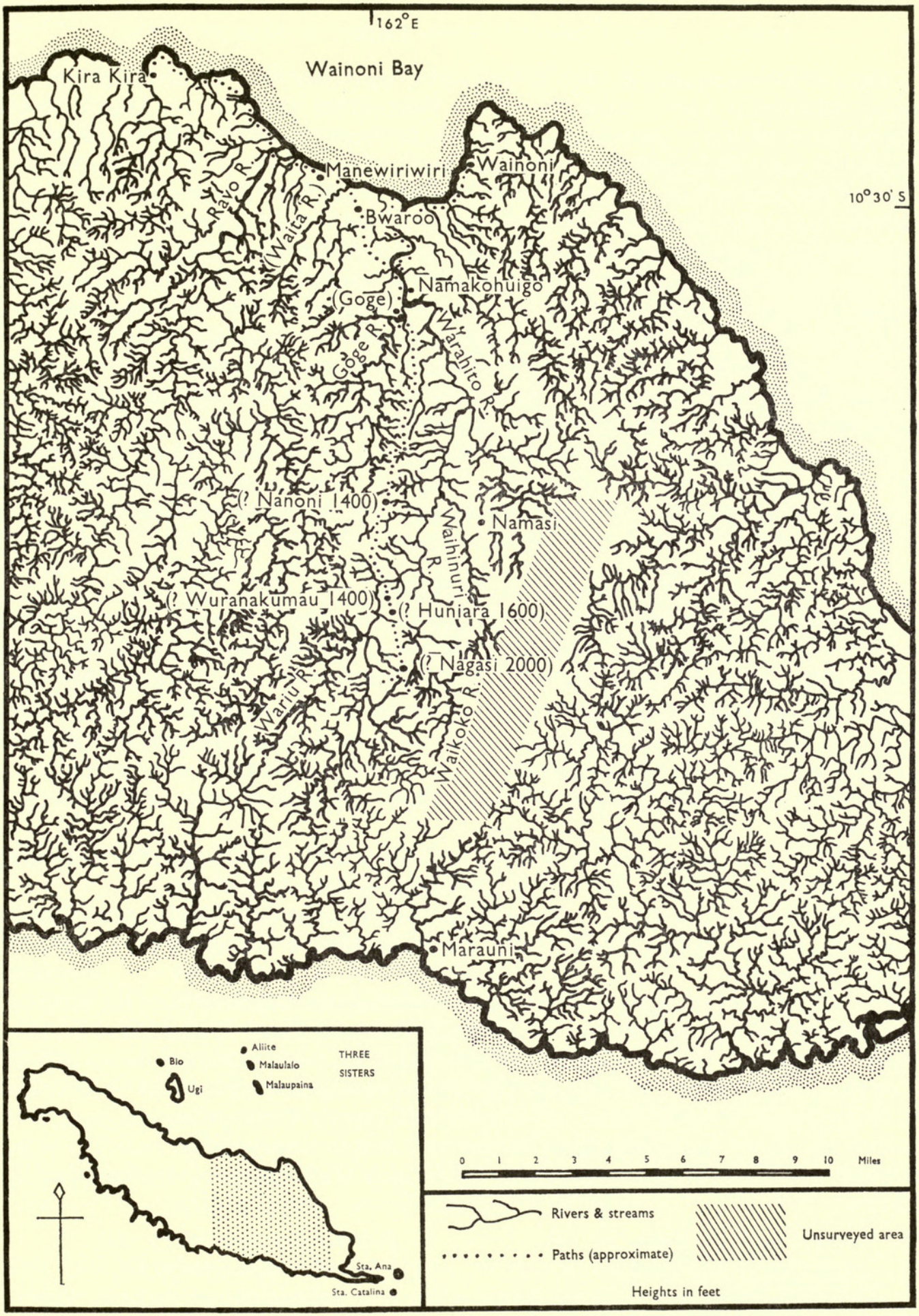
Nunukama/Betibau confluence and Nala. The peak marked as Mt. Tambunugnu at 5,300 ft may well be the high point recorded by Cain & Galbraith as Tambunangu (" forbidden to speak ") at about 6,000 ft, but the position of the sites along the spur is conjectural.

San Cristoval : Manewiriwiri. Village on coast of Wainoni Bay, among coconut plantations, gardens and second growth in coastal forest.

San Cristoval : Goge. Village in Warihito valley at Goge confluence, near sea-level in lowland forest with extensive clearings and second growth. The name of the village is correctly Napagiwae ; but this was not used by the natives during I. C. J. G.'s stay, and is ignored here for ease of reference to Cain & Galbraith (1956) and the specimen labels.

San Cristoval : Nagasi. Inland ridge rising to about 2,200 ft, with hill forest, second growth and deserted village clearing. The position of this ridge is very uncertain, and merely suggested on map 3. Unfortunately, no compass directions were recorded, and no views of recognizable points were obtained. The following may later assist in the identification of the Nagasi ridge. Crossing the Goge River from Goge, the path southwards up the crest of the nearby ridge was followed (through a deserted village, Nanoni, at about 1,400 ft after 2 hr.), without descending appreciably or crossing water until, after a sharp descent to the left from a ridge at about 1,700 ft, a small river, Halauma, flowing from right to left, was reached in 3 hours rapid marching. A recently deserted village, Wuranakumau, lay across this and 10 minutes climb away, at about 1,400 ft on a platform of the Nagasi ridge. The path to the highest point, from which the return to Wuranakumau took 40 minutes rapid descent, approximately followed the crest, past overgrown sites, Huniara at about 1,600 ft, and Nagasi at about 2,000 ft. Above Huniara it crossed a swampy saddle, with water trickling to the right. Just above Nagasi the path branched ; the left-hand branch was said to go towards the south coast, the other back to the Goge path. A view from the left of the latter showed at least three parallel ridges at about 2,000 ft, separated by steep valleys. Both paths soon began to descend. Thompson (*in litt.*), who had previously visited Namasi, made enquiries in the Wainoni area, and was convinced that the Halauma was the Haruta or upper Warihito River, where there was once a village Kehaha at the crossing (names not shown in map 3), and that the Nagasi ridge lay between this and the Waiakoko River, while the path down from the ridge probably reached the south coast at Marauni. The only discordant point is a clear though restricted view, to the right of the path below Nagasi, sharply down to a steep shore at an acute angle to the ridge, and an apparently extensive body of water. It seems impossible, from the distances involved, that this could have been the south coast as I. C. J. G. supposed at the time ; and hardly possible that it could have been the shore of a large unknown lake in the area not covered by aerial photographs (D.O.S. 1958 sheet 7).

Ugi. Although the collectors worked from the mission school at Pawa, they ranged over at least the southern half of the island, and did not collect within the extensive grounds of the school. The island reaches a height of 570 ft, and supports a variety of habitats—lowland forest, old and new second growth, gardens of native and European types, fields, coconut plantations and coastal formations.



MAP 3. Localities visited on San Cristoval (from D.O.S. 1958, sheets 2, 4, 5, 7 and 8). Names and altitudes obtained by the expedition, are shown in parentheses, and uncertain localites are indicated by queries.

The distinction drawn by Cain & Galbraith (1956), between hill forest on Guadalcanal (Betilonga) and " ridge forest " at comparable altitudes on San Cristoval (Nagasi), is probably not tenable. Intensive botanical study would be necessary to establish a real difference between primary forest at about 2,000 ft on the two islands, since forest physiognomy is considerably subject to local influences, while old second growth (especially common on San Cristoval—Walker, 1948 : 49) may be misleading. Avifaunally, the evidence is at most suggestive. *Phylloscopus trivirgatus* is the only species, taken at Nagasi, which was present on Guadalcanal in the montane mist forest (Turipava) but absent from Betilonga. *Edithornis silvestris*, *Vitia parens* and *Rhipidura fuliginosa*, not known to be represented on Guadalcanal, might prove to be hill forest birds on San Cristoval ; as might *Zoothera margaretae* on both islands. Besides *Phylloscopus*, the only other species known from both islands, and strictly montane on Guadalcanal, is *Petroica multicolor*, whose altitudinal distribution on different islands has not been recorded (Mayr, 1934*b*)—though " above 1800 feet " (Mayr, 1945*a*) may well refer only to San Cristoval. The attempt to delimit zones of bird life in the Solomons, to study their boundaries, and to compare strictly similar habitats on different islands, has yet to be made.

THE LAND AND FRESHWATER BIRDS

Although the expedition was concerned only with the land and freshwater birds (in the sense of Mayr, 1945*a*, the Charadriformes, Procellariiformes, Phaethontidae, Sulidae and Fregatidae being neglected), a very few waders were taken incidentally :

Actitis hypoleucos (Linnaeus, 1758). Guadalcanal : Betilonga 1 unsexed 25th August ; Tenaru 1 ♀ 15th September. San Cristoval : Goge 1 ♂ 30th October, 1 ♀ 3rd December, 2 unsexed 2nd and 3rd November.

Heteroscelus incanus brevipes (Vieillot, 1816). San Cristoval : Goge 1 ♀ 27th October.

Calidris acuminata (Horsfield, 1821). San Cristoval : Goge 1 ♂ 14th November, 1 unsexed 29th October. Ugi : Pawa 1 unsexed 19th December.

The *Heteroscelus*, in winter plumage, was identified subspecifically according to Stickney (1943). As Bull (1948) found, the white bars on the upper tail-coverts are poorly developed.

Every species and subspecies of land and freshwater bird known from the islands of Guadalcanal, San Cristoval, Ugi, the Three Sisters and Santa Ana is listed below, a total of 154 forms. Those represented in the expedition collection are shown in boldface type. The number, prefixed by " M.", associated with each name is for reference to Mayr (1945*a* : 212–280) and Cain & Galbraith (1956) : there are several gaps, while conspecific races, and sometimes species of a single superspecies, bear the same number. Additional species (marked* by Cain & Galbraith) are distinguished by letters :

A. *Pelecanus conspicillatus* (p. 14)
B. *Egretta intermedia* (p. 15)
C. *Platalea regia* (p. 16)
D. *Circus approximans* (p. 19)
E. *Falco peregrinus* (p. 19)
F. *Poliolimnas cinereus* (p. 22)
G. *Cichlornis whitneyi* (p. 52)
H. *Gymnorhina tibicen* (p. 71)
J. *Myzantha melanocephala* (p. 75)

The names adopted are those used by Mayr (latest of 1941*a* ; 1945*a* ; 1945*b* ; 1949*b* ; 1955 ; 1957), except as otherwise discussed under " Notes ". Nomenclatural references are not given, since these are easily found (especially from Mathews, 1927–30 ; 1931 ; 1932 ; 1933). Reference is made to recent revisions where possible, otherwise to a standard work (usually the *Catalogue of Birds in the British Museum*, London 1874–98, cited by volume as *Cat. Birds B.M.*), or in a few cases to several partial discriminations. References to Mayr, 1945*a* are given for species not there recorded from the Solomons. More general references are introduced by " See . . .".

In the range indications, " Solomons " includes only the islands from Buka to Santa Ana, and not Nissan, Ongtong Java, Rennell, Bellona or the Santa Cruz group. Forms which are not native residents of the Solomons are indicated as introduced, migrant or straggling ; those which are not normally to be found in or near the major hill-forest habitat are indicated as coastal, lowland or montane. The available information on altitudinal and ecological distribution is summarized by Cain & Galbraith (1956).

In the sections on the specimens collected, sexes and growth-stages are indicated by: ♂, male; ♀, female; ?, unsexed; ad, adult; subad, subadult; imm, immature; juv, juvenile; nest, nestling; ret, retarded phase. A few unsexed specimens (mainly adult males of strongly dimorphic forms) have been sexed by plumage. Growth-stages were determined from plumage. Most of the specimens are in the British Museum (Natural History), referred to as BM(NH), but some are indicated as having been sent to the American Museum of Natural History (AMNH) or the Oxford University Museum (OUM). The destination of a few specimens in spirit has not yet been decided. The BM(NH) specimens are registered as nos. 1959.21.1–1590, 1604–1611.

Specimens were collected at the various stations between the following dates in 1953 (expedition serial numbers in parentheses) :

Betilonga	4th June–24th July (1–27, 31–337)
	3rd August–12th August (356–443)
	22nd August–29th August (563–613)
Tsea	9th June–10th June (28–30)
Turipava	30th July–31st July (338–348)
	15th August–20th August (444–562)
Nala	31st July–1st August (349–355)
Tenaru	3rd September–24th September (614–834)
Goge	8th October–14th November (835–1404)
	30th November–3rd December (1573–1648)
Nagasi	18th November–26th November (1405–1572)
Manewiriwiri	6th December–8th December (1649–1712)
Pawa	14th December–30th December (1713–2003)

From 26th October to 31st October (nos. 1115–1191), the native collectors were working unsupervised, recording sex and gonadial development pictorially, but not weights nor colours. These determinations seem wholly reliable : there is a reasonable proportion of undetermined specimens, and the recorded gonadial states do not

conflict with the plumage, even where external differentiation is inconspicuous. Labels from this period are marked " nat. coll.". All other specimens were sexed, weighed and described by A. J. Cain or I. C. J. G.

The freshly collected birds, if not severely damaged, were weighed without allowance for loss of blood and feathers or for lodged shot. Weights less than 185 gm were taken to the nearest 0·5 gm, with a long-scale spring balance designed by Dr. J. A. Gibb for weighing small passerines alive (as advertised by the B.T.O. in *Bird Study*). Used with a 50 gm weight for the lighter specimens, this gave a linear response over its whole range, and would have been reliable to a greater degree of accuracy. It was calibrated in the field, and checked at intervals. Weights between 185 and 500 gm were taken with a dietary balance to the nearest 5·0 gm, and their means are given to the nearest 1·0 gm. Weights of discarded and spirit specimens have been used where possible, so that a weight series may be longer than the corresponding series of skins. Linear measurements were almost all taken by E. H. G., while re-measurement of some series by I. C. J. G. showed good agreement. Except where otherwise stated, wings were measured flattened down, tails from the common sheath to the tip of the longer central rectrix, and bills from the angle of skull and culmen chordwise to the tip of the mandible.

Weights are given in grams, linear measurements in millimetres, to the nearest 0·5 unit, and their means to the nearest 0·1 unit (except for weights above 185 gm). Measurements of unsexed specimens are not usually given. Though the standard deviation should ideally be given as the measure of spread, the undesirability of combining or accurately comparing measurements made by different workers makes the labour of computation not worthwhile in reports on collections, and the range is here given instead. Three or more measurements are given in the form : *number of individuals measured/sex/stage/range/(mean)* ; e.g. 5 ♂ ad 42·5–52 (46·7). For 2 specimens, the measurements are given instead of the range and mean.

Descriptions of the colours of soft parts are compiled from the field-labels for each series, including those of discarded and spirit specimens. They apply to both sexes and all represented stages, unless otherwise stated ; stages represented but not mentioned agree with the next older stage. Other notes on individual specimens refer to those taken by the expedition, unless otherwise noted. In the colour-comparison of *Ptilinopus solomonensis* and *Aplonis metallica* (pp. 24 and 68), the longest and most variable series was divided into as many colour-classes as could be re-assembled with little error, to which the remaining series were then matched, rather than into a predetermined number of classes.

(A) *Pelecanus conspicillatus* Temminck, 1824

REFERENCES. *Cat. Birds B.M.* 26 : 483 ; Alexander, 1954 : 189.

RANGE. Australia ; straggling from Tenimber Isles to Melanesia (coasts and lowlands).

NOTES. Recorded from the Solomons, New Hebrides and Rennell after high winds in 1952 (Anon, 1952 ; Dorst, 1954 ; Laird, 1954 ; Bradley & Wolff, 1956 ; Cain & Galbraith, 1956).

(M. 2) ***Phalacrocorax melanoleucos melanoleucos*** (Vieillot, 1817)

REFERENCES. Amadon, 1942*a* : 2.

RANGE. Java and Celebes to Australia and Santa Cruz, including Guadalcanal and Santa Ana (lowlands).

SPECIMENS. Guadalcanal : Betilonga 1 ♀ ad. To OUM.

Bill 42.

Iris dark brown, silvery outer ring. *Skin* round eye yellowish fuscous, chin dirty yellow. *Bill* yellow, maxilla mottled with black. *Foot* black.

NOTES. The known range of this species is irregular. In the Solomons proper, it is well-known from Guadalcanal (Mayr, 1945*a* ; Donaghho, 1950 ; Cain & Galbraith, 1956) and Santa Ana (Mayr, 1945*a* ; French, *in litt.*), while the endemic race *brevicauda* occurs on Rennell. A single specimen has been recorded from Bougainville (White, 1938), though the species is not known from the Bismarcks. Another, hitherto unrecorded, was taken at Star Harbour, San Cristoval, by Commander J. F. A. O'Neill of the Melanesian Mission's m.v. " Southern Cross ". It was examined by I.C.J.G. at Pawa in January 1954, but was later lost when the refrigerator broke down (Turbott, *in litt.*).

Though liable to be neglected by collectors, the species is conspicuous where it occurs. Virtue (1947) on Bougainville and Sibley (1951) on New Georgia apparently did not study suitable habitats on lakes or large rivers, so that their failure to record it is not conclusive. However, it definitely does not seem to maintain itself on San Cristoval. French (*in litt.*) doubts its presence there, natives did not recognize its unmistakable description, and it was not seen during six weeks on the apparently suitable Warihito River. The Star Harbour specimen must surely have been a straggler from Santa Ana, across the three-and-a-half mile strait.

The presence of the species on several small or low-lying islands without rivers (e.g. Santa Ana, Rennell, Ticopia) clearly depends on their possession of freshwater lagoons. However, its absence from such large islands as San Cristoval is surprising.

(M. 3) ***Butorides striatus solomonensis*** Mayr, 1940

REFERENCES. Mayr, 1940*a* : 6. See Bock, 1956.

RANGE. Solomons (lowlands).

SPECIMENS. Guadalcanal : Bilaha, Tenaru R. 1 ♂ ad.

Weight 245. *Wing* 181. *Tail* 64. *Bill* (from feathering) 66·5.

Iris bright yellow. *Eyelid* dull cherry-red. *Skin* round eye pale brown. *Bill* maxilla black, mandible dirty white. *Foot* dirty fuscous green, shank bright yellow behind, sole dirty yellow.

NOTES. We follow the generic arrangement of Bock (1956) for the Ardeidae.

(B) *Egretta intermedia plumifera* (Gould, 1848)

REFERENCES. Amadon & Woolfenden, 1952 : 11. See Bock, 1956.

RANGE. Australia, New Guinea region, southern Moluccas (lowlands) ; San Cristoval—straggler ?

NOTES. The young bird taken by French at Kira Kira (Cain & Galbraith, 1956 ; French, 1957) may have been a straggler. However, the extensive marshes of San Cristoval (Grover, 1958) provide a habitat suitable for the species, which because of its wariness and inaccessibility was not for a long while recognized as widespread and locally common in New Guinea (Rand, 1938 : 291).

(M. 4) *Egretta sacra sacra* (Gmelin, 1789)

REFERENCES. Mayr & Amadon, 1941 : 3. See Bock, 1956.

RANGE. Asia to western Polynesia (coasts and lowlands).

(M. 5) ***Nycticorax caledonicus mandibularis*** Ogilvie-Grant, 1888

REFERENCES. Amadon, 1942*a* : 5. See Bock, 1956.

RANGE. Solomons, Nissan and New Ireland—intergrading via Bismarcks with *N.c. hilli* (lowlands).

SPECIMENS. Guadalcanal : Betilonga 2 ♂ ad, 1 ♀ ad. 1 ♂ ad to OUM.

Wing 2 ♂ ad 270, 272 ; 1 ♀ ad 262. *Tail* 1 ♂ ad 95. *Bill* (from feathering) 2 ♂ ad 66·5, 69·5 ; 1 ♀ ad 63·5.

Iris yellow. *Skin* round eye dull yellow or yellow-green. *Bill* black, ♀ mandible yellowish. *Foot* yellow.

(M. 6) *Ixobrychus flavicollis woodfordi* (Ogilvie-Grant, 1888)

REFERENCES. Mayr, 1945*b* : 5 ; Bradley, 1962 : 11. See Bock, 1956.

RANGE. Solomons and Rennell (lowlands).

NOTES. This apparently widespread, though rare or retiring, species has not yet been recorded from the San Cristoval group In addition to the localities already recorded (Mayr, 1945*a*), there is a specimen in the BM(NH) collected at Bouin, Bongainville by W. F. H. Rosenberg.

(C) *Platalea regia* Gould, 1838

REFERENCES. Mayr, 1945*a* : 280 ; Amadon & Woolfenden, 1952 : 5.

RANGE. Australia, straggling as far as Celebes, Rennell and New Zealand (lowlands).

NOTES. We follow Amadon & Woolfenden in regarding *regia* as a distinct species. It is recorded as a rare non-breeding visitor to the Three Sisters (French, 1957), perhaps from Rennell where it may be resident (Bradley & Wolff, 1956 : 92).

(M. 7) ***Anas poecilorhyncha pelewensis*** Hartlaub & Finsch, 1872

REFERENCES. Amadon, 1943*a* : 3.

RANGE. Micronesia and northern New Guinea to Polynesia (lowlands).

SPECIMENS. Guadalcanal : Betilonga 1 ♀ ad. To OUM.

Wing 217. *Bill* (from feathering) 46·5.

Iris light brown. *Bill* bluish grey. *Foot* dull fawn.

NOTES. We follow Delacour & Mayr (1945 : 21) in uniting specifically the *superciliosa* group of Australasian mallards with *luzonica* of the Philippines and *poecilorhyncha* of

Malaysia and southeast Asia. The species has been recorded from the San Cristoval Group only by Ramsay (1882*c* : 41), but was familiar to natives of Goge (Cain & Galbraith, 1956 : 117).

(M. 8) ***Aviceda subcristata gurneyi*** (Ramsay, 1881)

REFERENCES. Mayr, 1945*b* : 9.

RANGE. Guadalcanal, Malaita and San Cristoval Group (mainly lowlands).

SPECIMENS. Guadalcanal : Betilonga 1 ♀ ad. To OUM.

Weight 340. *Wing* 316. *Tail* 193. *Bill* 30.

Iris bright yellow. *Bill* maxilla black, cere and mandible pale silvery blue. *Foot* white.

(M. 9) ***Haliastur indus flavirostris*** Condon & Amadon, 1954

REFERENCES. Condon & Amadon, 1954 : 206.

RANGE. Feni, Duke of York, Solomons (mainly coasts and lowlands).

SPECIMENS. Ugi 1 ? juv.

Wing 375. *Bill* 136·5.

Iris dark brown. *Eyelid* dark slate, visor and skin round eye dirty yellowish-green. *Bill* blackish slate streaked with bluish grey, gape dull greenish yellow, cere slaty black. *Foot* lemon-yellow, claws black.

The bills of this specimen and two BM(NH) juveniles are conspicuously heavier than those of *girrenera*, though not paler in the skin.

NOTES. A BM(NH) subadult specimen from the Duke of York group has the heavy and wholly yellow bill characteristic of this race ; which—with *Ptilinopus viridis lewisi, Ducula pistrinaria pistrinaria, Eos cardinalis, Hemiprocne mystacea woodfordiana, Eurystomus orientalis solomonensis* and *Hirundo tahitica subfusca* (and probably *Tyto alba* cf. *crassirostris*)—is a form characteristic of the Solomons which has colonized certain small islands in the Bismarcks.

(M. 10) *Accipiter meyerianus* (Sharpe, 1878)

REFERENCES. Mayr, 1934*a* : 1.

RANGE. Moluccas, Japen, Bismarcks, Solomons—Kolombangara, Guadalcanal (mountains ?).

NOTES. This very rare species is known in the Solomons by two specimens (Hartert, 1929 : 5).

(M. 11) ***Accipiter novaehollandiae pulchellus*** (Ramsay, 1882)

REFERENCES. Hartert, 1929 : 4. See Mayr, 1945*b*.

RANGE. Guadalcanal (mainly lowlands).

SPECIMENS. Guadalcanal : Tenaru 1 ♀ ad. To OUM.

Weight 280. *Wing* 221. *Tail* 173. *Bill* 29.

Iris very dark reddish brown. *Eyelid* dull orange, visor dull yellow. *Bill* black, cere and base orange. *Foot* orange, claws black.

This specimen (OUM No. B/3978) is uncharacteristic, and differs from three

BM(NH) females of *pulchellus* from Tenaru and Lunga, in having much deeper rufous thighs and under tail-coverts, not contrasting strongly with the belly, and somewhat more rufous on the under wing-coverts. However it agrees with *pulchellus*, and differs from *rufoschistaceus-rubianae-bougainvillei*, in having the thighs and under tail-coverts decidedly paler than the belly, the under wing-coverts primarily grey-and-white-speckled rather than solid rufous, and extensive white areas at the bases of the inner webs of the wing quills.

(M. 12) ***Accipiter albogularis woodfordi*** (Sharpe, 1888)

REFERENCES. Mayr, 1957 : 7.

RANGE. Main Chain of the Solomons, Bougainville to Ulawa.

SPECIMENS. Guadalcanal : Betilonga 1 ♂ ad, 1 ♀ ad, 1 ♀ imm. 1 ♂ ad to OUM.

Weight 1 ♂ ad 265 ; 1 ♀ imm 335. *Wing* 1 ♂ ad 210 ; 1 ♀ ad 248 ; 1 ♀ imm 241. *Tail* 1 ♂ ad 146 ; 1 ♀ ad 123. *Bill* 1 ♂ ad 26 ; 1 ♀ ad 30 ; 1 ♀ imm 28·5.

Iris orange ; imm yellow. *Eyelid* yellow, visor fuscous green, skin of chin greenish yellow. *Bill* ♂ black, base of mandible pale blue-grey ; ♀ dark grey, base of mandible white ; cere greenish yellow ; imm bill fuscous-streaked. *Foot* yellow, claws black.

The immature resembles a juvenile in the normal (i.e. not the " *holomelas* ") phase, but has the mantle blacker, the ground-colour of the underparts almost pure white, the underwing with bold chevrons rather than narrow shaft-streaks, and the thighs with pale rufous chevrons and a few sub-basal bars rather than shaft-streaks. The adults are both in the normal phase, with the rufous collar slightly developed.

(M. 12) ***Accipiter albogularis albogularis*** Gray, 1870

REFERENCES. Mayr, 1957 : 10.

RANGE. San Cristoval Group.

SPECIMENS. San Cristoval : Goge 1 ♀ ad.

Weight 280. *Wing* 243. *Tail* 170. *Bill* 29·5.

Iris deep orange-yellow. *Eyelid* deep yellow, visor pale fuscous green. *Bill* dark grey above, base and mandible pale and bluish, cere dull pale yellow-green. *Foot* orange-yellow, shanks paler and greener.

Like all specimens known from San Cristoval or Santa Ana, this is in the normal phase, without any trace of a rufous collar and with black speckling on the sides of the breast.

NOTES. Two of the seven specimens in the BM(NH) are from San Cristoval : an unsexed adult and a male juvenile, both in the normal phase. The other five are among those recorded by Ramsay (1882*c* : 30) as having been collected on Ugi by Stephens. Formerly in the Gurney collection (Gurney, 1884 : 33–34, footnote 4), these have been added to the BM(NH) collection since Mayr's (1957) paper. Two are adults in the normal phase, agreeing well with specimens from San Cristoval. The remaining adult and two juveniles are in the " *holomelas* " phase, otherwise unknown outside the range of *woodfordi*. It is unfortunate that Ramsay's known unreliability over locality records makes it impossible to accept Ugi as their provenance without confirmatory evidence. Doubt of the record is increased by the fact that the locality

" Ugi Island " has been added subsequently to the labels, though in the same hand. Adults of *albogularis* cannot certainly be distinguished from *woodfordi*. However, the " *holomelas* " juveniles agree closely with each other, and differ from one such of *woodfordi*, in having the spotting of the breast give way to the barring of the belly much more gradually (in which they agree with a normal juvenile of *albogularis*, though in the latter the transition takes place much lower on the breast), the underwing with less black, and the thighs with very vague chevrons rather than shaft-streaks. It would be interesting to find the all-black "*holomelas* " phase on Ugi but not on San Cristoval, in view of the tendency towards melanism of flycatchers on the former island (*Rhipidura rufifrons ugiensis, Monarcha castaneiventris ugiensis, M. vidua squamulatus*).

(M. 14) *Haliaeetus sanfordi* Mayr, 1935

REFERENCES. Mayr, 1936 : 1.

RANGE. Solomons.

NOTES. Definitely known only from the larger islands (including Bougainville—Beecher, 1945 : 35) and the Three Sisters (Cain & Galbraith, 1956 : 106), though reported from Ulawa and Ugi (*op. cit.* : 118). Condon & Amadon (1954 : 230) discuss the status of the representative species *H. leucogaster* on Nissan.

(D) *Circus approximans gouldi* Bonaparte, 1850

REFERENCES. Amadon, 1941 : 371 ; Mayr, 1945*a* : 54.

RANGE. Australia, southern New Guinea, Solomons, Southern Melanesia, western Polynesia, New Zealand (lowlands).

NOTES. In the Solomons, known from the lowlands of Guadalcanal (Beecher, 1945 : 35) and as a rare non-breeding visitor to the Three Sisters (French, 1957).

(M. 15) *Pandion haliaetus melvillensis* Mathews, 1912

REFERENCES. Amadon, 1941 : 376.

RANGE. Malaysia to Micronesia, Solomons and New Caledonia (coasts).

(M. 16) *Falco severus papuanus* Meyer & Wigglesworth, 1893

REFERENCES. Mayr, 1945*b* : 11.

RANGE. Celebes to New Guinea and Northern Melanesia.

NOTES. In the Solomons, known from Bougainville (Sibley, 1946 : 97) and Gizo (Mayr, 1945*b*), and doubtfully recorded from Guadalcanal (Cain & Galbraith, 1956 : 119).

(E) *Falco peregrinus ernesti* Sharpe, 1894

REFERENCES. Mayr, 1941*c* : 1 ; 1945*a* : 56.

RANGE. Malaysia to Philippines, New Guinea region and Northern Melanesia.

NOTES. In the Solomons, known only as a rare non-breeding visitor to the Three Sisters (French, 1957 ; see Cain & Galbraith, 1957).

(M. 17) ***Megapodius freycinet eremita*** Hartlaub, 1867

REFERENCES. Mayr, 1938*a* : 12.

RANGE. Northern Melanesia, with irregular minor geographical variation (coasts and lowlands).

SPECIMENS. Guadalcanal : Betilonga 1 ♂ ad, 2 ♀ ad. San Cristoval : Goge 1 ♂ ad, 1 ? juv. 1 ♀ ad to OUM.

Weight 1 ? juv 68. *Wing* 2 ♂ ad 221, 227 ; 2 ♀ ad 225, 227 ; 1 ? juv 55. *Tail* 1 ♂ ad 72 ; 2 ♀ ad 71, 73. *Bill* 2 ♂ ad 28, 29·5 ; 2 ♀ ad 26·5, 27 ; 1 ? juv 14.

Iris brown ; juv grey-brown. *Skin* of throat and sides of face dull purplish-red to dull pink, crown strawberry ; juv throat pinkish-brown. *Bill* yellow, greenish basally ; juv dark fuscous grey. *Foot* dark olive green to blackish fuscous ; juv dark grey-brown.

