

**CHIONEA MACNABEANA ALEXANDER, A MICROPTEROUS CRANE FLY
(DIPTERA: TIPULIDAE) NEW TO CANADA**

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Abstract

The flightless crane fly, *Chionea macnabeana* Alexander, is reported from Canada for the first time: several specimens were collected in Engelmann spruce-subalpine fir forest in the North Cascade Mountains of Manning Park, British Columbia.

Introduction

The genus *Chionea* is a fascinating group of flightless crane flies best known for their winter appearances, when they stride over the snow at dusk when the temperature hovers around 0°C. The North American species were recently treated by Byers (1983) in an excellent and thorough revision. Byers (1983) records five species in Canada: *C. albertensis* Alexander, *C. obtusa* Byers and *C. alexandriana* Garrett from the west and *C. scita* Walker and *C. valga* Harris in the east. In his monograph, Byers suggests that two additional species, *C. macnabeana* Alexander and *C. nivicola* Doane, may range into southern British Columbia.

On 6 March 1983, while on a skiing trip up Fat Dog Creek, Manning Park, B.C., I collected a single male specimen of a *Chionea* species unfamiliar to me. Although it superficially resembled *C. alexandriana* in the shape of the ninth tergum, it was yellowish in colour rather than brown like *C. alexandriana*, and its antennae had ten rather than three or four flagellomeres. Its legs were covered in stout, black setae. It occurred to me that this might be the undescribed male of *C. macnabeana*, so I sent it to Dr. Byers for confirmation. He assured me that it was *C. macnabeana*, but he had just described the male from a specimen collected in Oregon (Byers 1983). On 31 December 1983 and 1 January 1984, eleven additional specimens were collected from the same area.

Material Examined

BRITISH COLUMBIA: Manning Provincial Park, Fat Dog Creek, 40°08'N 120°49'W, 1400-1450 m, 6.iii.1983, 1 male, S. G. Cannings (Canadian National Collection, Ottawa); *ibid.*, 1400-1500 m, 31.xii.1983, 1 male, 1 female, H. and A. Brock (Snow Entomological Museum, U. of Kansas, Lawrence); *ibid.*, 2 males, 1 female, R. J. Cannings (Spencer Entomological Museum, UBC); *ibid.*, 3 males, 2 females, S.G. Cannings (UBC); Manning Provincial Park, Big Ben Trail [headwaters of Similkameen R.], 1.i.1984, S. G. Cannings (UBC).

Discussion

C. macnabeana is an apparently rare species of the coastal mountains of the Pacific Northwest. Only three specimens had been collected previously; these were found near Tillamook, Oregon, in the Sentinel Hills, Oregon, and on the Olympic Peninsula of Washington State, all on the other slopes of the northern Coast Ranges. Two were found at low elevations in coastal forest and one was in subalpine forest at 5200-5500'.

The Manning Park individuals were crawling across snow in a subalpine forest of Engelmann spruce (*Picea engelmanni*) and subalpine fir (*Abies lasiocarpa*) at 1400-1500 m. The first one found was on a shady, steep, north-facing slope; the sky was clear with a temperature of 2°C. Most of the others were captured on the same slope on an overcast day when the temperature was about -1°C, but one was low on an east-facing slope. The common *Chionea* of the immediate area is *C. alexandriana*; *C. albertensis* is also present, but in much lower numbers.

This area is on the crest of the North Cascade Mountains, so the habitat is somewhat of a hybrid between coast and interior subalpine forests. It is colder and drier than coastal subalpine areas, but is still strongly affected by moist Pacific air masses and receives about 3-4 m of snow annually.

As is typical for the genus, the individuals seem to vary greatly in size, although the small sample size limits the ranges seen: males range from 6.0 to 8.5 mm long with hind femora from 3.8 to 5.8 mm, whereas females are from 7.6 to 8.7 mm long with hind femora from 3.6 to 4.0 mm.

Entomologists in the southern interior of British Columbia should watch for *C. nivicola*, a species which resembles somewhat the brown, slender-legged *C. albertensis* but differs from that species by its shorter antennae of only eight or nine segments (six or seven flagellomeres). In Washington and Oregon, *C. nivicola* inhabits open forests from about 740 to 1850 m elevation (Byers 1983).

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Reference

Byers, G. W. 1983. The crane fly genus *Chionea* in North America. *Univ. Kansas Sci. Bull.* 52(6): 59-195.