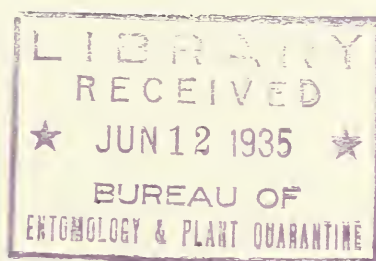


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THE INSECT PEST SURVEY  
BULLETIN



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I N S E C T P E S T S U R V E Y B U L L E T I N

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THE MORE IMPORTANT RECORDS FOR MAY 1935

During the third week in May grasshopper eggs started hatching in Wisconsin, Minnesota, and Wyoming. About the middle of the month vast swarms of these insects were invading southern Mexico, apparently flying in from Guatemala.

Cutworm damage is reported as generally severe over a large part of the country, severe damage being reported from the Great Basin and from California.

Armyworm outbreaks, following heavy flights of moths, are reported from Virginia, Indiana, and Illinois westward to Nebraska and Oklahoma. Control methods for the protection of crops from these insects have been found necessary in parts of California.

Heavy infestations of grapes by the white-lined sphinx are reported from several points in central California.

A very heavy migration of the painted lady butterfly attracted considerable attention in Colorado and Utah. The moths, moving in a generally northward direction, were subsequently reported in Idaho.

Heavy defoliation of many kinds of trees by June beetles occurred in the North, Middle, and South Atlantic States westward to Minnesota and Kansas.

Over the area from Indiana westward to Missouri and Oklahoma the hessian fly population is apparently increasing.

Chinch bug infestations were reported throughout the East Central States and westward to Iowa, Kansas, and Oklahoma.

Infestations of alfalfa and winter peas by the pea aphid are reported from Mississippi and Michigan, and westward to Nevada and the Pacific Northwest.

The alfalfa weevil has been found in two new localities in California and one new locality in Nevada. In California the population is very low.

Spring-brood moths of the codling moth were reported the first week in May from Delaware, and the second week in May from Pennsylvania. During the third week of the month moths were emerging in Ohio. In southern Indiana and Illinois they started emerging the first week in May. In general, populations were large.

The eastern tent caterpillar caused severe defoliation of wild cherries and, in some instances, of apples throughout the New England and Middle Atlantic States and westward to Ohio, Kentucky, and Tennessee.

Fruit aphids are generally scarce in the New England and Middle Atlantic States.

The plum curculio is from 2 to 3 weeks earlier than last year in the peach belt of Georgia, and appears to be generally abundant along the Atlantic seaboard, indicating that there will probably be considerable damage later in the season. In the drought area of last year in the Central States this insect is unusually scarce.

The changa, or Puerto Rican mole cricket, has been a serious pest for the first time in tobacco seed beds in North Carolina this spring.

Late in April and early in May Mexican bean beetle adults were observed in the field from Maryland and Virginia, westward to Ohio.

The number of boll weevils that successfully passed the winter in hibernation cages is smaller than it has been for the past few years in Louisiana and Oklahoma; while, on the other hand, Texas reports the heaviest emergence that has occurred during the past 10 years.

The heaviest emergence of cotton flea hopper from weeds recorded during the past 10 years was reported from Texas this month.

Considerable damage to cotton by the beet armyworm is reported from Texas, Arizona, and southern California.

Gypsy moth eggs started hatching earlier this year than last.

The elm leaf beetle apparently passed the winter successfully in New England.

The larch case bearer infestation, which has been under way in New England and New York in the past 3 years, is apparently persisting.

The screw worm is increasing rapidly throughout Florida and Texas. In one county in Florida 1,500 cases have been reported.

GENERAL FEEDERS

GRASSHOPPERS (Acrididae)

- Wisconsin. E. L. Chambers (May 21): Melanoplus mexicanus Sauss. and Camnula pellucida Scudd. were observed hatching in light sand areas in Marinette and Oconto Counties. Egg pods examined at various points in the 35 infested counties indicate that a few were destroyed during the winter.
- Minnesota. A. G. Ruggles (May 23): Grasshoppers are just beginning to hatch. Abundant only in neglected places.
- North Dakota. J. A. Munro (May 21): No hatching of grasshoppers as yet. Hatching delayed by cool spring.
- Montana. J. R. Parker (April): In March large quantities of eggs of C. pellucida, M. bivittatus Say, and M. mexicanus were dug from the ground in Sweet Grass County in south-central Montana and brought to the laboratory to rear grasshoppers for bait experiments. Nearly a 100-percent hatch was obtained whenever these eggs were held at a temperature of 80° F. for a period of 10 days.
- Wyoming. C. L. Corkins (May 25): Summer species of grasshoppers started hatching this week, following clear, warm weather, which was preceded by much rain and snow in May. All indications are that the infestations will be about as predicted last fall. This means that we shall spread about 10,000,000 pounds of grasshopper bait this summer.
- Utah. G. F. Knowlton (May 14): First-instar and second-instar grasshoppers have been generally present in northern Utah for 10 days or longer. Nymphs are moderately abundant throughout northern Utah. Slight damage to raspberry leaves was observed in north Ogden.
- California. C. C. Wilson (May 7): The grasshopper situation was of first importance in San Luis Obispo County in April. At least 5,000 acres of egg beds showed approximately 70 percent hatch on April 23 and the remaining eggs were in good condition. The warrior grasshopper (C. pellucida) and the valley grasshopper (Oedaleonotus enigma Scudd.) were the dominant species. Counts of live hoppers per square yard ran from 10 to more than 6,000. The stage of development ranged from first instar to adult, indicating that hatching has probably been continuous since the latter part of January. Most of the nymphs were in the first, second, and third instars. Poisoning operations were in progress and it was estimated that from 3,000 to 4,000 man-days will be required to control the grasshoppers in this county.
- Mexico. Warden Urquhart, Cia. Agricola La Zacualpa, S. C. P. A. (May 14): We are at present being invaded by a vast swarm of locusts flying in from Guatemala and Central America. Last year swarming occurred, but on a smaller scale. So far we have succeeded in keeping the locusts in movement by making plenty of noise. The real test will come when the hoppers hatch out, as great quantities of eggs are being laid all over

the country. We have a very large banana plantation here and the  
hoppers do great harm to the plants. The custom here is to drive the  
hoppers into ditches and turn flame throwers onto the massed hoppers.  
(Determined as Schistocerca paranensis Burm. from notes in files of  
the Insect Pest Survey)

MORMON CRICKET (Anabrus simplex Hald.)

Wyoming. C. L. Corkins (May 25): Mormon crickets are appearing in great  
numbers. In Sheridan County there are 20,000 acres of hatching beds,  
Johnson County about 4,000, Converse County 15,000, Crook County 5,000,  
and there are milder infestations in Washakie, Park, Lincoln, Hot  
Springs, and Teton Counties.

CUTWORMS (Noctuidae)

Vermont. H. L. Bailey (May 25): Cutworms, Agrotis unicolor Walk., were  
unusually abundant and were damaging gardens near Burlington on May 20.

Virginia. H. G. Walker (May 25): Cutworms have been reported as being very  
abundant, and injurious in some cornfields near Norfolk.

Ohio. T. H. Parks (May 25): Less than the usual number of reports have  
been received this month. Climbing cutworms were reported to be devour-  
ing the buds and foliage of apples and grapes in northeastern counties  
in May.

B. J. Landis (May 1): Cutworms are doing some damage to early  
cabbage at Columbus.

Indiana. J. J. Davis (May 25): Cutworms were reported as damaging sweet-  
clover at Greenfield on May 21. A few other sections reported cutworms  
as abundant, but no records were received of crops being attacked.

Michigan. R. Hutson (May 20): Various species of climbing cutworms are  
quite numerous around Hartford.

Wisconsin. E. L. Chambers (May 21): Early tomato and cabbage plants in the  
Milwaukee and Racine truck-farm areas were reported to be slightly damaged  
by cutworms.

Iowa. C. J. Drake (May 23): Cutworms are unusually abundant in gardens and  
cornfields. Infestations seem to be quite general in the State.

Tennessee. G. M. Bentley (May 22): Cutworms are occurring in unusual num-  
bers throughout the State.

Nebraska. M. H. Swenk (May 20): Cutworms were reported from Antelope, Brown,  
Webster, and Nemaha Counties from May 5 to 16. Alfalfa and wheat were  
the chief crops affected. Numerous inquiries concerning the control of



cutworms in gardens have also been received from Lancaster County.

Kansas. H. H. Walkden (May 25): Adults of Chorizagrotis auxiliaris Grote were first taken at lights on April 16 at Manhattan and Hays, and at Garden City on April 18. Since May 14 this species has predominated in the catches at Garden City. Only one specimen was taken at Cherryvale up to May 20. Scotogramma trifolii Rott. predominated in Noctuidae taken at the trap lights during the first 3 weeks of May, the heaviest flight occurring from May 1 to 10. The adults were taken in greatest numbers at the Garden City light. Larvae were taken on lambsquarters on May 20 at Manhattan.

Arkansas. D. Isely (May 24): There has been an outbreak of the variegated cutworm (Lycophotia margaritosa saucia Hbn.), originating in bur-clover and alfalfa and moving to row crops in Lee and Saint Francis Counties. This cutworm is also abundant in northwestern Arkansas.

Idaho. R. W. Haegele (May 1): There has been a severe outbreak of climbing cutworms throughout the fruit district of southwestern Idaho this spring. The feeding started April 15 and damage is still being reported from some districts.

Utah. C. J. Sorenson (May 20): An undetermined species of cutworms observed in alfalfa fields at Park Valley. Climbing cutworms reported attacking peach buds at South Brigham. Porosagrotis orthogonia Morr. observed in dry-farm fall wheat at Cedar Valley, Utah County.

G. F. Knowlton (May 14): Cutworms destroyed three-fourths of the tomato plants in a 1-acre planting at Roy, Webster County, within 24 hours after they had been set out. Damage has also been reported from Kelton and Brigham. Cutworms destroyed an entire planting of carrots and cut off nearly half the young tomato plants set out on one farm at Orem. Serious damage to corn, tomatoes, and alfalfa was reported from Butlerville.

California. H. J. Ryan (April 25): A small larva, tentatively identified as the variegated cutworm (L. margaritosa saucia), has been found killing buds on pear trees in the Antelope Valley. The infestations appear to be general but not heavy.

A. F. Howland (April): L. margaritosa saucia is reported as very abundant at Lemon Heights, Santa Ana, Orange County, where it is attacking tomatoes. Damage is about 50 percent, a count yielding from 12 to 25 cutworms per plant. The worms are feeding on the foliage of the plants, which are from 6 to 8 inches high.

J. C. Elmore (May): The variegated cutworms are damaging gladiolus buds at Alhambra. They are boring into the long spikes, thus lowering the quality or destroying the flower spikes. About 30 percent of the heads are damaged.

ARMYWORM (Cirphis unipuncta Haw.)

- Virginia. H. G. Walker (May 25): Several wheat fields in the Norfolk area are heavily infested with armyworms. There are at least two species of hymenopterous parasites and one dipterous parasite, the latter being especially abundant.
- Indiana. J. J. Davis (May 25): The armyworm moths have been common at lights at La Fayette and elsewhere for the past month or more.
- Illinois. W. P. Flint (May 20): There have been several very heavy flights of armyworm moths during the past 3 weeks. Ten light traps on the University Farm caught from 20 to 1,000 moths per night during the period from May 1 to 20. On several nights the numbers exceeded 500. Examination of a number of specimens taken at random from these catches showed 44 percent gravid females.
- Missouri. L. Haseman (May 22): Severe outbreaks of armyworms two-thirds grown were reported from the southeastern part of the State on May 18. Moths are quite abundant at Columbia.
- Kansas. H. H. Walkden (May 25): A moderately heavy flight of adult armyworms occurred at Manhattan and Cherryvale lights during the first 3 weeks of May.
- Nebraska. H. H. Walkden (May 25): Only a few specimens of armyworms were noted at Lincoln at the light trap.
- Oklahoma. F. A. Fenton (May 22): A species of armyworm is reported to be abundant in wheat fields in the northeastern section of the State. (Det. by C. Heinrich as C. unipuncta.)
- California. Kern County Agr. Comm. (May 3): The first brood of armyworms is appearing and ditches have been thrown up around several vegetable fields.

BEEET WEBWORM (Loxostege sticticalis L.)

- Kansas. H. H. Walkden (May 25): Heavy flights of adults were noted at light traps as follows: At Manhattan on May 1 to 11; at Hays on May 7 and 8; and at Garden City on May 6. No flights were noted at Cherryvale. The greatest numbers were taken at Manhattan.
- Nebraska. H. H. Walkden (May 25): No heavy flights of this species occurred at Lincoln.

WHITE-LINED SPHINX (Sphinx lineata Fab.)

- California. S. Lockwood (May 24): In Madera, Fresno, Tulare, Kings, and Kern Counties grapevines have been severely defoliated in rather small

local areas by larvae of two sphinx moths, Pholus achemon Drury and S. lineata. The larvae are almost mature and are going into the ground. This, coupled with rather drastic control measures carried out by growers, is relieving the situation.

D. F. Barnes (May 20): The white-lined sphinx moth is plentiful locally. In many places in the San Joaquin Valley the larvae of the first generation have entered vineyards from wild host plants and are causing serious defoliation. In some localities the achemon sphinx (P. achemon) is also reported as causing damage.

