

Systematic notes on Asian birds. 24. On the priority of the name *Hypsipetes* Vigors, 1831, and the division of the broad genus of that name

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We conclude that the reasons hitherto given for non-recognition of the generic name *Ixos* in the family Pycnonotidae were erroneous. The broad genus employed by the proponents of that view is now considered too broad, and we concur with Sibley & Monroe (1990) that several generic names must be used, including *Ixos*. No genus can be constructed except around the name of its type species, and no other species within such a genus may be the type species of a generic name that is older. The arrangement offered by Sibley & Monroe (1990) was flawed because this rule was not observed. We therefore offer a complete revision. We believe it to be desirable to recognise several more genera than those recognised by Sibley & Monroe (1990), at least until we have the molecular evidence available to make firmer judgements.

Introduction

Deignan (1942) reported discovering some manuscript notes by Charles W. Richmond which convinced him that the type species of the genus *Ixos* Temminck, 1825, was *Turdus phoenicopterus* Temminck, 1821. This is not a bulbul, but an African campephagid species. Deignan considered *Microscelis* Gray, 1840, to be the next oldest name that might be applied to a number of species that he might otherwise have grouped under the older name *Ixos*.

Deignan considered the name *Hypsipetes* Vigors, 1831, to be preoccupied and unavailable. Rand & Rabor (1959) noted that *Hypsipetes* Vigors was not preoccupied by *Ypsipetes* Stephens, 1829 (a name in Lepidoptera) and this finding was in time to cause Rand & Deignan (1960) to adopt *Hypsipetes* with *Microscelis* as a junior synonym.

We set out below first to explore the actual employment of the generic name *Ixos* by Temminck in Temminck & Laugier (1820-1839) and we show that *Ixos* actually has a type species that is a bulbul. It is therefore the oldest name and were a broad genus to be maintained, *sensu* Rand & Deignan (1960), *Ixos* would supplant *Hypsipetes*.

We sympathise with Deignan (1942) who wrote "I have been quite unable to discover characters which might be used to separate any one group from those others most related" and we do not see three tenable groups such as those treated by Delacour (1943) as subgenera, nor do we see the five and a fraction genera perceived by Sibley & Monroe (1990). Nonetheless, we agree with later authors that this group does require subdivision and in this paper we develop appropriate recommendations.

In some contexts below we list specific epithets without giving authorship and date. In all such cases the citations for Asian forms may be found by locating the name in the table in Dickinson et al. (2002), this provides the authorship and date, and the full reference is then given at the end of that paper.

The history of the name *Ixos* Temminck

The validity of the introduction of the generic name *Ixos* is in no way altered by subsequent interpretation of the nature of original publication, see Art. 67.3 of the Code (ICZN, 1999). The facts are paramount. In many respects the description and illustration of the type, together with the first use of *Ixos* in the binomen is exemplary. The confusion that has arisen is in the nature of the work in which this appeared (Temminck & Laugier, 1820-1839). This is a "part work" and has recently been re-examined in some detail, see Dickinson (2001) from whom we take the publication dates. That review did not touch on *Ixos*, other than clarifying dates and demonstrating that the specific names on original wrappers appeared to have been reported by Froriep (1821), and it neither strengthened nor weakened the case for the use of this generic name for bulbuls.

Here we examine the facts, upon which the case must be determined, these appear in three livraisons spread over 18 years (livr. 12, 64 and 102). The nomenclatural details given here have been drawn from the folio edition held at the Natural History Museum, Tring. Taking these in order, we have:

- a **Livraison 12:** Plate 71, published July 1821. Letterpress published between 25 June and 25 December, 1823.
Subject: TURDOÏDE À ÉPAULETTES ROUGE
TURDUS PHÆNICOPTERUS Temm.

This taxon is depicted as generally dark blue, with darker ear coverts and lighter throat and breast. The lesser wing coverts are shown as orange-scarlet. Primaries, underside of tail, bill and legs are dark grey/black. This would appear to be a reasonable representation of *Ampelis phoenicea* Latham, 1790 = *Campephaga phoenicea* (Latham, 1790), the red-shouldered cuckoo-shrike. There is no reason to doubt that the generic name *Turdus* was used on the wrapper in 1821 as this is the name used by Froriep (1822).

Deignan (1942) quoting the manuscript notes of Richmond wrote that here "Temminck establishes his section 'Turdoïdes' and designated as type *Turdus phoenicopterus*."

- b **Livraison 64:** Plate 382, fig. 1, and letterpress, published 21 December 1825.
Subject: TURDOÏDE VERDIN
IXOS VIRESCENS Temm.

Here is the introduction of the generic name *Ixos*, used with a specific epithet and a description of the taxon.

The bird in the figure has a grey crown and nape with grey/drab and white

streaked ear coverts. Back, from hind neck to uppertail coverts, and wings generally mid-green. Tail rounded, dark green. Underparts from chin to undertail coverts streaked with white and green. Bill and legs shown grey/black.

Temminck's description has been universally accepted as the first description of what is now usually called the Sunda bulbul. Despite changes in generic treatment the specific epithet *virescens* has been in constant use.

c **Livraison 102:** Tableau Méthodique. Published 1839.

Nothing in the "Tableau" looks like a type designation. Here we find confirmation that Temminck organised his thrushes into two sections.

