

THE INSECT PEST SURVEY BULLETIN

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

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OUTSTANDING ENTOMOLOGICAL FEATURES IN THE UNITED STATES FOR JULY, 1924

The armyworm outbreak reported in the last number of the Bulletin advanced northward during the month, developing most seriously in the northern third of Illinois and southern Wisconsin. In Ohio and Indiana the damage seems to be less severe.

Cutworms continued to be an outstanding feature of the entomological conditions over practically the entire country extending from Maine to New Mexico.

The grasshopper situation on the whole does not seem to be as serious as usual.

The Hessian fly in Missouri, Indiana, and Michigan is threatening. In Kansas, owing to the very dry weather, the killing out of plants by the Hessian fly is believed to have been advantageous to the crop.

The chinch bug is generally less troublesome than usual in the eastern parts of its range, but very serious in Nebraska and Kansas.

The stalk borer is reported as generally numerous in New England and in the Ohio River States, and reports of damage also have come from Kansas and Nebraska.

Report has been received that this promises to be the worst codling moth year ever recorded in Washington State.

The Oriental fruit moth has been found in numerous places in the southeastern states.

The cherry fruit-fly continues troublesome in parts of Oregon and a State quarantine on the shipping of this fruit from these sections into the State of California has been promulgated.

The very unusual flights of the painted lady butterfly reported in the last number of the Bulletin seem to have been but a reflection of a very widespread increase in the numbers of this insect; during the month reports of unusual numbers of these butterflies and their larvae were received from Ohio, Michigan, Indiana, Illinois, Minnesota, and Oregon, and also from the Gila Bend section of Arizona and from the State of Sinaloa in Mexico.

The Mexican bean beetle during the month was discovered in Indiana and has materially advanced its range in Ohio and Georgia, as well as making substantial ground over the rest of the infested territory. In Wyoming the pest has extended its range 30 miles north of last year's infestation.

The cotton boll weevil situation is no more serious than last month, judging from the reports so far received.

An unusual pest in the form of an *Eleodes* beetle is recorded attacking cotton in Tulare County, Calif.

A serious situation has developed in the Nebraska National Forest, where the tip moth is materially interfering with the reforestation projects under way in that State.

In this number of the Bulletin is a review of reports on termite damage to woodwork throughout the United States during the past year.

The European earwig is increasing its activities in the Newport Colony in Rhode Island.

OUTSTANDING ENTOMOLOGICAL FEATURES IN CANADA FOR JULY, 1924.

Aphids have been conspicuously abundant in many parts of Canada this season. In the Niagara district, Ontario, the black cherry aphid has been present in outbreak form, and there have been severe infestations of the rosy apple aphid and the green apple aphid. In New Brunswick the green apple aphid infestation has been very severe, especially in the St. John River Valley, and in the Prairie Provinces aphids of several species have been very abundant on many kinds of plants.

Severe local outbreaks of the forest tent caterpillar have occurred in Nova Scotia, New Brunswick, and western Ontario. In Saskatchewan the tent caterpillar situation has proved more serious and widespread than was at first anticipated and many species of deciduous trees, including aspen, poplar, willow, ash, wild rose, and choke cherry have been badly attacked.

The grape-blossom midge, *Contarinia johnsoni* Sling., is present in small numbers in vineyards from Niagara-on-the-Lake to Fruitland, Ont., and probably occurs in all parts of the grape belt, but so far has not caused serious injury.

The pear-leaf blister-mite is becoming widespread upon apples throughout the interior and Kootenay sections of British Columbia.

The currant fruit-fly, *Epochra canadensis* Loew., is unusually abundant in southern Alberta, having been reported from Cardston, Magrath, Lethbridge, Medicine Hat, and Taber, and Foam Lake, Sask.

The cranberry rootworm beetle, *Rhabdopterus picipes* (Oliv.), has caused considerable injury to the apple crop in the Rougemont district, P. Q., damaging both leaves and fruit. This is apparently the first record of injury by this species in Canada.

In the Bulkley Valley and Lakes district of central British Columbia severe injury has been done to timothy hay which constitutes the principal crop of the district. The species involved are *Melanoplus borealis monticola* Fieber, and *M. brune* Scudder, the former doing by far the greater amount of damage, which is interesting as it has only been taken previously in very small numbers in patches of fireweed at high altitudes, in the southern part of the Province.

Wireworms are causing noticeable injury in the Prairie Provinces.

Extensive injury to corn, peas, potatoes, and small grains by the yellow-necked cutworm, Septis (Hadena) arctica Edv., has been experienced in southwestern Ontario on the lighter types of soil.

In the infested area of southern Saskatchewan the northwest chinch bug, Blissus occiduus Barber, is appearing only in small numbers, even where it was enormously abundant last year. No damage has occurred and none is expected during the 1924 season.

The cottonwood leaf-beetle, Lina scripta Fab., is again abundant over the greater part of southern Alberta.

The rose-chafer was present in immense numbers in some of the sandy sections of southwestern Ontario.

The rhododendron lace-bug, Stephanitis rhododendri Horv., has been found in the Victoria district, B. C., where it is probably well distributed. This is thought to be the first record of its occurrence in Canada.

The rose leaf-hopper has been a severe pest to rose bushes this summer all over the western part of Nova Scotia.

On the Quetico Forest Reserve, Ontario, an area of 130 square miles of red, white, and jack pine, burned over in 1923, is heavily infested by the black sawyer beetle, Monochamus scutellatus (Say), and to a much lesser extent by the pine sawyer, Monochamus notatus (Drury). A large section of virgin pines burned over in the Kippewa Lake region, P. Q., in 1923 has also been heavily attacked by sawyer beetles with consequent serious depreciation.

CEREAL AND FORAGE - CROP INSECTS

MISCELLANEOUS FEEDERS

CUTWORMS (Noctuidae)

- Maine E. M. Patch (June 27): Larvae of Agrotis ypsilon Rott. are migrating from a grain field to an adjoining potato field at Mapleton. Report states: "Every plant that has barely pierced the ground is surrounded by 3 to 10 worms. They ate leaves and they are now cutting sprouts just beneath the surface." (July 3): County agent writes "100 acres of oats are being destroyed by cutworms. . . We have used poisoned clover in potato fields where the cutworms are working, with very good results." Crows were working night and morning in grain fields, filling up on cutworms, in Mapleton near Presque Isle in the locality I visited.
- New Hampshire P. R. Lowry (June 30): Cutworms have been very common and injurious over the southern half of the State. Species undetermined. Bibio albipennis Say emerged in unusual numbers during the first two weeks of June, thousands covering the vegetation in gardens. We had many requests for control measures for this fly, as they were blamed for the cutworm injury.

- New York L. C. Tyler (June 21): Cutworms are ruining some cabbage planting in Nassau County, making it necessary to replant entire fields.
- C. R. Crosby (July 2): A field of corn at Durham is badly infested by Hadena fractilinea Grote. They enter the top of the young plant and eat out the heart, leaving the bottom of the plant with 3 or 4 leaves standing.
- Wisconsin S. B. Fracker (July 15): Serious loss of corn in one field in southern Grant County by attack of Lycophotia margaritosa Haw. Cutworms are reported from the following counties: Barron, Bayfield, Crawford, Dodge, Douglas, Dunn, Eau Claire, Fond du Lac, Grant, Green Lake, Juneau, Manitowoc, Marinette, Monroe, Oconto, Ozaukee, Pepin, Pierce, Portage, Price, Sawyer, Washington, and Winnebago.
- Wyoming C. L. Corkins (July 10): An outbreak, presumably of Chorizagrotis auxiliaris Grote, was reported by county agent of Lander. Have not yet seen specimens but from description of cutworm and the habit it is undoubtedly the army cutworm. This has also done some damage to gardens over the southern portion of the State.
- Colorado E. A. Back (July 11): On June 21 specimens were sent in from Undercliffe of a moth which has been identified recently as Chorizagrotis auxiliaris, with the statement that these moths were very troublesome and made life miserable in many houses in that city.
- New Mexico E. A. Back (July 10): On June 16 specimens of the moth Chorizagrotis auxiliaris were sent in from Albuquerque with the statement that it is exceedingly annoying to occupants of houses in that city.
- Mexico R. H. Van Zwaluwenburg (June 25): The annual outbreak of Agrotis ypsilon occurs as usual on newly sprouted alfalfa in late November. Poisoned bran is used successfully. Where alfalfa is not poisoned it is eventually controlled by at least five species of tachinids and by Comptosia calipterus Say, but too late to save the crop. The annual outbreak of Laphygma exigua Huebner occurs at the same time.

GRASSHOPPERS (Acridiidae)

- Wisconsin S. B. Fracker (July 15): Camnula pellucida Scudd. et. al. have been reported from the following Counties on grain, etc.: Door, Marinette, Florence, Pierce, and Price.
- Minnesota A. G. Ruggles (July 9): Several complaints have come in concerning grasshoppers. Camnula pellucida seems to be the one doing the damage. The spring has been so late that some of the eggs seem to be just hatching.
- Nebraska M. H. Swenk (June 15-July 10): Melanoplus bivittatus Say, etc., began hatching in the North Platte Valley during the last week in June, an unusually late date, the hatching no doubt having been delayed by the cold, backward spring. However, grasshoppers are present in subnormal numbers in this State this year.

- Kansas Roger C. Smith (July): We had a small outbreak of the lesser migratory grasshopper (Melanoplus atlanis Riley) on alfalfa at the college farm last year but this year they are more plentiful. Control measures are being applied. They are present in their usual numbers in western Kansas.
- Texas F. C. Bishopp (June): Grasshoppers were reported to be damaging cotton in a number of north Texas counties. At first the injury occurred only in bottom lands but later uplands were also invaded. At Uvalde some cotton fields were seen to be injured considerably by them, principally the lubber grasshopper (Brachystola magna Gir.) and the differential grasshopper (Melanoplus differentialis Thos.). A large amount of poisoned bait was distributed.
- Wyoming G. L. Corkins (July 10): Melanoplus bivittatus and Camnula pellucida are late and less abundant than last year, but are doing damage in most of the irrigated valleys in the eastern section of the State. No large campaigns are yet necessary but many local infestations are being taken care of. An attack by Anabrus simplex Hald. should have been reported three months ago. One campaign was carried on with good results. New and additional territory is now being infested by migrating bands. The amount of damage is yet problematical.
- Washington E. J. Newcomer (June 20) (Extract from Yakima Republic, June 17, 1924): Farmers in Colville County are in bad straits this year, according to L. M. Holt, supervising engineer for the Indian reclamation service, who returned yesterday from a trip of inspection of the irrigation project there. Those who have crops under the irrigation project are having them destroyed by a plague of grasshoppers and those on the dry farm lands have no crops at all. This is the driest summer in 15 years according to the weather records of that section. Grasshoppers strip the fields clean as they go, leaving nothing but the stems of the wheat standing. In the dry land areas the grain is only a few inches high and the heads are shriveled.
- WIREWORMS (Elateridae)
- New York C. R. Crosby (June 18): Agriotes mancus Say are destroying a 4-acre field of oats in Otsego County. (June 19): Wireworms are reported as causing serious injury to corn and oats in several parts of Chemung County.
- Washington Monthly Letter of Bureau of Entomology, No. 122 (June): Reports from the Yakima Valley show that the wireworm appeared in unusually large numbers during the present spring and has caused heavy injury to miscellaneous crops. This insect, known as Pheletes occidentalis Cand., is closely related to the cultivated-land wireworm, (Limonius) Pheletes californicus Mann., which has been a consistent and serious pest of lima beans and sugar beets in the southern half of California.

WHEAT

HESSIAN FLY (Phytophaga destructor Say)

- Indiana J. J. Davis (July 22): Further observations on the Hessian fly corroborate our statement in the last Bulletin to the effect that we may anticipate injury in early sown fields of wheat this fall.
- Missouri L. Haseman (July 20): Stubble counts show following infestation: Springfield, 2 per cent; Columbia, 1/2 per cent; Charleston, 17 per cent; Maryville, 18 per cent; Cuba, 2 per cent; St. Louis, 13 per cent. An epidemic threatens. Control campaigns are being pushed.
- Nebraska M. H. Swenk (June 15-July 10): The wheat harvest, now in full swing in southeastern Nebraska, indicates that on the whole a good yield will be realized, notwithstanding the fact that the attack of the Hessian fly last fall destroyed completely a considerable acreage of wheat and materially thinned the stand of a larger acreage, while during the past May and early June the fly, in connection with unfavorable weather conditions, caused short and often only partly filled wheat heads to be the rule. It is generally realized that the present wheat crop would have been much better if the fly had not made this serious double attack upon the plants. Continued efforts will be made to increase the percentage of farmers that will await the fly-free date this fall and thus decrease fly injury on the next crop of winter wheat.
- Kansas J. W. McColloch (July 19): The severe Hessian fly infestation, which I reported from western Kansas during the winter, took a very big turn, and the farmers in that section consider the Hessian fly a blessing rather than a pest. Conditions for seeding last fall were exceptionally good and a very heavy stand of wheat was secured. The Hessian fly also being abundant killed out a good part of the stand, and at the time looked as though it had ruined the prospects for the wheat crop. This spring, however, the plants tillered out and at the time the fly was emerging, dry weather set in and proved fatal to the eggs, and there was very little further infestation this spring. Dry weather continued until harvest time, and the farmers claim that if the fly had not reduced the stand last fall the amount of wheat on the ground would have been too great for the available moisture supply. As it was, with the reduced stand, there was sufficient moisture for the crop and western Kansas is rolling in wealth at the present time. It is going to be very difficult to go into this country and talk Hessian fly control measures at the present time. (July 22): The data on the average acre loss has been furnished by E. C. Palton as follows: A loss of 6 bushels per acre is estimated in southeastern Kansas in Crawford County with 5 bushels loss in adjoining counties of Neosho and Cherokee. A region of 4-5 bushels loss is also located in east-central and northeastern Kansas, extending from Republic and Morris Counties east to Franklin and Brown Counties with a third similar region recorded in the northwestern and north-central part of Kansas, extending from Decatur and Wichita east to Mitchell County.

