

THE CONOPIDAE (DIPTERA) OF BRITISH COLUMBIA

KENNETH G. V. SMITH

Hope Dept. of Entomology, University Museum, Oxford, England

Through the kindness of Dr. G. G. E. Scudder I have recently been able to study a collection of Conopidae, taken in British Columbia by Professor G. J. Spencer, of the University of British Columbia. Since the collection (104 specimens) was a comparatively large one for this rather rare family it seems worth while to review all the species hitherto recorded from British Columbia. The classification followed is that of Parsons (1948) with additional synonymy from various papers by Camras and others. Keys for the determination of North American Conopidae will be found in the references. A list is given of collectors names and initials.

CONOPINAE

Physoconops obscuripennis (Williston)

Conops obscuripennis Will., 1822, Trans. Conn. Acad. Arts & Sci., 4:328-9.

Conops brachyrhynchus Macquart of Williston and others in error.

Conops foxi Van Duzee, 1927, Proc. Calif. Acad. Sci., 16:574.

Camras (1955:181) includes British Columbia in the range of this species. Western specimens have the posterior margin of the wing hyaline which led Van Duzee (1927) to describe them as a distinct species, *foxi*. New data: Kamloops, 13.vi.1943, G.J.S.

Physocephala burgessi (Williston)

Conops burgessi Williston, 1882, Trans. Conn. Acad. Arts & Sci., 4:337.

Physocephala brevirostris Van Duzee, 1927, Proc. Calif. Acad. Sci., 16:579.

Camras (1957:213) includes B.C. in the range of this species, but gives no details. New data: Cobble Hill, 16.iv.1912, Hooke Coll.; Goldstream 15.vii.1923, K.F.A.; Newcastle Is., Nanaimo, 10.vi.1925, G.J.S.; Quesnel, 16.vii.1947, 20.vii.1947, 31.vii.1948, 14.vi.1949, G. J. S.; Salmon Arm, 20.vi.1929, H.B.L.; Salvus, 17.viii.1946, G.J.S.

Physocephala texana (Williston)

Conops texanus Williston, 1882, Trans. Conn. Acad. Arts & Sci., 4:338.

Conops affinis Williston, Trans. Conn. Acad. Arts & Sci., 4:339.

Conops ochroiceps Bigot, 1887, Ann. Soc. Ent. France, 7:39.

Physocephala humeralis Van Duzee, 1927, Proc. Calif. Acad. Sci., 16:580.

Physocephala humeralis simulans Van Duzee, 1927, Proc. Calif. Acad. Sci., 16:581.

Physocephala aurifacies Van Duzee, 1927, Proc. Calif. Acad. Sci., 16:581.

Physocephala buccalis Van Duzee, 1927, Proc. Calif. Acad. Sci., 16:582.

Physocephala rubida Van Duzee, 1934, Ann. Ent. Soc. Amer., 27:315.

Camras (1957:213) includes B.C. in the range of this species, but gives no details. The high variability of *P. texana* has resulted in a number of synonyms. The species has been bred from nests of the Bembicid wasps *Bembix comata* Parker and *B. occidentalis beutenmuelleri* Fox (*vide* Bohart and MacSwain, 1939, Bull. So. Calif. Acad. Sci., 38: 84 and 1940, Pan Pacific Ent., 16:16). New data: Kamloops, 16.vii.1934, 25.vii.1937, 13.vi.1943, G.J.S.; Penticton, 16.viii.1920, W.D.; Quesnel, 13.vii.1948, G.J.S.; Summerland, 26.vii.1920 (no captor given); Walhachin, 1.vi.1917, E.R.B.

Physocephala marginata (Say)

Conops marginata Say, 1823, Jour. Acad. Nat. Sci. Philad., 3:82.

Physocephala dakotensis Van Duzee, 1934, Ann. Ent. Soc. Amer., 27:317.

Physocephala stylifer Van Duzee, 1934, Ann. Ent. Soc. Amer., 27:318.

Parsons (1948:232) records a specimen in the American Museum of Natural History from Nicola Valley, B.C.

DALMANNIINAE

Dalmannia picta Williston

Dalmannia picta Williston, 1883, Trans. Conn. Acad. Arts & Sci., 6:94.

This is the first member of this sub-family recorded from Canada. One male, Kamloops, 24.v.1935, G.J.S.

MYOPINAE

Myopa vesiculosa Say

Myopa vesiculosa Say, 1823, Journ. Acad. Nat. Sci., Philad., 3:80.

Myopa apicalis Walker, 1849, List of Dipt. Ins. in B.M., 3:679.

Myopa bistria Walker, 1849, *loc. cit.*: 679-80.

Myopa conjuncta Thomson, 1868, *Eugenies Resa*, Diptera: 515-6.

Glossigona maculifrons Bigot, 1887, *Ann. Soc. Ent. France*, 7:206-7.

Myopa utahensis Stains and Knowlton, 1940, *Proc. Utah Acad. Sci. Arts Letters*, 16:51.

