

## *Asteia dimorphica* sp. n.: A new asteiid species from Spain (Diptera: Asteiidae)

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### Abstract

A new species of Asteiidae (*Asteia dimorphica* sp. n.) is described from Spain. It was collected with a flight interception trap and belongs to the *ibizana*-group.

**Key words:** Diptera, Asteiidae, *Asteia dimorphica*, new species, Spain.

### Resumen

*Asteia dimorphica* sp. n.: Una especie nueva de asteido de España (Diptera: Asteiidae)

Se describe una especie nueva de Asteiidae (*Asteia dimorphica* sp. n.) de España. Fue capturada con una trampa de interceptación de vuelo y pertenece al grupo *ibizana*.

**Palabras clave:** Diptera, Asteiidae, *Asteia dimorphica*, especie nueva, España.

### Laburpena

*Asteia dimorphica* sp. n.: Asteidoen espezie berri bat Espainiakoa (Diptera: Asteiidae)

Asteiidae familiako espezie berri bat (*Asteia dimorphica* sp. n.) deskribatzen da, Espainiakoa. Hegaldiaren interzeptazio-tranpa baten bidez harrapatua izan zen eta *ibizana* taldekoa da.

**Gako-hitzak:** Diptera, Asteiidae, *Asteia dimorphica*, espezie berria, Espainia.

## Introduction

*Asteia* Meigen (1830), the largest genus of the family Asteiidae, is a worldwide genus with some 30 described species in the Palearctic Region; 10 of them have been recorded from Spain. *Asteia* is easily distinguishable from the other Palearctic asteiid genera by the absence of crossvein dM-Cu and alula, and by having the wing margin bare on the alular region (Papp, 1998).

During the study of dipterological material collected in eastern Spain (part of the results have been published by Carles-Tolrá and Lencina (2010a, 2010b)) two specimens of *Asteia* were found. They belong to the *ibizana*-group (see Papp, 1979), which is characterized by having the head quadrangular, that is, head and eyes longer (sometimes only slightly) than high.

It currently includes 5 species (Papp, 1979; Deeming, 2010), namely *A. ibizana* (Enderlein, 1935), *A. inanis* Lyneborg, 1969, *A. floricola* Papp, 1979, *A. tunisica* Papp, 1979 and *A. vanharteni* Deeming, 2010. Both specimens belong to a new species for science and it is described below.

## Systematics

### *Asteia dimorphica* sp. n.

A light brownish species.

*Male*. Head brownish, very slightly longer than high (length:height = 15:14 = 1.071) (Fig. 1a). Eye (Fig. 1a)

