

Positions 3 to 8. Manual thermistor selection, one of the six thermistors can be selected to monitor separately and is activated for each thirty-minute operation of the half-hour cycling motor.

The accuracy of temperature measurement is 2 per cent of the range. The overall accuracy of time recording is about 3 per cent. The thermograph is housed in an aluminum case and weighs approximately 40 lbs.

For use by geographers who are interested in long-term temperature variation of the permafrost, the timer should be set at the 'on' position and the selector switch should be set at position 2 for obtaining readings at six depths. The instrument can be modified to run unattended for one year and with at least ten thermistors in the circuit. Construction parts and details are available from the Engineering Research Service, Canada Department of Agriculture, Central Experimental Farm, Ottawa, Canada.

The author wishes to thank A. Murphy for his excellent technical help. He is especially thankful to Dr. J. R. Mackay, Professor of Geography, University of British Columbia, for valuable discussions leading to the design of the instrument. R. S. ADHAV*

¹McLean, J. A. 1954. A method of constructing direct reading thermistor thermometer. J. Sci. Instrum. 31:455.

SOME SOIL-INHABITING, FRESH-WATER, AND PLANT-PARASITIC NEMATODES FROM THE CANADIAN ARCTIC AND ALASKA†

Canadian Arctic Expedition collection

From 1915 to 16 a nematode collection was made by a member of the Stefansson Expedition in the Canadian Arctic and Alaska. Soil and freshwater samples were taken from Depression Point,

*Physics Section, Engineering Research Service, Canada Dept. of Agriculture, Ottawa, Ont., Canada.

†An investigation associated with the program studies on Arctic insects, Entomology Research Institute, Canada Department of Agriculture (Paper No. 3).

Pihumalerksiak Island, Cockburn Point, Bernard Harbour, Cape Bathurst, and Herschel Island in the Canadian Arctic, and from Demarcation Point, Spy Island, Collinson Point, and Teller in Alaska.

The nematode collection was sent for identification to the late Dr. N. A. Cobb, a nematologist, who at that time was employed by the Bureau of Plant Industry, United States Department of Agriculture. Dr. Cobb did not publish a detailed report on the results of his identifications. In 1954, through the courtesy of Dr. F. J. Alcock, then Chief Curator, National Museum of Canada, the Canadian Arctic Expedition collection of nematodes was deposited with the Canadian National Collection of Nematodes, Nematology Section, Entomology Research Institute, Ottawa. The collection, which consists of some 7,500 specimens mounted on Cobb slides, has deteriorated badly.

Dr. Cobb's notes, which accompanied the collection, contained identifications of specimens as follows:

TYLENCHIDAE		
<i>Tylenchus</i>		3 spp.
APHELENCHIDAE		
<i>Aphelenchus</i>		1 sp.
MONONCHIDAE		
<i>Prionchulus</i>		2 spp.
<i>Mononchus</i>		1 sp.
DORYLAIMIDAE		
<i>Dorylaimus</i>		7 spp.
ACTINOLAIMIDAE		
<i>Actinolaimus</i>		1 sp.
PLECTIDAE		
<i>Plectus</i>		5 spp.
<i>Rhabdolaimus</i>		1 sp.
ONCHOLAIMIDAE		
<i>Oncholaimus</i>		1 sp.
AXONOLAIMIDAE		
<i>Cylindrolaimus</i>		1 sp.
MONHYSTERIDAE		
<i>Monhystera</i>		7 spp.
CHROMADORIDAE		
<i>Chromadora</i>		2 spp.
<i>Euchromadora</i>		1 sp.
<i>Hypodontolaimus</i>		1 sp.
CYATHOLAIMIDAE		
<i>Ethmolaimus</i>		2 spp.
<i>Achromadora</i>		2 spp.

TRIPYLIDAE	
<i>Tobrilus</i>	1 sp.
<i>Tripyla</i>	1 sp.
MICROLAIMIDAE	
<i>Microlaimus</i>	1 sp.
CEPHALOBIDAE	
<i>Teratocephalus</i>	1 sp.
<i>Cephalobus</i>	5 spp.
ALAIMIDAE	
<i>Alaimus</i>	1 sp.

Cobb¹ remarked that 70 per cent of the specimens are species of the genus *Plectus* and that the collection comprises 22 genera containing 47 species. About 50 per cent of the species are common much farther south, many occurring in the vicinity of Washington, D.C., and in the Tropics, and such species must be regarded as truly cosmopolitan.

Lake Hazen (Ellesmere Island) collection

From June 16 to August 18, 1962, several members of the Research Branch, Canada Department of Agriculture, Ottawa, worked at Hazen Camp (81°49'N., 71°18'W.) of the Canadian Defence Research Board, on the north shore of Lake Hazen, Ellesmere Island, N. W. T. This party, which consisted of six entomologists, one botanist, and one nematologist, was engaged in ecological studies of the Lake Hazen area. The collections of soil-inhabiting, and plant-parasitic nematodes which were made between June 16 and July 21, 1962, are the first of their kind from an area within the Canadian High Arctic.

The main purpose for collecting nematodes in the Lake Hazen area was to ascertain which groups exist in the High Arctic and the type of habitat which each genus occupies. Nematodes were collected by screening soil for the soil-inhabiting forms and by examining plant leaves, seed heads, and roots for the plant-parasitic nematodes. The live nematodes were eventually killed and fixed in 5 per cent formal for future examination and identification.

