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THE INSECT PEST SURVEY
BULLETIN

A periodical review of entomological conditions throughout the United States
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THE STATE ENTOMOLOGICAL
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OUTSTANDING ENTOMOLOGICAL FEATURES IN THE UNITED STATES FOR MARCH, 1927.

The chinch bug is reported as having started migration from winter quarters to the wheat fields during the last week in February, in southern Kansas. Mortality was generally low over the Kansas chinch bug belt. Eastward the insect seems to be less abundant in winter quarters than usual. Missouri reports serious numbers only in the counties along the western edge of the State.

Somewhat intense infestations of the green bug are reported from the region north of Dallas and Fort Worth, Tex., extending from Love County westward to Cotton County and northward to Kingfisher County in Oklahoma.

Thousands of acres of winter wheat have been destroyed by the false wireworms around Syracuse, Kans. Damage by this insect is also reported from Jennings and Salina, in the same State.

One of the noteworthy entomological events of the month was the launching of the extensive control campaign against the European corn borer.

The pea aphid is appearing in threatening numbers in alfalfa fields in parts of Oklahoma.

The green apple aphid began to hatch in the Winchester section of Virginia on March 14, and at Blacksburg on March 23.

By March 23, the apple grain aphid was abundant in the Blacksburg section of Virginia. It was observed in rather threatening numbers in Morgan County, Illinois, on March 16, and eggs of this insect began hatching the same week in central Missouri.

The first rosy apple aphid was observed in the Winchester section of Virginia on March 18 and in the Blacksburg section on March 14.

The strawberry weevil is reported as unusually abundant and doing serious damage in the Chadbourn section of North Carolina. The weevils began entering the fields on March 7, and egg laying started on March 13.

The Florida flower thrips has been severely damaging beans in the Okeechobee district of Florida.

The first adult of the boll weevil was collected from the field on March 14 in Florida; 3.88 per cent of the adults in the hibernation cages at Gainesville had emerged by February 28. No emergence has yet been observed in

Louisiana. In the Lower Rio Grande Valley of Texas weevils were active in January, feeding on the growth from last year's stalks.

The cotton flea was emerging in rather large numbers about the middle of March in the experimental hibernation quarters at the Texas Station.

The sugarcane borer passed the winter much more successfully than it did the winter of 1925-26 in the Louisiana sugarcane section. Pupation in the field began in the first week of February, and the first moths appeared March 3. This is a month earlier than they appeared in 1926.

One of the most severe infestations by the buffalo gnat ever recorded in the State of Mississippi was at its height during the early part of March this year. This insect was so abundant that in Yazoo County about 70 head of horses and mules were killed. The outbreak extends from the Delta backward to from 5 to 10 miles from the river.

CEREAL AND FORAGE - CROP INSECTS

WHEAT

CUTWORMS (Noctuidae)

Texas F. L. Thomas (March 21): The cutworms, especially the greasy cutworm, have been unusually injurious over a rather large area in south-central Texas. A species, samples of which have not been received, has been reported as damaging wheat and oats in several counties in the northwestern part of the State.

PALE WESTERN CUTWORM (Porosagrotis orthogonia Morr.)

Oklahoma C. E. Sanborn (March 18): The pale western cutworm, which has been more or less injurious in the northwestern part of the State, especially to wheat, is becoming more general in its appearance and less severe in attack.

HESSIAN FLY (Phytophaga destructor Say)

Illinois J. H. Bigger (March 21): Slight infestation in fall sown wheat, but heavy infestation in volunteer wheat. Probably a great increase in infestation by the spring brood.

Missouri L. Haseman (March 10): With our ten-year Hessian fly experiment drawn to a close with last summer's harvest we are not continuing as an important station project the ten or a dozen experimental seeding plats throughout the State, and we have had little opportunity of making a survey since wheat harvest. However, those records showed the Hessian fly at a very low ebb without any real danger of the pest causing harm to the coming wheat crop. (March 25): There is no indication that the pest will be of any importance on the coming wheat crop.

