

### Grafting of Apple on *Eriobotrya Japonica* Stocks

CONSIDERABLE attention has been devoted to apple root-stock problem in many Fruit Research Stations in Europe, and especially, in the East Malling Research Station in England. Various root-stocks such as the 'Northern Spy', 'Paradise' and others have been used for grafting apples. There has been very little work done in India, to find out a root-stock for apples suitable for the prevailing conditions. It is usual in this country to import from Australia, apple plants grafted on Northern Spy root-stock. From experience in the Mysore State, these plants have been found to be susceptible to root disease (*Rhizoctonia*) and deteriorate after a few years of bearing.

In the search for a hardy root-stock, a few buddings of apple were made during May 1936



FIG. 1

on *Eriobotrya Japonica*, which, though successful, did not make much headway.

*Eriobotrya Japonica* (Loquat) is a medium-sized tree belonging to the order *Rosaceae*, introduced in India from Japan. It grows well in gardens and is able to resist drought conditions owing to its vigorous root-system.

Cleft grafts made with the 'Jonathan' and 'Rome Beauty' as scions, began to put forth shoots in 18 to 20 days. The accompanying

photograph was taken when the graft was six weeks old. Though these grafts have shown promising signs of growth, the compatibility between the stock and scion can be ascertained only during the next season's growth. The further development of these grafts will be reported later.

M. J. THIRUMALACHAR.

Department of Botany,  
Central College,  
Bangalore,  
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### A Terrestrial Species of *Oedogonium*

THIS is a preliminary note on a terrestrial species of *Oedogonium* collected by the author from Tanda and Fyzabad from August to October, 1938. So far no terrestrial species of *Oedogonium* has been described, and as compared with genus *Oedocladium*, some of whose species are terrestrial, *Oedogonium* is supposed to be a purely aquatic genus.

This species which appears in the form of green felt-like patches was found growing throughout the monsoon season in lawns, and compounds of houses. When the oospores ripen, the patches become orange-coloured. Ripe cospores are found in all the months, a few days of sunshine being enough to ripen the spores.

Vegetative cells are 6-8  $\mu$  broad and 26-70  $\mu$  long, are hyaline and unbranched with a rhizoidal function in the subterranean part, while the subaerial cells are 14-17  $\mu$  broad and 24-32  $\mu$  long. The alga is monoecious macrandrous. Oogonia are found singly, are globose, 30-42  $\mu$  in diameter and are operculate. Oospores are globose, do not fill the oogonia, have smooth chocolate-brown spore-wall and are 26-32  $\mu$  broad. Antheridia are 4-6 in number each containing one sperm, and are 11-14  $\mu$  broad and 6-10  $\mu$  long.

This is obviously a new species and has been named as *Oedogonium terrestris* sp. nov. The author is thankful to Dr. L. H. Tiffani of North Western University, Evanston, Illinois, U.S.A.,