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J. R. HORTON

**THE INSECT PEST SURVEY  
BULLETIN**

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

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Volume 11

June 1, 1931.

Number 4

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





INSECT PEST SURVEY BULLETIN

Vol. 11

June 1, 1931

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OUTSTANDING ENTOMOLOGICAL FEATURES IN THE UNITED STATES FOR ~~MAY~~, 1931.

Probably the most serious insect development of the month is the severe armyworm outbreak occurring over 11 counties in north central Texas. A similar outbreak is under way in Mississippi and Kentucky with lesser outbreaks in eastern Arkansas and the eastern shore of Virginia.

Cutworms seem to be unusually prevalent along the Atlantic Seaboard. These insects are also very troublesome this spring in the East Central States, and westward to Montana, the Dakotas, and Nebraska. The remainder of the country is experiencing about the normal cutworm damage.

During the first week in May grasshopper eggs were found to be very numerous in South Dakota and at that time began hatching in Montana and Nebraska. By the third week in the month, hatching was reported from the Great Basin. The Salt River Valley of Arizona and the Antelope Valley and the Klamath Lake district of California are having localized grasshopper outbreaks.

Owing to the cool weather of late spring considerable wireworm injury was reported from scattered localities throughout the United States.

As a whole, the Hessian fly situation does not seem to be alarming, although Illinois reports that from 32 to 40 per cent of the tillers are infested in certain fields.

The chinch bug situation in Illinois, Missouri, and parts of Kansas appears to be rather serious. Large numbers of the bugs are in the fields, and in some cases in Illinois are killing wheat, while in Kansas reports of the killing of a lot of oats by this insect have been received.

The corn ear worm is commencing to appear in destructive numbers in the Gulf States.

A very unusual and severe attack of one of the tiger moths (Apantesis phalerata Harr.) is reported from south-central Tennessee. The Lincoln County agent estimates that in that county alone 500 acres of corn are destroyed, and many pastures are completely stripped of vegetation.

The alfalfa weevil is so abundant in western Nevada as to necessitate control measures.

During the latter half of the month codling moth adults were emerging in the Middle Atlantic States. In the southern part of this section the emergence is considerably later than last year. In the Eastern Central States winter survival seems to be somewhat higher than last year, and emergence in this section occurring at about the same time as last year. In the Pacific Northwest emergence occurred during the first week of May, while in California the peak of emergence in the Antelope Valley was on April 10.

The fruit aphid situation has not materially changed since last month. The rosy aphid and apple grain aphid increased slightly in abundance toward the end of the month.

Apple leafhoppers continue to be unusually numerous in New England, and are doing serious damage in the Hudson River Valley in New York State.

A rather unusual outbreak of the striped cucumber beetle as an apple pest has developed in Mississippi. This was first observed last year when this insect, by feeding on the blossoms, ruined a large part of the crop in the northeastern part of the State. This year the insect has again attacked the blossoms but not so seriously as last year.

The European red mite started hatching during the first week in May in New England and the Middle Atlantic States. Abundance does not seem to be unusual.

The oriental fruit moth on <sup>the</sup> whole does not seem to be unusually abundant in its range this season.

The plum curculio is not abnormally abundant throughout the New England, Middle Atlantic, and South Atlantic sections. On the whole emergence is later than usual; and in Georgia the infestation is the lightest in the past 13 years.

The grape leafhopper is <sup>reported</sup> as unusually abundant in southern New Jersey and in eastern Virginia.

Heavy infestation of pecan by the hickory phylloxera was reported from the Gulf section and this insect was doing serious damage to trees in Louisiana.

The pecan case bearer was very injurious during the first half of the month in Mississippi and Texas.

The infestation of the six-spotted mite in Florida, reported in the last number of the Insect Pest Survey Bulletin, is rapidly decreasing, apparently owing to a fungus disease.

By the middle of the month the striped cucumber beetle put in its appearance in the southern part of the Middle Atlantic States, and was recorded as quite generally abundant and destructive throughout the eastern part of the United States, westward to Nebraska, Oklahoma, and Mississippi.

The first adult of the spotted cucumber beetle was observed in Maryland on April 5, and in Kansas on May 19.

Flea beetles on truck crops occasioned considerable injury in New York and New Jersey.

During the cool weather of May the seed-corn maggot did considerable damage to bean and cucumber seed in Virginia, to corn and beans in Illinois, and to similar crops in Kentucky, Missouri, parts of Kansas, and Utah.

The potato tuber worm has been unusually abundant in parts of Los Angeles County, Calif., this year, and was reported from stored potatoes at Newark, Del.

By the middle of the month reports of serious infestation by the cabbage aphid were received from New Jersey, Virginia, Ohio, and Indiana. In some cases the infestations are suspected as having originated on plants shipped from the South. Very heavy infestations of cabbage by the cabbage aphid were also reported from Mississippi.

Rather heavy infestations of the harlequin bug were reported from the southern tip of New Jersey during the month. In the Norfolk district of Virginia eggs of this insect were numerous in the field during the last week in April, and the first nymphs were observed on May 12.

The State Plant Board of Mississippi reports that the strawberry weevil was found seriously infesting strawberries in the southeastern part of the State. This is the first record of this insect in Mississippi.

During the last week in May the Mexican bean beetle appeared in the fields in the southern part of New Jersey, and on the eastern shore of Maryland. During the first week in the month the insect was observed in the Norfolk district of Virginia. This insect is causing considerable damage at the present time in North Carolina and has extended its range southward to Albany, Ga. Except for the isolated infestation at Thomasville, Ga., this is 37 miles south of where it was recorded last year.



Carbide worms are reported as somewhat more abundant than usual in the New England States. Similar reports have been received from Minnesota and Kansas.

One of the worst outbreaks of the forest tent caterpillar ever recorded is under way in central Virginia. Complete defoliation of forest trees has been observed over considerable areas.

The larch case bearer is heavily infesting the larch of New Hampshire, Vermont, and parts of Pennsylvania. Heavy stands appear as if scorched by fire owing to the feeding of this insect.

The European pine shoot moth is becoming generally prevalent in southern New England, southern New York, New Jersey, and Pennsylvania. So far the infestations are all confined to nurseries and transplanted trees.

The Nantucket pine shoot moth is reported as doing serious damage to several species of pine in a nursery in the Philadelphia district of Pennsylvania.

#### OUTSTANDING ENTOMOLOGICAL FEATURES IN CANADA FOR MAY, 1931.

As forecast, the pale western cutworm has again developed in outbreak numbers in eastern Alberta and Saskatchewan, affecting grain crops, and by the middle of May damage was becoming evident. Indications point to a probable severe outbreak of the red-backed cutworm in sections of Manitoba and Saskatchewan, affecting field and garden crops. The young larvae of this species were appearing in considerable numbers by the middle of the month. Cutworms are proving troublesome to garden plants in southern Vancouver Island and in the Okanagan Valley, British Columbia.

A rather heavy outbreak of white grubs was reported locally from the Pike Lake district, in central Saskatchewan. This constitutes the first record of white grub damage in this territory.

Flea beetles have again appeared in large numbers on various field and garden crops on Vancouver Island, in the Lower Fraser Valley, and in sections of the Okanagan Valley, British Columbia.

The squash bug is reported from British Columbia for the first time, specimens having been taken in the southern part of the province, at Winslow.

The rosy apple aphid and the apple grain aphid are reported as numerous and widespread in the Annapolis Valley, Nova Scotia. In the Niagara district, Ontario, at the end of April, the stem mothers of common species of fruit-tree aphids were noted as apparently less

abundant than usual. In British Columbia, reports indicate that aphids are more abundant than for many years past in southern Vancouver Island, but that they are very scarce in the Lower Fraser Valley. In the latter area ladybird beetles are unusually abundant.

The San Jose scale is reported as more common in apple orchards of the Niagara peninsula, Ontario, than it has been for many years.

The hairy spider beetle, an introduced species affecting flour and other grain products, has increased rapidly in Manitoba in recent years, and is widespread and causing considerable damage.

Ticks are troublesome on horses, cattle, and sheep, in south-central British Columbia, in the range areas and the Dry Belt generally, and cases of tick paralysis have occurred, although losses from this cause are less than last year.

Black flies (Simuliidae) appeared earlier than usual in the south-central sections of British Columbia and are moderately troublesome.

The common cattle grub and the northern cattle grub, particularly the latter species, are below normal in abundance in British Columbia.

GENERAL FEEDERS

ARMYWORM (Cirphis unipuncta Haw.)

- West Virginia L. M. Peairs (May 27): One report of abundance and damage to corn received from Pendleton County May 23.
- Virginia H. G. Walker and G. E. Gould (May 25): Several serious but localized outbreaks of the armyworm have been reported in the past week. On the Eastern Shore there is an outbreak at Machipungo, with injury to oats, rye, and wheat, and at Nassawadox the damage is serious on oats and wheat. In Princess Anne County damage to oats has been reported.
- Kansas H. B. Hungerford (May 7): This species has been visiting the flowers of fruit trees and lilac at Lawrence in unusually large numbers this year.
- Arkansas D. Isely (May 23): Local outbreaks have occurred in eastern Arkansas, specimens having been collected in Lee, Arkansas, Woodruff, Mississippi, and Prairie Counties.
- Mississippi State Plant Board of Mississippi, Press Release (May 25): Hundreds of acres of alfalfa, oats, and other crops in a number of localities in several Delta counties have been seriously injured during the past week by worms, according to letters and telephone complaints. The greatest damage has occurred in Leflore, Sunflower, and Washington Counties. Examinations of specimens show that several species of insects are at work, the most abundant being the armyworm. According to Prof. R. W. Harned, this is the first record in Mississippi of this insect assuming the army habit, as it is not generally present in sufficient numbers to be important in the South.
- R. W. Harned (May 27): I have just received another report in regard to the armyworms, probably C. unipuncta, from Cleveland. On a plantation in Washington County there was a 20-acre oat field that would probably have yielded more than 60 bushels per acre that has been almost completely destroyed. At the present time the crop is scarcely worth harvesting. The armyworms had completed their damage within 48 hours after they were first noticed. The weed, curly dock, as well as soy bean and alfalfa in the vicinity of this oat field were eaten. The leaves on the oats were completely eaten. Tachinid eggs were noticed on some of the worms. Only ten larvae were sent in. Four of them had Tachinid eggs on them. Apparently something else is also causing the death of the worms, probably a fungous disease.
- Texas F. L. Thomas (May 20): An outbreak has been reported from eleven counties in north-central Texas, with injury to oats, barley, corn, and cotton.



CUTWORMS (Noctuidae)

- Maine C. R. Phipps (May 27): Cutworms are moderately abundant on blueberry. As usual we have taken a number of species of cutworms feeding on the seedling blueberry buds at night. These have been collected in Washington, Hancock, Cumberland, and Penobscot Counties. However, they have not been present anywhere in very serious numbers. Probably the most common species is Polia purpurissata Grote.
- Massachusetts A. I. Bourne (May 23): While garden crops are not as yet very far along in Amherst we are beginning to receive numerous complaints of the activities of cutworms. Indications are that they are at least normally abundant this season.
- Connecticut A. E. Wilkinson (May 6): Spinach eaten all over the field by cutworms. Damage: 15 to 20 per cent of stalks in case of asparagus, in Easton and Trumbull.
- New York Weekly News Letter, New York State College of Agriculture (May): One grower has had considerable damage in one vineyard through cutworms cutting off the new shoots. (A. B. Buchholz, Columbia County.)
- New Jersey Weekly News Letter, New Jersey State College of Agriculture (May): Quite general and severe cutworm damage is reported over southern New Jersey, the insects seriously damaging tomatoes, peppers, broccoli, sweet potatoes, and raspberry shoots. (Abstract, J. A. H.)
- Virginia C. R. Willey (May 25): Cutworms are very abundant in Richmond and vicinity. This statement is based on requests for information on control received through the mail and telephone calls.
- North Carolina W. A. Thomas (May 8): Since the beginning of May, the activity of cutworms at Chadbourn attacking tobacco, beans, tomatoes, cowpeas, and several other crops, has been considerably on the increase. A few specimens have been observed with numerous parasite eggs on the body. Nineteen *Tachina* eggs were counted on a single specimen.
- South Carolina P. K. Harrison (May 19): Cutworms have been doing some injury to small garden plants at Fairfax, and have been very troublesome in one yard, cutting especially chrysanthemum and petunia plants.
- Ohio T. E. Parks (May 7): Climbing cutworms of this species (Agrotis unicolor Walk.) have been devouring leaves and blossom buds in a 25-acre tract apple orchard with 16-year old trees. In one orchard in Erie County the larvae climb

up the trees at night and defoliate the branches and twigs on the inside of the trees. Many trees have the upper limbs also defoliated. (May 24): Cutworms are now quite serious in some corn and tobacco plantings in southwestern Ohio. They are much more abundant than last spring.

Indiana

J. J. Davis (May 26): Cutworms are common throughout the State and attacking all kinds of vegetation. They are apparently more abundant than for several seasons.

Illinois

W. P. Flint (May 19): The bristly cutworm (Polia renigera Steph.) has been sent from a number of localities in Illinois. Judging by the specimens sent in this is the predominating species in the State this spring.

C. C. Compton (May 18): Cutworms are appearing in the Cook County trucking area in moderate numbers.

Kentucky

W. A. Price (May 25): Cutworms are very abundant on tobacco in beds, garden crops, and corn in central and western Kentucky this season. The clay-backed species (Feltia gladiaria Morr.) was especially abundant.

Michigan

R. H. Pettit (May 25): Cutworms are very abundant.

Wisconsin

E. L. Chambers (May 26): Many reports of cutworm injury are coming into the office from the southern portion of the state.

Minnesota

A. G. Ruggles and assistants (May): Cutworms were reported generally below normal in numbers throughout the greater part of the State. However, unusual abundance was reported from Murray, Nobles, and Blue Earth Counties. (Abstract, J. A. H.)

North Dakota

J. A. Munro (May 22): The army cutworm (Chorizagrotis auxiliaris Grote) has been reported by county agents and farmers as very abundant in Golden Valley, Stark, and Bowman Counties. The pest is not so abundant in Hettinger, Morton, Burleigh, Wells, Kidder, LaMoure, and Dickey but in all counties has caused injury to such crops as rye, alfalfa, sweet clover, and March-sown wheat.

Iowa

C. J. Drake (May 8): Cutworms are present in a large number of alfalfa and clover fields this spring. They seem to be doing a considerable amount of damage.

H. E. Jaques (May 25): Cutworms are very abundant in the southeastern part of the State, and generally moderately abundant over the remainder of the State.



- Missouri L. Haseman (May 23): Worms were pupating from May 15 to 20 at Columbia. The variegated cutworm (Lycophotia margaritosa Haw.), the bronzed cutworm (Nephelodes emmedonia Cram.), and Agrotis c-nigrum L. apparently were most abundant.
- Nebraska H. E. Swenk (April 15 - May 15): Reports of damage by cutworms began to be received during the first week in May. One cabbage grower near Lincoln reported serious loss of young transplants during the second week in May. In gardens, the dingy cutworm (Feltia ducens Walk.) was a dominant species. ( D. B. Whelan.)
- Kansas E. R. Bryson (May 23): Cutworms were reported on May 1 as seriously damaging, wheat, alfalfa, and barley at Scott City and also reported doing injuries to gardens at Syracuse. These insects are now moderately abundant in most sections of the State. Owing to the adverse growing conditions cutworm damage in the State has been quite prevalent and rather generally distributed. Western Kansas has suffered considerably.
- Tennessee C. M. Packard (May 2): C. Benton reports much injury to young corn by cutworms associated with an arctiid moth outbreak, from April 20 to 30. Tentatively identified as Feltia sp.) These worms were also observed to be very numerous in a potato field, sometimes from six to nine to the hill, killing the young plants. Considerable cutworm damage to various crops has been reported in the neighborhood of Fayetteville.
- Oklahoma C. F. Stiles (May 21): More damage has been reported by cutworms to garden and truck crops in central and western Oklahoma than in a long time.
- Mississippi W. L. Douglass (May 19): Cutworms (Agrotis c-nigrum L.) have been noticed on several occasions damaging fields of corn, and numerous vegetables, such as beans, cabbage, tomatoes, etc. in north-central Mississippi.
- F. A. Smith (May 22): Cutworms have been very bad on low or bottom land in DeSoto, Tate, Panola, Tunica, Quitman, and Marshall Counties. Worse along the Coldwater river bottom. Damage was slackening up some last week.
- R. W. Harned (May 25): Lycophotia margaritosa has caused serious damage to alfalfa in Washington and Sunflower Counties. On May 8 J. W. Whitaker, County Agent, Greenville, mailed to us nine larvae of this species, three of which had tachinid eggs on them. He stated that they were found eating alfalfa. On May 15 he collected more material from this field and sent in 78 specimens of L. margaritosa and

1 specimen of Cirphis sp. Many of them were parasitized. He stated that in the older alfalfa the worms were making rather slow progress, and that they had moved only from 20 to 40 feet during the previous six days in the particular field from which he secured the specimens. Specimens of Feltia malefida Guen. were collected in a garden at Tupelo on May 7. Slight injury to various garden plants was reported. Specimens of Prodenia ornithogalli Guen. collected on corn were received from Brookhaven on May 7, from Natchez May 14, and from Woodville May 15. Little injury had been caused. Specimens of this species were reported as injuring daisy plants at Lucedale on May 7.

Louisiana

W. E. Hinds (May 25): Cutworms are very abundant and destroying cotton stands in Lafayette Parish.

Montana

A. L. Strand (April 28): Altogether several thousand acres of wheat have been destroyed by the army cutworm (Chorizagrotis auxiliaris Grote). The following counties have reported damage: Ravalli, Missoula, Lewis and Clark, Cascade, Chouteau, Fergus, Musselshell, Stillwater, Big Horn, Dawson, and Wibaux. Some damage obscured by accompanying wind damage.

Idaho

C. Wakeland (May 19): The army cutworm, C. auxiliaris, is very abundant in southern and southeastern Idaho. It is widely distributed in nearly every county of that portion of the State and has done quite severe damage to dry-land grain and to irrigated alfalfa. In one instance it even ate into and destroyed potato seed pieces. Injury has now abated and most of the larvae are mature.

Nevada

G. G. Schweis (May 21): Cutworms are very abundant in Reno and damage has been reported from numerous places.

Utah

G. F. Knowlton (May 14): A few instances of damage to sugar beets and newly set tomatoes have been observed in Davis and Webster Counties.

Washington

E. J. Newcomer (May 22): Of nearly 300 adult moths caught in molasses baits in an apple orchard in Yakima County Agrotis c-nigrum outnumbers five other species three to one. First moths were caught May 1.

GRASSHOPPERS. (Acrididae)

Indiana

C. M. Painter (May 2): H. R. Painter searched for grasshopper eggs in various fields from Attica to Owensville, April 14 - 25, and near Lafayette, but found few. Many present in alfalfa field near Fort Wayne. Serious infestation seems unlikely this season.

