

A NEW SPECIES OF *DICTYA* FROM MEXICO
(DIPTERA: SCIOMYZIDAE)

R. E. ORTH

Department of Entomology, Division of Biological Control, University of California, Riverside, California 92521.

Abstract.—*Dictya sinaloae*, n. sp., is described from Sinaloa, Mexico. The new species is a member of the *abnormis* group of which there are now six recognized species. Within the *abnormis* group it most closely resembles *D. bergi* Valley. A photograph, illustrations and a key are provided.

The genus *Dictya* in the Americas south of the United States is poorly known. The external morphology of the species of *Dictya* is very similar and terminalia dissection is generally required for positive determination. Prior to the publication by Curran (1932) only one species, *Dictya umbrarum* Linnaeus, now known to be strictly Palaearctic, was recognized in North America. *Dictya pictipes* Loew (1859), described from three females from Washington, D.C., was synonymized by Cresson (1920). Curran (1932) recognized seven species, including *D. pictipes*, and separated each by genitalic characters. His work provided the basis for the taxonomic studies that followed. Today 33 species are recognized, including the new species described herein. All but one, *D. umbrarum*, are New World species.

Steyskal (1954) assigned the 22 *Dictya* species then known to three groups. The number of species now recognized in each group are: *abnormis* (6), *ptyarion* (1), and typical (26). *Dictya sinaloae*, new species, is a member of the *abnormis* group. According to Steyskal (1954) the distinguishing characteristics of this group are: second antennal segment shining on outer upper half or more, longer than high; deep black parafrontal spots present. The group is now comprised of the following six species: *D. abnormis* Steyskal, *D. bergi* Valley, *D. guatemalana* Steyskal, *D. insularis* Steyskal, *D. matthewsi* Steyskal, and *D. sinaloae*, new species. All are Neotropical and the known distribution of two, *D. abnormis* and *D. matthewsi*, extends northward into the Mexican Nearctic, with *D. matthewsi* extending into Arizona.

KEY TO THE *DICTYA ABNORMIS* GROUP BASED ON MALE TERMINALIA

- | | |
|--|---|
| 1. Surstylus with apical dorsal tip strongly projecting | 2 |
| – Surstylus with apical dorsal tip not strongly projecting | 5 |
| 2. Ventral process of epandrium with a slender digitiform posterior lobe, anterior lobe not present; ventral process of hypandrium rather slender, gently curved forward; surstylus with apical dorsal tip rounded | |
| <i>D. abnormis</i> Steyskal | |
| – Ventral process of epandrium without slender digitiform posterior lobe | 3 |

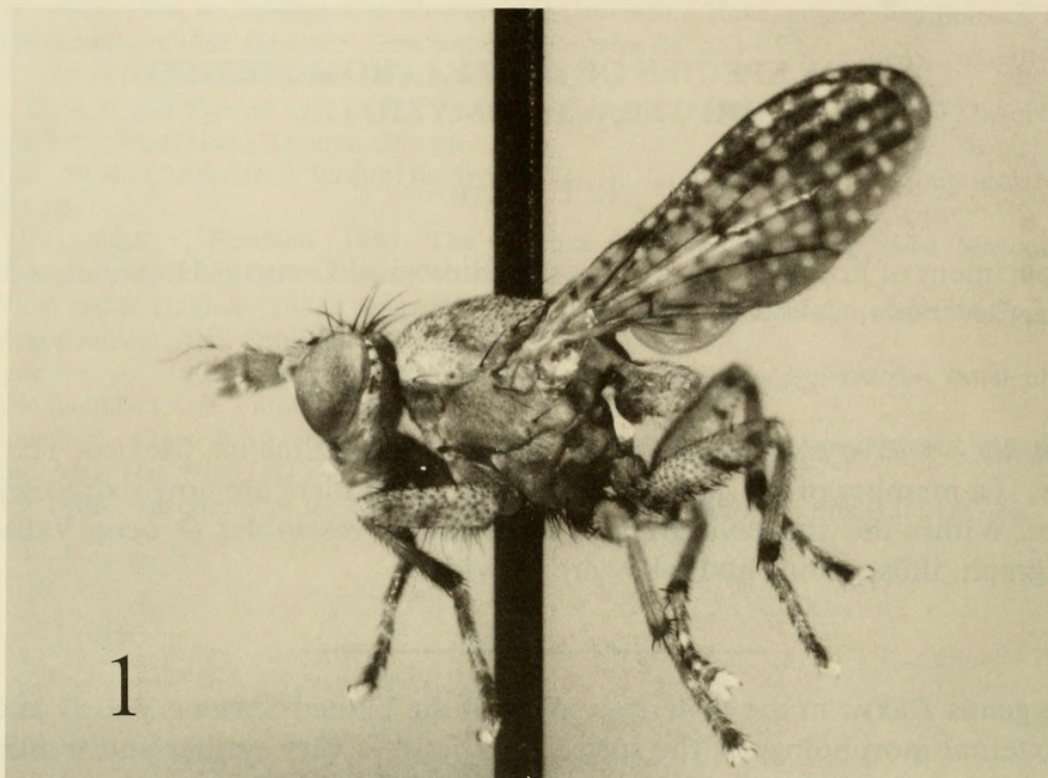
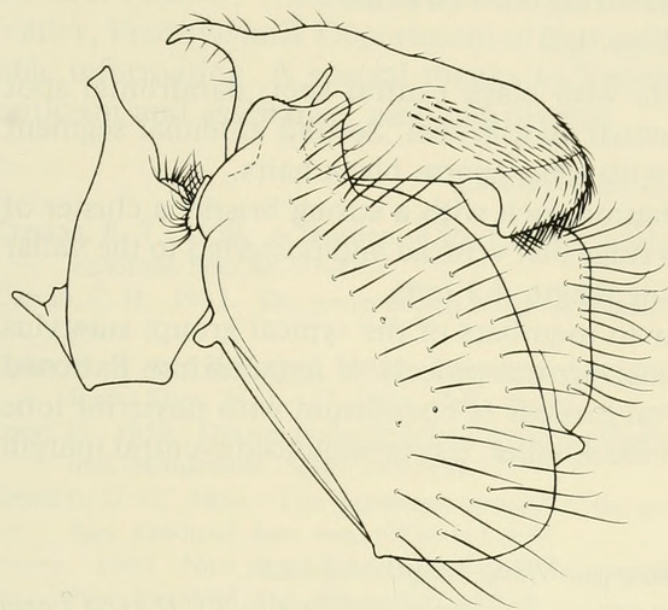
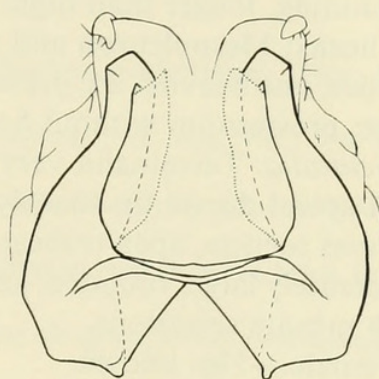