#### PAINTED LADY (Cynthia cardui L.)

Colorado. G. M. List (May 23): On May 10 the painted lady butterfly appeared in large numbers in a number of localities in the State. Many reports came in of their abundance on fruit blossoms. Rainy weather during the past week has reduced their activity, but whenever the sun appears they are out in numbers.

Idaho. C. R. Wakeland (May 31): This butterfly has been reported to be quite numerous in Teton County but is only fairly numerous now. I have noted them in flight as far north as Dubois. I think that this is the species that defoliated some of the native shrubs in the vicinity of Sandpoint last year.

Utah. G. F. Knowlton (May 20): Migrations of the painted lady butterfly were observed on numerous occasions during the first 3 weeks of May and even earlier. Inquiries concerning it and reports of its movements have been received from Provo, Ogden, Richfield, Eureka, and Garland. Northward and westward movements of large numbers of the adults have been observed in various parts of Box Elder, Weber, Davis, and Salt Lake Counties.

#### MONARCH BUTTERFLY (Danaus menippe Hbn.)

District of Columbia. J. A. Hyslop (May 10): Saw an adult in flight in the streets of Washington today.

Florida. H. T. Fernald (May 20): Monarch butterflies appeared at Orlando about November 8, 1934, and soon became abundant. They did not appear to be much faded or battered. On November 13 they were still in a migrating body 20 miles west of Brooksville where they were feeding on the staminate flowers of groundselbush (Baccharis halimifolia). Though cold weather--down to 20° F. or even lower--came on December 12 and 13, the butterflies were frequently seen during last December and January at Orlando and on the east coast, but during February and March almost none were seen. On April 1 I found several near Saint Johns River and caught three, all of which proved to be males. They were of normal size and fresh. Other observers also saw them just about this time. All captured were males.

A CABBAGE BUTTERFLY (Pieris monuste L.)

Florida. J. R. Watson (May 21): The native cabbage butterflies were very abundant during the month. Along the eastern coast they collected in large swarms which attracted the attention of motorists. From Titusville south the migration was southward along the coast. From Jacksonville they are reported to be moving northward.

H. T. Fernald (May 20): On April 22 a distinct direction of flight through the city of Orlando to the southwest was observed. The flight began about April 10 and continued until about the 25th.

WHITE GRUBS (Phyllophaga spp.)

Maryland. J. A. Hyslop (April 27): The first adults of the season were collected at a light on my farm at Avenel, near Silver Spring, on April 27. The flight was so heavy as to interfere with a motion-picture performance in Silver Spring. The following species were collected: P. fervida Fab., 17 males and 9 females; P. fusca Froel., 1 male and 1 female; P. fraterna Harr., 4 males; and P. tristis Fab., 11 males. (Det. by P. Luginbill.)

West Virginia. F. W. Craig (May 28): June bugs have been reported as damaging the leaves of the oak trees in the vicinity of Lewisburg. We had an outbreak of this insect in Greenbrier Valley last year.

Virginia. R. A. St. George (May 10): A heavy emergence of P. fervida adults occurred over most of Arlington County during the last few days of April and the first week of May. Cool, rainy weather interrupted the emergence of the beetles. Adults were so abundant on the warmest nights that over 1,500 specimens were taken in less than 2 hours while they were feeding and mating. The beetles emerged at dusk and fed on privet, pussy willow, maple, and Jack rose.

South Carolina. R. A. St. George (May 10): Activity was not noted in the vicinity of the State Forest Nursery, Georgetown, S. C., until the first week in April. Adults of P. ulkei Smith were taken at that time. By the middle of the month other species such as P. luctuosa Horn, P. fosteri Burm., and P. micans Knoch were taken. The beetles were quite abundant by the end of the month.

Michigan. R. Hutson (May 23): May beetles are appearing in Grand Ledge, Ludington, Muskegon, and Lake Odessa.

Wisconsin. E. L. Chambers (May 21): White grubs are very abundant in La Crosse and Vernon Counties. The beetles were very abundant in Racine and Walworth Counties on one warm night, but cold weather has held them in check later than usual.

Minnesota. A. A. Granovsky (May 24): The expected flight of brood A June beetles was somewhat delayed on account of the cold spring, but it came on

with a rush. The first beetles were observed flying this year on May 1 in Houston County in southeastern Minnesota. They began to fly en masse on May 7. In the vicinity of Saint Paul the first beetles were observed on May 6, although one was taken on April 26. The mass flight started on May 10, but was interrupted by the cold weather. P. fusca is the major species so far. P. tristis and P. rugosa Melsh. are just beginning to fly.

Iowa. C. J. Drake (May 23): June beetles, Brood A, are just beginning to appear in moderately large numbers.

Missouri. L. Haseman (May 22): Backward weather has delayed flights of June beetles. Only a few have come to lights at Columbia.

Kansas. H. R. Bryson (May 25): The flight of May beetles began about May 1 but, owing to continued rainy weather and cool days and nights during the first half of May, comparatively few adults have come to lights.

M. W. Sanderson (May 12): A list of the species taken thus far this year in Douglas County, in the order of their first appearance at lights or at host plants, includes: April 24, P. rubiginosa Lec., P. venemens Horn, and P. futilis Lec.; May 7, P. fervida; May 11, P. fraterna; May 12, P. crenulata Froel., P. hirtiventris Horn, P. crassissima Blanch., and P. hirticula Knoch. In addition to this list, two specimens each of P. fusca and P. horni Smith have been taken from plowed ground, the former species on April 29, the latter on March 20.

#### A WHITE GRUB (Ochrosidia immaculata Oliv.)

Nebraska. M. H. Swenk (May 20): White grub activity in lawns of two Lancaster County residents was reported on April 28 and May 13, respectively.

Illinois. C. L. Metcalf (May 28): Larvae occur at a frequency of 3 or 4 per square foot in gardens at Urbana.

#### GREEN JUNE BEETLE (Cotinis nitida L.)

Tennessee. J. Milam (April): This pest has been found in two tobacco plant beds and in a number of gardens, causing considerable injury.

#### WIREWORMS (Elateridae)

Massachusetts. A. I. Bourne (May 21): Wireworms recently collected in a field of potatoes in Northampton were attacking seed potatoes and were badly riddling some of the seed. In some instances it was possible to take as many as a dozen out of a single seed piece. This is the second year that this plot has been cultivated from grass. (Det. by J. A. Hyslop as Limonius sp.)

South Carolina. C. F. Rainwater (April): Wireworms, Aeolus sp., possibly

dorsalis Say, were found eating cotton seed and reducing stands in the vicinity of Florence.

Florida. J. W. Ingram (April 30): An unusually heavy outbreak of Melanotus sp. occurred in the sugarcane fields of the Lake Okeechobee section. Infestations ranged from a small amount of injury to a 50-percent loss of stand, with an estimated average loss of 4 percent of the crop. Injury was reported to have begun in February, was at its height in March, and was diminishing in April.

Tennessee. G. M. Bentley (May 22): Wireworms occur in unusual numbers throughout the State.

Mississippi. C. Lyle (May 23): On May 3 a correspondent at Mize sent to us specimens of Horistonotus uhlerii Horn, with a report that these insects were damaging the roots of young corn. On May 7 a correspondent at Gunn wrote us that they had caused considerable damage to cotton and corn roots on the same piece of land during the past 3 years. These were the first complaints received regarding this species in many years.

South Dakota. H. C. Severin (May 21): Reports of damage to corn, wheat, barley, and rye are beginning to arrive in our offices in unusual numbers. Damage reported from areas both east and west of the Missouri River.

Nebraska. M. H. Swenk (May 20): Wireworms were reported on April 27 as having taken the wheat in the lower and moister part of a field in Lincoln County.

Washington. M. C. Lane and H. P. Lanchester (April 23): Very general flights of adults of Pheletes canus Lec. have occurred on warm days for 2 weeks. The emergence has been largely composed of male beetles. Female emergences have increased rapidly in number during the past few days. (May 21): Injury by P. canus is heavier than usual at this season. Numerous instances of injury to overwintering onions have been reported, while spring-planted onions, lettuce, and carrots have been severely injured.

Oregon. M. C. Lane and H. P. Lanchester (April 23): A general flight of adults of Limonius infuscatus Mots. was observed in the truck-farming areas along the Columbia River, in northern Multnomah County, during the past week. From 4 years' observations of the beetle flights, it appears that the infestation by this species is steadily increasing throughout this area.

A CHINCH BUG (Blissus hirtus Montd.)

Ohio. J. S. Houser (May 17): The bugs are moving about and many are copulating. During the first half of May, a mortality estimated at 75 percent occurred at Cleveland. This was caused by a fungus, probably Sporotrichum globuliferum.

CEREAL AND FORAGE - CROP INSECTS

WHEAT AND OTHER SMALL GRAINS

HESSIAN FLY (Phytophaga destructor Say)

Indiana. W. B. Noble, H. R. Painter, and C. M. Packard (May 17): Light to heavy infestations of the hessian fly have been noted in both sown and volunteer wheat near La Fayette, the spring brood now being in the larval stage, with egg laying apparently about over. In one sample of volunteer wheat 84 percent of the stems were infested. Weather conditions this spring have been rather favorable to fly activity.

Illinois. C. Benton (April 27): Numbers of females were observed laying eggs in a winter-wheat field near Sterling.

Missouri. L. Haseman (May 22): In a few of the southeastern counties early seeding of wheat for fall and winter pasture has caused a definite building up of the hessian fly, and some fields show severe damage.

Oklahoma. C. F. Stiles (May 21): The hessian fly is appearing in much larger numbers in northeastern Oklahoma than it has for the past several years. In some fields the infestation will run as high as 10 percent.

CHINCH BUG (Blissus leucopterus Say)

New Hampshire. L. C. Glover (May 24): Overwintering chinch bugs are reported at Hopkinton. They are plentiful at this point and are all of the long-winged form.

Ohio. T. H. Parks (May 25): We have completed a survey of chinch bugs in volunteer timothy clumps taken at random along roadsides in 21 counties. More bugs were found overwintering in such clumps than in other hibernating places. From 40 to 80 clumps were examined in each county and the bugs were counted in the laboratory. The following figures represent the number of adult bugs present per square foot of timothy, listed by counties: Champaign, 7; Clark, 45; Defiance, 8; Erie, 15; Hancock, 67; Henry, 22; Licking, 27; Madison, 7; Marion, 24; Medina, 75; Portage, 23; Putnam, 9; Richland, 56; Sandusky, 20; Seneca, 51; Stark, 40; Van Wert, 18; Wayne, 54; Williams, 10; Wood, 49; Wyandot, 47. On May 24 practically none of the bugs had left their hibernation quarters and no records of chinch bugs in flight had been observed. The weather has been unusually cool for May. Numerous rains came between May 3 and 18 but this has not promoted the development of the fungus Sporotrichum globuliferum among the overwintering bugs in timothy clumps. We expect a heavy infestation this summer, but wheat is well along and will not be seriously damaged.

Indiana. J. J. Davis (May 25): The continued unfavorable wet weather and the rank growth of small grains has, undoubtedly, made the situation very questionable. Notwithstanding these unfavorable conditions, there is reason to believe that the danger is not over by any means and that, if

conditions from now on are favorable, we may expect plenty of bugs. Perhaps in much of the area very heavily infested in 1935, the infestation will decrease, although it still constitutes a serious hazard. There is reason to believe that there will be an increase in some of the areas lightly infested in 1934.

Illinois. W. P. Flint (May 20): It has rained nearly every day during May, but this period of rainy weather has not greatly reduced the numbers of adult bugs. There are still large numbers in the small-grain fields and an outbreak threatens should the weather turn dry. Because of the heavy growth of small grain, the bugs cannot damage this crop nearly so much as they did last year.

Wisconsin. E. L. Chambers (May 21): A chinch bug survey now under way has revealed many overwintering bugs, but not as great numbers as had been anticipated, possibly owing to cold, cloudy weather for the past 2 weeks.

Iowa. C. J. Drake (May 23): About 50 percent of the chinch bugs are in small grain and the rest are scattered in the grass fields. Migration from hibernating quarters to small-grain fields has been very slow and often interrupted. Unseasonably cool weather has interfered with spring migration. The bugs are still migrating on warm days. Winter mortality was quite high in central Iowa. In some districts farmers are reporting considerable numbers of chinch bugs in small-grain fields.

Kansas. W. T. Emery (May 25): There appear to have been three periods this spring when chinch bugs were moving from winter quarters to feeding and breeding fields in the vicinity of Manhattan. Judging from the catch on flight screens, about one-third of the bugs were on the wing on March 25 and 26. About two-thirds of those remaining took wing on April 22 to 23, and the remainder after the first week in May. From one to three bugs have been found per linear foot of drill row of wheat in fields adjoining Andropogon meadows and sorghum stubble. Very few eggs have been found in the field.

Missouri. L. Haseman (May 22): Most of the chinch bugs had left winter quarters by the 10th of May, but examination of wheat fields showed very few where we expected great numbers on May 16. Three weeks of continuous rain has given them a definite set-back, so far as normal breeding is concerned.

Oklahoma. F. A. Fenton (May 22): A survey has just been completed in three of the six counties that were most heavily infested with the chinch bug last fall, and the pest is found to be sufficiently abundant in 18 percent of the small-grain fields to warrant barrier construction, provided the weather turns off hot and dry. Examinations in March at Stillwater showed the pest to be less numerous in this vicinity than at any time in the last 4 years. Owing to the cool, rainy weather the bugs have not yet started the production of the first generation.



C. F. Stiles (May 21): Chinch bugs are showing up in moderately large numbers in Tulsa, Osage, and Okfuskee Counties. Heavy rains have fallen over part of this territory and we do not know yet just what the situation will be.

