



## A new genus for *Dasycrotapha plateni* and *D. pygmaea* (Aves: Zosteropidae)

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Traditionally, Zosteropidae contained only species known as white-eyes, most of which were characterized by the presence of white feathering around the eyes. However, recent phylogenetic studies have considerably reshaped the species composition within the family. Species in two genera (*Yuhina* Hodgson, 1836 and *Stachyris* Hodgson, 1844) formerly considered ‘babblers’ were found to be closely related to members of Zosteropidae (Cibois 2003; Moyle *et al.* 2009, 2012; Cai *et al.* 2019; Oliveros *et al.* 2021; Vinciguerra *et al.* 2023). Both *Yuhina* and *Stachyris* were also found to be non-monophyletic. *Yuhina*, as traditionally defined (e.g., Sibley & Monroe 1990), comprises three major lineages (Cibois *et al.* 2002; Cibois 2003; Moyle *et al.* 2009, 2012; Cai *et al.* 2019), which are currently recognised as three genera [*Parayuhina* Cai *et al.*, 2019, *Staphida* Gould, 1871, and *Yuhina* (Cai *et al.* 2019; Gill *et al.* 2023)]. Several species formerly included in *Stachyris* were shown not to be closely related to each other (Cibois *et al.* 2002; Moyle *et al.* 2009); these species are also currently placed in three genera: *Dasycrotapha* Tweeddale, 1878; *Zosterornis* Ogilvie-Grant, 1894; and *Sterrhoptilus* Oberholser, 1918 (Dickinson & Christidis 2014; Cai *et al.* 2019; Gill *et al.* 2023).

*Dasycrotapha* was reinstated by Collar & Robson (2007) for Flame-templed Babbler “*Stachyris*” *speciosa* Tweeddale, 1878. Dickinson & Christidis (2014) subsequently also placed Mindanao Pygmy Babbler “*S.*” *plateni* (Blasius, 1890) and Visayan Pygmy Babbler “*S.*” *pygmaea* (Ogilvie-Grant, 1896) in *Dasycrotapha*. They treated the latter two taxa as subspecies of a single species, *D. plateni*, and thus did not follow Collar (2006), who documented multiple morphological differences between *plateni* and *pygmaea* and argued that both taxa are best treated as full species. Dickinson & Christidis (2014: 518) expressed doubt about the placement of the latter two taxa in *Dasycrotapha*, noting that the genus “may still be polyphyletic.”

Recent phylogenetic studies provide evidence that *Dasycrotapha* is indeed non-monophyletic. Based on a multi-locus molecular dataset, Cai *et al.* (2019) found that *D. plateni* was sister to the three species of *Sterrhoptilus* with 93% bootstrap support, and that *D. speciosa* was their sister taxon (with 99% bootstrap support). Bayesian posterior probability values were much lower and thus offered essentially no support for these relationships. The inferred divergence between *D. plateni* and *Sterrhoptilus* was c. 6.5 million years ago (mya; Cai *et al.* 2019). In a study based on thousands of genome-wide ultraconserved elements (UCEs), Oliveros *et al.* (2021) found that *D. plateni* and *D. pygmaea* were sister to *Sterrhoptilus* (3 spp.), with 100% bootstrap support, but they did not sample *D. speciosa*. More recently, Vinciguerra *et al.* (2023) analysed a supermatrix that combined the multi-locus data from Cai *et al.* (2019) with the UCE data from Oliveros *et al.* (2021). This approach yielded a tree in which *D. speciosa* (based on ND2) was sister to *Cleptornis marchei* (Oustalet, 1889) (albeit with only 73% bootstrap support), yet was strongly supported as being outside the *D. plateni*/*D. pygmaea* + *Sterrhoptilus* clade. The inferred divergence between *D. plateni*/*D. pygmaea* and *Sterrhoptilus* was c. 5.7 mya (95% HPD 4.3–7.0 mya), which exceeded the mean divergence estimates of two other pairs of genera, *Tephrozosterops* Stresemann, 1931/*Zosterops* Vigors & Horsfield, 1827 and *D. speciosa*/*Cleptornis marchei*, by 2.8 and 1.4 million years, respectively (Vinciguerra *et al.* 2023).