Minnesota

A. G. Ruggles and assistants (May): Grasshoppers were reported as scarce throughout the State during the month of May.



- South Dakota A. L. Ford (May 15): A survey in the Rosebud District to determine the abundance of grasshopper eggs was started May 4. Eggs were found in unusual abundance and are expected to start hatching the week of May 18.
- Nebraska M. H. Swenk (April 15 - May 15): Grasshoppers (Melanoplus spp.) began hatching in southeastern Nebraska during the first week in May, but up to date only a small number of the eggs have hatched. One Otoe County orchardist noted slight leaf injury by young grasshoppers to red clover between rows of apple trees on May 6.
- Montana R. L. Shotwell (May 3): In all places we found eggs of grasshoppers, M. atlanis Riley, in abundance. In some places they were very numerous. The problem is the same as it has always been; the eggs were massed in the south and west facing banks along roadsides. While at Beach we saw grasshoppers hatching on south-facing banks where the egg pods had become more or less exposed to the sun. A few days later, the young hoppers were quite numerous. Along the south-facing banks north of Beach the species were M. bivittatus Say and M. atlanis Riley.
- Wyoming A. G. Stephens (May 23): Grasshoppers are moderately abundant in northeastern Wyoming.
- Idaho C. Wakeland (May 19): Grasshoppers were just hatching on May 14 and are moderately abundant at Moscow.
- Nevada G. G. Schweis (May 21): Grasshopper eggs are very abundant and are just hatching at Menden.
- Utah G. F. Knowlton (April 27): Young grasshoppers are now hatching out very rapidly and becoming rather abundant in Tooele, Boxelder, Davis, Weber and Cache Counties. (May 18): Grasshoppers are very abundant, more abundant than for some years, in northern Utah. Adults of the overwintering nymphs of Hippiscus corallipes Hald. have been found in Skull Valley and other parts of Tooele County and in Boxelder County for the past three weeks. (May 21): Adult grasshoppers, Trimerotropis vinculata Scudd., are moderately abundant in Skull Valley. This species overwinters in the adult or large nymph stage here. (May 23): Young grasshoppers are now beginning to damage strawberries in parts of Utah County.
- Arizona C. D. Lebert (May 22): The lesser migratory hopper, M. atlanis, is extremely abundant all over the Salt River Valley. Severe injury to alfalfa and other crops has been noted. Hesperotettix spp. and Trimerotropis spp. have also been reported.

California

Monthly News Letter, Los Angeles County Agriculture Commission, Vol. 13, No. 5. (May 15): Grasshoppers in the Antelope Valley have engaged the attention of the county agricultural commissioner's office this month. The hoppers were found feeding on alfalfa and grain and in some instances considerable damage resulted. Infestation is heaviest in the extreme western portion of the valley, although there is some scattered infestation in the eastern part.

WIREWORMS (Elateridae)

Maine

C. R. Phipps (May 27): Wireworms are moderately abundant, Agriotes mancus Say particularly. This species was also seriously abundant last season in many potato fields throughout the State. As a result of their feeding punctures many barrels of potatoes were culled out by the State inspectors. This spring they are present in considerable abundance in or near potato fields in various potato producing districts.

Connecticut

A. E. Wilkinson (April 25): Insects noticed all over a  $3\frac{1}{2}$ -acre patch of peas in Vernon. The same insect has been found rather numerous in freshly plowed soil at Storrs. (May 5): A rather serious outbreak of this pest was reported from two farmers. Damage: 10 to 15 per cent loss and slow growth to balance of crop,  $2\frac{1}{2}$  acres.

P. L. Dean (May 21): Reported by telephone as causing some damage to corn on sod ground at Middletown.

Pennsylvania

C. A. Thomas (May 5): Many adults of the eastern field wireworm (Pheletes agonus Say) were found flying over cultivated fields in Bucks and Montgomery Counties during the first few days of May. They alighted on the bare soil and burrowed in to oviposit. These beetles were active only during the warm sunny part of the day, from about 10 a. m. to 4 p. m. A few were found burrowing into the soil of oat fields. The larvae have not yet caused noticeable injury in this section this year.

North Carolina

W. A. Thomas (May 6): Monocrepidius vespertinus Fab. is doing considerable damage to seedling melons and recently transplanted tobacco at Chadbourn. Several reports of injury have reached the laboratory within the past few days.

South Carolina

J. N. Tenhet (April 29): The first wireworms attacking corn this season were found this date at Fairfax. Infestation is just beginning. (May 20): Injury to corn and cotton by Horistonotus uhleri Horn is becoming very noticeable in this locality. Damage is heavy.



- Indiana J. J. Davis (May 26): Wireworms were reported as damaging flowering plants at Middleton on May 15, planted melon seed at Brownstown May 15, and corn at Shelbyville May 23.
- Michigan R. E. Pettit (May 25): Wireworms are very abundant.
- Wisconsin E. L. Chambers (May 26): Several reports have been received from county agents and farmers in Grant and LaCrosse Counties to the effect that wireworms are doing unusually severe injury to cornfields on low ground.
- North Dakota J. A. Munro (April 20): Wireworms are moderately abundant in Kidder County, as observed in the preparation of the soil for planting.
- Iowa E. E. Jaques (May 25): Wireworms were reported as scarce in the following counties: Emmet, Mills, Madison, and Monroe; moderately abundant in Sioux, Osceola, Crawford, Harrison, Page, Guthrie, Union, and Tama; very abundant in Jones County.
- Nebraska M. H. Swenk (April 15 - May 15): The cool weather of late April and May has been favorable to wireworm injury. During the first week in May a Johnson County correspondent reported a loss of stand over large spots in a field of spring-sown alfalfa due to these pests. The species concerned were Monocrepidius auritus Hbst., Melanotus cribulosus Lec., and M. pilosus Blatch.
- Kansas E. R. Bryson (May 23): Wireworms are moderately abundant and reports of injury to slowly germinating corn at La Cygne on May 20 were received.
- Kansas D. Isely (May 25): Wireworms (Melanotus sp.) are causing injury to corn near Harrisburg. (Determined by J. A. Hyslop.)
- Mississippi and Alabama E. L. Cockerham (May 30): Injury by Heteroderes laurentii Guer. to the commercial sweetpotato crop this spring is far greater than at any time since this species was discovered in southern Alabama. Many plantations have 50 per cent of the tubers damaged and the Bureau of Markets' Inspectors report that 25 per cent of the crop on shipping platforms during the week of May 23 to 30 was damaged.
- Mississippi N. L. Douglass (May 19): Wireworms have been reported injuring corn on low bottom land in Montgomery County especially.
- California E. O. Essig (May 22): Wireworms are moderately abundant in the Delta of Sacramento River.

WHITE GRUBS (Phyllophaga spp.)

- Massachusetts A. I. Bourne (May 23): Several complaints have been received of white grubs working in tobacco seed beds in Amherst. In every case it has been found that the insects are small, young stage grubs.
- Connecticut R. B. Friend (May 18): Adults of Phyllophaga tristis Fab. are very abundant in lawns in Old Lyme.
- Pennsylvania H. N. Worthley (May 20): Adults are now common about lights and in bait traps, at State College.
- A. B. Champlain (May 27): June beetles were observed in a very heavy flight in the vicinity of Harrisburg on the evenings of May 15 and 16. They have not been observed since that time.
- Maryland J. A. Hyslop (May 5): Adult beetles are completely defoliating five ornamental European mountain ash that were set this spring in recently plowed sod land at Avanel.
- Virginia H. G. Walker (May 25): June beetles seem to be common throughout the Tidewater region and are reported to be causing damage to many trees and shrubs.
- Georgia J. B. Gill (April 28): May beetles have been observed during April eating the buds and tender shoots of pecan trees in some orchards in the vicinity of Putney.
- Ohio E. W. Mendenhall (May 25): May beetles are very numerous in Columbus and vicinity and some complaint that the beetles were eating the leaves of plum and other fruit trees has been received.
- Indiana J. J. Davis (May 26): White grubs are among the outstanding insects according to correspondence. For the past month they have been reported very abundant in ground being plowed. Apparently in most cases they are of the brood which will mature this year.
- Illinois W. P. Flint (May 18): C. C. Compton reported adults in flight in considerable numbers in Carroll County on April 18.
- Kentucky W. A. Price (May 25): White grubs are moderately abundant on corn and tobacco. (May 27): Adult May beetles are very plentiful about lights at nights, in Lexington.
- Michigan R. H. Pettit (May 25): White grubs are very abundant.

Wisconsin

C. L. Fluke (May 7): A peculiar situation exists in Wisconsin in regard to the appearance of June beetles which at present we are not able to explain. According to our information the spring of 1932 should be the logical time for appearance of the main brood of adults. However, this spring there has already been a heavy flight of beetles. They began appearing as early as April 13 and it seems as if they are beetles which should have appeared next year. We believe that the long continued hot weather of last year caused these insects to develop in two years, which is apparently going to upset the brood cycles. From our counts about 50 per cent remained as larvae over to this year. There are approximately 40,000 adult beetles per acre in the generally infested territory of southwestern Wisconsin. This refers of course to the pasture land.

Minnesota

A. G. Ruggles and assistants (May): White grubs were quite generally reported as but moderately abundant or scarce throughout the State. No reports of unusual abundance were received. (Abstract J.A.H.)

Iowa

H. E. Jaques (May 25): White grubs were reported as scarce in the following Counties: Sioux, Harrison, Page, Dickinson, Buena Vista, Adams, Emmet, and Worth; moderately abundant in Crawford, Pocahontas, Union, Tama, Monroe, Maraska, Van Buren, Henry, Delaware, Jones, Cedar, Des Moines, and Jackson; very abundant in Wayne, Keokuk, and Buchanan.

Missouri

L. Haseman (May 23): White grubs are moderately abundant at Columbia. Flights of beetles were observed on warm nights about the middle of the month.

Nebraska

M. H. Swenk (April 15 - May 15): The first May beetles were found on the evening of April 29.

Mississippi

R. W. Harned (May 25): Specimens of May beetles identified by J. M. Langston as P. bipartita Horn and P. praeternissa Horn were reported as injuring roses at Canton on May 18.

H. Dietrich (May 23): Adults did some injury to pecans at Lucedale early in the month.

N. L. Douglass (May 19): May beetles have been numerous in Grenada, Yalobusha, and Montgomery Counties this spring, injuring pecans, roses, and other tender growth on plants of a similar nature.



CEREAL AND FORAGE - CROP INSECTS

WHEAT

HESSIAN FLY (Phytophaga destructor Say)

- Indiana            W. B. Noble through C. M. Packard (May 2): Very light oviposition occurred from April 17 to 21. The main emergence apparently had not yet arrived on April 30.
- C. M. Packard (May 2): The spring infestation is expected to be generally light in the East Central States owing to small numbers of overwintering puparia and April weather conditions which were rather unfavorable to fly activity.
- Illinois           J. H. Bigger through W. P. Flint (May 18): The Hessian fly is very abundant. From 32 to 45 per cent of tillers in certain fields were infested with eggs on April 22, in Greene County.
- Iowa                H. E. Jaques (May 25): The Hessian fly is moderately abundant in the southern half of the State and there are reports of great abundance in Woodbury and Tama Counties.
- Missouri           L. Haseman (May 23): The Hessian fly situation seems to be not at all serious anywhere in the State.
- Nebraska           M. H. Swenk (April 15 - May 15): The western limits of the present infestation seem to be Gothenburg, Dawson County, in the Platte River Valley, and a little west of McCook, Redwillow County, in the Republican River Valley. In general, the winter wheat came through in good condition, and the abandonment this spring was very small. It is still too early to tell how heavy an infestation the spring brood of the fly will be able to build up this year.
- Kansas             H. R. Bryson (May 23): Dr. E. G. Kelly reports on May 1 that the Hessian fly is plentiful in wheat grown in the northern tier of counties in the western half of the State. These comprise several excellent corn-growing counties.
- Tennessee         C. Benton through C. M. Packard (May 2): Light egg laying occurred throughout April, the main wave from April 18 to 21, but not heavy. Small to mature larvae were present April 28; in the most heavily infested fields about 20 per cent of the stems are infested, two larvae to a stem.
- Oregon             Oregon Agricultural College, Insect Pest Report (March): First emergence of the spring brood of the Hessian fly occurred March 19.



A STEM MAGGOT (Meromyza nigriventris Macq.)

Oregon T. R. Chamberlin (April 30): First adults out April 23 at Forest Grove and vicinity, fairly common at the end of the month.

WHEAT JOINT WORM (Harmolita tritici Fitch)

Oregon T. R. Chamberlin (April 30): The first adults were out April 27 in Molalla and vicinity. This is 10 days later than last year. There was very little development during the first half of April owing to cool backward weather, but development was very rapid after the 20th. The parasite Eurytoma parva Phillips had all pupated by April 20, pupation having taken place very recent in most cases. None had issued by the end of the month. Eupelminus saltator Lind. was common in the field during the last one-third of the month. Ditropinotus aureoviridis Crawford is in the larval stage.

CORN

CHINCH BUG (Blissus leucopterus Say)

Illinois W. F. Flint (May 19): The weather during early May was rather unfavorable to chinch bugs and a slight reduction in numbers occurred. This reduction, however, was not sufficient to make any material difference in the threatened outbreak and it seems likely that we will have very serious damage in the south-central counties of the State. The old bugs are so numerous in some cases as to be killing the wheat. In localities where no wheat is grown the eggs are very abundant in oats. This is true also in some localities where both wheat and oats occur. No young bugs have been seen in the fields as yet, although eggs are present in large numbers.

Missouri L. Haseman (May 25): The area from Columbia west and to the southwest is badly infested with chinch bugs, and unless wet weather continues we are sure to have heavy losses.

Kansas H. R. Bryson (May 23): Dr. E. G. Kelly reported chinch bugs very abundant from Miami County south to the Oklahoma line and west as far as Sumner County in volunteer oats, wheat, and barley May 8. Owing to the mild winter, the extensive burning campaign carried on over this area did not prove so effective as if the winter had been severe. Scattered reports from May 1 to 5 show that chinch bugs were numerous in rye at Vermillion and were killing the oats in a field at Stark.

Oklahoma C. E. Sanborn (April 28): The chinch bug is moderately abundant.

Mississippi R. W. Harned (May 25): Although no complaints have been received in regard to damage caused by chinch bugs, a number of corn plants brought to this office from Attala County, because they were badly infested with larvae of Diabrotica 12-punctata Fab., had on them so many chinch bugs, that it is apparent that these insects are unusually abundant in the field from which the corn plants came.

CORN EAR WORM (Heliothis obsoleta Fab.)

South Carolina P. K. Harrison (May 22): The first larvae this season were found injuring buds and tassels of corn on the laboratory grounds at Fairfax.

Florida J. R. Watson (May 21): The corn ear worm is moderately abundant. It is beginning to be noticeable on tomatoes and corn, especially to the south.

Missouri L. Haseman (May 23): The overwintering pupae of the corn ear worm show that but a small percentage will probably produce moths.

Alabama J. M. Robinson (May 25): The corn ear worms are moderately abundant at Auburn.

Louisiana W. E. Hinds (May 25): The corn ear worms are moderately abundant in early planted corn and there are some in tomatoes.

AN ARCTIID MOTH (Apantesis phalerata Harr.)

Tennessee C. Benton through C. M. Packard (May 2): An outbreak in south-central Tennessee the latter part of April of what is possibly Apantesis phalerata Harr. occurred. Larvae sent to Washington for identification. Not yet reared. Hairy caterpillars were eating the portion of young corn which was above the ground. Reports were received from all of Lincoln County and parts of Moore and Bedford Counties. Probably of general occurrence throughout this part of Tennessee. Lincoln County agent estimates that out of an annual total of 60,000 acres of corn 500 acres are completely destroyed or so seriously injured as to necessitate replanting. Injury to grass lots and pastures has also been reported. One pasture near Fayetteville showed 12 out of 15 acres of hillside pasture completely stripped of all grass, clover, and weeds. Larvae also were observed feeding on tobacco plants in seed-bed which they had invaded from devastated cornfields. The first pupae in the field was

observed April 30. Several fields under observation have already been plowed up for replanting.

AN ARCTIID MOTH (Apantesis rectilinea French)

Tennessee

S. Marcovitch (May 6): Larvae of this arctiid moth have been sent in from numerous localities in eastern Tennessee, where they have been severely damaging corn.

CORN FLEA BEETLE (Chaetocnema pulicaria Melsh.)

Illinois

W. P. Flint (May 19): Corn flea beetles are appearing in injurious numbers in the fields in the central part of the State and in some cases have destroyed the early corn to such an extent that it is necessary to replant.

J. E. Bigger (May 18): The corn flea beetle is very abundant. It is reported that 75 acres of corn were damaged in two areas in Morgan County and 200 or 300 acres severely attacked in Greene County. Reports of large acreage damaged in Illinois River bottom in Scott County were received May 18. The corn is just coming up. These reports were received from widely separated areas.

FLEA BEETLES (Halticinae)

Kansas

H. R. Bryson (May 23): Flea beetles were reported on May 16 as attacking 70 acres of corn at Olathe. The infestation in this field showed from 5 to 30 beetles per stalk.

SOUTHERN CORN LEAF BEETLE (Myochrous denticollis Lec.)

Kansas

H. R. Bryson (May 23): The southern corn leaf beetle was reported by E. G. Kelly as causing damage in occasional fields in southeastern and central Kansas. The county agent at Wellington reported on May 19 that this insect was causing damage to corn in that section of the state.

CORN BILLBUGS (Sphenophorus spp.)

Missouri

L. Haseman (May 23): Corn billbugs were reported as very serious on new bottom-ground corn in Howard County May 20.

SEED CORN BEETLE (Agonoderus pallipes Fab.)

Missouri

L. Haseman (May 25): The seed corn ground beetle is coming to lights in great numbers, but no reports of their work on corn have been received.



SUGARCANE BEETLE (Euethiola rugiceps Lec.)

Mississippi R. W. Harned and assistants (May): The rough-headed corn stalk beetle is found to be moderately abundant in cornfields that have just been plowed from sod. Quite a bit of damage to the young corn. This beetle is moderately abundant in Adams County. It was found feeding on corn May 14. (Abstract G. M.)

CRANE FLIES (Tipulidae)

Indiana J. J. Davis (May 26): Leather jackets were reported May 6 as seriously damaging alfalfa at Kendallville. Adults were reported as very abundant at Aurora May 24.

Missouri L. Easeman (May 23): Crane flies have been emerging in great abundance at Columbia since May 10. It is the large species that was so abundant a year ago.

Kentucky W. A. Price (May 25): Crane flies have done much damage to corn in the vicinity of Danville.

CLOVER, ALFALFA, ETC.

PEA APHID (Illinoia pisi Kalt.)

Delaware L. A. Stearns (May 21): Pea aphids were very abundant on alfalfa in Sussex and Kent Counties May 12.

Georgia O. I. Snapp (May 25): Austrian peas around Fort Valley that were not turned under at the proper time are now heavily infested with green aphids.

Indiana J. J. Davis (May 26): Aphids were apparently injuring alfalfa at Winamac May 15.

Kansas H. R. Bryson (May 23): Pea aphids continue to be a pest in southwestern Kansas, at Lakin, Garden City, Minneapolis, Salina, and Doniphan.

Mississippi R. W. Harned and assistants (May): I. pisi was collected on peas at Lucedale on May 6 and at Richton on May 21.