GREEN BUG (Toxoptera graminum Rond.)

Georgia. O. I. Snapp (May 8): J. R. Thomson, Jr., reports the green bug as abundant and damaging Austrian field peas at Perry.

Colorado. G. M. List (May 23): We are having a few reports of the green bug on grain in southeastern part of the State. Indications are that the injury will not be serious.

BLACK GRAIN-STEM SAWFLY (Trachelus tabidus Fab.)

Ohio. J. S. Houser (May 11): Overwintered larvae kept out of doors under natural conditions at Wooster have begun to transform to the pupal stage.

ALFALFA

PEA APHID (Illinoia pisi Kalt.)

Michigan. R. Hutson (May 20): C.C. Mullett, county agent at Fremont, Newaygo County, reports an infestation of pea aphid in alfalfa.

Mississippi. G. I. Worthington (May 23): On May 21 I observed severe and general infestations of the pea aphid in Bolivar County, on winter peas planted for cover crops. In many places from 10 to 25 percent of the peas had been killed. The severe damage was in fields that had not been plowed under by May 1. Some injury on English peas and alfalfa was also observed but the damage to these crops was not severe.

Kansas. H. R. Bryson (May 25): The pea aphid is quite plentiful in garden peas and may be found in alfalfa fields, although not in sufficient abundance to cause damage.

Nevada. R. A. Blanchard (May 14): Severe damage to alfalfa was observed on May 14 near Reno, Wadsworth, Fernley, and Fallon. A large percentage of the fields near Fernley were severely damaged. The damage, although severe, is not nearly so widespread as in 1934. The infestations developed about a month later than last year. The loss in the infested fields will probably be greater this year than in 1934, owing to the lateness of the infestation.

Washington. L. P. Rockwood (May 2): This species was estimated to average from 16,000 to 20,000 aphids per 100 sweeps in one alfalfa field near Mabton that had been well irrigated and showed no damage. Natural enemies, including a fungous disease caused by Empusa planchoniana, hymenopterous parasites, coccinellid larvae and adults, and syrphid larvae and adults were present in numbers and the parasites and predators were increasing

rapidly. Alfalfa in a field fall sown to barley, near Walla Walla, also showed a large population of aphids. In some fields the percentage of alates in the population had already risen to 25 percent. Coccinellid beetles were moderately abundant, particularly near the foothills of the Blue Mountains.

Oregon. L. P. Rockwood (May 17): The pea aphid increased greatly in some fields of Austrian winter field peas that were seeded late in September and early in October 1934. One field near Barlow showed a damaging population on May 17. There probably will be some very localized damage. The backward spring, cool and with deficient precipitation in May, has been favorable to aphid increase. (May 18): Most of the vetch sown in August and early in September was plowed under for green manure in fields and orchards by May 15. In some localities this vetch had been very heavily infested and some alates had moved out before it was plowed under. Later sown vetch in seed and hay fields as a rule show only small aphid populations and these populations are increasing more slowly than those on Austrian peas.

#### ALFALFA WEEVIL (Hypera postica Gyll.)

Colorado. G. M. List (May 23): The alfalfa weevil promises to do very noticeable injury in Mesa and Delta Counties.

Utah. C. J. Sorenson (May 20): The alfalfa weevil is moderately abundant in Cache and Bear River Valleys.

Utah and California. G. I. Reeves (May 17): Alfalfa weevil larvae were collected at Willits, Mendocino County, Calif., on April 23 and at Hornbrook, Siskiyou County, on May 2. We are also in receipt of specimens collected at Moapa, Clark County, Nev., on April 14, which is also a new record for the occurrence of this weevil. (Det. by A. G. Boving.)

California. A. E. Michelbacher (May 21): Larval populations in the Pleasanton area have been the lowest of any year since our investigation of this pest was started. No counts as high as 1,000 larvae per 100 sweeps of an insect net have been collected. In this area Bathyplectes curculionis Thoms. has built up at a tremendous rate since its introduction. In the field where it was first liberated at least 80 percent of the large alfalfa weevil larvae collected on May 15 were found to be parasitized. On May 2 in a field located some little distance from the point of introduction 15 percent of the large larvae collected were found to be parasitized.

#### CLOVER LEAF WEEVIL (Hypera punctata Fab.)

Ohio. T. H. Parks (May 25): This insect has been very abundant in some clover and alfalfa fields in the northern half of the State. Reports from Huron County reveal that one field of clover was plowed under because of the work of the weevil. Samples were also received from Portage County with the statement that it was seriously injuring alfalfa and clover.

Indiana. J. J. Davis (May 25): The clover leaf weevil was reported on May 14 and 15 to be damaging clover in the northern third of the State. Some specimens showed the white-mold fungous disease and, as the weather continued wet and no further reports of abundance were received, it is assumed that natural control checked the outbreak.

Michigan. R. Hutson (May 20): The clover leaf weevil has been reported from Hartford on sweetclover and from Centerville on red clover.

Washington. E. J. Newcomer (May 21): Larvae of this weevil have been particularly numerous on alfalfa in the lower Yakima Valley this spring. It is possible that this is the result of the two mild winters here. (Det. by G. I. Reeves.)

California. A. E. Michelbacher (May 21): On May 6 the clover leaf weevil was found in fair abundance in Humboldt County. The exact location was about 6 miles east of Garberville. To my knowledge this is a new locality for this insect.

#### SUGARCANE

##### SUGARCANE BORER (Diatraea saccharalis Fab.)

Florida. J. W. Ingram (April 30): The sugarcane borer infestation in the Everglades sugar section was less than 0.5 percent at this time.

##### LESSER CORN STALK BORER (Elasmopalpus lignosellus Zell.)

Florida. J. W. Ingram (April 30): The growing points of about 4 percent of the sugarcane plants in the Lake Okeechobee district had been killed by lesser corn stalk borers. Injury in some fields ran as high as 30 percent. Nearly all of the injured plants were suckering out, as the point of injury was high enough in the plant to permit this. There will be little loss of stand, although the delayed growth will result in somewhat lowered sugar content in the injured stalks. Only slight injury was found in cane fields at Fellsmere and at Quincy.

##### SUGARCANE BEETLE (Euethoea rugiceps Lec.)

Georgia. T. L. Bissell (May 11): Young corn in several gardens in one part of Griffin was severely attacked and corn 18 inches high was killed.

Alabama. J. M. Robinson (May 24): The rough-headed cornstalk borer is reported as attacking corn in Ranburne.

Mississippi. C. Lyle (May 23): Inspector N. D. Feets reports having observed injury to corn and sugarcane at several places in the southwestern section of the State. A correspondent at Rome, Sunflower County, sent us specimens of these beetles on May 9, with a report that his stand of corn had been ruined.

Louisiana. J. W. Ingram and W. E. Haley (May 15): Beetle injury to sugarcane in the section west of the Atchafalaya River is the lightest in several years. Injury has been less than 30 percent of that in an average year. Timely rains in the infested area have increased the growth of cane so that it is out of danger of serious injury.

#### RICE

##### SUGARCANE BEETLE (Euethiola rugiceps Lec.)

Louisiana. W. A. Douglas (May 29): A survey of the southwestern Louisiana rice belt has been made to obtain data on the extent of injury to rice by the sugarcane beetle. Six thousand stalks were examined in 12 fields and the percentage of killed plants found to be 3.3. Fifteen hundred of these stalks, or 3 fields, were in the Kinder-Oberlin section, where the percentage of killed plants was 5.8. Most rice fields have now been flooded and no more sugarcane beetle injury will occur, except on planted levees, until the rice is drained for harvest.

##### RICE STINKBUG (Solubea pugnax Fab.)

Louisiana. W. A. Douglas (May 29): Rice stinkbugs are breeding rapidly on various wild hosts in the Louisiana rice section, the favorite wild host being Paspalum urvillei.

##### RICE WATER WEEVIL (Lissorhoptus simplex Say)

Louisiana. W. A. Douglas (May 29): Rice water weevils are present in about average numbers in the Louisiana rice section. Adult feeding scars are noticeable on a few small areas, but aside from this there is no apparent injury to the rice crop.

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

#### APPLE

##### CODLING MOTH (Carpocapsa pomonella L.)

New York. P. J. Parrott (May 20): Indications point toward large populations of codling moth in western New York.

Delaware. L. A. Stearns (May): On April 30, 65 percent of overwintered larvae had transformed. The spring-brood moths first emerged on May 5.

Pennsylvania. H. N. Worthley (May 28): A single moth emerged from an observation cage at Biglerville on May 14, and in 5 bait pails on May 18 only one moth was taken. Continued cool weather delayed further activity until May 23, when 7 moths emerged and 6 were caught in the pails. In 1934 the heaviest moth flight occurred between May 18 and 24, when 476 moths were trapped in 5 bait pails in the same block of trees.

South Carolina. W. C. Nettles (May 27): Codling moth below normal in commercial orchards.

Ohio. T. H. Parks (May 25): From a cage of over 1,000 overwintering larvae at Columbus, only 2 moths have emerged. These emerged on May 22. Emergence is fully 10 days behind that of 1934. The cool weather has held back the moth and the first brood of larvae will probably be bunched and more easily controlled with well-timed sprays. Emergence in Lawrence County, southern Ohio, began on May 8 but has been progressing very slowly. Many are now in the pupal stage and will emerge as soon as warm weather arrives. Nights have been too cool for moth activity in southern counties.

Indiana. J. J. Davis (May 25): Reports from Vincennes and Orleans indicate that pupation was not uncommon on April 11, in fact newly formed pupae were observed as early as March 27 at Elberfeld (between Vincennes and Evansville). At Vincennes the first moths were captured in the orchard on May 8 (4 days later than in 1934). No eggs hatched at Orleans up to May 23. Apparently hatching of the first-brood worms will be rather drawn out.

G. W. Hamilton (May 20): At Orleans the first adults were captured in bait traps during the night of May 8, and in light traps during the night of May 9. Since then daily captures in both light and bait traps gradually increased through the night of May 13. Since May 13 weather conditions have been very unfavorable for moth activity.

L. F. Steiner (May): Bait traps began capturing moths at Bicknell and in 2 orchards at Vincennes on the night of May 8. Emergence began in packing sheds at Bicknell and Elberfeld, also on May 8. The first pupal skins were observed in the orchard on May 9, the last previous search for them having been made on May 7. If any emergence occurred before May 8, rain and low temperatures would have prevented oviposition. First-brood larvae are expected to begin hatching in this area on May 18, if the weather is normal.

Illinois. W. P. Flint (May 20): Codling moth adults began emerging in southern Illinois about May 1. Quite a heavy emergence occurred from May 10 to 15.

Missouri. L. Haseman (May 22): Emergence of the codling moth began the last part of April in the southeastern part of the State, from May 1 to 3 in the southwestern part, and from May 8 to 11 in the central part. Up to May 20 none had emerged in the northern part. Cool, rainy weather has slowed down emergence and development, so no worms have yet been observed entering fruit.

Colorado. G. M. List (May 23): The winter mortality of codling moths was low. Moth emergence began in Mesa County on May 18. No moths have yet emerged in Delta County. The spring is backward, a contrast to that of last year.

Idaho. R. W. Haegele (May 1): Codling moth emergence has not yet started. The season is nearly normal, the calyx spray being due about May 10, at which time emergence should be under way.

Washington. E. J. Newcomer (May 21): Moths began emerging on May 3 in the Yakima Valley.

EASTERN TENT CATERPILLAR (Malacosoma americana Fab.)

New England. L. H. Worthley (May 6): In New Hampshire hatching was first observed on April 26. An apparently heavy infestation is reported in the Concord district. Massachusetts inspectors first observed signs of hatching on April 22. Cool weather kept the larvae near the egg masses until a warm spell on April 30, when they began to spin tents. Reports from Quincy, Boston, Framingham, and Lynnfield indicate heavy infestations in these districts. Hatching of larvae was noted in the Westerly and Newport, R. I., districts on April 26. A heavy infestation exists in the Westerly section. Connecticut inspectors report hatching as having begun in the Middletown district on April 20, in Willimantic territory on April 25, and in the vicinity of Manchester on April 27. All three of the latter sections are apparently heavily infested.

Maine. H. B. Peirson (May 17): The American tent caterpillar is general in the southwestern part of the State. The tents are becoming very noticeable in size and abundance.

New Hampshire. L. C. Glover (May 24): The tent caterpillar is very common in certain localized areas around Durham. As a whole, however, the State has fewer caterpillars than last year. Several men from different parts of the State have noted wilt disease among the caterpillars.

Vermont. J. M. Robinson (May 25): Extremely abundant in the southwestern section of the State, comparatively scarce to moderately abundant in central and northeastern sections, and the smallest numbers where winter temperatures were coldest.

Massachusetts. J. V. Schaffner, Jr. (May 21): The eastern tent caterpillar is unusually abundant in many localities throughout the eastern part of the State.

Rhode Island. A. E. Stene (May 20): The eastern tent caterpillar is showing up in unusual numbers.

Connecticut. W. E. Britton (May 23): Caterpillars and their nests are extremely abundant on apple and wild cherry throughout the State.

New York. P. J. Parrott (May 20): Very abundant in western New York and in the Hudson Valley.

R. E. Horsey (May 22): At Rochester very common on ornamental crabapples of several species, native crabapples, and several species of

cherry. On May 9 the nests measured about  $2\frac{1}{2}$  inches in diameter and the caterpillars were nearly  $\frac{1}{2}$  inch long.

