# REDESCRIPTION OF TWO SPECIES OF *OMMATIUS* WIEDEMANN, WITH LECTOTYPE AND PARALECTOTYPE DESIGNATIONS FOR *OMMATIUS* TENELLUS VAN DER WULP AND RANGE EXTENSION, AND A REPLACEMENT NAME FOR *OMMATIUS TIBIALIS* RICARDO (DIPTERA: ASILIDAE)

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Abstract.—The type series of *Ommatius tenellus* van der Wulp and *O. tibialis* Ricardo were examined and redescriptions are given for both species. A lectotype and paralectotypes are designated for *O. tenellus*, new records extend the range of the species across northern Africa, and illustrations of the terminalia are presented. *Ommatius abdelkuriensis* Scarbrough (new name) is proposed as a replacement name for *O. tibialis*.

Key Words: Diptera, Asilidae, Afrotropical, Ommatius, redescriptions

As a part of my revisionary studies of the African species of the tribe Ommatiini (Scarbrough and Marascia 1996, 2000), this paper clarifies and stabilizes the identities of Ommatius tenellus van der Wuilp (1899) and O. tibialis Ricardo (1903). Both species were originally reported from present day Yemen, O. tenellus from two sites on the mainland and O. tibialis from the island of Socotra. Yet specimens labeled incorrectly as O. tenellus are frequently found in museums. Furthermore, the species was reported from southern India (Joseph and Parui 1998) and was listed in the recent Oriental and Afrotropical catalogues (Oldroyd 1975). Until recently these reports have not been verified (Scarbrough and Hill 2000). Material examined herein extends the range of O. tenellus westward from Yemen and Israel across the Sahara desert to Senegal. However, O. tenellus is not yet found east of Yemen. A new name for Ommatius tibialis, a junior homoym of O. tibialis Say (1823), is proposed.

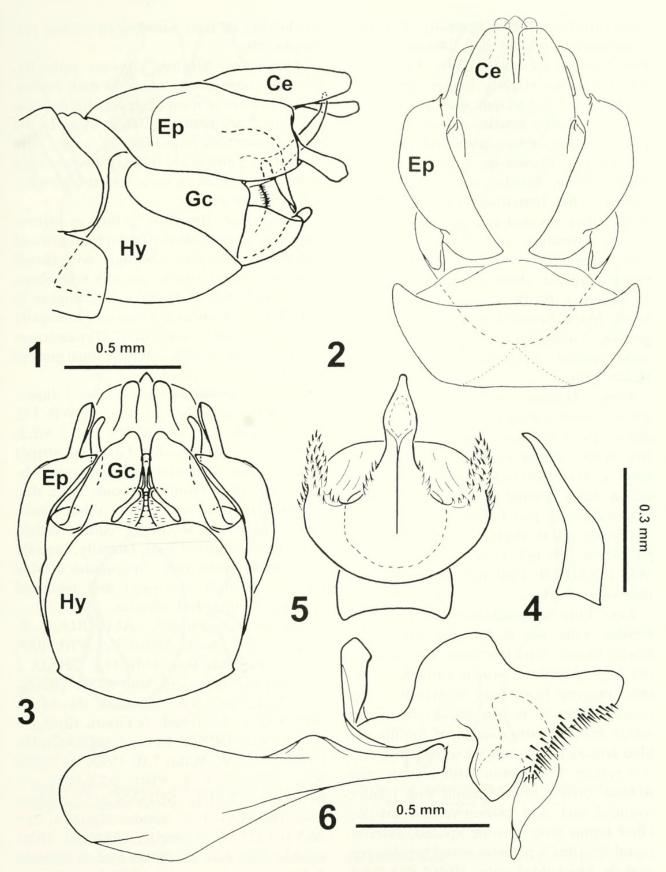
## **METHODS**

Terminology, measurements, and ratios follow that of previous work (Scarbrough and Marascia 1996, 2000; Scarbrough and Hill 2000). Museum acronyms follow Arnett et al. (1993). Data labels associated with each syntype are numbered (1), (2), (3), etc., indicating the sequence of labels on the pin from top to bottom. Brackets provide further information not present on type labels.

Ommatius tenellus van der Wulp (Figs. 1–10)

Ommatius tenellus Wulp 1899: 97. Type locality: Arabia [= Yemen], Leiji & Haithalhim; 6 syntypes OXUM, BMNH; Oldroyd 1975: 135 (catalogue); 1980: 348 (catalogue).

