SHORT COMMUNICATIONS

SYMPHYodyn AMBLYORNIS SUBALARIS AND A. MAC GregORIEAE
IN NEW GUINEA

During the working-out of a small collection of New Guinean birds a breeding specimen of the Striped Bowerbird Amblyornis subalaris was found that had been collected approximately 160 km east of its known range, and above its usual altitude (Harrison and Frith 1970). On the label of this specimen the collector stated that another four nests, containing eggs, of this species were examined. This suggested that A. subalaris and MacGregor’s Bowerbird A. macgregorii may be locally sympatric because the range of the latter extends to the same mountains as A. subalaris in some places. In these circumstances the distinctly different bowers of the species might act as isolating mechanisms. An examination of Amblyornis skins in the British Museum did in fact bring to light some evidence of sympatry.

The two species of Amblyornis in south-eastern New Guinea are quite similar in plumage. Both are the size of thrushes (Turdus spp.), dark olive-brown above and ochraceous-brown on the throat and underparts. A splendid orange crest extends from the crown onto the back in adult males of A. macgregorii, but only onto the nape of A. subalaris (Fig. 1). A. subalaris is further distinctive in having pale-brown streaking on the throat and upper breast in both sexes, and dark-brown tips to the crest feathers of the male. Females lack the orange crest; they can, however, be easily distinguished at close quarters by the striated throat of A. subalaris and the lighter browner head of A. macgregorii.

A far more striking difference between these two species is the type of bower constructed by the males (Marshall 1954; Gilliard 1969). The bower of A. subalaris is an extremely ornate structure of twigs forming a nest around the central sapling or maypole, and is decorated with blossoms, berries and other objects. The bower of A. macgregorii is comparatively simple, consisting of a column of sticks placed against and round a central sapling and surrounded by a clear circular display area which is encircled by a rim of moss some millimetres high (Fig. 1).

A. subalaris and A. macgregorii have previously been considered allopatric, separated by a zone of some scores or hundreds of metres (Mayr 1941; Gilliard 1969). Gilliard gives the following altitudes: A. subalaris, 2,200 to 3,600 feet (660-1080 m) and A. macgregorii, 3,800 to 9,000 feet (1,140-2,700 m) (Fig. 2).

There is a number of skins of A. subalaris in the British Museum which are labelled as having been collected within the altitudinal range of A. macgregorii. These and their localities are listed with the sympatric specimens of A. macgregorii. The number of skins from each locality is given in brackets.

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<thead>
<tr>
<th>Location</th>
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<tr>
<td>Head of Aroa River</td>
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<tr>
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<td></td>
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<tr>
<td>Mokoka Mts</td>
<td>6,000-8,500 ft</td>
<td>1,200-1,350 m</td>
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<tr>
<td>Bonam, 48 km</td>
<td>5,000 ft</td>
<td>1,200-1,350 m</td>
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<td>NW Mt Simpson</td>
<td>1,200-1,350 m</td>
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<tr>
<td>Owen Stanley</td>
<td>3,000-7,000 ft</td>
<td>1,500-2,100 m</td>
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<tr>
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Figure 1. Heads and bowers of Amblyornis subalaris and A. macgregorii to show display plumage and bower types. (Bowser after Marshall 1954)

All specimens from the Owen Stanley Mountains, including Bagatana Camp, were collected by W. Goodfellow in April 1908, and in March and April 1909, except one specimen of A. subalaris from 7,000 feet, which has no collector’s name or date.

Aroa River is a rather vague locality where these two species may meet. Of the three specimens from there two have no altitude, but were collected on the same day (20 May 1903) by A. S. Meek. These two birds are one of each species, a male of A. subalaris and a female of A. macgregorii. The third specimen is from the ‘Head of Aroa River’, 19 April 1903 at 4,000-6,000 feet (1,200-1,800 m), and was also collected by Meek.

Gilliard (1969: 315) thought that differences in the bowers of these birds act as species-specific isolating mechanisms where their ranges ‘front on each other’. If the two species are sympatric this might well be so. There has probably been greater selection pressure for differences in bower-building and the resultant product (and its specific recognition by the female) than for differences in coloration or display feathering. The more elaborate bower of A. subalaris may result from this rather than from its slight loss of display plumage as suggested by Gilliard (1956).

Sympathy of these birds may explain the peculiar bower found in the Owen Stanley Range, referred to and illustrated by Marshall (1954: 174).

C. B. Frith, British Museum (Natural History), Cromwell Road, London SW7.

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He stated that this bower had features of both A. subalaris and A. macgregorii. Possibly a bower of A. macgregorii was added to by an A. subalaris, perhaps an immature or inexperienced male, resulting in this aberrant structure.

There is a need for much field work on the Amblyornis bowerbirds, particularly where sympathy may occur. More knowledge of their displays and behaviour will undoubtedly throw light upon the evolutionary trends that have brought about this divergence between their breeding systems.

