

"the Association approve the substance of the proposed bill and that a committee be appointed by the chair to consist of five members to approve the final wording of the bill. Said committee to have power to act." The committee appointed by the chair consisted of Messrs. Marlatt, O'Kane, Worsham, Gillette and Sanders.

## SOME RECENT INSECT IMPORTATIONS INTO NEW JERSEY

By HARRY B. WEISS, *New Brunswick, N. J.*

Inasmuch as the state of New Jersey imports from the various countries of Europe, Asia and South America, an average of 12,000 parcels of nursery stock every year, it is not surprising to find injurious forms coming over and in some instances becoming established. Scale insects are the most numerous of these importations, chief among which are *Coccus hesperidum* Linn. occurring on bay trees from Belgium, *Chrysomphalus dictyospermi* Morg. on palms from Belgium, *Hemichionaspis aspidistrae* Sign. on aspidistra and ferns from Belgium, *Diaspis boisduvali* on orchids from England, *Targionia biformis* Ckll. on orchids from Venezuela and the United States of Colombia, *Pseudaonidia pæoniæ* Ckll. on azaleas from Japan and *Diaspis pentagona* Targ. on peach stock from Japan, also *Lepidosaphes ulmi* Linn. on boxwood from Holland.

Except in the case of greenhouse species which were established in New Jersey, all infested plants were destroyed. During the fall of 1911 ants were taken from the packing in a case of roses imported from Germany. Unfortunately they were overlooked until the spring of 1914 when they were sent to Dr. W. M. Wheeler who identified them as specimens of the Argentine ant, *Iridomyrmex humilis* Mayr, which has been such a plague in the southern states and in California and which has recently been introduced into South Africa and Portugal. Dr. Wheeler was at a loss to understand its occurrence in Germany unless it had happened to be living in greenhouses. It is a tropical species and of course unable to maintain itself out of doors in the northern states or in Germany. Systematic collections of ants were made in several of the largest greenhouses in the state especially where imported stock had been received in large quantities but no Argentine ants were discovered.

Another interesting capture was the taking of *Eucactophagus graphipterus* Champion during April 1914 in an orchid house at Summit, N. J. This large member of the family Calandridæ is a native of Costa Rica and the United States of Colombia. Mr. Schwarz who determined it said that only three specimens were known, one of which had been taken in a Connecticut greenhouse by Dr. Britton.

*Ulex europea* from England was found infested by *Apion ulicis*, a weevil injurious to the seeds. Members of this genus are found on other leguminous plants and it is one which should be guarded against.

A much more injurious imported beetle in the shape of *Myelophilus piniperda* Linn.<sup>1</sup> was noted by Dr. T. J. Headlee to have gained a slight foothold in a northern New Jersey nursery where it was found attacking Scotch Fir to the extent of boring out the tips of the central shoots. According to Ratzeburg, this beetle does two important kinds of injury. First it attacks for the purpose of breeding, already injured Scotch Fir and quickly brings about its death. Second, it bores out the terminal twigs of young coppice growth causing the tree to assume a crooked unsightly branching habit. The result of this second type of damage is much like that of the white pine weevil. According to Dr. Hopkins, it often does extensive damage to pine trees in Europe and for this reason the section in which it was discovered is being closely watched.

Another imported beetle, *Agrilus viridis* Linn. var. *fagi* Ratz.<sup>2</sup> was found during the past year extensively injuring roses, chiefly in nurseries, in four different places in northern New Jersey. The injurious work of the larva consists of a spiral band of channels in the sap wood over which forms a swelling or gall, above which of course the plant dies. It was found attacking standard roses and *Rosa rugosa* more than other varieties and infested blocks presented the appearance of having been burned over as early as the middle of August. Considering the nature of the injury, cutting and burning of the infested stems during the fall or winter seems to be the best method of control.

Still another unwelcome importation, not from Europe however, but from Florida was *Callopietria floridensis* Guen. known as the Florida Fern Caterpillar. This pest was found during September 1914 injuring ferns in greenhouses at opposite ends of the state and one of the firms in question undoubtedly purchased it in some stage other than the adult along with a shipment of ferns from Florida. It does considerable damage to various species of ferns and in this state has yielded successfully only to handpicking supplemented by trapping the moths. Considering the fact that it is such a troublesome species, it would pay ferngrowers to be on the watch for it when receiving ferns from other establishments.

The most serious finding of the year was made in November, by Government scouts, who discovered 198 egg masses of the gipsy moth, *Porthetria dispar* Linn., at Rutherford. The capture of a perfect male moth on August 1 by a local collector led to these men being placed in the field by Mr. Burgess. The infestation occurred in a small block of nursery evergreens used mostly for show purposes and was at least

<sup>1</sup> Determined by Dr. A. D. Hopkins.

<sup>2</sup> Determined by Mr. Chas. Kerrimans of Belgium.

two years old. It is supposed that the egg masses were brought in on New England stock although no definite proof of this is obtainable.

Unfortunately the funds at our disposal for inspection service are expended almost entirely in the inspection of nurseries and foreign stock, leaving practically nothing for the inspection of domestic stock. It is needless to state that prompt measures were taken with the infested area and the careful scouting of the surrounding area by the Government men led us to believe that New Jersey is still free from this pest.

In addition to injurious species, one will at times find beneficial forms being imported. However as a rule, these are few and far between. Egg masses of the praying mantis are not infrequently brought in on stock from Japan. During the past season, a large black carabid beetle was taken from a case of Japanese azaleas and Mr. Schwarz identified it as *Damaster blaptoides* Kollar. This is a rather rare species, the genus being peculiar to Japan. Its introduction into the United States would of course be highly desirable. *Pterostichus* (*Feronia*) *vulgaris* Linn.<sup>1</sup> another beneficial carabid beetle, very common in central Europe was taken on Holland stock and *Amara ovata* Fabr.<sup>1</sup> from packing around English stock. *Philonthus politus* Fabr.<sup>1</sup> of the family Staphylinidæ was also taken from English stock. The species of this genus live under dung or decaying vegetable matter, the larvæ being predaceous on soft insect larvæ, mostly Dipterous. This of course places it among the beneficial forms.

Various other species mostly injurious but as a rule of lesser importance are taken from imported stock every year. This includes white flies on azaleas from Belgium, ants from Holland and France, *Pseudococcus* sp. on palms and bay trees from Belgium, *Tingitid* eggs on rhododendrons from Holland and *Notolophus antiqua* egg masses also on Holland stock.

One fact stands out plain. In spite of elaborate inspection systems and careful, conscientious work, some injurious foreign species continue to creep in and become established.

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## CAGES AND METHODS OF STUDYING UNDERGROUND INSECTS<sup>2</sup>

By JOHN J. DAVIS, *Lafayette, Indiana*

Our studies the past few years with *Lachnosterna* and related insects, whose immature stages are passed underground and which have a one-to four-year life-cycle, have given us an opportunity to determine the relative value of various cages.

<sup>1</sup> Determined by Mr. Schwarz.

<sup>2</sup> Published by permission of the Chief of the Bureau of Entomology, United States Department of Agriculture.