SMUT BEETLE (Phalacrus politus Melsh.)

Nebraska M. H. Swenk (June 15-July 10): An abundance of the smut beetle on ripening wheat was reported from Furnas County during the last week in June.

WHEAT JOINTWORM (Harmolita tritici Fitch)

North Carolina F. Sherman (July 5): This is usually a minor pest with us. There have been several recent reports.

Missouri L. Haseman (July 20): Stubble infested as follows:

Springfield	-	2 per cent	Columbia	-	1.7 per cent
Charleston	-	0 per cent	Maryville	-	0 per cent
Cuba	-	17 per cent	St. Louis	-	11.5 per cent

It is worse in some fields than the Hessian fly.

WHEAT STRAWWORM (Harmolita grandis Riley)

Kansas J. W. McCulloch (July 19): The wheat strawworm, while it was very abundant in the fields of northwestern Kansas this year, apparently ~~did not~~ reduce the yield as much as was anticipated. This is probably due to the fact that the second brood was delayed somewhat in its emergence, and at the same time conditions were favorable for early maturity of the wheat crop. While practically every straw was infested, yet the infestation did not take place in time for the heads to become blighted. (July 20): The area of heaviest infestation was in the northwestern part of the State from Graham and Pinney Counties westward. Slight injury was general over the State. No actual figures are available yet as to the real loss. Many samples of wheat had every straw infested and the heads blighted or poorly filled.

CORN

CHINCH BUG (Blissus leucopterus Say)

Indiana J. J. Davis (July 22): No reports of injury or abundance of this insect have been received so far.

Illinois W. P. Flint (July 21): The heavy rains of May and June have so reduced the numbers of this insect that there will probably be no necessity of taking any active measures of combating this pest during the present summer. It is present in fields in central and southern Illinois in smaller numbers than has been the case since 1912.

Missouri L. Haseman (July 20): The pest, in spite of rains, has done some migrating in southwestern and north-central Missouri, though over the State as a whole the chinch bug situation is favorable. Some signs of fungus are present.

Nebraska

M. H. Swenk (June 15-July 10): The chinch bug has been by far the most important insect pest in the State during the last three weeks. The area seriously infested includes the 10 counties touching the southern border of the State, from Richardson to Furnas Counties, inclusive, and eastwardly extends north into Nemaha, Johnson, southwestern Otoe, southeastern Lancaster, and northern Saline Counties, while westwardly it is practically confined to the southern tier of counties, except that the Furnas County infestation extends well up into Gosper County. The bugs began leaving the wheat in the southern tier of counties during the last week in June, chiefly from June 25 to 28, though the migration did not start in some fields until the first week in July. During the last four or five days there have been many complaints of heavy losses of corn because of invading chinch bugs. The weather has been very dry in Nuckolls, Webster, Franklin, Harlan, and Furnas Counties, and these counties are suffering the heaviest injuries, especially the central county of the block, Franklin, where the bugs seem to be especially numerous. Eastwardly Pawnee County continues to show the heaviest infestation, as stated in my report of June 20.

Kansas

J. W. McColloch (July 19): The chinch bug has been especially bad this year and reports coming to this office at the present time indicate that some farmers have lost as much as 100 acres of corn and sorghums. It is interesting to note that the heaviest correspondence has been from three north-central counties. (July 20): This insect has been worse than at any time since 1913. In some areas whole fields of corn and sorghums have been destroyed.

CORN EARWORM (Heliothis obsoleta Fab.)

South Carolina

Bureau of Entomology Monthly Letter, No. 122 (June): W. A. Thomas, of Chadbourn, N. C., investigated an outbreak of the corn earworm on tomatoes in South Carolina and reported that this insect has caused considerable injury to the tomato fruits.

Georgia

O. I. Snapp (June 2): The corn earworm has been unusually abundant in middle Georgia this year, doing much damage to young corn. Severe injury has been reported from at least six counties.

Florida

F. S. Chamberlin (July 11): Corn earworm larvae of all sizes are present at this time. The ears in cornfields of this region were about 85 per cent infested.

Texas

F. C. Bishopp, through J. L. Webb (June): During June the corn earworm was quite abundant in the vicinity of Dallas. Sweet corn in gardens was almost completely ruined and tomatoes were attacked to a considerable extent.

STALK BORER (Papaipema nitela Guen.)

Maine

E. M. Patch (July 22): A report from North Alfred states: "The entire planting is infested with them."

- New Hampshire P. R. Lowry (July 19): A number of reports have been received of injury to corn and tomatoes.
- Massachusetts A. I. Bourne (July 24): There are indications of a moderately severe infestation this season. Tomatoes thus far appear to be the crop worst attacked. One report, however, of very severe injury to iris and other similar plants was received about the 10th of this month.
- Ohio E. W. Mendenhall (July 6): Stalk borers are doing considerable damage in the northwestern locality of Champaign County and nearly ruined some cornfields.
- Michigan R. H. Pettit (July 22): The common stalk borer is steadily becoming worse year by year. It is naturally confused with the European corn borer and every mail brings in many samples of the stalk borer working in corn.
- Indiana J. J. Davis (July 22): The common stalk borer has been unusually abundant in the past few weeks. We received the first reports of injury June 19 from Evansville where they were attacking tomatoes and from that time on the noticeably infested area gradually worked northward to Fort Wayne, where reports of injury were first received July 14. This insect has been pretty generally abundant and destructive throughout the State and has been especially conspicuous the past two weeks. It has injured tomatoes, corn, carnation, potato, and flower garden plants.
- Illinois W. P. Flint (July 21): The common stalk borer has been very abundant this season, and has been sent in from cotton, corn, tomatoes, potatoes, ragweed, smartweed, soybeans, oats, and several other plants. It was found by C. C. Compton in northern Illinois feeding in ripe strawberries. Larvae are now about one-third grown.
- Nebraska M. H. Swenk (June 15-July 10): The stalk borer was reported as feeding on the blades of corn, especially sweet corn, as well as burrowing in the cornstalks in Jefferson and Webster Counties during the last week in June. This pest became quite numerous during late June and early July, working not only in the corn but in raspberry canes, rose stems, and various ornamental plants.
- Kansas J. W. McColloch (July 18): The following reports have been received since June 20: Hymer, working on corn; Skiddy, damaging tomatoes; Lyons, damaging tomatoes; and Effingham, working on a variety of plants, principally gardens and ornamentals.

ARMYWORM (Cirphis unipuncta Haw.)

- Ohio T. H. Parks (June 28): One county in western Ohio reported armyworms injuring corn to some extent. The outbreak is localized and not reported as general over the county. Poisoned bran mash was used successfully.

- Indiana J. J. Davis (July 22): Since our report last month we have received additional reports of injury by armyworms and these have continued up to July 12 and have extended to the extreme northern end of the State, the first report in the northern boundary counties being June 23. They seem to be fairly heavily parasitized.
- Wisconsin S. B. Fracker (July 15): Heavy attacks in bottom lands of southern Grant County, less loss in Spring Grove township, Green, and several southern townships of Rock County. In most cases poisoned bran was applied in time to prevent serious damage.
- Illinois W. P. Flint (July 21): Armyworms were very abundant and destructive in some 40 or more counties throughout the State, the worst outbreaks occurring in the northern third of the State. A warning was sent out regarding the probable occurring of armyworms, and severe damage was prevented in many cases through the action of the county agents. The loss in corn from this pest would amount to only a small fraction of the corn acreage in any county where the outbreaks occurred.

SILVER-STRIPED WEBWORM (Crambus praefectellus Zinck.)

- Connecticut W. E. Britton (July 18): Eating into cornstalk at surface of ground at Shelton.

SOUTHERN CORN ROOTWORM (Diabrotica 12-punctata Fab.)

- Maryland J. A. Myslop (July 22): For the first time in the past six years I have observed Southern corn rootworm seriously damaging sweet corn. In a small patch at Avanel about 30 per cent of the plants had the roots so badly eaten that the plants were upset and dead. Larvae were still present in the ground at this date.
- Indiana J. J. Davis (July 22): The southern corn rootworm has been doing considerable damage to sweet corn in the Purdue Experimental plots at Lafayette within the last two weeks.
- Illinois W. P. Flint (July 21): Adults of this species were extremely abundant during May. At the present time reports are coming in from all over the State of injury to corn by the larva. Larvae of the first brood are now pupating, so that it is possible that a considerable second brood may appear this season.

SUGAR-CANE BEETLE (Euethola rugiceps Lec.)

- North Carolina F. Sherman (July 5): This southern species occasionally damages corn in our warmer sections. There has been at least one case of noticeable damage.
- Missouri L. Haseman (July 1-20): This is our first experience with this pest. Attacking corn at Dexter and Dudley.

CORN ROOT-APHID (Aphis maidi-radici Forbes)

Nebraska

M. H. Swenk (June 15-July 10): Information received during early July indicated that the prevalence of the corn root-aphid in Franklin and Harlan Counties, mentioned in my report of June 20, extends north into Phelps County also, and that the insect has been equally injurious in that county this spring.

ALFALFA AND CLOVER

ALFALFA WEEVIL (Phytonomus posticus Gyll.)

California

Weekly News Letter, State of California, Vol. 6, No. 15, July 26: "That insects are carried and transported in this manner (by automobile) is well demonstrated by the findings of the inspectors at the border stations. During the month of June of this year live insects, many of them alfalfa weevils, were taken from 61 automobiles. As many as 140 live alfalfa weevils were shaken from the camping equipment carried by one automobile, and only a few days ago 40 live alfalfa weevils were intercepted in a small quantity of green alfalfa hay which the camper had gathered in Nevada. Interceptions of from one to a dozen or more alfalfa weevils in a live condition are daily occurrences at the border stations, and any one of these lots of insects if not intercepted might be the means of introducing the pest into California, thus placing upon the alfalfa grower of this State the added tax of control measures to suppress it.

Utah

Geo. I. Reeves (July 8): We have done little scouting in new territory for the alfalfa weevil this year, owing to lack of funds and assistance and preoccupation with the more urgent economic work of perfecting the dusting method, importing parasites, and assisting the University of Nevada to adapt our control measures to Nevada conditions. The attack has been severe but well controlled in Utah and Colorado. The attack in Utah has shown an increase over last year corresponding very closely with the increased warmth and earliness of the season. The parasite Bathyplectes curculionis is generally present both in damaged and undamaged fields. (July 15): Alfalfa weevil injury is noticeable in fields east of River Heights and some other parts of Cache County.

FALSE CHINCH-BUG (Nyzius ericae Schill.)

Nebraska

M. H. Swenk (June 15-July 10): During the last half of June and up to July 10 the false chinch-bug has, like the true chinch bug, appeared in large numbers in a part of the State. The infested area extends from Thomas County west to Scottsbluff County and north to Dawes County. These bugs have appeared in the gardens, attacking radishes, lettuce, and other vegetables, and also are reported as swarming in great numbers around certain weeds.

Utah

Geo. F. Knowlton (July 11): The false chinch-bug is present in northern Utah and doing damage in a few fields. As a rule ~~it~~ ^{it} is not found in damaging numbers.

GARDEN WEBWORM (Loxostege similalis Guen.)

- Kansas Roger C. Smith (July 1-15): We had a large State-wide outbreak last year and we have predicted local outbreaks this year. It is plentiful in some fields at Manhattan and Emporia.
- Texas F. C. Bishopp (June): During the first half of June the webworm appeared in destructive numbers in Dallas and other north Texas counties. In Dallas County it was estimated that 1 per cent of the cotton acreage was infested and most of this very seriously damaged. Considerable poisoning with calcium arsenate was resorted to.

PEA APHID (Illinoia pisi Kalt.)

- Kansas Roger C. Smith (Apr. 12-May 2): This insect has been present in damaging numbers in the Kaw Valley for the last three springs. It appeared on alfalfa in damaging numbers the spring of 1921 for the first time. At Manhattan on the south side of a building; in the Kaw Valley several fields were destroyed as well as in Lincoln County.

FAIR ARMYWORM (Laphygma frugiperda S. & A.)

- Louisiana T. E. Holloway and W. E. Haley (July 3): This pest had defoliated alfalfa, and had partly defoliated corn and sugar cane. Only a few acres were observed infested. Few larvae are now on the plants, and they have apparently left to pupate. These observations were made at Raceland. Near Houma the same day larvae were frequently observed on sugar cane, but were not doing much damage. It is likely that the pest will be controlled by parasites.

GREEN CLOVER WORM (Plathypena scabra Fab.)

- Mississippi R. W. Harned (June 20): An insect that is probably the green clover worm has been reported as seriously damaging alfalfa in Bolivar County.

ZEBRA CATERPILLAR (Ceramica picta Harr.)

- Indiana J. J. Davis (July 22): In a few fields of sweet clover, notably one field in Randolph County, the zebra caterpillars were abundant. They were hardly abundant enough to damage the crop, however.

VARIEGATED CUTWORM (Lycophotia margaritosa Haw.)

- Illinois W. P. Mint (July 21): This cutworm has been more than usually abundant in clover and alfalfa. It has doubtless reduced the yield of hay from both these crops, although no cases have been reported where fields have been destroyed.

AUTOGRAPHHA OU Guenée

CORRECTION:

R. W. Harned (July 7): What appeared as the green clover worm, Plathypena scabra Fab., on page 114 of Vol. 4, No. 4, of the Insect Pest Survey Bulletin, should be Autographa ou. These insects are especially serious on Melilotus.

SOYBEAN

BROWN COLASPIS (Colaspis brunnea Fab.)

