

## RAPID PUBLICATION NOTE

**CULICOIDES RADICITUS DELFINADO: A SYNONYM OF *CULICOIDES BREVITARSIS* KIEFFER (DIPTERA: CERATOPOGONIDAE)**

A. L. DYCE

*Division of Animal Health, CSIRO, McMaster Laboratory, Private Bag No. 1, P.O., Glebe, N.S.W. 2037.***Abstract***Culicoides radicitus* Delfinado, 1961 is a synonym of *Culicoides brevitarsis*, Kieffer 1917.

The original description of *Culicoides radicitus* Delfinado, 1961 was based on two males and a single female. The male holotype (Tala, Rizal, Philippine Islands, 21.v.1958, light trap, M. D. Delfinado) and female allotype (Clark Air Base, Angeles, Pampanga, 17.ix.1957, light trap, I. Balatbat) are stated to be lodged in the Division of Malaria, Philippine Department of Health, Manila (PDH), and a male paratype with the same data as the holotype except for the date of collection (22.v.1958), in the United States National Museum, Washington D.C. (USNM).

Enquiries reveal that the PDH no longer holds any *Culicoides* material. I have examined three specimens marked *Culicoides radicitus* Delfinado, on loan from the USNM. These comprise a male with data identical to those published for the holotype, including date 21.v.1958, but labelled paratype, a female labelled allotype with data identical to those published, and a second female with data the same as those for the allotype, but which was not listed as having been examined by the author, and a second female with data the same as those for the allotype ♀, but which was not listed as having been examined by Delfinado. The present author identifies this second female as *Culicoides nudipalpis* Delfinado.

Further enquiries (Dr Willis W. Wirth pers. comm.) revealed that the Delfinado material, including types, for lodgment in the PDH and Chicago Natural History Museum was "collated and labelled" at the USNM but not by Dr Delfinado herself. There is evidence that specimens did reach the PDH, but that some specimens destined for that institution, including the allotype female *Culicoides radicitus* Delfinado, were retained at the USNM for the purpose of illustration and have remained there since.

The two specimens of the *Culicoides radicitus* Delfinado type series in the USNM are mounted on separate slides; attached labels comprise an original with hand-inscribed data on to which is glued a second, type printed, identification label of a kind frequently used in USNM. For the male specimen the type designation (paratype) is shown in type print on the identity label, and for the female "Allotype," has been inscribed in a hand quite distinct from the data inscription on the original label.

Taking into account the different dates of collection of the two males in the series of *C. radicitus* studied by Delfinado and the procedure of slide labelling and dispersal of the material, some firm conclusions emerge. The male specimen presently in the USNM labelled "paratype" is the specimen intended by Delfinado as the holotype male; in any event, it is the only male specimen studied by the author that is available today. Also, it is apparent that the specimen labelled "Allotype ♀" is such, as intended by the author, but which, like the holotype male, was not forwarded to the PDH, as stated in the original article.

Following detailed study of the definitive male specimen (Tala, Rizal, Philippine Islands, 21.v.1958, light trap, M. Delfinado), I now relegate *Culicoides radicitus* Delfinado to synonymy (New Synonymy) under *Culicoides brevitarsis* Kieffer, 1917, a species previously unrecognised from the Philippine Islands but specimens of which I have examined from the Japanese Archipelago, Malaysia, Indonesia, Papua New Guinea, Fiji Islands, Lord Howe Island and northern and eastern Australia.

Furthermore, the designated allotype female *Culicoides radicitus* Delfinado is conspecific with *Culicoides nudipalpis* Delfinado, the holotype female of which is also apparently lost. The wing pattern of the designated allotype *C. radicitus* does not correspond with Plate 9, fig. 12 accompanying the original description, but matches precisely Plate 9, fig. 9 shown for *C. nudipalpis* Delfinado. The wing shown in Plate 9, fig. 12 is of a female specimen and is not of *C. brevitarsis*, but is almost certainly of an undescribed species of the subgenus *Avaritia* that is widespread in the western Pacific. I have examined specimens of it from some Japanese islands, Malaysia, Indonesia, Papua New Guinea and tropical Australia.

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**Reference**

DELFINADO, MERCEDES D. (1961).—The Philippines biting midges of the genus *Culicoides* (Diptera: Ceratopogonidae). *Fieldiana: Zool.* 33: 629-675.

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