NOTES. Frith (1956) summarizes the incubation methods of megapodes, which seem to be especially diverse in the Solomons.

(M. 18) ***Turnix maculosa salomonis*** Mayr, 1938

REFERENCES. Mayr, 1938*b* : 3 ; Sutter, 1955 : 114.

RANGE. Guadalcanal (lowlands).

SPECIMENS. Guadalcanal : Tenaru 3 ♂ ad, 1 ♂ juv, 1 ♀ ad. 1 ♂ ad to AMNH.

Weight 3 ♂ ad 38·5, 39·5, 41 ; 1 ♂ juv 31 ; 2 ♀ ad 52·5, 57·5. *Wing* 3 ♂ ad 75, 76, 77 ; 1 ♂ juv 72 ; 1 ♀ ad 86. *Tail* 3 ♂ ad 27, 27, 28 ; 1 ♂ juv 23·5 ; 1 ♀ ad 31·5. *Tarsus* 3 ♂ ad 19·1, 19·5, 20·3 ; 1 ♂ juv 19·4 ; 1 ♀ ad 22·4. *Culmen* (dorsal) 3 ♂ ad 9·5, 10·0, 10·7 ; 1 ♂ juv 10·7 ; 1 ♀ ad 11·5 ; (lateral) 3 ♂ ad 11·1, 11·7, 11·7 ; 1 ♂ juv 11·0 ; 1 ♀ ad 12·8. Linear measurements taken by Sutter.

Iris yellowish white. *Bill* blackish, base of mandible yellowish, gape bright yellow ; whole of juv mandible and edge of maxilla dull yellow. *Foot* dull yellow, toes greyer.

Four other specimens of this race have been recorded : an adult female at the AMNH (Mayr, 1938*b*), an adult female at the Museum of Vertebrate Zoology, Berkeley, California, and an adult male at the Chicago Museum (Beecher, 1945), and a juvenile female at the U.S. National Museum (Baker, 1948 ; Sutter, 1955). Dr. Sutter has kindly examined our specimens and provided very helpful notes, though comparative material of the other eastern races was not available to him at the time. All the specimens have the black markings well-developed on the underparts, but none approaches the remarkable condition shown by the juvenile in the USNM (Sutter, *in. litt.*).

The female specimen is in poor condition on rump, back and throat, and adds little to Mayr's description ; except that the belly is decidedly paler and the back apparently less grey than those of *saturata*. It differs from five adult females from the central highlands of New Guinea (in the type-series of *giluwensis* Sims, 1954) in having the plain rufous feathers of the mid-breast darker, contrasting more with the paler black-barred feathers at the sides ; the belly darker than average, matching the most rufous-tinged belly of *giluwensis* ; the head paler, with wider grey edges, and without a distinct pale stripe ; the rufous collar well-developed (only one *giluwensis* has concentrations of rufous near the wing-roots) ; and the upper back more rufous. It

differs from three adult females from New Britain (including the holotype of *saturata*) in having the belly and perhaps the throat paler ; the black-barred feathers of the breast perhaps encroaching more towards the mid-line ; the rufous collar much better-developed than in the one *saturata* which shows it (see Mayr, 1938*b*) ; and the back apparently with more rufous and *more* black. The head is similar to those of two *saturata* which lack crown-stripes. This specimen differs from a female from south-eastern New Guinea (holotype of *horsbrughi*) in having the belly much paler (the holotype being unusual among *horsbrughi* in having the belly rufous—see Mayr, 1938*b* : 2 ; Sutter, 1955 : 111) and the throat possibly so ; more barring on the breast, with the barred feathers more conspicuously pale ; the edges of the upper wing-coverts much paler ; and the crown with broader grey edges and no central stripe. It differs from two adult females from Cape York Peninsular (*yorki*) in having the midbreast deeper rufous ; more barring on the sides of the breast ; the crown-stripe less distinct ; the collar deeper rufous and apparently narrower ; and the mantle apparently blacker, less grey.

The male has not hitherto been described. Sutter (*in litt.*) describes the three adults as " in coloration and pattern somewhat intermediate between *horsbrughi* and *mayri* of the Louisiades. Upper-parts in general appearance rather plain-coloured (apart from the ochraceous edges on mantle and scapulars), principal colours black and dark olive-grey with narrow rufous vermiculation or bars. The rufous bars are distributed regularly over the whole upper back, without indication of a nuchal collar (as in Australian males). Breast rather deep rufous, middle of belly whitish in strong contrast to the breast collar colour (as in *giluwensis*). Sides of the breast and wing-coverts heavily spotted." These specimens agree with two males of *giluwensis* in the coloration of the underparts and in the crown-stripe, and differ in having the pale edges of the crown-feathers wider and more rufous ; the back variable but averaging greyer, less black, and more rufous towards the interscapulars ; and the edges of the scapulars and upper wing-coverts deeper ochraceous. They differ from three adult males of *saturata* in having the belly-patch whiter and larger ; the edges of the crown-feathers more rufous, less grey ; the mantle more black, less grey, with considerably more rufous anteriorly ; and the edges of the upper wing-coverts and scapulars deeper ochraceous.

NOTES. Mayr (1949*b* : 2) combines *T. maculosa* specifically with *T. sylvatica*, but they overlap on Mindanao (Sutter, 1955 : 137). Pendleton (1947) studied this race in the field.

(M. 19) ***Rallus philippensis christophori*** Mayr, 1938

REFERENCES. Mayr, 1938*b* : 7.

RANGE. Guadalcanal and San Cristoval Groups.

SPECIMENS. San Cristoval : Goge 1 ♀ ad.

Weight 240. *Wing* 134. *Bill* 34.

Iris reddish-brown. *Bill* slate, mandible paler, base pinkish-brown. *Foot* pale greyish-buff, joints greyer.

The specimen, caught in a native drop-trap, is in poor condition posteriorly.

(F) *Poliolimnas cinereus leucophrys* (Gould, 1847)

REFERENCES. Mayr, 1949*b* : 17.

RANGE. Moluccas to northern Australia and Northern Melanesia (lowlands).

NOTES. Known in the Solomons from Bougainville (Baker, 1948) and Guadalcanal (Donaghho, 1950) ; and from the Three Sisters (Cain & Galbraith, 1956 ; French, 1957) where it is common. No doubt, as French suggests, it will prove to be widespread.

(M. 20) *Amaurornis olivaceus ultimus* Mayr, 1949

REFERENCES. Mayr, 1949*b* : 21.

RANGE. San Cristoval, Santa Ana, Gower (lowlands).

(M. 21) *Nesoclopeus woodfordi woodfordi* (Ogilvie-Grant, 1889)

REFERENCES. Mayr, 1949*b* : 15.

RANGE. Guadalcanal.

(M. 22) *Edithornis silvestris* Mayr, 1933

REFERENCES. Mayr, 1933*a* : 1.

RANGE. San Cristoval (mountains).

NOTES. The species is well-known to the natives, and apparently not rare below Nagasi, yet the holotype remains unique.

(M. 23) ***Porphyrio porphyrio samoensis*** Peale, 1848

REFERENCES. Mayr, 1949*b* : 22.

RANGE. Northern and Southern Melanesia and western Polynesia (individual and irregular geographical variation).

SPECIMENS. Guadalcanal : Betilonga 2 ♀ ad. San Cristoval : Goge 1 ♀ ad. 1 ♀ ad to OUM.

Weight San Cristoval 1 ♀ ad 495. *Wing* Guadalcanal 2 ♀ ad 222, 226 ; San Cristoval 1 ♀ ad 203. *Tail* Guadalcanal 1 ♀ ad 86. *Bill* (from back of shield) Guadalcanal 2 ♀ ad 61·5, 64 ; San Cristoval 1 ♀ ad 57·5.

Iris orange-brown to red. *Bill* and shield deep orange-red. *Foot* flesh colour to deep pink.

The San Cristoval specimen agrees with Mayr's in being small and black above, but has a distinct breast-shield.

(M. 24) ***Ptilinopus superbus superbus*** (Temminck, 1810)

REFERENCES. Stresemann, 1914 : 45 ; 1923 : 72. See Cain, 1954*b* ; 1954*c* ; 1957.

RANGE. Moluccas to eastern Australia and Solomons, except San Cristoval Group (mainly lowlands).

SPECIMENS. Guadalcanal : Betilonga 3 ♂ ad, 4 ♀ ad. 1 ♂ ad, 2 ♀ ad to OUM.

Weight 4 ♂ ad 111·5–133·5 (120·4) ; 5 ♀ ad 104–118 (113·4). *Wing* 3 ♂ ad 124–129 (127·3) ; 4 ♀ ad 115–127 (121·5). *Bill* 3 ♂ ad 18·5–19 (18·8) ; 3 ♀ ad 18–19 (18·7).

Iris yellow, sometimes greenish. *Eyelid* pale yellow or green, skin round eye greenish blue. *Bill* sage green to fuscous green. *Foot* dull purplish red (" bright " in 1 of 12).

A male (not preserved) was taken by collectors from Turipava, probably below the mist-forest.

NOTES. It has only recently been pointed out (Cain & Galbraith, 1956 : 121) that this widely-distributed species is apparently absent from the San Cristoval group. There are no specimens from there in the AMNH (Amadon, *in litt.*) nor the BM(NH). and natives of San Cristoval and of Ugi failed to recognize a coloured figure of this distinctive lowland species (Mayr, 1945*a* pl. 2, fig. 11). Ramsay's (1882*c* : 39) record for Ugi cannot be accepted without further evidence.

(M. 25) ***Ptilinopus solomonensis ocularis*** Mayr, 1931

REFERENCES. Mayr, 1931*f* : 6. See Cain, 1954*b*.

RANGE. Guadalcanal.

SPECIMENS. Guadalcanal : Betilonga 2 ♂ ad, 1 ♂ juv ; Turipava 2 ♂ ad, 4 ♀ ad. 1 ♂ ad, 1 ♀ ad to OUM.

Weight 5 ♂ ad 112–136 (125·3) ; 1 ♂ juv 91 ; 5 ♀ ad 114·5–141·5 (127·1). *Wing* 4 ♂ ad 127·5–131 (129·9) ; 1 ♂ juv 122·5 ; 3 ♀ ad 123·5–129 (125·8). *Bill* 2 ♂ ad 19, 20 ; 1 ♂ juv 20 ; 4 ♀ ad 19·5–21 (20·2).

Iris sage green (light sage green to dull green) ; juv pale yellow. *Skin* round eye pale green to bluish. *Bill* sage green to greenish-grey. *Foot* dull purplish red (" dull pink " in 1) ; juv dull reddish brown and grey.

NOTES. Iris colours were not given for the three high-altitude races in the Solomons (*bistictus*, *ocularis* and *ambiguus*) at their original description (Mayr, 1931). Labels of the AMNH series of *ocularis* show some variation in iris colour (P. Vaurie, *in litt.*), but it is not clear whether the iris is ever yellow. We have the labels of ten adults, all showing it as some shade of dull green. This is very different from the warm yellow, with a narrow green inner ring, of *solomonensis*. BM(NH) specimens of lowland races have the irides indicated as bright yellow to red (*solomonensis*), yellow (*neumanni*), pale greenish yellow to dull cream yellow (*meyeri*) and pale greenish yellow (*johannis*). Careful study of the AMNH collections will be necessary to determine the geographical variation of iris colour in this species

(M. 25) ***Ptilinopus solomonensis solomonensis*** Gray, 1870

REFERENCES. Mayr, 1931*f* : 6. See Cain, 1954*b*.

RANGE. San Cristoval Group.

SPECIMENS. San Cristoval : Goge 39 ♂ ad, 27 ♀ ad, 1 ? juv ; Nagasi 5 ♂ ad, 1 ♀ ad, 1 ? juv. Ugi 1 ♂ ad, 1 ♀ ad, 1 ? juv. 3 ♂ ad, 3 ♀ ad to AMNH ; 3 ♂ ad, 2 ♀ ad to OUM.

Weight Goge 30 ♂ ad 80–101·5 (93·1) ; 22 ♀ ad 83·5–105 (93·7) ; Nagasi 6 ♂ ad 88·5–106·5 (98·1) ; 1 ♀ ad 97·5 ; Ugi 1 ♂ ad 101 ; 1 ♀ ad 86·5. *Wing* Goge 39 ♂ ad 114–123 (119·5) ; 27 ♀ ad 111·5–123 (116·8) ; Nagasi 5 ♂ ad 116–124 (120·3) ; 1 ♀ ad 120 ; Ugi 1 ♂ ad 127 ; 1 ♀ ad 119. *Bill* 40 ♂ ad 18–21 (19·3) ; 28 ♀ ad 16·5–20 (19·1).

Iris orange-yellow (pale pinkish yellow to dull orange), inner ring pale green ; juv dark grey-brown to dirty yellow, inner ring greenish. *Skin* round eye pale green to pale blue ; juv blackish to blue-green, eyelid paler. *Bill* sage-green, sometimes greyer and bluer ; juv dark, fuscous-green to blue-grey. *Foot* dull mauve, shanks redder ; juv pale pinkish brown to pale grey.

In this, and the other long series of *Ptilinopus*, the distribution of weights is markedly bimodal. However, this is not paralleled in other measurements or characters, and no first-year or retarded plumages (as described by Mayr, 1931*f* : 7, for *ambiguus*) can be discerned. The juvenile from Nagasi, presumably a male, has pink forehead feathers which evidently belong to the juvenile plumage.

The series from Goge is extremely variable in depth of coloration. This is evidently due to variation in carotenoid pigmentation (see Völker, 1953 ; Auber, 1957), the yellow, green and lilac areas being equally affected. The variation does not seem to be due to bleaching, whether in life or *post mortem*. It is most conspicuous in the green of the back, but there interacts with variation in structural coloration (blue and bronzing). Table I shows the distribution of specimens among seven colour-classes (A palest to G deepest) for the males, judged from the yellow bib ; and among 6 classes (H to N) for the females, judged from the yellow under tail-coverts. BM(NH) specimens of *solomonensis* are included in the series for the coast of San Cristoval and Ugi. Other specimens, of the races *neumanni*, *meyeri*, and *johannis*, are lumped together, since they are too few to indicate significant differences among themselves in variability or average depth of pigmentation.

TABLE I.—*Intensity of yellow carotenoid pigment in adults of* Ptilinopus solomonensis.

Classes A–G males, judged on bibs ; classes H–N females, judged on under tail-coverts : classes A and H palest, G and N deepest.

	A	B	C	D	E	F	G	H	J	K	L	M	N
P.s. solomonensis:													
Nagasi . .						1	4					1	
Goge . . .	1	4	3	3	14	5	6	1	2	3	13	7	1
San Cristoval coast.					1	1						1	
Ugi . . .					2	1					1		
P. s. ocularis . .						3	1				1		1
Other races . .					3	4	2			1	2	2	

NOTES. The subspecific assignment of the population on the Three Sisters must be tentative, since it is represented in the BM(NH) by a single juvenile only.

(M. 25) ***Ptilinopus solomonensis*** cf. ***solomonensis***

SPECIMENS. Guadalcanal : Betilonga 1 ♂ ad.

Weight 97·5. *Wing* 121. *Bill* 19·5.

Iris yellowish orange. *Skin* round eye pale blue-green. *Bill* greyish green. *Foot* dull lilac, shanks dull purplish red.

This specimen agrees with the lowland races, and disagrees with *ocularis*, in its smaller dimensions, yellow iris, and complete lilac cap. It is richly-pigmented (group F of Table I), and has the scapular spots slightly larger and the cap and belly perhaps

slightly richer lilac than in most males of *solomonensis*. It could belong to *vulcanorum* of the New Georgia Group (P. Vaurie, *in litt.*).

NOTES. Although Amadon does not rule out the possibility of this being a mutant of *ocularis* (P. Vaurie, *in litt.*), the concordance of three characters makes it much more probable that it is a straggler from another island. Its provenance must remain uncertain until the *solomonensis*-like populations on small islands in the Solomons are better known (see Mayr, 1931*f* : 8). Geographically, Buena Vista near the Florida group seems the most probable source.

Errant individuals are almost unknown among the strongly-localized races of Northern Melanesia. Their occasional occurrence is necessary to the hypothesis that character-progressions in insular areas may be due to gene-flow (e.g. Galbraith, 1956: 160–165), but they must remain rare if the geographical variation is not to be swamped. The possibility should not be overlooked, that striking character-differences between neighbouring insular populations may sometimes be of selective importance in reducing introgression from such errant individuals. This would help to explain why very isolated populations tend to lose their distinctive patterns while relatives in archipelagos, not sympatric with closely-related species, retain them.

(M. 26) ***Ptilinopus viridis lewisi*** Ramsay, 1882

REFERENCES. *Cat. Birds B.M.* 21 : 153. See Cain, 1954*b*.
RANGE. Lihir, Solomons except San Cristoval Group.
SPECIMENS. Guadalcanal : Betilonga 1 ♂ ad. To OUM.
Weight 112. *Wing* 116. *Bill* 17·5.
Iris yellow. *Bill* yellow. *Foot* dull purplish red.

(M. 26) ***Ptilinopus viridis eugeniae*** (Gould, 1857)

REFERENCES. *Cat. Birds B.M.* 21 : 153. See Cain, 1954*b*.
RANGE. San Cristoval, Ugi, Three Sisters.
SPECIMENS. San Cristoval : Goge 10 ♂ ad, 1 ♂ juv, 11 ♀ ad ; Nagasi 1 ♂ ad. Ugi 2 ♂ ad, 2 ♀ ad, 1 ♀ juv. 1 ♂ ad, 1 ♀ ad to OUM.
Weight 13 ♂ ad 93·5–129·5 (113·8) ; 1 ♂ juv 66 ; 12 ♀ ad 101·5–127·5 (113·2) ; 1 ♀ juv 89. *Wing* 12 ♂ ad 114–128 (122·6) ; 1 ♂ juv 113·5 ; 12 ♀ ad 116–124·5 (120·2) ; 1 ♀ juv 115·5. *Bill* 13 ♂ ad 17–19 (18·2) ; 1 ♂ juv 18 ; 12 ♀ ad 17–18·5 (18·1) ; 1 ♀ juv 17·5.
Iris tawny orange to tawny red (" deep scarlet " in 2 of 3 from Ugi), inner ring (when noted) pale yellow to dull green ; juv dull brownish, inner ring greenish. *Skin* round eye bluish grey, eyelid usually yellower. *Bill* yellowish, usually greenish (sometimes golden), base and cere dull maroon ; juv dirty yellowish-green, yellower distally, cere once dull maroon. *Foot* mulberry-red, sometimes bluer ; juv dull (buffy pink to greyish purple).

The maroon-based bill of *eugeniae* has been overlooked as a further character of this very distinct race. In the dried skin the maroon turns blackish. Apart from *eugeniae*, only *geelvinkianus* shows slight blackish traces in the dried bill. Of BM(NH)

specimens, only one of *vicinus* and six of nominate *viridis* have the colour in life indicated. In these the base is indicated as redder (scarlet to orange) than the tip (rich orange to greenish-yellow).

(M. 27) ***Ptilinopus richardsi richardsi*** (Ramsay, 1882)

REFERENCES. Ripley & Birckhead, 1942 : 8. See Cain, 1954*b* ; 1957.

RANGE. Ugi, Three Sisters, Santa Ana.

SPECIMENS. Ugi 15 ♂ ad, 2 ♂ juv, 6 ♀ ad. 1 ♂ ad, 1 ♀ ad to OUM.

Weight 15 ♂ ad 94–117 (108·6) ; 2 ♂ juv 88, 92·5 ; 6 ♀ ad 94·5–109·5 (99·1). *Wing* 15 ♂ ad 128·5–134 (131·5) ; 2 ♂ juv 118, 122 ; 6 ♀ ad 122–129 (125·9). *Bill* 14 ♂ ad 19–20 (19·5) ; 2 ♂ juv 19, 20 ; 6 ♀ ad 18·5–20 (19·2).

Iris orange to orange-red, inner ring pale yellow (once golden-yellow) to pale green. *Skin* round eye pale blue-grey, eyelid pale yellow. *Bill* dark sage green basally, paler yellow-green distally, cere dull purple. *Foot* deep purple (bluish to reddish).

NOTES. Cain (1957) dismisses the character " malar apex concolorous with crown " (Ripley & Birckhead, 1942 : 8) as a mere form of words when applied to this grey-crowned species. However, the malar apex and the crown are pure grey, while the face and neck are washed with yellow. In individuals whose greys are exceptionally deep, the malar apex contrasts sharply with the paler and yellower face. It seems probable that the ancestral population did have the apex brightly coloured, like the crown—though this still further emphasizes the polyphyletic origin of the character.

(M. 29) *Ducula pacifica pacifica* (Gmelin, 1789)

REFERENCES. Amadon, 1943*a* : 10. See Goodwin, 1960.

RANGE. Small islands from Louisiades and Solomons to Polynesia.

NOTES. In the Solomons, the species is known from Buena Vista, Ramos, Gower, Sikaiana, Ongtong Java, Rennell (Amadon, 1943*a*), Bellona (Mayr, 1931*b*) and the Three Sisters (Cain & Galbraith, 1956 : 106 ; French, 1957). Only on the latter does it overlap with its close relative, *D. rubricera*.

(M. 30) ***Ducula rubricera rufigula*** (Salvadori, 1878)

REFERENCES. *Cat. Birds. B.M.* 21 : 179. See Goodwin, 1960.

RANGE. Solomons.

SPECIMENS. Guadalcanal : Betilonga 2 ♂ ad. San Cristoval : Goge 1 ? juv. 1 ♂ ad to OUM.

Wing 2 ♂ ad 240, 253. *Bill* 2 ♂ ad 33, 33·5.

Iris deep red or orange-red ; juv dark brown. *Skin* round eye blue-grey. *Bill* dark grey, base and cere cherry-red ; juv slaty-grey distally, grading to pale greyish-fawn base and cere. *Foot* purplish red (cherry-red in 1 of 5 ad), claws dark grey ; juv fawn, fuscous-tinged, claws grey.

Though small, the juvenile is as brightly-coloured as adults.

(M. 31) ***Ducula pistrinaria pistrinaria*** Bonaparte, 1855

REFERENCES. Hartert, 1926*a* : 34. See Goodwin, 1960.

RANGE. Feni, Nissan, Solomons (coasts).

SPECIMENS. Ugi 1 ♂ imm. To OUM.

Weight 390. *Wing* 220. *Tail* 130. *Bill* 29·5.

Iris dark brown. *Skin* round eye pale grey, eyelid reddish brown with blackish wash. *Bill* dark slate. *Foot* pinkish brown.

The specimen has faint juvenile barring on the breast, and is somewhat smaller than adults, with narrower rectrices. Oiliness of the plumage conceals any colour-difference.

(M. 32) ***Ducula brenchleyi*** (Gray, 1870)

REFERENCES. *Cat Birds B.M.* 21 : 225. See Goodwin, 1960.

RANGE. Eastern Solomons—Guadalcanal, Malaita, Ulawa, San Cristoval, Ugi, Three Sisters (mainly coasts ?).

SPECIMENS. Ugi 1 ♂ imm. To OUM.

Weight 380. *Wing* 210. *Tail* 105. *Bill* 31.

Iris reddish brown, inner ring yellowish brown. *Skin* round eye grey, eyelid greyish purple. *Bill* dark fuscous grey, tip black. *Foot* deep dull purplish-brown.

Like two juveniles from the Three Sisters, the specimen differs from adults in somewhat smaller size and narrower rectrices ; underparts less purplish (more rufous) brown, breast greyer and with pale barring, sides of breast grey not purplish, throat yellowish rather than pink.

NOTES. Though considered by Mayr (1945*a*) to be a forest bird, mainly of higher altitudes, this species is common on the coast of San Cristoval, especially in isolated trees, and also on the small islands of Ulawa, Ugi and the Three Sisters (Cain & Galbraith, 1956 : 123 ; French, 1957).

(M. 33) ***Gymnophaps solomonensis*** Mayr, 1931

REFERENCES. Mayr, 1931*f* : 11.

RANGE. Mountainous islands of the Solomons—Bougainville, Kolombangara, Vangunu, Guadalcanal, Malaita.

SPECIMENS. Guadalcanal : Betilonga 1 ♂ ad, 2 ♀ ad. 1 ♀ ad to OUM.

Weight 1 ♂ ad 385 ; 2 ♀ ad 310, 310. *Wing* 1 ♂ ad 226 ; 2 ♀ ad 221, 222. *Bill* 1 ♂ ad 29 ; 2 ♀ ad 25, 25·5.

Iris orange-red (1 ♂) or pinkish-orange (3 ♀) ; juv orange-red. *Skin* round eye, and eyelid, red (1 ♂) or reddish purple (2 ♀) ; juv blue-grey. *Bill* pale yellow, pinkish terminal or subterminal patch ; juv fuscous, tip pale. *Foot* lilac, pinkish in dried skin (1 ♂), or dull purplish-blue to dull lavender-grey, greyish in skins (3 ♀), claws fuscous ; juv dark grey.

(M. 34) ***Columba vitiensis halmaheira*** (Bonaparte, 1855)

REFERENCES. Amadon, 1943*a* : 14. See Goodwin, 1959.

RANGE. Moluccas, New Guinea region, Solomons.

SPECIMENS. Guadalcanal: Turipava 2 ♂ ad. San Cristoval: Goge 1 ♂ ad, 1 ♀ ad. 1 ♂ ad to OUM.

Weight 1 ♂ ad 490; 1 ♀ ad 395. *Wing* 3 ♂ ad 219–229 (224·3); 1 ♀ ad 212. *Bill* 3 ♂ ad 29·5–31 (30·2); 1 ♀ ad 31.

Iris orange (yellowish to pinkish), inner ring brownish or greenish. *Skin* round eye maroon, more or less mixed with pale grey, eyelid dull reddish (brownish red to bluish purple). *Bill* ivory, base and cere dull reddish (pinkish red to bluish purple). *Foot* pinkish red, with back of shank bluer, to dull bluish purple, claws ivory.

(M. 35) *Columba pallidiceps* (Ramsay, 1877)

REFERENCES. *Cat. Birds B.M.* 21 : 319 (*pallidiceps* + *philippana*); Mayr, 1934*a* : 4. See Goodwin, 1959.

RANGE. Bismarcks, Solomons.

NOTES. Rare or retiring in the Solomons, but known from Guadalcanal and San Cristoval, and recorded by Ramsay (1882*a* : 722) from Ugi.

(M. 36) ***Macropygia mackinlayi arossi*** Tristram, 1879

REFERENCES. *Cat. Birds B.M.* 21 : 363 (*rufocastanea*); Mayr, 1931*f* : 12.

RANGE. Nissan, Solomons, Rennell.

SPECIMENS. Guadalcanal: Tenaru 1 ♀ ad; Betilonga 1 ♀ juv; Turipava 1 ♂ juv, 1 ♀ ad. San Cristoval: Goge 2 ♀ ad. 1 ♀ ad to OUM.

Weight 1 ♂ ad 79; 1 ♂ juv 91·5; 6 ♀ ad 79–88 (84·8); 1 ♀ juv 75. *Wing* 1 ♂ juv 138; 3 ♀ ad 137·5–142 (140·5); 1 ♀ juv 134·5. *Bill* 1 ♂ juv 18; 4 ♀ ad 17–18 (17·7); 1 ♀ juv 19·5.

Iris scarlet, sometimes irregularly mottled with yellow, inner ring yellow; juv dull brown or pale brown. *Skin* round eye dark grey, eyelid grey or red. *Bill* black. *Foot* red (bright or dull, pinkish orange-red to crimson); juv fawn, toes fuscous.

The juveniles differ from adults in iris and foot colour (left and right irides seem to redden independently), and in more pointed rectrices, laxer plumage, and more black at the bases of the contour-feathers (yielding a scalloped pattern on the mantle).

(M. 37) ***Reinwardtoena crassirostris*** (Gould, 1856)

REFERENCES. *Cat. Birds B.M.* 21 : 368; Mayr, 1944*c* : 1.

RANGE. Solomons.

SPECIMENS. Guadalcanal: Betilonga 1 ♂ ad. To OUM.

Weight 2 ♂ ad 258, 260. *Wing* 208·5. *Bill* 26.

Iris yellow. *Skin* round eye deep red. *Bill* red basally, tip more orange. *Foot* red (purplish in 1 of 2).

NOTES. In discussing the characters which separate this species from the representative *R. browni* and *R. reinwardtsi*, Mayr (1944*c*) inadvertently omits the most trenchant, the crest, which the others totally lack.

The species is known primarily from the larger islands of the Solomons, but also from Gatukai, Rendova, Ugi (Ramsay, 1882*c* : 36) and the Three Sisters. On the latter it rarely breeds, but is sometimes common (French, 1957).

(M. 38) ***Chalcophaps stephani mortoni*** Ramsay, 1881

REFERENCES. Rothschild & Hartert, 1901*b* : 189 ; Mayr, 1934*a* : 6.

RANGE. Nissan, Solomons (mainly lowlands).

SPECIMENS. Guadalcanal : Betilonga 1 ♂ juv. San Cristoval : Goge 3 ♂ ad. 1 ♂ ad to OUM.

Weight 3 ♂ ad 133·5–150 (143·8) ; 1 ♂ juv 87 ; 1 ♀ ad 132. *Wing* 3 ♂ ad 148–154 (150·0) ; 1 ♂ juv 110. *Bill* 3 ♂ ad 23·5–24 (23·8) ; 1 ♂ juv 22·5.

Iris dark brown ; juv brown. *Skin* round eye brownish grey to dull purple, eyelid dull purple. *Bill* deep purple basally, cere blackish ; distal 2/3 deep orange with bright yellow tip (3 ♂), or dull yellow separated from purple by blackish cross-streak (1 ♀) ; juv fuscous-brown, edges dull yellow. *Foot* cherry-red, toes more purplish ; juv dull pale purplish.

(M. 39) ***Gallicolumba beccarii solomonensis*** (Ogilvie-Grant, 1888)

REFERENCES. *Cat. Birds B.M.* 21 : 594 (*granti*) ; Mayr, 1931*b* : 12. See Hachisuka, 1931 ; Amadon, 1943*a*.

RANGE. Guadalcanal, San Cristoval Group, Gower, Rennell (lowlands).

SPECIMENS. San Cristoval : Goge 2 ♂ ad, 2 ? juv ; Nagasi 1 ♂ ad. 1 ♂ ad to OUM.

Weight 3 ♂ ad 93–98 (94·8). *Wing* 3 ♂ ad 105–106·5 (105·7). *Bill* 2 ♂ ad 18, 19.

Iris very dark brown. *Skin* round eye bluish white, eyelid dull yellow ; smaller juv dark grey round eye and under throat, wing and belly. *Bill* and cere black ; larger juv with yellowish tip, smaller fuscous, whitish distally with dark subterminal band and white tip (flexible in dried skin). *Foot* purplish red, toes bluer ; larger juv pinkish brown with somewhat fuscous toes, smaller pinkish fuscous-grey with back of shank flesh-colour.

(M. 40) *Gallicolumba jobiensis* cf. *chalconota* Mayr, 1935

REFERENCES. Mayr, 1936 : 2.

RANGE. Vella Lavella ; Guadalcanal (subspecies ?).

