

Ice-fall of Vaughan Lewis Glacier
Juneau Icefield, Alaska

DATE

The Institute will be held for six weeks beginning July 18 and ending August 29, 1964. For qualified students, interested in gaining experience in research, a few supplementary days of field work can be arranged.

LOCATION

The main camp area lies on the Taku-Llewellyn Glacier system in the heart of the Juneau Icefield in the Alaska-B.C. Coast Range, 25 to 50 miles from Juneau, Alaska. Field trips are also conducted to observe phenomena in the deglaciated coastal region of the Glacier Bay National Monument or the forest fiord district of Lynn Canal and the Taku River Valley.

ELIGIBILITY

Fifteen National Science Foundation field Fellowships are available at the graduate level, plus two university research scholarships at the undergraduate level. Two half-time graduate assistantships are also available to previous participants. Three grants in lesser amounts are offered by the Glaciological Institute for qualified undergraduates.

The 15 graduate student awardees must either be enrolled in or accepted for graduate work as candidates for a degree at their respective institutions. Indication of intent to go to graduate school is not sufficient. Places for several additional students without Institute support are available.

FACILITIES AND LOGISTICS

Six main camps and research facilities are located on the icefield. Eight insulated and aluminum-sheathed structures, including a 46-foot laboratory and classroom building, and nine lesser ones exist at the main field sites. At trail camps, tent facilities are used. A 600-volume library containing pertinent research materials and basic references is maintained at the two main stations. Communication between camp sites and with Juneau is handled by radio. When necessary, helicopter and ski-plane transport to the icefield is available, with logistical support for heavy equipment and supplies provided by the Alaska Air National Guard.

For ground transport, five oversnow vehicles, sleds and skis are used. Field equipment for geophysical, glaciological, meteorological and general geological work is available and limited laboratory and microscopy equipment and facilities are provided for teaching and research.

The permanent installations, vehicles and scientific equipment are provided by the Juneau Icefield Research Program through the cooperation of its sponsoring agency, the Foundation for Glacier Research, Seattle, Wash.

INSTRUCTIONAL PROGRAM and STAFF

The Institute faculty is drawn from the Departments of Geology, Botany, and Engineering at Michigan State University. Professor Maynard M. Miller of the Geology Department and head of the Glaciological Institute at Michigan State University is Institute Director and conducts the Field Glaciology course. Dr. Miller has been in charge of the annual expeditions of the Juneau Icefield Research Program since its inception in 1946, and in 1961, 1962, and 1963 also directed the associated Glaciological Institute programs. In 1963 he served as geologist and glaciologist on the American Mt. Everest Expedition. His research interest and teaching experience is in glacial geology, polar and mountain geomorphology, meteorology, photogrammetry and glaciology, with emphasis on problems of glacier regimen, glacier dynamics and teleconnection.

Dr. Aureal T. Cross, Professor of Geology and Botany, will conduct the Glacio-botanical program, emphasizing arctic-alpine ecology, as he did for the 1963 field Institute. Since 1939, Professor Cross has maintained research and teaching interest in problems of Pleistocene and recent sedimentation, and the relationship of plant history and plant geography to climatic change as determined by palynological studies. His specialty is paleobotany, with current research in glacial and firn stratigraphy, bog studies, limnology of glacial lakes, and associated problems in sedimentation.

Dr. Tien H. Wu, Professor of Soil Mechanics, will teach the Glacier Mechanics course, as he has previously for the Institute. He will be assisted in the program by Dr. Richard W. Christensen, of the Dept. of Engineering Mechanics at the University of Wisconsin. Drs. Wu and Christensen have special Arctic experience and research interests in the mechanics of glacial deposits, clays and glacial ice. Each was also a member of the 1963 Institute program. They are currently engaged in the field study of plastic creep in glacial ice and the visco-elastic properties of glacial deposits and lacustrine clays.

Dr. Gottfried Konecny, Head of the Division of Surveying Engineering and Associate Professor at the University of New Brunswick, will be a visiting professor during the first part of the session. He will conduct a series of lectures and demonstrations in glacier photogrammetry and glacier photo-theodolite surveys. Professor Konecny has experience in glacier surveys from the Alps to the Canadian Arctic. He was formerly at the Technical University of Munich where he was a research associate with the late Dr. R. Finsterwalder.

Mr. Christopher Egan and Mr. James Whitaker, graduate students in the Department of Geology, ma-

THE GLACIOLOGICAL INSTITUTE
Department of Geology

Michigan State University

Announces the Fourth

SUMMER INSTITUTE OF
GLACIOLOGICAL SCIENCES

JUNEAU ICEFIELD, ALASKA

JULY 18 - AUGUST 29, 1964

Sponsored by the
NATIONAL SCIENCE FOUNDATION

and in cooperation with

the Juneau Icefield Research Program

joring in Glaciology, will assist the senior staff. Mr. Egan has been with the Institute's field program since 1962 and Mr. Whitaker participated in the Institute's 1963 Alaskan program.

Dr. Willard Nicholl, former Director of Student Health at the University of Montana, currently in private practice in Colorado, and Dr. Theodore R. Haley, surgeon from Tacoma, Wash., serve as medical coordinators. Dr. Nicholl has had two seasons as medical officer with the Juneau Icefield Research Program and Dr. Haley has participated in four previous expeditions of the program.

