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OCTOBER 7, 1955

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Cooperative
**ECONOMIC INSECT
REPORT**

Issued by

PLANT PEST CONTROL BRANCH

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL BRANCH

ECONOMIC INSECT SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Branch serves as a clearing house and does not assume responsibility for accuracy of the material.

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United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

FALL ARMYWORM medium to heavy in several Texas counties. Infesting oats in West Feliciana Parish, Louisiana and increasing in southern Alabama. (p. 939).

YELLOW CLOVER APHID requiring control measures in southern Nevada and in some fields in Arizona. Injurious infestations in areas of Utah and Nebraska. (p. 940).

ALFALFA WEEVIL reported from New York for first time. (p. 940).

YELLOW-STRIPED ARMYWORMS damaging alfalfa in Nevada. Infestations also reported from Arizona, Texas and Maryland. (p. 942).

VELVETBEAN CATERPILLAR general on soybeans and peanuts in southern Alabama, with severe damage to soybeans in Conecuh County. South Carolina also has damaging infestations on soybeans. (p. 942). PLANT BUGS continue abundant in alfalfa in some areas of South Dakota, Utah and Nebraska. (p. 941). STINK BUGS numerous on alfalfa in western and southwestern Nebraska. (p. 941) and THREE-CORNERED ALFALFA HOPPER more numerous than usual on alfalfa in Pima County, Ariz. (p. 941).

WALNUT CATERPILLAR general in pecans in southern Alabama and causing defoliation on this crop at Gainesville, Florida. (p. 943).

FALL WEBWORM infestation general on pecans in Louisiana, many orchards defoliated. (p. 943). WALNUT HUSK FLY survey results in California. (p. 943).

BANDED CUCUMBER BEETLE very abundant at Charleston, South Carolina. Infestations also at Baton Rouge, Louisiana. (p. 944).

PICKLEWORM continues to damage cucurbits in South Carolina and Virginia. (p. 944).

CABBAGE LOOPER damaging lettuce in Clark County, Nevada and Maricopa County, Arizona. Damaging infestations on crucifers in Louisiana, South Carolina and Virginia. (p. 945).

COTTON LEAF PERFORATOR continues to infest cotton in Imperial Valley, California. (p. 946).

(Continued on next page).

BOLLWORMS lighter than usual on cotton in Nye and Clark Counties, Nevada. (p. 946).

BOLL WEEVIL heavy widespread on succulent untreated cotton in central Texas. (p. 946).

HORN FLY light to medium on cattle in southern Louisiana. Untreated cattle in northwestern Oklahoma have 1000-2000 flies per animal. (p. 948).

STATES reporting this week - 24.

WEATHER Summary and Outlook. (p. 951)

Reports in this issue are for the week ending September 30, 1955, unless otherwise designated.

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - WYOMING - Survey of adults shows infestation of 375,800 acres of range and cropland in 14 counties. (Spackman, ARS). UTAH - Still causing some local damage in scattered alfalfa fields. (Knowlton). Survey of adults showed threatening infestations in parts of Cache, Sanpete, Juab, Beaver, Iron, Millard, Sevier, Wasatch, Uintah, Duchesne, Salt Lake and Morgan Counties. (Thornley, Knowlton). Unusually severe in several areas of Sanpete County this season. About 14,475 acres sprayed. (Funk, Knowlton). NEBRASKA - Melanoplus femur-rubrum and M. bivittatus very abundant in alfalfa fields and margins of corn fields in northeastern area. Apparently a new generation of M. mexicanus appearing in southwestern area. (Roselle, Andersen).

EUROPEAN CORN BORER (Pyrausta nubilalis) - SOUTH DAKOTA - Infestations in west and southwestern areas light, from 0-72 borers on 100 stalks and spotted in distribution. (Hantsbarger). NEBRASKA - Areas surveyed were in Platte River Valley as far east as Keith County. Populations light. Counts ranged from 12-20 per 25 plants. Average about 3.3 borers per plant in Cuming County. As high as 22 per plant. (Roselle, Andersen). VIRGINIA - Average number of larvae per 100 stalks by counties: Tazewell 155, Buchanan 24, Dickenson 15, and Patrick 25. (Morris).

CORN EARWORM (Heliothis armigera) - NEVADA - Infestations in field corn throughout Clark and southern Nye Counties range from 40 to 100 percent. Individual fields severely damaged and some practically destroyed. (Gallaway, September 24).

A CORNSTALK BORER (Diatraea sp.) - NEVADA - Field corn in Moapa Valley severely damaged. Individual fields containing spots 50 feet in diameter with 100 percent damaged stalks. (Gallaway).

FALL ARMYWORM (Laphygma frugiperda) - LOUISIANA - Infesting about 300 acres of oats in West Feliciana Parish. Requiring control. (Oliver). TEXAS - Medium to heavy, general infestations reported from Dimmit, Zavala, Brazos, Goliad, Caldwell, Madison, Tarrant and Brazoria Counties. Many more counties probably infested. (Davis, Randolph, Fuller, Garrett, Lindsey). ALABAMA - Increasing in numbers in southern area. (Arant).

GREEN JUNE BEETLE (Cotinis nitida) - VIRGINIA - Larvae numerous in two pastures near Homeville, Sussex County. (Wright).

WHITE GRUBS - UTAH - Damaging lawns at Tooele and Grantsville. (Biggs, Knowlton).

CORN LEAF APHID (Rhopalosiphum maidis) - NEBRASKA - Very abundant in corn fields in northeastern area. (Andersen).

BROWN WHEAT MITE (Petrobia latens) - OKLAHOMA - First hatch of diapause eggs from soil samples from Hennessey-Kingfisher area September 12. Numerous young mites on germinated volunteer wheat by September 23. (Henderson).

YELLOW CLOVER APHID (Myzocallis trifolii) - NEVADA - Infestations on alfalfa in Clark and southern Nye Counties dropped to low point in August and began increasing September 10, reached economic proportions requiring control by September 24. Populations of lady beetles, damsel bugs and lacewings have increased in most areas. (Gallaway, September 24). ARIZONA - Appearing in alfalfa in Pima County and building up at Marana and south of Tucson. Some acreage has been treated. (Ariz. Coop. Rept.). UTAH - Threatening to injurious populations in many alfalfa fields in Tooele and Salt Lake Counties. (Knowlton). SOUTH DAKOTA - Negative results from survey of alfalfa in these counties: Charles Mix, Gregory, Tripp, Todd, Mellette, Bennet, Shannon, Fall River, Custer, Pennington and Jackson. (Hantsbarger). NEBRASKA - Infestation persists in legumes in Republican River Valley. Populations have increased from Bridgeport in Morrill County eastward to Buffalo County. In sufficient numbers to cause losses. Damaging new plantings and also many newly-cut fields. Growth being retarded and much yellowing of leaves. Newly-infested areas are Hamilton and York Counties, (Hill). OKLAHOMA - Per 100 sweeps in Stillwater area September 21, counts were 473 compared with 215 September 7. (Fenton).

PEA APHID (Macrosiphum pisi) - NEBRASKA - Counts from 5-15 per 25 sweeps in alfalfa in northeastern area. (Andersen).

ALFALFA CATERPILLAR (Colias philodice eurytheme) - VIRGINIA - Medium infestation in some alfalfa fields in southern Goochland County. (Truett).

ALFALFA WEEVIL (Hypera postica) - NEW YORK - Larvae found at Westtown, Orange County, June 27. (Det. W. H. Anderson). (Gyrisco, Sept. 26). According to available records this is the first report of this insect in New York. NEVADA - Adults average one per sweep in alfalfa in Panaca area of Lincoln County. (Gallaway).

CLOVER SEED CHALCID (Bruchophagus gibbus) - OKLAHOMA - Counts in Stillwater area were 482 September 21 compared with 14 September 7. (Fenton).

COWPEA CURCULIO (Chalcodermus aeneus) - SOUTH CAROLINA - Causing considerable injury to cowpeas in Charleston vicinity. (Reid, Sept. 21).

CLOVER ROOT BORER (Hylastinus obscurus) - PENNSYLVANIA - Several second-year clover fields showed 96 percent infestation in Huntingdon County. Damage light to complete destruction. Infestation about 94 percent in Indiana County, (Udine).

SOUTHERN CORN ROOTWORM (Diabrotica undecimpunctata howardi) - SOUTH DAKOTA - Adults common in alfalfa from Brookings to Pennington Counties. Counts up to 13 per 25 sweeps. (Hantsbarger).

A LEAFHOPPER (Scaphytopius sp.) - UTAH - Has replaced Colladonus geminatus, which is almost rare this year, in alfalfa and clover. (Knowlton, Kaloostian).

A LEAF ROLLER (Platynota stultana) - ARIZONA - Has defoliated many alfalfa fields in the Buckeye area of Maricopa County and some fields at Theba. (Ariz. Coop. Rept.).

MEXICAN BEAN BEETLE (Epilachna varivestis) - SOUTH CAROLINA - Abundant on cowpea cover crops in Dorchester County. (Reid, Sept. 21).

PLANT BUGS - SOUTH DAKOTA - Lygus lineolaris quite abundant on alfalfa in some western and southwestern areas. In one area, 32 per 25 sweeps. (Hantsbarger). UTAH - Lygus lineolaris still unusually numerous in alfalfa fields in Tooele County. (Knowlton). NEBRASKA - Adelphocoris lineolatus, A. rapidus and L. lineolaris found in numbers in Dawson, Lincoln, Keith, and Deuel Counties. (Roselle).

MITES - ARIZONA - Spider mites causing yellowing of foliage of soybeans in one 40-acre field in Maricopa County. Other fields reported infested. (Ariz. Coop. Rept.). UTAH - Infestations moderately severe on corn in Gunnison Valley of Sanpete County. (Funk).

STINK BUGS - SOUTH DAKOTA - Quite numerous on alfalfa in western and southwestern counties with counts up to 20 nymphs and adults per 25 sweeps. (Hantsbarger). UTAH - Have been unusually low in small grains and alfalfa seed crops of State this season. (Knowlton).

SWEETCLOVER WEEVIL (Sitona cylindricollis) - NEBRASKA - Counts in alfalfa fields in the northeastern area range from 3-7 per 25 sweeps. (Andersen).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - ARIZONA - More numerous than usual on alfalfa in Pima County and the commonest insect in all fields checked in Pima, Pinal, and Maricopa Counties. (Ariz. Coop. Rept.).

THRIPS - NEBRASKA - Numerous in alfalfa in northeastern area and in the Platte River Valley. (Roselle, Andersen).

A TREEHOPPER (Tortistilus inermis) - NEVADA - Average 5-12 per sweep in most alfalfa fields in Clark, Lincoln, and northern Nye Counties. (Gallaway).

YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli) - ARIZONA - Infesting alfalfa at 15 per sweep at Mesa, Maricopa County. (Ariz. Coop. Rept.). TEXAS - Medium widespread infestations on weeds and other plants in Dimmit County. (Richardson). MARYLAND - In complex with cutworms and a webworm, is retarding new alfalfa seeding in Baltimore County. (U. Md., Ent. Dept.).

WESTERN YELLOW-STRIPED ARMYWORM (Prodenia praeifica) - NEVADA - Most alfalfa fields contain infestations of 1-60 per sweep. Fields with 20 or more per sweep show severe damage. (Gallaway, Sept. 24). Local infestation in Fallon area of Churchill County. (Gallaway)

VELVETBEAN CATERPILLAR (Anticarsia gemmatilis) - SOUTH CAROLINA - Sufficiently abundant to require control in soybeans in Charleston County, September 21. (Reid, Cuthbert). Heavily infesting soybeans in Aiken area. (Johnson). ALABAMA - Has caused severe damage to alfalfa in Conecuh County. General on soybeans and peanuts in southern area. (Arant).

WEBWORMS (Loxostege sp.) - TEXAS - Medium to heavy general infestation in alfalfa in north central area. (Chada).

FRUIT INSECTS

ORIENTAL FRUIT MOTH (Grapholitha molesta) - CALIFORNIA - Reported from San Benito County, about 50 miles south of San Francisco on the coast. Second record for area, the first in 1945. Apparently adapting to California conditions. (Cal. Coop. Rept.).

LESSER APPLEWORM (Grapholitha prunivora) - PENNSYLVANIA - Light infestation in apple trees after final cover sprays. (Adams).

CLOVER MITE (Bryobia praetiosa) - IDAHO - Heavy egg deposition on apple trees at Challis on treated trees. Severe injury to leaves submitted as sample. (Manis).

PEAR-SLUG (Caliroa cerasi) - IDAHO - Larvae still feeding on pear leaves not covered with spray deposit. (Manis).

RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) - PENNSYLVANIA - Survey shows an increase in apple orchards in southwestern area. (Udine).

CITRUS RUST MITE (Phyllocoptruta oleivora) - LOUISIANA - In complex with Lepidosaphes beckii and Coccus hesperidum, heavily infesting untreated orange trees and fruit in Plaquemine Parish. Marked decrease in marketable fruit. (Oliver).

BOXELDER BUG (Leptocoris trivittatus) - SOUTH DAKOTA - Heavily concentrated and feeding on apples in Union County. (Hantsbarger).

SAN JOSE SCALE (Aspidiotus perniciosus) - PENNSYLVANIA - Survey shows an increase on apples in southwestern area this year. (Udine).

SHOT-HOLE BORERS - UTAH - Killing some cherry trees in Tooele County. (Biggs).

WOOLLY APPLE APHID (Eriosoma lanigerum) - IDAHO - Heavy infestations on new-growth apple twigs in Moscow area. (Manis).

ORANGE-DOG (Papilio cressphontes) - TEXAS - Heavy local infestation attacking citrus east of Carrizo Springs. (Richardson).

PECAN WEEVIL (Curculio caryae) - OKLAHOMA - Jarring showed from 30 to 40 per tree in Payne County. (Howell).

WALNUT HUSK FLY (Rhagoletis completa) - CALIFORNIA - Completed seasonal survey shows infestation throughout Sonoma Valley in Sonoma County. Adult taken in trap in Frazier Park in Kern County, for first record in south end of San Joaquin Valley. Final fly emergence September 15. (Cal. Coop. Rept.).

LEAF-FOOTED BUG (Leptoglossus phyllopus) - FLORIDA - Infesting ripening clusters of pecans at Gainesville, Alachua County. (Det. L. A. Hetrick). (Denmark).

WALNUT CATERPILLAR (Datana integerrima) - FLORIDA - Causing partial defoliation of pecans at Gainesville, Alachua County. (Det. L. A. Hetrick). (Denmark). ALABAMA - General in pecans in southern area. (Arant).

FALL WEBWORM (Hyphantria cunea) - LOUISIANA - Infestation general and state-wide on pecan trees, with many orchards completely defoliated. (Oliver).

TRUCK CROP INSECTS

MEXICAN BEAN BEETLE (Epilachna varivestis) - VIRGINIA - Infestations from very light to moderate on snap beans and lima beans in eastern area. (Brubaker, Greenwood, Hofmaster, Sept. 24).

BANDED CUCUMBER BEETLE (Diabrotica balteata) - LOUISIANA - Infesting potatoes and snap beans with up to eight per plant in East Baton Rouge Parish. (Oliver). SOUTH CAROLINA - Very abundant; injuring snap beans moderately and cucumbers slightly at Charleston. (Cuthbert, Reid, Sept. 21).

BEAN LEAF BEETLE (Cerotoma trifurcata) - SOUTH CAROLINA - Causing slight injury to snap beans in Charleston area. (Cuthbert, Reid, Sept. 21). VIRGINIA - Light to moderate numbers of adults and injury on young late-crop snap beans in eastern area. (Brubaker, Greenwood, Hofmaster, Sept. 24).

BEAN LEAF ROLLER (Urbanus proteus) - SOUTH CAROLINA - Causing slight injury to snap beans at Charleston. (Cuthbert, Reid, Sept. 21).

BEET ARMYWORM (Laphygma exigua) - ARIZONA - In complex with other lepidopterous larvae, causing unusually severe damage to sugar beet seedlings, Sept. 12-23. Damaging green tomato fruits at Bowie, Cochise County. (Ariz. Coop. Rept.).

BEET LEAFHOPPER (Circulifer tenellus) - UTAH - From 43-66 percent loss on tomatoes due to curly top at Santa Clara. (Dorst).

PICKLEWORM (Diaphania nitidalis) - SOUTH CAROLINA - Causing serious damage to unprotected cantaloupes and squash at Charleston. (Cuthbert, September 21). VIRGINIA - Continues to injure some plantings of cucumbers in eastern area. (Brubaker, Greenwood, Hofmaster, Sept. 24).

MELONWORM (Diaphania hyalinata) - TEXAS - Heavy local infestation attacking cantaloupes on the Winter Garden Experiment Station. (Richardson).

MELON APHID (Aphis gossypii) - SOUTH CAROLINA - Light but increasing populations on cantaloupes in Charleston area, September 21. (Cuthbert, Reid).

A LEPIDOPTEROUS LARVA (Heliothis phloxiphaga) - OREGON - Feeding on commercial peppermint in Jefferson County. (Det. S. E. Crumb). (Every).

TURNIP APHID (Rhopalosiphum pseudobrassicae) - LOUISIANA - Very light populations in several turnip fields in St. Charles and St. John the Baptist Parishes. (Oliver).

CABBAGE APHID (Brevicoryne brassicae) - UTAH - Damaging cabbage in some fields and gardens. (Knowlton).

CABBAGE WEBWORM (Hellula rogatalis) - LOUISIANA - Infesting a field of broccoli at three per linear foot of row in St. John the Baptist Parish. (Oliver).

CABBAGE LOOPER (Trichoplusia ni) - NEVADA - Damaging lettuce in Moapa Valley, Clark County. (Gallaway, Sept. 24). ARIZONA - Severe in all untreated lettuce fields in Maricopa County. (Ariz. Coop. Rept.). LOUISIANA - Infesting broccoli, cabbage and cauliflower over all the vegetable crop area. Requiring control many sections. (Oliver). SOUTH CAROLINA - Causing considerable injury to unprotected plantings of early fall collards in Charleston area. Light to moderate infestations persist in some treated collard fields. Some larvae on fall crop plants. (Cuthbert, Reid, Sept. 21). VIRGINIA - Largely responsible for injury to young kale, collards, and similar crops in southeastern truck crop area. (Brubaker, Greenwood, Hofmaster, Sept. 24).

SOUTHERN GREEN STINK BUG (Nezara viridula) - LOUISIANA - Infesting okra at 1-4 per linear foot of row in St. John the Baptist and East Baton Rouge Parishes. (Oliver).

SOUTHERN GARDEN LEAFHOPPER (Empoasca solana) - LOUISIANA - Infesting sweetpotatoes at 150 per 100 sweeps in Evangeline Parish, 75 per 100 sweeps in Acadia Parish, 110 per 100 sweeps St. Landry. (Oliver).

EUROPEAN EARWIG (Forficula auricularia) - PENNSYLVANIA - Infestation in a garden in Ridgway, Elk County. (Adams).

WESTERN SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata) - OREGON - Larvae entering tomatoes in commercial truck crop areas of Yamhill County. Economic loss to one grower's acreage. (Every). Larvae caused a reduction in yield of at least three tons per acre in 15 acres of beans at Junction City. (Morrison, September 16).

TOMATO FRUITWORM (Heliothis armigera) - SOUTH CAROLINA - Causing moderate injury to fall tomatoes in Charleston area, September 21. (Cuthbert, Reid). VIRGINIA - Still seasonably abundant on lima and snap beans in eastern area. (Brubaker, Greenwood, Hofmaster, Sept. 24). MARYLAND - Larvae of all sizes abundant on snap bean pods in Baltimore County. (U. Md., Ent. Dept.).

HORNWORMS (Protoparce spp.) - SOUTH CAROLINA - Causing considerable injury to fall tomatoes in Charleston area. (Cuthbert, Reid, Sept. 21).

WIREWORMS - FLORIDA - Conoderus probably amplicollis larvae averaging one per 1000 plants injuring tomatoes by boring into stems of newly-set plants in Dade County, September 17. (Wolfenbarger).

TOBACCO BUDWORM (Heliothis virescens) - TEXAS - Medium to heavy local infestation in plantings of sesame on the Weslaco Experiment Station. (Wene, Deer).

COTTON INSECTS

BOLL WEEVIL (Anthonomus grandis) - TEXAS - Heavy, widespread infestations in all succulent untreated cotton in central area. (Parenica).

BOLLWORMS (Heliothis spp.) - NEVADA - Survey of 2100 acres of cotton in Clark and Nye Counties revealed less than one percent infestation; lighter than usual. (Gallaway, Sept. 24).

PINK BOLLWORM (Pectinophora gossypiella) - TEXAS - The heavy infestation recently found between El Paso and Ysleta continues to build up but is localized. LOUISIANA - Some 278 specimens in one lot of gin trash at Lake Charles. Originated in the Johnson Bayou section of Cameron Parish. Field inspection showed a heavy infestation in one field and two other light infestations in this section, with green bolls abundant. (Pink Bollworm Cont. Proj., Sept. 15).

COTTON LEAFWORM (Alabama argillacea) - TEXAS - Heavy widespread infestation on all succulent untreated cotton in central area. (Parenica). ALABAMA - Common throughout southern area. (Arant).

COTTON LEAF PERFORATOR (Bucculatrix thurberiella) - CALIFORNIA - Continues to infest many fields in Imperial Valley. (Cal. Coop. Rept.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

PINE NEEDLE SCALE (Phenacaspis pinifoliae) - UTAH - Damaging mugho pine and yellow pine at Salt Lake City. (Knowlton).

NANTUCKET PINE MOTH (Rhyacionia frustrana) - MISSISSIPPI - Old field loblolly pine 2-10 feet high heavily infested in Oktibbeha County. Of 3761 tips examined, 67.5 percent were infested. (Neel).

A LEPIDOPTEROUS LARVA (Anisota sp.) - VIRGINIA - Defoliating oak trees in one area of Buckingham County. (Nichols, Morris).

AN OAK TWIG PRUNER (Hypermallus villosus) - RHODE ISLAND - Active on scattered oak trees in Gloucester. Typical damage in Smithfield and Cranston. (Mathewson, Caroselli).

BRONZE BIRCH BORER (Agrilus anxius) - PENNSYLVANIA - One specimen birch killed in Centre County. (Adams).

BALSAM-FIR SAWFLY (Neodiprion abietis) - WISCONSIN - Correction: CEIR 5(26)605 under sawflies, European spruce sawfly should read balsam-fir sawfly (Neodiprion abietis).

AZALEA CATERPILLAR (Datana major) - FLORIDA - Second generation larvae abundant and causing severe defoliation of azaleas at Gainesville, Alachua County. (Det. L. A. Hetrick). (Denmark).

COTTONY MAPLE SCALE (Pulvinaria innumerabilis) - RHODE ISLAND - Light infestation of a few red and silver maples in Providence area. Noted on two-and three-year old twigs. (Caroselli).

A GIANT HICKORY APHID (Longistigma caryae) - PENNSYLVANIA - Abundant on ornamentals in Beaver County. (Adams).

RED-HUMPED CATERPILLAR (Schizura concinna) - VIRGINIA - Has practically defoliated willow trees in one locality of Appomattox County. (Smith, Morris).

SPIDER MITES - IDAHO - Severe infestations on many ornamental evergreens in northern area. (Portman, Barr).

VIRGINIA CREEPER LEAFHOPPER (Erythroneura ziczac) - NEVADA - Increased to severe infestations during late August and during September. Virginia creeper 100 percent defoliated in western Nevada. (Gallaway).

A WILLOW BORER (Cryptorhynchus sp.) - RHODE ISLAND - Injury to poplar in Scituate area. (Caroselli).

YELLOW-NECKED CATERPILLAR (Datana ministra) - MISSISSIPPI - Numerous leaves of post oak trees infested in an abandoned field in Oktibbeha County. (Neel).

GIANT HORNET (Vespa crabo germana) - VIRGINIA - Severely damaging lilacs in Richmond area and also eating on apples. Many calls from counties adjacent to Richmond. (Willey).

INSECTS AFFECTING MAN AND ANIMALS

HOUSE FLIES - ARIZONA - Flies, mainly Musca domestica, populations index of two small towns in southeastern Maricopa and northwestern Pinal Counties: average of five highest grill counts in nine blocks week of September 19-23: 28.6. UTAH - Constitute a conspicuous problem in many communities. (Knowlton).

HORSE FLIES (Tabanus spp.) - LOUISIANA - Tabanus sp. and T. lineola, T. atratus, and T. americanum attacking cattle over southern half of State at 1-8 per 15-minute period. (Oliver).

MOSQUITOES - LOUISIANA - A very heavy population of adult Aedes and Anopheles in Plaquemine Parish. (Oliver).

HORN FLY (Siphona irritans) - LOUISIANA - Populations light to medium on several hundred head of cattle in southern half of State. (Oliver). OKLAHOMA - Untreated cattle in northwestern area have 1000-2000 flies per animal. (Howell).

CAT AND DOG FLEAS (Ctenocephalides spp.) - PENNSYLVANIA - Very abundant in a home in Cameron County. (Adams).

CUBAN ROACH (Panchlora cubensis) - OREGON - Single specimen sent in by Fremont Sprowls from Gresham. (Every).

COMMON CATTLE GRUB (Hypoderma lineatum) - OKLAHOMA - In about 5 percent of 500 cattle inspected in northwestern area. (Howell).

BROWN-BANDED ROACH (Supella supellectilium) - IDAHO - Two new infestations reported from Twin Falls and Kuna. Previously reported from Boise, Nampa, and Moscow. (Portman).

BLACK WIDOW SPIDER (Latrodectus mactans) - UTAH - A few found in homes in central area. (Knowlton). PENNSYLVANIA - A few specimens found in home in Lancaster County. (Pepper).

STABLE FLY (Stomoxys calcitrans) - UTAH - Seriously abundant in Davis County. (Knowlton).

PUNKIES (Leptoconops sp.) - NEVADA - Very abundant in eastern area. Abnormal moisture during August and September. (Gallaway).

