

LIBRARY
STATE PLANT BOARD

Insect Pest Survey Bul.

Q

THE INSECT PEST SURVEY BULLETIN

A periodical review of entomological conditions throughout the United States,
issued on the first of each month from April to November, inclusive.

*P. 310 aphids spinaceous -
Ga. -*

Volume 5

September 1, 1925

Number 6

BUREAU OF ENTOMOLOGY
UNITED STATES
DEPARTMENT OF AGRICULTURE
AND
THE STATE ENTOMOLOGICAL
AGENCIES COOPERATING

OUTSTANDING ENTOMOLOGICAL FEATURES IN THE UNITED STATES FOR THE MONTH OF AUGUST, 1925

The localized outbreaks of grasshoppers reported in the last number of the Survey Bulletin have developed to somewhat serious proportions in parts of the Middle Atlantic and East-Central States.

The results of additional Hessian fly surveys have been reported from New York and Illinois. The New York wheat belt is much less seriously infested than was the case last year. In the 16 counties surveyed the straw infestation this year is about 1.5 per cent as compared with 5.9 per cent infestation last year. In central Illinois the situation is much more serious, the infestation there being much heavier than last year.

The second brood of the chinch bug promises to do little damage in the Ohio River Valley and East-Central States. No serious chinch bug situation has developed in any of the important corn States.

The corn earworm is again abundant over the northern limits of its range, being reported as more serious than it has been since the last bad outbreak of 1922.

The clover seed chalcid is doing considerable damage in the alfalfa-seed-producing sections of Arizona, as high as 50 per cent of the seed being destroyed in some fields.

Codling moth infestation is reported as generally more prevalent than during the last three years in the East-Central States.

Massachusetts and Ohio report unusual prevalence of the plum curculio, whereas reports from Georgia indicate that this pest is very well under control in that State.

The potato leafhopper is producing serious hopperburn in the potato-growing sections of Ohio, Indiana, and Wisconsin.

The Mexican bean beetle during this month has been found in two additional counties in southwestern Pennsylvania. It is now known to be present in five counties in that State.

Boll weevil infestations in the infested areas have increased rapidly during the last fifteen days, owing to general field migration. The only serious injury so far reported is from southern Alabama, east-central Georgia, and the Coastal Plain sections of the Carolinas.

Boll worm injury seems to be more prevalent than usual in the Mississippi Valley and Texas.

The cotton worm is generally extremely prevalent over the entire cotton belt, eastward to Alabama.

In this number is an interesting report from Porto Rico of a very serious infestation of sugarcane by the sugarcane leaf scale.

In the Cape Cod section of Massachusetts the elm leaf beetle is seriously browning the trees and in Fresno County, California, the pest is completely defoliating all untreated trees.

The locust leaf miner seems to be generally abundant over the entire eastern part of the United States.

The European earwig colony in East Aurora, New York, is apparently spreading.

OUTSTANDING ENTOMOLOGICAL FEATURES IN CANADA FOR AUGUST, 1925

The grasshopper situation in British Columbia is serious and severe outbreaks are anticipated in 1926. From 100 Mile House to Quesnel the roadside grasshopper, Camnula pellucida (Scudder), is extremely abundant, and from Chilcotin to Vernon, grasshopper outbreaks are either in progress or are expected to develop next summer;

The western wheat-stem sawfly is proving of considerable economic importance in the Province of Saskatchewan this year.

The European red mite occurred in outbreak form in the Niagara district and southwestern Ontario this summer and caused serious injury to the foliage of European plums and apples.

The mite, Tetranychus telarius Linn. has become very numerous on hops at Sardis, British Columbia, due to the hot dry weather.

The Hessian fly has been found present over practically the whole of the Fraser River Valley, New Brunswick, from Fredericton to Grand Falls. It was also noted at West Devon, Prince Edward Island. The infestations were light, varying from one to three per cent.

The western lined June beetle, Polyphylla decemlineata (Say), is occurring in serious outbreak form near Salmon Arm, British Columbia, attacking vegetables and small fruits.

An additional outbreak of the codling moth in British Columbia is reported from Okanagan Centre.

The fruit-tree leaf-roller has been of very minor importance this season in the Niagara district, Ontario, even in orchards usually subject to severe attack.

Cutworms are reported as troublesome on truck crops in the Fraser River Valley, British Columbia.

The Colorado potato beetle has been relatively unimportant in northern Saskatchewan this season.

Potato leafhoppers have been generally abundant and injurious to potatoes in southwestern Ontario.

The oat thrips, Anaphothrips obscurus Miller, caused twenty-five per cent loss in some fields of oats at Richmond, Prince Edward Island, in mid-August.

The larch sawfly, Lygaeonematus erichsoni Hart., is causing severe injury to larches throughout New Brunswick and Prince Edward Island, apparently all the larches being affected.

The maple leaf cutter, Paraclemensia acerifoliella Fitch, has caused severe injury to maples in southeastern Quebec.

GENERAL FEEDERS

GRASSHOPPERS (Acridiidae)

- Maryland P. D. Sanders (August 6): At Clearspring 40 acres of alfalfa and 80 acres of young apple trees were heavily infested by Melanoplus femur-rubrum DeG. Apple trees were being completely defoliated and spots in the alfalfa field had been eaten down to main stems.
- Georgia Oliver I. Snapp (July 14): In several fields at Fort Valley grasshoppers have considerably damaged field corn. They are more abundant this year than usual.
- Ohio T. H. Parks (August 19): Wet weather has held the grasshoppers in the meadows and stubble fields so that very little damage has been done to corn. Young clover and pastures have been damaged. The grasshoppers are now very abundant in alfalfa in many counties. Farmers have used the poisoned-bran mash with fine success. Corn, clover, bluegrass, and truck crops have been protected with it. The insects are most numerous in the southeastern part of the State.
- H. A. Gossard (August 24): Grasshoppers in injurious numbers have been recently reported from Howard, Xenia, Salesville, Lewisburg, Kent, and Akron. A field of alfalfa at Salesville was reported as almost ruined and fear was expressed for the safety of all crops on the farm. A peach orchard at Howard and a young apple orchard at Xenia were also threatened with destruction by grasshoppers.
- Indiana C. R. Cleveland (August 21): Reports from various parts of the State continue to indicate that here and there grasshoppers are troublesome. The county agent at Kokomo last week reported a serious infestation of grasshoppers on clover and in an adjoining field of corn and requested a demonstration of control.

- Tennessee A. C. Morgan (August 20): Some complaint of grasshopper injury at Clarksville has been received but not enough to require remedial measures.
- Nebraska M. H. Swenk (July 25 to August 25): During the last week in July a report from Cass County was to the effect that differential grasshoppers (Melanoplus differentialis) were gnawing the stems of grapes and causing the bunches to drop to the ground to such an extent that the crop was being destroyed.
- Kansas J. W. McColloch (August 18): Few reports of grasshopper injury have been received. At Rolla and Elkhart some damage has occurred to alfalfa. A farmer at Uniontown says the grasshoppers are ruining a young apple orchard by eating the foliage and bark. Four hundred 1-year-old trees have been injured.
- Oklahoma E. E. Scholl (August 20): During the spring and early summer of this year we had one of the largest grasshopper fights that was ever carried on by the State.
- Arizona Arizona News Letter (Vol. 3, No. 6, June 30): During the month of June a very successful eradication campaign against grasshoppers was conducted by representatives of the office of the State Entomologist. The hoppers began to be troublesome in the alfalfa fields near Gilbert during May but the peak of the outbreak came in early June and appeared to be more concentrated in the Goodyear and Chandler districts. At the former place the adult hoppers appeared by the millions in the large alfalfa fields and in several instances moved into the neighboring cotton fields. A number of fields of alfalfa were so badly infested that practically all of the foliage was eaten off leaving only the bare straws.
- LUBBER GRASSHOPPER (Brachystola magna Gir.)
- New Mexico J. R. Douglas (August 22): The lubber grasshoppers, Brachystola magna Gir., were noted in great numbers crossing the Dening and Lardsburg highway for about two miles. The areas being traversed by the grasshoppers were grazing lands.

CEREAL AND FORAGE - CROP INSECTS

WHEAT

HESSIAN FLY (Phytophaga destructor Say)

- New York C. R. Crosby: The preliminary results of the Hessian fly survey for 1925 in the counties listed below are as follows:

<u>County</u>	<u>Per cent</u>	<u>County</u>	<u>Per cent</u>
Cayuga	2.5	Ontario	2.2
Chemung	6.0	Orleans	1.0
Erie	0.3	Oswego	0.0
Genesee	1.6	Schuyler	1.3
Livingston	0.0	Tompkins	1.0
Monroe	1.6	Wayne	1.1
Niagara	1.0	Wyoming	2.1
Onondaga	0.6	Yates	2.5

The same counties as surveyed last year were again surveyed this season. Last year this region showed a 5.9 per cent infestation of straw whereas this year the average infestation was only 1.5 per cent.

Illinois

W. P. Flint (August 18): The annual wheat insect survey has been conducted in Illinois during the first two weeks of August. Examinations were made in 37 of the principal wheat-growing counties in the State. This survey showed a heavy infestation by the Hessian fly in wheat stubble in the central counties of the State, with a moderate to light infestation in the north, and a light to very light infestation in the extreme south. Parasitism varied from 12 to over 50 per cent. Very little volunteer wheat was found in any part of the State. All fly found were in the puparia. In central Illinois the increase in infestation is quite marked over that of last year with but little change in the northern and southern parts of the State. Apparently emergence will take place at about the normal time if the present rains continue.

Kansas

J. W. McColloch (August 18): The results of a recent Hessian fly survey based on reports made by 604 farmers show that at least 30 per cent of the total wheat acreage of the State was infested. The eastern third of the State showed infestation running from 3 to over 60 per cent. The heaviest infestation was in the central and west-central counties where the infestation ran from 60 to as high as 97 per cent. In the eastern quarter of the State damage ran from 1,000 to 100,000 bushels to the county, whereas in the heavily infested region in Kansas infestation ran from 500,000 to over 1,000,000 bushels to the county. Reports from 21 counties give a grand total of 6, 538,000 bushels loss due to this infestation.

