EDITORIAL

The Papua New Guinea Bird Society, during the two decades of its existence, has published a great deal of ornithological information in its official Newsletter. Unfortunately, but understandably, many authors who could have contributed to that publication chose to place their papers in other more widely distributed journals overseas. The Society now feels that an effort should be made to bring together in one journal all Papua New Guinean ornithological papers, thus avoiding the frustration and inconvenience of having the material scattered widely and often obscurely throughout the world. This is the first issue of MURUK, a quarterly journal, to be published by the Papua New Guinea Bird Society. It has come into being because of the a joint effort by the Society and the Department of Environment and Conservation who were also interested in consolidating papers on the birds of this region.

We hope that MURUK fulfils a need and encourage contributions of an academic or formal nature. If will be a journal dedicated to the sharing of knowledge about the unique birds of Papua New Guinea, as well as the other half of New Guinea, Irian Jaya, and the entire Solomon Islands region. Together they make up the 'New Guinea Region', an unique area, unsurpassed in its high percentage of endemics for such a relatively small part of the world.

This issue contains a paper questioning the current taxonomy of the Aplonis starlings, and a most interesting article on the co-operative breeding of Helmeted Friarbirds and Brown Orioles. The latter article raises many questions we hope to have answered in forthcoming issues of MURUK. Finally there is a report of a Black Tern at the Moitaka settling ponds near Port Moresby, the first record of this bird in the New Guinea region. We trust that you will find the articles interesting and topical, and hope that you will give this journal the support required for its success.

The Editorial Committee wishes to thank all authors who have contributed papers to date and we apologize for the delay in producing the first issue. We are optimistic that the next few issues will appear on schedule. For the long term the Society will continue to publish MURUK as regularly as possible when it receives appropriate papers. The continuing support of authors everywhere who have new material on the birds of the 'New Guinea Region' is needed.

The society Newsletter will henceforth become a bimonthly publication dealing solely with the activities of the Papua New Guinea Bird Society. Local members of the Society will receive both the Newsletter and MURUK as they are published. Overseas members will receive their Newsletters enclosed with MURUK on a quarterly basis.

Brian W. Finch, Editor

THE *APLONIS* STARLINGS OF THE SOLOMON ISLANDS

BRIAN W. FINCH

INTRODUCTION

The Solomon Islands are very well represented by the Starling family. There are only three genera present, one of which is introduced, but numerous species. The genus *Aplonis* has a greater abundance of species in the region than any other. Depending on the taxonomy followed there are no less than ten forms, which the author feels should all be recognised as individual species. This paper gives some unpublished data concerning these forms, and attempts to explain how so many different species can co-exist in these islands, whereas on the New Guinea mainland only two species occur over the major portion of the island with a very locally distributed third species confined to two major river basins.

THE GENUS *APLONIS*

The species of the genus *Aplonis* found in the Solomon Islands are as follows: *brunneicapilla, cantoroides, dichrous, feadensis, grandis, insularis, malaitae, metallica, tabuensis* and *zelandica*. These last two named species only enter the political Solomon Islands in the Santa Cruz Islands and represent New Hebridean avifauna not Solomon Islands; as such they are not discussed further in this paper, which deals with the Solomon Islands as a faunal region. The inter-relationships amongst the *Aplonis* species may be described by establishing three groups.

PROBABLE RELATIONSHIP BETWEEN THE SPECIES

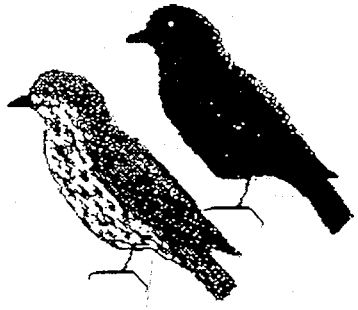
cantoroides	metallica	grandis
feadensis	brunneicapilla	malaitae
insularis		
tabuensis		
zelandica...	(?).....	dichrous

THE CANTOROIDES GROUP

Plump, stout-billed, short-tailed starlings are very widespread in the south-west Pacific. Two species are very widespread, *payanensis*, which extends into Malaysia from the Philippines and Borneo, and the familiar *cantoroides* found from the Moluccas to the Solomons. Over most of its range, this adaptable species has colonised small islands without changing in form; on some very small islands, however, the birds have differentiated from the ancestral stock sufficiently to warrant full specific status.

cantoroides

Over most of its range *cantoroides* is the most abundant starling but on some islands *metallica* occurs in far greater numbers. *Cantoroides* always nests in holes, usually in trees, but now it commonly uses man-made structures in which to nest and to roost. No other native starling in the region has shown this adaptability, nor has any other so readily accepted the change to an urban existence. This last move has most certainly led to a great increase in numbers, particularly in the large coastal towns. Although mainly a coastal or lowland species on the Papua New Guinea mainland, the species has moved into the montane towns of Goroka and Mount Hagen, each over 1700 m.



