on journeys made by Richardson in 1819-1821 and 1825-1827, whereas I collected Cree names in 1971, it is possible to compare names in use at two periods separated by an interval of approximately 150 years. Richardson travelled over most of the Cree country, from Hudson Bay to present day Alberta, while my informants were all from central or northern Alberta. Many differences in the two lists of names may therefore be due to regional, as opposed to temporal, differences; nevertheless a preponderant similarity between the old and the present-day names is evident on comparison. Richardson also listed a few Chipewyan animal names, so that a similar comparison, though on a small sample, can be made for this language as well.

I have grouped the results of the comparison into three categories: names which are alike, and in many cases the same, allowing for the fact that there is often more than one way of writing the same sound for English readers; names which are cognate; and names which are different. Some examples, using Cree names only, are tabulated below.

Of 23 mammals for which Cree names are given in the two sources compared, 18 were alike, 4 cognate and only one different. In the case of 42 bird names, 21 were alike, 7 cognate and 14 were different. For all 65 names the proportions are: 60% alike, 17% cognate and 23% different.

The few Chipewyan names given in the *Fauna Boreali-Americana* make it possible to compare ten (six mammal and four bird) names with ones from my own material. Eight of these names are alike and two different.

Irving[3], comparing Eskimo bird names in use in 1877 and 1960 in one locality, Cumberland Sound, Baffin Island, and thus eliminating the factor of regional differences, found that 92% were alike.

His data and that given above for two Indian languages indicate that animal names in these particular Amerindian languages are no less enduring in time than those used in languages which have writing.

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Species	*Richardson*	*Höhn*	*Category*
black bear	musquaw	maskooa	alike
gray wolf	mahaygan	maychan or maygan	alike
porcupine	cawguaw	kakooa	alike
golden eagle	koeoo	keeheeoo	alike
Canada goose	neescah	nisga	alike
robin	peepeechew	peepee tsoo	alike
mink	shahwaeshew	sakooees	cognate
woodchuck	weenusk	weenshagatshé	cognate
meadowlark	peesteh atchewusson	pichtooe tshawasoss	cognate
scaup	tawquawgewsheep	nanatahawaooseep	cognate
snow bunting	sheegun petheesees	wapayachgosees	different
magpie	ootawkee askee	apistshigagasees	different

A Note on the Holocene History of a Portion of Northernmost Ellesmere Island

Three points raised in Lyons and Mielke's[1] paper on the "Holocene history of a portion of northernmost Ellesmere Island" warrant further discussion. Alternative interpretations of the field evidence surrounding these points are advanced in this note on the basis of two years of research conducted by the present author on the glacial geology of Archer Fiord/Lady Franklin Bay, northeastern Ellesmere Island. The points to be discussed deal with: 1) the Holocene chronology, 2) the interpretation of postglacial uplift, and 3) the form of the postglacial uplift curve on northern Ellesmere Island.

1) *Holocene chronology*

Lyons and Mielke[1] place the Pleistocene/Holocene boundary on northern Ellesmere Island at 10,000-13,000 BP. This boundary is based on inference from the Greenland ice core[2,3], since the authors state that "there is no reliable information on northernmost Ellesmere Island which closely fixes the transition from the Pleistocene to the Holocene"[1]. This outlook is based on two principal assumptions: a) that the Greenland and Antarctic ice core chronologies contain "key points" fixed in time such that they can be used to clarify the glacial history of northern Ellesmere Island, and b) that the initial postglacial emergence on Ward Hunt Island is insufficient evidence on the termination of the last glaciation, hence the end of the *local* Pleistocene, on northern Ellesmere Island. It seems clear that the estimated time profile through the Greenland ice core is particularly subject to question and should not be assumed to be free of error or without the need of being clarified by the radiocarbon-dated terrestrial record (not vice versa). Even if the ice core is dated correctly around 10,000-13,000 BP, *it still represents a climatic change which* would only be expressed in the glacial events on northern Ellesmere Island following a considerable time lag. Terasmae[4] has described the time-transgressive nature of the late glacial/postglacial boundary in southeastern Canada (*ca.* 10,000 BP), and hence, similar time-transgressive problems might be expected in the arctic events. The 10,000 BP threshold for the Pleistocene/Holocene boundary in the Arctic is not tenable on current information, nor is it useful. Clearly the Pleistocene/Holocene boundary is, internationally, part of a fixed, time-stratigraphic nomenclature; however, the important point is the relevance of this time boundary to local field areas.

