

## Mosses from the Mackenzie Mountains, Northwest Territories\*

A recent collection by W. J. Cody (Canada Department of Agriculture) from the Mackenzie Mountains, continental Northwest Territories, arctic Canada, included 2 mosses of some phytogeographical interest. These were collected on the Plains of Abraham (64°30'N., 127°13'W.), on a shattered limestone plain at approximately 1,400 m. altitude. The specimen (containing both species) was collected on 9 July 1970, W. J. Cody, collection number 19078.

*Bryum wrightii* Sull. and Lesq. *Cody 19078*, with numerous sporophytes.

This is the first report of this moss from the continental Northwest Territories, and a substantial southwestward range extension. The species is also known from a few of the Queen Elizabeth Islands<sup>1</sup>, Banks Island, Southampton Island<sup>2</sup>, and Greenland<sup>3</sup>, but it is rare and local throughout its distribution.

*Voitia hyperborea* Grev. and Arnott. *Cody 19078a*, a few plants, with sporophytes.

This species, whose distribution was recently mapped<sup>1</sup>, was known from the eastern part of the continental Northwest Territories but not from the western part. The present collection extends the species' range to the southwest, and provides the closest locality yet to the Alberta populations of its vicariant, *Voitia nivalis* Hornsch. The Plains of Abraham specimens are, however, definitely the high arctic *V. hyperborea*.

The presence of *Bryum wrightii* and *Voitia hyperborea* on a high-altitude plain which was unglaciated in the Pleistocene is significant. They have probably remained in this locality during the Pleistocene Glaciations. Both species undoubtedly also survived the glaciations in other Nearctic refugia. *Bryum wrightii* is also known from Banks Island but has not yet been reported from unglaciated Arctic Alaska. *Voitia hyperborea* seems also to have survived glaciation in several other widely scattered refugia, including arctic Alaska, northern Ellesmere Island, and Greenland.

The discovery of these 2 mosses in an unglaciated part of the continental Northwest Territories may well indicate that the Plains of Abraham and other high unglaciated

plateaus in the Mackenzie Mountains have a flora rich in high arctic bryophytes.

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### REFERENCES

- <sup>1</sup>Brassard, G. R. 1971. The mosses of northern Ellesmere Island, Arctic Canada. I. Ecology and phytogeography, with an analysis for the Queen Elizabeth Islands. *The Bryologist*, 74: 233-81.
- <sup>2</sup>Steere, W. C. 1948. Musci. In: Botany of the Canadian Eastern Arctic. Part II. Thallophyta and Bryophyta. *National Museum of Canada Bulletin*, 97: 370-490.
- <sup>3</sup>Persson, H. and K. Holmen. 1961. Bryophytes collected during the arctic field trip of the Ninth International Botanical Congress. *The Bryologist*, 64: 179-98.

## Peregrine Falcon Survey, West Greenland, 1972

### INTRODUCTION

A conference at the University of Wisconsin in 1965 discussed the rapid decline of peregrine falcons (*Falco peregrinus*) in North America and Europe<sup>1</sup>. By 1965 the peregrine had become extinct as a breeding bird east of the Mississippi River and had suffered drastic population reductions in western United States and Europe. At the Wisconsin conference, reports on the peregrine falcon were presented for most areas except Greenland.

A second peregrine falcon symposium was held at Cornell University in November 1969. This meeting reported continued decline in numbers of peregrines and presented overwhelming evidence about the cause of this decline: chlorinated hydrocarbons, the hard pesticides, including DDT and dieldrin<sup>2</sup>. Both field evidence and laboratory experiments showed that high residue levels of DDE (a metabolite of DDT) and other pesticides in birds are associated with thin eggshells, resultant eggshell breakage, and low hatching rates<sup>3,4</sup>. This situation seemed to apply, in varying degrees, to all the North American subspecific populations of *Falco peregrinus*: the continental *anatum*, the Pacific Northwest and Aleutian *pealei*, and the northern *tundrius*, although the marine *pealei* falcons in the Aleutians appear to be a rather healthy population<sup>5</sup>.

As in 1965, the 1969 peregrine falcon symposium heard no evidence from Greenland, where general reports in the past had described the peregrine as a relatively com-

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