NOTES. Only four specimens are known from the Solomons : the adult male holotype from Vella Lavella, and three juveniles from Guadalcanal (*Cat. Birds B.M.* 21 : 599, footnote) one of which is in the BM(NH).

(M. 41) *Gallicolumba salamonis* (Ramsay, 1882)

REFERENCES. Ramsay, 1882*d* : 299.

RANGE. San Cristoval, Ramos.

NOTES. Only two specimens are known : the unsexed adult holotype from San Cristoval, and one from Ramos (Mayr, 1945*a*).

(M. 42) ***Caloenas nicobarica nicobarica*** (Linnaeus, 1758)

REFERENCES. Mayr, 1931*b* : 12.

RANGE. Malaysia to New Guinea region and Northern Melanesia.

SPECIMENS. Guadalcanal : above Tsea 1 ♀ ad. To OUM.

Wing 244. *Tail* 82. *Bill* 31.

Iris salmon pink. *Bill* and cere matt black. *Foot* purplish red, sole yellow.

(M. 44) ***Eos cardinalis*** (Gray, 1849)

REFERENCES. *Cat. Birds B.M.* 20 : 22 ; Hartert, 1926*a* : 38 ; Auber, 1938 : 698. See Peters, 1935.

RANGE. Duke of York, Lavongai, Tabar, Lihir, Tanga, Feni, Nissan, Solomons (mainly lowlands).

SPECIMENS. Guadalcanal : Tenaru 9 ♂ ad, 3 ♂ juv, 5 ♀ ad, 4 ♀ juv, 4 ? juv ; Betilonga 1 ♂ ad. 1 ♂ ad, 1 ♀ ad to OUM.

Weight 9 ♂ ad 173–205 (184·9) ; 4 ♂ juv 124–160 (145·4) ; 5 ♀ ad 168·5–195 (178·8) ; 4 ♀ juv 142·5–155 (148·4). *Wing* 4 ♂ ad 177–183 (180·7) ; 3 ♂ juv 166–173 (168·7) ; 4 ♀ ad 172·5–180 (175·4) ; 4 ♀ juv 165–171 (169·3). *Tail* 1 ♂ ad 154 ; 1 ♂ juv 116·5 ; 1 ♀ ad 150 ; 1 ♀ juv 144. *Bill* (from cere) 10 ♂ ad 20–22 (21·2) ; 4 ♂ juv 19·5–21 (20·1) ; 5 ♀ ad 20–21 (20·5) ; 4 ♀ juv 19·5–20 (19·6).

Iris orange-red to pinkish orange, very narrow black and yellow inner rings ; juv dull yellow. *Skin* round eye and under throat black, sharply-marked semi-circular yellow patch at base of mandible ; juv blackish or fuscous, irregularly mottled with more or less yellow. *Bill* reddish-orange, tip yellower, cere and base of maxilla black ; juv dull orange more or less suffused or mottled with blackish, especially towards cere. *Foot* black, ad sometimes with irregular patches of orange- to whitish-yellow.

The juveniles differ from adults in the coloration of their soft parts, especially that of the bare throat ; and in more pointed rectrices, more uniformly-coloured upper-parts, ventral fringes yellower less white, and vaguer and whiter violet-blue areas at wing-bends and under wing-coverts. One BM(NH) juvenile from Guadalcanal has a much shorter tail, very wide yellow fringes ventrally, and conspicuously orange thighs.

The outer edges of the remiges and rectrices are subject to bleaching during life, turning from bronzy red to yellowish olive.

NOTES. The generic placement of this species is obscure. Auber's (1938) intensive study associates it with the *atra-scintillata-duivenbodei* group of New Guinea, which Peters (1935) separates as *Chalcopsitta*, while Verheyen (1956) creates for it a monotypic genus *Cardeos*. Whereas Mayr (1941*a*) separates *Chalcopsitta* and *Pseudeos* from *Eos*, he later (1945*a*) includes *cardinalis* with the latter, thus giving to the unwary a false impression of the scope and range of the genus. His intention is clearly to adopt a broader generic concept for the Loriinae (as by following Amadon, 1942*b* in uniting *Charmosyna* with *Vini*), and to return all these forms to one genus. This seems the most acceptable solution until the subfamily has been critically revised.

(M. 45) ***Trichoglossus haematodus massena*** Bonaparte, 1854

REFERENCES. Rothschild & Hartert, 1901*a* : 70 ; Cain, 1955 : 438, 445.

RANGE. Bismarcks to New Hebrides (lowlands).

SPECIMENS. Guadalcanal : Tenaru 14 ♂ ad, 1 ♂ juv, 9 ♀ ad, 1 ♀ juv. San Cristoval : Goge 1 ♂ ad, 2 ♀ ad. 1 ♂ ad, 1 ♀ ad to OUM.

Weight Guadalcanal 13 ♂ ad 83–103·5 (92·3) ; 1 ♂ juv 75·5 ; 9 ♀ ad 74·5–95·5 (84·9) ; 1 ♀ juv 82 ; San Cristoval 1 ♂ ad 117·5 ; 2 ♀ ad 97·5, 103. *Wing* Guadalcanal 10 ♂ ad 125–134 (130·9) ; 1 ♂ juv 130·5 ; 7 ♀ ad 122–132 (128·8) ; San Cristoval

1 ♂ ad 145 ; 2 ♀ ad 132, 135·5. *Tail* Guadalcanal 8 ♂ ad 96·5–104·5 (100·3) ; 1 ♂ juv 101·5 ; 5 ♀ ad 93–101 (97·1) ; 1 ♀ juv 86·5 ; San Cristoval 1 ♂ ad 101·5. *Bill* (from cere) 14 ♂ ad 18–20·5 (19·2) ; 1 ♂ juv 18 ; 10 ♀ ad 17–19·5 (18·4) ; 1 ♀ juv 17·5.

Iris orange-red (sometimes pinkish or dull, occasionally yellower or more scarlet) ; juv greyish yellow to pale dull brown. *Skin* round eye dark fuscous grey to black, throat whitish to pale flesh-colour with yellow tinge. *Bill* orange-red, tip yellower, cere dark fuscous grey to black ; juv dull orange streaked with blackish, especially distally. *Foot* fuscous-grey, more or less greenish or occasionally bluish.

The juveniles differ from adults in the colour of iris and bill (which in the dried skin is whiter basally), more pointed rectrices, and slight differences in plumage coloration—less blue and orange on the crown, no concealed red at the bases of feathers on the mid-back, more gradual transition from red breast to green belly, more evenly yellow-green thighs and under tail-coverts.

(M. 46) ***Lorius chlorocercus*** Gould, 1856

REFERENCES. *Cat. Birds B.M.* 20 : 38.

RANGE. Eastern Solomons—Guadalcanal, Savo, Malaita, Ulawa, San Cristoval, Ugi—and Rennell.

SPECIMENS. Guadalcanal : Betilonga 5 ♂ ad, 2 ♀ ad ; Turipava 1 ♂ ad. San Cristoval : Goge 1 ♀ ad ; Nagasi 1 ♂ ad. Ugi 4 ♂ ad. 1 ♂ ad, 1 ♀ ad to OUM.

Weight Guadalcanal & San Cristoval 7 ♂ ad 168–185 (176·1) ; 4 ♀ ad 153–174·5 (160·6) ; Ugi 4 ♂ ad 190–225 (206·3). *Wing* Guadalcanal & San Cristoval 7 ♂ ad 160–174 (166·7) ; 3 ♀ ad 159–164 (161·0) ; Ugi 3 ♂ ad 176–181 (178·7). *Tail* Guadalcanal & San Cristoval 4 ♂ ad 89·5 –101·5 (95·4) ; Ugi 3 ♂ ad 95–100 (98·2) ; *Bill* (from cere) Guadalcanal & San Cristoval 6 ♂ ad 21·5–24 (22·7) ; 3 ♀ ad 21–22 (21·5) ; Ugi 4 ♂ ad 23–24·5 (22·1).

Iris dull orange to orange-red (Guadalcanal), pinkish-orange (San Cristoval and Ugi), inner ring yellow. *Skin* round eye black, throat white. *Bill* orange to reddish-orange, base of maxilla blackish, cere black. *Foot* dark grey, scutes black.

(M. 47) ***Vini meeki*** (Rothschild & Hartert, 1901)

REFERENCES. Rothschild & Hartert, 1901*b* : 187 ; Amadon, 1942*b* : 2.

RANGE. Higher islands of the Solomons—Bougainville, Kolombangara, Guadalcanal, Malaita (mainly mountains).

SPECIMENS. Guadalcanal : Betilonga 3 ♂ ad, 3 ♀ ad ; Turipava 1 ♂ ad, 2 ♀ ad. 1 ♂ ad to OUM.

Weight 4 ♂ ad 21–25·5 (24·1) ; 5 ♀ ad 21·5–25·5 (23·5). *Wing* 4 ♂ ad 78–81 (81·2) ; 5 ♀ ad 78–82 (80·4). *Tail* 3 ♂ ad 73–78·5 (75·0) ; 4 ♀ ad 64·5–70·5 (68·7). *Bill* (from cere) 4 ♂ ad 11·5–12 (11·7) ; 3 ♀ ad 10·5–11·5 (11·2).

Iris yellow to reddish orange. *Skin* round eye yellowish fuscous. *Bill* reddish orange, cere sometimes duller, mandible yellower, tip and edges blackish. *Foot* pale to reddish orange, claws fuscous.

(M. 49) ***Vini margarethae*** (Tristram, 1879)

REFERENCES. *Cat. Birds B.M.* 20 : 81.

RANGE. Solomons.

SPECIMENS. Guadalcanal : Tenaru 1 ♂ ad ; Betilonga 3 ♂ ad, 2 ♀ ad. San Cristoval : Goge 1 ♂ ad ; Nagasi 1 ♂ ad. 1 ♂ ad to OUM.

Weight 6 ♂ ad 52·5–59·5 (55·7) ; 2 ♀ ad 43, 44·5. *Wing* 5 ♂ ad 106·5–115 (111·7) ; 2 ♀ ad 108·5, 112. *Tail* 2 ♂ ad 95, 103 ; 2 ♀ ad 85·5, 101·5. *Bill* (from cere) 5 ♂ ad 14·5–15 (14·7) ; 2 ♀ ad 13·5, 14·5.

Iris orange, occasionally paler or duller. *Skin* round eye pale yellowish fuscous to black. *Bill* and cere orange, tip blackish. *Foot* orange, claws fuscous.

(M. 50) ***Micropsitta finschii aolae*** (Ogilvie-Grant, 1888)

REFERENCES. Hartert, 1924*a* : 202.

RANGE. Guadalcanal, Florida and Russell Is., Malaita.

SPECIMENS. Guadalcanal : Betilonga 5 ♂ ad, 2 ♂ juv, 1 ♀ ad, 1 ? juv. 1 ♂ ad to OUM.

Weight 5 ♂ ad 15–17·5 (15·9) ; 2 ♂ juv 14, 15·5 ; 1 ♀ ad 14·5. *Wing* 3 ♂ ad 62–66 (63·8) ; 2 ♂ juv 62, 63·5 ; 1 ♀ ad 59. *Tail* 4 ♂ ad 27·5–34 (31·4) ; 2 ♂ juv 30, 32 ; 1 ♀ ad 26. *Bill* (from cere) 5 ♂ ad 7·5–8 (7·8) ; 1 ♀ ad 7.

Iris ♂ orange ; ♀ and 1 juv dull yellow. *Skin* round eye grey. *Bill* ♂ blackish, whitish stripe under mandible, cere dull purplish red ; ♀ mottled horn, tip and base of maxilla darker, cere whitish ; juv as ♀ but cere pinkish or grey. *Foot* pale bluish grey.

(M. 50) ***Micropsitta finschii finschii*** (Ramsay, 1881)

REFERENCES. Hartert, 1924*a* : 202.

RANGE. San Cristoval, Ugi, Rennell.

SPECIMENS. San Cristoval : Manewiriwiri 2 ♂ ad ; Goge 3 ♀ ad ; Nagasi 2 ♂ ad, 1 ♀ ad. Ugi 3 ♂ ad, 1 ♀ ad.

Weight 8 ♂ ad 15·5–17·5 (16·6) ; 5 ♀ ad 14–18 (16·1). *Wing* 6 ♂ ad 62–67·5 (65·2) ; 5 ♀ ad 59–65·5 (63·0). *Tail* 6 ♂ ad 30·5–35·5 (33·3) ; 5 ♀ ad 27·5–32·5 (30·6). *Bill* (from cere) 5 ♂ ad 8–8·5 (8·3) ; 5 ♀ ad 7–8·5 (7·9).

Iris very dark brown (1 dull yellowish brown). *Skin* round eye blackish to pale grey. *Bill* ♂ slate, whitish stripe under mandible, cere pinkish grey to dull mulberry-red ; ♀ mottled bluish grey to horn, tip and sides of maxilla darker, cere dark grey (1 pinkish flesh). *Foot* pale bluish grey.

Though conspicuous in the intact males, the red belly-patch was lost or reduced during skinning.

(M. 51) ***Micropsitta bruijnii rosea*** Mayr, 1940

REFERENCES. Mayr, 1940*b* : 2.

RANGE. Kolombangara, Guadalcanal (mountains).

SPECIMENS. Guadalcanal : Turipava 1 ♂ ad.

Weight 14·5. *Wing* 65·5. *Tail* 28. *Bill* (from cere) 6·5.

Iris dark brown. *Skin* round eye fuscous. *Bill* grey, tip of maxilla and stripe under mandible white, tip of mandible yellowish. *Foot* grey.

(M. 52) ***Cacatua ducorpsii*** (Pucheran, 1853)

REFERENCES. *Cat. Birds B.M.* 20 : 129. See Vane, 1959.

RANGE. Solomons except San Cristoval Group.

SPECIMENS. Guadalcanal : Betilonga 3 ♂ ad. 1 ♂ ad to OUM.

Weight 3 ♂ ad 355–460 (408). *Wing* 3 ♂ ad 258–274 (264). *Tail* 2 ♂ ad 120, 121. *Bill* (from cere) 3 ♂ ad 32·5–34·5 (33·7).

Iris dark grey-brown. *Skin* round eye bright blue, throat grey to dull purplish. *Bill* pale horn, bluish at base. *Foot* black, greyish between scutes.

(M. 53) ***Larius roratus solomonensis*** (Rothschild & Hartert, 1901)

REFERENCES. Rothschild & Hartert, 1901*a* : 82.

RANGE. Solomons.

SPECIMENS. Guadalcanal : Betilonga 1 ♂ ad, 1 ♂ juv, 1 ♀ ad, 1 ♀ juv. Ugi 1 ♂ ad. 1 ♂ ad, 1 ♀ ad to OUM.

Weight 2 ♂ ad 370, 375 ; 1 ♂ juv 425 ; 1 ♀ ad 355 ; 1 ♀ juv 370. *Wing* 2 ♂ ad 245, 248 ; 1 ♂ juv 230 ; 1 ♀ ad 229 ; 1 ♀ juv 227. *Tail* 2 ♂ ad 109, 110·5. *Bill* (from cere) 2 ♂ ad 39, 40·5 ; 1 ♂ juv 37 ; 1 ♀ ad 36 ; 1 ♀ juv 34.

Iris ♂ orange ; ♀ yellow ; ♂ juv dull olive, ♀ juv brownish grey. *Skin* of throat straw-coloured. *Bill* ♂ maxilla orange, distal 1/3 golden-yellow, mandible black ; ♀ black ; juv black, tip of maxilla yellow or horn. *Foot* fuscous to dull black.

(M. 54) ***Geoffroyus heteroclitus heteroclitus*** (Hombron & Jacquinot, 1841)

REFERENCES. *Cat. Birds B.M.* 20 : 412 ; Mayr, 1931*b* : 13.

RANGE. Bismarcks, Solomons (lowlands).

SPECIMENS. San Cristoval : Goge 2 ? juv.

Iris very pale yellow, dull green inner ring. *Skin* round eye pale grey, eyelid dull yellow. *Bill* dull greyish horn, cere dull green. *Foot* dull greyish green.

(M. 55) *Cuculus saturatus* subspecies

RANGE. Eastern Palaearctic and Oriental regions, wintering in Malaysia and western Australasia.

NOTES. Six specimens have been recorded from the Solomons, under various specific names : four from New Georgia (Rothschild & Hartert, 1905 : 258) and one each from Malaita (Mayr, 1931*f* : 13) and Ugi (Ramsay, 1882*c* : 21).

(M. 56) ***Cacomantis variolosus addendus*** Rothschild & Hartert, 1901

REFERENCES. Amadon, 1942*b* : 20.

RANGE. Solomons.

SPECIMENS. Guadalcanal : Tenaru 2 ♂ ad ; Betilonga 4 ♂ ad, 2 ♂ juv, 3 ♀ ad ; Turipava 2 ♂ ad. San Cristoval : Goge 2 ♂ ad. 1 ♂ ad. to OUM.

Weight Guadalcanal 9 ♂ ad 38–45·5 (42·4) ; 2 ♂ juv 38, 39 ; 3 ♀ ad 38–42·5 (40·0) ; San Cristoval 2 ♂ ad 35·5, 38. *Wing* Guadalcanal 7 ♂ ad 121–131 (124·4) ; 2 ♂ juv 113·5, 115 ; 3 ♀ ad 110·5–112 (111·2) ; San Cristoval 2 ♂ ad 116, 121. *Tail*

Guadalcanal 2 ♂ ad 139, 139; 2 ♂ juv 106, 124·5; 1 ♀ ad 141; San Cristoval 1 ♂ ad 141. *Bill* Guadalcanal 8 ♂ ad 19–20 (19·5); 2 ♂ juv 17, 18·5; 2 ♀ ad 19, 20; San Cristoval 2 ♂ ad 19, 20.

Iris dark reddish brown, wholly or partly ringed with white. *Eyelid* yellow (bright to dull and greenish). *Bill* maxilla black, mandible horn-colour more or less mottled with fuscous and yellowish, gape yellow to pale grey externally, orange-red internally. *Foot* yellow (orange-yellow to pale and dull) more or less tinged with greyish or fuscous, claws fuscous or blackish.

One female, with much enlarged ovarian follicles, has the throat to the upper belly barred with dark subterminal chevrons. This is clearly a somewhat retarded plumage, seen also in a short-tailed subadult female in the BM(NH) (recorded by Ogilvie-Grant, 1888 : 191 as *tymbonomus*), and in a female from Bougainville, probably immature, in the AMNH (P. Vaurie, *in litt.*).

(M. 57) ***Cacomantis pyrrhophanus pyrrhophanus*** (Viellot, 1817)

REFERENCES. Amadon, 1942*b* : 16.

RANGE. New Caledonia and Loyalty Is.; partial migrant, occasionally wintering in Solomons.

SPECIMENS. Guadalcanal : Tenaru 1 ♂ ad.

Weight 56·5. *Wing* 140. *Tail* 148·5. *Bill* 22·5.

Iris bright red-brown. *Eyelid* dull yellow. *Bill* maxilla black, mandible grey mottled with darker grey and yellow, gape pale flesh-colour externally, pinkish orange internally. *Foot* dull yellow tinged with fuscous, claws dark fuscous.

NOTES. Four other specimens are recorded from the Solomons : three from Ysabel (Rothschild & Hartert, 1902 : 587) and one from Bellona (Mayr, 1931*b* : 14).

(M. 58) ***Chrysococcyx lucidus lucidus*** (Gmelin, 1788)

REFERENCES. Mayr, 1932*b* : 2.

RANGE. New Zealand, Chatham, Norfolk (and Lord Howe ?) Is.; migrant, wintering in Northern Melanesia.

SPECIMENS. Guadalcanal : Tenaru 2 ♂ ad ; Betilonga 1 ♂ ad. 1 ♂ ad to OUM.

Weight 3 ♂ ad 21·5–27 (24·4). *Wing* 3 ♂ ad 103–104·5 (103·7). *Tail* 3 ♂ ad 68·5–70 (69·2). *Bill* 3 ♂ ad 18–19·5 (18·5). *Bill width* (at front of nostril) 3 ♂ ad 5·5–6 (5·8).

Iris dark brown to grey-brown. *Eyelid* whitish. *Bill* black, base of mandible silvery to dark grey. *Foot* bluish grey, sole pale yellowish.

NOTES. We follow Berger (1955), who shows that *Chalcites* cannot be separated from *Chrysococcyx* and *Lampromorpha*.

Since Mayr's (1932*b*) summary of records, White (1938) and Baker (1948) have recorded this race from Bougainville, in May and September. As Mayr conjectured, one of the specimens recorded by Tristram (1882) as *plagosus* actually belongs to *lucidus* (Russell Is., 24th September, 1880). Another BM(NH) specimen (Bouin, Bougainville, 25th November, 1938, W. F. H. Rosenberg) was taken long after the migrants normally return to New Zealand (Mayr, 1932*b* ; Fell, 1947).

Three of Mathews' specimens from Norfolk Island support his statement (1918 :

352) that *lucidus* breeds there : an adult female (2nd December, 1912) is labelled " this bird would also have laid tomorrow "; and there are two juveniles (20th and 23rd January, 1913), one labelled " was fed by No. 536 " (the identity of which cannot be traced). Despite Mayr's (1932*b* : 5) view that this race does not migrate through Southern Melanesia, a juvenile from New Caledonia (Ausevata, 26th April, 1877, E. L. Layard) belongs to it, and not to the resident *layardi*.

(M. 58) ***Chrysococcyx lucidus plagosus*** (Latham, 1801)

REFERENCES. Mayr, 1932*b* : 6.

RANGE. Tasmania and southern Australia ; migrant, wintering from northern Australia to Lesser Sunda Isles and Northern Melanesia.

SPECIMENS. Guadalcanal : Betilonga 1 ♂ ad, 2 ♀ ad.

Weight 1 ♂ ad 21 ; 2 ♀ ad 21·5, 23. *Wing* 1 ♂ ad 89·5 ; 2 ♀ ad 95·5, 95·5. *Tail* 1 ♂ ad 65·5 ; 1 ♀ ad 68. *Bill* 1 ♂ ad 18·5 ; 1 ♀ ad 19·5. *Bill width* (at front of nostril) 1 ♂ ad 4 ; 2 ♀ ad 4·5, 5.

Iris dark brown to fawn. *Bill* black, base of mandible whitish to pale grey. *Foot* bluish grey, sole pale yellow.

Two of these specimens agree in all respects with Australian *C. l. plagosus*, except that their upper throats and chins are white with only a trace of barring. They have been compared with the specimens of *plagosus* at the AMNH by Mrs. Vaurie (*in litt.*), and at the BM(NH). The third specimen, a female, has more white and green on the head than most of those from Australia, but falls within their range of variation. It is damaged, but has the stump of the bill conspicuously narrow.

NOTES. It is not surprising that this race should prove to winter in the Solomons, despite Mayr (1932*b* : 3), since both *lucidus* and *plagosus* are known from the Bismarcks (see Mayr, 1941*a* : 73). An adult male from Guadalcanal (recorded by Ogilvie-Grant, 1888 as *C. basalis*) belongs to this race.

(M. 59) ***Eudynamis scolopacea alberti*** Rothschild & Hartert, 1907

REFERENCES. Rothschild & Hartert, 1907 : 440 ; 1908*a* : 356.

RANGE. Solomons (lowlands).

SPECIMENS. Guadalcanal : Tenaru 1 ♀ ad. San Cristoval : Goge 1 ♂ ad.

Weight 1 ♂ ad 190 ; 1 ♀ ad 148. *Wing* 1 ♂ ad 185 ; 1 ♀ ad 179. *Tail* 1 ♂ ad 197 ; 1 ♀ ad 207·5. *Bill* 1 ♂ ad 30 ; 1 ♀ ad 29.

Iris ♂ bright crimson ; ♀ light rufous-brown. *Bill* ♂ greenish silvery grey, base and tip of maxilla black ; ♀ dark horn, gape and mandible light greenish-tinged horn. *Foot* greenish grey, toes fuscous.

(M. 60) *Eudynamis taitensis* (Sparrman, 1787)

REFERENCES. Bogert, 1937 : 1 ; Mayr, 1944*c* : 1.

RANGE. New Zealand ; migrant, wintering in Polynesia and more rarely in Southern and Northern Melanesia and Micronesia.

NOTES. Bogert (1937) records 18 specimens from the Solomons, mainly from small outlying islands. No further specimens have been recorded, but French (1957) reports the species as common in the Three Sisters.

(M. 61) ***Centropus milo milo*** Gould, 1856

REFERENCES. *Cat. Birds B.M.* 19 : 335 ; Rothschild, 1904 : 59.

RANGE. Guadalcanal, Florida Is.

SPECIMENS. Guadalcanal : Betilonga 2 ♂ ad, 1 ♂ imm, 1 ♀ ad, 1 ? juv. 1 ♂ ad to OUM.

Wing 2 ♂ ad 270, 272 ; 1 ♀ ad 265. *Bill* 2 ♂ ad 63·5, 64 ; 1 ♂ imm 57·5 ; 1 ♀ ad 63·5.

Iris dark brownish red ; imm and juv grey. *Skin* round eye and at base of bill dark grey. *Bill* black, whitish streaks under mandible ; imm and juv maxilla grey-brown to dark fuscous, mandible pale horn whitish below. *Foot* silvery blue-grey.

An immature and a juvenile in the BM(NH) agree with ours in showing that the dull black plumage of the foreparts, though not loose in texture, belongs to the same feather-generation as the barred loose juvenile plumage of the hinderparts. It is replaced by immature feathers which have large subterminal spots and bars, rufous above and whitish below, with a much paler appearance (cf. Cain & Galbraith, 1956 : 132). The immature plumage of the hinderparts is similar in coloration, though not in texture, to the juvenile plumage which it replaces. Variation in the colour of the quills and their bars, and in the width and definition of the bars, seems to be merely individual.

(M. 62) *Tyto alba* cf. *crassirostris* Mayr, 1935

REFERENCES. Mayr, 1936 : 10.

RANGE. Tanga, Nissan, Solomons and Rennell Group ; geographical variation not yet understood.

NOTES. Only four specimens are known from the Solomons proper—from Vella Lavella, New Georgia, Malaita and Santa Ana—besides the topotypical series from Boang (Tanga group near New Ireland), two specimens from Nissan, and one from Bellona (Mayr, 1936 ; Sibley, 1951 ; Bradley, 1962). However, the species is apparently not uncommon on New Georgia (Sibley, 1951). It is also known from sight-records on the Three Sisters, as a rare non-breeding visitor (French, 1957), and on Rennell (Bradley & Wolff, 1956)—where, as on Guadalcanal, San Cristoval and Ugi (Cain & Galbraith, 1956), it is known to the natives.

The inadequate material from Nissan and the Solomons, tentatively assigned to this race by Mayr (1936), suggests considerable geographical variation without revealing its pattern. In coloration, these specimens agree generally with topotypical *crassirostris*, with *delicatula* of Australia, and with *lulu* of Central Polynesia ; and are distinct from the pale *meeki* of south-eastern New Guinea and the ventrally ochraceous *interposita* of northern Southern Melanesia. These forms are reviewed by Mayr (1936) and Amadon (1942*b*). Topotypical *crassirostris* differs from *delicatula* in its much deeper bill, larger size, richer ochraceous and darker grey upper parts, broader and darker barring on tail and wing, and somewhat bolder spotting above and below. Four specimens from the Solomons and Nissan are intermediate in dimensions, and one from Santa Ana agrees rather with *delicatula*, while they span the range of coloration between the two races. While *lulu* averages still smaller and

still less ochraceous above than *delicatula*, they overlap in both coloration and dimensions.

Bradley (1962) describes as a new race, *bellonae*, a specimen recently collected on Bellona. This she compares with the somewhat inadequate material of *delicatula*, *lulu*, *meeki* and *interposita* in the BM(NH). She mentions the size of topotypical *crassirostris*, given in Mayr's original and scarcely more than nomenclaturally valid description (1935), but does not quote Mayr (1936) nor Amadon (1942*b*). I.C.J.G. has compared the type of *bellonae* with a paratype of *crassirostris*, with specimens from Nissan and Santa Ana, and with the BM(NH) material. Measurements of both sexes are combined in quoting (within square brackets) those extracted from Mayr and Amadon, since there is apparently no sexual dimorphism even in mean dimensions ; though in fact the four critical specimens are all females. In the following discussion *bellonae* refers to the type, *crassirostris* to the topotypical series.

Wing-length. In many of the specimens examined, the metacarpo-phalangeal joint distal to the wing-bend is flexed, to a degree that more or less seriously reduces the measured wing-length. This flexure was especially marked in *bellonae*, so that after freeing the joint it is possible to obtain a measurement 15 mm greater than that taken by Bradley. The value given here was taken with the joint somewhat flexed, for comparison with the other specimens : *bellonae* 282, Santa Ana 274 [273] ; Malaita & Vella Lavella [279, 283] ; Nissan, ♀ 283 [281], ♂ [288] ; *crassirostris* 291 [285–290 (287·8)] ; *delicatula* [273–291 (284)] ; *lulu* [262–282 (272)].

Tail-length. Bradley clearly measured the tail from a different basal point, giving a much higher value than those obtained by Mayr and Amadon, and (in combination with the unduly low wing value) yielding a tail/wing ratio of 45% ; whereas Mayr and Amadon's mean figures yield ratios between 40% and 41%. The corrected measurements for *bellonae* yield a ratio of just under 40%. In order to obtain the same values as Mayr from the same specimens, the tails were measured from the common sheath of the central rectrices to the tip of the longer second rectrix, the central pair being shorter and variably developed : *bellonae* 112 ; Santa Ana 109 [109] ; Malaita & Vella Lavella [112, 115] ; Nissan, ♀ 113 [113], ♂ [113] ; *crassirostris* 116 [113–116 (114·8)] ; *delicatula* [109–120 (114)] ; *lulu* [105–119 (112)].

Maxilla-depth. This character, on which Mayr assigned the Nissan and Solomons specimens to " *crassirostris* ", is not mentioned by Bradley. Since *bellonae* has the culmen damaged at the cere, it has been necessary to take this measurement slightly further forward, perpendicular to the tomium just in front of its obtuse angle, across the front edge of the nostril. This method, probably less reliable, yields measurements approximately 0·2 mm. less than Mayr and Amadon's, which are here adjusted by that amount : *bellonae* 9·3 ; Santa Ana 9·5 [9·4] ; Malaita & Vella Lavella [10·4, 10·5] ; Nissan, ♀ 10·5 [10·5], ♂ [9·9] ; *crassirostris* 11·0 [10·8–11·1 (10·9)] ; *delicatula* [8·3–10·0 (9·1)] ; *lulu* [8·2–9·8 (9·1)].

Coloration. The female from Nissan and *crassirostris* differ from the specimens of *delicatula* and *lulu*, and that from Santa Ana, in having the distal white spots on the mantle feathers reduced and the proximal white bars somewhat widened. This trend is carried furthest in *bellonae*, in which the large black spots are margined by subequal white bars proximally and distally. The feathers defining the facial disc

have unusually small black tips in *bellonae*, but this condition is paralleled in a few specimens of *lulu* and *delicatula*, and seems to be due in part to wear of the tips. The purer and darker greys, especially on the head, of *bellonae* are certainly due to foxing of the other specimens, of which the most recent (*crassirostris*) was taken twenty-four years earlier ; while the same is probably true of its deeper blacks. In its rich ochraceous areas on the upper parts, *bellonae* agrees with *crassirostris*, while the bars on its tail and wings are intermediate in width, as in the Nissan and Santa Ana specimens.