Indiana

J. J. Davis (July 22): Adults were reported from Nashville on July 18 as conspicuously eating the foliage of soybeans. This insect is becoming increasingly abundant and destructive, the beetles eating the foliage of clover and soybeans and the grubs injuring corn plants following clover, especially if the clover is plowed in the fall of the year. Inasmuch as it seems to have a preference for clover roots, we would suggest the common name of clover white grub for this insect.

LESSER CORN STALK-BORER (Elasmopalpus lignosellus Zell.)

Louisiana

J. W. Ingram (July 21): During the latter part of June larvae of the lesser corn stalk-borer were found attacking soybean plants near Crowley. In some cases the injury to the young plants was so great as to necessitate replanting of the beans. Adult specimens were sent in, and were determined by Mr. Heinrich. At present the borers are still at work in the beans, but the soybeans are too large to be killed outright by tunneling, although they are easily broken off in cultivation.

SORGHUM AND KAFIR

CORN-LEAF APHID (Aphis maidis Fitch)

Kansas

J. W. McColloch (July 18): The following reports have been received recently: Neosho Rapids, seriously injuring cane and kafir; Burlington, have seriously injured 35 acres of kafir; and Ida, seriously injuring kafir.

KAFIR ANT (Solenopsis molesta Say)

Kansas

J. W. McColloch (July 20): At Eskridge farmers have had to re-plant sorghum two and three times. A farmer at Westphalia has been unable to get a stand of feterita. Damage has also been reported from Eureka.

FRUIT INSECTS

APPLE

GREEN APPLE APHID (Aphis pomi DeG.)

- Massachusetts A. I. Bourne (July 24): The green apple aphid was very abundant this year, attaining unusually large numbers rather rapidly. The natural enemies seemed to overtake the lice before they had been able to do any serious amount of damage.
- New York C. R. Crosby and assistants: A serious outbreak was reported on nursery stock at Honeoye Falls on July 5. This insect is also reported from Dutchess County as being very numerous on young trees and in Ulster County it was also becoming numerous.
- Wisconsin S. B. Fracker (July 15): Reported from the following counties: Douglas, Eau Claire, Florence, Marinette, Ozaukee, Portage (bad), Rock, Washington, Waukesha, and Winnebago, attacking apple.

ROSY APPLE APHID (Anuraphis roseus Baker)

- Massachusetts A. I. Bourne (July 24): The rosy apple aphid is very generally distributed throughout the State in orchards and is apparently more abundant than it has been for a considerable period of years. Migration began about the first week in July and was apparently very nearly complete by the end of the second week.
- New York C. R. Crosby and assistants: This insect has been reported as unusually abundant throughout practically the entire apple growing section of the State, both in western New York and in the Hudson Valley.
- Arkansas A. J. Ackerman (July 17): The rosy apple aphid has been found in practically every orchard of this fruit section, but injury by this species has been of little consequence this season as compared with last year.

CODLING MOTH (Carpocapsa pomonella L.)

- Massachusetts A. I. Bourne (July 24): The codling moth this year has not apparently been as serious a pest as usual. The very first of the second-generation moths are just emerging at this time.
- Indiana J. J. Davis (July 22): The codling moth is not nearly as abundant this year as in past seasons.
- B. A. Porter (July 25): The second brood of moths began emerging on July 6.
- Wisconsin S. B. Fracker (July 15): Reported from Brown, Dodge, Green, Lake, Monroe, and Walworth Counties, attacking apple.

Illinois W. P. Flint (July 21): The second-brood codling moth was greatly delayed by the cold, wet weather of the spring. Adults did not emerge in the extreme southern part of Illinois until July 12, and have just started coming out in the Olney-Centralia fruit districts, Clay, Richland, and Marion Counties. The insect is less abundant than usual throughout the State.

Arkansas A. J. Ackerman (July 17): Frequent rains during the latter part of May and in June washed the spray solutions from the apple at the time when the first-brood worms were hatching in large numbers. As a result, the codling moth is unusually abundant in many orchards. A larger number of "stings" are evident this year than is the usual case. Second-brood worms are now entering the fruit.

Washington E. J. Newcomer (July 7): This promises to be one of the worst codling moth years ever experienced in Washington. Continued warm weather during May resulted in more eggs being deposited than usual, an average of over 30 per female being obtained while in cool seasons the average is as low as 6. A light crop, due to late frosts, makes the situation worse, and a very early season will allow the worms to work longer than usual, and will probably result in a larger third brood than normal. The first full-grown worms were found leaving the fruit on June 9, while the average date for this valley is June 21.

APPLE LEAF-SKELETONIZER (Canarsia hammondi Riley)

Arkansas A. J. Ackerman (July 17): Injury caused by the first-brood larvae of the apple leaf-skeletonizer is quite common at this time, especially on trees not yet in bearing which often do not receive the late summer sprays. This insect caused much damage to young trees last season.

FRUIT-TREE LEAF-ROLLER (Cacoecia argyrospila Walk.)

New York C. R. Crosby and assistants: Reported present in large numbers in many orchards in Ontario County, and very severe in Orleans County, damaging a large amount of fruit.

Utah Geo. F. Knowlton (July 15): Fruit-tree leaf-rollers are numerous in the moth stage and have been depositing eggs for the last two weeks in Cache Valley. So far a great number of egg masses have been deposited in the infested orchards.

APPLE AND THORN SKELETONIZER (Hemerophila pariana Clerck)

Massachusetts A. I. Bourne (July 24): The apple and thorn skeletonizer is gradually spreading to all parts of the State. The first cocoons of the first generation were noted about June 24 to 27, and early in July the moths of the second brood began to appear.

Connecticut W. E. Britton (July 19): Much less abundant than last year at New Haven.

TENT CATERPILLAR (Malacosoma americana Fab.)

- New Hampshire P. R. Lowry (July 12): Adults are now emerging. Has been very common but hardly as numerous as last year in this locality (Durham).
- New York C. R. Crosby and assistants: Many trees especially on roadsides practically defoliated in Columbia County, while these insects have been doing much damage in neglected orchards in Genesee County.
- Wisconsin S. B. Fracker (July 15): Reported from Sauk County attacking apple.

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

- Illinois W. P. Flint (July 21): This insect is quite abundant throughout central Illinois and has occurred in greater numbers in apple orchards than is usually the case. The first-brood larvae are now maturing.

APPLE LEAFHOPPERS (Erythroneura hartii Gill., and E. obliqua Say)

- Arkansas A. J. Ackerman (July 17): These two species of leafhoppers cause considerable injury to apple during most seasons in northwestern Arkansas. The first-brood nymphs were not as abundant as usual this year, because of a late spring with much cool weather and frequent rains. Second-brood nymphs are now hatching and with continued hot weather heavy infestations of hoppers are likely to occur. This is the first season that sprays have been applied for the control of these apple leafhoppers in commercial orchards.

ROSE LEAFHOPPER (Empoa rosae L.)

- Massachusetts A. I. Bourne (July 24): Material which was sent to Dr. E. D. Ball was determined as rosae. These insects have been present in unusually large numbers, many growers stating that the infestation was the worst they had experienced for years.
- Arkansas A. J. Ackerman (July 17): This leafhopper apparently is no longer abundant enough in apple orchards to cause much injury. Evidently the continued use of dormant sprays with oil emulsions has prevented the overwintering eggs of this leafhopper from hatching.

POTATO LEAFHOPPER (Empoasca mali LeB.)

- Arkansas A. J. Ackerman (July 17): The potato leafhopper caused some injury in bearing apple orchards as well as on young apple trees, in 1923 and again this season. Most of the injury results from feeding by the overwintering adults and by the first-brood nymphs. Curling of the terminal leaves followed by the characteristic hopperburn of the tips is evident in most orchards but injury is not severe enough to require a special spray application for this insect.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

- Indiana H. F. Dietz (July 11): A number of cases of spray injury from various parts of the State have been brought to our attention. Both lime-sulphur solution and Bordeaux mixture have caused severe burning in many instances, probably due to the variable climatic conditions, and due to the fact that owing to the lack of sunshine during May and June plants have made an unusually tender growth.
- B. A. Porter (July 25): As a result of effective spraying with oil emulsions, most of the commercial orchards in southern Indiana are more nearly free of scale than they have been for several years. In occasional neglected or poorly sprayed orchards the scale is present in about the usual abundance. Along with most everything else, the scale is about two weeks behind schedule, and the second brood of crawlers has not yet appeared at this date.
- Arkansas A. J. Ackerman (July 16): Dormant sprays with lubricating-oil emulsions during the past three years in Arkansas apple orchards have proved entirely satisfactory in controlling the San Jose scale. There is only an occasional orchard in the section where any scale-spotting of fruit can be found at the present time.
- Wisconsin S. B. Fracker (July 15): Reported from Ozaukee County attacking apple on this date.
- Washington E. J. Newcomer (July 17): Crawlers of the San Jose scale were first observed on May 25. No unusual infestations have been reported to date.

APPLE FRUIT-CHAFER (Metachroma interruptum Say)

- Indiana B. A. Porter (July 25): A small amount of injury caused by this insect in July in one apple orchard near Decker, not as abundant as last year.

APPLE FLEA-WEEVIL (Orchestes pallicornis Say)

- Arkansas A. J. Ackerman (July 17): The apple flea-weevil is more abundant in northwestern Arkansas than in former years and it may be found in practically every orchard of the section. Clean cultivation, which is practiced in most orchards, has prevented the insect from causing serious damage.

PLUM CURCULIO (Conotrachelus nenuphar Hbst.)

- Massachusetts A. I. Bourne (July 24): Not much damage in the western part of the State. Injury in western Middlesex County estimated at 60 per cent of normal; seems to prefer Duchess apples. Unusually serious in Bristol County, 25 to 50 per cent of fruit on well-sprayed trees. In Plymouth County it is the worst orchard pest.

- New York C. R. Crosby and assistants: In Columbia County injury caused by this insect does not appear to be as serious as in previous years. In Dutchess County injury is rather severe in some orchards, and in one orchard 50 per cent of the fruit is injured.
- Wisconsin S. B. Fracker (July 15): Reported from Dodge, Monroe, and Pierce Counties, attacking apple.
- Missouri L. Haseman (July 11): This pest is with us every year but this is a real epidemic in the Waverly district. Four curculios on some apples, and is more serious in abundance as compared with an average year.

ROSE LEAF-BEETLE (Nodonota puncticollis Say)

- New York C. R. Crosby and assistants: In Dutchess County this insect has been noted injuring apples and pears but so far the injury has been slight. In Ulster County injury by this insect is rather slight but widespread.
- New Jersey R. B. Lott (July 2): This chrysomelid was doing considerable damage to young fruits on apples, sometimes eating half of apples the size of a walnut.

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

- Massachusetts A. I. Bourne (July 24): Gradually increasing in numbers. It has now spread to practically every part of the State. In unsprayed orchards or those which were not treated with oil during the dormant season, the pest is occasionally assuming tremendous proportions, and, if this condition of drought persists for any length of time, the effects will in some cases be very marked.
- Connecticut Philip Garman (July 22): Very little work of this pest has so far been seen in New Haven County.
- Indiana B. A. Porter (July 25): Conspicuous injury was noted in one small plum orchard near Decker, on July 24.

PEAR

PEAR SLUG (Caliroa cerasi L.)

- Indiana H. F. Dietz (July 11): Pear and cherry slugs are more abundant this year than at any time during the last five seasons.

CLOVER MITE (Bryobia praetiosa Koch)

- Oregon Don C. Mote (June 21): At Medford damage is severe on pears, according to county agent's report.

PEACH

ORIENTAL FRUIT MOTH (Laspeyresia molesta Busck)

Connecticut Philip Garman (July 22): Infestation late but rapidly increasing in amount in Fairfield County.

Southeastern States A. L. Quaintance: The oriental fruit moth has been determined by State and Federal inspectors to be present in numerous places in Georgia, Alabama, Tennessee, and Mississippi. It has been found in two or three localities in North Carolina.

SOUTHERN GREEN PLANT-BUG (Nezara viridula L.)

Georgia Oliver I. Snapp (July 1): A knotty condition of the fruit in a peach orchard at Albany is common, having resulted from the feeding of the southern green plant-bug earlier in the season.

Mississippi Oliver I. Snapp (July 12): Many peaches in an orchard at Canton have been rendered unmerchantable on account of injury from the southern green plant-bug.

A LANTERN FLY (Fulgoridae)

Georgia C. H. Alden (June 30): These nymphs were found attacking peach twigs but caused less injury than on the honeysuckle at Fort Valley.

SAY'S BLISTER BEETLE (Pomphopoea savi Lec.)

New York C. R. Crosby and assistants: Several outbreaks reported from Ontario County. In Wayne County another orchard was found infested which was not previously reported.

SHOT-HOLE BORER (Scolytus rugulosus Ratz.)

Georgia O. I. Snapp (June 20): The fruit-tree bark-beetle is reported abundant in northwestern Georgia, and has been found in one orchard attacking apparently perfectly healthy peach trees.

Indiana J. J. Davis (July 22): Further reports of injury by the shot-hole borer have been received from the southern half of the State and we anticipate further trouble from this source because of the weakened condition of the trees following the severe winter and the recent San Jose scale infestations.

CHERRY

JUNE BEETLES (Phyllophaga spp. and Ligyrus gibbosus DeG.)

Missouri A. C. Burrill (June 13): So badly stripped two young cherry trees at Jefferson City that the owner came to county agent for advice.

FRUIT-TREE LPAF-BEETLE (Syneta albida Lec.)

Oregon Don C. Mote (June 14): No adults present now. Many reports of damage, however, at Salem. Quite noticeable on fruit being picked now. The dried feeding puncture lowers the quality of the cherry.

PLUM CURCULIO (Conotrachelus nenuphar Hbst.)

Maine Edith M. Patch (July 16): Reported from Bath, attacking Montmorancy cherries, not a single one found good.