BENEFICIAL INSECTS

DAMSEL BUGS - SOUTH DAKOTA - Quite large numbers in alfalfa fields of western area with counts up to 32 per 25 sweeps. (Hantsbarger).

STORED PRODUCTS INSECTS

PSOCIDS - NORTH DAKOTA - Infesting stored grain in Renville and Mercer Counties. Confused flour beetles also in Mercer grains. (N. D. Ins. Rept. Serv.).

EUROPEAN EARWIG (Forficula auricularia) - UTAH - Unusually abundant in the Mt. Pleasant area this season. (Funk).

MISCELLANEOUS INSECTS

CLUSTER FLY (Pollenia rudis) - UTAH - Has invaded some homes in northern area. (Knowlton).

CLOTHES MOTHS - UTAH - Damaging clothing, carpets and upholstered furniture in a number of counties. (Knowlton).

BOXELDER BUG (Leptocoris trivittatus) - UTAH - Increased appearance in homes and offices following cooler weather. (Knowlton).

PENNSYLVANIA - A nuisance in a home in Northampton County. (Pepper).

RECENT INTERCEPTIONS AT PORTS OF ENTRY

Of interest recently was the interception of a living adult pentatomid, identified as Plantia fimbriata (F.) with chrysanthemum flowers in air cargo from Australia at the Honolulu Airport (Rainwater). This insect has been reported injurious to various plants in parts of the Far East. In Japan, where it is known as the brown-winged green bug, it has been reported feeding on citrus, persimmon, peach, pear, mulberry, chestnut, and other plants. In China, it has been reported a pest of some importance on long bean (Vigna sesquipedalis) and a minor pest of lima bean (Phaseolus lunatus). In China, it has also been reported feeding on canna, chrysanthemum, morning glory and night shade. It is said to occur also in India, Malaya, and Indonesia. It is not known to occur in the United States.

(Compiled - Plant Quarantine Branch).

LIGHT TRAP COLLECTIONS

		Pseudal unipun.	Laphyg. frugip.	Agrotis ypsilon	Antic. gemma.	Feltia subter.	Heliothis armig. vires	Protoparce sexta quin.
TEXAS								
College Sta.	9/24-29	24	125	16		41	2	
LOUISIANA								
Tallah* B. Rouge	9/24-30 9/24-30	404 7	167 32	119 9	239 75	177 128	70 7	24 6
ALABAMA								
Auburn	9/24-30	75	19			26		
GEORGIA (Counties)								
Clarke Spalding Tift	9/17-23 9/17-23 9/18-24	97 110 52	81 39	18		30 129 31	3 2	1 13
SOUTH CAROLINA (County)								
Oconee	9/18-24	37					56 spp.	1
VIRGINIA (County)								
Pittsylvania	9/18-24							434 204

950

*Three traps at Tallulah.

WEATHER BUREAU'S 30-DAY OUTLOOK
October 1955

The Weather Bureau's 30-day outlook for October calls for temperatures to average below seasonal normals over most of the nation except for above normal in the South and near normal in the North Atlantic States, Ohio Valley, and Far West. Coldest weather is indicated in the Northern Plains and warmest in the extreme Southeast.

Precipitation is expected to exceed normal over most of the country except for subnormal amounts west of the Continental Divide and also along the Gulf and South Atlantic coasts.

This report released by the Weather Bureau on September 30, 1955.

Weather forecast given here is based on the official 30-day "Resume and Outlook", published twice a month by the Weather Bureau. You can subscribe through Superintendent of Documents, Washington 25, D. C. Price \$4.80 a year, \$2.40 for six months.

WEATHER FOR THE WEEK ENDING OCTOBER 3, 1955

Moderate to heavy rains in parts of the lower Great Plains and in most sections from the Mississippi Valley to the Atlantic Coast furnished additional soil moisture which was urgently needed in local areas east of the Continental Divide for fall seeding. Fair weather in most of the Far West favored harvesting operations. A cold front brought moderate to heavy rains to the middle and upper Mississippi Valley eastward on September 27 and 28, and along the entire East Coast on the latter date. Meantime a weak low pressure area brought light to moderate showers to the Pacific Northwest (heavy west of Cascades), and as it moved eastward, general moderate to heavy rains again fell in the middle and upper Mississippi Valley on September 29, over all the East on the 30th, and along the Atlantic Coast on October 1. Light to moderate showers were falling in the central and western portions of the lower Great Plains at the end of the period.

Rainfall totals were very light (under 0.25 inch) west of a line joining Amarillo, Texas and Minneapolis, Minnesota, and in virtually all areas west of the Continental Divide except western Washington, where totals at many stations exceeded an inch. No rain fell in most of California, Arizona, Utah, Nevada, and southern Idaho. Some heavy weekly totals were as follows: Roswell, New Mexico, 2.69 inches; Wichita Falls, Texas, 1.47; Oklahoma City, Oklahoma, 4.82; Wichita, Kansas, 5.46; Little Rock, Arkansas, 2.49; Nashville, Tennessee, 3.71; Louisville, Kentucky, 2.44; Indianapolis, Indiana, 3.01; Charlotte, North Carolina, 5.88; and Scranton, Pennsylvania, 2.88 inches.

Maximum temperatures were consistently in the 90's or high 80's in most southern areas during the week, and rose into the 90's in California's central Valley at the end. In northern areas daytime temperatures were generally in the 50's and 60's and minima during the latter half fell below freezing in many areas.

(Summary Supplied by U.S. Weather Bureau).



VOL. 5 No. 41

OCTOBER 14, 1955

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Cooperative
**ECONOMIC INSECT
REPORT**

Issued by

PLANT PEST CONTROL BRANCH

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL BRANCH

ECONOMIC INSECT SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Branch serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Economic Insect Survey Section
Plant Pest Control Branch
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

EUROPEAN CORN BORER infestation at high level, 349 borers per 100 plants, in Iowa. Considerable build-up in Wisconsin. Severe infestation of second generation in many fields in Illinois. (p. 955).

FALL ARMYWORM light to heavy on alfalfa and small grains in several Texas counties and requiring controls on young oats in Louisiana. (p. 955). HESSIAN FLY populations lower than last year in Kansas. (p. 956).

CHINCH BUG reported from Florida for first time. (p. 956).

GARDEN WEBWORM of concern on alfalfa at Yuma, Arizona and on forage and small grains in some Texas counties. (p. 956). YELLOW CLOVER APHID causing considerable damage to new seedlings in Graham County, Arizona, increasing in Box Elder and Weber Counties, Utah, continues moderate to heavy in Platte River Valley, Nebraska, and in Brazos and Burleson Counties, Texas. (p. 957). SWEETCLOVER WEEVIL building up in eastern and northeastern Nebraska. (p. 958). WHITE-FRINGED BEETLE survey results. (p. 958).

CITRUS BLACKFLY collected in Laredo, Texas. (p. 959). BLACK PECAN APHID heavily infesting pecan trees in northwestern Louisiana. (p. 960).

MEXICAN BEAN BEETLE beginning to damage young snap beans in eastern Virginia. Damage to beans in Franklin County, Mississippi and at Auburn, Alabama. (p. 960). BEET LEAFHOPPER survey results in Texas. (p. 960). CABBAGE LOOPER causing serious losses on cabbage in southern Wisconsin and severe on lettuce at Glendale, Arizona. (p. 961). SWEETPOTATO WEEVIL unusually heavy in Falls County, Texas; about 2 percent infestation in Louisiana. (p. 961).

SAW-TOOTHED GRAIN BEETLE very abundant in southern Wisconsin. Most common pest in stored grain in South Carolina. (p. 964).

BOXELDER BUG very abundant in Iowa and southeastern Wisconsin. (p. 965).

STATES reporting - 27.

ADDITIONAL NOTES (p. 966).

WEATHER FOR THE WEEK ENDING OCTOBER 10, 1955

A belt of moderate to heavy rain extending from the lower Great Plains to the upper Mississippi Valley and Great Lakes at the beginning of the period moved slowly eastward during the week, resulting in weekly totals of one-half to over 5 inches. The heaviest rains fell in a wide belt extending from Oklahoma to New England. In Oklahoma heavy flood damage was reported in the Washita and Red River Valleys. East of the Rocky Mountains moderate to heavy rains which have fallen during the past 3 weeks have replenished soil moisture to the extent that no serious dry areas remain, although more rain is needed in local areas in the South and upper Mississippi Valley. Kansas, for example, received 4 to 9 inches of moisture during this 3-week period and wheat prospects are good. Precipitation in the far West was mainly limited to extreme northern areas west of the Continental Divide, where showers occurred at the beginning and end of the week.

Cool Pacific air overspread the far West early in the week, reducing temperatures 15 to 20°. Freezing and frost occurred in the Pacific States east of the Cascade and Sierra Nevada Mountains and in all of the Mountain States except the extreme southern part. As the cool air continued eastward, freezing and frost also occurred in the western Great Plains as far south as the Texas Panhandle on the 7th and 8th. In many sections this was the first freeze of the season. Freezing was responsible for only limited damage to crops since they were already mature. The cool air moved across the Eastern States over the weekend, reducing temperatures to normal levels or below. Most of the South reported the coolest weather since May. The period ended with fair weather and rising temperatures everywhere, except in the Pacific Northwest, where rain was still falling. Temperatures, unusually high for the season in central areas on the last day, reached 92° at Havre, Montana, 90° at Williston, North Dakota, and 93° at Pierre, South Dakota. Temperatures for the week averaged below normal in the extreme southern Great Plains and west of the Continental Divide, with the greatest departures of 6° occurring at Yakima, Washington and Pendleton, Oregon. The week was warmer than normal elsewhere, as much as 6° in some North Central Interior sections topped by 8° at Detroit, Michigan.

(Summary Supplied by U. S. Weather Bureau).

Reports in this issue are for the week ending October 7, 1955, unless otherwise designated.

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - IDAHO - Results of survey for adults show that populations throughout the State are generally lighter than for the last four years except in the extreme southeastern area, where populations started to build up. Economic populations found in rangeland in these counties with the number of acres which are estimated as requiring control in 1956: Fremont, 35,000; Idaho, 60,000; Custer, 10,000; Lemhi, 2000. Spotted economic infestations in several other counties. (Evans, Manis). WYOMING - Damaging second cutting alfalfa in Lincoln County. (Spackman). KANSAS - At one location in south central Jefferson County, egg pod counts averaged about three per square yard in fence rows with about 75 percent of the pods containing predators. (Matthew). LOUISIANA - Melanoplus spp. infesting coastal Bermuda grass with up to three per square foot in Claiborne and Tensas Parishes. (Oliver). MARYLAND - Populations, principally Melanoplus femur-rubrum, averaged 10 adults per square yard in large pastures, fields, and along roadsides in central Montgomery County. (U. Md., Ent. Dept.).

EUROPEAN CORN BORER (Pyrausta nubilalis) - VIRGINIA - Two fields in Brunswick County averaged 191 larvae per 100 stalks with 76 and 64 percent of stalks infested. (Morris). ILLINOIS - Severe infestation of second generation in many fields. (Petty). IOWA - Infestation at high level and the average for State is 349 borers per 100 plants compared with 483 in the fall of 1954. (Harris). WISCONSIN - Survey for overwintering larvae indicates a considerable buildup in populations throughout the State compared with previous years. (Chambers). NORTH DAKOTA - Fall survey in Traill County showed an average of 78.3 percent plants infested. Average number of larvae per plant was 1.3. (N. D. Rept. Serv.). NEBRASKA - From 2-25 per stalk in Dakota County. (Roselle, Andersen). KANSAS - Fields in Jefferson County averaged 33 percent infestation, at rate of one larva per stalk. From 4-80 percent infestation so far in Douglas, Leavenworth and Shawnee Counties. (Matthew).

CUTWORMS - Active in wheat in McClain and Oklahoma Counties. (Flora). LOUISIANA - Flights of Agrotis gladiaria occurring in northern area. (Oliver).

FALL ARMYWORM (Laphygma frugiperda) - TEXAS - Light to heavy infestations on alfalfa, small grains, pastures, and lawns in Denton, Wise, Jim Wells, Coryell, and Victoria Counties. (Chada, Brandes, Tomlin, McCombs). LOUISIANA - Infesting young oats in East Baton Rouge, East Feliciana, West Feliciana, Tensas, and St. Helena Parishes. Many fields treated. (Oliver).

SORGHUM WEBWORM (Celama sorghiella) - KENTUCKY - Has caused some damage to sorghum at Murray. (Price). TEXAS - Light to heavy spotted infestation on grain sorghums in Rockwall, Frio, Burleson, and Brazos Counties. (Hawkins, Novasod, Davis).

HESSIAN FLY (Phytophaga destructor) - KANSAS - Percent infestation by county, based on 50-stem sample: Marshall, 1.1; Riley, 1.1; Linn, 0.5; Cherokee, 1.2; and Bourbon, 5.3. No other infestations found in State. Much lower populations than last year. (Jones, Matthew).

BROWN WHEAT MITE (Petrobia latens) - OKLAHOMA - A survey of 10 fields in Kingfisher County shows a beginning infestation in fall-seeded wheat. Mites in six of ten fields examined but highest population 1.2 per linear foot of row. Most of mites were recently hatched but in one area west of Hennessey adults predominated. (Henderson).

GREEN JUNE BEETLE (Cotinis nitida) - VIRGINIA - Heavy in a lawn in Prince Edward County. (Striplin, Rowell). Active in some pastures, lawns, and some hay fields in eastern area. (Rowell).

SOD WEBWORMS - RHODE ISLAND - Light damage in a few lawns in Kingston. (Kantack).

TURF INSECTS - RHODE ISLAND - Of 471 scarabæid larvae taken in 14 samples in turf in Newport County, 36.73 percent were Japanese beetle, 53.92 percent were Asiatic garden beetle, and 9.3 percent were other scarabæids. (Mathewson).

A GRASSWORM (Mocis spp.) - FLORIDA - All stages, averaging 50 per square yard on Bermuda grass at Alturas, Polk County, September 7. (Wesson). Averaging two per plant of pampas grass near White City, St. Lucie County, September 14. (Campbell).

A LEAF ROLLER (Platynota stultana) - ARIZONA - Prevented some growers in the Yuma area from producing an alfalfa seed crop when control started too late. (Ariz. Coop. Rept.).

GARDEN WEBWORM (Loxostege similalis) - ARIZONA - Caused noticeable damage to alfalfa in some locations at Yuma with 20-30 per 100 sweeps. (Ariz. Coop. Rept.). TEXAS - Light to heavy widespread infestation on alfalfa and small grain in Denton and Wise Counties. Some alfalfa fields completely destroyed. (Chada). Heavy widespread infestations on forage and small grain crops in Jim Wells County. (Brandes).

CHINCH BUG (Blissus leucopterus) - FLORIDA - Adults collected on corn, Escambia County, August 3. First record for State as far as known. (Det. R. F. Hussey). (Mead).

ALFALFA CATERPILLAR (Colias philodice eurytheme) - ARIZONA - Abundant on alfalfa on Yuma Mesa, 2-3 per sweep. (Ariz. Coop. Rept.). UTAH - Moderate infestation is general in northern and central area alfalfa fields. (Knowlton).

BEET ARMYWORM (Laphygma exigua) - TEXAS - From 4-6 per 100 sweeps on alfalfa in Brazos and Burleson Counties. (Randolph).

YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli) - TEXAS - Light to medium local infestations on alfalfa and small grains in Denton and Wise Counties. Heavy infestations in irrigated alfalfa, light infestations in small grains, but many larvae are small. (Chada). UTAH - CEIR 5 (38):905. Prodenia ornithogalli should read Prodenia sp.

A CATERPILLAR (Pyroderces rileyi) - LOUISIANA - Infesting grain sorghum in Claiborne and Tensas Parishes. (Oliver).

YELLOW CLOVER APHID (Myzocallis trifolii) - ARIZONA - General on alfalfa in Graham County, causing considerable damage to new seedlings. Not started to build up in Yuma area. (Ariz. Coop. Rept.). UTAH - Populations have increased in Box Elder and Weber Counties. (Knowlton). NEBRASKA - Low population on red clover in Saunders County. (Hill). Reduced somewhat by moist weather around Trenton in the Republican River Valley. Continues moderate to heavy in Platte River Valley. Populations in York and Hamilton Counties very light. (Andersen). TEXAS - Can be found in almost any alfalfa field where there is green growth but infestation light. Very heavy infestations in a few alfalfa fields that were irrigated in Denton and Wise Counties. (Chada). Infestations increasing in Brazos bottoms of Brazos and Burleson Counties. (Randolph). LOUISIANA - Infesting all of ten alfalfa fields and one white clover field examined in Bossier Parish, one of two alfalfa fields examined in Red River Parish, and two of three alfalfa fields examined in Natchitoches Parish. (Oliver).

PEA APHID (Macrosiphum pisi) - ARIZONA - Quite abundant on alfalfa at Marana, Pima County, September 29. (Ariz. Coop. Rept.).

VELVETBEAN CATERPILLAR (Anticarsia gemmatilis) - NORTH CAROLINA - Light infestation in soybeans in Johnson County. (Dogger). LOUISIANA - Infesting alfalfa fields in Red River and Natchitoches Parishes, causing complete defoliation in several fields examined. (Oliver).

THRIPS - UTAH - Unusually numerous on blossoming alfalfa in Box Elder and Weber Counties. (Knowlton).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - ARIZONA - Abundant on alfalfa in Yuma area, 60 per 100 sweeps. (Ariz. Coop. Rept.). TEXAS - From 60-70 per 100 sweeps on alfalfa in Brazos and Burleson Counties. (Randolph).

SWEETCLOVER WEEVIL (Sitona cylindricollis) - NEBRASKA - Populations building up with moist weather. Counts in eastern and northeastern areas 5-10 per 25 sweeps. (Andersen).

STINK BUGS - ARIZONA - Very numerous everywhere on alfalfa in Yuma area. From 40-50 per 10 sweeps in two fields and 2-10 per 10 sweeps in some others. Seed crop very poor where infestation high. In Bermuda grass seed fields at 8-10 per square foot near alfalfa fields in Yuma area. (Ariz. Coop. Rept.).

PLANT BUGS - UTAH - Lygus bugs, largely L. elisus and L. hesperus still very numerous in alfalfa fields in northern area. (Knowlton).

WHITE-FRINGED BEETLES (Graphognathus spp.) - Surveys between July 1 and September 30 in the eight infested southeastern states resulted in finding of white-fringed beetles for first time in six additional counties: Calhoun County, Alabama; Butts, Henry and Morgan Counties, Georgia; Livingston Parish, Louisiana; and Rowan County, North Carolina. Infestations in these counties ranged from 10 acres to approximately 200 acres. Considerably more acreage was found infested when a delimiting program was completed at Millington, Tennessee. Additional infested properties were found in infested counties in Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, and Tennessee. Largest increase in infested acreage was in Alabama, Mississippi, and Georgia; while in Louisiana and South Carolina, only 234 and 303 acres, respectively, have been found since October 1, 1954. A cooperative survey was also completed during this period in New Jersey without discovering additional areas of infestation in that State. (WFB Program).

FRUIT INSECTS

RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) - OHIO - Injury by third brood common. From 5-10 percent of fruit injured in a few orchards. (Cutright).

LESSER PEACH TREE BORER (Synanthedon pictipes) - LOUISIANA - Heavily infesting about 150 peach trees in Claiborne Parish by entering trees through wounds of pruning and plowing. (Oliver).

HALL SCALE (Nilotaspis halli) - CALIFORNIA - Removals of infested trees and shrubs in the Chico City infestation totaled 21 during the period. Total removals to date are about 3578 with about 1601 remaining. Other hosts in Chico City area have been readied for fumigation or pulling. (Hall Scale Proj., Sept. 1955).

CODLING MOTH (Carpocapsa pomonella) - OHIO - Lightest infestation in years. Very few late entries. (Cutright).

CALIFORNIA PRIONUS (Prionus californicus) - UTAH - Has killed another twelve apple trees and 29 apricot trees in one large orchard at Holladay, Salt Lake County. Damage was serious in 1954 also. (Parrish, Knowlton).

APPLE MAGGOT (Rhagoletis pomonella) - OHIO - Unusual number of second-brood flies. Observed ovipositing as late as October 3 at Wooster. Injury present in several commercial orchards. (Cutright).

COTTONY-CUSHION SCALE (Icerya purchasi) - ARIZONA - Three outbreaks in Yuma area brought under control with vedalia beetles. (Ariz. Coop. Rept.).

YELLOW SCALE (Aonidiella citrina) - FLORIDA - Averages 20 per leaf of grapefruit at Dunedin in Pinellas County, September 26. (Miller).

THRIPS - ARIZONA - Moderately abundant on citrus at Yuma; damage most noticeable on small trees. (Ariz. Coop. Rept.).

SALT-MARSH CATERPILLAR (Estigmene acrea) - ARIZONA - Has caused some loss of young citrus leaves of some citrus groves at Yuma. (Ariz. Coop. Rept.).

PURPLE SCALE (Lepidosaphes beckii) - LOUISIANA - In complex with Coccus hesperidum and Phyllocoptruta oleivora infesting oranges and satsumas in St. Bernard and Plaquemine Parishes. (Oliver).

CITRUS BLACKFLY (Aleurocanthus woglumi) - TEXAS - Infestation found September 20 in a tourist court about 25 blocks north of the international bridge on the Laredo-San Antonio highway. On September 26, a second infestation was found about three blocks from the first in a private residence. A total of three leaves bearing pupae were taken from two trees on the two properties. (Mex. Fr. Fly and Cit. Blackfly Cont. Prog., Sept. 16-20).

A GOOSEBERRY BORER (Xylocrius agassizi) - OREGON - Injured 100 percent of gooseberries in a 15-acre planting over a period of several years, necessitating removal of all plants this fall. (Rosenstiel).

WALNUT CATERPILLAR (*Datana integerrima*) - VIRGINIA - Injuring pecan foliage locally in Spotsylvania County. Larvae about three-fourths mature. (Morris).

BLACK PECAN APHID (*Melanocallis caryaefoliae*) - LOUISIANA - Heavily infesting pecan trees in northwestern area. (Oliver).

TRUCK CROP INSECTS

BEAN LEAF ROLLER (*Urbanus proteus*) - LOUISIANA - Infesting snap beans in Plaquemine Parish. (Oliver).

BEAN LEAF BEETLE (*Cerotoma trifurcata*) - VIRGINIA - In complex with cutworms, salt-marsh caterpillars and woollybears, causing some damage to most fall snap beans in eastern area. (Brubaker, Greenwood, Hofmaster).

MEXICAN BEAN BEETLE (*Epilachna varivestis*) - VIRGINIA - Appearing in considerable numbers in eastern area. Young snap beans beginning to show injury. A large number of adults expected to go into hibernation this fall. (Brubaker, Greenwood, Hofmaster). MISSISSIPPI - Reported as causing damage to beans in Franklin County. (Hutchins).

BEAN AND PEA WEEVILS - OKLAHOMA - Active generally over State. (Flora).

CORN EARWORM (*Heliothis armigera*) - VIRGINIA - Causing light to moderate injury to snap beans and lima beans in eastern area. With armyworms and yellow-striped armyworm infesting kale and collards in the Churchland area west of Norfolk. Infesting about 25 percent of head lettuce in one field on Eastern Shore. (Brubaker, Greenwood, Hofmaster).

BLACK CUTWORM (*Agrotis ypsilon*) - MISSISSIPPI - Feeding on vegetables in Jackson County. (Bond).

FALL ARMYWORM (*Laphygma frugiperda*) - MISSISSIPPI - Feeding on turnips. (Hester, Pepper).

BEET LEAFHOPPER (*Circulifer tenellus*) - TEXAS - Results of survey show very few leafhoppers on Russian-thistles in Trans-Pecos area. None found in Pecos, Jeff Davis, Val Verde and Zavala Counties. Range per 100 sweeps in other counties surveyed: Crane, 0-7; Winkler, 0-3; Gaines, 3-6; Andrews, 5-8; Loving, 0-1; Reeves, 0-9; Presidio, 0-7; Brewster, 0-2; Terrell, 0-1. Heavier populations found in northwestern area. Average per 100 sweeps in northwestern counties:

Bailey, 10.5; Castro, 32.0; Childress, 30.0; Crosby, 4.3; Dickens, 60.0; Foard, 16.0; Hale, 20.0; Hall, 35.0; Haskell, 12.0; Hockley, 32.0; Howard, 16.0; Jones, 34.0; Knox, 16.0; Lamb, 10.5; Lubbock, 39.5; Motley, 41.3; Parmer, 34.0; Sterling, 20.0; Taylor, 4.0. (Gaines).

APHIDS - Heavy local infestations on tomatoes and peas in Brazos County. (King).

BEEF WEBWORM (Loxostege sticticalis) - LOUISIANA - Very severe infestation in beets in St. Bernard Parish. (Oliver).

CABBAGE LOOPER (Trichoplusia ni) - ARIZONA - Severe on lettuce one month from harvest at Glendale, Maricopa County. (Ariz. Coop. Rept.). LOUISIANA - Continues to infest broccoli, cabbage, and cauliflower in St. Bernard and Plaquemine Parishes. (Oliver). WISCONSIN - Has been very abundant in cabbage-growing areas of southern section, causing serious losses. (Chambers).

HARLEQUIN BUG (Murgantia histrionica) - TEXAS - Heavy local infestations on tomatoes in Brazos County. (King).

SOUTHERN ARMYWORM (Prodenia eridania) - MISSISSIPPI - A number observed for first time this year in Harrison County. (McGehee).

RASPBERRY ROOT BORER (Bembecia marginata) - OREGON - Larvae at ground level and up to one inch above ground level in last week of September in Willamette Valley. (Rosenstiel).