New Jersey. T. J. Headlee (May 21): The tent caterpillar is extraordinarily abundant over the State, perhaps as abundant or more so than at any time during the last 20 years.

M. Kisliuk, Jr., and E. Kostal (May): The American tent caterpillar is especially abundant from Monmouth County to Cumberland County. Eggs began to hatch the second week in April. Trees infested, in order of severity, are wild cherry, apple, native plum, Japanese quince, and flowering thorn.

Pennsylvania. H. N. Worthley (May 24): Eastern tent caterpillars are now becoming full grown and are beginning to wander. During a trip on May 21 to 23, complete defoliation was observed common from Centre County east to Lehigh County and south to Adams County.

West Virginia. F. W. Craig (May 23): Eastern tent caterpillars have been very numerous in localities scattered throughout the State.

Virginia. F. F. Smith (June 3): In Arlington County the damage by the tent caterpillar this year appeared to be limited to groups of trees and on which defoliation was complete and the nests were numerous. In nearby areas the damage was slight on the same hosts and the nests were scarce.

Ohio. E. W. Mendenhall (May 14): M. americana was found to be quite prevalent in Cuyahoga County this spring.

Kentucky. W. A. Price (May 27): The tent caterpillar was conspicuous in many places in Kentucky during the early part of May, being especially abundant in the eastern part of the State.

Tennessee. J. Milam (April 15): Many trees at Clarksville are entirely defoliated but little damage has been done to orchards.

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

Connecticut. P. Garman (May 22): Larvae began hatching about the first week in May in New Haven County. In the more heavily infested orchards it appears to be well in control.

New York. P. J. Parrott (May 20): Orchards with severe infestations, especially in the Hudson Valley, are more common than in any recent year.

N. Y. State Coll. Agr. News Letter (May): Leaf rollers started hatching the last week in April in the Hudson River Valley and the first week in May in western New York. Some damage was observed in the Hudson River Valley later in the month.

Pennsylvania. H. E. Hodgkiss (May 21): In the northern half of the State the fruit tree leaf roller has been more abundant than in other years.

PISTOL CASE BEARER (Coleophora malivorella Riley)

Pennsylvania. H. E. Hodgkiss (May 21): A rather serious infestation of the pistol case bearer was observed in Adams County. The case bearers were practically matured on May 17.

DUSKY LEAF ROLLER (Amorbia humerosana Clem.)

Pennsylvania. H. E. Hodgkiss (May 21): Leaf rollers, especially the dusky leaf roller, were very abundant in all stages throughout the State during the week of May 13 to 18.

A CUTWORM (Septis alia Guen.)

New Jersey. T. J. Headlee (May 21): We had a most extraordinary number of this noctuid moth on the wing during the latter part of April and the first part of May. Reports on this insect have been received from various parts of the State, particularly from middle and southern parts, where the larvae are beginning to appear in apple orchards where they are mistaken for green fruit worms.

GREEN FRUIT WORM (Graptolitha antennata Walk.)

Connecticut. P. Garman (May 22): Green fruit worms abundant in pear and apple orchards. Eggs observed about a month ago.

New York. N. Y. State Coll. Agr. News Letter (May): The green fruit worm began hatching in the Hudson River Valley the last of April and by the end of May was doing some damage in the lower part of the valley.

APHIDS (Aphidae)

Connecticut. P. Garman (May 22): The rosy aphid (Anuraphis roseus Baker) is present in many orchards in New Haven County but weather conditions have not been suitable for its development and consequently it is not abundant at present.

Ohio. T. H. Parks (May 25): No reports of trouble from the green aphid (Aphis pomi DeG.) or the rosy aphid (Anuraphis roseus Baker) in our State. The apple grain species (Rhopalosiphum prunifoliae Fitch) migrated from trees at Columbus about a week ago.

Indiana. J. J. Davis (May 25): In orchards where aphids were abundant earlier, they have been reduced to insignificance by ladybeetle larvae.

New York. P. J. Parrott (May 20): The rosy apple aphid is moderately abundant in western New York.



N. Y. State Coll. Agr. News Letter (May): All species of fruit aphids were appearing in western New York by the end of April. The apple grain aphid was leaving the apples by the third week in May. The green apple aphid was only moderately abundant over most of the State. The rosy apple aphid was generally reported as scarce until the end of May, when it started to increase in abundance in the Hudson River Valley and also in the lakes district.

Pennsylvania. H. E. Hodgkiss (May 21): Rosy apple aphid infestation is not important. In three southwestern counties there are enough rosy aphids to cause a rather serious situation if breeding conditions are favorable.

Michigan. R. Hutson (May 20): Apple aphids have been frequently reported from southwestern Michigan, but all specimens examined proved to be R. prunifoliae.

Wisconsin. C. L. Fluke (May 22): Apple aphids numerous.

Minnesota. A. G. Ruggles (May): On May 20 H. C. Tederson, of Lowry, Winona County, reported aphids numerous on buds of some fruit trees. A. Campbell, Lewiston, Winona County, reported apple aphids very abundant earlier in the season.

Arkansas. D. Isely (May 24): The rosy apple aphid is unusually abundant in northwestern Arkansas.

Idaho. R. W. Haegele (May 1): The green apple aphid is quite general in apple orchards of southwestern Idaho but severe injury is not anticipated.

#### WHITE APPLE LEAFHOPPER (Typhlocyba pomaria McAtee)

Connecticut. P. Garman (May 22): White apple leafhoppers are scarce at present.

Pennsylvania. H. E. Hodgkiss (May 21): Pale leafhopper nymphs were hatching in Bucks County and other southeastern counties on May 14.

#### A TREEHOPPER (Glossonotus crataegi Fitch)

New York. P. J. Parrott (May 20): This treehopper is very abundant in a few apple orchards in the vicinity of Hilton.

#### SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Georgia. O. I. Snapp (May 20): Predators have greatly reduced the San Jose scale infestation in Fort Valley. This locality was more heavily infested last fall than in average years. Very few live scales have been left in some orchards. A few crawlers set up during the last month.

Indiana. J. J. Davis (May 25): San Jose scale is evidently noticeably increasing in northern Indiana. A number of scale-encrusted twigs have been received.

Wisconsin. E. L. Chambers (May 21): The spraying of about 600 city properties in southern Wisconsin has been completed under favorable weather conditions.

ROSE CHAFER (Macroductylus subspinosus Fab.)

South Carolina. F. Sherman (May 27): Rose chafer locally abundant and doing damage in unsprayed apple orchards in the mountains.

Tennessee. G. M. Bentley (May 22): A very phenomenal outbreak of the rose beetle in three commercial orchards in Fayetteville has caused considerable excitement. The owners report from 50- to 85-percent loss of apples from the heavy attack of these beetles. They seem to congregate in the woods and fly in swarms to the orchards.

APPLE FLEA WEEVIL (Orchestes pallicornis Say)

Ohio. J. S. Houser (April 29): During the past few years this insect has increased in abundance in a considerable number of areas in the State. One grower who operates a 30-acre commercial orchard at Medina states that a conservative estimate of his loss during each of the last 8 years is \$1,000. On April 26, when this orchard was visited, one fruit cluster that had not reached the prepink stage, was infested with 13 weevils. This was very unusual; however, on many clusters groups of 3, 4, and 5 beetles were found.

SAY'S BLISTER BEETLE (Pomphopoea sayi Lec.)

Ohio. J. S. Houser (April 29): This beetle appeared in large numbers in Millersburg and New Philadelphia and caused serious damage by eating all parts of the blossoms. The damage is most severe in the tops of the trees. The beetles are active on warm, sunny days and retire to the shelter of debris under the trees during rainy, cool weather.

PEACH

PLUM CURCULIO (Conotrachelus nenuphar Hbst.)

Delaware. L. A. Stearns (May): First overwintered adults emerged from hibernation on April 25; peak of emergence on May 2.

Virginia. W. J. Schoene (May 25): During the past 30 days adults have been reaching the peach orchards in very much larger numbers than in previous years.

Pennsylvania. H. E. Hodgkiss (May 21): Plum curculio was very abundant in Adams, Franklin, and other southern counties during the week of May 13.

Ohio. E. H. Parks (May 25): Inspection of apple orchards indicates that there are fewer of these beetles than usual in the apple trees. It is difficult to find curculio-scarred apples, except where fruit trees join woodland or weedy fence rows. The large peach crop in prospect is still free from curculio blemishes.

Illinois. W. P. Flint (May 20): Largely because of the extreme drought of last year, the plum curculio is very scarce. S. C. Chandler's examinations in southern Illinois show the insect in smaller numbers than at any time during the last 10 years.

Georgia. O. I. Snapp (May 20): The peak of emergence of first-brood larvae from drops occurred on April 28 at Fort Valley. The first pupation of the season was recorded on May 9, which is 19 days earlier than the first pupation in 1934. The insect is developing from 2 to 3 weeks earlier than last year and a serious second brood is expected. Peach drops were very heavily infested with curculio larvae. (May 21): The first transformation to adult beetles in soil in the laboratory was recorded today. It will probably be another week or two before these beetles emerge. Several new-locking beetles were among the curculios jarred from peach trees in an orchard today. (May 28): The first new beetle of the season emerged today from the soil in the laboratory. This is 16 days earlier than the first emergence last year, and on account of the unusually early emergence of first generation adults there is every prospect of considerable damage to the peach crop from second-brood larvae. There was a marked increase in the number of curculios caught in the orchard by jarring this morning, as a result of the emergence of new beetles from the soil. In one block of trees this increase was 246 percent during the last week. (May 31): The first-generation adults started emerging from peach drops during the night, following a rain yesterday.

South Carolina. W. C. Nettles (May 27): Curculio apparently above normal in peach orchards.

Mississippi. C. Lyle (May 23): Heavy damage to unsprayed peaches and plums by the plum curculio is rather general over the State.

Missouri. L. Haseman (May 22): Plum curculio seems to be less abundant than usual, or else is being held back by weather. Few punctures in plums have been reported at Columbia, and at Cape Girardeau some stings during the past 2 weeks have been reported.

Kansas. H. R. Bryson (May 25): Some cherries at Manhattan show both feeding- and egg-laying punctures of this insect.

#### CAMBIUM CURCULIO (Conotrachelus anaglypticus Say)

Georgia. O. I. Snapp (May 17): A few specimens have been taken since April 20 by jarring peach trees at Fort Valley.

PEACH BORER (Aegeria exitiosa Say)

Georgia. O. I. Snapp (May 15): The examination of hundreds of peach trees in commercial orchards in all directions from Fort Valley during the last month shows that there has been no cocooning or pupation of this insect under field conditions. (May 22): The first cocoon of the season was found in a peach orchard today. It contained a pupa about 2 days old. This is the earliest pupation in the field of which we have a record. (June 3): The first moth of the season, a normal, full-sized female, emerged today from a cocoon collected in a commercial peach orchard at Fort Valley on May 22. This is the earliest moth emergence from commercial orchard material in this locality of which we have a record.

Illinois. W. P. Flint (May 20): More than the usual number of inquiries concerning damage by the peach tree borer have been received this spring.

LESSER PEACH BORER (Aegeria pictipes G. & R.)

Delaware. L. A. Stearns (April 26): Reports of injury from Millsboro and Bridgeville.

Georgia. O. I. Snapp (May 17): Spring-brood moths are still emerging at Fort Valley.

ORIENTAL FRUIT MOTH (Grapholitha molesta Busck)

Delaware. L. A. Stearns (May): Ninety percent of the overwintered larvae had transformed by April 30; first emergence of spring-brood moths occurred on April 26; heavy emergence of spring-brood moths took place from April 26 to May 2. First first-brood eggs observed on May 9.

New Jersey. G. J. Haeussler (May 24): The first adult moths were captured in bait pans on April 26.

Georgia. O. I. Snapp (May 20): Twig injury is less abundant than usual at Fort Valley.

Ohio. T. H. Parks (May 25): Larvae were present in the new growth on May 12 and were causing wilting of some terminals.

Indiana. J. J. Davis (May 25): Oriental fruit worm adults were observed in a packing house at Bedford on April 25. Emergence was slow because of cool weather. At present, twig injury is common in southern Indiana and worms half grown or older are to be found.

L. F. Steiner (May): The first twig injury by the oriental fruit moth was observed at Vincennes on May 9.

Illinois. W. P. Flint (May 20): Damage to peach twigs from the oriental

fruit moth is now beginning to show over the southern fourth of the State.

Mississippi. C. Lyle (May 23): On April 26 Inspector J. P. Kislanko sent to us photinia twigs showing injury evidently caused by this insect. Complaints of damage to peach twigs have been received from various localities throughout the State.

Arkansas. D. Isely (May 24): The oriental fruit moth has been rare in northern Arkansas.

GREEN PEACH APHID (Myzus persicae Sulz.)

Nebraska. M. H. Swenk (May 20): Reports of injury to peach trees were received from Lancaster and Cedar Counties on May 9 and 12, respectively.

Colorado. G. M. List (May 23): The green peach aphid is more numerous in the peach areas than for a number of years. Spraying has been quite general and with the large number of ladybeetles that are appearing it is hoped little damage will be done.

BLACK PEACH APHID (Anuraphis persicae-niger Smith)

Maryland. E. N. Cory (May 7): Black peach aphid reported at Cambridge.

LEAF-FOOTED BUG (Leptoglossus phyllopus L.)

Georgia. O. I. Snapp (May 22): This species is unusually abundant this year at Fort Valley and is damaging peaches by puncturing the fruit and sucking the juice.

PEAR

PEAR PSYLLA (Psyllia pyricola Foerst.)

