

**A New Species of Hawaiian *Campsicnemus*
(Diptera: Dolichopodidae) from Rosettes of the Lobeliad
Lobelia gloria-montis (Campanulaceae) on Maui¹**

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Abstract. A new species of Hawaiian *Campsicnemus*, *C. gloriamontis*, n. sp., collected from rosettes of a lobeliad plant on Maui is described and illustrated.

INTRODUCTION

The genus *Campsicnemus* is one of the most speciose of Diptera genera in Hawai'i with a total of 136 described endemic species and an estimated 200 or more awaiting description. Little is known of their biologies, so the recent collection of a number of individual adults by botanist Ken Wood (National Tropical Botanical Garden, Lawa'i, Kaua'i) of a species of *Campsicnemus* from the unfurled rosettes of the lobeliad *Lobelia gloria-montis* Rock. on West Maui was of significant interest. Identification of the specimens in the collected series showed this species to be undescribed. It is herein described and illustrated in hopes that future biological work may provide additional information on its biology and habits.

Morphological terminology and description format follow Evenhuis (1997). Abbreviations: MSSC = Male secondary sexual character(s).

SYSTEMATICS

Campsicnemus gloriamontis Evenhuis, **new species**

Fig. 1

Diagnosis. This species does not key out using the keys to species of Hawaiian *Campsicnemus* provided by Hardy & Kohn (1964) and Tenorio (1969). The reason being that this species is typified by a brownish black thorax and abdomen with metallic bluish green highlights throughout. There are no other Hawaiian *Campsicnemus* that have this coloration combined with various MSSC that characterize this species. Based on the patches of long setation of the mid tibia, this species appears to belong to a complex of species with similar types of modified setation (in patches) on the mid tibia that includes *C. acuticornis* Parent, *C. albitarsus* Hardy & Kohn, *C. bicrenatus* Hardy & Kohn, *C. exiguus* Hardy & Kohn, *C. hardyi* Tenorio, *C. loxothrix* Hardy & Kohn, *C. restrictus* Hardy & Kohn, and *C. undulatus*. This species most resembles *C. loxothrix*, but it can easily be separated from it by the different size, shape, and setation of the mid basitarsus as well and the different setation pattern on the mid tibia.

Male. Body length: 2.04–2.38 mm. Wing length: 2.80–2.85 mm. Head. Face and clypeus brown, front brown pollinose, subshining in some portions, vertex blackish with shining metallic blue-green highlights; oc and vt black, slightly shorter than antennal arista; clypeus yellowish brown pollinose; face only slightly constricted at middle, eyes dichoptic below antennae; palp small, brown; proboscis brown to yellowish-brown, extending below eye in lateral view; antennal scape and pedicel brown; flagellomere black, short, conical, arista slightly shorter than head height; [head missing in one paratype male].

Thorax. Dark brownish black throughout with metallic blue-green highlights darker brown on

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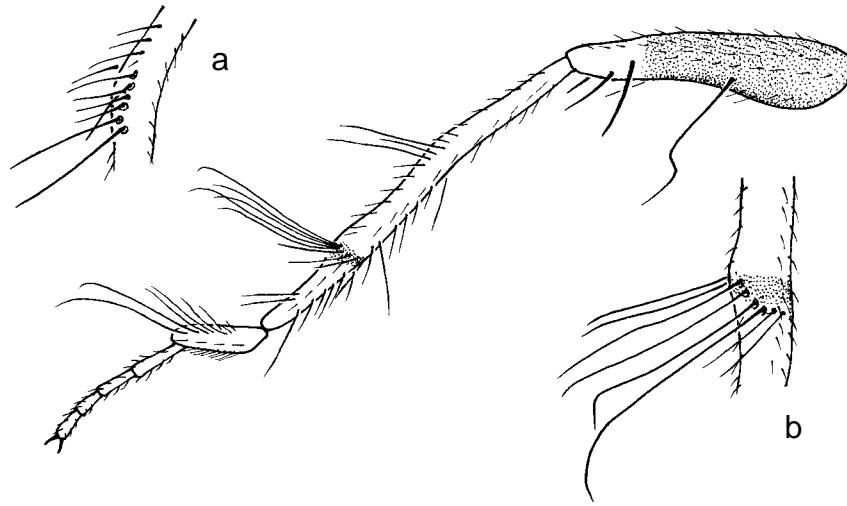


Figure 1. *Campsicnemus gloriomontis* Evenhuis, n. sp., male mid leg. a. detail of upper tibial setal patch; b. detail of lower tibial setal patch.

dorsum of mesoscutum and scutellum, brownish pollinose admedially along line of dc, in prescutellar area, and laterally on scutellum; thoracic setae (except ac) black: 4 dc; 2 + 1 np; 1 + 1 ph; 1 pa; 1 sc; row of numerous brownish-black ac medially.

Legs. Coxae and femora dark brownish black, yellowish apically, remainder of legs yellowish brown. Leg I unmodified, without MSSC. FII (Fig. 1) with long ventrally oriented setae near middle, single subapical strong black seta on medial surface (all MSSC); TII (Fig. 1) with patch of 2–3 long yellowish setae on basal third; another patch of 4 long yellowish setae and numerous smaller black setae at apical one-fourth; both patches on dark swollen areas of tibia; 2 strong black setae apically (MSSC); IIt1 (Fig. 14) about 2 times length of IIt2, with 2 long sinuous yellow setae subapically (MSSC); IIt2–5 unmodified. FIII with 1–2 strong black setae apicoventrally, remainder of leg III unmodified, without MSSC.

Wing subhyaline; halter and knob yellowish orange to yellowish white.

Abdomen. Dark brownish black with metallic blue-green to greenish highlights throughout with short black hairs dorsally on each tergite, a few longer hairs laterally. Hypopygium concolorous with abdominal tergites, not dissected.

Female. As in male except for lack of MSSC; legs normal, without modifications.

Types. Holotype male (BPBM 16,343), 2 paratype males, and 6 paratype females from Hawaiian Is: Maui I: West Maui: Pu'u Kukui, 5700 ft [1737 m], 22 December 1999, hand caught off of rosettes of *Lobelia gloria-montis*, K.R. Wood 8103. Types in the Bishop Museum.

Discussion. The collector, Dr. Ken R. Wood, gives additional details concerning his collection: “[the specimens were] collected by hand net from apical, unfurled rosette, of *Lobelia gloria-montis* (Campanulaceae) [see Fig. 2], observed ca. 20–30 individuals hidden within rosettes of several plants located just west of Pu'u Kukui summit on Panaewa side.” The area of collection is a montane wet bog community, with epiphytes and bryophytes common in the shrub layer.



Figure 2. Leaf rosette of *Lobelia gloria-montis* Rock. (from Wagner, W.L. *et al.*, 1990, *Manual of flowering plants of Hawai'i*. Univ. Hawaii Press & Bishop Museum Press). Specimens were collected from the bases of the more apical freshly unfurling leaves.

This is the first known association of a congregation of adults of a species of Hawaiian *Campsicnemus* in the rosettes of a flowering plant. As predators, *Campsicnemus* adults are often found foraging for prey on various portions of plants, but usually only a single or a few individuals may be seen together in any one area. The results of further research into the behavior of the adults of this species to ascertain their habits within the rosettes of this plant species is greatly desired.

Etymology: The specific epithet refers to the apparent association with the lobeliad *Lobelia gloria-montis*.

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