

## The Relationships of the New Guinean Ground-Robins *Amalocichla*

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Throughout its history, there has been considerable uncertainty regarding the relationships of the New Guinean endemic genus *Amalocichla*, which comprises two species, the Lesser Ground-Robin *A. incerta*, and the Greater Ground-Robin *A. sclateriana*. The first of these was originally described by Salvadori (1875) as *Eupetes incertus*, along with *Eupetes castanonotus*, both of which he placed in the 'Eupetidae'. *Eupetes* is a south-east Asian genus, usually placed in the Timaliidae, and has been used by some authors to include the three New Guinean species of jewel-babblers, including *castanonotus*, of the genus *Ptilorhoa*. Salvadori (1881) later expressed doubt about his original assignment by listing the species as '*Eupetes? incertus*'.

The second species was described by De Vis (1892, p. 95) in a new genus as *Amalocichla sclateriana*, which he placed in the 'Timeliidae' and considered to be most closely related to *Ptilopyga* (= *Trichastoma*). De Vis (1894) later named a second species in the Timeliidae that he called *Drymoedus* (= *Drymodes*) *brevicaudus*, with *D. [superciliaris] beccarii* as its presumed closest relative.

Reichenow (1915) proposed a new genus, *Pseudopitta*, for *Eupetes incertus*. Matthews (1930) listed *Pseudopitta incerta* as a species of Cinclomatidae, placing it just before *Drymodes*. He put the species *brevicauda* De Vis in the genus *Amalocichla*, family Turdidae, along with *A. sclateriana*, although he suggested (p. 560 footnote) that *P. incerta* should perhaps be placed near *A. brevicauda*, and that *Pseudopitta* could possibly be synonymised with *Amalocichla* (p. 919). This led the way to the modern treatment in which *brevicauda* is considered to be a subspecies of *incerta*, which is in turn placed in *Amalocichla* along with *A. sclateriana*.

Mayr (1941) put *Amalocichla* with the thrushes in the subfamily Turdinae of the Muscicapidae. Iredale (1956, p. 82) separated the two species generically as *Amalocichla sclateriana* and *Pseudopitta incerta*, calling them 'false-thrushes', and stating that they were to be 'placed with the other "Timalian" birds, as there is nothing known about their exact relationship save that it is not with the true Thrushes.' Rand & Gilliard (1967) included the two species of *Amalocichla* in the Turdidae, but considered them to be

a separate group, the 'New Guinea thrushes', distinct from the true thrushes and chats.

On the basis of DNA hybridisation studies, Sibley & Ahlquist (1982, p. 101) considered that the Australasian genus *Drymodes*, formerly placed with the thrushes, was closely related to the Australian robins such as *Eopsaltria* and they noted that: 'In a personal communication Dr Schodde has suggested that the closest relative of *Drymodes* is the genus *Amalocichla* of the montane rainforest of New Guinea, another genus that is usually included with the turdine thrushes.' They went on to remark that: 'The Papuan genus *Amalocichla* may or may not be turdine, but we lack its DNA. As noted above, *Drymodes* is not a thrush, but a member of the corvid family Eopsaltriidae, and an old endemic' (Sibley & Ahlquist 1985, p. 10). On this basis, Beehler & Finch (1985) placed *Amalocichla* following *Drymodes* in the Eopsaltriidae.

Thus far, no concrete anatomical evidence has been brought to bear on the question of the relationships of *Amalocichla*. Ames (1975) discovered a distinctive derived condition of the syrinx (the 'turdine thumb') that occurs only in the true thrushes ('Turdidae') and the muscicapine flycatchers ('Muscicapini'), but *Amalocichla* and *Drymodes* were among the few genera that he was not able to examine. Harrison (1976) later showed that the syrinx of *Drymodes* did not have the turdine configuration. I was able to examine the syrinx in a whole specimen of *Amalocichla incerta* (AMNH 5700) and in a fluid-preserved trunk of *A. sclateriana* (USNM 541218). In neither does the syrinx display the distinctive 'turdine' condition, being of the generalised oscine type instead. Thus, a close relationship between *Amalocichla* and the thrushes (Muscicapinae) may be safely ruled out.

Another character that is useful in suggesting relationships in the oscine passerines is the configuration of the proximal end of the humerus, the variation in which has been discussed by Bock (1962). In the corvine assemblage (basically the superfamily Corvoidea of Sibley & Ahlquist 1985), the tricipital fossa is single, or has only an incipient second fossa, and it is truly pneumatic, with a trabeculated opening into the shaft. In thrushes, on the other hand, there are two deep fossae, the second deeply undercutting the

head, and neither is pneumatic (Olson 1987). The humerus in a skeleton of *Drymodes superciliaris* (USNM 489081) has a single, pneumatic tricipital fossa, thus corroborating its placement with the corvine assemblage. It should be noted that with the recognition of this affinity, the plumage similarities between *Drymodes* and some of the species of *Poecilodryas* (including *Heteromyias*) become highly suggestive.

A humerus removed from the trunk of *Amalocichla sclateriana* is quite different from that of *Drymodes*, however. The head is much more undercut (though not nearly to the extent as in the thrushes), the tricipital fossa is not pneumatic, and the area for the attachment of M. scapulo-humeralis cranialis is greatly excavated. The configuration of the humerus of *Amalocichla* is therefore unlike that of either the corvine group (including the Eopsaltriidae) or the thrushes (Muscicapidae). It is, however, similar to the condition in the Australo-Papuan warblers of the family Acanthizidae.

An acanthizine relationship for *Amalocichla* is not contradicted by external morphology. Many of the acanthizines have relatively unpatterned plumage of sombre shades of brown and white, as in *Amalocichla*. The white loreal spots of *A. incerta* also occur in a number of species of *Sericornis*. A pattern of dark upperparts, and whitish underparts with a diffuse, darker breast band, is common to *Amalocichla incerta*, *Crateroscelis murina* and males of *C. r. robusta*. The morphology of the bill in *Amalocichla* appears identical to that in species of *Crateroscelis* and *Sericornis*.

The mouse-warblers of the genus *Crateroscelis* are particularly good candidates for being close relatives of *Amalocichla*, as the species in both genera are long-legged terrestrial birds with relatively short tails that are endemic to New Guinea. Furthermore, the vocalisations of *Amalocichla* and *Crateroscelis* are reported to be similar in quality and pattern (Bruce Beehler pers. comm.). It is doubtless mainly the greater size of the two species of *Amalocichla* that has obfuscated their probable affinities up to now.

In summary, the syrinx of *Amalocichla* shows that it cannot be a true thrush (Muscicapidae), as had already been assumed. The morphology of the humerus also precludes a close relationship between *Amalocichla* and *Drymodes* of the Eopsaltriidae, whereas in this character, as well as in plumage, overall external morphology, and habits, *Amalocichla* agrees with the Acanthizidae, partic-

ularly *Crateroscelis*. In the absence of contrary information, it is recommended that *Amalocichla* be transferred to the Acanthizidae, immediately following *Crateroscelis*.

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