

STORRS L. OLSON

PRELIMINARY SYSTEMATIC NOTES
ON SOME OLD WORLD PASSERINES



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Abstract. — The relationships of various genera of Old World passerines are assessed based on osteological characters of the nostril and on morphology of the syrinx. *Chloropsis* belongs in the Pycnonotidae. *Nicator* is not a bulbul and is returned to the Malaconotidae. *Neolestes* is probably not a bulbul. The Malagasy species placed in the genus *Phyllastrephus* are not bulbuls and are returned to the Timaliidae. It is confirmed that the relationships of *Paramythia*, *Oreocharis*, *Malia*, *Tylas*, *Hypergerus*, *Apalopteron*, and *Lioptilornis* (*Kupeornis*) are not with the Pycnonotidae. *Trochocercus nitens* and *T. cyanomelas* are monarchine flycatchers referable to the genus *Terpsiphone*. «*Trochocercus*» *nigromitratus*, «*T.*» *albiventer*, and «*T.*» *albonotatus* are tentatively referred to *Elminia*. Neither *Elminia* nor *Erythrocerus* are monarchines and must be removed from the Myiagridae (Monarchidae auct.). *Gralina* and *Aegithina* are monarch flycatchers referable to the Myiagridae. *Eurocephalus* belongs in the Laniinae, not the Prionopinae. *Myioparus plumbeus* is confirmed as belonging in the Muscicapidae. *Pinarornis* lacks the turdine condition of the syrinx. It appears to be most closely related to *Neocossypha*, *Stizorhina*, and *Modulatrix*, and these four genera are placed along with *Myadestes* in a subfamily Myadestinae that is the primitive sister-group of the remainder of the Muscicapidae, all of which have a derived morphology of the syrinx.

Riassunto. — Note sistematiche preliminari a proposito di alcuni Passeriformi del Vecchio Mondo.

Le relazioni tra vari generi di Passeriformi del Vecchio Mondo vengono accertate in base alle caratteristiche osteologiche della narice e alla morfologia della siringe. *Chloropsis* appartiene ai Pycnonotidae. *Nicator* non è un bulbul e viene portato di nuovo tra i Malaconotidae. *Neolestes* probabilmente non è un bulbul. Le specie malgascse comprese nel genere *Phyllastrephus* non sono bulbuls e sono riportate tra i Timaliidae. Si conferma che *Paramythia*, *Oreocharis*, *Malia*, *Tylas*, *Hypergerus*, *Apalopteron* e *Lioptilornis* (*Kupeornis*) non hanno relazione con i Pycnonotidae. *Trochocercus nitens* e *T. cyanomelas* sono pigliamosche monarchini riferibili al genere *Terpsiphone*. «*Trochocercus*» *nigromitratus*, «*T.*» *albiventer* e «*T.*» *albonotatus*

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sono tentativamente riferiti ad *Elminia*. Nè *Elminia* nè *Erythrocerus* sono monarchini e devono essere rimossi dai Myiagridae (Monarchidae degli autori). *Grallina* e *Aegithina* sono pigliamosche monarchini riferibili ai Myiagridae. *Eurocephalus* appartiene ai Laninae, non ai Prionopinae. *Myioparus plumbeus* viene confermato come appartenente ai Muscicapidae. *Pinarornis* non possiede una siringe di tipo turdino. Sembra essere maggiormente affine a *Neocossypha*, *Stizorhina* e *Modulatrix*, e questi 4 generi sono posti a fianco di *Myadestes* in una sottofamiglia Myadestinae che è il primitivo gruppo «fratello» del rimanente dei Muscicapidae, i quali presentano tutti una morfologia derivata della siringe.

Introduction.

For some time I have been accumulating systematic morphological data on various groups of Old World oscine passerines for future incorporation into several comprehensive papers. Because of the imminent appearance of the passerine volumes of *The Birds of Africa* (Urban, Fry, and Keith, editors; Academic Press: London), I have been encouraged to summarize my more important findings regarding African taxa. In the process I have included remarks on certain Asian and Australasian taxa as well. These are to be regarded as preliminary, with fuller documentation to be supplied later.