I am grateful to Mr J. C. Galbraith and Mr D. Goodwin for reading and commenting on this paper.
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SYMPATHY OF AMBLYORNIS SUBALARIS AND A. MACGREGORIAE
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The two species of *Amblyornis* in south-eastern New Guinea are quite similar in plumage. Both are the size of thrushes (*Turdus* spp.), dark olive-brown above and ochreous-brown on the throat and underparts. A splendid orange crest extends from the crown onto the back in adult males of *A. macgregoriae*, but only onto the nape of *A. subalaris* (Fig. 1). *A. subalaris* is further distinctive in having pale-brown streaking on the throat and upper breast in both sexes, and dark-brown tips to the crest feathers of the male. Females lack the orange crest; they can, however, be easily distinguished at close quarters by the striated throat of *A. subalaris* and the lighter browner head of *A. macgregoriae*.

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7 May 1970.
THE RELATION OF THE PARROT GENUS OPOPSITTA TO PSITACULIOSTRIS

Salvadori (1891) included the five species that are at present placed in the genera Psitaculiostris and Opopopitua in one genus, Cyclopispticus of Reichenbach 1850. The name Cyclopispticus was dismissed as invalid by Mathews (1912: 304-308) on the grounds that the bird illustrated (to which only the name 'Cyclopispticus' and an asterisk indicating that it was figured from a specimen were attached) was not definitively identifiable with Opopopitua diopthalma, the species which Salvadori and others had identified as the type.

After examining Reichenbach's drawing (Synt. Av. Nat., 1850, tab. lixiii) I am convinced that it can be identified, not with Opopopitua diopthalma, but with one of the subspecies of Psitaculiostris desmaresti, probably with P. d. kiukihi (Wallace) 1864. Fortunately, however, Cyclopispticus does not appear to have been used in the 'primary zoological literature' in the last fifty years, so that it is now a non-existent genus and will not disturb the stability of the current nomenclature.

Mathews (1927) separated two of the species that were formerly placed in Cyclopispticus into separate genera, Opopopitua (diopthalma and subspecies), and Swainspitica (gulielmi III and subspecies; name here applied to gulielmi following the int. Code for zool. Nomen.) placing the remaining forms in a genus Crotopitua (of Mathews 1916, a synonym of Psitaculiostris J. E. and G. R. Gray 1859).

Peters (1937) merged Swainspitica with Opopopitua and corrected Mathew's use of the name Crotopitua.

After examining skins of all forms of these five species and comparing the characters (for the heads of study skins to show characters of the skull) of each species I consider it inadvisable to separate the genera Opopopitua and Psitaculiostris, unless the poorly differentiated monotypic genus Swainspitica is also recognized, and this seems inadvisable also.

These five species stand apart from other parrots in having the mentotremum deeply grooved (O. diopthalma and P. edwardi examined), in having the processes of the parahyoid bone only narrowly joined and not projecting forwards (resembling only Nezor spp. in this; same two species examined), and stand apart from all of the other genera placed in the Lorinae of Peters (1937) in having the lachrymal and postorbital processes joined to form a complete ring of bone below the orbit (skulls or x-rays of all species examined).

The three species placed in the genus Psitaculiostris by Peters show marked similarities in plumage pattern and replace each other geographically, forming a well-defined superspecies. Opopopitua diopthalma and O. guilelmerti differ markedly from each other in their plumage pattern and coloration (descriptions of all forms are given either by Rand and Gilliard (1967) or Forshaw (1969)), resembling each other, and differing from Psitaculiostris only in their small size and in possessing yellow patches on the flanks, although the latter are indicated in some forms of Psitaculiostris desmaresti. O. guilelmerti resembles some forms of the genus Psitaculiostris, but differs from O. diopthalma, in having orange on the breast, and the head-pattern of this species is peculiar. Diopthalma resembles Psitaculiostris spp. in its head pattern, which differs strikingly from that of O. guilelmerti.

Differences in size were also used in the original separation of these genera. Comparison of measurements of all subspecies from the three genera shows that the differences are small when all forms are considered, and quite insufficient to allow generic separation on these grounds alone (wing lengths of 38 O. guilelmerti 75–100 mm, 32 O. diopthalma 78–98 mm, 34 Psitaculiostris spp. 103–120 mm).

As these genera appear to be closely related, and are all monotypic or nearly so, it is probably best to combine them. Psitaculiostris is the senior generic name, and no nomenclatural changes are necessary.

I am grateful to I. C. J. Galbraith, D. Goodwin and C. J. O. Harrison for help and guidance in the preparation of this note, although the views expressed are my own.

