

*Smith* *Library*

THE INSECT PEST SURVEY  
BULLETIN

*"Homoptera  
supplement filed under Cicadas"  
d.*

---

Volume 15

April 1, 1935

Number 2

---

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

LIBRARY  
ENT BOARD



Digitized by the Internet Archive  
in 2013

<http://archive.org/details/insect1935no2>

# INSECT PEST SURVEY BULLETIN

Vol. 15

April 1, 1935

No. 2

## THE MORE IMPORTANT RECORDS FOR MARCH 1935

Reports of the usual damage by cutworms were received during the last 2 weeks of March from Kansas, Missouri, and Tennessee, southward to the Gulf and the Mexican border.

White grub beetles started heavy flights in the Gulf States during the third week of the month.

Heavy infestations of several species of wireworms were reported from the Pacific Coast States.

The chinch bug came through the winter successfully throughout the chinch bug belt.

Heavy infestations of the green bug were reported from South Carolina during the first half of the month.

Eastern tent caterpillars are hatching from Kansas to Tennessee. The insect will probably be unusually abundant throughout the Eastern States this year, as large numbers of eggs have been reported over this area.

The San Jose scale is reported as generally prevalent from New York westward to Wisconsin and southward to the Gulf. This insect appears to be on an upward trend.

Flat-headed apple tree borers were doing unusual damage from Ohio to Nebraska.

Adult plum curculios were generally distributed over the peach orchards of the Fort Valley section of Georgia by the third week of the month, with a heavier infestation than usual.

A rapid increase in abundance of the citrus aphid in Florida was reported during the last week of March.

Tomato pinworms are reported in large numbers in tomato fields in the Santa Ana and San Juan Capistrano districts of California.

The pea aphid was seriously damaging market peas in Santa Barbara and San Luis Obispo Counties, California.

Very severe damage by the onion thrips to celery was reported from

Sarasota County, Fla. Heavy infestations of onions by this thrips were reported from southern Louisiana.

The winter has, in general, been favorable for the survival of beet leafhoppers in southern Idaho and southwestern Utah. About normal populations entered hibernation last fall.

Canker worms were generally abundant in Connecticut, New Jersey, Illinois, Missouri, Kansas, and Colorado.

An outbreak of buffalo gnats occurred in parts of the delta counties of Arkansas and Mississippi.

## GENERAL FEEDERS

### GRASSHOPPERS (Acrididae)

Tennessee. G. M. Bentley (March): Grasshoppers, Schistocerca americana Drury and Dissosteira carolina L., are moderately abundant in eastern Tennessee.

California. S. Lockwood (March 25): The eggs of Melanoplus mexicanus Sauss. were just beginning to hatch in Imperial County on March 19. A few nymphs of Cannula pelludica Scudd. were found in grazing land south of San Diego County close to the coast. In the hills above the Santa Maria Valley, in San Luis Obispo County, a few first-instar nymphs of C. pellucida were found and many of the eggs in the egg beds were on the verge of hatching. On March 24 these eggs started hatching, immediately after they were removed from the soil and warmed by the sun.

### EUROPEAN EARWIG (Forficula auricularia L.)

Oregon. D. C. Mote (March 21): Males are beginning to move around. We have had reports of their being found in homes at Corvallis.

### CUTWORMS (Noctuidae)

Tennessee. J. U. Gilmore (March 22): Folia renigera Steph. and Feltia ducens Walk. are seriously injuring early gardens at Clarksville.

Mississippi. C. Lyle (March 22): Inspector Jack Milton, of Jackson, states that he has observed some injury to tomato plants in cold frames by cutworms during the past week.

Louisiana. W. E. Hinds (March 26): Various species of cutworms are attacking young garden plants at Baton Rouge.

Missouri. L. Haseman (March 26): At Columbia, from half-grown to nearly full-grown specimens of what is apparently the variegated cutworm (Lycophotia margaritosa saucia Hbn.) have been taken since early in March. The county agent of McDonald County has just reported severe injury on the edge of a wheat field next to a wood by what was probably greasy cutworms (Agrotis ypsilon Rott.).

Arkansas. D. Isely (March 22): Cutworms (Lycophotia sp.) are unusually abundant in northwestern Arkansas.

Kansas. H. R. Bryson (March 25): From February 25 to March 4 the variegated cutworm (L. margaritosa saucia) was reported by E. G. Kelly as very abundant in Edwards, Finney, Hodgeman, Ford, Gray, Clark, Comanche, and Pratt Counties. The worms were doing serious injury to fall-sown wheat, barley, and rye at the edges of the fields where they moved in from grass and stubble lands.

Kansas, Nebraska, and Oklahoma. R. T. Cotton (March 25): The army cutworm (Chorizagrotis auxiliaris Grote) is abundant and causing damage in local areas in Kansas, in Riley, Ellsworth, Edwards, Kiowa, Pratt, and Comanche Counties. The species is plentiful in Cloud, Dickinson, Osborne, Ottawa, Barber, Rice, and Ford Counties, but no damage was seen or reported. Eighteen additional counties reported the species to be scarce or absent. In Nebraska all reports indicated the species to be scarce. In Oklahoma 9 acres of wheat in Blaine County have been destroyed, but no other injury was reported. Alfalfa County reported the insect as plentiful, but no damage was seen or reported.

Utah. G. F. Knowlton. (March 14): Cutworms are unusually abundant on the range 8 miles northwest of Corinne.

Arizona. C. D. Lebert (March 21): Slight damage to grape buds in an 80-acre vineyard near Phoenix by a climbing cutworm was noted.

California. S. Lockwood (March 27): On March 26 an inspection was made of a citrus grove in Tulare County in the Ivanhoe district. A cutworm, Parastichtis purpurea Grote, was found to be feeding very freely on chickweed between the trees and many of them had climbed into the interlocking branches of the citrus and were eating the young fruit buds and foliage. The infested area was not definitely ascertained.

#### WHITE GRUBS (Phyllophaga spp.)

Louisiana. W. E. Hinds (March 26): Phyllophaga (especially P. congrua Lec. and P. futilis Lec.) and a few Dyscinetus trachypygus Burm. were flying abundantly at Baton Rouge on the evening of March 21, when air temperature was about 70° F. and the relative humidity from 80 to 90 percent.

Mississippi. C. Lyle (March 22): May beetles were present in large numbers at lights at State College on March 21 for the first time this year. A few specimens were determined by J. M. Langston as P. calceata Lec.

Kansas. H. R. Bryson (March 25): Holes dug on March 23 to determine the abundance of white grubs indicate the presence of fewer grubs and May beetles than usual per unit area in native prairie sod. We have taken no beetles at lights. They are very close to the surface of the soil; so we should procure some this week.

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

Illinois. C. L. Metcalf (March 27): We have a report of the green June beetle from West Frankfort, with the information that thousands of larvae are present in gardens and lawns.

Tennessee. J. U. Gilmore (March 22): White grubs, C. nitida, are now becoming active and are attacking lettuce, radish, and onion at Clarksville. Grubs are also active in tobacco plant beds, although the

plants have not yet appeared.

### WIREWORMS (Elateridae)

South Carolina. H. Dietrich (June 1934): A specimen of Heteroderes laurentii Guer. was collected at Myrtle Beach in June 1934 by C. H. Townes.

Washington. M. C. Lane and H. P. Lanchester (March 20): Commercial gladioli growers of the Sunnyside area are planning treatment of the soil to control the wireworms Pheletes canus Lec. and P. californicus Mann. in the fields which are to be planted to this crop. The general upward movement of these wireworms through the soil at Walla Walla has been somewhat checked by cool weather. Market growers report the presence of a few wireworms in the surface soil.

