

129

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(Homoptera, Cicadellidae)

PART VII
SIX NEW SPECIES OF EMPOASCA FROM MEXICO

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PART VII¹

SIX NEW SPECIES OF EMPOASCA FROM MEXICO

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Empoasca serrula n. sp.

Resembling *hecta* in shape of lateral processes and in general coloration. Length 3.5 mm.

External characters.—Vertex blunt, roundedly produced, more than twice as wide between eyes as median length. Color green, marked with orange and with spots and dashes of white. Vertex dull orange-green with a median stripe; a pair of white oblique dashes just below apex and a pair of larger whitish spots on basal portion. Pronotum dull orange green with three paler areas on anterior margin. Apical half of scutellum predominately white. Elytra with veins appearing hyaline, areas between tinged with orange. Apical veins smoky. Female last ventral segment roundedly produced.

Internal male genitalia.—Lateral processes rather short, tapered to pointed apices. Aedeagus concavely notched on posterior margin one-third the distance from apex, forming a definite constriction just before an enlarged head-like apex which bears an anteriorly directed pointed spur at base of head structure. Spine of ninth segment broad at base strongly concavely excavated on anterior margin and to some extent on posterior margin, forming a narrow, anteriorly curved apical portion which is serrate on posterior margin.

Holotype male, *allotype* female and a series of male and female paratypes from Guanajuato, Mexico, 11-11-27 (Dampf) and Barranca, Mexico, 11-16-26 (Dampf) and deposited in the collection of the authors.

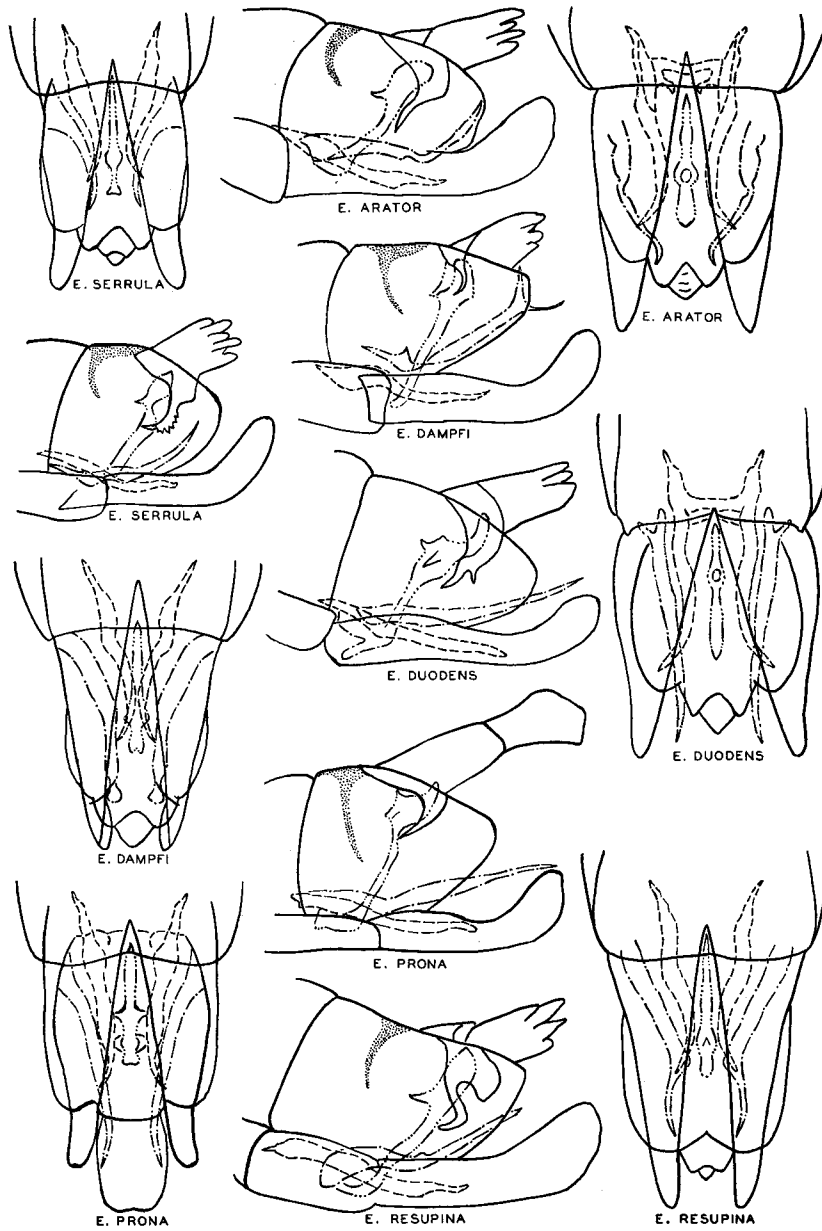
Empoasca dampfi n. sp.

A small species which in side view resembles *chelata* in shape of lateral processes. Length 3 mm.

External characters.—Vertex bluntly, roundedly produced, wider between eyes than median length. Pale in color, almost white, tinged, with green and yellow. Elytra whitish subhyaline. Female last ventral segment roundedly produced.

Internal male genitalia.—Lateral processes in ventral view appearing constricted just before rounded apices, a long narrow process curving outward arises at constricted portion. In lateral view the apical fourth is bent dorsally and tapered to a pointed apex and the long slender

¹Previous parts of this study have appeared as follows: Ohio Jour. Sc., 32: 393-401; 35: 29-39; 36: 225-230; 38: 90-96; 39: 110-118, and Ann. Ent. Soc. 27: 604-609.