WESTERN WHEAT SAWFLY (Cephus cinctus Norton)

North Dakota

R. L. Webster (August 20): Reports of severe damage in Pierce and Divide Counties to spring wheat have been received.

JOINTWORM (Harmolita tritici Fitch)

Illinois

W. P. Flint (August 18): The wheat insect survey has shown the jointworm confined very largely to the same areas of the State where it was present in 1924. The infestation has increased slightly in the northwest central and southern counties.

LIBRARY
STATE PLANT BOARD

some of the southern counties as high as 50 per cent of all wheat culms were infested. In the northwest central counties 5 to 18 per cent. Parasitism was lower than last year.

WESTERN WHEAT STEM MAGGOT (Hylemyia cerealis Gill.)

Nebraska

M. H. Swenk (July 25 to August 25): Some belated reports indicate more extensive damage during June by the western wheat-stem maggot than was indicated in my report of June 25.

A WHITE GRUB (Phyllophaga lanceolata Say)

Kansas

J. W. McColloch (August 19): The grubs of this beetle are very abundant in a 30-acre field which is being prepared for wheat. They destroyed the wheat on this ground last year.

CORN

BUMBLE FLOWER BEETLE (Euphoria inda L.)

Kansas

J. W. McColloch (August 7): The adults are rather common in sweet corn about Manhattan. In some truck gardens they are causing injury by burrowing into the tips of the ears.

LESSER CORN STALK BORER (Elasmopalpus lignosellus Zell.)

Virginia

A. M. Vance and G. W. Underhill (August 10): In our plats of field corn planted June 12, 28 per cent of the plants were infested by this insect, and as a result of the typical killing of the buds, such infested plants will produce no corn. Infestation in several near-by fields of late corn ran somewhat lighter, averaging slightly over 6 per cent. Moths of the second brood have been in the field for several weeks.

CHINCH BUG (Blissus leucopterus Say)

Ohio

T. H. Parks (August 19): With the best prospects for a corn crop this State has had in years in northwestern counties, the chinch bug is scattered through the corn and making very little impression upon it. No damage will come from the second brood.

Illinois

W. P. Flint (August 18): The weather of late July and the first part of August has continued favorable to chinch-bug development, whereas practically no damage will occur from the second-brood bugs this year. Apparently sufficient numbers of bugs will go into winter quarters in many sections of the State to cause some injury next season.

Nebraska

M. H. Swenk (July 25 to August 25): Although the migration of the chinch bugs (Blissus leucopterus) from the small grains into the corn crops was largely over by July 10, and most of the bugs had gained their wings a few days later, there were some reports of

continued injury in corn and cane fields during the remainder of July. Some rather important injury of this sort was reported from Phelps and Harlan Counties, west of the main area of damage as given in my report of July 25, during the last week in July. The second generation of this pest is doing damage in the corn-fields of southeastern Lancaster County at the time of the forwarding of this report. Many bugs of the second generation have become matured at this time.

CORN EAR WORM (Heliothis obsoleta Fab.)

- New Hampshire P. R. Lowry (August 10): Half a dozen larvae sent in from a small patch of sweet corn. This is the first record of this species in the State since 1922.
- Illinois W. P. Flint (August 18): There has been very little increase in injury by the corn ear worm during the past month, a light infestation occurring in sweet corn fields, but no very serious damage to date.
- Wisconsin E. L. Chambers (August 20): Several complaints have been received from growers to the effect that this pest has made its appearance in southern Wisconsin, but little damage has been done as yet.
- Tennessee A. C. Morgan (August 20): The corn ear worm was quite injurious in the buds of the young corn in late July at Clarksville.
- Texas F. L. Thomas (August 19): Two or 3 worms to every head of milo, great numbers in the corn. Also reported from Lubbock, Hall, Wichita, Cass, Panola, Tyler, and Brazoria Counties.
- California T. D. Urbahns and assistants (August 19): In Mendocino County the corn ear worm is attacking corn and doing severe damage.

CORN ROOT WORM (Diabrotica longicornis Say)

- Nebraska M. H. Swank (July 25 to August 25): During the last week in July we received several reports of serious injury to corn by the western corn-root worm (Diabrotica longicornis) from Dundy County, in the extreme southwestern part of Nebraska. Many fields were reported as affected, the damage in some cases being estimated as fully 20 per cent of the field destroyed. One seventy acre field was attacked both by the western corn-root worm and the seed-corn beetle (Agonoderus pallipes), the latter also attacking the root system of the corn, and in combination these two pests threatened to destroy the field. Injury by the western corn-root worm was also reported from Kearney County. This pest as a rule is not seriously injurious so far to the westward in Nebraska.

ARMYWORM (Cirphis unipuncta Haw.)

Illinois W. P. Flint (August 18): A small outbreak of armyworms occurred in the south-central part of the State, being confined largely to Coles and Douglas Counties. Practically all injury occurred in cornfields, and was not of a very severe nature; the lower leaves were eaten from the corn, but little if any reduction will be made in the yield.

CORN LEAF APHID (Aphis maidis Fitch)

Nebraska M. H. Swenk (July 25 to August 25): During the first half of August there were reports of a destructive abundance of the corn leaf aphid (Aphis maidis), working on the corn tassels and other parts of the corn plants, in Seward, Saline, and Nuckolls Counties.

Kansas J. W. McColloch (July 30): Cornfields in Reno County are reported to be rather generally infested by this aphid. In some cases the tassel is not emerging from the foot owing to the abundance of this pest.

ALFALFA

YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli Guen.)

Kansas J. W. McColloch (August 18): A rather serious outbreak of the cotton cutworm developed in this county (Riley) about August 5. In some fields alfalfa was held back several weeks. Where the alfalfa was in bloom the worms did considerable damage by cutting off the bloom. Tachinid parasites were very active and from 75 to 90 per cent of the worms bore eggs. At present (August 18) the worms have nearly all disappeared.

WESTERN YELLOW-STRIPED ARMYWORM (Prodenia praefica Grote)

California A. O. Larson (July 31): This insect was serious in Merced and Stanislaus Counties in 1923. It is becoming serious in Merced County this year, attacking alfalfa, beans, watermelon, grapevines, and young peach trees.

ALFALFA CATERPILLAR (Eurymus eurytheme Boisd.)

California A. O. Larson (July 30): While driving north through the San Joaquin Valley on July 30 I noted that many of the radiators of southbound automobiles were well covered with alfalfa butterflies. This was interesting because the butterflies did not appear to be remarkably numerous and were not on all the machines. A few were flying about in no definite direction. Apparently as many were going in one direction as in any other. This condition was noted for about 75 miles but soon after I passed Tulare I came to a very heavy infestation of the butterflies. They were literally swarming over the alfalfa on both sides of the highway. Here was where the automobiles were catching the butterflies. North of Kingsburg they were again less numerous but they were quite noticeable the next 115 miles or as far north as Modesto.

CLOVER SEED CHALCID (Bruchophagus funebris How.)

Arizona Arizona News Letter (Volume 3, No. 7): A noticeable increase of the alfalfa seed chalcid fly has been reported from the Yuma district. Reports also have reached the office that this insect has been very destructive to the alfalfa seed in the Chandler district of the Salt River Valley. As much as 50 per cent of the seed has been destroyed in some fields.

BLISTER BEETLES (Meloidae)

Kansas J. W. McColloch (August 18): Blister beetles have not been bothersome during the past month. Reports from Alton and Falun indicate some damage to alfalfa.

VARIEGATED CUTWORM (Lycophotia margaritosa saucia Hbn.)

California T. D. Urbahns and assistants: The variegated cutworm is attacking gardens and alfalfa in Modoc County, being severe in places. Damage first noticeable about June 15.

VELVET BEAN

FALL ARMYWORM (Laphygma frugiperda S. & A.)

South Carolina Philip Luginbill and T. C. Shiver (August 21): The fall armyworm is attacking velvet beans at Columbia in a field containing 100 acres.

ARMYWORM (Cirphis unipuncta Haw.)

South Carolina Philip Luginbill and T. C. Shiver (August 21): A field of 100 acres in Congaree River bottoms about 7 miles from the city is attacked by this insect. Slight damage is being done.

California T. D. Urbahns and assistants (August 15): Adjoining fields of alfalfa were cut and migration of the worms to the beans took place destroying as much as 10 acres of beans in one night at Escalon, San Joaquin County. Growers are using furrow method and poisoned-bran mash for control.

APHIDIIDAE

California T. D. Urbahns and assistants (August 15): Several fields in Escalon-Manteca districts heavily infested. Growers are using various contact insecticides with varying degrees of control. Sample of insect sent to Geo. Wilson for identification.

GREEN CLOVER WORM (Plathypena scabra Fab.)

South Carolina Philip Luginbill and T. C. Shiver (August 21): A field at Columbia containing 100 acres was attacked by this insect. This same field was also infested with true and fall armyworms. Considerable damage is being done.

COWPEAS

AN APHID (Aphis medicaginis Koch)

Indiana C. R. Cleveland (August 31): Reports, including specimens of the cowpea or locust aphid (Aphis medicaginis), have been received from several points in the State that this aphid has been abundant and injurious on cowpeas during the past month.

MESQUITE

MESQUITE BEAN MOTH (sp. undetermined)

Texas O. G. Babcock (July 28): Largest bean crop in at least five to 6 years in vicinity of Sonora, Ozona, Eldorado, and Rocks Springs, Texas. To date (July 28) there seem to be two crops of the mesquite beans as well as two broods of the mesquite bean pod moth. Parasites very numerous, hence holding in check the ravages of the moth larvae. Loss probably less than $\frac{1}{2}$ of 1 per cent.

F R U I T I N S E C T S

APPLE

APPLE FRUIT CHAFER (Metachroma interruptum Say)

Indiana B. A. Porter (August 8): This insect caused considerable damage to the fruit of a few apple trees in an orchard near Decker during the early part of July.

APPLE FLEA WEEVIL (Orchestes pallicornis Say)

Indiana B. A. Porter (August 8): Most of the weevils entered hibernation between July 10 and 15.

APPLE APHID (Aphis pomi DeG.)

Ohio H. A. Gossard (August 24): The green apple aphid became quite generally noticeable over the northeastern section of the State during June, July, and early August. Hundreds of trees in many orchards were blackened by the fungous growth in the honeydew. They were particularly noted at Ravenna, Chardon, Painesville, Cleveland, and Berea. They were most numerous about the first of July and at the present time have largely subsided.

