

Bombay Presidency where these are found naturally, but not Kolhapur. Roxburgh¹ refers to them as natives of Coromandel, Ceylon, etc. Their occurrence, therefore, in Kolhapur is interesting from point of view of their distribution.

Drosera Burmanni Vahl. was collected at Radhanagari hills (a place of heavy rainfall) while *Drosera indica* Linn. was found at Katyayani hills (with much less rainfall), in marshy places.

A third variety of *Drosera*, also collected in a marsh near Gokulshirgaon—very near to the city, differs from *Drosera indica* Linn. in possessing red flowers instead of the usual white ones, while it agrees in other characters very closely. It also flowers in September.

This third type appears, therefore, to be a distinct variety of *Drosera indica* Linn., not recorded by Cook.¹ This may not be the same as that referred by I. Pfeleiderer³ and V. Mayuranathan² as having "pinkish" flowers.

The following new nomenclature is, therefore, proposed:—

Flowers white *Drosera indica* Linn.
var. *alba*.
Flowers red *Drosera indica* Linn.
var. *rubra* Parandekar et Diwan.

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September 16, 1943.

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1. Cook, T., *Flora of the Bombay Presidency*, 1901.
2. Mayuranathan, V., *Bulletin of the Madras Govt. Museum*. 3. Pfeleiderer, I., *Glimpses into the Life of Indian Plants*. 4. Roxburgh, W., *Flora indica*, 1874.

PRODUCTION OF ELEMENTARY SULPHUR BY REDUCTION OF SULPHATE THROUGH BACTERIAL AGENCY

IN the course of investigations on microbiology of some anaerobic bacteria at the Imperial Agricultural Research Institute, New Delhi, an organism, which reduces sulphate to elementary sulphur, has been isolated both from soil collected from the bottom of an irrigation channel and materials from the anaerobic fuel gas plant set up at the chemical laboratory. Although the reduction of sulphates to sulphides in the presence of organic matters has been known for a long time, no mention has been made in literature of any organism producing elementary sulphur by reduction of sulphate. The organism appears to be a new one of the kind as is evident from the morphological characteristics and biochemical tests. The organism is a gram negative, non-spore forming short rod. It grows in Dunham's solution in the presence of sucrose, lactose, maltose, raffinose, levulose, mannite, salicine, and glycerine with no gas and acid. The organism ferments glucose with production of gas and acid and reduces nitrate to nitrite and ammonia. It neither curdles nor peptonises milk. It does not reduce litmus milk. The organism grows well in Van Delden's lactate asparagine liquid medium of the following composition:—
K₂HPO₄ 0.5 gm., Sodium lactate 5.0 gm., As-

paragine 1.0 gm., MgSO₄ or CaSO₄ 1.0 gm., FeSO₄ Traces, and Tap water 1,000 c.c. In this medium about 30-35 per cent. of sulphur present in calcium sulphate is reduced to crude elementary sulphur in about a week's time. For the estimation of crude elementary sulphur 50 c.c. of the inoculated culture medium were evaporated to dryness on water-bath. The dried mass was treated with carbon disulphide and then filtered on a tared porcelain dish. The carbon disulphide was then evaporated to dryness. The substance extracted by carbon disulphide was then weighed as crude elementary sulphur. Further test for sulphur was made by oxidising it with nitric acid and precipitating the sulphate with barium chloride.

The production of hydrogen sulphide could not be detected at any stage as no blackening of lead acetate paper occurred during the course of reduction.

The possibility of this organism producing sulphur from sulphate by composting with organic matter is being studied. A paper on the subject will be published later.

Imperial Agricultural
Research Institute,
New Delhi,
September 15, 1943.

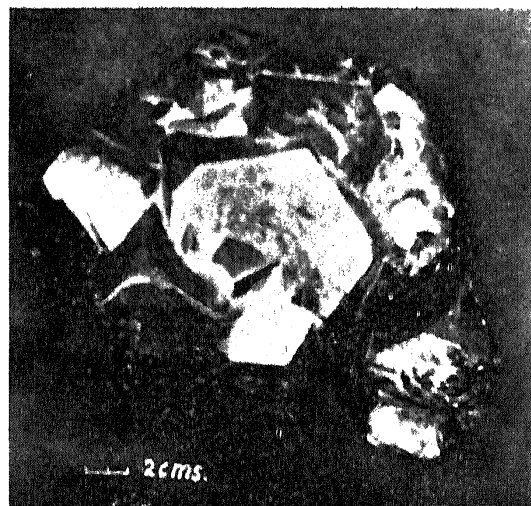
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PYRITE CRYSTALS FROM THE ALMORA DISTRICT, UNITED PROVINCES

PYRITE is a widely distributed mineral and occurs in formations of various ages, and its crystals are quite common. However, on account of the large size of the crystals the above occurrence is worthy of record.

The crystals occur in greenish schistose phyllites at two localities, Chowkoree (29° 50.5'; 80° 2') and near the bank of Sarju river E.N.E. of Khani (29° 47.70' 47.5').

From the former locality the crystals are cubes, which are somewhat distorted and show



a pseudo-tetragonal symmetry. The edges of the largest crystal measure 19 mm. One of the crystals showing the pseudo-tetragonal symmetry can be seen towards the right in the photograph.