Aplonis cantoroides

Whilst the species has invaded small islands, it has not successfully re-invaded the islands which now have insular species that have evolved from it in earlier invasions. Four other species in the Solomons region have probably evolved from *cantoroides*, and all are restricted to small islands in the region.

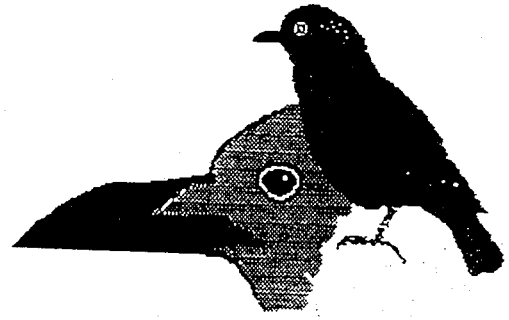
Typical *cantoroides* show a red iris in adult plumage, no coloured eye-ring; the immatures are heavily streaked on their undersides.

feadensis

Previously *feadensis* was considered to be more widespread, the reason being that one of the other races is now recognised as a separate isolated species. It is found only on the very small islands to the north-east of Bougainville and north of the south-eastern tip of New Ireland, and Ongtong Java off the north coast of Malaita. Although Rennell Island is given as part of the distribution for this species, there is another species endemic to that island, and this is discussed under *insularis*.

On Nissan Island where the author has had field experience with *feadensis* it was only noted in singles, pairs or small parties but not in flocks. Because there is no natural open country vegetation other than along the beach, the species has evolved into an arboreal forest inhabitant, feeding amongst the dense foliage of the trees.

A. feadensis is built much like *A. cantoroides*, from which it differs in being bulkier. The bill is more slender, almost thrush-like, with black feathering coming right down onto the culmen. The all dark iris is surrounded by a bright pale yellow eye-ring. Compared to *cantoroides* this species is almost totally without gloss, being a dull slaty-black. Immatures lack the heavily streaked underparts, and are merely a slightly duller version of the adult birds, with paler edgings to the breast feathers. In flight the species appears much broader winged, the beats are slower and the flight-pattern hesitant, nothing like the direct fast flight of *cantoroides*.



Aplonis feadensis

On Nissan Island the most abundant species of bird is the Nissan White-eye *Zosterops griseitincta*, an abundant species found in all types of vegetation throughout the island. This species has louder calls than most species of white-eyes, and a very pleasant Whistler-like warble. The Atoll Starling *A. feadensis* instead of having the loud ringing, sharp metallic notes common to *cantoroides*, has soft notes very similar to those given by the white-eye. The reason for this apparent mimicry is unclear, but the repertoire of calls is atypical for this genus. The most commonly given call is a loud rising slur:

weeeeee-eeeeee

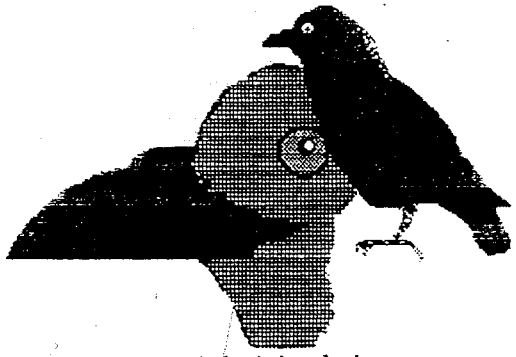
insularis

Confined to Rennell Island, south of the island of Guadalcanal, this species, for it is a species in its own right, was formerly treated as a race of *feadensis*. Reasons are given here why the author considers that it is not even related to that species.