Arizona C. D. Lebert (April 27): The pea aphid injury was very severe on peas, alfalfa, and vetch during March and April. This season has undoubtedly been the worst in years for this pest.

Utah G. F. Knowlton (May 6): Pea aphids are now becoming fairly abundant on alfalfa at Willard.

Oregon D. C. Mote (April 24): L. P. Rockwood, on April 20, together with H. Schoth and the writer, made a survey of the vetch and Austrian pea fields in the vicinity of Corvallis. The infestation of the pea aphid was found to be spotted. In a few fields the infestation was abundant and there was evidence of damage to peas and vetch. In other fields the infestation was scarce and there was no evidence of damage whatever. A considerable number of eggs of syrphus flies were present as well as the fungus Entomophthora aphidis (reported by Mr. Rockwood). Only a few coccinellids were observed, but the valley was experiencing a very high wind and dust storm which probably accounted for the absence of the coccinellids. Mr. Schoth reported both coccinellids and syrphus flies abundant the day before, which was warm and sunny.

CLOVER LEAF WEEVIL (Hypera punctata Fab.)

Ohio T. H. Parks (May 25): An inquiry was received from the county agent of Mahoning County, on May 21 regarding the control of larvae which are more abundant on clover than usual.

Indiana H. R. Painter (May 2): Small to nearly mature larvae were very abundant (from 2 to 6 larvae per plant) in clover fields April 14 - 20 from Owensville through Lafayette to Fort Wayne. The leaves of young growth were noticeably notched by their feeding. There was no evidence of disease.

Illinois W. P. Flint (May 19): The clover leaf weevil has caused alarm in many counties and serious damage in several of the west-central counties. The insects are now pupating. Many of the larvae have been killed by disease.

Kentucky W. A. Price (May 25): The clover leaf weevil has caused much damage to clover and alfalfa over the entire State.

Iowa C. J. Drake (May 8): The clover leaf weevil has been reported recently in the following counties: Cedar, Dallas, Madison, Union, Taylor, Washington, Louisa, and Lee.

H. E. Jaques (May 25): The clover leaf weevil is moderately abundant in Keokuk, Henry, Adams, and Union Counties and very abundant in Manaska and Washington Counties.

Tennessee C. Benton (May 2): April 25 - 27, Occasional small to mature larvae were observed slightly injuring clover fields near Fayetteville.

Missouri L. Haseman (May 23): The larvae have now about completed their feeding for the year. It seems from reports that they were very abundant in the fore part of May.

Kansas H. R. Bryson (May 23): The clover leaf weevil has been reported as causing damage at Burlington.

ALFALFA WEEVIL (Phytonomus posticus Gyll.)

Nevada G. G. Schweis (May 21): The alfalfa weevil is very abundant in western Nevada, causing very heavy damage and necessitating control measures.

LESSER CLOVER LEAF WEEVIL (Phytonomus nigrirostris Fab.)

Indiana H. R. Painter through C. M. Packard (May 2): Adults are apparently rather scarce in Indiana. A few eggs and young larvae were first found April 28 at Lafayette.

Iowa C. N. Ainslie (May 21): This pest, unknown at Sioux City until recently, is evidently multiplying and has been taken in some numbers in young alfalfa. It is rather numerous.

CLOVER ROOT BORER (Hylastinus obscurus Marsham)

Oregon L. P. Rockwood (April 25): The root borer was observed in first flight on April 25. Maximum temperature for day, 71° F. It was not abundant.

CLOVER ROOT CURCULIO (Sitona hispidula Fab.)

Illinois W. P. Flint (May 19): The adults destroyed 45 acres of clover seeded this spring in fields in Scott County. They migrated from near by clover sod.

Missouri L. Haseman (May 23): The clover root curculio was reported by one farmer from Clay County.

ALFALFA CATERPILLAR (Eurythmus eurythema Boisd.)

Arizona C. D. Lebert (May 22): Considerable numbers of adults and larvae were found in alfalfa fields May 20. They are not so abundant as they were last year at this time.



SUGARCANE

SUGARCANE BORER (Diatraea saccharalis Fab.)

Louisiana W. E. Hinds (May 25): Larvae in the 2nd instar were found at Baton Rouge in corn on May 13. Subsequent observations have located a center of quite heavy infestation at Plaquemine, where corn and cane are being attacked. Field colonization of Trichogramma minutum Riley for control was started on May 19. Borer infestation generally is very light at this time.

T. E. Holloway (May 21): After a mild winter there was an indication of an early and heavy borer infestation. There has been a rather cool spring, however, the Weather Bureau recording temperatures for May as low as many ever recorded. This has retarded both sugarcane and borer development. The crop is now regarded as two weeks late or possibly more. Fields having any noticeable borer infestation are scarce.

SUGARCANE BEETLE (Euctheola rugiceps Lec.)

Mississippi R. W. Earned (May 25): A correspondent at Tchula sent to this office on May 14 a number of specimens with the report that they were beginning to cause considerable damage to sugarcane. S. R. Cooley, county agent, Belzoni, sent to us, on May 13, 12 adults of this species, but failed to indicate what crop was being attacked.

Louisiana W. E. Hinds (May 25): Damage to cane and corn is decreasing at this time. Egg laying has been under way for about five weeks. The unusually prolonged cool weather appears to have retarded the activity and oviposition period of these beetles. The catch of beetles at lights has been less than hoped for.

J. W. Ingram and E. K. Bynum (April 15): As far as we can determine, heavy injury to sugarcane is localized within a 10-mile radius of Franklin. We have also found the beetle damaging corn around Franklin and at Cut Off.

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

APPLE

CODLING MOTH (Carpocapsa pomonella L.)

- New York      Weekly News Letter, New York State College of Agriculture (May): During the last week in May these insects were pupating in the Lake fruit belt, and on May 25 the first adult was caught in bait traps in Ulster County. (Abstract J. A. H.)
- New Jersey      Weekly News Letter, New Jersey State College of Agriculture (May): By May 9 approximately 65 per cent of the overwintering codling moths were in the pupal stage in Gloucester County. A few adults were observed in this county on May 16 and by the 23d of the month moths were numerous. (Abstract J. A. H.)
- Pennsylvania      H. N. Worthley (May 20): The first adult codling moth was captured in a bait pail May 18-19, at State College. (May 27): About 15 per cent codling moth emergence at State College; 17 per cent at Arendtsville, Adams County.
- Delaware      L. A. Stearns (April 30): Pupation of overwintered larvae delayed, but 3 per cent had pupated on April 24 at Camden; abnormally abundant; 75 per cent of overwintered larvae pupated May 21. First emergence of spring-brood moths May 8.
- Maryland      P. D. Sanders & C. Graham (May 26): The codling moth emergence is later than in 1930. Last year on May 15 at Hancock 35 per cent of the overwintering moths had emerged and at Salisbury nearly 40 per cent emerged. On May 15 this year emergence had hardly begun. There seems to be a much heavier carry-over than normal, both inside the packing houses and on the tree trunks. Peak of emergence on Eastern Shore May 21. Records not available for this week from western Maryland, where emergence began on May 11. Records up to May 16 indicate that that was the peak up to that time.
- Georgia      C. H. Alden (May 20): The codling moth is moderately abundant at Cornelia, the first-brood eggs hatching from May 17 to 23.
- Ohio      T. H. Parks (May 25): Spring-brood moths began emerging in Lawrence County May 9; in Cincinnati and Columbus May 15, and in Wooster May 19, and have not yet commenced to emerge along Lake Erie. At Columbus only three nights since emergence commenced have been warm enough for egg laying.
- Illinois      C. C. Compton through W. P. Flint (May 18): Recent examination of overwintering larvae in orchard cages showed 97 per cent winter survival as compared with 10 per cent survival under these same conditions for 1929-30. Pupation started at Des Plaines May 2, as compared with May 5 for 1930.



Kentucky W. A. Price (May): The codling moth is moderately abundant. Dr. Eddy reports first codling moth emergence at Paducah on May 4.

Michigan R. H. Pettit (May 25): The codling is moderately abundant. It is still in the larval stage, not having pupated yet.

Missouri L. Haseman (May 23): Reports for the entire State show that the earliest emergence occurred in the southern part of the State, on May 23. Moths were emerging in cages from all parts of the State except the north-central and northeastern parts. With warm weather we expect the peak of first-brood moths at Columbia by June 1. Emergence of the moths was delayed by the recent cool spell but moths are now emerging rapidly.

R. M. Jones (May 20): The first spring-brood moths emerged on May 4 and egg deposition was recorded on May 17.

Idaho Claude Wakeland (May 19): The codling moth began emergence the first week of May at Parma and Lewiston.

Washington E. J. Newcomer (May 22): The first moths appeared in Yakima County April 27 as compared with April 30 in 1930. By the time of the first cover spray (May 18) about twice as many moths had appeared in baits as at that time last year, when the same number of baits were used in the same location. This was due to very warm weather from May 11 to 14.

California Monthly News Letter, Los Angeles County Agricultural Commissioner (April 15): The peak of moth emergence this spring in the Antelope Valley was reached April 10, which was three weeks early. Therefore, the eggs laid by the moth will be hatching about April 20.

A TENT CATERPILLAR (Malacosoma sp.)

Oregon Oregon Agricultural College & Experiment Station. Oregon Insect Pest Report: There is an unusually heavy infestation in the vicinity of Corvallis. Wild rose bushes and alders west of Corvallis are heavily infested. More than 50 tents have been observed in one apple tree.

EASTERN TENT CATERPILLAR (Malacosoma americana Fab.)

New England C. W. Collins (May 29): The eastern tent caterpillar was observed generally common but abundant locally especially in vicinity of York, Falmouth, Brunswick, and Bath, Maine. In eastern Massachusetts this species is common generally, but is found abundant in some localities, mostly on wild black cherry. (John V. Schaffner, Jr.)

- Maine H. B. Pierson (May 26): The eastern tent caterpillar is extremely abundant.
- C. R. Phipps (May 27): The eastern tent caterpillar is very abundant on apple, wild pin cherry and black cherry.
- Vermont H. L. Bailey (May 25): The eastern tent caterpillar is scarce to moderately abundant.
- Connecticut W. E. Britton (May 23): The first and only nest this season was observed at Mount Carmel on May 16.
- M. P. Zappe (May 21): This insect is much more abundant in Litchfield County than in the rest of the State but not very plentiful even in Litchfield County. It is less abundant than usual.
- Pennsylvania T. L. Guyton (May): The eastern tent caterpillar is moderately abundant in Dauphin County.
- H. N. Worthley (May 27): A few webs have been observed here and there around State College. The caterpillars are nearly full-grown.
- J. N. Knull (May 14): This insect seems to be more abundant than usual this year in the Mont Alto State Forest, in Franklin County. The first webs were observed April 28.
- Maryland E. N. Cory (May 25): The eastern tent caterpillar is very abundant.
- Delaware L. A. Stearns (May 21): The eastern tent caterpillar is rather scarce throughout the State. First nests were reported April 16.
- West Virginia L. M. Peirs (May 27): The eastern tent caterpillar is probably more abundant than usual at Morgantown and other sections.
- Virginia H. G. Walker and G. E. Gould (May 25): The eastern tent caterpillar is scarce at Norfolk.
- C. R. Willey (May 25): The eastern tent caterpillars are very abundant at Richmond and vicinity and west to Lynchburg and Gordonsville.
- Wisconsin E. L. Chambers (May 26): Several reports have come to our attention of the appearance of the tents from several southern counties.

FRUIT TREE LEAF ROLLER (Archips argyrospila Walk.)

New York Weekly News Letter, New York State College of Agriculture (May): The first larvae was observed in western New York May 1. By the middle of the month they were quite generally hatching throughout the State. No unusual damage has been reported as yet. (Abstract J. A. H.)

Idaho C. Wakeland (May 19): The fruit tree leaf roller is nearly absent from the State.

EYE-SPOTTED BUDMOTH (Spilonota ocellana Schiff.)

New York Weekly News Letter, New York State College of Agriculture (May): As a whole budmoths were not as numerous as usual over the greater part of the State. However, in the Lake fruit belt, particularly in Orleans and Monroe Counties, they are doing considerable damage. (Abstract J. A. H.)

Michigan E. McDaniel (May 27): The budmoth is common all over the State.

PISTOL CASE BEARER (Coleophora malivorella Riley)

West Virginia L. M. Peirs (May 27): The pistol case bearer is moderately abundant in the eastern panhandle and is spreading.

APPLE APHIDS (Aphidae)

Vermont H. L. Bailey (May 25): Fruit aphids are scarce.

Massachusetts A. I. Bourne (May 23): The apple aphids are quite scarce at Amherst; in fact, we have had no complaints of their abundance from any section.

Connecticut W. E. Britton (May 23): Fruit aphids are scarce.

New York Weekly News Letter, New York State College of Agriculture (May): Aphids in general do not seem to be abnormally abundant except in restricted areas. (Abstract J. A. H.)

New Jersey Weekly News Letter, New Jersey State College of Agriculture (May): Fruit aphids are so extremely scarce throughout the State that spraying for them is being eliminated in many orchards. (Abstract J. A. H.)

Delaware L. A. Stearns (May 21): Fruit aphids are rather scarce throughout the State.

Maryland E. N. Cory (May 25): Fruit aphids are scarce to moderately abundant.

Florida J. R. Watson (May 21): Fruit aphids are scarce.



- Wisconsin C. L. Fluke (May 23): Fruit aphids are absent. I have been unable to locate any on apples.
- Minnesota A. G. Ruggles and assistants (May): Green aphids were scarce throughout the State during May.
- Wyoming A. G. Stephens (May 23): Fruit aphids are moderately abundant in south and central Wyoming.
- Nevada G. G. Schweis (May 21): Fruit aphids are very abundant at Reno and damage is reported from many places.
- Arizona C. D. Lebert (May): The aphid injury is past. They were reported scarce in the Salt River Valley.

APPLE APHID (Aphis pomi DeG.)

- Maine C. R. Phipps (May 27): Aphis pomi is moderately abundant on apple.
- Connecticut W. T. Clark (May 19): Very little damage by the apple aphid to date in New London County.
- New York Weekly News Letter, New York State College of Agriculture (May): As the month advanced, the green apple aphid became more plentiful, and in the lower Hudson Valley was multiplying rapidly from the middle to the end of the month. (Abstract J. A. H.)
- New Jersey Weekly News Letter, New Jersey State College of Agriculture (May): Towards the end of the month this aphid was showing up in increasing numbers. (Abstract J. A. H.)
- Mississippi F. A. Smith (May 22): The little green aphids have been very abundant on apple, roses, shrubs, and some ornamental plants in Panola, Tate, and De Soto Counties up to this date.

ROSY APPLE APHID (Anuraphis roseus Baker)

- Connecticut N. Turner (May 21): In one orchard at Hamden which was carefully searched a few colonies were present and curling the leaves.
- New York Weekly News Letter, New York State College of Agriculture (May): Early in the month this aphid was extremely scarce. As the month advanced it became more numerous, and in the lower Hudson River Valley it looked as though some damage would be done towards the end of the month. (Abstract J. A. H.)
- New Jersey Weekly News Letter, New Jersey State College of Agriculture (May): During the last week in the month rosy apple aphids were reported as becoming quite abundant in Burlington, Camden, and East Essex Counties. (Abstract J. A. H.)

- Pennsylvania H. N. Worthley (May 27): Rosy aphids are scarce on apple at State College.
- T. L. Guyton (May): Rosy aphids are moderately abundant in Cumberland and Franklin Counties.
- Maryland E. N. Cory (May 25): The rosy aphid is more numerous than in previous years.
- Virginia C. R. Willey (May 25): Rosy apple aphids are moderately abundant at Richmond.
- W. J. Schoene (May 26): The rosy aphid is causing serious injury to apple orchards in the central part of the State. On some trees practically 100 per cent of the clusters are damaged. The infestation is very severe in some orchards and practically absent in others in the same locality.
- Georgia C. H. Alden (May 20): The rosy aphid is moderately abundant at Cornelia, bad on Yates apples.
- Ohio T. H. Parks (May 25): These aphids are now quite abundant in some orchards in Lawrence County.
- Michigan R. H. Pettit (May 25): The rosy aphid is moderately abundant.
- Missouri R. M. Jones (May 20): The rosy aphid is moderately abundant.
- L. Haseman (May 23): The rosy apple aphid is very abundant on several varieties but mostly on growing tips and not on fruit clusters, at Columbia west to Kansas City and east to St. Louis and Cape Girardeau.

APPLE GRAIN APHID (Rhopalosiphum prunifoliae Fitch)

- New York Weekly News Letter, New York State College of Agriculture (May): In the lower Hudson River Valley this aphid has been by far the most numerous species. (Abstract J. A. H.)
- Pennsylvania H. N. Worthley (May 27): Apple grain aphids are scarce on apple at State College.

REDBUG (Lygidea mendax Reut.)

- New York Weekly News Letter, New York State College of Agriculture (May): The first redbugs were observed in the Lower Hudson River Valley May 3, and by the end of the first week they were appearing in the Lake region. By the middle of the month they were quite numerous in all parts of the State and were reported as serious in the Lake fruit belt. (Abstract J. A. H.)
- New Jersey Weekly News Letter, New Jersey State College of Agriculture (May 26): Reports on insects indicate that there is a moderate infestation of the redbug in Sussex County.



Virginia. C. R. Willey (May 25): On May 22 we saw more redbugs<sup>feeding</sup> in an old feeding apple orchard in Powhatan County, near Powhatan Court House, than we have seen for years. Only nymphs were present but we believe them to be L. mendax.

TARNISHED PLANT BUG (Lygus pratensis L.)

Mississippi N. L. Douglass (May 19): Damage of the tarnished plant bug attacking peaches has been noticed in several orchards in the vicinity of Grenada.

Washington E. J. Newcomer (May 22): Fruit bud injury was not so severe in 1931 as in 1930, owing probably to the cooler weather previous to blooming, which prevented the bugs from feeding so extensively. Injury to fruit after blooming, however, seems to be fully as extensive as last year.

APPLE LEAFHOPPERS (Cicadellidae)

Massachusetts A. I. Bourne (May 23): Leafhoppers appear to be quite abundant in some of the orchards in Plymouth, Bristol, Middlesex, and Essex Counties. In other sections of the State the infestation is rather spotty.

Connecticut H. A. Rollins (May 15): Apple trees set in 1930 had rather serious infestation on leaves at Woodstock. Leaves have shown some mottling already.

P. Garman (May 22): Nymphs appearing in considerable numbers in many apple orchards in New Haven County.

New York  
New York

Weekly News Letter, New York State College of Agriculture (May): Typhlocyba pomaria McAtee, which caused serious damage in the Hudson River Valley last year, was first observed in the orchards during the first week in May. By the end of the month it was hatching rapidly, and indications were that hatching would be completed in time for the treatment immediately following the calyx spraying. (Abstract J. A. H.)

Pennsylvania H. N. Worthley (May 27): Apple leafhopper nymphs (species not yet determined) appearing on apple foliage at State College.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Wisconsin E. L. Chambers (May 27): Three new infestations were discovered recently in Ft. Atkinson, Mukwonago, and Hazel Green. The scale is still confined to less than a dozen counties and is not yet present in any of the commercial apple growing sections of the State.

