



FIG. 2

Antipodal region of the same enlarge 1×1900 .

divides by mitotic divisions to form a mass of 4 to 6 cells. Usually one to two antipodals of the embryo-sac develop in this manner individually. Further development of these antipodal embryos is arrested probably due to want of nutrition. Only the embryo developed from the fertilised egg matured and this fact has also been confirmed by seed germination tests.

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D. M. GOPINATH.

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ON A VINE CHILLY IN MYSORE

IN Rayarakalhalli, a village six miles from Goribidnur, Mysore State, an unusual type of chilly plant is present. The plants are nearly six years old with apparent scandent habit. Consequently the plants have been supported on other trees. Material for the present study was made available by the kindness of Mr. N. R. Chikkannia, owner of the estate. A previous description of the plant that had appeared in the newspaper "*Hindu*" was based on the plants from the same garden.

The plants favour sciophytic (shade-loving) habitats. They are at present six years old, with branches supported to a height of 17 to 20 feet. An examination of the floral parts indicated that it is beyond doubt *Capsicum frutescens* L., but with minor variations. Comparative studies between the vine chilly plants and the local varieties of *Capsicum frutescens* with respect to floral parts, size, sculpturing and number of germ pores in the pollen grains, anatomy of the leaf-stem and root, and the size and distribution of the stomata, pointed out that the two plants are identical. Further, the similarity of the sizes of the stomata and the pollen indicate the improbability of the vine chilly plant having arisen as a result of polyploidy. In both the vine chilly plants and the local ones the leaves

are ovate-lanceolate, with solitary peduncles, white flowers, drooping fruits which are tapering, curved or slightly reflex. The ovary is two-celled and rarely three-celled. A higher percentage of three-celled ovaries, however, occur in the vine chilly plants.

The scandent habit of the plants with branches growing to a length of nearly 20 feet is a feature so far unrecorded in any of the species or varieties of the genus *Capsicum*. A close study of nearly two hundred large plants and seedlings of the vine chilly plants were made with a view to observe if any splitting of characters occurred, thus indicating the heterozygous nature of the plants. In all the cases the plants were true breeding and uniformly similar.

It is manifest that the vine chilly plants are true breeding, closely resembling structurally *Capsicum frutescens* L. It is also apparent that their scandent habit is not due to etiolated conditions but a natural phenomenon. A new variety *Capsicum frutescens* L. var. *scandens* Narasimhan is designated for its accommodation.

A brief history of the plants as obtained from Mr. Chikkannia indicated that a few plants with vine habit were first observed in a plot with seedlings of *Capsicum frutescens* near Koratigere, Mysore State. Since the plants are all true breeding, their origin by way of mutation is not improbable. A detailed cytological study is bound to throw more light on this point. Another feature worth mentioning is that the vine chilly plants are extremely floriferous and the branches do not become scraggy at the end of the year as in the local varieties. Their perennial habit and sciophytic nature can be used with advantage in growing them in cocoanut and areca gardens. An attempt in this direction has already been made.

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ERGOT ON SUGARCANE IN MYSORE

IN the course of the collections of smuts on sugarcane in Mysore, elongated, yellowish-black sclerotia of ergot were noticed on sugarcane arrows; when they occur in abundance, the unaffected flowers cease to develop but remain sterile. The persistent tuft of bristles at the base of the glumes helps the dispersal of the sclerotia just in the same manner as the normal seeds. Such a mechanism of dispersal has been reported by Stager¹ in the ergot on *Calamagrostis epigeios*.

Ergot on sugarcane has been recorded as stray occurrence from the Philippines by Ocfemia² on the basis of the material collected by Messrs. Simon Perez and Pedro Juachon, and has so far not been recorded from any other place. The abundance of sclerotia observed in the present study is encouraging. The mass of flowers in the arrowing varieties of sugarcanes is enormous, and by proper inoculation and dissemination of infection it