On Rennell the bird was fairly common, usually encountered in pairs feeding in the forest canopy where it can be most silent and unobtrusive. It readily comes down low to feed in shrubs. In general appearance it is much like the previous species but has a very short tail, even for an *Aplonis*. It is wholly slaty-black with a greenish gloss on the back and sides of the neck. Compared to *feadensis* the bill is heavy, more like *cantoroides*, possibly even heavier and lacking the conspicuous feathering on the

culmen of the former. The upperparts of adults are uniformly slaty-black; the under parts are dull grey-black; the flight feathers show as a duller black and contrast a little with the rest of the wing; the entire iris is orange-yellow and there is no trace of an eye-ring. Immatures are more uniformly browner, lacking any gloss, and have a pale brown iris.

The calls are most distinctive. In flight the notes are a sharp metallic clinking "chink-chink" very like that given by the Orange-breasted Fig-Parrot *Cyclopsitta giuelmitertii* of the New Guinea mainland. The song however is a musical series of tinny notes like those of *cantoroides* but more varied. Some calls are similar to those of the Song Parrot *Geoffroyus heteroclitus*, also found on Rennell Island.



Aplonis insularis

Like *feadensis* this species is an obvious derivative of *cantoroides*, both having evolved independently following invasions of that species to the islands that they now occupy. Whether Nissan, Fead or Ongtong Java received the original invasion of *cantoroides* that evolved into *feadensis* is not certain, but from one of these islands the bird spread to the others as an already evolved *feadensis*. At some time *cantoroides* arrived on Rennell Island where a very insular form evolved into *insularis*. So sedentary is this species that it has not even managed to colonise nearby Bellona, which has no Starlings with which it would compete.

The lumping of these two forms under the umbrella *feadensis*, as Mayr (1954) and others have done, has surely been on the grounds that the two are similar in appearance, inhabit well off-shore islands and it was convenient to do so. Obviously no investigations were carried out in the field, and diagnostic features in both these species, such as eye-ring colour and iris colour, are lost in museum specimens. Mayr (1954), makes no mention of the yellow eye-ring on *feadensis* nor the orange-yellow iris of *insularis*. When *feadensis* was illustrated in Gould's monographs, the species was illustrated without a yellow eye-ring; nor did Rutgers make any mention of the fact, when he published his contributory text to Gould's paintings in Birds of New Guinea. The illustration, however, does show the thrush-like bill of *feadensis* as mentioned, whereas Mayr states that it has a heavier bill than *cantoroides*.

metallica

A. metallica is probably the most numerous and widespread Starling in the Solomon Islands, sharing the distribution of every other species apart from *insularis*. It is even present on the off-shore islands occupied by *feadensis*, although in much smaller numbers.

It is a highly social species, always in flocks, and nesting colonially in usually isolated trees, where the pairs build their woven pendant nests. No other species has a long graduated tail (but see *brunneicapilla*), nor the rich green-purple gloss.

Aplonis metallica

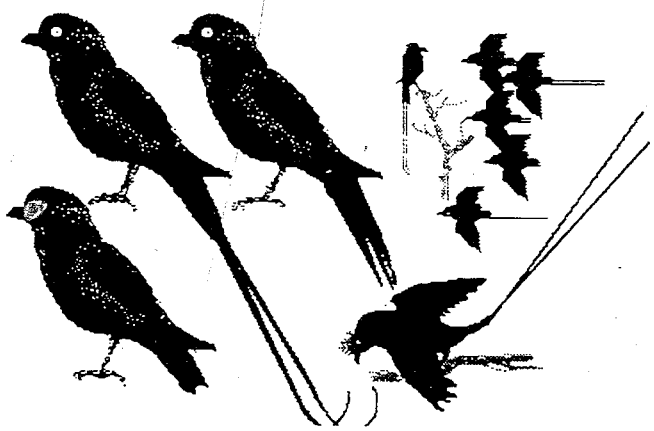
brunneicapilla

This species is undoubtedly the most striking of the whole genus, and the rarest starling in the Solomon Islands. It was previously known from only a few specimens from Rendova and Bougainville, and, until a breeding colony was discovered by Cain and Galbraith on Guadalcanal, the remarkable breeding plumage was completely unknown. They located breeding colonies in the hill-forest behind Honiara, where pairs had burrows in epiphytes attached to large rainforest trees. Birds with extraordinary long central tail feathers were then seen for the first time. The original birds that were collected were no-breeding individuals showing no trace of any elongated tall feathers; the most distinctive feature that they possessed was a pale iris. Thus the most diagnostic feature being unknown, the species was named the White-eyed Starling. To emphasise the obscurity of the species, Mayr states "...tail slightly elongated, bill highly arched. Iris white; bill and feet black. Differs from *metallicus* by the white eye, heavy bill, and short tail. Very rare and probably not colonial."