The Lake Hazen collection consists of at least 30 described and several undescribed genera represented by 60 or more species.

The following is a list of the nematode genera and number of species in each that were collected:

PLANT-PARASITIC NEMATODES

<i>Anguina</i>	1
<i>Ditylenchus</i>	1

SUSPECTED PLANT-PARASITIC NEMATODES

<i>Ditylenchus</i>	4
<i>Tylenchus</i>	4
<i>Tylenchorhynchus</i>	2
<i>Criconemoides</i>	1
<i>Helicotylenchus</i>	1
<i>Psilenchus</i>	2
<i>Aphelenchoides</i>	3
<i>Hexatylus</i>	1
<i>Neotylenchus</i>	1

SOIL-INHABITING NEMATODES

<i>Dorylaimus</i>	2
<i>Eudorylaimus</i>	5
<i>Ethmolaimus</i>	1
<i>Achromadora</i>	1
<i>Cylindrolaimus</i>	1
<i>Tylencholaimus</i>	1
<i>Wilsonema</i>	1
<i>Monhystrella</i>	1
<i>Cryptonchus</i>	1
<i>Prismatolaimus</i>	1
<i>Alaimus</i>	1
<i>Acrobeles</i>	3
<i>Chiloplacus</i>	3
<i>Teratocephalus</i>	1
<i>Euteratocephalus</i>	1
<i>Punctodora</i>	1
<i>Tripyla</i>	1
<i>Plectus</i>	2

PREDACEOUS NEMATODES

<i>Mononchus</i>	2
<i>Prionchulus</i>	3

MERMITHIDS

Unidentified genus	1
--------------------	---

Discussion

Since the collection made by the Stefansson Expedition includes freshwater forms, it is impractical to compare it with the Lake Hazen collection. However, in both collections the species of the genus *Plectus* are abundant and present in nearly all the samples taken. The genus *Rhabditis*, a rather common form south of the Arctic Circle, is noticeably absent in all collections.

The plant-parasitic nematodes include a grass nematode, *Anguina agrostis* (Steinbuch), which was found parasitizing the seed heads of *Arctagrostis latifolia*. A stem nematode, *Ditylenchus* sp., was found attacking the leaves of *Dryas integrifolia*.

Acknowledgements

For the Canadian Arctic Expedition collection of 1915-16 I am indebted to various members of the National Museum of Canada, Ottawa, who made this collection available. Thanks also go to the Defence Research Board, Ottawa, and to Dr. G. Hattersley-Smith, the leader of Operation Hazen, for making available the facilities at Hazen Camp.

ROLAND H. MULVEY*

¹Cobb, N. A. 1921. Nematodes collected by the Canadian Arctic Expedition under Stefansson. (Read before Helminthol. Soc. Wash., D.C., Jan. 1921). *J. Parasitol.* 7:195-196.

The Friends of Polar Research, University of Wisconsin

The Friends of Polar Research have concluded their first year of meetings at the Geophysical and Polar Research Center, University of Wisconsin. *The Friends* are an informal organization of university staff and students interested in the broad field of polar studies. Membership in the organization is drawn from sixteen departments ranging from Anthropology to Zoology and meeting attendances range from 20 to 35 persons. At each meeting a lecture is given followed by a lively and stimulating discussion among the group. The evening concludes with coffee and convivial comradeship. The speakers and topics during the past year have been: Prof. Osmund Holm-Hansen (Biology), "Laboratory studies on organisms isolated from the Antarctic"; Prof. Kirk Stone (Geography), "Norden to Alcan — a transfer of settlement experience"; Prof. Robert Black (Geology), "Pat-

terned ground in Antarctica"; Prof. William S. Laughlin (Anthropology), "Origin of Eskimos and Aleuts"; Prof. Robert Ragotzkie (Meteorology), "Antarctic Lakes"; and Mr. Mario Giovinetto (Geophysical and Polar Research Center), "Antarctic Glaciology". A similar, full and stimulating program is planned for the 1963-4 academic year.

A NOTE ON ICE ISLAND WH-5†

As reported by Hattersley-Smith¹ Ice Island WH-5, the easternmost and largest (approximately 20 by 9 km.) of the islands resulting from the massive calving of the Ward Hunt Ice Shelf during the winter 1961-2, drifted eastward, whereas the other four islands drifted westward. WH-5, tracked through radar photography by the U.S. Navy "Birds-eye" ice reconnaissance flights, continued its eastward movement during the winter 1962-3. It entered the Lincoln Sea, moved south through Robeson Channel and between February 24 and 28, 1963 became lodged across Kennedy Channel, with one end resting against the shore of Ellesmere Island and the other end held by mid-channel Hans Island. In this position the ice island formed an effective barrier to the southward movement of sea-ice from the Arctic Ocean. Open water soon appeared south of the obstruction and by May extended well into Kane Basin.

In a study of WH-5 during the summer of 1963 emphasis was placed on physical oceanography, both to observe the local influence of the ice island and to take advantage of the unusual presence of open water in an area where ice normally restricts ship operations. The study was directed by D. C. Nutt and L. K. Coachman and was sponsored by the Arctic Institute with support from the U.S. Office of Naval Research and the U.S. Coast Guard and the collaboration of the Woods Hole Ocea-

†This brief note, based only on data immediately available, is being published to provide timely information on the recent drift and break-up of ice island WH-5. A more comprehensive report will follow.

*Chairman, Nematology Section, Entomology Research Institute, Research Branch, Canada Department of Agriculture, Ottawa.