CHINCH BUG (Blissus leucopterus Say)

Missouri L. Haseman (March 10): Chinch bugs went into the winter in large numbers in a number of counties along the western edge of the State, through the north-central part of the State and along the east-central portion, but the unusual rainfall during the fall and early winter months has been very favorable for the pest. Unless a drought develops we are not expecting any real epidemic and in case of drought the destructive infestations will, we believe, be confined to scattered counties or two individual farms. (March 25): In central Missouri the bugs were scarce in winter quarters.

Kansas J. W. McColloch (March 21): Surveys show that the chinch bugs are very numerous in the grassland, and there has been little mortality during the winter. Migration to the wheat fields has occurred in some areas. On February 22, bugs were flying in southern Kansas.

GREEN BUG (Toxoptera graminum Rond.)

- Mississippi R. W. Harned (March 28): About March 16, A. L. Hamner spent 30 minutes searching for the green bug in an oat field at A. & M. College, Miss., but none were found.
- Missouri L. Haseman (March 10): We have made no wheat survey, and the green bug has not been reported by any growers.
- Oklahoma C. E. Sanborn (March 18): The green bug is increasing its boundary line of infestation. Data from both Federal and State entomologists indicate that its heaviest infestation lies in the country north of Dallas and Fort Worth, Tex. A great deal of small grain has already been plowed under because of damage by the green bug. The infestation in Oklahoma lies north and westward from the infestation in Texas, extending from within Love County westward to within Cotton County, thence northward into Kingfisher County. Very recently parasites have been noticed. Indications are that the infestation will become rather severe before parasites can develop to such an extent as to bring it under subjection.

PLAINS FALSE WIREWORM (Eleodes opaca Say)

- Kansas J. W. McCulloch (March 20): Reports of false wireworm injury to wheat have been received during the past two weeks from Quinter, Jennings, Syracuse, and Salina. At Syracuse thousands of acres of wheat have been destroyed. All reports are from areas where there was little rain last fall and where much of the seed failed to germinate.

CORN

EUROPEAN CORN BORER (Pyrausta nubilalis Hbn.)

The \$10,000,000 European corn borer campaign began March 14. The infested area now includes about 60,000,000 acres.

The purpose of the campaign is to clean up the borer as far as possible in the infested area and to prevent the serious damage to the corn crop in Illinois, Iowa, and other Corn Belt States that would result from its farther spread. In the clean-up, the cornstalks either will be gathered and burned or plowed under cleanly, care being taken not to drag any debris to the surface afterwards. Corn stubble will be destroyed with a stubble pulverizer. All cornstalks, pieces of cornstalks, and corncobs around barnyards and feed-lots will be cleaned up and burned. The plan is to pay the farmers for work that is done over and above their normal farming operations at a rate not to exceed \$2 per acre for field corn and not to exceed \$1 per acre for sweet corn.

The following are the counties in which the clean-up will be conducted: Indiana: DeKalb and Steuben Counties; and selected townships in Allen, LaGrange, Noble, and Whitley Counties.

Michigan: Bay, Branch, Calhoun, Genesee, Hillsdale, Huron,

Ingham, Jackson, Lapeer, Lenawee, Livingston, Macomb, Monroe, Oakland, Sanilac, Saginaw, Shiawassee, St. Clair, Tuscola, Washtenaw, and Wayne Counties; and selected townships in Kalamazoo and St. Joseph Counties.

Ohio: Ashland, Ashtabula, Carroll, Columbiana, Crawford, Cuyahoga, Defiance, Erie, Fulton, Geauga, Hancock, Harrison, Henry, Huron, Jefferson, Lake, Lorain, Lucas, Mahoning, Medina, Ottawa, Paulding, Portage, Putnam, Richland, Sandusky, Seneca, Stark, Summit, Trumbull, Wayne, Williams, Wood, and Wyandot; and selected townships in Allen, Hardin, Holmes, Knox, Marion, Morrow, Tuscarawas, and Van Wert Counties.

Pennsylvania: Beaver, Butler, Crawford, Erie, Lawrence, Mercer, Venango, and Warren Counties.

New York: Selected townships in Cattaraugus, Chautauqua, Erie, and Niagara Counties.

DINGY CUTWORM (Feltia subgothica Haw.)

Nebraska D. B. Whelan (March 15): This cutworm has been reported both from McCook, Redwillow County, and from St. Paul, Howard County, where it was found in corn ears left in the field all winter.

