THE INSECT PEST SURVEY BULLETIN

A periodical review of entomological conditions throughout the United States, issued monthly from March to October inclusive.

Volume 3 Number 1

BUREAU OF ENTOMOLOGY

UNITED STATES

DEPARTMENT OF AGRICULTURE

AND

THE STATE ENTOMOLOGICAL

AGENCIES COOPERATING

LIBRARY
STATE PLANT BOARD

AUTHENTICATED
U.S. GOVERNMENT
INFORMATION
GPO

Collaborators of the United States Department of Agriculture acting as Reporters for the Insect Pest Survey

Alabama	Dr. W. E. Hinds, Entomologist, Agricultural Experiment Station, Auburn.
Arizona	Dr. Oscar Bartlett, State Entomologist, Phoenix.
Arkansas	Mr. W. J. Baerg, Entomologist, Agricultural Experiment Station, Fayetteville.
California	Dr. W. B. Herms, Head of Division of Entomology and Parasitology, University of California, Berkeley.
	Mr. H. S. Smith, Entomologist, University of California, Berkeley.
	Mr. Theodore Urbahns, Department of Agriculture, Sacramento.
Colorado	Dr. C. P. Gillette, State Entomologist, Agricultural Experiment Station, Fort Collins.
Connecticut	Dr. W. E. Britton, State Entomologist, Agricultural Experiment Station, New Haven.
Delaware	Prof. C. O. Houghton, Biologist, Agricultural Experiment Station, Newark.
Florida	Mr. Jeff Chaffin, Assistant Nursery Inspector, State Plant Board, Gainesville.
Idaho	Mr. Claude Wakeland, Experiment Station Entomologist, Box 37, Parma.
	Mr. Don B. Whelan, University Extension Division, Boise.
Illinois	Dr. W. P. Flint, Entomologist, State Natural History Survey, Urbana.
Indiana	Prof. J. J. Davis, Entomologist, Purdue University, LaFayette.
Iowa	Dr. F. A. Fenton, Agricultural Experiment Station, Ames.
Kansas	Dr. G. A. Dean, Entomologist, Agricultural Experiment Station, Manhattan.
	Prof. S. J. Hunter, Entomologist, University of Kansas, Lawrence.
Kentucky	Prof. H. Garman, Entomologist, Agricultural Experiment Station, Lexington.
Louisiana	Mr. T. H. Jones, Entomologist, Agricultural Experiment Station, Baton Rouge.
Maine	Dr. E. M. Patch, State Entomologist, Agricultural Experiment Station, Orono.
Maryland	Prof. E. N. Cory, State Entomologist, Maryland University, College Park.
Massachusetts	Dr. H. T. Fernald, Entomologist, Agricultural Experiment Station, Amherst.
Michigan	Prof. R. H. Pettit, Entomologist, Agricultural Experiment Station, East Lansing.
Minnesota	Prof. A. G. Ruggles, State Entomologist, University Farm, St. Paul.
Mississippi	Prof. R. W. Harned, Entomologist, State Plant Board, Agricultural College.
Missouri	Dr. L. Haseman, Entomologist, Agricultural Experiment Station, Columbia.
Montana	Prof. R. A. Cooley, State Entomologist, Agricultural Experiment Station, Bozeman.

Montana	Mr. A. L. Strand, Assistant State Entomologist, Agricultural Experiment Station, Bozeman.
Nebraska	Prof. M. H. Swenk, State Entomologist, University of Nebraska, Lincoln.
Nevada	Prof. C. W. Creel, Entomologist, University of Nevada, Reno.
New Hampshire	Prof. W. C. O'Kane, Entomologist, Agricultural Experiment Station, Durham.
New Jersey	Dr. T. J. Headlee, State Entomologist, Agricultural Experiment Station, New Brunswick.
	Mr. Harry B. Weiss, Chief of Bureau of Statistics and Inspection, Department of Agriculture, Trenton.
New Mexico	Dr. R. L. Middlebrook, Agricultural Experiment Station, State College.
New York	Dr. E. P. Felt, State Entomologist, University of the State of New York, Albany.
	Prof. C. R. Crosby, Extension Entomologist, Cornell University, Ithaca.
	Mr. P. J. Parrott, Entomologist, Agricultural Experiment Station, Geneva.
North Carolina	Prof. F. Sherman, Chief in Entomology, State Department of Agriculture, Raleigh.
North Dakota	Dr. R. L. Webster, Agricultural Experiment Station, Agricultural College.
Ohio	Prof. H. A. Gossard, Entomologist, Agricultural Experiment Station, Wooster.
	Dr. Herbert Osborn, Entomologist, Ohio State University, Columbus.
	Dr. R. C. Osburn, Entomologist, Ohio State University, Columbus.
Oklahoma	Prof. C. E. Sanborn, Entomologist, Agricultural Experiment Station, Stillwater.
	Mr. E. E. Scholl, Agricultural and Mechanical College, Stillwater.
Oregon	Prof. A. L. Lovett, Entomologist, Oregon Agricultural College, Corvallis.
Pennsylvania	Mr. J. G. Sanders, Director, Bureau of Plant Industry, State Department of Agriculture, Harrisburg.
Rhode Island	Dr. A. E. Stene, Entomologist, State Board of Agriculture, Kingston.
South Carolina	Prof. A. F. Conradi, Chief Entomologist, Agricultural Experiment Station, Clemson College.
South Dakota	Prof. H. C. Severin, State Entomologist, Agricultural Experiment Station, Brookings.
Tennessee	Prof. G. M. Bentley, State Entomologist and Plant Pathologist, State Board of Agriculture, Knoxville.
Texas	Dr. M. C. Tanquary, State Entomologist, Agricultural Experiment Station, College Station.
Utah	Prof. H. J. Pack, Entomologist, Agricultural Experiment Station, Logan.
Virginia	Prof. W. J. Schoene, State Entomologist, Crop Pest Commission, Blacksburg.
	Mr. Herbert Spencer, Virginia Truck Experiment Station, Norfolk.
West Virginia	Prof. W. E. Rumsey, State Entomologist, Agricultural Experiment Station, Morgantown.
	Prof. L. M. Peairs, Entomologist, Agricultural Experiment Station, Morgantown.
Wisconsin	Prof. S. B. Fracker, State Entomologist, State Department of Agriculture, Madison.
	Prof. H. F. Wilson, Entomologist, University of Wisconsin, Madison.

