

The Canadian Species of *Epiptera* (Homoptera: Achilidae)¹

By BRYAN P. BEIRNE²

Ottawa, Ontario

Fulgorids of the genus *Epiptera* Metcalf are well represented in the Canadian fauna, probably because they are associated with conifers. Metcalf (1938. *Gen. Cat. Hemip. IV*, Part 10) listed 12 North American species, of which seven had been recorded from Canada. Ten species are represented by specimens from Canada in the Canadian National Collection. Two of these are previously undescribed. As there has been much confusion among certain species of this genus, due partly to misinterpretations of some of the original descriptions, it is probable that previous Canadian records for some species were based on mis-identifications. The species show external characters that are usually of good specific value; although there is some variation. The colour and type of markings of the face and the shape of the vertex are of particular value. The male genitalia exhibit good specific characters in the form and structure of the aedocagus (Figs. 8-12).

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Key to Canadian Species of *Epiptera*

1. Upper half of frons dark brown or black, strongly contrasting with the white or pale-yellow lower half (Figs. 1-3) 2
- Frons brownish or yellowish, the upper half not sharply darker than the lower 7
2. Dorsal surface deep blackish-brown, almost uniform *opaca* (Say) ✓
- Dorsal surface brownish, usually variegated with greyish or ochraceous 3
3. Clypeus black or dark blackish-brown (Fig. 1) 4
- Clypeus brown or yellowish-brown (Figs. 2, 3) 6
4. Larger species, over 9 mm. in length; western only 5
- Smaller species, 8-9 mm. in length; eastern *brittoni* Metc. ✓
5. Vertex one and a half times as wide as long (Fig. 15) *fusiformis* (Van D.) ✓
- Vertex about as long as wide (Fig. 16) *henshawi* (Van D.) ✓
6. A narrow species in proportion to its length; length 7-8 mm., width 3 mm.; clypeus concolorous with lower half of frons (Fig. 2) *slossoni* (Van D.) ✓
- Broader species; length 7-8.5 mm., width 4 mm.; clypeus obviously darker than lower half of frons (Fig. 3) *confusa* n. sp. ✓
7. Clypeus distinctly darker than frons (Fig. 4) 8
- Clypeus not darker than frons (Figs. 5-7) 9
8. Vertex one and a half times as long as its basal width (Fig. 13); elytra almost uniform brown *floridæ* (Walk.) ✓
- Vertex barely as long as its basal width (Fig. 14); elytra variegated with greyish white *pallida* (Say) ✓
9. Front brown, irrorated paler throughout (Fig. 5); vertex obviously wider than long (Fig. 17) *variegata* (Van D.) ✓
- Front irrorated paler only at sides (Fig. 6) or not at all (Fig. 7); vertex as long as or longer than its basal width 10
10. Frons darker than clypeus, irrorated paler at sides (Fig. 6) *manitobiana* n. sp. ✓
- Frons and clypeus unicolorous brownish (Fig. 7) *septentrionalis* (Prov.) ✓

¹Contribution No. 2716, Division of Entomology, Science Service, Department of Agriculture, Ottawa, Canada.

²Systematic Entomology, Division of Entomology.

Brittoni Metcalf (E.S.T.)

Colonia (UD 1948)

Slossone (D.H.) WY

Woodworth (UD)

CA, YK

Slossone

fusca (unlabeled)

Epiptera opaca (Say)

Flata opaca Say. 1830. J. Acad. Nat. Sci. Philadelphia 6: 239.

Helicoptera vestita Provancher. 1889. Pet. Faune Ent. Canada 3: 221.

Helicoptera pinorum Mance. 1910. Ent. News 21: 117.

This species is easily recognized by its almost uniform dark-brown colour. The only pale markings are a yellowish spot at the end of the claval area and one at each end of the stigma. Viewed microscopically, however, the elytra are seen to be minutely irrorated yellowish. Quebec: Norway Bay (G. E. Shewell); Ontario: Hastings Co. (Evans). It has been recorded previously from Ontario and British Columbia.

Epiptera fusiformis (Van Duzee)

Elidiptera fusiformis Van Duzee. 1910. Trans. Am. Ent. Soc. 36: 82.