California. R. E. Campbell (November 1934): At Temple City an early rainfall of over 2 inches in October, followed by warm weather, was evidently favorable to the wireworm P. californicus, as it has done considerable damage to rutabagas. From a crop of 7,000 sacks (100 pounds), 750 sacks were thrown out as culls, owing to holes eaten in them.

A. E. Michelbacher (March 21): Near Sacramento several acres of a sugar beet field were noticed to be heavily infested by wireworms on March 19. Considerable damage was being done.

M. W. Stone (February): Cardiophorus tenebrosus Lec. was first taken on alfalfa in Orange County on February 1. A few have been taken under piles of malva since then. Population counts were again resumed in the 5-acre lima bean field in Orange County on February 24. This is the fourth year trapping has been carried on in this field, 10,521 beetles having been captured to date. In 1933, 2,918 were captured, and 4,141 in 1932.

### SAY'S STINK BUG (Chlorochroa sayi Stahl)

Montana. A. L. Strand (March 19): A brief survey of north-central Montana has been completed and this plant bug is coming through the winter in enormous numbers. The center of the infestation is in western Hill, Liberty, and Chouteau Counties, but extends as far east as Blaine County and as far south as Cascade, and occurs in considerable numbers in eastern Pondera, Teton, and Toole Counties.

## CEREAL AND FORAGE - CROP INSECTS

### WHEAT AND OTHER SMALL GRAINS

#### HESSIAN FLY (Phytophaga destructor Say)

Ohio. T. H. Parks (March 23): No serious infestation is expected this summer. Some early sown fields in northern Ohio have a medium infestation,

whereas the later sown fields are free from the insect. Wheat looks very well, with less than the usual amount of winter injury.

CHINCH BUG (Blissus leucopterus Say)

Indiana. C. Benton (March 15): The mortality of chinch bugs in samples of 5 species of bunchgrass taken from the field on March 11 was 13 percent of a total of 1,921 bugs. No significant difference in mortality was apparent in the different kinds of grass. The bugs were stirring about in the grass clumps on March 4 and 15, when maximum temperatures were 60° and 73° F., respectively, some even crawling an inch or so up the stems, but none were leaving their hibernation quarters.

Illinois. W. P. Flint (March 20): Recent counts have shown winter mortality in hibernating chinch bugs to be approximately 14 percent. This is not sufficient to make any appreciable decrease in the probable damage this spring. There has been no flight of the bugs as yet, and very little activity in winter quarters.

Missouri. L. Haseman (March 26): From about 10 to 15 percent of the hibernating chinch bugs in central Missouri have died but a heavy population is present in about 90 counties.

GREEN BUG (Toxoptera graminum Rond.)

South Carolina. C. F. Rainwater (March 15): Aphids were collected from the leaves of oats in Florence County, where they are generally distributed over the entire county and are causing alarm among the farmers. Some entire fields have been killed, and spots in many other fields have been either killed or severely stunted. Rye is being attacked to about the same extent as oats. Some of the aphids are parasitized, but the percentage of parasitization is rather low. (Det. by F. W. Mason)

APPLE GRAIN APHID (Rhopalosiphum prunifoliae Fitch)

California. E. O. Essig (March 25): The apple grain aphid was very abundant on grains and grasses from February 25 to March 25 at Berkeley.

CORN

EUROPEAN CORN BORER (Pyrausta nubilalis Hbn.)

Connecticut. N. Turner (March 23): About 30 percent winter mortality in heavily infested weed areas in Hartford County. A comparatively large infestation remains.

WEBWORMS (Crambus spp.)

Tennessee. G. M. Bentley (March): Sod webworms are general throughout the State.

ALFALFA

ALFALFA WEEVIL (Hydroera postica Gyll.)

California. A. E. Michelbacher (March 21): About Niles the alfalfa weevil was active throughout the entire winter. At present, counts in excess of 100 larvae per 100 sweeps of an insect net have been obtained. In one heavily infested field on February 19, 7 stems out of 200 examined were found to contain eggs, as compared with 14 out of 300 stems in the same field on March 15. In the San Joaquin Valley the weevil was collected easily on February 25. The larvae were not very abundant, but were generally distributed throughout the infested area.

VETCH

PEA APHID (Illinoia pisi Kalt.)

Kansas. H. R. Bryson (March 25): No pea aphids have been found this year.

Oregon. T. R. Chamberlin (March 11): Vetch fields near Hillsboro averaged 1 aphid per 100 sweeps in October-seeded vetch and 4 per 100 in volunteer vetch. The volunteer fields averaged 8 per 100 in February. Fall-seeded plots at Forest Grove show fewer aphids than in February or January and much fewer than in November. At this time in 1934, damage to common vetch was beginning to show and aphids averaged several thousands per 100 sweeps.

SUGARCANE

A MITE (Tarsonemus bancrofti Michael)

Virginia. F. F. Smith (February): On February 5 R. D. Rands brought a piece of sugarcane from an Arlington Farm greenhouse to H. E. Ewing to be examined for mites as the cause of a "rusted" appearance of the surface. This cane bore large numbers of T. bancrofti, first recognized as a pest of sugarcane in 1877 and since found in many tropical countries and islands, but not heretofore reported in continental United States. The examination revealed the presence of an associated species considered by Dr. Ewing to be new. It is of interest that other species were noted among colonies of T. bancrofti by Michael in 1890, but they were not described and apparently no specimens were preserved.

SUGARCANE BORER (Diatraea saccharalis Fab.)

Louisiana. W. E. Hinds (March 26): Sugarcane borer moths have begun emerging at Baton Rouge. The first adult was taken on March 22. Survival has been reduced much below normal by the severe cold of the past winter. Cane at Baton Rouge is about 1 foot high and early planted corn is only from 6 to 8 inches high.

SUGARCANE BEETLE (Euetheola rugiceps Lec.)

Louisiana. W. E. Hinds (March 26): Sugarcane beetles are beginning to fly on warm nights. It is not yet time to estimate their abundance and probable injuriousness for this season.

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

APPLE

CODLING MOTH (Carposcapa pomonella L.)

Georgia. C. H. Alden (March 22): Larvae are still in hibernation at Cornelia. There has been no oviposition to date. A high percentage is surviving the winter and it appears that there will be a moderate number of spring-brood moths.

Missouri. L. Haseman (March 25): Apples are rapidly approaching the prepink stage at Columbia and as yet no oviposition has taken place in our breeding cages. Winter mortality has been low at Columbia but in the northwestern part of the State it has been reported as high in breeding cages.

EASTERN TENT CATERPILLAR (Malacosoma americana Fab.)

Connecticut. W. E. Britton (March 23): Egg clusters of the eastern tent caterpillar are very abundant throughout the State on apple and wild cherry. Specimens have been sent in from Glastonbury, Hartford, and Waterbury.

E. P. Felt (March 25): Eggs are generally abundant and the prospects are that there will be considerably larger numbers over a greater area than occurred last year under conditions that led us to believe that the outbreak had reached its peak.

New Jersey. T. J. Headlee (March 23): Egg masses are extremely numerous and widely distributed throughout the State. Judging from the number of egg masses, this insect will reach the peak of its present increasing cycle this year. However, a good many egg masses found are not viable.

Pennsylvania. T. L. Guyton (March 28): Egg masses of the eastern tent caterpillar are very numerous on wild cherry in Pike and Monroe Counties.

Tennessee. G. M. Bentley (March): The eastern tent caterpillar is generally distributed over the State. Small tents were just appearing on March 20.