INTRODUCTORY STATEMENT

In this, the first number of the third volume of the Insect Pest Survey Bulletin, we are inaugurating a new feature. Through the generous cooperation of the entomological forces of the Dominion of Canada we are able to include a monthly review of the outstanding entomological features of the great territory lying north of the United States which has so many entomological problems in common with the northern States of this Union.

An Insect Pest Survey of the Dominion of Canada, working along similar lines and with the same general purpose as this Survey, has recently been instituted and is under the supervision of Mr. R. C. Treherne, Chief of the Division of Field Crop and Garden Insects of the Canadian Department of Agriculture.

The appearance of the Annual Summary of insect conditions throughout the United States for the season of 1922 will be delayed somewhat, as the Survey is attempting to review a much more comprehensive group of insects than was reviewed in the first Annual Summary. In addition to the larger scope of the summary the mass of data being received from the States is constantly increasing.

During the past winter the distribution records of the Survey have been very materially augmented by the extreme generosity of our collaborators in three States, who have very kindly loaned us their entire file of correspondence record cards, in one case extending back to 1888. These cards indicate the name of the insect, the date and the place, and in some cases the crop attacked as referred to in each letter received at the Station. These records very clearly indicate the parts of the State where certain insect pests are most frequently attracting the attention of the agricultural population, and when similar data are brought together over a reasonably large area of the region of optimum conditions for the successful life of a given pest can soon be ascertained.

Digitized by the Internet Archive
in 2013

http://archive.org/details/insect1923apr

OUTSTANDING ENTOMOLOGICAL FEATURES IN THE UNITED STATES

FOR THE PERIOD FROM NOVEMBER 1, 1922, to APRIL 1, 1923

The temperature throughout the United States during the period covered by this report was generally above normal except during the first, second, and third weeks in February when below-normal departures were experienced over the greater part of the country. During the second and third weeks in December there were also minus departures throughout the greater part of the Mississippi Valley, New England, and the Middle Atlantic States. The New England States, as a whole, experienced a somewhat below-normal winter, minus departures being almost continuous from the beginning of January to the end of February. The Pacific Coast States had cold weather during November and the first half of December and again the temperatures were below normal during the last week in January and the first two weeks in February. Abnormally cold weather prevailed in the Great Basin during November and February. Temperatures were above normal in the Southwest from early in November until the end of January. The Rocky Mountain region had minus departures during November, the second and third weeks in December, and the first three weeks in February. Temperatures in the North-Central States were above normal with the exception of the second and third weeks in December and the month of February, similar conditions prevailing over the West-Central and East-Central States. The temperature in the Lower Mississippi Valley was generally above normal as was also the case in the Middle Atlantic States except in the month of February when minus departures were recorded. The South Atlantic States had very similar departures to those of the Middle Atlantic.

The drought that prevailed between the Mississippi Valley and the Rocky Mountains during the latter part of the summer was relieved early in November; droughty conditions, however, continued in most of the Middle Atlantic and South Atlantic States during this month. In December the drought was relieved in the Lower Middle Atlantic and South Atlantic States, while this month showed a deficiency of rainfall in the Mississippi Valley. The January rainfall was below normal in the South Atlantic and Gulf States and above normal in the Middle Atlantic and New England, while in most of the Upper Mississippi Valley, except Wisconsin and Minnesota, it was below normal. The Rocky Mountain States also showed a deficiency of rainfall in January. In February from the Great Plains to New England the rainfall was below normal, while in the Rocky Mountain foothills and the Gulf region it was above normal. The South Atlantic States during this month, as well as the Great Basin, the Pacific Coast, and the Rocky Mountain States, were all experiencing dry weather.

The mild weather has favored the successful overwintering of the chinch bug and it is now found to be present in winter quarters in threatening numbers over the greater part of southern and central Illinois, southern Nebraska, and eastern Kansas.

The green bug appeared in numbers sufficient to produce an epidemic early in the season in northern Texas, Oklahoma, and southern Kansas. Though still widespread, it is not at present considered to be a serious menace. During the spring it was also reported from Louisiana and New Mexico.

The annual examination of hibernating quarters of the cotton boll weevil made by the Bureau of Entomology's Delta Laboratory indicates that this insect has not passed the winter well in northern Louisiana and we may expect a much decreased spring emergence in the general region than was the case last year. In Alabama, however, reports have been received that a very high percentage of the weevils has passed the winter successfully.

