

GEOLOGY OF THE REGION AROUND SYOWA STATION,
ONGUL ISLAND, LÜTZOW-HOLM BAY, ANTARCTICA*

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リュッツォウ・ホルム湾東岸の地質*

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Gology of the region around Syowa Station is briefly summarized. The rocky area found in the region consists entirely of metamorphic rocks probably of pre-Cambrian age. The rocks are classified into eight units on the basis of their modes of occurrence and petrographic characters; (1) hornblende-pyroxene dioritic gneiss, (2) marble and quartzite, (3) basic metamorphic rocks, (4) pyralspite (Ca poor garnet)-biotite granodioritic gneiss, (5) biotite granitic gneiss and granite, (6) pegmatites, (7) glacial morainic deposits and erratic boulders, and (8) fossil shell-bearing sand and gravel deposits.

The whole of the rocks exposed in regions (1-6) seem to be those of granulite facies or of the upper part of amphibolite facies according to studies on their mineralogy. Among them the hornblende-pyroxene dioritic gneiss and basic metamorphic rocks resemble closely the intermediate and basic charnockites of India respectively. Erratic boulders were found to include, besides the rocks exposed in the region, garnet-biotite-sillimanite gneiss, amphibolite, epidote amphibolite, hornblende-chlorite schist, biotite hornfels, garnet-muscovite hornfels, quartzose sandstone, and ilmenite-augite basalt. The last four rocks were possibly derived from the Beacon Sandstone formation and dolerite intrusives.

Planes of gneissosity or banded structure generally strike NS and dip eastward from 30° to 60°, although local fluctuation and gentle folding are observed in some places. All of the rocky areas scattered in the region belong structurally to one unit. The rocks exposed in the region as well as those found as boulders are characteristic members of East Antarctica.

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