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## REFERENCES

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- <sup>2</sup>Tailleur, I. L., B. H. Kent and H. N. Reiser. 1966. Outcrop geologic maps of the Nuka-Etivluk region, northern Alaska. *U.S. Geological Survey open file report*, 5 sheets, map scale 1: 63, 360.
- <sup>3</sup>Detterman, R. L. 1970. Sedimentary history of the Sadlerochit and Shublik Formations in northeastern Alaska. In: American Association of Petroleum Geologists, *Proceedings of the Geological Seminar on the North Slope of Alaska, Pacific Section*, pp. 01-13.

## Devon Island Programs 1972-1973

From April 1972 through the 1973 field season, the Arctic Institute's research base on the northeast coast of Devon Island (75°40'N., 84°40'W.) will be the seat of operations for scores of investigators and their field assistants. The major research program continues to be a large integrated tundra ecosystem study sponsored by the Canadian International Biological Program (IBP). The Base Camp is also being used by groups of researchers from the Canadian Wildlife Survey, and from the Polar Continental Shelf Project. The two AINA-sponsored projects are summarized below.

The status and condition of the Base Camp and the logistics services, remain essentially as reported in the 1971 field summary (*Arctic*, Volume 25, Number 2, page 156).

During the summer of 1972, and the winter of 1972-73, the camp was used as a communications centre, and for providing other assistance to research stations established on Coburg Island and on the Carey Islands (Greenland) which are part of the Institute's North Water Project.

During the 1972 summer the camp staff were host to a number of distinguished visitors, including Dr. and Mrs. F. Armstrong of the Institute's Board of Governors, Mr. T.

Harwood, Chairman of AINA's Devon Island Advisory Committee, and Mr. G. J. Thompson, AINA's Finance Officer.

### ECOLOGICAL STUDIES OF SEDGE-DOMINATED MEADOW TUNDRA

During the 1972 field season studies were continued on the ecology of sedge-dominated meadows. Populations mapped during 1971 were relocated and mapped and new map plots established at other locations in the lowland. Studies of rhizome behaviour were continued. Complete systems were excavated and collected at five locations. Rhizome growth was monitored on selected individual plants. These plants were marked and re-buried and will be followed continuously. Population characteristics of sedges invading small ponds and drained lake systems were further investigated.

Three-and-a-half weeks were spent at the National Museum of Natural History camp on Bathurst Island. During this period six sedge meadows were selected and analysed for comparison with the Devon Island meadows. Five permanent plots were also established and mapped and populations of *Carex stans* collected for both seed and morphological measurements.

A project to investigate the revegetation of vehicle-disturbed sedge meadows with native *Carex* species was also initiated. Six sites of heavy disturbance were located on the ground. These areas were then subdivided into various treatment blocks. Analysis of plantings of *Carex stans* as well as natural revegetation in some blocks will be monitored in following seasons. A detailed report of the last-mentioned project is at present being prepared for the Arctic Institute of North America and the Canadian Wildlife Service which supported the study.

### VEGETATION STUDIES ON THE INTERIOR PLATEAU

Vegetation studies were initiated on the Plateau to the east of Base Camp during the 1972 season. The Plateau is spatially isolated from the lowlands by a vertical escarpment approximately 300 m. in height. Though the two areas are contiguous, the influence of controlling environmental conditions appears very different. These differences are reflected in the dichotomy of floristic composition and vegetation cover of the Plateau and Lowland. On 27 July, the Plateau became snow-free. A 2.4 km. transect was placed east from the Plateau margin to the interior. The transect crossed a number of habitats, including solifluction terraces, stripes and sorted nets. Four maximum-minimum thermometer enclosures

and two hygrothermograph stations were set out to determine microclimatic variations along the line. Forty 25 m.<sup>2</sup> quadrats were placed at 80 m. intervals along the transect for vegetation analysis.

At each plot, the percentage cover of rock, soil, vascular plants and bryophytes was calculated; species composition was determined and voucher specimens from each quadrat were collected. Lichen specimens were also collected for later taxonomic determinations in the laboratory. Surface soil samples from each plot were collected for mechanical and chemical analysis. Soil pits were dug on selected plots. At 5 points along the transect, regular sampling of soil at 0 and 15 cm. was undertaken to determine a curve of seasonal soil moisture. These values will be compared with concurrent samples taken in nonsorted circles on the Lowland.

In addition to the 40 systematic plots, 5 additional sites were also analysed. Three of these areas were chosen for study of vegetational characteristics 6.4 km. from the plateau margin. Comparisons with the transect data should indicate if the visual homogeneity of the vegetation on the Plateau is constant over a large area. A high density bryophyte community at the head of a drainage system and one solifluction terrace characterized by *Alopecurus* were also analysed. These sites were unusual in that they both had vegetation cover values greater than 40 per cent. Other plots on the Plateau had values of 1 to 4 per cent.

Live specimens of 5 species were collected from the interior and margin of the Plateau

and Lowlands. These plants are now in the University of Massachusetts growth chambers where comparative tests on their physiology and reproductive biology were carried out during the 1972-73 winter.

#### ACKNOWLEDGEMENTS

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#### Correction

*Arctic*, volume 25, number 3, September 1972; paper on barren-ground caribou by Miller *et al.*; page 200, third and fourth line should read: "Baskin (1970 p. 33) stated that it is doubtless that the structuring of the herds within populations is the result of adaptation to the environment."

#### Notice to Readers

The opinion expressed by the Arctic Institute's Research Programs Committee that every effort should be made to increase the social science content of *Arctic* was noted and endorsed by the Information Programs Committee in December 1972. To this end the need is being brought to the attention of readers who may be competent to write on subjects other than those in the physical and biological disciplines, in the hope that they will submit manuscripts for possible publication in the journal.

*Walter O. Kupsch*

CHAIRMAN

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