The clover-leaf weevils are still, apparently, on the increase in Illinois and heavy damage is anticipated this season.

The spring cankerworm was observed in flight on March 9 in Missouri and on March 13 in West Virginia.

The fall cankerworm was emerging and ovipositing in serious numbers in Morris County, N. J., the last week in March.

The San Jose scale is attracting increasing attention in Rhode Island, Ohio, Georgia, Indiana, Illinois, Idaho, Texas, and New Mexico. The lime-sulphur spray, possibly owing to faulty application, is not proving as satisfactory as formerly and some States are recommending lubricating-oil sprays.

The first adult of the plum curculio was observed on March 5 in Georgia, indicating that the beetles will probably appear in numbers from hibernation by the time the peach trees are in full bloom.

The large numbers of hibernacula of the pecan case-bearer that are present in the semiarid pecan-growing sections of Texas seriously threaten the otherwise promising crop for 1923.

The orange basketworm is reported as causing serious damage to the fruit and young growth of several large plantataions in Florida, the damage in some cases running as high as 20 per cent of the fruit.

The European red mite is now quite prevalent in the fruit sections of New York, Connecticut, and Ohio and scattering infestations have been found in Maryland.

Indications of a serious outbreak of the pea aphid in the San Francisco Bay region of California have been reported.

The onion thrips is causing serious trouble in the important canteloupe growing section of the Imperial Valley in California. The thrips are now attacking the early vines under their frost protectors.

The common field cricket is reported as seriously infesting 200 acres of lettuce in San Benito County, in some places necessitating planting the crop three times.

Reports have been received from California that the cattle tick and cattle scabies are no longer present in that State.

OUTSTANDING ENTOMOLOGICAL FEATURES IN CANADA

FOR THE PERIOD NOVEMBER 1, 1922, to APRIL 1, 1923

The winter in Canada has been more severe in the eastern sections than in the West. The depth of snow in the Maritime Provinces has been exceptional. In Western Ontario, except for a few mild days in the latter part of February, the winter has been cold and steady, with a much greater fall of snow than is usual. The same applies, to some extent, to Manitoba; but in Alberta the winter season has been mild, with a light snowfall. In British Columbia the winter season has been open and the spring is earlier than usual.

The European corn borer has increased its area of infestation in Ontario during 1922 by 45 townships, and now involves an area of 12,616 square miles, with 162 townships under quarantine. There was, however, but slight increase in the area of heaviest infestation and a light general decrease in intensity in the area where cooperative control measures have been carried on. Overwintering larvae in the crop refuse under observation, to date (February 25), have suffered slight mortality, protection being afforded by the snow blanket over the whole infested area.

The roadside grasshopper (Camnula pellucida Scudd.) occurred in extreme outbreak form on the cattle ranges of the Nicola Valley in British Columbia during 1922. The general situation and the winter conditions would indicate a continuance of the outbreak during 1923. In the Prairie Provinces the situation is much relieved, though an ascendency in the numbers of the lesser migratory grasshopper has been observed in many sections.

The pale western cutworm remains the most important grain-insect problem in southern Alberta. It would appear that the same acreage is infested year after year with the centres of infestation constantly shifting. From the precipitation records of 1922, the greatest degree of prevalence will probably occur in southeastern Alberta and western Saskatchewan, with the infestation somewhat diminished in western Alberta.

The grape leafhopper was extremely prevalent in the grape sections of Ontario in 1922. Leaves, weeds, grass, and rubbish, in neglected fence rows, are providing satisfactory hibernation quarters for the adults which have not been reduced apparently to any extent by winter. A noticeable migration is expected to vineyards in the middle of May with favorable spring and early summer weather conditions. The species concerned in last year's outbreak were Erythroneura comes Say, E. tricincta Fitch, E. vulnerata Fitch, and the varieties of comes, viz: vitis Harr. and ziczac Walsh.

The rose-chafer occurred in severe outbreak form in several sections of Ontario during 1922, the greatest numbers being present in the sandy grape-growing areas of the Niagara Peninsula. It is not possible to state to what extent this insect will be present in 1923 but winter conditions have not been unfavorable to its successful hibernation.

The forest tent caterpillar will doubtless again occur in outbreak form in New Brunswick, particularly over the southeastern portions of the Province, judging from the number of egg masses now present. Spring frosts in the past have had a very marked influence in controlling this insect and it is possible that this same influence will reoccur this year. The outbreak of the orchard tent caterpillar which assumed important proportions in 1922 in New Brunswick may also continue during this coming season, particularly in the St. John River Valley.

INSECT PEST SURVEY BULLETIN

Vol. 3 April 1, 1923 No. 1

CEREAL AND FORAGE-CROP INSECTS

WHEAT

CHINCH BUG (Blissus leucopterus Say)

Illinois — W. P. Flint and assistants (March 20): From 97 to 98 per cent of the bugs in winter quarters throughout southern and central Illinois are still alive. The winter has been milder than the average and only from 2 to 3 per cent of the bugs died during the winter. We expect from moderate to heavy infestations in about 65 counties this spring.

Nebraska — M. H. Swenk (March 10): The chinch bug seems at this time quite threatening in the southern part of the tier counties along the southern border of Nebraska, from Jefferson County west at least to Furnas County, and in the northeastern corner of the State in Boyd County, the latter being a southward extension of a serious infestation in southeastern South Dakota.