Mr. Barry Prather, of the Foundation for Glacier Research, is camp manager and terrain safety instructor, responsible for the field stations, oversnow vehicles and communications equipment. Mr. Prather assisted Dr. Miller on the Mt. Everest Expedition and has been a staff member on five previous expeditions to the Juneau Icefield. Associated with Mr. Prather in these responsibilities is Mr. Franz Gabl, Director of the Mt. Baker Ski School and former coach of the Canadian Olympic Team. He served as the Institute's terrain safety instructor in 1962 and 1963.

AWARDS AND ALLOWANCES

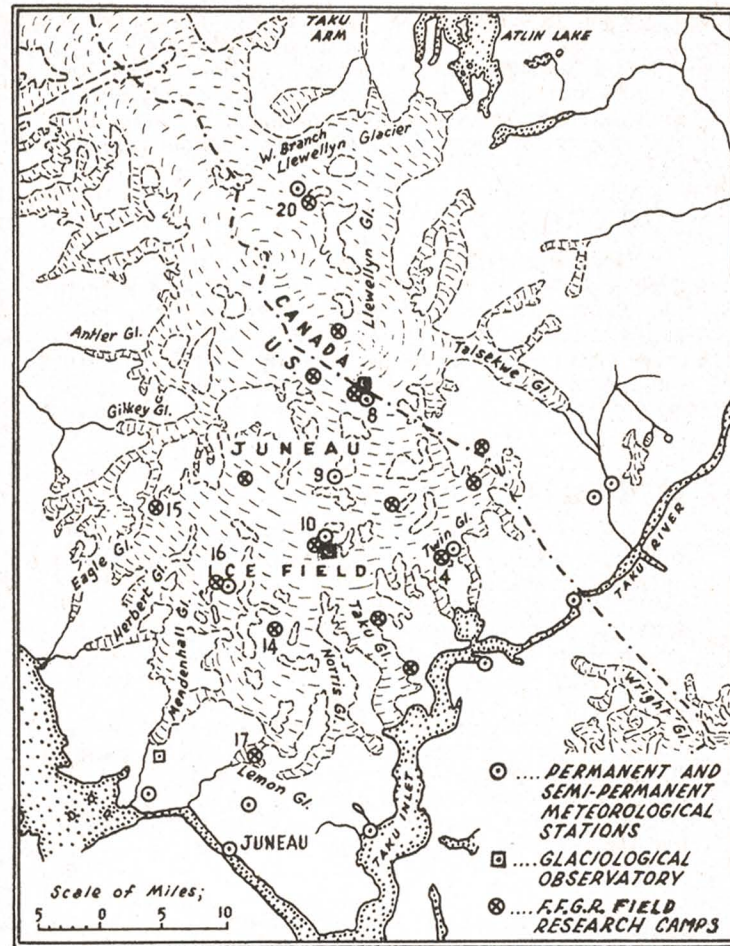
The N.S.F. graduate fellows will receive free tuition and be furnished round-trip air travel expenses, Seattle to Juneau, plus all food, lodging and facilities during the 6-week session. The participants can use the \$150 travel allowance, in lieu of Seattle-Juneau round trip air flight, for own automobile arrangements to and from Juneau. The Institute will try to put students in touch with each other if they care to make combined travel arrangements.

REGISTRATION

Participants will be registered in the Michigan State University summer quarter. The basic graduate credit requirement is 6 points, the cost of which for N.S.F. graduate fellows will be paid by the Institute. Additional credits can be arranged at \$12 per credit. Credits can be transferred to the participant's university. Details of the course content will be provided on request.

APPLICATION

Application should be made by letter, preferably before April 25, 1964. Letters should contain information on field experience and adaptability to rugged field conditions; transcripts; evidence of graduate school status or acceptance; and letters of recommendation from departmental chairman and two other individuals regarding scholarship and character. Participants will be notified by May 1.



Sketch map of the Juneau Icefield and vicinity showing meteorological and glacier research stations. Main permanent stations are numbered. Summer Institute headquarters at Camp 8 (elev. 7,000 ft.) and Camp 10 (elev. 4,000 ft.).

Direct inquiries to:

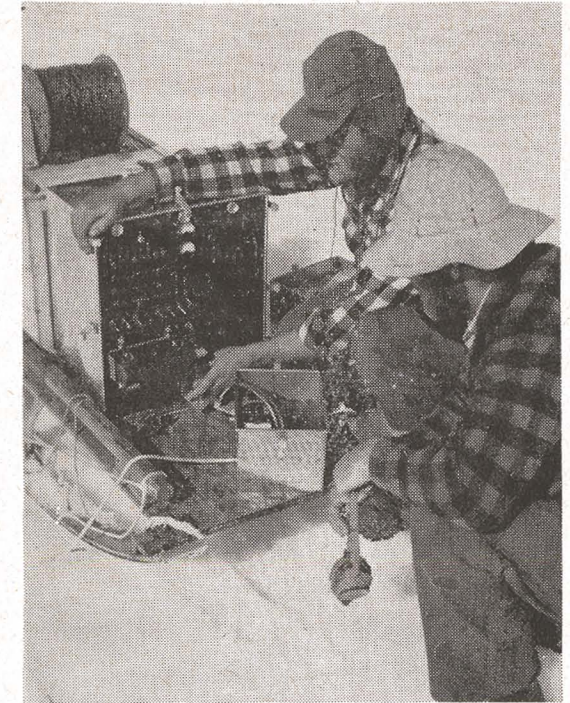
The Director, Glaciological Institute
Department of Geology

Michigan State University
East Lansing, Michigan

SUMMER ADDRESS:

P.O. Box 1775

JUNEAU, ALASKA



Glaciologists with portable seismograph



Mapping team on upper Taku Glacier