

A NEW SPECIES OF *SONIA* FROM EASTERN NORTH AMERICA (TORTRICIDAE)

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ABSTRACT. *Sonia divaricata* is described from three male and one female specimens captured in Missouri and Kentucky. It differs from its six known congeners by various combinations of small body, bifid male uncus, nearly square female sterigma, and scant constriction of the medial dark forewing band.

Additional key words: *Sonia divaricata*, Olethreutinae, taxonomy, Missouri, Kentucky.

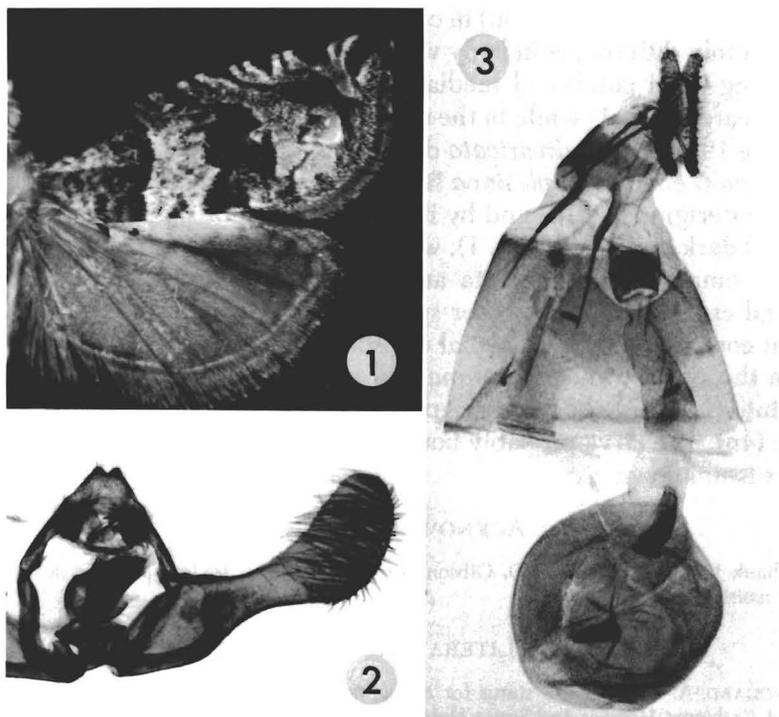
Heinrich (1923) proposed the olethreutine genus *Sonia* for three Nearctic species. Three more Nearctic *Sonia* species have been described since, bringing the total for the genus to six (Blanchard 1979, Powell 1983). The six species occur in various parts of eastern and western North America (Blanchard 1979, Clarke 1952, Heinrich 1923, Miller 1987, Powell 1975). Biological information is available for *S. canadana* McDunnough, *S. comstocki* Clarke, *S. filiana* (Busck), and *S. vovana* (Kearfott), all of whose larvae bore in roots of Asteraceae (Čapek 1971, Hetz & Werner 1979, Powell 1975). Larvae of the first and third species above have been taxonomically described (Hetz & Werner 1980, MacKay 1959).

The present species is being named to facilitate faunistic works in progress as well as to augment knowledge of this small genus. In the description that follows, italicized character states identify *Sonia* and justify the generic placement of the new species (Heinrich 1923). The letter n preceded by a numeral denotes number of specimens underlying a statement; published wingspans are converted to forewing lengths with a proportionality constant derived by Miller (1977); and wing venation terminology follows Common (1970).

Sonia divaricata, new species

(Figs. 1-3)

Male. Forewing 7.5-8.0 mm long (3n). **Head.** Labial palpus off-white for most of its length, brown on outsides and at apex, vestiture lengthening apically, 2nd segment subequal in length to eye diameter, 3rd segment $\frac{1}{4}$ length of 2nd. Vertex off-white or pale brown. **Thorax.** Vestiture brownish dorsally, shiny white ventrally. Upper side of forewing white, silver, and shades of brown interlaced as in Fig. 1, underside dark brown, veins R_4 and R_5 united, upper internal vein arising between R_1 and R_2 , R_2 arising from before middle of discal cell, termen faintly concave, veins M_2 , M_3 , and CuA_1 approximate at termen, costal fold present on basal $\frac{1}{4}$ of wing. Upper side of hindwing grayish brown, veins CuA_1 and M_3 stalked, Rs and M_1 anastomosing toward their bases. **Abdomen.** Genitalia (3n) (Fig. 2). Valva with rudimentary clasper, valval neck constricted to $\frac{1}{2}$ or more maximum parallel dimensions of sacculus and cucullus; uncus bifid; socii finger- or



FIGS. 1-3. *Sonia divaricata*. 1, Wings of holotype male (negative reversed). 2, Genitalia of holotype. 3, Genitalia of female, with corpus bursae darkened by spermatophore (negative reversed).

ribbonlike; aedeagus a sheath open on one side for much of its length, vesica with 25-30 closely packed deciduous cornuti.

Female. As described for male except as follows. Forewing 6.5 mm long (1n). Genitalia (1n) (Fig. 3). Anterior and posterior apophyses subequal in length; sterigma approximately square in outline, consisting entirely of lamella postvaginalis; ductus bursae with a partial sclerotized ring at middle; corpus bursae with two similar finlike signa.

Etymology. The name *divaricata* refers to the bifid or divaricate uncus.

Types. Holotype male (Fig. 1), Prairie State Park, Barton Co., Missouri, 10 June 1980, J. R. Heitzman, genit. prep. WEM 243893 (Fig. 2), in American Museum of Natural History, New York. Two male paratypes same data except genit. preps. DH 225811 and DH 303821, and one female paratype Red River Gorge, Powell Co., Kentucky, 14 May 1988, L. Gibson, genit. prep. WEM 243894. The paratypes, respectively, are in the University of Minnesota Entomology Museum, St. Paul; J. R. Heitzman Collection, Independence, Missouri; and L. D. Gibson Collection, Florence, Kentucky.

Differentiation. *Sonia divaricata* differs from all known congeners except *comstocki* by its bifid uncus (Fig. 2); other congeners have less developed, rounded unci (Blanchard 1979, Heinrich 1923, McDunnough 1925). From *comstocki* it differs by its smaller body and its more distinct wing pattern; forewing length is 6.5-8.0 mm (4n) com-

pared with 9.0–11.0 mm (8n) in *comstocki*, ranges which represent two- to threefold differences in body weight (Miller 1977). In *divaricata*, the forewing basal patch and medial crossband, both brown, are sharply demarcated (Fig. 1) while in the overall tan *comstocki* they are obscure (Clarke 1952). *Sonia divaricata* differs from its eastern congeners, *constrictana* (Zeller), *paraplesiana* Blanchard, and *canadana*, by its nearly square sterigma (Fig. 3) and by its unconstricted or slightly constricted medial dark crossband (Fig. 1), which contrast with the oblong, rounded, or emarginate sterigmata and greatly or completely constricted medial crossbands in the other species (Blanchard 1979, Miller 1987). Scant constriction of the medial crossband readily separates *divaricata* from the sympatric *constrictana* and *paraplesiana* without dissection.

Biology. *Sonia divaricata* capture dates range from 14 May to 10 June (4n). The larva probably bores in roots of Asteraceae, but the food plant is unknown.

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