

To meet the needs of navigation in ice special features have been incorporated in the design of the *Thala Dan*. These features are similar to those of the two earlier-built ships, but have been further refined as a result of the experience obtained in the working of those two vessels. The hull is specially strengthened, to specifications greater than those required for the Finnish ice class A I, whilst the whole ship is built to accord with the highest class listed by Lloyds. The *Thala Dan* is fitted with an ice-breaker stem, an ice cutter and with fins to protect the propeller from ice. More powerful than her predecessors, the ship has a 7-cylinder turbo-charge Diesel unit as her main engine. It is a single-acting, direct reversible two-stroke engine, developing 2200 initial horsepower at 300 revolutions per minute.

Of particular interest are the navigational aids included in the design. The quarter-deck has space for a helicopter or small aeroplane to be used for reconnoitring ice conditions, whilst the ship can be steered and directed from a crow's nest built into the foremast. Access to the crow's nest, which is about 20 metres above sea level, is by the inside of the mast. The equipment in the crow's nest duplicates and can be operated independently of the manœuvring gear in the wheel-house.

The living quarters for the crew, on the 'tweendeck aft, and for the officers, in the deck-house aft, are handsomely furnished. Although not mentioned in the published list of specifications it is presumed that the *Thala Dan* has the same type of insulated holds as those which were built into the *Magga Dan*. It is presumed too that performance figures, also not yet released, are similar or superior to those of the *Magga Dan*, which was listed as having a speed of 12 knots and a range of 16000 miles. There can be little doubt that the M.S. *Thala Dan* is very well equipped to perform its function of expedition transport in polar areas.

### Archaeological investigations in the Arctic and subarctic, 1957.

At the request of the editor, I shall attempt to summarize the various archaeological activities that occurred in the Arctic and subarctic during the last summer. This summary will be kept relatively brief.

Members of a party called Operation Hazen organized by the Defence Research Board as part of the Canadian program for the International Geophysical Year worked on archaeological remains on Ellesmere Island, discovering four sites of aboriginal structures. One, about twenty miles north of Lake Hazen; one on the shores of Lake Hazen; and two along the Ruggles River. Few artifacts were uncovered since they did no digging. These sites, however, are of considerable significance for not only are they the northernmost sites in the Canadian Arctic but they are situated along the hypothetical route of migration from the Canadian Arctic to Greenland. Investigation of these sites has been planned for the 1958 field season by the National Museum of Canada.

Moving a little further south, Dr. Jorgen Meldgaard of the National Museum of Denmark, returned to the Alarnerk Site in the Igloodik area on the Melville Peninsula after two season's absence. The previous season's efforts had been concentrated on Dorset structures and remains belonging to five periods. These Dorset remains were on ancient beaches from 8 to 22 metres above sea level. This season's endeavours concentrated on older remains (dated roughly 3400 years ago by Carbon 14) on beaches from 26 to 54 metres above sea level. I shall mention only a few of the more salient facts of his finds. Most of these early pre-Dorset remains appear to belong to an early and late period having burins, micro-blades, side-blades, small end-blades, and other artifacts indicating a close relationship with both the Cape Denbigh Flint Complex of Alaska as well as with Sarqaq of Greenland. The sequential changes in his artifact types from these pre-Dorset remains closely parallel changes of types from the four middle cultural phases from the Firth River in the Canadian

Yukon. Two particularly interesting features are that the latest of these remains on levels only a few metres above the earliest Dorset remains, do not appear to be a transition into Dorset. The other significant feature of these early remains is that they have distinctive toggle-headed harpoons that indicate a much earlier time period for this implement and inferred hunting technique than had previously been suspected.

Mr. William E. Taylor of the National Museum of Canada undertook preliminary excavation and survey in the interior as well as the coast and adjacent islands of the northern part of the Ungava Peninsula. His activities in the interior were at Payne Lake where he found about forty house remains, of which he excavated four. All of these were Dorset with one having a slight overlay of Eskimo remains. On the coast at the estuary of the Payne River, he uncovered another Dorset site as well as one Dorset burial. He has stated that at least superficially the skull is like those of modern Eskimos in the area. At Sugluk, seven sites were investigated and five of these appear to be Dorset villages with semi-subterranean rectangular houses.

My endeavours were in the southern part of the Yukon Territory between

Johnsons Crossing, Kluane Lake, Dawson City, and Mayo. Ninety-seven sites were discovered as well as about 1,000 artifacts. The sites seem to belong to at least six different artifact complexes, four of which were below the volcanic ash layers dated about 300 A.D. Twenty-eight of the sites are micro-blade sites.

In Alaska, Dr. Ivar Skarland of the Department of Anthropology of the University of Alaska, during the last part of the summer, investigated interior sites on which "Yuma" projectile points have been found.

Mr. Gordon Lowther, of the McCord Museum of McGill University of Montreal, undertook archaeological survey in the Old Crow Flats in the Yukon Territory. He was most successful in finding fourteen archaeological sites as well as places at which mammoth bones occurred. As yet, his materials have not been analysed but they are from an area that it is most difficult to find sites in, and one which is probably very important for the understanding of the relationships between the coastal or tundra cultures and those from the boreal forest or interior.

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