This, like *henshawii*, is a large insect, averaging over 10 mm. in length. The two species are easily distinguished by the shape of the vertex (Figs. 15, 16). British Columbia: Agassiz (R. Glendenning), Departure Bay (G. E. Taylor), Cowichan Lake (J. M. Swaine), Seton Lake (J. McDunnough), Alberni.

Epiptera henshawii (Van Duzee)

Elidiptera henshawii Van Duzee. 1910. Trans. Am. Ent. Soc. 36: 83.

British Columbia: Brookmere (R. D. Bird), Midday Valley, Merritt (K. F. Auden, N. L. Cutler, and Mathers), Victoria (K. F. Auden). It has been recorded previously from British Columbia.

Epiptera manitobiana n. sp.

Vertex elongate, tapering, the lateral margins slightly arched, the anterior margin rounded; frons strongly carinate, the lateral margins elevated; clypeus carinate; pronotum obtusely produced between the eyes; mesonotal carinae present but weak. Length 9-10 mm.

Ground colour rich dark brown; vertex, pronotum, and mesonotum closely irrorated ochraceous, the vertex and the median area of the mesonotum sometimes largely ochraceous; frons (Fig. 6) rich dark brown, the lower half irrorated paler at the sides; clypeus brown; the gene, the narrow ventral margin of the breast plate, and the pro-pleuron and meso-pleuron ochraceous, breast plate otherwise dark brown, almost black; abdomen brown; legs light brown; elytra dark brown, closely and irregularly marked with greyish ochreous.

Aedocagus (Fig. 8) with the lateral plates rounded, the median processes each broad at base, evenly tapering, and almost straight; the median ventral process long.

Holotype ♂.—Aweme, Manitoba, October 25, 1924 (N. Criddle). No. 5906 in the Canadian National Collection, Ottawa.

Allotype ♀.—Aweme, Manitoba, July 16, 1925 (N. Criddle).

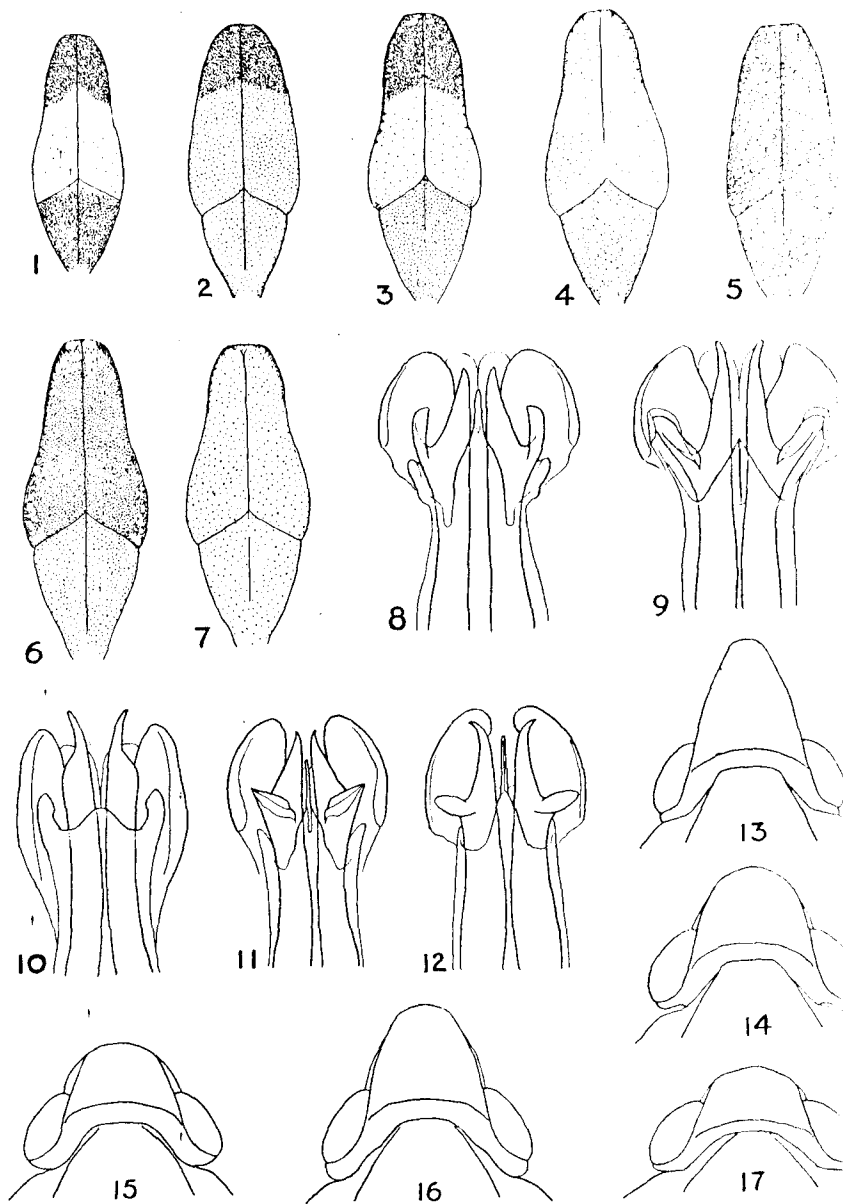
Paratypes.—1 ♂: Aweme, Manitoba, July 9, 1927 (N. Criddle); 3 ♀: Aweme, Manitoba, September 19, 1923 (N. Criddle), Aweme, Manitoba, July 31, 1925 (R. M. White), and Treesbank, Manitoba, August 3, 1928 (R. H. Handford).