For section '1' he used Merle (French vernacular) and *Turdus* Linn. (scientific name). For Section '2' he used Turdoïde (French vernacular) and *Ixos* Temm., and here, regardless of the names given them in the original letterpress, he grouped the forms where he believed each belonged. In the case of Section '2' he added a footnote which translates "These species carry the name *Turdus* in the text for the *Planches Coloriées*, which must be changed for *Ixos*".

Sharpe (1882: 121) denounced this as "a perfect *olla podrida*¹ of forms ... and the genus is made to include such widely different birds as *Ixos azureus*, which is a *Cochoa*, and *Ixos* (sic) *phaenicopterus*, which is a *Campophaga* (sic)." He then declared "*Ixos* (sic) of Temminck (1825) is indefinable."

This argument fails on the grounds that when Temminck introduced the generic name *Ixos* he did so with just one species (*virescens*) so named and that must be the type by monotypy. We agree with the view that the term Turdoïde was never more than a French vernacular name for the "section" and that it can, as such, have no type species. Nor can the comments of Temminck (1839) change the fact that he had established a type for *Ixos* by monotypy and no species he chose to include later can be considered for ranking as type species.

The position of Deignan (1942), picked up by Delacour (1943), and retained in Rand & Deignan (1960), was based on the manuscript notes of Charles W. Richmond. Deignan (1942) mentioned that Oberholser (1899) had said that "the only species given is *Ixos virescens* Temminck, which must therefore be considered the type". This should have been read in the context "when the name *Ixos* was introduced ..." and it would then have been clear and irrefutable.

However, Temminck (1839) was no more capable of changing past facts than were later authors, who have accepted that *Ixos* is either indeterminate or that it is a generic name for campephagids (as which it has perhaps never been accepted). Those, since Oberholser, who argued correctly for the use of *Ixos* include Robinson & Kloss (1923: 565)² and Mees (1969: 302 fn.).

Amongst those who mistakenly clung to the use of *Hypsipetes* Vigors, 1831, for the broad genus were Dickinson et al. (1991) and Kennedy et al. (2000). In fact Sibley &

¹ Spanish for a 'rotten pot'.

² Whose views were accepted by Baker (1930: 613).

Monroe (1990) re-split the broad genus and accepted the views of Mees and have been widely followed so there were few recent holdouts.

Rand & Deignan (1960: 292) provided a brief reference to Deignan (1942) but were presumably comfortable with the argument by Sharpe (1882). Only in this context can it be explained that the genus *Ixos* is not listed anywhere, in the same volume, in the context of the Campephagidae. In the circumstances the Editors would have materially assisted had they required a more detailed footnote.

The generic names used in this section of the family Pycnonotidae, their priorities and their type species

The generic names that we have considered are *Hypsipetes*, those listed as synonyms by Rand & Deignan (1960), and *Ixos*. The table below shows their dates and their type species and arranges them from the earliest name to the newest.

Table 1: the generic names proposed for the group comprising the species treated within the genus *Hypsipetes* by Rand & Deignan (1960), and their type species. We also refer to this group hereinafter as "this section of the family".

Generic name and author	Date	Type species
<i>Ixos</i> Temminck	1825	<i>Ixos virescens</i> Temminck, 1825
<i>Hypsipetes</i> Vigors	1831	<i>Hypsipetes Psaroides</i> Vigors, 1831
<i>Galgulus</i> Kittlitz	1832	<i>Turdus amaurotis</i> Temminck, 1830
<i>Microscelis</i> Gray	1840	<i>Turdus amaurotis</i> Temminck, 1830
<i>Iole</i> Blyth	1844	<i>Iole olivacea</i> Blyth, 1844
<i>Hemixos</i> 'Hodgson' Blyth	1845	<i>Hemixos flavala</i> Blyth, 1845
<i>Ixocincla</i> Blyth	1845	<i>Hypsipetes olivaceus</i> Jardine & Selby, 1836 ³
<i>Orpheus</i> Temminck & Schlegel	1847 ⁴	<i>Turdus amaurotis</i> Temminck, 1830
<i>Anepsia</i> Reichenbach	1850	<i>Turdus borbonicus</i> Forster, 1781
<i>Tricholestes</i> Salvadori	1874	<i>Trichophorus minutus</i> Hartlaub, 1853 ⁵
<i>Myiosobus</i> Reichenow	1891	<i>Myiosobus fulvicauda</i> Reichenow, 1891
<i>Cerasophila</i> Bingham	1900	<i>Cerasophila thompsoni</i> Bingham, 1900
<i>Thapsinillas</i> Oberholser	1905	<i>Criniger affinis</i> Hombron & Jacquinot, 1841
<i>Acritillas</i> Oberholser	1905	<i>Criniger ? ictericus</i> Strickland, 1844
<i>Haringtonia</i> Mathews & Iredale	1917	<i>Hypsipetes Psaroides</i> Vigors, 1831

From this list it is apparent that the name *Galgulus* is preoccupied by its use as a generic name in other families and is unavailable, and it may be perceived that *Haringtonia* is only required if *Hysipetes* is considered to be unavailable. Likewise the generic name *Orpheus* is a junior synonym of the name *Microscelis*. *Myiosobus* will

³ Dated 1837 by Rand & Deignan (1960: 296); we know of no published evidence that contradicts the dates for this work given by Sherborn (1894).