SWEETPOTATO WEEVIL (Cylas formicarius elegantulus) - TEXAS - Heaviest infestation in recent years in Falls County. (King). LOUISIANA - Now from 4-10 percent infestation with about two percent average infestation for the season. Expected to increase due to longer exposure. Found for first time in Wilkinson County, Mississippi, and three additional infestations found in Bibb County, Georgia. (Sweetpotato Weev. Cont. Prog., July 1-Sept. 30).

STRAWBERRY CROWN MOTH (Ramosia bicinipennis) - OREGON - In complex with symphylids damaged over 80 percent of a seven-acre planting of blackcap raspberries in Dundee. (Stephenson). Larvae injuring 60 percent of a 12-acre field of blackcap raspberries southeast of Oregon City and injuring 80 percent of the blackcaps in another nearby planting of eight acres. (Rosenstiel).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

SOUTHERN PINE BEETLE (Dendroctonus frontalis) - NORTH CAROLINA - Attacking a moderate acreage of pines on city limits of Asheville. (Merkel, Farrier).

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - KANSAS - Reports received of its discovery in Norton County, extending the northwestern distribution. (Matthew).

IPS BEETLES - TEXAS - Heavy widespread infestation on loblolly and shortleaf pines in Montgomery and Anderson Counties. (Suneson, Thatcher).

TURPENTINE BEETLES (Dendroctonus spp.) - TEXAS - Heavy infestations on loblolly and shortleaf pines in Montgomery County. (Suneson). D. terebrans larvae and adults heavy on loblolly pines in Cherokee County with 50 percent of trees attacked. (Thatcher).

TWIG GIRDLER (Oncideres cingulatus) - VIRGINIA - Continue to damage honeylocust heavily in a southeastern area nursery and causing some damage to some persimmon and ash trees. (Phillips, Harrell, Miller).

FALL WEBWORM (Hyphantria cunea) - MISSISSIPPI - A number of gum and persimmon trees defoliated in Jackson County. (Bond).

EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana) - WISCONSIN - Frequently reported from nurseries and parks throughout southeastern area. (Chambers).

DOUGLAS-FIR BEETLE (Dendroctonus pseudotsugae) - WYOMING - Causing damage near Hyattsville. (Spackman).

PINE NEEDLE SCALE (Phenacaspis pinifoliae) - VIRGINIA - So numerous on some pines in Galax area that they are killing trees. (Holcomb). Light to medium on Austrian and Mugho pines in a nursery in southeastern area. (Phillips, Harrell, Miller).

ORANGE-STRIPED OAKWORM (Anisota senatoria) - TEXAS - In complex with Heterocampa manteo defoliating several thousand acres of oak trees in Montgomery and Liberty Counties. (Webster).

LACE BUGS (Stephanitis sp.) - VIRGINIA - Light to heavy on some nursery stocks of pyracanthas, azaleas, and crataegus in southeastern area. (Phillips, Harrell, Miller).

BAGWORMS - SOUTH CAROLINA - Infesting arborvitae. Most numerous they have ever been in the Spartanburg area. (McCown).

APHIDS - UTAH - Pterocomma sp. extremely abundant on golden willow trees at Francis, Summit County, during August and into September. (Moore, Knowlton).

MIMOSA WEBWORM (Homadaula albizziae) - MARYLAND - Larvae still active and injuring mimosa trees in Anne Arundel and Baltimore Counties. (U. Md., Ent. Dept.).

WALNUT SCALE (Aspidiotus juglans-regiae) - VIRGINIA - Light to heavy on holly in a nursery in southeastern area. (Phillips, Harrell, Miller).

COCONUT SCALE (Aspidiotus destructor) - FLORIDA - Adults averaging 100 per leaf on tropical-almond at South Miami, Dade County. (Dowling).

WHITE PEACH SCALE (Pseudaulacaspis pentagona) - VIRGINIA - Light to heavy on red twig dogwood, lilac, willow, and other nursery plants in southeastern area. (Phillips, Harrell, Miller).

CAMELLIA SCALE (Lepidosaphes camelliae) - VIRGINIA - Light to heavy on camellias in a southeastern area nursery. (Phillips, Harrell, Miller).

A COTTONWOOD CROWN BORER (Aegeria tibialis) - UTAH - Damaging poplar trees at Logan. (Det. H. W. Capps). (Henninger, Knowlton).

A JUNIPER MEALYBUG (Pseudococcus juniperi) - KANSAS - A survey in Pittsburg County showed ten additional infestations. Was found for the first time in that area of State, August 1955. (Calkins).

SCALE INSECTS - FLORIDA - Adults of Aonidiella orientalis averaging 200 per leaf of cycas at South Miami, Dade County, September 28. (Dowling). A scale, Toumeyella sp., attacking longleaf pines and giving plants a white, dusty appearance near Gonzales, Escambia County. (Smith). VIRGINIA - Ceroplastes ceriferus infestation from light to heavy on holly, boxwood, flowering quince, camellias, and gardenias in a nursery in southeastern area; light to heavy infestations of Aspidiotus pseudopsinosus on holly; heavy infestation of Pseudaonidia paeoniae on camellias. (Phillips, Harrell, Miller).

GIANT HORNET (Vespa crabo germana) - VIRGINIA - Causing medium damage to lilac at a locality in Spotsylvania County. (Kosh).

IRIS BORER (Macronoctua onusta) - VIRGINIA - Have heavily damaged iris rhizomes at one locality in Loudoun County. (Burr, Rowell).

GOLDEN OAK SCALE (Asterolecanium variolosum) - VIRGINIA - Light to heavy infestations on several species of oak in a nursery in southeastern area. (Phillips, Harrell, Miller).

GLOOMY SCALE (Chrysomphalus tenebrosus) - VIRGINIA - Light to heavy on red and silver maples and very light on honeylocust trees in southeastern nursery. (Morris).

INSECTS AFFECTING MAN AND ANIMALS

A CEREAL MITE (Tyrophagus americanus) - WISCONSIN - Has attracted considerable attention by annoyance to farmers working with feed and straw. (Chambers).

BLACK WIDOW SPIDER (Latrodectus mactans) - NORTH CAROLINA - Numerous and widely distributed immature stages in houses in Wake County. (Libeau, Jones). VIRGINIA - Very numerous and causing concern to residents in a subdivision of Blacksburg. (Dryling). An unusually large number in areas of Bedford County and one man bitten. (Darnell).

MOSQUITOES - UTAH - More abundant on fresh water marshes than in 1954 in vicinity of Salt Lake City, especially Aedes dorsalis. Principal species about the same as in 1954; Culex tarsalis and Culiseta inornata. (Rees).

HORN FLY (Siphona irritans) - OKLAHOMA - Populations on untreated cattle in northwest area average 750-800 per animal. (Flora).

STORED PRODUCTS INSECTS

SAW-TOOTHED GRAIN BEETLE (Oryzaephilus surinamensis) - WISCONSIN - Very abundant in many farm granaries in southern area. Several large consignments of flour condemned also. (Chambers). SOUTH CAROLINA - Most common pest of stored wheat, oats, and barley. (McAlister, Sept. 29).

A RICE MOTH (Corcyra cephalonica) - IOWA - Infestation found in corn meal at Ankeny. (Harris).

LESSER MEALWORM (Alphitobius diaperinus) - MARYLAND - Heavy infestation of larvae and adults in corn cob litter of brooder house in Centreville, Queen Annes County. Larvae have attacked dying and dead chicks. (U. Md., Ent. Dept., Oct. 3).

GRAIN WEEVIL (Sitophilus granarius) - WISCONSIN - With Tribolium confusum and Oryzaephilus surinamensis very abundant throughout southern area. (Chambers).

PSCOCIDS (Liposcelis sp.) - NEBRASKA - Very abundant in stored wheat in Trenton. (Hill).

BENEFICIAL INSECTS

LADY BEETLES - IDAHO - Extremely heavy populations in flight, entering hibernation in forested areas of Latah County. (Manis).

MISCELLANEOUS INSECTS

OLD HOUSE BORER (Hylotrupes bajulus) - MARYLAND - Larvae infesting timbers in basement of home, Upper Marlboro, Prince Georges County. (U. Md., Ent. Dept.).

AMBROSIA BEETLES - MISSISSIPPI - Xyleborus sp. emerging from oak floor recently laid in a new house. (Bond).

COCKROACHES - WISCONSIN - Appear to be more numerous than usual. (Chambers).

WOOLLYBEARS - WISCONSIN - Unusual numbers attracting much attention. (Chambers).

WASPS (Polistes spp.) - WISCONSIN - Many reports received from home owners being annoyed. (Chambers).

CARPET BEETLES - WISCONSIN - Anthrenus scrophulariae and Attagenus piceus have been reported more abundant this fall by home owners. (Chambers).

BOXELDER BUG (Leptocoris trivittatus) - IOWA - Extremely numerous with many reports from various portions of State. (Harris). NORTH CAROLINA - Moderate infestation in Wake County. (Scott). WISCONSIN - Very abundant in southeastern area. (Chambers).

RECENT INTERCEPTIONS AT PORTS OF ENTRY

Of recent interest was the unusual interception of an adult pentatomid, identified as Scotinophora lurida (Burm.) with orchids in air express from Formosa at Seattle, Washington (Schoening.) This insect has been reported injurious to rice in Japan, Formosa, China, India, Okinawa and Ceylon. Reported injury varies from slight to occasionally serious, but seems to be of a minor nature ordinarily. Observations on the life history of the insect in Japan indicate there is one generation a year with hibernation occurring in the adult stage. Eggs hatch in about one week. Nymphs and adults congregate at bases of plants and start feeding. Later in the season they migrate to the heads of the

rice to feed on the developing grain. Specimens of S. lurida have been intercepted occasionally in recent years in rice straw packing from Ceylon and Japan at West Coast and Atlantic ports. It is not known to occur in the United States.

(Compiled - Plant Quarantine Branch).

ADDITIONAL NOTES

ALABAMA - All observations in vicinity of Auburn. CORN EARWORM and FALL ARMYWORM causing considerable damage to ears of late sweet corn. CORN LEAF APHID attacking sweet corn. THREE-CORNERED ALFALFA HOPPER present in large numbers on alfalfa and sericea lespedeza. From 50-75 percent of alfalfa being damaged. CABBAGE LOOPER and CABBAGE APHID damaging collards. MEXICAN BEAN BEETLE abundant on pole lima beans. Heaviest infestation of SOUTHERN GREEN STINK BUG in this area since 1950. Many garden crops, especially corn and beans, infested. HARLEQUIN BUG and HORNWORMS in small numbers in gardens. (Guyton).

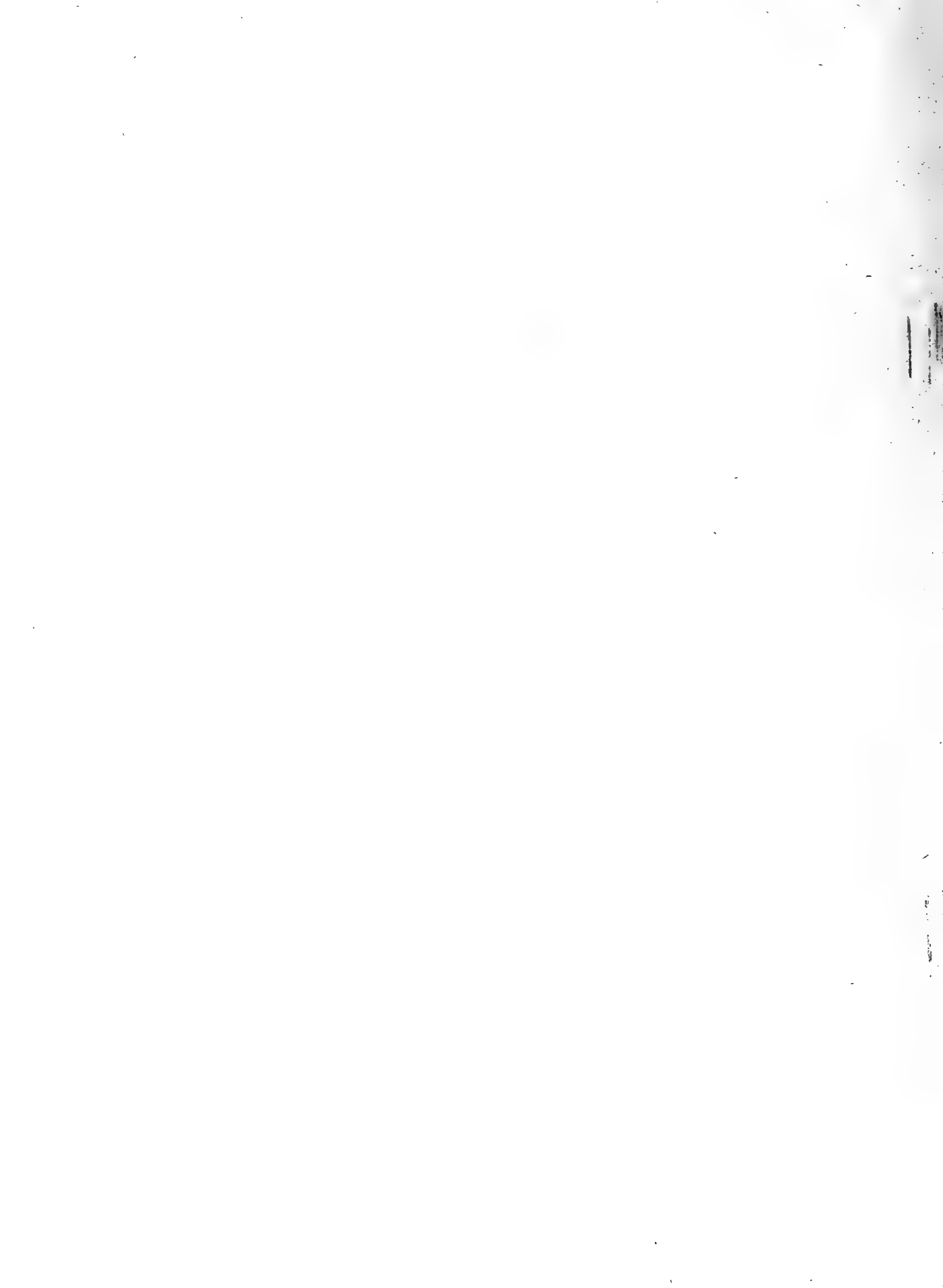
WASHINGTON - A NITIDULID (Glischrochilus quadrisignatus) - An unusual occurrence, heavy infestation boring into ripening strawberries in a small planting at Pullman during September. Sound fruits were attacked. (Johansen, James).

SOUTH DAKOTA - EUROPEAN CORN BORER - Average percent of plants infested is 66, with average of 116 borers per 100 plants in Hamlin, Kingsbury, Brookings, Miner, Moody and Lake Counties. ALFALFA CATERPILLAR still fairly abundant in alfalfa fields of east-central region, five larvae in 25 sweeps. TARNISHED PLANT BUG also quite numerous in alfalfa fields of east-central region with 23 adults in 25 sweeps. ALFALFA PLANT BUG in alfalfa with counts up to 10 adults per 25 sweeps. BOXELDER BUG becoming nuisance in and around homes of Brookings area. (Hantsbarger). BRONZE - BIRCH BORER quite numerous in eastern areas with many of the infested birch trees dying. (Spawn).

LIGHT TRAP COLLECTIONS

		Pseudal unipun.	Laphyg. frugip.	Agrotis ypsilon subter.	Feltia armig.	Heliethis vires	Protoparce sexta	Antic gemma.
KANSAS	10/4-7			20	144			
Manhattan	9/28-10/5			125	627			
Garden City								
TEXAS	10/3-5	4	67		33			
College Sta.								
LOUISIANA	10/1-7	6	158	2	111	7	1	39
B. Rouge	10/1-7	173		109	257	270		251
Tallah* [*]								
ALABAMA	10/2-8	7	13			1		
Auburn								
SOUTH CAROLINA (Counties)	10/4-10	3	11	7	19	13	4	5
Charleston	10/2-6	15	1	3				10
Oconee								15 spp.
NORTH CAROLINA (County)	10/1-7					5		1
Duplin								
VIRGINIA (County)	9/24-30						244	99
Pittsylvania								
GEORGIA (Counties)	9/24-30	50	20	11	8	27	2	7
Spalding	9/24-30	19			2	8		
Clarke	9/26-10/1	23	21		9			6
Tift								67

*Three traps at Tallulah.



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OCTOBER 21, 1955

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Cooperative
**ECONOMIC INSECT
REPORT**

Issued by

PLANT PEST CONTROL BRANCH

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL BRANCH

ECONOMIC INSECT SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Branch serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Economic Insect Survey Section
Plant Pest Control Branch
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

EUROPEAN CORN BORER infestation averages 282 borers per 100 plants in Illinois, 108 in northeast South Dakota, 35 to 329 in some Virginia counties. Fifth instars particularly abundant in grain sorghum in northern Alabama. (p. 971).

FALL ARMYWORM abundant in alfalfa in Oklahoma. Damage to small grains in some counties in this State and in Mississippi. (p. 972).

GREENBUG appearing on wheat in Deaf Smith and Castro Counties, Texas. (p. 972). Results of MEADOW SPITTLEBUG survey in Ohio. (p. 973).

YELLOW CLOVER APHID on alfalfa will be called SPOTTED ALFALFA APHID. Since the discovery of the aphid outbreak on alfalfa in New Mexico in early 1954, the species involved in this and other States on this host has been referred to as the yellow clover aphid (Myzocallis trifolii) in the Cooperative Economic Insect Report. The taxonomy of this aphid has been undergoing detailed study, however, and until a generally accepted scientific name is adopted for the form on alfalfa, the Report will carry all notes on it under "Spotted Alfalfa Aphid." This aphid is reported from Missouri for the first time. Causing considerable damage in Cozad area of Nebraska. Marked increase in populations in Utah. (p. 974).

A ROOT APHID causing heavy losses in some lettuce in Puyallup Valley, Washington. (p. 977). CORN EARWORM causing severe local damage to snap beans in northwestern Arkansas and abandonment of one lettuce crop on Eastern Shore, Virginia. (p. 977). ONION MAGGOT severe on fall-planted onions in western Washington. (p. 977).

MOSQUITO-borne encephalitis reported from North Carolina, numerous cases in horses, one in human. (p. 979). EAR TICK widespread in cattle in Oklahoma. (p. 979).

STATES REPORTING this week - 27.

Reports in this issue are for the week ending October 14, 1955, unless otherwise designated.

WEATHER FOR THE WEEK ENDING OCTOBER 17, 1955

Flood-producing rains in the Northeast featured the weather of the week. On October 14, 15, and 16 unusually heavy rains fell over southern New England and eastern portions of the Middle Atlantic States, with extreme totals for the storm exceeding 15 inches in the Catskill Mountains of New York State and ranging up to 14 inches in Hampden County, Massachusetts. Damaging floods occurring in Pennsylvania, New Jersey, New York State, and southern New England were particularly devastating in the latter area, where a mounting death toll exceeded 40 at the end of the period and property damage was expected to amount to many millions of dollars.

Most of the remainder of the Nation enjoyed typical autumn weather with warm, sunny days and cool nights, which was very favorable for fall harvesting operations. Moderate to heavy rains which fell in the Pacific Northwest at the beginning of the period, in the northern Great Plains on the 11th, and in the middle and upper Mississippi Valley eastward to the Appalachians on the 12th were generally beneficial either for replenishing or maintaining soil moisture. Rainfall, however, was very light in much of the South, where more is needed locally, particularly in parts of Alabama and Georgia. The first snow of the season at International Falls, Minnesota, was observed on the 12th. Some snow was also reported in northern New England on the 16th.

Cooler weather following the rains which moved across the northern portion of the Country during the week brought the season's first frost and freezing to some areas, such as northwestern and eastern Kansas, northern Missouri, northeastern Oklahoma, and locally in western Virginia. Temperatures averaged 3° to 5° below normal in the middle Mississippi and Ohio Valleys and Southeast, along the West Coast and in Washington and the Columbia River Basin. The week was warmer than normal elsewhere, with departures ranging from 5° to 7° in the Rocky Mountain region and Northeast.

The week's precipitation outside the area of heavy rains in the Northeast totaled over an inch along the lower east coast of Florida and in western portions of Kentucky and Tennessee, and in a large area extending from the lower Mississippi Valley to the Great Lakes. Light amounts fell in other northern areas, except moderate to heavy amounts on the north Pacific Coast, while the lower Great Plains and Southwest received little or no rain at all.

(Summary Supplied by U. S. Weather Bureau).

WEATHER outlook on page 982.

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - IDAHO - Populations of Melanoplus mexicanus light but general throughout Athol area in northern section. Scattered areas showed 2-3 per square yard. (Barr, Gittins). NEW MEXICO - Heavy on 35-50,000 acres of rangeland in the Capitan-Tinnie-Arabela area of Lincoln County. Another heavy infestation reported on 150,000 acres of rangeland in Socorro, Sierra and Catron Counties. (Durkin, Oct. 7). SOUTH DAKOTA - Survey for eggs completed in northeast. About 75-90 percent of eggs deposited are M. femur-rubrum. Areas vary from light to threatening in Marshall, Roberts, Grant and Deuel Counties. (Lofgren, Hantsbarger). OKLAHOMA - Reported as damaging fall-seeded small grains in the wheat-growing section. (Flora). M. mexicanus in western and panhandle counties averages 4-8 per square yard. Damage to newly-sowed fall grains, requiring planting in some areas. Many farmers treating margins of fields. (Coppock).

EUROPEAN CORN BORER (Pyrausta nubilalis) - NEBRASKA - Infestations 20-100 percent in central counties; 32-100 percent along eastern counties; and 20-100 percent in north central area. (Andersen). KANSAS - Fall survey showed following average infestations: 1.7 percent with 1.7 borers per 100 stalks in Clay County; 1.8 percent with 2.4 borers per 100 stalks in Pottawatomie County. Cloud and Ottawa Counties showed no infestation. (Matthew). SOUTH DAKOTA - Fall survey completed for northeast district comprising Marshall, Roberts, Day, Grant, Clark, Hamlin, Codington and Deuel Counties. Average infestation was 68 percent, with 108 borers per 100 plants. (Lofgren, Hantsbarger). NORTH DAKOTA - Fall survey showed an average of 82.5 percent infestation in Cass County, with an average of 108 larvae per 100 plants. In Richland County, 98.2 percent infested plants with 157 larvae per 100 plants. (N. D. Ins. Rept. Serv.). ILLINOIS - Heaviest infestations in northern half of State. Average for State 282 borers per 100 plants compared with 182 in 1954. (Petty, Oct. 3). ALABAMA - Fifth instar larvae present in corn, grain, sorghum and pimento peppers in northern area. Particularly abundant in grain sorghum. (Eden). Collected in Etowah County by Thompson and Haynes. (Arant). VIRGINIA - Survey revealed average number of larvae per 100 stalks by county: Rockbridge 35; Augusta 329; Rockingham 311; Shenandoah 197; and Frederick 224. (Perry).

SOUTHWESTERN CORN BORER (Diatraea grandiosella) - MISSOURI - Fall survey shows seven extreme southwestern counties with infestations ranging from 2-10 percent. Counties with overwintering larvae include Stone, Barry, McDonald, Newton, Lawrence, Jasper and Barton. (Kyd, Thomas). KANSAS - Infestations in Ottawa County ranged from 8-16 percent and less than four percent in Clay and Cloud Counties. (Matthew).

FALL ARMYWORM (Laphygma frugiperda) - OKLAHOMA - Quite abundant in alfalfa in southwestern, central and northwestern counties. Reported injuring newly-planted alfalfa in Alfalfa and Woods Counties, small grain in Canadian, Garvin and Oklahoma Counties. (Coppock). LOUISIANA - Infestations of 1-3 per square yard in one oat field in each of East Baton Rouge and East Feliciana Parishes. (Oliver). MISSISSIPPI - Damage to oats in Humphreys, Leflore, Lincoln, Yalobusha and other counties. (Bennett).

CHINCH BUG (Blissus leucopterus) - NEBRASKA - Light infestation still persists in corn in east central area. Counts average 43 per ten stalks. (Andersen).

GREENBUG (Toxoptera graminum) - TEXAS - Light infestations on volunteer wheat in Deaf Smith and Castro Counties. (Daniels).

ARMY CUTWORM (Chorizagrotis auxiliaris) - TEXAS - Light infestations on wheat in Deaf Smith County. (Daniels).

CORN ROOTWORMS - SOUTH CAROLINA - Infesting peanuts at Clemson. (Berly).

CORN LEAF APHID (Rhopalosiphum maidis) - UTAH - Causing conspicuous damage to barley at Kanab. (Knowlton). NEBRASKA - Very abundant throughout corn-growing areas. Feeding mainly on stalks. (Andersen).

MITES - UTAH - Late season damage to corn and sorghum in Washington County. (Hughes).

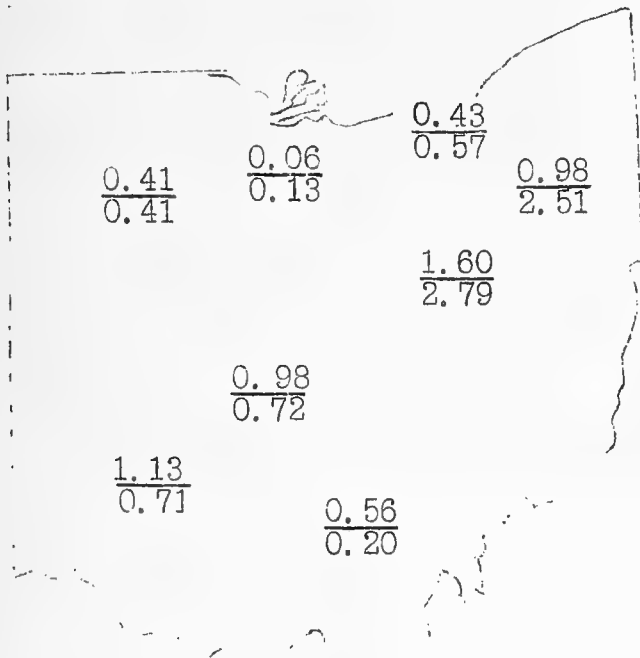
NORTHERN MASKED CHAFER (Cyclocephala borealis) - OHIO - Severe infestations have appeared in lawns and other grass areas throughout northeastern section. (Neiswander). MARYLAND - Larvae average six per square foot in lawn and causing some damage at College Park, Prince Georges County. (U. Md., Ent. Dept.).