It seems probable that the next revision of these populations will result in a single variable race (*delicatula*) in Australia, Northern Melanesia and Central Polynesia (whether or not a broader subspecies-concept finally results in further combination). The data on *lulu* and *delicatula* given by Amadon are suggestive, but inadequate to determine the statistical separation of the populations according to the " 75% rule " or a variant (see Amadon, 1949). Only the differences in wing and tail lengths are put forward to justify separation, and it seems improbable that the statistics for the latter (difference between means 2 mm, spreads of samples 14 & 11 mm, overlap between samples 10 mm) conceal sufficiently separated distributions. Only the provision of standard deviations or related statistics could have shown whether the wing-length distributions (for which the corresponding values are 12, 20 & 18, and 9 mm) were separable. While topotypical *crassirostris* seems amply distinct from *delicatula* according to current standards, the few other Northern Melanesian specimens already reveal inextricable intermediacy. However, it seems best to maintain the accepted nomenclature pending a full revision, while emphasizing the heterogeneity of " *crassirostris* ". Only the pattern of the dorsal spots could conceivably justify the separation of *bellonae*, and much more material from Northern Melanesia is necessary to determine the constancy and importance of this character.

(M. 63) ***Ninox jacquinoti granti*** Sharpe, 1888

REFERENCES. Sharpe, 1888 : 183.

RANGE. Guadalcanal.

SPECIMENS. Guadalcanal : Turipava 1 ♂ ad, 1 ♀ ad. 1 ♂ ad to OUM.

Weight 1 ♂ ad 153·5 ; 1 ♀ ad 158. *Wing* 1 ♂ ad 173 ; 1 ♀ ad 182. *Tail* 1 ♀ ad 95. *Bill* 1 ♂ ad 25·5 ; 1 ♀ ad 26.

Iris yellow. *Bill* dirty greenish yellow, more fuscous at base ; cere ♂ greenish yellow, ♀ greenish fuscous. *Foot* pale dirty yellow, fuscous-tinged, claws fuscous.

(M. 63) ***Ninox jacquinoti roseoaxillaris*** (Hartert, 1929)

REFERENCES. Hartert, 1929 : 6.

RANGE. San Cristoval.

SPECIMENS. San Cristoval : Goge 1 ♂ ad.

Weight 147. *Wing* 150·5. *Tail* 82·5. *Bill* 25·5.

Iris brownish grey. *Bill* greenish straw-colour, whitish blue-grey basally, cere pale fleshy grey mottled with blackish. *Foot* dull whitish yellow, claws dark grey.

This is probably the third known specimen, Ramsay's (1883 : 672) " *Ninox taeniata* ? juv." being the first. Dr. Amadon finds that it agrees with the holotype, except in being slightly more conspicuously marked with white on wing-coverts and hind-neck, and in a stronger suggestion of barring on the mid-abdomen (P. Vaurie, *in litt.*).

The porphyrin pigment which gives the characteristic pink tinge to the under wing-coverts and axillaries of this species fluoresces brilliantly under ultra-violet illumination. The pigment is generally distributed in the dark bases of the body-feathers in many *Ninox* and other owls, but forms clear patches only under the wings. The extent of the fluorescent patches in *N. jacquinoti* may be of systematic significance. In 4 specimens of *eichhorni*, 5 of *jacquinoti* and 8 of *granti* it extends to the wing-bend ; whereas in this specimen of *roseoaxillaris* a broad area within the bend is without porphyrin, showing white under the UV lamp. However, in a ninth specimen of *granti* this area shows little fluorescence. The fluorescence is faint in some of the older skins, and UV examination of longer series of fairly fresh specimens will be necessary to determine the constancy of this character.

(M. 67) *Collocalia whiteheadi orientalis* Mayr, 1935

REFERENCES. Mayr, 1936 : 12.

RANGE. Guadalcanal (mountains ?).

NOTES. Only the holotype is known.

(M. 68) ***Collocalia vanikorensis vanikorensis*** (Quoy & Gaimard, 1830)

REFERENCES. Mayr, 1937 : 4.

RANGE. New Hebrides to Solomons and ? Bismarcks; minor geographical variation.

SPECIMENS. San Cristoval : Goge 1 ♂ ad. Ugi 2 ♂ ad. 1 ♂ ad to OUM.

Weight 3 ♂ ad 9–11·5 (10·5). *Wing* 3 ♂ ad 113–115·5 (114·7). *Tail* 2 ♂ ad (inner) 44, 45 ; (outer) 54, 54·5. *Bill* 3 ♂ ad 8·5–9 (8·7).

Iris very dark brown. *Bill* black. *Foot* fuscous grey, shanks purplish, fleshy above, toes blackish.

NOTES. In addition to the islands in the Solomons listed by Mayr (1937), the species is known from Malaita (Davidson, 1934 : 193), San Cristoval and the Three Sisters (Cain & Galbraith, 1956 : 133, 106), and from Rennell (Bradley & Wolff, 1956 : 102).

(M. 69) ***Collocalia spodiopygia reichenowi*** Stresemann, 1912

REFERENCES. Streseman, 1912 : 350 ; Hartert, 1924*b* : 269 ; Mayr, 1937 : 16.

RANGE. Solomons, Rennell.

SPECIMENS. San Cristoval : Goge 1 ♂ ad. Ugi 1 ♂ ad.

Weight 2 ♂ ad 7, 8·5. *Wing* 2 ♂ ad 103, 105. *Tail* 2 ♂ ad (inner) 41, 41 ; (outer) 47, 49·5. *Bill* 1 ♂ ad 8.

Iris very dark brown. *Bill* black. *Foot* fuscous (1 very pale), toes blackish.

NOTES. Formerly known only from Guadalcanal and Kolombangara (Stresemann, 1912 ; Mayr, 1945*a* : 239), but now also from San Cristoval and Ugi (Cain & Galbraith, 1956 : 133) and Rennell (Bradley & Wolff, 1956 : 102). In these localities at least, it is not confined to the mountains.

(M. 70) ***Collocalia esculenta becki*** Mayr, 1931

REFERENCES. Mayr, 1931*b* : 16.

RANGE. Solomons except San Cristoval Group.

SPECIMENS. Guadalcanal : Betilonga 1 ♂ ad. To OUM.

Weight 7·5. *Tail* inner 39 ; outer 42. *Bill* 6·5.

Iris dark brown. *Bill* black. *Foot* pinkish grey, claws fuscous.

NOTES. Recorded from Malaita by Mayr & Camras (1938).

(M. 70) ***Collocalia esculenta makirensis*** Mayr, 1931

REFERENCES. Mayr, 1931*b* : 15.

RANGE. San Cristoval, Three Sisters, ? Ugi.

SPECIMENS. San Cristoval : Goge 1 ♂ ad ; Nagasi 2 ♂ juv, 2 ♀ ad, 1 ? juv. 1 ♀ ad to OUM.

Weight 1 ♂ ad 5 ; 2 ♂ juv 5·5, 6·5 ; 1 ♀ ad 5·5. *Wing* 1 ♂ ad 87 ; 2 ♀ ad 93, 93. *Tail* (inner) 1 ♂ ad 39·5 ; 2 ♀ ad 39, 41 ; (outer) 1 ♂ ad 41 ; 2 ♀ ad 44, 44·5. *Bill* 1 ♂ ad 6·5 ; 2 ♀ ad 6, 6.

Iris very dark brown. *Bill* black. *Foot* purplish grey, pale to blackish, claws black ; juv pale, dull flesh to grey, with purplish tinge.

NOTES. Two BM(NH) specimens recorded from Ugi (Gray, 1873) carry field labels showing them to have been collected there by Brenchley, and belong to this race. The species has not recently been taken on Ugi (Mayr, 1945*a* : 279) and seems not to be present (Cain & Galbraith, 1956 : 104).

(M. 71) ***Hemiprocne mystacea woodfordiana*** (Hartert, 1896)

REFERENCES. Hartert, 1896 : 19 ; Stresemann, 1921 : 38.

RANGE. Feni, Solomons, Rennell (lowlands).

SPECIMENS. Guadalcanal : Nala 1 ♀ ad, 1 ♀ imm. 1 ♀ imm to OUM.

Weight 1 ♀ ad 59·5 ; 1 ♀ imm 53. *Wing* 1 ♀ ad 202. *Tail* 1 ♀ ad (inner) 58·5 ; (outer) 185. *Bill* 1 ♀ ad 16·5 ; 1 ♀ imm 16·5.

Iris dark brown. *Skin* round eye and gape purplish grey. *Bill* black. *Foot* blackish, legs purplish.

(M. 72) ***Alcedo atthis salomonensis*** Rothschild & Hartert, 1905

REFERENCES. Rothschild & Hartert, 1905 : 255 ; 1908*b* : 361 (*ispida* subsp.) ; Stresemann, 1913 : 316.

RANGE. Solomons ; irregular geographical variation, some populations scarcely distinct from *A. a. hispidiodes* (mainly lowlands).

SPECIMENS. San Cristoval : Goge 1 ♂ imm, 1 ♀ imm. 1 ♀ imm to OUM.

Weight 1 ♂ imm 35 ; 1 ♀ imm 35·5. *Wing* 1 ♂ imm 73 ; 1 ♀ imm 74. *Tail* 1 ♂ imm 33·5 ; 1 ♀ imm 32·5. *Bill* (from front of nostril) 1 ♂ imm 31 ; 1 ♀ imm 31·5.

Iris very dark brown. *Bill* black ; ♂ gape dull pinkish fuscous, pale salmon-pink internally ; ♀ gape dull orange, base of mandible dull orange. *Foot* orange-red with fuscous wash, especially on toes.

(M. 73) *Ceyx pusillus aolae* (Ogilvie-Grant, 1914)

REFERENCES. Ogilvie-Grant, 1914 : 13.

RANGE. Guadalcanal, Florida Is. (coasts).

NOTES. This mangrove-living species is known by only a few specimens from any island in the Solomons, and though it has not yet been recorded from San Cristoval or Malaita it may still be found there.

(M. 74) ***Ceyx lepidus nigromaxilla*** Rothschild & Hartert, 1905

REFERENCES. Rothschild & Hartert, 1905 : 256 ; Mayr, 1936 : 5.

RANGE. Guadalcanal.

SPECIMENS. Guadalcanal : Betilonga 3 ♂ ad, 1 ♀ ad ; Tasinasa, near Nala, 1 ♀ ad ; Turipava 1 ♂ ad. 1 ♂ ad to OUM.

Weight 3 ♂ ad 19–19·5 (19·2) ; 2 ♀ ad 19, 20·5. *Wing* 4 ♂ ad 57·5–59·5 (58·8) ; 2 ♀ ad 60, 62. *Tail* 4 ♂ ad 23·5–25·5 (24·8) ; 2 ♀ ad 25, 25. *Bill* (from front of nostril) 4 ♂ ad 29–30·5 (29·8) ; 1 ♀ ad 30·5.

Iris dark brown. *Bill* maxilla black, more or less streaked with dull orange, mandible orange-red streaked with black at tip and sometimes towards base. *Foot* orange to orange-red.

The small weight (16·5) of one male from Betilonga is not listed above, since the bird was evidently starved : it was caught by hand, and found to have one wing hampered by sticky fruit.

(M. 74) ***Ceyx lepidus gentianus*** Tristram, 1879

REFERENCES. Tristram, 1879 : 438.

RANGE. San Cristoval.

SPECIMENS. San Cristoval : Goge 3 ♂ ad, 2 ♀ ad, 1 ♀ juv, 1 ? juv ; Nagasi 2 ♀ ad. 1 ♀ ad to OUM.

Weight 3 ♂ ad 24·5–28 (26·8) ; 4 ♀ ad 27–29·5 (28·4) ; 1 ♀ juv 25. *Wing* 3 ♂ ad 61·5–64 (62·5) ; 4 ♀ ad 63–65 (64·4). *Tail* 3 ♂ ad 27·5–28·5 (28·0) ; 3 ♀ ad 29–31 (30·2). *Bill* 3 ♂ ad 31·5–33 (32·2) ; 4 ♀ ad 29–31 (29·9) ; 1 ♀ juv 19.

Iris very dark brown ; juv very dark grey-brown. *Bill* black, gape greyish to brownish fuscous ; juv tip white. *Foot* orange ; juv pale pinkish flesh.

The juveniles (which have growing quills, and white overhanging tips to their bills) were taken from a nest hole, by a native collector who had seen them flying.

(M. 75) ***Halcyon chloris alberti*** Rothschild & Hartert, 1905

REFERENCES. Hartert, 1926*b* : 132 ; Mayr, 1936 : 6.

RANGE. Solomons, except Russell Is., Malaita and San Cristoval Group : very similar to *H. c. tristrami*.

SPECIMENS. Guadalcanal : Tenaru 3 ♂ ad, 1 ♂ juv, 2 ♀ ad, 1 ? juv ; Betilonga 2 ♂ ad. 1 ♂ ad, 1 ♀ ad to OUM.

Weight 5 ♂ ad 73·5–82·5 (76·8) ; 1 ♂ juv 70 ; 2 ♀ ad 77, 77·5. *Wing* 5 ♂ ad 104·5–110·5 (107·3) ; 1 ♂ juv 106·5 ; 2 ♀ ad 104·5, 105·5. *Tail* 4 ♂ ad 64–68 (65·4) ; 1 ♂

juv 67 ; 2 ♀ ad 67, 69·5. *Bill* (from front of nostril) 5 ♂ ad 37–39 (38·2) ; 1 ♂ juv 33 ; 2 ♀ ad 38·5, 41.

Iris dark brown ; 1 juv dark grey-brown. *Bill* black, basal half of mandible ivory, sometimes pinkish ; juv tip ivory, gape pale grey, base brownish. *Foot* fuscous black.

(M. 75) ***Halcyon chloris solomonis*** Ramsay, 1882

REFERENCES. Hartert, 1926*b* : 132.

RANGE. San Cristoval Group, except Three Sisters.

SPECIMENS. San Cristoval Manewiriwiri 1 ♂ ad ; Goge 19 ♂ ad, 8 ♀ ad, 5 ♀ imm. Ugi 12 ♂ ad, 1 ♂ juv, 18 ♀ ad. 1 ♂ ad, 1 ♀ ad to OUM.

Weight San Cristoval 17 ♂ ad 47·5–61 (57·4) ; 7 ♀ ad 61–71·5 (65·0) ; 5 ♀ imm 57–66 (61·5) ; Ugi 12 ♂ ad 54–62·5 (56·5) ; 1 ♂ juv 58·5 ; 18 ♀ ad 57–69·5 (62·9). *Wing* San Cristoval 20 ♂ ad 89·5–96 (92·7) ; 6 ♀ ad 93–95·5 (94·4) ; 5 ♀ imm 90·5–94 (92·2) ; Ugi 9 ♂ ad 92·5–96 (94·7) ; 1 ♂ juv 92 ; 15 ♀ ad 90–100 (94·8). *Tail* San Cristoval 19 ♂ ad 59–66·5 (63·1) ; 6 ♀ ad 63–67·5 (64·7) ; 5 ♀ imm 62–64 (62·8) ; Ugi 9 ♂ ad 61–65 (63·4) ; 12 ♀ ad 59·5–68·5 (66·0). *Bill* (from nostril) San Cristoval 20 ♂ ad 34·5–39 (37·1) ; 8 ♀ ad 37·5–40·5 (38·5) ; 5 ♀ imm 36·5–40·5 (38·0) ; Ugi 12 ♂ ad 33·5–38·5 (36·7) ; 1 ♂ juv 32·5 ; 18 ♀ ad 33·5–40·5 (38·5).

Iris dark to very dark brown (1 dark grey-brown). *Bill* black, base of mandible white to very pale grey, sometimes pinkish ; juv base of mandible dull grey. *Foot* blackish, shank purplish.

As Ramsay (1882*b* : 834) points out, the pale supraloral spots, which are the remnants of the " ringband " (Mayr, 1931*a* : 3) in this race, are sometimes still further reduced to vanishing-point. This tendency seems to be confined to Ugi, whence 11 of our 31 specimens (6 ♂, 5 ♀) have the spots obsolete or lacking. All 33 specimens from San Cristoval (and the one from Santa Ana at the AMNH—P. Vaurie, *in litt.*) have the spots well developed, extending back as more or less concealed superciliary stripes. Indeed, one male from Goge (BM(NH) reg. no. 1959.21.329) has a well-developed though concealed ring-band connecting the superciliaries across the nape ; although the ochraceous area is subterminal on most of the nape feathers, a few are pale to the tip.

There are also striking differences, in the mean values of several colour characters, between the San Cristoval and Ugi series, with the former much the more variable. This is most conspicuous in the coloration of the male underparts, which are predominantly rufous in many San Cristoval specimens but mainly white in the Ugi series. However, plotting colour-classes against collection-dates shows a progressive paling, superimposed on great variation at any one time, during eight weeks on San Cristoval ; and suggests that the more uniform palor of the Ugi series (collected in two weeks) may result merely from the continuance of this trend. Like the bleaching of phaeomelanin, most of the other colour characters which vary in these series are known to be affected by wear (Mayr, 1931*a* : 3). In each the San Cristoval series is the more variable, while the mean displacement of the Ugi series is towards the worn condition : head bluer, mantle less blackish green, less dark fringing on sides of breast, female underwing less ochraceous.

The impression given by the present series, that *solomonis* is unusual among the races of *H. chloris* in its susceptibility to wear and consequent variability, needs confirmation on fresher specimens. Intergradation from pale to dark ochraceous also appears unusually abrupt on the underparts of the most deeply-coloured males, though the effect may be exaggerated by the make-up of the skins. The rufous is most intense at the sides of the breast, between which the paler mid-breast contrasts sharply with the large white throat-patch and intergrades with the still paler belly ; but the field impression is not of an interrupted ochraceous gorget (cf. Rothschild & Hartert, 1908*b* : 361 ; Hartert, 1926*b* : 132 ; Mayr, 1945*a* : 243).

The 5 female immatures from Goge (collected 2nd–12th November, ovaries enlarged, 1 with oocytes c. 3 mm diam.) do not have the short bills with white overhanging tips, nor the deeply ochraceous and strongly-fringed underparts, characteristic of juveniles. However, they show the juvenile characters of buffy under wing-coverts, buff edges to the upper wing-coverts, a little buff in the forehead, and somewhat more olivaceous upperparts. No comparable stage is distinguishable in the other series : 3 males from Goge have some buff in the upper wing-coverts, but no other juvenile characters.

(M. 75) *Halcyon chloris sororum* **new subspecies**

HOLOTYPE. British Museum (Natural History) reg. no. 1940.7.4.17. ♂ adult, Malau Paina Island, 19th December, 1938, coll. W. French.

RANGE. Malaupaina and Malaulalo Islands, Three Sisters or Olo Malau group, north of San Cristoval, British Solomon Islands.

DIAGNOSIS. Apparently very like topotypical *santoensis* Mayr (1931*a*) from Espiritu Santo, New Hebrides, but with wider bill. Bill width in mm, taken with vernier calipers at front edges of nostrils :

sororum 4 ♂ ad 13·4, 13·7, 13·8, 13·8 ; 3 ♀ ad 13·7, 14·4, 14·4.
santoensis 3 ♂ ad 12·6, 12·7, 12·9 ; 5 ♀ ad 12·8, 12·9, 13·3, 13·4, 13·4.

MATERIAL. Three Sisters : 11 specimens, BM(NH) reg. nos. 1934.8.15.3, 1938.11.23.41–43, 1940.7.4.15–21. All but one collected by W. French, though some marked as collected by W. H. Barrow. Malaupaina : 4 ♂ ad (19th December, 1938, 25–27th March, 1939), 1 ♂ imm (11th May, 1934, coll. R. A. Lever), 1 ♀ ad (19th December, 1938), 1 ♀ imm (25th March, 1934), 1 ? ad (27th February, 1934), 1 ? imm (1st March, 1934). Malaulalo : 2 ♀ ad (30th March, 1939).

Wing 4 ♂ ad 96·5–101 (98·2) ; 1 ♂ imm 94 ; 3 ♀ ad 95–100 (98·0) ; 1 ♀ imm 95 ; 1 ? ad 99·5 ; 1 ? imm 95·5. *Tail* 4 ♂ ad 66·5–67·5 (66·9) ; 3 ♀ ad 63·5–69·5 (67·5) ; 1 ? ad 68·5. *Bill* (from front of nostril) 4 ♂ ad 38–39 (38·4) ; 1 ♂ imm 39 ; 3 ♀ ad 39–42 (40·3) ; 1 ♀ imm 40 ; 1 ? ad 37 ; 1 ? imm 39·5.

Iris " dark brown ". *Bill* " black " (and " white "). *Foot* " dark flesh ", " grey " or " black " (February to May), " dirty white " (December—somewhat paler in dried skins).

DESCRIPTION. Differs from *solomonis*, and agrees with the Southern Melanesian forms (see Mayr, 1931*a*), in having the ringband fully-developed across the nape.

The series is in more or less worn plumage, so that critical comparisons of the blue and ochraceous colours are impossible. However, where comparative material is suitable, reasonable predictions can be made about the coarser differences, and these are given in square brackets. The series has been compared with specimens of *solomonis*, all the Southern Melanesian races, and three from western Polynesia. Compared with :

solomonis (Solomons—San Cristoval and Ugi) : ringband continuous [♂ ringband deeper rufous relative to underparts ; ♂ underparts much less rufous than on San Cristoval ; wing and tail paler and greener relative to mantle].

amoena (Rennell) : much larger [♂ much paler and greener above].

vicina (Sta. Cruz group—Duff group) : bill longer and much wider.

brachyura (Sta. Cruz group—Reef group) : somewhat larger, bill considerably so [♂ ringband relatively deeper rufous, ♀ whiter below].

ornata (Sta. Cruz group—Santa Cruz) : [♂ mainly white below].

utupuae (Sta. Cruz group—Utupua) : supraloral spots much smaller, ringband narrower [♀ paler above].

melanodera (Sta. Cruz group—Vanikoro) : ringband much wider, black nuchal band narrower [less black fringing on breast, mantle much less blackish].

torresiana (New Hebrides—Torres group) : ringband wider, especially above auriculars [♂ mantle duller and greener, ♀ head bluer relative to mantle].

cf. *santoensis* (New Hebrides—Banks group) : ringband wider, especially above auriculars, bill longer and somewhat wider.

santoensis (New Hebrides—Santo) : bill wider [tail relatively paler and greener, head relatively bluer, ♂ under wing-coverts deeper buff].

juliae (New Hebrides—Efate) : bill longer and much wider.

erromangae (New Hebrides—Erromanga) : bill longer and much wider, collar narrower [♂ mainly white below, ♀ underwing almost pure white].

tannensis (New Hebrides—Tanna) : bill longer and much wider, collar narrower [♂ mainly white below, ♀ underwing almost pure white].

cf. *juliae* (New Hebrides—Aneiteum) : bill much wider.

eximia (Fiji—Kandavu) : bill longer and wider, ringband less mixed with blue posteriorly [♂ whiter below].

vitiensis (Fiji—Viti Levu, Ovalau) : bill longer and much wider, ringband wider, especially over auriculars, and less mixed with blue [♂ much whiter below].

sacra (Tonga) : bill longer and wider [♂ underwing with some ochraceous].

NOTES. The general resemblance between *sororum* and *solomonis*, with the one trenchant difference bridged by the ringbanded individual from Goge mentioned above, confirms that the major cleavage between the races characteristic of Southern and of Northern Melanesia lies (despite Mayr, 1931*a* : 10) not between *amoena* and *solomonis*, but between *solomonis* and *alberti*. This affects the faunal affinities of Rennell (see Mayr, 1931*c* ; Bradley & Wolff, 1956 ; Braestrup, 1956). It is remarkable that otherwise similar individuals on Ugi, fourteen miles away, differ so markedly from the Three Sisters population in lacking the ringband altogether.

This subspecies is named in honour of our daughters Angela, Nino and Janet.

(M. 76) ***Halcyon saurophaga saurophaga*** Gould, 1843

REFERENCES. *Cat. Birds. B.M.* 17 : 249. See Mayr, 1949*a* : 56.

RANGE. Moluccas, northern New Guinea and nearby islands, Northern Melanesia except Admiralty and Ninigo groups (coasts).

SPECIMENS. Ugi 3 ♂ ad, 1 ♂ subad ?. 1 ♂ ad to OUM.

Weight 3 ♂ ad 123–146 (132·2) ; 1 ♂ subad 111·5. *Wing* 3 ♂ ad 122–131 (127·8) ; 1 ♂ subad 124. *Tail* 3 ♂ ad 80–84·5 (82·2) ; 1 ♂ subad 80. *Bill* (from nostril) 3 ♂ ad 53–53·5 (53·3) ; 1 ♂ subad 48.

Iris very dark brown. *Bill* black, base of mandible white to very pale grey, pinkish towards extreme base. *Foot* slate-grey, scutes fuscous black.

The " subadult " specimen is here separated solely on measurements, especially bill-length.

(M. 77) ***Halcyon australasia sancta*** Vigors & Horsfield, 1827

REFERENCES. *Cat. Birds B.M.* 17 : 267 ; Keast, 1957 : 68.

RANGE. Southern Australia ; partial migrant, many individuals wintering from Lesser Sunda Isles to Solomons, where a few apparently remain all year (lowlands).

SPECIMENS. Guadalcanal : Tenaru 6 ♂ ad, 2 ♀ ad, 1 ? ad. 1 ♂ ad to OUM.

Weight 6 ♂ ad 46–58 (50·0) ; 2 ♀ ad 54·5, 54·5. *Wing* 6 ♂ ad 88–94·5 (92·0) ; 2 ♀ ad 90, 90. *Tail* 6 ♂ ad 57–61 (58·8) ; 2 ♀ ad 56, 61. *Bill* (from nostril) 6 ♂ ad 32–38 (34·5) ; 2 ♀ ad 32·5, 37·5.

Iris dark to very dark brown. *Bill* black, base of mandible dirty white to silvery, sometimes pinkish. *Foot* fuscous grey, toes blackish.

NOTES. We follow Mayr (1944*b* : 119) and van Bemmel (1948 : 359) in regarding *sancta* as conspecific with *H. australasia* of the Lesser Sunda Isles, despite the overlap in that area outside the breeding-season. In the Solomons, some of the individuals which remain during the breeding season do appear to breed (Cain & Galbraith, 1956 : 263 ; French, 1957). French (*in litt.*) writes of the Three Sisters : " The Sacred Kingfisher (*Halcyon sancta*) bred, and its breeding habits and choice of sites were similar to the White-collared Kingfisher (*Halcyon chloris* [sororum]). Both utilize termites nests on trees in fairly open forest and frequently those on coconut trees in the plantations, and seem to prefer those at a height of from 3 ft. to 10 ft. above ground level. The drilled hole is very like that of our Green Woodpecker [*Picus viridis*] but not nearly so deep. The Beach or White-headed Kingfisher (*Halcyon saurophaga*) always nested in dead and rotting stumps along the shore, and the hole was invariably drilled straight in, and in many cases straight through leaving a double entrance. All three species laid 2 or 3 eggs, the latter being the commonest full clutch."

(M. 78) ***Halcyon leucopygia*** (Verreaux, 1858)

REFERENCES. *Cat. Birds B.M.* 17 : 252 ; Hartert, 1926*b* : 134.

RANGE. Bougainville, Shortland, Choiseul, Ysabel, Florida Is., Guadalcanal (lowlands).

SPECIMENS. Guadalcanal : Tenaru 5 ♂ ad, 6 ♀ ad. 1 ♂ ad, 1 ♀ ad to OUM.

Weight 5 ♂ ad 42·5–52 (46·7) ; 6 ♀ ad 43·5–51·5 (49·1). *Wing* 5 ♂ ad 84–92 (87·9) ;

6 ♀ ad 87–90 (88·3). *Tail* 5 ♂ ad 55–63 (56·1) ; 6 ♀ ad 57–61 (58·5). *Bill* (from nostril) 5 ♂ ad 32·5–34·5 (33·7) ; 6 ♀ ad 32·5–34·5 (33·0).

Iris dark brown. *Skin* round eye white. *Bill* black, extreme base of mandible dirty white to blackish. *Foot* dark grey, toes and scutes black, upper shanks purplish.

(M. 79) ***Halcyon bougainvillei excelsa*** Mayr, 1941

REFERENCES. Mayr, 1941*d* : 3.

RANGE. Guadalcanal.

SPECIMENS. Guadalcanal : Betilonga 2 ♀ ad. 1 ♀ ad to OUM.

Weight 2 ♀ ad 160, 215. *Wing* 2 ♀ ad 135, 137. *Tail* 2 ♀ ad 99, 100·5. *Bill* (from nostril) 2 ♀ ad 40·5, 41.

Iris dark brown. *Bill* orange. *Foot* orange.

These specimens, whose ovaries were somewhat developed, agree with the hitherto unique holotype in having softer plumage than *H. b. bougainvillei*, so that this does appear to be a racial character (cf. Mayr, 1941*d*). Differences of these two from the holotype (apparently larger ; colours of crown, wing and tail and sizes of collar and rump-patch as in *bougainvillei*) may reflect the fact that the latter is in very worn plumage (P. Vaurie, *in litt.*).

NOTES. This race differs from *bougainvillei* chiefly in the pure olive upper back and paler underparts of the female, while the male remains unknown. Despite Mayr (1941*d*), the differences are not very marked, considering the separation of the races and the peculiarity of the species.

(M. 80) *Merops ornatus* Latham, 1801

REFERENCES. *Cat. Birds B.M.* 17 : 74.

RANGE. Australia ; migrant, wintering from Celebes to Northern Melanesia.

NOTES. The only published records for the Solomons seem to be those of Ramsay (1882*c* : 20).

(M. 81) ***Eurystomus orientalis solomonensis*** Sharpe, 1890

REFERENCES. Ripley, 1942 : 174.

RANGE. Feni, Solomons.

SPECIMENS. Guadalcanal ; Betilonga 1 ♂ ad, 3 ♀ ad. San Cristoval : Goge 2 ♂ ad, 1 ♂ juv ; Nagasi 1 ♂ ad. 1 ♂ ad, 1 ♀ ad to OUM.

Weight 4 ♂ ad 149·5–166 (159·0) ; 1 ♂ juv 120 ; 3 ♀ ad 151·5–185 (166·8). *Wing* 4 ♂ ad 190·5–201 (197·8) ; 3 ♀ ad 191–200·5 (197·0). *Tail* 4 ♂ ad 125–134 (129·9) ; 2 ♀ ad 132, 136. *Bill* (from feathering) 4 ♂ ad 23–23·5 (23·2) ; 1 ♂ juv 14 ; 3 ♀ ad 21·5–24 (22·5).

Iris dark brown. *Eyelid* dull orange. *Bill* orange-red, sometimes pinkish ; juv maxilla black with flesh-coloured base and edges, mandible flesh-colour. *Foot* dull orange-red, claws blackish ; juv pinkish fawn, washed with fuscous on toes, purplish on shanks.

(M. 82) ***Rhyticeros plicatus mendanae*** Hartert, 1924

REFERENCES. Mayr, 1934*a* : 10 ; Sanft, 1960 : 120.

