

Cheleocloeon falcatum (Crass), a new combination for a southern African species previously assigned to *Afroptilum* Gillies (Ephemeroptera: Baetidae)

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Gillies (1990) described the genus *Afroptilum* (Ephemeroptera: Baetidae) to include all African species previously assigned to *Centropilum* Eaton. Considerable revisionary work dealing with *Afroptilum* has restricted the concept of *Afroptilum* and resulted in the description of several new genera and reassignment of many Afrotropical species (Wuillot & Gillies 1994; Lugo-Ortiz & McCafferty 1996a,b,c, 1997a,b, 1998; Barber-James & McCafferty 1997; McCafferty *et al.* 1997). Of the 30 species listed under *Afroptilum* by Gillies (1990), and subsequently described by Gillies (1991) and Wuillot & Gillies (1993), only the southern African species *A. falcatum* (Crass) has not yet been correctly assigned to a genus. Crass' (1947) description of this species was based on male and female adults only, the description was brief, and the drawings were schematic. This species has an unusual combination of adult characters relative to other Afrotropical baetids with single marginal intercalaries in the forewings. Unfortunately, the material on which Crass (1947) based his description is apparently lost, and the larval stage of this species remains unknown.

Lugo-Ortiz & McCafferty (1998) showed that *Afroptilum* adults are distinguished by a unique bifurcate costal process of the hind wings consisting of a narrow, erect proximal portion and a prostrate, broad-based distal portion (Crass 1947: Fig. 19a–d). In addition, the hind wings of *Afroptilum* adults are broad (Crass 1947: Fig. 19a–d; Kimmins 1960: Fig. 5; Kopelke 1980: Figs 16b,c, 19b–d, 25b–d). Examination of the figures of the hind wings of *A. falcatum* in Crass (1947: Fig. 20c) and Demoulin (1970: Fig. 3b) revealed, however, that the species cannot be assigned to *Afroptilum* because its hind wing costal process is single and falcate. Moreover, the genital forceps of male adults of *A. falcatum* (Crass 1947: Fig. 20b; Kimmins

1960: Fig. 4c; Demoulin 1970: Fig. 3c) are not consistent with those occurring in male adults of *Afroptilum*. In *A. falcatum*, segment 2 is slightly expanded distally and segment 3 is narrowly reduced. In other male adults of *Afroptilum*, segment 2 of the genital forceps is not expanded distally and segment 3 is narrowly elongate (Kimmins 1960: Fig. 4a; Kopelke 1980: Figs 15a, 18a, 24).

Lugo-Ortiz & McCafferty (1997a) reviewed the genus *Cheleocloeon* Wuillot & Gillies, and indicated that, although the larvae are easily diagnosed, adults are not as easily distinguished from other Afrotropical baetids with single marginal intercalaries in the forewings. This situation is due to adults of *Cheleocloeon* manifesting considerable variability with respect to the presence or absence of hind wings. Male adults of *C. dimorphicum* (Soldán & Thomas) and *C. excisum* (Barnard) have hind wings with a hooked costal process, but female adults of both species lack hind wings. Male and female adults of *C. carinatum* Wuillot and *C. yolandae* Wuillot lack hind wings. Lugo-Ortiz & McCafferty (1997a) erred in stating that male and female adults of the latter two species have hind wings. Taking this variability into account and, as male adults of *A. falcatum* have hind wings and genitalia with similar morphological features to those of *C. excisum*, as indicated by Demoulin (1970), we assign *A. falcatum* to *Cheleocloeon*.

Because male adults of *C. excisum* and *C. falcatum* appear to be similar, and because the ranges of both species overlap in southern Africa (Barnard 1932; Crass 1947; Kimmins 1960; Demoulin 1970), some confusion may arise regarding their identification. The only difference between the two species is the presence of hind wings in female adults of *C. falcatum*. Only when the larval stage of *C. falcatum* is known can a more reliable diagnosis of the two species be expected.

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