Kansas — E. G. Kelly (January 29): Chinch bugs seem to be more abundant than during average years. The temperatures have been above normal and very dry. Burning of hibernating quarters is being practised throughout the State.

HESSIAN FLY (Phytophaga destructor Say)

Nebraska — M. H. Swenk (March 10): In spite of the dry summer and fall in 1922 the Hessian fly seems to be still quite numerous in early-sown winter wheat in some parts of eastern Nebraska. A field in Dodge County examined in the middle of January contained on the average five puparia of this insect to each wheat plant.

California — C. M. Packard (March 7): The Hessian fly is present in considerable numbers bordering San Francisco Bay, and in a region in the northern part of Monterey and San Benito Counties and the southern part of Santa Cruz County.

GREEN BUG (Toxoptera graminum Rond.)

Kansas — S. J. Hunter (January 15): Mr. Beamer has completed a survey of the southeastern tier of counties of Kansas and finds no evidence whatever of the green bugs; this region, owing to the unusual drought last August, had no volunteer grain.

G. A. Dean and J. W. McColloch: Mild winter and a backward spring followed by excellent growing conditions have materially reduced the amount of green bug in the western part of the State.

E. G. Kelly (January 20): A few adults were observed in Montgomery and Labette Counties. They have already started to multiply.

Oklahoma

J. R. Horton (January 23): Mr. H. H. Walkden has found three fields infested with the green bug in small colonies in Noble County. The largest of the injured spots measured 20 feet in diameter. No evidence of parasites was found, but adults of Hippodamia convergens were moderately numerous. (January 29): Thirty-six wheat and volunteer oat fields were examined in Oklahoma, Logan, and Carter Counties. In Carter County no aphids of any kind were observed; in Oklahoma aphids were found but none of them were Toxoptera; in Logan County one wheat field was infested with the green bug. This field was very thoroughly infested and covered 20 acres.

Louisiana

T. H. Jones (February 1): A few small areas in oat fields at the Louisiana Experiment station showed damaged by the green bug on this date, the oats being stunted in growth and of a brownish color. Material determined by Dr. A. C. Baker.

Texas

E. E. Russell (January 5): Found two heavily infested spots in wheat fields near Celina, Collin County. The first of these spots was noted by the farmer on December 21; by January 5 this spot was entirely bare. Parasitized specimens were quite plentiful. Syrphidae and Coccinellidae were also present. This field was lightly infested last year. Examinations of fields in northern Dallas, Collin, and Grayson Counties failed to show further infestations. (January 26) Two additional fields have been found to be infested with the green bug in Grayson and nothern Collin Counties.

C. H. Gable (February 21): The winter has been exceptionally mild followed by a cold snap, on February 3 the temperature reaching 22 degrees at San Antonio. The past summer was unusually hot and dry with practically no volunteer growth of grain until late in the fall. Toxoptera are in such numbers that it does not seem possible that they passed the summer on native grass. The general green bug situation does not appear to be alarming, although there is sufficient infestation to cause serious injury should there be unusually favorable weather conditions for the development of the aphids.

New Mexico

R. L. Middlebrook (March 11): This insect has damaged about 10 per cent of the wheat in Dona Anna County. Parasites have not as yet appeared.

GREAT PLAINS FALSE WIREWORM (Eleodes opaca Say)

Nebraska

M. H. Swenk (March 10): In Nance County early in November the Great Plains false wireworm was injurious in the wheat fields, one farmer suffering a loss of an entire field that was sown the last of August.

CORN

CORN EARWORM (*Heliothis obsoleta* Fab.)

Nebraska — M. H. Swenk (March 10): In November our attention was drawn to a cornfield in Scottsbluff County that had been extensively damaged by a combination of the corn leaf aphid and the corn earworm during the summer.

ALFALFA AND CLOVER

CLOVER-LEAF WEEVIL (*Hypera punctata* Fab.)

Illinois — W. P. Flint (March 20): The larvae of this species are more than usually abundant in southern Illinois. Very little feeding has been done as yet as the weather has been cold.

LESSER CLOVER-LEAF WEEVIL (*Phytonomus nigrirostris* Fab.)

Illinois — W. P. Flint (March 20): Adults of this species are more abundant than has ever been the case before throughout southern and northern Illinois. We anticipate rather heavy damage from this insect during the coming season.

LEAFHOPPER (*Stictocephala festina* Say)

New Mexico — R. L. Middlebrook (March 11): This insect is more plentiful than usual in the Pecos and Rio Grande Valleys where it is attacking alfalfa.

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

APPLE

APHIDIDAE

Illinois — S. C. Chandler (March 17): Aphid eggs are fairly abundant in southern Illinois in a few localities. As a whole, they are not generally numerous.

ROSY APPLE APHID (*Anuraphis roseus* Baker)

Connecticut — Philip Garman (March): Many eggs noted in New Haven County.

CODLING MOTH (*Carpocapsa pomonella* L.)

New Mexico — R. L. Middlebrook (March 11): This insect was observed as somewhat abundant in Dona Anna County.

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

Idaho — D. B. Whelan (March 1): The following counties are known to be infested on this date: Bonner, Kootenai, Nez Perce, Adams, Gem, Canyon, Twin Falls, and Madison.

SPRING CANKERWORM (Paleacrita vernata Peck)

Missouri — A. F. Satterthwait (March 9): Moths were flying at extension lights at Webster Groves until about 8 or 8:15 p. m. None seen after 8:15. Elms are common here, but I do not know of cultivated apples close by.

