

THE INSECT PEST SURVEY
BULLETIN

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BUREAU OF ENTOMOLOGY
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THE STATE ENTOMOLOGICAL
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OUTSTANDING ENTOMOLOGICAL FEATURES IN THE UNITED STATES FOR OCTOBER, 1927

A flight of the lesser migratory grasshopper is reported from western Kansas and severe damage has already been done to fall-corn wheat in certain localities.

The fall armyworm is doing considerable damage in central Illinois, eastern Nebraska, and Kansas.

The summer Hessian-fly survey of the Middle Atlantic States shows higher infestation than has prevailed for several years. A general summary of the survey appears in this number. Flies are also reported as abundant in south-central Kansas.

Several new counties in Pennsylvania, Ohio, Indiana, and Michigan have been found infested by the European corn borer in the course of the October scouting work.

The San Jose scale is not reported as unusually abundant from any part of the eastern fruit belt, though indications earlier in the season were that unusual infestations were to be expected.

In general, the codling-moth situation of the Eastern United States has been favorable; considerable wormy fruit, however, is being found in eastern export apples.

The apple and thorn skeletonizer is reported for the first time from the State of Maine.

In the apple-growing section of West Virginia a very unusual outbreak of the apple maggot occurred this year.

In the Georgia peach belt, the peach borer is so serious that an unusually large quantity of paradichlorobenzene is being used this year.

The Mexican bean beetle has been found one county east of our last record in New York State (Steuben County). A single beetle has been found north of Washington, D. C., in Montgomery County, Maryland. An infestation in the eastern part of North Carolina is decidedly more intense than last year. In South Carolina the recorded spread is practically one tier of counties farther east than according to our last report, extending eastward to a line between

Dillon and Barnwell. In Michigan the recorded infestation is two counties farther north than previously recorded, extending into Wayne, Oakland, and Macomb Counties in the southeastern part of the State.

The carrot weevil is doing considerable damage in southern Illinois.

As anticipated in our summer numbers of the bulletin, the cotton leaf worm did practically no damage in the northern limit belt this year.

Throughout the pine stands of northern Idaho, present indications are that another epidemic of the mountain pine beetle is under way. A similar epidemic has been under way for the past few years in the Bitter Root region of Montana.

The heaviest losses in the past 10 years from the ravages of the Jeffrey pine beetle in the area included in the California-Oregon control project are now occurring. The older epidemic in the Inyo National forest is now on the decline.

Several reports of damage to garden plants by the fire ant have been received from Mississippi.

GENERAL FEEDERS

WHITE GRUBS (Phyllophaga spp.)

Illinois W. P. Flint (October 17): Severe injury by various species of white grubs to corn has been reported from many points in central and northern Illinois.

Kansas J. W. McCulloch (October 1): The county agent of Cheyenne County, reports that white grubs have destroyed a field of wheat. Counts showed that there were seven grubs to the square foot.

SPALK BORERS (Pyrausta spp.)

Wisconsin E. L. Chambers (September 15-October 1): Lotus borers and smartweed borers, Pyrausta spp., are very abundant in several localities in limited smartweed patches and lotus beds.

CHAIN-SPOTTED GEOMETER (Gingilia catenaria Drury)

Maine C. R. Fhipps (October 6): The chain-spotted geometer appeared in destructive numbers about August 15, defoliating blueberry, sweet fern, gray birch, and many other plants.

Wisconsin E. L. Chambers (September 15-October 1): Thousands of moths were observed about the lights at Black River Falls on September 17. The surrounding bog land was stripped by larvae.

LESSER MIGRATORY GRASSHOPPER (Melanoplus atlantis Riley)

Kansas J. W. McCulloch (October 20): The lesser migratory grasshopper has caused some damage to fall-sown wheat in western Kansas. Flights have been reported from Great Bend and Dighton. (September 30): These grasshoppers are reported to be present by the hundreds of thousands in the fields of Falco. On September 29 a big flight of grasshoppers passed over Great Bend.

CEREAL AND FORAGE - CROP INSECTS

MISCELLANEOUS FEEDERS

FALL ARMYWORM (Leptocrypta fragiparula S. & A.)

Nebraska H. H. Slink (September 15-October 25): During the first week in August an instance of the fall armyworm caterpillars attacking the ears of corn, and burrowing in the cob of the attacked ears, was found in Cass County.

Illinois W. P. Flint (October 17): Fall armyworm larvae have been reported from several points in central Illinois, injuring corn and alfalfa.

Kansas

J. W. McCulloch (October 5): Corn plants sent in from Liberal were badly injured by the fall armyworm. The leaves had been destroyed and the worms were working in the ears and stalks.

WHEAT

RUSSIAN FLY (*Phytoecia destructor* Say)

Middle Atlantic States

C. C. Hill and H. D. Smith (October 3): Russian-fly surveys made this summer show more fly infestation in the eastern wheat-growing area than there has been for some years past. Records of percentage of infestation were based on calms. The following summary shows the average infestation per county of the States under survey:

State	1927		1928	
	Number of counties	Infestation per county, per cent.	Number of counties	Infestation per county, per cent.
Penna.	21	33	21	1
Del.	3	7	1	0
Md.	10	21	5	2
P.S.	1	4	--	--
Va.	11	25	5	1
W.Va.	2	51	2	0

Kansas

J. W. McCulloch (October 20): A survey made during early October shows the fly abundant in the south-central part of the State, also one infestation in Thomas County.