New York C. R. Crosby and assistants: First injury noted in Chautauqua County on June 19, attacking cherry.

CHERRY FRUIT-FLY (Rhagoletis cingulata Loew)

California Weekly News Letter, State of California, Vol. 6, No. 15, July 26: It has been determined by the Director of Agriculture that an insect, a species of Trypetidae, known as the cherry fruit-fly, Rhagoletis cingulata, exists in portions of the State of Oregon, and that cherries are a host fruit of this insect. It has been further determined by the Director of Agriculture that the cherry fruit-fly is now known to exist in that portion of the State of Oregon known as the Dalles section of Wasco County and the Milton-Freewater section of Umatilla County.

CHERRY APHID (Myzus cerasi Fab.)

New York C. R. Crosby and assistants: In Ontario County they were found on both sour and sweet cherries quite commonly.

Wisconsin S. B. Fracker (July 15): Reported from the following counties: Dodge (bad) and Florence, attacking cherry.

PLUM

PLUM CURCULIO (Conotrachelus nenuphar Hbst.)

Indiana H. F. Dietz (June): The plum curculio has been unusually abundant on apples, cherries, and plums.

JOHANNSENYMYIA POLITA

New York C. R. Crosby and assistants: Numerous at Pavilion on the foliage of plum trees.

PLUM PULVINARIA (Pulvinaria amygdali Coll.)

Kansas J. W. McColloch (July 15): Leaves from a plum tree were received from Wakeeney heavily infested with this scale. This is the first record of this insect from Kansas since 1895 when it was found on a plum at Wichita.

APHIDIDAE

Wisconsin S.B. Fracker (July 15): Hysteroneura setariae Thos. was reported from Dane, Marinette, and Oconto Counties, while Rhopalosiphum prunifoliae Fitch and Anuraphis cardui L. were reported from Rock and Walworth Counties.

RASPBERRY

RASPBERRY MAGGOT (Phorbia rubivora Coq.)

New York C. R. Crosby and assistants: Infested raspberry canes were received from Greene.

RASPBERRY FRUITWORM (Byturus unicolor Say)

New York C. R. Crosby and assistants: On July 5 this insect was abundant in several fields in Wayne County, attacking raspberries.

RASPBERRY CANE-BORER (Oberea bimaculata Oliv.)

Maine E. M. Patch (July 15): Excessively abundant at Bucksport and Cumberland Center, attacking raspberries and blackberries.

GRAPE

ROSE-CHAFER (Macrodactylus subspinosus Fab.)

Massachusetts A. I. Bourne (July 24): The rose-chaffer has been unusually abundant and, contrary to its usual habits, has turned its attention to a considerable degree to attacking foliage and even young fruits of apple. It would appear that the heaviest damage has been done to orchards in the eastern half of Worcester County, and in Middlesex, although definite reports of this nature were received from orchards in Bristol and Plymouth Counties where, in some cases, the estimated amount of injury to the fruit equalled that done by the red-bug in a normal season.

New Hampshire P. R. Lowry (July 19): Has been very numerous this year at Durham.

New York C. R. Crosby and assistants: In Dutchess County this pest was observed on apple and grape on June 23. Has been doing serious damage to grapes in some cases. At Syracuse, on July 4, they were eating everything in sight, the orchards, vineyards, etc., being overrun with them. In Dutchess County, on July 5, they had caused considerable injury in some vineyards.

Michigan R. H. Pettit (July 22): The rose-chaffer is worse in Michigan than for many years past. This creature is working on ornamentals, apples, grapes, and on most everything else.

GRAPEVINE APHID (Macrosiphum illinoisensis Shinn)

Mississippi H. W. Allen (July 23): Early in the present month the young terminal shoots of grape were heavily infested with the brown grape aphid at A. & M. College. They have now become greatly reduced in numbers and are difficult to find.

GRAPE-PLUME MOTH (Oxyptilus periscelidactylus Fitch)

New York C. R. Crosby and assistants: Larvae noted in several vineyards in Dutchess County, but are not causing serious damage.

EIGHT-SPOTTED FORESTER (Alypia octomaculata Fab.)

Indiana H. F. Dietz (July 24): The eight-spotted forester is more abundant than for several years past. It is quite abundant on grape, in the northern half of the State.

GRAPE LEAFHOPPER (Erythroneura comes Say)

New York C. R. Crosby and assistants: In Chautauqua County this insect has been greatly reduced in numbers by the recent rains and storms so that now they are rather scarce, while in Monroe County they are beginning to become abundant.

Nebraska M. H. Swenk (June 15-July 10): From Clay County a report of an abundance of the grape leafhopper on woodbine vines was received.

BANDED LEAFHOPPER (Erythroneura tricineta Fitch)

Texas D. C. Parman (June 25): The banded leafhopper has been doing heavy damage to grape arbors during the last four years and in many cases has killed out all of the vines except the Black Spanish or Mission grape. The leaves usually fall from the vines during the latter part of July or August. The damage this year at this date is apparently more than usual.

CURRENT

CURRENT AND GOOSEBERRY MAGGOT (Epoclera canadensis Loew)

Oregon Don C. Mote (May 23): Ten bushes heavily laden. Picked a quart and almost every currant, green and ripe, is stung, and opening where blight is, found white worm, one-eighth inch in length, at Roseburg.

CURRENT STEM-GIRDLER (Janus integer Norton)

New York C. R. Crosby and assistants: The tips of over half the young shoots girdled in a number of plantings in Chautauqua County.

CURRENT APHID (Myzus ribis L.)

- New York C. R. Crosby and assistants: (June 17): Infested leaves received from Candor. (June 20): In Chautauqua County this insect was observed leaving black currant in great numbers.
- Wisconsin S. B. Fracker (July 15): Reported from Dodge (bad), Eau Claire, Marinette, Racine, Rock, Walworth, and Wood Counties, attacking currant.

PECAN

PECAN NUT CASE-BEARER (Acrobasis hebescella Hulst)

- Georgia John B. Gill (June 30): The pecan nut case-bearer, Acrobasis hebescella Hulst , has been very destructive in pecan orchards around Eaconton, DeWitt, Putney, and Albany, during the present season. The infestation at Thomasville is considerably lighter than that of the Albany district. Much damage has been done by the larvae of the first generation, especially since there was such a small crop of nuts set in most orchards of this general region. The parasitic enemies of this pest are becoming quite abundant at this writing and it is not expected that the second generation will be very large.
- Mississippi R. P. Colmer (July 10): In unsprayed orchards the pecan nut case-bearer has caused loss of about half the crop. Where arsenical sprays were used the loss has been controlled to a great degree.

PECAN LEAF CASE-BEARER (Acrobasis nebulella Riley)

- Georgia John B. Gill (June 30): The moths of the pecan leaf case-bearer are commonly observed at this time in pecan orchards of southern Georgia. Egg laying has been in progress for several weeks and present indications point to a heavy infestation for another year. Doubtless many growers will spray their orchards during August and September for the control of this insect.

FALL WEBWORM (Hyphantria cunea Drury)

- Georgia Oliver I. Snapp (June 23): The fall webworm has started to attack pecans in this section (Perry). Several nests were found today.
- John B. Gill (July 17): The fall webworm is occurring in injurious numbers in many pecan orchards of this section (Thomasville). The larvae of the second generation will likely cause considerable damage in unsprayed orchards.

Mississippi R. P. Colmer (July 10): The fall webworm makes earliest appearance in several years in Jackson County. Persimmon and hickory in woods completely defoliated. Is being controlled in orchards by burning with torches. Damage is great in poorly kept orchards.

K. L. Cockerham (July 15): Severe outbreaks of the fall webworm have occurred much earlier this spring than usual. On June 15 I noted the owner of a 600-acre pecan grove using hired labor to clip egg clusters and broods of young worms from the trees, so severe was the infestation. All through the Gulf Coast section the infestation has been early and in most cases rather severe.

PECAN SPITTLE-BUG (Clastoptera obtusa Say)

Mississippi R. P. Colmer (June 30): Largest infestation of spittle-bugs in years in Jackson County. Where spraying for pecan scab is practiced, the spittle-bug is controlled completely.

(Phylloxera spp.)

Mississippi R. W. Harned (July 7): Are still apparently more numerous on pecan trees throughout this State than during any recent year. Many more complaints in regard to these insects have been received this year than at any time in the past. Most of these complaints have been received from the western part of the State.

COSSID BORER (Cossula magnifica Streck.)

~~Alabama~~ John B. Gill (July 17): A report from Fowl River states that the hickory cossid borer is doing some damage to orchard pecan trees of that section.

WALNUT CATERPILLAR (Datana integerrima G. & R.)

Georgia John B. Gill (July 17): Occasional colonies of the walnut caterpillar are observed on pecan trees, but the insect does not appear to be as prevalent as usual for this season of the year.

LITTLE HICKORY APHID (Monellia caryella Fitch)

Georgia John B. Gill (July 17): The little hickory aphid is now appearing in large numbers on the foliage of pecan trees in that section.

CRANBERRY

CRANBERRY WEEVIL (Anthonomus suturalis Lec.)

Massachusetts A. I. Bourne (July 24): The cranberry snout-beetle or weevil has been found quite widely distributed over the Cape section and, in a few isolated cases, has caused 90 to 95 per cent injury. This pest, however, covers only a relatively small acreage of bog land in its area of infestation.

BLACK-HEADED CRANBERRY WORM (Rhagothota naevana Hbn.)

Massachusetts A. I. Bourne (July 24): The black-headed fireworm is present in about normal abundance.

ROSE-CHAFER (Macrodactylus subspinosus Fab.)

Massachusetts A. I. Bourne (July 24): Reports from the Cape region, from our cranberry substation, note the abundance of rose-chafers and that they have been even found on cranberry bogs, although no extensive amount of feeding by them has been noted to date.

GIPSY MOTH (Porthetria dispar L.)

Massachusetts A. I. Bourne (July 24): Mr. Lacroix, of the cranberry substation, reports that the gipsy moth larvae are present in considerable abundance on several cranberry bogs in southern Plymouth County, although not to be seen in any great numbers in adjoining woodland or in orchards near by.

TRUCK - CROP INSECTS

MISCELLANEOUS FEEDERS

PAINTED LADY BUTTERFLY (Vanessa cardui L.)

Ohio

T. H. Parks (June 29): These larvae are now devouring Canada thistles in the northwestern quarter of the State. Many counties report thistles being devoured during the last week of June. The larvae are also reported feeding on plantain and timothy to a small extent. Caterpillars were pupating June 29. No migration of butterflies was reported.

Michigan

R. H. Pettit (July 1): This State is, experiencing an outbreak of a butterfly larva which I suspect is Vanessa cardui. The larvae have appeared in the western part of the State in such numbers that they practically covered the ground and have been the occasion of much excitement among county agents and growers who expect the larvae to attack oats, corn, and other valuable crops just as soon as they finish on thistles. The thistles have been completely killed out in many fields and very marked good has been done at the expense of a small amount of peppermint and soybeans. Down in the peppermint belt at Mentha it was necessary to spray some new fields of peppermint in order to save the stand. However, the amount of real damage done by this creature is negligible and the amount of good very great. This larva happens to be here at the time when armyworms are starting in to make trouble and, unfortunately, the two are confused. (July 22): Our larvae ~~and~~ thistles, which proved to be Vanessa cardui, are through working and the adults are now flying. Great good has resulted from the enormous numbers which worked over the State this year.

Indiana

J. H. Davis (July 22): Additional reports on the thistle caterpillar show that this caterpillar occurred throughout the State and attacked especially Canada thistle, burdock, and hollyhock. No injury to cultivated crops has been reported, excepting in one instance the county agricultural agent at Angola, in the extreme northeastern corner of the State, reported injury to a field of tansy.

Indiana

H. F. Dietz (July): The thistle caterpillar was responsible for considerable injury at Indianapolis and other points to ornamental plants such as Mexican thistle (Echinops), bugloss (Anchusa), and hollyhocks.

Illinois

W. P. Flint (July 21): Adults of this species were very abundant in May and the larva was more abundant than ever before recorded from this State. The area over which they occurred ~~in greatest numbers was confined to the northern two-thirds~~ of the State. Larvae were found feeding on dog fennel, thistles of all species, burdock, cocklebur, hollyhock, and sunflowers. In one case larvae of this species almost completely defoliated

6 acres of soybeans. None of the bean plants were killed but the crop received a serious set-back and will probably make a lighter yield than would have been the case had this insect not fed upon it. Parasites are now greatly reducing the numbers of larvae, and while second-brood adults are abroad, they are not appearing in large numbers.

Minnesota

A. G. Ruggles (July 9): Another interesting insect to report is one that is feeding on Canada thistle. This particular one has caused a considerable lot of interest among the farmers in general and we have had a great many specimens sent in with request that we rear the insect and send it out to them to control Canada thistles whenever abundant.

Oregon

Don C. Mote (May 20): Attacking Amsinckia intermedia, "fiddle neck," at Medford. (June 4): Report of extensive infestation on Canadian thistles in Benton County. Many larvae found dead, probably caused by some wilt or fungus.

Mexico and Southwest

A. W. Morrill (July 11): Migrating larvae of this butterfly were noted in enormous numbers crossing a desert road in the Yaqui Valley near Cajeme, Sonora, Mexico, on the 3d and 4th of March. No adults were seen at this time. The caterpillars had been feeding on a malvaceous plant resembling, but probably not identical with, Sphaeralcea emoryi. On March 8 the caterpillars were noted in large numbers on the desert near Gila Bend, Maricopa County, Arizona, and it was feared that they might prove destructive to cotton on ranches in that vicinity.

It was reported that the butterflies had been very abundant for several days preceding my visit at Gila Bend, but on March 8 they were comparatively scarce. Eggs were found on common globe mallow and larvae were found in small numbers on this plant. In the desert the insects had developed principally on an unidentified plant, which was practically stripped of foliage wherever found. On March 23 another brood of adults was appearing in the vicinity of Gila Bend. Eggs were being deposited in large numbers on globe mallow but none could be found on Sphaeralcea emoryi. Many butterflies were present in the alfalfa fields, but no eggs were being deposited on alfalfa.

