Characterization of cryptic diversity within Paragus bicolor complex (Diptera, Syrphidae, Syrphinae, Paragini)

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Abstract

Identification of adult specimens belonging to the Paragus bicolor group, of the genus Paragus Latreille, 1804 is difficult due to the high degree of variability in the color of the abdomen. In the present literature Paragus bicolor (Fabricius, 1794) and Paragus romanicus Stanescu, 1992 are cited as valid species of Paragus bicolor complex, while Paragus testaceus Meigen, 1822 is cited as junior synonym of Paragus bicolor. After detailed morphological analysis, including geometric morphometry of the wing and male surstyle, existence of four cryptic species within Paragus bicolor complex has been confirmed. Besides Paragus bicolor, also Paragus testaceus proved to be a valid one and should be reinstated from the status of synonyms. Contrary to previous ones, Paragus romanicus lost this status and should be synonymized with Paragus bicolor. Additionally two new species have been revealed.

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