West Virginia — L. M. Peairs (March 13): Adults, male and female, observed on and near apple trees in considerable numbers.

APPLE MAGGOT (Rhagoletis pomonella Walsh)

Maine — E. M. Patch (March 15): One correspondent from Brunswick reports that his apples were completely destroyed by this insect last year.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Rhode Island — A.E. Stene (March 15): This insect, though not found in large numbers, is apparently on the increase in the northern section of Rhode Island.

Ohio — T. H. Parks (March 23): Several growers in Lawrence County complained that the San Jose scale is increasing in spite of careful spraying with lime-sulphur solution. We note that this scale is worst in an orchard that did not receive the dormant spray in 1922. In this orchard much fruit was ruined by the insect. Well sprayed orchards also have some. Approximately 40 per cent of the overwintering scales are now dead from natural causes other than parasites. Some parasitism exists among the scales.

Illinois — W. P. Flint (March 20): Large percentage of unsprayed scale found alive, 60 to 80 per cent. Many orchardists are changing from lime-sulphur to lubricating-oil emulsion sprays, as there is general dissatisfaction in the southern half of the State.

Idaho — Claude Wakeland (March 16): Very heavy infestations of the scale on willow along the shores of the Snake River and on islands in the River. Fruit orchards adjoining are repeatedly reinfested from this source. Scale generally scattered in apple orchards at Emmett and Parma with here and there heavily encrusted trees in many of the best cared for orchards. In Boise this pest occurs on currants, pear, cherry, apple, and rose.

Texas — M. C. Tanquary (March 17): Serious infestations of the San Jose scale have been reported from Milam, Sabine County.

New Mexico — R. L. Middlebrook (March 6): Infestation by the San Jose scale seems to be particularly heavy in the Pecos Valley and a sample with the twigs badly encrusted was received from San Juan County, where our records indicate that heretofore it has been unknown. This County, in the northwestern corner of the State, is very much isolated.

OYSTER-SHELL SCALE (Lepidosaphes ulmi L.)

Rhode Island — A. E. Stene (March): Reports accompanied by material have been received to the effect that entire trees are dying from the attack of this insect.

Nebraska — M. H. Swenk (March 10): During the winter infestations of apple orchards by the oyster-shell scale were reported.

ROUNDHEADED APPLE-TREE BORER (Saperda candida Fab.)

New Mexico — R. L. Middlebrook (March 11): The roundheaded apple-tree borer is more numerous than usual in Dona Anna County. Another species lacking the stripes of candida is also occurring in great numbers in this County.

EUROPEAN RED MITE (Paratetranychus pilosus Can. & Fanz.)

Connecticut — Philip Garman (March): A great many eggs may be found in orchards in New Haven County, where no injury was noticed last summer.

Maryland — E. N. Cory (March 27): Scattering infestations are to be found at this time in the egg stage.

Ohio — H. A. Gossard (March 22): The European red mite has been found distributed over most of northern Ohio. Eggs of this species are very abundant in apple orchards in Mahoning County west to Lucas County and southward as far as Delaware County. It is probably distributed all over the State.

CLOVER MITE (Bryobia praetiosa Koch)

Idaho — Claude Wakeland (March 16): Very heavy infestations at Parma and Roswell of eggs, indicating that injury may be expected this season.

PEACH

PEACH BORER (Aegeria exitiosa Say)

New York — G. M. Codding (March 20): Practically all peach trees in Westchester County are infested. Have taken from 8 to 10 borers from one tree. Have never seen as many before.

SHOT-HOLE BORER (Scolytus rugulosus Ratz.)

New Mexico — R. L. Middlebrook (March 11): This insect is present, but not serious, in Dona Anna County.

PLUM CURCULIO (Conotrachelus nenuphar Hbst.)

Georgia — O. I. Snapp (March 5): The first adult curculio was taken from a peach tree early this morning while jarring. A few peach blossoms just beginning to appear. Beetles will be appearing in numbers from hibernation by the time the trees are in full bloom.

Louisiana — T. H. Jones (March 17): Observations made today on a few peach trees on which abundant fruit has set; some fruit having reached a diameter of 3/4 inch failed to show any evidence of the curculio.

PEACH-TWIG MOTH (Anarsia lineatella Zell.)

New Mexico R. L. Middlebrook (March 11): This insect has been observed in Dona Anna County.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Georgia O. I. Snapp (March 10): Homemade engine-oil emulsion has given excellent control of this insect, and to date no injury to peach twigs has been discerned from the use of the 2 per cent emulsion. Liquid lime-sulphur has given only fair control, and the dry materials in many cases poor results. Crawlers have been found each month during the winter, proving that full-grown females are living through the winter in the South. These mature scales are difficult to kill with the lime-sulphur. Had low temperatures occurred in middle Georgia during the past several winters the full grown females, in all probability, would have been killed and scale breeding during the winter prevented.

PECAN

PECAN CASE BEARER (Acrobasis hebescella Hulst)

Texas A. I. Fabis (March 14): Seasonal conditions are very favorable to the production of a large pecan crop in the semiarid section of Texas. Acrobasis hebescella hibernacula are, however, unusually abundant this winter, and unless parasites check the ravages of this pest the pecan crop will be very short.