WOOLLY APPLE APHID (Eriosoma lanigerum Hausm.)

Ohio E. W. Mendenhall (August 20): I find that a great deal of apple stock in the nurseries south and west of Columbus is infested with the woolly aphid, especially the aerial form.

CODLING MOTH (Carpocapsa pomonella L.)

Ohio T. H. Parks (August 19): The plum curculio, together with the codling moth, is solving the market problem of apples grown in the uncared-for farm orchard. Practically no unsprayed fruit is free from attack and the insect is causing losses in some well-sprayed orchards.

Indiana B. A. Porter (August 8): Although the codling moth got a late start in this section (Vincennes) with reference to the blooming period of the apple, conditions since the beginning of the entrance of the worms into the fruit have been very favorable to them, and the infestation in most orchards is unusually severe. According to banding records, there has been no definite break between the first and second broods.

Illinois W. P. Flint (August 18): As indicated earlier in the summer, the codling moth is more abundant this season than during the last three years. Some poorly sprayed orchards show a fairly high infestation, mainly by late worms from eggs which have hatched during the last two weeks.

APPLE AND THORN SKELETONIZER (Hemerophila pariana Clerck)

New Hampshire P. R. Lowry (July 29): Injuring tip of branches of nearly every tree in an orchard at Hollis.

Massachusetts A. I. Bourne (August 22): The first moths of the second generation of the apple and thorn skeletonizer were making their appearance about the 30th of July. We are finding that the pest is just about as abundant as was the case last year at the corresponding period of seasonal development. The ease with which this has been controlled has led our leading fruit growers to rank it among the more or less secondary pests which they have to consider.

RED-BANDED LEAF ROLLER (Eulia velutinana Walk.)

Indiana B. A. Porter (August 8): This pest continues to be present in most orchards in small numbers. The outbreak at Vincennes reported earlier stopped with the first brood, the second being present in only very small numbers.

FALL WEBWORM (Hyphantria cunea Drury)

Massachusetts A. I. Bourne (August 22): The fall webworm is slightly more abundant than has been the case for several years.

Indiana C. R. Cleveland (August 21): The webs of this insect are a very common sight on apple trees and shade trees throughout those portions of central and northern Indiana which have been visited by the writer. Portions of trees and branches show considerable defoliation.

YELLOW-NECKED CATERPILLAR (Datana ministra Drury)

Ohio E. W. Mendenhall (August 5): I find that Datana ministra is quite troublesome in a number of orchards in the central and southern portions of the State.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Indiana B. A. Porter (August 8): Second-brood crawlers began appearing about July 12 at Vincennes. The unseasonably hot weather in early June, when the first brood of crawlers was appearing, apparently caused the pest to multiply much faster than is usual with the first brood. Serious infestations are developing in a few orchards in this section.

EUROPEAN RED MITE (Paratetranychus pilosus C. & F.)

Massachusetts A. I. Bourne (August 22): The European red mite, for some reason or other, quite generally over the State, has jumped ahead in its abundance during late July and early August. As a result, the characteristic bronzing of the foliage is beginning to make its appearance in very many of our orchards. In general the pest is not serious in orchards where the oils were thoroughly applied. It has been the custom of some fruit growers to skip some of the blocks in seasons where there is little expectation that there will be any fruit. It has been noted that the mites have gotten their start chiefly on those trees which were not given attention at the proper season.

PEACH

PEACH TWIG BORER (Anarsia lineatella Zell.)

Massachusetts A. I. Bourne (August 22): W. D. Whitcomb, who is located at the field station at Waltham, reports the peach twig borer on peach in Waltham and vicinity, which is in Middlesex County. He reports that 5 per cent of the twigs in some cases are damaged.

California T. D. Urbahns (August 19): Field observations for the past two weeks show considerable loss to canning peaches in southern, central, and northern peach districts. Some orchards show fruit 100 per cent infested where spraying was neglected and the crop was light. Late peaches are more infested than early varieties.

ORIENTAL FRUIT MOTH (Laspeyresia molesta Busck)

Georgia Oliver I. Snapp and assistants (July 14): Fourth-generation pupae are now being noted in the insectary. There has been no increase in the infestation at Fort Valley. (August 15): Some individuals of the fifth generation of the Oriental peach moth have been reared in the insectary at Fort Valley.

Indiana B. A. Porter (August 8): No Oriental fruit worms have yet been found in southern Indiana this season. Occasional instances of typical injury have been found, but this may, of course, have been caused by the peach twig-borer or some other species.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Georgia Oliver I. Snapp (August 15): This insect has apparently increased very rapidly on peach trees since the close of the peach-shipping season. Weather conditions have been favorable for scale reproduction.

CORRECTION In Volume 5, No. 5, page 247, note on Green June Beetle, Cotinis nitida L., credited to H. F. Dietz, instead of reading "foliage of peach and grasses" should read "foliage of peach and grapes."

SHOT-HOLE BORER (Scolytus rugulosus Ratz.)

Virginia W. S. Hough (August 22): The beetles are breeding and spreading at a rapid rate at New Market in one large apple orchard. At Winchester cherry and peach are being attacked to the extent that the spread is from the weakened trees to healthy trees. Neglect in looking after weakened trees has resulted in the present outbreak.

PLUM CURCULIO (Conotrachelus nenuphar Hbst.)

Massachusetts A. I. Bourne (August 22): The plum curculio seems to be very abundant in most sections of Middlesex and Worcester Counties, the chief fruit-growing region of the State. In the absence of any serious infestation of aphids or leafhoppers, the plum curculio is by far causing more serious loss than any of our other fruit insects.

- Georgia Oliver I. Snapp (July 14): Over 8,500 cars of Georgia peaches have moved to date unusually free of plum curculio larvae. The insect is apparently under most excellent control. There are no small larvae in the Elbertas that are now moving, and other observations point to an absence of a second generation in Georgia this year. The absence of a second brood is attributed to the very unfavorable weather conditions during the pupation season, which caused first-generation adults to be late in emerging from the soil. (August 15): The very dry and hot weather has been most unfavorable for the development of adults in the soil. The general curculio infestation in the Georgia Peach Belt is lower than it has been for seven years.
- Ohio T. H. Parks (August 19): This insect, together with the codling moth, is solving the market problem of apples grown on the uncared-for farm orchard. Practically no unsprayed fruit is free from attack and the insect is causing losses in some well sprayed orchards.

PLUM

RED SPIDER (Tetranychus spp.)

- California Weekly News Letter, State of California, Vol. 7, No. 17, August 23: An infestation fully as severe as that of 1924 has again occurred during the season of 1925. The red spider has been particularly active in many orchards of the Sacramento Valley, causing defoliation of trees and a corresponding reduction of quality of fruit and loss of crop. Despite the efforts of fruit growers who have experimented with different spray materials this pest has continued to spread. It is hoped that through a discussion of latest methods by members of the staff of the Department of Agriculture, the University, and spray organizations, methods may be devised which will help to bring it under control.

GREEN JUNE BEETLE (Cotinis nitida L.)

- Kansas J. W. McColloch (July 31): This beetle was received from Bethel with the information that it was doing some injury to plums in an orchard there.

RASPBERRY

RED-HUMPED CATERPILLAR (Schizura concinna S. & A.)

- Indiana C. R. Cleveland (August 21): Report of species feeding on raspberries received from Bedford. Specimens were included.

GRAPE

RED SPIDER (Tetranychus telarius L.)

California T. D. Urbahns and assistants (August 17): Serious injury to Alecanto Bouche grapevines, Delano, and Wasco. Also serious on ornamentals owing to lack of control practice.

SIX-SPOTTED GRAPE BEETLE (Pelidnota punctata L.)

Indiana H. F. Dietz (July 25): In the vicinity of Indianapolis a six-spotted grape beetle has been doing considerable damage to grapes. One man brought in specimens and said that he had collected hundreds of them from his vines.

GRAPE LEAF SKELETONIZER (Harrisina americana Guer.)

Arizona Arizona News Letter, State Comm. of Agric. and Hort., Vol. 3, No. 7 (July 31): The grape leaf skeletonizer was reported from the Verde Valley, and a slight outbreak was also observed in a vineyard near Phoenix.

GRAPE LEAFHOPPER (Erythroneura comes Say)

Arizona Arizona News Letter, State Comm. of Agric. and Hort., Vol. 3, No. 7 (July 31): The grapevine leafhopper has been abundant in practically all the vineyards near Phoenix during the past month.

PRUNES

RED SPIDER (Tetranychus spp.)

California T. D. Urbahns and assistants (August 15): At Fresno prunes especially are seriously affected — peaches and figs and Zinfandel grapevines.

CRANBERRY

CRANBERRY FRUIT WORM (Mineola vaccinii Riley)

Massachusetts A. I. Bourne (August 22): Mr. Lacroix, who is at the cranberry substation at East Wareham, reports that the cranberry fruit worm is notably less in its intensity of infestation than usual throughout the cranberry-growing section of the Cape.

PECANS

FALL WEBWORM (Hyphantria cunea Drury)

Georgia Oliver I. Snapp (July 14): This insect, which is normally very common on pecan, persimmon, etc., at this season of the year in central Georgia, is scarce this year. The very hot dry summer may have been responsible for its absence, although parasites were perhaps a factor.

A FLAT-HEADED BORER (*Buprestidae*)

Arizona

Arizona News Letter, State Comm. of Agric. and Hort., Vol. 3, No. 7 (July 31): The flat-headed borer was found to have killed a number of young pecan trees in two plantings northeast of Phoenix. The trees were girdled near the base by the action of the borers.

ALMONDS

A RED SPIDER (*Tetranychus telarius* L.)

California

T. D. Urbahns (August 18): This species together with *Eryobia praetiosa* has caused early defoliation of almond trees. The crop is naturally reduced considerably.

PEACH TWIG BORER (*Anarsia lineatella* Zell.)

California

T. D. Urbahns and assistants (August 15): Careful inspection of the mature nut will usually show the point of entrance into the remal of the nut, but commercially it will be impracticable to examine every nut. This will result in a lowered price for the farmer for his product.