Early in May, when stopping at Los Mochis in Sinaloa, Mexico, I noted that the painted lady butterfly was fairly common and that the larvae were common on globe mallow, but no extensive migration of adults, such as occurred in northern Mexico, Arizona, and California, was noted by entomologists stationed in this part of the State of Sinaloa. In the Gila Bend section of Arizona the butterflies did not show any interest in volunteer cotton sprouts.

GARDEN WEBWORM (Loxostege similalis Guen.)

Arkansas

T. Roy Reid (June 19): Dwight Isely, associate entomologist, College of Agriculture, has examined a number of the specimens of the insect which have been reported as armyworms. He states that the insect is the garden webworm. A letter I have just received from him states that the garden webworm is covering a widespread area

in the State this year. He found a considerable number of these worms around Fort Smith Tuesday. He also found them in cotton fields visited in Texarkana on Wednesday. They also have been reported in a number of other sections in the State.

SEED-CORN MAGGOT (Hylemyia ciliatara Rond.)

- Ohio E. W. Mendenhall (July 6): This insect destroyed a great deal of seed corn and caused the farmers to replant a great deal of corn in Champaign County.
- Minnesota A. G. Ruggles (July 9): We have had more than the usual number of complaints of the seed-corn maggot, not only working in corn but in some places destroying large areas of beans.

POTATO AND TOMATO

COLORADO POTATO BEETLE (Leptinotarsa decemlineata Say)

- New York L. C. Tyler (June 21): Potato beetles are hatching rapidly in Nassau County and oviposition is heavy.
- Rhode Island A. E. Stene (July 18): The potato beetle seems to be present in fewer numbers than common.
- Indiana C. R. Cleveland (July 8): Nearly full-grown potato beetles larvae were common on tomato at Kempton and some plants were considerably defoliated.
- Wisconsin S. B. Fracker (July 15): Reported from the following counties: Barron, Brown, Crawford, Dodge, Eau Claire, Fond du Lac, Langlade, Oconto, Price, Washington, and Waushara.

POTATO FLEA-BEETLE (Epitrix cucumeris Harr.)

- New York P. H. Allen (July 4): Flea-beetles caused considerable injury to plants in Genesee County.
- D. D. Ward (July 5): Injury reported from a number of localities in Onondaga County.
- North Dakota R. L. Webster (June 28): Foliage of early potatoes at Fargo severely damaged by these beetles.
- Nebraska M. H. Swenk (June 15-July 10): The potato flea-beetle is putting in an appearance in such numbers as to indicate that it will duplicate its serious injury of last season in the potato-growing districts of both the northeastern and western parts of the State.
- Wyoming C. L. Corkins (July 10): This pest is worse than usual this year, but is now checked by spraying. Attacking cucurbits, beans, and potatoes at Wheatland.

POTATO APHID (Macrosiphum solanifolii Ashm.)

- Connecticut M. P. Zappe (July 1): Aphids not very plentiful yet, but are quite heavily parasitized at Branford.

New York

L. C. Tyler (July 5): Aphids are now showing up in quite considerable numbers in Nassau County.

W. B. Davis (July 5): Aphids have been found in several fields in Suffolk County but at present are not in sufficient numbers to cause any trouble.

POTATO LEAFHOPPER (Empoasca mali LeB.)

Wisconsin

S. B. Fracker (July 15): Reported from Jackson County.

BLISTER-BEETLES (Meloidae)

Maine

E. M. Patch (July 5): Report of Macrobasis unicolor from Island Falls states "present in thousands, many hills having from 50 to 100 on them."

Kansas

J. W. McCulloch (July 18): Several species of blister-beetles have been reported as stripping the foliage of various garden plants, but particularly potatoes and tomatoes.

TOMATO SUCKFLY (Macrolophus separatus Uhler)

Texas

M. M. High (July 25): The tomato suckfly, which has caused serious injury to tomatoes in certain localities in southern Texas the past few years, has now been reported as far east as Troup. When this insect was first observed in abundance about Brownsville a number of years ago, it was attacking a wild tomato but in recent years it has become a major pest of tomatoes in the lower Rio Grande Valley.

TOMATO FRUITWORM (Heliothis obsoleta Fab.)

Mississippi

M. M. High (July 25): The tomato fruitworm has been unusually abundant on tomatoes, beans, and corn in southern Mississippi this season. It has been found in lesser numbers on several other truck crops. Among the remedies tried arsenate of lead applied straight as a dust and sprayed at the rate of 2 pounds to 50 gallons of water gave about equal results. Free nicotine dust gave very good results early, while the larvae were small and before they entered the fruit, but had little effect on the larvae in the fruit.

CABBAGE

CABBAGE MAGGOT (Hylemyia brassicae Bouche)

New York

C. R. Crosby and assistants: Serious damage to cabbage seed beds by this insect was reported from Ontario, Onondaga, Monroe, and Nassau Counties.

Illinois

C. C. Compton (June 30): The cabbage maggot is more numerous and destructive than usual this year.

Wisconsin

S. B. Fracker (July 15): Reported from Barron County on cabbage and from Oneida on radish.

HARLEQUIN CABBAGE BUG (Murgantia histrionica Hahn)

Missouri W. M. White (July 9): Feeding on horseradish and cauliflower.

STRAWBERRY

STRAWBERRY LEAF-ROLLER (Ancylis comptana Froehl.)

Indiana H. F. Dietz (July 24): The strawberry leaf-roller is apparently not as ~~serious~~ as in past years.

Oregon Don C. Mote (May 24): Twenty per cent of a 3-acre patch of strawberries reported damaged at La Grande, by county agent.

LATE STRAWBERRY SLUG (Empria maculata Norton)

Nebraska M. H. Swenk (June 15-July 10): The late strawberry slug is reported as badly injuring strawberries in Madison County.

STRAWBERRY ROOT-WEEVIL (Brachyrhinus ovatus L.)

Oregon Don C. Mote (June 10): Adults attacking strawberries at Sherwood.

WHITE GRUBS (Phyllophaga spp.)

Indiana H. J. Davis (July 22): Reported injuring strawberries July 16 at Waynetown in Montgomery County.

CLICK-BEETLES (Elateridae)

Massachusetts A. I. Bourne (July 24): We have received one report of a very severe injury to ripening strawberries caused by adult click beetles. An estimate of the amount of injury to the fruit in one instance places the figure at 75 per cent. The writer stated that quantities of beetles had been taken out of the berries at the time of picking, the beetles having eaten clear into the heart.

ASPARAGUS

ASPARAGUS BEETLE (Crioceris asparagi L.)

New York K. E. Paine (June 21): Some spraying has been done in the control of this pest in Chautauqua County.

Wisconsin S. B. Fracker (July 15): Reported from Brown, Fond du Lac, and Winnebago Counties.

Washington E. J. Newcomer (July 9): Specimens of the eggs, larvae, and adults of this beetle were brought to the writer early in June with the statement that they were common on asparagus in several backyards in the City of Yakima. As far as I have been able to learn, this is the first time this beetle has been found in the State. This information was turned over to the local representative of the State Department of Agriculture, with the suggestion that it

might be possible to eradicate the beetle here. There is a considerable planting of asparagus in the Yakima Valley that would be affected ~~if~~ the beetle should become established.

Oregon Don C. Mote (June 17): Adults are attacking asparagus at Hubbard.

MEXICAN BEAN BEETLE (Epilachna corrupta Muls.)

Virginia Neale F. Howard (July 11): A number of reports of damage have come from Wise, Lee, Scott, Russell, and Washington Counties.

West Virginia W. D. Click through W. E. Rumsey (July 1): A report from Wayne, in Wayne County, is the first of the insect in this State.

Neale F. Howard (July 15): During the early part of the month the insect was reported from Campbell, Boone, Raleigh, Logan, Mingo, and Wayne Counties.

North Carolina F. Sherman (July 5): The first overwintered adults of the season were sent on June 2. Since then complaints have been frequent and there is every prospect that the damage will be serious throughout our infested area; in Haywood County on June 15 I examined a row of garden snaps which was 43 yards long, finding 30 adults and 41 egg masses. Copulation was occurring, but no larvae yet in evidence.

Georgia Neale F. Howard (July 15): Reports were received of the presence of the beetle in Chattahoochee, Crawford, Marion, Monroe, and Taylor Counties during the month.

John B. Gill (July 17): The Mexican bean beetle is causing serious damage to bean foliage at Thomasville at this writing. The insect did not seem to develop very rapidly during the early spring, but now larvae and adults may be found quite abundantly in most bean patches within a radius of a few miles from Thomasville. The area of infestation is being materially increased, although the insect does not appear to spread so rapidly in this southern latitude as is the case in other infested sections farther North.

Neale F. Howard (July 21): L. W. Brannon found the beetle in Grady County, adjoining Thomas County, and close to the Florida line. Three hundred and ninety square miles are now covered by the beetle as compared with 250 last year.

Ohio J. E. Graf (July 12): We have received a complaint from Portsmouth, Scioto County, showing that the Mexican ~~bean~~ beetle is causing a considerable injury to beans in that locality.

Neale F. Howard (July 15): The Mexican bean beetle was found at Circleville. (July 21): The beetle is doing serious damage in Scioto and Pike Counties, where it was not known to occur a year ago. Mr. DeLong reports the completion of the life cycle of the earliest progeny of the overwintered beetles at Columbus.

D. M. DeLong (July 24): Found the Mexican bean beetle at Findlay. This is in Hancock County in the northwestern part of the State about 20 miles from the Michigan border.

Indiana

J. J. Davis (July 22): The first authentic report of the occurrence of the Mexican bean beetle in this State was received July 21, the specimens having been collected by the county agent at Madison July 19. No further information is available on this infestation but the record is authentic as the county agent sent in specimens of larvae which are about two-thirds grown.

Kentucky

H. Garman (July 24): The Mexican bean beetle seems to have taken possession of nearly or quite all of the northern counties in the eastern half of the State during the present season. My latest reports show that it is spreading rapidly and doing a good deal of mischief. Specimens have recently come from Lincoln and Mason Counties and unquestionable information as to its presence in Floyd, Jefferson, and other adjacent counties, showing that it has spread over all our territory from Meade and Simpson Counties on the West to the eastern boundary of the State.

Tennessee

Neale F. Howard (July 21): In the vicinity of Newport the infestation is severe and unsprayed beans are destroyed or heavily infested. Excellent results are being obtained on large acreages again this year with magnesium arsenate used as a spray. Many reports of serious damage have come from other points in eastern Tennessee.

Alabama

Neale F. Howard (July 15): During the month reports of the beetle were received from Elmore and Chambers Counties. (July 21): The infestation is increasing and ~~some~~ fields of beans have been destroyed. In general, the infestation has been lighter than in previous years and some early beans matured without serious injury from the beetle. The survival over the winter in hibernation cages was lower than the previous year.

Mississippi

R. W. Harned (July 7): The Mexican bean beetle has now been found on two properties in the northern part of Lee County. This makes five counties in the northeastern part of the State that are now infested: Itawamba, Tishomingo, Alcorn, Prentiss, and Lee.

Wyoming

C. L. Corkins (July 10): I have neglected to report this pest, which I found upon coming to the State last year. This is apparently, from all records available, the third season here of this new pest. It has extended its range 30 miles north of last year's infestation.

SEED-CORN MAGGOT (Hylemyia cilicrura Rond.)

New York

C. R. Crosby (June 19): Infested plants received from Rochester, (July 3): About one-half of bean crop destroyed in some fields at Ithaca. (July 7): A 6-acre field badly damaged at Shortsville.

Michigan

R. H. Pettit (July 22): We have had serious attacks of the bean and seed-corn maggot, worse than any other in several years. Inquiry into conditions shows in most cases that the land was seeded late, owing to our extremely late spring, and that the seed was sown deeply, often with fresh manure applied just before plowing. These conditions are undoubtedly very favorable from the standpoint of the insect. Beans-growers are very prone to blame the work of the bean maggot on the bean weevil and are constantly writing in to get some statement whereby they can place the blame on this other insect and, consequently, claim damages from the seedsman. This mistaken notion on the part of the growers has necessitated the publication of many articles exonerating seedsmen from responsibility in causing the outbreak of maggots.

BEAN TINGITID (Gargaphia iridescens Champ.)

Mexico

R. H. Van Zwallowagen (June 25): Eggs and all stages of this insect were abundant on beans near Los Mochis, Sinaloa, in February. Determined by Dr. Carl J. Drake.

PEAS

PEA APHID (Pisum pisi Kalt.)

Rhode Island

A. E. Stene (July 18): The pea aphid has shown up in a few places in considerable quantities but I have examined a large number of fields of peas where apparently not a single aphid could be found.

New York

L. C. Tyler (June 21): Aphids are becoming very numerous in some plantings in Nassau County.

W. B. Davis (June 28): Rather abundant in certain plantings in Suffolk County.

Wisconsin

J. E. Dudley, Jr. (June 30): Attacking peas in Columbia and Dodge Counties. They are slightly more abundant than normal, considering a late season, and have greatly increased since last month by 1,000 per cent or more. Great abundance of syrphids and coccinellids of several species, each attacking aphids in alfalfa. Fungous disease prevalent in certain fields and has cut aphid down to small fraction of its original numbers in many fields of alfalfa and peas. Syrphids and coccinellids still scarce in pea fields. Unusually cold, wet season, in southern part of State from three to four weeks late. All the way from 15 to 20 per cent of crop destroyed in some pea fields and 90 per cent or over in other pea fields and most alfalfa fields. In one or two alfalfa fields watched constantly the fungous has twice cleaned up aphids and during the last three days it has spread with the greatest rapidity to certain pea fields. High per cent of syrphid larvae found parasitized.