J. U. Gilmore (March 20): The first small web of the season was seen in wild cherry at Clarksville on March 20.

Arkansas. W. J. Baerg (March 7): Caterpillars of the eastern tent caterpillar began emerging at Fayetteville on March 6, a few of them probably on March 5. Judging by the number of egg masses, the species will be about as abundant this year as it was last.

Kansas. H. R. Bryson (March 25): E. G. Kelly reports that the eggs of the tent caterpillar were very plentiful in wild plums and sand plums from March 1 to 4, in Ford, Edwards, Comanche, Gray, and Finney Counties.

FRUIT TREE LEAF ROLLER (Cacoecia argyrospila Walk.)

Connecticut. P. Garman (March 23): Eggs are abundant locally around Wallingford.

New York. P. J. Parrott (March 23): Egg masses of the fruit tree leaf roller are probably more common in western New York and the Hudson Valley than usual.

APHIDS (Aphidae)

Connecticut. P. Garman (March 23): Eggs of Anhis pomi DeG. and Anuraphis roseus Baker are present in most orchards and are moderately abundant, more so than last year.

Virginia. W. J. Schoene (March 25): The green aphid is appearing in considerable numbers in Blacksburg, Montgomery County, and in Monroe, Amherst County. No rose aphids have been noticed.

Pennsylvania. H. N. Worthley (March 29): Aphid eggs are moderately abundant at State College. They started hatching on March 24, before any apple buds showed green tips.

Ohio. T. H. Parks (March 23): Overwintering eggs of apple tree aphids are not very abundant. Hatching of the apple grain aphid (Rhopalosiphum prunifoliae Fitch) has commenced in southern counties.

Wisconsin. E. L. Chambers (March 20): Shipments of apple trees received from apple-tree-growing States of the Southwest show heavy infestation of root galls of the woolly apple aphid (Eriosoma lanigerum Hausm.) on certain varieties.

Missouri. L. Haseman (March 26): Apple grain aphids began hatching at Columbia and Louisiana about March 15 and are now quite abundant in some orchards.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

New York. P. J. Parrott (March 23): The San Jose scale is very abundant at Geneva.

Georgia. O. I. Snavely (March 22): The percentage of live scale on peach

trees around Fort Valley has not yet been lowered by cold weather. The minimum temperature this winter was 16° F. on December 12. The percentage of live scale ran as follows: December 17, 86.7; January 14, 86.3; February 23, 83.8; and March 21, 79.3. The slight decrease in the percentage between December 17 and March 21 was due to the work of the twice-stabbed ladybeetle (Chilocorus bivulnerus Muls.)

C. H. Alden (March 22): The San Jose scale has been moderately abundant in apple and peach orchards and is still prevalent in uncared-for orchards around Cornelia.

Ohio. T. H. Parks (March 23): The San Jose scale is more abundant than usual and dormant spraying is now in full swing.

Indiana. J. J. Davis (March 21): San Jose scale has been reported very abundant from isolated localities throughout the State. More than the usual number of inquiries have come from northern Indiana, where the scale appears to be gaining a foothold.

Wisconsin. E. L. Chambers (March 20): The San Jose scale survived the winter in much more than normal numbers in the southern part of the State. More than 6,000 trees and shrubs are being sprayed in White-water. The work was begun on March 18. This is the third city-wide spray campaign carried on by the State in this city, the two previous ones being in 1924 and 1915. After 8 or 9 years the scale builds up so heavy an infestation that the growing of trees and shrubs is impossible without spraying.

Mississippi. C. Lyle (March 22): Inspector N. L. Douglass, Grenada, states that the San Jose scale has been more prevalent in that district than usual. He has observed several trees that have been killed since last year, especially in orchards that were not sprayed in 1932-33. Inspector N. D. Peets, Brookhaven, and M. L. Grimes, Meridian, report medium to severe damage on unsprayed fruit trees.

Arizona. C. D. Lebert (March 21): Several small but severe infestations of the San Jose scale on roses have been reported from Phoenix and Scottsdale.

#### FLAT-HEADED APPLE TREE BORER (Chrysobothris femorata Oliv.)

Ohio. T. H. Parks (March 23): More than the usual number of specimens of the flat-headed apple tree borer have been brought in by anxious tree owners. Injury was especially severe to young trees set out 1 year ago. Roadside plantings of shade trees have also suffered.

Indiana. J. J. Davis (March 21): Reported as abundant and severely damaging maples and apple in numerous localities in the State.

Illinois. W. P. Flint (March 20): More than the usual number of reports

of damage by this species and also by the round-headed borer (Saperda candida Fab.) in apple trees have been received.

Nebraska. M. H. Swenk (March 20): The flat-headed apple tree borer was found working in young apple trees in Platte and Dawson Counties on March 8 and 16, respectively.

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

Connecticut. P. Garman (March 23): Eggs are present in most orchards and abundant in some in New Haven County.

PEACH

PLUM CURCULIO (Conotrachelus nenuphar Hbst.)

Georgia. O. I. Snapp (March 22): As a result of the heavy infestation at Fort Valley last year, when two generations occurred, the hibernating population was larger than usual; therefore a heavy infestation is anticipated this year. The hibernation season was a favorable one for the curculio. Adult curculios began leaving hibernation this year in advance of full bloom, which occurred on March 17 on Elbertas and Hileys, and by March 22 they had reached the center of the orchards and were disseminated throughout. The petal-fall spray will be applied beginning March 25, and is an important application this year on account of the early appearance of the curculio, relative to blooming of peaches. The infestation is heavier than usual.

C. H. Alden (March 22): No curculios have been found in peach orchards at Cornelia to date. In 1934 the first curculios were caught on April 9. Elbertas are now in full bloom, about 10 days earlier than last year.

T. L. Bissell (March): Jarring peach and wild plum for the plum curculio started on March 13 at Experiment. The first curculio was jarred from wild plum on March 23 and from cultivated plum on March 24. Five curculios were jarred from 15 peach trees on March 25.

ORIENTAL FRUIT MOTH (Grapholitha molesta Busck)

Georgia. C. H. Alden (March 22): Oriental fruit moth larvae are still in the hibernating cocoons at Cornelia.

PEACH BORER (Aegeria exitiosa Say)

Ohio. T. H. Parks (March 23): Injury is severe at the present time. Backyard trees are widely infested.

Mississippi. C. Lyle (March 22): Inspector Jack Milton reports that the peach borer is very abundant in the central part of the State and that

some of the trees have been almost completely killed by it. Inspectors F. A. Smith, Senatobia, N. D. Peets, Brookhaven, and M. L. Grimes, Meridian, report medium to severe damage to plum and peach trees in their districts.

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

Kansas. H. R. Bryson (March 25): Peach trees planted as an intercrop in one orchard in northeastern Kansas showed the lesser peach tree borer to be abundant on March 1.

PLUM

PEAR THRIPS (Taeniothrips inconsequens Uzel.)

Oregon. S. C. Jones (March 21): On March 14 the first prune thrips was found on the first breaking buds of prune trees near Independence. On March 18 a few thrips were found in prune buds picked near Roseburg and thrips were also emerging in prune orchards at Forest Grove.

California. S. Lockwood (March 9): A survey of the pear and plum orchards in the Sacramento River Valley south of Sacramento was made yesterday and no pear thrips was found.

RASPBERRY

BLACK VINE WEEVIL (Brachyrhinus sulcatus Fab.)

California. L. M. Smith (March 15): The black vine weevil occurs in considerable numbers in raspberry patches in the Santa Clara Valley. At the present time approximately 70 percent of the larvae have pupated.

GRAPE

GRAPE LEAFHOPPER (Erythroneura comes Say)

California. S. Lockwood (March 25): In the Coachella Valley, Riverside

County, the grave leafhopper is much more prevalent than at this time last year. In the vineyards in the Imperial Valley it is about the same as last year, but is far more than normally abundant.