CITRUS

CITRUS APHID (*Aphis spiraecola* Patch)

Louisiana

H. K. Plank (August 11): Numerous tender tips on two willow-leaved mandarin orange trees were found today curled by this aphid in the Jules Morel grove. Many curled tips were also seen in other groves in the vicinity of Burns, where none were apparent on July 24. Mr. Morel states that he has noticed curled leaves in his grove for a year or more. Damage, however, has never been very great. So far as known this is the first recorded occurrence of the "citrus aphid" in Louisiana.

IVY SCALE (*Aspidiotus hederæ* Vall.)

Arizona

Arizona News Letter, State Comm. of Agric. and Hort., Vol. 3, No. 6 (June 30): The oleander scale was discovered upon a grapefruit tree in one of the plantings northwest of Phoenix. Only one tree in the entire grove was found infested and steps were immediately taken for its suppression. As the tree was far distant from any oleander plants it seems likely that the scale was introduced upon the grapefruit tree by visiting birds.

TERMITES

Texas

F. L. Thomas (August 20): At Alamo termites were attacking citrus, one tree being killed. They worked on the roots.

TRUCK - CROP INSECTS

MISCELLANEOUS FEEDERS

WIREWORMS. (Elateridae)

Idaho M. C. Lane (August 5): Wireworms were found to be on the increase over most of the irrigation projects in southern Idaho, eliminating the growing of such crops as corn, potatoes, onions, and melons. The farmers were very anxious that something be done on the control of the pest.

A RED SPIDER (Tetranychus telarius L.)

Illinois W. P. Flint (August 18): Mites, mainly Tetranychus telarius, have caused serious damage to gardens and small fruit plantations throughout the central part of the State, beans having been a failure in many gardens because of the abundance of these creatures.

BLISTER BEETLES (Meloidae)

Massachusetts A. I. Bourne (August 22): For the last week or ten days the black blister beetles have been making their appearance and doing considerable havoc, particularly on flowers.

Ohio H. A. Gossard (August 24): Black blister beetles, I suppose Epicauta pennsylvanica DeG., were reported as injurious to potatoes at Dalton and have been observed at Wooster.

Indiana C. R. Cleveland (August 21): There has been an apparent increase in the number of blister beetles, particularly the black blister beetle, on potatoes and other garden crops during the last two weeks. Several reports from correspondents have been received and personal observations have disclosed a number of instances of rather severe damage.

SEED CORN MAGGOT (Hylemyia cilicrura Rond.)

New Mexico J. R. Douglass (August 22): Specimens of the seed corn maggot have been received from Tucumcari, Quay County, with the complaint that it was causing considerable damage to beans.

MOLE CRICKETS

Alabama J. M. Robinson (July 31): Mole crickets, probably the Porto Rican, continue to attract attention in various southern counties of the State.

POTATO AND TOMATO

COLORADO POTATO BEETLE (Leptinotarsa decemlineata Say)

Ohio H. A. Gossard (August 24): There was a severe outbreak of the Colorado potato beetle at Craighton, requiring stramonius use

of poisons to control the beetles. This appears to have been somewhat local, and so far as detected damage by the potato beetles has not been unusually excessive over most of Ohio territory.

POTATO APHID (Illinoia solanifolii Ashm.)

Ohio H. A. Gossard (August 24): The green and pink potato aphid became very numerous on three of our experimental plots of potatoes at Wooster, but were eventually cleaned up by ten different species of ladybird beetles which were observed working on them. It was noted as doing considerable damage to tomatoes about Toledo August 1.

GREEN PEACH APHID (Myzus persicae Sulz.)

Indiana C. R. Cleveland (August 21): Potatoes at various points in northern and central Indiana ordinarily show infestation by this species each year. Although it has not been as abundant as usual thus far during the present season, some colonies are beginning to appear in conspicuous numbers at the present time. No direct injury is yet apparent but in view of the known ability of this species to carry potato disease, there will undoubtedly be a sufficient infestation to have some influence on disease transmission.

LEAFHOPPER (Empoasca fabae Harr.)

Ohio T. H. Parks (August 19): The potato leafhopper continues to be a serious pest of potatoes. Hopperburn is now prevalent on unsprayed potatoes.

H. A. Gossard (August 24): There is a somewhat general infestation of the potato or apple leafhopper and at Craighton these finished up what the beetles left, causing great shrinkage to the crop. There has been considerable shrinkage from leafhopper damage over most of northern Ohio.

Indiana C. R. Cleveland (August 21): Empoasca fabae Harr. has continued to increase on potatoes at Lafayette. Early potatoes have shown very severe injury and in many cases the vines are already dead owing at least partly to attack by this species. Hoppers are now abundant on late potatoes and the injury is beginning to appear on these plants conspicuously.

Wisconsin E. L. Chambers (August 20): There has been quite a serious loss to potatoes from hopperburn during the past two weeks. The infestation is much worse than the past two years. All blocks of apple in the nurseries and dahlias in the majority of gardens show marked injury from hopperburn.

STALK BORER (Panaipema nebris nitela Guen.)

Ohio H. A. Gossard (August 24): The common stalk borer has been numerous reported over most of northern Ohio during the months of June, July, and August. It was particularly noted as damaging

potatoes in the neighborhood of Castalia, in Erie County, and was reported from 29 other localities since June 23, infesting corn, potatoes, tomatoes, rhubarb, dahlias, horseweed, flowers, etc.

Nebraska M. H. Swenk (July 25 to August 25): A few complaints of injury by the stalk borer (Papaipema nebris nitela) continued until the end of July.

TOBACCO WORM (Protoparce quinquemaculata Haw.)

Oregon Sadie E. Keen (July 29): Fourteen full-grown hawk-moth larvae were brought in from a half-acre potato patch near Forest Grove. Usually only one or two are brought in in a season.

POTATO FLEA BEETLE (Epitrix cucumeris Harr.)

Nebraska M. H. Swenk (July 25 to August 25): Injury to potato, tomato and cucumber plants by the potato flea beetle has been reported from northern and western Nebraska during the past ten days.

AUSTRALIAN TOMATO WEEVIL (Listroderes obliquus Gyll.)

Mississippi M. M. High (August 11): The weevil is now about Crystal Springs.

CABBAGE

IMPORTED CABBAGE WORM (Pieris rapae L.)

Wisconsin E. L. Chambers (August 20): Complaints are still coming in from cabbage growers to the effect that the loss from the worm is quite serious this year.

CABBAGE APHID (Brevicoryne brassicae L.)

Illinois W. P. Flint (August 18): The outbreak of the cabbage aphid in northern Illinois has been checked somewhat by weather conditions and the insect enemies of this pest. A large amount of damage has been done to cabbage in the trucking sections adjacent to Chicago.

Wisconsin E. L. Chambers (August 20): There has been quite a serious loss to cabbage growers in Racine County from the cabbage aphid. Several fields show 50 per cent loss.

HARLEQUIN BUG (Murgantia histrionica Hahn)

Alabama J. M. Robinson (July 31): The harlequin cabbage bug has been sufficiently numerous in parts of the State to cause considerable concern.

STRAWBERRY

STRAWBERRY ROOT APHID (Aphis forbesi Weed)

Wisconsin E. L. Chambers (August 20): The nursery inspectors have been finding a bed of strawberries in practically every section of the State,

with a light infestation of root lice, but it is very light and less than 5 per cent of the nurseries have been reported as having it.

WHITE GRUBS (Phyllophaga spp.)

Wisconsin E. L. Chambers (August 20): There has been quite a heavy loss to strawberry growers from the white grubs during the past season, the loss being heavier than last year and very general.

ASPARAGUS

ASPARAGUS BEETLE (Crioceris asparagi L.)

Wisconsin E. L. Chambers (August 20): Several large plantings were practically ruined in Jefferson County because of neglect to spray for the asparagus beetle.

BEANS

MEXICAN BEAN BEETLE (Epilachna corrupta Muls.)

Pennsylvania J. N. Knull (August 25): During the present month the Mexican bean beetle has been found in two additional counties, Alleghany and Fayette, to the territory already known to be infested in this State. The infested territory now covers the southwestmost five counties in the State extending from Beaver, on the north, to Fayette, on the southeast.

West Virginia W. E. Rumsey (August 1): During the current year 13 counties not known to have been infested last year are now within the infested territory. The entire western three-fourths of the State is infested. The easternmost counties are Preston, Tucker, Lewis, Clay, Nicholas, and Greenbrier.

Ohio H. A. Gossard (August 24): The Mexican bean beetle was observed at Rocky River in early August and we infer that it is now distributed over practically the entire State.

Indiana Neale F. Howard (August 26): The Mexican bean beetle is reported from Franklin and Jackson Counties.

Tennessee Neale F. Howard (August 26): The Mexican bean beetle is reported from McNairy County.

Alabama J. M. Robinson (July 31): The Mexican bean beetle has been active in the northern and eastern parts of the State.

New Mexico and Arizona J. R. Douglass (August 22): The infestation of the Mexican bean beetle over the southwestern part of New Mexico and southeastern part of Arizona is lighter this season than for several years. Early plantings of home garden beans are infested, but no injury is noted to late field plantings. The adults of the first generation are appearing over the above areas.

RED-HEADED FLEA BEETLE (Systema frontalis Fab.)

- Mexico J. R. Douglass (August 22): On July 28, this insect was noted attacking a six acre field of late planting of beans in the Rio Grande River Valley. Beans in poor conditions and beetles concentrated on stunted plants.

MELONS

MELON APHID (Aphis gossypii Glov.)

- Ohio T. H. Parks (August 19): Some growers in northwestern Ohio lost their plants from a very severe infestation of these aphids during July and early August.
- Indiana C. R. Cleveland (August 21): Reports of injury to cucumbers and melons have been coming in for the last week or two from all parts of the State.
- Nebraska M. H. Swenk (July 25 to August 25): During the entire period covered by this report the melon aphid has been fully normally injurious, in contrast to its records in July.
- Kansas J. W. McColloch (August 13): The melon aphid was somewhat late in making its appearance this year, the first report coming from Whitewater on July 24. The outbreak developed rapidly, however, and the aphids have caused heavy losses to the growers of watermelons, cantaloupes, and cucumbers.

MELON WORM (Diaphania hyalinata L.)

- Alabama J. M. Robinson (July 31): Cantaloupe worms have been rather active over the southern and central parts of the State.

SQUASH

SQUASH BORER (Melittia satyriniformis Hbn.)