This is a distinctive species in its large size, strong markings, and general deep greyish-brown colour. It is perhaps most closely related to *pallida* and *confusa*.

Epiptera slossoni (Van Duzee)

Helicoptera slossoni Van Duzee. 1908. Proc. Acad. Nat. Sci. Philadelphia 1907: 476.

This species is easily recognized by its narrow form, as well as by the coloration of the face (Fig. 2). Quebec: Mt. Lyall, at 1500 feet (W. J. Brown). This species has been recorded previously from localities across Canada, from the Maritimes to British Columbia (A. W. A. Brown. 1941. *Canada Depr. Agr. Tech. Bull.* 31: 16), but it seems possible that some or all of these records may refer



Figs. 1-17. *Epiptera* spp. 1-7, colour and markings of front of head of: 1, *E. brit.* Metc.; 2, *E. slossoni* (Van D.); 3, *E. confusa* n. sp.; 4, *E. pallida* (Say); 5, *E. variegata* (A. D.); 6, *E. manitobiana* n. sp.; 7, *E. septentrionalis* (Prov.). 8-12, apex of aedocagus, ventral view, of: 8, *E. manitobiana*; 9, *E. confusa*; 10, *E. variegata*; 11, *E. pallida*; 12, *E. septentrionalis*. 13-17, vertex, showing shape, of: 13, *E. floridiae* (Walk.); 14, *E. pallida*; 15, *E. fusiformis* (A. D.); 16, *E. henshawii* (Van D.); 17, *E. variegata*.

to other species. Elsewhere, it has been recorded only from localities in New Hampshire and New York.

Epiptera variegata (Van Duzee)

Helicoptera variegata Van Duzee. 1908. Proc. Acad. Nat. Sci. Philadelphia 1907: 479.

This species is easily recognized by its very short vertex (Fig. 17) and irrorated face (Fig. 5). Superficially, it resembles *septentrionalis* or *pallida* but tends to be more strongly marked than those species. Quebec: Maniwaki and Ft. Coulonge (Forest Insect Survey); Ontario: Achroy and Dahlia (Forest Insect Survey), S. March (T. N. Freeman), Mer Bleue (W. J. Brown, L. J. Milne, and J. A. Adams).

Epiptera brittoni Metcalf

Epiptera brittoni Metcalf. 1923. J. Elisha Mitchell Soc. 38: 175.

In this species the clypeus is black, instead of brown as in *confusa* (see remarks under that species). I have not seen Canadian specimens of *brittoni*. It has been recorded from New Brunswick, Quebec, Ontario, Manitoba, Saskatchewan, and British Columbia by A. W. A. Brown (1941. loc. cit.). It seems possible that some or all of these records may refer to *confusa*.

Epiptera confusa n. sp.

Helicoptera pallida Van Duzee (nec Say). 1908. Proc. Acad. Nat. Sci. Philadelphia. 1907: 476-9.

Epiptera pallida Metcalf (nec Say). 1923. J. Elisha Mitchell Soc. 38: 159.