RANGE. Choiseul, Ysabel, Guadalcanal, Malaita.

SPECIMENS. Guadalcanal : Betilonga 1 ♂ ad, 1 ♀ ad. To OUM.

Wing 1 ♀ ad 386. *Tail* 1 ♀ ad 227. *Bill* 1 ♂ ad 185·5 ; 1 ♀ ad 169.

Iris ♂ orange, ♀ brown. *Skin* round eye blue ; eyelid ♂ red, ♀ grey ; throat white. *Bill* dark red basally, tip pale horn. *Foot* black.

(M. 84) *Hirundo tahitica subfusca* Gould, 1856

REFERENCES. Mayr, 1934*a* : 13 ; 1955 : 6.

RANGE. Polynesia to Solomons and Lihir, intergrading via New Ireland with *H. t. ambiens* (coasts).

(M. 85) *Hirundo nigricans nigricans* Vieillot, 1817

REFERENCES. White, 1936 : 90.

RANGE. Australia ; migrant, wintering in New Guinea region and Northern Melanesia (mainly lowlands).

NOTES. Only two specimens have been recorded from the Solomons, both from Guadalcanal (Hartert, 1929 : 7 ; Mayr, 1955 : 6).

(M. 86) ***Lalage leucopyga affinis*** (Tristram, 1879)

REFERENCES. Mayr & Ripley, 1941 : 17.

RANGE. San Cristoval, Ugi.

SPECIMENS. San Cristoval : Manewiriwiri 1 ♂ ad ; Goge 1 ♂ ad, 2 ♂ imm, 3 ♀ ad, 2 ♀ imm, 2 ? juv ; Nagasi 1 ♂ ad, 2 ♀ ad. Ugi 8 ♂ ad, 1 ♂ imm, 4 ♀ ad. 1 ♂ ad, 1 ♀ ad to OUM.

Weight San Cristoval 3 ♂ ad 24–25 (24·2) ; 2 ♂ imm 21, 24·5 ; 5 ♀ ad 21–28 (24·3) ; 1 ♀ imm 24 ; Ugi 8 ♂ ad 23·5–27 (25·6) ; 1 ♂ imm 23·5 ; 4 ♀ ad 24–26 (24·9). *Wing* San Cristoval 3 ♂ ad 81·5–87 (84·2) ; 2 ♂ imm 80, 82·5 ; 4 ♀ ad 80–82·5 (81·6) ; 2 ♀ imm 79, 84 ; Ugi 8 ♂ ad 82·5–87·5 (85·1) ; 1 ♂ imm 78·5 ; 4 ♀ ad 80–85 (82·9). *Tail* San Cristoval 1 ♂ ad 74 ; 1 ♂ imm 68 ; 1 ♀ ad 75 ; 2 ♀ imm 66, 74 ; Ugi 6 ♂ ad 66–76 (71·5) ; 2 ♀ ad 69·5, 73. *Bill* San Cristoval 3 ♂ ad 17·5–18 (17·7) ; 2 ♂ imm 17, 17·5 ; 3 ♀ ad 17·5–18 (17·7) ; 2 ♀ imm 17·5, 18 ; Ugi 7 ♂ ad 16–18 (17·3) ; 1 ♂ imm 18 ; 3 ♀ ad 17·5–18·5 (18·0).

Iris very dark brown *Bill* black, base of mandible paler—♂ more or less grey, ♀ grey to horn ; imm pale area yellower and more extensive ; juv gape yellow. *Foot* dark grey or black, upper shank fuscous or brownish.

One of the immature males from Goge had enlarged testes.

NOTES. Clearly the single very large male from Ugi (Mayr & Ripley, 1941) was not characteristic of the population.

(M. 87) ***Coracina holopolia holopolia*** (Sharpe, 1888)

REFERENCES. Sharpe, 1888 : 184 ; Rothschild & Hartert, 1901*c* : 374 ; Mayr, 1931*f* : 17.

RANGE. Buka, Bougainville, Choiseul, Ysabel, Guadalcanal (mainly lowlands ?).

SPECIMENS. Guadalcanal : Tenaru 1 ♀ imm ; Betilonga 1 ♀ subad.

Weight 1 ♂ ad 43 ; 1 ♀ subad 41 ; 1 ♀ imm 47. *Wing* 1 ♀ subad 105 ; 1 ♀ imm 104. *Bill* 1 ♀ subad 25 ; 1 ♀ imm 23·5.

Iris dark brown. *Bill* black ; subad and imm fuscous to dark grey. *Foot* black.

Neither the juvenile nor the immature plumages have been described for this species, and the latter is not represented in the AMNH (P. Vaurie, *in litt.*), while geographical variation has been studied only in the adult male. The subadult is in adult plumage, except for its juvenile remiges (as retained by immatures), apparently immature axillaries and under wing-coverts, and a single immature feather on the lower breast. The immature is moulting from the juvenile to the immature plumage, but accidental loss and replacement of some feathers has superficially confused its plumage sequence : some of the secondaries in the right wing are essentially adult, while an underlying patch of feathers on the right lower breast is more worn and more juvenile in character (more boldly barred, the white tinged with yellow) than the surrounding immature plumage. The immature contour-feathers are grey above as in the adult, but on throat, breast, under tail-coverts, under wing-coverts and axillaries they are boldly barred in black and white, grading on the flanks and belly into grey with narrow white bars.

The juvenile plumage, softer than the succeeding ones, is fuscous and fawn in colour. The rectrices are pointed, the central pair grey and the remainder browner than in the adult, with a terminal pattern best developed on the outermost feathers. This pattern consists of a wide fawn tip, not extending far up the margins of the webs, which bears a dark line parallel to the margin on each side, and indications of a second line within this. The wing feathers are fuscous, with fawn outer margins expanding into wider tips. The tips of the coverts and inner secondaries bear a pattern of two dark bars similar to that on the tail. Both bars run straight across the tip, while the inner one bends sharply at each end to run for a short distance parallel to the edges of the feather ; the inner edge of this bar is ill-defined. The contour feathers are square-cut, fawn with brown cross bars. On head and back there are two straight bars, while on breast and flanks there is usually a single }-shaped bar, and a vague shaft-streak basally.

NOTES. The juvenile plumage is very different from that of *Coracina lineata*, in which the pale areas are yellowish white and the dark blackish, the contour feathers rounded, with pale edges (giving a scalloped effect) on the underparts, and the pale edges on remiges and rectrices simple. The immature plumage, with its ventral barring and white-flecked auriculars, is reminiscent of the female of *C. dohertyi* (which represents the *morio-tenuirostris* superspecies on Sumba and Flores—Stresemann, 1939 : 124 ; Mayr, 1944*a* : 142), though its barring is less bold.

An adult male, too damaged to be retained, was taken near Tsea. The locality Tenaru was omitted by Cain & Galbraith (1956 : 266). Thus two of the three specimens were taken in the lowlands. The vertical distribution of the species is not clear : possibly it is subject to geographical variation.

This species and the *morio-tenuirostris* superspecies were formerly placed in *Edolisoma*, now considered as merely a subgenus of *Coracina* (Delacour, 1946 : 2 ; see Mayr, 1955).

(M. 88) ***Coracina tenuirostris erythropygia*** (Sharpe, 1888)

REFERENCES. Rothschild & Hartert, 1901*c* : 373 ; 1902 : 582 ; Mayr, 1931*f* : 18 ; 1955 : 12.

RANGE. Guadalcanal and Malaita Groups, with slight geographical variation.

SPECIMENS. Guadalcanal : Tenaru 2 ♂ ad ; 2 ? imm ; Betilonga 11 ♂ ad, 4 ♀ ad, 1 ♀ imm, 3 ? imm, 1 ? juv ; Turipava 1 ♀ ad. 1 ♂ ad, 1 ♀ ad to OUM.

Weight 11 ♂ ad 54–63 (58·1) ; 2 ♂ imm 54, 61·5 ; 5 ♀ ad 52–64·5 (57·4) ; 1 ♀ imm 55. *Wing* 10 ♂ ad 113–120 (117·5) ; 1 ♂ imm 112 ; 5 ♀ ad 109–113·5 (111·5) ; 1 ♀ imm 112. *Bill* 9 ♂ ad 25·5–29 (27·0) ; 2 ♂ imm 26·5, 26·5 ; 4 ♀ ad 26–27·5 (26·6) ; 1 ♀ imm 26.

Iris dark brown. *Bill* black, base of ♀ mandible sometimes paler ; imm maxilla fuscous to blackish, mandible pale horn to warm grey with darker tip ; juv bill dull brown. *Foot* fuscous black, ♀ sometimes paler ; imm and juv dark grey.

Apart from their juvenile remiges and rectrices, the immatures differ from adult females in having the cap brown instead of grey and the mantle more rufous, less greyish or olivaceous.

In the juvenile plumage, each upper wing-covert and inner secondary has a rufous tip bearing a white terminal spot and a blackish bar. The head is yet more brown than that of immatures, with whitish fringes. The underparts bear dark drop-shaped shaft-streaks.

One of the adult females (BM(NH) reg. no. 1959.21.542) has sparse and irregular shaft-streaking and barring of the underparts. This seems relevant to the origin of the barred race *nisoria* of the Russell Is. (see Mayr, 1955 : 13).

(M. 88) ***Coracina salomonis*** (Tristram, 1879)

REFERENCES. Ramsay, 1883 : 667 ; Rothschild & Hartert, 1908*b* : 362 ; Mayr, 1955 : 12.

RANGE. San Cristoval.

SPECIMENS. San Cristoval : Goge 13 ♂ ad, 3 ♂ imm, 8 ♀ ad, 1 ♀ imm, 1 ? imm ; Nagasi 3 ♂ ad, 2 ♂ imm, 6 ♀ ad, 1 ♀ imm, 2 ? juv. 1 ♂ ad, 1 ♀ ad to OUM.

Weight 15 ♂ ad 55–75 (64·6) ; 5 ♂ imm 62·5–65·5 (63·8) ; 12 ♀ ad 60·5–73 (65·7) ; 1 ♀ imm 64·5. *Wing* 14 ♂ ad 117–122·5 (119·2) ; 5 ♂ imm 115·5–118 (116·5) ; 12 ♀ ad 115–120·5 (117·4) ; 2 ♀ imm 112, 112. *Bill* 15 ♂ ad 27·5–32 (28·9) ; 4 ♂ imm 27·5–29·5 (28·4) ; 14 ♀ ad 28–30·5 (29·4) ; 2 ♀ imm 28·5, 29.

Iris very dark brown ; juv dark grey-brown. *Bill* black ; imm gape and base of mandible sometimes grey ; juv mandible grey or brown with pale subterminal spot. *Foot* black, shanks sometimes brownish ; juv dark grey.

The immatures are indistinguishable from adult females, except for their juvenile wings and tails. In the juvenile plumage, the wing-feathers have the white terminal spots obsolete and the dark subterminal bars not clearly demarcated. The feathers of the crown are dark fuscous grey, with black subterminal bars and whitish-buff tips ; those of the mantle and the upper tail-coverts have white tips, followed by rufous and then by black subterminal bars. The underparts are paler than those of immatures and adult females, with vague blackish streaks-shaft and whitish tips.

NOTES. In *Coracina*, two character-series can be traced in the female plumage, in each of which the first-mentioned term is closest to the male and the last to the juvenile plumage. The series in distribution of eumelanins runs : all-grey—grey with narrow pale bars—black, grey and pale bars—pale with narrow black bars—all-pale. That in the intensity of phaeomelanins in the pale areas runs : none (white)—pale (buff)—deep (rufous). Total cock-feathering has clearly arisen repeatedly in the *morio-tenuirostris* superspecies. However, discordance between the coloration of dorsal and ventral surfaces is rare, being confined to the females of *morio* and closely-related races in Celebes, *dohertyi* of Flores and Sumba, and *salomonis*. In the two former, the underparts lie towards the " male " ends of both character series, whereas in *salomonis* they are as " juvenile " as possible. In all three, the upperparts are as in the adult male. Since *morio* is sympatric with a characteristic form (*edithae*) of *C. tenuirostris*, while Mayr (1944*a* : 142) considers *dohertyi* as a full species, and since *salomonis* is also distinct in the more conservative male plumage, it should be considered as another representative species.

(M. 89) ***Coracina lineata solomonensis*** (Ramsay, 1879)

REFERENCES. Ramsay, 1879*a* : 71 ; Tristram, 1892 : 294 ; Rothschild & Hartert, 1905 : 264 (*pusillus*) ; Mayr, 1931*f* : 17 ; 1955 : 14. See Ripley, 1941 ; Voous & van Marle, 1949.

RANGE. Guadalcanal.

SPECIMENS. Guadalcanal : Tenaru 1 ♂ ad ; Tasinasa 1 ♀ ad ; Betilonga 5 ♂ ad, 6 ♀ ad ; Turipava 1 ♂ ad, 1 ♀ ad. 1 ♂ ad, 1 ♀ ad to OUM.

Weight 7 ♂ ad 56–64 (60·4) ; 8 ♀ ad 50–65·5 (58·9). *Wing* 7 ♂ ad 129–135 (131·8) ; 8 ♀ ad 124·5–129·5 (126·3). *Bill* (from front of nostril) 7 ♂ ad 10·5–12 (11·2) ; 8 ♀ ad 11–11·5 (11·1).

Iris yellow. *Bill* black. *Foot* black.

The males show considerable variation, between individuals and between the feathers of one individual, in the degree of barring of under wing-coverts and axillaries; the extremes being blue-grey with faint white bars on the one hand, and boldly barred in black and white on the other. The barred feathers are probably remnants of the immature plumage, which (in *solomonensis*, *ombriosa*, *nigrifrons*, and *axillaris* at least) is ventrally barred (P. Vaurie, *in litt.*).

(M. 89) ***Coracina lineata makirae*** Mayr, 1935

REFERENCES. Mayr, 1936 : 13. See Ripley, 1941 ; Voous & van Marle, 1949.

RANGE. San Cristoval.

SPECIMENS. San Cristoval : Goge 8 ♂ ad, 10 ♂ imm, 8 ♀ ad, 2 ♀ imm, 1 ♀ juv, 1 ? imm ; Nagasi 1 ♂ ad, 1 ♂ imm, 1 ♀ ad. 1 ♂ ad, 1 ♀ ad to OUM ; 1 ♂ imm to AMNH.

Weight 7 ♂ ad 70–78·5 (73·9) ; 9 ♂ imm 61–75 (71·8) ; 7 ♀ ad 65·5–84·5 (73·5) ; 2 ♀ imm 69·5, 70 ; 1 ♀ juv 66·5. *Wing* 8 ♂ ad 135·5–144 (139·4) ; 10 ♂ imm 130·5–137 (133·4) ; 9 ♀ ad 133–140 (137·3) ; 2 ♀ imm 132, 132 ; 1 ♀ juv 129. *Bill* (from front of nostril) 8 ♂ ad 12·5–14 (13·3) ; 9 ♂ imm 13–14 (13·3) ; 7 ♀ ad 12–13·5 (13·1) ; 2 ♀ imm 12·5, 13 ; 1 ♀ juv 13.

Iris bright lemon-yellow ; imm bright lemon-yellow to pale yellowish grey ; juv pale grey-brown. *Bill* black ; juv gape flesh-coloured. *Foot* black ; juv dark slate.

Immature individuals have juvenile wings and tails, and sometimes dull irides. They are otherwise indistinguishable from adult females, except that the barring is occasionally black-and-white, as in adults of the wholly hen-feathered races *gracilis* and *lineata*, instead of having grey inner halves to the dark bars. Two immature specimens each of *gracilis* (Bradley & Wolff, 1956 : 104, nos. 125 and 131) and *lineata*, and one of *sublineata*, have the white bars markedly wider than in corresponding adult females. Before the immaturity of the heavily-barred males was recognized, *makirae* was erroneously mentioned as an unusually variable race (Galbraith, 1956 : 162).

NOTES. There seems no reason to suppose that *gracilis* of Rennell is more closely related to *lineata* of Australia than to the Melanesian races, despite Mayr (1931*b* : 18 ; 1955 : 14). They are linked by their complete hen-feathering, and by the associated " juvenility " of their barring, without any grey (see p. 50). The races *makirae*, *malaitae* and *sublineata* are intermediate in degree of dimorphism, while some immatures of the former show black-and-white barring. In other respects, the small dark *gracilis* is more similar to the Solomons races than to the large pale *lineata*. In fact, Mayr (1931*c* : 7 ; followed by Bradley & Wolff, 1956 : 115) elsewhere lists *gracilis* as more closely related to the races in the Solomons.

(M. 90) ***Coracina papuensis elegans*** (Ramsay, 1881)

REFERENCES. Rothschild & Hartert, 1916 : 289 ; Mayr, 1931*f* : 16 ; 1955 : 13. See Ripley, 1941 ; Voous & van Marle, 1949.

RANGE. Guadalcanal, Russell Is., New Georgia Group (mainly lowlands).

SPECIMENS. Guadalcanal : Tenaru 9 ♂ ad, 4 ♀ ad, 1 ? imm, 1 ? juv : Betilonga 1 ♂ ad. 1 ♂ ad, 1 ♀ ad to OUM.

Weight 10 ♂ ad 56–64 (61·2) ; 4 ♀ ad 58·5–65 (61·1). *Wing* 9 ♂ ad 130–137 (132·3) ; 4 ♀ ad 127–136 (131·8). *Bill* (from front of nostril) 7 ♂ ad 16–18 (17·4) ; 3 ♀ ad 16–17·5 (17·0).

Iris very dark brown. *Bill* black ; juv maxilla blackish, mandible dark horn with blackish tip, gape yellow. *Foot* grey, scutes black ; juv pale fuscous grey, claws black and dull white, soles very pale yellow.

Apart from its juvenile wing and tail, the immature differs from adults in its duller black mask and whiter breast.

The Betilonga specimen was taken " in native gardens near village ", not in forest, despite Cain & Galbraith (1956 : 267).

(M. 91) ***Coracina caledonica amadonis*** Cain & Galbraith, 1955

REFERENCES. Cain & Galbraith, 1955 : 90. See Mayr, 1955 : 15. See Ripley, 1941 ; Voous & van Marle, 1949.

RANGE. Guadalcanal (mountains).

SPECIMENS. Guadalcanal : Turipava 2 ♂ ad, 1 ♀ ad. 1 ♂ ad to AMNH.

Weight 2 ♂ ad 133·5, 136 ; 1 ♀ ad 165. *Wing* 2 ♂ ad 176, 180 ; 1 ♀ ad 173. *Bill* 2 ♂ ad 35, 36·5 ; 1 ♀ ad 38·5.

Iris dark red-brown. *Bill* black. *Foot* black.

The holotype (adult female, expedition no. 459) is BM(NH) reg. no. 1959.21.434.

NOTES. This is the most distinct race in the species.

(M. 92) *Coracina novaehollandiae melanops* (Latham, 1801)

REFERENCES. *Cat. Birds B.M.* 4 : 30 ; Keast, 1958 : 253. See Ripley, 1941 ; Voous & van Marle, 1949.

RANGE. Southern and eastern Australia ; migrant, wintering in eastern New Guinea region, Bismarcks, and occasionally Solomons (coasts).

NOTES. Recorded from the northern Solomons only, Nissan (Mayr, 1955 : 17) and Bougainville (Baker, 1948 : 17)—both records in August.

(M. 93) ***Turdus poliocephalus sladeni*** Cain & Galbraith, 1955

REFERENCES. Cain & Galbraith, 1955 : 92. See Mayr, 1931*b* : 21 ; 1941*d* : 6.

RANGE. Guadalcanal (mountains).

SPECIMENS. Guadalcanal : Turipava 1 ♂ ad, 2 ♂ subad, 1 ? subad. 1 ♂ subad to AMNH.

Weight 4 ♂ ad & subad 57–67·5 (61·9). *Wing* 4 ♂ ad & subad 107–111·5 (109·6). *Tail* 4 ♂ ad & subad 82–87 (84·5). *Bill* 4 ♂ ad & subad 23–24·5 (23·7).

Iris dark brown. *Eyelid* yellow. *Bill* yellow. *Foot* yellow, shins and claws fuscous-tinged.

The holotype (adult male, expedition no. 544) is BM(NH) reg. no. 1959.21.553.

(M. 95) ***Zoothera margaretae turipavae*** Cain & Galbraith, 1955

REFERENCES. Cain & Galbraith, 1955 : 92. See Mayr, 1955 : 17.

RANGE. Guadalcanal (mountains).

SPECIMENS. Guadalcanal : Turipava 1 ♂ ad.

Weight 53·5. *Wing* 90·5. *Tail* 63·5. *Bill* 24·5.

Iris very dark brown. *Bill* black, base greyish, gape dull orange. *Foot* greyish fuscous, joints paler and greyer, claws ivory.

The unique holotype (expedition no. 485) is BM(NH) reg. no. 1959.21.557.

(M. 95) *Zoothera margaretae margaretae* (Mayr, 1935)

REFERENCES. Mayr, 1936 : 14. See Mayr, 1955 : 17.

RANGE. San Cristoval (mountains).

(G) ***Cichlornis whitneyi turipavae*** Cain & Galbraith, 1955

REFERENCES. Cain & Galbraith, 1955 : 91. See Mayr, 1945*a* : 191 ; Gilliard, 1960*b*.

RANGE. Guadalcanal (mountains).

SPECIMENS. Guadalcanal : Turipava 1 ♂ ad.

Weight 36. *Wing* 65·5.

Iris dark brown. *Bill* blackish, mandible streaked with whitish, gape dull yellow. *Foot* fuscous brown.

The unique holotype (expedition no. 448) is BM(NH) reg. no. 1959.21.558.

NOTES. In the scattered group of babbler-warblers to which *Cichlornis* appears to belong (Mayr, 1933*a* : 3 ; 1944*a* : 158 ; 1955 : 18 ; Cain & Galbraith, 1955 : 91), two subgroups (whether phyletic or adaptive) are discernible. On the one hand there are pale-coloured, relatively long-tailed forms, somewhat resembling *Megalurus*, in open and more or less arid habitats : *Buetikoferella bivittata* of Timor, *Eremiornis carteri* of Australia and *Megalurulus marei* of New Caledonia. On the other, there is an even more scattered subgroup of dark-coloured, shorter-tailed forms, with less depressed nasal opercula, occupying the dense wet forest on mountainous islands : *Cichlornis w. whitneyi* on Santo, *C. w. turipavae* on Guadalcanal, *C. grosvenori* and *Ortygocichla rubiginosa* on New Britain, and *O. rufa* on Viti Levu. With the recent discovery of *Cichlornis grosvenori* Gilliard (1960*b*), the mountains of New Britain become the only locality known to support two species of this group.

(M. 96) ***Vitia parens*** Mayr, 1935

REFERENCES. Mayr, 1936 : 15.

RANGE. San Cristoval (mountains).

SPECIMENS. San Cristoval : Nagasi 1 ♀ ad, 1 ♀ imm.

Weight 1 ♀ ad 14 ; 1 ♀ imm 13. *Wing* 1 ♀ ad 55. *Tail* 1 ♀ imm 42. *Bill* 1 ♀ imm 17·5.

Iris brown ; imm dark grey-brown. *Bill* maxilla black, mandible grey with whitish base, gape pale grey, dull yellow internally ; imm mandible with whitish stripe and yellowish tip, gape dull yellow. *Foot* dull yellow, toes and fronts of shanks washed dark brown.

The immature specimen, whose wings are not fully-grown, has the crown duller and less rufous than the adult, but retains none of the juvenile plumage described by Mayr (1936).

(M. 97) ***Acrocephalus stentoreus cervinus*** de Vis, 1897

REFERENCES. Mayr, 1948 : 209 ; 1955 : 18.

RANGE. Sumba, northern Queensland, scattered localities in New Guinea, New Britain, Solomons—Bougainville, Gijunabena near Ysabel, Guadalcanal (lowlands).

SPECIMENS. Guadalcanal : Tenaru 3 ♂ ad, 1 ♀ ad.

Weight 3 ♂ ad 17·5–18 (17·8) ; 1 ♀ ad 16. *Wing* 3 ♂ ad 68·5–71·5 (69·8) ; 1 ♀ ad 65·5. *Tail* 3 ♂ ad 63–64·5 (63·5) ; 1 ♀ ad 62. *Bill* 3 ♂ ad 20–22 (21·2) ; 1 ♀ ad 20·5.

Iris yellowish brown. *Bill* maxilla blackish with yellowish horn edges, mandible yellowish horn with greyer tip, gape flesh-colour. *Foot* brownish grey, shanks browner.

(M. 99) ***Phylloscopus trivirgatus becki*** Hartert, 1929

REFERENCES. Hartert, 1929 : 13 ; Mayr, 1936 : 17.

RANGE. Ysabel, Guadalcanal, Malaita (mountains).

SPECIMENS. Guadalcanal : Turipava 2 ♂ ad.

Weight 2 ♂ ad 10, 11·5. *Wing* 1 ♂ ad 59. *Tail* 1 ♂ ad 44·5. *Bill* 1 ♂ ad 14.

Iris dark brown. *Bill* maxilla blackish, mandible horn, paler basally. *Foot* pale blue-grey, tinged with fuscous, sole dull yellow.

NOTES. The remark (Mayr, 1955 : 19) that the species is to be expected from Guadalcanal is of course a lapse, since this was one of the first birds to be discovered in the mist-forest of Guadalcanal.

(M. 99) ***Phylloscopus trivirgatus makirensis*** Mayr, 1935

REFERENCES. Mayr, 1936 : 18.

RANGE. San Cristoval (mountains).

SPECIMENS. San Cristoval : Nagasi 2 ♂ ad, 2 ♀ ad.

Weight 2 ♂ ad 9, 9·5 ; 2 ♀ ad 9, 9·5. *Wing* 2 ♂ ad 50·5, 53 ; 2 ♀ ad 48·5, 49. *Tail* 2 ♂ ad 37·5, 39·5 ; 1 ♀ ad 35. *Bill* 1 ♂ ad 13·5 ; 2 ♀ ad 13, 13·5.

Iris dark brown. *Bill* maxilla black (♀ with yellowish edge), mandible greyish or greenish horn with dark brown subterminal patch, gape dull yellow to pale fuscous with yellow tinge. *Foot* bluish grey, ♂ shank blotched with blackish.

(M. 100) ***Rhipidura rufifrons rufofronta*** Ramsay, 1879

REFERENCES. Mayr, 1931*e* : 19. See Mayr & Moynihan, 1946.

RANGE. Guadalcanal.

SPECIMENS. Guadalcanal : Tsea 1 ♂ ad ; Betilonga 7 ♂ ad, 3 ♀ ad, 2 ? ad. 1 ♂ ad to OUM.

Weight 8 ♂ ad 11–12 (11·6) ; 4 ♀ ad 10·5–14·5 (11·9). *Wing* 8 ♂ ad 70–74·5 (72·7) ; 3 ♀ ad 68–72 (69·3). *Tail* 5 ♂ ad 80·5–84 (82·4) ; 2 ♀ ad 80·5, 84·5. *Bill* 8 ♂ ad 13·5–15·5 (14·3) ; 2 ♀ ad 14, 14·5.

Iris dark brown. *Bill* black, base of mandible whitish to pale grey or horn. *Foot* grey, brownish to bluish.

(M. 100) ***Rhipidura rufifrons russata*** Tristram, 1879

REFERENCES. Mayr, 1931*e* : 18. See Mayr & Moynihan, 1946.

RANGE. San Cristoval.

SPECIMENS. San Cristoval : Manewiriwiri 1 ♂ ad, 1 ♂ imm, 1 ? imm ; Goge 9 ♂ ad, 10 ♂ imm, 7 ♀ ad, 2 ♀ imm, 3 ? imm; Nagasi 2 ♂ ad, 1 ♂ imm, 1 ♀ ad, 1 ? imm. 1 ♂ ad to OUM.

Weight 13 ♂ ad 8·5–10 (9·1) ; 13 ♂ imm 8·5–10 (9·2) ; 9 ♀ ad 8–9·5 (8·5) ; 2 ♀ imm 8, 8·5. *Wing* 11 ♂ ad 63–68 (65·2) ; 11 ♂ imm 61–68 (63·0) ; 8 ♀ ad 60·5–65·5 (62·4) ; 2 ♀ imm 61, 61. *Tail* 6 ♂ ad 71·5–75 (73·3) ; 6 ♂ imm 67–74 (70·7) ; 3 ♀ ad 70·5–73 (71·8) ; 1 ♀ imm 71·5. *Bill* 11 ♂ ad 12·5–14·5 (13·5) ; 11 ♂ imm 12·5–14 (13·5) ; 8 ♀ ad 13–14 (13·3) ; 2 ♀ imm 13·5, 14.

Iris very dark brown. *Bill* black, base of mandible ivory, sometimes horn-coloured or pinkish ; imm mandible occasionally purplish with orange gape and base, only tip blackish. *Foot* dark grey, usually somewhat fuscous, browner towards upper shank.

In this worn and badly-prepared series, the immature birds are separated only by the rufous edges of their wing-feathers, since their gorgets do not seem to be uniformly duller nor their plumage softer. The development of the gonads tends to support this separation, since there is little overlap between the adult and immature series : but see under *ugiensis* below.

(M. 100) ***Rhipidura rufifrons ugiensis*** Mayr, 1931

REFERENCES. Mayr, 1931*e* : 19. See Mayr & Moynihan, 1946.

RANGE. Ugi.

SPECIMENS. Ugi 3 ♂ ad, 4 ♂ imm, 4 ♀ ad, 2 ♀ imm. 1 ♀ ad to OUM.

Weight 3 ♂ ad 10·5–11·5 (11·0) ; 4 ♂ imm 10·5–12 (10·9) ; 4 ♀ ad 10–10·5 (10·4) ; 2 ♀ imm 10·5, 10·5. *Wing* 1 ♂ ad 71 ; 3 ♂ imm 64–74 (68·3) ; 3 ♀ ad 65–67 (66·0) ; 2 ♀ imm 62, 64. *Tail* 1 ♂ ad 72·5 ; 3 ♂ imm 76–80 (77·7) ; 3 ♀ ad 72–75 (73·5) ; 2 ♀ imm 73·5, 74·5. *Bill* 2 ♂ ad 14·5, 14·5 ; 4 ♂ imm 14–15 (14·2) ; 4 ♀ ad 13·5–14·5 (14·0) ; 2 ♀ imm 13·5, 14.

Iris very dark brown. *Bill* black, base of mandible ivory, sometimes grey or horn-coloured. *Foot* dark grey, somewhat fuscous, brownish towards upper shank.

In this series, shorter and worse-preserved than that of *russata*, the separation of immatures from adults is more dubious : there is more overlap in gonadial development, and the distributions of rufous edges to the wings, duller black throats, and whitish chins (the two last mentioned as characteristic of juveniles in another black-throated race, *melanolaema*, by Mayr, 1931*e*) do not coincide.

(M. 100) *Rhipidura rufifrons kuperi* Mayr, 1931

REFERENCES. Mayr, 1931*e* : 18. See Mayr & Moynihan, 1946.

RANGE. Santa Ana, Santa Catalina.

(M. 101) ***Rhipidura drownei ocularis*** Mayr, 1931

REFERENCES. Mayr, 1931*e* : 12.

RANGE. Guadalcanal (mountains).