⁴ Holthuis & Sakai (1970) provided the basis for understanding the dates to apply to letterpress parts of the *Fauna Japonica: Aves*. It is reasonable, since fascicle 4 began with page 61 and fascicle 8 ended with page 100, to presume that each of fascicles 4 to 8 comprised the habitual eight pages. On this basis page 68 was part of fascicle 4 which these authors dated 6 October 1847.

⁵ This is a junior synonym of *Brachypodius criniger* Blyth, 1845.

remain a junior generic synonym of *Tricholestes* unless *M. fulvicauda* is found to be misplaced in the synonymy of the monotypic species *T. criniger*.

In any rearrangement of the species these generic names must all be considered and accounted for in use or in synonymy. We do not append a formal synonymy here, but it would be precisely that given in Rand & Deignan (1960: 282-283) except for a correction to the date of the name *Orpheus*, and the listing, first, of *Ixos* Temminck, 1825, *Nouveaux Recueil des Planches Coloriées d'Oiseaux*, livr. 64, text to plate 382. Type by monotypy, *Ixos virescens* Temminck.

The groups employed by Sharpe (1882) and Delacour (1943)⁶

In seeking to arrive at acceptable genera we examined arrangements by Sharpe (1882) and by Delacour (1943). Sharpe recognised 1) *Hypsipetes* (three species, using current names and species limits: *amaurotis*, *leucocephalus* and *nicobariensis*⁷); 2) *Ixocincla* for the Madagascan and Mascarene taxa; 3) *Hemixus* [sic] (three species: *flavala*, *virescens* Temminck, 1825, and *malaccensis*); 4) *Iole* (six species, using current names and species limits: *olivacea*, *virescens* Blyth, 1845, *everetti*, *rufigularis*, *philippinus* and *mcclllandii*), 5) *Tricholestes* (one species: *criniger*), and 6) placed two species (*palawanensis* and *affinis*) in *Criniger* Temminck, 1820, and another (*indicus* Jerdon, 1839) in an extralimital West African genus. The species *siquijorensis* and *thompsoni* were described later.

The name *virescens* has been proposed in three separate but related genera; in *Ixos* by Temminck, 1825; in *Iole* by Blyth, 1845 and 2 pages later in *Ixocincla* by Blyth, 1845. For both the 1845 names substitute names were proposed and in the broadened genera whether conceived and used under the name *Microscelis* or as conceived and used under the name *Hypsipetes* these substitute names have had to be employed. It is hoped that Table 2 will assist in keeping the picture clear in what is, of necessity, a confusing history.

Delacour (1943) employed the generic name *Microscelis* and accepted three subgenera. These were: 1) a monotypic subgenus *Tricholestes* (species: *criniger*) with long hairs on the upper back; 2) polytypic *Iole* with slightly elongated crown feathers (species: *charlottae*⁸, *nicobariensis*, *ictericus*⁹ and *affinis*); and 3) polytypic *Microscelis* with pointed crown feathers that were more or less elongated (species: *everetti*; '*gularis*' – now known as *philippinus*, *siquijorensis*; *amaurotis*, *virescens* Temminck, 1825, *flavalus*, *madagascariensis* and *thompsoni*).

Delacour (1943), followed Deignan (1942), in considering the generic name *Microscelis* to be the oldest relevant name; he could therefore have put all the species

⁶ In this section, and those that follow, we include the name of the author of the species in only two contexts: first, when we use the specific epithets *virescens* (or its substitutes) and *olivaceus* as these are the only names used for more than one taxon; second, when the taxa are considered to be extralimital such that they are not listed in the type list, and covered by the references, in Dickinson et al. (2002) and for these we do therefore include the references in our list of References.

⁷ A substitute name for *Ixocincla virescens* Blyth, 1845, not to be confused with *Iole virescens* Blyth, 1845.

⁸ Within this "species" lay the preoccupied name *Iole virescens* Blyth, 1845. See later.

⁹ The name *indicus* Jerdon, 1839, was at this time considered preoccupied.

Table 2. A comparison of the treatments of Asian species in the broad genus *Hypsipetes*.