#### PECAN

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

North Carolina. R. W. Leiby (March 21): An examination of 700 buds on pecan twigs from the largest orchard in the State shows 87 cases per 100 buds. This is slightly higher than the average for the last 8 years and forecasts some damage to pecan growth in spring.

##### PECAN CARPENTER WORM (Cossula magnifica Stkr.)

Georgia. T. Bissell (March 21): On February 11 at Forsyth an orchard of 17 pecan trees about 15 years old was examined and 10 trees contained 12 worms. This is the heaviest infestation ever observed. On March 9 at Experiment in an orchard of 30 trees 27 years old 1 worm was found in 1 tree. On March 14 at Barnesville an orchard of 250 trees about 10 years old showed 3 trees containing 1 worm each.

#### CITRUS

##### GREEN CITRUS APHID (Aphis spiraecola Patch)

Florida. J. R. Watson (March 23): Citrus aphids are increasing in numbers, and while most of the spring growth on oranges and grapefruit is too far advanced to be endangered, they may do commercial damage to tangerines.

##### COWPEA APHID (Aphis medicaginis Koch)

Arizona. C. D. Lebert (March 21): A. medicaginis is numerous on new growth of citrus trees, but is not considered as very important.

##### CALIFORNIA RED SCALE (Chrysomphalus aurantii Mask.)

Arizona. C. D. Lebert (March 21): Several small infestations have been found in ornamentals in Phoenix yards recently. The infested plants were removed and destroyed and all adjacent plants were sprayed.

##### COTTONY CUSHION SCALE (Icerya purchasi Mask.)

Mississippi. C. Lyle (March 22): On March 19 Inspector H. Gladney, of Ocean Springs, wrote as follows: "A few light infestations on citrus

are scattered along the southern edges of Jackson and Harrison Counties. *Vedalia* ladybird beetles (*Rodolia cardinalis* Muls.) were observed feeding at some of the places."

Arizona. C. D. Lebert (March 21): This scale is active in several citrus groves and was very abundant on some ornamentals on March 1. *Vedalia* activity was noted today for the first time. Some *Cryptochaetum icervae* Williston were liberated 2 weeks ago and the activity of this parasite was also recorded today.

CHAFF SCALE (*Parlatoria pergandei* Comst.)

Mississippi. C. Lyle (March 22): On March 19 Inspector H. Gladney wrote that heavy scattered infestations have been observed on citrus in Jackson and Harrison Counties.

A SCALE INSECT (*Margarodes* sp.)

Florida. J. R. Watson (March 23): The margarodes on the roots of citrus trees are beginning to emerge and lay eggs.

HOLCOCERA MOTH (*Holcocera iceryaeella* Riley)

California. H. J. Ryan (March 26): Larvae are present in numbers on the orange fruit in Los Angeles County, but they have not started boring into the fruit. The orange tortrix (*Tortrix citrana* Fern.) has not done any damage.

CITRUS RED SPIDER (*Paratetranychus citri* McG.)

California. H. J. Ryan (March 26): The infestation of the citrus red spider on citrus in Los Angeles County has built up rapidly and quite a little spraying has been done to control it.

## TRUCK - CROP INSECTS

### VEGETABLE WEEVIL (Listroderes obliquus Gyll.)

Alabama. J. M. Robinson (March 25): The vegetable weevil continues to be abundant in central and southern Alabama and is attacking vegetables in the Birmingham trucking area.

Mississippi. M. M. High (March 7): The vegetable weevil is causing serious injury to turnips, carrots, and a number of other vegetables along the Gulf coast. The weevils became active about the middle of October and egg laying started the latter half of October. Heavy oviposition took place in November, December, January, and February.

C. Lyle (March 22): Inspector N. D. Peets, of Brookhaven, states that carrots and turnips in his district have been rather heavily damaged by larvae, and inspector M. L. Grimes, of Meridian, reports that larvae and pupae are very abundant in the soil in certain gardens, although no vegetables are present for the larvae to feed upon.

Louisiana. P. K. Harrison (March 15): The vegetable weevil was causing slight injury to young cabbage plants near Westwego.

### CUCUMBER BEETLES (Diabrotica spp.)

Virginia. H. G. Walker (March 23): Twelve-spotted cucumber beetles (D. duodecimpunctata Fab.) were quite common in kale, collard, and spinach fields at Norfolk on March 21.

Georgia. T. L. Bissell (March 13): Beetles (D. 12-punctata) are common on rye and wild plum blossoms at Experiment.

Florida. J. R. Watson (March 23): D. balteata Lec. is found on various crops well distributed over the State.

Mississippi. C. Lyle (March 22): Inspector Jack Milton, of Jackson, wrote on March 19 as follows: "A truck-crop grower in Rankin County reports that the 12-spotted cucumber beetle is causing some injury to his plants." Inspector M. L. Grimes reports that he has observed these beetles on volunteer vegetables in the vicinity of Meridian.

M. M. High (March 1): The southern corn root worm beetle was very abundant on turnip and other cruciferous crops along the Gulf coast during January and February. The belted cucumber beetle (D. balteata) was fairly abundant in southern Mississippi on turnip, mustard, cabbage, and related crops during February.

### SEED CORN MAGGOT (Hylemyia cilicrura Rond.)

Virginia. H. G. Walker (March 23): Adults of the seed corn maggot are very abundant in the Norfolk area.

California. R. E. Campbell (February 28): The seed corn maggot is attacking sweet corn in the Alhambra district. Five acres of early planted corn seed were destroyed, necessitating the replanting of the entire field.

TARNISHED PLANT BUG (Lygus pratensis L.)

Virginia. H. G. Walker (March 23): Tarnished plant bugs were found feeding on collards on March 21 at Norfolk.

Tennessee. G. M. Bentley (March): Tarnished plant bugs are general in narcissus plantings at Chattanooga and Knoxville.

CHANGA (Scapteriscus vicinus Scudd.)

North Carolina. W. A. Thomas (February): During the month many complaints have reached the laboratory of rather severe injury to seed beds by mole crickets. The imported mole cricket has now increased in population to the point where control measures are necessary to protect young seedling plants. This is especially true of seed beds protected somewhat from sudden changes of temperature, where there is usually an abundance of decaying vegetable matter, and where moisture conditions are favorable.

GARDEN CENTIPEDE (Scutigera immaculata Newp.)

California. A. E. Michelbacher (March 21): The garden centipede has been very destructive this year. It has done considerable damage to germination stands of sugar beets and onions in the Sacramento River Delta. Several hundred acres of beets have been severely injured and many fields destroyed. In some instances barley has been injured, although not seriously.

POTATO AND TOMATO

COLORADO POTATO BEETLE (Leptinotarsa decemlineata Say)

Mississippi. C. Lyle (March 22): Inspector L. J. Goodgame reports that the first Colorado potato beetles were observed in Prentiss County on March 14. Inspector N. D. Peets indicates that he has not yet observed any of these beetles in the vicinity of Brookhaven.

E. W. Dunnam (March 25): Adult Colorado beetles have been noticed for the first time this season in Washington County.

Louisiana. W. E. Hinds (March 26): Colorado potato beetles are attacking tomatoes lightly around Baton Rouge. There are no potatoes nearby.

C. E. Smith and P. K. Harrison (March 29): Adults that overwintered are quite abundant in several home gardens in the vicinity of Baton Rouge and in the experimental plots at the Louisiana State University. Larvae about one-third grown were found in one home garden.