OYSTER-SHELL SCALE (Lepidosaphes ulmi L.)

New York

E. P. Felt (May 26): The oyster-shell scale is generally abundant on its favorite food plants, such as poplar, lilac, and ash, a bad infestation having been observed recently at Haverstraw.

Indiana

J. J. Davis (April 29): The oyster-shell scale has been reported abundant on lilac at Lafayette, Otterbein, and Williamsport.

Michigan

R. H. Pettit (May 25): The oyster-shell scale is very abundant.

Wisconsin

C. L. Fluke (May 23): Overwintering eggs are plentiful. They have not hatched.

Minnesota

A. G. Ruggles (May 22): The oyster-shell scale was reported as unusually abundant from scattered localities throughout the State.

Nebraska

M. H. Swenk (April 15 - May 15): The oyster-shell scale continues to be reported as very injurious in apple orchards in our northeastern counties. A Knox County correspondent sent very heavily infested samples on April 20, with the statement that many of his trees were dying from the attack.

Kansas

H. B. Hungerford (May 25): Reports of renewed infestation of the oyster-shell scale at Topeka have been received.

SHOT-HOLE BORER (Scolytus rugulosus Ratz.)

Indiana

J. J. Davis (May 26): The shot-hole borer was destructive to apple in Dearborn County, according to reports dated May 7.

Michigan

R. H. Pettit (May 25): Scolytus rugulosus has been on the increase the last few years because drought has weakened the trees.

APPLE FLEA WEEVIL (Orchestes pallicornis Say)

Ohio

T. H. Parks (May 25): Injury in the southern and central counties is not so extensive as anticipated last month. Orchards where the insect used to be serious have very few, while in some orchards of Lawrence County the beetles are more numerous than in previous years. There is no general outbreak this year.

APPLE CURCULIO (Tachypterellus quadrigibbus Say)

New York

Weekly News Letter, New York State College of Agriculture (May): The first adult to be collected in the extreme north-eastern corner of New York State was found on May 9. By the end of the month the insects were numerous enough to make feeding on the young fruit evident. (Abstract J. A. H.)

STRIPED CUCUMBER BEETLES (Dicbroctica vittata Fab.)

Mississippi

R. W. Harned (April 23): On March 2, E. T. Barrett, Saltillo, wrote: "Last spring our apple crop was completely destroyed by striped cucumber beetles. They ate the petals and even the young apple stems. This damage was done before the apples were in full bloom, they did it so quickly." On April 11, Mr. Barrett sent about 50 adult beetles that were identified by J. M. Langdon as D. vittata, and wrote: "I am mailing you a few of the striped beetles. I have found that they cleaned up the apple blossoms all around here last year and did it in a few days."

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

Vermont

H. L. Bailey (May 25): First newly hatched red mites noted at Dorset, Bennington County, May 15. Rather heavy mortality is apparent in overwintering eggs.

Massachusetts

A. I. Bourne (May 23): We found the European red mite to be hatching during the warm period of May 2 to 4 at Amherst.

Connecticut

H. A. Rollins (April 28): Most commercial orchards of apples have some European red mite throughout the State.

P. Garman (May 22): The European red mite has been observed in several orchards in New Haven County.

New York

Weekly News Letter, New York State College of Agriculture (May): These mites began hatching during the first week in the month and were quite generally observed throughout the State. (Abstract J. A. H.)

New Jersey

Weekly News Letter, New Jersey State College of Agriculture (May): This mite seems to be unusually scarce throughout the State this year. (Abstract J. A. H.)



PEACH

PEACH BORER (Aegeria exitiosa Say)

- Maryland E. N. Cory (May 25): The peach borer is very abundant.
- Georgia C. H. Alden (May 20): The peach borer is scarce at Cornelia. Some nearly full-grown larvae have been observed.
- Ohio T. H. Parks (May 25): Many complaints from over the State have reached us about injury to trees by these larvae this spring.
- E. W. Mendenhall (May 23): Peach and cherry trees and in some cases plum trees are found badly infested with the peach borer on city lots in Columbus and vicinity.
- Mississippi F. A. Smith (May 22): The peach borer is very abundant in northwestern Mississippi on peach trees that were not treated with paradichlorobenzene last October.

PEACH TWIG BORER (Anarsia lineatella Zell.)

- Indiana J. J. Davis (May 26): The peach twig borer was unusually abundant in southern Indiana the past month. It was commonly mistaken for the oriental fruit worm.
- Arizona C. D. Lebert (May 22): Considerable branch-tip injury to peaches and apricots was found in the Phoenix area. In several instances nearly every developing twig was killed back at the tip for an inch or two.

ORIENTAL FRUIT MOTH (Laspeyresia molesta Busck)

- Connecticut F. Garman (May): Twig injury is not yet noticeable. Eggs have been observed on trees near the Experiment Station at New Haven.
- W. E. Britton (May 23): The oriental fruit moth is moderately abundant. Eggs are being laid.
- New Jersey Weekly News Letter, New Jersey State College of Agriculture (May 26): The oriental peach moth was noted at work today (May 22) in Essex County.
- Pennsylvania T. L. Guyton (May): The oriental fruit moth is moderately abundant.
- Delaware L. A. Stearns (May 21): First emergence of the oriental fruit moths of the spring brood occurred at Millsboro, April 18. Emergence of the spring-brood moths has about ended. No twig injury has been observed to date.

- Maryland E. N. Cory (May 25): The oriental fruit moth is moderately abundant.
- Georgia O. I. Snapp (May 2): The first twig injury of the season was observed on April 22 at Fort Valley. The oldest larvae found in peach twigs today (May 2) were about two weeks old. Last year the first twig injury was observed here on April 29, which was the latest date for first twig injury since the insect became established here. The dates of the first twig injury of the other years are: April 4, 1929; April 25, 1928; April 1, 1927; April 20, 1926; April 10, 1925. This insect continues to be a peach pest of only secondary importance in this section of the Georgia peach belt.
- C. H. Alden (May 20): The oriental fruit moth is scarce at Cornelia. Occasionally larvae can be found in small green peaches.
- Kentucky W. A. Price (May 25): The oriental fruit moth is moderately abundant. It appeared at Paducah in some numbers during early May, there being as many as 30 wilted twigs per tree. At this time they seem to have pupated (May 22).
- Michigan R. H. Pettit (May 25): The oriental fruit moth is scarce.
- Tennessee H. G. Butler (May 18): Larvae were observed in peach twigs at Harriman today but they were not numerous.
- Alabama J. M. Robinson (May 25): The oriental fruit moth is moderately abundant at Millport.
- Mississippi R. W. Harned (May 25): Peach twigs injured by larvae were received on April 29 from Meridian, on May 4 from Ruleville, and on May 20 from Water Valley.

PLUM CURCULIO (Conotrachelus nenuphar Hbst.)

- Massachusetts A. I. Bourne (May 23): In his jarring tests Professor Whitcomb found the first beetles on May 15. By the 18th he was able to collect a considerable number.
- New York Weekly News Letter, New York State College of Agriculture (May): Adults were obtained by jarring in the lower Hudson River Valley on May 6. On May 9 they were observed in the extreme northeastern corner of the State, and by the end of of the month they were numerous in the Lake fruit valley. Although considerable fruit scarring has been observed, the abundance does not appear to be abnormal. (Abstract J.A.H.)
- New Jersey Weekly News Letter, New Jersey State College of Agriculture (May): Although the plum curculio is being observed quite generally over the State, it does not appear to be so numerous as last year. (Abstract J.A.H.)

- Pennsylvania T. L. Guyton (May): The plum curculio is very abundant.
- Delaware L. A. Stearns (May 21): Emergence from hibernation is considerably delayed. The first emergence from hibernation at Camden occurred April 18. The insect appears to be much less abundant than it was last year.
- Maryland P. D. Sanders and C. Graham (May 26): The spring emergence is later than in 1930 and on the Eastern Shore is much lighter. It is felt that both the short peach crop last year and the hot, dry condition of the soil during the pupation period were unfavorable for curculio development. Jarring records at Salisbury/1930 showed: May 10, 6.7 curculio per tree and in 1931 on May 13, only 2.65 per tree. The season is only about seven days late as judged by the stage of the trees. Jarring records on curculio indicate heavy invasion of the orchards about the 16th at Hancock. Most of the records of heavy infestations come from jarred apple trees.
- Virginia C. R. Willey (May 25): The plum curculio is very abundant at Richmond and vicinity. Practically all plum and peach trees examined were infested, some very badly.
- H. G. Walker and G. E. Gould (May 25): The plum curculio is moderately abundant at Norfolk.
- Georgia C. H. Alden (May 20): The spring brood of the plum curculio infestation is light at Cornelia.
- O. I. Snapp (May 8): This season's infestation at Fort Valley is the lightest in 13 years; 18,523 peach drops were cut on May 7 and 8, and only 402, or 2.2 per cent, were infested with larvae. The infestation last year ranged from 10.6 to 23.5 per cent for the first collection of drops, and in 1929 the infestation varied from 42.7 to 55.0 per cent for the first collection. The unusually light infestation this year is attributed to the dry weather during the pupation season in 1930, the effectiveness of the arsenical treatments in 1930 when very little rain fell between the several applications, and the jarring of the trees to catch the adult curculios, more of which was done last year than ever before. The first larva to reach maturity this season left a peach drop on May 7. This is 10 days later than the first record last year when only one brood occurred. (May 19): 7,012 peach drops were cut on May 13 and of these only 116, or 1.6 per cent, were infested. On May 19 another collection of 7,678 drops was cut and of these only 70, or 0.9 per cent, were infested. The figures further substantiate my report on May 8 that the curculio infestation in the Georgia peach belt is the lightest since 1918. Very few growers in



this locality picked up drops this year on account of the light infestation, and they were justified in omitting this usual practice. There has been no pupation to date (May 19), although the first larvae entered the soil on May 7. The continued unseasonably cool weather is retarding development. (May 25): The first pupation of the season took place today. That is just ten days later than the first pupation last year when the pupation was considered unusually late. It is extremely doubtful if there will be a second generation this year.

Ohio

T. H. Parker (May 25): The first egg punctures on plums were found at Columbus May 23. This was about one week after the fall of the apple bloom. Mr. C. H. Huff was unable to secure adults at Cincinnati by jarring trees and fruit examination until May 14, his last day in that County. The beetles did not appear in the trees there during the bloom period of apples.

Kentucky

W. A. Price (May 25): The plum curculio is scarce and emergence is late. The first adults were taken by jarring on April 15 and very few have been taken since.

Tennessee

H. G. Butler (May 11): First plum curculio larva found in a peach in an orchard at Harriman May 11. The first insectary-reared larva hatched May 9. The insect appears to be scarce.

Iowa

H. E. Jaques (May 25): The plum curculio is very abundant in Sioux, Henry, and Page Counties.

Missouri

L. Haseman (May 23): The plum curculio is quite abundant, stinging fruit at Columbia; up to May 22, only an occasional puncture in fruit.

Alabama

J. M. Robinson (May 25): Plum curculios are very abundant at Auburn.

Mississippi

N. L. Douglass (May 19): Where spraying was neglected injury of the plum curculio may be seen in north central Mississippi.

F. A. Smith (May 22): The plum curculio is very abundant on trees that have not been sprayed everywhere that I made observations in Tate County.

Oklahoma

C. E. Sanborn (April 28): The plum curculio is moderately abundant.

A BLISTER BEETLE (Pomohopoea aenea Say)

Indiana

J. J. Davis (April 29): Blister beetles (P. aenea) were ruining peach blossoms in an orchard at Vallonia, April 13. They were present by the thousands in a small area and completely denuded trees of blossoms. At that time the trees were not quite in full bloom. A week later when the county agent visited the orchard, all of the beetles had disappeared.

PEAR

PEAR PSYLLA (Psyllia pyricola Foerst.)

New York

Weekly News Letter, New York State College of Agriculture (May): This insect threatens to be a serious problem in western New York this year. By the middle of the month they had practically finished laying, and the earlier laid eggs were hatching rapidly by the 18th. Heavy rains in the early part of the month very materially reduced the population of these insects in the Hudson River Valley. (Abstract J.A.H.)

PEAR MIDGE (Contarinia pyrivora Riley)

New York

Weekly News Letter, New York State College of Agriculture (May): Damage is again evident this year in pear orchards in the lower Hudson River Valley. (Abstract J.A.H.)

PEAR THRIPS (Taeniothrips inconsequens Uzel)

New York

Weekly News Letter, New York State College of Agriculture (May 18): Ulster Co. (W. J. Clark): Pear thrips adults are now found in the summer stage.

Oregon

D. C. Mote (April 24): J. Wilcox reports the infestation of the pear and prune thrips on prunes to be spotted. Very serious damage in certain prune orchards. The young thrips are now present in the orchard.

Ore. Agr. Coll. and Exp. Station, Oregon Insect Pest Report (March): J. Wilcox reports the infestation to be spotted. Very serious damage in certain prune orchards. The young thrips are now present in the orchard. Prune and pear thrips are moderately abundant in Douglas County, general infestation. Very abundant in Ballston, Polk County, spotted in rest of Polk County. Very abundant in Yamhill County.

California

Monthly News Letter, Los Angeles County, Agriculture Commissioner, Vol. 13, No. 4. (April 15): The State Department of Agriculture recently assigned Stewart Lockwood, Assisting Entomologist, to look over the situation of a rather heavy

infestation of thrips in pear and apple orchards in the Antelope Valley. The insects are numerous enough to cause many of the growers in the Valley to become concerned about the best methods of control.

CHERRY

BLACK CHERRY APHID (Myzus cerasi Fab.)

New York

Weekly News Letter, New York State College of Agriculture (May): Black cherry aphids were present in both the lower Hudson River Valley and in the western part of the State. By the end of the month they were increasing very rapidly in the lower Hudson River Valley. (Abstract J.A.H.).

CHERRY FRUIT FLIES (Rhagoletis spp.)

Michigan

R. H. Pettit (May 22): We are still collecting cherry fruit flies from cages, and there is a vast difference in the number produced by the different wild cherries. I feel very safe in saying that the black bodied cherry fruit fly, (R. fausta O. S.) breeds by the thousand in the pin cherry, which is also called the fire cherry, Prunus pennsylvanica. We have obtained lesser numbers from the other wild cherries and from some of them we have obtained some of the white-banded adults (R. cingulata Loew) as well. I rather think that the breeding of white-banded specimens in quantity in wild cherries is a new thing. Probably others have failed to produce them because they did not collect cherries by the peck and cage them over as we did.

CHERRY CASE BEARER (Coleophora pruniella Clem.)

Wisconsin

C. L. Fluke (May 15): An average of about 25 case bearers per one foot of twig on apple in Door County. Less on cherries, considerably more on apples. Definite counts this spring show 90 per cent kill on cherries and 75 per cent kill with the same material on apples.

RASPBERRY

A CURCULIONID (Gooderces melanothrix Kby.)

Washington

Wm. W. Baker (April 8 and 9): G. melanothrix is more abundant on Marlboro raspberries in the vicinity of Puyallup than usual. It was very numerous in some fields in 1915 in the same vicinity but is now rather widespread throughout this immediate territory every year although seldom injurious: It normally feeds on native shrubs and plants.



RASPBERRY FRUIT WORM (Byturus unicolor Say)

New York

Weekly News Letter, New York State College of Agriculture (May): Beetles began emerging throughout the Hudson River Valley in central New York during the first week in the month. By the end of the month they were very numerous, particularly in the Hudson River Valley where they were skeletonizing the leaves and eating off the flower buds. (Abstract J.A.H.)

Michigan

R. H. Pettit (May 25): The American raspberry beetle is common in all raspberry patches in Berrien County. In and around Benton Harbor control measures have been necessary. At present the adult beetles are feeding on the leaves and have started to work on the opening buds.

Washington

Wm. W. Baker (May 25): Bud and blossom counts on raspberries and loganberries at Auburn, Alderton, Pyallup, and Sumner gave from 18.4 to 26 per cent damage but not enough counts have been made to indicate how general this is. Moderately few eggs have been observed to date.

GRAPE

GRAPE FLEA BEETLE (Haltica chalybea Ill.)

New York

New York News Letter, N. Y. State College of Agriculture (May 4): Found one case of quite severe damage to grapes by the flea beetle in Columbia County.

Virginia

C. R. Willey (May 11): Mr. F. G. Claiborne, of Guinea, reports the grapevine flea beetle doing considerable damage to his grapes this year. It is eating buds as they open. He has been growing grapes for 40 years, and this is his first experience with this pest. He has a planting of over a thousand vines, and fears destruction.

Mississippi

R. W. Harned and assistants (May): The grape flea beetle is quite abundant in some sections on cultivated and wild grapes, in Stone County, and was reported from Lauderdale County on May 9.

GRAPE LEAFHOPPER (Erythroneura comes Say)

New Jersey

Weekly News Letter, New Jersey State College of Agriculture (May 26): Leaf hoppers are showing up in large numbers on grape in Gloucester County.

Virginia

C. R. Willey (May 25): Grape leafhoppers are very abundant in Powhatan County.

GRAPE BERRY MOTH (Polychrosis viteana Clem.)

Delaware L. A. Stearns (May 19): First emergence of first brood adults was observed at Camden, Millsboro and Bridgeville today.

CURRENT

CURRENT AFHID (Myzus ribis L.)

New York Weekly News Letter, New York State College of Agriculture (May): Currant aphids are apparently more numerous than usual in commercial plantings in the lower Hudson River Valley and in the extreme western part of the State. (Abstract J.A.H.)

CURRENT FRUIT FLY (Epochra canadensis Loew)

Oregon D. C. Mote (April 24): S. C. Jones reports that the first gooseberry fruit fly emergence from puparia in insect cages was on April 13. Practically all of the flies have now emerged.

IMPORTED CURRENT WORM (Pteronidea ribesi Scop.)

Missouri L. Hasenan (May 23): Imported gooseberry worms were reported by a few people at Columbia May 15 to 23.

Nebraska M. H. Swenk (April 15-May 15): The first eggs of the imported currant worm were found on April 22, and the first larvae were hatched about the first of May. (D. B. Whelan.)

PERSIMMON

PERSIMMON PSYLLA (Trioza diospyri Ashm.)

Mississippi H. Dietrich (May 23): T. diospyri is very abundant on cultivated and wild persimmon in George, Greene, and Ferry Counties.

PECAN

PECAN AFHIDS (Aphiidae)

Georgia J. B. Gill (April 28): Myzocallis fumipennellus Fitch is already showing up in the pecan orchards of southern Georgia, but only in very limited numbers.

T. L. Bissell (May 18): The first adult of Monellia nigropunctata Gran. was observed on April 20. Adults are very scarce, found only on small seedlings May 15, at Experiment. Adults and young of M. costalis Fab. were abundant on pecan May 15 at Experiment. The first adult was observed on April 20. The first adults (stem mothers) of Melanocallis caryae-foliae Davis were observed April 13 on hickory at Experiment. April 17 numerous adults and first-generation young were abundant on pecan. The first leaf injury was seen May 15. The aphids are now scarce on pecan.