B. B. Fracker (July 15): Reported from Door County.

CUCUMBERS

STRIPED CUCUMBER BEETLE (Diabrotica vittata Fab.)

- Rhode Island A. E. Stene (July 18): The striped cucumber beetle has been quite abundant.
- New York L. C. Tyler (June 21): They are found riddling the foliage of cucumbers, squash, and melons in Nassau County, making it necessary to apply control measures everywhere.
- W. B. Davis (June 28): Present in large numbers in Suffolk County.
- Michigan R. H. Pettit (July 22): The cucumber beetle has appeared in force in the State this year. We have recommended arsenate of soda and gypsum dust which is apparently being used successfully, although some growers seem to prefer using the more expensive nicotine dust and enjoy seeing the immediate discomfiture of the little pests.
- Wisconsin S. B. Fracker (July 15): Reported from the following counties: Barron, Brown, Crawford, Dane, Eau Claire, Fond du Lac, Jackson, Jefferson, Portage, Washington, Waushara, Winnebago, and Wood.
- Nebraska M. H. Swenk (June 15-July 10): On cucurbits the striped cucumber beetle continues more numerous than usual.
- Oregon Don C. Mote (May 22): Attacking cucumbers at Grants Pass.

TWELVE-SPOTTED CUCUMBER-BEETLE (Diabrotica 12-punctata ~~Oliver~~)

- Indiana H. F. Dietz (June): The twelve-spotted cucumber beetle has been very abundant. In some cases they have riddled young bean plants badly. These beetles have also been found feeding on such unusual things as young peach foliage early in the month. This is due to the fact that its normal food of corn and melons was lacking at this time.

MELONS

MELON APHID (Aphis gossypii Glov.)

- Arkansas A. J. Ackerman (July 17): During the last two weeks several complaints have been received of injury to cantaloupes and water-melons by this aphid.
- Nebraska M. H. Swenk (June 15-July 10): The melon aphid, rather oddly, has not as yet appeared in its usual abundance.

STRIPED CUCUMBER BEETLE (Diabrotica vittata Fab.)

- Arkansas A. J. Ackerman (July 17): Requests are often received at this station for information on the control of this insect from growers of melons. First-brood adults are very numerous now.

SOUTHERN GREEN STINK-BUG (Nozara viridula L.)

Louisiana

Bureau of Entomology Monthly Letter, No. 122 (June): C. E. Smith, of Baton Rouge, reports that the southern green stink-bug has been the cause of severe injury to watermelon and cantaloupe vines in this State. At the time of his visit the insect had largely disappeared but considerable injury had already been caused, the growing tips of the vines having been killed by punctures made by the insect. Cantaloupe vines suffered the heaviest injury.

CUTWORMS (Noctuidae)

Oregon

Don C. Mote (June 3): Cutworms have and are yet doing damage to large areas of watermelon seedlings at The Dalles.

SQUASH

SQUASH BUG (Anasa tristis DeG.)

Massachusetts

A. I. Bourne (July 24): First-instar nymphs of squash bugs were noted here at the College about July 6 and 8. County agent of Middlesex County reports that they have made their appearance on greenhouse cucumbers in considerable quantities, for the first time within his experience.

Nebraska

M. H. Swenk (June 15-July 10): Complaints of injury by the squash bug began to be received during the third week in June.

SQUASH LADY-BEETLE (Epilachna borealis Fab.)

North Carolina F. Sherman (July 5): This species is now sent in more often than formerly, being often mistaken for the Mexican bean beetle. This mistake is all the more natural by reason of the fact that adults of this species often occur on beans.

SQUASH-VINE BORER (Melittia satyriniformis Huebn.)

Massachusetts A. I. Bourne (July 24): The first eggs of the squash-vine borer were found in the field here at Amherst on July 5 and from that date on to the present can be found in considerable abundance.

ONIONS

ONION THRIPS (Thrips tabaci Lind.)

Connecticut

R. B. Friend (July 12): Thrips are very numerous on set onions at Wethersfield but injury is not sufficiently severe to wilt the plants.

ONION MAGGOT (Hylemyia antiqua Meig.)

New York

A. G. Newhall (June 28): Unusually abundant this year at Williamson. (July 5): They continue to take an unprecedented toll and the end is not yet in sight as the flies were observed still laying eggs on July 2.

W. D. Davis (July 5): Have caused heavy loss in one field in Suffolk County.

Wisconsin

S. B. Fracker (July 15): Reported from Brown and Oneida Counties.

Illinois

C. C. Compton (July 12): The first brood of onion maggots have severely damaged onion sets in Cook County, causing a loss of 33 per cent to the growers. Second-brood adults are emerging in large numbers at this time.

CELERY

PARSNIP LEAF-MINER (Acidia fratria Loew.)

Connecticut

R. B. Friend (July 12): Very slight infestation at Wethersfield. Probably Acidia fratria Loew. Mines fairly extensive in leaves.

BEETS

SUGAR-BEET WEBWORM (Loxostege sticticalis L.)

Nebraska

M. H. Swenk (June 15-July 10): From Scottsbluff and Kimball Counties come reports of a ~~plentiful~~ ^{plentiful} of the sugar-beet webworm. The first brood of worms of the year began hatching about June 20 and the species was found developing not only on sugar beets but on several others of its food plants as well.

SUGAR-BEET NEMATODE (Heterodera schachtii Schmidt)

Utah

Geo. F. Knowlton (July 11): Considerable damage is being done to beets in northern Utah by the sugar-beet nematode.

ASH-GRAY BLISTER-BEETLE (Macrobasis unicolor Kby.)

Utah

Geo. F. Knowlton (July 15): ~~ASH-gray~~ blister-beetles are damaging mangels in a few fields at Widtsce.

BEET ROOT APHID (Pemphigus betae Doane)

Utah

Geo. F. Knowlton (July 11): The beet root aphid is present throughout the beet-growing area of the State and certain fields in Lewiston and Cornish are being noticeably affected.

SUGAR-BEET ROOT-MAGGOT (Tetanops aldrichi Hendel)

Utah

Geo. F. Knowlton (July 11): The sugar-beet root-maggot is present throughout the northern part of the State and especially doing damage in Cornish, Lewiston, and Trenton.

SPINACH LEAF-MINER (Pegomya hyoscyami Panz.)

New York

L. C. Tyler (June 28): Plentiful on beets and spinach in some places in Nassau County.

Connecticut

R. B. Friend (July 10): Most of the damage to beets and spinach done by this insect occurred in June around New Haven.

MINT

A FLEA-BEETLE (*Halticinae*)

Michigan

L. G. Gentner through R. H. Pettit (July 22): I wish to report the finding of a flea-beetle larva on roots of peppermint which has been working for several years back in the plantations of Mr. Todd of Mentha.

FOUR-LINED PLANT-BUG (*Poecilocapsus lineatus* Fab.)

New York

C. R. Crosby (July 1): A large bed of mint nearly ruined at Buffalo.

SWEET POTATOES

SWEET-POTATO WEEVIL (*Cylas formicarius* L.)

Mississippi

K. L. Cockerham (July 20): At this period of the year I may safely say that there are less sweet-potato weevils in this State than we have had for several years. This is due in part to severe freezes which reached to the coast last winter and caused a goodly portion of the banked tubers to be frozen. Seed and plants have been unusually scarce this spring and the crop in this locality is very short as a result. In a great many instances there are no potatoes planted on the individual farms.

SWEET-POTATO LEAF-BEETLE (*Typophorus viridicyaneus* Crotch)

South Carolina

Philip Euginhill (June 9): Specimens on sweet potato injuring plants near Columbia received on this date.

J. A. Berley (July 8): Reported as doing considerable damage at Blythewood, enough so as to warrant control.

TURNIP

TURNIP APHID (*Rhopalosiphum pseudobrassicae* Davis)

Mississippi

M. M. High (July 25): Did severe injury to the late turnip crop on the Mississippi Coast.

FLEA-BEETLES (*Halticinae*)

Mississippi

M. M. High (July 25): The striped turnip flea-beetle has been doing serious injury to turnips on the Mississippi Coast the past month along with *Phyllotreta bioustulata* Fab. which was found in lesser numbers.

SOUTHERN FIELD-CROP INSECTS

COTTON

BOLL WEEVIL (Anthonomus grandis Boh.)

- North Carolina F. Sherman (July 5): The first specimens on young cotton were found on May 14 in a southern county. The spring emergence has been very light until at this date (July 3) First blooms are appearing with very few fields, if any, having been sufficiently infested to need the "pre-square" applications of ppison. In view of the very light infestation we are emphasizing the gathering and burning of squares, especially in case of those who are not prepared to use the standard dust method later. Our cotton is belated, and the weevils are both belated and scarce; these facts lead us to expect that the dusting point (of 10 per cent) will be reached in most fields later than usual; and that many fields may not need to be dusted, but the continual rains make us uneasy on this point.
- Georgia F. C. Bishopp (July 29): Reports dated July 21 emanating from the county agents in various parts of Georgia show the injury from the boll weevil to be comparatively light, ranging from less than 1 per cent infestation to about 15 per cent.
- Mississippi R. W. Harned (July 7): Boll weevils are apparently less numerous in this State at the present time than at this date during any of the past ten or twelve years. However, there are some boll weevils in cotton fields in every section of the State.
- Oklahoma E. E. Scholl (July 17): The distribution of the cotton boll weevil has been slow up to the present time. The adults of the first brood are now beginning to show some degree of activity and indications are that a large percentage of the second brood will develop successfully because of the fact that we have cloudy and showery weather at the present time. Prof. Sanborn of the College reports some degree of control by parasites and indications are that parasitism will be higher this season than it ever has been.

COTTON LEAFWORM (Alabama argillacea Hubn.)

- Louisiana Geo. A. Maloney (July 23): Report received from Dr. Hunter on this date stating that this insect is present and active at Brownsville and McAllen, Texas. Infestation is reported as light.

COTTON RED SPIDER (Tetranychus telarius L.)

- South Carolina J. A. Berly (July 17): The cotton red spider has attracted attention in various parts of the State though no serious outbreaks have been reported.

SWEET-POTATO BEETLE (Typophorus viridicyaneus Crotch)

- South Carolina J. A. Berly (July 8): Reported feeding on cotton at Anderson.

GARDEN FLEAHOPPER (Halticus citri Ashm.)

South
Carolina

J. A. Berly (July 8): Local damage to cotton adjoining alfalfa fields in Fairfield County.

COTTON FLEA (Psallus seriatus Reut.)

Texas

F. C. Bishopp (July 29): The cotton flea is reported by correspondents of the Bureau of Agricultural Economics as causing serious injury to cotton in Texas.

COTTON APHID (Aphis gossypii Glov.)

South
Carolina

J. A. Berly (July 18): Several inquiries have been received in regard to control from several counties.

Louisiana

Geo. A. Maloney (July 24): Cotton aphids are reported as doing considerable damage to the crop in the vicinity of Port Gibson, Miss., causing serious shedding.

Texas

F. C. Bishopp (June): During the latter part of May and early June many fields of cotton in northern Texas were infested with aphids. While they produced considerable curling and discoloration of the leaves they apparently caused no serious damage.

COTTON SQUARE-BORER (Uranotes malinus Hbn.)

South
Carolina

J. A. Berly (July 21): Reported from Seneca, Oconee County, as not doing serious damage.

Oklahoma

E. E. Scholl (July 17): The cotton square-borer is doing considerably more damage to cotton squares at this time than any other insect in Oklahoma. Parasites are beginning to show up, however, and we hope that the natural control will be complete in a very short time.

COTTON BOLLWORM (Heliothis obsoleta Fab.)

North
Carolina

F. Sherman (July 5): For the third consecutive year we have had reports of this species attacking foliage and stems of young cotton plants in early season, occurring in numbers and showing somewhat the habits of armyworms.

COWPEA POD WEEVIL (Chalcodermus aeneus Boh.)

North
Carolina

F. Sherman (July 5): Each year, and especially since the boll weevil invaded the State, this species is sent with reports of its damage to young cotton plants; it severs young stems and leaf-pedicels, but the injury is usually temporary. The insect is often mistaken for the boll weevil of course.

SUGAR CANE

SMALLER SUGAR-CANE MOTH BORER (Chilo loftini Dyar)

Mexico

R. H. Van Zwaluwenburg (June 25): The most important sugar-cane pest in the State of Sinaloa, breeding throughout the year. This year it greatly outnumbers Diatraea lineolata Walk., between 80 and 90 per cent of all stalks being infested, and about 15 per cent of all joints. Infestation practically uniform in plant and ratoon cane. Other hosts are rice, corn, sorghum, para grass, Johnston grass, and a native river-cane. In volunteer rice this spring it was parasitized by Chelonus sp. to the extent of about 23 per cent. In addition two species of Ichneumonidae parasitize it in this locality.

SUGAR-CANE BORER (Diatraea saccharalis Fab.)

Mexico

R. H. Van Zwaluwenburg (June 25): Next to Chilo the most important pest of sugar-cane in western Mexico. Present in somewhat less numbers this past season as compared with the two previous crops. Primarily a pest of plant cane; infestation in ratoons is invariably much lower. Percentage of stalks infested, season of 1924: Fall and spring plant cane, 60 per cent; ratoons (all ages), 36 per cent. Percentage of joints infested: Plant cane, 8 per cent; ratoons, 4 per cent. From October to May it is present in larval and pupal stages only. Earliest emergence of adult noted this year, May 4. Heavily parasitized by Trichogramma minutum Riley which was already at work on eggs of the first generation early in June. A native ichneumonid also parasitizes this species, but only rarely.

A BLACK BEETLE (probably Eleodes omisa borealis Blais.)