The broad genus <i>Hypsipetes</i> sensu Rand & Deignan (1960)	Nomenclature of Sharpe (1882)	Nomenclature of Delacour (1943) [see footnote]	Nomenclature of Sibley & Monroe (1990)	Nomenclature of Dickinson & Gregory (2002)
<i>Hypsipetes viridescens</i>	<i>Iole viridescens</i>	<i>Microscelis charlottae</i> partim	<i>i</i> <i>Iole virescens</i>	<i>Iole virescens</i>
<i>Hypsipetes propinqua</i>	Not yet described	<i>Microscelis charlottae</i> partim	<i>i</i> <i>Iole propinqua</i>	<i>Iole propinqua</i>
<i>Hypsipetes charlottae</i>	<i>Iole olivacea</i>	<i>Microscelis charlottae</i> partim	<i>i</i> <i>Iole olivacea</i>	<i>Iole olivacea</i>
<i>Hypsipetes palawanensis</i>	<i>Criniger palawanensis</i>	<i>Microscelis charlottae</i> partim	<i>i</i> <i>Ixos palawanensis</i>	<i>Iole palawanensis</i>
<i>Hypsipetes criniger</i>	<i>Tricholestes criniger</i>	<i>Microscelis criniger</i>	<i>t</i> <i>Tricholestes criniger</i>	<i>Tricholestes criniger</i>
<i>Hypsipetes philippinus</i>	<i>Iole philippensis</i>	<i>Microscelis gularis</i>	<i>m</i> <i>Ixos philippinus</i>	<i>Ixos philippinus</i>
<i>Hypsipetes philippinus</i> partim	<i>Iole rufifigularis</i>	<i>Microscelis everetti</i> partim	<i>m</i> <i>Ixos rufifigularis</i>	<i>Ixos rufifigularis</i>
<i>Hypsipetes siquijorensis</i>	Not yet described	<i>Microscelis siquijorensis</i>	<i>m</i> <i>Ixos siquijorensis</i>	<i>Ixos siquijorensis</i>
<i>Hypsipetes everetti</i>	<i>Iole everetti</i>	<i>Microscelis everetti</i>	<i>m</i> <i>Ixos everetti</i>	<i>Ixos everetti</i>
<i>Hypsipetes affinis</i>	<i>Criniger affinis</i>	<i>Microscelis affinis</i>	<i>i</i> <i>Alophoixus affinis</i>	<i>Thapsinillas affinis</i>
<i>Hypsipetes indicus</i>	<i>Xenochila icterica</i>	<i>Microscelis ictericus</i>	<i>i</i> <i>Iole indica</i>	<i>Acritillas indica</i>
<i>Hypsipetes mccllellandii</i>	<i>Iole mccllellandii</i>	<i>Microscelis virescens</i> partim	<i>m</i> <i>Hypsipetes mccllellandii</i>	<i>Ixos mccllellandii</i>
<i>Hypsipetes malaccensis</i>	<i>Hemixus malaccensis</i>	<i>Microscelis virescens</i> partim	<i>m</i> <i>Ixos malaccensis</i>	<i>Ixos malaccensis</i>
<i>Hypsipetes virescens</i>	<i>Hemixus virescens</i>	<i>Microscelis virescens</i>	<i>m</i> <i>Hypsipetes virescens</i>	<i>Ixos virescens</i>
<i>Hypsipetes flavala</i>	<i>Hemixus flavala</i>	<i>Microscelis flavalus</i>	<i>m</i> <i>Hemixos flavala</i>	<i>Hemixos flavala</i>
<i>Hypsipetes amaurotis</i>	<i>Hypsipetes amaurotis</i>	<i>Microscelis amaurotis</i>	<i>m</i> <i>Ixos amaurotis</i>	<i>Microscelis amaurotis</i>
<i>Hypsipetes</i> <i>madagascariensis</i> partim	<i>Hypsipetes</i> <i>leucocephalus</i>	<i>Microscelis</i> <i>madagascariensis</i> partim	<i>m</i> <i>Hypsipetes</i>	<i>Hypsipetes</i> <i>leucocephalus</i>
<i>Hypsipetes nicobariensis</i>	<i>Hypsipetes virescens</i>	<i>Microscelis nicobariensis</i>	<i>i</i> <i>Hypsipetes nicobariensis</i>	<i>Ixos nicobariensis</i>
<i>Hypsipetes thompsoni</i>	Not yet described	<i>Microscelis thompsoni</i>	<i>m</i> <i>Hypsipetes thompsoni</i>	<i>Cerasophila thompsoni</i>

Footnote: t = subgenus *Tricholestes*; i = subgenus *Iole*; m = subgenus *Microscelis*

in here without concern for the priority of the alternative names. His subgenus *Tricholestes* was correctly constructed; the one species included is the type species. No species or subspecies in his subgenus *Iole* is associated with *Turdus amaurotis* and thus no name among the listed taxa belonged to a type species for a generic name older than *Iole*.

The groups employed by Sibley & Monroe (1990)

These authors considered the species *affinis* misplaced in this section of the family and thought its affinities lay with the genus *Criniger* sensu lato. However, as Sibley & Monroe believed that *Criniger* should be employed more narrowly and reserved for African species, they placed *affinis* in the genus *Alophoixus*.

Otherwise their five genera were: monotypic *Tricholestes*, and the four polytypic genera *Iole* (species: *virescens* Blyth, 1845, *propinqua*, *olivacea* and *indica*), *Ixos* (species: *palawanensis*, *philippinus*, *rufigularis*, *siquijorensis*, *amaurotis*, *everetti* and *malaccensis*), *Hemixos* (species: *flavala* and *castanonotus*) and *Hypsipetes* (species: *mccllellandii*, *virescens* Temminck, 1825, *madagascariensis* P.L. Stadius Müller, 1776, *crassirostris* Newton, 1867, *parvirostris* Milne-Edwards & Oustalet, 1885, *borbonicus* J.R. Forster, 1781, *leucocephalus*, *nicobariensis* and *thompsoni*).

