

NEW CONTRIBUTIONS TO CANADIAN BRYOLOGY.

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36. GRIMMIA (SCHISTIDIUM) DIVERSIFOLIA.

Leaves large, channelled or concave, diversiform; the lower broader, subovate obtuse and mucous; the upper broadly ovate-lanceolate, obtusate or short-acuminate, recurved all around, mucous or rarely with a short and broad hairpoint; cells not sinuous. Perichetial leaves larger. Capsule immersed; peristome orange, brittle. Stem 2-3 cm. high. Tufts blackish-brown.

On rocks in Pipestone Pass, eastern slope of Rocky Mountains, Alta., altitude 7,300 feet, July 5th, 1904. No. 119a.

37. GRIMMIA HARTMANI SCH.

Gaspe, 1907.

38. GRIMMIA PAPILLINERVIS.

Capsule smooth oval; teeth nearly entire, reddish-yellow or yellowish; stomata not distinct; pedicel exerted, curved when moist. Leaves ovate-lanceolate, broadly acuminate subacute, carinate, slightly or not recurved, sometimes papillose at borders, not large, faintly appressed when dry; cells quadrate, not sinuous; the upper somewhat small and chlorophyllose, the lower larger, nearly uniform and hyaline; hairpoint long, denticulate or nearly smooth; costa papillose. Monoecious (sub-parceous). Tufts pulvinate, densely cohering, about 1 c.m. high dark or glaucous green when dry. Lid and calyptra not seen.

British Columbia, Skagit summit, J. M. Macoun, 1905.

39. GRIMMIA HAMULOSA, LESQ.

Vancouver Island, Nanaimo Biological Station, June, 1908. New to Canada.

40. GRIMMIA COGNATA, CARD. ET THER.

Alberta, Lake Louise, alt. 6,000 ft. 13th Sept., 1904. New to Canada.

41. GRIMMIA SUBPAPILLINERVIS.

Agrees with *G. papillinervis*. Leaves with not sinuous cells, the upper cells subquadrate; costa papillose. Differs from it. Leaves longer, long-subulate; lower cells rectangular, the alar more distinct; hair-point smooth. Capsule oblong-cylindric.