

chromatographed over silica gel gave three crystalline substances. Two of them were obtained in very small quantities while the third one could be obtained in relatively good yield (0.1%) as a micro-crystalline solid from chloroform-methanol, m.p. 262-64°,  $[\alpha]_D^{29} = +100.6^\circ$  (methanol). It gave a positive Liebermann-Burchard reaction and formed a methyl ester with diazomethane, feathery needles from alcohol, m.p. 130-31°,  $[\alpha]_D^{29} = +65^\circ$  (chf.) showing that it might be a triterpene acid. The properties of this substance do not seem to correspond with any of the known compounds.

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\* All the substances described in this note gave satisfactory elemental analysis.

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## NORTHERN LIMIT OF SYLHET TRAP

THE area around Umstew, in which the present geological investigation has been done, is on the southern slope of the Shillong plateau occupying a part of the Cherrapunjee, and lies between Lat. 25° 15' 20" and 25° 20' 30" N. and Long. 91° 41' 0" and 91° 45' 0" E. in toposheet 78 0/11.

Medlicott (1869) who did the pioneer geological mapping of this part of the plateau, named the basaltic flow found here, as the 'Silhet trap' as it is best exposed in the vicinity of the Sylhet plains.

In his map, Medlicott traced the extension of this trap rock up to 'Tarna' on the north, to 'Maoelong' on the south, and on the east and west up to Um Tangsiang and Bogapani rivers respectively. From his map it is clear that the rock type occupies the area within these boundaries except for a small gap between 'Sobar' and 'Vulang'. Ghosh (1940) who remapped the area has shown that its northern limit extends to 2 km. south of Mawmluh. Recent geological mapping (Dutta, 1964) shows that the northern limit of this basaltic flow extends to the gorge face of 1023' falls (91° 43' 0" : 25° 19' 0") near Umstew about 12 km. further north. Ghosh who studied the strati-

graphic succession on this gorge face has not reported the occurrence of the trap there.

The rock type is a dolerite or basalt, sometimes with olivine and more or less serpentinized. It is invariably black in colour. The variety exposed here is amygdaloidal, the amygdules being filled with chalcedony and calcite. The constituent minerals are olivine, pyroxene and plagioclase while magnetite, serpentine, iddingsite form secondary minerals.

In this section the trap fills the depressions on the uneven pre-trap land surface formed by the granite. The age of the Sylhet trap is Middle Jurassic and on lithological similarity it has been equated with the Rajmahal trap.

From the above discussions, it has been concluded that in the Khasi Hills, Umstew is the northern limit of the Sylhet trap.

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Directorate of Geology S. K. DUTTA.  
and Mining,  
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## RAPAKIVI STRUCTURE IN THE GRANITIC ROCKS OF ALMORA, U.P., INDIA

DURING the investigation of the granitic rocks of Almora area (79° 30' 50" E., 29° 36' 50" N.), the writers noted in them the presence of rapakivi structure. It is normally not observed megascopically but is brought out on staining with sodium cobalt nitrate and rhodizonate reagent (Bailey and Stevens, 1960<sup>1</sup>). Under the microscope perthite porphyroblasts are, at times, seen to be surrounded and corroded by a polycrystalline rim of oligoclase grains. Quartz and mica also sometimes form a part of the rim. The oligoclase is untwinned and contains myrmekitic inclusions of vermicular quartz. It shows 2 V between 84° (+ve) to 82° (+ve) corresponding to an anorthite content of 24-26%. The perthite is usually idiomorphic and in this respect differs from the characteristically ovoid potash feldspars of rapakivi granites from the type areas in