Pycnonotidae.

Most bulbuls exhibit a very characteristic pattern of ossification in which a thin sheet of bone covers the posterior margin of the nostril and is usually pierced by one or two small neural foramina. Even in species in which this condition is not fully developed, there is almost always some trace of ossified connective tissue around the posterior portion of the bony nostril. I have examined all of the genera now usually associated with the Pycnonotidae and have found that this character will serve well to define the family, which, with very few exceptions, seems to be a natural group.

Chloropsis.

Whereas most of the following discussion under this family centers on what is *not* a bulbul, I have found one genus not now included in the Pycnonotidae that definitely belongs there — the Asian leafbirds of the genus *Chloropsis*. These are brightly colored, mainly green, gregarious, partially nectarivorous birds that have often been associated with two other genera that did not fit conveniently in other families — *Irena* and *Aegithina*. These three genera have practically nothing in common except

their dubious affinities. Each has been made the type of a monotypic family and all three have at times been grouped as a single family, Irenidae (e.g. Delacour 1960).

Although *Chloropsis* had been suggested as being related to the Pycnonotidae, Delacour (1943: 18) regarded it as differing « greatly from the true bulbuls in plumage texture, pattern and colors » and in « proportion of the tail and wings . . . legs and feet ». In examination of skeletons of *Chloropsis aurifrons*, *C. hardwickii*, *C. cyanopogon*, and *C. palawanensis*, I found the typical pycnonotid pattern of ossification of the nostril to be invariably present and well-developed. There is little doubt that *Chloropsis* is a nectar-adapted member of the Pycnonotidae. The adoption of nectarivorous habits appears to lead to very rapid evolutionary changes in behavior, color pattern, and feeding morphology (Olson and Ames, 1984). Compared with some nectarivorous birds, such as *Promerops* or the more extreme examples of the Drepanidini, which differ radically from their ancestral stock, the differences between *Chloropsis* and the typical bulbuls are relatively modest.

Nicator.

In the 12 skeletons of *Nicator chloris* that I examined, there was no trace of ossification of any sort in the nostril. In the literature prior to 1943, *Nicator* was always placed among the bush-shrikes of the family (or subfamily) Malaconotidae, members of which it very much resembles in plumage. Delacour (1943), however, placed *Nicator* in the Pycnonotidae and in his diagram of relationships he showed the genus as being derived from *Bleda*, which in turn was derived from *Phyllastrephus*. Delacour did not comment on this placement, but his decision was probably heavily influenced by James Chapin, whom he several times acknowledges for assistance. Chapin (1953: 184) later argued that *Nicator* had been erroneously placed among the Malaconotidae and thought it more likely to be a bulbul « though not closely allied to *Bleda* or *Setornis* » and differing notably (presumably from the bulbul genera just mentioned) « in having a patch of bristly feathers between the eye and the gape ». Such bristly feathers also occur in *Malaconotus*, however. Chapin also remarked that « the nestling looks quite unlike a young shrike » in retaining bare sides of the head long after the « body is well clothed with feathers . . . Otherwise the coloration of the young is not unlike that of the adult, not rufous as in *Bleda*, not barred as in many young shrikes ». None of this can be construed as evidence linking *Nicator* with the Pycnonotidae, as the nestling is presumably quite unlike those of bulbuls as well.