Ventral and lateral views of male genitalia of species of *Empoasca*.

caudally directed process arises at the bend. Aedeagus with apical fourth enlarged, apex broadly rounded. Spine of ninth segment small, short, narrowed at about middle to form a narrow anteriorly curved apex.

Holotype male from Mexico City, 12-14-37 (Dampf), *allotype* female from San Cristobal, Mexico, 6-19-35 (Soto), and three female paratypes from Finca Vergel, Finca Aurora, and Cocula, Mexico. Types in the collection of the authors.

***Empoasca arator* n. sp.**

Resembling *fabalis* and *phaseola* in size and general appearance but with distinct internal male genitalia. Length 3.5 mm.

External characters.—Vertex produced about half its length before anterior margins of the eyes, blunt and rounded. Color yellowish to dull smoky with a median white line and an oblique white dash on each side of vertex. Three large white blotches on anterior margin of pronotum. Elytra subhyaline. Female last ventral segment roundedly produced.

Internal male genitalia.—Lateral processes directed caudally for about half their length then slightly narrowed and bent abruptly caudo-dorsally with pointed tips. Aedeagus with apical third enlarged with apex broadly curved and with an anteriorly projecting process at anterior margin of enlarged portion. Spine of ninth segment broad, directed ventrally abruptly narrowed at about two-thirds its length to form a narrowed portion on anterior-ventral margin.

Holotype male, *allotype* female, and male and female paratypes from Mexico City, Mexico (Dampf). A large series of paratypes from Rancho Monter, Orizaba, Cajeme, Finca Belem and Cacalotepec, Mexico, collected by Dr. Dampf and R. R. Soto. A small series of paratypes from Whittier, California, 4-25-40 (LaFollette) and 4-16-40 (Hiltabrand) collected from citrus. Types in the collection of the authors. Male and female paratypes in the U. S. National Museum.

***Empoasca prona* n. sp.**

Resembling *filamenta* somewhat in shape of lateral processes but with distinctly smaller and characteristic dorsal spine. Length 3.5 mm.

External characters.—Vertex blunt, scarcely produced, wider between eyes than median length. Color yellow to green with variable white blotches and markings. Vertex usually with longitudinal white markings and with three white blotches on anterior margin of pronotum. Elytra greenish, subhyaline. Female last ventral segment appearing almost truncate, scarcely produced.

Internal male genitalia.—Lateral process long, gradually tapered to form a long narrow apical portion. Aedeagus narrow, apical fourth greatly enlarged with a broad, roundedly produced portion on dorso-caudal margin. Spine of ninth segment short, very broad at base, deeply concavely excavated on anterior margin forming a sharp pointed anteriorly directed ventral apex.

Holotype male, *allotype* female and male and female paratypes from Finca Vergel, Chiapis, Mexico, 6-7-35 (Dampf). A large series of male and female paratypes taken from the following localities in Mexico: Tamazunchale, 11-15-38 (Caldwell); Iguala, Guerrero, 9-11-39 (DeLong); Coatepec, 8-14-34 (Dampf); Barranca, 2-16-26 (Dampf); Cuaulta, 9-25-37 (Soto); Rancho Monter, 12-14-37 (Dampf); Zoogochi, 6-22-35 (Reyer); and three specimens from Costa Rica, 5-8-10; and one from Campinas, Brazil. All types in collection of authors.

***Empoasca resupina* n. sp.**

Resembling *duodens* in general form and appearance, with lateral processes similar to *sativae* and a characteristic dorsal spine somewhat like *ratio*. Length 3 mm.

External characters.—Vertex bluntly roundedly produced, more than half as long at middle as basal width between eyes. Color dull green, tinged with yellow and orange. Apex of vertex orange; anterior portion of pronotum with white blotches; elytra subhyaline. Female last ventral segment roundedly produced.

Internal male genitalia.—Lateral processes in ventral view abruptly narrowed at two thirds their length and broadly concavely curved to narrow pointed tips. Aedeagus broadened anteriorly on apical third with an anteriorly pointed spine at base of enlargement and with broad blunt apex. Spine of ninth segment broad with a deep rounded notch on ventral side forming a caudal rounded lobe and a narrow anterior ventrally directed portion which is bent anteriorly at apex and forms a pointed tip.

Holotype male (6-9-35), *allotype* female (5-16-35) and two paratype females from Finca Vergel, Chiapas, Mexico, collected by A. Dampf. Types deposited in collection of the authors.

***Empoasca duodens* n. sp.**

Resembling *resupina* in general form and appearance, with lateral processes as in *prona* and a dorsal spine similar to that of *bicuspidata*. Length 3.5 mm.

External characters.—Vertex bluntly produced, a little wider between eyes than median length. Color dull green tinted with orange. Elytra subhyaline.

Internal male genitalia.—Lateral processes long, straight, tapered to pointed apices. Aedeagus enlarged just beyond middle, with short heavy spines on lateral anterior margins; apical fourth concavely narrowed on anterior margin forming a thick curved, dorsally directed finger process with a rounded apex. Dorsal spine rather broad, curved anteriorly and with a pair of ventral pointed teeth, the anterior one longer and broader.

Holotype male from Huatuco, Mexico, (July, 1932) collected by A. Dampf and deposited in the collection of the authors.