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## First record of the genus *Xenoplatyura* Malloch from Fiji (Diptera: Keroplatidae)<sup>1</sup>

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**Abstract.** A new species, *Xenoplatyura bipartita*, n. sp., is described and illustrated and is the first record of the keroplatid genus in Fiji.

The genus *Xenoplatyura* is predominantly found throughout the Old World tropics, except for seven of these that are found in the Neotropical Region (Evenhuis 2006b), comprising 50 species. In the Australian/Oceanian Region it occurs in Australia (6 spp.) and Micronesia (1 sp.) and 6 species are known from the Oriental Region with species in both Palaearctic and Oriental China (Evenhuis & Pape 2024; see Cao *et al.* 2007 for the Chinese species).

Surveys in Fiji for terrestrial arthropods using Malaise traps for 5 years resulted in discoveries of a number of new Diptera taxa, including Keroplatidae (Evenhuis 2005, 2006a). The results presented here mark the first record of the genus *Xenoplatyura* Malloch in Fiji.

### MATERIAL AND METHODS

Material derives from the Fiji Arthropod Survey, now housed in Bishop Museum (BPBM). The holotype is deposited in BPBM with paratypes in BPBM and some to be deposited in the Fiji National Insect Collection (FNIC). Extended depth of field images were accomplished by using a Leica M165C stereo dissecting scope via the Leica Microsystems LAS Multifocus software (v. 5.0.1) and using Zerene Stacker® software (v. 1.04) (Zerene Systems, LLC, Richmond, Washington, USA) to align and stack focus each final image. Morphological terminology follows Cumming & Wood (2017).

### TAXONOMY

#### Genus *Xenoplatyura* Malloch

*Xenoplatyura* Malloch, 1928: 601. type species *Platyura conformis* Skuse, 1888, by original designation.

*Afrorfelia* Matile, 1970: 787. Type species: *Orfelia tsacasi* Matile, 1970, by original designation.

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**Figure 1.** *Xenoplatyura bipartita*, n. sp. male habitus, lateral view.

*Xenoplatyura bipartita* Evenhuis, n. sp.

(Figs. 1–6)

**Type.** Holotype ♂ (BPBMENT0000081270) and paratypes 1♂, 5♀, from FIJI: **Taveuni:** Caucadrove Prov., 5.6 km SE Tavuki Village, Devo Peak, 16.843°S, 179.955°W, 1187 m, 21 Nov–13 Dec 2002, E.I. Schlinger, M. Tokota'a. Malaise (FBA 149481); 1♂, same data except 1,064 m, 27 Dec 2002–3 Jan 2003; 1♂, same data except, 31 Jul–14 Aug 2004; 1♂, same data except 20–27 Dec 2002. *Other paratypes:* **Vanua Levu:** 1♂, Batiqere, 3–10 Jan 2004, E.I. Schlinger, M. Tokota'a. Malaise. **Viti**



**Figure 2–3.** *Xenoplatyura bipartita*, n. sp. **2**, dorsal view; **3**. Fore tibial organ.

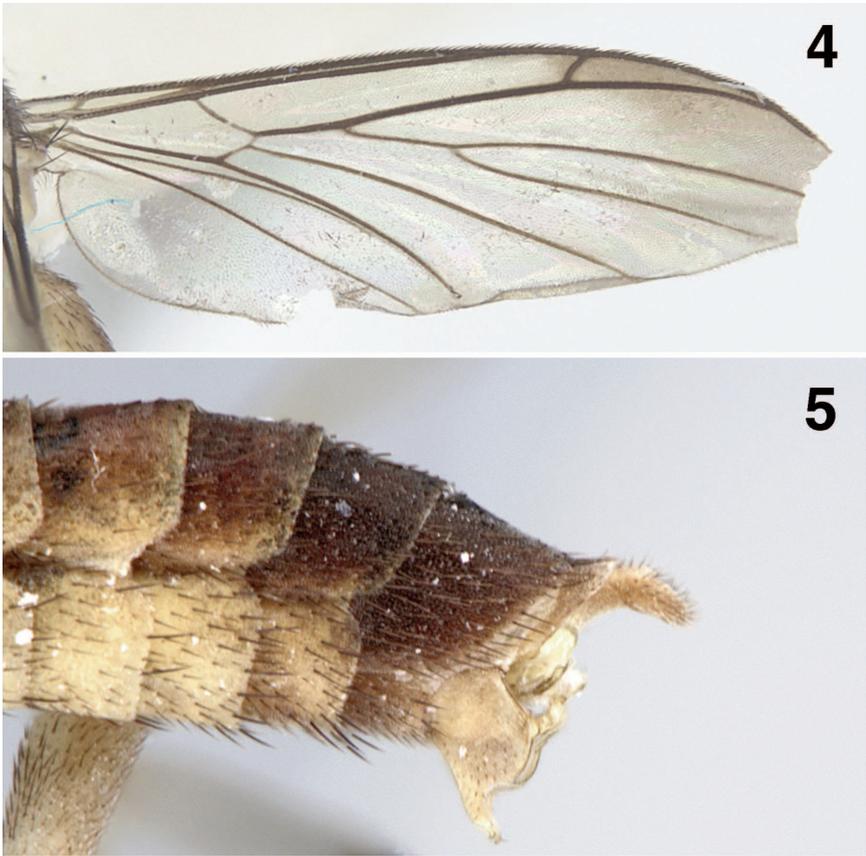
**Levu:** Naltasiri Prov: 1♀, 4 km WSW Colo-i-Suva Village. Mt. Nakobalevu, 12–24 Aug 2004, Timoci coll. Malaise. Holotype and paratypes in BPBM.

