hot-houses themselves. Therefore, once when the snow deposit gets wet or becomes icy, its melting will be accelerated by the increasing hot-house effect. This is the reason that the puddles are formed in the lower parts, getting wet first, of the uneven snow surface.

The puddles dealt with here are formed only in the fixed ice field, and none on land nor on island. This may be explained as follows. The surface temperature of the snow deposit approaching to 0°C in summer, the temperature throughout the layers of snow, fragile ice, and fast ice also approaches to 0°C, because the lower surface of the fast ice is kept at the temperature of about −1.5°C all the year by sea water. Thus, the snow and fragile ice on the fixed ice are easily melted when summer comes.

GEOMORPHIC FEATURES OF THE EAST COAST OF LÜTZOW-HOLM BAY, EAST ANTARCTICA*

Torao YOSHIKAWA** and Hiroshi TOYA***

リュツツォウ・ホルム湾東岸の地形*

吉川虎雄**・戸谷　洋***

Among landforms on bared rock areas along the east coast of Lützow-Holm Bay, glacially quarried surfaces and glacial throughs are most remarkable. And minor characteristic features of former glaciation, such as polishing, striation, grooving, and existence of erratic boulders, can be found throughout every height in these areas, the highest of which reaches 542 meters above sea-level in the SE part of the Langhovde District. The direction of movement of pre-existing ice suggested by these topographies is generally from E to W or from SE to NW, and is discordant to geologic structure.

A small glacial cirque which cuts in the smoothed surface formerly made by the ice sheet exists in the southern mountains of the Langhovde District; the bottom of which is about 270 meters above sea-level, and has a shallow pond. On the other hand, raised beaches about 15 to 20 meters high can be seen at several places in the Ongul Islands and the Langhovde district, which are partly covered by thin veneers of sand and gravel bearing fossil shells.

Present conditions, in short, are of the cold desert type. Desquamation, exfoliation, and wind erosion are most remarkable, and nivation is also in process. But geocryological processes are poorly developed, owing to dryness of loose deposits and their coarse-grained composition. On the one hand, cellular deflation of rocks and boulders of the kind associated with deserts can be seen in many places, but the process of its formation is still exactly uncertain. These erosive agencies have modified the original landscapes made by the ice sheet. It must be noticed here that minor features of glaciation on rock surfaces have been less subjected to these agencies in the southern region, i. e. the Skallen District

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** 東京大学理学部地理学教室，第1次南極地域観測隊員. Institute of Geography, University of Tokyo. Member of JARE 1956–57.

*** 東京都立大学理学部地理学教室，第1次南極地域観測隊員. Geographical Institute, Tokyo Metropolitan University. Member of JARE 1956–57.

and the Padda Island, than in the northern region, i.e. the Ongul Islands and the Langhovde District.

In conclusion, the ice sheet formerly extended all over these areas surrounding Syowa Station, and then its shrinking period began earlier in the northern part and later in the southern part, when cirque and valley glaciers were formed at one time on the higher part of the Langhovde District and a relative upheaval of land of about 15 to 20 meters took place. At present, these bared rock areas are a kind of "Antarctic oasis," and are being exposed to peri-glacial agencies and wind erosion. More detailed descriptions have been presented in following literatures.

Literature

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MOVEMENTS OF CALVED ICEBERGS ALONG PRINCE OLAV COAST*

Yukio KITANI** and Arao YOSHIDA***

プリンスオラフ海岸における海岸線の変化*

木谷幸雄**・吉田新生***

Concerning the icefront area along Prince Olav Coast, some amount of movements about a glacier tongue and calving icebergs were found out during two years.

For examining how much each of the calved icebergs floating on the sea or of the icebergs that are calving from glacier tongue has moved, photogrammetrical plotting was carried out to be compiled in a map of scale 1:50,000. The results are follows.

1. The mean distance of movement of calved icebergs is within 1200 to 800 meters in two years.

2. It is supposed that the drifting icebergs are not too much affected by either long-shore current or wind though limited in a narrow area.

3. Concerning the relative velocity of the stream flow of the icebergs, the central part of the glacier tongue is faster, while, the both sides are slower. The difference of the velocity between them might be caused by the ground feature beneath the glacier, and the larger the mass, especially about thickness, the faster it might moves.

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** Geographical Survey Institute.
*** Geographical Survey Institute. Member of the Japanese Antarctic Research Expedition, 1958-59.