PLAINS FALSE WIREWORM (*Elaeodes opaca* Say)

Kansas

J. W. McCulloch (September 25): Wheat is being destroyed before germination at Pierceville and Garden City.

OCYNI

EUROPEAN OCYNI BORER (*Pyrausta nubilalis* Hbn.)

General statement

Monthly Letter, Bureau of Entomology, No. 161, (September, 1927): A summer shipment of 30,200 *Pyrausta nubilalis* chrysalids, parasitized by *Phaeogenes planifrons* Wesl. and 7,500 cocoons of *Diocetes punctator* Roman was made on August 9 from Genoa, Italy, by the European parasite laboratory at Hyeres, Var. France. These parasites were collected by Dr. E. L. Pariser at Bergamo, in Lombardy. Total shipments of *Pyrausta* parasites from Europe to this country for the last fiscal year were *Eulimneria crassifemur* Thom., 47,340; *Diocetes punctator*, 11,209; *Mesocera canalis* Rond., 1,652; *Microgaster tibialis* Loes., 10,722; and *Phaeogenes planifrons*,

17,017. At the Arlington, Mass., laboratory there were reared 42,704 Genillia roseana B. & B.; 11,447 Macrocentrus abdominalis Fab.; 87 Diocles punctoria; 53,175 Apanteles sp.; and 5,684 Masicera senilis. These two lists make the total parasites sent for use in the warfare against the corn borer, 338,037. To collect the imported parasites 150 laborers were employed for two weeks in the summer collecting period, extending from July 25 to August 10, 1926, in northern Italy, and 146 during the months of November and December, 1926, and January and February, 1927.

General statement

Corn-Borer Control Extension Service, No. 20 (October 15): Comparison of infestation in Michigan, Ohio, New York, and Pennsylvania, 1925, 1926, 1927.*

	Total larvae per 100 stalks		
	1925	1926	1927
Michigan	1.50	10.73	35.56
Ohio	1.90	5.40	4.02
New York	4.48	7.00	10.78
Pennsylvania	2.66	6.59	17.72
average for whole area	2.11	6.02	12.93

* Figures for survey not complete September 19, 1927.

Pennsylvania

Corn-Borer Control Extension Service, Nos. 19-21 (October 1-22): Scouting for borers in new territory is still being carried on under the direction of L. H. Northley. The following counties have been added this season: Luzerne, Monroe, and Wayne.

Ohio

Corn-Borer Control Extension Service, Nos. 17-21 (September 17-October 22): The following counties have been added this season: Clark, Fairfield, Champaign, Perry, and Belmont.

Indiana

Corn-Borer Control Extension Service, Nos. 17-21 (September 17-October 22): The following counties have been added this season: Elkhart, Huntington, Marshall, St. Joseph, Jay, Randolph, and Wabash.

Michigan

Corn-Borer Control Extension Service, Reports Nos. 19-21 (October 1-22): The following counties have been added this season: Alcona, Alpena, Barry, Benzie, Ingham, Iosco, Kalamazoo, Midland, Presque Isle, St. Joseph, Tacoboygan, and Arenac.

Canada

Corn-Borer Control Extension Service, Report No. 19 (October 1): Scouts in Canada have discovered an infestation in the Cobalt mining area, 350 miles north of the original outbreak at St. Thomas, Ontario, said Prof. L. S. McEline of the Dominion government at Ottawa. Infestations have also been found on St. Joseph Island

and Manitoulin Island in northern Lake Huron and at several points in Quebec. Nova Scotia has been scouted but no borers found there.

CORN EAR WORM (*Heliothis obsoleta* Fab.)

North Carolina G. H. Brannon (October 1): This insect was reported by the county agent of Craven County as severely injuring soy beans.

Wisconsin E. L. Chambers (September 15-October 1): Less than 20 per cent of the sweet corn in southern counties is infested with the corn ear worm.

Wisconsin H. H. Srenk (September 25-October 15): Complaints of injury by the third brood of the corn ear worm continued to be received in about the normal numbers during the latter part of September and the first week in October.

CORN ROOT WORM (*Diabrotica longicornis* Say)

New York E. P. Felt (October 25): Corn root worm adults were numerous September 15 in a corn field at Caylerville, Livingston County, being attracted to ears which had been injured by raccoons.

COLEFLIES, etc.

FOUR-SPOTTED BEAN WORM (*Hylobius quadrimaculatus* Fab.)

Mississippi R. W. Harned (October 5): Serious injury to field peas by this species was reported from Caledonia October 6.

COLEFLA JURGULIC (*Chalcodermus aeneus* Boh.)

Mississippi R. W. Harned (October 5): Serious injury to field peas was also noticed at Caledonia October 6.

GRASS

A WEEB WORM (*Grampus* sp.)

California Monthly News Letter, Los Angeles County Horticultural Commission. Vol. 9, No. 10 (October 15): The small dark brown insect larvae found feeding on grass roots and recently reported from many parts of Los Angeles County as causing considerable injury to lawns represent a species of soil weeb worm or grub, according to determinations received by E. W. Whitage, Entomologist, Los Angeles County Horticultural Commissioner's office, from eastern authorities on this group. These insects are recorded as being of more or less common occurrence throughout the United States, but only occasionally causing serious injury to their hosts. They

live in silken tubes just below the surface of the soil, feeding on the roots and foliage of grasses and cereals and in some of the larvae crawl up into the stems.

GREEN JUNE BEETLE (Cotinis nitida L.)

North Carolina
R. W. Leiby (October 14): Larvae of the green June beetle are causing considerable damage to grass lands and golf courses. The damage appears somewhat more serious than last year.

