

Polyphyly of *Hylophilus* and a new genus for the Tawny-crowned Greenlet (Aves: Passeriformes: Vireonidae)

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Once a catch-all taxon for various small, greenish passerines (Sclater 1881), today the genus *Hylophilus* Temminck contains 15 species of Neotropical greenlets in the avian family Vireonidae (Clements *et al.* 2013). Although *Hylophilus* species do share some common anatomical proportions and plumage features (Baird 1866; Ridgway 1904), some striking and concordant differences in habitat, voice, and iris color led Ridgely and Tudor (1989) to posit that the genus might contain sufficient diversity to warrant splitting into multiple genera.

Around the same time, a molecular phylogenetic study using allozymes (Johnson *et al.* 1988) suggested a polyphyletic *Hylophilus*, with one clade containing *H. poicilotis* Temminck and *H. thoracicus* Temminck, and the other containing *H. hypoxanthus* Pelzeln, *H. aurantiifrons* Lawrence, *H. decurtatus* (Bonaparte), and *H. ochraceiceps* Sclater. Johnson *et al.* (1988) considered their own results to make a strong case for splitting *Hylophilus* into two or more genera but refrained from making strong taxonomic recommendations due to their limited taxon sampling.

In a recently published phylogeny of Vireonidae with more genetic loci and greatly improved species sampling, Slager *et al.* (2014) found *Hylophilus* to be polyphyletic (Figure 1), containing four clades with strong statistical support in a three-gene analysis of Z-linked nuclear loci, a four-gene concatenated analysis of mitochondrial ND2 and three Z-linked loci, and a species tree analysis using all four genes [Figures 1, 2, and S1 in Slager *et al.* (2014)].

One *Hylophilus* clade from Slager *et al.* (2014) contained *H. sclateri* (Salvin & Godman) and was embedded within *Vireo* Vieillot, sister to a clade containing *V. philadelphicus* (Cassin), *V. gilvus* (Vieillot), and *V. leucophrys* (Lafresnaye). Although unexpected, the molecular phylogenetic placement of this little-studied species within *Vireo* is clear (Figure 1), and Slager *et al.* (2014) recommended *H. sclateri* be subsumed within *Vireo*.

A second clade resolved by Slager *et al.* (2014) mirrors the results of Johnson *et al.* (1988) in placing several species of "scrub" *Hylophilus* (*sensu* Slager *et al.*) in a clade distant from *Vireo* and other *Hylophilus* (Figure 1). These "scrub" greenlets generally have pale irides, sing rather simple, repetitive songs, and inhabit scrub or edge habitats (Ridgely and Tudor 1989). This clade includes *H. brunneiceps* Sclater, which Ridgely and Tudor (1989), lacking accurate information on iris color and song, had placed in the "canopy" *Hylophilus* group. Zimmer and Hilty (1997) noted based on careful field observations that *H. brunneiceps* sings a simple, repetitive song and has pale irides; thus, they considered the species to be a "scrub" greenlet. Because the type species of *Hylophilus* is *H. poicilotis* (by subsequent designation; AOU 1998), the genus *Hylophilus* should be restricted to the "scrub" clade. Although *H. amaurocephalus* (Nordmann) is not included in the phylogeny of Slager *et al.* (2014), the species was considered conspecific with *H. poicilotis* until recently (Willis, 1991; Raposo *et al.*, 1998) and can be tentatively placed within the "scrub" clade. Thus, the genus *Hylophilus* should be restricted to *H. poicilotis*, *H. amaurocephalus*, *H. flavipes* Lafresnaye, *H. olivaceus* Tschudi, *H. semicinereus* Sclater & Salvin, *H. thoracicus*, *H. pectoralis* Sclater, and *H. brunneiceps*.

A third well-supported clade in Slager *et al.* (2014) contains five species of "canopy" *Hylophilus* (*sensu lato*) that have dark irides, sing complex songs, and inhabit forest canopy (Figure 1). One of these "canopy" greenlets, *H. decurtatus*, is the type species for the genus *Pachysylvia* Bonaparte; thus, *H. decurtatus*, *H. aurantiifrons*, *H. hypoxanthus*, *H. muscicapinus* Sclater & Salvin, and *H. semibrunneus* Lafresnaye should be transferred to the resurrected genus *Pachysylvia*.

The fourth and final *Hylophilus* (*sensu lato*) clade in Slager *et al.* (2014) contains *H. ochraceiceps*, a taxon long recognized as distinct from the other greenlets (Ridgely and Tudor 1989; Figure 1). Because *Hylophilus* and *Pachysylvia* are in use for the greenlet clades containing their respective type species and no generic name is available, we describe a new genus:

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