HESPERIIDAE

Nebraska D. B. Whelan (March 15): From Eustis, Frontier County, some specimens of a hesperiid larva were sent, together with a portion of corn which was badly riddled by its burrows. Our correspondent states that about two-thirds of the stalks were affected in this way.

GRAPE COLASPIS (Colaspis brunnea Fab.)

Illinois J. H. Bigger (March 21): Severe losses expected to corn on red clover land. Wet season might minimize this damage. Large numbers of larvae went into hibernation successfully.

ALFALFA

PEA APHID (Illinoia pisi Kalt.)

Oklahoma C. S. Rude (March 18): This pest is very numerous in Roger Mills, Woodward, and Woods Counties. As yet the damage is not severe.

C. E. Sanborn (March 18): There is a rather serious infestation of the pea aphid on alfalfa in Woodward, Ellis, Woods, and Roger Mills Counties of this State. This pest is not ordinarily controlled in Oklahoma by any insect parasite but is generally quite suddenly controlled by a disease. The disease is not yet prevalent. It generally comes after several weeks of warm weather. I might add that the pea aphid also attacks sweet clover in this State to a very marked extent although the latter has never been damaged beyond recovery. In many instances alfalfa has been damaged beyond recuperation.

J. R. Horton (March 19): Unusually abundant in Woodward County, although I have not seen specimens, I am quite sure it is the pea aphid.

CLOVER

LESSER CLOVER-LEAF WEEVIL (Phytonomus nigrirostris Fab.)

Illinois J. H. Bigger (March 21): Severe damage to clover buds and seed crop expected this spring. Large numbers of adults survived the winter.

CLOVER LEAF WEEVIL (Hypera punctata Fab.)

Illinois J. H. Bigger (March 21): Little severe damage expected this season. Few survived severe fall weather and rains. Some slight damage if we have very favorable weather.

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

APPLE

APPLE APHID (Aphis pomi DeG.)

Virginia W. J. Schoene (March 23): According to Dr. W. S. Hough, the green aphids began to hatch in the Winchester section on March 14. L. R. Cagle reports that the first green aphids were observed at Blacksburg on March 23. The green aphids are abundant.

Mississippi R. W. Harned (March 30): Attacking satsuma at Moss Point, Miss. Determinations made by A. L. Hamner.

APPLE GRAIN APHID (Rhopalosiphum prunifoliae Fitch)

Virginia W. J. Schoene (March 23): Oat aphids are abundant.

Illinois J. H. Bigger (March 21): Barring very unfavorable weather, severe damage is probable in the early season. Observed in large numbers first in Morgan County March 16.

Missouri L. Haseman (March 25): Eggs began hatching March 15 to 20. Much more abundant than last year at the same time though in central Missouri not so abundant as during severe epidemics.

ROSY APPLE APHID (Anuraphis roseus Baker)

Virginia W. J. Schoene (March 23): According to Dr. W. S. Hough, the first rosy aphids were observed in the Winchester section March 18. L. R. Cagle reports that the rosy aphids were observed at Blacksburg on March 14. The rosy aphids are present in very small numbers.

CODLING MOTH (Carpocapsa pomonella L.)

Illinois J. H. Bigger (March 21): Severe damage expected. Low winter mortality. Large numbers in hibernation.

EASTERN TENT CATERPILLAR (Malacosoma americana Fab.)

Massachusetts A. I. Bourne (March 16): It appears that the tent caterpillars are fully as numerous as a year ago, which will mean a heavy infestation throughout practically the entire State. Campaigns have been started, interesting boys and girls clubs, boy scouts, etc., to collect and destroy the overwintering egg masses, and the program stimulated by a few well chosen prizes offered by various agricultural societies has awakened a very gratifying response on the part of the boys and girls. Already many thousands of egg masses have been collected and destroyed. It is planned to continue this work clear up to the time of the hatching of the eggs. Just what effect this will have upon the later infestation is of course merely a matter of conjecture. In fact, we can not be sure that it will exert any great amount of influence upon the heavy infestation which is statewide. We will be able, in the course of another month, to report to you more definitely on this point.

Arkansas W. J. Baerg (March 19): The caterpillars hatched about four or five days ago. The infestation will probably be moderate.