Consensus now points to a closer relationship of *D. plateni* and *D. pygmaea* to *Sterrhoptilus* than to *D. speciosa*. Although the phylogenetic placement of *D. speciosa* remains unresolved, it is clear that *D. speciosa* is not embedded within the *D. plateni*/*D. pygmaea* + *Sterrhoptilus* clade (Cai *et al.* 2019; Vinciguerra *et al.* 2023), thus rendering *Dasycrotapha* paraphyletic. To correct this instance of paraphyly, several taxonomic arrangements are possible. One

approach is to include *D. plateni* and *D. pygmaea* within the genus *Sterrhoptilus*. However, we do not support this solution because it disregards the deep phylogenetic split subtending *D. plateni* and *D. pygmaea* from *Sterrhoptilus*. A second and taxonomically more inclusive approach is to include *Cleptornis marchei*, *Dasycrotapha* (3 spp. *sensu lato*), *Sterrhoptilus* (3 spp.), and possibly also *Apalopteron familiare* (von Kittlitz, 1830) in a single genus. This solution would subsume all taxa in Clade IV from Vinciguerra *et al.* (2023) in one genus, *Apalopteron* Bonaparte, 1854, and has the advantage of maintaining a phylogenetically consistent genus-level classification in line with the recognition of *Yuhina*, *Zosterornis*, and *Heleia* Hartlaub, 1865. However, we do not support this solution for two reasons. First, it masks morphological and biogeographical diversity within this clade. Second, the phylogenetic relationships of *Apalopteron*, *Cleptornis* Oustalet, 1889, and *D. speciosa* remain uncertain, owing to scant and non-overlapping mitochondrial data that are available for *Apalopteron* and *D. speciosa*. With better genomic sampling, it is entirely plausible that one or more of these taxa (particularly *Apalopteron*) may not belong in this clade at all.

We favor an alternative classification that erects a new genus for *D. plateni* and *D. pygmaea*. The type species of *Dasycrotapha* is *D. speciosa* (Tweeddale 1878) which is not closely related to *Sterrhoptilus*. In view of the obvious morphological differences between *D. plateni*/*D. pygmaea* and *Sterrhoptilus* (Fig. 1), and their deep phylogenetic divergence, maintaining separate genera for these two groups is warranted. No genus name is available for *D. plateni* and *D. pygmaea* (Dubois 1902; Sharpe 1903; Deignan 1964; Wolters 1980). Therefore, we propose:

