

**A NEW SPECIES OF CONTARINIA
(DIPTERA: CECIDOMYIIDAE)
FROM HELIANTHUS ANNUUS L. (COMPOSITAE)
IN NORTH AMERICA¹**

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Contarinia schulzi, new species, an apparently native species but unnoticed until recently, has become a serious pest of heads of cultivated sunflower, *Helianthus annuus* L. (Compositae), in North Dakota, Minnesota, and Texas. This cecidomyiid is described here to make a name available for a forthcoming report concerning its biology and pest status. It is named in honor of Dr. J. T. Schulz of North Dakota State University, who is directing research related to this species.

***Contarinia schulzi* Gagné, NEW SPECIES**

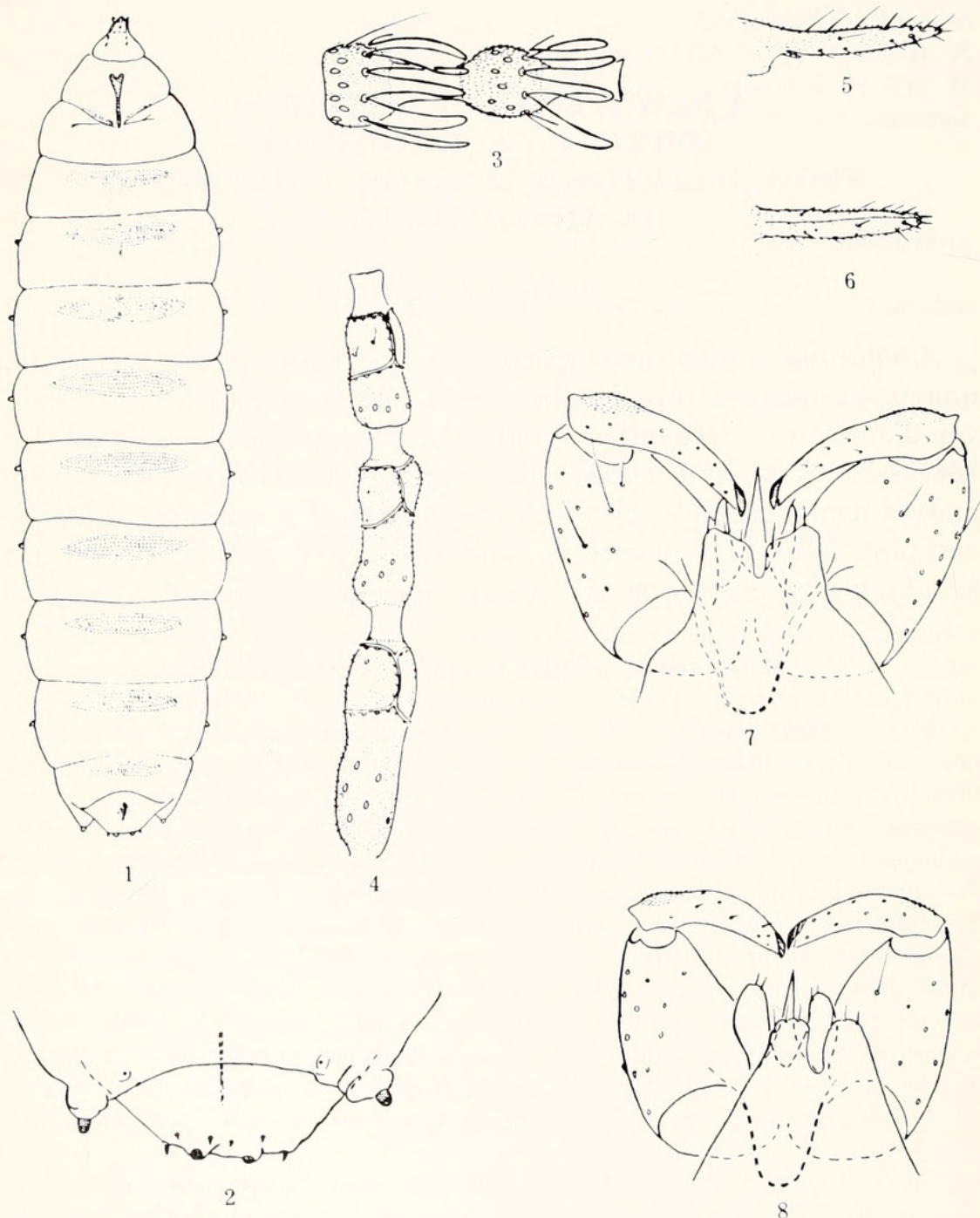
MALE.—Wing length, 1.38-1.42 mm. Postvertical peak absent. Eye facets hexagonoid ventrolaterally, rounded elsewhere, slightly farther apart laterally than dorsally. Antennal flagellomere III (fig. 3): loops of circumfilum I reaching approximately to base of node II, those of circumfilum III reaching to apex of flagellomere; nodes covered with setulae. Frontoclypeus with 10-12 setae. Palpus 4-segmented, proportions of segments I-IV, respectively, 1.0 : 1.5 : 1.8 : 2.7 (avg. 8 specimens). Anepisternum with 4-8 setae. Abdominal tergum VI with 26-30 caudal setae placed in a single transverse row, and 2-3 lateral setae per side; tergum VII with 1-6 caudal setae per side, these 2 groups divided mesally by extensive unsclerotized area, and 0-3 lateral setae per side; tergum VIII naked, weakly sclerotized laterally. Genitalia (fig. 7): cerci truncate apically; lobes of sternum X long, narrow; aedeagus tapering evenly from base to pointed apex; basimere stout; telomere long, gradually narrowing from base to apex; subgenital plate evenly rounded.