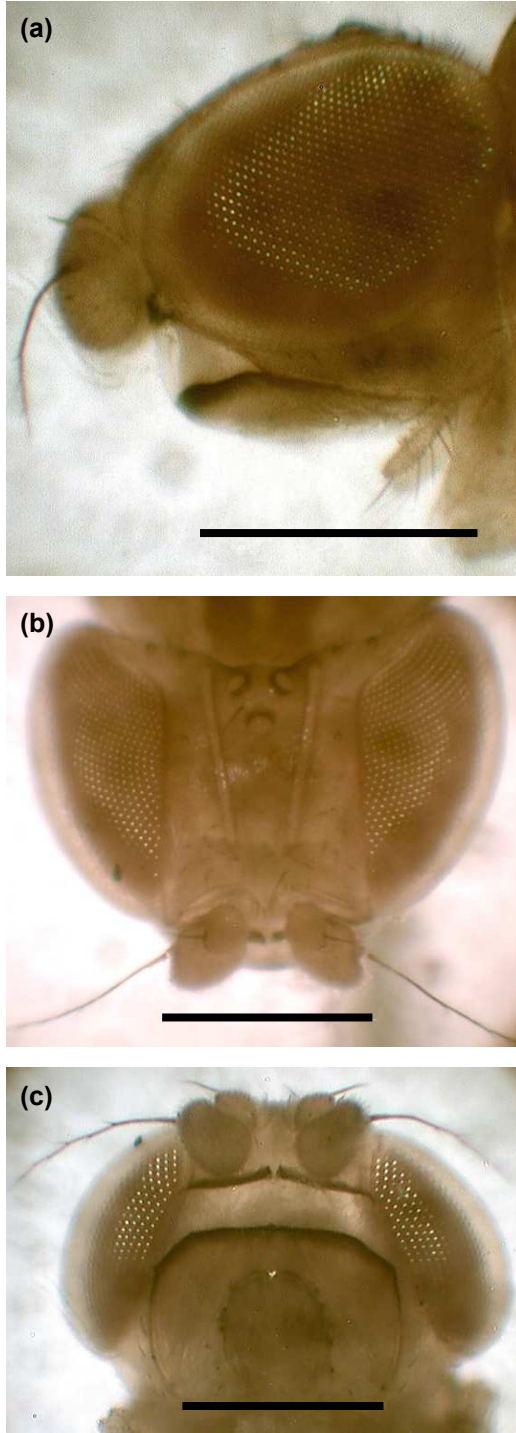


FIGURE 1. *Asteia dimorphica* sp. n.: Head: (a) Lateral view; (b) Dorsal view; (c) Anteroventral view (Scale bars = 0.3 mm).

oblique, clearly longer than high, maximum length : maximum height = 15 : 11 = 1.36. Frons brownish. Interfrontal stripes (Fig. 1b) long, straight, convergent anteriorly, almost reaching frontal margin. Gena yellow and very narrow, eye vertical height : gena (narrowest part) = 15 : 1. Ocellar triangle same colour as frons. Face (Fig. 1c) yellowish, with a narrow black upper stripe and similar lower stripe. Palpus yellowish. Antenna yellowish, joint 3 short, pubescent, as long as high. Arista (Fig. 2a) of a slightly zig-zag form (in lateral view), with 3 short dorsal and 2 shorter ventral rays. Chaetotaxy (most bristles broken, but sockets visible): 1 ors, vte, vti, oc short, pvt small (hair-like), 1 vibrissa.

Thorax: Scutum brownish, with 3 pairs of stripes: 1 median pair reaching anterior dc, 1 lateral pair reaching posterior dc, and 1 supraalar pair. Pleura completely yellowish, only a very small slightly brownish spot on the lower part of the anepisternum (just above katapisternum). Chaetotaxy (almost all broken, but sockets visible): 0 hu, 2 np, 2 st (whitish), 2 dc, 2 sc (anterior much shorter, hair-like).

Wing almost hyaline. Apex of R1 slightly, almost indistinctly, infuscated. Apex of R2+3 not infuscated. R2+3 apically not strongly angled (as in *A. inanis*). Haltere yellow, knob brownish.

Legs completely yellow, without rings. Fore femur with 1-2 dorsal long hairs.

Abdomen yellow. Tergites 1-3 desclerotized, tergites 4 and 5 strongly sclerotized, with small hairs, brown, sun spectacle-shaped (Fig. 3a). Venter membranous, sternites lacking.

Genitalia yellow: surstylus bifid (Figs. 4a-b), haired apically and internally; aedeagus (Figs. 4c-d) with a strong, curved, apical sclerotization. Ejaculatory apodeme not studied.

*Female* similar to the male, but with a very few differences. Head and thorax somewhat sunk, deformed (in only available specimen). Interfrontal stripes lacking. Arista (Fig. 2b) clearly different from that of the male, that is with a distinctly zig-zag form (in lateral view) but also with 3 short dorsal rays and 2 shorter ventrals. Chaetotaxy as male, but bristles present, not broken. Fore femur with 1 long dorsal hair. Tergites 4 and 5 dark brown, strongly sclerotized; tergite 4 bean-shaped, haired; tergite 5 small, oval, haired; tergite 6 brownish, less sclerotized, subrectangular, with small hairs (Fig. 3b). Genitalia yellow. Cerci with short hairs, apical one longer.

Total body length: male 2.7 mm, female 2.1 mm. Wing length: male 2.4 mm, female 2.2 mm.