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THE RELATION OF THE PARROT GENUS OPOPSITTA TO PSITACULIROSTRIS

Salvadori (1891) included the five species that are at present placed in the genera Psittaculirostris and Opopsis in one genus, Cyclopisittacus of Reichenbach 1850. The name Cyclopisittacus was disallowed as invalid by Mathews (1912: 304-305) on the grounds that the bird illustrated (to which only the name 'Cyclopisittacus' and an asterisk indicating that it was figured from a specimen were attached) was not definitely identifiable with Opopsis diophthalma, the species which Salvadori and others had identified as the type.

After examining Reichenbach's drawing (Synt. Av. Nat., 1850, tab. lxxiii) I am convinced that it can be identified, not with Opopsis diophthalma, but with one of the subspecies of Psittaculirostris desmarestii, probably with P. d. blythi (Wallace) 1864. Fortunately, however, Cyclopisittacus does not appear to have been used in the 'primary zoological literature' in the last fifty years, so that it is now a nomen abutum and will not disturb the stability of the current nomenclature.

Mathews (1927) separated two of the species that were formerly placed in Cyclopisittacus into separate genera. Opopsis (diophthalma and sub-species), and Suavisitta (suivisitta III and subspecies; name here applied to galeolatilis following the Int. Code for zool. Nomen.) placing the remaining forms in a genus Cruopista (of Mathews 1916, a synonym of Psittaculirostris J. E. and G. R. Gray 1859). Peters (1837) merged Suavisitta with Opopsis and corrected Mathews's use of the name Cruopista. After examining skins of all forms of these five species and collecting additional data (the contents of the heads of study skins to show characters of the skull) of each species I consider it inadvisable to separate the genera Opopsis and Psittaculirostris, unless the poorly differentiated metopic genus Suavisitta is also recognized, and this seems inadvisable also.

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DISTRACTION DISPLAY IN THE BELL MINER

The Bell Miner Manorina melanocephala nests colonially, generally in the shrubby understorey of sclerophylly woodland. During a study at Bayswater, Vic., between April 1969 and February 1970 I made notes on twenty-six occasions of distraction displays which occurred when I visited nests containing young, or when fledglings were approached closely on their first day or two out of the nest.

In display, a bird crouches on its perch, depresses its tail a little and fans it out, at the same time lifting its wings above its back without extending the primaries, and slowly flutters them. Simultaneously it utters harsh mewing shrills, and then drops down into the understorey where it repeats the display. There are occasional variations. After checking a nest on 9 December 1969 I watched an adult, perched in full view on a bare branch about 2.5 m high. It crouched, slowly fluttering its half-opened wings, then slowly keeled over on one side and fell off its perch uttering a cawing sound. Just above the ground it sharply stopped its fall and glided to the base of a shrub. At some nests the performance started with the 'falling stone' display described for the Blue Wren by Rowley (1965, Enns 64: 251-257). I heard a loud thump as the ground was struck; then the bird moved quickly into nearby undergrowth and displayed. This occurred once when I was about to band young from a nest 1.0 m above ground. It seemed as if the bird had started its fall from higher up.

Armstrong (1956, Ibis 98: 641-654) suggested that distraction displays evolved from many components of threat displays. When threatening, a Bell Miner crouches, points its head forward, and depresses and fans out its tail. In mobbing, the wings are also lifted and sometimes fluttered. The distraction display appears to be a modified form of mobbing, with the addition of injury-feigning and the 'falling stone' display.

More than two birds take part. My counts varied from three to twelve, but Lang (1928, Emu 27: 250-251) noted about 30 adult birds round him when he caught a fledgling. Chitoholm (1936, Anakt. 53: 251-253) stated that among various Australian chats and honeyeaters neighbouring birds also injury-feigned. Skutch (1954, Ibis 96: 544-564; 97: 118-142) clarified this as sympathetic injury-simulation, and appears to have assumed that the species in question bred as unsustained pairs. The Bell Miner has helpers at the nest, and these birds take part in the displays. Colour-handling has shown that birds will also join a display at another group's nest. Perhaps in other honeyeaters, sympathetic injury-simulation may indicate social behaviour similar to that of the Bell Miner.

Of the fifty-four nests that I have found at Bayswater, only four were above the understorey, and only one of these was successful. Perhaps predation pressure has been too heavy on nests above the understorey. The species feeds its young at a high rate, and has helpers. The consequent large number of visits must expose the nest to risk. However the denser undergrowth helps to hide such activity, but brings the nest within reach of terrestrial predators. The consequence of having the nest too low is the loss of two evils; hence the distraction display.

Skutch (op. cit.) mentions that most species choose a cleared space on which to perform their particular type of ruse. The Bell Miner does the opposite. When I inspected a nest, 4.0 m high in an Ecocarpus which stood in a small grassy clearing, a bird at the nest flew down and glided into some shrubs about 10 m away, where it then displayed. Perhaps the main predator responsible for the display has been a quick and agile animal, possibly one of the marsupial 'cats' and not a reptile.