YELLOW-STRIPED ARMYWORMS (Prodenia sp.) - UTAH - Moderate infestation in alfalfa at Santa Clara, Washington County. (Knowlton).

RHODES-GRASS SCALE (Antonina graminis) - TEXAS - Light infestation in undisturbed St. Augustine grass along house foundation in Denton County. (Chada).

Meadow Spittlebug Survey in Ohio

During the second week in September a survey of adult spittlebug populations was conducted in 8 areas. From 12 to 39 fields in each were swept with a 15-inch net, 50 sweeps per field. Adults were counted, and an average of one per sweep was considered evidence that an economic population would occur next spring. The chart shows the average adults per sweep for each area. The average from the 1954 survey is also given. In general, the heaviest infestation followed a pattern similar to that in 1954. Economic infestations will occur in 50 to 75 percent of all legume hay fields in a broad area extending diagonally across the State from northeast to southwest. The south central region will have from 10 to 25 percent of all fields that will warrant treatment. The northwest and the western shores of Lake Erie will have few fields with sufficient spittlebugs to warrant treatment. The most notable change in the infestation level occurred in the northeastern area, where adults per sweep dropped from more than 2 to about 1. Even with this decline a majority of the fields will require treatment. (Weaver, Goleman).



Adults per sweep $\frac{1955}{1954}$

SPOTTED ALFALFA APHID - UTAH - Now found in Morgan County. Increased markedly in many counties. Counts from 0.1-16 per sweep in northern counties, usually higher in central counties, and 2-50 per sweep in Washington, Kane and Iron Counties, with damage apparent at Kanab where foliage is very sticky. In Juab County third crop alfalfa yield often reduced by 50 percent, but no control was applied. (Knowlton). NEBRASKA - Considerable damage south of Cozad. Populations too numerous to count. Black fungus prevalent throughout the area. (Hill). A very light infestation still around O'Neill, Holt County. Counts 5-12 per 25 sweeps in northeast area. (Andersen). KANSAS - Survey of alfalfa fields in Clay, Cloud, Ottawa and Pottawatomie Counties showed aphid counts from 2-140 per 20 sweeps. Alfalfa fields in the Republican River Valley in northern Cloud County had up to 70 per sweep. Predators quite low in all fields examined and no parasites found. (Matthew). OKLAHOMA - Has declined in numbers in alfalfa in Payne County. (Fenton). MISSOURI - Light numbers on alfalfa over all southwestern quarter of State. Counts ranged from 1.0 to 4.2 per sweep. Infestations increased with the amount of alfalfa growth. Counties infested were Stone, Barry, McDonald, Newton, Jasper, Lawrence, Christian, Green, Dade, Barton, Vernon, Cedar, Polk, Dallas, Hickory, St. Clair, Bates, Henry, Benton, Morgan, Moniteau, Cooper, Pettis, Johnson, Cass, Lafayette, Saline and Howard. (Kyd, Thomas). TEXAS - Light widespread infestations on alfalfa in Deaf Smith, Potter and Castro Counties. (Daniels). LOUISIANA - Populations have greatly declined*in Bossier and Natchitoches Parishes. (Oliver). ARKANSAS - Collections made on alfalfa in Washington County October 12. (Warren).

PEA APHID (Macrosiphum pisi) - MISSOURI - A few present in all fields, averaging 1-3 per sweep. One field in Cass County averaged 10 per sweep. (Kyd, Thomas). NEBRASKA - Small numbers in legumes in northeast area of the State. Counts 3-8 per 25 sweeps. (Andersen).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - SOUTH CAROLINA - Causing yellowing of alfalfa in several alfalfa fields in vicinity of Spartanburg. (Nettles, Oct. 12). ALABAMA - Infesting alfalfa and causing economic damage. (Arant). LOUISIANA - Populations have declined considerably during past few weeks, possibly due to cutting of alfalfa and to fungus. Counts 50-150 per 100 sweeps in Natchitoches, Bossier and Rapides Parishes. (Oliver). MISSOURI - Light to moderate numbers on alfalfa over southeast quarter and extreme southwest corner with southern two tiers of counties most heavily infested. Sweepings in Stone and Barry Counties averaged 1.5 to 2.5 adults and nymphs per sweep and about 23 percent of stems showed feeding damage. (Kyd, Thomas). OKLAHOMA - Average 3.3 per sweep on alfalfa in Garvin County. (Coppock).

*on alfalfa

SEED-CORN MAGGOT (Hylemya ciliatella) - OKLAHOMA - Averages 8-12 per ten sweeps in alfalfa in Woods and Pottawatomie Counties. (Coppock).

PLANT BUGS - IDAHO - Lygus spp. up to four per sweep on volunteer stands of alfalfa in northern Latah County. (Barr, Gittins). UTAH - Lygus bugs still very numerous, particularly in southern counties, especially on alfalfa. (Knowlton). NEBRASKA - Lygus lineolaris counts 5-12 per 25 sweeps in the northeastern area. (Andersen).

POTATO LEAFHOPPER (Empoasca fabae) - OKLAHOMA - Declined some, but still one of the most important species in alfalfa in Payne County. (Fenton).

VELVETBEAN CATERPILLAR (Anticarsia gemmatilis) - SOUTH CAROLINA - Infestations generally heavy on soybeans. Foliage being stripped in some fields at Charleston. (Cuthbert, Oct. 12). LOUISIANA - In complex with Heliothis armigera, continues to infest and defoliate alfalfa in Natchitoches and Bossier Parishes. (Oliver).

GREEN JUNE BEETLE (Cotinis nitida) - VIRGINIA - Larvae heavy in a pasture in Floyd County (Talley) and in an alfalfa field in Botetourt County (Burtner).

BLISTER BEETLES (Epicauta sp.) - ALABAMA - Causing economic damage to alfalfa. (Arant).

CLOVER SEED CHALCID (Bruchophagus gibbus) - OKLAHOMA - Most abundant species in Payne County, where alfalfa was allowed to seed. (Fenton).

FRUIT INSECTS

CODLING MOTH (Carpocapsa pomonella) - UTAH - Infesting about 35 percent of apples in small orchards of Garfield County. (Knowlton).

SHOT-HOLE BORER (Scolytus rugulosus) - UTAH - Some apricot trees at Hurricane are dying and being severely attacked. (Hughes). MISSISSIPPI - Damage to peach trees reported from Coahoma and Quitman Counties. (Hutchins).

PEACH TREE BORERS - UTAH - Have damaged many peach and almond trees in Washington County this fall. (Hughes, Knowlton).

GRAPE BERRY MOTH (Polychrosis viteana) - UTAH - Infestation in Washington County has been considerably lower than in 1953-54. (Knowlton, Hughes).

FALL WEBWORM (Hyphantria cunea) - LOUISIANA - Continues to infest and defoliate pecan trees over entire State. Several complaints of infestations in azaleas. (Oliver).

BLACK PECAN APHID (Melanocallis caryaefoliae) - LOUISIANA - Infesting several thousand pecan trees in northern area. (Oliver).

APHIDS - UTAH - Causing moderate damage to pecan foliage in Washington County. (Knowlton).

TRUCK CROP INSECTS

SQUASH BUG (Anasa tristis) - SOUTH DAKOTA - From second or third instars to adults appearing in numbers from 25-100 feeding on immature squash in Brookings area after frost killed vines. (Spawn). MARYLAND - Heavy infestations on acorn squash and pumpkins, Millersville, Anne Arundel County. (U. Md., Ent. Dept.).

PICKLEWORM (Diaphania nitidalis) - SOUTH CAROLINA - Caused serious injury to untreated cantaloupes in Charleston County. About 75 percent of fruits infested and moderate infestations in untreated cucumbers. (Cuthbert, Oct. 5).

CUCUMBER BEETLES - SOUTH DAKOTA - From 25-100 on squash in Brookings area. (Spawn).

WHITE GRUBS - UTAH - Causing some damage to potato tubers in Cedar Valley, Iron County. (Sjoblom).

POTATO TUBERWORM (Gnorimoschema operculella) - UTAH - No infestations found in surveys in State up to October 11. (Knowlton, Hutchings, Co. Agents).

POTATO PSYLLID (Paratrioza cockerelli) - UTAH - Quite abundant on rabbitbrush in some areas since potato vines have frozen. (Knowlton).

TURNIP APHID (Rhopalosiphum pseudobrassicae) - LOUISIANA - Lightly infesting turnips in West Baton Rouge and East Feliciana Parishes. (Oliver).

SEED-CORN MAGGOT (Hylemya cilicrura) - OKLAHOMA - No eggs or larvae found on spinach foliage in experimental plots at Bixby. (Walton).

A ROOT APHID (Thecabius sp.) - WASHINGTON - Causing heavy losses to some stands of lettuce in Puyallup Valley. Head lettuce wilted from underground feeding of aphids. (Howitt).

LEAFHOPPERS - UTAH - Several species extremely abundant on young sugar beets planted for seed in Washington County fields. From 3-10 percent with curly top. (Knowlton).

IMPORTED CABBAGEWORM (Pieris rapae) - SOUTH CAROLINA - Light to moderate and increasing infestations on cabbage in Charleston County. (Cuthbert, Oct. 5).

CUTWORMS - UTAH - Have damaged young beets intended for next year's seed crop in one area southeast of Washington. (Hughes).

BEEET ARMYWORM (Laphygma exigua) - NEW MEXICO - In lettuce fields in Dona Ana County. (Durkin, Oct. 7).

CABBAGE LOOPER (Trichoplusia ni) - SOUTH CAROLINA - Moderate infestations on cabbage in Charleston County. (Cuthbert, Oct. 5).
NEW MEXICO - Light to medium infestations in lettuce in Dona Ana County. (Durkin, Oct. 7).

FULLER ROSE BEETLE (Pantomorus godmani) - VIRGINIA - Injuring snap beans and potatoes to a considerable extent on Eastern Shore, and necessitating control. (Brubaker, Greenwood, Hofmaster, Oct. 7).

BEAN LEAF ROLLER (Urbanus proteus) - SOUTH CAROLINA - Moderate infestation on snap beans in Charleston County. (Cuthbert, Oct. 5).

CORN EARWORM (Heliothis armigera) - ARKANSAS - Infestations appearing on snap beans in northwestern area and in local instances crops were abandoned due to severe damage. (Warren). ALABAMA - In complex with Laphygma frugiperda infesting pimento peppers. (Arant). VIRGINIA - One grower on Eastern Shore had his lettuce crop graded so low that he abandoned the crop, valued at \$15,000 if not damaged by this pest. (Greenwood, Brubaker, Hofmaster, Oct. 7).

SWEETPOTATO LEAF ROLLER (Pilocrocis tripunctata) - ALABAMA - Causing economic damage to sweetpotatoes. (Arant).

ONION MAGGOT (Hylemya antiqua) - OREGON - Third brood flies very active and still laying eggs as of October 13 in the Portland suburb market garden area. (Crowell). WASHINGTON - Causing severe losses to fall plantings of onion in western area. (Howitt).

AN OKRA CATERPILLAR (Anomis erosa) - ALABAMA - Causing economic damage to okra. (Arant).

GREEN JUNE BEETLE (Cotinis nitida) - MARYLAND - Larvae rooting up soil in tobacco beds being prepared for next year's crop in Prince Georges County. (U. Md., Ent. Dept.).

LEAF MINERS - SOUTH CAROLINA - Twenty-five acres of tomatoes severely infested near Spartanburg. (Ferree, Oct. 12). Injurious populations of Liriomyza spp. in some cucumber plantings in Charleston County. (Cuthbert, Oct. 5).

A PSYLLID (Trioza tripunctata) - PENNSYLVANIA - Very abundant on blackberry in a plantation in Blair County. Deposit of wax filaments along vine on ground. (Udine).

COTTON INSECTS

COTTON LEAFWORM (Alabama argillacea) - ARKANSAS - Flights have occurred over most of the State. No damage reported. (Warren).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

IPS BARK BEETLES (Ips spp.) - MISSISSIPPI - Damage to pine trees reported from Wayne County on October 6. (Hutchins).

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - RHODE ISLAND - Many larvae present in dead and dying elm limbs in Hamilton. (Kantack).

Arkansas Forest Insect Conditions as of October 1

IPS BEETLES failed to do much damage beyond normal amounts. Slight increase in activity in the Crossett area. Increased activity of BLACK TURPENTINE BEETLE throughout southern pine belt as far north as Logan and Pope Counties. Not expected to reach serious proportions. RED-HEADED PINE SAWFLY activity has practically ceased after a season of high activity. (Ark. Forestry Comm.).

WHITE-PINE SAWFLY (Neodiprion pinetum) - NORTH CAROLINA - Infestations on white pines pupating in Ashe County. (Farrier).

OAK LEAF MINERS (Cameraria spp.) - NEW YORK - Complex of C. cincinnatiella and C. hamadryadella caused severe defoliation of white, black, red and chestnut oaks at Harriman, central Orange County, Sloatsburg, Rockland County, and at Lloyds Neck and Huntington on the north shore of Long Island. (Winslow, Sept. 28).

A WILLOW APHID (Pterocomma smithae) - PENNSYLVANIA - Very abundant on willow branches in Centre County. (Udine).

SCALE INSECTS - VIRGINIA - Wax scales and cottony-cushion scale infesting many ornamentals in eastern area. (Brubaker, Greenwood, Hofmaster). FLORIDA - A nigra scale (Saissetia nigra) averages 100 per stem of hibiscus at Wilton Manors, Broward County (Soowal) and heavily infesting ten of 100 plants at Lakeland, Polk County (Wesson).

GIANT HORNET (Vespa crabro germana) - PENNSYLVANIA - Several reports of damage to lilac in Bradford County. (Gesell).

AN OLEANDER CATERPILLAR (Syntomeida epialis) - FLORIDA - Abundant on oleander and causing defoliation at Welaka, Putnam County. (Det. L. A. Hetrick). (Denmark).

SOUTHERN ARMYWORM (Prodenia eridania) - FLORIDA - Average two per 100 feet of row in gladiolus at Rockledge, Brevard County. (Coston).

INSECTS AFFECTING MAN AND ANIMALS

CATTLE LICE - UTAH - Increasing on cattle in several counties. Highest numbers in Kane County. (Rose, Knowlton).

COMMON CATTLE GRUB (Hypoderma lineatum) - OKLAHOMA - Twenty percent of all cattle examined in central area had one or more grubs in the back. (Howell).

EAR TICK (Otobius megnini) - OKLAHOMA - Widespread, averaging 20-50 per ear in western area and 5-10 in the eastern area. (Howell).

HORN FLY (Siphona irritans) - OKLAHOMA - Numerous on cattle in Wilburton area, Latimer County. (Flora).

MOSQUITOES - NORTH CAROLINA - Reported so severe in Sampson County that workers will not stay in fields. Numerous equine and one human case of encephalitis reported. (Jones).

SCREW-WORM (Callitroga hominivorax) - OKLAHOMA - Numerous on cattle in Wilburton area, Latimer County. (Flora).

LIGHT TRAP COLLECTIONS

		Pseudal unipun.	Laphyg. frugip.	Agrotis ypsilon subter.	Feltia armig.	Heliothis vires.	Protoparce sexta	Antic. quin.	gemma.
KANSAS									
Garden City	10/6-11			12	1 sp.	85			
Hays	9/30-10/7			19		78			
Manhattan	10/11-14			13		405			
TEXAS									
College Station	10/10 & 13	16	343	23		47	1		
LOUISIANA									
Tallulah *	10/8-14	210	84	40	72	61	6	1	142
B. Rouge	10/8-14	4	14	2	98	13			44
Franklin	10/1-14	10	74	6	77	53			76
ARKANSAS									
Hope	9/28-10/13	6		118		194			
Stuttgart	9/15-10/12	46		85		387			
Van Buren	9/16-10/13	7		5		241			
Varner	9/15-10/5	249		288		967			
Fayetteville	9/18-10/14	61		191		1207			
TENNESSEE (Counties)									
Shelby	9/30-10/5	64		42		344	8		
Madison								32	
Lawrence								1	1
Maury		32		24		80		4	4
Robertson				8		16		11	11
Cumberland		16		4		32		2	2
Knox						88			
Greene		1		8		64		1	2
MARYLAND (County)									
Montgomery	10/5-12			93	3	42			2

*Three traps at Tallulah.

BENEFICIAL INSECTS

PREDACIOUS BEETLES - LOUISIANA - Hippodamia convergens in complex with Collops balteatus numerous in alfalfa in Bossier and Natchitoches Parishes. (Oliver).

KLAMATHWEED BEETLES (Chrysolina spp.) - IDAHO - C. gemellata and C. hyperici have become very abundant on klamathweed plots in Kootenai County following rains. Some egg deposition by C. hyperici at an experimental site near Athol. (Barr, Gittins).

STORED PRODUCTS INSECTS

RICE WEEVIL (Sitophilus oryza) - ALABAMA - Smaller numbers than usual in corn in southern area. (Arant).

CADELLE (Tenebroides mauritanicus) - MARYLAND - Infestation in stored wheat in Washington County causing moderate damage. (U. Md., Ent. Dept.).

ANGOUMOIS GRAIN MOTH (Sitotroga cerealella) - ALABAMA - Reported as present in smaller numbers than usual in corn in southern area. (Arant).

TOBACCO MOTH (Ephestia elutella) - NORTH CAROLINA - Light infestations in packhouses in Green and Wayne Counties but moderate in Wilson with fumigation necessary in some instances. (Jones).

A MURKY MEAL CATERPILLAR (Aglossa cuprealis) - NORTH CAROLINA - Local infestation in stored tobacco in Columbus County. (Jones).

MISCELLANEOUS

BOXELDER BUGS (Leptocoris trivittatus) - VIRGINIA - Large numbers on boxelder trees and on houses in many areas of State. (Morris et al). MARYLAND - Annoying home owners in Baltimore. (U. Md., Ent. Dept.).

OLD HOUSE BORER (Hylotrupes bajulus) - VIRGINIA - Damaging joists and studs in a new home in Christianburg. (Rowell).

A FUNGUS DISEASE OF INSECTS

MARYLAND - Diseased green cloverworms collected September 15 in Dorchester County on soybeans discovered to be infected with the fungus Spicaria rileyi, which appears to be quite common this year. Epizootics were observed in the corn earworm, alfalfa looper and the cabbage looper, as well as the green cloverworm, in the Beltsville area. This fungus appears to be quite virulent to those insects which are susceptible and appears to be a better biological control agent than known heretofore. (Thompson, ENT, ARS, and U. Md., Ent. Dept.).

WEATHER BUREAU'S 30-DAY OUTLOOK

Mid-October to Mid-November 1955

The Weather Bureau's 30-day outlook for the period from mid-October to mid-November calls for temperatures to average above seasonal normals over western half of the nation, the upper Lakes, and the Northeast. Below normal temperatures are predicted for the southeastern quarter of the country.

Precipitation is expected to exceed normal in the Northeast and Pacific Northwest. In the remainder of the country surnormal amounts are predicted, except for near normal over the Great Lakes, southern Appalachians, and South Atlantic States.

This report released by the Weather Bureau on October 14, 1955.

Weather forecast given here is based on the official 30-day "Resume and Outlook", published twice a month by the Weather Bureau. You can subscribe through Superintendent of Documents, Washington 25, D. C. Price \$4.80 a year, \$2.40 for six months.



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OCTOBER 28, 1955

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Cooperative

**ECONOMIC INSECT
REPORT**

Issued by

PLANT PEST CONTROL BRANCH

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL BRANCH

ECONOMIC INSECT SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Branch serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Economic Insect Survey Section
Plant Pest Control Branch
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

GRASSHOPPERS damaging margins of wheat fields in Harper County, Oklahoma. (p. 985).

EUROPEAN CORN BORER found in several new counties in Arkansas. (p. 985).

SUGARCANE BORER infestation in Louisiana heavier than expected. (p. 986).

SPOTTED ALFALFA APHID damaging newly-seeded alfalfa in some areas of Oklahoma and active on this crop in several Arkansas counties. Build-up in Yuma area of Arizona. (pp. 987, 997).

MEXICAN FRUIT FLY specimen collected at Tecate, Baja California, Mexico. Tecate is near the California border 30 miles east of Tijuana. (p. 989).

COWPEA CURCULIO infestation in pole beans unusually heavy in south Florida. (p. 990).

TURNIP APHID severe in some areas of Louisiana. (p. 990).

PINK BOLLWORM surveys show increase over last year in east Texas and in most counties inspected in Oklahoma, but no infestations have been found this year outside the quarantine area. (p. 991).

SCREW-WORM outbreak severe in some west central counties of North Carolina. Flies numerous in Lincoln County area of Oklahoma. (p. 993).

TOBACCO MOTH of concern in east central North Carolina. (p. 995).

STATES reporting this week - 28.

List of Cooperative Survey Entomologists. (p. 998).

Reports in this issue are for the week ending October 21, 1955, unless otherwise designated.

WEATHER FOR THE WEEK ENDING OCTOBER 24, 1955

Mostly fair weather, favorable for harvesting and fall seeding, and the passing in rapid succession of cold air masses across the Country, which brought the lowest temperatures of the season, characterized the weather of the week.

A cold air mass moved across the southeast quadrant of the Nation from the 18th to the 21st, reducing minimum temperatures into the 30's and 40's and maxima into the 50's and 60's in the interior of the Gulf States.

An area of high pressure crossed the northeastern quarter of the Country on the 21st, 22nd, 23rd, dropping minimum temperatures into the 20's or lower. A weekend low of 18° was reported in the cranberry bogs of New Jersey.

The last and most extensive cold air influx of the week overspread the western two-thirds of the Nation on Saturday and Sunday and the Atlantic Coastal States on Monday. On Monday morning below-freezing minima were reported by nearly all stations between the Cascade and Sierra Nevada Mountains and the Mississippi River as far south as the northern portions of Arizona, New Mexico, Texas, Oklahoma, and Arkansas. Ely, Nevada and Amarillo, Texas had lows of 15° and 29°, respectively.

Light to moderate precipitation fell over the Northeast during the first half of the week as a result of a lingering low pressure area of the preceding week, and additional light rain fell on Monday during the passage of a cold front. Light to occasionally moderate precipitation also fell in most of the remainder of the northern half of the Country over the weekend, some of which was in the form of snow in the northern Rockies and the western Great Plains.

Temperatures were unseasonably high in the far West until the weekend. Burns, Oregon recorded a late season high of 79° on the 17th; and Pocatello, Idaho, 82° and Billings, Montana, 83° on the 18th.

Average temperatures for the week were above and below normal west and east of lines joining Memphis, Tennessee, with Williston, North Dakota and Del Rio, Texas, respectively. Plus departures were 6° to 9° in the central and southern Rockies. The greatest minus departures were 6° to 8° along the Gulf and Atlantic Coasts

(Summary Supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - UTAH - Largely Melanoplus femur-rubrum and M. mexicanus still abundant in many northern alfalfa fields. (Knowlton). IDAHO - Grasshoppers, probably M. mexicanus, causing marginal damage to a field of fall-sown wheat in Lewis County. Severe damage extends over about an acre. Populations concentrated along fence-rows where egg deposition is still in progress. (Manis). SOUTH DAKOTA - Egg survey in southeastern counties substantiate survey for adults; light scattered infestations of M. femur-rubrum in legumes. (Lofgren, Hantsbarger). OKLAHOMA - Many wheat field margins in Harper County being stripped as much as 50 feet into the field by M. mexicanus. (Owen). CALIFORNIA - In September, total loss of pasture of barley and birdsfoot trefoil on about five square miles of Marin County. Heaviest infestation in recent years in that county. (Cal. Coop. Rept.).

EUROPEAN CORN BORER (Pyrausta nubilalis) - NORTH DAKOTA - Fall abundance survey showed percent infestation with number of borers per 100 plants by county as follows: Grand Forks and Traill, 76 percent and 69 borers per 100 plants; Cass and Richland, 90 and 133; Ransom and Sargent, 63 and 17; LaMoure, Dickey, McIntosh, Logan, Emmons, 33 and 6. (N. D. Ins. Rept. Serv.). SOUTH DAKOTA - Average of 90 percent of plants infested with 241 borers per 100 plants in Hutchinson, Turner, Lincoln, Bon Homme, Yankton, Clay and Union Counties. (Lofgren, Hantsbarger). NEBRASKA - Infestation of 36-100 percent with average of 138 borers per 100 plants in the area of Custer, Wheeler, Garfield, Loup, Howard, Greeley, Sherman and Valley Counties. (Andersen). KANSAS - Abundance survey showed 40 percent infestation with 60 borers per 100 plants in Leavenworth County and 27 and 46 in Wyandotte County. (Matthew). ARKANSAS - Light infestations found in five fields in Yell, Logan, Pope and Franklin Counties. First records from these counties. (Warren). VIRGINIA - Average number of borers per 100 stalks by county: Clarke 375, Loudoun 195, Fairfax 64, Fauquier 157, Culpeper 152. Number of larvae per 100 stalks for ten northern counties was 204. (Morris).

FALL ARMYWORM (Laphygma frugiperda) - OKLAHOMA - Causing considerable damage in rye grass lawns in Oklahoma City and small damage in Bermuda grass. (Rogers). LOUISIANA - Several light infestations continue in East Baton Rouge, East Feliciana, St. Helena and West Feliciana Parishes. (Oliver). FLORIDA - Infesting nearly every small sweet corn plant at La Belle, Hendry County, October 11. Averaging 10 per square foot of grass at Bradenton, Manatee County, October 11. (Det. E. G. Kelsheimer). (Denmark).