C. E. Brannon (October 20): Mr. E. W. Bower, Gastonia, reports that his home lawn has been seriously damaged by June bug larvae. Mr. A. R. Morrow reports the June bugs have caused serious injury to golf greens in the vicinity of Slatersville.

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

MISCELLANEOUS PESTS

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Middle Atlantic States
E. Kostal (October 4): Inspection of export apples from the Middle Atlantic States during the month of September, at the Port of New York, reveals considerable infestation of San Jose scale. Out of approximately forty carloads or part carloads inspections, this insect was present in nineteen instances, infestation ranging from 1/2 of 1 per cent to 40 per cent of the apples in inspection samples.

Georgia
O. I. Snow (October 22): The San Jose scale increased rapidly during the summer, and by the latter part of August the infestation was very heavy. Recent observations have revealed the fact that many of the insects have died since summer, probably as a result of predacious enemies or parasites. The same thing occurred in 1925. I am still wondering if the general use of lubricating-oil emulsions for scale control during recent years has not allowed the predacious enemies and parasites of the San Jose scale to become more numerous than was the case when caustic scale sprays were used.

Ohio
E. F. Mendenhall (October 1): The San Jose scale in southwestern Ohio is held quite well in check, except in the exceptional outbreaks.

Indiana
B. A. Porter (October 22): San Jose-scale infestations this season have been about average in intensity, neither unusually light nor unusually heavy.

Wisconsin
D. L. Chambers (September 15-October 1): A survey for the San Jose scale has been made. There were 25 orchards in Racine

County, 75 orchards in the State, and 13 city parks found to be infested. Apples, plums, ornamentals, and shrubs were attacked.

JAPANESE BEETLE (Pomillia japonica Horn.)

Monthly Letter, Bureau of Entomology, No. 161 (September, 1927):
Owing to the fact that the activities of the adult Japanese beetle have ceased for the present season, it was possible on October 1 to lift the quarantine regulations covering farm products. No beetles have been found in any farm products inspected in the last week of September. Owing to the unusually cool nights, the few beetles remaining at a number of points within the infested area have shown a tendency to crawl down into flower blossoms for protection, this being favored in this respect. Since a considerable quantity of cut flowers are still being shipped from the regulated area to outside points, it was considered impracticable to permit the unrestricted movement of these articles. As a result, the quarantine restrictions requiring inspection and certification of cut flowers are being kept in effect until October 15, the maximal limit of the exportation of farm products and cut flowers. Three large consignments of parasite material were received at the laboratory in Sept. 24. One of these, a consignment of Euclyptus from India, was taken aboard the boat at Boston and rushed to Havertown by messenger, thus saving considerable time which otherwise would have been consumed between these two points.

MEDITERRANEAN FRUIT FLY (Ceratitis capitata Wied.)

Monthly Letter, Bureau of Entomology, No. 161 (September, 1927):
H. W. Willard and Arthur C. Mason, of the Honolulu station, report that records of infestation of insects by the Mediterranean fruit fly indicate that the fly was last abundant about Honolulu during 1927 from Darwin one of the previous years.

RODLING MOTH (Platycodes truncella L.)

E. A. Sordani (October 2): The rodling moth has been common, in one case 27 per cent of the apples in the inspection sample for export being infested. These apples, of the varieties Ben Davis, Gano, Jonathan, and Delicious, were produced in the States of Delaware, Maryland, Virginia, and West Virginia.

E. A. Sordani (October 2): This season the control of the rodling moth has been very difficult in the case in recent years. During the fall months, which are the breeding season of the pest, most of the normal control measures are inoperative. As a result, there are few eggs from which moths could emerge during late August and the first half of

September, when conditions were very favorable to the codling moth, and the number of late worms was reduced to a very low point

Wisconsin

E. L. Chambers (September 15-October 1): From 6 to 20 per cent of the apples are infested with the codling moth over the entire State.

APPLE AND THORN SKELETONIZER (Hemerophila pariana Clerck)

Maine

J. R. Phipps (October 6): This is the first report of this insect in Maine although similar injury was noted on Cutts Island last summer. Foliage turned brown in July and August in unsprayed and lightly sprayed orchards.

New York

E. P. Felt (October 25): Apple and thorn skeletonizer adults have been flying in numbers the last two weeks in various localities in the central and southern part of the State, areas where there has been considerable foliage injury the past season.

APPLE MAGGOT (Rhagoletis pomonella Walsh)

West

Virginia
F. E. Brooks (October 17): I desire to report that for the first time within my memory we are having at French Creek a serious outbreak of the apple maggot. It seems to be confining its attacks, so far as I have observed, to Grimes Golden. Around 75 per cent of the fruits of that variety are infested. Previously I have found the species in West Virginia only at elevations around 3,000 feet above sea level. This occurrence, at about 1,600 feet altitude, is unusual for this region.

Wisconsin

E. L. Chambers (September 15-October 1): The railroad worm is very abundant in some LaCrosse and Trempealeau County orchards.

SCURFY SCALE (Chionaspis furfura Fitch)

Ohio

E. W. Mendenhall (October 1): I find that apple trees and even apple stock in the nurseries in southwestern Ohio are badly infested with the scurfy scale, giving a white appearance.

PEAR

PEAR SLUG (Eriocampoides limacina Retz.)

Ohio

E. W. Mendenhall (October 6): I find outbreaks of the pear slugs on pear stock in some of the nurseries in Miami County.

PEACH

PEACH BORER (Agrobia exitiosa Say)

Georgia

O. I. Snapp (October 20) More paradichlorobenzene is being used in Georgia this year than for several years. This is largely due to

a greater borer infestation. For several years the Georgia peach growers have not been giving so much attention to this pest as they should, and as a result the infestation has materially increased and much damage has resulted to the trees.