GRAPE

GRAPE CANE-BORER (Amphicerus bicaudatus Say)

Nebraska M. H. Swenk (March 10): The grape cane-borer was found numerously infesting grapevines in Furnas County late in December and in Douglas County early in January.

CITRUS AND SUBTROPICAL FRUITS

COTTON APHID (Aphis gossypii Glov.)

California Roy E. Campbell (March 15): Reports from many localities indicate that the aphids are just beginning to get numerous but no damage has yet been done. Control measures, mostly dusting, have begun.

ORANGE BASKET WORM (Platoeceticus gloverii Pack.)

Florida Chas. M. Hunt (March 5): This insect is causing serious damage to fruit and young growth in several large orange groves at Sebring and Avon Park. In one large orange grove damage is estimated at not less than 20 per cent.

CITRUS THRIPS (Scirtothrips citri Moulton)

California A. J. Flebut (March 19): Young individuals first found on March 14. Found in considerable numbers in foothill groves in Lindsay District and generally throughout the Citrus area. No feeding, and young growth not affected. Prospects of a bad year, however.

TRUCK-CROP INSECTS

SWEET POTATO

SWEET POTATO WEEVIL (Cylas formicarius L.)

Louisiana — T. H. Jones (January 11). Mr. W. E. Anderson, entomologist of the State board of agriculture, reports weevils as being very abundant in a storage warehouse at Stevensdale. Later investigations by Mr. C. E. Smith, U. S. Bureau of Entomology, showed potatoes in this house to be of the 1921 crop. The weevils had, apparently, been introduced at Stevensdale through infested material brought there from elsewhere and had, apparently, been spread to various farms in that section through this material.

CABBAGE AND KOHLRABI

HARLEQUIN CABBAGE BUG (Murgantia histrionica Hahn)

Louisiana — T. H. Jones (March 14): Adults and a few eggs were observed at Baton Rouge today. No nymphs have so far been seen.

STRAWBERRY

FLEA-BEETLE (Haltica litigata Fall)

Louisiana — T. H. Jones (February 14): Larvae of this beetle were noted at Punchatoula on strawberry plants on this date. Most of the larvae were full grown and had entered the soil. Adults were very abundant on strawberries at Independence on this same date. These reports were made by Mr. C. E. Smith.

COTTON RED-SPIDER (Tetranychus telarius L.)

Louisiana — T. H. Jones (March 17): Mr. C. E. Smith reports the red-spider as being present in injurious numbers quite generally in strawberry fields in Tangipahoa and Livingston Parishes from the middle of February up to the present time.

PEAS

PEA APHID (Illinoia pisi Kalt.)

California — E. O. Essig (March 12): Indications are for a serious pea aphid year. Many fields of early market peas in the San Francisco Bay region are already seriously infested.

R. E. Campbell (March 19): Through the kindness of Mr. R.S. Woglum, I am able to furnish you with the following localities in which purple vetch has been damaged by the peadaphid: Santa Paula and Filmore in Ventura County; San Fernando and Alhambra in Los Angeles County, and LaHabra in Orange County.

CUCUMBER

NEMATODES

Illinois C. C. Compton (March 20): Eelworms were seriously damaging cucumbers at Kankakee.

CANTELOUPE

ONION THRIPS (Thrips tabaci Lind.)

California R. E. Campbell (March 1): Several reports have been received during the past month of damage to young canteloupe vines under their frost protectors in the Imperial Valley. Growers are combating it with nicotine dust. No specimens have been seen, so the identifications have not been verified.

LETTUCE

COMMON FIELD CRICKET (Gryllus assimilis Fab.)

California T. D. Urbahns (March 19): Heavy black soil about Hollister heavily infested with crickets, in all stages, very recently hatched to adults. The lettuce crop has been planted twice over a 60-acre patch and after starting to grow was completely destroyed each time by this cricket. It is now being planted for the third time. Applied poisoned bran mash on 60 acres. Results are still questionable. Approximately 200 acres are known to be infested.

LEAFHOPPERS (Jassidae)

New Mexico R. L. Middlebrook: Leafhoppers are very active and some complaint is coming in in regard to their activities on lettuce and late winter spinach. One of the most severe storms which we have had in this part of the country at this time of year occurred this week. The temperature dropped to 15°F. This froze practically all the lettuce and other green stuff which was up but had no appreciable effect upon the hoppers.

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

COTTON

BOLL WEEVIL (Anthonomus grandis Boh.)

Louisiana B. R. Coad (March 8): The regular annual examinations made by the Delta Laboratory have just been completed. These examinations are made to ascertain percentage of successful hibernations of the boll weevil and indicates that we may expect this spring a weevil emergence very much less than last year and probably slightly less than in 1916 and 1921. The emergence will just about attain the ten-year average.

Usually the weevils die in about equal numbers during each of the winter months but during the past winter there was but little mortality until the February blizzard. This was

undoubtedly due to the abnormally warm weather preceding the sudeen drop in temperature.

In the States west of the Mississippi River a rather "spotted" infestation may be expected, due to the cotton leafworm eating the cotton leaves, defoliating the plants in limited areas.

Alabama W. E. Hinds (March 23): We are finding here at Auburn a very high percentage of boll weevils still alive in hibernation- 80 per cent on March 5.

CUTTING ANT (Atta texana Buck.)

Texas M.-C. Tanquary (March 17): The cutting ant, Atta texana, is reported by Mr. R. R. Reppert, extension entomologist, as doing serious injury in several counties in central southwestern Texas from the region of Uvalde and Bexar Counties northward toward Dallas.

