

## A New Species of the Dipterous Family Asteiidae from Hawaii

By **CURTIS W. SABROSKY**

Bureau of Entomology and Plant Quarantine, Agricultural Research Administration,  
United States Department of Agriculture

The family Asteiidae is one of the smallest and least common of the acalyptrate Diptera, and is poorly represented in most collections. It is therefore always of interest to record a new species in the group.

In 1901, Grimshaw (*Fauna Hawaiiensis*, 3, pt. 1. Diptera, pp. 73-74) described two new species of *Asteia* Meigen from the Hawaiian Islands, *Asteia hawaiiensis* and *A. apicalis*, and recorded a third merely as "*Asteia* sp." From his notes on the last, especially his statement that "the arista appears to be quite bare," it is fairly certain that he had the species which is herein described as new. His specimen was recorded as "beaten from trees, at a height of 3,000 ft. in the Waianae Mts., Oahu," and it will be noted that both of the present specimens were also taken on Oahu, one of them at 4,000 feet on Mount Kaala (Waianae Mts.).

### ***Asteia nudiseta***, new species.

Black-brown and yellow species, distinguished from all other known species of the genus by having the combination of three pairs of dorsocentral bristles and a bare antennal arista.

*Female*.—Head predominantly shining black, the front anteriorly brown, the narrow cheeks whitish yellow except for black margin, and the lower half of the face with a broad silver-white crossband extending from eye to eye. Proboscis and palpi yellow. Antennae and the slender bare aristae black, the third segment dusky yellow on the lower fourth. Front broad, equal to one-half the width of the head. Bristles black, the oral vibrissae, inner and outer vertical bristles, and the one pair of fronto-orbitals very long and slender, the latter situated slightly in front of a line drawn through the median ocellus; proclinate divergent ocellar bristles distinct though somewhat shorter than the above; postverticals minute.

Thorax black, with a broad yellow fascia extending on a slight diagonal across each pleuron from the fore coxa to the base of the wing, the hypopleuron and a narrow upper margin of the sternopleuron, brown to yellow. Scutellum black with apical yellow spot between the bases of the widely separated apical scutellar bristles. Mesonotum shining black, only a broad median stripe between the dorsocentrals, and also the scutellum, sparsely pollinose. Chaetotaxy: Notopleurals 1 + 2, 1 postalar, 3 dorsocentral (one of them anterior to the suture), and 1 apical scutellar, all long and strong except the posterior notopleurals, which are short and spinelike; one pair of subapical scutellars, short, hairlike, and very inconspicuous (obviously over-

looked by Grimshaw in his notes on the genus, p. 73). Upper margin of the sternopleuron with three or four hairs, but only the posterior one is developed as a sternopleural bristle.

Abdomen yellow below and on the sides, the dorsum dull brown with two broad brown bands extending ventrad, apparently on the third and fourth segments. Distal segments shining black.

Legs predominantly yellow, marked with black as follows: Distal portion of all femora, including less than one-fourth of the fore, about one-half of the mid, and slightly over half of the hind femora; the bases of all tibiae slightly; and the distal segment and claws of all tarsi. Empodium notably long and curved.

Wings hyaline, veins brown, venation as figured for *Asteia* in Curran's Manual (1934, p. 328, fig. 3), except that the apical cell is slightly narrower at the margin of the wing, and the submarginal cell slightly but distinctly broader than the widest part of the first posterior cell. Knob of the halteres black, the stalk yellow.

Length 2.5 mm.

Holotype, female, Mount Kaala, Oahu, July 25, 1946, "el. 4,000 ft., bog at summit" (W. W. Wirth). Paratype, female, Oahu (J. C. Bridwell). Type No. 58218 and paratype in the United States National Museum.

The only described species in the Pacific area which might be confused with *nudisetata* is *Asteia atriceps* Malloch (1932, Bernice P. Bishop Mus. Bul., 98:115), described from Hivaoa in the Marquesas. That species, however, has four pairs of dorsocentral bristles (one before and three behind the mesonotal suture), only one posterior notopleural bristle, all yellow bristles, and a large prescutellar yellow spot on the mesonotum.

The two species might well be considered entitled to generic segregation from typical *Asteia*, based on the bare arista, as Malloch (op. cit.) has already observed. I believe that they are the only two known species of *Asteia* to possess that character. *Asteia decepta* Becker (Canary Islands), included with them by Malloch, is on the contrary a species with an intermediate type of arista (like *A. apicalis* Grimshaw, q. v.), in which the fundamental zigzag structure is present but only weakly developed and the arista branches are short and can be seen only with high magnification. Aside from the type of arista, however, the species are so similar to the usual *Asteia* that I agree with Malloch in leaving them in the genus.

#### ***Asteia apicalis* Grimshaw.**

Three female specimens agree with Grimshaw's description and are here recorded as that species (Kilauea, Hawaiian National Park, August 10 and September 1946, in light trap, coll. W. W. Wirth, C. J. Davis). The arista is almost straight, as he noted, and the arista branches are microscopic, but even so the arista is distinctly of the zigzag type and not the slender, straight, bare form

of *nudiseta*. The specimen before me has only two pairs of long, erect, dorsocentral bristles, the mesonotum is more thickly pollinose, and the yellow stripe on each pleuron is wider than in *nudiseta*, the knob of the halteres is partly yellow, and the abdomen has a brown dorsum and yellow sides and venter, without any brown bands extending ventrad from the dorsum.