California

E. A. McGregor (June 19): Mr. McLaren, manager, took us over the 2,000-acre ranch at Alpaugh, in Tulare County. We had no trouble finding the cause of the alarm. The offender is a large black tenebrionid beetle. The insect is inactive during the daytime, hiding then under the protection of earth clods, clumps of weed, fence rails, old burlap, etc. From our studies it seemed certain that the pest occurred in this field at the rate of easily 10,000 individuals per acre. Of the 2,000 acres in the entire ranch, 80 acres were heavily infested.

The work consists in gnawing the main stem at the crown of the plant, resulting either in the complete severance of the stem or in toppling it over so that the terminal portion dies. Many plants were thus attacked. The encroachment of the pest seemed to take place chiefly from a wild uncultivated area lying to the south and west of the cotton field. The ranch manager claimed that the migration took place from the southwest, and that the individuals advance at a good rate of travel. The greatest concentration of the pest appeared to be among

the weed growth along fence borders, to which points the beetles were said to retreat with the rising of the sun. However, we had no trouble in finding thousands of individuals concealed about the field.

The ranch authorities had applied poisoned bran about 8 a.m. of the day of my visit. This was ill-advised since the pest had mostly become inactive by that time. However, some few individuals were found that had succumbed to this treatment. It gives promise that if applied with the setting of the sun satisfactory control may follow.

Probably the beetles have been forced to attack the cotton, owing to the destruction of the native plants which constitute the natural food of the pest. In addition, the past winter was a very dry one with a resulting scarcity of native plant growth. This would tend to force insects, wintering through, to migrate to cultivated crops for support.

The fact remains that this *Eleodes* occurs at present as a very bad pest of cotton in the Alpaugh district.

FOREST AND SHADE-TREE INSECTS

MISCELLANEOUS FEEDERS

SNOW-WHITE LINDEN MOTHS (*Ennomos subsignarius* Hüb.)

Indiana

J. J. Davis (July 22): The adult moths of this insect were reported abundant in the vicinity of Portland on July 14.

PERIODICAL CICADA (*Tibicina septendecim* L.)

BROOD XXIII

Illinois

W. P. Flint (July 21): Brood XXIII of the seventeen-year cicada, 13-year variety, has appeared in nearly all wooded sections of Illinois south of a line drawn through Champaign, and Decatur, Ill., and Hannibal, Mo. In many of the woodlands adults have been sufficiently abundant so that the dead tips of twigs may be easily seen when riding on trains. It has not been excessively abundant, however, and has caused very little injury to orchards or shade trees.

Mississippi

R. W. Harned (July 7): Brood XXIII of the periodical cicada has probably now disappeared in this State. No specimens have been received during the past week. This insect was definitely recorded this year from the following counties: Alcorn, Benton, Bolivar, Calhoun, Coahoma, Carroll, Copiah, DeSoto, Grenada, Holmes, Humphreys, LaFayette, Leake, Lee, Leflore, Madison, Marshall, Montgomery, Pontotoc, Prentiss, Rankin, Sunflower, Tate, Tippah, Union, Yalobusha, Washington, and Yazoo.

BROWN-TAIL MOTHS (*Euproctis chrysorrhoea* L.)

New Hampshire

P. R. Lowry (July 19): Found first eggmasses today. This insect is on the increase in southeastern New Hampshire and has stripped a number of orchards at Durham.

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

Indiana

J. J. Davis (July 22): The tussock moth has defoliated linden trees in LaFayette during the past few weeks.

H. F. Dietz (July 24): Tussock moth caterpillars are more abundant than for several years, especially noticeable at Indianapolis and Frankfort.

FALL WEBWORM (Hyphantria cunea Drury)

Mississippi

R. W. Harned (July 7): The fall webworm is very rare at the present time in the northeastern part of the State, but is appearing in large numbers in the southern part. During 1922 and 1923 this insect was much more abundant in the northern part of the State than in the southern part. During the last week in May the moths were abundant and numerous egg masses were noticed. Since then the webs have been conspicuous by their absence. It is thought that natural enemies have held them in check.

BAGWORM (Thyridopteryx ephemeraeformis Haw.)

Kansas

J. W. McColloch (July 18): Reports from the following localities have been received during the past month: Lane, injuring pines and cedars; Garnett, stripping foliage of plum, apple, and cherry, with statement that this insect killed the cedars last year; Coldwater, attacking arborvitae. This report indicates that the bagworm is spreading westward in Kansas.

BOXELDER

A LEAF ROLLER

Wyoming

C. L. Corkins (July 10): Have not reared this through for identification yet. Shade trees and other trees in parks are being ruined by this insect. A roller is also doing damage to apple trees, but it may be another species. These are being reared.

CATALPA

CATALPA MIDGE (Cecidomyia catalpae Comst.)

Indiana

J. J. Davis (July 22): Injury to the tips of branches of catalpa were reported from Marion on July 15. The tips of the branches, usually the first node from the terminal growth, showed an infestation of a cecidomyiid larva in cavities inside of the twigs. These are probably the catalpa midge.

CATALPA SPHINX (Ceratonia catalpae Boisd.)

Indiana

H. F. Dietz (July 11): The first generation of the catalpa sphinx seems to be more abundant than usual this year in spots and many trees showed almost complete defoliation by the end of June. The hatching of the eggs of this caterpillar took place about June 5, and the full-grown caterpillars were leaving the trees by the end

of the month. Parasities seemed to be quite scarce on these first-generation caterpillars. One of the common ground-beetles, Scarites subterraneus Fab., was observed to catch the caterpillars after they left the trees, to drag them into the ground, and there to devour them at leisure.

J. J. Davis (July 22): The catalpa sphinx has been reported very abundant throughout the southern two-thirds of the State, occurring in conspicuous and injurious numbers at least as far north as LaFayette.

FOUR-HORNED SPHINX (Ceratomia amyntor Hbn.)

Ohio E. W. Mendenhall (July 22): Found the four-horned sphinx infesting catalpa trees in Yellow Springs, Green County. Spraying with arsenate of lead is being used to destroy them.

ELM

EUROPEAN ELM SCALE (Gossyparia spuria Modeer)

Indiana H. F. Dietz (July 11): The European elm scale is attracting considerable attention over the whole northern part of Indianapolis in a strip running from 38th Street to 54th Street, and from Millersville across to northern Indianapolis. Inspections were made at Millersville, in northern Indianapolis, and in the vicinity of the State fair grounds. The infestations at Millersville and west of the fair grounds are very heavy. The hatching of this scale began on June 11 and was still in progress on June 30.

Nebraska M. H. Swenk (June 15-July 10): A second infestation of elms by this scale has been found in Nebraska, this time in the town of McCook, Redwillow County.

WOOLLY ELM APHID (Eriosoma americanum Riley)

North Dakota R. L. Webster (June 28): At Fargo this insect was attacking elm. Abundance as compared with an average year seemed greater.

ELM LEAF-BEETLE (Galerucella luteola Muell.)

Ohio E. W. Mendenhall (July 22): First elm leaf-beetles ever reported from Clark County were found on this date. Found on street trees in New Carlisle. The damage is not very great. They had been found in Dayton some years ago.

Michigan R. H. Pettit (July 23): This insect was found at Monroe. Mr. C. L. Burton, county agricultural agent, has just brought in specimens and reports the partial defoliation of a goodly number of elms in the city of Monroe.

ELM LEAF-MINER (Kaliopenusa ulmi Sund.)

New Hampshire P. R. Lowry (June 23): Several camperdown elms severely injured at Bennington.

COCKSCOMB ELM GALL (Colopha ulmicola Fitch)

Indiana

J. J. Davis (July 22): The cockscomb elm gall, mostly Colopha ulmicola, has been received from all parts of the State the past month.

HICKORY

A BORER (Agrilus arcuatus Say)

West
Virginia

Monthly Letter of the Bureau of Entomology, No. 122. (June 1924): Fred E. Brooks, in charge of the Bureau's laboratory at French Creek, W. Va., writes as follows: "Serious injury to young shagbark hickory and pecan trees by Agrilus arcuatus Say has been observed recently in several localities. The larva spends two years in the wood and twice during its life severs the branch or trunk in which it is working. Wood from half an inch to slightly more than an inch in diameter is entirely severed, except the bark, and the part above dies. In one block of young hickory trees in a nursery in Virginia the writer estimated that a hundred dollar's worth of trees had been ruined. Injury very similar in nature and extent to that described above is being done by larvae of Pseudibidion unicolor. This species attacks small hickory and pecan trees and also severs branches of larger trees. In a pecan grove at Petersburg, Va., many fruiting branches were breaking during the month of May as a result of cuts made by the larvae of this species.

SUGAR-MAPLE

MAPLE BORER (Glycobius speciosus Say)

New Hampshire P. R. Lowry (July 9): Sugar-maple shade trees have been severely damaged. Adults are now present in large numbers at Durham.

COTTONY MAPLE SCALE (Fulviharja vitis L.)

Indiana

J. J. Davis (July 22): The cottony maple scale continues to appear in some localities in abundant and destructive numbers, but apparently is not as abundant as the past few years.

OAK

OAK PRUNER (Elaphidion villosum Fab.)

Michigan

R. H. Pettit (July 22): The oak-twig-pruner is attracting more attention than usual this year.

PINE

PINE SCALE (Chionaspis pinifoliae Fitch)

Indiana

H. F. Dietz (July 11): The pine scale continues to be one of the worst pests of the various kinds of pines and spruces that are used in ornamental planting. The hatching of the eggs of this scale took place during the first week in June and owing to the excessive rainfall the young scales did not have an opportunity to crawl

very far. Hence they settled down near the mother scale in large numbers. This will result in the trees shedding a large number of the infested needles owing to the heavy drain on the food supply.

TIP MOTH (Rhyacionia bushnelli Busck)

Nebraska

T. E. Snyder (July 1): A very serious situation has developed in the plantations of the Nebraska National Forests. Plots established in 1909 showed 53 per cent infestation by the tip moth in the fall of 1913, while the same plot in 1923 showed 63 per cent. Damage was so severe that in many cases trees are being killed. The condition is made more serious by the spread of this insect in shipments of Kinkaid trees which are sent out by the Bessey Nurseries every year. About 16,000 of these trees have been distributed so far, and the infestation is appearing in plantations throughout the State.

The reforestation project in the Sand Hills of western Nebraska is being seriously interfered with by this infestation.

Colorado, New
Mexico and
Arizona

T. E. Snyder (July 1): Mr. Rohwer spent some time in Colorado, National Forests and in National Forests in New Mexico and Arizona and reported that tip moth injury was found throughout this region, but not as serious as in Nebraska. The injury in New Mexico and Arizona is due to another species, probably Rhyacionia neomexicana Dyar.

A SAWFLY (Neodiprion pinetum Norton)

Connecticut

W. E. Britton (July 21): Several trees defoliated at Hamden.

POPLAR

A LEAF-MINER (Phyllocnistis populiella Chamb.)

Oregon

Don C. Mote. For the last two years leaves have been turning and falling off at Fort Klamath.

COTTONWOOD LEAF-BEETLE (Lina scripta Fab.)
et al.

Indiana

H. F. Dietz (July 11): The poplar and willow leaf-beetles, Lina scripta Fab. and Lina interrupta Fab., are abundant on various kinds of willows and poplars. In many places, due to the fact that the adult beetles and their larvae eat off the upper surface of the leaf, leaving the lower epidermis intact, the trees appear as if they were scorched by fire. The second generation of beetles were beginning to appear on June 26.

SATIN MOTH (Stilpnotia salicis L.)

New Hampshire

P. R. Lowry (June 23): This insect has done considerable damage to poplars in Nashua and Portsmouth.

SPRUCE

RED SPIDER (Tetranychus telarius L.)

Nebraska M. H. Swenk (June 10-July 15): During the past week a number of complaints of injury to spruces, cedars, and other evergreen trees by the common red spider have been received from different localities in eastern Nebraska.

SPRUCE BUDWORM (Harmoloba fumiferana Clem.)

Idaho Monthly Letter Bureau of Entomology, No. 122 (June 1924): While on a recent examination in the Coeur d'Alene National Forest, H. J. Rust found the spruce budworm becoming well established. One-third to one-half grown larvæ were found on white pine, larch, hemlock, white fir, Douglas fir, and Engelmann spruce reproduction. Larvæ were also found on large white fir, hemlock, and larch.

CHERMES COOLEYI GILLETTE

Connecticut W. E. Britton (July 18): Large galls noted at Waterbury. Adults emerging.

Oregon Don C. Mote (June 14): Found at Warrendale attacking Douglas fir.

SPRUCE MITE (Paratetranychus uniusquis Jac.)

Connecticut Philip Garman (July 22): Much damage to young trees at New Haven done by this insect.

TULIP TREE SCALE (Toumeyella liriiodendri Gmel.)

Indiana J. J. Davis (July 22): Was reported abundant on tulip trees at New Albany, July 8. The correspondent reported that they were especially conspicuous because they attracted so many other insects.

INSECTS ATTACKING GREENHOUSE

AND ORNAMENTAL PLANTS

MISCELLANEOUS FEEDERS

BLACK VINE WEEVIL (Brachyrhinus sulcatus Fab.)

New York C. R. Crosby (June 27): Slowly killing a few hedge at Glen Cove.

HALTICUS INTERMEDIUS UHL.

Mississippi R. W. Harned (July 7): An insect tentatively determined as Halticus intermedius is causing considerable damage to clematis in Starkville.

BLISTER-BEETLES (Meloidae)

Minnesota

A. G. Ruggles (July 9): One of the most interesting things right now is the abundance of blister-beetles. These are attacking vigorously the Caragana hedges, several of the garden flowers, leaves of hackberry, and in the fields are doing considerable damage to clover and particularly alfalfa. The particular species that is doing the most of the injury is Macrobasis unicolor Kirby.

ZEBRA CATERPILLAR (Mamestra picta Harris)

Indiana

H. F. Dietz (June): The zebra caterpillar is more abundant this year than at any time within the past five seasons. It has been particularly troublesome on cabbage, iris, gladiolus, Swiss chard, and beets.