Redescription.—*Male:* Black body, gray to yellowish-gray tomentose, pale yellow to whitish vestiture and yellow legs. Length, body 7.0–8.0 mm; wing 5.3–5.7 mm. *Head:* Face scattered short setae dorsally,



Figs. 1–6. *Ommatius tenellus*, male terminalia. 1–3, Lateral, dorsal, and ventral views. 4, Gonostylus. 5–6, Aedeagus, dorsal and lateral views. Abbreviations: Ce = cercus, Ep = epandrium, Gc = gonocoxite, Hy = hypandrium.

abundant, longer setae ventrally; 2–4 thick, ventromedial bristles and 2 rows of long, thin bristles present; FHWR 1.0:6.5–1.0: 6.6. Flagellum slightly longer than scape; FWLR 1.0:1.1. Occiput with 10–12 short, thick, postocular bristles extending to midlateral margin of eye, none proclinate.

Thorax: Pronotum gray tomentose, white setose; bristles white. Mesonotum mostly dense tomentose, glabrous median stripe, often divided anteriorly with narrow line of tomentum, and 2 lateral spots present; setae sparse dorsally, 2 dorsocentral bristles present, about as thick and as long as scutellar bristles; anterior notopleural bristle black. Scutellum without a subapical groove, 2 marginal bristles and sparse thin, setae present. Anepimeral bristle present. Halter yellow.

Wing: Hyaline, surface slightly corrugated. Dense microtrichia present narrowly along apical margin. Cell r1 long, ending just before costal vein, petiole extremely short. Cell r4 with base just beyond apex of cell d, sides beyond base narrow, parallel. Crossvein r-m just before to just beyond middle of cell d, slightly shorter than basal petiole of cell m3. Base of cell m<sub>1</sub> wide, WR 1.0:2.0:1.9. Cell m3 with apex near base of cell m1.

Leg: Fore and middle coxae with stout bristles. Fore and middle trochanters yellowish brown, hind trochanter brown. Femora largely yellow, brown variable anteriorly, ranging from light brownish yellow basally, light to brown streaks, to extensively brown, narrow apex of middle and hind femora brown in type series only; bristles yellow. Fore femur with 1 stout, ventrobasal bristle; middle femur with 1 anteroventral and 3-4 posteroventral bristles. Hind femur with 5, wide spaced, anteroventral bristles; 5 posteroventral bristles present on basal third only; HFWLR 1.0:5.5. Tibiae yellow, narrow apex of middle tibia usually and hind tibia always brown. Basal tarsomere of all tarsi largely yellow, narrow apex and remaining tarsomeres of each tarsus brown; all tarsi with few to several yellow bristles.

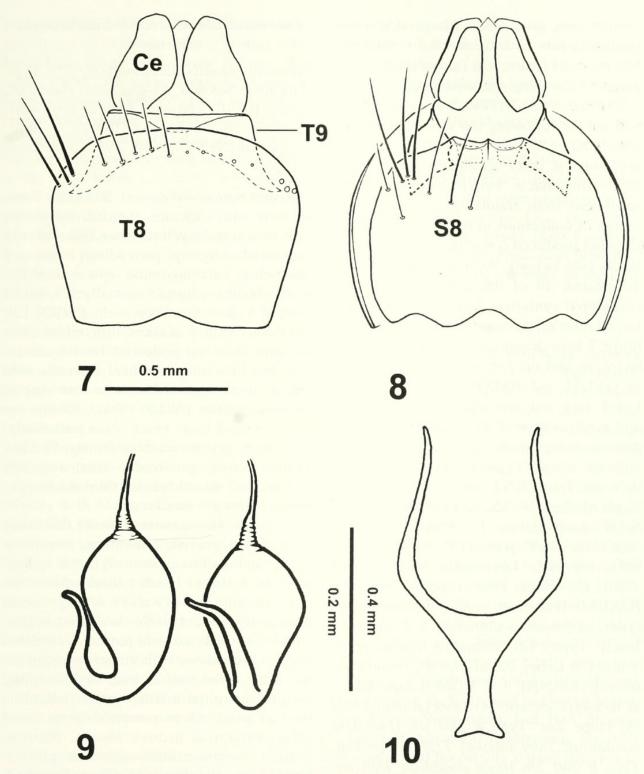
Abdomen: Slightly clavate apically. Ground color mostly black to dark brown, apical margin of most segments lighter, apical 1 to 2 segments lighter, grading to red or yellow; tomentum mostly gray, light brownish-yellow to reddish-brown spot with brown setae on most tergites dorsally; setae mostly yellow.