FRUIT TREE LEAF ROLLER (Archips argyrospila Walker)

Washington R. L. Webster (March 29): Examination of leaf roller egg masses by Mr. Spuler in Spokane Valley showed that there was no damage or any severe outbreak in 1927. Not enough live eggs found to warrant continuation of oil spray wash there.

SPRING CANCKER WORM (Paleacrita vernata Peck.)

Pennsylvania H. N. Worthley (March 21): Moderate numbers seen on road from Butler to Greensburg on the evening of March 11. Observed on window panes of hotel in Franklin (Venango County), March 17.

Missouri L. Haseman (March 25): Male moths attracted to lights March 1 to 15. An occasional specimen was observed.

ROSE LEATHOPPER (Empoa rosae L.)

Missouri L. Haseman (March 25): Very abundant though still in their winter harbors. Observed, however, in blue grass harbors March 1 to 10.

BUFFALO TREEHOPPER (Ceresa bubalus Fab.)

Nebraska D. B. Thelan (March 15): A portion of a young apple tree

covered with old injury by this insect was received.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Massachusetts A. I. Bourne (March 16): The San Jose scale, which for a few years seemed to be increasing to some extent, has very largely subsided as a pest of prime importance. While it is still present, it is not causing any anxiety. Apparently a very general use of oil sprays made necessary by the rapid spread of the European red mite throughout Massachusetts has automatically controlled the situation, as regards the San Jose scale.

Missouri L. Haseman (March 10): This pest continues to be at a low ebb with a tendency through central Missouri to pick up in numbers. Our fruit growers have it completely under control in all commercial orchard centers.

OYSTER-SHELL SCALE (Lepidosaphes ulmi L.)

Nebraska D. B. Thelan (March 15): A badly infested specimen of a pest on apple bark was sent from Howells, Colfax County.

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

Massachusetts A. I. Bourne (March 16): There seems to be a heavy infestation of the European red mite throughout practically all sections of the State. This, of course, is based on the evidence of the overwintering eggs. Although many growers secured good control by the use of oil sprays a year ago, there seems to have been sufficient increase over the State as a whole so that reinfestation took place quite rapidly.

PEAR

PEAR LEAF BLISTER MITE (Eriophyes pyri Pgst.)

California T. D. Urbahns (March 22): The blister mite Eriophyes pyri was active under the bud scales, and eggs were being deposited on pear at Penryn. (March 29): The pear leaf blister mite has caused considerable damage to pear buds in the Sacramento, Napa, and Suisun Counties on account of the mild winter weather. The mites continued active under the bud scales. Spraying in full cluster bud is just beginning.

PLUM

RUSTY PLUM APHID (Hysteroneura setariae Thos.)

Mississippi R. W. Harned (March 28): The first complaint in regard to the Southern plum or rusty brown aphid this year accompanied by

specimens came from the property of G. C. Coats at Meridian, Miss., on March 22. Plum trees were reported to be heavily infested. (Determination by A. L. Hamner). (March 30): Attacking plum at Picayune, Miss.

CHERRY

WESTERN PISTOL CASE BEARER (Coleophora sacramenta Heinrich)

California T. D. Urbahns (March 22): On March 4 the pistol case bearer, Coleophora sacramenta, was observed migrating from twigs to the buds and beginning its feeding.

GRAPE

GRAPE LEAFHOPPER (Erythroneura comes Say)

Missouri L. Haseman (March 25): Very abundant though still in their winter harbors. Observed, however, in blue grass harbors March 1 to 10.

C I T R U S A N D S U B T R O P I C A L F R U I T S

SPIRAEA APHID (Aphis spiraeicola Patch)

Florida J. R. Watson (March 19): Aphis spiraeicola Patch has not yet recovered from the freezes of January which killed all tender growth on the citrus trees. They are, however, rapidly increasing in numbers and, unless checked by their fungus disease, indications point to considerable damage later.

DESTRUCTOR SCALE (Aspidiotus destructor Signoret)

Haiti G. N. Wolcott (March 11): A very serious outbreak of Aspidiotus destructor. occurred at Cayes, Haiti, on coconut palms. This was reported several months ago by Dr. H. D. Barker as a dying of the palms; and, when recently investigated, the yellowing of the fronds and dying of some of the trees was found to be entirely due to a heavy infestation by this scale. Few parasites or predators, which are usually present, were noted on these palms. The scale had also spread to banana and Mammea americana trees.

