have thought much of relative values in life, this institution has a field of great usefulness lying before it. In their administration of the generous gift, the trustees, the president and the faculty of the Case School of Applied Science, whether for research, for school instruction or for community education, will have the sympathetic interest of astronomers, of all lovers of the truth. This observatory may assist in the solution of important problems concerning the universe of which we form a part. The universities, the colleges and the technical schools of our country, and of other countries, are graduating every year many hundreds of young men, ready to start upon the more serious phases of their lives, who can tell us all about the lights in our houses, but not one word about the lights in our sky. This institution will do its quota in approximating to a liberal education. The casual visitor who enters its portals in search of knowledge, yea, the passer-by in the street who merely sees a dignified and purposeful observatory set upon a hill, will have his thoughts directed to higher levels.

W. W. Campbell

Lick Observatory,
University of California

PLAN OF THE BICENTENARY EXPEDITION TO THE NORTH OF GREENLAND

In the year 1721 Hans Egede left Copenhagen for Greenland; with this event the systematic colonization of the vast arctic territory by the Danish State began. In celebrating the bicentenary of this colonization it is natural not only to review what has been achieved, but also to look forward to what still remains to be done both in administration and in research.

The whole coast-line of Greenland is now known. Every point of the coast, extensive as that of a continent, commemorates by its name the glorious achievements of explorers. As a rule, the big nations were before us as far as the discovery itself was concerned, but we may safely say that Danish research has deepened and perfected the knowledge of the new coast-lines. Stubbornly and unweariedly we have carried our flag to the North on both coasts.

The coast of Peary Land, the remotest, most inaccessible part of Greenland we have reached from both sides. The "Danmark" Expedition reached Peary's Cairn on Cape Bridgeman and the Second Thule Expedition, in which I took part myself, reached the De Long Fiord. There still remains a stretch of coast which no Dane has ever seen, and the interior of this country, almost as large as Denmark, is absolutely unknown.

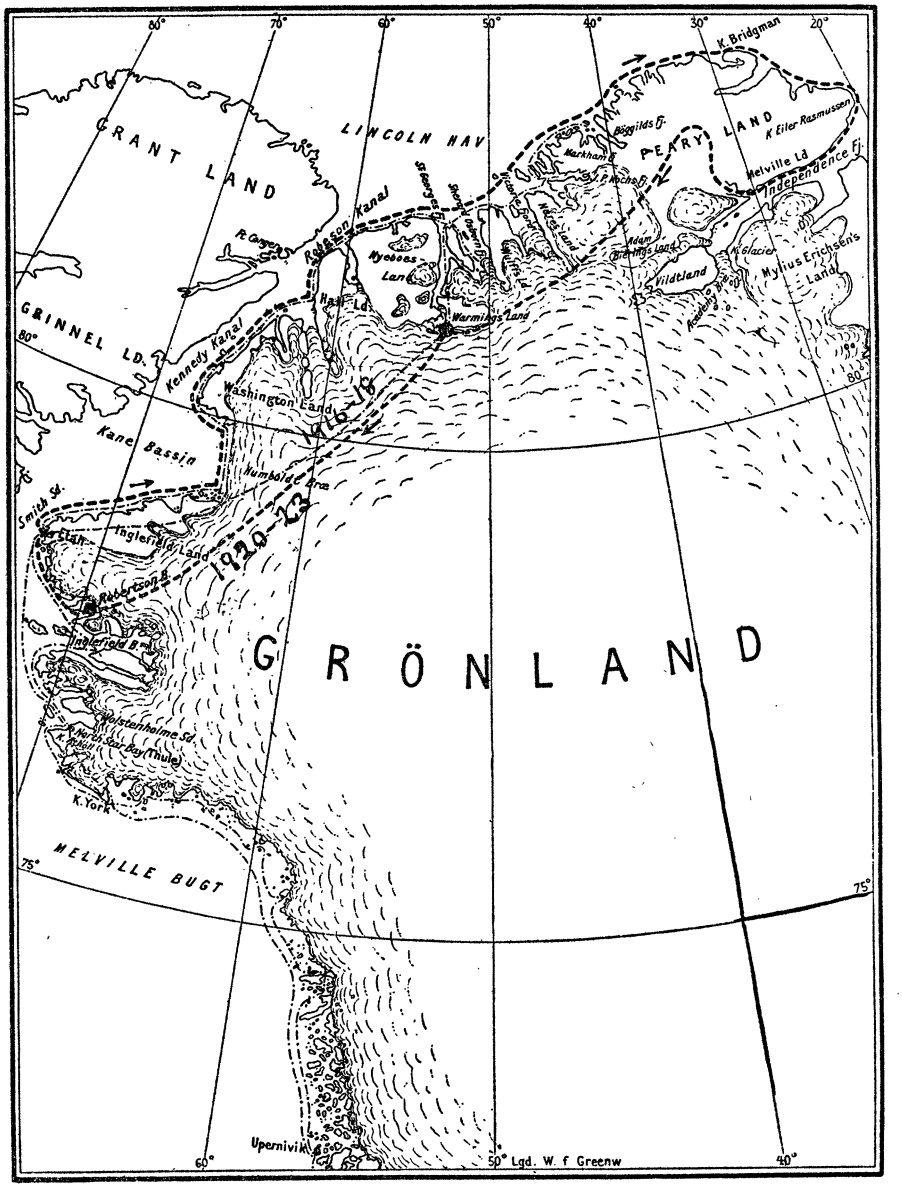
On the Second Thule Expedition, conducted by Knud Rasmussen, it fell to me not only to map out great ice-free territories, which had hitherto been unknown, but also to demonstrate that these new territories are geologically among the most interesting in Greenland, and that the so-called Caledonian Fold, which had hitherto been known to exist only in northern Europe stretched across to the other side of the Atlantic.