Ohio E. W. Mendenhall (October 3): The work of the peach tree borer is about as severe as usual.

Illinois W. P. Flint (October 17): Adult peach tree borers ~~begin to~~ emerge up to October 5, at Carbondale, in southern Illinois. In some cases pecan growers in this section had applied paradichlorobenzene early in September. These treatments would probably not prevent injury by the larvae hatching from the ~~larvae~~ late emerging moths.

ORIENTAL FRUIT MOTH (Laspheyresia molesta Busck)

Georgia O. I. Snapp (October 21): This insect has spread to many new localities in Georgia during the 1927 season, although it is still not a pest of major importance in sections where late peaches and apples are not grown. This insect is now in hibernation here.

SMARTWEED CATERPILLAR (Acronycta oblongata A. & S.)

Illinois W. P. Flint (October 17): This caterpillar has been found in moderate numbers on the foliage of peach. In some cases as much as 25 per cent of the trees in certain orchards were being badly defoliated by this pest.

TARNISHED PLANT BUG (Lygus pratensis L.)

Indiana B. A. Porter (October 22): The tarnished plant bug is very abundant on almost all plants. We are particularly interested in this species as a peach pest, and its abundance this fall threatens serious damage to peaches next spring.

LOGANBERRY

RASPBERRY FRUIT WORM (Byturus unicolor Say)

Washington J. J. Snearer (October 24): On Vashon Island, Puget Sound, as the growers of loganberries delivered their crops to the canneries, near Tacoma, they were rejected on the grounds that the berries were wormy.

PECAN

PECAN SHUCKWORM (Laspheyresia caryana Fitch)

Mississippi R. W. Harned (October 27): On October 3, inspector R. P. Colmer,

Loss Point, reported in regard to the peach shrubworm as follows: "The shrubworm was the worst this year that I have seen for quite a while. They are causing quite a bit of damage opening of the shrubs and then the shrub itself is discolored. I think the reason for it is that last year after the storm so many of the growers did not attempt to clean up under the trees and the shrubs with the larvae in them were not disturbed until spring." Another rather serious complaint in regard to the peach shrubworm was received on October 5 from Colton.

CITRUS

RED SPIDER (*Tetranychus telarius* L.)

California

Monthly News Letter, Los Angeles County Horticultural Commission, Vol. 4, No. 15 (October 15): Serious "red spider" injury has been noted recently in citrus orchards in eastern Los Angeles County according to Deputy Horticultural Commissioner, H. T. Wolff. Generally speaking, damage has been found to be most severe in orchards which have not been recently irrigated. While the number of spiders was found to be nearly as great on some of the more recently irrigated properties, the amount of injury from their attacks was noticeably less. In many orchards where control measures have not been applied soon enough, the drying and dropping of foliage have been severe.

TRUCK - CROP INSECTS

MISCELLANEOUS PESTS

BLACK CUTWORM (*Agrotis mellon* Hott.)

Mississippi

H. W. Warden (October 27): Two rather serious complaints have been received recently in regard to the greasy cutworm. Specimens of this species, identified by S. E. Crumb of the Bureau of Entomology, were received from Ocean Springs on October 7. The correspondent from Ocean Springs stated that they had apparently destroyed his entire patch of turnips in one night. Specimens tentatively identified as this species by J. H. Langston were received from Grace on October 22. The correspondent stated that the worms had destroyed about 3 acres of alfalfa out of a 25-acre field.

POTATO

COLORADO POTATO BEETLE (*Lepidoptera coccinea* Say)

Wisconsin

E. L. Chambers (September 15-October 1): The northern counties have been surveyed for the Colorado potato beetle with negative results.

POTATO LEAFHOPPER (Empoasca fabae Herr.)

Wisconsin E. I. Chambers (September 15-October 1): The potato leafhopper has infested from 25 to 50 per cent of the potatoes in northern counties. Dahlias are also attacked by it.

CABBAGE

CABBAGE WEBWORM (Hellula unalis Fab.)

Mississippi R. W. Harned (October 27): The imported cabbage webworm has been very abundant in Mississippi during the past few weeks. Cabbage and turnips are the principal crops that have been injured. Specimens accompanied by statements in regard to serious damage that they were causing have been recently received from Jackson, Kemper, Monroe, and Lowndes Counties.

CABBAGE APHID (Brevicoryne brassicae L.)

Mississippi R. W. Harned (October 10): Aphids were reported on cabbage at Hamilton October 10.

BLISTER BEETLES (Blolidae)

North Carolina J. H. Brannon (October 1): Blister beetles have been reported to be severely damaging collards near Turkey, Sampson County.

STRAWBERRY

STRAWBERRY LEAF ROLLER (Ancyliis compta Trogli.)

Virginia W. W. Stone (September 25-October 25): Strawberry leaf rollers were reported injuring the foliage of strawberry plants in southeastern Lancaster County during the second week in October.

Kansas J. W. McColloch (October 10): A heavy infestation of this insect is reported from North Topeka.

MEXICAN BEAN BEETLE (Epilachna coarctata uls)

beetle

New York W. F. Howard (September 28): The Mexican bean/has been reported from Steuben County.

Illinois E. W. Corv (October 1): A giraffe beetle has been found by Dr. Sanders in wine apples at the laboratory grounds, at Somers.

Carolina J. H. Brannon (October 1): This beetle has caused tremendous damage all over the infested areas of the State this year. It is spreading east rapidly and has been found in Columbus and up through Martin and Halifax Counties. (October 20): Mr. W. C.

