

remains very short and the body of the ovule turns upwards through 90° from its region of attachment, consequently bringing the apical part of the ovule to the base of the style (Figs. 3-5). Thathachar⁶ described the ovules in *Breynia* as orthotropous. But the ovules in *Breynia* do not conform to the definition of an orthotropous condition but are nearer to the hemianatropous nature. The obturator in these two species is clearly stylar in origin, as the glandular cells of the stylar canal descend in a bundle and come in touch with nucellar beak which protrudes out of the micropyle (Figs. 4, 5). This note records this feature for the first time to the best of our knowledge. The cells of the obturator, transmitting tissue, and the stigmatic papillae are remarkably similar and form a continuous strand of tissue through the style. Earlier workers on *Breynia*^{6,7}, somehow missed to make out the stylar origin of the obturator in *Breynia*.

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1. Willis, J. C., *A Dictionary of Flowering Plants and Ferns*, Cambridge, 1966.
2. Cronquist, A., *The Evolution and Classification of Flowering Plants*, Thomas Nelson and Sons Ltd., 1968.
3. Davis, G. L., *Systematic Embryology of the Angiosperms*, John Wiley and Sons, 1966.
4. Rao, P. N., "Euphorbiaceae," In : *Bull. Ind. Nat. Sci. Acad.*, 1970, 41, 136.
5. Webster, G. L., "The Euphorbiaceae of the South Eastern United States," *Jour. Arn. Arb.*, 1967, 48 (3), 303.
6. Thathachar, T., "Morphological studies in the Euphorbiaceae," *Jour. Mysore Univ.*, 1953, 13 B, 43.
7. Singh, R. P., "Forms of ovules in the Euphorbiaceae," in : *Plant Embryology, a Symposium*, C.S.I.R., New Delhi, 1962, p. 124.

SHORT SCIENTIFIC NOTES

A Note on Pyrrhotite of Tapang, Orissa

The note embodies preliminary investigations on pyrrhotite and associated sulphide mineralisation around Tapang (20° 5' 35" N; 85° 35' 30" E), Orissa. The rocks of the area consist of charnockites, basic granulites, granitic rocks, khondalites and quartzites. Pyrrhotite is invariably confined to the migmatized parts of basic granulites only. The sulphides occur along joints and fractures, occasionally as massive but otherwise sporadically dispersed.

Pyrrhotite is the dominant sulphide constituting more than 90% of the ore body. Coarse aggregates of anhedral pyrrhotite grains are interspersed with finer grained clusters with inclusions of silicate minerals. Etch reactions with HNO₃(1:1) and HCl(1:1) show strong brown colour and feeble tarnish respectively. With FeCl₃ and HgCl₂ negative reactions were recorded. Besides pyrrhotite, a few other sulphides like chalcopyrite, pentlandite, sphalerite, marcasite and pyrite occur in very minor quantities.

Chemical analyses of four samples of pyrrhotite showed the presence of nickel from 0.11% to 1.17% and sulphur from 33.4% to 37.7%. Besides, very small amounts of copper and zinc were also detected.

In the present case, pyrrhotite might be considered as having been formed at the time of crystallisation

of basic rocks but selective occurrences of the sulphides along zones of migmatization definitely indicate a genetic relationship with granitic activity. Therefore the alternative possibility of sedimentogenous origin or an origin by inversion from pyrite can be ruled out. Observed textural features and distribution pattern of the sulphides in basic granulites support the above contentions. Therefore it is logical to associate pyrrhotite with migmatization of basic granulites. The granitic material, while moving up along foliation planes, could have carried the sulphides and localised them at suitable sites under favourable conditions. This explains why pyrrhotite is observed wherever migmatitic activities are prominent.

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A Note on Some Interesting Fungi from Hyderabad (India)

During the survey (1971-72) of microfungi from pond waters, pond muds and soils of Hyderabad District (A.P., India) the author has isolated 146 species; which include 43 Phycomycetes, 16 Ascomycetes, 87 Fungi Imperfecti and a single sterile