SOUTHWESTERN CORN BORER (Diatraea grandiosella) - KANSAS - No evidence of infestation in Leavenworth or Wyandotte Counties. (Matthew). ARKANSAS - Of 21 fields examined in Pope, Johnson, Franklin, Yell, Logan, Crawford and Washington Counties, 11 had 0-9 percent infestation, five had 10-19, three had 20-30, and two had 70-75. Heaviest infestations in Pope, Johnson and Yell Counties. (Warren).

SUGARCANE BORER (Diatraea saccharalis) - LOUISIANA - Considerably heavier than expected. Second and third generations built up materially. Losses from the pest expected to be heavy. (Oliver).

SORGHUM MIDGE (Contarinia sorghicola) - LOUISIANA - Severe infestation in Natchitoches Parish. At least 60 percent of the grain in a 15-acre field of grain sorghum did not mature due to this insect. A somewhat less severe infestation in Tensas Parish, (Oliver).

HESSIAN FLY (Phytophaga destructor) - KANSAS - Light infestation in a field of volunteer wheat in south central Marshall County. (Painter, Smith).

BROWN WHEAT MITE (Petrobia latens) - UTAH - Highest population to October 15 was 96 mites per linear foot of row in wheat planted September 7 in western Salt Lake County. Most populations less than one mite per linear foot of row. (Lieberman). Populations in Salt Lake County, October 18, 10-100 per linear foot of row. Oviposition heavy. Damage conspicuous in fields with higher counts. (Lieberman, Knowlton).

GROUND MEALYBUG (Rhizoecus falcifer) - OREGON - Attacking an 18-acre field of Merion bluegrass at Central Point. (Gentner).

A MITE (Pediculopsis graminum) - OREGON - A probable vector of silvertop disease of Chewings fescue in the Springwater area. (Krantz).

CORN EARWORM (Heliothis armigera) - ARKANSAS - Up to two per sweep in alfalfa and light in soybeans. (Warren).

ALFALFA CATERPILLAR (Colias philodice eurytheme) - CALIFORNIA - Heavy infestations in alfalfa fields in Imperial County. Heavy infestation over Yolo County and light infestations in Kern County. Report for September. (Cal. Coop. Rept.).

YELLOW-STRIPED ARMYWORMS (Prodenia spp.) - PENNSYLVANIA - These larvae destroyed seven acres of August-seeded alfalfa in Montgomery County in late September and early October. (Menusan). CALIFORNIA - Medium infestation of these armyworms county-wide in Yolo County in September. (Cal. Coop. Rept.).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - TEXAS - Heavy, local infestations on peanuts in Caldwell County. Large numbers of larvae in peanuts during threshing. (Lindsey).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - CALIFORNIA - Infestations light to heavy in alfalfa in Stanislaus County in September. Infested corn in Tehama County in September. (Cal. Coop. Rept.).

SPOTTED ALFALFA APHID - Since the discovery of the aphid outbreak on alfalfa in New Mexico in early 1954, the species involved in this and other States on this host has been referred to as the yellow clover aphid (Myzocallis trifolii) in the Cooperative Economic Insect Report. The taxonomy of this aphid has been undergoing detailed study, however, and until a generally accepted scientific name is adopted for the form on alfalfa, the Report will carry all notes on it under "Spotted Alfalfa Aphid." KANSAS - Infesting nearly all alfalfa fields examined with counts 2-45 per 20 sweeps in Linn, Allen, Wilson, Elk and Cowley Counties. Predators, lady beetles, lacewings and nabids from 1-12 per 20 sweeps. (Matthew). OKLAHOMA - Populations building up rapidly in newly-seeded alfalfa of Murray County. Some stands killed which showed very light infestations the previous week. (Flora). Average over 110 per sweep in alfalfa in Johnston and Carter Counties. Low populations in most central and eastern counties. (Coppock). ARKANSAS - Infesting 16 of 17 alfalfa fields examined in Yell, Pope, Logan, Johnson, Franklin, Crawford, Washington and Benton Counties. Counts from a few to 200-250 per 20 sweeps, with the heaviest infestations in Logan County. Infestations presumed to have appeared in areas in late August or September. (Warren).

APHIDS ON LEGUMES - NEBRASKA - Populations very low in Hitchcock, Red Willow, Furnas and Webster Counties. Counts 0-10 per 25 sweeps. Many predators present. Populations moderate in Platte River Valley. Counts 10-50 per 25 sweeps. One field in Dawson County south of Cozad still had well over 200 per sweep. None in southeastern area. (Connin). Moderate infestation in Loup Valley. Counts from 50-100 per 25 sweeps. (Andersen).

LEAFHOPPERS - OKLAHOMA - Common in early fall-seeded small grain in central and eastern counties. Average 5-7 per square yard in early-sowed wheat in Oklahoma County. (Coppock). UTAH - From 1-3 Dikraneura carneola per linear foot of drill row in fall-planted wheat in Salt Lake County. (Knowlton).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - ARKANSAS - From 10-125 per 20 sweeps in alfalfa. (Warren).

SWEETCLOVER WEEVIL (Sitona cylindricollis) - NEBRASKA - Ranges from 1-2 per 50 sweeps in southeastern area and 4-6 per 25 sweeps around Columbus in Platte County. (Connin, Andersen).

A SEED CHALCID - UTAH - Damage noted in alfalfa seed fields in several areas. (Knowlton).

PEA APHID (Macrosiphum pisi) - UTAH - Scarce to moderately numerous in northern counties; up to 3 per sweep. (Knowlton). NEBRASKA - Populations building up again in Platte River Valley. Counts 50-100 per 25 sweeps. In Republican and Loup River Valleys counts 25-50 per 25 sweeps. (Connin, Andersen).

GREEN JUNE BEETLE (Cotinis nitida) - VIRGINIA - In complex with white grubs heavy in alfalfa field in Patrick County. (Olinger).

GREEN CLOVERWORM (Plathypena scabra) - ARKANSAS - Has caused up to 50 percent defoliation of late soybeans in upper Arkansas River Valley. (Warren).

CUTWORMS - OKLAHOMA - Populations exceed one per square yard in alfalfa in some areas of Carter County and causing extensive damage. (Flora).

CLOVER ROOT CURCULIO (Sitona hispidula) - NEBRASKA - From 2-3 per 50 sweeps of alfalfa in southeastern area. (Connin). WASHINGTON - Adults have built up to 61 per 100 sweeps on white clover in the Pullman area. Mating. (Johansen).

BEET ARMYWORM (Laphygma exigua) - CALIFORNIA - Outbreak numbers in San Diego County in September. Damage to 50 percent in spots in fields of alfalfa, corn, celery, peppers, other vegetables, and gladiolus. (Cal. Coop. Rept.).

A WHITE-FRINGED BEETLE (Graphognathus peregrinus) - MISSISSIPPI - First record of collection in Newton County, (Fancher).

FRUIT INSECTS

APPLE AND THORN SKELETONIZER (Anthophila pariana) - OREGON - Adults now in flight and very abundant on poorly- or unsprayed apple trees and common in houses, Corvallis area. (Ritcher).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - CALIFORNIA - A general infestation in pear orchards reported in Sacramento County in September. (Cal. Coop. Rept.).

GREEN PEACH APHID (Myzus persicae) - WASHINGTON - Migrating back to peach trees at Wawawai. No eggs observed yet. (Johansen).

A STINK BUG (Euschistus conspersus) - CALIFORNIA - Most untreated orchards showed considerable damage during September. (Cal. Coop. Rept.).

WOOLLY APPLE APHID (Eriosoma lanigerum) - IDAHO - Moderately heavy flights observed in Moscow area. (Gittins).

WALNUT CATERPILLAR (Datana integerrima) - LOUISIANA - Infesting several hickory trees in Claiborne Parish. (Oliver).

Citrus Insect Situation in Florida, Second Week in October

PURPLE SCALE activity increased with 93 percent of groves infested. Highest activity in Ridge district. FLORIDA RED SCALE activity increased sharply during week and near an all-time high, and by far the highest recorded for October, with 75 percent in the young stages. Average infestation has more than doubled in past two weeks. Expected to increase further and remain high for at least a month. Activity highest in Ridge and Indian River districts. CITRUS RUST MITE increased in activity, with 81 percent of groves infested, and will remain at a high level through November. Fruit infestations (22.6 percent) are extremely high for October. Highest activity was in Bartow, Ridge, and upper East Coast districts. CITRUS RED MITE increased in activity, with 49 percent of groves infested. Expected to increase further. Highest activity in Brooksville district. (Pratt, Thompson, Johnson).

MEXICAN FRUIT FLY (Anastrepha ludens) - MEXICO - Adult male trapped at Tecate, Baja California, October 14. Tecate is located on the Mexico-California border about 30 miles east of Tijuana. (Cit. Blackfly and Mex. Fruit Fly Cont. Proj. Rept., Oct. 1-15).

TRUCK CROP INSECTS

CORN EARWORM (Heliothis armigera) - FLORIDA - Causing 15-20 percent damage in 50 acres of beans in Alachua County. (Hunter). VIRGINIA - Continues to infest snap beans and lima beans in eastern area. (Brubaker, Greenwood, Hofmaster).

BEAN LEAF ROLLER (Urbanus proteus) - FLORIDA - Larvae causing serious damage to about 50 acres of beans near Gainesville, Alachua County. Adults numerous. (Det. W. P. Hunter). Average about six per leaf of cowpeas at Bereah, Polk County. (Det. J. A. Haddox). (Denmark).

COWPEA CURCULIO (Chalcoedermus aeneus) - FLORIDA - Infesting most early pole beans at Homestead, Dade County, and growers expected to lose some of the early crop. Worst infestation in ten years. (Det. D. O. Wolfenbarger). (Denmark).

MEXICAN BEAN BEETLE (Epilachna varivestis) - FLORIDA - A few colonies found in a 50-acre bean field in Alachua County. (Hunter).
NORTH CAROLINA - Moderate attacks on beans in gardens in Wake County. (Jones). VIRGINIA - Moderate damage to untreated snap beans and lima beans in eastern area. (Brubaker, Greenwood, Hofmaster).

PEA WEEVIL (Bruchus pisorum) - WASHINGTON - A number of adults collected on ponderosa pines in Pullman area, apparently entering hibernation. (Johansen).

POTATO TUBERWORM (Gnorimoschema operculella) - CALIFORNIA - Heavy damage to potatoes in Santa Barbara County in September. (Cal. Coop. Rept.).

TOMATO PINWORM (Keiferia lycopersicella) - CALIFORNIA - Moderate infestations in tomato fields were reported in San Diego County in September. (Cal. Coop. Rept.).

CABBAGE LOOPER (Trichoplusia ni) - LOUISIANA - Continues to infest cabbage, broccoli and cauliflower in the vegetable-growing area. (Oliver).

TURNIP APHID (Rhopalosiphum pseudobrassicae) - LOUISIANA - Very severe infestation in St. Charles, St. John the Baptist, and Tangipahoa Parishes. (Oliver).

PICKLEWORM (Diaphania nitidalis) - FLORIDA - Causing five percent damage to 25 acres of squash in Alachua County. (Hunter).

MELON APHID (Aphis gossypii) - CALIFORNIA - An increase in winter squash reported in Los Angeles County in September. (Cal. Coop. Rept.).

ARTICHOKE PLUME MOTH (Platyptilia carduidactyla) - CALIFORNIA - Damage to 15 percent was reported in artichoke fields in Monterey County and medium damage in Santa Barbara County in September. (Cal. Coop. Rept.).

GREEN PEACH APHID (Myzus persicae) - VIRGINIA - Infesting some plantings of spinach to a considerable extent in eastern area, necessitating control. (Brubaker, Greenwood, Hofmaster).

COTTON INSECTS

Pink Bollworm Situation as of October 15

Gin trash inspections completed in Alabama and Georgia with negative results. Negative also in Florida and South Carolina, inspected previously. In Louisiana outside of Cameron and Calcasieu Parishes, only five northwestern parishes--Sabine, DeSoto, Caddo, Webster and Claiborne--have been found infested and these infestations very light. In Arkansas, pink bollworm found in Little River, Hempstead, Lafayette and Logan Counties, with the first three counties a part of the original eight infested in Arkansas. Although east Texas counties and most counties where inspection has been done in Oklahoma continue to show an increase in infestation over last year, results in other states are encouraging. No pink bollworms have been found outside the quarantined area, and borderline counties within the quarantine have also been negative. (P.B. Cont. Proj. Rept. Oct. 1-15).

COTTON LEAFWORM (Alabama argillacea) - OKLAHOMA - Causing almost complete defoliation of cotton in parts of Grady, Stephens, Payne and Jefferson Counties. An average of 10-20 larvae per plant in Jefferson County. Pupating. (Coppock). ARKANSAS - Heavy infestations in fields of upper Arkansas Valley. Decrease rapidly down the valley and are light to non-existent in Pope County. (Warren).

Mites on Cotton

CALIFORNIA - Lighter than usual in San Joaquin Valley. Some defoliation in Tulare County and moderate damage recently in Imperial County. (Cal. Coop. Rept., Sept.). NORTH CAROLINA - A survey to determine the species of mites on cotton showed the following by counties harvesting over 10,000 acres: Halifax, Tetranychus schoenei and T. atlanticus; Nash, T. telarius, T. atlanticus and Tetranychus sp.; Johnston, T. telarius; Wayne, T. telarius; Harnett, Tetranychus sp. and T. atlanticus; Robeson, T. telarius; Scotland, T. desertorum and T. telarius; Rowan, T. tumidus; Anson, T. tumidus, T. telarius and Tetranychus sp.; Union, T. atlanticus, Tetranychus sp. and T. telarius; Cleveland, Tetranychus sp., T. schoenei and T. telarius; Rutherford, T. telarius and T. schoenei. (Farrier, Oct. 10).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

FALL WEBWORM (Hyphantria cunea) - TEXAS - Caused defoliation on scattered sweetgum and hickories in Montgomery, Polk and San Jacinto Counties. (Young). LOUISIANA - Populations remain heavy and severe on pecan trees over State. (Oliver).

CALIFORNIA OAKWORM (Phryganidia californica) - CALIFORNIA - Heavy county-wide infestation on oak trees in September in San Mateo County and a light infestation in Marin County. (Cal. Coop. Rept.).

ELM LEAF BEETLE (Galerucella xanthomelaena) - CALIFORNIA - Light infestation in Marin County and unusual numbers in Sacramento County in September. (Cal. Coop. Rept.).

TURPENTINE BEETLES (Dendroctonus spp.) - TEXAS - Caused death of pines on small areas in Angelina, Cherokee, Montgomery and Tyler Counties. (Young).

A SCOLYTID (Xyleborus morstatti) - FLORIDA - Average two per twig of a large flowering dogwood tree at Oakland, Orange County. Almost all terminals killed. (Det. A. N. Tissot). (Nieland).

RED-HEADED PINE SAWFLY (Neodiprion lecontei) - TEXAS - Reported on a two-year loblolly pine plantation and also on natural reproduction in San Augustine County. (Young).

ORANGE-STRIPED OAKWORM (Anisota senatoria) - TEXAS - In combination with Heterocampa manteo is defoliating several thousand acres of oak trees in western Liberty, eastern Montgomery and northern Harris Counties. Black oak group more commonly attacked than the white oak group. No mortality expected. (Young).

LOCUST BORER (Megacyllene robiniae) - NORTH CAROLINA - Causing moderate loss of isolated locust trees in Ashe County. (Farrier).

IPS BEETLES - TEXAS - Infestations causing mortality to pines in scattered locations of Anderson and Montgomery Counties. (Young). ALABAMA - Ips avulsus spreading from pine slash and killing tops of standing timber near Bellamy. (Arant). VIRGINIA - Recent surveys in Buckingham, Appomattox and Cumberland Counties show activity increased during August. (Morris, Va. For. Serv.).

TERMITES - MARYLAND - Damaging young poplar trees in Montgomery County and a house in Baltimore. (U. Md., Ent. Dept.).

GIANT HORNET (Vespa crabro germana) - VIRGINIA - Killing lilacs and probably damaging fruit trees in one area of Scott County. Troublesome for two years on this farm. (Rowell).

AZALEA LACE BUG (Stephanitis pyrioides) - PENNSYLVANIA - Numerous reports of damage to azaleas in southeastern areas. (Menusan).

A FALSE SPIDER MITE (Brevipalpus essigi) - OREGON - Collected on fuchsia in Florence. (Krantz).

LILY WEEVIL (Agasphaerops nigra) - CALIFORNIA - Severe damage to lilies in some fields in Humboldt County in September. (Cal. Coop. Rept.).

A MEMBRACID (Umbonia crassicornis) - FLORIDA - Thousands per plant infesting pithecellobium and calliandra at Bradenton, Manatee County, October 11. (Det. E. G. Kelsheimer). Found on several other trees including mimosa. (Miller).

ORIENTAL FRUIT MOTH (Grapholitha molesta) - SOUTH CAROLINA - Infesting pyranantha in Lancaster County. (Cannon).

A PSYLLA (Psylla floccosa) - CALIFORNIA - Heavy infestations on wild ceanothus in Descanso area of San Diego County. Alder is usual host. (Cal. Coop. Rept., Sept.).

INSECTS AFFECTING MAN AND ANIMALS

COMMON CATTLE GRUB (Hypoderma lineatum) - OKLAHOMA - Of 73 head examined in McAlester County, 27 percent had grubs. (Coppock).

HOUSE FLIES - NEBRASKA - Populations built up to annoying proportions with continued mild weather. (Andersen).

HORN FLY (Siphona irritans) - OKLAHOMA - Very numerous in Lincoln County area. (Flora). Range per head in the following areas: McAlester, 25-50; Muskogee, 5-100; Sapulpa, 20-40. (Coppock).

SCREW-WORM (Callitroga hominivorax) - OKLAHOMA - (Correction: CEIR 5(42):979. Reference to screw-worm should refer to screw-worm flies.) Flies numerous in Lincoln County area. (Flora, Oct. 21). NORTH CAROLINA - A serious outbreak in Mocksville area. Noted first about October 1 and reached epidemic proportions by October 15. (Jones, Scott, Oct. 18). Very severe epidemic in Davidson, Davie,

Iredell and Rowan Counties. Uninjured cows infested in eyes; nearly all newly dropped calves and pigs had navels infested; some scratched dogs required drastic surgery or had to be destroyed. One veterinarian dispensed six bottles of smear and treated over a dozen dogs and other animals in the epidemic area. (Williams, Farrier).

A BOTFLY (Cuterebra sp.) - NORTH CAROLINA - Removed from under skin of puppy. (Cutts).

MOSQUITOES - UTAH - Annoyance from Mansonia perturbans in Cache County was higher in 1955 than during previous season. Culex erythrothorax was lower. (Harmston).

DOG AND CAT FLEAS - PENNSYLVANIA - Numerous requests for control in homes and lawns in Philadelphia. (Menusan).

BLACK WIDOW SPIDER (Latrodectus mactans) - UTAH - Reports of occurrences from Logan, Richfields, Provo and Salt Lake City. (Knowlton). VIRGINIA - Entering home in Fairfax County. (Burr). Reported in unusual numbers in Blacksburg and requests for control received from Bon Air and Salem. (Morris).

SHEEP SCAB MITE (Psoroptes equi var. ovis) - VIRGINIA - Of 238 head of sheep inspected, 41 were infested. (Va. Livestock Health Bul. No. 10, Oct. 1955).

CATTLE LICE - NORTH CAROLINA - Appearing in a number of herds in Ashe County. (Farrier).

CHICKEN MITES - VIRGINIA - Very heavy on a farm in Botetourt County. (Burtner).

BENEFICIAL INSECTS

BLACK SCALE PARASITES - CALIFORNIA - Aphycus helvolus, A. lounsburyi and Scutellista cyanea reported responsible for heavy reduction of black scale on citrus in eastern Los Angeles County. Have virtually eliminated irregular hatch of black scale. (Cal. Coop. Rept., Sept.).

TACHINA FLIES - ALABAMA - Heavily parasitizing fall armyworm near Auburn. (Arant).

STORED PRODUCTS INSECTS

TOBACCO MOTH (Ephestia elutella) - NORTH CAROLINA - Causing concern in east central area packhouses. Many growers had as much as 10-25 percent damage. (Jones, Scott, Oct. 18).

ANGOUNCIS GRAIN MOTH (Sitotroga cerealella) - MARYLAND - Infesting stored ear corn in Frederick County. (U. Md., Ent. Dept.).

A MURKY MEAL CATERPILLAR (Aglossa caprealis) - MARYLAND - Larvae in homes in Dorchester and Prince Georges Counties. (U. Md., Ent. Dept.).

MISCELLANEOUS INSECTS

EARWIGS - WYOMING - Causing damage to gardens in Lincoln County. (Spackman).

BOXELDER BUG (Leptocoris trivittatus) - NEBRASKA - Heavy populations in eastern portion. As many as 12 calls received in one hour. (Andersen). OHIO - Greater numbers than usual in northern area in and about houses. (Neiswander). ILLINOIS - Causing the usual number of complaints. (Petty). VIRGINIA - Annoying about homes in Spotsylvania County (Kash) and at Richmond (Rowell). Heavy on some maple trees in Orange County. (Grayson). MARYLAND - Annoying home owners in Howard and Prince Georges Counties. (U. Md., Ent. Dept.).

RECENT INTERCEPTIONS AT PORTS OF ENTRY

Of recent interest was the unusual number of interceptions of adult Japanese beetles (Popillia japonica Newm.) as stowaways and with baggage on airplanes from Japan at Hickam Field, Hawaii, during June and July of this year. In a total of 25 interceptions consisting of 41 adult beetles, 22 were found alive and 19 dead. A check of the collections of Japanese beetle traps maintained in the vicinity of the Hickam Field and other points in the Hawaiian Islands to detect any possible introduction showed that no Japanese beetles have been found in the Territory of Hawaii to date. Specimens of the Japanese beetle have been intercepted a number of times as stowaways on airplanes from Japan in Hawaii in the years since 1951, and occasionally in soil around the roots of plants from Japan at various ports. Dead adults have also been intercepted in rice straw packing, and with tree seeds from China. This injurious beetle was introduced into the United States in or about the year 1916, becoming a common and injurious pest of fruits, field and forage crops, grasses, and gardens in areas in several States east of the Mississippi River. The known infested area has been placed under quarantine (Domestic Quarantine 48) to prevent its spread to non-infested areas of the United States.

(Compiled - Plant Quarantine Branch).

LIGHT TRAP COLLECTIONS

		Pseudal. unipun.	Laphyg. frugip.	Agrotis ypsilon	Feltia spp.	armig. vires.	Heliopsis sexta.	Protoparce quin.	Antic. gemma.
KANSAS									
	Manhattan			7	53	244			1
	Garden City			34		67			
	Hays			13	13	110			
LOUISIANA									
	B. Rouge	16	13	3	85	7			
	Tallahah*	118	7	13	29	30			5
ALABAMA									
	Auburn	1	5		87				
SO. CAROLINA (Counties)									
	Charleston	9	11	10	13	18	2	3	1,577
	Oconee	10	1		277		3 spp.		6
GEORGIA (Counties)									
	Spalding	9	8		92	3			
	Clarke	11			307				
	Tift	2	28		47	10		1	51
TENNESSEE (Counties)									
	Shelby	160		256	64	672			36
	Madison	40	8	16	4	20	4	1	1
	Lawrence	8		8	96				
	Maury	16		16	384	32			
	Knox	4				12			
	Greene	14		8	90	18			
	Robertson	8			138	16			

1996

*Three traps at Tallulah

ADDITIONAL NOTES

MINNESOTA - EUROPEAN CORN BORER survey completed and ranged from 13 to 327 per 100 plants and averaged 96 for State compared with 72 per 100 plants in 1954. Heaviest infestations occurred in southwest district. GRASSHOPPER egg survey indicates infestation generally higher throughout State. Heaviest infestation in southeastern, west central and northwestern districts. (Minn. Ins. Rept. Serv.).

ARIZONA - SPOTTED ALFALFA APHID building up in alfalfa in Yuma area. Isolated spots showing honeydew. A fungus is common on aphids where aphids and foliage are densest and humidity is highest (Oct. 19). Aphids increasing rapidly in all areas of eastern Maricopa County, with large numbers winged. PEA APHID light on eight acres of alfalfa at Phoenix, October 17, in association with spotted alfalfa aphid. STINK BUGS appearing in alfalfa seed fields at Yuma, 5-12 per ten sweeps, October 19. CLOVER SEED CHALCID appeared in numbers in alfalfa seed samples at Yuma in past two weeks. RUSTY PLUM APHID severe at ends of rows and borders of an 80-acre field of sorghum at Phoenix, October 12. Plants dripping with honeydew and sooty mold beginning to develop. Literally thousands of aphids on undersides of some leaves. Also on Johnson grass. A SPIDER MITE, probably Oligonychus pratensis, discoloring foliage in 80 acres of sorghum at Phoenix, October 12, and probably decreasing. Severe infestation of a mite in nearly all untreated fields of soybeans west of Phoenix, Maricopa County, October 12. ADULT LACEWINGS appearing by hundreds at lights at Yuma, coming from alfalfa fields. SEED-CORN MAGGOT has caused about 5-8 percent damage to peas at Yuma (Oct. 19). CABBAGE LOOPER still damaging lettuce north of Scottsdale. SALT-MARSH CATERPILLAR general in Maricopa County in sugar beet seed fields, enough to warrant control (Oct. 6-7). BLACK-MARGINED APHID severe on nearly all pecan trees in Maricopa County (Oct. 10). Much honeydew and trees likely to be defoliated as in previous years. (Ariz. Coop. Rept.).

COOPERATIVE SURVEY ENTOMOLOGISTS

A cooperative plan to place survey personnel in a number of states was started in 1953. It involves sharing the cost between the State and Federal governments of the actual survey work (of one individual) on approximately a 50-50 basis. The employees are state controlled and report all insect information directly through the state clearing house. After the information has been made available for release at the state level it is brought together for the national report.

