Picus Rafflesii Vigors, 18301, re-assigned to Chloropicoides Malherbe, 1849

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Picus Rafflesii Vigors, 1830[1], re-assigned to *Chloropicoides* Malherbe, 1849

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Summary.—A recent comprehensive molecular phylogeny of the Picidae recovered the genus *Dinopium* as paraphyletic, with Olive-backed Woodpecker *D. rafflesii* sister to Pale-headed Woodpecker *Gecinulus grantia*. Of the available taxonomic responses, we favour assigning *D. rafflesii* to its own genus, in line with the modern trend to recognise more and smaller genera. Several genus names were used for *rafflesii* between the mid-19th and early 20th centuries, of which *Chloropicoides* Malherbe, 1849, is the oldest. Available information suggests, however, that it was not Malherbe's intention to designate *rafflesii* as the type of his new genus, but that in near-simultaneously publishing two works on the Picidae he inadvertently introduced *Chloropicoides* first in combination solely with *rafflesii*, making it the type species by monotypy. Should it be proven that his other, more detailed paper was in fact published first, then another Malherbe genus, *Gauropicoides*, could be used by those who seek to recognise the distinctiveness of *rafflesii*.

Olive-backed Woodpecker *Dinopium rafflesii* occurs from southern Myanmar and peninsular Thailand south to Sumatra, with a separate subspecies on Borneo (del Hoyo & Collar 2014). It is one of 4–6 species (taxonomy-dependent) assigned to the genus *Dinopium* Rafinesque, 1814 (Dickinson & Remsen 2013, del Hoyo & Collar 2014, Fernando *et al*. 2016). However, in a comprehensive molecular review of the Picidae, sampling 203 of the 217 well-recognised species across six loci, Shakya *et al*. (2017: 187) found that

> '*Dinopium* is paraphyletic because *D. rafflesii* is sister to [Pale-headed Woodpecker] *Gecinulus grantia*. Morphologically, *D. rafflesii* resembles other *Dinopium* woodpeckers, except that it has plain brownish rather than black-and-white striped underparts, and its females do not have spotted crests as in *Dinopium*. In respect to these characters, and also wing coloring and red crests, *D. rafflesii* is most similar to *Gecinulus* species.'

The implications of this are that either (1) *Gecinulus* should be merged in *Dinopium*, (2) *D. rafflesii* should be reassigned to *Gecinulus* or (3) *D. rafflesii* should be transferred to another genus. The general trend in modern taxonomy is to split genera rather than lump them (2,161 genera in Dickinson 2003, increased to 2,340 genera in Dickinson & Remsen 2013, Dickinson & Christidis 2014). Given this, plus the fact that option 1 would obscure the distinctiveness of the two species in *Gecinulus* and option 2 would negate that of *D. rafflesii*, we here propose that *D. rafflesii* be moved to another genus. This is not, however, to pretend that anomalies might not result as a consequence: in the phylogenetic trees generated by Shakya *et al*. (2017) a number of pairs of congeners are indicated as being separated for longer than *D. rafflesii* has been from *Gecinulus*, including Eurasian Wryneck *Jynx torquilla* and Rufous-necked Wryneck *J. ruficollis*, Rufous Piculet *Sasia abnormis* and White-browed Piculet *S. ochracea*, Heart-spotted Woodpecker *Hemicircus canente* and Red-

[1] Bruce (2003) demonstrated that Vigors alone, not Vigors & Horsfield, should be considered the authority.

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crested Woodpecker *H. concretus*, Maroon Woodpecker *Blythipicus rubiginosus* and Bay Woodpecker *B. pyrrhotis*, and Orange-backed Woodpecker *Chrysocolaptes validus* and all other *Chrysocolaptes* sampled; but genus limits in some of these cases may indeed merit review.

Unfortunately, the second species of *Gecinulus*, Blyth, 1845, *G. viridis* (Bamboo Woodpecker) was not sampled by Shakya *et al*. (2017), but a close relationship between these congeners has long been assumed, with conspecificity sometimes proposed (Short 1982, Dickinson 2003), in part doubtless because a narrow hybrid zone between them exists in northern Thailand and, presumably, northern Laos (Round *et al*. 2012). The risk that the absence of molecular data for *G. viridis* might complicate the scenario recovered by Shakya *et al*. (2017) therefore appears remote.

Similarities between *D. rafflesii* and both species of *Gecinulus* are the unspotted throat and otherwise concolorous underparts; *D. rafflesii* and *G. viridis* further share concolorous upperparts (both with olive rump) and blackish tail. Differences between *D. rafflesii* and both species of *Gecinulus* are the former's (i) bold *Dinopium*-like black-and-white vs. plain olive-yellow facial pattern; (ii) more extensive and crested red on crown in the male; (iii) black vs. yellowish-olive crown in the female; (iv) sparse whitish spots on the flanks and lower belly; (v) large blackish vs. stubby yellowish bill; and (vi) browner-olive underparts. Differences between *D. rafflesii* and other *Dinopium* species are its: (i) lack of white spotting or streaking on the black crown in the female; (ii) lack of yellow, flame-yellow or red on the dorsal area; (iii) continuous olive-green vs. either bright red or black rump; (iv) lack of markings on the pale throat; and (v) dull plain sooty brownish-olive vs. black-on-whitish underparts. Moreover, Stresemann (1921) indicated that the nostrils of *rafflesii* are covered by feathers, but those of other *Dinopium* species are not, and in Natural History Museum (Tring) material we find that this distinction is supported (albeit with some exceptions, presumably caused by abrasion).

