

A NEW SPECIES OF *GRETCHENA* (TORTRICIDAE) INJURIOUS TO PLANTED NEOTROPICAL WALNUT

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ABSTRACT. *Gretchena garai* is described from four males and three females reared from shoots of *Juglans neotropica* Diels. (Juglandaceae) near Loja, Ecuador. Adults differ from all known congeners by their greenish vestiture and by absence of setae on the anal extensions of male cuculli. This is the first report of *Gretchena* from continental South America and the Neotropics.

Additional key words: Olethreutinae, Eucosmini, *Juglans neotropica*, Ecuador.

I describe this new species now because of its economic importance. It was discovered injuring leader shoots of Neotropical walnut, *Juglans neotropica* Diels., in Ecuador. One- to four-year-old plantings have been attacked repeatedly in the Loja Province highlands. Injured trees develop multiple leaders which lessen their chances of producing commercial timber. Walnut is important in Ecuadorian forestry, yielding timber similar in properties and value to North American black walnut, *J. nigra* L. Several species of *Juglans*, locally known as nogal, occur naturally from S Mexico through Central America and the cordilleras of Columbia, Ecuador, and Peru to Argentina (Chudnoff 1984).

Gretchena, a genus of Eucosmini, currently comprises 11 Nearctic species, including the pecan bud moth, *G. bolliana* (Slingerland), and *G. concitatricana* (Heinrich), a black walnut shoot moth (Blanchard & Knudson 1983, Brown 1982, Naughton 1970, Powell 1983). Except for *G. watchungana* (Kearfott), whose larvae feed on *Alnus* (Betulaceae), the previously known larvae of *Gretchena*, numbering four species, feed on Juglandaceae (Miller 1987, Naughton 1970). *Gretchena* has not previously been reported from continental South America or the Neotropics (Powell & Razowski in press).

I deemed the Ecuadorian *Gretchena* to be new after comparing specimens with descriptions of all check-list species of generically unplaced Eucosmini (Powell & Razowski in press). In the description below, character states that place the species in *Gretchena* (Brown 1982) are italicized.

Gretchena garai, new species

(Figs. 1-3)

Male. Forewing 7.0-7.5 mm long (4n). **Head.** Length of second labial palpus segment $1\frac{1}{2}$ eye diameter, whitish except for brownish black near base, middle, and apex; third segment $\frac{1}{2}$ length of second. Face white, vertex yellowish. **Thorax.** Whitish, tegula white, brown, and green. Forewing termen concave, *costal fold extending from base to middle*



FIGS. 1-3. *Gretchena garai*. 1, Wings of holotype female; 2, Male genitalia (prep. WEM 2110862); 3, Female genitalia (prep. WEM 211086).

and enclosing a white hair pencil, upper side patterned as in Fig. 1, basal patch more distinct on inner margin than on costa, geminations on costa white, darkest appearing areas brownish black, the less dark green, underside brownish gray, fringe brownish black. Hindwing upper and undersides, including fringe, brownish gray. **Abdomen.** Brownish gray. **Genitalia** (Fig. 2) (4n): *Uncus absent; socii separate*, bent dorsally just beyond middle; aedeagus $\frac{3}{4}$ as long as valva, supported by long juxtal caulis, beaked at apex, vesica with 20-30 tightly packed cornuti $\frac{1}{2}$ as long as aedeagus; valval neck sparsely spined, cucullus drawn out at lower anal margin to a spinelike tip, this extension lacking setae even at tip.

Female. Forewing 6.0-6.5 mm long (3n). Exteriorly as described for male. **Genitalia** (Fig. 3) (3n): *Posterior margin of seventh sternum inflected, overlapping ostium bursae*, posterior corners not elaborated; eighth tergum lacking scales; middle $\frac{1}{3}$ of ductus bursae sclerotized, the sclerotization encircling ductus but appearing flat and twisted, ductus seminalis originating just anterior to sclerotization; corpus bursae largely spinulose, with two equal-sized finlike signa.

Types. Holotype: female, 28 June 86, 4 km S Loja, Ecuador, reared from *Juglans neotropica*, A. Samaniego, Col. (Fig. 1), genit. prep. WEM 2710861, in U.S. National Museum of Natural History (USNM). Paratypes: Four males, same data as holotype except genit. preps. WEM 2110862 (Fig. 2), 2710862, 2738610, 2710864, and two females, same data as holotype except genit. preps. WEM 211086 (Fig. 3), 2810861; in USNM and University of Minnesota, St. Paul.

Discussion. *Gretchena garai* is distinct from all known congeners because of the green scaling on thorax and forewings, and the absence of setae on the anal extensions of male cuculli. I examined three additional males with the same data as the types but excluded them from the type series because of poor condition. All specimens had some or many forewing scales missing; I could not tell whether they had forewing scale tufts, a generic trait. It seems likely that specimens with all scaling intact would appear greener. The species is named in honor of Robert I. Gara and his forest entomological work in Ecuador.

ACKNOWLEDGMENTS

I thank R. I. Gara of the U.S. Agency for International Development and the University of Washington, Seattle, for information and specimens; J. A. Powell, University of California, Berkeley, for a manuscript copy of the Neotropical check list of Tortricidae (Powell & Razowski in press); R. L. Brown, J. B. Heppner, and two unnamed referees for reviewing the manuscript; and R. K. Robbins for serving as *Journal* editor for this paper.

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Received for publication 17 March 1987; accepted 1 May 1987.