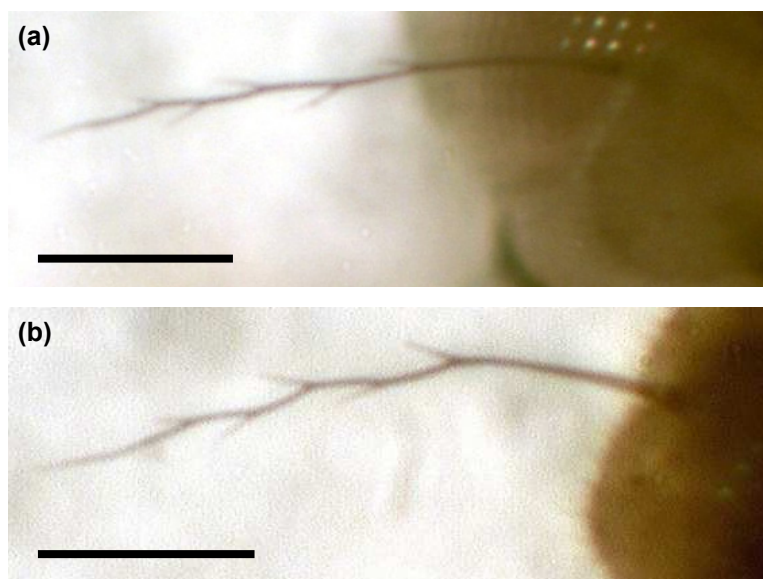


FIGURE 2. *Asteia dimorphica* sp. n.: Arista: (a) Male; (b) Female (Scale bars = 0.1 mm).

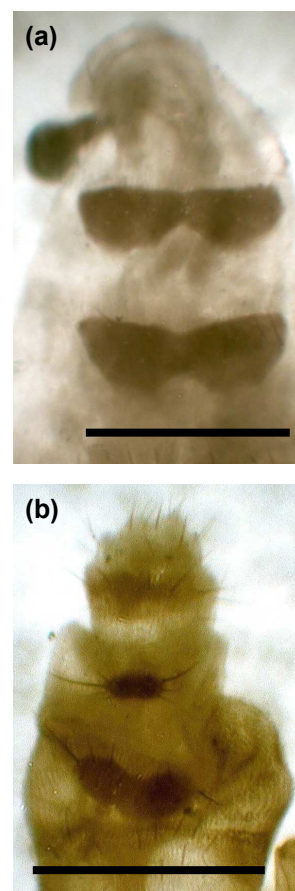


FIGURE 3. *Asteia dimorphica* sp. n.: (a) Male tergites 4 and 5; (b) Female tergites 4, 5 and 6 (Scale bars = 0.3 mm).

**Type material** (1 ♂ and 1 ♀):

Holotype ♂: SPAIN: Murcia: Jumilla, Parque Regional de la Sierra del Carche, 5-22.7.2008, flight interception trap, 900-1325 m a.s.l., J.L. Lencina leg.

Paratypes: 1 ♀ as the holotype.

Holotype not dissected. Type material preserved in alcohol (70%) and deposited in the author's private collection.

**Discussion:** *Asteia dimorphica* sp. n. belongs to the *ibizana*-group characterized by having the head and eyes longer than high. It differs from the other species of this group by the shape of the head (distinctly longer than high in *A. ibizana* and *A. tunisica*) and the coloration of the mid- and hind tibiae (each one with 2 dark rings in *A. inanis*, *A. floricola* and *A. vanharteni*).

**Biology:** Unknown. Both specimens were collected

by means of a flight interception trap at 900-1325 m a.s.l. placed in a forest. For more details see Carles-Tolrà and Lencina, 2010a.