- Indiana C. R. Cleveland (August 21): Injury by this borer to squashes has been the subject of more than the usual number of reports this summer.
- Nebraska M. H. Swenk (July 25 to August 25): The squash-vine borer was very frequently reported as injurious to squashes and cucumbers during August.

SQUASH BUG (Anasa tristis DeG.)

- Nebraska M. H. Swenk (July 25 to August 25): The squash bug Anasa tristis DeG. has continued to be at least normally troublesome.

ONIONS

ONION THRIPS (Thrips tabaci L.)

New Mexico and
Arizona

J. R. Douglass (August 22): The onion thrips was noted in injurious numbers on Valencia onions in San Simon Valley, N. Mex., and in Sulphur Spring Valley, Ariz.

PHLACRID BEETLE (Eustilbus apicalis Melsh.)

Michigan

R. H. Pettit (August 24): Mr. John Freeman of Lowell, Mich., reported by letter that phlacrid beetles were working on the roots of his onions. He stated that he saw no evidence of rotting but that the onion roots seemed to be cut off square and that they appeared to be healthy, so far as anything else showed. He had a patch about a rod across where the roots were cut off and he says some of these onions still lie on the ground and are hard and sound.

BEETS

BEET LEAFHOPPER (Eutettix tenellus Baker)

Utah

Geo. F. Knowlton (August 8): ^{of} ~~Only~~ leaf/sugar beets is appearing in varying degrees now. In some fields in Cache and Boxelder Counties there is rather severe damage, but not so bad as last year, and it appeared largely after the beets had a good start.

SUGAR-BEET NEMATODE (Heterodera schachtii Sch.)

Utah

Geo. F. Knowlton (August 8): The sugar-beet nematode is doing its usual damage to beets in northern Utah and where badly infested the beets are very scrubby.

WHITE GRUBS (Phyllophaga spp.)

Utah

Geo. F. Knowlton (August 8): White grubs are damaging sugar beets in some fields south of Logan and in Cornish.

TURNIPS

CABBAGE WEBWORM (Hellula undalis Fab.)

Alabama

J. M. Robinson (July 31): The turnip webworm has already appeared in considerable numbers at Seale.

CARROTS

PARSLEY STALK WEEVIL (Listronotus latiusculus Boh.)

Illinois

W. P. Flint (August 18): Mr. Chandler reports that the area infested by this insect is much larger than at first supposed, serious damage to carrots having occurred over several of the counties east of St. Louis.

Kansas

J. W. McColloch (August 8): Some carrots received from Wyandotte County which were being injured by a *Rhynchophora* grub. These were submitted to Mr. Graf, who reported that in all probability they were the larvae of the parsley weevil.

HORSE-RADISH

HORSE-RADISH FLEA BEETLE (*Phyllotreta armoraciae* Koch)

New York

Neale F. Howard (August 7): Every petiole of horse-radish was mined by numerous larvae at Olean, in Chautauque County. (August 8): Quite numerous at Sherman, Chautauque County.

Ohio

Neale F. Howard (August 14): A very heavy infestation of larvae was observed at Columbus. Pupae and larvae ready to pupate were present in the soil about the roots of the plants.

PEANUTS

A PRIONUS GRUB (probably *Prionus fissicornis* Hald.)

Nebraska

M. H. Swenk (July 25 to August 25): From Cherry County comes the report of the destruction of part of a field of Early Northern peanuts by *Prionus* grubs, probably those of *P. fissicornis*.

S O U T H E R N F I E L D - C R O P I N S E C T S

COTTON

BOLL WEEVIL (*Anthonomus grandis* Boh.)

GENERAL
STATEMENT

Cooperative report on status of boll weevil and other cotton insects as of August 15, Delta Laboratory, Tallulah, La.

Weevil infestations in the infested areas have increased rapidly during the last 15 days as a result of general field migration. The continued dry weather in many localities has effected complete weevil control. In Texas injury has been reported in only a few counties on or near the coast in the southeast. In Arkansas "spotted" infestations with injury occurred in only the southern portion. In northern Louisiana "spotted" infestations occurred with severe injury in many fields and in the southern portion a high infestation prevailed generally. In Mississippi injury has occurred locally and largely in the Mississippi Delta section. Tennessee is practically free of injury. In northern Alabama, northern Georgia, western South Carolina, and western North Carolina weevil injury has been limited to local areas. Considerable injury has been reported in southern Alabama, southern and eastern central Georgia, the coastal plain section of South Carolina, and southeastern and eastern North Carolina.

Texas

Dr. F. L. Thomas (August 14): Reports of injury from boll weevils come from Fort Bend and Brazoria Counties.

A. C. Johnson: On August 3 in four fields near Port Lavaca an average infestation of 42.5 per cent was found and on August 12 in the same fields an average infestation of 51.8 per cent.

Arkansas

D. Isely (August 15): Boll weevil infestations are still local. In some fields in the southern half of the State serious injury has occurred, but the greater part of cotton in Arkansas is still free from infestation.

Louisiana

W. R. Sudduth: On August 8 in one field near timber in the Shreveport section an infestation of 54 per cent was found and in one field some distance from timber an infestation of 2.7 per cent. In different fields from the above on August 15 an infestation of 43 per cent was found near timber and 21 per cent in a field some distance from timber.

W. E. Hinds (August 17): No emergence from hibernation cages has occurred from August 1 to 15 and we have closed these tests and are now moving our cages. The latest emergence was, I believe, on June 12.

Sodium fluosilicate has given serious burning on cotton when applied with dew on the foliage and appears to have been considerably less efficient than calcium arsenate so far as boll weevil control is concerned.

Boll weevil migration has been under way since about July 15 in central Louisiana and there has been no effective natural control at any time during the season and weevils have become exceedingly abundant. In spite of this fact, the weevils have been sufficiently well controlled on regular calcium arsenate dusted plats to allow fruiting to continue steadily to date (August 15): Practically no fruit has been set on unpoisoned fields in the vicinity of Baton Rouge since about July 20. The setting of bolls has not been satisfactory in this section throughout the season and regardless of weevil infestation, spacing, or other conditions. The trouble seems to be due to a combination of moisture and fertility conditions which have been more favorable to vegetative growth than to the setting of bolls.

Probably the latest poisoning of cotton for weevil control in the State this season is being done in the extreme southern part of the State. In that section two airplane dusting units have recently begun work in the vicinity of Houma and south of Abbeville.

B. R. Coad (August 15): Generally, the infestation has increased during the last 15 days owing to general field migration. Infestations range from light to complete. Severe injury has occurred in many fields in Madison Parish.

Mississippi

R. W. Harned (August 8): During the week which ended August 8 inspections were made in 15 counties on 48 farms. Weevil infestations were found on 35 farms. Infestations ranging from 0 to 90 per cent were found. The average infestation on the 35 farms was 18.4 per cent whereas on all farms the average was 13.6 per cent. The increase in infestation during the last week was 80 per cent. The heaviest infestations were found in the Mississippi Delta section. The next highest infestations were found in the northeastern section of the State and the lowest infestations in the southern portions.

Alabama

J. M. Robinson (July 31): The subject of methods for the control of the boll weevil has been one of the outstanding bits of

correspondence for the month. The work of the boll weevil has been sufficient to cause a great increase in the active control work. (August 14): Weevils are common over the southern and central portions of the State. Damage probably 3 to 5 per cent higher this year than last.

Georgia R. P. Bledsoe (August 17): The average infestation in all experimental check plats for the past week was 21.3 per cent. Infestations ranged from 7.7 to 47 per cent. The dry weather still continues in the Piedmont section of Georgia. Squares are getting scarce, which makes the taking of infestation records rather difficult.

V. V. Williams (August 17): Weevil infestation is complete in most fields in the Valdosta section.

South Carolina R. W. Moreland: From July 27 to August 2, 12,600 squares were examined in the experimental check plats: 6,540 punctures, or an average infestation of 51.9 per cent were found. Infestation ranged from 13.5 to 83.8 per cent.

Dr. F. A. Fenton: Field-to-field movement of the weevil continued throughout the past two weeks, resulting in the heavy infestation of fields heretofore only slightly infested. This movement was accelerated over large areas owing to droughty conditions which caused a heavy shedding of squares and young bolls. This latter condition resulted in a shortage of cotton forms in which the weevil could breed. The result is that the second-brood weevils are finding very unfavorable conditions for breeding, with the exception of a few fields of late cotton or in the richer soils where the plants are still fruiting.

J. O. Pepper and C. B. Nickels (August 17): In the coastal-plain region bolls are being punctured heavily in undusted fields but less in dusted fields. Weevil injury is very light in the Piedmont section, the larger part of cotton being sufficiently mature to escape weevil injury.

North Carolina Franklin Sherman (August 17): In the Piedmont section continued heat and drought are retarding the weevil but some dusting is being done. In eastern and southeastern sections the drought is less pronounced and infestations have continued to increase until now entire plantings are often found to need dusting and individual fields often found in which 75 to 80 per cent of the squares are punctured. More dusting is being done in this section than in previous years.

COTTON APHID (Aphis gossypii Glov.)

Georgia Jeff Chaffin (August 5): Within the last three weeks we have received a very large number of complaints from cotton growers all over the State concerning the serious damage that is being done by the cotton lice. They are more numerous and doing a great deal more damage than in any year in the past. This can be accounted for to a

large extent by reason of the fact that the State of Georgia is dusting over 50 per cent of her cotton acreage with calcium arsenate in the control of the boll weevil. Calcium arsenate kills the lady beetle, leaving the way open for the lice to multiply very rapidly.

V. V. Williams (August 17): Lice are noticeable on many plants in most fields but it is too late for damage.

Alabama J. M. Robinson (July 31): Plant lice on cotton have been the cause of inquiries from various parts of the State.

Louisiana Dr. J. W. Folsom (August 15): No serious lice infestation. Lice are comparatively few in numbers and most of these are small individuals.

W. E. Hinds (August 17): The cotton plant louse infestations have been abundant, regardless of poisoning, but apparently average considerably heavier on areas where several applications of calcium arsenate have been made.

Arizona The Arizona News Letter, Vol. 3, No. 6, Phoenix, (June 30): A report was received from Gila Bend that the cotton aphid was becoming numerous. A request was included for leaves bearing the parasitized lice which would be distributed in the cotton fields, thus liberating the parasites as they hatched. Because of the lack of such material in the Salt River Valley it was impossible to send any relief.