The bill in *Nicator* is strongly hooked as in the bush-shrikes, though more laterally compressed, and is not really similar to that of *Bleda*. The strongly spotted pattern of the wings is like that of *Malaconotus*. *Nicator* lacks the long filoplumes in the nape that are characteristic of most bulbuls, including *Bleda*. Benson and Irwin (1975: 1) described bulbuls as having « the outer edge of the inner webs of the inner primaries and secondaries . . . either pale or in sharp contrast to the remainder of the feather and often brightly coloured », which they regarded as a « readily diagnostic character » of the Pycnonotidae. This character I believe is too variable to be of much use. It is indeed present in *Nicator* but is likewise strongly expressed in *Malaconotus cruentus*, *M. blanchoti*, *Telephorus nigrifrons*, *T. multicolor*, *T. sulfureopectus*, and *T. olivaceus*, while being absent in *T. dohertyi*, *T. viridis*, *T. quadricolor*, and *T. zeylonus*, and variably present in species of *Laniarius*.

Nicator can hardly be derived from *Bleda*, in which the pycnonotid pattern of ossification of the nostrils is especially well developed. The total absence of ossification in *Nicator*, along with the other considerations discussed above, is sufficient cause to remove *Nicator* from the Pycnonotidae and return it to the Malaconotidae, wherein it appears to be most closely related to *Malaconotus* itself.

Neolestes.

The placement of the so-called « Black-collared Bulbul » has never been regarded as certain. Formerly included among the shrike-like birds, it is now usually carried in the Pycnonotidae. Delacour (1943: 18) remarked that its « proportions and color pattern . . . make it difficult to accept » as a bulbul, « although it . . . is certainly not a shrike ». Chapin (1953: 155) said that although it « was long assigned to the family Laniidae merely because of its broad, blue-black chest band . . . in life it reminded me of nothing but a bulbul ». I dissected the narial region in a fluid-preserved specimen of *Neolestes* and could not detect the presence of any pycnonotid-like ossification. This result is not entirely conclusive, however, as thin bone is difficult to distinguish from tough ligamentous tissue except in carefully prepared skeletal specimens. It may be noted that the small vertical band of plush post-auricular feathers in *Neolestes* is very reminiscent of that in *Prionops plumatus*, which also has a black pectoral band. *Prionops* has a distinctive morphology of the syrinx (Peter Ames pers. comm., and Olson pers. obs.), which should be checked in *Neolestes*. I strongly doubt that *Neolestes* is a bulbul and would suggest listing it as *incertae sedis* near *Prionops*.

Malagasy « *Phyllastrephus* ».

Some half-dozen species of Malagasy passerines once included in the genera *Bernieria*, *Crossleyia*, *Xanthomixis*, and *Oxylabes* and placed in the Timaliidae, were removed to the Pycnonotidae by Delacour (1943) and put in the African genus *Phyllastrephus*. Benson and Irwin (1975) concurred in this except that they argued for returning the species *xanthophrys* to the Timaliidae in the monotypic genus *Crossleyia*, on the basis of the wing character mentioned above.

Two specimens of « *Phyllastrephus* » *madagascariensis* and one of « *P.* » *zosterops* that I examined showed no trace of ossification in the nostril, whereas the nostril is well ossified in *Phyllastrephus terrestris*, the type species of the genus. In the two Malagasy species, the culmen and tomium were straight, not curved downward, and the transpalatine processes were long and thin, both conditions unlike *Phyllastrephus*. The birds from Madagascar are almost certainly not bulbuls, much less members of the genus *Phyllastrephus*. In the final analysis, Salomonsen (1934) will probably be proven correct in considering the endemic Malagasy genera *Bernieria*, *Oxylabes* (including *Crossleyia*), *Mystacornis*, *Hartertula*, and *Neomixis*, to be allied members of a single radiation. Irwin (1983) thought that *Thamnornis*, another genus endemic to Madagascar now placed in the Sylviidae, should be included with preceding « timaliid » genera. These birds certainly bear close investigation, especially as they may represent an unrecognized example of adaptive radiation, much like the Vangidae. There is no good evidence for including any of them in the Pycnonotidae, though that they are really referable to the Timaliidae is equally doubtful.

Paramythia, *Oreocharis*, and *Malia*.