In early 1985 Peter Kaestner was most fortunate to find an active breeding colony on the Buin road, south of Aropa on Bougainville. This was in a logged area, and the colony of some ten pairs was located in a large completely isolated tree that had been left standing. The author was most fortunate in visiting this colony very shortly after its discovery and this provided a unique opportunity to study this virtually unknown species.

The adults were bluish-black with a strong purple gloss to the throat and a bottle-green gloss to the back. The black bill was short, stout, but with a strangely arched culmen quite unlike any other species. The iris was conspicuously whitish, although the immatures were not so striking, and in many it was not very obvious that the iris was so pale. The most outstanding feature was the curious elongated central tail feathers, which extended as two long and very flexible pins up to three times the length of the outer tail feathers. The rest of the tail showed a slight graduation. Birds with tail wires were assumed to be adult males; the presumed females and immatures lacked the pin feathers and had lanceolated tails, rather than graduated, this being less obvious in the younger birds. This species appeared to lack streaked immature plumages, the young being duller versions of the adults, and lacking gloss.

Some adult birds lacked the pins, and others had broken wires, or only one streamer. These are presumably broken in the confines of the nest burrow when the bird is turning around, but it is also likely that the wires are moulted when the bird is no longer in breeding condition or has completed nesting. This would also explain that whilst adults had been collected before Cain and Galbraith found the first breeding colony, they showed no trace of the pin feathers.



Aplonis brunneicapilla

The location was inundated lowland forest, which probably remains water-logged throughout the year, although the logging operations may have upset the local water table; however the nesting tree was above the water-line. It was 20 m from the nearest patch of forest, completely in the open. The tree was very tall; for the first 15 m the trunk rose straight up and had no arterial branches at all and the upper part of the tree spread out into several stout branches, terminating in a fairly open canopy. The upper portion of the trunk and the major branches were densely clothed in masses of epiphytes of many kinds. The epiphytes had created their own soil-like environment, as the vegetation withered, or wind-blown detritus collected in the tangles. Dense stem and root systems formed mats around the vegetation and on the branches. The

starlings' nests were burrowed either in the soil around the larger epiphytes such as 'Staghorns', or in the dense tangles of roots. Some of these tunnels must have been fairly deeply located inside of the mass as birds with very long tail streamers disappeared completely from view.

At first light the birds would awaken and emerge from the nest tunnels, where all of the birds had roosted during the night, and sit around on the tops of the branches of a dead neighbouring tree, or close to the nest, where they would preen in the first rays of the dawn sun. Some would sing in a subdued fashion. After a short while the birds would collect as a flock or a series of parties, and fly out to collect food from the nearby forest. The birds would be away for some twenty minutes, then return as a flock to the nest site carrying food, which appeared to be berries, and wisps of plant material for the nest. The birds carrying food entered the nest tunnels; some birds that appeared to carry nothing, or had already deposited their load and were waiting for their mates to finish feeding the young, would sit outside the nest and preen and warble softly. when the young had been fed, the birds would wait until all were ready, then fly off as a flock to the feeding site. One such feeding tree was only 30 m away, and there the birds collected berries. Around the nesting tree the birds were always seen flying to it or from it, but a few hundred metres away a couple of parties were observed flying at a tangent to the colony suggesting that another nesting colony was located in the forest not very far away.

In all the respect the species lives a colonial existence. It breeds as a colony, it flies out to feed as a group, it feeds as a group, returns to the nest as a group and feeds the young as a group. Connected with this is the most complex pair-bonding display which was demonstrated by several adult males at the same time, near the nesting tunnels on neighbouring branches. These males selected a horizontal branch, lowered their heads and backs by flexing their legs, raised a short tufted crest from the base of the bill to the back of the crown, spread. At the same time the tail was pointed at an upwards angle, and the long tail wires, which were completely flexible, wafted up and down. For a starling this is a most unusual display. Some birds while performing would give a warble of sharp metallic notes, very loud and strong when compared to *metallica* which is what it most closely resembled. Many notes were very tinny, and now and again the birds would string the notes together into a rustling 'aluminium-foil-like' warble.

The birds showed no aggression when congeneric species either settled in their nesting tree or in a neighbouring tree, as was the case with a pair of Brown-winged Starlings *Aplonis grandis* which had their nest in a neighbouring tree and frequently used the white-eyed Starlings tree as a landing station when flying to or from their own nest. When a flock of *metallica* landed in the neighbouring tree there was likewise no aggression, and it was as if the *brunneicapilla* had not noticed them.