Epiptera pallida Van Duzee (nec Say). 1923. Connecticut Geol. Nat. Hist. Surv. Bull. 34: 129.

Epiptera pallida Dozier (nec Say). 1923. Mississippi Agr. Expt. Sta. Tech. Bull. 14: 43.

Vertex elongate, narrow, the lateral margins slightly arched and the anterior margin rounded; frons with the median carina strong and the lateral margins elevated; clypeus not or very weakly carinate; pronotum obtusely produced between the eyes; mesonotal carinae distinct. Length 7.8-9.0 mm.

Ground colour brown; vertex irregularly marked ochraceous, usually mainly ochraceous; pronotum and mesonotum closely irrorated ochraceous or ochraceous tawny; frons (Fig. 3) dark brown on upper half, pale yellow on lower half; clypeus tawny brown to brown; the pale-yellow band of the face continued across each gena, the ventral margin of the breast plate, and the pro-pleuron and meso-pleuron; breast plates otherwise black or blackish-brown; abdomen dark brown, the segments narrowly bordered paler; legs brown; clytron brown; irregularly marked and mottled greyish ochraceous, often becoming dark brown at apex of claval region and at apex of costa, with traces of an irregular, dark-brown, transverse band at $\frac{1}{2}$, and with two or three dark-brown spots near apex.

Aedocagus (Fig. 9) with the lateral plates bluntly pointed at their apices, the median processes long, relatively slender, and the median ventral process short, rapidly and evenly tapering.

Holotype ♂.—Cascapedia, Quebec, June 12, 1938 (W. J. Brown). No. 5905 in the Canadian National Collection, Ottawa.

Allotype ♀.—Covey Hill, Quebec, June 20, 1927 (G. S. Walley).

Paratypes.—4 ♂: Barraute, Quebec, July 4, 1938 (J. M. Caron), Cascapedia, Quebec, June 12, 1933 (W. J. Brown), Dauphin, Quebec (J. R. Dickson), and Blueberry Creek, British Columbia, June 23, 1939 (T. G. Laughton); 2 ♀: Fredericton, New Brunswick, June 19, 1929 (L. J. Simpson), and Covey Hill, Quebec, June 30, 1927 (G. S. Walley).

This species has often been confused with *pallida* (Say), but is easily distinguished from that species by the coloration of the face (Figs. 3, 4), as well as by the male genitalia (Figs. 9, 11). It differs from *brittoni* in the brown clypeus, generally lighter coloration, broader frons, and more sharply pointed vertex, and in the absence of a distinct clypeal carina.

Epiptera pallida (Say)

Flata pallida Say. 1830. J. Acad. Nat. Sci. Philadelphia 6: 240.

This species is likely to be confused with *septentrionalis*, which it closely resembles (see remarks under that species). Quebec: Cascapedia River (C. Smith); Labrador: Goose Bay (W. E. Beckel); Saskatchewan: Cypress Hill (A. R. Brooks), Waskesiu (Forest Insect Survey); Yukon: South Rampart House (D. H. Nelles).

Epiptera septentrionalis (Prov.)

Helicoptera septentrionalis Provancher. 1889. Pet. Faune Ent. Canada 3: 22.

This species resembles *pallida* in form and colour, but is on the average slightly larger. The two species are easily separated by the colour of the face (Figs. 4, 7), as well as by the male genitalia (Figs. 11, 12). Labrador: Muel Falls, Hamilton River (S. E. Arthur); New Brunswick: Harcourt (M.B.D. Miscou Harbour (C. H. Young); Quebec: Gaspé Co. (R. Gobeil), Mt. Lyall, 1500 feet, Mt. Albert at 3000-3200 feet, and Cascapedia (W. J. Brown), Aylmer (J. N. Knull), Brule River Camp, Riordan Limits; Ontario: Sudbury; British Columbia: Lindup (E. W. Thomas).

Epiptera floridæ (Walker)

Monobpsis floridæ Walker. 1851. List Homop. Insects 2: 326.

The long, pointed vertex and the almost unmarked brown elytra distinguish this species. The female described by Van Duzee (1910. *Trans. Am. Ent. Soc.* 36: 83) evidently is not of this species. The female is similar to the male in form and colour, differing only in size; the male is 7 mm. in length; the female, 9-10 mm. Ontario: Constance Bay (W. J. Brown).