ALEURODIDAE

Texas F. L. Thomas (February 17): White fly pupae have been received from San Benito. This is the first information of the occurrence of this insect in the Valley that has come to my attention.

TRUCK - CROP INSECTS

MISCELLANEOUS FEEDERS

CUTWORMS (Noctuidae)

Oklahoma C. E. Sanborn (March 18): Cutworms, especially common garden cutworms, are being reported as more prevalent this spring than usual.

Louisiana G. H. Bradley (March 26); A species of cutworm has been very bad in my garden this past month, destroying peas, lettuce, spinach, and tomatoes. This garden was all planted to corn last year and was kept fairly well cultivated. One of my neighbors who had some cabbage planted reports that cutworms destroyed every plant that he had.

SOUTHERN GREEN STINK BUG (Nezara viridula L.)

Mississippi R. W. Harned (March 30): Although many complaints in regard to the southern green plant bug have been received during the past few weeks, only one lot of specimens has been sent to this office. These specimens came from Peoria in Amite County on March 21.

APHIIDAE

Florida J. R. Watson (March 19): Aphids have been unusually abundant on truck crops during the past few weeks. Mustard, turnips, radishes, and peas have suffered severely, cabbages and lettuce to a lesser extent.

WESTERN SPOTTED CUCUMBER BEETLE (Diabrotica soror Lec.)

California T. D. Urbahns (March 22); Has been active in fields of vegetable gardens on warm days throughout the winter in the Santa Clara Valley.

TURNIP WEEVIL (Listroderes obliquus Gyll.)

Mississippi R. W. Harned (March 30): Adult specimens of Listroderes obliquus were received from Laurel, on March 23, where they were reported as feeding upon collard plants.

California T. D. Urbahns (March 22): The Australian tomato weevil was active in the various larval stages throughout the winter months in the San Francisco Bay region on turnips, spinach, and carrots.

TURNIP APHID (Rhopalosiphum pseudobrassicae Davis)

Mississippi R. W. Harned (March 30): Attacking turnips at Yazoo City and Anguilla. Determination made by A. L. Hamner.

THRIPS (Thysanoptera)

Louisiana W. E. Hinds (March 14); Exceedingly abundant on many food plants up to the end of February but heavy rains and temperatures down to freezing have reduced their numbers materially.

RED SPIDER (Tetranychus bimaculatus Harv.)

Louisiana W. E. Hinds (March 14): Red spiders were exceedingly abundant on many food plants up to the end of February but heavy rains and temperatures down to freezing have reduced their numbers materially.

PEPPER

PEPPER WEEVIL (Anthonomus eugenii Cano.)

California R. R. McLean (March 25): Pepper weevil, Anthonomus eugenii Cano, is doing considerable damage in several fields around Vista and Bonsall in San Diego County.

CABBAGE

CABBAGE APHID (Brevicoryne brassicae L.)

Mississippi R. W. Harned (March 30): Attacking cabbage and collard at Hazlehurst and Yazoo City. Determination made by A. L. Hamner.

HARLEQUIN BUG (Murgantia histrionica Hahn.)

Mississippi R. W. Harned (March 30): The harlequin cabbage bug seems to be quite abundant in all parts of the State at the present time. Specimens have been received during the last few days from Belzoni, Collins, Peoria, and Yazoo City. Winter turnips seem to be the crop most heavily attacked at this season. A few complaints are received in regard to these insects on collards and cabbage.

POTATO

POTATO LEAFHOPPER (Empoasca fabae Harris)

Missouri L. Haseman (March 25): Very abundant though still in their winter harbors. Observed, however, in blue grass harbors March 1-10.

STRAWBERRY

FIELD CRICKETS (Gryllus assimilis Fab.)

Mississippi R. W. Harned (March 30): Complaints have been received recently from Laurel, Picayune, and Wiggins, in regard to serious damage caused to strawberries by crickets. (Specimens from Laurel were determined by J. M. Langston as Gryllus assimilis Fab.)