The flaw here, referred to by Bock (1994), is that of the two species for which they used the name *virescens* the one they placed in *Hypsipetes* is actually the type species of the genus *Ixos*. Since *Ixos* is an earlier name than *Hypsipetes* the rules of priority require that such a group take the generic name *Ixos* and that the group named *Ixos* by Sibley & Monroe use another name or be merged. The species these authors grouped as *Ixos* include the type species of the genus *Microscelis* and, as the grouping lacked the type species for *Ixos*, should have been labelled *Microscelis*. Bock (1994) argued that *Ixos* Sibley & Monroe was either a *nomen nudum* or a junior homonym. We consider it best treated as a *lapsus*. In other respects the Sibley & Monroe arrangement was logical, although one may disagree with the detail.

Their arrangement was followed by Inskipp et al. (1996), who apparently overlooked Bock (1994). Gregory (2000) offered a necessary correction, keeping it as simple as possible. He proposed moving the species *virescens* Temminck, 1825, and *malaccensis* from *Hypsipetes* to *Ixos*. The genera do then all contain their type species and each genus is then known by the oldest name that applies. But the validity of this arrangement depends on whether like has been placed with like. It is necessary that this be asked if only because the arrangement differs from that of Sibley & Monroe (1990).

Historical recognition of close specific relationships

Various prior reviews of species or species groups have demonstrated, and grappled with, a very close resemblance between two or more species. In such cases one would expect the species concerned to be placed in the same genus.

Deignan (1942) listed a broad species *Microscelis virescens* (Temminck, 1825) that included *malaccensis* and *mccllellandii*. We see the resemblance.

Delacour (1943) listed a species *Microscelis charlottae* ranging all the way from the Himalayas and Indochina to the Greater Sundas and Palawan. This, although recogni-

tion of considerable similarity, was overlumped. Deignan (1948) explored the limits of *Microscelis viridescens* (Blyth, 1867)¹⁰ and *M. charlottae* because of apparent sympatry in eastern Burma and western Thailand, and he segregated *M. palawanensis*. He also remarked that the Malay Peninsula form of *charlottae* occurred north to Nakhon Si Thammarat and that the southern Thai race *cinnamomeoventris* occurred south to the Isthmus of Kra, interpreting the apparent overlap as due to the wanderings of non-breeding birds. Subsequently in Rand & Deignan (1960), he decided that the overlap represented breeding sympatry and split his previous *charlottae* between a northern *propinquus* and a southern *charlottae*. In a broad genus *Hypsipetes* these three – *palawanensis* apart – are called *viridescens*, *propinquus* and *charlottae* as in Rand & Deignan (1960)¹¹.

These three should be expected to fall within the same narrow genus. If used in a small genus from which *Ixos virescens* Temminck, 1825, is excluded the first of these can be named *virescens* Blyth, 1845¹². Similarly, if the species *borbonicus* (with its associated Mauritius subspecies *olivaceus* Jardine & Selby, 1837) is excluded from the genus *Ixos* the name *olivacea* Blyth, 1844, becomes available and can be reintroduced in place of *charlottae*. Thus when treated in a narrow genus *Iole* excluding both *virescens* Temminck, 1825, and *borbonicus* these three species must be called *virescens* Blyth, 1845, *propinqua* and *olivacea*.

In the Philippines, nomenclature has changed and the number of species admitted has varied (see Dickinson & Dekker, 2002; Dickinson et al., 2002). However there has been general acceptance (Delacour & Mayr, 1946; duPont, 1971; Dickinson et al., 1991; Kennedy et al., 2000) that what is now called *philippinus*, *rufigularis*, *siquijorensis* and *everetti* form a close group of species (although we have reservations as in colouration *everetti* is entirely different).

Finally when Delacour (1943), mainly following Danis (1940), united a very broad species *madagascariensis*, subsuming Asian *leucocephalus* in a species also occurring in Madagascar, Mauritius, Reunion, Aldabra and the Seychelles, a further group was defined. Danis (1940) conceived of some of these forms as belonging not just to a separate species but to a separate subgenus and specific distinctness was restored within the congeneric treatment of Rand & Deignan (1960). These too might reasonably be expected to fall within the same smaller genus.

These groupings, so far as they go, appear to us to be well supported by the morphological evidence. This does not necessarily imply that each group mentioned belongs in a separate genus.

¹⁰ Blyth's substitute name for *Iole virescens* Blyth, 1845.

¹¹ Two of these specific names are substitute names: *viridescens* Blyth, 1867 for *virescens* Blyth, 1845, preoccupied in a broad genus whether named *Microscelis* or *Hypsipetes*; and *charlottae* Finsch, 1867, the senior name within the species previously called *Iole olivacea* Blyth, 1844, preoccupied in the same broad genus (the taxon named *olivacea* taking the available synonym *crypta* Oberholser, 1918).

¹² *Iole virescens* Blyth, 1845, has page priority over *Ixocinclia virescens* Blyth, 1845, and both are preoccupied in a broad genus *Hypsipetes* by *Ixos virescens* Temminck, 1825. In our arrangement *Iole virescens* Blyth, 1845, is available, but the name *Ixocinclia virescens* Blyth, 1845, is preoccupied by *Ixos virescens* Temminck, 1825, and Blyth's name must be placed in the synonymy of its junior synonym *Hypsipetes nicobariensis* Moore, 1854.