SPECIMENS. Guadalcanal : Turipava 4 ♂ ad, 1 ♂ juv, 3 ♀ ad, 2 ? ad. 1 ? ad to OUM.

Weight 4 ♂ ad 11·5–12·5 (12·0) ; 3 ♀ ad 10–10·5 (10·3). *Wing* 4 ♂ ad 72·5–77·5 (75·1) ; 1 ♂ juv 72 ; 3 ♀ ad 68·5–70 (69·2). *Tail* 3 ♂ ad 81–82·5 (81·5) ; 1 ♂ juv 72 ; 2 ♀ ad 73, 75. *Bill* 4 ♂ ad 14–15 (14·2) ; 1 ♂ juv 15 ; 3 ♀ ad 13–13·5 (13·3).

Iris dark brown, sometimes greyish. *Bill* maxilla black, mandible white (sometimes tinged with pink or mauve), tip blackish. *Foot* dark fuscous or brownish grey, sole pale yellow.

(M. 102) ***Rhipidura tenebrosa*** Ramsay, 1881

REFERENCES. Mayr, 1931*e* : 12.

RANGE. San Cristoval.

SPECIMENS. San Cristoval : Goge 3 ♂ ad, 2 ♀ ad, 4 ? ad ; Nagasi 2 ♂ ad, 2 ♀ ad. 1 ? ad to OUM.

Weight 5 ♂ ad 18·5–19·5 (18·9) ; 4 ♀ ad 15·5–16·5 (15·9). *Wing* 4 ♂ ad 84–90 (85·9) ; 4 ♀ ad 75–79·5 (77·7). *Tail* 4 ♂ ad 88–95·5 (92·1) ; 2 ♀ ad 86, 86·5. *Bill* 4 ♂ ad 16–18 (17·0) ; 4 ♀ ad 16.

Iris dark or very dark brown. *Bill* maxilla black, mandible mainly whitish or pale grey (sometimes mauve-tinged) with blackish tip and edges of variable extent. *Foot* fuscous grey with bluish grey patches.

(M. 103) *Rhipidura fuliginosa* cf. *brenchleyi* Sharpe, 1879

REFERENCES. Mayr, 1931*e* : 14.

RANGE. San Cristoval (mountains).

NOTES. It is unfortunate that this is one of the high-altitude species missed by the expedition on San Cristoval, since the only known series is too worn to show the expected differences from *brenchleyi* of the New Hebrides (Mayr, 1931).

Reversion by Mayr (1955 : 20) to the name *R. flabellifera* (Gmelin, 1789) instead of *R. fuliginosa* (Sparrman, 1787), is clearly a lapse.

(M. 105) ***Rhipidura cockerelli cockerelli*** (Ramsay, 1879)

REFERENCES. Mayr, 1931*e* : 4.

RANGE. Guadalcanal.

SPECIMENS. Guadalcanal : Betilonga 8 ♂ ad, 3 ♂ imm, 4 ♀ ad, 1 ♀ imm, 2 ? ad. 1 ♂ ad to OUM.

Weight 8 ♂ ad 16·5–18·5 (17·6) ; 3 ♂ imm 15–16·5 (15·7) ; 4 ♀ ad 17–18 (17·4) ; 1 ♀ imm 15. *Wing* 8 ♂ ad 87–93 (90·1) ; 3 ♂ imm 84–86 (84·8) ; 4 ♀ ad 81–86·5 (83·5) ; 1 ♀ imm 78·5. *Tail* 7 ♂ ad 80–85 (82·7) ; 3 ♂ imm 81–84 (82·0) ; 4 ♀ ad 79–82·5 (80·5) ; 1 ♀ imm 75·5. *Bill* 8 ♂ ad 18–20·5 (19·0) ; 3 ♂ imm 18·5–20 (19·2) ; 3 ♀ ad 18·5–20 (19·5) ; 1 ♀ imm 18.

Iris dark brown. *Bill* black. *Foot* black, occasionally dark fuscous or grey.

NOTES. Though the fact has apparently never been remarked (except by Galbraith 1956 : 193), this species is clearly the geographical representative of the widespread and highly polytypic *R. rufiventris*. This makes it less surprising (Mayr, 1955 : 21) that the latter is absent from the Solomons. *R. rufiventris* shows tendencies (especially in *kordensis* of Biak) towards melanism, white spotting of the breast, and loss of all phaeomelanin, which are carried to extremes in *R. cockerelli*. Though much the largest form in the superspecies, *R. cockerelli coultasi* of Malaita approaches certain races of *R. rufiventris* in its white throat, reduced white wing-patch, and grey back. In behaviour, *R. cockerelli* is very unlike the smaller species of *Rhipidura* (Cain & Galbraith, 1956 : 271), though this is not apparent from other accounts (Mayr, 1945*a* ; Virtue, 1947 ; Sibley, 1951) ; while *R. rufiventris* apparently approaches the same *Myiagra*-like mode of feeding (Mayr & Rand, 1937 : 159 ; Mayr & Schauensee, 1939 : 32). In Malaysia, the *rufiventris* superspecies seems to be represented by a doublet : *R. perlata* and *R. euryura*.

(M. 106) ***Rhipidura leucophrys melaleuca*** (Quoy & Gaimard, 1830)

REFERENCES. Mayr, 1931*e* : 2.

RANGE. Moluccas, New Guinea region, Northern Melanesia.

SPECIMENS. Guadalcanal : Tenaru 2 ♂ ad, 1 ♀ ad, 1 ♀ imm ; Betilonga 2 ♂ ad, 1 ♀ ad ; Nala 1 ♂ ad. San Cristoval : Manewiriwiri 1 ♀ imm ; Goge 1 ♂ ad, 1 ♂ imm, 1 ♀ ad. Ugi 1 ♂ ad, 3 ♂ imm, 2 ♀ ad, 1 ♀ imm. 1 ♂ ad to OUM.

Weight 7 ♂ ad 31·5–37 (34·4) ; 4 ♂ imm 30–34 (32·4) ; 5 ♀ ad 27–36 (31·7) ; 3 ♀ imm 29–30 (29·3). *Wing* 7 ♂ ad 96–102 (99·2) ; 4 ♂ imm 97–100 (98·6) ; 5 ♀ ad 96–102 (98·5) ; 2 ♀ imm 95·5, 99. *Tail* 6 ♂ ad 93–101 (97·4) ; 2 ♂ imm 94, 95·5 ;

4 ♀ ad 95–100·5 (97·7) ; 3 ♀ imm 91·5–98·5 (94·3). *Bill* 6 ♂ ad 20·5–23 (21·5) ; 4 ♂ imm 20·5–21·5 (21·1) ; 3 ♀ ad 21–22 (21·3) ; 3 ♀ imm 20–21 (20·3).

Iris very dark brown. *Bill* black ; some imm mandibles partly grey, gape dull flesh. *Foot* black, shanks somewhat fuscous.

(M. 108) ***Monarcha castaneiventris castaneiventris*** Verreaux, 1858

REFERENCES. Ramsay, 1879*a* : 79 (*rufocastanea*). See Mayr, 1942 : 81.

RANGE. Choiseul, Ysabel, Florida Is., Guadalcanal, Malaita.

SPECIMENS. Guadalcanal : Tenaru 2 ♂ imm, 1 ♀ imm, 1 ? ad ; Betilonga 11 ♂ ad, 2 ♂ imm, 2 ♀ ad, 3 ♀ imm, 1 ? ad ; Turipava 1 ♂ ad, 1 ♀ ad. 1 ♂ ad to OUM.

Weight 12 ♂ ad 22·5–27 (24·6) ; 4 ♂ imm 25–28·5 (26·4) ; 3 ♀ ad 22·5–25 (23·8) ; 4 ♀ imm 21·5–24 (22·8). *Wing* 10 ♂ ad 82·5–88 (84·7) ; 4 ♂ imm 81·5–83·5 (82·5) ; 3 ♀ ad 83–84·5 (83·8) ; 4 ♀ imm 79–82 (80·7). *Tail* 10 ♂ ad 66–75·5 (70·8) ; 4 ♂ imm 67–69 (67·7) ; 3 ♀ ad 67·5–73·5 (69·8) ; 4 ♀ imm 67–69·5 (68·0). *Bill* 12 ♂ ad 18·5–21 (20·0) ; 4 ♂ imm 20–21 (20·6) ; 3 ♀ ad 19·5–21 (20·0) ; 4 ♀ imm 19·5–21 (20·0).

Iris dark brown. *Bill* silvery blue-grey, occasionally streaked with black, sometimes paler towards tip and edges, tip blackish. *Foot* blue-grey.

Immature and adult birds seem to be much less distinct in this race than in *megarhynchus*, and are here separated tentatively. Both in this series and in 5 males and 3 females in the BM(NH), all the specimens are intermediate, in colour and texture of wing and tail and shape of rectrices, between adults and immatures of *megarhynchus*. Some of the males which appear the most juvenile had enlarged testes. There is some overlap between the sexes, but the females average much less glossy above, especially on rump, wings and tail.

(M. 108) ***Monarcha castaneiventris megarhynchus*** Rothschild & Hartert, 1908

REFERENCES. Rothschild & Hartert, 1908*b* : 363. See Mayr, 1942 : 81.

RANGE. San Cristoval.

SPECIMENS. San Cristoval : Goge 20 ♂ ad, 5 ♂ imm, 13 ♀ ad, 6 ♀ imm, 3 ? ad, 9 ? imm. 1 ♂ ad to OUM.

Weight 20 ♂ ad 25–28·5 (26·2) ; 3 ♂ imm 25–27·5 (26·2) ; 11 ♀ ad 22–33 (25·0) ; 4 ♀ imm 23–25·5 (24·2). *Wing* 19 ♂ ad 83–91·5 (87·6) ; 5 ♂ imm 80–88·5 (82·9) ; 13 ♀ ad 81–86·5 (83·8) ; 6 ♀ imm 78–81·5 (79·6). *Tail* 18 ♂ ad 73·5–81·5 (77·6) ; 5 ♂ imm 73·5–80 (76·0) ; 13 ♀ ad 70–78 (74·9) ; 6 ♀ imm 70–74 (71·7). *Bill* 17 ♂ ad 23–25·5 (24·3) ; 4 ♂ imm 23·5–24 (23·7) ; 12 ♀ ad 22–24 (23·0) ; 6 ♀ imm 22–24 (23·0).

Iris dark to very dark brown. *Bill* pale blue-grey, whitish distally and sometimes towards edges, tip and sometimes edges blackish. *Foot* blue-grey, often dark especially on toes.

Immatures are readily distinguished from adults by their softer and browner wings and tails, roundedly-pointed rectrices, and blackish brown upper wing-coverts (not dull black with a slight blue gloss at the edges). Their bills were adult in coloration, but one male, with enlarged testes (noted in the field as " ! somewhat autolysed, but recognisable ") and adult plumage, had the bill black with pinkish-white base and pale yellow gape. There is no appreciable sexual dimorphism in this series.

(M. 108) ***Monarcha castaneiventris ugiensis*** (Ramsay, 1881)

REFERENCES. Ramsay, 1882*e* : 128. See Mayr, 1942 : 81.

RANGE. Ugi, Three Sisters, Santa Ana.

SPECIMENS. Ugi 9 ♂ ad, 2 ♂ imm, 7 ♀ ad, 2 ♀ imm, 1 ? ad, 2 ? imm. 1 ♂ ad to OUM.

Weight 9 ♂ ad 28·5–33·5 (31·6) ; 2 ♂ imm 26·5, 27·5 ; 7 ♀ ad 28–30·5 (28·9) ; 2 ♀ imm 27·5, 28. *Wing* 8 ♂ ad 89–95·5 (92·2) ; 2 ♂ imm 85·5, 86 ; 5 ♀ ad 85–88 (86·1) ; 2 ♀ imm 81·5, 82. *Tail* 9 ♂ ad 77–83·5 (80·5) ; 2 ♂ imm 78·5, 79 ; 6 ♀ ad 73·5–76·5 (75·4) ; 2 ♀ imm 70·5, 74·5. *Bill* 8 ♂ ad 25–26·5 (25·9) ; 2 ♂ imm 25, 26 ; 6 ♀ ad 24–26 (24·9) ; 2 ♀ imm 25, 25·5.

Iris very dark brown. *Bill* pale bluish grey, whitish distally, tip blackish ; imm more or less overlaid with black especially distally, gape dull yellow. *Foot* bluish grey, shank paler ; imm more blackish.

The belly and under tail-coverts average distinctly duller in the females than the males, though there is no sexual difference in those areas which are black in other races. The belly is slightly glossy in all the males, but in females it is sometimes decidedly brownish with shafts whitish to the tips. Among the immature birds, the two females seem older than the two males and two unsexed specimens, in having had the bill of adult coloration (except that the gape of one was " greyish flesh ") rather than black with dull yellow gape. However, they are less glossy in plumage, and have the white shafts of the belly-feathers extended and becoming tawny at the tips, with tawny tips to the feathers themselves, especially near the crissum. These tips are extensive in the pale-gaped specimen so that the whole lower belly appears dull tawny. It seems probable that tawny-fringed belly-feathers are characteristic of immature females. Two rufous-bellied specimens have been reported (Davidson, 1934 : 195 ; Mayr, 1942 : 81). In the latter at least, the appearances is as in adults of *megarhynchus*, not at all as in our immature females (P. Vaurie, *in litt.*).

(M. 109) ***Monarcha barbatus barbatus*** Ramsay, 1879

REFERENCES. Ramsay, 1879*a* : 80 ; Rothschild & Hartert, 1901*b* : 182 ; 1905 : 262 ; 1908*a* : 357 (*brodei*) ; Mayr, 1931*f* : 23.

RANGE. Bougainville, Choiseul, Ysabel, Florida Is., Guadalcanal.

SPECIMENS. Guadalcanal : Betilonga 6 ♂ ad, 6 ♀ ad, 2 ♀ imm, 2 ? imm. 1 ♂ ad, 1 ? imm to OUM.

Weight 6 ♂ ad 20–23 (21·5) ; 7 ♀ ad 19–21·5 (20·5) ; 2 ♀ imm 19·5, 20. *Wing* 4 ♂ ad 79–83 (80·9) ; 6 ♀ ad 75–79·5 (77·3) ; 2 ♀ imm 72, 78·5. *Tail* 5 ♂ ad 70–73 (71·6) ; 5 ♀ ad 64–73 (67·4) ; 1 ♀ imm 69. *Bill* 4 ♂ ad 17–17·5 (17·1) ; 5 ♀ ad 16·5–17·5 (16·7) ; 2 ♀ imm 16, 16·5.

Iris dark brown. *Bill* silvery blue-grey, whitish distally and along edges, tip and occasionally edges blackish ; imm more or less overlaid with black. *Foot* blue-grey, sole yellowish.

All but one of these specimens, and all those in the BM(NH), are either clearly adult or in the pale rufous-washed immature plumage. However, BM(NH) no. 1959.21.799 appears to be an immature female in an advanced plumage. It resembles

immatures of *M. vidua* in being generally similar to adults, but with wing and tail somewhat brownish and of juvenile shape and texture, the black throat-patch less scaly, and the gloss duller. Unfortunately, the puzzling juvenile plumages of this species have not yet been reviewed (see Mayr, 1931*f* : 23).

NOTES. At first sight, the black-tipped white outer rectrices of *M. b. malaitae*, reversing the common condition in the *verticalis* superspecies, suggest a marked genetic difference. However, close inspection, especially of juveniles, shows that the change is produced by a distalwards shift of the tail pattern, with enlargement of the normally small white basal area. This confirms the suggestion of its geographical distribution, that the character is readily acquired : it is found on Buru, Kei, Biak, the Admiralty group and Malaita (*loricatus, leucurus, brehmii, coultasi, infelix* and *malaitae*). Clearly *malaitae* is properly associated with *barbatus*. On the other hand, it does not seem appropriate to separate the races of the New Georgia Group as a distinct species, *R. browni*, despite Mayr (1955 : 27). This arrangement reflects the geography rather than the affinities of the forms concerned, since they differ from *barbatus* in relatively trivial characters and do not form a homogeneous group. They are large and somewhat melanic, but *browni* + *meeki* is black-breasted, *nigrotectus* is black-winged, and *ganongae* is closest in pattern to *barbatus*.

(M. 109) ***Monarcha vidua vidua*** (Tristram, 1879)

REFERENCES. Ramsay, 1880 : 468 (*melanocephalus*).

RANGE. San Cristoval, Santa Ana.

SPECIMENS. San Cristoval : Goge 8 ♂ ad, 7 ♂ imm, 1 ♂ juv, 13 ♀ ad, 4 ♀ imm, 8 ? ad, 4 ? imm, 1 ? juv ; Nagasi 5 ♂ ad, 2 ♂ imm, 5 ♀ ad, 2 ♀ imm, 1 ? ad, 1 ? imm. 1 ♂ ad, 1 ♀ imm to OUM ; 1 ♂ imm to AMNH.

Weight 11 ♂ ad 16–19·5 (17·4) ; 9 ♂ imm 15·5–17·5 (16·7) ; 1 ♂ juv 15 ; 19 ♀ ad 16–18 (16·8) ; 6 ♀ imm 15·5–18 (16·7). *Wing* 13 ♂ ad 74–83 (78·7) ; 7 ♂ imm 74–79 (76·0) ; 1 ♂ juv 73·5 ; 17 ♀ ad 72·5–79 (75·2) ; 4 ♀ imm 70–73 (71·6). *Tail* 12 ♂ ad 68–76·5 (71·6) ; 7 ♂ imm 68–78·5 (72·9) ; 1 ♂ juv 69 ; 13 ♀ ad 67–72 (70·8) ; 5 ♀ imm 65·5–71 (68·7). *Bill* 13 ♂ ad 16–17 (16·2) ; 7 ♂ imm 15·5–16·5 (16·1) ; 1 ♂ juv 16 ; 16 ♀ ad 15·5–16·5 (16·0) ; 6 ♀ imm 15·5–16·5 (15·9).

Iris very dark brown ; juv dark grey. *Bill* blue-grey, usually pale especially distally, tip and more or less of edges black, occasional black patches in front of nostrils (especially ♀) ; imm range from ad to juv condition ; juv black, gape flesh-coloured, yellow internally. *Foot* blue-grey, sometimes dark especially on toes ; juv paler.

Even the juveniles are generally similar to the adults in plumage coloration, not pale and rufous as in *M. barbatus*. They differ from adults in their soft parts, and in softer plumage, differently-shaped and browner wings and tails, brownish mantle-feathers with little black at the tips, and unspecialized dull black throat-feathers. The immatures have juvenile wings and tails, but otherwise resemble adults—except that their throat-feathers are less specialized, their greater upper wing-coverts have the black outer edges obsolescent, and their gloss is greener and somewhat duller. There are no specimens of *vidua* or *squamulatus* in a pale and rufous plumage, in the AMNH (P. Vaurie, *in litt.*) or BM(NH).

NOTES. It is remarkable that the uncharacteristic non-adult plumages of *vidua* and *squamulatus* have not previously been pointed out. Rothschild & Hartert (1908*b* : 363) suggested it in their remark that the " females " of *vidua* did not differ from the males ; but their views on the existence of sexual dimorphism in the pied monarchs fluctuated (1901*b* : 183 ; 1901*c* : 374 ; Hartert, 1908 : 107).

Even supposing a constant minority of immature *barbatus* to show an advanced plumage like that of *vidua*, it seems likely that juveniles of that and most other pied monarchs are always pale and rufous. Thus the juvenile plumage presents a striking difference between *barbatus* and *vidua*. In addition, these forms differ in adult pattern as radically as many of the representative forms currently separated as species. Indeed they have little in common, and *vidua* agrees rather with other members of the superspecies in having the nape and rump white and the sides of the throat black. Despite Mayr (1955 : 27), it does not seem possible to unite *vidua* with *barbatus* while they are specifically separated from their relatives in the Bismarcks and beyond.

(M. 109) ***Monarcha vidua squamulatus*** (Tristram, 1882)

REFERENCES. Tristram, 1882 : 136.

RANGE. Ugi.

SPECIMENS. Ugi 10 ♂ ad, 2 ♂ imm, 1 ♂ juv, 7 ♀ ad, 2 ♀ imm, 1 ♀ juv, 4 ? ad, 2 ? imm, 2 ? juv. 1 ? ad, 1 ? imm to OUM ; 1 ♀ imm to AMNH.

Weight 10 ♂ ad 16–19·5 (17·7) ; 2 ♂ imm 18, 19 ; 1 ♂ juv 19·5 ; 7 ♀ ad 15·5–18 (16·9) ; 2 ♀ imm 16, 17·5 ; 1 ♀ juv 18. *Wing* 10 ♂ ad 73·5–79·5 (76·2) ; 2 ♂ imm 73·5, 75 ; 1 ♂ juv 75 ; 7 ♀ ad 73–76 (74·2) ; 2 ♀ imm 75·5, 76 ; 1 ♀ juv 69·5. *Tail* 8 ♂ ad 65·5–70 (68·3) ; 1 ♂ imm 69 ; 1 ♂ juv 69 ; 7 ♀ ad 64·5–68·5 (67·3) ; 2 ♀ imm 67, 68 ; 1 ♀ juv 65·5. *Bill* 9 ♂ ad 16·5–17 (16·7) ; 2 ♂ imm 17, 17 ; 1 ♂ juv 17 ; 7 ♀ ad 16–17 (16·6) ; 2 ♀ imm 17, 17 ; 1 ♀ juv 16·5.

Iris very dark brown (including juv). *Bill* bluish grey, paler distally, tip and occasionally distal edges black ; imm between ad and juv conditions ; juv black, base of mandible grey or horn, gape dull yellow. *Foot* bluish grey ; juv sometimes paler.

This race is a melanistic derivative of *M. vidua*, and shows the same difference between plumages. The melanization affects the breast, wingpatch and nape, the rump slightly, but not the tail tips. It is very variable in degree, and the most highly melanic specimens have black breasts and upper wing-coverts with narrow white shaft-streaks, no white collars, and somewhat narrowed white rump-patches. This variation is shown in all plumages.

(M. 110) ***Myiagra ferrocyanea ferrocyanea*** Ramsay, 1879

REFERENCES. Ramsay, 1879*a* : 78 & 79 (+*pallida*) ; Rothschild & Hartert, 1905 : 261 ; 1908*a* : 357 ; Mathews, 1928 : 373 ; Mayr, 1931*f* : 24.

RANGE. Choiseul, Ysabel, Florida Is., Guadalcanal.

SPECIMENS. Guadalcanal : Tenaru 3 ♂ ad, 1 ♂ imm, 1 ♀ ad ; Betilonga 17 ♂ ad, 9 ♀ ad, 2 ♀ imm, 1 ? imm. 1 ♂ ad, 1 ♀ ad to OUM.

Weight 21 ♂ ad 11·5–14 (12·9) ; 1 ♂ imm 12 ; 10 ♀ ad 10–14·5 (12·6) ; 2 ♀ imm

12·5, 13. *Wing* 19 ♂ ad 63–71 (68·6) ; 1 ♂ imm 67 ; 10 ♀ ad 64–68·5 (66·3) ; 2 ♀ imm 67, 67. *Tail* 19 ♂ ad 58·5–62·5 (60·6) ; 1 ♂ imm 60·5 ; 8 ♀ ad 58–61 (59·7) : 2 ♀ imm 59·5, 59·5. *Bill* 18 ♂ ad 15·5–17·5 (16·3) ; 8 ♀ ad 14·5–16·5 (15·9) ; 1 ♀ imm 16·5.

Iris dark to very dark brown. *Bill* silvery grey-blue, tip and edges black, maxilla sometimes streaked with black, especially along culmen and in front of nostril ; imm from more or less black with greyish base and yellow gape, to ad condition. *Foot* dark grey to black.

The immatures are like adult females in body-plumage, but have softer wings and tails with more pointed rectrices, bills decidedly brownish in the dried skin, and wing-feathers with darker and browner centres more sharply marked off from the broader fawn edges. The adults vary considerably in shape, texture and colour of wing and tail, and the females in amount of buff on the underparts ; but no distinct phases are separable. The adult males, in somewhat worn plumage, are less purple in body-gloss than fresher BM(NH) specimens.

(M. 110) ***Myiagra cervinicauda*** Tristram, 1879

REFERENCES. Tristram, 1879 : 439 ; Ramsay, 1882*a* : 726 ; Rothschild & Hartert, 1908*a* : 357 ; 1908*b* : 363.

RANGE. San Cristoval, Ugi, Santa Ana.

SPECIMENS. San Cristoval : Manewiriwiri 2 ♂ ad, 1 ♀ ad, 1 ♀ imm ; Goge 2 ♂ ad, 5 ♂ subad, 2 ♂ imm, 1 ♀ ad, 2 ♀ imm, 1 ? imm ; Nagasi 1 ♂ ad. Ugi 11 ♂ ad, 1 ♂ imm, 5 ♀ ad, 1 ♀ imm, 2 ? imm. 1 ♂ ad, 1 ♀ ad to OUM.

Weight San Cristoval 5 ♂ ad 10·5–12 (10·9) ; 5 ♂ subad 9·5–11 (10·6) ; 2 ♂ imm 10·5, 10·5 ; 1 ♀ ad 13 ; 3 ♀ imm 10–11 (10·5) ; Ugi 12 ♂ ad 11–13 (11·7) ; 1 ♂ imm 11 ; 5 ♀ ad 10–12 (11·1) ; 1 ♀ imm 10·5. *Wing* San Cristoval 4 ♂ ad 62·5–64·5 (63·6) ; 4 ♂ subad 64–66·5 (64·9) ; 2 ♂ imm 62·5, 63 ; 1 ♀ ad 62 ; 3 ♀ imm 58–62·5 (60·0) ; Ugi 11 ♂ ad 63·5–67 (65·7) ; 1 ♂ imm 64·5 ; 5 ♀ ad 61·5–64 (62·7) ; 1 ♀ imm 61. *Tail* San Cristoval 4 ♂ ad 56–59 (57·7) ; 3 ♂ subad 56–59 (57·7) ; 3 ♀ imm 55–60 (57·3) ; Ugi 7 ♂ ad 55–58·5 (57·3) ; 1 ♂ imm 58·5 ; 5 ♀ ad 54·5–57 (55·9) ; 1 ♀ imm 57·5. *Bill* San Cristoval 4 ♂ ad 16·5–17·5 (17·0) ; 4 ♂ subad 16–17 (16·6) ; 2 ♂ imm 16·5, 17 ; 1 ♀ ad 16 ; 3 ♀ imm 15–16·5 (15·8) ; Ugi 9 ♂ ad 16–17·5 (16·8) ; 1 ♂ imm 16·5 ; 4 ♀ ad 16–16·5 (16·1) ; 1 ♀ imm 17.

Iris very dark brown. *Bill* dark or dull blue-grey, tip and edges and sometimes culmen black, maxilla occasionally more or less black ; imm average more black. *Foot* blackish, shank dark blue-grey.

The immatures differ from adult females in the texture and shape of wing and tail, and in the colour of the dried bill. The females and immatures vary considerably in the intensity of rufous above and below, but without any apparent correlation with age. The males also vary markedly, in the shape, colour and texture of wing and tail, and in the colour and intensity of gloss. Five males, separated as subadults, have soft wings with pale edges to the inner feathers, pointed tails, duller gloss above and greener gloss on the throats (though this may be due to wear). However, they do not differ from adults in testis development and bill colour, while several males are intermediate in character.

NOTES. The genus *Myiagra* forms a single superspecies distributed from the Lesser Sunda Isles to Samoa, yet curiously absent as breeding populations from the Bismarcks and most of New Guinea. Cain (1956*a* : 106) gives a brief account based on a review by I. C. J. G. A satisfactory species arrangement is made difficult by the overlap between very similar forms (especially *rubecula* and *cyanoleuca* in Australia) and the extreme variation between representative isolated forms, together with striking convergences made possible by a limited repertoire of variation. Mayr's arrangement (1941*a* ; 1945*a*) is not consistent, as is seen especially in the aggregation of very distinct Micronesian forms into a single " species " *M. oceanica*, while the Polynesian forms *caledonica*, *vanikorensis* and *albiventris* are separated. It might be most satisfactory to combine the majority of forms in a single polytypic species (*M. rubecula*) from the Moluccas to Samoa and Micronesia to Australia, sympatric with three other species, *M. ruficollis*, *M. cyanoleuca* and *M. azureocapilla*. However, the specific separation of distinct representatives is here accepted, though Mayr's arrangement for the Solomons does not seem satisfactory. The inclusion of *cervinicauda* in *M. ferrocyanea* emphasizes their geography rather than their characters, since *cervinicauda* resembles the Southern Melanesian forms *vanikorensis* and *caledonica* at least as closely, in coloration and bill-form. It seems to be rather distinct from both groups in ecology, in its confinement to the canopy and avoidance of the substage and second growth (Cain & Galbraith, 1956 : 275), and is best treated as a distinct species.

(M. 111) ***Petroica multicolor dennisi*** Cain & Galbraith, 1955

REFERENCES. Cain & Galbraith, 1955 : 93. See Mayr, 1934*b*.

RANGE. Guadalcanal (mountains).

SPECIMENS. Guadalcanal : Turipava 6 ♂ ad, 3 ♂ ad retarded, 3 ♀ ad, 1 ♀ imm. 1 ♂ ad, 1 ♀ ad to AMNH.

Weight 6 ♂ ad 10–11 (10·3) ; 3 ♂ ad ret 10·5–11 (10·7) ; 3 ♀ ad 11–14·5 (12·3) ; 1 ♀ imm 10. *Wing* 6 ♂ ad 62·5–64·5 (63·5) ; 3 ♂ ad ret 60·5–66 (62·7) ; 3 ♀ ad 62–62·5 (62·2) ; 1 ♀ imm 62·5. *Tail* 5 ♂ ad 39·5–44·5 (42·1) ; 2 ♂ ad ret 41·5, 42 ; 3 ♀ ad 41–42·5 (42·0) ; 1 ♀ imm 42·5. *Bill* 5 ♂ ad 13·5–14·5 (13·9) ; 2 ♂ ad ret 14, 14 ; 3 ♀ ad 14–14 (14·0) ; 1 ♀ imm 14.

Iris dark brown. *Bill* maxilla black, mandible horn-colour to blackish, paler basally. *Foot* dark brown to dull orange-yellow, fuscous-tinged, sole yellow to orange.

The holotype (adult female, expedition no. 520) is BM(NH) reg. no. 1959.21.957.

The three adult males in retarded plumage have enlarged testes. They differ from those in advanced plumage in having the crown blackish-brown (with white traces on the forehead), the wing and especially the primary-coverts browner, the outer coverts brown not white, the white edges of the secondaries washed with ochraceous, and the throat and mantle somewhat brownish.

(M. 111) *Petroica multicolor polymorpha* Mayr, 1934

REFERENCES. Mayr, 1934*b* : 11.

RANGE. San Cristoval (mountains).

(M. 112) ***Pachycephala pectoralis cinnamomea*** (Ramsay, 1879)

REFERENCES. Mayr, 1932*c* : 14. See Galbraith, 1956.

RANGE. Guadalcanal, Beagle.

SPECIMENS. Guadalcanal : Betilonga 18 ♂ ad, 2 ♂ imm, 8 ♀ " ad ", 1 ? imm, 1 ? juv. 1 ♀ " ad " to AMNH ; 1 ♂ ad, 1 ♀ " ad " to OUM.