The terrestrial record from northern Ellesmere Island, therefore, should be accepted on its own merit — i.e. the time of initial postglacial emergence, which is more accurately measured than the ice core chronologies, should be taken to be synchronous with deglaciation[5] or, for those points depressed beyond the ice margin (Walcott[6], Fig. 10), to be synchronous with the initial reduction in the load(s) responsible for that depression. Hence, in the case of Lyons and Mielke's data, deglaciation would be best represented by the date 7755 ± 150 BP (SI-718). The only older date on postglacial emergence along the north coast of Ellesmere Island is 8150 ± 140 BP (GSC-1534, in Blake[7]). The present writer suggests, therefore, that the local Pleistocene/Holocene boundary on northern Ellesmere Island occurred between 7500-8100 BP rather than 10,000-13,000 BP. This is also the case indicated by the majority of radiocarbon dates from raised marine deposits in Archer Fiord/Lady Franklin Bay[8].

2) *The interpretation of postglacial uplift*

Lyons and Mielke[1] also infer that the observed postglacial uplift on Ward Hunt Island is a product of the maximum Pleistocene ice thicknesses in this area. This would imply an ice terminus covering Ward Hunt Island (elevation approx. 400 m.) and extending 127 km. inland to a maximum thickness of 1800 m. during the last glaciation. This maximum ice load is, therefore, considered consistent with the observed uplift both on Ward Hunt Island (65 m. above sea level) and at the head of Tanquary Fiord (76 m.a.s.l.). There is, however, no stratigraphic evidence that the maximum Pleistocene ice thickness in this area caused this Holocene uplift (7755 ± 150 BP, SI-718).

It is equally possible that this postglacial emergence on Ward Hunt Island (only 38 m. a.s.l.) could have been produced beyond a restricted inland ice margin entirely independent of this most extensive ice advance. The present author has modelled[9] the postglacial uplift over northeastern Ellesmere Island and northwestern Greenland using relatively small ice advances during the last glaciation, and the resulting uplift is consistent with the observed isobases over this area. These isobases[8] extend consistently into the north coast uplift values observed by Lyons and Mielke[1] at 7755 ± 150 BP, SI-718. Hence, there is no apparent need for the maximum Pleistocene ice load in this area to produce this moderate amount of postglacial uplift — in fact, these are very possibly two discrete events separated by an unknown amount of time. Evidence from northwestern Greenland[10,11] and from eastern Baffin Island[12,13] suggests that the maximum Pleistocene glaciations in these areas are much older than the last glaciation. Similar stratigraphic relationships may exist on northern Ellesmere Island where Brassard[14] has suggested the presence of Wisconsin refugia.

3) *Postglacial uplift curves*

The postglacial uplift curve constructed by Lyons and Mielke[1] is quite steep showing >70 per cent of the postglacial uplift occurring in the first two thousand years following deglaciation. Similarly steep curves have been noted by Hattersley-Smith and Long[15] from nearby Tanquary Fiord, and by Lasca[16] and Washburn and Stuiver[17] from eastern Greenland. On the curve of Lyons and Mielke[1] postglacial uplift has almost completely flattened-off by *ca.* 5000 BP. Whether this is an accurate representation of the postglacial uplift process in this area or whether it is a problem of stratigraphy is not clear. For example, SI-723 (4775 ± 120 BP) is a shell sample of *Hiatella arctica* collected at 5 m. a.s.l. in "till (?) being uncovered by ablation"[1]. The possibility that these shells relate to, or have been washed out from, a higher relative sea level cannot be excluded yet this is of critical importance to the steepness of their curve (see also sample SI-724 at 10 m.a.s.l.). Driftwood collected by Crary[18] at 3 m.a.s.l. in Disraeli Fiord, however, has been dated at 3000 ± 200 BP so these lower elevation features, as Lyons and Mielke suggest, may in fact be stratigraphically correct.