Norvell or Wendell reports his community attacked by a veritable plague of Mexican bean beetles and that all garden beans have been destroyed where no control was employed.

South
Carolina

N. F. Howard (September 28): This insect has been reported from the following counties: Chesterfield, Marlboro, Darlington, Dillon, Lee, Sumter, Darrell, and Orangeburg.

Ohio

E. W. Mendenhall (October 12): The Mexican bean beetle has been reported as very injurious in Harrison County during the summer and fall.

Michigan

N. F. Howard (September 23): The Mexican bean beetle has been reported from the following counties: Oakland, Wayne, and Macomb.

CUCUMBER

STRIPED CUCUMBER BEETLE (Diabrotica vittata Fab.)

Wisconsin

E. L. Chambers (September 18-October 1): The striped cucumber beetle has been observed on cucumbers in the southwestern part of the State, but no noticeable damage.

SQUASH

MELON WORM (Diaphania hyalinata L.)

Mississippi

E. L. Cochran (October 19): This insect was found damaging late squash at Biloxi during September.

CARROT

PARSLEY STALK WEEVIL (Listronotus latiusculus Boh.)

Illinois

W. P. Flint (October 17): The results of a recent survey in the infested territory within a 40-mile radius of East St. Louis showed over half the carrot patches infested with this carrot weevil, the infestation ranging from 10 to 100 per cent with an average of about 40 per cent.

TURNEP

TURNEP APHID (Rhopalosiphum pseudo-brassicae Davis)

Mississippi

K. L. Cochran (October 19): Doing considerable damage to turnips and muscard.

CARROT BEETLE (Curvius gibbosus DeC.)

Kansas

J. W. McCulloch (September 29): Carrot beetles are causing serious injury to turnips at Lakin.

STRIPED FLEA BEETLE (Phyllotreta vittata Fab.)

Mississippi K. L. Cockerham (October 19): The striped flea beetle did serious damage to turnips in Biloxi during September and October.

SWEET POTATTO

SEMITROPICAL ARMYWORM (Prodenia eridania Clem.)

Mississippi R. W. Harned (October 13): Serious injury to one corner of a sweet-potato field near Vicksburg was reported on October 13, by the semitropical armyworm, Xylomyges eridania.

SOUTHERN FIELD-CRCP INSECTS

COTTON

BOLL WEEVIL (Anthonomus grandis Boh.)

PINK BOLL WORM (Pectinophora gossypiella Guand.)

Mexico W. I. Jackson, American Consul (October 10): Due to the great amount of damage by the boll weevil and pink boll worm, the 1927 cotton crop of the Laguna region, which in June was placed at 90,000 bales, is now estimated at not more than 75,000 bales. A certain amount of damage is always expected in the Laguna from the pink boll worm, but the boll weevil as a rule does but little damage. This year, however, both are exceedingly bad and the damage wrought by them will amount to at least 30 per cent of the crop.

BOLL WORM (Heliothis obsoleta Fab.)

North Carolina C. H. Brammon (October 27): The county agent of Halifax County reports under date of October 27. "In the field where they were found there was an average of at least two bolls per stalk that were ruined, and the bolls that this worm ruined were the ones we had saved from the weevil by dusting."

Mexico A. J. Merrill (October 6): Following a thorough clean-up of infested wild cotton plants in the Ysqui Valley as well as the only field of cultivated cotton in the valley in 1926, no infestation of the 1927 crop was discovered until late in September in fields kept under close surveillance during the season. No damage possible to the 1927 crop.

COTTON LEAF WORM (Aproxma aprillacea Hübner)

Indiana B. A. Porter (October 22): Fruit in this section has been practically uninjured by the moth of this species. One grower reported that only a few moths of the cotton leaf worm were present

about the middle of September. This is very different from the situation in 1926, when the moths appeared in September by millions and caused serious damage.

Michigan

E. Z. McDaniel (October 12): The first specimen of Alabama agillacea in Michigan, so far as has come to our notice, was discovered yesterday. This creature has not yet appeared in numbers, only a single specimen having been observed at East Lansing.

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 PESTS

APHIDAE

Montana

J. C. Evenden (October 8): Throughout the city of Libby the elms, imported ashes, and boxelders are being seriously attacked by aphids (species unknown). This attack is so heavy as to injure seriously the appearance of the trees and to cause the death of some few individuals.

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

Nebraska

M. H. Srenk (September 25-October 25): The white-marked tussock moth continued to be conspicuous during the period covered by this report.

COTTONWOOD DAGGER (Acanoveta poruli Riley)

Nebraska

M. H. Srenk (September 25-October 25): During the latter part of September and the first ten days of October the cottonwood dagger moth, Acanoveta poruli, appeared in conspicuous numbers on the shade trees of Lincoln.

PINE LEAF SCALE (Chionaspis pinifoliae Fitch)

Nebraska

M. H. Srenk (September 25-October 25): Complaints of injury by the pine leaf scale on spruce and pine continued to be received during the period here reported.

ALDERS

WOOD BINDER BEETLE (Procinellus tessellatus Fitch)

New York

E. D. Bolt (October 26): Millions of the young were leaving from adult masses and going down the branches and tree trunks and covering the ground for a couple of feet around the base, in the case of an alder some 50 feet high in Highland Park. Several other near-by alder trees were not infested (R. L. Morsey).

ARBORVITAE

A RED SPIDER (Paratetranychus uniuspinis Jac.)