Mississippi

R. W. Harned (May 25): Specimens of Longistigma caryae Harr. on pecan have been received from Sumner and Fope.

Alabama

J. M. Robinson (May 25): The giant aphid L. caryae is very abundant on pecan foliage at Millport, West Blockton, and Bellamy.

#### HICKORY PHYLLOXERA (Phylloxera caryaecaulis Fitch)

Mississippi

R. F. Colmer (May 19): The hickory phylloxera was moderately abundant on young seedling pecans, May 14.

Louisiana

W. E. Hinds (May 25): This aphid appears to be unusually widespread and injurious on pecan twigs and leaves of new growth this season. Heavily infested trees are suffering retarded growth and malformation, and will probably lose most if not all of their fruiting possibilities while so infested. The worst infestation known is in the vicinity of Lafayette, but complaints have been received also from several other localities.

#### PECAN CASE BEARER (Acrobasis juglandis LeB.)

Mississippi

F. F. Ansler (May 17): Leaf case bearers did great damage to pecans in Harrison, Hancock, Jackson, Stone, and Lee Counties this spring.

Texas

F. L. Thomas (May 6): The pecan leaf case bearer injury is much more severe than usual, according to Dr. S. W. Bilsing. A number of trees were defoliated at Simonton.

#### A CASE BEARER (Acrobasis palliolella Rag.)

Georgia

J. B. Gill (April 28): A pecan leaf case bearer (A. palliolella) is causing serious damage to pecan orchards in southern Georgia and will be quite a factor in reducing the yield of nuts in unsprayed orchards.



HICKORY SHUCK WORM (Laspeyresia caryana Fitch)

Mississippi J. F. Kislanko (May 20): On April 30 moths were rather numerous in Stone County in pecan orchards that had no sanitation work. On May 12 and 13 four adults were collected in a light trap.

PECAN BUDMOTH (Eroteopteryx bolliana Sling.)

Georgia J. B. Gill (April 28): The first-brood larvae are showing up in some pecan orchards and nurseries in southern Georgia.

Mississippi R. W. Harned (May 25): Slight injury to pecan by the larvae was reported from Ruth on April 28.

PECAN CIGAR CASE BEARER (Coleophora caryaefoliella Clem.)

Georgia J. B. Gill (April 28): Larvae have made their appearance in limited numbers in pecan orchards in various sections of southern Georgia, but no serious damage is anticipated on account of the mildness of the infestation.

Mississippi R. W. Harned (May 25): Heavy infestations of the pecan cigar case bearer were reported from Ocean Springs on May 5 and from Gulfport on May 19.

CIGAR CASE BEARER (Coleophora fletcherella Fern.)

Mississippi F. I. Ansler (May 17): The cigar case bearer has been moderately abundant on pecans in Harrison County this spring.

R. F. Colmer (May 19): The cigar case bearer was very abundant on young pecan foliage in the vicinity of Pascagoula, Jackson County, May 12.

A CHRYSOMELID (Iaria canella pumila Lec.)

Mississippi H. Dietrich (May 23): I. canella pumila was extremely abundant at one farm at Lucedale on May 5, killing the tender shoots of pecan, hickory, and oak by chewing around them. Among hundreds of specimens observed they were all the above subspecies except for one specimen of I. canella gilvipes Horn. The beetles feed at night but during the day hide in rubbish at the base of the trees and in leaves and bud scales.

PECAN COSSID (Cossula magnifica Streck.)

Georgia J. B. Gill (April 28): The work of the cossid borer in the trunks of pecan trees has been in evidence in various localities in southern Georgia during the months of March and April.

PECAN SPITTLE BUG (Clastoptera obtusa Say)

Mississippi R. W. Harned and assistants (May): The first spittle bugs of the season were noted in a pecan orchard near Pascagoula Apr. 22. Specimens were observed on pecan trees at Cannonsburg on May 23.

A FLANT BUG (Flagiognathus caryae Knight)

Mississippi R. W. Harned and assistants (May): The mirids are very abundant on pecans in Adams, Hinds, Stone, Forrest, and Harrison Counties. Sometimes four or five adults are found on the young pecan cluster. The falling of young nuts is undoubtedly due to these insects, as pollination was very good this year.

OAK TWIG IRUNER (Hypermallus villosus Fab.)

Georgia J. B. Gill (April 28): There seems to be an increased damage to limbs of pecan trees in orchards growing adjacent to woodland tracts.

HICKORY SHOOT CURCULIO (Conotrachelus aratus Gern.)

Mississippi R. W. Harned (May 25): Pecan twigs containing the larvae were received from Brookhaven on April 28, May 8, and May 15. Specimens of this species were also received from Mize on May 18. Serious injury was reported in each case.

SAWFLIES (Tenthredinidae)

Mississippi J. F. Kislanko (May 20): A pecan sawfly, Acordulecera maura McG., is very abundant in Stone County this year. Some orchards are very badly injured. Some trees are so damaged that the injury can be noticed from several hundred yards. In previous years this insect was noticed in moderate abundance on hickory but it is the first time it injured pecan trees in this section for the past few years. The oviposition was observed on April 24, although on this day larvae one-third grown were observed.

R. W. Harned (May 25): Complaints in regard to sawfly larvae on pecans accompanied by specimens have been received from a number of places. Larvae tentatively identified by J. M. Langston as Megaxyela major Cress. were received from Meridian, Renova, and Dorsey.

CITRUS

GREEN CITRUS APHID (Aphis spiraeicola Fatch)

Mississippi R. W. Harned and assistants (May): A. spiraeicola has been very abundant on spiraeas since the first of the month in George, Greene, and Terry Counties. Specimens have been received from Lucedale and Ocean.

COTTONY-CUSHION SCALE (Icerya purchasi Mask.)

Mississippi H. L. Bond (May 19): The cottony-cushion scale is becoming very abundant on Tittosporum and attacking other plants to some extent in Laurel.

Arizona C. D. Lebert (May 22): This scale is again appearing in all of the last years' infestations which were practically cleaned by winter 1930. It is considerably more abundant than last month on both ornamentals and citrus. The predacious ladybird beetle Rodolia cardinalis Muls. which was so abundant last season, has made its appearance in three separated groves. However, natural establishment and spread of these predators was not depended on entirely and we have placed many specimens on various infestations this past month. The scale is not so severe as last year at this time, probably owing to the nearly complete reduction of the scale by the beetles during 1930.

CALIFORNIA RED SCALE (Chrysomphalus aurantii Mask.)

Texas F. L. Thomas (May 1): The California red scale is multiplying very rapidly at Weslaco.

PURPLE SCALE (Lepidosaphes beckii Newm.)

Florida H. T. Fernald (May 23): The purple scale is very abundant and bad in some places in the region of Orlando.

J. R. Watson (May 21): The purple scale is moderately abundant.

CITROPHILUS MEALYBUG (Iseudococcus gahani Green)

California Monthly News Letter, Los Angeles County Agri. Comm. (April 15): Field observations indicate that the new Australian mealybug parasite Coccophagus guerneyi Compere has carried through the winter in satisfactory numbers and is serving as an important factor in holding the mealybug in check this spring. It seems to be well established throughout the infested areas of the



county owing to the liberations made during the past two years from material grown in the insectary. Present liberations are being somewhat restricted, as it is felt that little can be added to the parasite population already in the field. However, a stock of parasites is being maintained in the insectary for use as might become necessary.

CITRUS RUST MITE (Ithlocoptes oleivorus Ashm.)

Florida

J. R. Watson (May 21): The citrus rust mite is moderately abundant and is beginning to appear on fruit in many sections.

H. T. Fernald (May 23): The citrus rust mite is very abundant, bad on unsprayed trees, in the region of Orlando.

Texas

F. L. Thomas (May 20): Many complaints have been received of the citrus rust mite at Weslaco.

SIX-SPOTTED MITE (Tetranychus sexmaculatus Riley)

Florida

J. R. Watson (May 21): The infestation of the six-spotted mite in the citrus belt is apparently dying down as the foliage matures, and what is apparently a fungus disease is attacking it.

RED SPIDER (Tetranychus telarius L.)

Mississippi

H. M. Dietrich (May 23): Red spiders were very abundant on satsumas at Vernal on May 7; moderately abundant generally in southern Mississippi owing to dry weather.

PURPLE MITE (Paratetranychus citri McG.)

Florida

J. R. Watson (May 21): The purple mite is becoming rather widespread on citrus throughout the entire State.

A SWALLOWTAIL (Papilio cresphontes Cram.)

Mississippi

H. Dietrich (May 23): The first larva was seen on satsuma at Lucedale on May 20.

A MOTH (Melissopus latiferreanus Wlsm.)

California

Monthly News Letter, Los Angeles County Agr. Conn. (May 15): On at least three different occasions, over a period of eighteen months, specimens of the larva of this moth have been taken from oranges in Los Angeles County. Ordinarily the Catalina cherry moth in its larval stage attacks fruits of oak, beech, chestnut, walnut, and the Catalina cherry. The damage it does, like that of the well known orange tortrix, consists of a small hole through the skin of the fruit and injury to the edible portion caused by the feeding of the larva.

TRUCK - CROP INSECTS

VEGETABLE WEEVIL (Listroderes obliquus Gyll.)

Alabama J. M. Robinson (May 25): The vegetable weevil has been observed at Tuscaloosa.

Mississippi R. W. Harned (May 25): Specimens of the vegetable weevil, accompanied by complaints of serious injury to various garden plants, have been received during the past month from many localities.

STRIPED CUCUMBER BEETLE (Diabrotica vittata Fab.)

New Jersey Weekly News Letter, New Jersey State College of Agriculture (May 26): Striped cucumber beetles were active in Cape May County on May 23.

Pennsylvania J. N. Knull (May 8): First adults observed on blossoms at Mont Alto today.

West Virginia L. M. Peairs (May 27): Adults of the striped cucumber beetle were observed at Morgantown from May 5 to 7.

Virginia W. J. Schoene (May 26): Striped cucumber beetles are unusually abundant on canteloupes and watermelons in Rockingham County.

Gould and Walker (May 25): At present the cucumber beetles are scarce in the cucumber fields at Norfolk.

Florida J. R. Watson (May 21): The striped cucumber beetle is extremely abundant in the Everglades.

Ohio T. H. Parks (May 22): The striped cucumber beetle began to appear in melon fields in Franklin County this week. Its appearance is earlier than usual.

Indiana J. J. Davis (May 26): Beetles seen at Bristol on April 27.

Nebraska M. H. Swenk (April 15 - May 15): The first striped cucumber beetle was observed on May 7 by D. B. Whelan.

Kansas H. R. Bryson (May 23): On May 15th Dr. R. L. Parker reported a large number of striped cucumber beetles coming from hibernation south of Manhattan in one locality. Apparently these were congregated in hibernation.

Oklahoma C. F. Stiles (May 21): The striped cucumber beetle is very abundant over two-thirds of the eastern part of the State.

Alabama K. L. Cockerham (May 23): The striped cucumber beetle is reported by Mr. O. T. Deen as being plentiful on cucumbers at Foley.

- Mississippi R. W. Harned and assistants (May): The striped cucumber beetle was doing slight damage to cucumber at Indianola on April 29 and it has been very abundant at Gulfport for a month causing severe damage to beans, melons, cucumbers, and squash and is also very abundant around Senatobia and Batesville.
- SPOTTED CUCUMBER BEETLE (Diabrotica duodecimpunctata Fab.)
- Maryland E. N. Cory (April 5): Two specimens were found on mustard at College Park today.
- J. A. Hyslop (May 15): Observed the first adult this season eating petals of an iris in my garden at Aveland today.
- Virginia H. G. Walker (May 25): The 12-spotted cucumber beetle is scarce in the fields around Norfolk this year.
- W. J. Schoene (May 26): Spotted cucumber beetles are unusually abundant on cantaloupes and watermelons in Rockingham County.
- North Carolina C. H. Brannon (May 20): The spotted cucumber beetle is causing widespread damage to cucumbers, cantaloupes, cotton, and tobacco.
- Missouri L. Haseman (May 23): P. H. Johnson found the first specimen of the spotted cucumber beetle this season May 21 at St. Louis and I took two specimens on iris May 22 at Columbia.
- Kansas H. B. Hungerford (May 25): The first specimen was brought in May 19 from Lawrence.
- Arkansas D. Isely (May 23): The 12-spotted cucumber beetle is unusually scarce this year. It is doubtful if it occurs in 1 per cent of its normal number. This scarcity is probably chargeable to the severe drought during the past season.
- Alabama J. M. Robinson (May 25): The spotted cucumber beetle is very abundant at Brewton and Auburn necessitating replanting of corn.
- Mississippi R. W. Harned (May): Severe damage, often requiring replanting of corn, has been reported from eighteen counties, indicating that this species is unusually abundant throughout the State.
- Louisiana W. E. Hinds (May 25): The spotted cucumber beetle is moderately abundant on many truck and field crops over the State.
- Texas F. L. Thomas (May 20): The 12-spotted cucumber beetle is moderately abundant at Weatherford. Full-grown larvae collected in the base of corn plants were sent in by the county agent.



WESTERN SPOTTED CUCUMBER BEETLE (Diabrotica soror L.)

Oregon T. R. Chamberlin (April 30): Countless thousands of these beetles, deposited along fence rows near Forest Grove by flood waters of March 31 and April 1, were sprinkled with distillate and burned on the morning of April 2 before they had begun to leave. Practically all were females and full of eggs. It is estimated that from 80 to 90 per cent were destroyed in the burned areas.

FLEA BEETLES (Halticinae)

New York Weekly News Letter, New York State College of Agriculture (May): Flea beetles (several species) were causing a good deal of injury to seedling cabbage plants in Ontario County on May 11.

New Jersey Weekly News Letter, New Jersey State College of Agriculture (May): These insects are so numerous on truck crops in the southern part of the State that growers are spraying to protect their crops from injury. (Abstract J. A. H.)

Missouri L. Haseman (May 23): P. H. Johnson reports the horseradish flea beetle (Phyllotreta armoraciae Koch) quite abundant in St. Louis County on horseradishes May 22. Larvae in leaf stocks measured from 3 to 4 mm. in length.

Mississippi R. W. Harned (May): Flea beetles are apparently not unusually abundant. Reports have been received during the month of damage to eggplant in Stone County, to sweet potato in Adams County, and to tomatoes in Jefferson County.

SEED CORN MAGGOT (Hylemyia cilicrura Rond.)

Virginia H. G. Walker (May 25): The seed corn maggot has been excessively abundant this spring on bean and cucumber seed near Norfolk. Many fields had to be replanted. Some damage also occurred to corn.

Illinois W. P. Flint (May 19): The seed corn maggot has recently been reported from a number of points in Illinois injuring corn and beans.

Kentucky W. A. Price (May 25): The seed corn maggot is moderately abundant and was reported as damaging corn at Horse Cave and Paris.

Missouri L. Haseman (May 23): The seed corn maggot badly damaged corn, beans, and melon seeds in the forepart of the month in southern eastern and north central Missouri.

Kansas H. R. Bryson (May 23): The seed corn maggot was reported working in corn at Studley, on May 18. Also reported as attacking slowly germinating beans.

Utah G. F. Knowlton (May 6): The seed corn maggot caused some damage to melon seeds during the recent rainy period in Davis County.

CHANGA (Scapteriscus vicinus Scud.)

North Carolina R. W. Leiby (May 29): We have had more complaints than usual this spring of damage by this insect in the extreme eastern part of the state.

POTATO

COLORADO POTATO BEETLE (Leptinotarsa decemlineata Say)

New Jersey Weekly News Letter, New Jersey State College of Agriculture (May): These insects are showing increasing damage in southern New Jersey, and growers are spraying to protect their crop. (Abstract J. A. H.)

Delaware L. A. Stearns (May 22): Abundant enough to cause the first comment at Bridgeville on the date mentioned.

Maryland P. D. Sanders (May 27): The Colorado potato beetle is more abundant in the early potato section of the lower Eastern Shore of Maryland than normally.

West Virginia L. M. Peairs (May 27): A few adults of the Colorado potato beetle have been seen at Morgantown.

Virginia H. G. Walker (May 25): The Colorado potato beetle is moderately abundant in Norfolk, Princess Anne, and Northampton Counties and exceedingly abundant in Accomac County, where in some fields there were an average of three or four egg-masses per plant. Most growers in this region have started to apply insecticides to their plants.

North Carolina W. A. Thomas (May 6): This insect was observed today depositing eggs not only on potatoes but also on clods of dirt, dead sticks, and weeds in the potato field, in the vicinity of Chadbourn. This habit of depositing eggs on objects other than solanaceous plants is rather unusual in this section. Although oviposition has been extremely heavy this season, the resulting larvae have not been so numerous as in previous years.

Iowa H. E. Jaques (May 25): The Colorado potato beetle is scarce in Delaware and Henry Counties.



- Missouri L. Haseman (May 23): Occasional specimens of the Colorado potato beetle have been found on potatoes at Columbia since the first of the month.
- Oklahoma C. F. Stiles (May 21): The Colorado potato beetle is very abundant over the eastern three-fourths of the State.
- Mississippi F. A. Smith (May 22): The Colorado potato beetles are very bad on potatoes in Tate County.
- Louisiana W. E. Hinds (May 25): The Colorado potato beetle is scarce on potatoes.
- Idaho C. Wakeland (May 19): The Colorado potato beetle is very abundant on early potatoes and despositing eggs, at Lewiston.

TOBACCO FLEA BEETLE (Epitrix parvula Fab.)

- North Carolina W. A. Thomas (May 11): This flea beetle has been prevalent for the last few days on most young tomato plants in this vicinity, some of the plants having been completely destroyed by their attacks.

STRIPED FLEA BEETLE (Phyllotreta vittata Fab.)

- Virginia H. G. Walker (May 25): Flea beetles are common in the Tidewater region and are exceptionally abundant in Accomac County on the Eastern Shore.
- Maryland P. D. Sanders (May 27): This flea beetle is more injurious to potatoes on the Eastern Shore than usual.

POTATO TUBER WORM (Phthorimaea operculella Zeller)

- Delaware L. A. Stearns (April 21): Specimens were taken from stored potatoes at College Farm, Agricultural Experiment Station, Newark. These moths emerged from April 14 to 18. (Determined by A. Busck)
- California Monthly News Letter, Los Angeles County Agricultural Commissioner Vol. 13, No. 4, (April 15): Infestations of the tuber moth in some sections of Los Angeles County have been particularly bad this year. In nonirrigated fields the pest has been most active. "More than twelve hundred lugs of new potatoes have been rejected in the Los Angeles wholesale markets since April 15."

CABBAGE

IMPORTED CABBAGE WORM (Pieris rapae L.)

- Indiana J. J. Davis (May 26): The cabbage worm was abundant in cabbage at Shoals May 13 and destructive to cauliflower at Greenfield, May 23.



North Dakota J. A. Munro (May 22): Adults have been commonly seen since the early part of May. From present indications they will cause the usual amount of injury in gardens this season.

Missouri L. Haseman (May 23): Butterflies are abundant at Columbia and St. Louis and worms are showing up on cabbage and horse-radish.

Mississippi R. W. Harned and assistants (May): Complaints have been received all during the month of May. The injury, however, is not great. (Abstract G. M.)