Louisiana W. E. Hinds (March 14): Crickets are reported in several localities as injuring the fruit of strawberries where the plants have been mulched heavily during the winter.

STRAWBERRY ROOT APHID (Aphis forbesi Weed.)

Mississippi R. W. Harned (March 30): attacking strawberry at Picayune and Cleveland. Determination made by A. L. Hamner.

STRAWBERRY WEEVIL (Anthonomus signatus Say)

North Carolina W. A. Thomas (March 21): This insect is unusually abundant at Chadbourn this season and is doing serious damage to fields of berries where no control measures have been employed. The weevils began entering the fields on March 7 and fed heavily on developing buds before beginning egg deposition on March 13. They are now generally distributed on most farms on the section. Twentyone active weevils were collected on a single plant early last week.

SOWBUGS (ONISCIDAE)

Mississippi R. W. Harned (March 30): On March 24 County Agent Jas. H. Price Pascagoula, wrote as follows: "These pill-bugs or sowbugs are literally eating up our strawberries. One lady told me this morning that she had been able to get but one strawberry for over a week. I have a few myself and it is very hard to get a berry without a hole eaten in it and most of them are from one-half to three-fourths eaten."

SLUGS (Species undetermined)

Mississippi R. W. Harned (March 30): Slugs were reported as causing damage to strawberries in Pike County, on March 14.

BEANS

FLORIDA FLOWER THRIPS (Frankliniella tritici bispinosa Morgan)

Florida J. R. Watson (March 19): The flower thrips, Frankliniella tritici bispinosa, has been severely damaging beans in the Okeechobee district.

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.)

Florida E. F. Grossman through E. W. Berger (March 19): Though a number of weevils probably had already emerged from their natural hibernation quarters, the first weevil was trapped in the open field March 14. To date 3.88 per cent of the 26,347 weevils placed in hibernation cages at Gainesville last fall have emerged since February 23, when the first weevils to emerge were removed from the cages.

Louisiana W. E. Hinds (March 14): No boll weevils have emerged as yet from hibernation cages at Baton Rouge.

Missouri L. Haseman (March 10): This pest attracted no attention on our southern cotton growing farms the past two or three seasons.

Texas F. L. Thomas (March 21): Boll weevils were active in January in the hibernation cages. They have been feeding on cotton which is growing from last year's stalks in the Lower Rio Grande Valley. I understand that much of this cotton will be left to grow a crop this year, and as a result we are expecting much complaint from boll weevil injury.

COTTON FLEA (Psallus seriatus Reut.)

Texas F. L. Thomas (March 15): The number of cotton flea hoppers which have emerged or hatched from each lot of 100 plants, from first emergence up to above date, inclusive, is given below.

		<u>1927</u>	<u>1926</u>
College Station	Goatweed.....	796	26
	Cotton.....	5	0
	Ragweed.....	4	-
	Horsenettle	-	0
Corpus Christi	Goatweed	16	
	Cotton	0	
	Horsenettle	1	
San Antonio	Goatweed	248	
	Cotton	1	
	Horsenettle	3	
	Ragweed	6	
Troup	Goatweed	2	
	Cotton	0	
	Ragweed	0	
Weslaco	Cotton	1	
	Ragweed	21	
Wharton	Horsenettle	16	

Date of first emergence at College Station: February 16. The much larger number of cotton flea hoppers emerging from goatweed at College Station in 1927 is not considered as especially significant at this time, but is probably a result of more favorable weather conditions for hatching of the eggs.

SUGARCANE

SUGARCANE BORER (Diatraea saccharalis Fab.)

Louisiana W. E. Hinds (March 14): With regard to the sugarcane borer hibernation, we have found during the past few weeks a very large number of full-grown larvae in the stalks of cane, corn, etc. The survival is very much heavier than it was a year ago. Pupation began in the field during the first week of February and the first moth emerging out of doors was taken in our cages March 3. This is at least a month earlier than moths became active here in 1926. This indicates a strong probability of six generations of sugarcane borers this season where we had only five in 1926.

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

MISCELLANEOUS FEEDERS

A SCALE INSECT (Lecaniodiaspis sp.)