FEMALE.—Wing length, 1.48-1.55 mm. Antennal flagellomeres I-III (fig. 4) with proportions 1.0:0.7:0.6, respectively (avg. 4 specimens). Other head and

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thoracic characters as in male. Abdominal tergum VI with 32-37 caudal setae, placed in a single transverse row, and 2-3 lateral setae per side; tergum VII with 22-26 caudal setae in single transverse row and 5-9 laterals per side; tergum VIII



FIGURES 1-7, *Contarinia schulzi* Gagné: 1, larva (ventral view); 2, terminal segments of larva (dorsal view); 3, flagellomere III of male antenna; 4, flagellomeres I-III of female; 5, female cerci (dorsal view); 6, same (lateral view); 7, male genitalia (dorsal view). FIGURE 8, *Contarinia perfoliata* Felt: male genitalia (dorsal view).

quadrate with tiny scattered setae caudally. Tergum VII (measured from basal trichoid sensillae to caudal setae) approximately 1/8 length distal half of ovipositor; cerci (figs. 5-6) narrow, elongate, setulose.

LARVAE (figs. 1-2). Sternal spatula clove-shaped. Papillae evident only on venter of thorax and terminal segments, viz. tiny lateral papillae on pro- and mesothorax, an aetose pair of dorsal papillae on tergum VIII, and 4 pairs of terminal papillae. Spiracles of abdominal segment VIII situated on caudolateral extensions of the segment.

Holotype, ♂, Fargo, Cass Co., North Dakota, VIII-15-1971, K. Kamali, USNM Type No. 72056. Paratypes: ♂, 8 ♀ ♀, same data as holotype; 2 ♂ ♂, 3 ♀ ♀, Traill Co., North Dakota, coll. VIII-9-1971, em. VIII-15-1971, J.T. Schulz.

Additional material (all larvae). North Dakota: Fargo, Cass Co., VIII-18-1971, K. Kamali. Minnesota (all Norman Co.): VII-30-1971, G. Samuelson; Ada, VIII-2-1971, D.K. McBride; Halstad, IX-13-1971, J.T. Schulz; Hendrum, VII-22-1971, J.T. Schulz. Texas: Knox Co., X-1-1971, C.E. Rogers.

In my manuscript key to adults of nearctic *Contarinia*, *C. schulzi* keys to and is similar to a group of species comprising *C. ampelophila* Felt taken on grape, *C. flavolinea* Felt caught by sweeping, and *C. perfoliata* Felt reared from florets of *Eupatorium perfoliatum* L. (Compositae). The two last-named are each known from a single male and *C. ampelophila* is known from 2 specimens, one of each sex. As with *C. schulzi*, these species are small (wing length less than 1.6 mm.), lack or have only a very short post-vertical peak, lack circumfilum II on the male flagellomeres, have lateral setae and one transverse row of caudal setae on the abdominal terga, possess a pointed aedeagus, a deeply lobed sternum X, and rounded subgenital plate. The female cerci, where known, are long, narrow, and setulose. Only *C. schulzi*, however, lacks any postvertical peak. Its sternum X has much narrower lobes than the other 3 species (e.g., compare figs. 7 and 8) and the telomere is somewhat longer. The caudal extensions of segment VIII of the larvae are uncommon in *Contarinia*, though not unique.

2.0175 a new species of *Contarinia* (Diptera: Cecidomyiidae from *Helianthus annuus* L. (Compositae in North America.

ABSTRACT—*Contarinia schulzi* Gagné, new species, a pest of sunflower seed heads, is described, illustrated, and compared to its most similar congeners.—Raymond J. Gagné, Systematic Entomology Laboratory, U. S. National Museum, Washington, DC 20560.

Descriptors: Diptera; Cecidomyiidae; *Contarinia*, new species, North Dakota, Minnesota, and Texas; host, *Helianthus annuus*; sunflower; Compositae.



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