Not previously recorded from B.C., but known from Quebec. New data: Chilcotin, 28.v.1929, G.J.S.; Salmon Arm, 4.v.1930, H.B.L.

Myopa longipilis Banks

Myopa longipilis Banks, 1916, *Ann. Ent. Soc. Amer.*, 9:197.

Previously only known from California, Idaho, Oregon, Utah and Washington. New data: Cobble Hill, 15.iv.1912, Hooke Coll.

Myopa rubida (Bigot)

Glossigona rubida Bigot, 1887, *Ann. Soc. Ent. France*, 7:206.

Myopa tectura Adams, 1903, *Kans. Univ. Sci. Bull.*, 2:35.

Myopa clausa var. *aperta* Roder, 1889, *Wein. Ent. Zeit.*, 8:5.

Myopa seminuda Banks, 1916, *Ann. Ent. Soc. Amer.*, 9:198.

Not previously recorded from Canada. Camras (1953:101) states that it is commonest in Washington, which adjoins B.C.; it appears to be fairly common in B.C. as the present collection contains nine specimens with data as follows: Salmon Arm, 3.v.1920, 17.v.1932, 27.v.1932, H.B.L. (on shepherd's purse); Vancouver, 4.v.1931, H.B.L.; Vernon, 1.v.1920, M.H.R.; Victoria, 28.vi.1919, 29.vi.1919, W.D.

Myopa clausa Loew

Myopa clausa Loew, 1866, *Centuriae VII*, no. 72:101.

Camras (1943:101-2) gives the range of this species as 'Southern Canada and United States (Maine to Georgia, West to Washington and California.)'. He does not specify a Canadian province, neither does Parsons (1948:238). New data: Chilcotin, 13.vi.1921, E.R.B.; Kamloops, 12.vi.1946, G.J.S.; Quesnel, 24.v.1949, 28.v.1949, 30.v.1949, H.R.M.; 26.vi.1949, G.J.S.; Yale (pair *in copula*), 24.v.1948, G. J. S.; Cariboo Distr., Sorenson Lake, 25.v.1959, G.G.E.S.

Myopa vicaria Walker

Myopa vicaria Walker, 1849, *List of Dipt. Ins. in B.M.*, 3:679.

Myopa pilosa Williston, 1885, *Trans. Conn. Acad. Arts & Sci.*, 6:383-4.

Not hitherto known from B.C., but recorded from Ontario and Quebec in Canada and the type in the British Museum is from Nova Scotia. I have also seen a specimen from Saskatoon, Sask., 23.iv.1943, P. Larkin. New data: Marpole, 1.iv.1950, coll. Farr. Peace River, 1949, D.G.H. Vancouver, 1.iv.1949, G.B.R.; 1.iv.1950 (Univ. campus), H.J.; 2.iv.1950, coll. Richard. 20.iii.1950, E.F.; 9.iv.1950, H.A.M.; 4.iv.1950, H.W.M.; 1.iv.1950, H.R.M.; 29.iii.?, M.O.

Zodion fulvifrons Say

Zodion fulvifrons Say, 1823, *Journ. Acad. Nat. Sci. Philad.*, 3:83.

Zodion abdominalis Say, 1823, *loc. cit.* 3:84.

Myopa rubrifrons Desvoidy, 1830, *Mem. Sav. etr. Acad. Sci. Paris*, 2:247.

Zodion flavipenne Bigot, 1887, *Ann. Soc. Ent. France*, (6) 7:204.

Zodion lativentre Graenicher, 1910, *Canad. Ent.*, 42:26.

Zodion sayi Banks, 1916, *Ann. Ent. Soc. Amer.*, 9:194.

Zodion obscurum Banks, 1916, *Ann. Ent. Soc. Amer.*, 9:194.

? *Zodion bilineata* Van Duzee, 1927, *Proc. Calif. Acad. Sci.*, 16:586.

Camras (1944:122) includes Southern Canada in the range of this species and Parsons (1948:240) mentions specimens seen from Nova Scotia and Ontario. Severin (1937, *Ent. News*, 48:243) has found this species as a parasite of worker honey bees in Dakota. New data: Chilcotin, 23.vi.1929, 20.vii.1930, G.J.S. Jesmond, 27.vi.1943, 20.vi.1943, G.J.S.

Zodion intermedium Banks

Zodion intermedium Banks, 1916, *Ann. Ent. Soc. Amer.* 9:193.

Zodion occidentale Banks, *loc. cit.*: 194.

Zodion reclusum Banks, *loc. cit.*: 194.

Zodion basalis Van Duzee, 1927, *Proc. Calif. Acad. Sci.*, 16:586.

Previously known from Quebec and Ontario in Canada, and U.S.A. New data: Quesnel, 10.vi.1947, 19.vi.1949, G.J.S.; 10.v.1948, H.R.M.

Zodion ?perlongum Coquillet

Zodion perlongum Coquillet, 1902, *Can. Ent.*, 34:199.

