

Lady Tata Memorial Trust for the award of a scholarship.

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Haffkine Institute,
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- ¹ Miller *et al.*, *J.A.C.S.*, 1939, **61**, 1198.
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Dewing *et al.*, *J.C.S.*, 1942, 239.
² Welebir and Barnes, *J.A.M.A.*, 1941, **117**, 2132.
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Parentiss and Kanealy, *J. Urol.*, 1942, **47**, 11.
³ Crossley *et al.*, *loc. cit.*
Steinbach and Duca, *Proc. Soc. Exp. Biol. Med.*, 1940, **44**, 133.
⁴ Bergmann and Haskelberg, *J.A.C.S.*, 1941, **63**, 2243.
⁵ Crossley, Northey & Hultquist, *Ibid.*, 1938, **60**, 2217.
⁶ Miller *et al.*, *loc. cit.*

CHLOROPHÆITE BEARING BASALTS FROM THE CUDDUPAH TRAPS (PRE-CAMBRIAN)

IN the course of a detailed examination of the basaltic lava flows associated with the rocks of the Cuddapah system (Pre-cambrian) in South India, the presence of chlorophæite has been noticed. Since all the occurrences of chlorophæite so far recorded in India are from the comparatively much younger basalts such as those of the Rajamahal series¹ (lower to middle Jurassic) and the Deccan traps² (early Tertiary), the present find of this mineral in rocks so old as the Pre-cambrian is of some interest.

Chlorophæite occurs in the top basaltic flows of both the Papugnee and the Cheyair divisions of the Cuddapah system. The Vempally basalt is composed of labradorite, augite and iron ores. Chlorophæite occurs as amœboid patches in the interstices, is bottle green

in colour, and has a refractive index higher than canada balsam. It also occurs as pellets or spherules infilling cavities, and is then



FIG. 1

Cuddupah Basalt, showing a large spherule of chlorophæite. Also shows irregular patches of chlorophæite in the groundmass.

bordered by spherulitic chalcedony. These spherules sometimes contain needles of epidote. The Banganapalli basalts show similar patches or spherules but the colour is yellow or brownish yellow, and has a refractive index lower than canada balsam. Chlorophæite is here accompanied by calcite.

The chlorophæite in these basalts has developed at the expense of the primary minerals as has already been observed in the case of the Deccan and the Rajamahal traps—felspar being the last mineral to be palagonitised, as microscopic fibres of chlorophæite are found surfeiting the felspars.

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¹ Middlemiss, "On some Palagonite bearing Traps of the Rajamahal Hills and Deccan," *Rev. G.S.I.*, **22**.

² Fernor, "On Basaltic Lavas of Bhusaval," *Ibid.*, **58**.
Fernor and Fox, "Deccan Trap Flows of Linga," *Ibid.*, **47**.

Wadia, "Palagonite bearing Dolerite from Nagpur," *Ibid.*, **58**.