Massachusetts A. I. Bourne (October 19): Several hundred arborvitae trees constituting the "Forest" at Cedar Hill, Massachusetts Girl Scout, Newmarket, Waltham, are heavily infested by the spruce mite. This was determined by Prof. Garrison as Paratetranychus uniuspinis Jac.

BOASLEDER

BOASLEDER BUG (Psotocoris trivittatus Say)

Kansas J. W. McLoilock (October 20): At this season of the year the boasleider bugs are proving a serious annoyance in many homes over the State.

CATALPA

CATALPA SPIDERS (Scotonomis catalpa Loise)

Ohio E. F. Kendall (October 7): I find no outbreak of the catalpa spider mite in Miami County. They came much later this year.

Illinois W. C. White (October 17): The catalpa spider mite has been a little less numerous than earlier the last two or three seasons. Many trees have been almost free of mite infestation.

Indiana A. W. Porter (October 20): The catalpa spider mite is rather scarce this season, and very little infestation has been observed.

BEET

BEETLE SPIDER (Chlorobius viridissimus Chrys.)

Ohio E. F. Kendall (October 7): The beetle spider has done considerable damage to the alder trees in the vicinity of the city and some of the trees are not looking up with them as they should.

BEET

BEETLE SPIDER (Chlorobius viridissimus Chrys.)

Montana J. C. Lusk (October 23): Farmed out the western part of the state the beetle spider has done considerable damage to the alder trees in the vicinity of the city and some of the trees are not looking up with them as they should.

JULIUS

JULIUS WORM (Diastis cruci Ingr.)

Ohio
E. W. Wadsworth (October 21): In summer scale is fully in-
festing junipers in green houses in Troy.

LOCUST

VIOLET WORM (Chalioa robiniae Forst.)

Nebraska
W. H. S. Smith (September 25-October 25): A Clayborne County corres-
pondent reported that the locust borer was present in such abun-
dant in a large grove of black locust trees, now nearly 40 years
old, that during the past summer 25 per cent of the trees showed
infestation, and about 15 of them were killed.

MAPLE

COMMON MAPLE WORM (Amblyopis inaequalis Rathv.)

Idaho
J. C. Stender (October 2): During the past year the cottony maple
worm has increased in such numbers as to become a serious pest
of the shade trees throughout the district of Coconino. Plans
for community control have been started for the season of 1928.

GREEN-STRIPED MAPLE WORM (Nicota rubicunda Fab.)

Nebraska
W. H. S. Smith (September 25-October 25): A correspondent from
Dodge County reports early in October that the second brood of
the green-striped maple worm had stripped the maple trees on his
place white clean of leaves. The first brood had been injurious
earlier in the season.

PINE

MOUNTAIN PINE BEETLE (Tomicus contortae Hook.)

Idaho
J. C. Stender (October 2): Throughout the white-pine stands of
northern Idaho the losses due to the attack of the mountain pine
beetle increased materially during the 1926-27 seasons. This con-
dition indicates start of another epidemic in the white-pine stands
of this region. Recent surveys show that in some areas over 50
per cent of the white-pine has been destroyed in the past 10 years.
Throughout the Owyhee, Shoshone, Boise, Idaho, and Payette National
Forests a very severe outbreak of the mountain pine beetle exists
in the lodgepole- and yellow-pine stands. It is impossible
to even estimate the damage which has occurred at this time. It
is safe to assume that in the next few years at least 40 per cent
of the timber stands will be killed.

Montana

J. C. Evenden (October 9): For the past few years a serious epidemic of the mountain pine beetle has existed in the pine stands (lodgepole pine and yellow pine) of the East Fork drainage of the Bitter Root River. From 50 to 70 per cent of the timber on the areas over which this epidemic has spread has been destroyed. In the past year or two this infestation has spread into the Big Hole Basin and the Missouri National Forest.

JEFFREY-PINE BEETLE (*Pendroctonus jeffreyi* Hobbs.)

California
and
Oregon

Monthly Letter, Bureau of Entomology, No. 151 (September, 1927): J. M. Miller reports that an infestation of the Jeffrey-pine beetle of several years' standing on the Inyo National Forest has declined this year. A few years ago a large windfall occurred in this region, several million feet of timber being blown down. This infestation developed in the blow-downs, and attacked green timber, but soon lost its momentum after the dying timber from the windfalls was no longer available. Surveys of the California-Oregon control project area, conducted by F. F. Ross during the recent summer, show the heaviest losses of the last 10 years. In 1927 more than 350,000,000 feet of timber were killed. Private owners in this region are very much disturbed, and it is probable that a great deal of control work will be carried on during the coming winter and spring.

PINE LEAF SCALE (*Aspidiotus pinifolius* Fitch)

Ohio

E. W. Mendenhall (October 27): The pine leaf scale is quite abundant on several of the white pine farms of the properties in Troy.

PINE BARK BEETLE (*Bark Beetle* Fitch)

Ohio

E. W. Mendenhall (October 19): Bark beetle adults are infesting the white pines in Cincinnati to some extent.

Nebraska

H. H. Stone (October 25-October 26): In Richardson County an experimental white-pine tree in a farmer's yard was found to be heavily infested with the white-pine bark beetle in the latter part of September.

SCISSOR

A SCISSOR (*Scissor* Fitch)

California

J. C. Evenden (October 11): Scissor was observed in several localities in the hills. It is not so common as it was in the latter part of the year.

TULIP

TULIP SCALE (Tooureyella liriiodendri Cmel.)

New York

E. P. Felt (October 25): Twigs badly infested with the tulip scale were received the middle of the month from Millbrook, Dutchess County.