Connecticut. P. Garman (May 22): The pear psylla is reported more abundant than last month in New Haven County.

New York. P. J. Parrott (May 20): Pear psylla abundant in western New York.

PEAR MIDGE (Contarinia pyrivora Riley)

New York. P. J. Parrott (May 20): Pear midge abundant in western New York.

PEAR THRIPS (Taeniothrips inconsequens Uzel)

New York. N. Y. State Coll. Agr. News Letter (May): The pear thrips caused some damage during the month in Ulster, Columbia, and Onondaga Counties; in general, however, it was less numerous than last year.

Oregon. D. C. Mote (May): Few larvae still remaining on prune and cherry trees. Most remaining thrips are mature.

California. H. J. Ryan (April 25): Several growers in Antelope Valley have applied control measures for thrips on pear.

PEAR LEAF BLISTER MITE (Eriophyes pyri Pgst.)

California. H. J. Ryan (April 25): The pear leaf blister mite has been quite active in the Antelope Valley and pear buds have been discolored. Several growers have applied control measures.

PLUM

RUSTY PLUM APHID (Hysteroneura setariae Thos.)

Missouri. L. Haseman (May 21): The rusty brown plum aphid was reported serious on some varieties of plums in the central part of the State early in May, but is largely cleared up now.

Mississippi. C. Lyle (May 23): Plum twigs showing a heavy infestation of rusty plum aphid were received from a grower at Shuqualak on April 30 and Inspector J. Milton stated that he found a heavy infestation on a plum tree in Jackson on April 29.

Oklahoma. F. A. Fenton (May 22): Aphids of various species are causing more trouble this year than normally, owing to the cool, late spring. The rusty brown plum aphid has caused considerable damage to plums.

Texas. F. L. Thomas (April and May): Many of the plum trees of Bee and Live Oak Counties are infested. Reports were received from Skidmore on April 29, from Three Rivers on May 11, and from Rockwall on April 22.

CURRANT

CURRANT APHID (Myzus ribis L.)

Indiana. J. J. Davis (May 25): Currant aphid reported very abundant at Marion on May 21.

North Dakota. J. A. Munro (May 21): Aphids very abundant on currants in Fargo.

Nebraska. M. H. Swenk (May 20): The currant aphid was reported working on gooseberry leaves in Garfield County on May 9.

PECAN

PECAN LEAF CASE BEARER (Acrobasis juglandis Le B.)

Georgia. J. B. Gill (May 22): The larvae of the pecan leaf case bearer have been causing considerable damage to the buds and foliage in some pecan orchards in the vicinity of Tifton.

FALL WEBWORM (Hyphantria cunea Drury)

Georgia. O. I. Snapp (May 24): Nests of young fall webworms were observed on pecan trees at Fort Valley today. This is unusually early for the first seasonal appearance of these insects. Another heavy infestation is expected. Last year's infestation in some localities was the heaviest I had ever seen.

J. B. Gill (May 22): Nests of the fall webworm are now showing up in pecan orchards and other trees in the vicinity of Tifton.

Mississippi. G. L. Bond (May 23): On May 10 a large web of fall webworms was noted on a persimmon tree near Wade. The worms appeared to be about half grown.

PECAN PHYLLOXERA (Phylloxera devastatrix Perg.)

Mississippi. C. Lyle (May 23): On May 7 county agent L. C. Strahan, of Natchez, reported heavy infestations of galls on pecan trees in that vicinity.

A SAWFLY (Periclista sp.)

Mississippi. H. Gladney (May 23): Sawfly larvae, Periclista sp., have caused considerable injury to pecan trees along the coast of Jackson County during the past month by eating holes in the foliage. The leaves have the appearance of having been shot with a shot gun. (This is probably P. nicoriae Rohw., according to notes on file in the Insect Pest Survey.)

CITRUS

GREEN CITRUS APHID (Aphis spiraecola Patch)-

Florida. J. R. Watson (May 21): Citrus aphids were very abundant the first part of April, which was very much later than usual. They were chiefly on trees that had been more or less injured by the freeze of December and were putting out new growth. The ladybeetle, Leis sp., was found in large numbers in the northern part of Orange County and was effecting commercial control of aphids.

T R U C K - C R O P I N S E C T S

VEGETABLE WEEVIL (Listroderes obliquus Gyll.)

South Carolina. W. J. Reid (May 14): The vegetable weevil has been discovered at Charleston. (Det. by L. L. Buchanan.)

Georgia. T. L. Bissell (May 4): Potatoes are heavily infested by weevils in a farm garden at Orchard Hill. (May 6): I have found L. obliquus at five points in and near Orchard Hill and Milner, over an area 5 miles by 4. We have scouted six other counties, one or two localities to the county, in a ring around the area, without finding further infestations. (Det. by L. L. Buchanan.)

California. A. C. Fleury (April 30): The vegetable weevil has been found in Santa Ana Canyon about half a mile across the Riverside County line and so far as I know this is the only place where it occurs in Riverside County. It was found there on wild growth and is far away from any vegetable-growing area.

D. T. Prendergast (May 27): On May 15, the vegetable weevil was observed seriously injuring tomatoes 11 miles south of Tracy, across the line in Stanislaus County. This is the first record of the appearance of this weevil in this area.

A CAMEL CRICKET (Daihinia brevipes Hald.)

Oklahoma. C. F. Stiles (May 21): The California camel cricket has been reported damaging gardens and truck crops in Kingfisher, Garfield, and Tillman Counties. This insect was reported in 1932 as being present in large numbers in Harmon County. Since then it has again been reported from Harmon, Ellis, Roger Mills, and Jackson Counties. It has been definitely proved that this insect feeds on vegetation.

MOLE CRICKETS (Scapteriscus spp.)

North Carolina and South Carolina. W. A. Thomas (May): Mole crickets, S. acletus R. & H., and S. vicinus Scudd., have been serious pests in tobacco seed beds throughout the South Carolina tobacco belt, which includes several border counties in North Carolina. Although isolated instances of injury have been noted during the past 2 years, this is the first time the mole cricket has been considered a serious seed-bed pest in this particular territory.

SEED CORN MAGGOT (Hylemyia cilicrura Rond.)

Iowa. C. J. Drake (May 23): Many scattered reports of damage to seed corn, melon, and other seeds have come in this spring. The maggot is fairly common in the onion-growing districts of eastern Iowa.



Missouri. L. Haseman (May 22): Many complaints are being received. Melon growers in southeastern Missouri are reporting injury.

Utah. G. F. Knowlton (May 14): Seed corn maggots are damaging melon and bean seeds in several parts of Weber County.

#### POTATO AND TOMATO

##### COLORADO POTATO BEETLE (Leptinotarsa decemlineata Say)

Virginia. H. G. Walker (May 25): The Colorado potato beetle has been unusually abundant in many sections of Tidewater Virginia. This is probably due to the fact that many growers failed to control this insect properly last year because of the low price of potatoes.

Georgia. J. B. Gill (May 22): The Colorado potato beetle has been damaging Irish potatoes and tomatoes in the vicinity of Tifton.

Florida. F. S. Chamberlin (May 20): The Colorado potato beetle is very abundant in Gadsden County, where it is causing considerable damage to tomato plants.

Ohio. B. J. Landis and H. C. Mason (May 23): The Colorado potato beetle is very abundant at South Point. Some eggs have hatched. On May 20 many egg masses were washed off the plants by heavy rains.

Tennessee. G. M. Bentley (May 22): In western Tennessee the Irish potato beetle is occurring in larger numbers than usual.

Alabama. J. M. Robinson (May 24): The Colorado potato beetle has been very abundant and active this year at Auburn. Stiretrus anchorago Fab. has appeared associated with the larvae.

Mississippi. C. Lyle (May 23): Damage to Irish potatoes is quite general over the State. In some places eggplants and tomatoes are also being injured.

Utah. G. F. Knowlton (May 14): The Colorado potato beetle appears to be rather scarce this spring in the small infested area in Weber and Davis Counties.

##### POTATO FLEA BEETLE (Epitrix cucumeris Harr.)

Virginia. L. D. Anderson (May 1): Although the potato plants are just coming through the ground, flea beetles may be found easily throughout every potato field in the vicinity of New Church.

North Dakota. J. A. Munro (May 21): Potato flea beetles are moderately abundant at Fargo. Adults were commonly observed in gardens this spring.

South Carolina. W. C. Nettles (May 27): Potato flea beetles are more than normally abundant over the State. They are injuring eggplant and potato seriously.

CORN EAR WORM (Heliiothis obsoleta Fab.)

Georgia. J. B. Gill (May 22): The tomato fruit worm has been very troublesome in tomato fields at Tifton.

South Carolina. C. O. Bare (May 18): Examination of 355 stalks in a field of sweet corn showed 88 stalks, or 25 percent, infested with from one to three larvae per stalk.

Mississippi. C. Lyle and assistants (May 23): Tomato fruit worms are beginning to damage tomatoes in the districts around Ocean Springs, Moss Point, and Brookhaven. These insects severely injured the young growth and buds on roses in Pascagoula early in May.

Kansas. H. H. Walkden (May 25): One adult was taken at the Hays trap light on May 2, the first appearance of the insect this season. At Manhattan the first adult was taken at the trap light on May 19 and another on May 24. All were badly rubbed. None have been observed in the field.

Texas. F. L. Thomas (May 20): Moths were beginning to oviposit on tomatoes on May 14, just as the plants were beginning to bloom. Eggs or newly hatched larvae were apparently dislodged by heavy rains and wind during the following week, as on May 20 only new-laid eggs were found.

S. W. Clark (May 4): This insect is more abundant than usual on corn and tomato at Weslaco. It is seriously damaging pop corn.

BEANS

MEXICAN BEAN BEETLE (Epilachna corrupta Muls.)

Correction.--The record of the Mexican bean beetle in Mississippi by E. W. Dunnam, in the Insect Pest Survey Bulletin, May 1, 1935, p. 86, is erroneous. The specimen has been determined as E. borealis Fab.

Maryland. L. W. Brannon (May 3): The first Mexican bean beetle of the season was found feeding in the field on the Eastern Shore at Salisbury on May 3. A large number of field examinations were made in the vicinity and only one beetle was found.

Virginia. L. W. Brannon (April 29): The first beetle of the season was found feeding in the field in the Norfolk area on April 29. Only one beetle was found on 25 rows of beans, so the beetle is apparently one of the first to emerge. Daily observations have been made since April 18. On the Eastern Shore of Virginia the first beetle was found feeding in the field on May 3 near Belle Haven.

H. G. Walker (May 25): About 20 percent of the overwintering beetles have emerged from our hibernation cages at Norfolk.

South Carolina. F. Sherman (May 27): The Mexican bean beetle is becoming active in the field.

Georgia. T. L. Bissell (May 27): The Mexican bean beetle is very injurious in Union County, much more so than around Experiment. The damage has been by beetles, which are just beginning to lay eggs.

Ohio. N. F. Howard (May 25): The first record of the Mexican bean beetle in the field was made at South Point on May 8. H. C. Mason found the first feeding in the field at Columbus on May 13. The beetles have been emerging in hibernation cages throughout the month and the peak of emergence occurred on May 21 at Athens and Columbus.

Alabama. J. M. Robinson (May 24): The Mexican bean beetle is active generally over the northern two-thirds of the State.

New Mexico. R. L. Wallis (April): Examinations of hibernation cages for the period ended April 30 in the foothills of the Estancia Valley showed that 67.71 percent of the beetles were dead. This is 5.68 percent lower winter mortality than the average for the past 5 years.

#### BEAN LEAF BEETLE (Corotoma trifurcata Forst.)

Virginia. L. W. Brannon (May 1): The first bean leaf beetles were observed feeding on young snap beans in the field at Norfolk on April 25. This is 10 days earlier than this insect was observed feeding in the field in 1934. Considerable damage was being done in some patches of beans.

South Carolina. W. C. Nettles (May 27): Bean leaf beetle damage is above normal over the State.

Georgia. J. B. Gill (May 22): The bean leaf beetle and the spotted cucumber beetle have been troublesome on the foliage of beans this spring at Tifton.

Ohio. H. C. Mason (May 26): Not as abundant at South Point as in 1934.

Mississippi. C. Lyle (May 23): On April 30 a correspondent at Potts Camp sent specimens with a report that garden beans were being severely injured by them. Additional reports of damage were received from Copiah and Lincoln Counties.

#### SPOTTED CUCUMBER BEETLE (Diabrotica duodecimpunctata Fab.)

Virginia. L. W. Brannon (May 1): Twelve-spotted cucumber beetles were observed feeding in the field at Norfolk on young snap beans for the first time this season on April 26. This is 3 days later than the first beetles were observed feeding in 1934.

BANDED FLEA BEETLE (Systema taciata Say)

Virginia. L. W. Brannon (May 1): Adults were observed feeding on snap beans in the Norfolk area on April 26. Considerable damage was being done to the young plants in some counties.

CABBAGE

CABBAGE INSECTS (Lepidoptera)

South Carolina. W. J. Reid and C. O. Bare (May 24): Listed according to relative abundance, the chief cabbage insects in the vicinity of Charleston are the diamond-back moth (Plutella maculipennis Curt.), the cabbage looper (Autographa brassicae Riley), the imported cabbage worm (Ascia rapae L.), and the cabbage webworm (Hellula undalis Fab.). The total infestation of these insects in an experimental planting increased from less than 0.5 worm per plant on partially headed cabbage on April 20 to 13.68 worms per plant on headed cabbage on May 24. Only 3 of the last-named species were found on May 6 to 3 in an examination of 7,200 plants:

IMPORTED CABBAGE WORM (Ascia rapae L.)

