

***Crumia deciduidentata*, New to Canada from the  
Canadian Arctic Archipelago**

Abstract. *Crumia deciduidentata* Sharp & Iwats., previously known only from the type locality on the Alaskan Peninsula and from the Glacier Bay area, Alaska, is reported new to the North American Arctic flora from King Christian Island in the Canadian Arctic Archipelago.

In 1966 Schofield proposed the genus *Crumia* and placed one species in it—*Crumia latifolia* (Kindb.) Schof. In segregating this species from *Merceya*, he pointed out several differences between *Merceya* and the then monotypic *Crumia*, suggesting a close relationship of the latter with *Tortula* and *Desmatodon*. Zander (1967) showed that *Merceya* Schimp. is antedated by the name *Scopelophila* (Mitt.) Lindb., and in his consideration of *Scopelophila* in the Western Hemisphere he excluded *Crumia latifolia*. *Crumia* has been accepted by Crum et al. (1973); however, both Lawton (1971) and Flowers (1973) treated *Crumia* as a synonym of *Scopelophila*. Sharp and Iwatsuki (1969) described a second species, *Crumia deciduidentata*, from Moller Bay on the north side of the Alaskan Peninsula, Alaska (ca. 56°N, 161°W). This new species was characterized on the basis of four collections from the same area. These have ovate-lingulate leaves ca. 2.0–3.0 mm long that are somewhat contorted when dry, smooth upper cells about 18  $\mu\text{m}$  wide and a slight leaf border of thicker-walled cells below. The sexual condition is parocious, setae about 6–8 mm long, capsules cylindrical, (2.5–3.5 mm long) and spores 15–18  $\mu\text{m}$  in diameter. A fragile but well-developed peristome, with slender, spirally twisted teeth and a basal membrane is present. In 1976 Noble and Sandgren reported it from Muir Point in the Glacier Bay National Monument, Alaska.

While identifying specimens of bryophytes from the Canadian Arctic Archipelago

collected by L. C. Bliss in the summer of 1977, we discovered a second collection site for *C. deciduidentata*. Our specimen was smaller than the type collection (TENN!) of *C. deciduidentata*; however, it is similar in several critical characteristics.

The King Christian Island material has plants with short and broadly ovate leaves ca. 1.0 mm long, which are imbricate when dry, have smooth cells ca. 15–16  $\mu\text{m}$  wide and have no detectable border. The sexual condition is paroicous, setae ca. 3.0–5.0 mm long, capsules cylindric, ca. 1.6 mm long and spores 15–17  $\mu\text{m}$  wide. The peristome is fragile, well-developed, whitish, possesses a basal membrane and spirally twisted teeth and usually adheres to the deciduous operculum, as in the Alaska specimens. Our plants are much smaller and more compact than the type gatherings; however, we feel that the paroicous sexual condition, smooth leaf cells, broad leaves with a costa ending in or just below the apex and similar leaf cell and spore sizes warrant inclusion of our material in the concept of *Crumia deciduidentata*.

This record is a range extension of considerable extent; however, more collections of this species probably will be made and one might expect the distribution to be similar to that of such other arctic-alpine species as *Psilopilum cavifolium* (Wils.) Hag., *Geheebia gigantea* (Funck) Boul. and *Arctoa fulvella* (Dicks.) B.S.G. (excluding its eastern North American stations).

CANADA. NORTHWEST TERRITORIES: District of Franklin, Queen Elizabeth I., King Christian I., near Cape Abernathy, 77°45'N, 101°10'W, in polar semidesert landscape on slope of coulee with about 12% vascular plant cover, 45% crustose lichen cover and 12% moss cover, Bliss, 18 July, 1977 (ALTA, BUF).

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