DIAMOND-BACK MOTH (Plutella maculipennis Curt.)

North Carolina W. A. Thomas (May 9): An unusually heavy infestation has recently developed on cabbages in the vicinity of Chadbourn. Thousands of moths have been observed flitting about the field in the late afternoon. The whitish areas in the leaves showing the points of insect injury are very conspicuous in most of the fields. There seem to be few parasites present at this time.

Mississippi R. W. Harned and assistants (May): Heavy infestations on turnips late in April were reported from Stone County and early in May they were very numerous in cabbage in Forrest, Lee, Chickasaw, and Adams Counties. (Abstract J. A. H.)

CABBAGE LOOPER (Autographa brassicae Riley)

South Carolina P. K. Harrison (May 1): The cabbage looper is injuring cabbage in home gardens at Fairfax.

Mississippi W. L. Gray (May 20): The cabbage looper was moderately abundant on cabbage at Stanton, May 11.

CABBAGE MAGGOT (Hylemyia brassicae Bouche)

Massachusetts A. I. Bourne (May 23): Professor Whitcomb from the field station at Waltham reports finding the first eggs of the cabbage maggot on May 6.

Connecticut W. T. Clark (May 15): I noted eggs of the cabbage maggot and on two plants small maggots had hatched at Baltic.

New York Weekly News Letter, New York State College of Agriculture (May): Adult flies began emerging in the early part of May, and by the middle of the month were ovipositing in large numbers on early cabbage and seed beds, particularly in the central part of the State. (Abstract J. A. H.)

Pennsylvania H. N. Worthley (May 6): The first eggs of the cabbage maggot were found May 6 at State College.

Wisconsin E. L. Chambers (May 26): Cabbage and radishes have been hard hit by the cabbage maggot in spots throughout the State, according to our reports.

CABBAGE APHID (Brevicoryne brassicae L.)

New Jersey Weekly News Letter, New Jersey State College of Agriculture (May): During the last week in the month these insects were increasing rapidly in southern New Jersey. It is suspected that they were introduced on plants shipped in from the south. (Abstract J. A. H.)

Virginia G. E. Gould (May 20): The cabbage aphids that have been so abundant on kale and broccolis throughout the winter and spring have practically appeared owing to the numerous parasites and to wind and hail storms.

Ohio T. H. Parks (May 25): Young cabbage plants were received from Henry County May 22 with the statement that cabbage aphids (Brevicoryne brassicae) are numerous and have appeared so early that serious trouble is feared.

Indiana J. J. Davis (April 29): The cabbage aphid was reported April 13 from Manilla as a pest of cabbage and Brussels sprouts and has already been noticed in conspicuous numbers this spring on shipped-in plants. (May 26): The cabbage aphid was abundant on cabbage at Attica, May 10.

Mississippi R. B. Deen (May 22): Aphids on cabbage have been very numerous and have required control measures to prevent serious damage to field crops of cabbage, at Tupelo.

J. Milton (May 25): The cabbage aphid was found to be causing considerable injury to cabbage at Belmont on May 8.

HARLEQUIN BUG (Murgantia histrionica Hahn)

New Jersey Weekly News Letter, New Jersey State College of Agriculture (May): Quite heavy infestations of this insect are appearing in portions of Cape May County. Mr. White reports as many as 8 or 10 on one stalk of cabbage.

Virginia L. W. Brannon (May 20): The first harlequin bugs of the 1931 season were found by H. G. Walker feeding on kale and broccoli in the fields at Norfolk on April 9. During the period April 13 - 30 a total of 1,275 overwintered adults were collected on nine rows of broccoli 275 feet long. The first eggs of the season were deposited in the insectary on April 20. Eggs were numerous in the field by April 27. The first hatching eggs of the season were found on May 12.

Florida J. R. Watson (May 21): The harlequin bug is moderately abundant.



Alabama J. M. Robinson (May 25): The harlequin bug is very abundant at Auburn.

STRIPED FLEA BEETLE (Phyllotreta vittata Koch)

New York Weekly News Letter, New York State College of Agriculture (May 11): H. Glasgow reports that the cabbage flea beetles are very abundant in cabbage seedbeds generally this season and are likely to cause serious damage.

Geneva Experiment Station, Geneva, New York (May): The cabbage flea beetle is very abundant over western New York.

North Carolina W. A. Thomas (May 19): These insects have recently transferred from pepper grass to the foliage and developing seed-pods of mustard and broccoli near the laboratory at Chadbourn. The foliage has been converted into sieves and the green seed-pods are withering and drying up on the plants. The insects are so numerous as to give some plants a blackish appearance.

STRAWBERRY

STRAWBERRY WEEVIL (Anthonomus signatus Say)

North Carolina C. H. Brannon (May 18): Causing considerable damage to dewberries in Cumberland County.

Mississippi State Plant Board (May 4): The first record of the strawberry weevil in Mississippi has just been reported by J. P. Kislanko, who found the weevils seriously damaging young berry plants at the Jackson-Harrison-Stone Junior College at Perkinston. The insects were very abundant, causing damage ranging from 25 per cent to 80 per cent of the crop. This is the first known record in Mississippi, although the insect has probably been in the State for many years, as it has been reported from practically every other State east of the Rocky Mountains.

STRAWBERRY ROOT WEEVILS (Curculionidae)

Oregon D. C. Mote (April 24): The common weevil Brachyrhinus ovatus L. is moderately abundant and B. rugosostriatus Goeze is apparently scarce, as reported by J. Wilcox.

D. C. Mote (April 24): J. Wilcox reports the native weevils Dyslobus ursinus Horn and D. decoratus Lec. laying eggs. They are apparently more abundant this year than last.



A CURCULIONID (Tyloderma morbillosa Lec.)

Washington W. W. Baker (May 9): Eggs are abundant at Grand Mound at this date. About the same as the last two years.

STRAWBERRY LEAF ROLLER (Ancylis comptana Froehl.)

Michigan R. Hutson (May 6): This is to report that in Berrien County, near Benton Harbor, adults of the strawberry leaf roller were flying on May 4.

Mississippi R. W. Harned (May 25): A slight infestation on strawberry was reported from Tupelo, May 13.

Utah G. T. Knowlton (May 23): Strawberry leaf rollers are causing damage to strawberry patches in Utah County.

STRAWBERRY CROWN MOTH (Aegeria rutilans Hy.Edw.)

Oregon D. C. Mote (April 24): Mr. Kenneth Gray reports that the strawberry crown moth is still in the larval stage in the winter cell.

STRAWBERRY ROOT WORM (Paria canella Fab.)

Connecticut W. E. Britton (May 9): The strawberry root worm is apparently feeding on old plants at Center Groton, but no great amount of injury has been caused.

New York Weekly News Letter, New York State College of Agriculture (May 18): The strawberry root worm is causing serious damage in several old strawberry beds in Dutchess County.

SAWFLIES (Tenthredinidae)

Washington W. W. Baker (May 18): Strawberries at Bellevue are being attacked by sawfly larvae. The infestation is rather general throughout the field but not particularly severe. This is the first instance that I have found of strawberries being attacked by slugs in cultivated fields. One solitary larva was taken in 1930 on a wild plant, near Puyallup.

APHIDS (Aphidae)

Arizona C. D. Lebert (April 6): A very heavy infestation of medium-sized, dark green aphids occurred in 50 acres of strawberries near Phoenix, April 6.

ASPARAGUS

ASPARAGUS BEETLES (Crioceris spp.)

- Massachusetts A. I. Bourne (May 23): Professor Whitcomb reports that he noted asparagus beetles for the first time on May 9 at Waltham. This latter date coincides with our observations here at Amherst on the common asparagus beetle.
- Delaware L. A. Stearns (May 22 and 25): Asparagus beetles were very abundant on asparagus at Bridgeville and Blackbirds. They are more abundant than they were last year.
- South Carolina J. N. Tenhet (May): There is heavy infestation in practically every asparagus field in Allendale.
- Indiana J. J. Davis (May 26): The common asparagus beetle was reported abundant and destructive at Aurora, May 24.
- Missouri L. Haseman (May 23): P. H. Johnson took asparagus beetles in St. Louis County May 22.

BEANS

MEXICAN BEAN BEETLE (Epilachna corrupta Muls.)

- New Jersey Weekly News Letter, New Jersey State College of Agriculture (May): Adult beetles have been observed in several bean fields in the southern part of the State during the last week in the month. (Abstract J. A. H.)
- Maryland P. D. Sanders (May 27): A few Mexican bean beetle adults and egg clusters were observed at Salisbury. They are scarce for this date.
- West Virginia L. M. Peains (May 27): Adults of the Mexican bean beetle were observed as early as May 3 at Morgantown.
- Virginia L. W. Brannon (May 20): The first Mexican bean beetle adult of the 1931 season was found feeding in the field on May 6. This record is five days later than that of the 1930 season. The first eggs of the 1931 season were found in the field on May 19. On May 19 a Mexican bean beetle adult was found feeding on soy beans, in Norfolk.
- G. E. Gould (May 25): In the hibernation cages we have an average survival of 34 per cent from four cages located in different types of woods in Norfolk. The cage in the pure pine woods already has a survival of over 50 per cent.
- North Carolina R. W. Leiby (May 29): Beans appear to be more heavily infested with the Mexican bean beetle this year than they were last year at this time.

Georgia

J. B. Gill (May 12): An infestation was first observed on May 7 on snap beans in gardens within the city of Albany. So far as my observations go, this is the first year that this pest occurred in this locality. Evidently this insect entered here from the north or west and not from the Thomasville section, where it has been a pest for many years. The infestation around Thomasville does not spread much. Present last year at Americus, which is 37 miles north of Albany, and spread has been southward. Slight infestation.

BEAN LEAF BEETLE (*Cerotoma trifurcata* Forst.)

Virginia

L. W. Brannon (May 20): The first adults observed feeding on beans in the field (May 6). This observation was made by H. G. Walker and myself, at Norfolk.

South Carolina

J. N. Tenhet (April 27): Injury to foliage of bunch snap beans by the bean leaf beetle is quite severe in many home gardens in Fairfax.

Illinois

W. P. Flint (May 19): The bean leaf beetle infestation as yet is very light in the Union and Pulaski County green bean sections.

Alabama

J. M. Robinson (May 25): The bean leaf beetle is moderately abundant at Hanceville, Auburn, and Montgomery.

Mississippi

R. W. Harned and assistants (May): During the latter half of May, the bean leaf beetle was reported as damaging beans in Alcorn, Prentiss, Tishomingo, Lee, George, Greene, Jones, Harrison, and Sunflower Counties.

CUCUMBERS

PICKLE WORM (*Diaphania nitidalis* Stoll)

Mississippi

J. P. Kislanko (May 20): The first appearance of pickle worm adults was noticed on May 16 in the light trap.

SQUASH

SQUASH BEETLE (*Epilachna borealis* Fab.)

South Carolina

P. K. Harrison (May 22): The first specimen of this season was collected on fern May 21 and on cantaloupe May 22 on the laboratory grounds at Fairfax.



SQUASH BUG (Anasa tristis DeG.)

Utah

G. F. Knowlton (May 20): "A few adult squash bugs have been taken at Ogden, Farmington, and Salt Lake. Apparently they are only moderately abundant at the present time.

CELERY

CELERY LEAF-TIER (Phlyctaenia rubigalis Guen.)

Florida

C. F. Stahl (May 18): "In the May issue of the Insect Pest Survey Bulletin P.123, I note that the celery leaf tier is reported as "moderately abundant." Of course there may be different interpretations of the word "moderately" but I think that the statement is misleading if this season is to be compared with previous ones. Certainly the tier has been scarce and, with the exception of the last few weeks of the crop, difficult to find.

ONIONS

ONION THRIPS (Thrips tabaci L.)

Texas

F. L. Thomas (May 21): The onion thrips has been reported as destroying the onion crop as San Angelo.

ONION MAGGOTS (Hylemyia antiqua Meig.)

New Jersey

Weekly News Letter, New Jersey State College of Agriculture (May 26): Onion maggots have caused some damage in Gloucester County.

SWEETPOTATO

SWEETPOTATO FLEA BEETLE (Chaetocnema confinis Gr.)

Mississippi

K. L. Cockerham (May 21): Mr. W. B. Hollingsworth reports that flea beetles are very numerous in the vicinity of Picayune, damaging plants in the seed beds. The species is presumed to be the sweetpotato flea beetle.

R. W. Harned (May 25): Slight injury to sweetpotato plants by flea beetles was reported in a field in Adams County, and severe damage in Jackson; also severe damage in seed beds in Greene and George Counties.

MOTTLED TORTOISE BEETLE (Chirida guttata Oliv.)

Mississippi

H. Dietrich (May 23): A tortoise beetle was found on May 5 in some numbers and ovipositing on sweetpotatoes in bed at Lucedale.

BEETS

BEEF LEAFHOPPER (Eutettix tenellus Baker)

Utah

G. F. Knowlton (May 16): The beet leafhopper is now distributed throughout most of the sugar-beet growing area of northern Utah, and considerable injury from curly-top is anticipated.

SUGAR-BEET ROOT MAGGOT (Tetanops aldrichi Hendel)

Utah

G. F. Knowlton (May 18): Adult flies are now abundant in the sugar-beet fields at Amalga, Benson, Cornish, and Trenton, in Cache Valley. A few have been observed at Hooper, in Weber County.

HOP FLEA BEETLE (Psylliodes punctulata Melsh.)

Utah

G. F. Knowlton (May 14): Hop flea beetles are damaging young sugar beets in some fields at Fielding and Richmond, and are present in all beet fields examined in northern Utah, but the damage is much less generally than during most years.

TOBACCO

TOBACCO BUDWORM (Heliothis virescens Fab.)

Florida

F. S. Chamberlin (May 16): The tobacco budworm is not so abundant as usual at this season of the year. The rains, however, have been sufficient to allow emergence of adults.

TOBACCO FLEA BEETLE (Epitrix parvula Fab.)

Kentucky

W. A. Price (May 25): The tobacco flea beetle is doing much damage to tobacco in the bed.

GARDEN FLEA HOPPER (Halticus citri Ashm.)

Florida

F. S. Chamberlin (May 11): H. citri appears to be more abundant than usual and is causing some damage to the lower leaves of shade tobacco.

MUSHROOMS

A FUNGUS GNAT (Sciara sp.)

Pennsylvania C. A. Thomas (May 7): Larvae of sciarid flies have caused considerable damage to cultivated mushrooms in Chester County this season.

MUSHROOM MITE (Tyroglyphus lintneri Osborn)

Pennsylvania C. A. Thomas (May 7): The mushroom mite has been very abundant and destructive in a number of mushroom houses in Chester County during the past winter.

A MITE (Linopodes antennaeipes Banks)

New Jersey C. A. Thomas (March): During March, 1931, several houses heavily infested with this mite were found near Plainfield. In two houses the mushrooms were all killed, and many hundreds of these mites were present.

A SPRINGTAIL (Achorutes armatum Nic.)

Pennsylvania C. A. Thomas (May 7): Springtails have caused considerable damage to cultivated mushrooms in Chester County this season.

A NOCTUID (Metalestra quadrisignata Walk.)

Pennsylvania C. A. Thomas (May 7): Occasional examples have been noted of injury to cultivated mushrooms in Chester County by a noctuid "looper;" M. quadrisignata. These are brought into the mushroom house with the casing soil in the fall. The caterpillars eat large holes into the caps, but the injury is usually not extensive and they soon disappear.



F O R E S T A N D S H A D E - T R E E I N S E C T S

CANKER WORMS (Geometridae)

- Connecticut B. H. Walden (May 22): Alsophila pometrans Harr. is rather more abundant at New Haven and Hamden than average, but not so abundant as it has been during the past two years.
- Rhode Island A. E. Stene (May 21): Canker worms are likely to be fairly abundant if we may judge from present indications.
- New York Weekly News Letter, N. Y. State College of Agriculture (May 25): Spring canker worms (Paleacrita vernata Peck) were observed May 19 in Ulster County.
- Minnesota A. G. Ruggles and assistants (May): The fall canker worm is quite abundant this spring in several apple orchards in the vicinity of Minneapolis and St. Paul. (Abstract J.A.H.)
- North Dakota J. A. Munro (May 22): On May 18 the first-stage larvae of the cankerworm were noticed on trees.
- Kansas H. B. Hungerford (May 25): Spring canker worms are very abundant at Lawrence and Ottawa.
- H. R. Bryson (May 23): On May 8 Dr. E. G. Kelly reports canker worms very abundant in the southeastern section of Kansas. Reported as defoliating apple, elm, and other trees.

F O R E S T T E N T C A T E R P I L L A R (Malacosoma disstria Hbn.)

- Virginia Wm. Middleton (May 8): On May 31, 1930, I reported the activities of the forest tent caterpillar which was defoliating most of the trees over considerable areas in Buckingham County. I have just received a letter from Mr. L. T. Steger of Warren on whose farm I first observed the activities of this caterpillar. Mr. Stegar reports that the caterpillars have reappeared this year by the millions and are playing havoc all through this section, webbing from the limbs to the ground and to housetops, literally covering the houses and ground.
- W. J. Phillips (May 15): There is a serious outbreak of the forest tent caterpillar in the neighborhood of Scottsville, Fluvanna County. Several hundred acres of forest land have been entirely defoliated. Mr. Maddox, the Assistant State Forester here, informs me that a like outbreak is in progress in Buckingham County. This is the worst outbreak I have ever witnessed.

Washington Evening Star (May 26): Presence of the destructive tent caterpillar in Pittsylvania County has been reported. The pest has appeared in the northern part of the county, but as yet had not been noted in the Danville section.

GYPSY MOTH (Porthetria dispar L.)

Vermont H. L. Bailey (May 25): Gypsy moths were found hatching at Fairlee May 5; scattering egg masses were found in isolated infestations in Fairlee and Newbury.

TWO-LINED CHESTNUT BORER (Agrilus bilineatus Web.)

New England E. P. Felt (May 26): The two-lined chestnut borer is generally prevalent in the Philadelphia area, somewhat extensive wooded areas being badly infested. It is also a troublesome pest in southwestern New England and southeastern New York.

A S FLY

A SAWFLY (Tomostethus bardus Say)

Maryland G. S. Langford (May 11): Observed a sawfly attacking ash in Prince Georges County.

District of Columbia G. Myers (May 18): Pale green larvae were collected on ash along Seventh Street, Washington.

CARPENTER WORM (Prionoxystus robiniae Peck)

Indiana J. J. Davis (April 29): The carpenter worm was observed very abundant in white oak at Colfax, March 30.

Arizona C. D. Lebert (April 27): The goat moth has been very much in evidence this month. The moths are attracted to lights in considerable numbers, and ash trees in the city of Phoenix contain many larval tunnels.

BEECH

BEECH SCALE (Cryptococcus fagi Baer.)

Massachusetts John V. Scheffner, Jr. (May 18): Infestations of the beech scale have been reported on American beech at Forest Hills, Jamaica Plain, and Stoneham. As yet no serious damage has been done by this pest.

B I R C H

BIRCH CASE BEARER (Coleophora salmani Hein.)