Terminalia: Brownish yellow to yellow. Epandrium wide basally, abruptly narrowed and digitate apically. Aedeagus with sheath concave in lateral view, apically with abundant setae, thin in lateral view, thicker in dorsal view. Gonocoxal process, unusually long and wide, triangular. Hypandrium about as long as wide, slightly emarginated apically.

Female: Differs from male as follows. Body 8.3 mm; wing 7.7 mm; FHWR 1.0: 5.7; FWLR 1.0:1.0; m1WR 1.0:2.5:2.5; HFWLR 1.0:49. Thorax: Glabrous stripes and/or spots, narrow/small, sometimes absent. Leg: Hind femur with only long, thin posteroventral setae on basal third. Abdomen: Apical 2–3 segments reddish yellow to yellow. Tergite 9 long laterally, broadly emarginate posteriorly. Spermatheca wide basally, strongly narrowed and recurved apically. Genital fork slender.

Specimens examined.—ALGERIA: 1 &, Hoggar Tit Oued Anded, 21.VIII.1987, Tanurix A. Pauly Réc., (MRAC). CHAD: 3 9, Korrom, 800 m, 30 Aout 1959, TIBES-TI, Piedmont, SW Romeau de Mire, (MNHN); 1 &, Tchad: N'Gouri, distr. De Kanem VIII-1958, P. Renaud, (MRAC). IS-RAEL: 1 9, W. Watir, 5.III.1975, A. Freidberg, (TAUI); 1 ♀, Eliot, 6.IX.1974, A. Freidberg, (TAUI). SUDAN: 1 9, Khartoun, (NMSA); 1 &, Soudan Kartoun, 21-26.VII.1927, W. Wismeijer, (RMNH). SEN-EGAL: 2 ♂, 2 ♀, 25–25 km Sud de Richard Toll piege malaise, 14.8.1989, Leg H. v. d. Volk c.s. (NMSA). YEMEN: Syntypes, 1  $\delta$ , 4  $\circ$ , 1 sex ?, (OXUM); syntype, 1  $\delta$ , (BMNH).

Distribution.-North Africa, Israel, and



Figs. 7–10. *Ommatius tenellus*, female terminalia. 7–8, Dorsal and ventral views. 9, Spermatheca. 10, Genital fork. Abbreviations: Ce = cercus, T8 = tergite 8, T9 = tergite 9, S8 = sternite 8.

Yemen. Active in March and July through September.

Remarks.—This desert species is recognized by its small size (7–8 mm); black body with gray tomentum and white to yellowish vestiture; clavate abdomen; presence

of ventral bristles on the femora and coxae; black glabrous stripe and two lateral spots per side on the mesonotum; and characters of the terminalia (Figs. 1–10). Superficially, it is similar to *O. aegyptius* (Scarbrough and Marascia 2000) but differs in the much

smaller size, presence of marginal scutellar bristles, a row of anteroventral bristles below the hind femur, and the combined characters of the wing and terminalia.