Weight 18 ♂ ad 48–56 (51·7) ; 2 ♂ imm 45, 48 ; 8 ♀ " ad " 42–47·5 (44·9). *Wing* 16 ♂ ad 100·5–105·5 (103·1) ; 1 ♂ imm 99 ; 8 ♀ " ad " 93·5–102 (98·1). *Tail* 16 ♂ ad 74–79·5 (76·3) ; 2 ♂ imm 71·5, 81 ; 8 ♀ " ad " 70·5–77·5 (74·5). *Bill* 15 ♂ ad 21·5–24 (22·9) ; 2 ♂ imm 23, 24 ; 8 ♀ " ad " 21–24 (22·3).

Iris grey more or less suffused with red, yielding brownish grey to rufous brown, sometimes blotched or veined. *Bill* ♂ ad black ; ♂ imm and ♀ horn-colour, usually darker and greyer above, sometimes streaked with black ; juv paler and yellower, gape yellow. *Foot* grey, more or less tinged with bluish and/or fuscous, ♀ averages paler ; juv whitish, tinged with fuscous and blue in patches.

Males in the " II Phase " plumage (Mayr, 1932*c* & *d*) are here considered as immatures, which in this species have apparently already passed through a moult of the wing and tail. They (and corresponding specimens of *christophori*) are extremely variable in tail-shape, which suggests that the onset of moult is not well co-ordinated with the maturation of the gonads and feather-follicles. The series of " adult " females probably includes some immatures, but these are apparently not recognizable. Unlike the 7 corresponding specimens described by Mayr (1932*c*) and 3 in the BM(NH), 5 of the 8 non-juvenile females are strongly washed with yellow pigment. It remains to be determined, whether yellow coloration is confined to undetected immature females (as an exception to the general rule that younger birds have less carotenoid) ; or whether the character is more variable in expression than Mayr's material had suggested. Since *cinnamomea* and *bougainvillei* differ consistently from *orioloides* only in this character, and from each other only in presence or absence of a rufous wash (which is variably developed in *orioloides*), proof of the latter would necessitate the union in a single subspecies, *P. p. orioloides*, of all the populations along the Main Chain from Buka to Guadalcanal—which are certainly very closely related.

NOTES. The name *Muscicapa pectoralis* Latham, 1801, has been validated by the International Commission (ICZN 1956 ; 1958) ; and so remains the name for this polytypic species whether or not the New Caledonian form, to which the name *Muscicapa caledonica* Gmelin, 1789 applies, is included (see Galbraith, 1956 : 174).

(M. 112) ***Pachycephala pectoralis christophori*** Tristram, 1879

REFERENCES. Mayr, 1932*c* : 19. See Galbraith, 1956.

RANGE. San Cristoval, Santa Ana.

SPECIMENS. San Cristoval : Goge 23 ♂ ad, 8 ♂ imm, 1 ♂ juv, 16 ♀ " ad ", 2 ♀ juv, 2 ? imm, 4 ? juv, 1 ? nest ; Nagasi 18 ♂ ad, 4 ♂ imm, 5 ♀ " ad ", 1 ? imm, 2 ? juv, 1 ? nest. 2 ♂ ad, 1 ♀ " ad " to OUM.

Weight Goge 23 ♂ ad 28–36 (33·3) ; 9 ♂ imm 28–33 (30·7) ; 1 ♂ juv 31·5 ; 16 ♀ " ad " 28–37·5 (31·8) ; 2 ♀ juv 31, 32 ; Nagasi 18 ♂ ad 32–35·5 (33·9) ; 4 ♂ imm 29–33 (31·7) ; 5 ♀ " ad " 31–36 (33·6). *Wing* Goge 22 ♂ ad 81–90 (85·4) ; 7 ♂ imm 80–85

(82·8) ; 1 ♂ juv 84 ; 16 ♀ " ad " 80–89 (84·2) ; 2 ♀ juv 80, 80·5 ; Nagasi 18 ♂ ad 85–90 (87·0) ; 4 ♂ imm 81·5–86 (84·2) ; 5 ♀ " ad " 83–89 (86·3). *Tail* Goge 19 ♂ ad 54·5–63·5 (59·1) ; 4 ♂ imm 56–61·5 (58·6) ; 12 ♀ " ad " 57·5–64 (59·9) ; 2 ♀ juv 56, 59·5 ; Nagasi 13 ♂ ad 57·5–62·5 (59·8) ; 3 ♂ imm 60–61·5 (60·3) ; 4 ♀ " ad " 58–62·5 (59·9). *Bill* Goge 19 ♂ ad 20–21·5 (20·7) ; 8 ♂ imm 20–21·5 (20·8) ; 1 ♂ juv 18·5 ; 15 ♀ " ad " 20·5–22 (20·8) ; 2 ♀ juv 21·5, 22 ; Nagasi 18 ♂ ad 20–22·5 (21·1) ; 4 ♀ imm 20·5–21·5 (21·1) ; 5 ♀ " ad " 20–21·5 (20·8).

Iris grey more or less suffused with red, yielding brownish grey to rufous brown, sometimes blotched or veined ; juv greyer. *Bill* ♂ ad black, base of mandible often paler, gape black to whitish or yellow, mouth-lining whitish to bright orange-yellow, sometimes blotched or rimmed with black ; other specimens maxilla blackish to dark greyish horn, mandible paler and yellower, often streaked, gape and mouth-lining never black. *Foot* grey, more or less tinged with bluish or brownish, sometimes in irregular patches.

In this series, there is scarcely any overlap in bill-colour and testis-development between the 41 adult males and the 12 males in " II Phase " plumage, listed above as immatures. The latter clearly cannot be adults in a retarded plumage, even if this is the explanation for such specimens in other races (Mayr, 1932*c* & *d*). The rectrices of these immatures differ in shape and texture from those of juveniles, and in average colour (with little overlap) from those of adults. It thus appears that an additional moult of the tail, and probably of the wing, is involved.

There is an unusual degree of overlap in this race, in the appearance of the wing, between the various plumage phases. The wing of nestlings and juveniles (" I Phase ") is firm in texture (only the upper coverts being markedly soft) and much mixed with olive, which sometimes extends far up the edges of the secondaries. Conversely, several adult males and specimens of both sexes in " II Phase " have much rufous in the secondaries and upper coverts.

Presumably, females in " II Phase " include adults and immatures, but it seems impossible to separate them. The immature males are also indistinguishable—except for one which (like two recorded by Mayr, 1932*c*) has a distinct gorget of irregularly-marked black-and-yellow feathers. This approaches the condition in some adults (with black bills, enlarged testes and blacker tails) which have the gorget much mixed with yellow. Otherwise, the gorget in " II Phase " is very variable in colour, from olivaceous or tawny yellow to olive.

The variable degree of melanization of the adult male is correlated, though imperfectly, between the head and tail, but is apparently independent of the development of rufous on the breast. In contrast, the Santa Ana population (Mayr, 1932*c*) is much more constant in both characters, having the head and tail mostly green and the breast with much rufous.

(M. 113) ***Pachycephala implicata implicata*** Hartert, 1929

REFERENCES. Mayr, 1932*c* : 1.

RANGE. Guadalcanal (mountains).

SPECIMENS. Guadalcanal : Turipava 7 ♂ ad, 1 ♂ imm, 1 ♂ juv, 12 ♀ ad, 1 ♀ juv. 1 ♂ ad, 1 ♀ ad to OUM.

Weight 7 ♂ ad 33·5–37 (35·7) ; 1 ♂ imm 33 ; 1 ♂ juv 29·5 ; 13 ♀ ad 30–39 (33·3) ; 1 ♀ juv 32. *Wing* 7 ♂ ad 86·5–91 (89·1) ; 1 ♂ imm 88·5 ; 12 ♀ ad 84–88 (86·8) ; 1 ♀ juv 83. *Tail* 6 ♂ ad 69–72 (70·2) ; 11 ♀ ad 67–72 (68·7) ; 1 ♀ juv 67. *Bill* 4 ♂ ad 19–20 (19·4) ; 1 ♂ imm 19 ; 1 ♂ juv 14 ; 8 ♀ ad 18·5–20 (19·2).

Iris dark brown, sometimes reddish, ♀ greyish ; juv dark grey-brown. *Bill* black ; juv fuscous (mandible and base paler) with pale yellow gape, or black with yellowish edges. *Foot* grey, usually bluish, shank darker and sometimes mottled ; ♀ average paler ; juv shanks pale blue-grey, toes ivory with bluish tinge, or as ad.

The male juvenile, with small pale bill and feet and growing wing and tail, agrees with Mayr's (1932*c*) description of nestling *richardsi*. The female juvenile, evidently older, is much less rufous, though a small patch of the yellow immature plumage on the breast shows it not to have undergone a complete moult. The adult females also vary greatly in degree of phaeomelanization ; especially on the rump, wing, tail and underparts.

(M. 114) ***Aplonis cantoroides*** (Gray, 1862)

REFERENCES. *Cat. Birds B.M.* 13 : 128 ; Heinroth, 1903 : 74.

RANGE. New Guinea region and Northern Melanesia—including Ugi, Three Sisters and Santa Ana, but not San Cristoval (coasts).

SPECIMENS. Guadalcanal : Tenaru 1 ♂ ad, 3 ♂ imm, 2 ♀ ad, 10 ♀ imm, 1 ♀ juv, 1 ? juv. Ugi 7 ♂ ad, 1 ♂ imm, 7 ♀ ad, 1 ♀ juv. 1 ♀ ad, 1 ♀ imm to OUM.

Weight Guadalcanal 1 ♂ ad 53·5 ; 3 ♂ imm 52·5–53 (52·7) ; 2 ♀ ad 53·5, 58 ; 10 ♀ imm 43–53·5 (48·8) ; 1 ♀ juv 44 ; Ugi 8 ♂ ad 51·5–59 (54·9) ; 1 ♂ imm 53 ; 7 ♀ ad 50·5–56 (53·4) ; 1 ♀ juv 50·5. *Wing* Guadalcanal 1 ♂ ad 100 ; 3 ♂ imm 96–97·5 (96·8) ; 2 ♀ ad 98, 98·5 ; 10 ♀ imm 91–99 (94·1) ; 1 ♀ juv 91·5 ; Ugi 7 ♂ ad 100–105·5 (102·0) ; 1 ♂ imm 96 ; 7 ♀ ad 96–101 (98·7) ; 1 ♀ juv 96. *Tail* Guadalcanal 1 ♂ ad 66 ; 3 ♂ imm 63–64 (63·7) ; 1 ♀ ad 64 ; 9 ♀ imm 56·5–65 (59·1) ; 1 ♀ juv 50·5 ; Ugi 6 ♂ ad 65–70 (67·4) ; 1 ♂ imm 63 ; 6 ♀ ad 62–66 (64·1) ; 1 ♀ juv 52. *Bill* Guadalcanal 1 ♂ ad 24 ; 3 ♂ imm 23–24 (23·3) ; 2 ♀ ad 23·5, 23·5 ; 10 ♀ imm 21·5–24 (22·5) ; 1 ♀ juv 21 ; Ugi 6 ♂ ad 22–24·5 (23·3) ; 1 ♂ imm 23·5 ; 6 ♀ ad 22·5–23·5 (23·2) ; 1 ♀ juv 22.

Iris bright orange ; juv greenish yellow to dark brown. *Bill* black ; juv gape yellowish. *Foot* black, occasionally brownish-tinged ; juv dark grey, brownish-tinged, to black.

NOTES. Amadon (1956 : 22) regards the species as monotypic, and separates *crassa* of the Tenimber Isles as a representative species.

The immature and juvenile plumages are described by Heinroth (1903).

Though listed as " widespread " in the Solomons by Mayr (1945*a* : 277), the species has been recorded only twice from San Cristoval (Tristram, 1882 : 137 ; Davidson, 1934 : 194). There are no specimens from this island in the AMNH (Amadon *in litt.*) or the BM(NH). Natives of San Cristoval, even on the coast, denied knowledge of it ; whereas the inland people of Betilonga, where neither species occurs, were well aware of the distinction between *A. cantoroides* and *A. metallica*. French (*in litt.*) never saw *A. cantoroides* on his many visits to San Cristoval, nor were its eggs brought to him

by the collectors he employed there. He does not believe that it can be resident. Tristram did not state the number of specimens, nor their precise locality. Davidson's single bird was taken at Star Harbour, and may well have been a straggler from Santa Ana (see p. 15).

The species was not taken on Malaita by the Whitney Expedition (Mayr, 1931*f*), but Davidson (1934) records a specimen, and there are 4 in the BM(NH) collected by R. A. Lever. The species is resident on Rennell (Bradley & Wolff, 1956 : 110), where the nesting sites recorded for *A. cantoroides* and *A. insularis* need confirmation.

(M. 116) ***Aplonis grandis macrura*** Mayr, 1931

REFERENCES. Mayr, 1931*f* : 21.

RANGE. Guadalcanal.

SPECIMENS. Guadalcanal : Tenaru 1 ♂ ad, 1 ♀ ad ; Betilonga 13 ♂ ad, 19 ♀ ad, 1 ♀ imm, 1 ? ad, 1 ? imm. 1 ♂ ad, 1 ? imm to OUM.

Weight 15 ♂ ad 114·5–151 (136·4) ; 21 ♀ ad 110·5–150 (133·3) ; 1 ♀ imm 119. *Wing* 14 ♂ ad 132–146 (140·7) ; 19 ♀ ad 130–144 (136·4) ; 1 ♀ imm 134. *Tail* 12 ♂ ad 92·5–103 (98·3) ; 17 ♀ ad 87–99·5 (93·6) ; 1 ♀ imm 89. *Bill* 14 ♂ ad 26–29 (27·5) ; 9 ♀ ad 26–29 (27·3) ; 1 ♀ imm 27·5.

Iris deep red, sometimes orange-red ; imm orange-red. *Bill* black. *Foot* black, sole sometimes yellowish.

The immatures differ relatively little from the adults, in having less gloss on the wing, the primaries dull brown and without fawn outer webs, the hackling of the head and neck greatly reduced (despite Rothschild & Hartert, 1905 : 268) and without green tinges in the purple gloss, and the gloss of the body duller and bluer and restricted to the tips of the feathers—so that the back appears scaly and the belly and under tail-coverts dull and brownish. Individual adults approach this condition in separate single characters.

(M. 116) ***Aplonis dichroa*** (Tristram, 1895)

REFERENCES. Ramsay, 1882*a* : 726 (*minor*).

RANGE. San Cristoval.

SPECIMENS. San Cristoval : Goge 7 ♂ ad, 4 ♂ imm, 8 ♀ ad, 1 ♀ imm, 3 ? imm ; Nagasi 3 ♂ ad, 3 ♂ imm, 3 ♀ ad, 5 ♀ imm, 1 ? imm. 1 ♂ ad, 1 ♂ imm to OUM.

Weight 8 ♂ ad 82·5–90 (86·9) ; 7 ♂ imm 68–90 (76·6) ; 9 ♀ ad 73–91·5 (81·2) ; 6 ♀ imm 68–82 (74·1). *Wing* 8 ♂ ad 112–122 (117·9) ; 7 ♂ imm 108·5–118 (112·4) ; 11 ♀ ad 110–119 (113·5) ; 6 ♀ imm 109–116 (111·8). *Tail* 9 ♂ ad 71·5–76·5 (73·5) ; 3 ♂ imm 61·5–62·5 (62·0) ; 9 ♀ ad 66·5–72·5 (69·1) ; 4 ♀ imm 61·5–68 (64·7). *Bill* 10 ♂ ad 26–28 (26·9) ; 7 ♂ imm 25–28 (26·0) ; 11 ♀ ad 25–27 (26·0) ; 6 ♀ imm 24·5–26 (25·3).

Iris tawny orange (deep orange-red to pale tawny orange) ; imm pale golden-brown (dull yellow-brown to golden yellow with orange wash). *Bill* black ; imm gape sometimes fuscous, yellow internally. *Foot* black.

The immature plumage differs from that of the adult much more than in our series of *A. grandis*. The upper wing-coverts are dark brown without gloss, the head and

neck are without hackles, the contour feathers are fuscous with gloss only at the tips, and the rectrices are paler and narrower. However, the remiges are like those of the adult.

The proportion of young birds taken near Goge shows a striking change after the visit to Nagasi, where an intermediate proportion was taken. The numbers of immatures and adults in the collection are : Goge (15th October–13th November) 2/15 ; Nagasi (20–24th November) 9/6 ; Goge (30th November–3rd December) 6/0. This suggests that the young birds were moving about together apart from the adults, as in the related *A. cantoroides* ; though the feeding flock seen was not noticed to be composed mainly of immatures (Cain & Galbraith, 1956 : 280).

NOTES. We agree with Amadon (1956 : 23) that this form should be kept specifically distinct from *A. grandis*, its representative in the remainder of the Solomons.

The identity of the third species of *Aplonis* on the Three Sisters, recorded in error by French (1957) as *A. grandis*, remains in doubt (see Cain & Galbraith, 1957, footnote). There is now no indigenous Melanesian population in these islands, who alone might be expected to distinguish between *A. cantoroides* and *A. feadensis* or *A. insularis*. However, through the kindness of the Chief Secretary to the High Commission and the District Commissioner, workers on the Lever estate were asked to observe, and after two months in 1957 reported only *A. cantoroides* and *A. metallica*. If able to distinguish these two species, they would immediately have recognized *A. grandis*, *A. dichroa* or *A. brunneicapilla*. If one of these species was present during Mr. French's residence, it cannot still be common as he recorded it.

(M. 117) ***Aplonis metallica nitida*** (Gray, 1858)

REFERENCES. Stresemann, 1912 : 311 ; 1914 : 151 ; Amadon, 1956 : 22.

RANGE. Bismarcks, Solomons (lowlands).

SPECIMENS. Guadalcanal : Tenaru 15 ♂ ad, 9 ♂ imm, 10 ♀ ad, 4 ♀ imm, 1 ? ad, 1 ? imm. San Cristoval : Goge 23 ♂ ad, 16 ♂ imm, 6 ♂ juv, 14 ♀ ad, 4 ♀ imm, 3 ? imm, 12 ? juv. Ugi 5 ♂ ad, 2 ♂ imm, 3 ♂ juv, 2 ♀ ad, 7 ♀ imm. All to OUM.

Weight Guadalcanal 15 ♂ ad 51·5–60·5 (55·7) ; 9 ♂ imm 50·5–60·5 (55·9) ; 10 ♀ ad 52–66·5 (57·1) ; 4 ♀ imm 47·5–52·5 (50·4) ; San Cristoval 19 ♂ ad 49–63·5 (58·7) ; 9 ♂ imm 48·5–61·5 (55·2) ; 6 ♂ juv 47·5–58 (53·1) ; 10 ♀ ad 47·5–57 (54·2) ; 3 ♀ imm 50–51 (50·7) ; Ugi 5 ♂ ad 52·5–60·5 (56·5) ; 2 ♂ imm 52, 55·5 ; 3 ♂ juv 44·5–53 (49·8) ; 2 ♀ ad 54·5, 57·5 ; 7 ♀ imm 46–57 (52·0). *Wing* Guadalcanal 15 ♂ ad 106–115 (110·4) ; 9 ♂ imm 99·5–108·5 (103·5) ; 10 ♀ ad 102–108 (105·3) ; 3 ♀ imm 96·5–100 (98·5) ; San Cristoval 23 ♂ ad 101·5–109·5 (106·0) ; 13 ♂ imm 95–109 (101·4) ; 6 ♂ juv 99·5–104·5 (102·9) ; 14 ♀ ad 98·5–107 (102·2) ; 3 ♀ imm 97·5–101 (98·8) ; Ugi 5 ♂ ad 106–109 (107·7) ; 2 ♂ imm 98·5, 100·5 ; 2 ♂ juv 98, 99·5 ; 1 ♀ ad 105 ; 5 ♀ imm 94·5–98·5 (96·8). *Tail* (central rectrices) Guadalcanal 13 ♂ ad 91–111·5 (102·5) ; 8 ♂ imm 82·5–95·5 (88·4) ; 10 ♀ ad 88–101·5 (93·2) ; 4 ♀ imm 79–88 (83·2) ; San Cristoval 19 ♂ ad 88·5–105 (97·1) ; 14 ♂ imm 83–94·5 (87·5) ; 5 ♂ juv 62–70 (67·2) ; 9 ♀ ad 80–93 (87·8) ; 4 ♀ imm 79–84·5 (81·2) ; Ugi 3 ♂ ad 99–106 (102·2) ; 2 ♂ imm 80·5, 92 ; 1 ♂ juv 68 ; 2 ♀ ad 89, 93 ; 5 ♀ imm 78–81·5 (79·6). *Tail* (2nd rectrices) Guadalcanal 13 ♂ ad 73·5–86 (79·9) ; 9 ♂ imm 58–75·5 (70·2) ; 10 ♀ ad

69–79·5 (73·4) ; 3 ♀ imm 57–68 (63·2) ; San Cristoval 21 ♂ ad 68·5–82 (75·3) ; 16 ♂ imm 62–76·5 (70·1) ; 5 ♂ juv 54·5–63 (58·3) ; 8 ♀ ad 65–75·5 (71·9) ; 4 ♀ imm 64–70·5 (66·9) ; Ugi 4 ♂ ad 76·5–81·5 (78·2) ; 2 ♂ imm 58·5, 73 ; 2 ♂ juv 54, 55 ; 2 ♀ ad 67, 71 ; 6 ♀ imm 63·5–69 (65·7). *Bill* Guadalcanal 14 ♂ ad 21·5–24·5 (22·8) ; 8 ♂ imm 20·5–24 (21·9) ; 10 ♀ ad 21·5–23·5 (22·3) ; 3 ♀ imm 21–22·5 (21·7) ; San Cristoval 22 ♂ ad 21–23·5 (22·0) ; 16 ♂ imm 21–23·5 (22·3) ; 7 ♂ juv 20·5–22·5 (21·4) ; 14 ♀ ad 20·5–23 (21·7) ; 4 ♀ imm 20–22 (21·1) ; Ugi 5 ♂ ad 21–23 (22·2) ; 2 ♂ imm 21·5, 22 ; 3 ♂ juv 20·5–21 (20·8) ; 2 ♀ ad 22, 22 ; 7 ♀ imm 21–23·5 (21·3).

Iris bright orange-red, often orange centrally, sometimes pinkish ; imm average yellower, juv golden buff through pale greenish brown to dark grey-brown in apparently youngest birds. *Bill* black ; juv gape fuscous to flesh, youngest birds have dull black maxilla, horn mandible with yellowish base and edges, golden-yellow gape. *Foot* black, sometimes fuscous.

The immatures have juvenile wings, but their tails (and that of one of the juveniles) are adult.

The series from San Cristoval is extremely variable in the colour of the gloss. Some specimens are more purplish than any others seen, with scarcely a trace of green when viewed with the light, as in individuals of *A. mystacea* ; while others are as greenish as any, having traces of purple on the shoulder only, as in *A. brunneicapilla*. Table II shows the distribution of adult specimens of both sexes among eight arbitrary colour-classes. The 24 specimens in the BM(NH), from 10 islands in the Bismarcks and Solomons, are grouped together, while all the specimens from Guadalcanal, San Cristoval and Ugi were collected by the expedition.

TABLE II.—*Colour of body gloss in adults of* Aplonis metallica nitida
Class A purplest, H greenest.

	A	B	C	D	E	F	G	H
Bismarcks and Solomons .			1	1	2	1	14	5
Guadalcanal . . .				2	3	11	9	1
San Cristoval . . .	1	2	6	6	6	6	9	1
Ugi				2	1		2	1

NOTES. The non-adult plumages are described by Stresemann (1914).

The character distinguishing *nitida* from *metallica* is not so much that the interscapular patch is reduced (Amadon, 1956), as that its central blue-green area is either totally abolished (Stresemann, 1912) or occasionally represented by a bluish tinge. Also, even very purplish individuals have the green throat less mixed with purple than have generally greener specimens of *metallica*.

(M. 118) ***Aplonis brunneicapilla*** (Danis, 1938)

REFERENCES. Beecher, 1945 : 31 ; Cain & Galbraith, 1956 : 281.

RANGE. Solomons—known from Bougainville and Guadalcanal ; 1 specimen from Rendova.

SPECIMENS. Guadalcanal : Betilonga 23 ♂ ad, 1 ♂ juv, 17 ♀ ad. 1 ♂ ad, 1 ♀ ad to AMNH ; 1 ♂ ad to OUM.

Weight 24 ♂ ad 59·5–76·5 (69·2) ; 1 ♂ juv 62·5 ; 18 ♀ ad 59–73·5 (64·2). *Wing* 22 ♂ ad 108·5–115 (112·9) ; 16 ♀ ad 106·5–114 (109·4). *Tail* (central rectrices) 11 ♂ ad 119·5–204·5 (150·5) ; 6 ♀ ad 98–133·5 (115·7). *Tail* (2nd rectrices) 22 ♂ ad 73·5–91 (80·1) ; 15 ♀ ad 68–81·5 (72·4). *Bill* 23 ♂ ad 25·5–28 (26·8) ; 1 ♂ juv 24 ; 17 ♀ ad 24·5–27 (25·5).

Iris white ; juv dark grey-brown. *Bill* black ; juv grey, maxilla dark with black base, mandible paler with ivory base, gape orange-yellow. *Foot* black, sole whitish or yellowish.

The juvenile at first sight resembles immatures of other species of *Aplonis*, in its firm glossy plumage with wings and tail of almost adult gloss and texture. However, the latter clearly do not belong to the adult feather-generation yet are still growing ; and the weak pale bill, dark iris and sparsely-feathered throat confirm that the specimen is in its first plumage.

Adults usually have little purple in the body gloss, but one adult male is mainly purple above, and several specimens are bronzy beneath. The distribution of gloss colours on the head and throat is reminiscent of that of *A. metallica purpureiceps* of Manus : an arc over the eye purple ; lores, superciliary and cheeks brilliant green ; the throat blue-green with purple mainly at the sides and across the chin and breast. In fresh plumage, the crest of the adult male (about 15 mm long) and the crown are glossy black with a brownish tinge, those of the female somewhat browner. They bleach in worn plumage to pale dull brown.

NOTES. This species has been compared and associated with *A. mystacea* of New Guinea lowlands (Amadon, 1943*b* : 16 ; 1956 : 22 ; Mayr, 1955 : 36). However, both are clearly related to the widespread *A. metallica*, and all three should be considered together. *A. brunneicapilla* outdoes *A. mystacea* in specialization of the head-feathering, pallor of the iris, arching of the bill, and suppression of the distinctive juvenile pattern. This last is a common trend in *Aplonis*, especially among long-established island populations. While *A. mystacea* is the smallest and purplest of the three species (retaining traces of the blue-green area in the interscapular patch, and adding a purple rump to the pattern shown by *A. m. metallica*), *A. brunneicapilla* is the largest and greenest, and its enormously developed tail-streamers are more like those of most races of *A. metallica*. On geographical grounds, it seems probable that *A. mystacea* and *A. brunneicapilla* are both derived from *A. metallica*, and owe their special resemblances to convergence.

(M. 119) ***Acridotheres tristis tristis*** (Linnaeus, 1766)

REFERENCES. Baker, 1926 : 53.

RANGE. Afghanistan through India to Thailand ; introduced to islands in the Solomons (coasts).

SPECIMENS. Guadalcanal : Tenaru 1 ♂ ad.

Weight 127·5. *Wing* 143. *Bill* 26.

Iris dirty white overlaid with reddish brown. *Skin* round eye orange yellow, eyelid blackish. *Bill* greenish yellow, base of mandible blackish. *Foot* dull yellow, greenish on claws and edges of scutes.

NOTES. In the Solomons, known from the Russell Is. (Mayr, 1945*a* ; 1955 : 36), Guadalcanal (Davidson, 1929 : 259 ; Donaghho, 1950 : 129 ; Cain & Galbraith, 1956 : 287) and the Three Sisters (French, 1957).

(M. 120) ***Mino dumontii kreffti*** (Sclater, 1869)

REFERENCES. Amadon, 1956 : 34.

RANGE. Bismarcks, Solomons except San Cristoval Group—irregular geographical variation in size.

SPECIMENS. Guadalcanal : Betilonga 5 ♂ ad, 3 ♀ ad. 1 ♂ ad to OUM.

Weight 5 ♂ ad 182–200 (191) ; 4 ♀ ad 170–215 (189). *Wing* 5 ♂ ad 149–155 (153·3) ; 3 ♀ ad 146–150 (148·3). *Tail* 3 ♂ ad 97–100 (98·5) ; 3 ♀ ad 95–98·5 (96·7). *Bill* 5 ♂ ad 33–36·5 (34·4) ; 3 ♀ ad 31–33 (32·2).

Iris yellow. *Skin* round eye orange. *Bill* orange. *Foot* yellow to orange-yellow.

NOTES. Amadon (1956) shows that the small birds of Guadalcanal and Malaita (*sanfordi* Hartert) are best combined with *kreffti*.

(M. 121) ***Dicrurus hottentottus meeki*** Rothschild & Hartert, 1903

REFERENCES. Vaurie, 1949 : 291. See Mayr & Vaurie, 1948.

RANGE. Guadalcanal.

SPECIMENS. Guadalcanal : Betilonga 4 ♂ ad, 4 ♀ ad, 1 ♀ imm, 1 ♀ juv, 1 ? imm. 1 ♂ ad to OUM.

Weight 4 ♂ ad 73·5–81·5 (78·1) ; 4 ♀ ad 79–86 (81·6) ; 1 ♀ imm 71 ; 1 ♀ juv 65·5. *Wing* 4 ♂ ad 146·5–152 (148·6) ; 4 ♀ ad 139–143 (141·2) ; 1 ♀ imm 138 ; 1 ♀ juv 135. *Tail* (outer rectrices) 4 ♂ ad 129–135 (131·1) ; 3 ♀ ad 120–127·5 (124·8) ; 1 ♀ imm 121·5 ; 1 ♀ juv 119. *Tail* (fork depth) 4 ♂ ad 7–10·5 (8·1) ; 3 ♀ ad 2·5–7 (4·7) ; 1 ♀ imm 6 ; 1 ♀ juv 0·5. *Bill* 4 ♂ ad 34–37 (36·0) ; 4 ♀ ad 32–34·5 (33·6) ; 1 ♀ imm 33 ; 1 ♀ juv 32·5.

Iris orange to orange-red ; imm red ; juv dull orange. *Bill* black. *Foot* black.

The " immatures " are doubtfully separated as birds in the second year plumage, on the basis of somewhat more rounded and less curled tails (see Vaurie, 1949 : 206).

(M. 121) ***Dicrurus hottentottus longirostris*** (Ramsay, 1882)

REFERENCES. Vaurie, 1949 : 291. See Mayr & Vaurie, 1948.

RANGE. San Cristoval.

SPECIMENS. San Cristoval : Goge 2 ♂ ad, 2 ♂ imm, 1 ? imm ; Nagasi 1 ♂ ad, 3 ♂ imm, 1 ? imm. 1 ♂ ad to OUM.