Uplift curves constructed from Archer Fiord/Lady Franklin Bay[8], however, based on stratigraphically-controlled shell deposits in delta forest beds and stranded driftwood in raised beaches, show smoother curves than do those of Lyons and Mielke[1] or Hattersley-Smith and Long[15]. Before such steep curves are assumed to accurately represent post-glacial uplift on northern Ellesmere Island, many more stratigraphically-controlled shell and driftwood samples must be obtained and dated. Also it needs to be determined whether the north coast of the island is undergoing a renewed submergence which could distort the real form of the uplift curve, particularly in its lower elevations.

It is clear that Lyons and Mielke[1] have made a valuable contribution to the Holocene history of northern Ellesmere Island, particularly around the evolution of the Ward Hunt Ice Shelf. However, the local data on the Pleistocene/Holocene boundary must be evaluated on their own merit, and caution should be exercised in making correlations with such data as the Greenland ice core which must, in return, be clarified by the land record provided by glacial geology.

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On a Polynya in Makinson Inlet

A polynya was observed three kilometres south of Hook Glacier in the northwest arm of Makinson Inlet in May 1973 (Fig. 1). Because of a combination of rough ice, soft snow and a spell of high winds it was only possible to occupy four stations in the arm: Station 1 near the head, Station 2 in the basin just north of Hook Island, Station 3 about 200 m. east of the polynya and Station 4 east of St. Laurent Point (See Table 1). The results from Station 2 showed that the water was almost isothermal at −1.80°C, near the

TABLE 1. Details of Stations.

Station Number	Date and time (GMT)	Sounding in metres	Ice thickness in metres	Snow thickness in metres
1	0100, 14/5	8	1.54	0.24
2	0150, 15/5	135	1.38	0.20
3	0235, 16/5	7.5	0.85	0.20
4	0625, 22/5	225	2.02	0.40

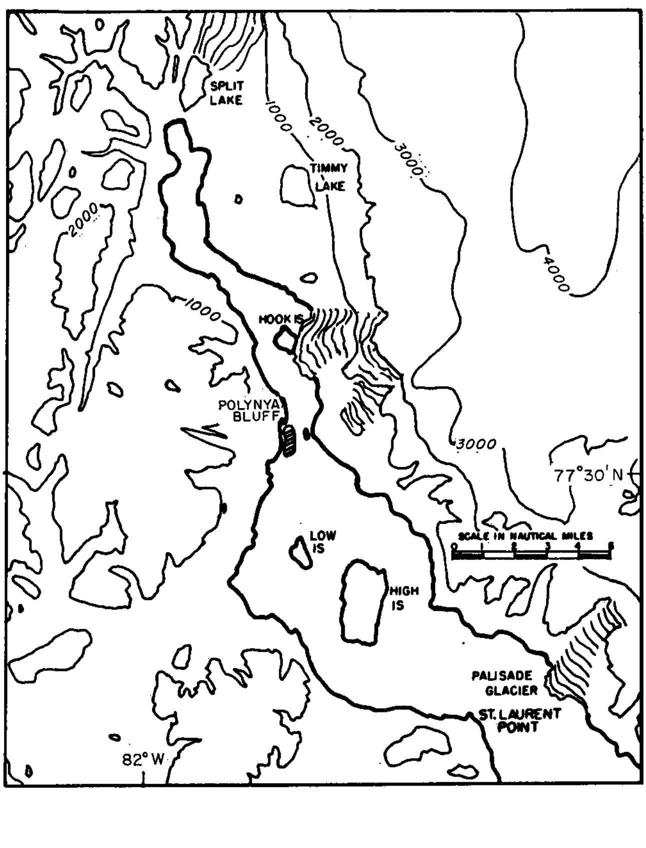

FIG. 1. Sketch map of the northwest arm of Makinson Inlet showing the position of the polynya observed in May 1973.