TOMATO PINWORM (Gnorimoschema lycopersicella Busck)

California. J. C. Elmore (March 11): In the Santa Ana district 217 moths were collected from 8 piles of old tomato plants, the piles being 3 by 4 feet in area. These plants were piled up about January 17. Adults were collected from cages set over the material. In the same area a large pile of tomato plants which were taken from the field November 2, 1934, was still harboring pinworm moths, 7 moths being taken from 36 square feet. Tomato plants set out under paper caps on February 1 were pushing through the paper by March 11. Five hundred acres of tomatoes in the Santa Ana district are at this stage of development. A general field examination was made in the San Juan Capistrano district March 13 and 55 acres of tomatoes under half paper caps were found to be infested. There were 150 acres of tomatoes set out under paper in this locality on February 1.

TOMATO PSYLLID (Paratrioza cockerelli Sulc.)

Arizona. V. E. Romney (February): During February adults and eggs were found on four additional species of Lycium. L. fremonti, L. exsertum, L. parishii, and L. californicum were found to harbor a few potato psyllids, but not to such an extent as in L. andersonii. The first brood of psyllids for the current season was completed by the latter part of February. The nymphs present were small ones that had recently hatched. The number of eggs now present on L. andersonii is very high, although coccinellid and chrysopid larvae have been noticed on the bushes.

PEAS

PEA APHID (Illinoia pisi Kalt.)

California. R. E. Campbell (March 18): The pea aphid is doing considerable damage to market peas in Santa Barbara and San Luis Obispo Counties. One 100-acre field observed will be a total loss unless the aphids are destroyed. Recent rains have promoted the aphid fungus in some fields and syrphid larvae are numerous, but any reduction in the number of aphids by these natural enemies usually occurs after considerable damage has been done. The Pacific Rural Press of March 16 reports as follows: "Pea growers in the Milpitas district are threatened with heavy losses by aphids, and a scout has been sent to the Sierra Nevadas to procure 2 tons of ladybugs to attack and destroy the aphid horde."

CABBAGE

IMPORTED CABBAGE WORM (Ascia rapae L.)

Virginia. H. G. Walker (March 23): Imported cabbage butterflies have been active in kale and collard fields at Norfolk for some time.

Tennessee. G. M. Bentley (March): Generally distributed over eastern Tennessee.

Mississippi. C. Lyle (March 22): Inspector N. D. Peets reports medium damage

to cabbage in Covich and Lincoln Counties.

Louisiana. W. E. Hinds (March 26): Cabbage butterflies and their eggs are unusually scarce at Baton Rouge.

C. E. Smith (March 13): At Baton Rouge a light infestation of larvae was found on cabbage plants that had been transplanted to the field since the freeze of January 21-26.

P. K. Harrison (March 15): Not one larva or adult was found on cabbage in southern Louisiana near Westwego.

Missouri. L. Haseman (March 26): First imported cabbage butterfly on the wing was seen at Columbia March 23. The insect is now increasing in numbers.

#### CABBAGE LOOPER (Autographa brassicae Riley)

Louisiana. C. E. Smith (March 13): The cabbage looper is very scarce in the vicinity of Baton Rouge.

P. K. Harrison (March 15): Not a single specimen of cabbage looper was found on cabbage plants near Westwego.

W. E. Hinds (March 26): No cabbage loopers have yet appeared at Baton Rouge.

#### DIAMOND-BACK MOTH (Plutella maculipennis Curt.)

Virginia. H. G. Walker (March 23): All stages of the diamond-back moth are present in kale and collard fields at Norfolk. Angitia hellulae Vier, is also very abundant and it is believed that this parasite will be able to keep the moth in check this spring.

Mississippi. M. M. High (March 7): The larvae were quite abundant on experimental plats of turnips at Biloxi and on cabbage at Gulfport during January and February.

Louisiana. C. E. Smith (March 13): Larvae were found on collards and cabbage that survived the severe freeze of January 21-26 at Baton Rouge and vicinity.

P. K. Harrison (March 15): Field observations and examinations show very little injury to cabbage. Very few larvae were found on young cabbage plants in one field of approximately 300 acres near Westwego.

#### CROSS-STRIPED CABBAGE WORM (Evergestis rimosalis Guen.)

Mississippi. M. M. High (February 19): The cross-striped cabbage worm was

observed attacking cabbage and turnip about Biloxi and Gulfport.

HARLEQUIN BUG (Murgantia histrionica Hahn)

Virginia. H. G. Walker (March 23): Only two harlequin bugs have been found at Norfolk this spring, indicating that they are rather scarce.

L. W. Brannon (February 26): A large number of examinations were made in trash and other debris in and near collard patches for adults of the harlequin bug in hibernation at Norfolk. Only one adult was found and it was beneath dead leaves and grass along the edge of the patch. No live adults were observed. The temperature at the time of the observation was 69° F. In similar examinations in another garden where dead leaves covered the ground near one end of the patch, no live adults were found. Examinations were then made in pine woods near the collard patches in order to determine whether any adults had flown to the woods for hibernation. No adults were found beneath pine needles and leaves.

Alabama. J. M. Robinson (March 25): Large numbers of overwintered adults have appeared on cabbage and turnips at Auburn.

Louisiana. W. E. Hinds (March 26): Harlequin cabbage bugs are very abundant at Baton Rouge on old stalks of cabbage and collard. Eggs are abundant.

CABBAGE APHID (Brevicoryne brassicae L.)

Virginia. H. G. Walker (March 23): A few specimens of Myzus persicae Sulz. and B. brassicae were found feeding on old collards at Norfolk but none were found on spinach.

North Carolina. W. A. Thomas (February): Cabbage aphids have shown up in considerable numbers on overwintering collards and young cabbage, necessitating control measures.

Mississippi. C. Lyle (March 22): The cabbage aphid was observed recently on cabbage plants in Rankin County near Florence. Although the infestations were spotted in the fields, the plants attacked were badly damaged. Medium damage to cabbage in Lincoln and Covish Counties has been reported.

TURNIP APHID (Rhopalosiphum pseudobrassicae Davis)

Louisiana. W. E. Hinds (March 26): Aphids, presumably this species, are abundant on some small plots of cabbage at Baton Rouge, but not generally distributed.

SEED CORN BEETLES (Agonoderus spp.)

Virginia. H. G. Walker (March 23): Hundreds of Agonoderus beetles, probably A. lineola Fab. and A. pallipes Fab., were observed flying over collard

and kale fields at Norfolk on the afternoon of March 21, and were very abundant around lights that night.

#### FLEA BEETLES (*Halticinae*)

Virginia. H. G. Walker (March 23): A large number of cabbage flea beetles are present in kale and collard fields at Norfolk.

Louisiana. W. E. Hinds (March 26): Phyllotreta vittata Fab. is very abundant on mustard and turnips coming up.

#### CELERY

##### GREENHOUSE LEAF TIER (Phlyctaenia rubigalis Guen.)

Florida. C. F. Stahl (February): One thorough survey of the celery area was made during the month to determine the abundance and distribution of the celery leaf tier. This was done on February 8, at the beginning of the few days of very warm weather. At that time the only places showing the presence of the insect were a few fields of mature celery immediately south of Lake Monroe, where from 6 to 15 moths per row were flushed by sweeping.

#### ONIONS

##### ONION THRIPS (Thrips tabaci Lind.)

Florida. J. R. Watson (March 23): There is an extremely heavy infestation of onion thrips on celery in Sarasota County where severe damage is being done. The thrips are also attacking beans in Sarasota County and the lower eastern coast. The usual damage to onions is noticeable all over the State.

Louisiana. P. K. Harrison (March 18): Onions are being rather heavily infested in the vicinity of Baton Rouge.