COTTON FLEA (Psallus seriatus Reut.)

GENERAL STATEMENT D. M. McEachern (August 14): From July 6 to 11 six localities in Georgia, and from July 12 to 23 seven localities in South Carolina, were visited to investigate the distribution and amount of hopper injury. The only pronounced injury found was at Jefferson, Ga., and in Anderson County, S. C. Slight injury was noted in Fulton, DeKalb, and Barrow Counties, Ga., and in Pickens, Greenville, Florence, Fairfield, and Kershaw Counties, S. C. The injury appeared absolutely identical with that found in Texas.

Mississippi Clay Lyle (July 30): The cotton flea, which caused serious loss in Texas, Georgia, and South Carolina last year, was recently found in Mississippi for the first time, when D. W. Grimes, Assistant Entomologist of the State Plant Board, collected specimens of this insect on two farms in Washington County. One farm was south of Greenville and the other north of Leland so that they were about 15 miles apart. Only one specimen was found on each farm, as they are very hard to collect but R. W. Harned expresses the opinion that this insect may be widely distributed in the State already.

The so-called "fleas" are so small and active that they are not easily seen. The typical injury caused by these pests is much more noticeable than the insects themselves. In the two Washington County fields the injury was exactly similar to that reported from Texas, South Carolina, and Georgia last year. Usually the affected plants grow very tall and put on practically no limbs or fruit. This habit of growth is very characteristic, though plants are occasionally stunted or dwarfed by this pest.

R. W. Harned (July 30): Small green insects taken on cotton at A. & M. College on July 30 by A. L. Hamner and J. M. Langston. This may possibly be the cotton flea, which will make the second county infested. We already have them from Washington County. (Determined by W. L. McAtee as this species. J. A. H.)

Texas Dr. F. L. Thomas (August 14): Injury from the cotton hopper has occurred in Henderson and Harris Counties, but in general has been reported only from the northeastern section of the State.

South Carolina C. B. Nickels (August 17): Hoppers began to migrate from cotton to croton plants during the early part of August in the Piedmont section.

Louisiana Dr. J. W. Folsom (August 17): The hopper is common in certain fields in which there are large numbers of small blasted squares, and where many hoppers have been seen in the act of puncturing the small squares.

RED SPIDER (Tetranychus telarius L.)

North Carolina Franklin Sherman (August 17): Light to moderate infestations of the red spider with a few severe cases reported. Light to moderate infestations of lice found in or reported from various sections; severe infestations in a few cases.

TARNISHED PLANT BUG (Lygus pratensis L.)

Arizona Arizona News Letter, Vol. 3 No. 7 (July 31): The tarnished plant bug has been responsible for the shedding of young squares of cotton in several fields near Chandler.

THRIPS (Thysanoptera)

Arizona Arizona News Letter, Vol. 3 No. 7 (July 31): The cotton thrips were observed to be very numerous in fields near Litchfield and Glendale. Many plants were showing injury from these insects.

BOLL WORM (Heliothis obsoleta Fab.)

Texas Dr. F. L. Thomas (August 14): The boll worm is abundant and causing injury in Wichita, Hall, Panola, and Tyler Counties.

Arizona Arizona News Letter, Vol. 3, No. 7, (July 31): The corn ear worm appeared in various parts of the State during July. Cotton has been attacked at Glendale, Chandler, and Goodyear. In several cotton fields near Tucson the insect has also been observed. A rose grower near Phoenix brought to the office one of these insects which had burrowed into the rose buds.

Oklahoma D. Isely (August 15): Complaints of boll worm injury have been received from southern Oklahoma.

E. E. Scholl (August 20): We are now entering a campaign on cotton boll worms in the southeastern part of the State, where at least 20 counties are now infested.

- Arkansas D. Isely (August 15): There is an unusual amount of complaint of boll worm injury this season, particularly from southwestern Arkansas.
- Louisiana T. Slack (August 4): Boll worm damage has been found in one field near Lake Charles.
- Dr. J. W. Folsom: Considerable boll worm injury in this section (Tallulah).
- W. E. Hinds (August 17): Cotton boll worms have been the occasion of complaint by an unusual number of growers and are apparently exceptionally numerous throughout the State. Calcium arsenate as applied for boll weevil control appears to have caused a considerable decrease in the numbers of worms but has not constituted a satisfactory control for the worms.
- Alabama J. M. Robinson (August 14): Boll worms have been reported as damaging 3,000 acres of cotton in Covington County.
- Georgia V. V. Williams (August 17): A few boll worms have been found but no injury as yet.

COTTON LEAF WORM (Alabama argillacea Hbn.)

- Texas S. D. Smith (August 13): Leaf worms appeared throughout the El Paso Valley on August 8 in considerable numbers. They are also reported from Artesia in southeastern New Mexico. About the first of August leaf worms appeared in the Big Bend in Texas and about the same time several reports were received regarding the occurrence in the Laguna of Mexico.
- Dr. F. L. Thomas (August 14): The leaf worm is becoming generally distributed throughout the greater part of the State, extending to Terry County in the west. Forty-four scattered counties have reported infestations to date. Much damage is liable to occur on the late cotton in the northern part of the State.
- A. C. Johnson (August 12): There is a considerable amount of leaf worm damage at Port Lavaca. Poison is being applied.
- Oklahoma E. E. Scholl (August 20): We are now entering a campaign against the cotton leaf worm in the southeastern part of the State, where at least 20 counties are now infested.
- Arkansas D. Isely (August 15): Leaf worms have apparently spread over the entire State during the first two weeks of August. Large worms have been collected from as far north as Craighead and Washington Counties.
- Louisiana V. S. Martin: From August 4 to 7 many fields were scouted for leaf worms in DeSoto, Caddo, and Bossier Parishes, one field of about 3 acres being found with a light infestation. From August 7 to 10 no worms were found. On August 11, of the 12 or 15 fields

inspected, 5 were infested, all of which had been poisoned. In only one of the five fields were sufficient worms present to do damage. These fields are located near Benton in Bossier Parish.

T. Slack (August 4): Severe damage was caused in a number of fields at Lake Charles. Serious damage was also reported at Grand Cheniere in Cameron Parish.

R. J. Smith (August 8): Only four comparatively heavy infestations of what might be second-brood worms have been found. These infestations were in Rapides, Grant, and Natchitoches Parishes.

Dr. J. W. Folsom (August 18): Leaf worm damage has been very local with no serious general outbreak.

W. E. Hinds (August 17): Cotton leaf worms have been reported quite commonly but usually with only a light infestation. Poisoning has been done in some localities on areas up to 50 acres, but the infestation has not become general. Applications of calcium arsenate by airplane in the vicinity of Bunkie gave completely satisfactory results within a few hours after an application of Paris green had been washed off by rain and failed to stop the cotton leaf worms.

Alabama

J. M. Robinson (August 14): Leaf worms have been found as follows: Pupae in Lowndes County, adults in Marshall County, larvae in Cullman County, and larvae in Morgan County. Not very numerous at any of the points.

Mississippi

Clay Lyle (July 30): That cotton worms are already appearing in this State seems highly probable, according to the following telegram just received by the State Plant Board from B. R. Coad, in charge of the Boll Weevil Laboratory at Tallulah, La.:

"Leaf worm invasion has appeared throughout northern Louisiana within past few days, and is now thoroughly distributed over this country, undoubtedly over a large portion of Mississippi as well. Poisoning already started in many places in northern Louisiana."

Not a single specimen of the cotton worm has yet been sent in for identification from Mississippi, and the Plant Board inspectors who examine hundreds of cotton fields each week have also found no signs of cotton worm injury to this date. With this appearance in northern Louisiana, however, it will probably be only a few days until it is reported in Mississippi. This pest appeared in Mississippi in July, 1923, and stripped cotton fields over a large section of the State that summer and fall, causing considerable loss. In 1924 the first report of this worm in Mississippi reached the Plant Board office on August 28 and on account of this late appearance practically no damage resulted last year.

R. W. Harned (August 5): The first specimens of the cotton worm were received at this office on August 1 from Adams County. Specimens and authentic reports have now been received in regard to the occurrence of these insects in Adams, Hinds, Lincoln, and Washington Counties. (August 17): The cotton worm has been reported from practically all sections of the State during the last few weeks.

T. F. McGehee (August 15): Leaf worms have been found on seven farms in Marshall County but the infestations are very light as yet. A few fields have been poisoned.

TOBACCO

TOBACCO BUD WORM (Heliothis virescens Fab.)

- Tennessee A. C. Morgan (August 20): No injury by the tobacco bud worm has been observed at Clarksville.
- Alabama J. M. Robinson (July 31): Bud worms attacking the tender leaves of tobacco plants have been reported from Tuscaloosa district.

TOBACCO WORM (Protoparce quinquemaculata Haw.)

- Tennessee A. C. Morgan (August 20): Tobacco hornworms are much later than usual for the August brood and the infestation is apparently as light as we have ever recorded. This condition is ascribed to the exceedingly dry summer.

TOBACCO FLEA BEETLE (Epitrix parvula Fab.)

- Tennessee A. C. Morgan (August 20): The tobacco flea beetle infestation is very light at Clarksville.

SUGARCANE

SUGARCANE LEAF SCALE (Pulvinaria iceryi Guer.)

- Porto Rico A. H. Rosenfeld (July 1): Attention of our entomologist, Dr. H. L. Dozier, was called to a field of 5 acres belonging to a colono of Central Cambalache, near Arecibo, on North Coast. Investigation proved these 5 acres to be 100 per cent infested and the cane was yellowed and dwarfed as if by some blight. All stages of the insect were present except the males, which even breeding in the laboratory by Dr. Dozier failed to develop. This is the first serious outbreak of this insect reported on the island and it would be interesting to know whether it has suddenly adapted itself from some native grass or if its appearance in numbers is due to reduced parasitism for some natural cause. Coccinellidae were abundant at the time the patch was sprayed with kerosene emulsion by the owner with excellent results. Wolcott (Journ. Bd. of Agr. of P. R., Vol. 2, pp. 35, April, 1921) reports six individuals having been found.

FOREST AND SHADE-TREE INSECTS

GENERAL FEEDERS

BAGWORM (Thyridopteryx ephemeraeformis Haw.)

