

## THE TYPE SPECIES OF SOME GENERA OF EPHEMEROPTERA.

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Because Reverend A. E. Eaton's *A monograph on the Ephemeridae* (Trans. Ent. Soc. London, 1871: 1-158, pls. 1-6) was shortly succeeded (1883-88) by his monumental *A revisional monograph of recent Ephemeridae or mayflies* (Trans. Linn. Soc. London, Sec. Ser. Zool., 3: 1-352, pls. 1-65), the earlier work is seldom consulted by the present generation of entomologists. The fact that Eaton designated genotypes and followed sound taxonomic procedures in working this order has minimized subsequent nomenclatural problems. In perusing Eaton's earlier monograph (*op. cit.*: 12) I therefore was surprised to note the following statement concerning a paper by Hagen (Stett. Ent. Zeit., 10: 386; 1849): "In the critique of Pict. Ephem. (1843-5), Dr. Hagen indicated in this paper a genus *Potamanthus*, restricted (type *P. gibbus*, Pict.); but he did not adopt the genus in his later writings. Mr. Walsh afterwards described this genus, with additional species, under the name *Ephemerella*. I have passed by Dr. Hagen's usage, and have adopted the latter name for the genus."

If it be true that *gibbus* was the species first designated as the genotype of *Potamanthus*, then, because *gibbus* is now included in *Ephemerella*, the present group of mayflies designated as *Ephemerella* (and hence the family Ephemerellidae) would properly be called *Potamanthus* (and Potamanthidae). The mayfly genus now designated as *Potamanthus* (and the family Potamanthidae) would thus need a new name, there being no available synonym of *Potamanthus*. Reference to F. J. Pictet's *Historie Naturelle General et Particulariere de Insectes Neuropteres, Famille de Ephemerides* (Genf., Paris, pp. 1-300, pls. 1-9) confirmed the fact that *gibbus* was included in *Potamanthus* at the time the genus was erected and is therefore available as the type of the genus. After discussing most of the species assigned to *Potamanthus* by Pictet, Hagen (*loc. cit.*) remarks "Der rest erythroptthalmus Schrank, *P. gibbus* und *P. aeneus*, beide neu, bilden ein besondern Typus." This is apparently what Eaton has interpreted as a genotype designation.

There are to me at least two reasons why this cannot be considered as a valid genotype designation: first, it is by no means clear that Hagen intended the statement in this sense; and secondly, he has indicated three names rather than one. It should be

noted, however, that all three names are synonyms of *Ephemerella ignita* Poda. Thus some might argue that a single *species* was indicated; but as the synonymy of these names is subjective, the three names cannot be considered as one, and the designation cannot be valid. As far as I am aware the first valid designation of the genotype of *Potamanthus* is that given by Eaton (1871: 36) wherein *P. luteus* Linn. is given as the type. In this same article (p. 31) the genotype of *Ephemerella* is designated as *E. invaria* Walker. As this species was not included in the genus originally, the later designation given by Eaton (1884: 126) is the valid one and the type is *E. excrucians* Walsh.

The nomenclature of the genera and families involved in this investigation thus remains unchanged, but this note is published with the hope that it may save some other worker a few anxious hours of bibliographic search as he seeks the facts pertaining to Eaton's statement.

In his 1871 monograph Eaton named the genus *Isonychia* and designated the type as *I. manca* Eaton (p. 33) (considered by McDunnough and Spieth to be *I. sicca manca*). Under the impression that *Isonychia* was a homonym of *Isonychus* Mannerheim, Eaton (*Ent. Mon. Mag.*, 18: 21; 1881) proposed the name *Chirotonetes* to replace *Isonychia* and in 1885 (p. 204) designated the type as *ignotus* Walker. McDunnough (*Canad. Ent.*, 55: 47, 1923) restored *Isonychia* as the valid name of the genus, but he indicated the type as *Isonychia ignota*, while in reality *Isonychia manca* must remain as type by original designation.