#### STRAWBERRY

##### STRAWBERRY LEAF ROLLER (Ancyliis comptana Froel.)

Kansas. H. R. Bryson (March 1): Strawberry leaf rollers passed the winter in good condition in northeastern Kansas.

##### STRAWBERRY ROOT APHID (Aphis forbesi Weed)

Virginia. H. G. Walker (March 23): At Norfolk a large percentage of the overwintering eggs have hatched and the young aphids are feeding mostly on the stems and undersides of the leaves.

COMMON RED SPIDER (Tetranychus telarius L.)

Virginia. H. G. Walker (March 23): The red spider continued to be rather abundant in a great many strawberry fields in the Norfolk area and on the Eastern Shore of Virginia.

BEET

BEET LEAFHOPPER (Eutettix tenellus Bak.)

Colorado and Utah. W. A. Shands and O. A. Hills (February): Observations near the end of February indicated that no germination of spring host plants had occurred in the general breeding area but that it could be expected within a few days; also that little mortality of E. tenellus occurred during the past winter in the Grand Valley of Colorado. It is reasonable to expect that similar survivals obtained over the breeding area of southeastern Utah.

Utah. G. F. Knowlton (March 14): Beet leafhoppers are more than usually abundant in the breeding areas of Box Elder County, south of Lamo and west of Corinne.

General. E. W. Davis (February): Filaree was found in southwestern Utah at Leeds and at Santa Clara. A few scattered plants on the uplands were of recent germination and no leafhoppers were found on them. At the station at Leeds 7 leafhoppers were found in 14 square feet; at Saint George, 9 per 16 square feet; and at Santa Clara, 1 was found. In a section northwest of the Indian reservation, where a large number were found last fall on sheepweed, only one was found. On beets in the Saint George area 10 leafhoppers per 20 square feet were found. In the southern Nevada section the creosote bush was quite dry and in many places exceedingly brown. In the Dry Lake section, which normally germinates some filaree, no annuals were present. South of Las Vegas the creosote bush was somewhat greener and some wild mustard was germinating around the base of the bushes. However, no leafhoppers could be found in this area. On the road south of Las Vegas toward Searchlight it was extremely dry and no annuals had germinated. In the Arizona section of the perennial breeding area, we found that the filaree had germinated from high on the hill slopes, down to the broad flats. Filaree was also found between Littlefield, Ariz., and Mesquite, Nev., in small areas. Twenty-five miles southwest of Saint George, Utah, on the hillside, two 10-square-foot samples did not show any leafhoppers. Farther down on the flat none were found. The filaree in this area was more or less of recent germination; that is, it germinated late last fall. Leafhoppers were found only in those patches that germinated from the November rainfall. In most of these places the areas that supported leafhoppers were covered in making these checks. In dissections of the females it was found that practically three-fourths had matured eggs. At Logandale, Nev., no leafhoppers were found on beets. On Russian-thistle 1 inch high, one leafhopper in 10 square feet was found, but very little Russian-thistle was germinated in this area.

California. H. E. Wallace (February): Early in February there was an influx of beet leafhoppers into the beets around King City. The writer visited the area on February 12 and 13 and made several counts in the field. The average population found, considering all counts, was 9 bugs per 100 square feet of row of unthinned beets, a population sufficiently large to indicate potential damage on unthinned beets on the 1,600 acres in the district. The majority were females of the overwintering generation.

## FOREST AND SHADE - TREE INSECTS

### CANKER WORMS (Geometridae)

Connecticut. E. P. Felt (March 25): Fall canker worms (Alsophila pomataria Harr.) are locally abundant, though mostly in areas adjacent to the sections where there was extensive defoliation last year. A number of the females did not appear until spring and on March 24 they were observed laying eggs. The spring canker worm (Paleacrita vernata Peck) occurs locally but is not so common as the fall canker worm.

W. E. Britton (March 23): Eggs of the fall canker worm are very abundant in the vicinity of New Haven and have been received from Bethany, Bridgeport, Groton, and Woodbridge. There may be serious defoliation in May.

New Jersey. T. J. Headlee (March 23): Both species of canker worm are increasing. This morning I found a female spring canker worm laying eggs.

Illinois. W. P. Flint (March 20): Canker worm moths were flying in rather large numbers on the night of February 27 and again on the night of March 19.

Missouri. L. Haseman (March 25): Male moths of the spring canker worm have appeared at Columbia now and then on warm nights since sometime in January. The moths are still abundant.

A. F. Satterthwait (February 25): The spring canker worm is now in flight at Webster Groves. One was observed on February 15. By February 21 many were in flight.

Kansas. H. R. Bryson (March 22): Canker worms are abundant in a number of localities. Several thousand trees were banded and counts revealed from 400 to 600 moths on representative bands. The majority of the moths are out, but the bands still catch a few late stragglers.

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

Colorado. G. M. List (March 19): Eggs are much less numerous in northern Colorado cities than they have been for two seasons. Little injury is expected this year.

BAGWORM (Thyridopteryx ephemeraeformis Haw.)

Ohio. E. W. Mendenhall (March 16): In examining cocoons of the bagworm in the central and southern parts of the State I find the eggs have overwintered very well and it looks as though there will be a heavy infestation this season.

Indiana. J. J. Davis (March 21): Many inquiries from as far north as La Fayette have been received regarding the abundance of the bagworm.

ELM.

EIM LEAF BEETLE (Galerucella xanthomelaena Schr.)

Maryland. E. N. Cory (March 26): An unusual swarming into a house in Baltimore County was noted.

A BARK BEETLE (Scolytus multistriatus Marsham)

Connecticut. B. J. Kaston (March 23): Dead adults were found at New Haven in brood tunnels on February 11. Live hibernating larvae, apparently almost ready to pupate, were also present. This species is relatively uncommon, as compared with the native bark beetle Hylurgopinus rufipes Eich. This native bark beetle is apparently much more numerous in the eastern part of the State, becoming more common the farther east one collects. Many dead adults were found in egg galleries especially in the town of Old Lyme. Some young scolytid imagoes were found dead in the pupal cell. There are many hibernating larvae but no pupae.

ELM BORER (Saperda tridentata Oliv.)

Connecticut. B. J. Kaston (March): Half-grown and larger larvae are common. In one tree at Danielson on March 18 almost every tunnel contained a pupa of an unidentified hymenopterous parasite.

EUROPEAN EIM SCALE (Gossyparia spuria Mod.)

Wisconsin. E. L. Chambers (March 20): The European elm scale is making its appearance in a few additional localities in southern Wisconsin each year. It is still confined to 8 or 10 cities where spraying is carried on each year. Madison has sprayed practically all the elm trees in the city this spring.

Colorado. G. M. List (March 19): The European elm scale has been on the increase during the last two or three seasons. It now occurs in practically all sections of the State where elms are grown. The indications are that the winter mortality has been very low.

PUTNAM'S SCALE (Aspidiotus ancylus Putn.)

Connecticut and New Jersey. E. P. Felt (March 25): Putnam's scale was

received from Nutlev, N. J., on a piece of elm bark, showing a rather severe infestation. A scale, presumably this species, was found in great abundance on flowering dogwood at Wilton, Conn.

OBSURE SCALE (Chrysomphalus obscurus Comst.)

Tennessee. G. M. Bentley (March): At Knoxville adults of Chilocorus bivulnerus Muls. were numerous and were feeding on the obscure scale on elm.

PINE

PINE NEEDLE SCALE (Chionaspis pinifoliae Fitch)

Wisconsin. E. L. Chambers (March 20): Specimens of the pine needle scale are being sent in from many localities in southern Wisconsin and all seem to have escaped injury from the mild winter.