- Kansas J. W. McColloch (August 18): Reports of defoliation of cedars and shade trees have been rather numerous during the last month. In many places in eastern Kansas the cedars have been killed

by the activities of the bagworm the last few years. Much of the injury this year has been to boxelder.

FALL WEBWORM (Hyphantria cunea Drury)

Virginia Herbert Spencer (August 11): Fall webworms are more abundant this fall than we have seen them in many years. The webs are very conspicuous in our woods at the present time.

WHITE-MARKED TUSsock MOTH (Hemerocampa leucostigma S. & A.)

Nebraska M. H. Swenk (July 25 to August 25): The white-marked tussock moth has continued its injuries to trees and shrubs during the period covered by this report.

ARBORVITAE

SOFT SCALE (Coccus hesperidum L.)

Wisconsin E. L. Chambers (August 20): One of the nurseries in the southeastern part of the State had quite a general infestation of this pest on arborvitae, and several trees at Maiden Rock (Pierce County) were seriously infested.

BIRCH

BRONZE BIRCH BORER (Agilus anxius Gory)

Wisconsin E. L. Chambers (August 20): Eleven cutleaf birch trees were condemned in one of the nurseries in the southeastern part of the State. Several trees were killed outright by the pest.

ELM

ELM LEAF BEETLE (Galerucella xanthomelaena Schrank)

Massachusetts A. I. Bourne (August 22): Mr. Lacroix, at East Wareham, reports the elm leaf beetle very abundant this season in several towns in Plymouth and Parnstable Counties. In the towns of Sandwich, Barnstable, and Yarmouth he reports the infestation so heavy that elm trees stand out very conspicuously because of the brown appearance of the foliage, due to the feeding of this insect. This report shows a degree of injury more severe than we have noted for a period of years.

California T. D. Urbahns and assistants (August 15): All elm trees throughout Fresno County that have not been sprayed with arsenical solution are completely defoliated at this time.

ELM BORER (Saperda tridentata Ol.)

Nebraska M. H. Swenk (July 25 to August 25): The usual number of complaints of injury to elms by the elm borer (Saperda tridentata) were received during the period covered by this report.

AMERICAN ELM SCALE (Chionaspis americana John.)

Nebraska M. H. Swenk (July 25 to August 25): The usual number of complaints of injury to elms by the white elm scale (Chionaspis americana) were received during the period covered by this report.

EUROPEAN ELM SCALE (Gossyparia spuria Hodeer)

Wisconsin E. L. Chambers (August 19): The first record of the finding of this scale in a nursery was received when eight weeping elms were found infested in one of the larger nurseries of the State at Jefferson.

SPINY ELM CATERPILLAR (Euxanessa antiopa L.)

Nebraska M. H. Swenk (July 25 to August 25): Within the past few days a case of the stripping of elm trees by the second generation of the spiny elm caterpillar (Euxanessa antiopa) has come to our attention.

RED SPIDER (Tetranychus bimaculatus Harv.)

Nebraska M. H. Swenk (July 25 to August 25): Complaints of injury by the red spider (Tetranychus bimaculatus), which ceased about July 1, were again coming in during late July and early August, chiefly in connection with attack on elm trees.

HACKBERRY

HACKBERRY LEAF-GALL (Pachypsylla celtidis-mamma Riley)

Nebraska M. H. Swenk (July 25 to August 25): During August numerous inquiries regarding hackberry leaf-gall (Pachypsylla celtidis-mamma) were received from several central Nebraska Counties.

LOCUST

LOCUST BORER (Cyllena robiniae Forst.)

Ohio E. W. Mendenhall (August 24): There is great damage by the locust borer, all over the State, and the locust timber is being damaged.

LOCUST TWIG BORER (Ecdytolopha insiticiaria Zell.)

Massachusetts A. I. Bourne (August 22): W. D. Whitcomb, at Waltham, reports under date of July 25 the locust twig borer on black locust in the vicinity of Winchester. He states that at that time the larvae were from two-thirds to full-grown, and that practically 50 per cent of the new twigs were infested and showed the typical swelling.

LOCUST LEAF MINER (Chalepus dorsalis Thunb.)

Ohio D. M. DeLong (August 7): The locust leaf miner has been extremely bad in the southern part of Ohio and has practically defoliated all the locust trees, including large areas in many places. Field

observations upon soybeans in the attempt to find the amount and nature of the damage caused by the Mexican bean beetle have revealed the fact that in many areas where the locusts have been defoliated the adults of the locust leaf miner have begun feeding very abundantly on soybeans. This has been so noticeable in many places that it has been reported by farmers and county agents. The feeding by this insect is much more severe than any feeding caused by the Mexican bean beetle upon the same crop. To the present time no egg masses have been found deposited upon soybeans and only the larvae which have migrated from other beans which were defoliated have been found upon soybeans. Feeding by the adult has been very meager in all cases.

T. H. Parks (August 19): The locust trees on the hills of southern Ohio now appear as if scorched by fire, owing to the feeding of these beetles on the foliage. They are also feeding to a less extent upon oak leaves and leaves of soybeans.

MAPLE

COTTONY MAPLE SCALE (Pulvinaria innumerabilis Rathv.)

- Ohio T. H. Parks (August 19): We have received more specimens of the cottony maple scale than for several years. Most inquiries come from western Ohio with the statement that they are damaging maples.
- Wisconsin E. L. Chambers (August 19): Serious damage was expected from the cottony maple scale on some of the trees in Marshfield and an attempt was being made to wash them off with water from a power spray outfit.

FLAT-HEADED BORER (Chrysobothris femorata Oliv.)

- Indiana C. R. Cleveland (August 21): Flat-headed borers, probably this species, were reported from Crown Point as being very serious on a large grove of young maple trees. It was feared by the correspondent that many of the trees would be killed. We have had reports from other sources of similar injury and it appears either that these borers are on the increase in the State or that they are being more generally noticed than formerly.

PINE

A GEOMETRID (Elliptia fuscicollis Gu.)

- Michigan R. H. Pettit (July 20): I am sending a sample of geometrid larvae just recently obtained from Ieland, in Leelanau County away up north. These larvae are defoliating hemlock, balsam, and, to a lesser degree, white pine. C. B. Dibble, who has just returned from a trip up there, after examining into this outbreak, reports several square miles badly infested, a number of trees killed last year, and practically complete defoliation of the trees this year.

LIBRARY
STATE PLANT BOARD

POPLAR

POPLAR BORER (Saperda calcarata Say)

Wisconsin E. L. Chambers (August 20): About 60 trees were broken over in one of the nurseries of the southeastern part of the State because of the borer injury. The adult beetles were observed unusually thick this summer.

POPLAR MOCHA STONE MOTH (Melalopha inclusa Hbn.)

Maryland P. D. Sanders (August 13): Young poplar trees growing in nursery rows at Pittsville were being defoliated by young larvae, possibly of the second brood. More numerous this year than last.

SYCAMORE

A MOTH (Ancylis platanana Clem.)

Ohio E. W. Mendenhall (August 19): Destroying the leaves of the sycamore trees in Hancock County but not serious.

TULIPTREE.

TULIP SCALE (Toumeyella liriodendri Gmel.)

Indiana H. F. Dietz (July 25): I have a record of the tuliptree scale being very abundant in the vicinity of Madison (probably Madison--J. J. Davis.)

WALNUT

WALNUT CATERPILLAR (Datana integririma G. & R.)

Ohio E. W. Mendenhall (August 5): I find that Datana integririma, is quite troublesome on the black walnut, and some of the trees are nearly defoliated.

T. H. Parks (August 19): These caterpillars were observed to have defoliated black walnut trees in Allan County during mid-August.

Indiana C. R. Cleveland (August 21): This species has been very prominent at many places in the State during the past month. As one drives along the highways many walnut trees are observed which are very nearly completely defoliated, owing to the work of this caterpillar.

Illinois W. P. Flint (August 18): The handmaid moth, Datana integririma, has caused a little more than the usual amount of damage on walnuts and hickories, many trees, both in the country and in towns, having been completely defoliated. The insects are now full-grown in the central part of the State and most of them have entered the ground for pupation.

INSECTS ATTACKING GREENHOUSE
AND ORNAMENTAL PLANTS

MISCELLANEOUS FEEDERS

APHIDIDAE

Indiana

C. R. Cleveland (August 21): There have continued to be many reports of serious injury to flowering plants of various kinds, especially asters, by root lice. Previous examination in many of these cases has shown a common species to be the corn root aphid, Anuraphis maidi-radicis Forbes, but another species has been observed which has not yet been identified. Trouble from this source is apparently steadily on the increase in the State. Infestations of root lice are always accompanied by conspicuous colonies of ants and most of our correspondents assume that the ants are doing the damage.

SNAILS

California

Weekly News Letter, State of California, Vol. 7, No. 17 (August 23): Snail control has been extended with success to ridding nurseries of this pest, according to R. D. Hartman, Superintendent of the Nursery Service of the California Department of Agriculture.

The common garden snail, Helix aspersa, is considered a troublesome pest in some parts of the State. It attacks many ornamental plants in gardens and nurseries. The measure recommended for the control of snails, as given out by the California Department of Agriculture, is to first spray the premises in the evening with water, to bring the snails into activity. Then mix 1 pound of calcium arsenate with 16 pounds of wheat bran, either dry or with the addition of about 1 gallon of water. This bran mash is then thrown under buildings, among flowers, or any place inhabited by the snails.

Eight hundred pounds of this poisoned-bran mash was scattered in Beverley Hills Nurseries and 250 pounds on the Hollenbeck Estate, with satisfactory results.

DAHLIA

TERMITE (Reticulitermes tibialis Bks.)

Nebraska

M. H. Swenk (July 25 to August 25): Reports of injury to a field of dahlias in Johnson County and to a house in Hall County by the termite Reticulitermes tibialis were received during the first half of August.

GLADIOLI

TWELVE-SPOTTED CUCUMBER BEETLE (Diabrotica duodecimpunctata Fab.)

Michigan

R. H. Pettit (August 21): Feeding on lima beans and gladiolus flowers, also dahlias and other flowers at Lansing.

BLISTER BEETLE (Meloidae)

Ohio E. W. Mendenhall (August 21): On some varieties of gladioli at Sidney, the damage to the flowers is very extensive.