All the above lends support to the proposition that the most appropriate course of action based on current evidence would be to remove *rafflesii* to its own genus. The synonymy in Peters (1948: 143) indicates the availability of several names, of which two, *Chloropicoides*, Malherbe, 1849, and *Gauropicoides*, Malherbe, 1861, are seen to have as their type species by monotypy *Picus rafflesii*. Clearly, the former would have priority, and during the first half of the 20th century it was used multiple times for this species, e.g., by Stresemann (1921), Baker (1927) and Chasen (1935). Baker (1927: 75), who had earlier used *Gauropicoides* (Baker 1919), following among others Hargitt (1890: 132) and Hesse (1912: 233), noted that the latter genus is antedated by *Chloropicoides*, and went on to define how *Chloropicoides* can be distinguished from *Brachypternus* (the genus invoked by Baker for Black-rumped Flameback *Dinopium benghalense*).

Nevertheless, this evidence of priority is considerably muddied because Malherbe published two different works in 1849. One was a brief note reporting the description (elsewhere) of some new species of Picidae, including a clarification of the taxon *Picus rafflesii* Vigors, 1830, which he assigned to *Chloropicoides* (Malherbe 1849a). The second, offering a new classification of the Picidae (Malherbe 1849b), is a longer paper which he evidently regarded as a direct foretaste of his monograph (both 1849 publications, and Strickland 1845: 197, indicate that that work was already well advanced). In his new classification, Malherbe again mentioned *Chloropicoides*, but this time considered it to form three parts, the first of which comprised multiple species and the others single species each, one of them *rafflesii*. Certainly by the time his monograph eventually appeared, Malherbe (1861: 53) had settled on the Himalayan Flameback *Dinopium shorii* (which he had mentioned in his first group in Malherbe 1849b: 346) to represent the type of his genus *Chloropicoides*.

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It is clear that the author himself generally considered the new classification paper (Malherbe 1849b) to have primacy—perhaps he even expected it to appear first—and there is evidence that contemporaries (Strickland 1850[2]) and subsequent commentators (Hargitt 1890: 132, Sherborn 1925: 1246) also did so, and although of itself this confers no evidence of priority, it bears mention that Malherbe (1862: 102) in the synonymy of *rafflesii* listed the new classification after his *Bull. Soc. Hist. Nat. Dept. Moselle* note. Irrespective of any of this, there appears to be no unequivocal internal evidence that either paper was published first. Crucial, therefore, is Stresemann (1921: 89), who (i) noted that on p. 520 of the same volume in which Malherbe's new classification was published it was reported that the relevant part of the *Bull. Soc. Hist. Nat. Dept. Moselle* in which Malherbe (1849a) appeared had already been received at the Metz Academy, and (ii) offered testimony that volume 30 of *Mém. Acad. Natl. Metz* was published as a single part, meaning therefore that the new classification must have appeared later. This clearly establishes priority for Malherbe (1849a) and thus *rafflesii* as the type species of *Chloropicoides*, notwithstanding that Malherbe's intention was almost certainly not to confer this status upon the taxon.

Nevertheless, one of our referees (A. Elliott *in litt*. 2020) notes that Stresemann's (1921) assertion (ii, above) could conceivably be challenged. Consequently, should evidence come to light establishing the priority of Malherbe (1849b), then Malherbe's (1861) own subsequent designation of *Dinopium shorii* as the type species of *Chloropicoides* would render the latter genus unavailable for *rafflesii* alone, and instead necessitate the use of *Gauropicoides* Malherbe, 1861[3], by those who wish to recognise the distinctiveness of *rafflesii*.

The frequency with which *rafflesii* has been afforded its own genus is notable, with *Mesospilus* Sundevall, 1866, also introduced to accommodate it. However, the treatment by Peters (1948: 143) and commentary by Goodwin (1968) served to stymie a separate generic assignment for *rafflesii* until the study by Shakya *et al*. (2017). As far as we can establish, while acknowledging that Stresemann's (1921) testimony might ideally be subject to independent confirmation, the earliest available generic name for *rafflesii* is *Chloropicoides* and, in the light of the genetic evidence (Shakya *et al*. 2017) and the morphological data provided above, we propose that *Chloropicoides* be resurrected to accommodate *rafflesii* henceforth.

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[2] It is abundantly clear that Strickland considered Malherbe something of a nomenclatural anarchist, with a complete disregard for priority; Strickland rejected all of the new replacement names in the new classification (Malherbe 1849b).

[3] Nevertheless, it must be noted that there is considerable doubt and confusion as to the precise years in which the four volumes of Malherbe's magnum opus appeared. Although generally considered to have been published in 1861 and 1862, as indicated by the imprints, there is evidence that early parts of the work appeared sometime in 1859 (Dickinson *et al*. 2011, wherein it is concluded that the dating of new names in this work remains a matter for clarification).

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