Males of this species are usually indistinguishable from *Z. fulvifrons*, but one male in the present collection

has a very rufous abdomen and as Camras remarks in his key (1944:120) 'Some of the larger and more rufous individuals are probably males of *perlongum*.' A definite record for Canada if not for B.C. is a female in the Hope Dept., Oxford, from Ottawa, Ontario, 21.vii.1897, Mary Holmes. The data on the B.C. male which I can only place doubtfully as *Z. perlongum* are Kamloops, 18-22.vi.1954, G.J.S.

***Occemyia propinqua* (Adams)**

Occemyia propinqua Adams, 1903, Kans. Univ. Sci. Bull., 2:32.

Occemyia augusticornis Van Duzee, 1927, Proc. Calif. Acad. Sci., 16:595.

Occemyia longipalpis Van Duzee, 1934, Ann. Ent. Soc. Amer., 27:321.

Camras (1945:218) gives Southern Canada and United States as the range of this species, but neither he nor Parsons (1948:244) give locality details. New data: Kamloops, 25.vii.1937, 23.vii.1939, 22.vii.1945, 22.viii.1958, G.J.S.; Quesnel, 19.vi. to 2.vii.1949, G.J.S.; Royal Oak, 8.ix.1925, G. J. S.; Soda Creek, 27.vii.1949, G.J.S.

***Occemyia nigripes* Camras**

Occemyia nigripes Camras, 1945, Ann. Ent. Soc. Amer., 38:218-9.

Described from Ontario with paratypes from Quebec, Ontario, Manitoba, all parts of the United States and Guatemala. New data: Australian, 15.viii.1948, G.J.S.

***Occemyia loraria* Loew**

Occemyia loraria Loew, 1866, Centuriae VII, No. 74, pp. 101-2.

Occemyia baroni Williston, 1883, Trans. Conn. Acad. Arts & Sci., 6:97-8.

Occomyia brevisrostris Van Duzee, 1927, Proc. Calif. Acad. Sci., 16:593.

Occomyia aequalis Van Duzee, *loc. cit.*, 16:594.

Occomyia terminalis Van Duzee, *loc. cit.*, 16:594.

Zodion bimaculata Curran, 1933, Amer. Mus. Novitates, 673:7.

Occemyia frontalis Van Duzee, 1934, Ann. Ent. Soc. Amer., 27:322.

Previously recorded from Ontario and the range also includes the United States. New data: Quesnel, 31.vii.1947, 10.vi.1948, 19 to 26.viii.1949, G. J. S.

***Occemyia modesta* Williston**

Occemyia modesta Williston, 1883, Trans. Conn. Acad. Arts & Sci., 6:96.

Camras (1945:220) gives the range of this species as southwestern Canada and western United States, east to Saskatchewan, Colorado and New Mexico. New data: Agassiz, 11.ix.1925, G.J.S.; Chilcotin, 23.vi.1929, G.J.S.; Middy creek, 11.viii.1920, N.I.C.; Royal Oak, 8.ix.1925, G.J.S.; Victoria, 8.ix.1925, G.J.S.

***Occemyia luteipes* Camras**

Occemyia luteipes Camras, 1945, Ann. Ent. Soc. Amer., 38:220-1.

Described from Washington with paratypes from California, Washington, Idaho, Utah and Colorado. New data: One female from Agassiz, 11.ix.1925, G.J.S.

There are four male *Occemyia* which I am unable to determine to species. Intermediates in size and coloration occur in the genus and without the females such examples are impossible to determine with certainty.

LIST OF COLLECTORS

E.F.—E. Fridell	H.J.—H. Johnson
E.R.B.—	H.R.M.—
E. R. Buckell	H. R. MacCarthy
G.B.R.—G. B. Rich	K.F.A.—K. F. Auden
G.G.E.S.—	M.H.R.—
G. G. E. Scudder	M. H. Ruhmann
G.J.S.—G. J. Spencer	M.O.—M. Oswell
H.A.M.—H. A. Magel	N.I.C.—N. I. Cutler
H.B.L.—H. B. Leech	W.D.—W. Downes
	D.G.H.—not known

References

- Bohart, G. E., 1938, Synopsis of the genus *Dalmannia* in North America (Diptera, Conopidae), Pan Pacific Ent., 14 (3): 132-136.
- Camras, S., 1944, Notes on the North American species of the *Zodion fulvifrons* group (Diptera, Conopidae), Pan Pacific Ent., 20 (4): 121-128.
- Camras, S., 1945, A study of the genus *Occemyia* in North America (Diptera, Conopidae), Ann. Ent. Soc. America, 38: 216-222.
- Camras, S., 1953, A review of the genus *Myopa* in North America (Diptera, Conopidae), Wasm. Journ. Biol., 11: 97-114.
- Camras, S., 1955, A review of the new world flies of the genus *Conops* and allies (Diptera, Conopidae), Proc. U.S. Nat. Mus., 105: 155-187.
- Camras, S., 1957, A review of the new world *Physocephala* (Diptera, Conopidae), Ann. Ent. Soc. America, 50: 213-218.