IRIS

IRIS ROOT BORER (Macronoctua onusta Grote)

New Hampshire P. R. Lowry (July 22): Badly damaging iris at Claremont.

Ohio H. A. Gossard (August 24): The iris borer was noted August 7 doing excessive damage to iris at Massillon. At that date most of the larvae were full-grown and some were transforming to the pupal stage.

MAGNOLIA

A MEALYBUG (Pseudococcus virgatus Ckll.)

Mississippi R. W. Harned (June 29): I am mailing to you a vial that contains mealybugs from a magnolia tree which belongs to an individual in McComb. This tree is very badly infested with mealybugs. Determined as this species by H. Morrison - J. A. Eyslop.)

SPIRAEA

SPIRAEA APHID (Aphis spireaella Schout.)

Missouri L. Hasegawa (June 25): This aphid has attracted attention throughout the month of June, though it is becoming less abundant toward the end of the month.

INSECTS ATTACKING MAN AND DOMESTIC

ANIMALS

MAN

CAT AND DOG FLEAS (Ctenocephalus canis Bouche' and C. felis Bouche')

Wisconsin E. L. Chambers (August 19): The fleas became so thick and troublesome at Stoughton that the people were forced to vacate the house. An unsuccessful attempt had been made to fumigate the house when an appeal was made to this department for help.

A SOCIAL WASP (Vespa communis DeS.)

Nebraska M. H. Swenk (July 25 to August 25): Citizens of Knox and Brown Counties in northern Nebraska have complained of annoyance caused by enormous colonies of the social wasp Vespa communis in the ground about their premises.

A REDUVIID

- Alabama J. M. Robinson (July 31): One of the Reduviidae has been reported and has caused irritation to a family near Gadsden, two having been found last year and five being taken this year. The correspondence states that the house was free from bedbugs.

HORSES

THROAT BOT FLY (Gastrophilus nasalis L.)

- Ohio F. C. Bishopp (July 28): The throat bot fly put in its appearance in the vicinity of Columbus about July 1. It is causing some annoyance to horses at this time but is not very abundant yet.

NOSE BOT FLY (Gastrophilus haemorrhoidalis L.)

- Ohio F. C. Bishopp (July 29): The examination of the digestive tracts of a number of horses and observations on horses on farms indicate that the nose bot fly is not present in the vicinity of Columbus. Reports from certain farms suggested its presence but these are almost certainly erroneous.

HORSE BOT FLY (Gastrophilus intestinalis DeG.)

- Ohio F. C. Bishopp (July): The adults of this species began to appear and attack horses about July 1 at Columbus. By July 17 nearly all horses had an infestation of from 75 to 300 eggs each.
- Canada F. C. Bishopp (July 25): Horses at Pelee Island, Ontario, are infested with eggs of the common horse bot. The number of eggs apparently averages about 200 per animal.

CATTLE

STABLE FLY (Stomoxys calcitrans L.)

- Ohio F. C. Bishopp (July): The stable fly has caused serious annoyance to stock during the entire month at Columbus and in the northern part of the State. Many dairymen are spraying but even then the herds spend much of the time standing in water or shade fighting the flies.
- Canada F. C. Bishopp (July 25): Stock are sorely annoyed by swarms of stable flies at Pelee Island, Ontario. Dogs have their ears raw from their bites and as many as 35 flies were observed biting one ear of a dog at one time.

HORN FLY (Haematobia irritans L.)

- Ohio F. C. Bishopp (July): Throughout the month of July horn flies have been a very annoying pest to cattle at Columbus. By the middle of July they had increased so that their numbers ran from 20000 to

5,000 per head on cattle which were not sprayed. Spraying at milking time was carried out on most dairy herds during the month. Some report considerable reduction in milk flow from the combined attack of horn flies and stable flies.

Texas O. G. Babcock (August 22): More numerous than normally for this time of the year at Sonora, owing apparently to local showers over this section of the country.

OX WARBLE (Hypoderma bovis DeG.)

Ohio F. C. Bishopp (July): The cattle in the northern half of the State became free of northern cattle grubs in their backs about July 1. The annoyance due to the attack of the flies began to subside markedly after July 15.

SCREW WORM (Cochliomyia macellaria Fab.)

Ohio and Canada F. C. Bishopp (July 25): Screw worm flies (Chrysomya macellaria) were observed in moderate numbers on dead fish on South Bass Island, Ohio, and Pelee Island, Ontario. The proportion of the different species of flies on fish was about as follows:

	Per cent		Per cent
<u>Phormia regina</u>	75	<u>Lucilia caesar</u>	5
<u>Chrysomya macellaria</u>	4	<u>Lucilia sericata</u>	2
<u>Sarcophaga</u> spp.	5	<u>Musca domestica</u>	6
<u>Muscina stabulans</u>	2	<u>P. terrae-novae</u>	none were seen

Texas O. G. Babcock (August 22): More numerous this month than normally at Sonora. Practically 100 per cent screw worm cases in calves castrated and born this month.

POULTRY

STICKTIGHT FLEA (Echidnophaga gallinacea Westw.)

Alabama J. M. Robinson (July 31): The hen flea or sticktight flea of poultry was reported as being abundant at one locality.

Texas F. C. Bishopp and H. M. Brundrett (June 15): West of Brownwood the sticktight flea is reported to have been very little more abundant this spring than usual. At this date their numbers appear to be increasing. This is an important pest every year in this section. Between Brownwood and Fort Worth the insect seems to have been more abundant and destructive this spring than normally.

HENHOUSE BEDBUG (Haematosiphon inodorus Duges)

Kansas J. W. McColloch (August 3): Bedbugs are reported very numerous in a poultry house at Elbing.

INSECTS INFESTING HOUSES AND PREMISES

EUROPEAN EARWIG (Forficula auricularia L.)

New York E. P. Felt (August 3): Regarding the earwig infestation at East Aurora, an examination last week showed the insect to be present, in one case at least, in considerable numbers and apparently somewhat widely distributed in the village, though no general complaint has been made and it is quite probable that many simply overlook the insect. There were very few about the premises originally reported as infested, though three blocks away there was a very considerable colony under the loose bark of an elm log kept as a trap. The insects appear to be more troublesome by getting into the house or on the laundry than on account of injuries to plants.

Oregon Oregon Daily Journal, Portland, (July 31): After having covered approximately half of the territory within the city limits of Albany with earwig poison during an "anti-earwig" campaign last week, local people have launched a second and "follow-up" campaign which will aim toward covering the entire city and killing earwigs hatched out since. The poison will be sold at cost at the city hall, under auspices of the City Government. More than 1,000 pounds of earwig poison was distributed to local people during the last campaign.

BOOK LICE (Atropidae)

Ohio T. H. Parks (August 19): Letters from Dayton and Cambridge report houses overrun with these insects. Specimens were submitted August 14 and 15. Superheating is being attempted to eradicate them.

TERMITES

Mississippi R. W. Harned (July 30): Termites were taken on soybeans at Holly Springs on July 21 by T. F. McGehee.

COCKROACHES

Kansas J. W. McColloch (August 1): Cockroaches have been giving considerable trouble in a few houses at Manhattan and in a cafeteria at Topeka.

EUROPEAN CRICKET (Gryllus domesticus L.)

Illinois W. P. Flint (August 18): An outbreak of the European cricket occurred in Joliet, the outbreak apparently originating from a city dump, which was overgrown with weeds, where garbage of various kinds had been accumulating. The crickets invaded near-by houses and caused more or less annoyance.

CARPENTER BEE (Xylocopa virginica Drury)

Kansas J. W. McColloch (July 18): Specimens of this bee were received from a farm near Lawrence with the information that they were seriously undermining the rafters in the farm buildings.

TINY RED ANT (Monomorium pharaonis L.)

Wisconsin E. L. Chambers (August 20): One of the largest hotels in southeastern Wisconsin was found overrun with red ants. They were a nuisance all through the hotel from lobby and kitchen to the upstairs rooms. The management claim that they came in on the laundry. The front plate glass window was lined with hundreds of them trying in vain to climb up.

S T O R E D * G R A I N I N S E C T S

MEDITERRANEAN FLOUR MOTH (Ephestia kuehniella Zell.)

Kansas J. W. McColloch (August 6): This insect is causing considerable trouble in a mill at Wilson.

ANGOUMOIS GRAIN MOTH (Sitotroga cerealella Oliv.),

Kansas J. W. McColloch (July 31): An elevator company at Emporia reports the moths abundant in their storage bins.

NOTES FROM THE FEDERAL HORTICULTURAL BOARD, June 15, 1925.

INTERCEPTIONS

About the first of June an express parcel arrived at San Francisco, Calif., from Hawaii, marked "Jams." Upon examining it, the collaborators of the Board found it to contain mangos and cooking bananas. This interception represented a deliberate attempt to violate Quarantine 13. The mangos were found to be infested with maggots of the Mediterranean fruit fly. The fruit was shipped in a pasteboard box, thus affording every opportunity for the maggots to escape. Steps have been taken to bring about the prosecution of the shipper.

An identification was recently received for specimens of the Mediterranean fruit fly (Ceratitis capitata) which were taken by the inspectors at Boston on May 28 from loquats arriving by mail from the Azores. There were three boxes of loquats in the consignment, each containing about six quarts. The loquats were packed in sawdust and shredded corn husks.

Since the last Letter of Information was issued, several identifications have been received for specimens of Anastrepha ludens Loew, the Mexican fruit fly, intercepted at Mexican border ports in mangos from Mexico. Collections were made at Brownsville, Tex., on June 1; at El Paso, Tex., on May 13, and at Laredo, Tex., on April 14, May 25, and June 3.

Larvae and pupae of the West Indian fruit fly, Anastrepha fraterculus Wied., were found by inspectors at Philadelphia on May 25 and at New York on June 11 infesting mangos from Jamaica.

A larva and pupa case of an unidentifiable species of Anastrepha were collected by inspectors at New Orleans inside of a mango from Spanish Honduras on May 19.

Thirty-five fruits of cherimoya were brought in in the baggage of a passenger arriving at New York from Peru on June 1 which, when found and examined by an inspector of the Board, proved to be infested with dipterous larvae. Fifteen larvae were collected. The specialist of the Bureau of Entomology could only identify them as to genus. They were classified as Anastrepha sp.