Fig. 1. *Dictya sinaloae*, holotype male. Abdominal segments excised and retained in genitalia vial on pin beneath specimen. Photo by M. E. Badgley, University of California, Riverside.

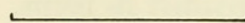
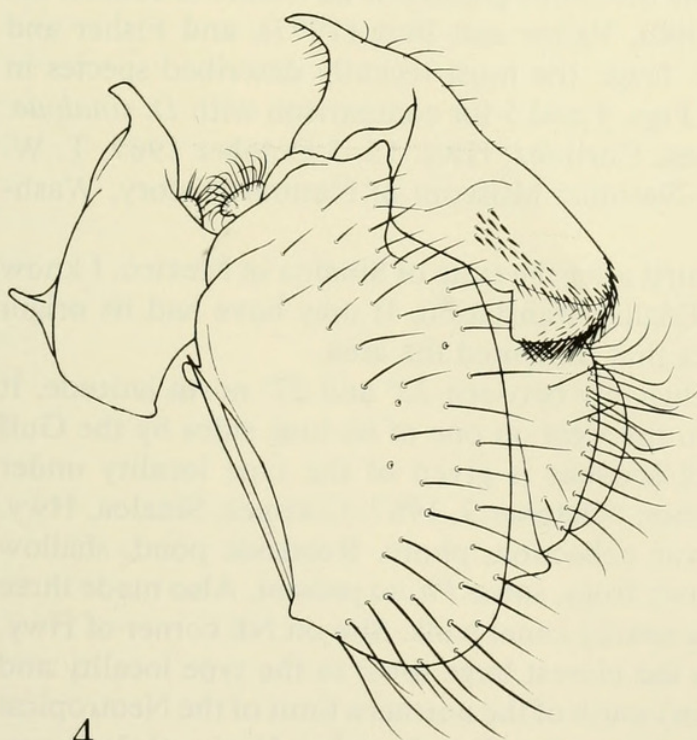
3. Surstylus with a deep emargination in the apical dorsal tip forming a ligulate lobe fringed with small bristles; ventral process of hypandrium short, stout, strongly tapering and curved forward; ventral process of epandrium lacking posterior and anterior lobes, but with a small mammiform projection on inner side at middle near margin . . . *D. guatemalana* Steyskal
- Surstylus with no emargination in the apical dorsal tip; no ligulate lobe 4
4. Surstylus with apical dorsal tip angulate; ventral process of hypandrium stout, thickened in cross section, apex angulate, directed anteriad; ventral process of epandrium with posterior lobe moderately large, bluntly pointed; anterior lobe less pronounced *D. bergi* Valley
- Surstylus with apical dorsal tip sharply angulate; ventral process of hypandrium flattened in cross section, apex truncate; ventral process of epandrium with posterior lobe moderately large, rounded, anterior lobe smaller, less pronounced *D. sinaloae* new species
5. Surstylus with apical extension directed posteriad, apical dorsal tip directed dorsally; ventral process of hypandrium nearly truncate with a very small anteriorly directed tip; ventral process of epandrium with posterior lobe moderately large, rounded, the anterior lobe much smaller *D. matthewsi* Steyskal
- Surstylus with apical extension sinuate and turned mesad beyond middle, apical tip directed posteriad; ventral process of hypandrium thick at base then abruptly constricted anteriorly and curved forward; ventral process of epandrium with a large somewhat pointed posterior lobe followed by another less pronounced lobe, anterior lobe not present *D. insularis* Steyskal