We have mentioned above the comment of Deignan (1942) about the lack of “characters which might be used to separate any one group” from the others. One reason for this remark is the intermediate appearance of certain species. For example *amaurotis* is reminiscent of the Indian Ocean taxa once attached to the *madagascariensis* group. And *palawanensis*, although in our view correctly placed in *Iole*, is not without apparent links to the Philippine group of the genus *Ixos*. Finally *nicobariensis* is so intermediate that different authors have placed it in quite different positions¹³.

Other species included in the broad genus *Hypsipetes* by Rand & Deignan (*Microscelis* of Delacour) seem to fit there much less well. Delacour placed *ictericus* and *affinis* in *Iole* (along with his broad *charlottae* and *nicobariensis*). Rand & Deignan (1960) clearly disagreed placing *nicobariensis* at the other end of the genus and placing the Philippine group between what we have termed the *charlottae* group and *affinis* and *ictericus*. This placed these two yellowish species next to *everetti*, which is also yellow. In addition to *affinis* and *ictericus* the peculiarities of *thompsoni* stand out.

Some criteria for subdivision of the species into two or more genera

Historically the characteristics of genera were most often based on constant morphological characters without reference to colour pattern. They took no account of egg colouration (although nest characteristics have been seen as relevant, for example for groups of swifts and swallows) nor of acoustic evidence.

The arrangement of keys to permit identification employed criteria in whatever sequence was best suited to breaking down the family in a coherent way. Sharpe (1882) in his key for the subfamily *Brachypodinae* (as he called the bulbuls) used the following characters to structure his key: whether the nostrils were exposed or hidden by bristles or feathers; the nature and abundance of rictal bristles; whether wings or tail were pointed or rounded; bill shape including the presence or absence of notches and serration; bill or culmen length compared to the length of the tarsus; presence or absence of tarsal scutellation; shape of the nostril and extent of protective membrane; and the presence or absence of head crests, eye wattles, tufts of back feathers or long hairs.

Sharpe did not characterise each of the genera he recognised, other than by means of the key. And we have not found all these characters helpful at the level of this section of the family. The generic names *Myiosobus*, *Cerasophila*, *Thapsinillas* and *Acritillas* all postdate Sharpe (1882). See Table 1.

Delacour (1943) characterised the genus and the three subgenera in this group that he recognised. He employed many of the same characters, but mentioned colour patches and voice (“loud short notes” in *Pycnonotus*, “loud and harsh” in *Criniger* and *Microscelis*), but on voice his comments are too sparse and incomplete to be of help. He also, importantly, mentioned the pointed and more or less elongated crown feath-

¹³ Sharpe (1882) placed it in a narrow genus *Hypsipetes* close to *leucocephalus* a position favoured by Rand & Deignan (1960) and Sibley & Monroe (1990), but Delacour (1943) saw it as a species with the subgenus *Iole*. Of these two views we prefer the former, but here we hypothesize that it is closer to *mcclellandii*.

ers of his subgenus *Microscelis*. Because his characterisations are of groups of species that do not coincide precisely with our proposals we cannot usefully restate any of his generic designations, except that of *Tricholestes* which is monotypic.

Methodology

Using the collection at the Natural History Museum, Tring, we assembled one or more representative specimens of each of the species treated by Rand & Deignan (1960) in the genus *Hypsipetes*. In doing so we took account of recent treatments re-splitting *madagascariensis* and we included Indian Ocean species as well as Asian ones. We also examined *Criniger finschii* Salvadori, 1871, as a relative whose placement in *Criniger* we doubt, and other species of the broad genera *Criniger* Temminck, 1820, and *Pycnonotus* Boie, 1826, when we felt these would be instructive. We made sure that each specimen was correctly identified and made ourselves aware of the names used for each in the broad genus *Hypsipetes* and in smaller genera.

We then grouped those species that seemed to us to show a resemblance and checked our groupings against those employed by earlier authors (and discussed above). Finally we examined each group to develop our own generic diagnosis with a view to refining those previously offered for such genera as we considered should be recognised.

Conclusions

We agree with Sibley & Monroe (1990) that the monotypic genus *Tricholestes* is justified for the species *criniger* (Blyth, 1845)¹⁴. We concluded that whatever *Criniger finschii* may be – and we doubt that *Alophoixus* Oates, 1889, is an appropriate generic name for it – it should not be considered as a component of a broad genus *Hypsipetes* and indeed it has not been. See also Dickinson & Dekker (2002).

We felt that the *mcclllandii* group and the Philippine group – as we have called them above – should be seen as congeneric. As one species of the former is *Ixos virescens* Temminck, 1825, this genus must be called *Ixos*. Contrary to Gregory (2000) we consider that *palawanensis* has been correctly grouped with other species in the genus *Iole* (although it is evidently intermediate).

We do not feel that *indica* is a good fit with the close-knit group that forms *Iole* and we believe it is best treated by recognition of a monotypic genus: the name *Acritillas* Oberholser, 1905, is available.

The “species” *affinis*, treated within *Hypsipetes* by Rand & Deignan, but in *Alophoixus* by Sibley & Monroe (1990), is enigmatic. We do not believe, however, that it fits less well in the broad genus *Hypsipetes* than with the *Criniger* group of bulbuls (where Sibley & Monroe placed it) and, pending molecular studies, believe it best to recognise a monotypic genus for which the name *Thapsinillas* Oberholser, 1905, is available. This “species” seems to us to be a composite that may be better expressed as two to four separate species¹⁵; we also see some resemblance, mainly in colour, to *Ixos everetti* which is a relatively close neighbour – as did Delacour (1943).

