

Candle-snuffer Moss in the Prairies

by C. D. Bird, University of Alberta, Edmonton

The "candle-snuffer" moss is one of the easiest recognized of the hundred or so mosses which are found in the Canadian prairies. This is not because it is particularly large and imposing but rather because its lemon-yellow calyptra, a cap-like cover, completely encloses the capsule with the appearance of an old-time candle snuffer over a candle. The plant with capsule and calyptra stands about one centimeter high and has hair-tipped, glaucous-green leaves at its base. Under a microscope these leaves are seen to have a costa or midrib and are up to two millimeters long. The rusty-red capsule is furrowed when old and dry and has 16 lanceolate outer peristome teeth.

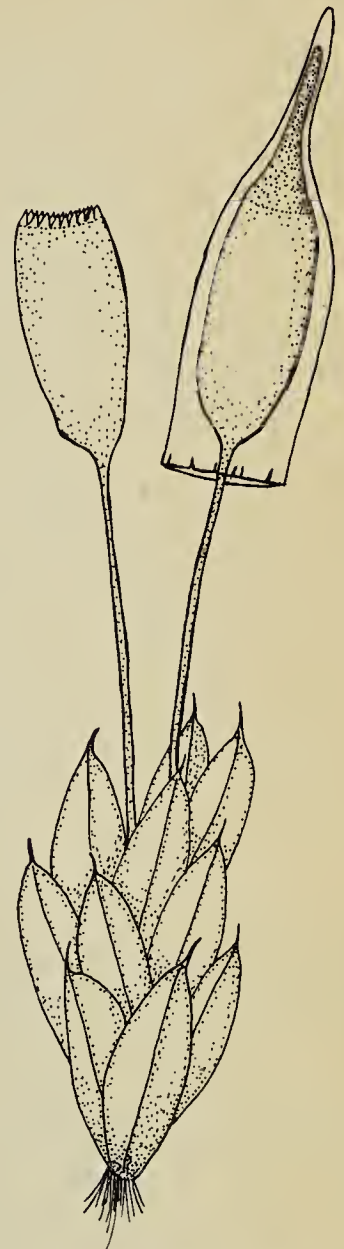
Eight species of *Encalypta*, or "candle-snuffer" moss, are reported in Grout's *Moss Flora of North America* (1928-1940). Conard's "Bryophytes of Saskatchewan" (*Bryologist* 60:338-343, 1947) mentions a single species, *Encalypta rhabdocarpa*, which he records only from the extreme northwest corner of the province. No species has been reported from the prairies of Manitoba, Saskatchewan, or Alberta. This does not mean the plants are rare but rather that very few collections have been made in the prairies. Personal studies, financed by the National Research Council of Canada, have turned up the following prairie stations of *Encalypta rhabdocarpa*.

SASKATCHEWAN — (1) Mixed with *Bryoerythrophyllum recurvirostre* on dry soil around granite boulders, steep, north-facing slope of Arm River, 2 miles south-east of Aylesbury, June 25, 1960 (Bird 3882). (2) Mixed with *Ceratodon purpureus* on north-facing gully slope, 2 miles southwest of Outlook, June 25, 1960 (Bird 3893 and 3899). (3) With *Brachythecium collinum* on north-facing ravine slope, 1 mile northwest of Ridpath, southwest of Rose-town, June 26, 1960 (Bird 3909). (4) On north-facing prairie slope, south side of Colbank Lake, east of Glidden, July 7, 1960 (Bird 4033).

ALBERTA—(1) with *Hypnum* and *Bryoerythrophyllum recurvirostre* on soil around limestone outcrop, Carstairs Creek, 4 miles southeast of Carstairs, June 9, 1960 (Bird 3559). (2) Dry soil, bank of Fish Creek, beside Hwy. 2 near Midnapore, south of Calgary, June 10, 1960 (Bird 3582). (3) With *Eurhynchium pulchellum* var. *diversifolium* on dry, north-facing slope, Hwy. 5 crossing of Belly River, southwest of Lethbridge, June 11, 1960 (Bird 3640 and 3642). (4) On steep, north-facing prairie slope, 6 miles west of Walsh, July 12, 1960 (Bird 4072).

These collections indicate that the best places to look for this moss are on rather steep, north-facing slopes. Snow remains longer in these places and the soil moisture content is higher while the temperature is lower than on other exposures.

Another species, *Encalypta procera*, was discovered on the Alberta side of the Cypress Hills (Bird 4469). What species occur in your district?



Drawing by Ann Bird

Encalypta rhabdocarpa Schwaegr. The capsule on the left shows the 16 outer peristome teeth while the one on the right has the operculum in place and is covered by the outline of the calyptra.