accumulations, or whether other factors are involved.

5) From a botanical standpoint, there is much to glean from further studies of plant succession, physiognomy and physiology in this complex and dynamic vegetation pattern. Changes in drainage conditions over time, as well as seasonally, seem to lead to the variety of bog types that were characterized by Allington⁷. Equally important to string bog ecology are the effects of bedrock and adjacent vegetation on water chemistry and nutrient levels.

It is possible that run-off generated by torrential rains in summer produces debris accumulation at the head of bogs in a manner similar to that developed in the thaw. However, on 1 August 1970, a 2-inch (5 cm.) rainfall in 3 hours at Schefferville simply served to fill up the pools. This highlights the factors responsible for the concentration of string bogs in the subarctic (boreal forest) zone. The summer is the season of plant growth. The flooding responsible for the sinuous ridge pattern occurs during the early spring thaw when the bog surface is frozen. Once the melt is completed and flow between pools ceases, the limitations of the growing season in the subarctic take effect. Until more systematic studies are conducted on the growth characteristics of plants in string bogs, as compared with similar plants to the north and south of the zone of string bog development, there must be severe questioning of any explanation of string bog genesis from both botanical and hydrological standpoints.

If a program could be set up in the Subarctic which permits seasonal observation of the physical processes, together with an examination of plant growth mechanisms, then the presumed critical role of string bogs in understanding environmental change may become further elucidated.

> Bruce G. Thom Department of Biogeography and Geomorphology Australian National University Canberra

REFERENCES

- ¹Drury, W. H. 1956. Bog flats and physiographic processes in the upper Kuskokwim River Region of Alaska. *Contribution of the Gray Herbarium, Harvard University*, Number 178. 130 pp.
- ²Heinselman, M. L. 1963. Forest sites, bog processes, and peatland types in the Glacial Lake Agassiz Region, Minnesota. *Ecologi*cal Monographs, 33: 327-74.

- ³Bird, J. B. 1967. *The Physiography of Arctic Canada*. Baltimore: The Johns Hopkins Press. 336 pp.
- ⁴Embleton, C. and C. A. M. King. 1968. *Glacial and Periglacial Geomorphology*. London: Edward Arnold Publishers. 608 pp.
- ⁵Davies, J. L. 1969. *Landforms of Cold Climates*. Canberra: Australian National University Press: 200 pp.
- ⁶Knollenberg, R. 1964. The distribution of string bogs in central Canada in relation to climate. *Department of Meteorology, Uni*versity of Wisconsin, Technical Report 14, 44 pp.
- ⁷Allington, K. R. 1961. The bogs of central Labrador-Ungava, an examination of their physical characteristics. *Geografiska An*naler, 43: 401-17.
- ⁸Auer, V. 1920. Uber die Entstehung der Sträng auf den Torfmooren. Acta Forestalia Fennica, 12: 23-125.
- ⁹Wenner, C. 1947. Pollen diagrams from Labrador. Geografiska Annaler, 29: 137-373.

An Albino Muskox Near the Atkinson Point River, Northwest Territories

Gavin¹ during his stay near the mouth of the Perry River (67°48'N., 102°16'W.) from 1937-1941 reported only few muskoxen. The largest herds were 12 and 15, seen in 1938 on the mainland a few miles west of the mouth of the Perry River. Aleksiuk² saw no muskoxen during his period of field work in the Perry River area from 21 May to 10 August 1963 but reported that, according to local Eskimos, muskoxen were still found in the region of MacAlpine Lake, at the headwaters of Perry River.

During waterfowl surveys on 11, 15, and 16 August 1971, between Perry River and the Atkinson Point River ($103^{\circ}18'W$.) and between $67^{\circ}10'N$. and $67^{\circ}45'N$. we saw the following numbers of muskoxen: 1, 26, 48, 1, 1, 23, 16, 1, 1. Dates of observation of herds, their location and numbers of yearlings preclude the possibility of duplication.

Of particular interest was the occurrence of a light-coloured individual in the herd of 23 observed on 15 August along the Atkinson Point River at $67^{\circ}45'N$., $103^{\circ}18'W$. The animal in question was a large adult of a pale creamy-yellow colour. Photographs taken at



FIG. 1. Herd of muskoxen along the Atkinson Point River.

the time show the animal to be accompanied by a yearling of normal colouration. At first the pale-coloured individual was thought to be a bull but the persistent proximity of the yearling and the adult's behaviour in running at the forefront of the herd when chased (in opposition to bulls which normally follow the herd) suggested that the muskox in question was a cow, and Fig. 1 has sufficient detail to confirm that it was so. We were unable to get a good look at the cow's horns but they appeared paler than in muskoxen having the typical pelage; just then we had run into low cloud and rain and were in fact retreating to our camp on the Perry River.

Only one albino muskox has been recorded previously. Tener³ quotes McDougall's⁴ observation of an adult albino cow muskox on 18 June 1853 at Cape Smyth, Melville Island, That cow was followed by a black calf.

E. Kuyt

Canadian Wildlife Service Fort Smith, N.W.T. C. H. Schroeder North Dakota Game and Fish Dept.

Bismarck, N. Dakota

A.R.Brazda

Bureau of Sports Fisheries and Wildlife Lafayette, Louisiana

REFERENCES

- ¹Gavin, A. 1945. Notes on mammals observed in the Perry River district, Queen Maud Sea. *Journal of Mammalogy*, 26: 226-30.
- ²Aleksiuk, M. 1964. Observations of birds and mammals in the Perry River region, N.W.T. Arctic, 17: 263-67.
- ³Tener, J. S. 1965. Muskoxen in Canada. Canadian Wildlife Service Monograph No. 2, 166 pp.

⁴McDougall, G. F. 1857. The eventful voyage of H. M. discovery ship "Resolute" to the Arctic regions, in search of Sir John Franklin and the missing crew of H.M. discovery ships "Erebus" and "Terror", 1852, 1853, 1854. London: Longman, Brown, Green, Longmans & Roberts. 530 pp.

Massey Medal Award 1972

Isobel Moira Dunbar is the fourteenth recipient of the Massey Medal of the Royal Canadian Geographical Society which is awarded annually to a Canadian citizen for "outstanding personal achievement in the exploration, development or description of the geography of Canada."

In 1947 Moira Dunbar, M.A. (Oxon), came to Canada from the United Kingdom and joined the professional staff of the Defence Research Board to study arctic geography and sea ice. Part of the citation for the presentation of the Medal reads: ". . . she has travelled widely throughout the Canadian Arctic, by air and on icebreakers, in developing her studies of ice conditions. A letter to the Society from a distinguished Canadian geographer says in part: 'Her work has been carefully done, and no one intending to do anything in northern transportation is likely to get very far without making use of her research'."

In presenting the Medal the Governor General offered her heartiest congratulations on behalf of Canadians generally and commended the Society for its "excellent selection", adding "We cannot but be intrigued by her decision to abandon a successful stage career for what must have seemed the rather dubious delights of the Arctic. It is a choice which confirms the breadth of her talents and enthusiasm."

Miss Dunbar is the tenth Fellow of the Arctic Institute of North America to receive the Massey Medal since it was first awarded in 1959.

Election of Fellows

At the meeting of the Board of Governors on 6 and 7 May 1972 the following were elected Fellows.

John T. Andrews, Assistant Director, Institute of Arctic and Alpine Research, University of Colorado, Boulder, U.S.A. Working on problems on glacial geomorphology in northern Quebec and eastern Arctic. Has written many papers on this subject.