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A new species of *Culcua* Walker (Diptera: Stratiomyidae) from Vietnam

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A new species of *Culcua* Walker (Diptera: Stratiomyidae) from Vietnam

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Abstract. A new species of *Culcua* Walker (Diptera: Stratiomyidae), *C. lingafelteri* Woodley, **new species**, is described from northern Vietnam. It is diagnosed relative to other species using the recent revision of the genus by Rozkošný and Kozánek (2007). This is the first species of *Culcua* reported from Vietnam.

Introduction

The genus *Culcua* Walker, in the subfamily Pachygastrinae of the family Stratiomyidae (Diptera), is known only from the Oriental Region, where it ranges from eastern India east to Taiwan, the Philippines, and the island of Borneo. The genus currently contains ten species, seven of which were described in a recent revision of *Culcua* (Rozkošný and Kozánek 2007). Most of the species are known from very few specimens and virtually nothing is known about their life histories. A paratype specimen of *C. kovaci* Rozkošný and Kozánek from Thailand has label data stating "on leaves nr. fallen tree". As members of numerous other taxa of Pachygastrinae are attracted to fallen trees and the majority of species have larvae that live under bark (Kraft and Cook 1961), it seems likely that *Culcua* larvae live under bark as well.

A specimen recently collected in Vietnam, housed in the National Museum of Natural History at the Smithsonian Institution (**USNM**), was found to be a new species. It is described here and compared to the most similar known species.

Culcua lingafelteri Woodley, new species

Figures 1, 3, 4

Diagnosis. The combination of scutum with appressed setulae silvery white interspersed with long, erect black setulae; all tibiae black; first tarsomere of middle leg yellow; first tarsomere of hind leg black; wing with a dark and hyaline pattern; and abdomen about as broad as long will separate *Culcua lingafelteri* from other species in the genus. In the key to species of Rozkošný and Kozánek (2007: 38) this species will key to *C. argentea* Rozkošný and Kozánek but differs from it by having darker antennae (Figs. 1, 2); longer, more conspicuous pilosity on the eye; the postocular orbit narrower; conspicuous, erect black setulae present on the scutum and scutellum (Figs. 4, 5); and wing cell cua_1 mostly hyaline (Fig. 3).

Description. Female. **Head** (Fig. 1) black. Lower frons and face with grayish tomentum covering surface, face with scattered erect pale setulae; upper frons with margins from ocellar triangle to about half distance to antennae yellowish-white tomentose interspersed with longer erect pale setulae; surface shiny, virtually impunctate, slightly concave. Ocellar tubercle moderately prominent, with erect pale setulae. Postocular orbit visible in profile, narrowest at about upper third, posterodorsally with sharply rounded margin, this and postocciput with dense erect pale setulae, longest ventrally. Eyes with moderately dense brownish-black setulae. Antenna with scape and pedicel black with blackish setulae that are longest on scape; flagellar complex brownish yellow, short penultimate flagellomere and base of last, arista-like flagellomere dark yellowish, the latter becoming dark apically. Palpus with first segment about half the length of the second, black, with erect dark setulae; second segment nearly cylindrical with rounded apex, brownish, velvety in appearance with two or three short dark setulae at apex.

Figures 1–3. Morphological features of *Culcua* species. **1)** *Culcua lingafelteri*, lateral view of head of female holotype. **2)** *Culcua argentea*, lateral view of head of female paratype. **3)** Wing of *C. lingafelteri* (anal area of wing is folded underneath).

Thorax black, only spines of scutellum yellowish white. Most of thoracic dorsum and pleura with vestiture of semi-appressed silvery white setulae except for median vitta on scutum that widens slightly on posterior half, lateral areas of scutum posterior to the transverse suture, entire scutellum with short, semi-appressed black setulae; anterior half of anepisternum, and posterior half of anepimeron bare and shiny; entire scutum and scutellum with erect dark setulae with a few pale setulae at extreme lateral areas of scutum. Scutellar spines elongate conical, subequal in length and each about half as long as scutellum. Legs black, middle and hind tarsi slightly more brownish; middle tarsus with basal segment dark yellowish, second segment brownish yellow; hind tarsus with first segment indistinctly paler at base. Wing hyaline with dark pattern as in Fig. 3, evenly set with microtrichia except basal part of cell c and basal and narrow anterior part of cell cup bare. Alula ovoid, completely set with microtrichia. Halter whitish yellow. Post-tegula with a few short dark setulae.

Abdomen black, sublateral callosities on tergite 3 strongly developed. Vestiture of tergites 1–3 with short semi-appressed black setulae medially; lateral areas of tergites 1–4 with longer, semi-erect

Figures 4–5. Lateral habitus view of *Culcua* species. **4)** *Culcua lingafelteri*, female holotype. **5)** *Culcua argentea*, female paratype.

silvery white setulae on approximately apical halves, forming poorly defined pilose spots; tergite 5 evenly clothed with moderately sparse erect pale setulae. Sternite 1 with moderate, fine dark brownish tomentum and short pale setulae medially and laterally; sternites 2–4 evenly set with semi-appressed silvery setulae; sternite 5 with erect dark setulae. Cerci two-segmented, segment 1 cylindrical, brownish; segment 2 darker, elongate-ovoid, about as long as segment 1; both segments with erect pale setulae with a few dark setulae intermixed.

Dimensions. Body length (excluding antennae) 8.9 mm; wing length 8.2 mm.

Distribution. This species is known only from Vietnam. It is the first species of *Culcua* reported for that country.

Type material. Holotype female (USNM) is labeled (slashes indicate each label): "VIETNAM: Vinh Phuc Prov. Tam Dao National Park, Thong Tin TV tower 21°27'49.01"N, 105°38'47.42"E ~1200m 17–23 June 2011/Steven Lingafelter Eduard Jendek Eduard Vives Pham Hong Thai/HOLOTYPE/*Culcua lingafelteri* Woodley 2012".

Discussion. As noted in the diagnosis, *Culcua lingafelteri* is most similar to *C. argentea*. In addition to the characters mentioned in the diagnosis, *C. lingafelteri* differs from *C. argentea* by being larger (body length range for *C. argentea* given by Rozkošný and Kozánek (2007: 40) is 6.5–7.9 mm), by having a uniformly black median vitta on the scutum (it is black with a very narrow silvery line medially in *C. argentea*), and having the sublateral callosities on abdominal tergite 3 more strongly developed.

Etymology. The species name is a patronym for Steven W. Lingafelter, my friend and life partner, who collected the specimen.

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