I N S E C T S   A F F E C T I N G   G R E E N H O U S E  
A N D   O R N A M E N T A L   P L A N T S

A FLOWER THRIPS (Frankliniella cephalica Cwfd.)

Florida. J. R. Watson (March 23): The flower thrips F. cephalica is very abundant in most blossoms. With the advent of abnormally dry and hot weather in March, the increase has been very rapid. The thrips is found in large numbers on ornamentals.

OYSTER-SHELL SCALE (Levidosaphes ulmi L.)

New York. R. E. Horsey (March 21): On March 13 the oyster-shell scale was common on a large ornamental planting of rosemary willow (Salix incana) at Rochester, almost every shrub being infested. It was also found on poplar trees nearby, but was not common.

Indiana. J. J. Davis (March 21): The oyster-shell scale has been reported as abundant on lilac and ash in the northern half of the State.

Colorado. G. M. List (March 19): The oyster-shell scale was less numerous this past season than for some time, but apparently the eggs have wintered well and we expect some increase, especially on lilac and ash.

ARBORVITAE

ARBORVITAE APHID (Dilachnus thujaefilina Del Guer.)

Mississippi. C. Lyle (March 22): Inspector M. L. Grimes reports that aphids, probably this species, are becoming abundant on arborvitae plants in the vicinity of Meridian.

Louisiana. W. E. Hinds (March 26): Arborvitae aphids are abundant on certain shrubs and their presence is indicated by the abundance of flies and wasps swarming around the infested plants.

COMMON RED SPIDER (Tetranychus telarius L.)

Louisiana. W. E. Hinds (March 26): Red spiders are abundant and are destroying young growth on arborvitae and cedars at Baton Rouge.

CAMPHOR

CAMPHOR THRIPS (Cryptothrips floridensis Watson)

Mississippi. C. Lyle (March 22): On March 15 inspector G. L. Bond reported rather general and severe injury to camphor trees at Lucedale.

DEODAR

DEODAR WEEVIL (Pissodes deodarae Hopk.)

Mississippi. C. Lyle (March 22): Inspector M. L. Grimes reports injury to plantings of Cedrus deodara in Meridian. A report of injury was also received from Hazlehurst on February 23.

EUONYMUS

EUONYMUS SCALE (Chionaspis euonymi Comst.)

Virginia. H. G. Walker (March 23): The euonymus scale is very abundant in the Norfolk area.

North Carolina. R. W. Leiby (March 21): This scale is being reported more frequently this spring than usual. Damage is severe.

Mississippi. C. Lyle (March 22): On March 19 Inspector Jack Milton wrote as follows: "Practically all of the euonymus plants in Jackson show from light to heavy infestation."

HOLLY

HOLLY LEAF MINER (Phytomyza ilicis Curt.)

Tennessee. G. M. Bentley (March): A serpentine leaf miner is working in the leaves of Ilex opaca.

NARCISSUS

LESSER BULB FLY (Eumerus tuberculatus Rond.)

Tennessee. G. M. Bentley (March): The bulb fly is general in narcissus plantings at Chattanooga and Knoxville.

NARCISSUS BULB FLY (Merodon equestris Fab.)

Washington. R. Schopp and C. F. Doucette (February): Pupation had started when the first seasonal observations were begun at Sumner on February 26. However, only 7.15 percent of the samples examined were pupae. Most of the remainder were still in the larval stage in the bulbs.

A BULB THRIPS (Liothrips vaneeckei Priessner)

Washington. R. Schopp (February): Throughout the month the proportions of thrips in the several stages were very near what appears to be normal for the winter; that is, nearly 50 percent each of adults and second-instar larvae and 2 or 3 percent of first-instar larvae. No eggs or pupae have been found. Apparently the cool weather, with occasional frost and light freezing, has kept the soil temperature low enough to prevent any perceptible development. There has been little change in the proportion of the sexes.

BULB MITE (Rhizoglyphus hyacinthi Bdv.)

Tennessee. G. M. Bentley (March): The bulb mite is general in narcissus plantings at Chattanooga and Knoxville.

PERIWINKLE

LILY APHID (Myzus circumflexus Buckton)

California. E. O. Essig (March 22): The lily aphid was common on Vinca major at Blocksburg on March 20 and on the same host at Berkeley on March 10.

RHODODENDRON

RHODODENDRON WHITEFLY (Dialeurodes chittendeni Laing)

Washington. R. Latta (February): Weekly observations at Sumner have shown a gradual change from second-instar to third-instar larvae, but pupae are in about the same proportion as in January. Sooty mold is beginning to show on the undersides of heavily infested leaves. On February 11 a large ornamental planting of rhododendron at the Highlands, Seattle, was sprayed. On February 26 spraying was started on another estate at the Highlands. There are over 1,500 plants on this place, practically all of them carrying more or less infestation. On this date a few heavily infested plants in a small ornamental planting were sprayed.

INSECTS ATTACKING MAN AND  
DOMESTIC ANIMALS

MAN

ORIENTAL RAT FLEA (Xenopsylla cheopis Rothsch.)

Iowa. C. J. Drake (March 23): R. L. Roundbush collected the tropical rat flea in Ames on March 22. His observations show that the insect survives Iowa winters.

BOXELDER BUG (Leptocoris trivittatus Say)

Maryland. E. N. Cory (March 26): The boxelder plant bug was reported from Easton.

Ohio. J. S. Houser (March 18): Reports of this insect in dwellings were received from many parts of Ohio during the winter.

Indiana. J. J. Davis (March 21): The boxelder bug has been reported annoying in homes in many sections of the State, especially in northern Indiana, during the past month.

Kentucky. W. A. Price (March 23): Boxelder plant bugs have been the source of worry to housewives during February and March.

Wisconsin. E. L. Chambers (March 20): With the appearance of a few warm days, the boxelder bug is showing up from one end of the State to the other, wherever the boxelder tree is grown extensively.

South Dakota. H. C. Severin (March 14): The boxelder bug is very abundant in eastern part of the State and is causing much annoyance.

Iowa. C. J. Drake (March 23): The boxelder bug is extremely abundant over the State. Many people are asking how they can keep the bugs out of houses.

Nebraska. M. H. Swenk (March 20): Complaints of annoyance by the boxelder bug were received from Dixon, Pierce, Stanton, Rock, Sherman, Colfax, and Seward Counties from February 21 to March 19.

Kansas. H. R. Bryson (March 25): Boxelder bugs are scarcer at Manhattan this year than they have been for several years.

Colorado. G. M. List (March 19): The usual number of inquiries have been received this winter and spring.

Utah. G. F. Knowlton (March 25): Boxelder bugs are reported as unusually abundant and annoying at Cedar City and other parts of Iron County. They are also very abundant and annoying in homes at Mendon.

PAINTED HICKORY BORER (Cyrtene caryae Gahan)

Illinois. C. L. Metcalf (March 14): A number of cases of annoyance in houses where hickory for firewood has been stored in the basement have been reported.

ROCKY MOUNTAIN SPOTTED FEVER TICK (Dermacentor andersoni Stiles)

Idaho. J. R. Douglass (March 8): A male specimen taken from a human was brought into the laboratory on March 6.

BLACK WIDOW SPIDER (Latrodectus mactans Fab.)

Kentucky. W. A. Price (March 23): Black widow spiders are prevalent in the vicinity of Lexington. One adult female was taken from a new house on December 10, and in February five half-grown specimens were collected in the basement of the same house. A number of specimens have been brought into the laboratory during the past few months.

