

Occurrence of the milliped *Ergodesmus compactus* Chamberlin in Canada (Polydesmida: Nearctodesmidae)

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Abstract. Recent collecting in southcentral British Columbia, near the International Border, has confirmed the Canadian occurrence of the milliped *Ergodesmus compactus* Chamberlin, which was predicted by field work in the adjacent part of the United States. With *Nearctodesmus insulanus* (Chamberlin) occupying the Shuswap Highlands and the Pacific Coastal region, the Nearctodesmidae is known from three separate regions of Canada, all in British Columbia. Other millipeds in the northwestern United States that may be reasonably anticipated in western Canada are discussed.

The nearctodesmid polydesmoid milliped, *Ergodesmus compactus* Chamberlin, occurs close to the International Border in northern Washington and Idaho (Shelley 1994a) and has been considered a likely inhabitant of western Canada (Kevan 1983) and as probable for the adjoining part of southcentral British Columbia (Shelley 1994a). The second author collected *E. compactus* ca. 4.5 km (2.8 mi) from the border in Pend Oreille County, Washington, in 1993, and ca. 6.4 km (4 mi) south of the line in Boundary County, Idaho, in 1991, and therefore projected it for the area between Trail and Creston, British Columbia. This prediction has now been fulfilled, as the first author has collected *E. compactus* near Creston and Yahk, a discovery adding one genus and one species to the faunas of both British Columbia and Canada. The sites are about 25 km (15.6 mi) apart and doubtlessly represent a northward extension of the population in northern Idaho. Specimens were discovered along the edge of a paved road beside cottonwood leaves and in second growth forest under a rotting board and the bark of a wet, decaying alder log. Collection data are as follows; the samples are housed at the Royal British Columbia Museum, Victoria.

BRITISH COLUMBIA: ca. 8 km (5 mi) S Creston, along Rykert Cr. off highway 21, ca. 1 km (0.6 mi) N US border, M, F, 25 June 1993, C. L. Whitney;

and Yahk Provincial Park, M, 21 May 1994, C. L. Whitney.

Ergodesmus compactus thus becomes the second nearctodesmid recorded from Canada, the other being *Nearctodesmus insulanus* (Chamberlin), which is common on Vancouver Island and, on the mainland, along the Pacific Coast west of the crest of the Cascades and the Coast Range as far north as Prince Rupert (Shelley 1990, 1994a). It has not been taken in Alaska but occurs on South and East Burnaby Islands, in the Queen Charlotte archipelago, and eight other islands and island groups in British Columbia. An allopatric population also occurs some 384 km (240 mi) to the east in the Shuswap Highlands near Salmon Arm and Sicamous. This population is about 272 km (170 mi) north of the area of *E. compactus*, which in turn is some 392 km (245 mi) east of the Pacific Coastal region. The family Nearctodesmidae therefore occurs in three separate areas of British Columbia and Canada (Fig. 1).

Kevan (1983) listed numerous diplopods in the western United States as potential inhabitants of western Canada, but according to published records and the second author's field work in Washington, Idaho, and Montana, the only really predictable species are the polydesmid, *Scytonotus piger* Chamberlin, and the xystodesmid, *Montaphe elrodi* (Cham-

berlin). The former is known from Stevens County, Washington, and Lincoln County, Montana, near the International Border (Shelley 1993), and can be anticipated in southern British Columbia between Walneeta and Lake Koocanusa; the latter has been collected in northern Idaho and northeastern Washington near the *E. compactus* sites and surely occurs near Creston and Walneeta/Nelway (Shelley 1994b). A less likely discovery is the paeromopodid julidan, *Californiulus euphanus* (Chamberlin), which occurs in Bayview State Park, Skagit County, Washington, about 57.6 km (36 mi) south of the Canadian border near Aldergrove, southwest of Abbotsford (Shelley 1994c). Based on occurrences in the United States, these three millipeds are the most probable additional Canadian inhabitants, but one can never discount the unanticipated discovery of an isolated, relictual species like *Chonaphe schizoterminalis* Shelley, a localized xystodesmid known only from Springdale, Stevens County, Washington (Shelley 1994b), about 43.7 km (70 mi) south of the border.

Such species survive in the northwestern United States, and they may also occur to the north in Canada; the vicinity of Rossland and Trail seems a promising area for such a relict because of its dense, relatively moist forests (Shelley 1990). The section of British Columbia just north of Idaho, the eastern one-third of Washington, and the northwestern corner of Montana, between Rossland and Lake Koocanusa, therefore merits special attention by Canadian field biologists. It is the most likely part of Canada to harbor new milliped records for the country.

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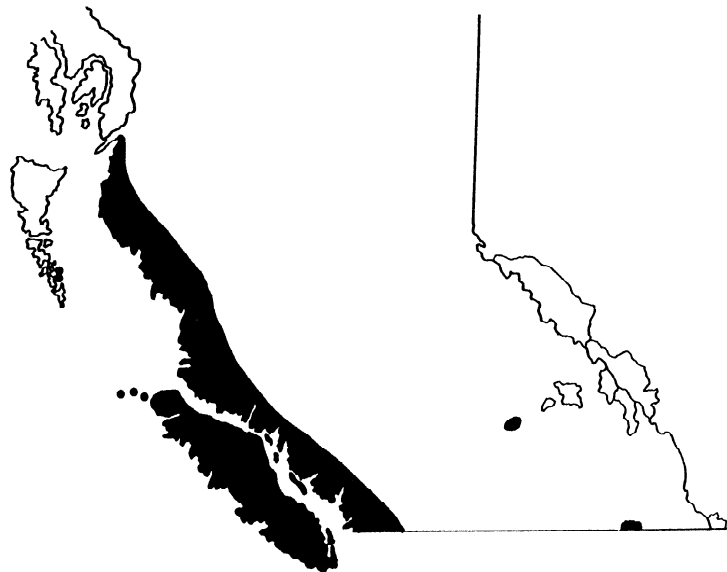


Fig. 1. Approximate distribution of the Nearctodesmidae in British Columbia and Canada. The southeastern most area is that of *E. compactus*.