Ohio. R. H. Davidson (May 20): The cabbage butterfly is depositing eggs in numbers on early cabbage in the vicinity of Clyde.

B. J. Landis (May 23): Imported cabbage worms are present on early cabbage at Columbus. A few eggs had hatched by May 1.

Mississippi. N. D. Peets (May 23): Injury to cabbage has been more severe this year in the trucking sections of Copiah and Lincoln Counties than in recent years.

California. R. E. Campbell (April 25): Cabbage worms have been sufficiently numerous in several cabbage fields at Puente and Temple City to require the application of insecticides.

DIAMOND-BACK MOTH (Plutella maculipennis, Curt.)

Virginia. H. G. Walker (May 25): The secondary parasite reared from Angitia hellulae Vier., the parasite attacking the larvae of the diamond-back moth, has been identified by A. B. Gahan as Eupteromalus viridescens Walsh.

Georgia. J. B. Gill (May 22): The diamond-back moth has been quite common in cabbage fields in the Tifton district.

Utah. G. F. Knowlton (May 14): Diamond-back moths are very abundant in most districts of northern Utah. Larvae of all sizes are abundant on Sophia sophia, Norta altissima, Choirinia repanda, and other mustards near fields that will soon be planted to cabbage and other crop host plants.

HARLEQUIN BUG (Murgantia histrionica Hahn)

- Virginia. L. W. Brannon (May 1): Adult harlequin bugs have been observed feeding on seed-kale plants in the field at Norfolk since April 5. The first eggs were found in the field on April 26. No hatching has been observed to date. The date of emergence and oviposition this season is about normal.
- Georgia. J. B. Gill (May 22): Harlequin cabbage bugs have been occurring in damaging numbers on cabbage in the vicinity of Tifton.
- Ohio. B. J. Landis and H. C. Mason (May 23): Harlequin bugs were very numerous on mustard greens at Columbus. One field showed from slight to moderate damage. A few egg masses were present on May 20.
- Kentucky. W. A. Price (May 27): The harlequin bug has appeared at several places in the State, notably at Marion, Hopkinsville, and Lexington.
- Mississippi. C. Lyle (May 23): Inspector G. I. Worthington, of Cleveland, reports having observed scattered infestations of the harlequin bug on cabbage and turnips. A heavy infestation of these bugs on turnips was reported recently from Marshville.

ONIONS

ONION THRIPS (Thrips tabaci Lind.)

- Georgia. J. B. Gill (May 22): The onion thrips has been quite prevalent in onion patches at Tifton.
- Mississippi. G. L. Bond (May 23): On May 4 I noted severe damage to onions at Leakesville. The tops had turned yellow and appeared to be almost dead.

HORSERADISH

HORSERADISH FLEA BEETLE (Phyllotreta armoraciae Koch)

- Michigan. R. Hutson (May 7): Heavy infestations of horseradish plantings at Saint Joseph, in Berrien County, are reported.

STRAWBERRY

STRAWBERRY WEEVIL (Anthonomus signatus Say)

- Delaware. L. A. Stearns (April 26): Report of early activity from Bridgeville.
- Virginia. L. D. Anderson (May 1): In many fields in the New Church district the strawberry weevil, commonly called the "strawberry clipper", is causing losses as high as 50 percent of the setting berries.

STRAWBERRY ROOT WEEVIL (Brachyrhinus ovatus L.)

Utah. G. F. Knowlton (May 24): From 50 to 85 percent of the strawberry root weevils found in Salt Lake and Utah Counties had pupated.

A FLEA BEETLE (Haltica sp.)

Iowa. C. J. Drake (May 23): The strawberry flea beetle (Haltica sp.) has been reported as extremely abundant in strawberry fields at Keokuk. Plants are being severely damaged by this insect.

Oregon. D. C. Mote (May): Flea beetles are showing up on strawberry at Corvallis. More numerous than usual.

STRAWBERRY LEAF ROLLER (Ancylis comptana Froel.)

Utah. G. F. Knowlton (May 24): Moths are very abundant in strawberry patches in Cache County, but only moderately abundant in most fields examined in Box Elder, Davis, Weber, Salt Lake, and Utah Counties.

A NEGRO BUG (Thyreocoris sp.)

Virginia. L. D. Anderson (May 1): Several hundred of these "negro bugs", Thyreocoris sp., were found on plants and on the ground in areas about 2 feet across, and several such spots were found in one strawberry field at New Church. Together with red spiders they were causing the death of the plants in these small areas.

PEPPER

PEPPER WEEVIL (Anthonomus eugenii Cano)

Florida. J. R. Watson (May 21): The most striking event in entomology during the month was the discovery of the pepper weevil in Manatee County. Scouting revealed its presence in nearly every pepper field in the county, but none in adjoining counties. Damage to the spring crop of peppers is not great as yet, but in some of the fields carried through the winter the loss is 100 percent.

SUGAR BEETS

BEEF LEAFHOPPER (Eutettix tenellus Bak.)

Utah. G. F. Knowlton (May 14): Beet leafhoppers have now moved into sugar beet fields in Box Elder and Weber Counties. They have not become abundant in any fields examined. Most of the specimens taken have been pale females.

TOBACCO

TOBACCO FLEA BEETLE (Epitrix parvula Fab.)

Florida. F. S. Chamberlin (May 20): The tobacco flea beetle continues to be unusually scarce in Gadsden County this season.

Tennessee. J. U. Gilmore (April): Considerable damage has been done by this pest to tobacco plant beds at Clarksville.

TOBACCO BUDWORM (Heliothis virescens Fab.)

Florida. F. S. Chamberlin (May 11): The tobacco budworm is more abundant in Gadsden County than usual for this period.

TOMATO WORM (Phlegethontius sexta Johan.)

Florida. F. S. Chamberlin (May 11): Small hornworm larvae are becoming very abundant in tobacco fields in Gadsden County.

A TOBACCO MOTH (Ephestia elutella Hbn.)

Virginia. W. D. Reed (May 31): During the first week in May when the traps were put into operation at Richmond, only 3 tobacco moths (E. elutella Hbn.) were captured. This small number indicates that the emergence of the spring brood was just beginning. The number of moths caught each week has risen rapidly, a total of 5,226 having been recorded for the week ending May 24. It is thought that this moth is nearing the peak of the spring-brood emergence.

TOBACCO THRIPS (Frankliniella fusca Hinds)

Florida. F. S. Chamberlin (May): Heavy rains have reduced the thrips population very materially in Gadsden County.

C O T T O N I N S E C T S

BOLL WEEVIL (Anthonomus grandis Boh.)

South Carolina. F. F. Bondy (May 9): The boll weevil was found feeding on young cotton at Florence today. In 1934 the first weevils were found in the fields on May 21. Weevils are more abundant than in 1934 and about as numerous as in 1933.

Georgia. J. B. Gill (May 22): Adults have been prevalent in cotton fields for some time at Tifton. Control measures are being carried out in some fields.

Alabama. J. M. Robinson (May 24): The boll weevil is moderately abundant in the cotton fields in central and southern Alabama.

Mississippi. H. C. Young (May 18): Boll weevils, at the rate of 42 per acre, were found in three or four fields examined in Forrest County.

Louisiana. M. T. Young (May): Boll weevils were fairly numerous in fields of large cotton near favorable hibernation quarters in the vicinity of Tallulah on May 11. R. C. Gaines reports that fewer weevils emerged from hibernation cages up to May 18 than at any time during the past 4 years.

Oklahoma. C. F. Stiles (May 21): The number of active boll weevils observed in hibernation cages up to April 30 were much less than in 1934. In 1934 a total of 237 active weevils were observed up to this same date out of 28,000 installed. On the same date in 1933, 13 live weevils were observed out of 35,000. In 1935, only 8 were observed out of 25,000. The weather remains cold and cotton has made poor progress. Much of it will have to be replanted. It appears quite likely that few weevils have survived the past winter in Oklahoma, except in the extreme southeastern part of the State. This fact, together with the lower population present in the fields last fall, means that comparatively few weevils will be present in the cotton fields early the coming season.

Texas. F. L. Thomas (May 23): In 1934 we had next to the highest percentage of emergence of boll weevils for 10 years, with very little injury to cotton during the season. This year the indications are that we shall have a very low emergence, if not next to the lowest, and an opportunity to see the results, following a very wet May.

R. W. Moreland (May): An average of 1 boll weevil to 58 plants on upland cotton, and 1 to 64 plants on bottom land, near timber, in the vicinity of College Station was reported on May 11. No weevils were found on bottom-land cotton at a greater distance from timber. K. P. Ewing and R. L. McGarr found no weevils in fields examined in Calhoun and Victoria Counties on May 18.

THURBERIA WEEVIL (Anthonomus grandis thurberiae Pierce)

Arizona. T. P. Cassidy (February 20): An annual examination is made in a field of cotton grown for experimental purposes at Tucson, to determine the number



of weevils produced during the season from a known number of weevils introduced into the field, and also the number of weevils that hibernated in the field. The examination of the 1934 crop was made from January 2 to 7, 1935. A total of 5,196 bolls were collected, 4,054 from the plants and 1,142 from the ground. From these bolls 121 weevil stages were found and 82, or 67.77 percent, were alive. A total of 170 weevil cells were found and 49 were empty. It was found that 2.79 percent of the bolls from the plants contained weevil cells or stages and 2.45 percent of the bolls from the ground were infested. Although this examination shows that the percentage of live weevils present is normal, the weevil population produced in the field is below normal, as compared to the population produced in the same field since 1926. Another examination showed that the infestation was below normal in the 1934 crop, as compared to the infestation records kept in the same field since 1930. The comparatively low infestations in domestic cotton in 1934 is attributed to drought in southeastern Arizona during the growing season and to an abnormally low weevil population in *Thurberia* plants in the mountains. Surveys made in four mountain ranges in southeastern Arizona during January and early February show that the weevil population present in *Thurberia* plants is normal. This indicates that a normal weevil infestation may be expected in domestic cotton plantings in southeastern Arizona this year, provided rainfall is normal during July and August, affording sufficient moisture to release the weevils from their pupal cells.

#### CUTWORMS (Noctuidae)

Texas, Arizona, and Mexico. R. E. McDonald (May 13): L. B. Coffin reports that cutworms are doing considerable damage to the field cotton in the Presidio section of Texas, but so far they have not damaged the trap-plot cotton. Some of the farmers intend to use poison, but in any case it will be necessary to replant some of the fields. The worms are also doing some damage on the Mexican side, and one ranch will have to replant about 40 acres. S. D. Smith writes that cutworms are very numerous in the Tucson, Ariz., district this year, and that some replanting will be necessary.

Texas. K. P. Ewing and R. L. McGarr (May 24): Considerable injury to young cotton by cutworms in the vicinity of Port Lavaca was reported during April and early in May. Most of the material submitted was determined tentatively as *Agrotis ypsilon* Rott., and *Feltia malefida* Guen., although many of the specimens were abnormal and many represent closely related species. Included with the cutworm specimens were a few specimens of *Heliothis obsoleta* Fab. and *Prodenia* sp. (probably a very dark form of *P. ornithogalli* Guen.). (Det. by C. Heinrich.)

#### SALT-MARSH CATERPILLAR (*Estigmene acrea* Drury)

Texas. R. L. McGarr (May 24): The salt-marsh caterpillar caused considerable damage to young cotton in Calhoun County in April. (Det. by C. Heinrich as dark specimens of *E. acrea*.)

COTTON LEAF WORM (Alabama argillacea Hbn.)

Texas. K. P. Ewing and R. L. McGarr (May 23): First leaf worms of the season were found on cotton 5 miles south of Port Lavaca in Calhoun County today. Four worms were found, three webbing to pupate. (Det. by C. Heinrich.) (June 1): Leaf worms have been found in Calhoun, Victoria, Refugio, and Brooks Counties. This insect was found in two new fields in Calhoun County this week.

APHIDS (Aphidae)

South Carolina. C. F. Rainwater (May 1): Three species of root lice, the white cotton root louse (Trifidsphis phaseoli Pass.), the green cotton root louse (Anuraphis maidi-radicis Forbes), and the brownish-purple cotton root louse (Rhopalosiphum sp.), have been found on cotton at Florence and a great deal of damage is resulting from them. They are much more numerous than they were last year. There is hardly a field in this immediate vicinity where the cotton is up that is not infested by one or more species of root louse. As was true last year, the white cotton root louse is more abundant in this immediate vicinity than either of the others and is causing most of the damage at the present time.

W. C. Nettles (May 27): The cotton root aphid has been reported from the eastern half of the State.

THRIPS (Thysanoptera)

Egypt. A. H. Rosenfeld (May 9): The principal entomological feature here for April was the prevalence of the cotton thrips in vast areas of all provinces during the abnormally cool first half of the month. The attack was particularly general in the Delta and the province of the Fayoum, an oasislike area about 35 miles southwest of Cairo, being especially severe on early planted crops. It subsided with the exceptionally hot weather of the final week of April and at the beginning of May was difficult to find. In some areas 50 percent replanting was necessary.

COTTON FLEA HOPPER (Psallus scriatus Reut.)