The distinctive genera *Paramythia* and *Oreocharis*, endemic to New Guinea, have been considered as aberrant members of the Dicaeidae. Harrison and Parker (1966), however, suggested that they were bulbuls, despite the reduction of the tenth primary, one of the principal characters for their placement with the Dicaeidae. The timaliid genus *Malia*, endemic to Celebes, was placed in the Pycnonotidae by White and Bruce (1986: 313) « on account of its colour and because the absence of a bulbul on Sulawesi is strange ». Actually, the presence of endemic genera of Pycnonotidae in either Sulawesi or New Guinea would be quite as strange, as this family is practically confined to Africa and Eurasia. Discounting the Javan subspecies of *Pycnonotus goiavier* on Lombok, the only truly Australasian bulbul is *Hypsipetes affinis* of the Moluccas, a member of

a speciose and widespread genus that is notable for having colonized most of the islands of the Indian Ocean (I have examined numerous skeletons of *H. affinis* and it is a perfectly good bulbul, should any doubt arise on this account).

Paramythia and *Oreocharis* lack any sign of ossification of the nostril. Furthermore, the humerus in both genera has the tricripital fossa double and non-pneumatic, whereas the Pycnonotidae are members of the corvine assemblage and have a single, pneumatic tricripital fossa. The double fossa appears to be invariably associated with the « nine-primaried » condition, which is not one to be dismissed lightly. Whatever *Paramythia* and *Oreocharis* may be, they are definitely not bulbuls.

The same applies to *Malia*, which lacks any narial ossification and has a non-pneumatic humerus with an incipient second fossa. Though the Timaliidae may well be a « refuge for the destitute », *Malia* is better off there than in the Pycnonotidae, where it clearly does not belong.

Tylas.

The genus *Tylas*, endemic to Madagascar, is an enigma. It was long considered a bulbul, though Pycraft (1907) would not have it as such. Oberholser (1917) even created a separate family Tylidae for it. Dorst (1960) argued for its inclusion in the Vangidae. The skeleton I examined showed no ossification in the nares, and was clearly not bulbul-like. At least some of the Vangidae have a shrike-like, or cractiid-like amphirhinal ossification of the nostril, lacking in *Tylas*. Furthermore, the bifurcated zygomatic process characteristic of the Vangidae and Cractiidae (Pycraft 1907, Dorst 1960), as well as the Artamidae and *Peltops* (pers. obs. and T. Howell in Sibley and Ahlquist 1984) is not present in *Tylas*. The tricripital fossa of the humerus in *Tylas* is not double, as in thrushes, which have also been suggested as possible relatives. Although *Tylas* does not belong in the Pycnonotidae or the Muscicapidae (Turdinae), its affinity with the Vangidae seems doubtful as well. It may have escaped notice that in the development of the rictal bristles and in the shape of the bill, *Tylas* is extremely similar to the much smaller species of the genus *Newtonia*, another Malagasy endemic. This observation is nearly useless at this point, because the relationships of *Newtonia* are equally obscure.

Other non-bulbuls.

A variety of other genera not now included in the Pycnonotidae, have in the past been suggested as possible bulbuls. Examination of the ske-

letons of *Hypergerus atriceps* (Sylviidae) and *Apalopteron familiare* (« Meliphagidae ») confirms that these are not bulbuls. The African genus *Lioptilornis* (= *Lioptilus* auct.), the naturalness of which has recently been questioned (Vande weghe 1988), was once thought to belong in the Pycnonotidae, though now carried in the Timaliidae. No nasal ossification was present in the one skeleton of *Lioptilornis* (*Kupeornis*) *rufocinctus* that I examined, which suggests that a timaliid affinity is the better choice among these two alternatives.

Myiagridae (Monarchidae auct.).