Weight 3 ♂ ad 85·5–96·5 (91·5) ; 5 ♂ imm 78·5–89·5 (83·4). *Wing* 3 ♂ ad 144–152 (149·3) ; 5 ♂ imm 137–145 (140·1). *Tail* (outer rectrices) 2 ♂ ad 130, 140 ; 3 ♂ imm 120·5–128 (124·2). *Tail* (fork depth) 2 ♂ ad 7, 15 ; 3 ♂ imm 2–4·5 (3·0). *Bill* 3 ♂ ad 44–46 (44·8) ; 5 ♂ imm 39–44 (41·8).

Iris deep dull red to deep red-brown ; imm dark brown to dark greyish brown. *Bill* black ; 1 imm with pale horn tip. *Foot* black.

The immature specimens are separated on their more rounded and less curled

rectrices. They average less glossy above, and smaller, and must be in their second-year plumage (see Vaurie, 1949 : 206).

NOTES. The two races in the Solomons span virtually the whole range of variation shown by the highly polytypic *D. hottentottus*, in bill-form and the development of rictal bristles. One might expect a greater difference in diet than Cain & Galbraith's (1956) small samples showed. With its very long compressed bill and weak bristles, *longirostris* seems the better adapted to a diet of lizards and large insects.

(M. 123) ***Corvus woodfordi woodfordi*** (Ogilvie-Grant, 1887)

REFERENCES. Vaurie, 1958 : 9.

RANGE. Choiseul, Ysabel, Guadalcanal—irregular geographical variation in size.

SPECIMENS. Guadalcanal : Betilonga 1 ♂ ad, 3 ♀ ad. 1 ♀ ad to OUM.

Weight 1 ♂ ad 425 ; 3 ♀ ad 375–405 (386·0). *Wing* 2 ♀ ad 262, 265. *Tail* 1 ♂ ad 130 ; 3 ♀ ad 118–126 (123·0). *Bill* 1 ♂ ad 64 ; 3 ♀ ad 60·5–61 (60·8).

Iris grey. *Skin* of throat purplish red. *Bill* ivory, shading to pale blue and purple basally, tip black. *Foot* black.

NOTES. We follow Vaurie (1958) in regarding the black-billed *meeki* of Bougainville as conspecific with *woodfordi*, and the population of larger birds on Ysabel (*vegetus*) as belonging subspecifically to the latter.

(H) *Gymnorhina tibicen* subspecies

REFERENCES. Condon, 1951 : 67 ; Amadon, 1951 : 20. See Amadon, 1953.

RANGE. Southern and eastern Australia, introduced to Guadalcanal.

NOTES. Records for Guadalcanal are all from the grasslands near the Tenaru River (Beecher, 1945 : 36 ; Baker, 1948 : 17 ; Cain & Galbraith, 1956 : 288), where the species is probably not well-established.

(M. 124) ***Nectarinia jugularis flavigaster*** Gould, 1843

REFERENCES. Rothschild & Hartert, 1914 : 297 ; Mayr & Rand, 1937 : 210. See Delacour, 1944.

RANGE. Admiraltys, Bismarcks, Solomons except San Cristoval and Santa Ana (coasts).

SPECIMENS. Guadalcanal : Tenaru 8 ♂ ad, 1 ♂ juv, 6 ♀ ad, 1 ♀ juv, 2 ? ad. Ugi 2 ♀ ad. 1 ♂ ad to OUM.

Weight 8 ♂ ad 9·5–11 (10·2) ; 1 ♂ juv 9 ; 8 ♀ ad 8·5–9·5 (8·9) ; 1 ♀ juv 8. *Wing* 7 ♂ ad 54–58·5 (56·0) ; 1 ♂ juv 53 ; 8 ♀ ad 48·5–53 (51·9) ; 1 ♀ juv 47·5. *Tail* 7 ♂ ad 34·5–38·5 (37·0) ; 1 ♂ juv 31·5 ; 7 ♀ ad 31·5–35 (33·9) ; 1 ♀ juv 29·5. *Bill* 6 ♂ ad 22–24 (23·2) ; 1 ♂ juv 21 ; 8 ♀ ad 21–22 (21·6) ; 1 ♀ juv 21·5.

Iris dark to very dark brown. *Bill* black ; 1 juv base of mandible blackish horn, gape yellow. *Foot* black, shanks sometimes fuscous ; 1 juv leaden-black.

The juveniles are distinguished from adult females by laxer plumage, paler carotenoid, and lack of blackish subterminal patches on the dorsal feathers.

NOTES. This widely-distributed species has not been recorded from San Cristoval (see Mayr, 1945*a* : 279), and there are no specimens from there in the AMNH (Amadon,

in litt.) or BM(NH). The expedition did not encounter it at Manewiriwiri, where natives did not recognize a coloured figure (Mayr, 1945*a* pl. 3, figs. 34–35). French (*in litt.*) doubts its presence on the island. Nor is it found on Santa Ana, though present on Ugi (see Cain & Galbraith, 1956 : 104) and the Three Sisters (Cain & Galbraith, 1956 ; French, 1957). Its absence from San Cristoval may be related to the presence of two species of *Myzomela*, ecologically very similar to *Nectarinia* and both abundant along the coast. Ripley (1959) discusses competition between these two genera in the Moluccas, while Salomonsen (personal communication) finds a similar geographical relationship in the Bismarcks (see Ripley, 1961). That *N. jugularis* and *M. nigrita* have precisely complementary ranges may be fortuitous : *M. cardinalis*, which coexists with the former on Ugi and the Three Sisters, might be expected, as another wholly coastal species, to compete with it the more intensely.

(M. 125) ***Myzomela cardinalis pulcherrima*** Ramsay, 1881

REFERENCE. Mayr, 1932*a* : 24. See Koopman, 1957.

RANGE. San Cristoval, Ugi, Three Sisters (coasts).

SPECIMENS. San Cristoval : Manewiriwiri 6 ♂ ad, 12 ♂ imm, 2 ♂ juv, 6 ♀ ad, 3 ♀ imm, 1 ♀ juv, 1 ? imm, 3 ? juv. Ugi 33 ♂ ad, 13 ♂ imm, 3 ♂ juv, 7 ♀ ad, 4 ♀ imm, 1 ? imm, 1 ? juv. 1 ♂ imm, 1 ♂ juv, 1 ♀ ad, 1 ♀ imm, 1 ? juv to AMNH ; 1 ♂ ad, 1 ♂ imm, 1 ♀ ad to OUM.

Weight San Cristoval 6 ♂ ad 14·5–16 (15·4) ; 12 ♂ imm 14–16 (15·0) ; 2 ♂ juv 12·5, 15·5 ; 6 ♀ ad 11·5–13 (12·3) ; 3 ♀ imm 11·5–13·5 (12·5) ; 1 ♀ juv 13·5 ; Ugi 33 ♂ ad 14–18 (15·8) ; 13 ♂ imm 13·5–17·5 (15·5) ; 3 ♂ juv 14·5–16 (15·3) ; 7 ♀ ad 12–14 (13·0) ; 4 ♀ imm 12–13·5 (12·7). *Wing* San Cristoval 5 ♂ ad 68–74 (70·6) ; 12 ♂ imm 65·5–70·5 (67·9) ; 1 ♂ juv 66 ; 5 ♀ ad 61·5–65 (63·8) ; 3 ♀ imm 60–64 (62·0) ; 1 ♀ juv 61·5 ; Ugi 28 ♂ ad 67–74 (69·7) ; 11 ♂ imm 65–68·5 (67·2) ; 3 ♂ juv 66–69·5 (67·5) ; 6 ♀ ad 61–66 (63·3) ; 3 ♀ imm 61–63 (61·8). *Tail* San Cristoval 4 ♂ ad 46–47·5 (46·7) ; 10 ♂ imm 38·5–44·5 (41·5) ; 1 ♂ juv 40·5 ; 5 ♀ ad 39–41·5 (40·0) ; 3 ♀ imm 39–40 (39·7) ; 1 ♀ juv 37·5 ; Ugi 22 ♂ ad 42–48 (44·9) ; 13 ♂ imm 39–44 (41·6) ; 3 ♂ juv 40–43 (41·3) ; 3 ♀ ad 38·5–40 (39·3) ; 3 ♀ imm 37–38·5 (37·7). *Bill* San Cristoval ; 6 ♂ ad 20·5–22 (21·0) ; 11 ♂ imm 19·5–21 (20·1) 2 ♂ juv 16·5, 19·5 ; 5 ♀ ad 18·5–20 (19·3) ; 3 ♀ imm 19–19·5 (19·3) ; 1 ♀ juv 18 ; Ugi 29 ♂ ad 20–22 (20·8) ; 10 ♂ imm 19–21·5 (20·3) ; 3 ♂ juv 20–21 (20·3) ; 6 ♀ ad 19–19·5 (19·3) ; 3 ♀ imm 19–19·5 (19·2).

Iris very dark brown. *Bill* black, ♂ gape occasionally fuscous or yellowish fuscous, ♀ base of mandible sometimes brownish and gape yellowish (dark horn to golden-yellow) ; imm and juv base of mandible horn, gape fuscous-yellow to golden-yellow, base of ♀ maxilla greyish horn, ♂ sometimes greyish. *Foot* dark grey, toes darker and browner, shanks bluish (often patchily) with silvery sheen, ♂ ad average darkest.

The adult males are readily separable and do not show much colour variation, but the other plumages are similar, intergrading and variable. The colour and texture of wing and tail are much affected by wear, and there is little difference between those of juveniles, immatures and adult females. The red pigmentation is very variable in extent, and in whether it forms a general wash or (as in the adult males) is confined to specialized feather-tips lacking barbules.

Adult females are dorsally like immature males, and differ ventrally in having the red virtually restricted to throat and breast, with the belly usually sombre grey scarcely washed with pink, olivaceous or buff. Immature females differ from adults in having red tips only on the back ; red on the head confined to the forehead and front of the crown ; the back averaging paler and more olivaceous or brownish, with much less red ; the ventral red much less intense, but extending further posteriorly ; and the belly paler and more decidedly washed with red or olive. Immature males differ from immature females in having much more red ventrally, with specialized red tips. The brownish hind-crown and nape of a few immature males, resembling those of immature females, probably belong to the juvenile plumage. There is scarcely any overlap, in either sex, in the gonadial development of the adult and immature series.

Juveniles are very like immatures, in both texture and coloration of plumage. Their identification as such depends on one male BM(NH) reg. no. 1959.21.1374) which is coloured much like immatures, as far as can be determined from its somewhat disarranged plumage, yet is clearly very young : its bill is small (16·5 mm), wing and tail growing (52·5 and 20·5 mm), and contour-plumage scanty with large naked tracts. The plumage considered to be juvenile has the hind-crown and nape dull brown with a faint reddish wash, instead of bright red as in immatures, and is much less intense red beneath. Female and unsexed juveniles are like immature females, but with less red on the crown.

NOTES. Most of the populations attributed to this species (Mayr, 1932 ; Koopman, 1957) are rather uniform in basic colour-pattern, though variable in dimensions, intensity of pigmentation, and degree of sexual dimorphism. However, the form on Rotuma (*chermesina* Gray) is very different, and perhaps belongs to the *lafargei* superspecies. It resembles *M. malaitae* of that group rather than the races of *M. cardinalis*. The presence of a putative member of the superspecies (*M. jugularis*) in Fiji demonstrates its colonizing potential.

(M. 126) ***Myzomela melanocephala*** (Ramsay, 1879)

REFERENCES. Mayr, 1932*a* : 26. See Koopman, 1957.

RANGE. Guadalcanal, Savo, Florida Is.

SPECIMENS. Guadalcanal : Tenaru 2 ♂ ad, 2 ♂ juv ; Betilonga 9 ♂ ad, 1 ♂ imm, 4 ♀ ad, 1 ? juv ; Turipava 1 ♂ ad, 1 ♂ imm, 1 ♂ juv, 1 ♀ ad, 1 ? imm, 1 ? juv. 1 ♂ ad, 1 ♀ ad, 1 ? imm to OUM.

Weight 12 ♂ ad 11–14 (12·8) ; 5 ♂ imm 12–15 (13·6) ; 3 ♀ juv 10–12·5 (11·3) ; 5 ♀ ad 10–12·5 (11·2). *Wing* 11 ♂ ad 63–68·5 (65·6) ; 2 ♂ imm 64, 65 ; 2 ♂ juv 62, 63·5 ; 4 ♀ ad 57–60 (58·7). *Tail* 8 ♂ ad 44–46 (44·8) ; 2 ♂ imm 43, 44 ; 3 ♂ juv 37·5–42 (40·2) ; 4 ♀ ad 38–40·5 (39·4). *Bill* 11 ♂ ad 20–23 (21·9) ; 2 ♂ imm 20·5, 22 ; 3 ♂ juv 19·5–20 (19·7) ; 5 ♀ ad 19·5–20·5 (20·2).

Iris dark brown. *Bill* black, ♀ gape sometimes dull yellow ; juv base (+ 1 tip) dull yellow, gape bright yellow. *Foot* grey, bluish or greenish to fuscous, soles yellowish.

The immature plumage is considerably laxer than the adult, especially where it is

most ochraceous in colour (rump, belly, upper wing-coverts). The juvenile plumage is very similar, but somewhat laxer still, duller on nape and interscapulars, and with the black on the head still duller and more restricted.

(M. 127) ***Myzomela tristrami*** Ramsay, 1882

REFERENCES. Mayr, 1932*a* : 29. See Koopman, 1957.

RANGE. San Cristoval, Santa Ana.

SPECIMENS. San Cristoval : Manewiriwiri 5 ♂ ad, 1 ♂ imm, 5 ♀ ad, 2 ? imm ; Goge 12 ♂ ad, 4 ♂ imm, 5 ♀ ad, 1 ? juv ; Nagasi 4 ♂ ad, 3 ♂ imm, 1 ♀ juv, 1 ? imm. 1 ♂ ad, 1 ♂ imm, 1 ♀ ad to OUM.

Weight 21 ♂ ad 12·5–16·5 (14·4) ; 8 ♂ imm 12·5–15·5 (14·1) ; 10 ♀ ad 11·5–13 (12·3) ; 1 ♀ juv 11·5. *Wing* 18 ♂ ad 66–69·5 (67·5) ; 8 ♂ imm 64–67 (65·7) ; 8 ♀ ad 61·5–64·5 (62·9) ; 1 ♀ juv 60. *Tail* 19 ♂ ad 40–46 (44·2) ; 8 ♂ imm 39–43 (41·6) ; 7 ♀ ad 40–42·5 (41·1) ; 1 ♀ juv 38. *Bill* 18 ♂ ad 21–23·5 (22·0) ; 5 ♂ imm 21–24 (22·1) ; 8 ♀ ad 18–20·5 (19·7) ; 1 ♀ juv 19.

Iris very dark brown. *Bill* black ; imm and juv basal 2/3 yellow, greyish above, gape brighter. *Foot* black or dark slate, sometimes bluish, ♂ ad average darkest.

What appears to be the juvenile plumage is somewhat softer than the immature, and less blackish below, but not markedly more olivaceous (cf. Mayr, 1932*a*).

NOTES. It seems unwise to associate this form with *M. nigrita* of the New Guinea region (Stresemann, 1923 : 51 ; Mayr, 1932*a* ; Koopman, 1957) on the single all-obscuring character of total melanism. It may rather be a member of the *lafargei* superspecies ; especially since its nearest neighbour, *M. melanocephala*, also lacks red and shows little sexual dimorphism. The fact that two specimens (from Sant Ana—Mayr, 1932*a*) have red on the rump (like *M. eichhorni* and *M. malaitae*), and not on the forehead and throat (as in the females of many races of *M. nigrita*) nor the crown (as in the male of *M. n. forbesi*), supports this conclusion, as does intensive study by Salomonsen (personal communication).

Ramsay's (1882*c* : 27) record for Ugi refers only to Morton's account, unsupported by specimens. The species has not since been found there (Mayr, 1932 ; Cain & Galbraith, 1956), and is not to be expected on a small island in company with both *M. cardinalis* and *Nectarinia jugularis*.

(M. 129) ***Meliphaga inexpectata*** (Hartert, 1929)

REFERENCES. Hartert, 1929 : 8 ; Mayr, 1932*a* : 13.

RANGE. Guadalcanal (mountains).

SPECIMENS. Guadalcanal : Turipava 6 ♂ ad, 1 ♂ imm, 10 ♀ ad, 3 ♀ imm. 1 ♂ ad, 1 ♀ ad to OUM.

Weight 6 ♂ ad 41·5–48·5 (46·8) ; 1 ♂ imm 40 ; 10 ♀ ad 37·5–44·5 (40·1) ; 3 ♀ imm 33·5–34 (33·8). *Wing* 5 ♂ ad 109·5–115 (112·9) ; 1 ♂ imm 104 ; 10 ♀ ad 96–102·5 (100·0) ; 3 ♀ imm 95–97·5 (95·2). *Tail* 4 ♂ ad 95–96 (95·4) ; 1 ♂ imm 91·5 ; 7 ♀ ad 76–86 (82·8) ; 3 ♀ imm 79–80·5 (79·7). *Bill* 4 ♂ ad 31·5–35 (32·9) ; 1 ♂ imm 32 ; 8 ♀ ad 28–31 (29·6) ; 3 ♀ imm 26·5–31 (28·2).

Iris brown, light to dark (once " black "), sometimes reddish ; imm dark grey-brown. *Bill* black. *Foot* blue-grey, sometimes pale or silvery, claws fuscous ; imm shanks fuscous-tinged.

The rectrices of the adult females are narrower than those of adult males, but not as soft and pointed as those of immatures.

NOTES. We follow the generic assignment of Salomonsen (*in litt.*), who places " *Meliphaga* " *bougainvillei* of the Bougainville mountains in *Melilestes*. With the discovery of a new genus and species in the mountains of New Britain (Gilliard, 1960*a*), the distribution of large honeyeaters in Northern Melanesia (except for the *Philemon moluccensis* superspecies) becomes even more puzzling : *Vosea whitemanensis* in the mountains of New Britain, *Melilestes bougainvillei* in the mountains of Bougainville, *Meliphaga inexpectata* in the mountains of Guadalcanal, and *Meliarchus sclateri* on San Cristoval.

(M. 130) ***Meliarchis sclateri*** (Gray, 1870)

REFERENCES. *Cat. Birds B.M.* 9 : 279 ; Mayr, 1932*a* : 12.

RANGE. San Cristoval.

SPECIMENS. San Cristoval : Goge 13 ♂ ad, 1 ♂ imm, 4 ♀ ad, 2 ♀ juv ; Nagasi 2 ♂ ad, 2 ♂ imm, 5 ♀ ad. 1 ♂ ad, 1 ♀ ad to OUM.

Weight 14 ♂ ad 75·5–88 (80·2) ; 3 ♂ imm 68–77 (72·5) ; 9 ♀ ad 51·5–58·5 (55·6) ; 1 ♀ juv 45. *Wing* 4 ♂ ad 122–136 (129·5) ; 3 ♂ imm 121–123·5 (122·5) ; 6 ♀ ad 107–115 (111·1). *Tail* 7 ♂ ad 104·5–110·5 (108·5) ; 3 ♂ imm 99–102·5 (100·5) ; 7 ♀ ad 87–97 (93·1). *Bill* 12 ♂ ad 39–42 (40·5) ; 3 ♂ imm 39·5–41 (40·2) ; 8 ♀ ad 34·5–36·5 (35·4) ; 2 ♀ juv 30, 30.

Iris pale greenish grey or brown, dark brown centrally ; juv dark brown. *Skin* round eye pale blue-grey, eyelid whitish tinged with yellow, greenish or fuscous. *Bill* silvery greenish or straw distally, shading to silvery blue-grey basally, gape whitish with yellow inner surface ; imm and juv more or less streaked with black. *Foot* pale blue-grey, shank sometimes yellow-washed.

Besides the characters noted by Mayr (1932*a*), immatures differ from adults in lacking bristly black shafts in the throat plumage, lacking the blackish subterminal patches which give a scaled effect to the mid-back, and having the back browner and the rump more rufous. The juveniles differ from immatures in having softer plumage, especially ventrally and on the crown and nape, the centres of the dorsal feathers less blackish and their edges less yellowish, and the ventral shaft-streaking still less distinct.

(J) *Myzantha melanocephala* subspecies

RANGE. Eastern and southeastern Australia and Tasmania ; introduced to Three Sisters (French, 1957).

(M. 132) ***Zosterops ugiensis oblita*** Hartert, 1929

REFERENCES. Mees, 1961 : 162.

RANGE. Guadalcanal.

SPECIMENS. Guadalcanal : Betilonga 15 ♂ ad, 1 ♂ juv, 9 ♀ ad, 1 ? ad, 2 ? juv ; Turipava 6 ♂ ad, 4 ♀ ad. 1 ♂ ad to OUM.

Weight Betilonga 16 ♂ ad 13·5–16·5 (14·9) ; 1 ♂ juv 14·5 ; 9 ♀ ad 15–17 (16·4) ; Turipava 6 ♂ ad 13–16 (15·1) ; 4 ♀ ad 13·5–18 (15·6). *Wing* Betilonga 15 ♂ ad 64–69 (66·0) ; 8 ♀ ad 63·5–69 (65·4) ; Turipava 5 ♂ ad 66–70·5 (68·3) ; 4 ♀ ad 62–66 (64·0). *Tail* Betilonga 14 ♂ ad 44·5–48·5 (46·5) ; 7 ♀ ad 44–47 (45·4) ; Turipava 5 ♂ ad 46·5–49 (48·1) ; 3 ♀ ad 44–46 (44·8). *Bill* Betilonga 13 ♂ ad 15–16·5 (16·1) ; 1 ♂ juv 14·5 ; 8 ♀ ad 15–16·5 (16·1) ; Turipava 5 ♂ ad 15·5–16·5 (16·1) ; 3 ♀ ad 16–16·5 (16·2).

Iris light brown ; juv grey-brown to light brown. *Skin* round eye dark grey. *Bill* black, base of mandible whitish ; juv maxilla blackish streaked with pale horn, mandible whitish or pale horn streaked with blackish, gape flesh. *Foot* bluish grey, often with yellowish or fuscous tinge.

The juveniles differ from adults in having softer plumage, more narrowly-pointed rectrices, and primaries with less falcation, and in more dilute carotenoids (under tail-coverts paler yellow, olive duller and more citrine especially on outer edges of remiges), olive edges continued to the tips of rectrices, and lower cheeks without grey wash.

Notes. The geographical and altitudinal distribution of species of *Zosterops* in the Solomons is puzzling (despite Cain, 1956*b* : 13).

(M. 132) ***Zosterops ugiensis ugiensis*** (Ramsay, 1882)

References. Mees, 1961 : 158 (*rendovae*).

Range. San Cristoval.

Specimens. San Cristoval : Nagasi 5 ♂ ad, 1 ♂ juv, 4 ♀ ad. 1 ♂ ad to OUM.

Weight 5 ♂ ad 18·5–19·5 (18·9) ; 1 ♂ juv 17 ; 4 ♀ ad 17·5–21·5 (19·5). *Wing* 5 ♂ ad 68–70 (69·1) ; 1 ♂ juv 64 ; 4 ♀ ad 66–68 (66·6). *Tail* 5 ♂ ad 43–45·5 (44·5) ; 4 ♀ ad 40·5–44 (42·3). *Bill* 5 ♂ ad 16·5–18 (17·3) ; 1 ♂ juv 17 ; 4 ♀ ad 16·5–18 (17·1).

Iris light brown. *Bill* black, extreme base of mandible dull fuscous to ivory ; juv base of mandible grey. *Foot* bluish to greenish or fuscous grey, sometimes patchy, toes average darker and bluer.

The plumage of the juvenile is slightly softer than that of adults, but much firmer than that of juvenile *oblita*, and it has growing rectrices of adult shape. It differs in colour from adults in having the brownish wash on the forehead (very variable in intensity between adults) much reduced though discernible, and the dorsal olive duller and more citrine.

Notes. Mees (1955 ; 1961 : 160–162) has pointed out that the name *rendovae*, which had always been applied to the quite different *Zosterops* on Rendova, is the valid name for the present species under the International Rules. Arguments put forward to disprove this (Galbraith, 1957) are incorrect (China *in litt.* I.C.Z.N. ref. Z.N.(S)1223). While the other objections to the change are largely irrelevant, the cardinal point remains : transfer of a name in use for one taxon to another is highly undesirable, because of the confusion it is likely to cause, in a way that simple adoption of an unfamiliar synonym is not. It is quite untrue that name-transfer in the present case would affect only museum workers (Mees, 1961), even if we accept a pessimistic view of future field work in the Solomons. The name *Zosterops rendovae*

has been repeatedly used for the polytypic species or superspecies in the New Georgia Group, in widely-read works on evolution (e.g. Mayr, 1942 ; Lack, 1947 ; Cain, 1954*a*).

In order to avoid this transfer, I. C. J. G. will apply to the International Commission for the suppression of the name *rendovae* under the plenary powers, an action approved by Mees (1961). Use of the name *rendovae* in either sense would now be objectionable, and in order to avoid confusion a favourable decision by the Commission is here anticipated. Mees (1961 : 143–151) should be followed for the nomenclature of the New Georgia Group superspecies, and Mayr (1945*a*) for that of the present species and race.

(M. 136) ***Dicaeum aeneum becki*** Hartert, 1929

REFERENCES. Mayr, 1955 : 39 ; Salomonsen, 1960 : 33. See Mayr & Amadon, 1947.

RANGE. Guadalcanal.

SPECIMENS. Guadalcanal : Betilonga 19 ♂ ad, 5 ♂ imm, 10 ♀ ad, 1 ? imm ; Nala 1 ♀ ad ; Turipava 1 ♂ ad. 1 ♂ ad, 1 ♀ ad to OUM.

Weight 22 ♂ ad 8·5–10·5 (9·6) ; 5 ♂ imm 9·0–10·5 (9·5) ; 9 ♀ ad 8–9·5 (8·6). *Wing* 20 ♂ ad 50·5–56·5 (52·9) ; 5 ♂ imm 50·5–54 (52·4) ; 8 ♀ ad 49–53 (49·9). *Tail* 15 ♂ ad 26–29 (27·2) ; 3 ♂ imm 25–26 (25·5) ; 5 ♀ ad 23·5–26 (24·8). *Bill* 14 ♂ ad 12–13·5 (12·5) ; 5 ♂ imm 11·5–12·5 (12·2) ; 7 ♀ ad 11·5–12·5 (12·2).

Iris dark brown, 1 ♂ ad light brown, 3 ♀ ad dark grey-brown. *Bill* black, ♂ base of mandible often grey to whitish, ♀ bill sometimes greyish or fuscous, and more or less of mandible always whitish ; imm gape and more or less of mandible orange. *Foot* dark grey to black, often fuscous, sometimes bluish.

The females have a more or less conspicuous hoary loral spot, and (where the orbital area is well-preserved) a narrow white circlet round the eye reminiscent of *Zosterops* species. Neither character is shown by any male (except that an adult sexed as a male with unenlarged testes, and two unsexed adults, agree with the females in all characters, and have been included with them).

The plumage of the immatures is somewhat scantier on flanks and rump than that of adults, but not otherwise different in texture or the shape of remiges or rectrices. The immature female is distinguished from adult females only by its orange-based bill ; while immature males also have less red on the breast, more white on the lower throat, the grey of the lower breast paler and more olivaceous, the olive of the flanks duller, and the dorsal green gloss somewhat duller and bluer and more sharply restricted to the feather-tips.

NOTES. The population on Malaita is a distinct race, *D. a. malaitae* Salomonsen (1960 : 34), not simply intermediate between *aeneum* and *becki* (cf. Mayr, 1955).

(M. 137) ***Dicaeum tristrami*** Sharpe, 1883

REFERENCES. Sharpe, 1883 : 579 ; Rothschild & Hartert, 1908*b* : 364. See Mayr & Amadon, 1947 ; Salomonsen, 1960.

RANGE. San Cristoval.

SPECIMENS. San Cristoval: Manewiriwiri 1 ♀ ad; Goge 10 ♂ ad, 1 ♂ imm, 4 ♀ ad, 2 ♀ imm; Nagasi 4 ♂ ad, 3 ♀ ad. 1 ♂ ad, 1 ♀ ad to OUM.

Weight 14 ♂ ad 11–13 (11·9); 1 ♂ imm 11; 8 ♀ ad 10–12·5 (11·4); 2 ♀ imm 10·5, 11. *Wing* 12 ♂ ad 56·5–60·5 (58·9); 1 ♂ imm 56·5; 8 ♀ ad 54·5–57·5 (55·9); 2 ♀ imm 55·5, 56·5. *Tail* 7 ♂ ad 27–30 (28·8); 1 ♂ imm 27; 6 ♀ ad 25·5–28·5 (27·3); 2 ♀ imm 26·5, 28. *Bill* 12 ♂ ad 12·5–13·5 (13·1); 1 ♂ imm 13; 8 ♀ ad 11·5–13 (12·5); 2 ♀ imm 12, 12·5.

Iris very dark brown. *Bill* black; imm pale in dried skin, gape and more or less of mandible dull orange-yellow or pale yellow. *Foot* black to dull slate, often brownish or bluish especially on shanks.

The sexes are not quite alike, but differ in the distribution of white on the head (Rothschild & Hartert, 1908*b*; despite Mayr & Amadon, 1947; Salomonsen, 1960 : 35). Males have a white area behind and below the auriculars (which it may invade to some extent), no white on the chin and upper throat, but whitish scaling on the lower throat and breast. Females have the auriculars themselves and the chin and upper throat white, while the brown breast-shield is unscaled but smaller.

The immatures have sparsely-feathered chins and distinctly softer plumage than adults, and might be thought much younger than those of *D. aeneum becki*. However, they do not agree with Rothschild & Hartert's (1908*b*) description, which may refer to juveniles. They differ in pattern from adults in being more uniform, without the sharp contrast between dark crown and pale mantle, with the white edges on the head confined to the forehead, with the breast-shield paler and greyer and less sharply distinct from the whitish underparts, and (in the female) with little white on the throat.

NOTES. It must be emphasized that this species can be associated with the superspecies to which *D. aeneum* belongs (by Mayr & Amadon, 1947 : 21; Mayr, 1955 : 39) solely on the geographical grounds that only the *erythrothorax-hirundinaceum* complex occurs in the Australo-Papuan area. Apart from its large size, heavy bill and total lack of carotenoids, *D. tristrami* shows a pattern of melanin distribution unique in the family, though somewhat reminiscent of certain western *Dicaeum* (e.g. *D. rectrocinctum*) and even of *Oreocharis arfaki*. It seems best to regard it as a relict species of unknown affinities, which by competition excludes *D. aeneum* from San Cristoval (cf. Salomonsen, 1960 : 17). It cannot be associated with any particular species; certainly not with *D. eximium* merely because both are somewhat phaeomelanic.

(M. 138) ***Erythrura trichroa woodfordi*** Hartert, 1900

REFERENCES. Mayr, 1931*d* : 5. See Delacour, 1943.

RANGE. Guadalcanal.

SPECIMENS. Guadalcanal: Betilonga 1 ♂ ad, 1 ♀ imm.

Weight 1 ♂ ad 15·5; 1 ♀ imm 16. *Wing* 1 ♀ imm 61. *Tail* 1 ♀ imm 35. *Bill* 1 ♂ ad 15, 1 ♀ imm 14.

Iris dark brown. *Bill* black; imm base of mandible whitish. *Foot* flesh, fuscous-washed; imm pale straw.

Both specimens are rather dark green dorsally.

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