This cooperative program is now in operation in 23 states and agreements have been completed in Oklahoma and Georgia. The men assigned to this work in the 23 states are listed below:

- Arizona - Floyd G. Werner, Department of Entomology,
University of Arizona, Tucson
- Arkansas - Lloyd O. Warren, College of Agriculture,
University of Arkansas, Fayetteville
- California - Stewart Lockwood, Department of Agriculture,
Sacramento
- Florida - H. A. Denmark, State Plant Board, Gainesville
- Idaho - A. R. Gittins, Entomology Department, University
of Idaho, Moscow
- Illinois - Clarence E. White, Illinois Agricultural Extension
Service, 280 Natural Resources Building, Urbana
- Kansas - David L. Matthew, Jr., Department of Entomology,
Kansas State College, Manhattan
- Louisiana - Abe D. Oliver, Department of Entomology,
Louisiana State University, Baton Rouge 3
- Maryland - Wallace C. Harding, Jr., Department of Entomology,
University of Maryland, College Park
- Minnesota - Hart Graeber, Department of Agriculture, Division
of Plant Industry, University Farm, 301 Coffey Hall,
St. Paul 1
- Missouri - George W. Thomas, Department of Entomology,
College of Agriculture, University of Missouri,
106 Whitten Hall, Columbia

- Nebraska - Lloyd W. Andersen, Extension Service,
Agricultural College, Lincoln 3
- Nevada - Harry E. Gallaway, Department of Agriculture,
P. O. Box 1027, Reno
- North Carolina - Maurice H. Farrier, Department of Entomology,
Box 5215, State College Station, Raleigh
- North Dakota - Vance V. Goodfellow, Office of State Entomologist,
State College Station, Fargo
- Oregon - Joe Capizzi, Division of Plant Industry,
Agriculture Building, Salem
- Rhode Island - Benjamin H. Kantack, Department of Plant
Pathology-Entomology, University of Rhode Island,
Kingston
- South Dakota - William M. Hantsbarger, Entomology-Zoology
Department, South Dakota State College, College
Station
- Texas - George T. Davis, Department of Entomology,
Texas Agricultural and Mechanical College,
College Station
- Utah - George F. Knowlton, Utah State Agricultural
College, Logan
- Virginia - Arthur P. Morris, Virginia Polytechnic Institute,
Blacksburg
- Wisconsin - Philip W. Smith, Plant Industry Division,
Wisconsin Department of Agriculture, 315 N. Carroll
Street, Madison 3
- Wyoming - Everett W. Spackman, Division of Plant Industry,
Department of Agriculture, 308 Capitol Building,
Cheyenne

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Cooperative
**ECONOMIC INSECT
REPORT**

Issued by

PLANT PEST CONTROL BRANCH

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL BRANCH

ECONOMIC INSECT SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Branch serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Economic Insect Survey Section
Plant Pest Control Branch
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

BROWN WHEAT MITE moderate to heavy in western Kansas but low in Payne County, Oklahoma. (p. 1003).

SPOTTED ALFALFA APHID infestations widespread in California, continues to build up in Clark County, Nevada, and increasing in areas of Arizona. Numerous in northern Utah but light in Kansas and in most areas of eastern and northern Oklahoma. (p. 1004).

SWEETPOTATO WEEVIL found in Rankin County, Mississippi (p. 1006) and in Caddo Parish, Louisiana (p. 1010).

HORNWORMS heavy widespread on tomatoes in Rio Grande Valley, Texas. (p. 1007).

GARDEN CENTIPEDE recorded in several new counties of Washington. (p. 1007).

VEGETABLE WEEVIL taken at Richmond, Virginia. New area in State. (p. 1007).

PINK BOLLWORM moth collected in light trap at New Roads, Pointe Coupee Parish, Louisiana. (p. 1010).

BROWN COTTON LEAFWORM reported from Arkansas. As far as known, this is a new State record for this insect. (p. 1010).

BROWN DOG TICK unusually heavy in Arizona and in College Station area of Texas. (p. 1008). SCREW-WORM infestation in cattle heavy in Texas. (p. 1009).

BROWN-BANDED ROACH reported from Nevada for first time. (p. 1010).

SUMMARY OF INSECT CONDITIONS - 1955 - Rhode Island. (p. 1012).

STATES reporting this week - 27.

Reports in this issue are for the week ending October 28, 1955, unless otherwise designated.

WEATHER FOR THE WEEK ENDING OCTOBER 31, 1955

Temperatures, although fluctuating considerably with the passage of cold fronts, averaged within a few degrees of the seasonal normals. Moderate to heavy precipitation fell in most sections east of the Mississippi River, light to moderate amounts in most northern sections west of that River, and dry weather continued for the third consecutive week in the lower Great Plains and for a much longer period in the far Southwest. As a cold front extending from the Great Lakes to Texas at the beginning of the week crossed the Eastern States on the 24th, moderate to heavy rains fell over the Ohio Valley, the Great Lakes, and Northeast, but little or none fell in the South.

Another cold front preceded and followed by a sharp rise and fall in temperatures respectively first appeared in the Pacific Northwest on October 25 and reached the Atlantic Coast on the 30th. During the passage of this front precipitation fell in nearly all northern areas and east of the Mississippi River.

Much precipitation which fell in the northern Rockies and extreme North-Central Interior was in the form of snow. Wyoming reported a foot of snow in the mountains and one to three inches at lower levels. Heavy snow in northeastern Minnesota ranged up to ten inches at Ely, and as much as five inches was reported in northern Wisconsin. Flurries occurred in parts of Illinois and Indiana for the first time this season. Snow also fell in the mountains of New England and northern New York. Thunderstorms occurred in the Southern States on the 28th and 29th, and tornadoes, high winds, and hail were reported in northern portions of Louisiana and Mississippi.

(Summary Supplied by U. S. Weather Bureau).

WEATHER BUREAU'S 30-DAY OUTLOOK

November 1955

The Weather Bureau's 30-day outlook for November calls for temperatures to average below seasonal normals over the northwestern quarter of the nation as well as in the Great Lakes region and Central Plains. Above normal temperatures are predicted for the Southwest, Southeast, and northern New England. In remaining areas near normal temperatures are anticipated with large week-to-week fluctuations. Precipitation, some in the form of snow, is expected to exceed normal over the northern third of the country, but subnormal rainfall is predicted for the southern third. In the remaining area near normal amounts are in prospect.

This report released by the Weather Bureau on November 1, 1955.

Weather forecast given here is based on the official 30-day "Resume and Outlook", published twice a month by the Weather Bureau. You can subscribe through Superintendent of Documents, Washington 25, D. C. Price \$4.80 a year, \$2.40 for six months.

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - UTAH - Still abundant in many alfalfa fields. Largely Melanoplus femur-rubrum. Numerous at 7000 feet in summits of mountains between Cache and Rich Counties. (Knowlton).

WASHINGTON - M. mexicanus up to four per square foot on rangeland in local areas north of Rice. Appears to be at height of mating season. (Gittins).

EUROPEAN CORN BORER (Pyrausta nubilalis) - NORTH DAKOTA - Completion of fall abundance survey showed 27 percent of plants infested with an average of six borers per 100 plants in Barnes, Stutsman, Wells, Foster, Eddy, Griggs, Steele and Benson Counties. (N.D. Ins. Rept. Serv.). SOUTH DAKOTA - Average percent of plants infested was 66 percent with an average of 117 borers per 100 plants in Beadle, Kingsbury, Brookings, Sanborn, Miner, Lake, Moody, Davison, Hanson, McCook and Minnehaha Counties. An average of 53 percent infestation with an average of 97 borers per 100 plants in Brown, Faulk and Spink Counties. (Lofgren, Hantsbarger). KANSAS - Fall abundance survey showed the following percent infestation and average number of borers per 100 stalks by county: Washington 7 percent and 9 borers; Republic 1 and 1; Cloud 4 and 6; Clay 2 and 2. (Matthew). TENNESSEE - Survey in Knox County showed an average of less than one borer per plant. (Stanley). OHIO - Thirty counties surveyed in western and central area showed an average of 124 borers per 100 stalks, a reduction of 20 percent under 1954. Heaviest infestations were in Van Wert (481), Putnam (283), Allen (213), and Auglaize (219). (Parks, Goleman).

GREENBUG (Toxoptera graminum) - OKLAHOMA - A survey of small grains in central, north central and eastern areas showed populations practically non-existent. (Wood, Coppock). KANSAS - None found in wheat fields surveyed in Washington, Republic, Jewell, Mitchell, Cloud, Clay, Ottawa, Saline and Dickinson Counties. None in northern two tiers of counties of States west of Highway U.S. 81 during week of October 17-21. (Somsen, Marvin).

BROWN WHEAT MITE (Petrobia latens) - OKLAHOMA - Low populations in small grains in Payne County. (Wood, Coppock). KANSAS - Survey of Finney, Lane, Scott, Wichita, Greeley, Hamilton and Kearny Counties showed moderate to heavy infestation. Counts on volunteer wheat 18-45 per clump of plants. In drilled wheat, 0-6 per linear foot of row. (DePew). Causing feeding injury to leaves in a few northwestern counties. (Somsen, Marvin, Oct. 17-21). Infestations 3-20 per five linear feet of row in eastern Saline County. (Matthew).

CORN EARWORM (Heliothis armigera) - OKLAHOMA - Averaging five per 10 sweeps on alfalfa in Pawnee County. (Coppock).

CORN LEAF APHID (Rhopalosiphum maidis) - OKLAHOMA - Very abundant in fall-planted barley and averaging over 460 per linear foot of row from two fields in Wagoner County. Lighter infestations reported from Ottawa and Pawnee Counties. (Coppock).

GREEN JUNE BEETLE (Cotinis nitida) - VIRGINIA - Larval damage to lawns has been heavy in several parts of State during past month. (Morris). OHIO - Has been a serious pest of lawns of southern half. Large numbers have been reported in local areas in Meigs, Scioto, Muskingum, Guernsey, Coshocton and Tuscarawas Counties. (Parks, Goleman).

LEAFHOPPERS - OKLAHOMA - From 10-12 per square yard in fall-seeded wheat in Pawnee County and common in other northern and eastern counties. (Coppock).

WHITE GRUBS - OKLAHOMA - Small damage to small grains in southeastern Osage County and populations of 4-5 per square foot in sandy loam soil of Payne County. (Wood, Coppock). UTAH - Damaging quite a number of lawns in Salt Lake County. (Parrish, Knowlton).

AN INDIGO GALL MOTH (Walshia amorphella) - TEXAS - In one field of clover in Hunt County, 80 percent of roots infested. (Hawkins).

SPOTTED ALFALFA APHID - CALIFORNIA - Counties infested wholly or in part: San Diego, Riverside, Orange, San Bernardino, Los Angeles, Ventura, Santa Barbara, San Luis Obispo, Kern, Tulare, Kings, Fresno, Monterey, Madera, Merced, Santa Clara, Stanislaus, San Joaquin, Solano, Sacramento, Yolo, Placer, Yuba, Sutter, Glen, Tehama and Shasta. Infestations in Tehama County are widely scattered in alfalfa-growing regions. There is considerable evidence of heavy loss there as in others where infestations have existed for a longer time. (Cal. Coop. Rept., Oct. 24). NEVADA - Continues to build up in some alfalfa fields in Clark County. Especially threatening new plantings. (Lauderdale). ARIZONA - In ten alfalfa fields in Tempe, Kyrene and Laveen areas of Maricopa County, populations averaged 1.5 per leaf October 20, compared with 0.3 per leaf October 10-11. Increase coincident with cooler weather and increased succulence of alfalfa, following irrigation. In other fields in the Tempe, Phoenix and Scottsdale area of Maricopa County, several counts ranged from 3-7 per leaf. In fields of heavier infestation, honeydew, sooty mold and leaf injury becoming noticeable. Some growers resumed control operations. In Greenlee County, populations increasing by October 21 with alates plentiful. Young alfalfa being injured particularly. (Ariz. Coop. Rept.). OKLAHOMA - Averaged 2-4 per sweep in alfalfa in Pawnee, Tulsa and Osage Counties. Populations low in other eastern and northern counties. (Coppock). KANSAS - Found in all alfalfa fields surveyed in Washington, Republic, Jewell, Mitchell,

Cloud, Clay, Ottawa and Saline Counties. Counts from 10-80 per 20 sweeps. Infestation general throughout State but no economic infestations now. Counts from four per 20 sweeps to 65 per sweep. (Matthew). UTAH - Numerous in most fields of succulent alfalfa examined in Davis, Salt Lake and Tooele Counties. From 2-35 per sweep. Oviparous females taken. (Knowlton).

SOUTHWESTERN CORN BORER (Diatraea grandiosella) - KANSAS - No infestations found in corn fields examined in Washington, Republic, and Jewell Counties in north central area. Two fields, each with four percent girdled stalks, were found in Cloud County. (Matthew).

PLANT BUGS - UTAH - Lygus bugs still moderately numerous on alfalfa, grass and native plants. (Knowlton).

PEA APHID (Macrosiphum pisi) - UTAH - From 2-25 per sweep in some alfalfa fields in Box Elder, Weber and Davis Counties. (Knowlton). MARYLAND - Building up on alfalfa in northern Cecil County. (U. Md., Ent. Dept.).

A LEAF MINER (probably Liriomyza scutellata) - NEVADA - Infesting about 20 percent of leaves in alfalfa field in Pahrump Valley, Nye County. (Lauderdale).

A WEBWORM (Loxostege sp.) - OKLAHOMA - Causing severe damage to young alfalfa in Payne County. (Walton, Bryan).

TERMITES - OKLAHOMA - Damage to peanuts in late summer by subterranean termites in several areas. From 2-3 percent of nuts destroyed in plots at Stillwater. (Walton).

FRUIT INSECTS

RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) - WEST VIRGINIA - Substantial injury to apples from late season generation of larvae which appeared through September in Kearneysville area. (Hamstead, October 24).

EUROPEAN RED MITE (Metatetranychus ulmi) - WEST VIRGINIA - Overall seasonal damage moderate in Kearneysville area, but populations persisted through season from May to October. (Hamstead, October 24).

CODLING MOTH (Carpocapsa pomonella) - WEST VIRGINIA - Injury to apples averaging about 1.3 percent at processing plants in Kearneysville area. About 50 percent less than last year. (Hamstead, October 24).

A LEAF MINER (Callisto geminatella) - WEST VIRGINIA - Early seasonal infestations were numerous and heavy in Kearneysville area. Late generations negligible. (Hamstead, October 24).

LESSER PEACH TREE BORER (Synanthedon pictipes) - TEXAS - Emergence of adults has ceased in Tyler area. (King).

PEACH TREE BORER (Sanninoidea exitiosa) - TEXAS - Emergence of adults ceased in Tyler area. (King).

SMALL CHESTNUT WEEVIL (Curculio auriger) - SOUTH CAROLINA - Infesting chestnuts locally in Greenville County, October 14. (Reid).

FALL WEBWORM (Hyphantria cunea) - ALABAMA - Damaging pecans in Mobile County. (Arant).

HICKORY SHUCKWORM (Laspeyresia caryana) - FLORIDA - From 6-8 larvae infesting shucks of some pecans in Alachua County, causing failure of shucks to shed. (Det. L. A. Hetrick). (Denmark, October 21).

TOMATO FRUITWORM (Heliothis armigera) - TEXAS - In complex with Laphygma frugiperda, a medium local infestation causing damage to fruit of kumquat trees in Harris County. (Garner).

TRUCK CROP INSECTS

SOUTHERN GREEN STINK BUG (Nezara viridula) - ALABAMA - Damaging lima beans in Monroe County. (Arant).

MEXICAN BEAN BEETLE (Epilachna varivestis) - NORTH CAROLINA - Causing concern on late green beans in Wake County. (Jones).

SWEETPOTATO WEEVIL (Cylas formicarius elegantulus) - MISSISSIPPI - Found in Rankin County south of Jackson Oct. 20. (Murphy).

SOUTHERN ARMYWORM (Prodenia eridania) - MISSISSIPPI - In complex with Trichoplusia ni, feeding on mustard in Itawamba County, October 21. (Young).

FALSE CHINCH BUG (Nysius ericae) - MISSISSIPPI - Infesting mustard in Itawamba County, October 21. (Young).

CABBAGE WEBWORM (Hellula rogatalis) - MISSISSIPPI - Infesting mustard in Itawamba County, October 21. (Young). TEXAS - Medium infestation on cauliflower in Dimmit County. (Richardson).

HORNWORMS (Protoparce spp.) - TEXAS - Heavy, widespread infestation on tomatoes throughout the Rio Grande Valley. (Deer, Wene).

GREEN PEACH APHID (Myzus persicae) - MARYLAND - Large numbers on tobacco cut and put in storage late in September. Convergent lady beetle also common. Quick ripening of tobacco noted before harvest at Crownsville, Anne Arundel County. (U. Md., Ent. Dept.).

RASPBERRY ROOT BORER (Bembicia marginata) - OREGON - By October, 85 percent of eggs had hatched in Stayton district. (Rosenstiel).

GARDEN CENTIPEDE (Scutigera immaculata) - WASHINGTON - Distribution records for these counties are in addition to those published in CEIR 5 (10):4, 1954: Lewis, Grays Harbor, King, Benton, Adams, Snohomish, Whatcom, Klickitat and Franklin. Heavy damage occurred this year to strawberries, raspberries, pole beans, cabbages, squash, tomatoes, sugar beets and mint. Most damage is due to feeding on the feeder roots. The pest also tunnels in strawberry fruits and into potato tubers. (Waterhouse).

VEGETABLE WEEVIL (Listroderes costirostris obliquus) - VIRGINIA - A single adult specimen taken at a tobacco warehouse at Richmond. First specimen from this area. (Willey).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

NANTUCKET PINE MOTH (Rhyacionia frustrana) - ALABAMA: † Reported attacking pines in southern area. (Arant). MARYLAND - Infesting Virginia and red pines in Baltimore County. Infestations less now than last spring. Pupal stage. (U. Md., Ent. Dept.).

MIMOSA WEBWORM (Homadaula albizziae) - VIRGINIA - Light infestation on some mimosa in Fairfax County. (Burr).

LEAFHOPPERS - OKLAHOMA - Leafhoppers, mostly Erythroneura spp., feeding heavily on elm and redbud. E. dumosa by far the most abundant. (Fenton).

JUNIPER WEBWORM (Dichomeris marginella) - OREGON - Found on Spiny Creek junipers in the Gresham area. Rarely recorded from State. (Det. Natl. Mus.). (Nicolaison).

APHIDS - UTAH - Numerous on European beech, linden, and some maples in Cache County. (Knowlton). KANSAS - Winged and wingless forms of Longistigma caryae on pin oak in Topeka, Shawnee County. (Calkins, Brady).

A CERAMBYCID (Stenocorus inquisitor) - WASHINGTON - Heavily infesting two-year cut yellow pine in Pleasant Valley area of Stevens County. (Gittins).

TWIG GIRDLER (Onciderus cingulatus) - ALABAMA - Several reports of attacking persimmons. (Arant).

SAWFLIES (Neodiprion spp.) - NEVADA - Causing considerable damage to young stands of single-leaf pine near Goldfield, Esmeralda County. (Lauderdale).

A WIREWORM (Conoderes sp.) - FLORIDA - Larvae collected on gladiolus at Sun City, Hillsborough County, October 17. Fifty percent of a 30-acre field destroyed. (Kelsheimer).

COCONUT SCALE (Apsidiotus destructor) - FLORIDA - Averaging 200 per leaf of sandalwood at South Miami, Dade County, October 12 (Dowling) and 1000 per leaf on bottlebrush at South Miami, October 17 (Buchanan, Dowling), and 25 per leaf on privet at Miami, Dade County, October 17 (Daigle).

BOXWOOD LEAF MINER (Monarthropalpus buxi) - NORTH CAROLINA - Local infestation on boxwood in Henderson County. (Scott).

INSECTS AFFECTING MAN AND ANIMALS

BLACK WIDOW SPIDER (Latrodectus mactans) - NEVADA - Numerous inquiries being received. (Lauderdale). VIRGINIA - Numerous requests for information received from southeastern Virginia. (Morris). A case reported of a man bitten three times and made unconscious for a day in Amelia County. (Holmes). OHIO - Abundant in homes in new housing development near Waverly and in a number of cottages at Buckeye Lake resort. (Parks).

BROWN DOG TICK (Rhipicephalus sanguineus) - ARIZONA - Continues as problem in Tucson area. Populations abnormally heavy this year. (Ariz. Coop. Rept.). TEXAS - Unusually heavy on dogs in the College Station area. (Davis).

CATTLE LICE - RHODE ISLAND - Solenopotes capillatus collected from cattle in Scituate, October 24. (Mathewson).

MOSQUITOES - UTAH - During October 650 acres were sprayed with ground equipment and 240 acres were sprayed by aircraft in Weber County for mosquito control. (Fronk). MARYLAND - Aedes sollicitans still biting on warm days on Kent Island, Queen Annes County. (U. Md., Ent. Dept.).

NORTHERN FOWL MITE (Bdellonyssus sylviarum) - NORTH CAROLINA - First infestation of year reported from Rockingham County. (Farrier).

PUSS CATERPILLARS (Megalopyge spp.) - TEXAS - Complaints received from most areas, especially southern half of State, of painful stings by this pest. (Garner, Davis).

SCREW-WORM (Callitroga hominivorax) - TEXAS - Heavy infestation in cattle over most of the State. (Davis).

BENEFICIAL INSECTS

A LONG-TAILED MEALYBUG PARASITE (Anarhopus sydneyensis) - CALIFORNIA - Recovered in plentiful numbers from an orange grove following treatment with insecticides. (Cal. Coop. Rept., September).

CARABIDS - TEXAS - Congregating on heads of late sorghum in Nueces County. (Nolan). Heavy populations congregating on elm and pecan trees in Bastrop County. (Reese).

STORED PRODUCTS INSECTS

TOBACCO MOTH (Ephestia elutella) - NORTH CAROLINA - Light infestation still present in Wake and Harnett Counties. (Scott).

SAW-TOOTHED GRAIN BEETLE (Oryzaephilus surinamensis) - NORTH CAROLINA - Light infestation on 1000 bushels of wheat in Rowan County; fumigated. Another infestation in same county. (Farrier).

RICE WEEVIL (Sitophilus oryza) - OREGON - Common in three of six grain elevators inspected in Portland. Tribolium castaneum in complex and may be a serious build-up. (Goeden).

INDIAN-MEAL MOTH (Plodia interpunctella) - OREGON - Infestations common in home-stored walnuts and filberts in Willamette Valley between Eugene and Portland. (Capizzi).

MISCELLANEOUS INSECTS

A SOLDIER FLY (Hermetia illucens) - NORTH CAROLINA - About 1-1/2 bushels of larvae in wet manure under 100 hens in Rockingham County. (Farrier). OKLAHOMA - Compost in rabbit pens heavily infested in Tulsa. (Fenton).

A KATYDID (Neoconocephalus triops) - MISSISSIPPI - Large numbers in business section of Jackson, where they were attracted to lights. (Lyle).

DARK MEALWORM (Tenebrio obscurus) - OHIO - Larvae entering homes in Circleville where infested manure was placed in yards. (Parks, Peterson).

CLOVER MITE (Bryobia praetiosa) - NEVADA - Fall migration to homes causing numerous inquiries. (Gallaway).

BOXELDER BUG (Leptocoris trivittatus) - NORTH CAROLINA - Causing concern at a home in Rowan County. (Farrier). KANSAS - Heavy populations reported from most areas of State. (Matthew). OHIO - Annoying householders in many areas. (Parks).

BROWN-BANDED ROACH (Supella supellectilium) - NEVADA - Infestation in home at Reno. (Ting). First report of this cockroach in Nevada. (Gallaway).

TERMITES - NEVADA - Subterranean termites unusually active with fall swarms appearing in Reno area. (Gallaway).

ADDITIONAL NOTES

NEBRASKA - ALFALFA CATERPILLAR producing another generation in alfalfa. Larvae in second and fourth instars and range from 5-8 per 25 sweeps in the northeastern area. PEA APHID counts ranged 10-18 per 25 sweeps in alfalfa in northeastern area. TARNISHED PLANT BUG counts 4-7 per 25 sweeps in alfalfa in northeastern area. CLOVER MITE very prevalent throughout eastern area. (Andersen). GRASSHOPPER egg pods in southeastern area ranged from 0.28-1.2 per square foot in the field to 3.6 per square foot in the margin; from 0.2 to 1.8 in the field to one in the margin in northeastern area; from 0-2.8 per square foot in north central area. (Fitchet, Gibson, Andersen).

ARKANSAS - CORN EARWORM heavy, 2-4 larvae per sweep in one field of alfalfa in Pulaski County. BROWN COTTON LEAFWORM taken from second growth cotton in Hempstead County. (Warren).

LOUISIANA - SWEETPOTATO WEEVIL found on thirty properties in the Shreveport area, Caddo Parish. Survey not completed. (Sweetpotato Weevil Control, Oct. 26). PINK BOLLWORM moth taken in light trap at New Roads, October 12. This is a new record for Pointe Coupee Parish. Further surveys are being conducted in this area. (Pink Bollworm Cont.).

LIGHT TRAP COLLECTIONS

		Pseudal. unipun.	Laphyg. frugip.	Agrotis ypsilon	Feltia spp.	Heliothis armig.	Heliiothis vires.	Agrotis glad.	Choriza. aux.	Antic. gemma.
KANSAS										
Hays	10/14-21			4	10	29			85	
Manhattan	10/22-28			2	27	181			30	
TEXAS										
College Sta.	10/25-27	24	22	3		17				
Weslaco	10/9-15	344		5		151	1			
LOUISIANA										
Tallah* B. Rouge	10/22-28 10/22-28	207 9	27 11	30	53 69	24 9		1957 6		3
ALABAMA										
Auburn	10/21-27		1		3			295		
GEORGIA (Counties)										
Spalding	10/15-21	11		2	106	1				
Tift	10/16-22	3	8		31	1				14
Oconee	10/16-22	9			164			939		
SOUTH CAROLINA										
Charleston	10/18-24	4		6	11	1				67
MARYLAND (County)										
Montgomery	10/20-28	36	10	73	6	4				
FLORIDA										
Gainesville	10/18	1			2					
Sanford	10/21					1				
Monticello	10/19	2			27	1				
Homestead	10/14 & 19				3	6				
ARKANSAS (Counties)										
Lincoln	10/19	36				84				
Arkansas	10/26	25				20				
Washington	10/28	27				96				

-1011-

*Three traps at Tallulah.