Van der Wulp (1899) lists only a male and female following the species name but additional comments following the description suggest other specimens were in his type series; that is 'Fairly common. Several specimens from Haithalhim and Lahej.' A search of collections in the Netherlands and England produced 6 specimens with Wulp's labels [see below]. As a holotype was not designated, all of the specimens must be considered syntypes. To fix the current interpretation of this name and to ensure stability, I here designate the male in OXUM lectotype and the five remaining specimens in OXUM and BMNH as paralectotypes. Label data and condition of the lectotype and paralectotypes follow. Lectotype 3, by present designation, (1) [red lined label with the word] 'Type' (2) [a note with] 'v. d. Wulp, Trans. ENT. Soc. 1899, pages 97-8, pl. iii, figs. 14–15,' (3) [data label with] S. W. Arabia/19 m. Fr. Aden/Haithalhim/ capt. Mar. 25.95/pres. 1899 by J. W. Yerbury; (4) [data label with] 1899 [above] 7751, (5) Hope Ent. Type # 280 4/6, (OXUM) [excellent condition]. Paralectotypes, by present designation,  $1 \delta$ , (1) [data label] 'Type', (2) Ommatius tenellus v. d. Wulp, (30 Lahej, Arabia/9.5.95, [good condition], (BMNH);  $4 \, ^{\circ}$ , 1 (sex?), same labels as lectotype except: (4) 1899 [above] 7753, (5) Hope Ent. Type # 280 1/6 [excellent condition]; 1899 [above] 7750, Hope Ent. Type # 280 2/6 [poor condition with abdomen glued to round label, entire fore tarsus and apical tarsomeres of remaining tarsi absent; (4) 1899 [above] 7755, (5) Hope Ent. Type # 280 3/6 [excellent condition]; (4) 1899 [above] 7751, (5) Hope Ent. Type # 280 5/6 [excellent condition]; (4) 1899 [above] 7754, (5) Hope Ent. Type # 280 6/ 6) [poor condition; abdomen, wings and left hind leg absent], (OXUM).

# Ommatius abdelkuriensis Scarbrough, new name

Ommatius tibialis Ricardo 1903: 375. Type locality: Sokotra, Ab-dul-Kuri; plate xxii, figs. 10, 10a (primary homonym of *Ommatius tibialis* Say 1823: 49); ♀ holotype, BMNH; Oldroyd, 1980: 348 (catalogue).

Redescription.—Female: Blackish. Body 9.7 mm; wing, 7.3 mm. Head: Gray tomentose with mostly yellow setae. Face evenly contoured, slightly protruding beginning just below antenna; setae, sparse dorsally, more abundant, longer ventrally; 2 vertical rows of 4 black bristles present; FHWR 1.0: 5.0. Frons with 5-6 short, thin, white setae laterally. Antenna yellowish-brown tomentose, blackish setose, pedicel ventrally with 1 long, thick seta, at least twice as long as remaining setae; FWLR 1.0:1.3. Ocellar tubercle with 2 long, black setae posteriorly, 2-3 short, yellow setae anteriorly. Occiput whitish setose, postocular bristles mostly yellow, 4-5 dorsal bristles thin and brown, longest strongly proclinate.

Thorax: Mesonotum dorsally subshiny with sparse grayish tomentum, tomentum dense laterally and posteriorly; setae sparse, whitish; 4 lateral bristles black; dorsocentral setae thin, mostly short, 4 longer setae posteriorly, about two-thirds as long as postalar bristle, 1 black seta present. Scutellum grayish tomentose, with numerous, long setae, setae about half as long as 2 marginal bristles; marginal bristles yellow, about as long as and thick as posterior dorsocentral setae; preapical groove absent. Pleuron grayish tomentose, white setose; anepimeral bristle absent. Halter base yellow, knob reddish.

Wing: Hyaline, dense microtrichia present apically. Crossvein r-m at apical third of cell d. Base of cell r4 beyond apex of cell d; base of vein M<sub>1</sub> strongly angled forward, cell m1 wide apically; m1WR 1.0: 3.4:2.8.

Leg: Fore and middle coxae grayish tomentose, whitish setose; hind coxa mostly

brownish tomentose. Femora shiny black, mostly or all whitish setose, ventral setae long. Fore femur with a row of long, thin setae, basal 3-4 setae about 1.5 times as long as greatest width of fore femur. Middle femur with anterior bristles black; anteroventral bristles absent, setae short, posteroventral setae twice as long as anteroventral setae. Hind femur anteriorly with 1 black and 1 yellowish bristle; all ventral vestiture yellowish, anteroventral setae mostly short and thin, 2-3 medially contrastingly thicker than most; posteroventral setae much longer and thinner than anteroventral setae, medially 3-4 thickest and longest; HFWLR 1.0: 6.2. Tibiae yellow with narrow apex brown; vestiture mostly blackish, each tibia with 2-3 thin yellow bristles; apical third of hind tibia anteriorly brown to brownish yellow. Tarsi brown except basal tarsomere of fore and middle tarsi lighter, reddish brown; bristles black.

