

ly at night would they venture onto the slope in search of food. Therefore, the behaviour of both the ground squirrels and ptarmigan had been noticeably affected by the absence of the jaegers.

It is very possible that the falcon was also responsible for the death of the jaeger as well. The feather remains were identified by Dr. W. Earl Godfrey of the Canadian Museum of Natural Sciences, as remiges, rectrices, and scapulars from an adult long tailed jaeger⁶. In addition, Dr. Godfrey postulated that it had probably been killed by an avian predator rather than a mammalian predator owing to the undamaged condition of the feather roots. A fox, for example, would probably have broken the base of the feathers⁶.

It is not known how long the jaegers have been nesting on this slope and elsewhere in the area, or if they will continue, but there is every reason to expect that they will. If so they will probably continue to have an effect on the local ecological balance and allow somewhat higher populations of certain animals in localized areas than would otherwise occur. As is usual in nature every relationship has additional implications. For example, it is well known (although poorly documented) that burrowing animals may have a considerable geomorphic impact on the landscape. This is particularly true for the southeast-facing slope in question since on the basis of my measurements the arctic ground squirrel has been excavating 320 lbs. of material per acre annually based on a total 53-acre area (8 tons per acre when calculated for actual area of occurrence)⁷. At the same time the southwest, east, and north-facing slopes are little affected. To stretch a point, this has even further implications in terms of valley asymmetry. But suffice it to say that there was a clear and observable difference in the ecology of the slope because of the jaegers' presence. Such ecological relationships are replete in nature and we have a great deal to learn about and from them.

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An Archaeological Site on the North Coast of Ellesmere Island

In July 1965, at the end of a long walk westward from Alert, I marked down an Eskimo site on the south side of the well-developed delta terrace at the mouth of the Wood River, 82°30'N., 63°07'W. In setting and lay-out it resembled sites of the Independence I and II cultures that we found at Tanquary Fjord in 1963 and that were excavated and identified by Count Eigil Knuth in August 1965¹. It was not until August 1972 that I was able to revisit the delta of the Wood River, during the course of a helicopter flight in connexion with other work.

The Eskimo site is 11.5 m. above sea level (as measured by a Wallace and Tiernan surveying altimeter) and lies 3 m. from the edge of the delta terrace and about 60 m. from the sea. The level terrace, composed mainly of shingle and gravel with scattered flat rocks and small boulders, ends above the foreshore in a steep bank, the material of which is more or less at angle of rest and lightly vegetated. The distinctive feature of the site is the central hearth, which measures 260 cm. in length by 69 cm. in breadth. It is oriented at right angles to the shore so that the entrance of the tent ring faces the sea, and it is formed in the usual way of flat slabs (in this case 3 in number) of fissile rock set on edge in the ground. Outside the central hearth only 4 rocks define the tent ring — a flat rock, 47 cm. long and about 10 cm. wide; two small boulders near the entrance; and a larger boulder measuring about 16 by 12 cm. at a distance of 165 cm. from the entrance on the south side. About 6 m. to the north of this main structure there is a rough circle (1.5 m. in diameter) of small boulders,

and a similar feature 35 m. to the south; the latter comprises 6 boulders with maximum dimensions of 35 cm. set on the arc of a rough circle about 2 m. in diameter. The site is protected to the south by a cliff in bedrock to a height of about 100 m. In the middle of the central hearth, with minimum disturbance of the floor, we made a small collection of charcoal and charred bones for radiocarbon dating. Radiocarbon analysis of the charcoal, performed by courtesy of Dr. W. Blake, Jr., and Mr. J. A. Lowdon of the Geological Survey of Canada, has yielded an age of 1070 ± 270 yr. BP (GSC — 1770). Three pieces of charcoal were examined; all were coniferous and two appeared to be from *Larix* sp., i.e. driftwood.

The discovery of the Wood River site raises the question of how many others remain to be discovered on the north coast of Ellesmere Island. Very little is to be seen at the surface, and it is likely that similar sites in the Alert area to the east have escaped notice, although by now they may have been destroyed by the passage of vehicles. On the long coast of northern Ellesmere Island no other archaeological sites have been found but then few people have had the interest and opportunity at the right time of year to look for them. Again in the course of other work in the 1972 summer, we traversed on foot the whole shoreline of the upper 40 km. of Disraeli Fiord, and found no evidence of Eskimo occupation, although there are a number of excellent potential sites on delta terraces. But this is the only one searched of eight major fiords along the coast.

Two further comments are offered with diffidence, since I am not an archaeologist. First, the radiocarbon age of the charcoal, if it can be accepted as a maximum age for occupation of the site, belies what appeared to be a distinctive feature of the Independence culture, namely the central hearth. Can it be that this was a feature that persisted to the end of the Dorset period in certain areas? Secondly, on the question of the movement north of these Eskimos, they may all have crossed the plateau southwest of the Grant Ice Cap from the Lake Hazen area and then followed the valley of the Wood River to its mouth, thus by-passing the Robeson Channel coast. From excavations in 1958, Dr. M. S. Maxwell concluded that hunters from the south visited the Lake Hazen area during the period from about A.D. 1000 to 1450². However, sites of both Independence and Thule cultures have since been found at the head of Tanquary Fiord^{3,1}, and in August 1965 Knuth and I found an Eskimo site of uncertain age on the north shore of the lake on the Lewis River, halfway between Tanquary

Fiord and Lake Hazen. Thus, although Maxwell found no evidence that Eskimos had made the passage from Tanquary Fiord to Lake Hazen, it now seems certain that immigration came from that direction at some time, thus completely by-passing the Smith Sound route.

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Pollutant and Shell Thickness Determinations of Peregrine Eggs from West Greenland

A preliminary survey of breeding peregrine falcons (*Falco peregrinus*) in West Greenland in 1972 indicated both a high nesting density (one pair per 100 square miles) and a high production rate (2.25 young per pair or 2.57 per pair with young)¹. Reporting of peregrine reproductive success varies, depending upon timing, the nature and intensity of the study. Exact comparisons are therefore difficult, but the rate of reproduction reported for this group of West Greenland peregrines is apparently comparable to that found earlier along the Colville River in Alaska during 1952 and 1959².

Peregrines in the eastern United States and southern Canada experienced an increasing incidence of reproductive failures throughout the 1950s and early 1960s, culminating in the disappearance of the breeding populations by 1964³. Studies were therefore carried out in the Northwest Territories and Alaska in 1966 to determine the status of the northern birds. No apparent abnormalities were found, and the reproduction was considered to be normal^{4,5}.

The breeding success of the Colville River peregrines has been followed since 1966 by Cade and colleagues^{5,6,7}. The number of pairs remained steady through 1969, but