SUMMARY OF INSECT CONDITIONS - 1955

RHODE ISLAND

Reported by B. H. Kantack

Cereal and Forage Insects

ARMYWORM (Pseudaletia unipuncta) outbreaks occurred in two areas of the State during July and August with moderate damage observed on a ten-acre field of wheat and five acres of Sudan grass. Parasitism was very heavy, nearly 100 percent, during the second outbreak. Both outbreaks were of short duration, since insecticides were applied. PEA APHID (Macrosiphum pisi) populations on alfalfa were light throughout the season. Heavy populations of predators were present in all fields and appeared to check extensive build-ups. LEAFHOPPER populations were generally light. MEADOW SPITTLEBUG (Philaenus leucophthalmus) was abundant on alfalfa during May; however, no damage could be definitely attributed to this insect. GREEN CLOVERWORM (Plathypena scabra) was common in alfalfa and clover fields during July and August with moderate damage observed on twenty acres of alfalfa in Wickford. EUROPEAN CORN BORER (Pyrausta nubilalis) appears to be more abundant than last year, as fall survey records show a State average of 113 borers per 100 plants. The infestation was heavier in Bristol and Kent Counties. STALK BORER (Papaipema nebris) was present in light numbers in most fields; however, damage was light. CORN EARWORM (Heliothis armigera) populations were light with a moderate increase during August resulting in light damage to late sweet corn.

Fruit Insects

Aphid populations remained low throughout the season with light infestations of APPLE APHID (Aphis pomi) developing in a few orchards during late July and early August. Injury by CODLING MOTH (Carpocapsa pomonella) was light in orchards maintaining spray schedules; however, severe injury was observed in orchards where control measures were not applied. SPRING CANKERWORM (Paleacrita vernata) occurred in light numbers early in the season with light injury to a few neglected trees. PLUM CURCULIO (Conotrachelus nenuphar) populations were low with light sting injury common in some orchards. EASTERN TENT CATERPILLAR (Malacosoma americanum) was very heavy with light to moderate injury on apple trees over State. RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) populations were normal. APPLE MAGGOT (Rhagoletis pomonella) was found in many orchards with infestations much higher than last season except where a timely spray schedule was followed. EUROPEAN RED MITE (Metatetranychus ulmi) and TWO-SPOTTED SPIDER MITE (Tetranychus telarius) were a problem to fruit growers this season, as control measures were necessary in some areas.

Turf Insects

JAPANESE BEETLE (Popillia japonica) and ASIATIC GARDEN BEETLE (Autoserica castanea) grubs remain a problem on turf. A survey conducted by J. A. Mathewson, of the Rhode Island Department of Agriculture, shows that Asiatic garden beetle grubs make up 53.9, Japanese beetle 36.7, and other scarabaeids 9.3 percent of the total grub population taken from 14 samples in Newport County. The predominance of the Asiatic garden beetle grubs in some turf plots may account for some of the ineffective grub control reported with spore dust applied to control Japanese beetle grubs on turf.

Truck Crop Insects

POTATO FLEA BEETLE (Epitrix cucumeris) was a problem on potatoes and other garden crops. Insecticidal control was required on all potato plantings. The IMPORTED CABBAGEWORM (Pieris rapae) was a major problem on cabbage throughout the season. Heavy infestations of the STRIPED CUCUMBER BEETLE (Acalymma vittata) occurred over the State with control measures required in all areas. Populations of the SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) were light. SEED-CORN MAGGOT (Hylemya cilicrura) severely damaged a few small bean plantings in Bristol. ONION MAGGOT (Hylemya antiqua) destroyed about one-third of a two-acre field of onions in the Portsmouth area. The SQUASH BUG (Anasa tristis) and the SQUASH VINE BORER (Melittia cucurbitae) were of major concern as both were very abundant; the squash vine borer was especially damaging in the Wickford area. MEXICAN BEAN BEETLE (Epilachna varivestis) was statewide in distribution and moderate to heavy in most small gardens. Damage was very severe where no control measures were applied in Wickford and Wakefield.

Forest, Ornamental and Shade Tree Insects

Infestations of BIRCH LEAF MINER (Fenusa pusilla) were very heavy, with serious defoliation on grey birch. Both first and second generations caused severe damage. ELM LEAF BEETLE (Galerucella xanthomelaena) numbers were very light. SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) remains abundant with heavy populations in the Hamilton and East Greenwich areas. ROSE CHAFER (Macrodactylus subspinosus) was unusually heavy with severe injury to roses and other plants. Outbreaks of EASTERN TENT CATERPILLAR were very heavy with complete defoliation of wild cherry trees in scattered areas. Spotted infestations of LOCUST LEAF MINER (Chalepus dorsalis) were observed during August, with severe damage common in the Scituate area. SPRUCE SPIDER MITE (Oligonychus ununguis) was encountered on arborvitae throughout season; however, no serious infestations developed. FLETCHER SCALE (Lecanium fletcheri), a YEW SCALE (Pulvinaria floccifera), EUONYMUS SCALE (Unaspis euonymi), JUNIPER SCALE (Diaspis carueli), and OYSTERSHELL SCALE (Lepidosaphes ulmi) were encountered frequently during the summer nursery inspection.

Insects Affecting Man and Animals

AMERICAN DOG TICK (Dermacentor variabilis) appeared about mid-April in unusually large numbers and remained abundant statewide until mid-July. The BROWN DOG TICK (Rhipicephalus sanguineus) was a household pest in Wickford and Warwick during the last of August. BLACK FLIES (Simulium spp.) were very abundant during early spring. FLEAS (Ctenocephalides felis and C. canis) and BEDBUGS (Cimex spp.) were found in houses in all areas during August and September. HOUSE FLY (Musca domestica) and MOSQUITO populations were generally abundant, with a heavy population of mosquitoes building up after the heavy rains of mid-August.

Household and Wood Insects

A TERMITE (Reticulitermes flavipes) has been very severe in all areas with over 600 homes reported infested in 1955. EUROPEAN EARWIG (Forficula auricularia) populations were very heavy with frequent invasion of homes reported throughout the summer. HOUSE CRICKET (Acheta domestica) was a common household pest in many homes throughout the summer.

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Cooperative
**ECONOMIC INSECT
REPORT**

Issued by

PLANT PEST CONTROL BRANCH

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL BRANCH

ECONOMIC INSECT SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Branch serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Economic Insect Survey Section
Plant Pest Control Branch
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

SPOTTED ALFALFA APHID continues to cause damage in some counties of California; increasing in Brazos and Burleson Counties, Texas; but infestations low at Yuma, Arizona. (pp. 1018, 1027).

WHITE GRUBS damaging small grains in Mayes and Rogers Counties, Oklahoma. Other small grain insect conditions in this State. (p. 1026).

SWEETPOTATO WEEVIL generally light in infested areas of Louisiana but a few heavy infestations in southwestern parishes. (p. 1020).

PINK BOLLWORM infestations showing increases over 1954 in some areas of Louisiana, Texas, and Oklahoma. (p. 1021).

FOREST INSECT situation in South Carolina. (p. 1021).

SCREW-WORM heavy on livestock in Autauga County, Alabama, (p. 1022).

Increased numbers of RICE WEEVILS and ANGOUMOIS GRAIN MOTH over last year in Arkansas. (p. 1023).

RECENT INTERCEPTIONS at ports of entry. (p. 1024).

STATES reporting this week - 24.

Reports in this issue are for the week ending November 4, 1955, unless otherwise designated.

WEATHER FOR THE WEEK ENDING NOVEMBER 7, 1955

The week's weather was featured by a spell of unusually cold weather for so early in the season, as a cold Arctic air mass, moving rapidly from the Canadian Northwest, overspread the western half of the Country on the 2d and the eastern half on the 3d and 4th. Many stations in the Rocky Mountains recorded subzero minima, some for the first time this season. The lowest reported was -11° at Frazer, Colorado. Frost occurred in the San Joaquin Valley and Santa Maria area of California. Ponds and lakes froze over in the extreme North Central Interior, where local areas are now covered with snow. Large and rapid temperature falls occurred in the South Central Interior, Shreveport, Louisiana reporting a drop of 47° from 85° on the afternoon of the 2d to 38° the following morning. Freezing during this spell occurred in all areas except coastal regions and the extreme south section.

The widespread cold early in the week resulted in below-normal average temperatures for the week everywhere except in New England, New York, and southern portions of Texas, New Mexico, and Arizona, where averages were normal or slightly above. In the former area maxima were below normal, but minima were generally much above, owing to persistent cloudiness and precipitation. Averages were 8° below normal in northern Florida, 4° to 6° in the Midwest, and 6° to 9° in the northern Great Plains.

The week's heaviest precipitation fell on the north Pacific Coast, with totals ranging from 3 to 6 inches in the lower Valleys and exceeding 8 inches at higher elevations in the Cascades. Flooding occurred in Whatcom, Skagit, and Snohomish Counties of Washington, where several families evacuated their homes, and landslides on the Olympia Peninsula blocked some highways.

Heavy rains also fell in southern New England, causing some flooding, particularly in southeastern Massachusetts, where totals ranged from 3 to over 5 inches. Other areas with heavy rain included the lower Ohio and parts of the Mississippi Valley.

In the remainder of the Country precipitation was generally very light, resulting in continued dry soil in the Southeast and a need for more moisture in the Great Plains and Far Southwest.

One to 3 inches of snow fell over the winter wheat belt in western Washington; 3 inches covers the ground in north-central Wisconsin; Michigan reported the first general snowstorm of the season on the 3d; and as much as 8 inches of snow fell in northwestern Connecticut.

(Summary Supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - CALIFORNIA - Populations throughout Modoc County reported lower than in past ten years. Areas usually subject to damage are almost free of grasshoppers. (Cal. Coop. Rept., Oct. 21-31). UTAH - Still active in spite of repeated frosts and some snow. (Knowlton).

EUROPEAN CORN BORER (Pyrausta nubilalis) - KANSAS - Average percent stalks infested and average number of borers per 100 stalks by counties: Jackson, 6 percent and 10 borers per 100 stalks; Nemaha, 8 and 11; Marshall, 5 and 5; Pottawatomie, 5 and 5. (Matthew).

ARKANSAS - Reported in 4 additional counties for the first time: Franklin, Logan, Yell, Pope. Infestations light except in Mississippi and Crittenden Counties. Infestations in 24 counties average 7 percent. (Warren). INDIANA - Survey results show percent infestation and average number of borers per 100 plants as follows: Northern counties, 78 percent and 169 borers; north central counties, 94 and 313; southeast central counties, 72 and 179; southwest central counties, 34 and 37; eastern Ohio River counties, 69 and 208; and western Ohio River counties, 1 and 1. State average was 65 percent infested and 172 borers per 100 plants. (Wilson, Gould, Everly, Schuder).

MARYLAND - Fall abundance survey indicates principal increase is on Eastern Shore. Average number of borers per 100 plants over State was 140 compared with 41 in 1954. (U. Md., Ent. Dept.).

GREENBUG (Toxoptera graminum) - TEXAS - A few found in large winter wheat of Hale, Floyd, and Swisher Counties. One field of volunteer barley had a few greenbugs in it. (Daniels).

SORGHUM WEBWORM (Celama sorghiella) - TEXAS - Heavy local infestations on sorghum in Zavala County. Grain has been ruined for seed. (Richardson).

SOUTHWESTERN CORN BORER (Diatraea grandiosella) - KANSAS - No borers found in Atchison, Doniphan, Jackson, Brown, Nemaha, Marshall, and Pottawatomie Counties. (Matthew). ARKANSAS - Range extended into seven known new counties: Miller, Hempstead, Sevier, Howard, Montgomery, Pulaski, and Cleburne. Infestations did not increase to heavy numbers except in two local areas of Pope and Yell Counties. (Warren).

SUGARCANE BORER (Diatraea saccharalis) - TEXAS - Heavy local infestations on sorghum in Zavala County. Borers numerous in

stalks. (Richardson). LOUISIANA - Damage to sugarcane severe and widespread over the sugarcane-growing areas. (Oliver).

WIREWORMS - LOUISIANA - Heavy infestation in sugarcane at St. Martinville, St. Martin Parish. (Oliver).

A SUGARCANE SCALE (Targionia sacchari) - FLORIDA - Average 50 per joint of para grass in St. Lucie County, October 24. (Campbell, Miles).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - LOUISIANA - Heavily infesting sugarcane in St. Mary Parish. (Oliver).

FALL ARMYWORM (Laphygma frugiperda) - LOUISIANA - Heavily infesting seedling corn at Centerville, St. Mary Parish. (Oliver).

CORN EARWORM (Heliothis armigera) - CALIFORNIA - Heavy damage to corn reported general in Glenn County. (Cal. Coop. Rept., Oct. 21-31).

SPOTTED ALFALFA APHID - CALIFORNIA - General infestation on alfalfa in Madera County with damage moderate. Infestations general in Kings County and heavy, general infestations in Kern County. Light to medium infestations in all alfalfa growing-areas of Tehama County and severe damage to alfalfa in western part of Riverside County, with no serious damage in desert areas. Taken for first time on alfalfa in Butte County, October 3. (Cal. Coop. Rept., Oct. 21-31). ARIZONA - Infestation low, October 28, in Gila and Yuma Valley areas near Yuma. Fields in full growth average two aphids per 20 trifoliate leaves and a high of 11 per 20 trifoliate leaves. Spotted infestation in Graham County not as severe as last year at this time. (Ariz. Coop. Rept.). KANSAS - Found in all alfalfa fields examined in Marshall, Nemaha, Brown, Doniphan, Jackson, and Atchison Counties. (Matthew). TEXAS - Building up in some alfalfa fields in the Brazos River bottoms of Brazos and Burleson Counties. (Randolph).

APHIDS - KANSAS - Yellow clover aphids found on red clover in Doniphan, Brown, Atchison, and Nemaha Counties ranged from 4-20 per 20 sweeps. (Matthew). VIRGINIA - Aphids, probably Macrosiphum pisi, damaging an alfalfa field in Rockingham County. (Peterson).

PEA APHID (Macrosiphum pisi) - KANSAS - Found in alfalfa of Doniphan, Brown, and Nemaha Counties from 5-60 per 20 sweeps. (Matthew). MARYLAND - Average 80 per sweep in alfalfa in Cecil County. (U. Md., Ent. Dept.).

MEADOW SPITTLEBUG (Philaenus leucophthalmus) - VIRGINIA - Still active and laying eggs in southwestern area. (Muka).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - TEXAS - Continues to damage alfalfa in Brazos River bottoms in Brazos and Burleson Counties. (Randolph). VIRGINIA - More severe than usual on alfalfa in Prince Edward County. Medium infestation county-wide. (Striplin).

COWPEA CURCULIO (Chalcodermus aeneus) - TEXAS - Very heavy infestations on blackeyed peas in Willacy and Hidalgo Counties. (Wene, Deer).

CLOVER ROOT CURCULIO (Sitona hispidula) - MARYLAND - Adults average one per sweep in alfalfa in Cecil County. (U. Md., Ent. Dept.).

ALFALFA WEEVIL (Hypera postica) - MARYLAND - Adults averaged one per five sweeps in alfalfa in Cecil County. Laying eggs in alfalfa stems at University Farms, Montgomery County. (U. Md., Ent. Dept.).

FRUIT INSECTS

A LEAFHOPPER (Colladonus geminatus) - OREGON - One specimen collected in Corvallis area, July 1. (Det. D. A. Young). This important vector of virus diseases of peach and cherry was previously taken only at Dailas and McMinnville of Willamette Valley. (Swenson).

BLACK SCALE (Saissetia oleae) - CALIFORNIA - Light to heavy infestation in citrus orchards in western part of Riverside County. (Cal. Coop. Rept., Oct. 21-31).

YELLOW SCALE (Aonidiella citrina) - CALIFORNIA - Medium to heavy infestations on citrus trees in Orland, Glenn County. (Cal. Coop. Rept., October 21-31).

CALIFORNIA RED SCALE (Aonidiella aurantii) - Light infestation on citrus in Riverside County. (Cal. Coop. Rept., Oct. 21-31).

OLIVE SCALE (Parlatoria oleae) - CALIFORNIA - Medium infestations in olives and shrubs in Willows, Glenn County. (Cal. Coop. Rept., Oct. 21-31).

PACIFIC MITE (Tetranychus pacificus) - CALIFORNIA - Heavy defoliation during heat spell caused considerable sunburned nuts in Lake County. (Cal. Coop. Rept., Oct. 21-31).

A WALNUT APHID (Panaphis juglandis) - CALIFORNIA - Taken August 30 for first time on walnut in Monterey County. Southernmost record for State. (Cal. Coop. Rept., Oct. 21-31).

WALNUT HUSK FLY (Rhagoletis completa) - CALIFORNIA - Medium to heavy infestation in all walnut-producing areas in Riverside County. Collected in Kern County September 19. (Cal. Coop. Rept., Oct. 21-31).

A WOOLLY WHITEFLY (Aleurothrixus floccosus) - FLORIDA - Nymphs moderately infesting mandarins at Winter Haven, Polk County. (Henderson).

RED-HUMPED CATERPILLAR (Schizura concinna) - CALIFORNIA - Medium to heavy infestation in walnuts, Glenn County. (Cal. Coop. Rept., Oct. 21-31).

TRUCK CROP INSECTS

SWEETPOTATO WEEVIL (Cylas formicarius elegantulus) - LOUISIANA - Lightly infested potato fields generally, with a few local heavy infestations in southwestern area. Cypressvine (Quamoclit sp.) heavily infested at Centerville, St. Mary Parish. (Oliver).

CUTWORMS - UTAH - Damaging young sugar beets planted for seed in Washington County. (Hughes).

MEXICAN BEAN BEETLE (Epilachna varivestis) - VIRGINIA - Adults and pupae numerous on fall crop beans not properly treated in eastern area. (Brubaker, Greenwood, Hofmaster).

CORN EARWORM (Heliothis armigera) - VIRGINIA - Numerous and injuring lima beans and snap beans in eastern area. (Brubaker, Greenwood, Hofmaster).

CABBAGE APHID (Brevicoryne brassicae) - VIRGINIA - Increasing on kale in eastern area. (Brubaker, Greenwood, Hofmaster).

FLEA BEETLES - UTAH - Damaging young sugar beets for next year's seed crop in Washington County. Some fields have been treated. (Hughes, Knowlton).

MEXICAN MEALYBUG (Phenacoccus gossypii) - FLORIDA - Populations averaging over 200 per okra plant and over 200 on cotton in Indian River County, October 14. (Burnett).

COTTON INSECTS

PINK BOLLWORM (Pectinophora gossypiella) - Beginning with the western tier of parishes in LOUISIANA and extending to central TEXAS, north into eastern half of OKLAHOMA, as far north as inspection has been made, nearly all counties show increases compared with 1954. Results of gin trash inspection in CALIFORNIA have been negative so far. Results of 116 lint cleaner inspections in the Mississippi Delta areas were negative also. In the older quarantined areas of southwestern Oklahoma 14 bollworms per inspection were found on lint cleaners compared with 4.6 for the same period in 1954. Results of examinations of a substantial number of green bolls in northeast Texas show that nearly 100 percent of fields are infested and build-up in the few remaining bolls has been heavy. In Columbia and Hempstead Counties, ARKANSAS, 700 bolls and 300 blooms were examined and no pink bollworms found. (Pink Bollworm Cont. Prog. Rept., Oct. 16-31).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

Forest Insect Situation, South Carolina, November 5

The SOUTHERN PINE BEETLE and various species of Ips have been responsible for most of the pine mortality this year. August survey of Cherokee, Chester, Fairfield, Laurens, Newberry, Spartanburg, Union, and York Counties showed about one million board feet of loblolly and shortleaf pines killed on about 720 acres over a four thousand square-mile area since early summer. About 14,400 infested pines are currently scattered through these counties. The outbreak is now endemic; but infestations in Union and Newberry Counties are still in dangerous numbers. SOUTHERN PINE BEETLE has shown considerable activity in Oconee and Pickens Counties during September and October. (Merkel, Barker).

A GROUND PEARL (Margarodes meridionalis) - FLORIDA - Nymphs 10-25 per square inch of root of ternstroemia at Gainesville, Alachua County, October 25. (Det. L. C. Kuitert). (Denmark).

A SEAGRAPE BORER (Hexeris enhydris) - FLORIDA - Causing damage to seagrapes at St. Petersburg, Pinellas County, October 19. (Daigle).

LILY WEEVIL (Agasphaerops nigra) - CALIFORNIA - Heavy damage by larvae in one field. (Cal. Coop. Rept., Oct. 21-31).

PINE WEBWORM (Tetralopha robustella) - MISSISSIPPI - Infesting 15 percent of an experimental 10-month-old loblolly pine plantation near State College. (Neel).

A SULFUR BUTTERFLY (Phoebis philea) - FLORIDA - Larvae and adults collected from golden-shower tree at Gainesville, Alachua County. Average 14 larvae per tree and have been defoliating these trees during September and October. (Weems).

INSECTS AFFECTING MAN AND ANIMALS

HOUSE FLIES - ARIZONA - Flies, mainly Musca domestica, population indices of two small towns in southeastern Maricopa County and northwestern Pinal Counties: average of five highest grill counts in nine blocks, October 31-November 4, was 71.6 compared with 32.4, October 24-28. (Ariz. Coop. Rept.).

SCREW-WORM (Callitroga hominivorax) - ALABAMA - Heavy infestations in livestock in Autauga County during past few weeks. (Arant).

CLUSTER FLY (Pollenia rudis) - VIRGINIA - Annoying in house in Blacksburg. (Grayson).

BLACK WIDOW SPIDER (Latrodectus mactans) - VIRGINIA - Control recommendations still being requested from northern and eastern areas. (Morris).

BROWN DOG TICK (Rhipicephalus sanguineus) - MARYLAND - Engorged immature stages found in home in Prince Georges County. (U. Md., Ent. Dept.).

CATTLE LICE - UTAH - Threatening infestations in additional areas. (Knowlton). VIRGINIA - Various species, including Bovicola bovis, populations still low in Blacksburg area of Montgomery County. (Turner).

BLACK FLIES - UTAH - Annoying to hunters in mountains of Cache and Rich Counties and in an area of Salt Lake County. (Knowlton).

STORED PRODUCTS INSECTS

CIGARETTE BEETLE (Lasioderma serricornis) - MARYLAND - Infesting spices in Catonsville, Baltimore County. (U. Md., Ent. Dept.).

Stored Grain Insect Situation in Arkansas

Examination of 38 bins of oats, wheat, milo, and rice on farms in Chicot, Lincoln, St. Francis, and Craighead Counties showed 15 bins infested with one or more species of insects. Saw-toothed grain beetle (Oryzaephilus surinamensis) and flour beetles (Tribolium spp.) were most common. Rice bins were practically free of infestations. Increased numbers of rice weevils and Angoumois grain moths over last year. (Warren).

MISCELLANEOUS INSECTS

PHARAOH ANT (Monomorium pharaonis) - MAINE - Pest in home with floors of pressed wood with sawdust between layers. Ants have been present for over a year. (Det. R. E. Olson). (Me. A. E. S.).

OLD HOUSE BORER (Hylotrupes bajulus) - MARYLAND - Infesting structural timbers of a new house in Frederick. (U. Md., Ent. Dept.).

LADY BEETLES - MARYLAND - Swarming in a house in Leonardstown, St. Marys County. (U. Md., Ent. Dept.).

CLOVER MITES - NORTH DAKOTA - Invading dwellings in many scattered points over the State. Appear somewhat later this year. (N. D. Ins. Rept. Serv.).

RECENT INTERCEPTIONS AT PORTS OF ENTRY

Of unusual interest was the interception of living larvae of the pink bollworm (Pectinophora gossypiella) in seed cotton in baggage from Mexico on three occasions recently at Calexico, California. (Allen, Koenig, Luke, Pruitt). On August 31 and September 5, two lots of infested seed cotton were found in the cotton picking sacks of two Mexican contract agricultural workers ("braceros"). On September 6, a third lot of infested seed cotton (approximately 5 lbs.) was taken from an open-end flour sack being used by the bracero for a pillow. On examining 1/2 of the 5 lb. lot, 25 living and 2 dead pink bollworm larvae were found. When questioned regarding the origin of the infested seed cotton, the braceros stated it was from Hidalgo, Edinburg, and Santa Maria, Texas, where they had picked cotton under contract during July and August. At the termination of their labor contract in Texas, the workers had returned to Mexico, had recontracted for a new assignment, and were re-entering the United States at Calexico with the infested material in their baggage to pick cotton in the California fields. Although the contract workers usually travel "light" with all their gear in a bundle, shopping bag, blanket roll, and occasionally a suit case, their baggage at times contains infested materials that present an added quarantine risk, inasmuch as they are headed directly to agricultural areas. At this time of the year these workers move in considerable numbers from Mexico to the United States through various ports, with as many as 36,990 entering through the port of Calexico during September of this year. In addition to the pink bollworm larvae intercepted at Calexico, larvae of the avocado weevil, the Mexican fruit fly, and adults of the boll weevil were found in laborers' baggage. At El Paso, Texas, interception of living pink bollworm larvae in seed cotton in braceros' baggage from Mexico included two interceptions on October 13, 11 on October 14, 7 on October 15, and 5 on October 16.

