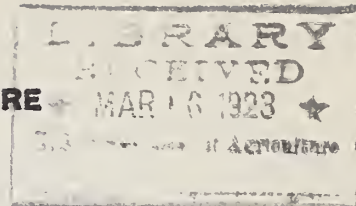


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UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF ENTOMOLOGY
WASHINGTON, D. C.



FOREST ENTOMOLOGY BRIEF 46.

July 14, 1919.

THE EUROPEAN ELM SCALE
(*Gossyparia spuria* (Modeer))

History and Damage. - This insect, an immigrant from Europe in about 1884, lives on elm trees only and may occur wherever this tree is grown in the United States. As a rule it does not kill the trees but it is often so very injurious, especially to young stock, that, together with the injury caused by the elm leaf-beetle, another importation from Europe (see Forest Entomology Brief 39), attack by bark borers, etc., is reduced and the trees do not recover.

How it Lives and Looks. - Like others of its kind this scale insect feeds on sap which it sucks from the bark of the trunks and twigs or leaves by means of a slender, thread-like beak. The winter it spends in crevices of the bark on the trunk and larger branches as brown immature males and females imbedded in white cottony matter. On the appearance of warm weather, in May at Washington, D. C., these forms begin to move about, molt, and mate, after which the females attach themselves permanently on limbs and trunk. The young - clear, lemon-yellow, lice-like insects - issue during June and July, settling temporarily on leaves alone or on leaves and twigs, depending on the smoothness of the latter. In August they return to the larger branches and trunk to settle for the winter, thus completing in Washington the seasonal life cycle.

Remedies. - In the case of shade trees and nursery stock, the best means of killing this insect is to spray infested trees during the dormant season with a 7 per cent solution of miscible oil in water, applying it like kerosene emulsion, as described in the companion Brief. Spraying with a summer strength of such an oil while the young are hatching is the next best means of control. Miscible oil is procurable in seed stores under various proprietary names. Other means of destroying the insect are available, such as water applied with a hose under high pressure, but none are as satisfactory as the solutions mentioned.

A. D. Hopkins,

Forest Entomologist.

1915, July 15

Revised Catalogue Entry No.

THE BUREAU OF ENTOMOLOGY
(Catalogue Entry No. 1915)

History and Origin. This Bureau was organized from the Bureau of Entomology and Plant Quarantine, which was established in 1915. It is a part of the United States Department of Agriculture, and its headquarters are located in the Bureau of Entomology and Plant Quarantine, Washington, D. C. The Bureau is responsible for the control of insects and other pests that damage crops and other plants, and for the study of the life history and habits of these insects.

The Bureau is organized into several divisions, each of which is headed by a Chief of Division. The divisions are: (1) the Division of Entomology, which is responsible for the study of the life history and habits of insects; (2) the Division of Plant Quarantine, which is responsible for the control of insects and other pests that damage crops and other plants; (3) the Division of Insect Pathology, which is responsible for the study of the diseases of insects; (4) the Division of Insect Physiology, which is responsible for the study of the physiology of insects; (5) the Division of Insect Genetics, which is responsible for the study of the genetics of insects; (6) the Division of Insect Systematics, which is responsible for the study of the classification of insects; (7) the Division of Insect Ecology, which is responsible for the study of the ecology of insects; (8) the Division of Insect Behavior, which is responsible for the study of the behavior of insects; (9) the Division of Insect Control, which is responsible for the study of the control of insects; (10) the Division of Insect Research, which is responsible for the study of the research of insects.

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A. D. Hopkins

Chief Entomologist