

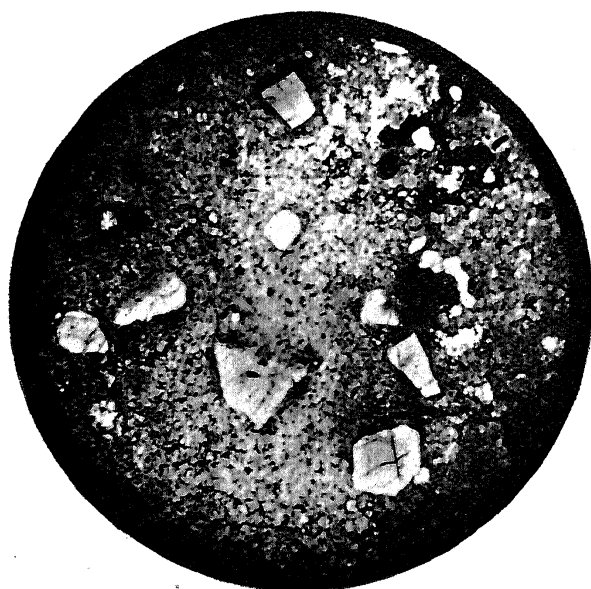
Letters to the Editor.

The Panjal Trap.

THE volcanic origin of the Panjal Trap of Kashmir was first established by the researches of Lyddeker and McMahon in 1883.¹ In his revision of the geology of Kashmir C. S. Middlemiss briefly referred to the Trap as 'genuine old basic lava flows'.² The microscopic characters have been described in some detail by D. N. Wadia. According to him 'the lava is a basic variety of augite-andesite'.³

The most easily accessible and prominent outcrops of the Trap occur in the neighbourhood of Srinagar where they form the high peak of Takht-i-Suleiman and the precipitous scarp at the back of the Mogal Gardens. It is easily seen along the road leading from Srinagar to Anantnag up to a distance of 5½ miles where the Jhelum comes close to the hill. Here the trap is extensively quarried as a building stone. During a recent visit to Srinagar the authors observed that the rock was often of a very light colour and gave low values of specific gravity common to rhyolites and trachytes. At many localities clear phenocrysts of quartz could be seen in hand-specimens, especially with the aid of a lens.

The accompanying figure is a micro-photograph of a specimen taken from the



Rhyolite, Panthachuk, near Srinagar, Kashmir. $\times 20$.

¹ *Mem. G. S. I.*, 22, p. 218.

² *Rec. G. S. I.*, 40, Pt. 3, p. 235, 1910.

³ D. N. Wadia, *Geology of India*, p. 360, 1926.

quarry at Panthachuk, between the fifth and the sixth milestone, south-east of Srinagar. It shows euhedral to sub-hedral phenocrysts of quartz which have often suffered corrosion in the magma. These crystals also show original fine cracks which appear as white lines in reflected light. Phenocrysts of simple-twinned felspar are present and are turbid due to kaolinisation. The groundmass is micro- to crypto-crystalline and is of a felsitic character. Traces of a chloritic mineral and iron ore are present. In hand-specimens the rock is compact and has a grey colour with minute white and black spots of felspar and chlorite respectively scattered sparingly through the mass. Small phenocrysts of quartz are also visible under a lens. Its specific gravity is 2.63. A partial chemical analysis carried out by the usual method gave 78.89 per cent. of silica. The rock is clearly a quartz-felsite or rhyolite.

The general description of the Panjal Trap given by D. N. Wadia⁴ applies to the rocks of this region except that granular augite is not seen as an essential constituent and the lavas often show phenocrysts of quartz. Pitchstone of a dark colour is not uncommon and shows a superficial resemblance to basalt. It is interesting to find that at least some of the lava-flows of the Panjal Trap are definitely rhyolites and not augite-andesites, and it is doubtful whether basic or sub-basic lavas occur in any quantity in the neighbourhood of Srinagar. Detailed study of the lavas of this formation round the Kashmir valley is being carried out by the second author of this article.

K. K. MATHUR.
S. N. WAKHALOO.

Geological Laboratory,
Benares Hindu University.
September 1, 1933.

On the Incoherence of Fluorescent Radiation.

ACCORDING to the generally accepted ideas regarding the excitation of fluorescence by light waves, we should expect the fluorescent radiations starting from neighbouring molecules in the medium to be incoherent in

⁴ *Op. cit.*