**Diagnosis.** Most similar to the Peninsular Malaysian *Xenoplatyura beaveri* Matile, 1979 by the shared possession of a fore tibial sensory organ, but can be easily separated from it by the striking yellow (to pale orange) and black pattern on the abdominal tergites (tergites generally reddish and becoming darker posteriorly), the yellowish pleura (reddish in *X. beaveri*), the lack of mesoscutal banding (present in *X. beaveri*), the predominantly yellow scutellum with brown stripe medially (all reddish in *X. beaveri*), and brown only along the dorsal rim of the halter knob (halter knob all reddish brown in *X. beaveri*).

**Description.** MALE (Fig. 1). Lengths: Body: 3.8 mm; wing: 3.4 mm.

**Head.** Occiput reddish brown with fairly dense minute black recumbent hairs. Vertex and ocellar tubercle black. Three ocelli, medial ocellus half the size of the lateral ones. Frons yellowish brown, white pollinose above antennal sockets. Antennae: scape and pedicel cup-shaped, yellow. Flagellum: dark brown. Face yellow with pale yellow-white upper half. Palpi yellowish white.

**Thorax** (Figs. 1, 2). Mesonotum shining brown on disc, yellowish white on humeral area, yellowish white anterodorsally and thin yellow notopleural line. Minute scattered hairs dorsally. Scutellum yellow with brown medial stripe, with long setae on posterior margin. Prothorax dark brown with some long setae. Pleura yellowish white, bare, except

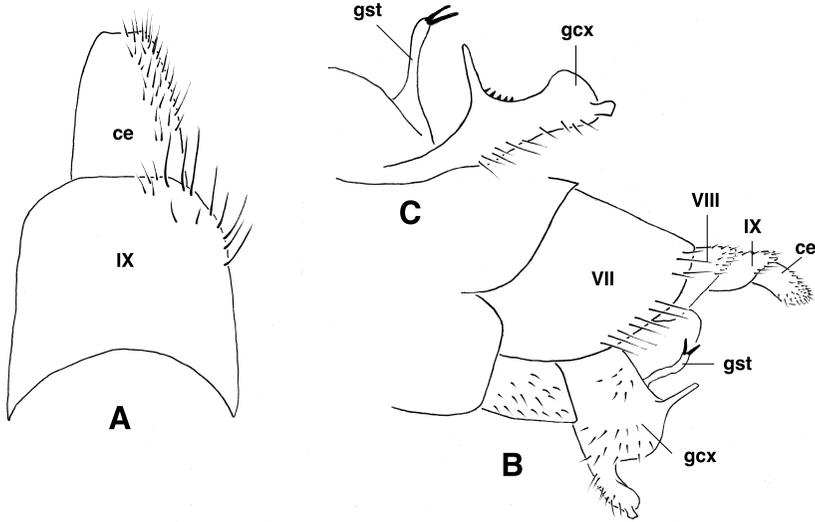


Figures 4–5. *Xenoplatyura bipartita*, n. sp. 4. Wing; 5. Posterior segments of abdomen, lateral view.

3 setae on proepimeron. Halter stem yellow, yellowish brown on outer rim of knob.

*Legs.* Yellow. Fore coxa, apex of mid and hind coxae with black hairs, longest apically. Femora with black hairs. Tibiae with setulae in rows. Fore tibial organ (Fig. 3) well demarcated, reddish. All tibiae with minute setae. Mid tibia with posterior comb and hind tibia with anterior and posterior combs. Tibial spurs dark brown: 1: 2: 2, mid and hind inner spur minute. Basitarsi slightly longer than their respective tibiae. Claws minute.

*Wing* (Fig. 4). Subhyaline with a brown infuscation apicodorsally, darkest in radial cells, fading in medial cells. Veins dark brown. Costa extends beyond vein  $R_{4+5}$ ; Sc complete, ending slightly beyond base of Rs;  $R_{2+3}$  ending in costa slightly beyond  $R_1$ . Petiole of M one-fourth length of  $M_1$  and  $M_2$ . Veins  $M_2$  and CuP not reaching wing margin, veins  $M_4$  and CuA reach wing margin.



**Figure 6.** *Xenoplatyura bipartita*, n. sp. male genitalia, **A.** dorsal view; **B.** lateral view; **C.** caudal view of gonocoxite and gonostylus. Abbreviations: ce = cercus; gcx = gonocoxite; gst = gonostylus; VII = tergite VII; VIII = tergite VIII; IX = tergite IX.

*Abdomen* (Fig. 5). Tergites I–V pale reddish orange, tergites VI–VIII dark brown, with dense recumbent black hairs. Sternum all yellow.

*Hypopygium* (Fig. 6). Tergite IX (Fig. 6A) dark brown, elongated, subrectangular, with rounded posterior corners, cercus well exerted, subconical, truncate apically. Genitalia as in Figs. 6B–C.

**FEMALE.** As in male but paler; wing infuscation not as evident as in male.

**Remarks.** Thousands of specimens of keroplatids in BPBM from areas between Fiji and Peninsular Malaysia were examined (e.g., Vanuatu, Solomon Islands, New Guinea, Indonesia) and no other specimens of *Xenoplatyura* have been found. Thus, its presence in Fiji is a probable example of a relict population distribution in the genus.

#### ACKNOWLEDGMENTS

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