The affinities of this species are unclear. In the elongated tail feathers, colonial habits, metallic warblings and chinkings, it shows closest alliance with *metallica*. It is evidently not able to compete successfully, and has remained a very rare species wherever it is found. It is likely that it will eventually be found to occur on all of the major islands throughout the Solomons, and has so far been over looked when not in its striking nuptial plumage. That the Bougainville colony was only the second ever to be discovered, on an island has been fairly well covered ornithologically when compared to all of the other islands that make up the Solomon Islands, testifies to its rarity.

THE GRANDIS GROUP

The three starlings to make up this group are different from those so far dealt with in that they are larger and shaped more like a Myna and their primaries are brownish, contrasting with the rest of the wing. Two species build large stick nests placed openly in the branches of trees. The author is not sure about the nesting habits of *dichrous*. The last named is possibly not part of this group. The reasons for this conclusion are discussed under the section dealing with that species.

grandis

Grandis is a member of a group of the three larger species of starlings of the region. The other two related species (considered subspecies by some authors) are *malaitae* only found on the island of Malaita, and *dichrous*, only found on the island of Makira (previously known as San Cristobel). On all of the other islands apart from small offshore islets, Rennell island and the Santa Cruz group, it is *grandis* that will be found. It differs little on these islands, although its altitudinal distribution and social behaviour do appear to differ from location to location, but this may have seemed so only because of having a limited sample.

A large bulky starling lacking the crisp blackness in the plumage, or any noticeable gloss, in build it is shaped similar to the Eurasian Starling *Sturnus vulgaris* and like this species has a medium length slender bill, rather than the short, stout, almost crow-like bills of most *Aplonis* starlings. The throat has long dark lanceolate hackles with green/bluish gloss, and there are also some elongated feathers on the back of the neck and nape. In some lights the whole bird can appear streaky, in others the underparts look more dull dark brown than blackish. The outer primaries are obviously and diagnostically paler brown, contrasting with the rest of the wing. The iris is dark, the bill and feet blackish. Immatures appear as duller versions of the adults, but there is no streaked immature plumage in this group.

The birds on Bougainville travel in pairs, and would seem to pair for life. They liketo perch openly in the very tops of trees, where they sit for long periods. They are sluggish in their movements, their flight is laboured and hesitant, more like a Myna's than a Starling's and it is in flight that the brown primaries are most obvious. The nest is also

placed in the small branches at the top of a tree, a very bulky nest woven out of small sticks into a dome-shaped mass with an entrance in the side. Possibly the nests are added to in successive seasons, as some observed were small, whilst others of much larger dimensions were in use at the same time.

Aplonis grandis

Most calls recorded were shrill and high pitched, "shreenk", "shrip", "seeet", and in flight the birds often gave an un-starling-like "tip-tip" similar to the fight calls of some Eurasian Buntings *Emberiza sp*. The protracted song consists of a continuous string of warbles, chips, squeaks and other shrill notes, interwoven with a chatter. This song is very like that given by the Eurasian Starling, a fact that has been commented on by other authors writing about this species. Some notes are soft but others, interspersed amongst the ramblings, cannot be heard at all even though the bill is opening and closing as if the refrain was still pouring forth. There is possibility that part of the song is beyond the range of human hearing as has been suggested by another author (Hadden, 1981).

On Bougainville *grandis* is mainly a lowland species, but occurs in small numbers as high as Panguna and probably extends even higher. It does not associate in flocks; parties up to four are regular, this probably representing an adult pair with two fledged offspring. The general rule is that this species is to be found in pairs, but undoubtedly more must gather at fruiting trees.

Birds of Kolambangara, in the central Solomon Islands, were in no way any different from the birds seen on Bougainville.

The birds on Guadalcanal in the far eastern and of the Solomon Islands chain were very similar to the birds encountered elsewhere, but in the field their appearance was slightly smaller overall, whit a very slightly proportionately longer tail (not obvious), and the pale brown of the primaries more conspicuous. They were common from sea-level up to 1200 m at Vallecocha. As with other localities, the species was usually in pairs, but it showed a more ready inclination to gather socially into larger parties, and on one occasion over twenty were feeding at a fruiting bush. One call heard on

Guadalcanal but not noticed elsewhere was a high metallic and strident "zink" which was given frequently by birds as they fed, or remained perched on a branch. The call note was given with a convulsive jerk of the head, and had carrying power.