¹⁴ Not to be confused with *Setornis criniger* Lesson, 1839.

Gregory (2000) considered *amaurotis* to belong to the narrow genus *Ixos*. We now think that it has as many similarities to *Hypsipetes*. We have concluded that until molecular evidence demonstrates that one affinity is closer than the other its differences from both groups warrant treatment of it in the monotypic genus *Microscelis*.

Finally we faced a decision in the case of *nicobariensis*. We do not agree with Delacour (1943) that it belonged in *Iole*, nor, although we find their arrangement more appealing, do we agree with Sibley & Monroe who considered it part of a superspecies with *Hypsipetes madagascariensis*¹⁶. A close examination of *nicobariensis* showed that the crown feathers are, despite the implications of placement in *Iole* by Delacour, most similar to those of *mccllellandii* and we should be surprised if this were not the representative offshoot in the Nicobars of that wide-ranging species. We tentatively place it next to that and retain specific rank for it. This hypothesis needs testing through molecular studies.

Thus we recommend that nine genera be recognised: *Acritillas*, *Tricholestes*, *Iole*, *Ixos*, *Thapsinillas*, *Microscelis*, *Hemixos*, *Hypsipetes* and *Cerasophila*. This may not be the most parsimonious solution. However, without the benefit of molecular studies for some of the key members of this group, we believe it is the best approach until DNA studies provide us with new information.

Proposed generic arrangement and brief characterisations of genera

All these genera share exposed nostrils, not covered by feathering, and have strongly carinated bills, but bill shape is often distinctive (see fig. 1). We give below some characteristics we found helpful to group the species in this section of the family; these are not put forward as diagnoses of the genera concerned as we believe that our arrangement will require revision when detailed molecular work has been done. We suspect the tarsi and feet would have been helpful too, but we did not attempt to sketch these.

Acritillas Oberholser, 1905. Monotypic. Species: *indica*.

Characteristics: has bright yellow in the plumage (reminiscent of the genus *Pycnonotus*); uncrested, the crown feathers are pointed but not markedly lengthened; the bill is sharply decurved towards the tip and although the gonys is nearly horizontal the upper edge of the lower mandible curves down to fit the upper; nasal bristles relatively short and few.

Tricholestes Salvadori, 1874. (synonym: *Myiosobus* Reichenow, 1891). Monotypic. Species: *criniger*¹⁷.

¹⁵ For example the distribution of yellow in the tail, if present, varies greatly, and the "subspecies" *mystacalis* Wallace, 1863, has a yellow eyelid not matched by other forms (Hartert, 1903).

¹⁶ They also reflect, and we can more easily see, the association of all the Madagascan and Mascarene forms and possibly *leucolophus* in such a superspecies.

¹⁷ This is the type species based on the name *Trichophorus minutus* Hartlaub, 1853, which is a junior synonym.

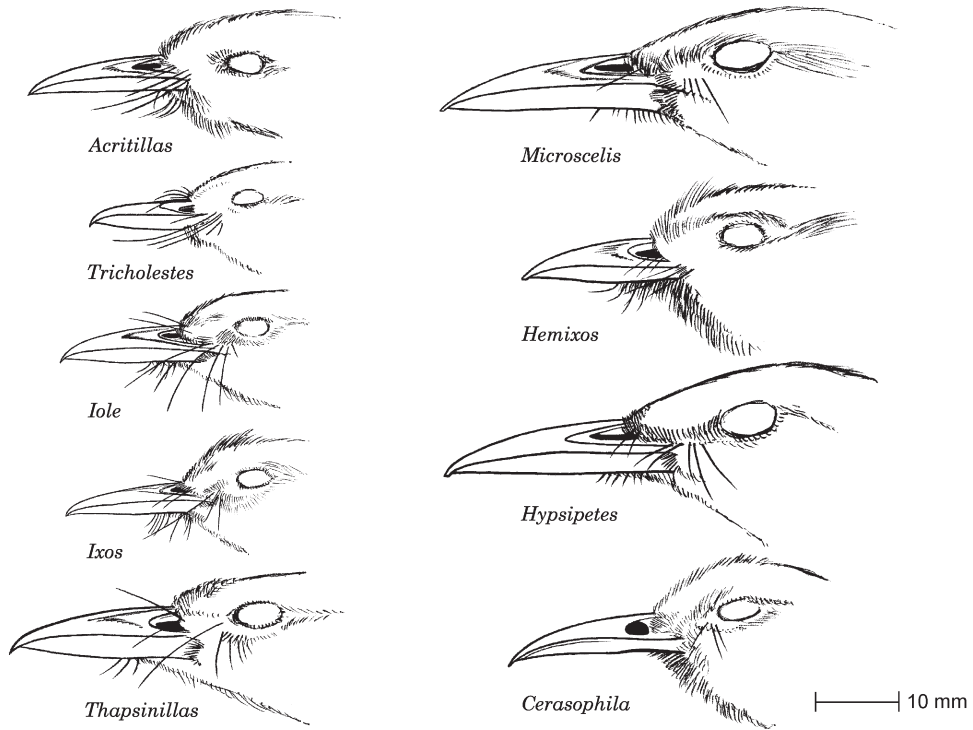


Figure 1. Species representatives of the genera of bulbuls treated here; heads to show bill shapes, nasal operculae and feathering.