The monarch flycatchers are part of the corvine assemblage and have the corvine humerus, with a single, pneumatic tricripital fossa. I have found that typical members of this group are characterized by a different pattern of ossification of the nostril from that of the Pycnonotidae in which a sheet of bone extends from the dorsal nasal bar to the maxilla, creating an essentially amphirhinal condition, with the posterior opening bordered laterally by a notably narrow lateral nasal bar. This condition may be present or absent within the genus *Monarcha* and appears to be imperfectly formed in certain other genera. The correct family name of this group is Myiagridae (Boles, 1981).

African monarchs.

I examined skeletons of the following African species that are usually considered to be monarch flycatchers: *Erythrocerus mcallii*, *E. livingstonei*, *Elminia longicauda*, *Trochocercus nigromitratus*, *T. albiventris*, *T. nitens*, *Terpsiphone viridis*, *T. rufiventer*, *T. rufocinerea*. It has frequently been suggested that the African genus *Trochocercus* (type *Muscicapra cyanomelas* Vieillot) is a composite, with the species *T. cyanomelas* and *T. nitens* being referable to *Terpsiphone* (e.g. Hall and Moreau 1970, Traylor 1986). Most recently, Erard (1987) suggested placing these two species in *Terpsiphone* (with *Trochocercus* as a synonym), and removing the remaining three species (*albonotatus*, *albiventris*, and *nigromitratus*) to the genus *Elminia* (= *Erranornis* auct.).

All *Terpsiphone*, *Trochocercus nitens*, and *T. cyanomelas* have the typical corvine configuration of the humerus and the monarchine ossification of the nostril. All of the other taxa listed above lack the nasal ossification and have non-pneumatic humeri with a double tricripital fossa. The second fossa in these taxa is intermediate between incipient and well-developed, with the exception of « *Trochocercus* » *nigromitratus*, in which the fossa is as large and as deeply excavated as in typical muscipine flycatchers. I examined the syrinx in *nigromitratus* and *albonota-*

tus and found that neither has the «turdine thumb» and hence are not true muscicapine flycatchers.

From the preceding I conclude that *Trochocercus cyanomelas* and *T. nitens* do indeed belong in the genus *Terpsiphone*, which is now seen to be the *only* genus of monarch flycatcher in Africa. The species *albonotatus*, *albiventris*, and *nigromitratus* may provisionally be included in *Elminia*, following Erard (1987), though externally they do not seem much like the two species of that genus. The relationships of *Erythrocerus* and *Elminia* are now very much uncertain. Based on osteology they are not monarchs nor members of the Platysteirinae, which also have the corvine humerus, and their syrinx lacks the turdine thumb of the true Muscicapinae (Ames 1975).

Grallina.

Three endemic genera of Australian birds, *Grallina*, *Corcorax*, and *Struthidea*, the so-called mudnest-builders, have been grouped as a family Grallinidae mostly because of their similar nest-building habits, coupled with relatively large size, black-and-white plumage, and Australian distribution. Sibley and Ahlquist (1985: 9), however, while advocating a close relationship between *Corcorax* and *Struthidea*, concluded that *Grallina* «is actually a large monarch, closely related to *Monarcha*». This is fully corroborated by osteology, as at least *Grallina cyanoleuca* (I have not seen skeletons of the New Guinean species) has the typical monarchine pattern of ossification of the nostril very well developed, whereas this is altogether lacking in *Corcorax* and *Struthidea*.

Aegithina.

The ioras of the Asian genus *Aegithina* are one of the constituents often included in the Irenidae, along with *Irena* and *Chloropsis*. The latter, as we have seen, belongs in the Pycnonotidae. *Aegithina*, on the other hand, has the monarchine pattern of nasal ossification consistently present and well-developed (numerous specimens of *A. tiphia* examined). I can see no reason to regard *Aegithina* as anything other than a genus of monarch flycatcher. *Irena*, it may be noted, lacks any nasal ossification and is neither a monarch nor a bulbul. Its proposed association with *Oriolus* may well be correct.

Laniidae.