Texas. K. P. Ewing and R. L. McGarr (April): Hatching of cotton flea hoppers from overwintering eggs began at Port Lavaca on February 19. The emergence was light, however, during February and the early part of March, with the peak of emergence occurring from April 6 to 8. During April 38,595 nymphs emerged, as compared to 22,837 from similar cages last year. Cotton plants collected last September averaged 251 nymphs per 100 plants, whereas those collected from October 6 to November 3 averaged 1,226 per 100 plants. Flight screens to determine migration of flea hoppers were placed in operation on April 16 and during the remainder of the month an average of 36.6 flea hoppers were caught per screen. The corresponding figures were 6.5 in 1934 and 102.5 in 1933. (May 25): Flea hopper infestation continues to remain comparatively light at Port Lavaca. No heavy migration into cotton during week. Infestation increasing rapidly on weed host plants, especially

on horsemint. Horsemint is more abundant this year than during the past 2 years.

F. L. Thomas (May 23): The hatching or emergence of flea hoppers from croton weeds prior to May 16 was slightly greater than the average, but the number emerging per 100 weeds during the first 2 weeks of May exceeds that of any other year since 1925.

PINK BOLLWORM (*Pectinophora gossypiella* Saund.)

Mexico. C. S. Rude (May 28): Infestation is very light at Tlahualilo, Durango, less than 1 percent in squares. No bolls are yet available for examination.

BEET ARMYWORM (*Laphygma exigua* Ebn.)

Arizona. W. A. Stevenson (May 24): Reports of May 18 indicate that considerable loss has recently been caused to the young cotton in the Tucson district. The caterpillars feed principally on the seed leaves of the cotton but in rare instances feed on the buds and stems, killing the young plants. Where the leaves are destroyed and the buds kept intact, the plants will undoubtedly recover if irrigated. However, the cotton will be set back about 2 weeks. Approximately 200 acres of cotton have been replanted in the Tucson district owing to the ravages of these worms, and the majority of the farmers have given their cotton an extra early irrigation to help it recover. Similar damage has been reported from the Salt River Valley, especially from the western part.

Texas. A. J. Chapman (May 24): Reports of May 18 state that cutworms have injured young cotton considerably during the past week. It is estimated that about 100 acres of cotton was replanted in the vicinity of Presidio because of cutworm injury. Severe infestations have been noted in several alfalfa fields. Farmers are trying various methods of control--irrigating, poisoning, and cultivating. (Det. by C. Heinrich.) (June 1): Parasites are exercising considerable control. In one alfalfa field under observation large numbers of dead parasitized worms were found. It is doubted that this armyworm will cause further damage in this area this year.

California. R. E. Campbell (May 1): The beet armyworm is rather abundant on sugar beets in the El Monte district, requiring the application of baits in a number of fields. Stands were so reduced in several untreated fields that beets were plowed up.

S. Lockwood (May 24): The beet armyworm has been responsible for some

rather severe but local loss to cotton growers in Kern and Tulare Counties. Last week it seemed that a considerable quantity of cotton in that area would be destroyed, but for reasons unascertained almost the entire population of worms has been killed.

Mexico. C. S. Rude (May 28): Considerable damage is being done at Tiahualilo, Durango, by a larva very much like the beet armyworm (L. exigua).

## FOREST AND SHADE - TREE INSECTS

### PERIODICAL CICADA (Magicicada septendecim L.)

North Carolina. Z. P. Metcalf (May 25): The 17-year locust has been reported from Vienna, Forsyth County, and Piney Creek and Laurel Springs, Alleghany County, and from Surry County. (June 4): I have just returned from the northwestern part of the State and I have found them at the following places: North of Mount Airy and at Dobsons, in Surry County; northwest of State Road in Wilkes County; near Roaring Gap, in both Wilkes and Alleghany Counties; near Sparta, Whitehead, and Twin Oaks in Alleghany County; in Ash County; west of Deep Gap in Watauga County; and in western Wilkes County west of the Yadkin River.

R. W. Leiby (June 3): The periodical cicada was present in Watauga and Wilkes Counties late in May.

Virginia. W. J. Schoene (May 25): The 17-year locust is appearing in Augusta County west of Staunton, and in Roanoke, Franklin, and Wythe Counties.

H. G. Walker (May 25): The newspapers in Norfolk report that the cicadas are appearing in great abundance in the southwestern part of the State.

Z. P. Metcalf (June 4): The periodical cicada has been reported from the following Counties: Wythe, Pulaski, Montgomery, Roanoke, Franklin, and Pittsylvania.

West Virginia. F. W. Craig (May 28): The periodical cicada was reported on good authority as emerging at White Sulphur Springs on May 22.

### GIANT APHID (Longistigma caryae Harr.)

West Virginia. F. W. Craig (May 28): This is one of the outstanding pests of the month. It has been observed on sycamore and linden in Charleston and Huntington. Several people have complained of the honeydew dripping from the trees.

### FOREST TENT CATERPILLAR (Malacosoma disstria Hbn.)

Mississippi. E. W. Gemmer (May 10): The forest tent caterpillar is defoliating red and blackjack oak, dogwood, red gum, and black gum in Pearl River County.

Louisiana. T. E. Snyder (May 10): The forest tent caterpillar is general and abundant in northern Saint Tammany Parish and eastern Washington Parish, feeding principally on black gum and red gum. The oaks are little touched. There have been complaints of extensive defoliation of shade trees in Bogalusa.

#### CANKER WORMS (Geometridae)

Connecticut. W. E. Britton (May 23): Larvae of Alsobila pometaria Harr. are now abundant around New Haven and are feeding on deciduous trees.

Connecticut and New York. E. P. Felt (May 23): The fall canker worm is developing in numbers in southwestern Connecticut and southeastern New York, especially on the margins of areas badly infested last year.

Ohio. T. H. Parks (May 25): Fall canker worms in more than usual numbers are feeding on elm foliage on the grounds of one of the country clubs near Columbus.

Iowa. C. J. Drake (May 23): Undetermined species of canker worms are abundant in orchards and timbered areas in the southern half of the State, where considerable damage is being done.

Missouri. I. Haseman (May 25): Light infestations of canker worms are occurring in some orchards. The larvae are about full-grown.

#### GYPSY MOTH (Perthetria dispar L.)

Vermont. H. L. Bailey (May 25): A high percentage of hatch was observed in a colony at Vernon, in Windham County, on May 22.

General. A. F. Burgess (May): The first hatching of gypsy moth egg clusters took place slightly earlier this year than in 1934. In the Pennsylvania infested area the first hatching was on April 27. This is several days earlier than last year. In a number of towns immediately east of Greenfield, Mass., first hatching occurred on May 1, 3 days earlier than in 1934. Up to the middle of May hatching was extremely variable, with many clusters just beginning to hatch on the latter date and many others not started. The larvae from the first clusters that hatched remained clustered on and around the masses from which they had come for periods up to a week or 10 days.

#### SALMON FLY (Taeniopteryx pacifica Bks.)

Idaho. J. C. Evenden (May 23): Every spring this insect appears on the foliage of deciduous trees and shrubs on the shore of Coeur d'Alene Lake, being quite numerous for a few days and causing considerable damage.

WALNUT SCALE (Aspidiotus juglans-regiae Comst.)

New Jersey and West Virginia. E. P. Felt (May 23): The English walnut scale was found in some numbers on white oak twigs at Englewood, N. J., and in very injurious numbers on soft maples at Charleston, W. Va.

BIRCH

BRONZE BIRCH BORER (Agrilus anxius Gory)

Pennsylvania. E. P. Felt (May 23): The bronze birch borer was found to be abundant in a birch in the environs of Philadelphia.

BOXELDER

BOXELDER APHID (Periphyllus negundinis Thos.)

West Virginia. F. W. Craig (May 28): This is one of the outstanding insect pests of the month, having been reported as abundant in Charleston and Huntington and also in lesser abundance in Beckley and Bluefield.

CYPRESS

A SAWFLY (Tenthredinidae)

California. R. E. Campbell (May 15): Numerous reports of larvae of an undetermined species of sawfly on cypress trees and hedges at Alhambra were received the latter part of April and early in May. (This may be Susana cupressi Rohw., judging from the files of the Insect Post Survey.)

ELM

A BARK BEETLE (Scolytus multistriatus Marsh.)

New York, New Jersey, and Pennsylvania. F. M. Wadley (May 10): The following records of this bark beetle are being submitted: White Plains and Saint George (Staten Island), N. Y.; Berkley Heights, Bernardsville, Round Brook, Chatham, East Orange Water Reservoir, near South Orange, Flomington, Green Village, Griggstown, Highland Park, Lawrenceville, Little Falls, Madison, Moorestown, Morristown, Nutley, Pequannock, Princeton, and White House, and, although no specimens were obtained, there were traces of infestation at Hopewell, Ridgewood, and Roseland, N. J.; in Fairmount Park in Philadelphia, and at Radnor, Pa.

ELM LEAF BEETLE (Galorucella xanthomelaena Schr.)

Massachusetts. J. V. Schaffner, Jr. (May 21): Many beetles were issuing from hibernation on May 11, and issuance increased considerably on May 16 and 17. The first feeding in the field was noticed at Woburn on May 19.

Connecticut. W. E. Britton (May 23): Hibernating adults at Ansonia, Danielson, Middletown, New Britain, and West Hartford indicate that the beetles have come through the winter successfully.

North Carolina. R. W. Leiby (May 13): Chinese elms used as ornamental shrubs are suffering noticeable injury.

California. Monthly News Bull. Kern County Agr. Comm. (May 3): The first elm leaf beetles were found on April 29. This is 1 month later than the beetles were found last year.

ELM BORER (Saperda tridentata Oliv.)

Missouri. L. Haseman (May 22): Adults were taken from cells under the bark of elm trees at Columbia on May 15.

Nebraska. M. H. Swenk (May 20): The elm borer was reported the last week in April as having killed some young elm trees in Gage County.

A FLEA BEETLE (Haltica sp.)

Maine. H. B. Peirson (May 20): A very heavy infestation of flea beetles (Haltica sp.) on American elm was observed at Harmony on April 22.

EUROPEAN ELM SCALE (Gossyparia spuria Mod.)

New York. P. J. Parrott (May 20): The elm bark scale is apparently becoming more numerous in western New York. The first generation is now present on the trees.

Ohio. T. H. Parks (May 25): The European elm scale is resuming its feeding on American elms in the city parks of Columbus and is quite conspicuous on the lower branches of young trees. This is the most serious elm pest in Columbus.

Utah. G. F. Knowlton (May 14): The European elm scale is damaging elms at Logan and Salt Lake City.

EUROPEAN FRUIT LECANIUM (Lecanium corni Bouché)

Oklahoma. F. A. Fenton (May 22): The European lecanium is unusually abundant on elms. Many requests have been received for control measures.

HEMLOCK

A SAWFLY (Neodiprion tsugae Middleton)

Oregon. F. C. Craighead (April): The sawfly which was discovered in August 1934 heavily defoliating the western hemlocks on approximately 10,000 acres along the slopes of the Cascades in Oregon, has been identified by Wm. Middleton as his newly described species. The defoliated area was revisited this month by R. L. Furniss in order to determine the present

status of the infestation and to collect additional information on the life history of the species. It was found that there had been no additional defoliation subsequent to the first examination, that practically no cocoons remained on the twigs, needles, or other exposed places, and that most of the cocoons on the ground were abandoned. No living sawflies were found, except a few overwintering larvae in cocoons. These appeared to be hold-overs from the main emergence of last fall. The conditions of the trees strengthened the belief that but slight timber losses will occur in this area.

A BARK BORER (Melanophila fulveguttata Harr.)

New York. P. M. Eastman (May 25): The spotted hemlock borer is very prevalent on hemlock in our amusement park known as Briggs Grove in Baldwinville. This borer has been reported as quite abundant in the vicinity of the Thousand Islands.

LARCH

LARCH CASE BEARER (Coleophora laricella Hbn.)

Maine. H. B. Peirson (May 20): The larch case bearer was observed in the vicinity of Augusta on May 17. The larvae moved into new foliage and were feeding a great deal. The foliage was already becoming grayish but no browning was seen.

Vermont. H. L. Bailey (May 25): Moderately heavy feeding by the larch case bearer was observed on new foliage at Woodstock, Windsor County, and also in Rutland County. Some trees near Rutland that have been infested for several years are apparently dead.

New England and New York. J. V. Schaffner, Jr. (April): The infestation of the larch case bearer still persists, after 3 years, in 10 permanent sample plots located in New England and New York.

OAK

HORNED OAK GALL (Andricus cornigerus O. S.)

Connecticut and New York. E. P. Felt (May 23): The horned oak gall occurs on pin oak somewhat generally in southwestern Connecticut and southeastern New York, occasionally being quite prevalent upon individual trees or groups of trees.

Mississippi. J. Milton (May 9): Galls caused by A. cornigerus are very abundant on water oak trees at Jackson.

WHITE OAK CLUB GALL (Andricus clavulus O. S.)

New Jersey. E. P. Felt (May 23): The white oak club gall is somewhat abundant on a white oak at Englewood.



PINE

PINE BARK APHID (Pineus strobi Htg.)

Wisconsin. E. L. Chambers (May 21): The pine bark louse seems to be very abundant everywhere this spring where white and Norway pine are growing.

PINE NEEDLE SCALE (Chionaspis pinifoliae Fitch)

Connecticut. E. P. Felt (May 23): The pine leaf scale is generally present on mugho and Austrian pines in particular. A heavy infestation has been noted at Hartford.

Ohio. E. W. Mendenhall (May 14): The pine leaf scale is abundant on Scotch, Austrian, mugho, and other species of pine in Cuyahoga County.

Iowa. C. J. Drake (May 23): The winter mortality of the pine leaf scale is quite high in central Iowa. We found only two living eggs under 400 scales at Ames.