Abdomen: Black, mostly gray tomentose, pale yellow setose; tergites 1-6 dorsally reddish-brown tomentose, apical 3-4 tergites with black setae; apex of most tergites with black, thin setae medially, thicker, longer, pale yellowish bristles laterally; tergites 7 and 8 sparse gray tomentose, apical bristles thicker than preceding tergites; sternite 6 with a black bristle in apical corner, sternite 7 with 6-7 bristles. Sternite 8 flat, apical margin broadly produced medially; 4 prominent black bristles and a long, low, median carina present, carina extends posteriorly from apical margin to posterior most bristle. Cercus narrow, twice as long as wide.

Type material.—Holotype ♀, Sokotra/Abd-el-Kuri/22.2.1899/W. R. O. Grant/1916–1975; Holotype [round label]; Ommatius tibialis Ricardo/det J. E. Chainey, 1986, [BMNH].

Distribution.—Known only from the Island of Socotra, Yemen. Active in February.

Remarks.—This species is recognized by the blackish body; shiny black femora, and gray tomentum and mostly light vestiture of the body; thinly tomentose mesonotum; abundant long setae on the scutellum and below the femora; and strongly produced apical margin and four prominent bristles on sternite 8. It is further characterized by the presence of thin dorsocentral setae and scutellar bristles, both yellow, and in the absence of an anepimeral bristle.

Unknown to Ricardo, the binominal, *Ommatius tibialis*, had been used earlier for a North American species (Say 1823, Bullington and Lavigne 1984). Here I propose a replacement name, *Ommatius abdelkuriensis* Scarbrough, in reference to the type locality.

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#### LITERATURE CITED

Arnett, R. H., G. A. Samuelson, and G. M. Nishida. 1993. The insect and spider collections of the

- world, 2nd Ed. Sandhill Crane Press, Gainesville, FL, 310 pp.
- Bullington, S. and R. Lavigne. 1984. Review of the genus *Ommatius* Wiedemann (Diptera: Asilidae) in Eastern United States with descriptions of five new species. Annals of the Entomological Society of America 77: 372–392.
- Joseph, A. N. T. and P. Parui. 1998. Fauna of India and the adjacent countries. Diptera (Asilidae) (Part 1) General introduction and tribes Leptogasterini, Laphriini, Atomosini, Stichopogonini and Ommatini. Zoological Survey of India, Calcutta, 278 pp.
- Oldroyd, H. 1975. Family Asilidae, pp. 99–156. *In*Delfindo, M. D. and E. Hardy, eds. A catalog of
  Diptera of the Oriental Region *Volume 2*. Suborder Brachycera through Division Aschiza, Suborder Cyclorrhapha. University Press of Hawaii,
  Honolulu.
- ——. 1980. Family Asilidae, pp. 334–374. *In* Crosskey, R. W., ed. Catalogue of the Diptera of the

- Afrotropical Region. British Museum (Natural History), London.
- Ricardo, G. 1903. Asilidae, pp. 362–375, pl. 22, figs. 7–11. *In* Ricardo and Theobald, *in* Forbes: Natural History of Socotra and Abd-el-Kuri. II. The flies of Abd-el-Kuri. Liverpool, xiv + 598 pp.
- Say, T. 1823. Description of the dipterous insects of the United States. Journal of the Academy of Science Philadelphia 3: 9–54; 73–104.
- Scarbrough, A. G. and C. G. Marascia. 1996. Status of the genus *Emphysomera* Schiner, 1866 (Diptera: Asilidae), with synopsis of Afrotropical species. Annals of the Natal Museum 37: 191–213.
- 2000. Revision of *Ommatius* Wiedemann (Diptera: Asilidae) subgenus *Metommatius* Hull, 1962. Annals of the Natal Museum 41: 157–179. Scarbrough, A. G. and Hilary N. Hill. 2000. Ommatiinae Robber flies (Diptera: Asilidae) from Sri Lanka. Oriental Insects 34: 341–407.
- Wulp, F. D. v. d. 1899. Asilidae from Aden and its neighborhood. Transactions of the Entomological Society of London. Part 1, pp. 81–98, pls. 2–3.



Scarbrough, Aubrey Glen. 2002. "Redescription of two species of Ommatius wiedemann, with lectotype and paralectotype designations for Ommatius tenellus van der Wulp and range extension, and a replacement name for Ommatius tibialis Ricardo (Diptera: Asilidae)." *Proceedings of the Entomological Society of Washington* 104, 680–686.

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