INSECTS ATTACKING GREENHOUSE AND ORNAMENTAL PLANTS

CHRYSANTHEMUM

CHRYSANTHEMUM GALL-MIDGE (Diarthronomyia hypogaea F. Loew.)

New Hampshire P.R.Lowry (February and March): These midges have done considerable damage to young plants in the Agricultural College greenhouse at Durham, distorting and stunting many of the plants.

SNAPDRAGON

GREENHOUSE LEAF-TYER (Phlyctaenia ferrugalis Hubn.)

Massachusetts P. R. Lowry (February and March): This insect is reported from Salem and Swampscott as doing serious damage in greenhouses.

TULIP

TULIP APHID (Anuraphis tulipae Boyer)

California California Weekly News Letter, Vol.5, No.5 (March 10): What is apparently the tulip aphid recently was taken on tulip bulbs arriving from Holland. Specimens have been forwarded to Washington for confirmation of our identification.

This aphid lives on the bulb between the scales and finds its way well into the interior parts. Specimens examined, where infestation was heavy, revealed the aphids on the embryonic blossom bud. Their manner of feeding undoubtedly prevents a normal growth and apparently results in a misshaped blossom even if it does not entirely prevent its development.

It is believed that further investigations will show this pest quite widespread in the State as it is hard to believe

that with all the tulips brought into California insect has not at some time been introduced. In fact, check bulbs planted in 1921 were infested with aphid but not being dognizant of the status of that particular aphid nothing further was thought of it. These recent developments lend weight to the belief that it was the tulip aphid.

FOREST AND SHADE-TREE INSECTS

YELLOW PINE

WESTERN PINE BEETLE (Dendroctonus brevicomis Lec.)

California — A. J. Jaenicke (December, 1922): This beetle killed 33,000,000 board feet of timber in 1921 over an area of 430,000 acres in the Modoc National Forest. Plans are now being considered to combat the pest on this area. The damage amounts to over $100.000.

J. M. Miller (December, 1922): This beetle killed 100,000,000 board feet of timber over an area of about 300,000 acres in the California National Forest during 1921. The loss amounted to at least $300,000 and was very conspicuous, whole hillsides appearing red as though swept by fire.

Oregon — A. J. Jaenicke (December 1922): This insect killed 40,060,000 board feet of yellow pine valued at $120,180 during 1921 on the area surrounding the control project in southern Oregon (Klamath and Lake Counties), covering 3,330, acres. This loss is not much above the normal and approaches one-fourth of one per cent of the stand each year.

F. K. Keane (March 12): On the control project this insect killed 91,961,000 board feet of lumber in 1921, at an estimated value of $275,883. This was determined by a 5 per cent cruise of the territory, which included 1,250,000 acres of forested land. A cooperative control project is now under way to curb this loss.

ELM

EUROPEAN- ELM SCALE (Gossyparia spuria Modeer)

Nebraska — M. H. Swenk (March 10): The elm scale was injuring the trees in the park of one of our central Nebraska cities.

Idaho — Don B. Whelan (March 16): This insect is destroying many fine trees in the City of Boise. Spraying with miscible oil is now being done.

LIBRARY
STATE PLANT BOARD

LIBRARY
STATE PLANT BOARD

BOXELDER

BOXEEDER PLANT-BUG (Leptocoris trivittatus Say)

Nebraska M. H. Swenk (March 10): The boxelder plant-bug has been unusually numerous during the winter of 1922-23 in houses. Complaints began to be received early in December and continued throughout the winter, but became much more numerous during the past week or ten days, with the bugs beginning to resume their activity. We have, in fact, received more inquiries concerning the boxelder plant-bug than concerning any other insect pest during the period covered by this report.

MAPLE

COTTONY MAPLE SCALE (Pulvinaria vitis L.)

New Mexico R.L.Middlebrook (March 6): A letter was received today from East LasVegas where the county agent reports an extremely heavy scale infestation. An examination reveals that it is the cottony maple scale and is the only outbreak of any importance that we have had in this State.

MISCELLANEOUS FEEDERS

COTTONY-CUSHION SCALE (Icerya purchasi Mask.)

Texas M. C. Tanquary (March 17): The cottony-cushion scale has been reported as being present in destructive numbers in the City of Galveston. A correspondent sent specimens to this office and reports it as being present on ratana and bay tree and a plumbago.

FALL CANKERWORM (Alsophila pometaria Harr.)

New Jersey H. B. Weiss (March 23): Thousands of moths are appearing now and depositing eggs on forest trees in the vicinity of Mt. Paul, near Mendham.

MESQUITE BORER (Schizax senex Lec.)

New Mexico R. L. Middlebrook (January 24): This insect is devastating our mesquite, which is the principal fuel wood of this region.

PALE-MARKED ASH BORER (Eburia quadrigeminata Say)

New Mexico R. L. Middlebrook (March 11): This insect was observed attacking locust trees in Dona Ana County.

INSECTS AFFECTING DOMESTIC ANIMALS

CATTLE

BITING LOUSE OF CATTLE (*Trichodectes scalaris* Nitzsch)

New Hampshire — P. R. Lowry (March): This insect has been found on practically every animal examined about Durham. Much more numerous than last year.

BLOOD-SUCKING CATTLE LOUSE (*Solenopotes capillatus* Enderlein)

New Hampshire — P. R. Lowry (January 10): Found on a few cattle in the vicinity of Durham.