In appearance, the differences between *grandis* from the three parts of its range, western (Bougainville), central (Kolamabangara), and eastern (Guadalcanal), were insignificant. There was no obvious difference in overall size or structure, no noticeable cline in plumage colour, characteristic, or texture, no appreciable variation in the shade or extent of the pale brown of the primaries, no differences in the bill size or structure, nor any variation away from a dark iris.

It is the unvarying characteristics of this species throughout its range that persuade the author that the two forms, *malaitae* and *dichrous*, are not merely races of *grandis*, as they have been treated in the past. The former is an allied form but still a species in its own right, the latter is only doubtfully a close ally of *grandis*. The author's reasons for splitting these forms into separate species are given under their individual treatments.

malaitae

Aplonis malaitae

Malaitae is confined to the island of Malaita, lying roughly to the north of Guadalcanal, where it is and obvious representative of the *grandis* group, but differs from that species in several small but nevertheless important features, and one very important and conspicuous feature. This last difference, strangely not even mentioned by Mayr (1945), is that the iris, instead of being dark, is wholly whitish. Overall the bird is slighter than *grandis*, showing less brown on the primaries of the perched bird. The hackles on the back of the neck and the nape are longer, and hang as a shaggy beard from the throat, where the gloss is a shiny deep purple. The breast shows an oily green sheen, contrasting with the throat.

This species is often encountered in pairs, but readily gathers into parties. A feature not observed with *grandis* is that *malaitae* will readily associate with *metallica* at fruiting trees. It is common throughout the lowlands, extending up into the hills.

The song is similar to that of *grandis* being rich and varied, and it also shares the higher pitched notes, which may be beyond the human auditory range. Whilst very closely related to *grandis*, and a geographic replacement species, full species status for *malaitae* is warranted because the iris colour, smaller size, glossier, greener plumage, and long hackles on the neck and throat place *malaitae* apart from *grandis*, which has unvarying appearance throughout its distribution.

The fact that Mayr (1945) did not make any mention of the white iris on this species must mean that he was unaware of the fact. This is yet another example of taxonomic placements being decided on the basis of museum skins, with no field data. Museum skins lose features such as iris colour, eye-rings, bill and leg colour, or the original tone of any soft parts such as wattles, gape linings and bare patches of skin. So far in this paper *malaitae* is not the only casualty; we have seen it with *feadensis*, where there is no mention of any yellow eye-ring, and with *insularis*, where there is no mention of the complete lack of an eye-ring, nor any mention of the orange-yellow iris colour. Thus *feadensis* and *insularis* were lumped together as one form, and the same procedure has been applied to *malaitae* and *grandis*. In fact the entire treatment given in "Birds of the Southwest Pacific" (Mayr, 1945) is to be found in the section dealing with the Brown-winged Starling (*grandis*), where *malaitae* is treated as a race of that species. It reads, "....*malaitae* Mayr 1931 (malaita) smaller and with a greener breast".

dichrous

Aplonis dichrous

Dichrous is a very different bird from either *grandis* or *malaitae* in size, appearance, call, habits and bill structure. All of the features are treated in detail in the text that follows.

It is a much smaller bird than either of its so called close relatives, but treated here in the *grandis* group, for that is where it has been placed by other authors. It lacks that dull brownish cast, being a crisper black, with a shorter, stouter black bill, and a redder iris. In overall shape (but not posture), it more closely resembles *cantoroides* than *grandis*. There is a bright glossy spangling of purple on the breast and underparts. The

throat has short pointed hackles, not the long rangey lanceolate hackles of its "allies". The most distinctive single feature is that the entire flight feathers are pale brown, almost with a golden tinge in some lights, whereas in the last two species, the pale brown is confined to the outer primaries, leaving the inner primaries and secondaries blackish. This pale wing contrasts strikingly with the crisp blackness of the remainder of the plumage. The tail is also brownish rather than black (unlike the last two species) and noticeably squared and rather short.

The birds associate mainly in pairs, but also in small parties, and are found at all altitudes on the island. Unlike the other two species which move deliberately and somewhat clumsily, this species is very agile, coming right down in the foliage to feed within less than a metre of the ground, hopping nimbly amongst the slender twigs, or hanging by its feet to stretch itself out to reach an item of food. In great contrast to all other starlings, it showed no aversion towards joining mixed feeding assemblages, readily associating with such unlikely genera as *Monarcha, Rhipidura*, and *Pachycephala*. The calls recorded were high pitched squeaks and clinks like *cantoroides*, and a rising whistle!