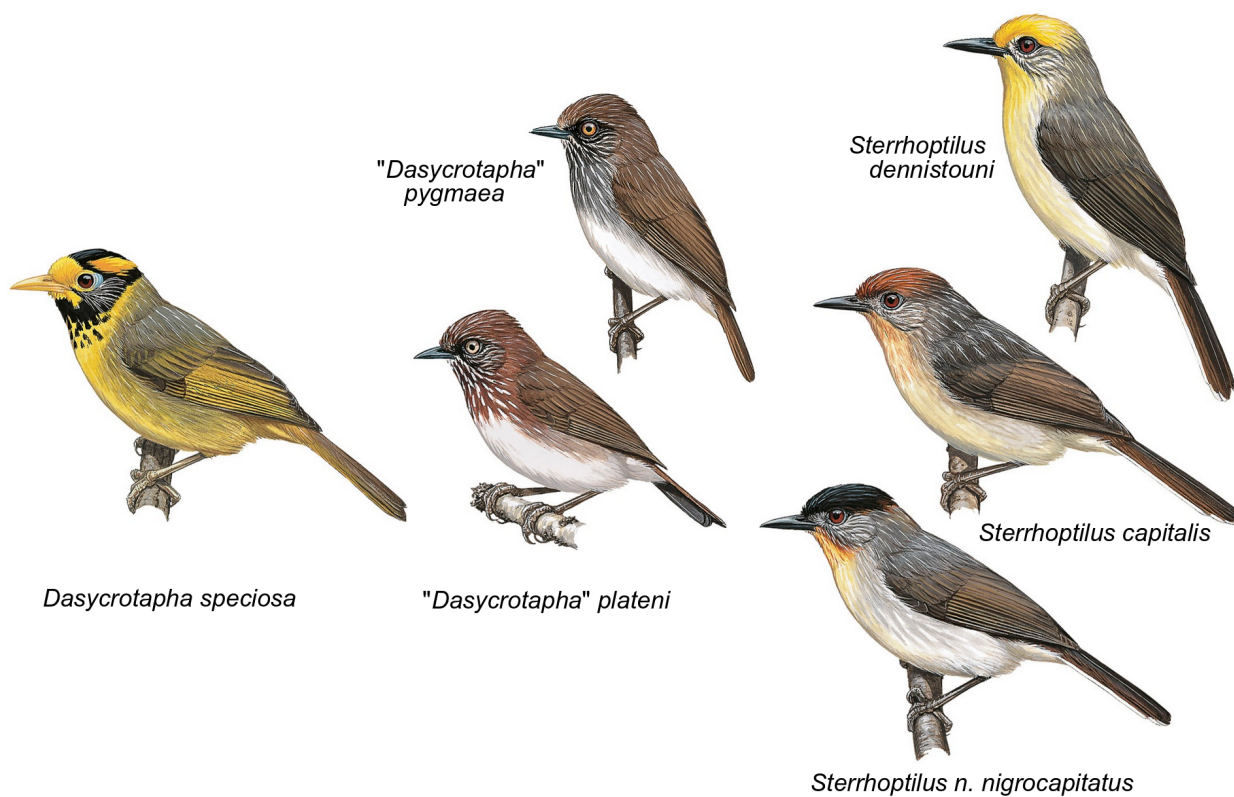


FIGURE 1. External morphology of six species of babbler-like white-eyes (Zosteropidae). Illustrations by Hilary Burn (used with permission from *Birds of the world* / Lynx Edicions).

### ***Stictocerthia* new genus**

**Type species:** *Mixornis Plateni* Blasius, 1890 (currently *Dasycrotapha plateni*).

**Diagnosis:** Small (10 cm), Philippine pygmy babblers. Both species differ from *Sterrhoptilus* in (i) much smaller size, (ii) relatively shorter bill, (iii) relatively shorter tail, (iv) yellow iris, (v) presence of streaking on throat and upper breast, and (vi) lack of white in outer tail feathers.

Both species differ from *D. speciosa*, with which they were previously united in *Dasycrotapha* (Wolters 1980; Dickinson & Christidis 2014; Cai *et al.* 2019), in (i) smaller size, (ii) relatively shorter tail, (iii) dark (not yellow) bill, (iv) yellow iris, (v) lack of naked blue patch behind eye, (vi) lack of a tuft of stiff decomposed white or greyish-white feathers originating from below the eye and extending over the ear coverts, (vii) dark forehead without yellow, (viii) streaked chin

without yellow, (ix) lack of black patches on head, (x) lack of yellow-orange patch on side of crown, and (xi) whitish belly and vent, without yellow.

**Included taxa:** *Stictocerthia plateni* **comb. nov.** (Blasius, 1890) and *Stictocerthia pygmaea* **comb. nov.** (Ogilvie-Grant, 1896).

**Etymology:** Derived from the Greek στικτος (*stiktos*) meaning spotted, and the Greek κερθιος (*kerthios*) meaning small, tree-dwelling, insect-eating bird. The gender is feminine.

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