Short Papers and Notes

"IKAITE", A NEW MINERAL FROM GREENLAND

During fieldwork in Ivigtut and its surroundings in August 1962, the inner part of Ika Fjord was visited. This fiord is about 12 km. long and forms the southern border of Ivigtut Peninsula, which is bordered on the north by Arsuk Fjord.

It has been known for several years that some peculiar skerries exist in inner Ika Fjord. These skerries, consisting of a white material, rise 10 to 20 m. above the bottom of the fiord and their tops are about 0.5 m. below sea-level at low tide.[1]

Through the kind collaboration of the Danish Navy at Grønnedal the skerries were investigated by a frogman on August 2, 1962. The diver found that the temperature close to the skerry examined was about 3°C. at the bottom and 7°C. at 1 m. below the surface and he reported that the general shape of the formation resembles that of a columnar cactus. The diver also collected samples of the small pillars growing at the foot of the main structure, which appears as a skerry when seen from above.

The diameter of the majority of the pillars is about 1 m. The one examined rises 12 m. from the bottom and its top is about half a metre below the surface at low tide. A few of the skerries have attained a much larger size, reaching a diameter of up to 10 m. and a height of 20 m.

Before these examinations were carried out the nature of the material was known only from a few samples broken off the tops of the skerries. They were examined in Copenhagen several months after they had been collected and then showed only the presence of calcite. Samples taken fresh from the skerries appear as white porous material that is rather friable but forms coherent masses, which disintegrate within a few hours into a wet powder. These and other observations showed that samples had to be stored and shipped with special care. The excellent samples obtained in August from the bottom of small pillars were shipped to Copenhagen in the refrigerator aboard the M.S. *Nanok S* of the Royal Greenlandic Trading Company.

Microscopic examination showed that the material is calcium hexahydrate, according to the description given in Ref. 2. The optical data for the new mineral are

n_g about 1.545
n_m about 1.538
n_p about 1.455

It was found to be biaxially negative with a moderate axial angle. Axial dispersion was clearly $r<v$.

Chemical determinations carried out by Mrs. E-L. Mortensen, M.A., Kryolitselskabet Øresund A/S chemical laboratories gave:

	found per cent	theoretical per cent
water, determined by heating to 135°C. for 24 hrs.	54.8	51.9
loss on ignition of dry material	44.4	44.0
Ca content of dry material	39.3	40.0
Mg content of dry material	0.46	

It proved to be difficult to obtain a dry powder of the hydrate without losing water belonging to the crystal structure, therefore the water determination is not quite reliable. The material used for the chemical analysis was prepared as follows. Pieces of the material kept in a refrigerator were crumbled on a piece of filter paper at room temperature. After a short while the paper had absorbed most of the adhering water and the material was transferred to a new piece of paper, where after a few

minutes it behaved almost as a dry powder much like sugar. Although it was found to be still a little damp it was not thought advisable to keep it longer under room conditions and it was analysed with the above results.

Another portion of the material was washed in alcohol and ether at near 0°C. on a filter. After drying it at 125°C. for 24 hrs. the water determination was carried out, which gave 50.4 per cent. A sample dried on paper as described above and then kept 15 minutes between filter paper in the refrigerator appeared dry when subjected to analysis, the result of which was 53.0 per cent.

This compound has not been mentioned before as occurring in nature, although some other calcium hydrates have been described, e.g., the pentahydrate, the existence of which seems chemically impossible, as stated by Krauss and Schriever (see Ref. 3). According to the same paper a monohydrate has been synthesized. Its field of stability seems to allow its occurrence in nature and it is suspected in the Ika material.

The material found in Ika Fjord, South Greenland, thus represents a new mineral and it is proposed to call it "Ikaite" (which has been approved by the I.M.A.) after the locality where it occurs in great masses and where it is apparently still being formed through the action of bicarbonate-carrying springs at the bottom of the fjord. The new mineral may, if the theory about its formation is right, turn out to be of widespread occurrence in arctic and other cold waters.

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[1]Pauly, Hans. 1963. Ikait, Nyt mineral der danner skaer. Naturens Verden, June, 168-71, 186-92.

[2]Johnston, John, H. E. Mervin, and E. D. Williamson. 1916. The several forms of calcium carbonate. Am. J. Sci. 41:473.

[3]Krauss, F., and W. Schriever. 1930. Die Hydrate des Calciumcarbonates. Z. anorgan. und allgem. Chem. 188:259.

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NOTES ON CULTURE CHANGE AND PERSONALITY ADJUSTMENT AMONG THE NORTH ALASKA ESKIMOS

During the past century the Eskimos of northern Alaska have been greatly influenced by the impact of western civilization. Whalers who arrived in the 1850's, traders, missionaries, school teachers, doctors, nurses, construction and military personnel who followed, have all contributed to the Eskimos' growing awareness of Anglo-American technology and culture. For many years the changes brought about by this knowledge were relatively slow, resulting in a gradual modification of the traditional native culture. This was largely owing to the newcomers having to adapt much of their way of life to that of the Eskimos. In the early contact period many of the adjustment problems were more the concern of the former than of the latter.

Recently, however, this situation has undergone an almost complete reversal. Today the majority of the northern Alaska Eskimos tend to identify themselves more and more with western society and culture, discarding in the process much of their ethnic heritage. As the anthropologist Margaret Lantis[1] has stated: "Eskimos are trying just as hard today to adapt as they did 500 or 900 years ago; the difficulty is that they are adapting not to the Arctic but to a Temperate Zone way of living."

What does this decision mean for the future of the North Alaskan Eskimos? Are the newly acquired goals and values capable of realization or will they eventually lead to social and psychological frustration, conflict, and disorganization? In an attempt to gather specific information on these and similar questions I began in 1958 a long-term study of the Eskimo community of Kaktovik. Situated on Barter Island on the arctic coast, approximately 400 miles northeast of Fairbanks, this small village of a little over 100 inhabitants is one of the geographically most isolated Eskimo villages in Alaska, and until recently its members had to rely on