

PROFESSOR C. F. BAKER, of the department of biology of Pomona College, has resigned to accept a professorship in the University of the Philippines. He will be at the College of Agriculture, Los Banos, Philippine Islands.

THE Coutts Trotter Studentship at Trinity College, Cambridge, founded for the promotion of original research in natural science (especially physiology and experimental physics), has been divided between Mr. E. D. Adrian, B.A., and Mr. A. E. Oxley, B.A.

THE council of the University of Paris has elected M. Andoyer, professor of physical astronomy in the faculty of science and member of the council of the Nice Observatory, as successor of the late M. Henri Poincaré in the professorship of mathematical astronomy.

#### DISCUSSION AND CORRESPONDENCE

##### INSECTS CONTRIBUTING TO THE CONTROL OF THE CHESTNUT BLIGHT DISEASE<sup>1</sup>

INVESTIGATIONS during the summer of 1912 by the Bureau of Entomology have brought to light some very important relations of insects to the chestnut blight, of which one of the most striking is that certain insects contribute to the natural control of the spread of the disease by feeding on and at the same time destroying the fruiting bodies.

During the winter of 1911 the writer observed many cankers with the pustules eaten out and the diseased bark infested with small larvæ. Later adults of the species were reared from these larvæ, one a Cerambycid, *Leptostylus macula* Say, the other a Colydid, *Synchita fuliginosa* Melsh; both were observed while caged to eat the pustules and stroma, the latter even to eat conidial threads.

At the Forest Insect Field Station 9, Charter Oak, Pa., an extensive outbreak of the disease was found where a large percentage of the pustules were eaten. Investigation showed both species to be present but *L. macula* doing most of the work. Other insects collected and

caged were found to eat the pustules as follows:

Family Buprestidæ—*Agrilus bilineatus* Web.

Family Chrysomelidæ—*Bassareus pretiosus* Melsh.

Family Trogositidæ—*Thymalus fulgidus* Er.

A number of experiments were made by Mr. R. D. Spencer, of the Chestnut Blight Commission, working with the writer, in culturing the stomach contents and excrement of *L. macula*, but in no case did the spores germinate.

Following these observations, a study of the chestnut throughout its northern range showed the same conditions everywhere the bark disease occurred. In many localities 50 per cent. to 75 per cent. of the pustules were eaten. In some cases scarcely a single perfect pustule could be found on a badly diseased tree and in such localities there was evidence of a marked decrease in new infection.

The fruiting bodies are eaten cleanly and deep into the bark, both pygnida and perithecia being destroyed. During the last summer a perceptible increase in the destruction of the pustules by insects was noticed. This shows that they have acquired a taste for the fungus which points toward increased destruction of the spores.

These insects, though not checking the growth of cankers already formed, play a most important part in controlling the dissemination of the disease.

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##### A POSSIBLE CAUSE OF ACCIDENTS TO AVIATORS

TO THE EDITOR OF SCIENCE: I think that your valuable paper is in a position to render a very important service in aiding to lower the death rate among aviators.

Probably if we knew all the causes of disaster we should see that they are of many kinds.

To mention only one of the possible causes, take the gyroscopic effect of the revolving-cylinder motor.

Among your readers there are very many

<sup>1</sup> Read before the Biological Society of Washington, November 16, 1912.