Maine H. B. Pierson (May 26): Heavy feeding on white birch is reported at Mt. Desert Island.

C A T A L P A

CATALPHA SPHINX (Ceratonia catalpae Boisd.)

Mississippi H. Dietrich (May 23): The catalpa sphinx eggs hatched at Leakesville on May 8 and at Lucedale on May 11. These caterpillars are very much sought after by the local fishermen. Two thousand mature larvae will be harvested from a single large catalpa tree, and sold for one cent apiece. This brings in a good income.

C Y P R E S S

CYPRESS BARK SCALE (Ehrhornia cupressi Ehrh.)

California Monthly News Letter, Los Angeles County Agriculture Commission (April 15): The cypress bark scale and two species of bark beetles are doing serious damage to cypress trees in some parts of Los Angeles County. The cypress bark scale has been found destroying cypress trees, particularly in hedge rows and wind-breaks, in the eastern and southern parts of the county, and is serious on trees where it has gained a foothold. The attack of the beetles is quite heavy in some districts but actual killing of the trees appears to occur mostly in cases where the trees are in a weakened condition, due to a lack of water or similar cultural conditions. Strong trees are quite successful in overcoming the work of the beetles.

E L M

ELM LEAF BEETLE (Galerucella xanthomelaena Schrank)

Rhode Island A. E. Stene (Apr. 25): Overwintering beetles are abundant on elm and other trees at Narragansett. (May 21) Elm beetles are likely to be fairly abundant if we may judge from present indications.



ELM FLEA BEETLE (Haltica ulmi Woods)

Rhode Island A. E. Stene (May 23): Have found a place where the elm flea beetle, observed earlier in the spring, is apparently doing more damage to elms than the elm leaf beetle, at Narragansett.

WOOLY APHIS (Eriosoma lanigerum Hausskn.)

Virginia Walker & Gould (May 25): The woolly aphis was observed to be infesting elm at Eastville. About half of the leaves on the tree were curled.

EUROPEAN ELM SCALE (Gossyparia ulmi L.)

Ohio E. W. Mendenhall (May 15): The elm trees in the northern part of Columbus are badly infested.

HEMLOCK

HEMLOCK BARK BORER (Melanophila fulvoguttata Harr.)

Pennsylvania J. N. Knull (May 10): First adults were observed May 10 on hemlock at Mont Alto. Many larvae are in the prepupal stage.

LARCH

LARCH CASE BEARER (Coleophora laricella Hbn.)

Maine H. B. Pierson (May 26): Larch stands throughout a large section of Maine appear as if scorched by fire.

Vermont Harold L. Bailey (May 25): The larch case bearer has been reported as very abundant in the southwestern part of the State. This insect has been sufficiently plentiful to brown the foliage of larch in at least some sections of the State during each of the past seven years.

Pennsylvania J. N. Knull (May 21): C. laricella is doing damage to foliage of larch trees from 1 foot to 3 feet high in a plantation at Lake Ariel.

MAPLE

SADDLED PROMINENT (Heterocarpa guttivitta Walk.)

Vermont Harold L. Bailey (May 25): From the healthy condition of pupae found in maple sugar orchards in Bennington County, which were stripped by the saddled prominent last summer, it

would appear that this insect may again be abundant this season. Adults had not emerged May 25.

O A K

HORNED OAK GALL (Andricus cornigerus O.S.)

New England E. P. Felt (May 26): The horned oak gall is common on the scarlet oak in southern New England, though rarely as abundant and injurious as the species occurring upon willow oak.

OAK GALLS (Andricus spp.)

New England and Middle Atlantic States E. P. Felt (May 26): The white oak club gall (Andricus clavulus O.S.) is moderately common in both the Philadelphia and New York areas, occasionally becoming very abundant upon individual trees or groups of trees.

E. P. Felt (May 26): The horned knotty gall of the willow oak, Andricus clavigerus Ashm., is very common in New Jersey and southward, frequently becoming so abundant as to kill many of the lower limbs and sometimes a considerable proportion of the tree.

A PSYLLID GALL (Psyllidae)

Florida C. F. Stahl (May 18): Several times this year our attention has been called to injury to oak leaves on trees growing along the streets in Sanford. The injury is due to psyllid galls. Practically all of the leaves on some species of oaks are seriously injured.

GOLDEN OAK SCALE (Asterolecanium variolosum Ratz.)

New England and Middle Atlantic States E. P. Felt (May 26): The golden oak scale is widely distributed in southern New England, southern New York, northern New Jersey, and Eastern Pennsylvania, at least. It is found not only in the vicinity of cities, but in woods miles from important centers and distant from frequently traveled routes. It is a dangerous species on relatively valuable trees on lawns and in parks.

P I N E

EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana Schiff.)

New England and Middle Atlantic States E. P. Felt (May 26): The European pine shoot moth is becoming generally prevalent in southern New England, southern New York and New Jersey areas. It is particularly

injurious to recent plantings of the more vigorous growing pines, and in some cases over 90 per cent of the trees are marked by serious deformation and stunting.

Massachusetts J. V. Schaffner, Jr. (May 15): There are severe infestations on Austrian and Mugho pines, mostly ornamental plantings on lawns in the city of Newton; also a very heavy infestation on Austrian pine (about 100 trees) in a cemetery at Brookline. The trees are badly distorted.

Connecticut W. E. Britton (May 8): Trunk injury. There are heavy infestations in forest plantings of red pine at Easton and of Scotch and red pines at Hamden, and a light infestation in a forest planting of red pine at Branford.

Pennsylvania G. B. Slesman (May 8): The European pine shoot moth is doing serious damage to Scotch pines growing on the Pennsylvania Railroad Nursery, Bristol. With the exception of the infestation at Chestnut Hill found last year, this is the only infestation known to occur in Pennsylvania.

J. R. Stear (May 18): Red pine tips infested by this insect were collected at Ligonier May 18. (Determined by C. Heinrich)

NANTUCKET SHOOT MOTH (Rhyacionia frustrana Comst.)

Pennsylvania G. B. Slesman (May 8): The Nantucket shoot moth is doing serious damage to infested tips of Pinus sylvestris, P. strobus, and P. rigida, growing at the Hermit Lane Nursery, Philadelphia. This is the only place that it is found in the State.

PINE NEEDLE MINER (Paralechia pinifoliella Chamb.)

Massachusetts J. V. Schaffner, Jr.: Paralechia pinifoliella is common to abundant on Pinus rigida in several localities of eastern Massachusetts.

WHITE-PINE WEEVIL (Pissodes strobi Peck)

Michigan R. H. Pettit (May 25): Recently the work of the white pine weevil was sent in from Dunbar Experiment Station, Sault Ste. Marie, on red pine. This species destructive wherever white pine nursery stock is grown in quantity.

Wisconsin E. L. Chambers (May 26): Blister rust crews have been reporting serious losses from white pine weevil in the vicinities of Superior and Eagle River.



A WEEVIL (Pissodes approximatus Hopk.)

Pennsylvania J. N. Knull (April 20): First adults were observed on white pine at Caledonia on this date. (May 12): Living white pines at Reading affected by the 1930 drought are infested at nodes with this insect. Undoubtedly the insect contributed largely to the death of numerous trees in the plantations. Larvae overwintering in trunks.

PALES WEEVIL (Hylobius pales Boh.)

Pennsylvania J. N. Knull (May 29): First adults were observed on white pine on April 20. The 1930 feeding is showing up on the branches of white pine at this season of the year. Branches with very slight feeding have turned brown and stand out against the green background.

ELEGANT PINE WEEVIL (Scythropus elegans Couper)

Pennsylvania J. N. Knull (May 12): At Old Forge, Pond Bank, Mont Alto and State Forest, adults were flying in great numbers in white pine plantations on warm days from the middle of April to date. (Det. L. L. Buchanan.)

BARK BEETLE (Ips spp.)

Wisconsin E. L. Chambers (May 26): In the northern half of the State numerous white and Norway pines are being found by the blister rust crews heavily infested with bark beetles. The trees attacked were apparently weakened from the effects of last summer's drought and the heavy infestation of the pine bark louse.

PINE BARK APHID (Cherres pinicorticis Fitch)

Wisconsin E. L. Chambers (May 26): White and Norway pines throughout the northern part of the State are heavily infested with the pine bark louse, aided by favorable dry weather. More than 120,000 transplants had to be destroyed in a forest nursery because of unusually severe infestation.

SCOTCH PINE LECANIUM (Toumeyella numismaticum P. & McD.)

Wisconsin E. L. Chambers (May 26): Severe infestations of the Scotch pine scale are being reported again throughout the northern portion of the State. Large numbers of young Jack pine trees were killed outright by the pest last summer, aided by severe drought, in the vicinity of Juneau and Dunn Counties.

Mississippi H. Dietrich (May 23): T. muristratica is very abundant on young pines along the Escatawpa River, George County.

PINE LEAF SCALE (Chionaspis pinifoliae Fitch)

J. V. Schaffner, Jr.

Massachusetts (May 15): Many ornamental plantings of Mugho and Austrian pine in sections of the city of Newton are heavily infested.

Delaware L. A. Stearns (May 22): The pine leaf scale is attacking pine at Dover.

New England and Pennsylvania E. P. Felt (May 26): The pine leaf scale is locally abundant upon the Austrian pine, especially in the southern New England and in the Philadelphia area.

Minnesota A. G. Ruggles (May 22): Very abundant in spots over the State. Eggs at St. Paul, Redwing and Lake City hatched last week. It has been too cold for much migration of young yet.

Mississippi H. Dietrich (May 23): C. pinifoliae and Chrysorhynchus/<sup>perseeae</sup> Comst. were killing young pines on Whiskey Creek, George County, in April.

Wisconsin E. L. Chambers (May 26): Several blue spruce trees in ornamental plantings and native white pine and Norway pine near LaCrosse and Prairie du Chien were found infested.

BLACK PINE LEAF SCALE (Aspidiotus pini Comst.)

Wisconsin E. L. Chambers (May 26): The first report of the black pine leaf scale injuring jack pine was received recently from LaCrosse. The infested branch submitted for examination was completely covered with the scales, causing the needles on the ends of the twigs to turn brown.

SPRUCE

A NEEDLE MINER (Hemimene albolineana Kearf.)

Nebraska M. H. Swenk (April 15-May 15): During the past fall, winter and spring, a number of serious infestations of blue spruce with a needle miner were discovered in Lincoln. During the second week in May similar infestations were found in Norfolk. The exact species has not been determined but is suspected to be H. albolineana.

SPRUCE NEEDLE MINER (Epinothia nanana Treitschke)

Maine J. V. Schaffner, Jr. (May 22): Observations made to date in parts of Sagadahoc and Lincoln Counties, Maine, show that

E. nanana is again locally abundant, especially near the sea coast. However, in most cases observed, the severe infestations do not seem to be in the same spots as last year.

H. B. Pierson: Heavy outbreaks of the spruce web worm are occurring along the coast from Harpswell to Peraquid.

SPRUCE MITE (Paratetranychus unguis Jacobi)

Michigan

R. H. Pettit (May 25): On blue spruce recently there has been considerable complaint about this mite. This insect occurs on Norway spruce in greatest numbers, but is to be found on other spruce as well.

WILLOW

WILLOW BORER (Cryptorhynchus lapathi L.)

Washington

Wm. W. Baker (May 23): At Tacoma damage has occurred for two or three years past and it is more severe this season. Adults were collected around Puyallup in 1929 though no damage was noted on any of the trees.



INSECTS AFFECTING GREENHOUSE AND  
ORNAMENTAL PLANTS AND LAWNS

APHIDS (Aphidae)

Mississippi R. W. Harned and assistants (May): A number of species of aphids are seriously infesting many ornamental shrubs and flowering plants throughout the State. Among the plants infested were rose, spirea, sweet pea, chrysanthemum, and viburnum. (Abstract J.A.H.)

ASIATIC BEETLE (Anomala orientalis Waterh.)

Connecticut R. B. Friend (May): Larvae are in about the usual abundance in lawns this spring.

A LEAF-CUTTER BEE (Andrena perplexa Smith)

Maryland E. N. Cory (April 22): An average of 62 nests per square yard were found on the lawns at Quantico.

CABBAGE LOOPER (Autographa brassicae Riley)

South Carolina J. N. Tenhet (May 22): This insect is attacking nasturtium, snapdragon, salvia, petunia, and dahlia at Fairfax, snapdragons being entirely defoliated.

CYCLAMEN MITE (Tarsonemus pallidus Banks)

Wisconsin E. L. Chambers (May 26): Heavy losses occurred in several greenhouse establishments in the vicinity of Milwaukee to cyclamen, geraniums, and chrysanthemums during May.

RED SPIDER (Tetranychus telarius L.)

Ohio E. W. Mendenhall (May 25): In some cases the red spider mite has been quite abundant on chrysanthemum plants in greenhouses.

Alabama J. M. Robinson (May 25): The red spider is moderately abundant on hydrangea at Millport.

Mississippi W. L. Gray (May 20): The red spider was found early in the month on privet hedge, grass, violets, and other ornamentals in the southwestern five counties, Adams, and adjoining counties.

Arizona C. D. Lebert (May 22): Extremely severe injury by this mite to conifers, especially Italian cypress, was recorded in the Phoenix area during May. Many of the trees were noticed to be entirely webbed and very much discolored.

ARBORVITAE

AN APHID (Dilachnus thujafolia Theob.)

Mississippi H. Dietrich (May 23): This aphid has increased to such numbers on arborvitae at Lucedale that control measures had to be adopted.

Arizona C. D. Lebert (April 27): The arborvitae aphid has been extremely numerous this season. Many trees show marked effects of the pest in the Phoenix area. Lady beetles are very numerous on arborvitae, where they have been feeding on the plant lice.

ASTER

EUROPEAN HORNET (Vespa crabro L.)

Maryland and Delaware E. F. Felt (April 30): The European hornet has been observed recently working on tree box at both Wilmington, Del., and Annapolis, Md. Even good sized stems have been partially to nearly completely girdled.

CEDAR

DEODAR WEEVIL (Tissodes deodarae Hopk.)

Mississippi A. W. Harned (May 25): A correspondent at Greenwood sent to this office four small Cedrus deodara trees, all of which were heavily infested.

CREPE MYRTLE

CREPE MYRTLE APHID (Myzocallis kahawaluokalani Kirk.)

Mississippi H. Dietrich (May 23): The crepe myrtle aphid is very abundant on crepe myrtle at Leakesville.

EUONYMUS

EUONYMUS SCALE (Chionaspis euonymi Comst.)

- Alabama J. M. Robinson (May 25): The euonymus scale is moderately abundant on Japonica at Greensboro.
- Mississippi J. E. McEvilly (May 21): Euonymus japonica plantings in McComb have been severely attacked by the euonymus scale.

FERN

FERN SCALE (Henichionaspis aspidistrae Sign.)

- Nebraska M. H. Swenk (April 15-May 15): During the last half of April several correspondents reported infestations of the fern scale.

FLORIDA FLOWER THRIPS (Frankliniella tritici bispinosa Morg.)

- Florida J. R. Watson (May 21): The Florida flower thrips was responsible for some damage to Asparagus plumosus beds in some ferneries about Leesburg.

FUSCHIA

GREENHOUSE WHITE FLY (Trialeurodes vaporariorum Westw.)

- Ohio E. W. Mendenhall (May 25): In one of the greenhouses in Circleville the whitefly is so bad on fuschsia plants that it has rendered them unsaleable.

JUNIPER

JUNIPER WEBWORM (Dichomeris marginellus Fab.)

- Connecticut W. E. Britton (May 9): Material received from Norwalk.
- Delaware L. A. Stearns (May 22): Juniper webworms were attacking juniper at Dover on the date mentioned.
- Maryland E. M. Cory (April 30): This is the second finding of the juniper webworm in Maryland this year. The first was during the winter months in Baltimore. In each case the insect was found on Irish juniper.



West Virginia L. M. Feairs (May 27): One record of juniper webworm on Juniper at Charleston has been received.

Ohio E. W. Mendenhall (May 25): There is a severe outbreak of the juniper webworm in one of the nurseries at Fainesville, Lake County.

MAGNOLIA

TULIP TREE SCALE (Toumeyella liriiodendri Gmel.)

Mississippi R. F. Colner (May 19): The tulip tree soft scale was moderately abundant on Magnolia fuscata in the vicinity of Pascagoula, May 6.

OLEANDER

OLEANDER SCALE (Aspidiotus hederæ Vallot)

Nebraska M. H. Swenk (Apr. 15-May 15): During the last half of April several correspondents reported infestations.

ROSE

THRIPS (Thysanoptera)

Mississippi R. W. Harned (May 25): Roses in all parts of the State have been more or less injured by thrips this spring. A correspondent at Aberdeen, Monroe County, reported severe injury to blackberries by thrips.

ROSE SAWFLY (Caliroa aethiops Fab.)

Ohio E. W. Mendenhall (May 23): I find rose bushes in an outdoor planting in Columbus infested with rose slugs, the leaves being skeletonized.

SNOWBALL

A SCALE (Chionaspis longiloba Cooley)

Mississippi H. Dietrich (May 23): This scale was killing Styrax americana along the Escatawpa River in George County on May 1.

SNOWBALL APHID (Anuraphis viburnicola Gill.)

Utah G. F. Knowlton (May 19): The snowball aphid is damaging snowballs at Salt Lake City and Grantsville. The leaves are badly curled, and the flowers attacked in severe cases.

YES

BLACK VINE WEEVIL (Brachyrhinus sulcatus Fab.)

New England E. I. Felt (May 26): The black vine weevil is developing as a somewhat serious pest of Taxus in southern New  
New York England, New York, and presumably New Jersey.  
New Jersey

INSECTS ATTACKING MAN AND  
DOMESTIC ANIMALS

MAN

SALT MARSH MOSQUITO (Aedes sollicitans Walk.)

FUNKIE (Culicoides canithorax Hoffman)

Mississippi H. Dietrich (May 23): A. sollicitans and C. canithorax were extremely abundant on the Mississippi coast at Bellefontaine, 7 miles east of Ocean Springs, all the month. This is a virgin section of coast and these two insects were so thick one had to stay right on the beach where the wind kept them back.

BLACK FLIES (Simulium sp.)

Connecticut R. B. Friend (May): Reported very abundant at Middletown, Hamden, and North Plain. Unusually annoying.

FLEAS (Ctenocephalus spp.)

South Carolina J. N. Tenhet (May 15): ~~One~~ ~~the~~ house and premises have become infested already this season with the ~~cat flea~~ Ctenocephalus felis Bouche).

Georgia O. I. Snavo (May 1): Fleas are unusually abundant this spring and have caused considerable annoyance to mules, hogs, and other domestic animals as well as man. On one farm they annoyed mules to the extent that treatment had to be given daily.

Indiana J. J. Davis (April 29): Fleas were reported abundant in houses and farm buildings at Markleville, Mt. Vernon, and Westfield, April 21-25.

Arizona C. D. Lebert (May 22): A severe infestation of C. canis Curtis was found in a Phoenix residence. These pests were in the house, lawns, driveway, and dog yard. The residents had been severely bitten.

CHIGGERS (Trombicula irritans Riley).

Mississippi H. Dietrich (May 23): Chiggers are appearing again in good numbers in George County.