New York — R. W. Wells (February 15): Several head of cows were heavily infested with the blood-sucking louse as well as the more common *H. eurysternus* and *H. vituli*.

STABLE FLY (*Stomoxys calcitrans* L.)

Texas — F. C. Bishopp (March 26): With the exception of a few short periods during the coldest weather the stable fly was present and annoying stock throughout the winter. During warm periods they were more abundant and troublesome than usual for winter periods.

HOUSE FLIES (*Musca domestica* L.)

Texas — F. C. Bishopp (March 26): House flies have been active except for short periods during the entire winter. At times they were so numerous as to be bothersome in houses when screens were not kept closed.

BLACK BLOWFLY (*Phormia regina* Meig.)

Texas — F. C. Bishopp (March 26): Owing to the mild winter the black blowfly was present in considerable numbers and much damage was done by it through its attack on live stock, especially following dehorning. In one instance following dehorning of a large number of cattle 100 per cent infestation was experienced The freeze of March 19 (16°F. Dallas) appears not to have greatly reduced the number of adults.

HORN FLY (*Haematobia irritans* L.)

Texas — F. C. Bishopp (March 26): The horn fly was present in small numbers on cattle in this vicinity (Dallas) throughout the winter, with the exception of short periods following the heaviest freezes. This was unusual as the pest usually disappears for a few months during the winter.

GREENBOTTLES (Lucilia sericata Meig.)

Texas F. C. Bishopp (March 26): Greenbottles were present about the packing houses in Dallas and Fort Worth most of the winter though they were considerably outnumbered by the black blowfly, P. regina. During March there was considerable increase in their numbers.

OX WARBLE (Hypoderma lineatum DeVill.)

New York R. W. Wells (February 15): Hypoderma appeared in the backs of cattle about February 15 in Orange County.

Texas F. C. Bishopp (March 26): Warbles were more abundant in cattle in north central Texas during the past winter than for several years, the maximum present in a number of animals observed being about ninety. Heel flies were active in north Texas throughout March though it is doubtful if they appeared in greater numbers than normal, partly due no doubt to the very low temperatures during the month.

CATTLE SCAB (Psoroptes communis Furst.)

California California Weekly News Letter, Vol.4, No.6 : (March 17): Fortunately we have no more cattle scab in our State.

CATTLE TICK (Margaropus annulatus Say)

California California Weekly News Letter, Vol. 4, No.6 (March 17): We have been cleaning house of cattle diseases in California for a number of years and it is with a feeling of exultant pride that the cattlemen of this great State can point to the fact that Texas fever has been entirely cleaned out.

BROWN WINTER TICK (Dermacentor nigrolineatus Pack.)

Texas F. C. Bishopp (March 26): During the past winter many reports of the occurrence of this species in injurious numbers on horses and cattle in central and west Texas have been received. The species abounds throughout the mountain and plateau region and eastward through the rugged escarpment to the plains. A few specimens received from Dr. S. M. Valdez from Chiapas, Mexico, indicate that the species follows the mountains to southern Mexico.

SHEEP AND GOATS

SHEEP SCAB (Psoroptes communis Furst.)

California California Weekly News Letter, Vol.4, No.6 (March 17): On account of the presence of sheep scab infestation, effective immediately and until further notice shipments of sheep from

the State of Oregon into California for any purpose except for immediate slaughter have been prohibited, unless such shipments are accompanied by an inspection certificate.

COMMON GOAT LOUSE (Trichodectes climax Nitzsch)

New Hampshire — P. R. Lowry (January 28): This insect was very common in a flock examined at Hookset, some individuals being very heavily infested.

DOGS

BROWN DOG TICK (Rhipicephalus sanguineus Latr.)

Texas — F. C. Bishopp (March 26): The brown dog tick has been found in certain dog and cat hospitals. This together with the finding of a few infestations on local dogs and the presence of the species in all stages indicate that it has become fairly well established.

POULTRY

CHICKEN HEAD LOUSE (Lipeurus heterographus Nitzsch)

New Hampshire — P. R. Lowry (March): Generally present but not as numerous as at this time last year.

POULTRY MITE (Dermanyssus gallinae Redi)

New Hampshire — P. R. Lowry (March): These insects have been found on fowls in the daytime, often in considerable numbers, at both Durham and Hookset.

LARGE HEAD LOUSE (Menopon biseriatum Piaget)

New Hampshire — P. R. Lowry (March): Common in all flocks examined at Durham, birds most heavily infested appearing unthrifty.

FEATHER MITE (Liponyssus silviarum Can. & Fahz.)

United States & Canada — F. C. Bishopp and assistants (March 26): On account of the seriousness of the feather mite as a poultry pest it may be well to summarize the localities in which it has been found. It should be borne in mind that most of these infestations occurred in single flocks and eradication has been accomplished. The localities are as follows: Beltsville, Md.; Harvel, Ill.; Plattsburg, N.Y.; LaFayette, Ind.; Bloomfield, Ind.; Ithaca, N.Y.; Oxford, Ohio, and Port Dover, Ontario.

New Jersey — F. C. Bishopp (March 26): The feather mite of chickens has been found to exist in a flock in Closter. The infestation attained considerable proportions before the matter was reported to the New Jersey Experiment Station, but through energetic control measures the pest seems to have been eradicated.

UNIVERSITY OF FLORIDA
3 1262 09244 4735