Nebraska. M. E. Swenk (May 20): Spruce twigs infested by the pine leaf scale were sent from Dixon County on April 26.

SCOTCH PINE SCALE (Toumeyella numismaticum Pettit & McDaniel)

Wisconsin. E. L. Chambers (May 21): Jack pine throughout the central part of the State seems quite generally infested with the Scotch pine scale, and in Adams and Juneau Counties many trees have been killed as a result of attack.

SYCAMORE

SYCAMORE SCALE (Stomacoccus platani Ferris)

California. R. E. Campbell (May 15): During the latter part of April and the first part of May numerous complaints were received regarding leather-winged beetles, Cantharis consors Lec., particularly on sycamores at Alhambra. An examination proved that these beetles were feeding on a small coccid, probably S. platani. Although considered a beneficial insect, they proved to be of considerable annoyance in many backyard sycamores. One tree not over 15 feet high was treated. Several square-foot counts of the beetles on the ground under the tree after treatment showed that this comparatively small tree had over 25,000 beetles on it.

WILLOW

EUROPEAN WILLOW BEETLE (Plagiodera versicolora Laich.)

Massachusetts. J. V. Schaffner, Jr. (May 21): Adults of the imported willow leaf beetle were found active on May 12 in Melrose and eggs were noted on the 14th. This species seems to be fully as abundant as last year.

INSECTS AFFECTING GREENHOUSE  
AND ORNAMENTAL PLANTS

SOFT SCALE (Coccus hesperidum L.)

New York. R. E. Horsey (January 28): Scale found on leaves of agave and yucca taken from a greenhouse succulent collection in Rochester. The scale appears to be common and spreading.

BARBERRY

BARBERRY APHID (Rhopalosiphum berberidis Kalt.)

Connecticut. W. E. Britton (May 23): Heavy infestation on a Japanese barberry hedge in New Haven.

DELPHINIUM

CYCLAMEN MITE (Tarsonemus pallidus Bks.)

Connecticut. E. P. Felt (May 23): The cyclamen mite is becoming troublesome on delphinium at Stamford.

GLADIOLUS

GLADIOLUS THRIPS (Taeniothrips gladioli M. & S.)

Wisconsin. E. L. Chambers (May 21): General inquiries are being received for control of the gladiolus thrips, and specimens sent in indicate that many thrips overwintered in storage.

HOLLY

ASH-GRAY BLISTER BEETLE (Macrobasis unicolor Kby.)

Florida. E. W. Berger and G. B. Merrill (May 21): Severely attacked several holly trees (Ilex opaca and I. dahoon) at Paradise near Gainesville. The owner states that this is the fifth successive year these beetles have appeared on his holly.

IRIS

IRIS THRIPS (Bregmatothrips iridis Watson)

New York. F. F. Smith (May 11): The hibernating adults of the iris thrips in a large iris planting in Brooklyn are less numerous than in 1934. The first-generation offspring reached the pupal stage today. Younger larvae were more numerous and the typical rusty appearance of the leaves was becoming evident.

PHLOX

A PHLOX BUG (Lopidea davisii Knight)

Illinois. C. L. Metcalf (May 23): The phlox plant bug (L. davisii) has been reported as very injurious to cultivated phlox at Bone Gap.

REDBUD

REDBUD APHID (Aphis pawneeana Hottes)

Kansas. H. R. Bryson (May 25): The redbud aphid was found on May 6 infesting the larger twigs on a small redbud tree (Cercis canadensis) at Manhattan. This is the first time it has been reported from Manhattan, although it has been learned that one tree on the college campus was infested last year. This occurrence is significant because of the fact that the native redbud has been comparatively free from insect pests. The aphids infest the underside of the twigs.

ROSE

GRAPEVINE HOPLIA (Hoplia callipyge Lec.)

California. H. C. Donohoe (May 3): The grapevine hoplia has appeared in the Fresno area in more than usual spring abundance during the past 10 days. As many as 34 adults have been found feeding on a single rose blossom.

A SCARABAEID (Serica fimbriata Lec.)

California. R. E. Campbell (May 14): Beetles are so numerous on roses and pyracantha at San Gabriel as to practically defoliate them.

SNOWBALL

SNOWBALL APHID (Aphis viburnicola Gill.)

Minnesota. A. G. Ruggles (May 23): The snowball aphid is unusually abundant around Minneapolis and Saint Paul.

SPIRAEA

SPIRAEA APHID (Aphis spiraeicola Patch)

Nebraska. M. E. Swenk (April 20 to May 20): On May 9 a report of the Spiraea aphid working on spirea plants was received from Garfield County.

TULIP

TULIP APHID (Rhopalosiphoninus tulipella Theo.)

Washington. E. O. Essig (April 24): The aphids were sent to me on November 14, 1934, by J. F. Curry, of the California State Department of Agriculture.

He stated that they were taken from tulip bulbs grown in the State of Washington. I examined the material myself. Only anteroous individuals were collected but fortunately I have some mounted paratypes of this species which appear to be R. tulipella and they compare well.

BULB MITE (Rhizoglyphus hyacinthi Bdv.)

Nebraska. M. H. Swenk (April 20 to May 20): Tulip bulbs infested with bulb mites were received on May 4 from Gage and Saline Counties.

I N S E C T S   A T T A C K I N G   M A N   A N D  
D O M E S T I C   A N I M A L S

MAN

EYE GNATS (Hippelates spp.)

Florida. E. C. Cushing (May 31): A rather severe outbreak of eye gnats occurred in Orange County early in May.

PUNKIES (Culicoides spp.)

Indiana. J. J. Davis (May 25): On May 16 punkies were reported from La Porte, where they were exceedingly annoying. They first appeared this spring the last of April or the first of May. The correspondent reports that they caused a great deal of annoyance last year.

TROPICAL RAT MITE (Liponyssus bacoti Hirst.)

North Carolina. R. W. Leiby (May 25): The complaint of the tropical rat mite attacking man at Pinehurst is the fourth in the past 12 months from as many points in North Carolina.

BLACK WIDOW SPIDER (Latrodectus mactans Fab.)

South Carolina. W. C. Nettles and F. Sherman (May 27): Many reports of severe poisoning from bites of this spider have been received.

Alabama. J. M. Robinson (May 24): The hour-glass spider has been reported as biting two human beings at Dothan. Both were affected seriously but not fatally.

Mississippi. C. Lyle (May 23): On account of considerable newspaper publicity regarding one or two cases where people had been bitten by L. mactans, there has been a great deal of interest in this spider in all sections of the State and many specimens have been received for identification.

AMERICAN DOG TICK (Dermacentor variabilis Say)

Maryland. E. W. Cory (April 29): Young wood ticks are abundant in low herbage at Public Landing.

CATTLE

SCREW WORMS (Cochliomyia spp.)

Florida. J. R. Watson (May 21): Screw worm damage is on the increase and the complaints are coming from farther south in the State than during the last 2 years. It appears likely that damage will be fully as severe as it has been for 2 years.

General. E. C. Cushing (June 5): W. G. Bruce states that in Florida screw worm cases are increasing rapidly in most counties. Fifteen hundred cases have been reported from Alachua County and the outbreak extends as far south as the Caloosahatchee River and Saint Lucie County. R. A. Roberts states that in Georgia, the outbreak is centered in the south-central counties, with scattered cases as far north as Lincoln County. Total cases reported from the State are 144 in cattle, 109 in hogs, 110 in horses, 12 in sheep, 7 in dogs, and 1 in man. W. J. Spicer reports only light infestations in eastern Texas but the number of cases is increasing.

Texas. H. E. Parish (May 23): The screw worm has greatly increased in numbers during the past month. About 85 percent of the flies taken in the traps belong to C. macellaria Fab. From a 1-quart sample of flies taken from the status trap operated at Menard, three were C. americana Cushing and Patton.

HORN FLY (Haematobia irritans L.)

Mississippi. C. Lyle (May 23): Inspector G. L. Bond reports that horn flies are rather abundant and are quite annoying to cattle in the vicinities of Moss Point and Pascagoula.

Missouri. L. Haseman (May 22): The horn fly is already abundant and is causing cattle much annoyance.

SHORT-NOSED CATTLE LOUSE (Haematopinus eurysternus Nitz.)

Nebraska. M. H. Swenk (May 20): The short-nosed cattle louse was reported infesting cattle in Hall County on May 8.

BEAVER

BEAVER PARASITE (Platyssylla castoris Reitsema)

Michigan. R. Hutson (May 8): On April 16 F. F. Tubbs reported a slight infestation of beaver parasites in Marquette County.

DEER

SHEEP BOTFLY (Oestrus ovis L.)

Washington. H. H. Stage (May 21): The death of 30 or 40 deer, on a game preserve in Pend Oreille County, was probably caused by the sheep botfly late in March and early in April. From 150 to 200 of the larvae were reported to have left the nose of a single deer after its death. All of the animals found dead were yearlings.

HOUSEHOLD AND STORED-PRODUCTS INSECTS

TERMITES (Reticulitermes spp.)

Massachusetts. J. V. Schaffner, Jr. (May 21): Three inquiries have been received from near Boston recently regarding termites and the methods of exterminating them from buildings.

Rhode Island. A. E. Stene (May 20): A great many complaints have been sent in regarding damage from termites. These insects have been present in the State for a great many years but reports of damage to buildings have been relatively scarce until this year.

Connecticut. N. Turner and M. P. Zappe (May 23): Reports from the entire State indicate that damage from R. flavipes Kol. is increasing.

Pennsylvania. H. E. Hodgkiss (May 21): Infestations of termites are being reported rather generally throughout the State this spring, on the average three or four inquiries on control practices coming in each week.

Maryland. E. N. Cory (May): Winged females and males taken in house at Oxford on April 25. Termites were reported from Annapolis, on April 26, and from Baltimore, on May 15.

Virginia. H. G. Walker (May 25): We have received quite a large number of calls for information about termites in the vicinity of Norfolk during the past 2 months.

Ohio. H. C. Mason (May 23): Winged termites are abundant in the University section of Columbus.

Indiana. J. J. Davis (May 25): Inquiries regarding termites have been even more numerous than a year ago. We receive more inquiries about this insect than any other one insect, and they come from every part of the State.

Illinois. W. P. Flint (May 20): Reports of damage by termites are being received in much greater numbers than at any time during the last few years. During May, 75 reports of damage were received.

- Wisconsin. C. L. Fluke (May 22): Termites reported damaging house foundations at Delavan.
- Nebraska. M. H. Swenk (April 20 to May 20): Reports concerning rather severe infestations of termites, R. tibialis Bks., continued to be received during the period here covered.
- Kansas. B. Listov (May 11): Quite an outbreak of termites at Wichita this spring.
- Texas. F. L. Thomas (May 21): Termites in residences reported from Bynum and Houston.

#### ANTS (Formicidae)

- Georgia. M. R. Smith (May 21): Specimens of Camponotus caryae Fitch, Formica pallide-fulva schaufussi Mayr, and Dorymyrmex pyramicus flavus Perg. were sent in from Milner, by T. L. Bissell, who obtained them from the stomach of a yellow-bellied sapsucker. He also sent specimens of Pharaoh's ant (Monomorium pharaonis L.), which he stated were colonized in a bundle of new paper bags.
- Alabama. M. R. Smith (May 21): H. Yates, of Fairhope, wrote me that the imported South American fire ant (Solenopsis saevissima richteri Forel.) did considerable damage to cabbage, potato, and satsumas there during February and March. He states that these ants go down below the surface of the ground on cabbage or potato and eat holes in the stalk, often girdling it, causing the plant to fall over.
- Mississippi. M. R. Smith (May 21): On April 25 winged males and winged queens of the imported South American fire ant (S. saevissima richteri) were obtained from nests near Agricola by G. L. Bond. On May 14 the first male and queen pupae of the fire ant (S. xyloni McCook) were observed at State College. Tiny black ants, Monomorium minimum Buckl., were reported as very troublesome in a house near Philadelphia. Also on May 14 a correspondent at Greenwood sent in for determination winged queens of the carpenter ant (Camponotus herculeanus pennsylvanicus DeG.).
- Texas. M. R. Smith (May 21): F. F. Bibby sent me for determination many winged males and several winged queens of the Texas leaf-cutting ant (Atta texana Buckl.), which were collected at Austin on May 11 by J. M. Del Curto.

#### A PINE SAWYER (Monochamus notatus Drury)

- Massachusetts. J. V. Schaffner, Jr. (May 9): A lithograph company in eastern Massachusetts sent in an adult which had bored through from 75 to 100 sheets of paper. This paper was shipped from Maine in large bundles. These bundles were fitted with skids made of cheap pine lumber, and the beetle evidently issued from one of the skids on the side facing the paper.

BLACK CARPET BEETLE (Attagenus piceus Oliv.)

South Dakota. H. C. Severin (May 21): We have had more inquiries and complaints concerning the black carpet beetle this year than in any other year since the organization of the entomological work in South Dakota.

FIG MOTH (Ephestia figulilella Greg.)

California. H. C. Donohoe (May 8): A ptinid, Trigonogenius globulum Solier, has been encountered in small numbers during the present spring in masses of hibernating larvae and webbing of the raisin moth (Ephestia figulilella Greg.) in dry locations beneath ground timbers in open-sided raisin-storage stacks. This appears to be the first record of its occurrence in the Central Valley of California.

A BOCKLOUSE (Psocus sp.)

South Carolina. W. C. Nettles (May 27): An interesting case of lichen removal from old shingles on a house with specimens of Psocus sp. is reported from the central part of the State.