CATTLE

CATTLE GRUBS (Hypoderma spp.)

North Dakota J. C. Russell through J. A. Munro (April 20): Cattle grubs are moderately abundant at Golden Valley.

H. W. Herbison through J. A. Munro (April 20): Cattle grubs are moderately abundant in Benson and Ramsey Counties.

Kansas H. R. Bryson (May 23): Ox warbles have been reported as unusually numerous this past winter by E. G. Kelly.

~~BLACK~~ MIDGES (Chironomidae)

North Carolina W. A. Thomas (May 12): Great swarms of these insects were observed attacking cattle in the late afternoon of May 12 and the early morning of May 13. They were especially noticeable about the udder where they were so numerous as to give it a blackish appearance. The following days there were only a few of these insects present about the cattle.

HORSES

BLACK FLIES (Simulium sp.)

Kansas H. R. Bryson (May 23): Black flies were reported by E. G. Kelly (May 1) as causing annoyance to both man and beast at Freedonia. No running water was within a half mile.

~~BLACK~~ FLIES (Talanidae)



HORSE FLIES (Tabanidae)

- Georgia D. G. Hall (May 21): There is an abundance of "greenhead" Tabanus costalis Fab.) at Wilmington Island. I had no idea that this species ever became so abundant or annoying to man as they have become here. An interesting point is that this species evidently does not occur in large numbers far from the coast at Savannah.
- Mississippi H. Dietrich (May 23): T. punilus Macq., a horse fly, was present in goodly numbers on the Mississippi coast.

OTHER DOMESTIC ANIMALS

STICKTIGHT FLEA (Echidnophaga gallinacea Westw.)

- South Carolina J. N. Tenhet (May 21): This flea seems unusually abundant on dogs and cats in this locality.

SHEEP TICK (Melophagus ovinus L.)

- Indiana J. J. Davis (April 29): The sheep tick was very common at Noblesville, April 9.

SHEEP SCAB MITE (Psoroptes ovis Her.)

- Kansas H. R. Bryson (May 23): The sheep scab mite is abundant in Neosho, and Crawford Counties.

HOUSEHOLD AND STORED-PRODUCT

INSECTS

TERMITES (Reticulitermes spp.)

- Indiana J. J. Davis (May 26): We continue to receive reports of destruction by termites from all parts of the State. Definite reports during the past month have come from Bloomfield, Elkhart, Ft. Wayne, Hymera, Lafayette, Lebanon, Linton, Madison, New Albany, Plymouth, Rockville, and West Lafayette.
- Illinois W. F. Flint (May 19): Large numbers of reports of termites and the appearance of termite swarms have come from many points in central, north central, and southern Illinois.

- Michigan R. H. Fettit (May 25): White ants are apparently becoming increasingly important in Michigan. In several instances large warehouses as well as dwellings have been almost a total loss before the cause of the trouble was discovered.
- Missouri L. Haseman (May 23): Termite complaints continue to come in great numbers from all parts of the State.
- Alabama J. M. Robinson (May 25): Termites in houses in Birmingham and Troy and on flowers at Alexander City. Swarming at Auburn May 24.
- Mississippi R. W. Harned and assistants (May): Termites are doing considerable damage to buildings in Monroe, Alcorn, Prentiss, Jones, Claiborne, Grenada, Washington, Bolivar, Sunflower, Coahoma, Lee, Union, Hancock, Adams, Wilkinson, and Pike Counties.

ANTS (Formicidae)

- Indiana J. J. Davis (May 26): Ants were reported abundant in dwellings at Princeton, and Swayzee and in Hamilton County. In the lawn they were reported from Swayzee, Hamilton County, Indianapolis, and Ft. Wayne. They were reported as destructive last year to grapes at Akron.
- Nebraska M. H. Swenk (Apr. 15-May 15): Beginning April 24 and continuing to date, there have been an unusual number of complaints of ants in houses. These relate to a variety of species, often in combination, principally Camponotus herculeanus pennsylvanicus DeG., Formica fusca L., Formica rufa obscuripes Forel, and Solenopsis molesta Say.

EUROPEAN EARWIG (Forficula auricularia L.)

- Oregon D. C. Mote (April 24): R. Dimick reports that nymphal earwigs are beginning to hatch (since the middle of the month) at Corvallis. He reports that the first Digonichaeta setipennis Fall. earwig parasite emerged from the puparium April 20 at the Portland insectary.

FALSE CHINCH BUG (Nysius ericae Schill.)

- Arizona C. D. Lebert (May 22): The falsechinch bug has been appearing in great numbers from grassy areas and migrating across lawns and into dwellings in Phoenix, where, during the first part of May, they caused much annoyance.

BOXELDER BUG (Leptocoris trivittatus Say)

Utah G. F. Knowlton (May 21): The boxelder bug is scattered and depositing large numbers of eggs at the present time. Nymphs are now becoming fairly abundant. This insect is causing very little annoyance in houses at the present time.

CIGARETTE BEETLE (Lasioderma serricorne Fab.)

Mississippi R. W. Harned (May 25): Larvae were reported as causing serious injury to upholstered furniture by a correspondent at Amory on May 9.

Nebraska POWDER-POST BEETLES (Bostrichidae)

Nebraska M. H. Swenk (April 15-May 15): A Hold County correspondent reported that a barn made of cottonwood lumber, built about eight years ago, had been very extensively damaged by powder-post beetles.

CLOVER MITE (Bryobia praetiosa Koch)

Ohio T. H. Parks (May 16): A correspondent from London asks for assistance in stopping mites from entering a house. Specimens sent proved to be this species.

Indiana J. J. Davis: Clover mites were annoying in dwellings at Fort Wayne, April 27, and at Mentone, May 4.

Wisconsin C. L. Fluke (May 21): Clover mites have been present at Green Bay, Brown County, since last October and are still moving in.

E. L. Chambers (May 27): Two complaints were received from residents in Milwaukee to the effect that the clover mite was overrunning their homes.



PLANT QUARANTINE AND CONTROL ADMINISTRATION

Notes abstracted from "News Letter;" May, 1931.

(Not for publication)

PARLATORIA DATE SCALE (Parlatoria blanchardi Targ.)

Two palms, one in a commercial garden and one an ornamental palm, were found infested in the Imperial Valley and defoliated and torched. Eight palms of no commercial value were found infested in the Coachella Valley and were dug out and destroyed. In the same areas 106,683 palm inspections were made during the quarter ending March 31, and 21 infested palms were found. Only three of these were in commercial gardens-- one in the Imperial Valley and two in the Coachella Valley. Of the remaining 18, two were ornamental date palms and one a Canary Island palm, which were defoliated and torched, and 15 were date palms of no value which were dug out and destroyed.

PINK BOLL WORM (Pectinophora gossypiella Saund.)

On March 7, 74 dead larvae were taken from a pillow made of seed cotton, lint, wool, and mohair. The pillow originated at Presidio, Tex., and appeared to be three or four years old, which probably accounts for the fact that all of the specimens were dead. This is the largest number of specimens ever taken from an interception at any of our road stations.

GYPSY MOTH (Porthetria dispar L.)

The scouting has resulted in finding infestation in several towns, but so far the towns of New Marlboro, Sandisfield, and Sheffield, Mass., are more seriously infested than any others in the zone. It is expected that the work in Piscataway and Hillsboro Townships, New Jersey, will be finished about the middle of April. If no further infestations were found, this will complete the scouting work planned for New Jersey this season except for checking up work in the vicinity of infestations that were discovered in the townships of North Plainfield and Warren during the fiscal year 1928.

BROWN-TAIL MOTH (Nygnia phaeorrhoea Don.)

The brown-tail moth infestation, as indicated by the presence of the hibernating webs, is heavier than usual in southeastern Maine and eastern New Hampshire. In Maine there is an infestation in most of the cities and towns south of Augusta and west to the New Hampshire state line, and in some cases the infestations are heavy, particularly on apple, pear and cherry. State officials in Maine have notified the proper authorities in the cities and towns as to the proper control methods, and the cutting

and burning of hibernating webs is being done in some places. Similar work is being done in New Hampshire by the State and local authorities, as well as by some individuals. In Massachusetts there is a local moth superintendent in each of the infested towns, and in most cases the hibernating webs of the brown-tail moth are removed and burned each year.

EUROPEAN CORN BORER (Pyrausta nubilalis Hbn.)

The European corn borer infestations in Upper Montclair Township in Essex County, New Jersey, has been cleaned up jointly by the owners of the property, necessitating no clean-up by the Federal or State Department.

INSECT CONDITIONS IN GUATEMALA DURING MARCH AND APRIL, 1931

Marston Bates

12 Calle Oriente No. 1, Guatemala.

The coffee cricket seems to be following the same cycle this year as last: no new oviposition scars have been noted since March. An adult cricket found on the coffee was determined as Paroecanthus guatemalae Saussure by Prof. T. H. Hubbell, and as the juveniles that emerged from the egg scars would seem to belong to this or some allied genus, it seems likely that this species is causing the trouble; but nothing definite can be determined without further study.

Saissetia hemisphaerica Targ. is a common and widely distributed coffee scale in Guatemala, but one that rarely occurs in injurious numbers. A severe infestation was found in April, however, on coffee in the Barberena regions. Severe infestations of realy bugs are also reported from various places, especially higher altitudes, in the cloud zone.

Specimens of Diaphania nitidalis Stoll. were sent in for determination and advice from the south coast, with the comment that they were doing considerable damage to a cucumber planting. The insect has also been quite common in cucumber fruits offered for sale in the city market during the past two months.

Larvae of Elateridae were again found doing considerable damage to potatoes. An undetermined flea beetle was also found to be causing considerable injury to this plant in the Tecpan region.

Cutworms were reported as doing considerable damage to alfalfa in certain regions. Adults were bred but have not as yet been determined.

The pine forests at higher elevations in Guatemala are continuing to die out, apparently because of insect attack, so that in some regions whole mountainsides will not have a living tree left. The insects that have been collected from these dying pines include: Ips cribricollis, Eichh., Dendroctonus mexicanus and D. adjunctus. Blandf.

Hopk.



INSECT CONDITIONS IN PORTO RICO DURING APRIL, 1931.

M. D. Leonard

Insular Experiment Station, Rio Piedras, Porto Rico.

About 10 per cent, by actual count, of the canes were infested on several varieties in experimental plots by the sugarcane moth borer (Diatraea saccharalis Fab.) at the Central Ignaldad near Mayaguez on April 21-23. (M.D.L. and F. Sein, Jr.)

Moths of the sugarcane root-caterpillar (Perforadix sacchari Sein) were common April 21-23 at Mayaguez where they were observed diving, after short flights, into the cut trash on the ground, the cane having been only just cut. (M.D.L. and F.S.)

The West Indian cane weevil (Metamasius hemipterus L.) is fairly common April 13-15 at Guyama and there is a very light infestation at Mayaguez April 21-23 in large cane variety experimental plots in which we are making detailed Diatraea counts. This insect is reported as abundant and generally distributed in banana plants on about 100 farms in which Mr. Jesus Gomez, Agricultural Agent of Humacao, was surveying during the month at Guyanilla for Cosmopolites sordidus Germ. (M.D.L. and F.S.)

The pink leaf sheath bug (Lasiochilus divisus Champion) was fairly common in all stages in a large experimental plot comprising 5 varieties of sugarcane at the Central Ignaldad at Mayaguez April 21-23. (M.D.L. and F.S.)

The yellow cane aphid (Sipha flava Forbes) was reported on April 24 by the manager of a large central at Cabo Rojo to be much less serious than last month on sugarcane owing to rains during April but he stated that there was still some infestation.

The cane mealybug (Pseudococcus sacchari Ckll.) was fairly common on sugarcane at Guyama, April 13-15 and less common at Mayaguez April 21-23 in several large cane variety experimental plots in which we were making detailed Diatraea counts. (M.D.L. and F.S.)

A light infestation of the sugarcane scale (Aspidiotus sacchari Ckll.) at Mayaguez April 21-23 and fairly common at Guyama, April 13-15 in large experimental plots of several varieties of sugarcane in which we were making detailed borer counts. (M.D.L. and F.S.)

Jesus Gomez reported observing a few coffee trees infested with the beetle borer (Apate francisca Fab.) at Guyanilla during an inspection trip there in April.

A light infestation of the green scale (Coccus viridis Green) was reported on leaves and stems of a number of young coffee trees in a variety breeding plot at the Station at Rio Piedras. The Coffea arabica and C. liberica plants seemed to be more infested than the others; among

at Carnney in one planting.

Mr. E. F. Rorke reports that the pink bollworm (Pectinophora gossypiella Saund.) has become progressively worse on the South Coast during the month and estimates that at least 15 per cent reduction of the crop on the approximately 10,000 acres of cotton there will result from its attacks. No cotton will be bought from the growers after May 15, owing to this insect and drought, whereas otherwise picking could have continued until well into June. During the week of the 20th ten meetings were held in as many towns in the South Coast to explain control measures and the "dead season" for cotton to start May 15 on the South Coast (this also includes the Carolina section on the North Coast). On April 3, G.N.W., M.D.L. and A.S.M. examined wild tree cotton on Road 3, between Guyama, Arroyo, and Patrillas; infested bolls were found each time but the infestation became more pronounced as we went Eastward from Guyama.

On April 20 Dr. Mel T. Cook of the Insular Station found a light infestation in one field at Carolina and on the 30th several infested bolls were observed out of many on a half dozen large Sea Island plants growing on the Station grounds at Rio Piedras. One larva and one moth of the common scavenger Pyroderces rileyi Wlsm. in cotton bolls was found at the station.

Only a few leaves out of a number of plants of wild tree cotton at several stops made between Guyama and Patrillas were found to contain the mines by a cotton leaf miner (Nepticula gossypii Forbes).

E. F. Rorke reports the cotton stainer (Dysdercus andreae L.) generally distributed and doing considerable injury (more than during March) throughout the whole south Coast cotton growing section. Dr. Ismael Flores Lugo reports stainers bad on April 18 in a 2-acre field in the Unidad Rural in the Barrio Carruzo and abundant on Maga trees in Barrio Cedro.

#### CUBA

Notes on observations during May, 1931.

By L. Dean Christensen.

Recently, in the community gardens at Central Baragua, Provincia De Caraguay, there has been considerable damage to red peas by Lachnopus hispidus Gyll. The adult of this curculionid feeds on the young plants, eating large evenly cut pieces from the edges of the newly formed leaves. The beetles averaged about 20 to the hill and many of the single leaved shoots had been completely defoliated. Black-eyed peas were attacked slightly by the same pest.



other species present are: C. janephora, C. guillou, C. robusta, and C. consensis.

A light infestation of Pseudococcus citri Risso was noted on April 18 in a small variety planting at the Station at Rio Piedras; one small tree of Coffea arabica, however, had been nearly killed by the mealybugs.

A hemispherical scale (Spissetia hemispherica Targ.) was reported by Jesus Gomez as abundant at Guyanilla during April and causing considerable sooty mould on the coffee trees.

A survey under the direction of I. L. Torres, Director of Agricultural Extension of the Insular Department of Agriculture, in search of the banana root weevil (Cosmopolites sordidus Germ.) on banana, was made during March and April on 800 farms comprising about 50,000 acres of land in the Ponce, Penuelas, and Guyanilla Districts. These places were previously thought to be uninfested. The infestation in the Ponce District was found to be generally distributed and from 7 to 20 per cent of the plantations were affected; in the other two Districts infestation was found to be just starting and still scattered and light. The wholesale collection of larvae and adults of Strateegus quadrioveatus P. deB. on cocconut by boys for the Agricultural Extension Division of the Insular Department of Agriculture has been continued during the month and a large quantity of specimens have been gathered and destroyed in the Mayaguez district.

The Agricultural Agent at Humacao reports a 2-acre planting of tobacco completely stripped of leaves by the tobacco hornworm (Protoparce sexta Joh.) during April at Juncas.

The bean lacebug (Corythucha gossypii Fab.) was found to be moderately infesting a large garden patch of pole lima beans at Aguirre, April 4, M.D.L. and A.S. Mills) and on April 30 several good sized string bean plants on the Insular Experiment Station grounds at Rio Piedras were considerably infested.

A. S. Mills reports a moderate infestation of sword bean (Canavalia spp.) pods during the latter part of the month at Florida by the corpea pod and stalk borer (Fundella cistipennis Dyar ).

All stages of a plant bug (Ehthia picta Drury) were found abundantly on a single tomato plant at the Insular Demonstration Farm at Mayaguez on April 22, but apparently doing but little injury.

Dr. Bregger reports that about 10 per cent of the sweet corn ears are infested by the corn ear worm (Heliothis obsoleta Fab. on a small test plot at the Insular Station.



The cabbage looper (Plutella maculipennis Curtis) was severely infesting a fairly large garden patch of cabbage at Aguirre on April 4. (M.D.L. and A.S.M.)

A leaf miner, presumably Agromyza inaequalis Mall., was fairly common on cabbage plants at the station.

The Agricultural Agent at Carolina, Ismael Flores, has reported many plantings of sweet potato as badly infested by the sweet potato weevil (Cylas formicarius Fab.) during the month in his section, with a considerable resulting loss in the crop.

About 10 per cent of the leaves of sweet potato in a small garden patch at Patillas on April 3 were showing mines by the sweet potato leaf-miner (Agromyza ipomeae Frost) (M.D.L. and A.S.M.)

It was reported the last of April that during February and March, owing to a bad infestation of this common pod borer (Utetheisa ornatrix L.) a large grower at Palo Seco was able to obtain only about 7 tons of seed from 60 acres of Crotalaria.

A leaf tier, (Dichomeris piperatus Wlsm.) has been scarce on alfalfa on experimental plots at the sub-station at Isabel as compared with a bad infestation in the spring of 1930, according to a report from L. A. Serrano, Director of the sub-station.

Several large West Indian laurel trees (Ficus nitida) in the Plaza at Caguas are badly infested by Gynaikothrips uzeli Zimm. (G.N. Wolcott, M.D.L. and A.S.M.) and was common on the same host on several trees in the Plaza at Guyama April 14.

Icerya moneerensis Riley & Howard was so abundant on several trees (Ficus nitida) in the Plaza at Caguas on April 4 that many of the lower twigs were almost defoliated. (G.N.W., M.D.L., and A.S.M.)

In October 1930, M. F. Sein, Jr., found a number of fruits infested by the pickle worm (Diaphania nitidalis Cramer) at Lares. This was apparently the first record of a definite locality or food plant for this insect in Porto Rico. He states that from October, 1930, to April, 1931, he has found from 5 to 10 per cent of the fruits infested in the market in Rio Piedras. On April 27 two fruits in a small planting at the Insular Experiment Station at Rio Piedras were found infested, one of them badly so.

The cotton leaf worm (Alabama argillacea Hbn.) was reported by E. P. Rorke from one cotton plantation at Yauco during March but he stated that he knows of no infestation in the South Coast during April. On April 18 the Agricultural Agent at Carolina, Mr. Flores, reported an infestation during the first week in April on 12 acres in the Barrio Cacao and another on 8 acres in the Barrio Canocanillas but these were promptly handled by spraying. Mr. Rorke also reported a light infestation April 20-25