seven Halictidae, one *Sphex;* on *M. bradburiana,* none; on *Scutellaria canescens,* three Halictidae; on *Penstemon laevigatus, Leionotus anormis.*

At Orlando, Florida, I saw two Eumenidae and two Vespidae getting nectar of *Gaylussacia hirtella* from holes made by *Odynerus erinnys.*

CHARLES ROBERTSON
CARLINVILLE, ILLINOIS

A NOTE ON A ROT OF THE SMYRNA FIG IN CALIFORNIA

AN article published in SCIENCE, August 14, 1925, page 161, by P. D. Caldis, of the University of California, entitled "A rot of the Smyrna fig in California," has been a source of confusion in regard to the name of the fungus causing the rot. The writer has already had several inquiries from pathologists and cataloguers in Washington and elsewhere how to index it.

In the spring of 1924 the fungus was isolated from the fig and the Blastophaga in this laboratory, and as the typical curved septate spores were obtained from both sources it was determined to be a Fusarium. Report of the work was sent to the Fig Growers Association in California in September, 1924. The species was identified by Dr. Sherbakoff in January, 1925, from our cultures and subsequently from one of Mr. Caldis' cultures which had been held under our laboratory conditions for eight months, as *Fusarium moniliforme* Sheldon. It is true that *Fusarium moniliforme* Sheldon has been confused with *Oospora verticilloides* Sacc. when it produces only the microconidial type of spores and on that account it has sometimes been listed as an Oospora. But it is not an Oospora, as might be inferred from Mr. Caldis' article.

The fungus has also been called a Cylindrotrichum, but the presence of curved septate Fusarium spores in infectious cultures determines its proper classification.

NELLIE A. BROWN
LABORATORY OF PLANT PATHOLOGY,
WASHINGTON, D. C.

SCIENTIFIC BOOKS

The Downtonian Fauna of Norway. I. *Anaspida, with a Geological Introduction.* By JOHAN KIÆR. Pp. 139, with 50 text figures and 14 plates. Kristiania, 1924, Videnskapsselskapets Skrifter. I. Mat.-Naturv. Klasse. 1924, No. 6.

THIS fine monograph is the first part of an extended memoir on the remarkable upper Silurian fauna discovered by the author and his wife in 1909 at Ringerike, in the southern part of the Oslo area. About 2,500 specimens of crustaceans, merostomes and fishes have been obtained, of which only the anaspidans, including *Pterolepis nitidus* Kiær, *Pharyngolepis oblongus* Kiær, and *Rhyncholepis parvulus* Kiær, are here discussed.

Traquair's views as to the orientation of the body are shown to be incorrect, the dorsal and ventral surfaces being reversed, as had been suspected by some students.

The scale system is shown in all three genera in the most detailed fashion. On the head the hitherto unknown dorsal and gular plate systems, formed by the fusion of smaller scales, is made known and an adequate terminology is proposed. The plates are intimately related with the openings in the head. Of these there are on the dorsal surface, besides the large eyes, a small median opening between the orbits believed to have lodged the pineal organ, and a somewhat larger unpaired opening in advance of this, supposed to be the single nostril.

The large terminal mouth is bounded superiorly by the anterior plates of the dorsal cranial system. Inferiorly it is bounded in one form by a small area of transverse scales, in another by a single moderate-sized median plate, and in the third by well-developed paired plates strengthened by the powerful gular system—apparently indirect stages in the formation of a large, powerful beak. There are no traces of teeth.

As has been known, there are a number (eight to fifteen) of circular branchial openings arranged in an oblique band back of the head. Just posterior to the lower end of this band there is a strong sharp spine in the Norwegian genera which the author considers as a possible homologue of the pectoral fins of the true fishes. There are unpaired anal and caudal fins. The latter is not, as was generally supposed, a normal heterocercal tail, but a reversed heterocercal one, strangely similar to that of an ichthyosaur but unknown among real fishes.

There is no trace of a sensory canal system or of a bony axial skeleton.

Clear, well-drawn reconstructions of the three genera are given.

The remaining fifty-five pages are devoted to the general bearing of these very welcome new facts. As regards the "jawless" nature of these forms, Kiær concludes that there was a definite cartilaginous stiffening around the mouth "which, it is highly probable, may be compared with the mandibular arch in real fishes." The presence of a functional pineal eye and of an unpaired narial opening, believed to be proven, is stressed. The branchial system is held necessarily to have consisted of cyclostome-like pouches, probably without any homologue of the branchial arches of true fishes.