The systematics of the birds termed «shrikes» and included in the Laniidae is still in an unsatisfactory state. Rand (1960) recognized four

subfamilies in the Laniidae: the various African bush-shrikes in the Malaconotinae; the Prionopinae, containing only *Prionops* (including *Sigmodus*) and *Eurocephalus*; the Laniinae, containing *Corvinella* and *Lanius*; and a monotypic Pityriasiinae for *Pityriasis*. The association of *Prionops* with *Eurocephalus* is solely by default. As once constituted, the Prionopidae comprised 20 genera. Mayr (1943: 216) distributed most of these to other groups, leaving only *Prionops* and *Sigmodus* as « typical members of the family. *Eurocephalus* has been left in the family temporarily . . . ». Raikow et al. (1980) continued to support a close relationship between *Eurocephalus* and *Prionops* based on myological characters.

The « typical » species of shrikes in the genus *Lanius* possess a very distinctive amphirhinal condition of the nostril in which the nares are closed over by a sheet of bone to leave small anterior and posterior openings. This is accompanied by a marked dorsoventral constriction at the base of the bill that presents a singular appearance. Of the species of *Lanius* I have examined, the following have this specialized condition: *L. excubitor*, *L. ludovicianus*, *L. schach*, *L. mackinnoni*, and *L. somalicus*. In other species, however, there is no sign of such a modification: *L. collurio*, *L. minor*, *L. senator*, and *L. nubicus*. In others there is an intermediate condition: *L. cristatus*, *L. colluriooides*, and *L. collaris*.

The amphirhinal condition is present in *Corvinella*, though without much evidence of the dorsoventral constriction. Most noteworthy is the fact that both species of *Eurocephalus* possess a strongly amphirhinal nostril and pronounced basal constriction, exactly as in the most specialized species of *Lanius*. This argues strongly against the placement of *Eurocephalus* with *Prionops*, which lacks this condition. The myological characters cited by Raikow et al. (1980) in support of this relationship are often of a very minor nature and in some cases are conflicting among themselves (viz. characters 5, 6, and 7 in Fig. 7 of Raikow et al., supposedly defining *Lanius* and *Corvinella* as a clade, are also found in *Eurocephalus*; character 9 of *Lanius* occurred in one specimen of *Eurocephalus*; and character 8 of *Corvinella* occurred in some specimens of *Lanius*).

On the basis of its cranial morphology, I would regard *Eurocephalus* as a typical shrike. Because the amphirhinal condition appears to arise within the genus *Lanius*, it would seem necessary to merge *Corvinella* and *Eurocephalus* with *Lanius*. The alternative would assume that the common ancestor of *Lanius*, *Corvinella*, and *Eurocephalus* was amphirhinal and that this condition was secondarily lost in some species of *Lanius*. In any case, *Eurocephalus* belongs in the Laniinae, not the Prionopinae.

Muscicapidae.

Ames (1975) showed that the Turdidae and the true flycatchers of the subfamily Muscicapinae, shared a distinctive, derived condition of the syrinx that he called the «turdine thumb». This character serves to define a more restricted family Muscicapidae than had been used by some authors, but that also includes the Turdidae. Subsequent to Ames (1975), *Drymodes*, *Chaetops*, and *Amalocichla* were shown by the syrinx not to be thrushes (Harrison 1976, Olson 1984, Olson 1987b), whereas the genera *Chlamydochaera* and *Promerops*, formerly placed in the Campephagidae and Meliphagidae, respectively, were found to have a turdine syrinx (Ames 1975, Olson 1987a, Olson and Ames 1984). I examined the syrinx in the following additional species representing genera that were not available to Ames and confirmed that they have the turdine thumb and thus belong to the Muscicapidae: *Cercotrichas podobe*, *Irania gutturalis*, *Thamnotaea coronata*, *Pseudocossyphus imerinus sharpei*, *Cichlerminia lherminieri*, *Fraseria ocreata*, *F. cinerascens*, *Humblotia flavirostris*, *Nesocichla eremita*.