**Distribution:** Hitherto only known from eastern Spain.

**Etymology:** The specific name refers to the sexual dimorphism of the antennae. It is an adjective.

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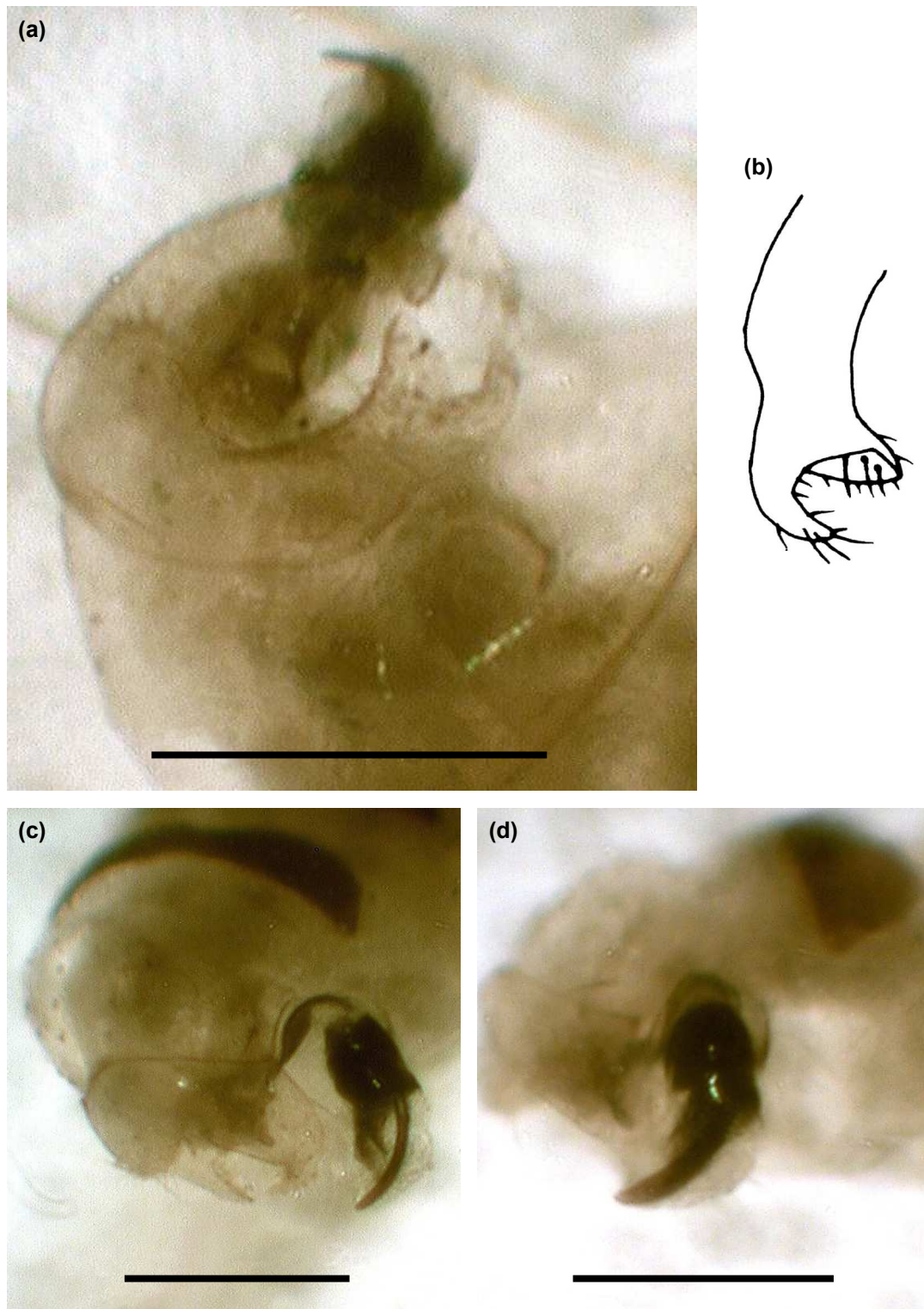


FIGURE 4. *Asteia dimorphica* sp. n.: Male genitalia: (a) Ventro-postero-lateral view; (b) Surstylus, broadest view; (c) Aedeagus, posterior view; (d) Aedeagus, lateral view (Scale bars = 0.2 mm).



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