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ON THE OCCURRENCE OF LIFE NEAR THE BEARDMORE GLACIER, ANTARCTICA

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During the New Zealand Alpine Club Antarctic Expedition 1959–60, the mountains east of the Beardmore glacier were explored from 83° 40′ to 84° 20′ S Lat. and from 171° 30′ to 174° E Long. These mountains are part of the coastal ranges of South Victoria Land which flank the west side of the Ross Ice Shelf. Rock, which is exposed extensively throughout the area and consists of dark metamorphic formations intruded by light-ochre granite, was examined for plant and animal life and collections were made for detailed examination later.

The commonest forms of life encountered were several species of lichen. Some species were found at only one or two sites whereas a few species were found on nearly every rock outcrop examined from the Ice Shelf to 2100 meters, 48 kilometers inland. A species of moss was also found at 5 sites ranging from the Ice Shelf to 600 m. All 5 sites were dark rock, much weathered, where melt water occurred.

At 4 sites Collembola were found:

Site 1. 6 Dec. '59, 390 m. NE Spur of Mt. Harcourt among granite boulders in gravel moistened by melt water. Collembola found crawling in moist fruticose lichen. Black bulb temperature was +13° C.

Site 2. 6 Dec. '59, 600 m. Same spur as last. Collembola found in dry fruticose lichen growing on the crest of the spur. The specimens from sites 1 & 2 are probably a different species from the others.

Site 3. 6 Dec. '59, 300 m. NW Spur of Mt. Harcourt, collected by B. L. Smith in moss.

Site 7. 16 Dec. '59, 450 m. Prospect Spur, 84° 54′ S. A swarm of about 20 found by B. L. Smith under a loose boulder which was lying on a heap of granitic gravel, moist from snow melt. The specimens consisted of juveniles and adults.

A species of red mite was collected from 4 sites. It was found by careful examination of lichen or moss with a hand lens and occurred on both types of plant.

Site 1. 6 Dec. '59, 390 m. NE spur of Mt. Harcourt. One mite seen crawling on soil in rock crevice.

Site 4. 9 Dec. '59, 300 m. Rock island in the Kyffin glacier. Mites found by B.L. Smith.

Site 5. 12 Dec. '59, 150 m. Black ridge. Mites found with white bodies and pink legs, in moist fruticose lichen. Two jumped when touched with forceps.

Site 6. 14 Dec. '59, 300 m. Sentinel Nunatak. Mites found on rock near moss.

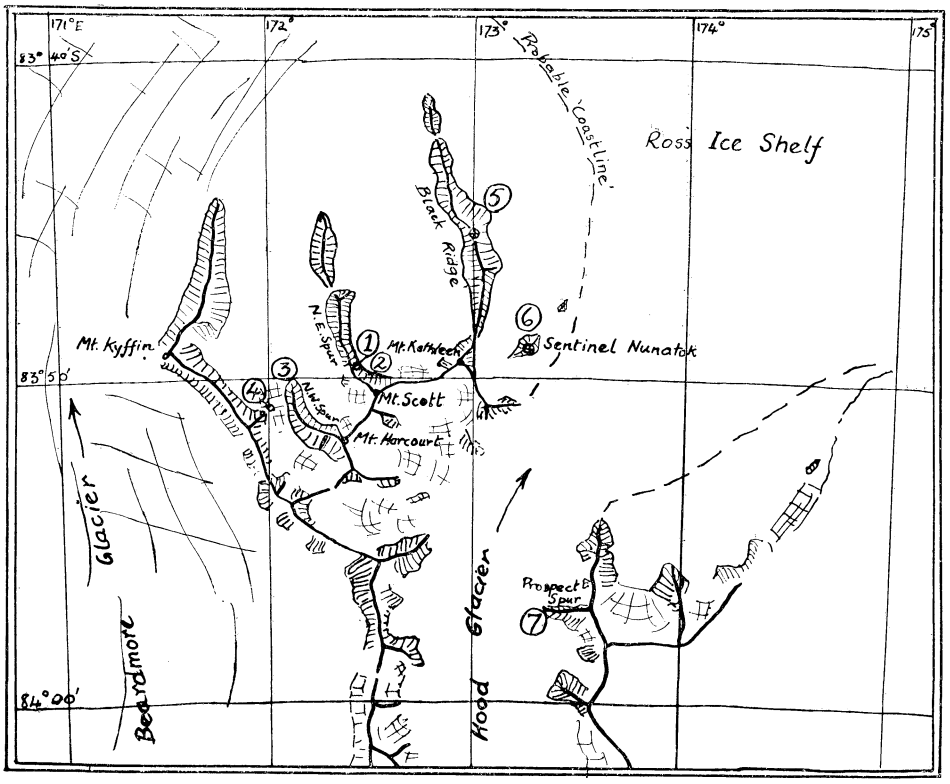

Fig. 1. Sketch map showing northern half of Hood Glacier where arthropods were found. Dark hatching indicates exposed rock. (From survey by N. Z. Alpine Club Antarctic Exped. 1959–60).

From the sketch map (fig. 1) it will be seen that the Collembola and mites only occurred on the coastal ranges and, though every rock outcrop visited inland was examined for animal life, none was found further south than Prospect Spur.

Mosses and invertebrates have previously been recorded from Antarctic coastal ranges. The most southerly insect record was Granite Harbour at 77° S. Lat. (Gressitt & Weber, 1960) so that these observations extend the known range 650 km further south. Although 600 km from the open ocean (in summer), the ranges are still coastal in the sense that the Ice Shelf floats on water; it is conceivable that these small communities became established before the formation of the Ice Shelf, and in support of this is the observation that neither moss nor invertebrates occurred inland. However, Collembola and mites are common in aerial zooplankton so that conveyance by wind cannot be excluded and the occurrence of mites on rock only recently exposed by the ice (site 4) suggests that wind was the distributive agent here.

Exploration of coastal ranges further south in Queen Maud Range and the Horlick Mts. should disclose more invertebrate and plant communities. The geological party of the 2nd Byrd Expedition which explored the Queen Maud Range found 7 species of lichen

(Siple, 1938); careful examination by biologists should reveal invertebrates also and extend the known distribution further south.

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Postscript

Since going to press, Dr. J. T. Salmon, Victoria University of Wellington, New Zealand, has identified one species each of the genera *Xenylla* and *Anurophorus* among the Collembola, both new records for the Antarctic.

RECENT LITERATURE ON PACIFIC INSECTS

(Continued from page 148)

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