

Oligarces behaves somewhat differently. A number of larvæ, probably mostly mother larvæ, containing embryos were found in elm bark March 18, 1911. This material was kept in a warm room, and a week later the interior of the jars literally swarmed with thousands of active, whitish maggots with here and there a yellowish or yellowish-transparent one. Many of these perished upon the walls of the jar, and even those confined between a piece of glass and decaying elm bark soon succumbed. In spite of this a pupa was found April 19 and adults obtained about a week later. These small, white larvæ mentioned above differed from typical *Miastor* larvæ and some, at least, evidently established themselves in the crevices of the bark, transforming to pupæ, and these in turn worked out to the free surface a day or so before the disclosure of the imago. These pupæ appeared to move more readily than those of *Miastor*, and in several instances were observed standing upon the moist surface of the bark, supported only by the somewhat mucilaginous posterior extremity.

Natural Enemies.—Both *Miastor* and *Oligarces* larvæ are subject to attack by several predaceous Dipterous larvæ occurring in similar situations. The pinkish larvæ of *Lestodiplosis*, resembling in a general way those of *Miastor* except for a difference in color and more slender structure, may be seen here and there among their prey, and in the case of populous clusters of white *Miastor* larvæ, may give an ornamental touch to the colony. *Itonida pugionis* Felt may also prey on *Miastor*. Two larger predaceous maggots, those of *Lonchæa polita* Loew and a species of *Medeterus* are commonly found in the vicinity of *Miastor* colonies, and it not infrequently happens that they are the only available evidence of the earlier occurrence of *Miastor*. The larvæ of these two latter are voracious forms and are undoubtedly responsible for the speedy destruction of many *Miastor* colonies. The finding of these predaceous larvæ may serve as a guide to the searcher for *Miastor* and suggests investigating the more inaccessible portions of the bark for colonies which may have escaped the predaceous maggots.

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SPURRED FLOWERS IN CALCEOLARIA

THE genus *Calceolaria*, often popularly called slipperwort, belongs to the Scrophulariaceæ. It may be divided into two sections; first, the herbaceous kind, the one usually employed by florists in this country; second, the shrubby and bedding kinds.

The herbaceous kinds are grown from seeds. When well grown they are very ornamental and serve to decorate the greenhouse in spring, when other plants are through blooming.

The shrubby kinds are serviceable to some extent for indoor decoration. They are extensively grown in Britain for bedding purposes. Owing to the American summers being so hot, they are unsuited for bedding purposes here. They are mostly raised from cuttings.

A little more than a year ago some crossing experiments were conducted by a student in one of the regular undergraduate courses, No. 6, in the department of botany. This course was in charge of Professor Geo. F. Atkinson and Mr. Robert Shore, the head gardener of the department. The student, Miss Margaret C. Graham, performed the experiments under the supervision of Mr. Shore. Since, in public lectures, several unauthorized references have been made to these spurred calceolarias, it seems desirable to place on record the principal facts in connection with the experiments, and to state that the work is still in progress by Professor Atkinson and Mr. Shore.

A shrubby plant was crossed with a herbaceous one. This gave plants of a stronger growth, more profuse bloomers, more compact and more ornamental. Some of these varieties can be propagated from cuttings. These hybrids have been recrossed and the offspring have produced an interesting variety in habit of plants and variation of flowers. Some of the varieties have a number of spurred flowers, one or two spurs on the labelum. These spurred varieties have been cross pollinated and self pollinated, and varieties raised from these seeds have produced several spurred flowers.

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