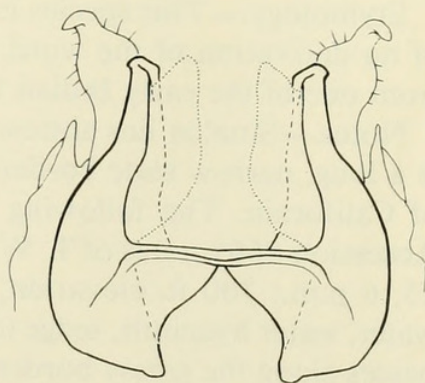
2



3


0.4 mm

4



5

Figs. 2-5. 2-3, *Dictya sinaloae*, holotype male. 2, Postabdomen, lateral view, inverted. 3, Hypandrium, anterior view, inverted. 4-5, *Dictya bergi*, paratype male, Costa Rica, Cartago Prov., Coris, Finca Hernan Molina, 13 July 1969, Karl R. Valley. 4, Postabdomen, lateral view, inverted. 5, Hypandrium, anterior view, inverted.

Dictya sinaloae Orth, NEW SPECIES

Figs. 1–3

Holotype male.—Head: Face white with black central spot; parafrontal spot distinct, ovoid, blackish; orbito-antennal spot brown. Second antennal segment subshining, longer than high; arista with long, sparse black hairs.

Thorax: Mesopleuron and pteropleuron each with a strong bristle; a cluster of bristles, one heavier, are present on a ridge just ventrad and posteriad to the vallar ridge; prosternum without hairs. Wing length 4.3 mm.

Genitalia: Terminalia very similar to members of the typical group; surstylus with apical dorsal tip sharply angulate; ventral process of hypandrium flattened in cross section, apex truncate; ventral process of epandrium with posterior lobe moderately large, rounded; anterior lobe smaller, less pronounced; ventral margin with minute serrations.

Female.—Not known.

Paratype.—(1 ♂) Same data as holotype. Wing length 4.1 mm.

Diagnosis.—Within the *abnormis* group the male terminalia of *Dictya bergi* and *D. matthewsi* show similarities to *D. sinaloae*. The terminalia of the above three species closely resemble those of the typical group. In the remaining species of the *abnormis* group as presently understood, i.e., *D. abnormis*, *D. guatemalana* and *D. insularis*, the surstylus and ventral process of the epandrium are unmistakably distinct in form.

When separating specimens of the *abnormis* group it is advisable to consult the illustrations of Steyskal (1954, 1960), Valley and Berg (1977), and Fisher and Orth (1983). The terminalia of *D. bergi*, the most recently described species in the *abnormis* group, are shown in Figs. 4 and 5 for comparison with *D. sinaloae*.

Holotype male.—Mexico, Sinaloa, Cortinez, Hwy. 15, 3 October 1967, T. W. Fisher, AS-661. Deposited in the National Museum of Natural History, Washington, D.C.

Etymology.—This species is named after the state of Sinaloa in Mexico. I know of no derivation of the word, or English translation. It may have had its origin from one of the early Indian tribes that inhabited the area.

Notes.—Sinaloa lies almost exclusively between 23° and 27° north latitude. It is a long, narrow state bordered to the west on one of its long sides by the Gulf of California. The following brief account is given of the type locality under Accession #661 notes of T. W. Fisher: "October 3, 1967; Cortinez, Sinaloa, Hwy. 15; 6 p.m.; 300 ft. elevation; D-vac collection, photo. Roadside pond, shallow water, water hyacinth, sedge (all low); frogs, some *Physa* present. Also made three passes along the grassy border of a nearby canal bank. Site on NE corner of Hwy. 15 and the canal." Los Mochis is the closest large town to the type locality and is approximately 100 miles (160 km) south of the northern limit of the Neotropical region. According to Francisco Pacheco Mendivil, Instituto Nacional de Investigaciones Agricolas del Noroeste, Ciudad Obregon, Sonora, Mexico, in litt. Cortinez "is a little village located approximately 24 km south of Los Mochis, Sin. As a matter of fact the exact name is Ruiz Cortinez, which are the father's and mother's last name of a Mexican president."

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