



DESIGNATION OF A TYPE SPECIES FOR *FORMOSITA* KLAPÁLEK 1914 (PERLIDAE: PERLINAE)

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ABSTRACT

Neoperla costalis (Klapálek 1913) is designated as type species of *Formosita* Klapálek 1914. An earlier type designation by Klapálek (1923) is considered invalid.

Keywords: *Flavoperla*, *Formosina*, *Formosita*, *Neoperla*, originally included species, synonymy, type species designation

During work on the African *Neoperla* (Perlidae: Perlinae) I wondered about the relations between various species groups and checked to which group the type species of genera synonymized with *Neoperla* belong.

Among these genera is *Formosita* Klapálek 1914, a replacement name for the preoccupied name *Formosina* Klapálek 1913 (not Becker 1911). The type species would be the Japanese *Neoperla hatakeyamae* Okamoto 1912 (Illies 1966, Sivec et al. 1988, DeWalt et al. 2016), allegedly by original designation. This is an error, the type designation was secondary and much later (Klapálek 1923: 173), as recorded by Claassen (1940). However Klapálek's type designation (1923) is invalid: *Neoperla hatakeyamae* was not originally included in *Formosita*.

Formosita was proposed for only two species from Taiwan, *F. taihorinensis* Klapálek 1913 and *F. costalis* Klapálek 1913. Both species were redescribed, male lectotypes designated, and the taxa transferred to *Neoperla* (Sivec & Zwick 1988). The female paralectotype of *N. taihorinensis* (Klapálek 1913) lacks the tip of the abdomen, but

some eggs were nevertheless recovered from the base of the abdomen. The egg of *N. costalis* (Klapálek 1913) is not available but the genitalia of both sexes are known, which is important for the assignment to a *Neoperla* species group.

Neoperla costalis (Klapálek 1913) is here designated as type species of *Formosita*. The structure of the penis and the short simple duct to the seminal receptacle attaching to the front of the strongly folded vagina indicate it belongs to the *N. montivaga*-group of *Neoperla* (Zwick 1977, Sivec & Zwick 1988).

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