CORN ROOT-APHID (Aphis maidi-radicis Forbes)

Indiana

H. F. Dietz (June): The corn root-aphid has been found to be an unusually serious pest on ornamental flowers of the composite family. It is also exceedingly abundant on the roots of some weeds such as the common broad-leaf plantain, dandelion, and wild lettuce.

A SAWFLY (Abia americana Cress.)

Connecticut

W. E. Britton (July 18): A honeysuckle bush, Lonicera sp., defoliated by larvae at Thomaston.

NICOTINE SULPHATE INJURY

Indiana

H. F. Dietz (June): Nicotine sulphate at the strength of 1 to 500 with the ordinary soap spreader has caused burning on such plants as sweet peas, nasturtiums, and hardy perennials, owing to the tender growth.

ASTERS

APHIDS (Aphididae)

Indiana

J. J. Davis (July 22): Numerous reports of aphids on the roots of asters have been received from various sections of the State. Some of these no doubt are the common root-aphid but others are one of the common white root-infesting forms, the identity of which has not been determined.

CARNATION

VARIEGATED CUTWORM (Lycophotia margaritosa Haw.)

Maine

E. M. Patch (July 1): A report states "they have bothered us only the past year. They are terrors on carnations." Report was received from Portland.

COLUMBINE

COLUMBINE

COLUMBINE LEAF-MINER (Phytomyza aquilegiae Hardy)

Indiana

J. J. Davis (July 22): The columbine leaf-miner was reported from Fort Wayne as doing considerable damage to columbine July 19. Our observations indicate that this insect has been destructive in other sections of the State the past few weeks.

GOLDENGLOW

A SAWFLY (species undetermined)

Connecticut

W. E. Britton (July 11): Gray black-spotted sawfly larvae had defoliated a large patch of goldenglow at Westport. Most of the larvae had matured and left the plants, but some material was collected for the purpose of rearing adults.

IRIS

IRIS BORER (Macronoctua onusta Grote)

Indiana

H. F. Dietz (June): The Iris borer is again very destructive this year and many complaints have been received during the month from persons who grow iris in ornamental plantings. The damage done by this insect is increased by the fact that it also spreads the root-rot bacterium, which kills the shoot infested by the borer.

PHLOX

RED SPIDER (Tetranychus telarius L.)

Indiana

J. J. Davis (July 22): Red spiders have been very abundant at LaFayette and other sections of the State within the past few weeks, attacking particularly phlox and other flower-garden plants.

ROSE

ROSE CHAFER (Macrodactylus subspinosus Fab.)

New York

Geo. N. Wolcott (July 9): The rose beetle is very abundant here now, attacking roses, daisies, blackberries, black alder, and many other shrubs and trees. It is reported as entirely defoliating hydrangea in a cemetery at Holland Patent.

Nebraska

M. H. Swenk (June 15-July 10): In Chase County the rose-chaffer occurred in heavy flights during the last week in June.

ROSE CURCULIO (Rhynchites bicolor Fab.)

Nebraska

M. H. Swenk (June 15-July 10): The rose curculio was unusually numerous over the State and in Kimball County was reported as puncturing all of the rose buds and blasting them before they opened.

COMMON ROSE SLUG (Caliroa aethiops Fab.)

Indiana

H. F. Dietz (June): Rose slugs are becoming a serious pest on roses.

Nebraska

M. H. Swenk (June 15-July 10): Roses were very heavily attacked during the last half of June all over southeastern Nebraska by the common rose slug.

Oregon

Don C. Mote (June 1): Larvae of this insect are numerous at Salem and Corvallis.

INSECTS AFFECTING MAN AND

DOMESTIC ANIMALS

MAN

MOSQUITOES (Culex spp.)

Indiana

H. F. Dietz (June): Due to the unusually wet weather mosquitoes (Culex spp.) have been exceedingly abundant in any place where there is standing water. At Millersville, Muncie, Noblesville, and in various parts of Indianapolis mosquitoes have been so abundant that people have been forced to stay indoors after dark. In shaded localities they are also as much a nuisance in the daytime as at night.

CHIGGERS (Trombicula tlalzahuatl Murray)

Texas

F. C. Bishopp (June): Chiggers continued to be present in very annoying numbers throughout June. While everyone talks of their abundance and annoyance they are probably no worse than normal at this season of the year.

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

GENERAL
STATEMENT

F. C. Bishopp (July 29): Have been occurring as household pests in the Atlantic States in an unusual number of cases. A great many complaints have been received from Maryland, Virginia, and Pennsylvania.

CATTLE

STABLE FLY (Stomoxys calcitrans L.)

Texas

F. C. Bishopp (June): At Dallas the stable fly was rather annoying to livestock during early June. At Sonora the pest was giving no appreciable annoyance and in the vicinity of Uvalde the abundance was below normal.

D. C. Parman (June 25): The straw or stably fly has become noticeably annoying to livestock in sections where bundle oats have been fed and on a few farms and ranches this fly is doing considerable damage, and as high as 100 or more flies are found on animals. In some cases the animals have wounded themselves fighting the flies and screwworm infestations have followed.

HORN FLY (Haematobia irritans L.)

Maryland and
Pennsylvania

F. C. Bishopp (July 29): Horn flies are causing much annoyance to cattle in the mountain regions of western Maryland and Pennsylvania during July.

Texas

F. C. Bishopp (June): Considerable annoyance was experienced in Dallas County due to the horn fly throughout the month of June. The numbers were greatly reduced, however, owing to the hot weather which occurred about the 17th.

D. C. Parman (June 25): The horn fly has decreased considerably throughout the Uvalde section during the month and at present is annoying cattle very little. In the heads of the canyons the flies are most numerous from a few to 500 on cattle; in other sections from 0 to 200 at most.

SCREWORM (Chrysomya macellaria Fab.)

Texas

F. C. Bishopp (June): The number of screwworm cases in Texas has been considerably less this spring and summer than usual. Comparatively few cases were reported in the vicinity of Dallas and Sonora up to June 20. At Uvalde and in the hills to the north nearly all ranchmen had some cases, the number ranging up to about 1 or 2 per cent. Some ranchmen who are restocking their pastures with steers took chances with branding and dehorning in June and in these cases the infestation ran from 20 to 50 per cent.

BUFFALO GNATS (Simulium vittatum Zett.)

Texas

F. C. Bishopp (June): These insects were found in moderate numbers in the ears of livestock pastured near running streams in Dallas County. The ears of animals were also considerably irritated by the bites of flies, presumably of this species, in Uvalde and Frio Counties.

HORSE-FLIES (Tabanidae).

Washington
D. C.

F. C. Bishopp (July 29): Certain dairymen in the vicinity of Washington D. C. complain of an unprecedented abundance of horseflies. They are so numerous as to cause the cattle to seek protection throughout the day.

HORSES

CANYON HORSE-FLY (Tabanus rubescens Bellardi)

Texas

D. C. Farman (June 25): The canyon horse-fly has increased some during the month and the infestation in the canyon is about 50 per cent of normal or from 0 to a dozen on animals during the hours of activity, averaging about one to the animal. The number in the lower country is approximately the same as last month or about half as many as in the canyons.

HORSE BOT-FLY (Gastrophilus intestinalis DeG.)

Texas

F. C. Bishopp (June): This species appeared and began laying eggs on horses in Dallas about June 1. On June 20 horses at Reagan Wells were observed to be rather heavily infested with eggs of this species. They are considerably earlier than normal in their appearance this season.

THROAT BOT (Gastrophilus nasalis L.)

Texas

F. C. Bishopp (June): This species appeared and began laying eggs on horses in Dallas about June 1. On June 20 horses at Reagan Wells were observed to be rather heavily infested with eggs of this species. They are considerably earlier than normal in their appearance this season.

GOATS AND SHEEP

LONE STAR TICK (Amblyomma americanum L.)

Texas

F. C. Bishopp (June): Goats and sheep in certain southwestern Texas counties are rather heavily infested with these ticks. In some instances they are undoubtedly responsible for infestations of screwworm.

POULTRY

BUFFALO GNATS (Prosimulium pecuarum Riley)

Nevada

F. C. Bishopp (June): At the end of May reports were received from Fallon to the effect that these gnats were causing serious losses among turkeys and other poultry in that section. Some turkeys were said to be actually killed by the gnats.

EUROPEAN HEN FLEA (Ceratophyllus gallinae Schrank)

New York C. R. Crosby (June 8): This insect was sent in from Frewsburg. This is the third record that has been made of the presence of this insect in New York State.

INSECTS INFESTING HOUSES AND
PREMISES

ARGENTINE ANT (Iridomyrmex humilis Mayr)

Mississippi M. R. Smith (June 30): Two years ago one and a half city blocks in Fayette were found infested with Argentine ants. In the fall of 1922 and the fall of 1923 an Argentine ant campaign was put on by the State Plant Board in cooperation with the city authorities. A very careful investigation on June 23 and 24 revealed no Argentine ants and the writer feels little hesitancy in stating that the ants have been eradicated. Recently this office received Argentine ants from Stafford Springs and from Orvisburg. (July 7): Specimens have just been received from Coffeeville.

PARAOAH'S ANT (Monomorium pharaonis L.)

Mississippi M. R. Smith (June 30): Paraoah's ant is infesting numerous houses in Meridian in which the Argentine ant was formerly the one and only ant pest. This seems to be replacing the Argentine ant.

LITTLE BLACK ANT (Monomorium minimum Buck.)

Mississippi M. R. Smith (June 30): The tiny black ant is infesting numerous houses in Meridian in which the Argentine ant was formerly the one and only ant pest. This seems to be replacing the Argentine ant.

ANTS (Formicidae)

North Carolina F. Sherman (July 5): The complaints have been increasing in recent years - usually no specimens are sent and correspondents merely report them as a nuisance in houses, on lawns, etc. A recent complaint is from a hospital. Mention is sometimes made of "small black ants," or "large black ants," or "large red ants," from which it is evident that several species are concerned.

Mississippi M. R. Smith (July 7): Three species have been found infesting houses on the campus at A. & M. College. In one house were found Iridomyrmex analis Andre and Cremastogaster laeviuscula Mayr and at another were found Monomorium minimum Buckley and Camponotus caryae var. decipiens Emery.

AN ANT, "ALBAYALDE" (Wasmannia auropunctata Roger)

Porto Rico

Arthur B. Rosenfeld (June 23): I have observed that the common ant of coffee groves, known locally as the above, is also about the commonest ant in ice boxes, seeming to continue active at surprisingly low temperatures.

AN ANT (Eciton schmitti Emery)

Mississippi

M. R. Smith (July 21): Today the writer saw hundreds of workers which had been killed by a lady by means of insect powder and the \$1,000 guarantee powder. The ants had made a temporary nest under several flowerpots and when discovered were immediately killed.

GERMAN COCKROACH (Blattella germanica L.)

Oregon

Don C. Mote (June 17): In a household at Monroe.

TERMITES (Reticulitermes spp.)

GENERAL
STATEMENT

T. E. Snyder (July 1): The following are reports of termite damage done to woodwork and contents of buildings in the United States from July 1, 1923, to July 1, 1924:

Alabama	- 2	Mississippi	- 2
Arkansas	- 1	Missouri	- 7
California	- 5	Nebraska	- 1
Connecticut	- 1	New Hampshire	- 1
District of Columbia	21	New Jersey	- 2
Florida	- 5	North Carolina	- 1
Georgia	- 2	New York	- 4
Illinois	- 11	Ohio	- 5
Indiana	- 10	Oklahoma	- 3
Iowa	- 4	Pennsylvania	- 3
Kansas	- 8	Rhode Island	- 1
Kentucky	- 3	South Carolina	- 2
Louisiana	- 4	Tennessee	- 1
Maryland	- 3	Texas	- 5
Massachusetts	- 1	Virginia	- 9
Michigan	- 4	West Virginia	- 1

FLEAS (Siphonaptera)

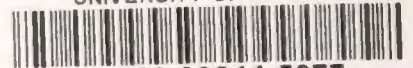
Indiana

J. J. Davis (July 22): Fleas in barns and in houses have been very abundant as evidenced by the numerous reports received.

SCORPIONS

Texas

F. C. Bishopp (June): During early June several reports were received of the appearance of scorpions in considerable numbers within houses.

EUROPEAN EARWIG (Forficula auricularia L.)

Rhode Island

A. E. Stene (July 18): The only complaint which has reached this office during the present month is of the increased activities in the European earwig colony in Newport. Residents of that city are complaining that the insect is present in unusually large numbers and is beginning to do a great deal of damage.

Notes from the Federal Horticultural Board (July 1):

PESTS INTERCEPTED

1. During the inspection of a shipment of grapes from Argentina at the port of New York, May 13, 1924, there was found a Coccinellid which was identified by Dr. E. A. Schwarz of the Bureau of Entomology as Epilachna paenulata Germ. Dr. Schwarz accompanied the reference slip transmitting the identification with the following pertinent comment: "This is one of the phytophagous species of Coccinellid, the introduction of which into the United States is by no means desirable."
2. A sapodilla taken in the baggage of a passenger arriving in New York May 7, 1924, on the S. S. Surinam from Dominica B. W. I., was found to be infested with larvae of the fruit-fly Anastrepha serpentina Wied. This interception furnished what seems to be the first authentic record of the occurrence of Anastrepha serpentina Wied. in Dominica although there are specimens in the National Museum from Trinidad, W. I., San Juan, P. R., Cayuga, Guat., Ancon, C. Z., and Lima, Peru.
3. In ships' stores in the steamer San Bruno arriving in Boston, April 6, 1924, a mango from Costa Rica was taken which was found to be infested with fruit-fly larvae identified as Anastrepha distans Hendel. This species is noted by the specialist making the determination as being a "rare species."