Myioparus.

Based on juvenal plumage, Vaurie (1957) showed that the species then known as *Parisoma plumbeum* was not a sylviid but a member of the Muscicapidae and tentatively placed it in the genus *Muscicapa*, with the suggestion that «*Parisoma*» *griseigularis* might also be muscicapine. Clancey (1957) supported the removal of *plumbeum* from *Parisoma* and pointed out that the name *Myioparus* Roberts was available for this species. Although Hall and Moreau (1970) included both *plumbeus* and *griseigularis* in *Myioparus*, Traylor (1986) puts the latter in *Muscicapa* immediately preceding *Myioparus*, which he has as a monotypic genus for *M. plumbeus*. I examined the syrinx in a specimen of *Myioparus plumbeus* and confirmed that it has the turdine thumb and is thus correctly placed in the Muscicapidae. The condition in *M. griseigularis* remains to be determined.

Pinarornis and relatives.

The Boulder Chat, *Pinarornis plumosus*, belongs to a monotypic genus restricted to granite outcroppings in Zimbabwe and Botswana. Although once included in the Timaliidae, Delacour (1946) offhandedly dismissed it as a thrush related to *Cercotrichas podobe*. Following this, *Pinarornis* has usually been carried in the Turdidae near *Chaetops*,

another rock-inhabiting South African genus. *Chaetops*, as noted, is not a thrush and was returned to the Timaliidae (Olson 1984), although I now consider it to be congeneric with « *Achaetops* » *pycnopygius* and best placed in the Sylviidae (Olson, in press).

I examined the syrinx in *Pinarornis plumosus* and found that it does *not* have the turdine thumb. Nevertheless, the musculature of the syrinx is strongly developed, as in thrushes, and is unlike the weak musculature in *Chaetops*. Examination of the skeleton of *Pinarornis* showed marked differences from *Chaetops* and from the Timaliidae, as represented by *Turdoides*, as well. The humerus has a well developed second tricipital fossa and the overall osteology of *Pinarornis* would not be out of line with its placement among the thrushes in the family Muscicapidae.

Three other African genera that Ames (1975) examined had been considered to be good « thrushes » yet also lack the turdine syrinx: *Neocossypha*, *Stizorhina*, and *Modulatrix*. The last had once been considered a timaliid but was placed with the thrushes by Ripley (1952). A turdine affinity for *Stizorhina* had sometimes been questioned but *Neocossypha* « is universally considered a good thrush » (Ames 1975: 127). Some authors have now merged *Stizorhina* with *Neocossypha* (Hall and Moreau 1970, Erard 1987). Hall and Moreau (1970: 131) suggested that in its « heavy build and the colour and pattern of the plumage, particularly the throat » *Modulatrix* « has some striking resemblance to *Neocossypha* » so that the « possibility of their being closely related might usefully be investigated ». I will take this a step further and suggest that *Pinarornis* may also be most closely related to these genera, sharing with them in particular the scaly or speckled pattern of the throat.

It has already been remarked that *Stizorhina* very closely resembles the New World solitaires of the genus *Myadestes* (Ripley 1952). In fact, on external morphology there are few, if any, differences between the two. *Myadestes* is another genus that has nearly always been considered to belong with the thrushes, and yet *Myadestes* also lacks the turdine condition of the syrinx. Because there is no group other than Muscicapidae with which *Myadestes* and the African genera may logically be aligned, and because of the general overall resemblance of these genera to one another, I provisionally propose that *Myadestes* (including the Hawaiian thrushes formerly placed in the genus *Phaeornis*), *Stizorhina*, *Neocossyphus*, *Modulatrix*, and *Pinarornis* be combined in a subfamily Myadestinae (based on Myiadestinae Baird, 1866) in the larger family Muscicapidae. The subfamily Myadestinae may be regarded as the primitive sister-group of the much larger clade that is defined by the derived turdine condition of the syrinx.

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