Though our results are confirmed by the collections which we succeeded in bringing home in spite of the greatest difficulties, I realized even while working in the field, that great problems still remained to be solved. Another expedition is planned the aim of which will be exclusively geological and geographical research.

Headquarters with a wintering station will be established in Robertson Bay in Inglefield Gulf. From here the following expeditions will be made:

1. A large provision cache for future journeys is to be taken across the Inland Ice from Inglefield Gulf to Warming's Land.[1] The transport will take place in the late summer, when the temperature is comparatively high and the surface snow is melted down or compressed. For this reason it is to be undertaken by Cleveland Tractors, which will be able to work across the ice-free marginal zone at Inglefield Gulf.

[1] South of Sherard Osborne Fiord. The writer's map of the regions surveyed by the Thule Expedition has been printed and will soon be published.



2. The next year the same journey will be repeated in dog-sledges to the cache and from there to the interior of Peary Land and to the north of Adam Bierings Land, an advanced base being established in Valmuedalen, from which various short journeys will be undertaken: to Independence Fiord where Mylius Erichsen's account of his journey is to be found, and northwards to Böggild's Fiord. On the way back, the part of Wulff's Land and Warming's Land, which I did not succeed in mapping out on the second Thule Expedition, will be surveyed. The main cache will be passed on the way back in August.

3. The following spring it is planned to proceed from headquarters along the coast, through Robeson Channel and further to the north of Peary's Land into Independence

Fiord. From thence to the main cache, from which the homeward journey will be made.

My Danish companion on these travels will be Mr. C. F. Slott, an engineer who during many years and in many countries has almost exclusively devoted himself to the study of tractors and their practical working. On the sledge-journeys I shall be accompanied by Polar Eskimos.

The cost of the expedition is estimated at 110,000 Danish Kroner, part of which has been guaranteed by the Danish State. The remainder was raised by a committee consisting of:

Mr. C. F. Wandel, former rear-admiral of the Royal Danish Navy, *Chairman.*

Mr. A. Erlandsen, shipowner, *Treasurer.*

Mr. J. Daugaard-Jensen, director of the administration of the colonies in Greenland.

Mr. V. Glückstadt, of the Merchants' Guild, consul general for Italy.

Mr. Eugene Warming, former professor of the University of Copenhagen.

The state has placed a ship at our disposal in order to take the expedition and its stores to Inglefield Gulf. This ship left Copenhagen on July 15, 1920.

Lauge Koch

Copenhagen

SCIENTIFIC EVENTS

UNIVERSITY OF TORONTO CONFERENCE ON RECENT ADVANCES IN PHYSICS

With a view to stimulating interest in research, the president and the board of governors of the University of Toronto have heartily approved of a proposal made to them to convene, during the present session, a conference on recent advances in physics. This conference will be held in the physics laboratory of the university between January 5 and 26, 1921.

Dr. Ludwik Silberstein, late professor in the University of Rome, and at present mathematical adviser to the Eastman Kodak Co., of Rochester, N. Y., has kindly consented to take the leading part in the conference. Dr. Silberstein is a distinguished mathematician and mathematical physicist and, during the period of the war, served as expert adviser to the important British optical firm, Messrs. Adam Hilger, Ltd., of London, England. By his training in Europe and by his own contributions to modern science, he is eminently fitted to speak with authority on his chosen themes. Dr. Silberstein will deliver a course of eighteen lectures on the special and generalized theories of relativity and gravitation and on some of the recent advances in spectroscopy and theory of atomic structure. In the latter courses there will be presented the theories put forward by Bohr and by Sommerfield on the origin of radiations, and by Epstein on the Stark effect, in addition to Dr. Silberstein's own investigations on non-spherical nuclei. From the nature of the subject the treatment will be chiefly from the mathematical standpoint.

Dr. Irving Langmuir, of the research laboratory of the General Electric Co., of Schenectady, N. Y., has also kindly consented to take part in the conference on January 17, 18 and 19. On these days he will deliver a short course of lectures on Theories of atomic structures, and other topics.

Provision has also been made in the conference for a course of sixteen lectures on a more or less popular nature. This course will be given by Professor McLennan. It will deal with various aspects of recent researches on the structure of matter and on the origin and characteristics of radiation. The dominant aim will be to present as simply and as clearly as possible the results of investigations which have been made up to the present on various phases of the subjects treated. The lectures of this course should prove of interest to science workers generally and to those of the public who are especially interested in the philosophical aspect of science or in some of its important applications.

A course of lectures will also be given on the fundamental properties of colloidal solutions. More and more in industry is a knowledge of colloids and their chemical properties becoming essential and it is expected that these lectures will prove interesting and profitable to manufacturers as well as to scientific workers. Professor E. F. Burton, both on account of his investigations in this subject and from