

## SOME PROBLEMS IN CORALLORHIZA.

BY M. B. THOMAS.

Some recent discussions regarding the relation of endophytic mycelium to the roots of certain orchids and allied plants has suggested an investigation into this condition in the Orchidaceae, and the results show that out of fifty species of orchids examined all present this relation in a varying degree. The very peculiar root system of the plants of this family may be accounted for by the influence of this semi-parasitic condition.

In corallorhiza, no doubt most of the nutrient material taken in is through the agency of these very abundant hyphae, while in the cypripediums, though present, the hyphae do not play a very conspicuous part in the absorption of food by the plant.

The great abundance of the hyphae in certain green orchids leads us to infer that the presence of these threads alone is not sufficient to account for the very remarkable phenomena in certain colorless orchids like corallorhiza, etc.

In my judgment, other and less obvious changes will yet be determined that will assist in accounting for the very remarkable life history of corallorhiza.

The paper deals with some of the problems along this line and the results will be published elsewhere.

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THE DISAPPEARANCE OF *SEDUM TERNATUM*.

BY M. B. THOMAS.

Attention is called to the very unusual condition of a plant in which modifications for adaptation to its peculiar environment failed to protect it from the severity of the fall and winter of 1898-9. *Sedum ternatum* Michx., a plant found in several localities previous to that time, completely disappeared, so that no trace of it remained in the local flora of Crawfordsville.

The paper, which is to be published in full elsewhere, deals with the history of adaptation in this plant.