Nebraska H. H. Swenk (February 1): A scale insect, identified for us in November, 1926, as Lecaniodiaspis sp., probably celtidis Cockerell, by Harold Morrison of the Bureau of Entomology, has been repeatedly complained of during January, 1927, as well as during the fall of 1926, by residents of Grand Island, Hall County. Our attention was first drawn to this infestation by the Hall County agricultural agent in September, 1925. Elm, hackberry, and locust trees are the ones chiefly affected, and many of these have been killed during 1926 because of the severe attack of this scale.

PISSODES SP.

Mississippi R. W. Harned (March 23): Complaints of serious injury to Cedrus deodora plants by insects tentatively determined as Pissodes sp. have been received during the past week from Jackson, Meridan, and Wiggins.

COTTONY CUSHION SCALE (Icerya purchasi Mask.)

Louisiana W. E. Hinds (March 14): The cottony cushion scale has been reported from Lake Charles, Covington, and Edgard sections of the State. The eggs are now hatching and the crawlers are abundant.

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

Ohio E. W. Mendenhall (March 8): White-marked tussock moth egg masses are quite plentiful on the street trees in many of the towns and cities in the southern section of the State.

BAGWORM (Thyridopteryx ephemeraeformis Haw.)

- Ohio E. W. Mendenhall (March 8): I find the bags of the bagworm very plentiful on the street trees of the cities and towns in the section of the State south of Columbus.
- Kansas J. W. McColloch (March 10): The cedars are said to be covered with the bags of this insect at Grenola.

GREENHOUSE AND ORNAMENTAL
PLANTS

MISCELLANEOUS FEEDERS

A CURCULIONID (Pachylobius picivorus Germ.)

- Mississippi R. W. Harned (March 28): Clay Lyle found ornamental conifers growing in yards at Prentiss, seriously attacked by the pine bark weevil. (Determination made by J. M. Langston.)

AN APHID (Dilachnus thujaefolia Theob.)

- Mississippi R. W. Harned (March 30): Complaints and specimens of aphids collected on arborvitae plants have been received from Grenada, Hollandale, Tupelo, and Meridian, during the last few days, all of which have been identified by A. L. Hamner as this species.

WIREWORMS (Melanotus sp.)

- Kansas J. W. McColloch (March 4): Wireworms have caused considerable damage to tomato plants in a large greenhouse at Wichita.

AN APHID (Macrosiphum rosaefolium Theob.)

- Mississippi R. W. Harned (March 30): Attacking rose at McComb and Yazoo City. Determination made by A. L. Hamner.

INSECTS ATTACKING DOMESTIC ANIMALS

HCGS

FLEAS (Siphonaptera)

- Nebraska Don B. Whelan (March 16): A farmer living at Scribner, Dodge County, reports being bothered by fleas in hog barns.

MULES AND HORSES

BUFFALO GNAT (Simulium pecuarum Riley)

Mississippi

R. W. Harned (February 26): We are having a serious outbreak of the buffalo gnats in parts of Mississippi. (March 28): On March 6, Dr. J. F. Barnett, a well-known veterinarian in Yazoo County, wrote as follows: "We have had the buffalo gnat here for several days. I had more calls than I could fill for two or three days until I could get the owners of stock to spray and grease the animals. They thought the animals had colic and in a few hours the animals were in such condition that I could do them no good. At first they roll and squat and act like they have colic. Some swell and at first there is a little rise in temperature, but in two or three hours the heart is affected and the pulse can not be felt. They get in a stupor or coma, run against objects, and soon fall dead. Most of the animals were dead or past doing anything for them by the time I could get to them. I was able to save quite a number where I reached them before the pulse was too weak and the temperature subnormal. I used raw linseed oil and stimulants such as carbonate of ammonia, aromatic spirits of ammonia, and camphor in whiskey. During the cold snap the gnats disappeared, but now that it is warm again they are plentiful in places. It seems that the wind carries them and they appear and disappear. Since the people are spraying and greasing no cattle are dying. Some farmers use smokers. I have been practicing here for 25 years and I believe they were worse this time than ever before. Some 50 to 75 head died in this county from gnats. Mules and horses are affected more than cattle and other animals."

