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Correction: Misidentification of a distinct species of *Mansonia* in India as the New World *Psorophora columbiae* (Diptera: Culicidae)

NATHAN DANIEL BURKETT-CADENA[1*] & RALPH E. HARBACH[2]
[1]*Florida Medical Entomology Laboratory, University of Florida, Vero Beach, Florida, USA.*
nburkettcadena@ufl.edu; https://orcid.org/0000-0001-6168-1637
[2]*Department of Science, Natural History Museum, Cromwell Road, London SW7 5BD, UK.*
r.harbach@nhm.ac.uk; https://orcid.org/0000-0003-1384-6972
**Corresponding author*

Misidentifications and invalid taxonomic interpretations are not uncommon for mosquitoes (Diptera: Culicidae); however, genus-level records based on erroneous identifications are rare. One such misidentification is the subject of this communication. It involves an unspecified number of adult female mosquitoes collected in Banswara District of Rajasthan State in northwestern India which were identified by Jangir & Prasad (2023) as specimens of *Psorophora columbiae* (Dyar & Knab, 1906).

Psorophora Robineau-Desvoidy, 1827, as noted by Jangir & Prasad (2023), is a New World genus comprised of species with distributions in the tropical and warmer temperate regions from North to South America. *Psorophora columbiae* occurs in North and Central America (Wilkerson *et al*. 2021). Contrary to Jangir & Prasad (2023), who cited Rutgers (2022, https://vectorbio.rutgers.edu/outreach/species/sp4.htm), *Ps. columbiae* does not occur southward from Central America (and Colombia?) to Argentina. Jangir & Prasad also stated that the species has been reported from Madhya Pradesh State of India and China, but this could not be verified from the source they cited (https://www.gbif.org/species/1654668).

Without explanation, Jangir & Prasad (2023) used keys for North American mosquitoes to identify their specimens (Bohart & Washino 1978; Varnado *et al*. 2012; Harrison *et al*. 2016; Rueda 2020 [cited as 2019]; Becker *et al*. 2020). Although the last publication (Becker *et al*.) is principally for European mosquitoes, it features a key for the identification of North American vector species that includes *Ps. columbiae*. Consequently, the identification of the Indian specimens was unduly biased by the use of keys for the mosquito fauna of North America. It is likely that Jangir & Prasad would have correctly identified the specimens if they had used keys for the mosquito fauna of southern Asia, especially Barraud (1934) and Tyagi *et al*. (2015).

Based solely on the images provided by Jangir & Prasad (2023), particularly the presence of broad, asymmetrical scales on the wings and the truncated apex of the abdomen, their specimens are readily recognizable as a species of *Mansonia* Blanchard, 1901, four of which are known to occur in India (Tyagi *et al*. 2015; Wilkerson *et al*. 2021). Those species, all members of the subgenus *Mansonioides* Theobald, 1907, are *Ma. annulifera* (Theobald, 1901), *Ma. dives* (Schiner, 1868), *Ma. indiana* Edwards, 1930 and *Ma. uniformis* (Theobald, 1901). Based on morphological data gleaned from the text and images provided by Jangir & Prasad, their specimens are easily identified to the genus *Mansonia* and as *Ma. indiana* in the keys of Barraud (1934), Tyagi *et al*. (2015) and Rattanarithikul *et al*. (2005, 2006).

Considering that *Mansonia* is included in two of the keys to North American mosquitoes used by Jangir & Prasad (Varnado *et al*. 2012; Harrison *et al*. 2016), the authors should have been able to identify their specimens as a species of *Mansonia*. Morphological characters that identify the Indian specimens as a species of *Mansonia*, and specifically as *Ma. indiana*, are as follow (morphological terminology of Harbach & Knight 1980). (1) Postspiracular setae present (also present in *Psorophora*); (2) prespiracular setae absent (the arrow indicating the presence of prespiracular setae in the Indian specimens (fig. 5) actually points to setae on the posterior margin of the postpronotum; thus, prespiracular setae, which are present in species of *Psorophora*, are clearly absent in the Indian specimens); (3) wing with a mixture of broad dark and pale asymmetrical scales (the wings of *Ps. columbiae* have a mixture of relatively narrow dark and pale symmetrical scales); hindtarsomeres with only basal pale rings (in addition to basal pale rings, an apical pale ring is present on hindtarsomere 1 of *Ps. columbiae*); (4) postpronotum with broad pale scales, diagnostic for *Ma. indiana* (these

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scales are clearly visible next to the postpronotal setae mistakenly labelled as prespiracular setae in fig. 5 of Jangir & Prasad). For clarity, figures 5, 6 and 7 of Jangir & Prasad (2023) can be compared with images b, d and e, respectively, of *Ps. columbiae* shown on page 481 of Wilkerson *et al*. (2021). The distinctive broad postpronotal scales of *Ma. indiana* are illustrated on page 32 of Rattanarithikul *et al*. (2006).

Although traditional morphology-based taxonomy is now overshadowed by molecular biology, it cannot be denied that species identification still relies on a wealth of information and knowledge attributable to morphological taxonomic expertise. The ongoing decline in taxonomic training and expertise can result in significant misidentifications, which can have serious consequences when published in peer-reviewed journals. This not only poses unneeded challenges for the future of mosquito systematics, but misidentifications of important vector species may even have real-world consequences for human health.

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