Differences between *dichrous* and *grandis* are far more numerous than the resemblances, the only obvious feature that they share is the paler primaries, and even in this it is very different in the extent of the pale area, and the colour.

The inclusion of *dichrous* with *grandis* is certainly erroneous, and many current authors treat it as a full species. The fact is that it has probably not even evolved from *grandis* stock, but could have come from the east and not the west. Although the author has no field experience of *zelandica* from Santa Cruz and the New Herbrides, it would seem (based on descriptions) to be a far better contender as an ally of *dichrous*. In bill structure and body shape, this species is like a typical *Aplonis* starling.

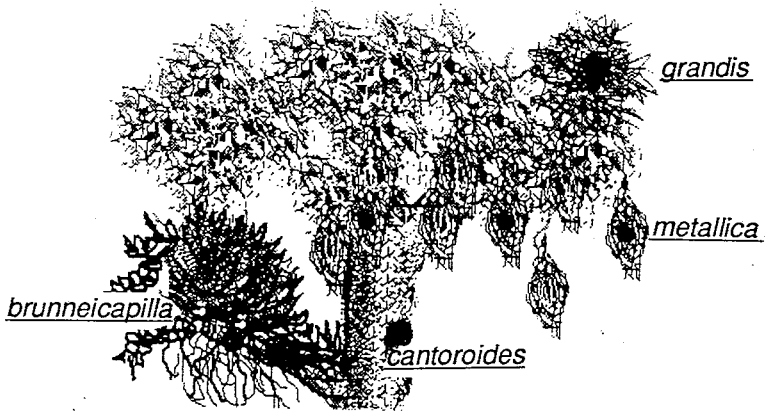
SUCCESSFUL SYMPATRY IN THE GENUS *APLONIS*

Through the greater part of the New Guinea mainland, two species of *Aplonis* are to be found. Both are common and they co-exist all around the coast, and along river systems. Both species require open country, but only the Singing Starling *A. cantoroides* is found in the dry savanna. Both are widespread and have colonised the major satellite islands, and a majority of the smaller vegetated islands. Whilst they may feed in the same trees, there is no competition when it comes to nesting, for the Singing Starling nests in already excavated holes or natural hollows in trees, and more recently in man-made structures. Whilst the species is solitary in its nesting habits, several pairs may nest in close proximity if there are a sufficient number of potential sites. The Metallic Starling *A. metallica* is a highly social species, and only nests in colonies, some of which are very large. Each pair constructs a neatly woven, pendant-shaped hanging nest, and the entire colony may have hundreds of these nests hanging from the higher branches all over the tree. Often the tree is an isolated individual in an otherwise fairly open area.

In view of the fact that the New Guinea mainland is the home for only two widespread species of *Aplonis*, it comes as a surprise to learn that some islands in the Solomon Islands, all of which have a fairly impoverished fauna typical of isolated island's host four species of *Aplonis* in complete sympatry. This presents a very interesting study for students interested in avian niches. Whilst a more detailed study for students interested in avian niches. Whilst a more detailed study of these birds is required, there is no doubt that a greater part of the success of their co-existence stems from their different nesting habits. It would be conceivable for all four species to nest in the same tree, without competing for sites. At the place along the road to Buin where the observations on the nesting colony of White-eyed Starlings were made, all four species of starlings were present, and all four were found nesting in close proximity.

There was no inter-specific aggression between the four species, even though they were at times present in the same vegetation; in fact there was a considerable tolerance. Perhaps they utilise different food resources, although all four were seen eating berries of the same appearance.

DIFFERENT NEST SITES UTILISED BY *APLONIS* STARLINGS



brunneicapilla

Only nests in holes which it must excavate itself at the bases of and amongst the packed root systems of arboreal epiphytes. Burrows are deep, and in most cases almost vertical. It would appear that this species favours isolated trees in which to nest, and will only do so as a small colony, as this is a highly sociable species.

cantoroides

Mainly a solitary breeder, though several pairs may nest in close proximity. Always nests in a hole, either in a tree or a man-made structure. The hollow issued as the nest site, but the species make no excavations itself apart from tidying up the hole.

grandis

A solitary breeder, which builds its bulky nest in exposed branches, usually in the top of a tree. The nest is a medium to very large (for the size of the bird), dome-shaped structure of small woven sticks and moss with a side entrance.

metallica

A colonial nester, favours isolated trees in which pairs weave their pendant hanging nest made from neatly woven strands of grass-like fibres.

