

are borne in clusters of 2-8. They are 25-70 μ in length and 4-6 μ in breadth. The conidia are greyish-brown to dark brown and borne in chains upto twenty, obclavate with a small beak in the majority of cases. They are 14-50 \times 7-19 μ and with 3-5 cross septa.

Alternaria sp. has been recorded on chilli in Roumania, U.S.A. and other countries but does not so far seem to have been observed in India. Further work is in progress.

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The Antipodals of Verbenaceae.

THE antipodals in the family Verbenaceae are described by Schnarf¹ in his review of the embryology of the angiosperms to be three in number, small and degenerating early. Junell² in his recent studies of the morphology of the Verbenaceae and Labiateae has, however, noted that the antipodals in this family frequently divide and their number increases, as for instance in *Petrea volubilis*.

The writer has seen this in one more member of the family. In *Clerodendron Phlomidis* Linn., there are at first only three antipodals (Fig. 1), but these very soon undergo repeated divisions and their number

increases up to twenty or even a little more. These antipodals are small in size and so

Clerodendron Phlomidis.

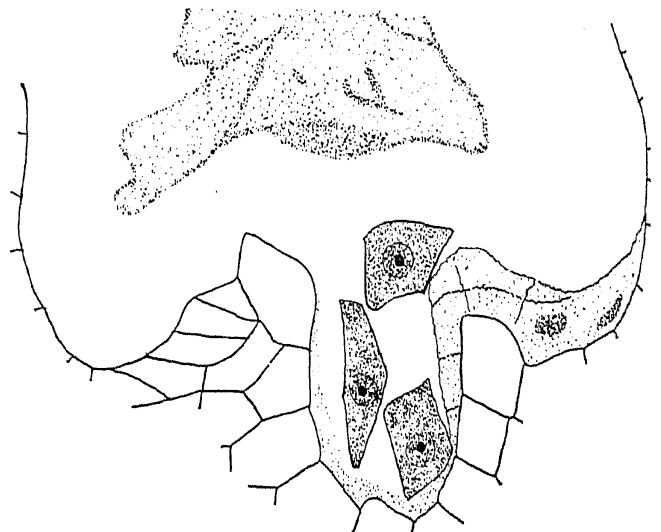


Fig. 1. Chalazal end of the embryosac showing three antipodals. \times 650.

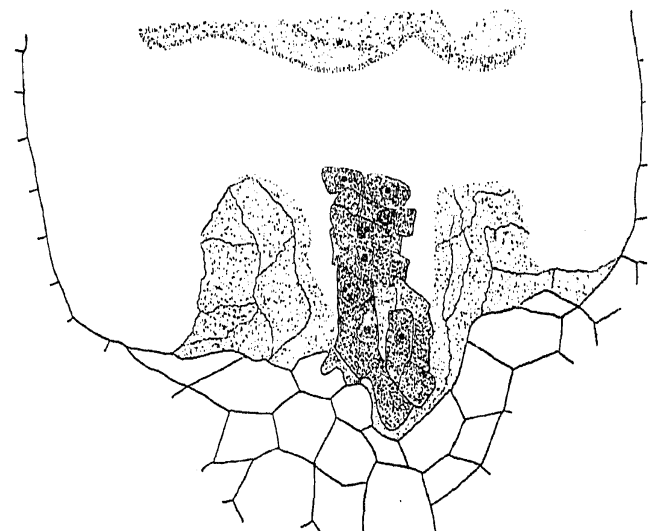


Fig. 2. The same at a later stage showing many antipodals. \times 650.

are their nuclei, but they are very rich in protoplasm (Fig. 2). Only rarely an antipodal is found to be vacuolated.

The details of the embryology of this and some other plants of the same family shall be published elsewhere.

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¹ Schnarf, K., *Vergleichende Embryology der Angiospermen*, Berlin, 1931.

² Junell, S., "Symb. Bot. Upsalienses, 1934, 1, No. 4.

The Occurrence of *Cystopus ipomoeae-panduratae* (Schw.) Swingle on *Ipomoea pestigridis* Linn.

Cystopus ipomoeae-panduratae is reported on various species of *Ipomoea*, viz., *I. eriocarpa*, *I. reniformis*, *I. hederacea*, *I. Batatas*, etc., in India and elsewhere also. So far as the writer is aware its occurrence on *Ipomoea pestigridis* is not reported from India.

The infected leaves of *Ipomoea pestigridis* were first collected at Utratia, District

Lucknow, in September 1936. The disease manifests itself as white spots on the leaf (Fig. 1) which brings about distorted deformity of the leaf resulting prematurely in death. In older spots, the tissue crumbles down and holes are formed. The diseased plants with large ellipsoidal spots of dull white colour were also collected in Badashahbagh in October 1936, where the infection was visible on the petiole and stem also.

In spite of best efforts, only conidial stages were found, which are generally laid down in a thick sorus under the epidermis of the host and the conidial spores are liberated by its rupture. The spores are broad, ellipsoidal, smooth and are 16 to 21 μ long and 12 to 16 μ broad. The identification of the parasite was confirmed by the Imperial Mycologist, Delhi, to whom my thanks are due.

This species of *Ipomoea*, a diffuse, twining, pubescent herb, is very common in the United Provinces during the rainy season almost in all fields.

An effort to germinate the spores in culture was unsuccessful.

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Petalody in Cotton.

RAMANATHA AYYAR AND SANKARAN¹ have described the appearance and genetic behaviour of a petaloid mutant from Karunganni cotton. They record complete dominance of normal in F_1 and segregation into 3 normal : 1 petaloid in F_2 .

Seed of heterozygotes was kindly supplied to us by Mr. Ramanatha Ayyar, and grown at Indore. It was observed that the fertile plants in segregating families were of two kinds, those bearing normal flowers with never more than one or two petaloid stamens and those bearing flowers showing slight petalody in a quarter to half the stamens. Karunganni strains are so late in fruiting at Indore that very little seed was obtained. Nine F_2 plants with normal flowers (only an occasional stamen petaloid) gave 24 normal plants in F_3 . Five F_3 plants with a quarter to half their stamens slightly petaloid gave 3 normal : 6 intermediate : 4 petaloid plants in F_3 . Dominance of normal is therefore



Fig. 1.

Leaf of *Ipomoea pestigridis* Linn., showing infection as white pustules. \times natural size.