GREENHOUSE AND ORNAMENTAL PLANTS

CHRYSANTHEMUM

CHRYSANTHEMUM GALL MIDGE (Liarthronomyia hypogaea Loew)

Ohio

E. W. Mendenhall (October 12): The chrysanthemum midge is doing damage to chrysanthemum in a greenhouse in Delaware.

IRIS

IRIS BORER (Microgaster crusta Grote)

Wisconsin

E. L. Chambers (September 15-October 1): Infestation of iris by the iris borer is very severe in some parts of the State in nursery plantings, being as high as 50 per cent.

JAPANESE CHERRY

WHITE FLASH SCALE (Aspidiotus pertusum Targ.)

New York

E. P. Felt (October 25): The West Indian peach scale persists on Japanese cherry in the vicinity of New York City to such an extent that park authorities have experienced difficulty in controlling it by ordinary spray applications.

LILAC

LILAC LEAF MINER (Gracilaria spirifera Fab.)

New York

E. P. Felt (October 25): Lilac leaf miner larvae continue to feed upon the leaves of lilac, ash, and rivet in Rochester, though but few could be found the last of the month (P. E. Horsey).

MAGNOLIA

MAGNOLIA SCALE (Aspidiotus camelliae Thro.)

New York

E. P. Felt (October 25): The magnolia scale has been extremely abundant on two large magnolia trees on private grounds at Rochester, the scales being chiefly crowded on the under side of the smaller branches, one tree being half dead (P. E. Horsey).

NEW SPECIES

ACRODORUS (Acrodorus Walker)

Maryland

E. M. Cory (September 9): Slight damage to pentstemon by Acrodorus hebesana Walker has been reported from College Park.

PHYLLOPHAGA

SOFT SCALE (Coccus hesperidum L.)

Ohio

E. W. Marshall (October 3): I find a scale, Coccus hesperidum, infesting wild vines on plantations near Dayton, but not doing much damage.

PHYLLOPHAGA

ACRODORUS (Acrodorus Walker)

Ohio

E. W. Marshall (October 28): I find this insect very bad on the leaves of the red-bud or Judas trees at Dayton. It was destroying the leaves.

PHYLLOPHAGA

PHYLLOPHAGA

PHYLLOPHAGA (Phyllophaga Curtis)
Phyllophaga falis Burdie

Wisconsin

E. E. Chittenden (September 21-October 14): Many complaints of cat and dog fleas were received during the past two weeks, of nuisance in dwellings.

Nebraska

J. M. Smith (September 15-October 3): Complaints of infestation with Phyllophaga sp. continued to be received during the latter part of September and the first ten days of October.

General statement

F. C. Binns (October): Reports of household and factory infestations of Illinois continued to come throughout the month. They came mainly from Pennsylvania, Maryland, Virginia, and Ohio. One was received from Connecticut.

PHYLLOPHAGA (Phyllophaga opercularis S. & A.)

North Carolina

C. H. Emerson (October 1): This insect stung several people in widely separated sections of North Carolina near Winston-Salem. An elderly lady was stung and the physician who attended her said that she nearly died as she had a weak heart. All who were stung

suffered severe pain and had to be operated on for relief. These caterpillars were found on pecan and cherry foliage and those who were struck were picking fruit. Mr. H. W. Pugh, County agent, Forryth County, sent in specimens and first reported the activities of the pest.

37777

HORN FLY (*Haematobia irritans* L.)

Texas

F. C. Bishop (October 27): Mr. C. J. Pugh reports as follows: "The Horn fly was widely noticeable at Uvalde during the summer, and there were several cases seen also on a small island October 1-10. At Brackettville the same conditions prevailed. At Del Rio there were a few more cases; some cattle had as many as 100. On October 15 and 16 flies were visible on all cattle and some had as many as 2,000 to 2,500 at San Antonio and Sonora. About the same conditions prevailed at Comstock and DeWitt on October 20 and 21 as at Sonora. There were some flies at Fort Stockton, some cattle having as many as 3,000 to 4,000. At Abilene and Waco on October 21 and 22 flies were annoying all animals to a great extent and some cattle had swarms of the flies 3,000 to 10,000. The horns of all cattle are discolored at the base or covered with flies and some cattle appear to have a pint of flies settled on the horns and about the head."

AT CATTLE (See *Haematobia irritans* L.)

Texas

F. C. Bishop (October 27): I have examined some cattle in a number of different localities in southwestern Texas, finding that there is a great variation in the seasonal development of the grubs in the animals, unlike at other many places where in the fifth instar and some had matured and were the maggots. The following conditions were noted at points westward: Waco, October 27, on examination of 52 mature dairy cattle showed an average of 1.7 grubs per head which had appeared in the subcutaneous tissue of the back to date. Maximum number in one animal was 17. Also examined 1st and 4th instars. Del Rio, October 11-13, Mr. Pugh examined 195 dairy cattle and found that no grubs had appeared about the backs. Fort Stockton, October, 10, 21 cattle were examined, but no grubs were present along the backs.

37778

HORN TICK (*Uta stansburiana* Latrod.)

Pennsylvania

F. C. Bishop (October 27): Specimens of the Brown dog tick sent in from Chesnut Hill with a report that they were on dogs and ground houses. This is the first record of this tick in the North's west.

POULTRY

CHICKEN LICE

Maryland
and
Virginia

F. C. Bishopp (October 28): The normal fall reduction in the numbers of chicken lice is taking place. Several flocks have been observed with moderate to heavy infestations of body lice. Shaft lice appear to be next in number, with head, fluff, and wing lice comparatively scarce.