South Dakota. H. C. Severin (March 14): Considerable uneasiness has been aroused in South Dakota over the black widow spider. Specimens have been sent in from many localities. One individual reported taking 20 specimens from his basement, two of which were sent us for examination.

Nebraska. M. H. Swenk (March 20): A specimen of the black widow spider was sent in by a Frontier County correspondent on March 2.

Utah. G. F. Knowlton (March 19): Black widow spiders have been observed surviving the winter in a greenhouse at Logan.

CATTLE

SCREW WORMS (Cochliomyia spp.)

Alabama. J. M. Robinson (March 25): The screw worm was reported as active on young calves near Auburn during the third week of March.

Texas. H. E. Parish (February 22): Our records show that C. macellaria Fab. can survive temperature as low as 11° F. at Menard.

CATTLE GRUBS (Hypoderma spp.)

Missouri. L. Haseman (March 26): In the central part of the State most of the grubs of the ox warble have now left the backs of cattle.

Kansas. H. R. Bryson (March 25): An examination of cattle in Finney, Gray, and Comanche Counties on March 1-4 showed that the larvae of H. lineatum DeVill. had not all dropped from the animals.

Texas. H. E. Parish (February 22): Heel flies were very active during February. The first activity was noted on February 4.

BLACK BLOWFLY (Phormia regina Meig.)

Texas. H. E. Parish (February 22): Larvae collected on January 5 and kept under outdoor laboratory conditions produced adults on January 30. The larvae were collected from dehorned calves and exposed to temperatures as low as 11° F. The fly was active during the warm days in February. One case of myiasis caused by this fly was observed on February 18.

BUFFALO GNATS (Eusimulium pecuarum Riley)

Mississippi. C. Lyle (March 22): On March 20 inspector N. L. Douglas, Grenada, wrote as follows: "Buffalo gnats have been showing up for about 2 weeks, especially in the overflow land and adjacent territory. I notice that they are showing up farther back in the hills than usual, as I have observed them on several occasions about 20 miles east of Grenada, near the Calhoun County line."

Arkansas. H. H. Schwardt (March 22): The southern buffalo gnat appeared in Miller County the last week in January. On February 19 gnats were seen in Mississippi County and during the week of March 3 to 9 local outbreaks occurred in Mississippi, Craighead, Phillips, and Miller Counties. The gnats were most numerous in Miller County. Farm work was stopped in several localities, but no loss of livestock was reported or seen.

BROWN WINTER TICK (Dermacentor nigrolineatus Pack.)

Texas. H. E. Parish (February 22): The winter horse tick was very abundant on horses during the first part of February in Menard County. Recent observations indicate that many of the adult ticks are leaving the host.

HOUSEHOLD AND STORED-PRODUCTS INSECTS

TERMITES (Reticulitermes spp.)

New Jersey. T. J. Headlee (March 23): The season for reporting sex forms of the common termite (R. flavipes Kol.) is now beginning and, judging from the number of reports already in, the insect is not decreasing.

North Carolina. R. W. Leiby (March 21): Complaints of termites swarming around buildings are about as common as usual. Swarming was reported first this season late in February.

Ohio. T. H. Parks (March 23): Several complaints reach our office daily. The insects have been swarming for the past 3 weeks.

J. S. Houser (March 18): A flight of adults at Wooster was

reported on March 17. These insects have increased greatly in abundance in Ohio in recent years.

Indiana. J. J. Davis (March 21): Termites have been swarming for the past 2 weeks and many inquiries have been received from all parts of the State.

Illinois. W. P. Flint (March 20): About the usual number of reports of infestation are now coming in. The same is true of powder-post beetles (Lyctus spp.).

Kentucky. W. A. Price (March 23): Termites were observed swarming in Lexington on March 11.

Alabama. J. M. Robinson (March 25): Termites are swarming at Auburn and are causing considerable concern at Gadsden.

Mississippi. C. Lyle (March 22): Inspector L. J. Goodgame states that on March 16 he observed termites flying from a building in Aberdeen, and inspector H. Gladney, of Ocean Springs, reports that the first swarm he observed this year appeared on March 18. Many complaints of damage have been received from all sections of the State during the past month.

Missouri. L. Haseman (March 26): Since the first of March we have been receiving reports of swarming termites. In all cases they have been in or alongside foundation walls of buildings.

Nebraska. M. H. Swenk (February 20 to March 20): Inquiries concerning the control of termites R. tibialis Bks. continued to be received during the period here covered. A Phelps County correspondent reported, under date of March 7, having lost a number of trees from termite attack.

#### ANTS (Formicidae)

Maryland. E. N. Cory (March 26): Three reports have been received from Baltimore of the European pavement ant (Tetramorium caespitum L.) being present in houses. (Det. by M. R. Smith.) A nuptial flight of Lasius interjectus Mayr has been recorded.

Alabama. J. M. Robinson (March 25): Several species of ants have been reported as attacking cabbage and potato plants in Baldwin and Mobile Counties. The ants are said to bite holes in the stems of the plants below the ground level. Argentine ants (Iridomyrmex humilis Mayr) are causing considerable concern at Gadsden.

Mississippi. M. R. Smith (March 1): Complaints in regard to Argentine ants have been received from Clinton and Summit. A report received from near Starkville indicates that fire ants Solenopsis xyloni McCook have been very troublesome around the hearth and chimney of a house this winter. Similar reports were received from Smithville and Rolling Fork.

Arkansas. M. R. Smith (March 21): A correspondent in Blytheville sent specimens of the odorous house ant (Tapinoma sessile Say), which were infesting her house.

Nebraska. M. H. Swenk (March 20): A house-infesting ant new to our records was added when an abundance of Prenolenis parvula Mayr was found infesting the basement and first floor of a studio in Lancaster County on March 5. The basement ant L. interjectus was reported infesting the basement of a house in Douglas County on March 11.

Texas. M. R. Smith (March 21): Specimens of the Texas leaf cutting ant (Atta texana Buckley) were collected in the Brazos River bottoms near College Station. The ants were reported as carrying berries and leaves of yaupon (Ilex sp.) in their mandibles. Specimens of ants reported attacking trees at Seabrook proved to be Camponotus herculeanus pennsylvanicus DeG. and C. caryae rasilis Whlr. Specimens of Pharaoh's ant (Monomorium pharaonis L.), found feeding on sweets in a house at Dallas, were sent me for determination.

#### PEA WEEVIL (Bruchus pisorum L.)

Oregon. A. C. Larson (February): During the month we have made mortality examinations of weevils found in fence posts and trees near last year's pea fields in different parts of the Willamette Valley. The mortality ran from 16.6 percent in oak posts at Halsey to 100 percent in similar posts at Barlow, where only two weevils, both dead, were found. The average mortality of the weevils in the 9 fields was 34.7 percent, about the same as last year, when the average mortality of weevils collected from posts during February was 35 percent. We found more weevils in apple trees at Dever than in posts at any other place.

#### BEAN WEEVIL (Acanthoscelides obtectus Say)

Wisconsin. E. L. Chambers (March 20): Reports of bean weevils are more numerous this spring than usual.

---

#### SPECIAL NOTE

#### BOLL WEEVIL (Anthonomus grandis Boh.)

Haiti. Andre Audant (January 15): The boll weevil has been discovered on the island. Within a 5-mile radius of Jacmel, about 90 percent of the bolls have been attacked. The infestation decreases from Jacmel to Port au Prince, the average loss being from 30 to 40 percent in the more heavily infested fields and from 20 to 30 percent on an average. It seems that the insect has been present at Jacmel since 1932 or 1933, but was not noticed by the peasants, who thought the heavy rains caused the falling of the bolls.

UNIVERSITY OF FLORIDA



3 1262 08537 0707