Chesley Hines, Inspector for the State Plant Board with headquarters at Yazoo City, made some investigation in regard to the buffalo gnat and reported as follows: "Although the gnats were mighty bad in the delta proper, there was a greater loss of mules and horses in the locality of Eden west of Zeiglersville which is from 5 to 10 miles from the river and in the hills. In this particular locality, I have learned from reliable sources that 25 head of mules and horses died. One man in this part of the county lost seven out of the 8 mules he had. Another man living about 4 miles east of Yazoo City in the hills lost the only two mules he had. I would say that the total number of mules and horses lost in the county would be around 65 or 70."

All kinds of stock seem to be attacked by the gnat, but I have not heard of any dying except mules and horses and more mules than horses. I noticed several cows with their udders covered with blood caused from the bites of the gnats.

I have made special inquiry as to the condition of the animals that succumbed from the bites of the gnats and from all indications the healthy ones were affected as severely as the poorly cared for. The gnats attack the animals under the belly, as well as along the legs. Some few have advanced the

idea that the gnats get into the nose and ears of the animals and kill them that way, but I have been unable to find them around these parts to amount to anything. They undoubtedly poison the animals and at the same time weaken them by sucking the blood. As but few if any die after the first few days of the outbreak, it looks as though the animals may become immune to the poison to a certain extent after they get used to it."

The people are using various concoctions to keep the gnats off, either buying them prepared or making them themselves. All use some kind of a mixture of oil and tar. They use various stimulant remedies after the mules have gotten down. I was in the delta yesterday and the gnats were as thick as they were before the cold spell. I was in Madison Thursday and inquired about them. They had not noticed any there yet.

On March 28 another correspondent at Webb in Tallahatchie County wrote that the buffalo gnats were "getting bad in this section."

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

T E R M I T E S

Kansas J. W. McColloch (March 21): Reports of injury have been received as follows:

February 21. Woodwork in a dwelling at Clay Center has been honeycombed.

March 3. Severe damage is reported of the woodwork in a house and garage at Osborne.

March 11. Termite injury is reported in a public building at Lawrence.

P O W D E R - P O S T B E E T L E (Lyctus spp.)

Kansas J. W. McColloch (March 18): Severe damage to the oak flooring in a dwelling is reported at Salina.

H O U S E F L Y (Musca domestica L.)

Haiti G. N. Wolcott (March 11): House flies are extremely abundant in Cayes and have been so every time I have been there. This is in contrast with their ordinary rarity elsewhere in the West Indies. I do not know why house flies should be abundant in Cayes, although there is no question about it, especially in the bar of the International hotel.

Missouri J. W. McColloch (March 25): The first adults observed on wing outdoors on March 1 to 10 at Columbia.



FIRE ANT (Solenopsis geminata Fab.)

Mississippi R. W. Harned (March 30): These ants are also very common in flower and vegetable gardens in this State and often viciously sting people when they are gathering flowers or vegetables. A number of complaints have been received from gardeners in regard to this species recently. (Determined by M. R. Smith.)

AN ANT (Camponotus herculeanus L. subsp. pennsylvanicus Deg.)

Mississippi R. W. Harned (March 30): Specimens of this ant have been received from Yazoo City and Merigold where they were causing trouble to property owners. No data were received to indicate whether or not the ants were infesting houses. (Determined by M. R. Smith.)

AN ANT (Camponotus caryae subsp. rasilis Wheeler)

Mississippi R. W. Harned (March 30): This ant has been received from Biloxi, Pascagoula, and Starkville, where it was found infesting houses. It normally nests outdoors in cavities in the branches of trees or in insect galls. At Starkville, the entrance to their nests was several small cracks around the window casing of a bed room. The workers have been noted in this house since last summer. At the time the house was visited, alate males and females were appearing in large numbers on the window sills. The owner stated that the ants had given no trouble around the dining room or kitchen. Specimens found in other houses in this vicinity were noted to feed on sugar and to forage most commonly in dark places. (Determination made by M. R. Smith.)

I N S E C T S I N J U R I O U S T O S T O R E D

P R O D U C T S

INDIAN-MEAL MOTH (Plodia interpunctella Hbn.)

Nebraska Don B. Whelan (March 16): A produce company in York, York County, reports much trouble with this pest getting into chick feed, corn-meal, walnuts, and cookies.