Characteristics: small; generally rather yellowish olive, but greener above; the bill is small and straight, both mandibles curving to make the point, slightly hooked; easily distinguished in the hand by the very long hairs on the back and long rictal bristles; the rump very densely feathered.

Iole Blyth, 1844. Polytypic. Species: *virescens* Blyth, 1845, *propinqua*, *olivacea* and *palawanensis*.

Characteristics: general colour rather uniform (and blending into a forest background); crown erectile, but modestly so, the feathers slightly elongated and more rounded than pointed; bill wide at base, pointed and typically slightly hooked; nasal fossa relatively large.

Ixos Temminck, 1825. Polytypic. Species: *nicobariensis*, *mcclellandii*, *malaccensis*, *virescens* Temminck, 1825; *philippinus*, *rufigularis*, *siquijorensis*, *everetti*¹⁸.

¹⁸ As mentioned above we have reservations about the placement of this in *Ixos*.

Characteristics: colours usually camouflage greens and browns, which vary considerably from species to species, with distinctive markings or pattern mainly on throat and breast; moderately well crested, crown feathers pointed and elongated; bill like that in *Iole*, but finer and not so hooked, lower mandible more horizontal, and nasal fossa smaller.

The species *nicobariensis* is a washed out version of *mccllellandii* that does not fit the colour characteristics given above.

Thapsinillas Oberholser, 1905. Monotypic. Species: *affinis*.

Characteristics: typically dark oily green, relieved by areas of yellow in some forms; crown not crested and feathers only slightly elongated; bill much like *Iole* but perhaps more hooked and with lower mandible deeper; rictal bristles fewer and weaker.

Microscelis G.R. Gray, 1840. (synonyms: *Galgulus* Kittlitz, 1832 – preoccupied; *Orpheus* Temminck & Schlegel, 1847). Monotypic. Species: *amaurotis*.

Characteristics: large; plumage essentially monotone, but with blotching below; crested, crown feathers pointed and elongated; tail slightly forked; bill long and relatively slender, shape much as in the smaller *Acritillas*; rictal bristles few.

Hemixos Blyth, 1845. Monotypic¹⁹. Species: *flavala*.

Characteristics: short tuft-like crest; crown feathers pointed and strongly elongated; plumage includes a distinctive colourful wing patch²⁰; tail very slightly forked; bill slightly hooked; rictal bristles moderate in number.

Hypsipetes Vigors, 1831. (synonyms: *Ixocinclia* Blyth, 1845; *Anepsia* Reichenbach, 1850; *Haringtonia* Mathews & Iredale, 1917). Polytypic. Species²¹: *crassirostris*, *borbonicus*, *madagascariensis*, *parvirostris* and *leucocephalus*.

Characteristics: colour scheme usually drab and monotone, grey-green, grey or black (but some black forms have white heads); sharply crested, crown feathers pointed and elongated; tail slightly forked; bill rather straight, slightly hooked; rictal bristles few.

¹⁹ We treat this as monotypic following Rand & Deignan (1960); the detailed case for splitting this into two or more species has yet to be made. Acoustic evidence may now permit this.

²⁰ Lacking in the Malaysian representative form *cinereus*.

²¹ The list we give presumes acceptance of the break-up of *madagascariensis* as given by Sibley & Monroe (1990). We concur in the separation of *leucocephalus*, but we have not examined the species outside Asia in any detail.

Cerasophila Bingham, 1900. Monotypic. Species: *thompsoni*.

Characteristics: white and grey with contrasting colourful undertail coverts; uncrested, crown feathers more rounded than pointed; tail forked; bill narrow and sharply down-curved (including the lower mandible); easily distinguished by the bare skin round the eye and the red eyering.

Effect of the recognition of the genus *Ixos* on the family name

The availability and relevance of the name *Ixos* was mentioned by Bock (1994: 201-202). There is no obligation under the Code (ICZN, 1999: Art. 64) for the family name to be based upon the oldest generic name, rather the basis is usually the date of the proposed family name. However, *Ixos* Temminck, 1825, has one year's priority over *Pycnonotus* Boie, 1826, and gave rise to the proposal of a family name (Ixodidae Bonaparte, 1838) which antedates the family name Pycnonotidae G.R. Gray, 1840.

The name Ixodidae is a senior homonym, but its junior homonym is widely used for a family of ticks (Arthropoda, Arachnida, Acari). Bock (1994: 202) reported that an application to the ICZN was "in press" in which he and a co-author sought approval of an action which, by a spelling change, would validate the bulbul name as Ixosidae Bonaparte, 1838.

Bock (1994: 201) also made clear that the uninterrupted use of the family name Pycnonotidae should lead the ICZN to order its conditional conservation, relative to other names including Ixosidae Bonaparte, 1838. Pending any ruling on such a point we believe the *status quo* should be maintained and the family name Pycnonotidae retained.

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²² Rand & Deignan (1960: 296) dated this 1837. If there is later evidence than Sherborn (1894) we have not found it and we follow him.

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