

NOTE

New Synonym and Western Range Extension for *Heterocloeon anoka* (Daggy)
(Ephemeroptera: Baetidae)

Pseudocloeon anoka Daggy, *Ps. edmundsi* Jensen, and *Ps. myrsum* Burks were placed into synonymy with *Baetis punctiventris* (McDunnough) (now in *Plauditus* Lugo-Ortiz and McCafferty) by McCafferty and Waltz (1990). In the revision of the genus *Heterocloeon* McDunnough by McCafferty et al. (2005), *Ps. anoka* (now in *Heterocloeon*) was shown to be a valid and distinctive species, *Ps. myrsum* was confirmed to be a variant of *P. punctiventris* (McCafferty et al. 2005, Figs. 20–21), and no action was taken with respect to *Ps. edmundsi* because, unlike the above, its types had not been reexamined. The differences between *H. anoka* and *P. punctiventris* were unclear until very recently, and this resulted in numerous identifications and records of *H. anoka* having been incorrectly attributed to *P. punctiventris*. McCafferty et al. (2005) reviewed newly established distribution records of *H. anoka*, indicating a primarily eastern and central Canada and USA range overlapping with that of *P. punctiventris* to a considerable extent. Because of the historical confusion between *H. anoka* and *P. punctiventris*, it became necessary to reassess the synonymy of *Ps. edmundsi* to determine if it is perhaps equivalent to *H. anoka* instead of *P. punctiventris*.

Jensen's (1969) description of *Ps. edmundsi* was of no aid in resolving this issue, but fortunately the types of *Ps. edmundsi*, consisting of a male adult holotype and male adult paratype taken at the Snake River on Highway 20–26 eight miles northwest of Parma in Canyon

County, Idaho, were found in the Purdue Entomological Research Collection, having been donated by George Edmunds in the 1990s. Color patterns of the type specimens indicated that *Ps. edmundsi* is synonymous with *H. anoka*, not *P. punctiventris* (see McCafferty et al. 2005), and therefore *Ps. edmundsi* is placed as a subjective junior synonym of *H. anoka*, **new synonym**, and removed from synonymy with *P. punctiventris*. The Idaho record of *H. anoka* represents a considerable western extension of its range in the USA, although the species has been reported from nearly as far west in Canada by Webb and McCafferty (2003). Based on anecdotal evidence, the lotic habitat of *H. anoka* is of a higher gradient than that of *P. punctiventris*.

LITERATURE CITED

- Jensen, S. L. 1969. New species of *Pseudocloeon* from Idaho. *Pan-Pacific Entomologist* 45: 14–15.
- McCafferty, W. P. and R. D. Waltz. 1990. Revisionary synopsis of the Baetidae (Ephemeroptera) of North and Middle America. *Transactions of the American Entomological Society* 116: 769–799.
- McCafferty, W. P., R. D. Waltz, J. M. Webb, and L. M. Jacobus. 2005. Revision of *Heterocloeon* McDunnough (Ephemeroptera: Baetidae). *Journal of Insect Science*. 5(35).
- Webb, J. M. and W. P. McCafferty. 2003. New records of mayflies (Ephemeroptera) from Alberta. *Entomological News* 114: 230–232.

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