PIGEON LIPROBOSEID (Lipoboscus Wiget)

Washington, D.C.

F. C. Bishopp (October 11): Specimens of the pigeon lipoboscoid have been received from the District of Columbia.

LESCHE'S FLY (Leschea Wiget)

AND FRUIT FLIES

FRUIT FLIES

Kansas

F. C. Bishopp (October 3): Fruit flies have infested live cherry trees in a yard at Indian.

FRUIT FLIES (Phaenocarpa Wiget)

Mississippi

M. R. Smith (October 27): E. C. Tamm, Chief of the Department of Botany of the University of Mississippi College, recently received a package of plants from Florida, which included various workers and other insects. The package was found to contain a species of fly which is spread from two to ten through shipments of plants, groceries, and other forms of commerce.

FRUIT FLIES (Phaenocarpa Wiget)

Mississippi

M. R. Smith (October 27): Inspector J. B. Gray, Itasca, recently sent to this office specimens of the fruit fly which he took from a ship, the Florida, which had arrived at Itasca. He states that the fly was first identified on board the ship. It flies between Port of Spain and Itasca, Miss., and Vidalia, La., and between other ports.

FRUIT FLIES (Phaenocarpa Wiget)

Mississippi

M. R. Smith (October 27): The fruit fly continues to be the source of much complaint. Insects are found in food, garbage cans, water bottles, etc., stinging children, and in the holes of the ship, and in the citrus trees and other plants. The fly is also found in the fruit of the grape. It is reported that the fly is also found in the fruit of the grape. Inspector Chesley

lines of Tazoo City reports that the fire ant was found destroying many of the pupae of the cotton leaf worm in the field. Mr. F.K. Harrison of the Bureau of Entomology sent to the office a young citrus tree, the roots and base of the trunk of which had apparently been girdled by workers of the fire ant. The ants had not completely girdled the tree but had eaten the bark from the roots and trunks in small patches which appeared on the trees as small pits or neck-shaped depressions. During the latter part of July, Mr. J. H. Fries, county agent, Escambia, sent to us some eggplants which he stated were being seriously injured by the fire ant. An examination of the plants showed that the ants had burrowed longitudinally in the stems of the plants and had also eaten the characteristic peck-shaped holes out of the bark on the stem and roots of the plants. A resident of the campus at A. M. College called our attention to injury to the pods of corn in her garden by fire ants. This injury consisted of small to fairly prominent holes gnawed in the pods at the base. Some of the pods showed small wartlike abnormalities that were presumably caused by the ants also. The writer witnessed the ants eating holes in the pods, and gnawing holes into the base of the corn pods. The ants were also reported as feeding on bacon and butter in the house.

BLACK HOUSE ANT (*Monomorium minimum* Foct.)

North Carolina

C. H. Brannon (October 1): This ant is reported by C. C. Dale, county agent, to be infesting dwellings in Lumberton.

Ohio

E. M. Marshall (October 13): Small ants, *Monomorium minimum*, have been a great nuisance in dwellings and farms and pastures.

ANT ANT (*Formica exilis* Say)

Mississippi

H. A. Smith (October 15): This species is infesting so many out-joining houses at Gated that it has given the impression that it is the Argentine ant. The ants were first found in some of the houses, but were more numerous in late fall. In one house which the writer examined, he found the ants very numerous in an ice box. Several hundred specimens, both dead and alive, were observed in this house. Householders in this section have noticed the ants infesting the following foods: Sweet corn on the cob, baked chicken, a kind of cake, brown candy, and boiled ham. Out of doors, the ants may be found building up and down tree trunks in streams large enough to permit one of the Argentine ant. They are reported to feed the corn, small sprouts of corn and a species of wild rice.

COLETTA ANT (*Colletes caryocera* Latr.)

California (Inyo County)

J. T. Dixon (October 17): Common here after the first frosts of autumn, these bees collect to find places to spend the winter.



and

They swarm into dwellings, school houses, sometimes completely covering the electrical fixtures and other objects suspended from the ceilings, also crawling into beds, cracks, etc. The numbers here have been considerably larger than usual this year. Many people are stung at this season of the year.

CIGARETTE BEETLE (Lasioderma serricorne Fab.)

Illinois

W. P. Flint (October 17): The cigarette beetle has been reported as damaging upholstered furniture in the homes and in stores. This beetle is becoming one of our most commonly reported household pests.

Kansas

J. W. McCulloch (October 17): The cigarette beetle is giving a lot of trouble in a furniture store at Abilene.

H. B. Hamerford (September 30): The cigarette beetle has been reported attacking upholstered furniture at Olathe.

POWDER MITE BEETLES (Leptothorax spp.)

Illinois

W. P. Flint (October 17): Several cases of injury by the larvae of the beetle to telephone wires have been reported from east-central Illinois. This injury is caused by the eating off of the lead sheath inside the insulation, and having the same effect as blowing the plug.

Kansas

J. W. McCulloch (October 5): Severe injury, especially to lath, is reported in a house in Johnson County.

STORAGE GRAIN PESTS

Nebraska

J. W. McCulloch (October 21-October 27): Storage-grain pests have been taken from several places (and caught in present fall, though a few quantities of infestations of stored and dried grain have been received from various parts of the state.

DARK MITE MITE (Phaenocarpa sp.)

Nebraska

J. W. McCulloch (October 11): The dark mite was found in a grain bin in a house at Ft. Hays.

WEEVIL (Callositypechus sp.)

North

Carolina

J. W. McCulloch (October 14): Weevils received in a small quantity from a house in a town about 10 miles from the coast of western North Carolina.