CONCLUSION

Hopefully this paper, whilst it has not conclusively reformed the taxonomic placements of the species treated, nor given them the thorough coverage that they deserve, will kindle and interest in this most interesting and sorely neglected group. The suggestions of revising the taxonomy are ventured in the hopes that another will take up the task and work on the group in the field.

Haddon, D. 1981. **Birds of the North Solomons.** Wau Ecology institute, *Handbook No. 8.* Papua New Guinea.

Mayr, D. 1945. **Birds of the Southwest Pacific.** New York: MacMillan.

Address: P.O. Box 59749, Nairobi, Kenya.

SECOND RECORDED INSTANCE OF THE BROWN ORIOLE *ORIOLUS SZALAYI* NESTING IN THE SAME TREE AS THE HELMETED FRIARBIRD *PHILEMON BUCEROIDES*

GEORGE E. CLAPP

INTRODUCTION

The author reported the Brown Oriole *Oriolus szalayi* nesting in the same rain-tree *Saman samanea* as the Helmeted Friarbird *Philemon buceroides* in Popondetta in 1982 (Clapp 1982b). Between 2 May 1982 and 5 June 1982 more than eleven hours of observations were carried out. Nesting in each case was aborted by an unknown agency, in the case of the honeyeater at the nesting stage and in the case of the oriole still apparently at the incubation stage. Twenty-eight antiphonal duets by *Philemon buceroides* during the observation period confirmed the data in Clapp (1982a) on duetting in *Philemon buceroides* and confirmed that duetting in this species is performed by a mated pair. During the period in question not a single instance of direct aggression between the two species was observed. The possibility was raised of a dominance hierarchy between *Philemon buceroides* and *Oriolus szalayi* with the former being dominant. The bearing of the data on the striking similar appearance of

O. szalayi and *P. buceroides* was discussed and the conclusion reached that the data supported the rejection of Cody's (1974) proposal that interspecific aggression has caused the convergence in appearance. The present paper documents the second instance of Brown Orioles nesting in the same tree as a pair of Helmeted Friarbirds.

CIRCUMSTANCES

On 10 April 1983 Brown Orioles and Helmeted Friarbirds were noticed both nesting in the same tree, in the high covenant housing area in Popondetta, Oro Province, Papua New Guinea. It was evident from the state of the nests that the friarbirds must have commenced building first. The tree used for nesting was an Erima, *Octomeles sumatrana.*

The nests were typical for each species, the *Oriolus* nest was a medium shallow saucer suspended from a fork let from a lateral branch and situation near the very bottom of the canopy about one third of the way towards the bole; the *Philemon* nest was a deep cup suspended from a forklet from a lateral branch and situated approximately two-thirds of the way up the canopy and halfway in towards the bole. The *Oriolus* nest had a wispy tail of vegetable material hanging from the bottom and the *Philemon* nest, although not having one to start with, developed a wispy tail later. The two nests were both on the same side of the tree and were some eight or nine metres apart vertically.

OBSERVATIONS

The bulk of the observations was carried out on 28 separate days within the period 10 April 1983 to 25 May 1983 inclusive. There was a total of 31 hours and 22 minutes observations. Observations were made on 10-12 April inclusive, 16-18 April inclusive, 21-26 April inclusive, 1st May, 3-8 May inclusive, 10 May, 12 May, 14-15 May, 18-19 May, 21-23 May inclusive and 25 May.

NESTING OF WHITE-BELLIED CUCKOO-SHRIKE *CORACINA PAPUENSIS* IN SAME TREE

On 21 April the author noticed that a pair of White-bellied Cuckoo-shrikes *Coracina papuensis* was also nesting in the same tree used by the Friarbirds and Orioles. The author was not able, however, to follow the progress of this breeding attempt (two nests were difficult enough to watch simultaneously, three would have detracted from the value of the observations) and the last note was that on 21 May the *Coracinas* were observed sitting on the nest, which was situated near the top of the canopy, on the same side of the tree as the other two nests.

THE NESTING RECORD

The initial observations of nest building started on 10 April and both the Brown Oriole and the Helmeted Friarbird were building on this day. Both and definitely finished building by the end of 16 April; both were seen sitting on 17 April. The Friarbird was