The pink bollworm is a widespread and serious pest of cotton, ranked by some entomologists as the sixth most destructive insect in the world. It is known to occur in part of Europe, Asia, Africa, South America, Australia, Pacific Islands, West Indies, Mexico, and some areas of the southern United States where it is under quarantine. It was introduced into the United States, probably from Mexico, prior to 1918. In this country it is known only from Arizona, New Mexico, Texas, Oklahoma, Arkansas, Louisiana, and southern Florida.

Living larvae of the pink bollworm have been intercepted on numerous occasions by plant quarantine inspectors at various ports in cotton bolls, linters, bagging, cotton seed or okra pods from many parts of the world including Mexico, Brazil, Argentina, Venezuela, Colombia, Trinidad, Italy, Sicily, Cyprus, Egypt, Syria, Angola, Greece, Turkey, Pakistan, India, China, Manchuria, Korea, Japan, Philippines, several islands of the West Indies, including Puerto Rico and the Pacific Islands, including Guam and Hawaii.

(Compiled - Plant Quarantine Branch).

LIGHT TRAP COLLECTIONS

		Pseudal. unipun.	Laphyg. frugip.	Agrotis ypsilon	Feltia spp.	Heliopsis armig.	Agrotis glad.	Choriza. aux.	Antic. gemma.
<u>KANSAS</u>									
Garden City	10/26-31	5		15		3		15	
Hays	10/23-29	4		6	16	46		52	
Manhattan	10/31-11/5	2		5	4	14		2	
<u>TEXAS</u>									
College Sta.	11/1-3	4	9	3		4	2		
Weslaco	10/16-31	327	54	46		69			
W. Haven	10/25-31	44		5					
<u>LOUISIANA</u>									
E. Rouge	10/29-11/4		2		14	5			
Franklin	10/21-27	5	7		11	2	1		
Tallulah*	10/29-11/4	222	15	34	46	15	1383		3
<u>ARKANSAS</u>									
Stuttgart	10/27-11/2	12		5		7			
Varner	10/20-26	22		24		82			
Fayetteville	10/29-11/4	16		4		13			
<u>ALABAMA</u>									
Auburn	10/29-11/4	1			1		31		
<u>TENNESSEE</u>									
Shelby	10/21-26	20		20	16	48		1920	
Madison		16		8		88		332	
Lawrence		24		60	40	28		352	
Robertson		18		20	8	44		72	
Cumberland				18	3	17		6	
Knox		9		6		7		59	
Greene		32		4	22	18		92	
<u>GEORGIA (Counties)</u>									
Clarke	10/23-29	5			406	1			
Spalding	10/22-28	15	2	4	193				
Tift	10/23-29	5	12		44	2			9

*Three traps at Tallulah.

LIGHT TRAP COLLECTIONS

	Pseudal. unipun.	Laphyg. frugip.	Agrotis ypsilon	Feltia spp.	Heliothis armig.	Agrotis glad.	Choriza. aux.	Antic. gemma.
SOUTH CAROLINA (Counties)								
Charleston	9	7	5	5				53
Oconee	12	2	1	97	1	266		
MARYLAND (County)								
Montgomery	3		18	11		3		

ADDITIONAL NOTES

SOUTH DAKOTA - EUROPEAN CORN BORER survey completed and shows an average of 40 percent infestation and 62 borers per 100 plants in central district and an average of 53 percent infestation and 103 borers per 100 plants in south central district. Infestations lighter than in 1954. (Hantsbarger).

OKLAHOMA - During October 19-28, surveys for small grain insects were made in 27 counties of north-central, northwestern, and southwestern Oklahoma, and in the Oklahoma Panhandle. This included the inspection of 28 volunteer, 66 late planted, and 24 early planted fields of wheat, barley, and oats. GREENBUG found in only two fields of volunteer barley, one in Noble County and a single greenbug in Beckham County. This is about the same as last year. BROWN WHEAT MITE found in 48 fields, 25 of which were in Texas and Beaver Counties. Populations in infested fields in these two counties averaged 9 mites per linear foot (0-50). Mites on very small, replanted wheat in the southwestern area, particularly in Kiowa County, with a maximum of 32 per linear foot. CORN LEAF APHID found in 10 barley and 2 wheat fields. Highest population was 500 aphids per linear foot in a field of volunteer barley in Blaine County, and 250 per foot of volunteer barley in Custer County. On Johnson grass along the roadside in all areas. A few scattered APPLE GRAIN APHIDS found during the survey. CUTWORMS occurred in the samples taken in only 15 of the 118 fields inspected, and populations in all at non-economic levels. Most abundant in fields of volunteer wheat and barley. Some scattered WHITE GRUB injury occurred in Noble County, but in no instance was the damage widespread. (Henderson, Wood). WHITE GRUBS are seriously damaging small grains in Mayes and Rogers Counties. WEEVILS entering hibernation from upland cotton in Muskogee are not numerous. (Stiles). SPOTTED ALFALFA APHID 200-300 per 100 sweeps in Payne County. (Coppock). In one alfalfa field in Payne County counts averaged 676 per 100 sweeps, October 26, and LADY BEETLES have declined steadily. CLOVER SEED CHALCID abundant in alfalfa fields left for seed or not cut. TARNISHED PLANT BUG counts 72 per 100 sweeps, October 26. (Continued on page 1027).

ADDITIONAL NOTES (Continued from page 1026)

STINK BUGS averaged 13 per 100 sweeps October 26 and THREE-CORNERED ALFALFA HOPPER averaged 26 adults per 100 sweeps. (Fenton). CORN LEAF APHID infestation 12-16 per linear foot of row on dry-land barley and 50 per linear foot of irrigated barley in Payne County. Found infesting wheat in Logan and Payne Counties, up to 10 per linear foot of row. (Coppock). A light infestation of BLACK CARPET BEETLE in stored grain in Canadian, Custer, Kiowa, Comanche, and Grady Counties, and a light to medium infestation of CONFUSED FLOUR BEETLE in stored grain in Custer and Kiowa Counties. A heavy infestation of RICE WEEVIL in one location in Kiowa County. (Stanford, Rogers, Coppock).

CALIFORNIA - SPOTTED ALFALFA APHID causing severe damage to alfalfa in Stanislaus County. One planting killed out. Heavy infestation in southern Solano County, almost to the Yolo County line. (Cal. Coop. Rept.).



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NOVEMBER 18, 1955

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Cooperative
**ECONOMIC INSECT
REPORT**

Issued by

PLANT PEST CONTROL BRANCH

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL BRANCH

ECONOMIC INSECT SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Branch serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Economic Insect Survey Section
Plant Pest Control Branch
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

GREENBUG unusually heavy and widespread for time of year in several Texas Panhandle counties, but none found in northeast and central Kansas counties. (p. 1031).

CORN LEAF APHID abundant on winter barley in Sequoyah and Haskell Counties, Oklahoma. Widely scattered on small grains in Texas Panhandle. (p. 1031).

SPOTTED ALFALFA APHID widespread in Platte Valley of Nebraska but economic infestation only in one area south of Cozad. Also widespread in some north and northeast Kansas counties. Reported from northern Utah. Still moderately abundant in that State. Infestations spotty in several Arizona counties. Cold weather apparently reduced populations in many areas of Oklahoma. New infestations in Arkansas in Conway, Pulaski and Lonoke Counties. (p. 1032).

SWEETPOTATO WEEVIL found for first time in Lincoln and LaSalle Parishes, Louisiana. (p. 1034).

Viruses carried by STRAWBERRY APHID greater than normal in strawberries in Willamette Valley, Oregon. (p. 1035).

SUMMARY OF INSECT CONDITIONS - 1955 - Indiana. (p. 1040).

STATES reporting this week - 21.

Reports in this issue are for the week ending November 11, 1955, unless otherwise designated.

WEATHER FOR THE WEEK ENDING NOVEMBER 14, 1955

The week ended with a record-breaking cold spell in the Northwest after temperatures had remained at seasonable levels or above there until the 11th. The reverse was true in the remainder of the Country as temperatures, unseasonably low at the beginning of the week, rose to well above normal levels over the weekend, setting new records at many stations in the Ohio and lower Mississippi Valleys. The week's precipitation was moderate to heavy along the Coasts and in the northern third of the Country, occurring in the latter area on 3 to 5 days, while little or no precipitation in the Southern Interior continued or increased soil moisture shortages in many sections.

As cold air early in the week continued to move from the west across the eastern half of the Country, subfreezing minima extended southward over northern Texas, and to central portions of Arkansas, Mississippi and Alabama. A strong southerly flow induced by high pressure off the Atlantic Coast and a trough in central North America resulted in a temperature rise into the 70's and 80's as far north as the Great Lakes and into the 60's and 70's in Pennsylvania and New York. Some late-season highs established on the 13th were Louisville, Kentucky, 80°; Indianapolis, Indiana, 77°; Little Rock, Arkansas, 86°; Springfield, Missouri, 80°; Springfield, Illinois, 78°; and Memphis, Tennessee, 85°.

Cold Arctic air began pouring into the Northwest on the 11th and by the 13th subzero minima extended over the eastern Dakotas, northern Wyoming, Montana, and northeastern Washington. At Cutbank, Montana, on that date the minimum temperature fell to -30° and the highest was only -9°; Seattle, Washington, had a low of 13° and a high of 23°; Portland, Oregon, a low of 24° and a high of 30°. Even Tatoosh Island, on the coast of Washington, had a low of 21°, and subfreezing minima extended southward throughout California's Central Valley. This cold snap resulted in much below-normal average temperatures for the week--Great Falls, Montana, 16°; Williston, North Dakota, 10°; and Spokane, Washington, 10°.

The week's moisture totaled over an inch along the Pacific Coast to below San Francisco, where heavy rains fell near the close of the period, in southern Texas (nearly all falling on the 9th), and along the Atlantic Coast. Most of the precipitation in the latter area occurred on the 9th, 10th, and 11th, as a storm system which developed over the Gulf of Mexico crossed northern Florida into the Atlantic and continued northward parallel to the coast.

(Continued on page 1043).

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - TEXAS - Widespread damage to wheat by Melanoplus mexicanus in northern panhandle counties. (Cleveland, Ashdown).

UTAH - Still occurring in small numbers after repeated frosts, particularly M. femur-rubrum. (Knowlton).

EUROPEAN CORN BORER (Pyrausta nubilalis) - KANSAS - Abundance survey completed in northeastern area with average percent infestation and number of borers per 100 stalks by counties as follows: Atchison, 37 percent and 65 borers; Brown 16 and 19; Doniphan, 49 and 168. (Matthew). ARKANSAS - Found in Lincoln County for first time. Five larvae in one stalk of 100 stalks examined. Southernmost infestation of State. (Warren).

FALL ARMYWORM (Laphygma frugiperda) - TEXAS - Less than one per foot of row in small grains in Floyd, Deaf Smith, and most northern panhandle counties. (Cleveland, Ashdown).

FALSE WIREWORMS - TEXAS - Severe infestations locally in Carson County, where some wheat stands have been completely destroyed. (Cleveland, Ashdown, Daniels).

CORN LEAF APHID (Rhopalosiphum maidis) - TEXAS - Widely scattered in northern panhandle counties. (Cleveland, Ashdown). OKLAHOMA - Abundant on winter barley in Sequoyah and Haskell Counties, averaging 750 per linear foot of row. Found on winter wheat in Garvin and Cleveland Counties, averaging 70 per linear foot of row. Forty to 80 per linear foot in Payne County. (Coppock).

CORN EARWORM (Heliothis armigera) - ARKANSAS - All instars present with counts up to 20 per 20 sweeps in alfalfa. (Warren).

CHINCH BUGS - OKLAHOMA - Samples of little bluestem grass in Payne County showed an average of 1865 bugs per square foot. (Fenton).

GREENBUG (Toxoptera graminum) KANSAS - No greenbug found in wheat fields examined in Clay, Riley, Geary, Dickinson, Saline, Ellsworth, Rice, McPherson, and Marion Counties. (Matthew). TEXAS - Surveys of small grains in October revealed populations in Crosby, Floyd, Hale, Swisher, Castro, Deaf Smith, and Hansford Counties. Highest populations, up to five per linear foot of row, were found in volunteer wheat fields in Deaf Smith and Hansford Counties. Infestations spotted and very low in most seeded fields. This is the heaviest and most widespread occurrence for this time of year during past few years. Beneficial insects rather plentiful and expected to prevent heavy early populations from developing. (Cleveland, Ashdown, Daniels).

BROWN WHEAT MITE (Petrobia latens) - KANSAS - Counts on drilled wheat from two to seven per linear foot of row in Dickinson, Saline, Ellsworth, and Rice Counties. (Matthew). TEXAS - Populations general but low in wheat in 23 panhandle counties in October. Less than one per foot of row except near Gruver, Hansford County, where 10 to 15 per foot of row occurred. (Cleveland, Ashdown, Daniels). UTAH - Abundant on fall wheat in some areas, scarce in others. (Knowlton).

APPLE GRAIN APHID (Rhopalosiphum fitchii) - TEXAS - Widely scattered in small grains in northern panhandle counties. (Cleveland, Ashdown).

WHITE-FRINGED BEETLES - ALABAMA - Found for the first time in Washington County, October 11. Comprises about 40 acres at Chatom. (WFV Prog.).

MEXICAN BEAN BEETLE (Epilachna varivestis) - NORTH CAROLINA - Adults attacking alfalfa along entire edge next to bean field in Wake County. Adults attacking Ladino clover in Transylvania County, where 50 percent of leaves damaged. (Dogger, Farley).

RHODES-GRASS SCALE (Antonina graminis) - FLORIDA - Nymphs and adults averaging 50 per plant of Bermuda grass at Ft. Walton, Okaloosa County. Infestation spotted in residential area inside base. (Mayeux, Oct. 26).

WEEVILS IN CORN - SOUTH CAROLINA - Some noticeable increase in weevil damage to corn in the field this season over last several seasons in Marion County. Thought to be result of increased rainfall and moisture content. (Nettles).

SPOTTED ALFALFA APHID - KANSAS - In all alfalfa fields surveyed in Clay, Riley, Geary, Dickinson, Saline, Ellsworth, Rice, McPherson, and Marion Counties. Counts ranged from 4-45 per sweep. (Matthew). ARKANSAS - New infestations on alfalfa in Conway, Pulaski, and Lonoke Counties. Counts high, 100 per sweep, in one field in Conway County. Two per 200 sweeps in Lonoke County. (Warren). NEBRASKA Infestation general throughout Platte Valley as far west as North Platte. No economic infestations except in one area south of Cozad, where counts were up to 300 per 10 sweeps. (Connin, Andersen). UTAH - Still moderately abundant in succulent alfalfa. Occurs at the Utah-Idaho state line north of Portage. (Knowlton). ARIZONA Increase over October 28 in Yuma region but generally not so

abundant as last year at this time. Infestations in a survey of 77 fields in Pima, Pinal, Maricopa, Graham, Greenlee, and Cochise Counties have been spotty, only an occasional field heavily infested. On one ranch at Amado, northern Santa Cruz County, populations sufficient to require treatment. (Ariz. Coop. Rept.). OKLAHOMA - Reported from Cleveland County at 20-30 per linear foot of row on newly-planted alfalfa. Cold weather apparently reduced populations in all eastern, central, and south central counties. Not found in many fields in this area. (Coppock).

PEA APHID (Macrosiphum pisi) - NEBRASKA - Very light infestation remains in Platte Valley area, with counts 1-10 per 25 sweeps. (Andersen). ARIZONA - In many of 77 fields surveyed in Pima, Pinal, Maricopa, Graham, Greenlee, and Cochise Counties, this aphid was as numerous as the spotted alfalfa aphid. (Ariz. Coop. Rept.). VIRGINIA - Building up on alfalfa. (Muka).

APHIDS - NEBRASKA - Yellow clover aphids still active on red clover south of Columbus in Platte County. Populations light to moderate. (Connin, Andersen). UTAH - Moderately numerous in some cases on earliest fall wheat in northern area. (Knowlton).

TARNISHED PLANT BUG (Lygus lineolaris) - NEBRASKA - Adults beginning to hibernate. Now found in crowns of alfalfa plants. (Connin, Andersen).

A SORGHUM MIDGE - SOUTH CAROLINA - Damage serious to grain sorghum in Laurens County. (Cannon, Nov. 2).

STINK BUGS - SOUTH CAROLINA - Green stink bug abundant on cowpeas and soybeans in Allendale County. Have been very numerous this fall. (Rogers).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - ARKANSAS - Appear to be declining in alfalfa but still 8-10 per 20 sweeps to 75-80 per 20 sweeps. (Warren).

FRUIT INSECTS

Citrus Insect Situation, Fourth Week of October, Florida
PURPLE SCALE activity, with 91 percent of groves infested, remained unchanged and expected to remain high throughout November. Highest activity in Ridge, Bartow, and West Coast districts. CALIFORNIA RED SCALE, with 63 percent of groves infested, increased, with

slight additional increase expected, and will remain high through November. Highest activity in Ridge district. CITRUS RED MITE, with 49 percent of groves infested, increased in activity and further increase expected. Highest activity in Indian River and Orlando districts. Activity has doubled in Orlando district in two weeks. CITRUS RUST MITE activity declined but level will remain high through November. With 77 percent of groves infested, highest activity was in Bartow district. (Pratt, Thompson, Johnson).

APHIDS - UTAH - Fall migrants on peach and apricot trees in northern area generally below usual abundance. (Knowlton).

A FALSE UNICORN CATERPILLAR (Schizura ipomocae) - FLORIDA - Larvae averaging a few per plant on lychee at Perrine, Dade County. First report of this insect on lychee. (Butcher, Oct. 10).

Correction: The note beginning "SMALL CHESTNUT WEEVIL", CEIR 5(44):1006, should be replaced by the following: "CHESTNUT WEEVILS - SOUTH CAROLINA - Damaging chinquapin nuts in Greenville County, October 14. (Coleman)."

WALNUT HUSK FLY (Rhagoletis completa) - OREGON - From early August until late September, 88 stickyboard traps located in 67 English and black walnut locations in 15 counties failed to trap the husk fly. (Capizzi).

TRUCK CROP INSECTS

SWEETPOTATO WEEVIL (Cylas formicarius elegantulus) - LOUISIANA - Found last part of October for first time in Lincoln Parish on nine properties six miles east of Dubach. One property near Tullos found infested for first record in La Salle Parish. (SPW. Cont. Prog., Nov. 10).

HARLEQUIN BUG (Murgantia histrionica) - TEXAS - Heavy, local infestations on turnips, mustard, and radishes in Dimmit County. (Richardson).

GREEN PEACH APHID (Myzus persicae) - OKLAHOMA - Infestations on spinach at low levels, generally less than five per plant, in several fields of Arkansas River Valley. (Walton).

SEED-CORN MAGGOT (Hylemya cilicrura) - OKLAHOMA - No infestations found on spinach in Arkansas River Valley during weekly examinations. (Walton).

SOUTHERN BEET WEBWORM (Pachyzancla bipunctalis) - OKLAHOMA - Light populations in a few spinach fields in Arkansas River Valley. (Walton).

VEGETABLE WEEVIL (Listroderes costirostris obliquus) - GEORGIA - Heavy infestation of adults on turnips in a garden in Spalding County, Nov. 7. (Tippins).

IMPORTED CABBAGEWORM (Pieris rapae) - MARYLAND - Larvae abundant on broccoli at University Farm, Montgomery County. (U. Md., Ent. Dept.).

CABBAGE APHID (Brevicoryne brassicae) - MARYLAND - Heavy on broccoli at University Farm, Montgomery County. (U. Md., Ent. Dept.).

STRAWBERRY CROWN MOTH (Ramosia bibionipennis) - OREGON - Larvae on crown of raspberries to within three inches of soil surface near Dundee. (Rosenstiel).

STRAWBERRY APHID (Pentatrachopus fragaefolii (Ckll.))* - OREGON - Viruses spread by this aphid three to six times greater than normal in Willamette Valley in fields with certified virus-free stock. (Rosenstiel).

COTTON INSECTS

BOLL WEEVIL (Anthonomus grandis) - ARKANSAS - Average counts per 50 feet of row in Lincoln County was as follows: October 6-7, 16.6; October 10-15, 14.6; October 17-22, 12.9; October 24-29, 7.8; and October 31-November 5, 5.5. Average counts in Chicot County were 16.7 week of October 25, 17.5 week of October 31, and 2.2 week of November 7. Counts from three fields in Hempstead County averaged 50.3 adults per 50 feet of row. (Warren, Leigh, Lincoln).

PINK BOLLWORM (Pectinophora gossypiella) - OKLAHOMA - Appreciably higher than last year's counts in central and eastern fields. (Coppock).

*Hille Ris Lambers, D. 1953. Contributions to a monograph of the Aphididae of Europe. Temminckia 9:72-73.

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

Forest Pest Situation in Arkansas as of November 1, 1955

IPS BEETLES limited in activity generally except 2-3 counties in southeastern area. Definite increase in several logging areas in northwestern Bradley County. Trees being salvaged. Indications of increased activity of BLACK TURPENTINE BEETLE are not so strong as a month ago. Some damage and mortality occurring throughout southern pine area and continues as threat although activity is static. Most of activity is in southern tier of counties. In areas of Arkadelphia burn plantation hit lightly by PALES WEEVIL, previously, trees were being killed last week in October. From two to ten weevils per seedling. (Ark. State For. Comm.).

COTTONY-CUSHION SCALE (Icerya purchasi) - FLORIDA - Abundant on mountainmint in a cultivated planting at Gainesville, Alachua County. (Det. L. A. Hetrick). (Denmark).

CAMELLIA SCALE (Lepidosaphes camelliae) - VIRGINIA - Medium on camellias at various spots in York and City of Hampton. (Adams).

A CERAMBYCID (Oberea myops) - VIRGINIA - Damaging rhododendron and azaleas at one locality on the Eastern Shore. (Matheny).

MIMOSA WEBWORM (Homadaula albizziae) - MARYLAND - Larvae infesting honeylocust, Havre de Grace, Harford County. (U. Md., Ent. Dept.).

BAGWORM (Thyridopteryx ephemeraeformis) - FLORIDA - Heavily infesting a Japanese holly hedge at Gainesville, Alachua County, October 31. (Det. C. Patton). (Denmark).

JAPANESE BEETLE (Popillia japonica) - TENNESSEE - The light, incipient infestation at Mountain City, Johnson County, was treated and also contiguous farm land, in all about 750 acres. About 18 acres of land were treated in Jefferson County where two beetles were discovered on the property of a bean canning plant. (Bruer).

INSECTS AFFECTING MAN AND ANIMALS

SCREW-WORM (Callitroga hominivorax) - NORTH CAROLINA - Infestation in calves' navels in late October in Richmond County. (Murdock, Jones). SOUTH CAROLINA - Reported from Dorchester County. (King).

CATTLE LICE - VIRGINIA - Eggs present in large numbers on cattle in Montgomery County. Calves received from northern areas also had eggs and lice. (Turner, Raffensperger).

BLACK WIDOW SPIDER (Latrodectus mactans) - VIRGINIA - Fewer calls than usual received by State Entomologist this year. (Matheny). MARYLAND - Several calls received from home owners in the Hagerstown area, Washington County. (U. Md., Ent. Dept.).

BLACK-LEGGED TICK (Ixodes ricinus scapularis) - FLORIDA - Adults collected from cattle, October 31, in Highlands County. (Harris).

A BOT FLY (Cuterebra horripilum) - FLORIDA - Adult collected at residence in Sebring, Highlands County, October 29. Parasite of rodents; adults seldom encountered. (Weems).

STORED PRODUCTS INSECTS

HIDE BEETLE (Dermestes maculatus) - VIRGINIA - Has heavily damaged about a ton of cured pork at Richmond. (Matheny).

MISCELLANEOUS INSECTS

A VINEGAR GNAT (Drosophila hydei) - NORTH CAROLINA - In several homes and a heavy infestation around new farmers' market hindering packaging in Wake County. (Scott, Farrier).

A TWIG GIRDLER (Oncideres rhodosticta) - ARIZONA - Damage to mesquite unusually noticeable in a region north of Nogales. Most of the twigs of a certain size are girdled. Importance in keeping mesquite in check not evaluated yet. (Ariz. Coop. Rept.).

OLD HOUSE BORER (Hylotrupes bajulus) - MARYLAND - Larvae working in rafters and joists of home, Rockville, Montgomery County. (U. Md., Ent. Dept.).

BOXELDER BUG (Leptocoris trivittatus) - VIRGINIA - Annoyance in Nelson County and in York and City of Hampton by invading homes and collecting in large numbers on trees and buildings. (Adams, Whitehead). MARYLAND - Swarming on old house, Ashton, Montgomery County. (U. Md., Ent. Dept.).

CARPET BEETLES - MARYLAND - Causing damage in homes in Montgomery and Harford Counties. (U. Md., Ent. Dept.).

GIANT HORNET (Vespa crabro germana) - VIRGINIA - Becoming more troublesome each year. About 100 calls, letters, and specimens received each year by State Entomologist. (Matheny).

LIGHT TRAP COLLECTIONS

		Pseudal. unipun.	Laphyg. frugip.	Agrotis ypsilon	Feltia spp.	Heliiothis armig.	Agrotis glad.	Choriz. aux.	Antic. gemma.
KANSAS									
Hays	11/1-12			1		2			1
Manhattan	11/6-12			2		3			2
TEXAS									
College Sta.	11/5-11	330	21	4	870	3			
LOUISIANA									
Tallah* ^h	11/5-10	154	8	23	3	19	1144		
ALABAMA									
Auburn	11/6-12	3			27				
GEORGIA (Counties)									
Clarke	10/31-11/5				66				
Spalding	10/30-11/4	3			11				
Tift	10/31-11/5	2			5				1
SO. CAROLINA (Counties)									
Charleston	11/7-13	14	1	25	77	1			51
Oconee	11/6-12	5		1	3		2		

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*Three traps at Tallulah.

SUMMARY OF INSECT CONDITIONS - 1955

INDIANA

Reported by J. J. Davis

Field Crop Insects

ARMYWORM (Pseudaletia unipuncta), which was so abundant and destructive in 1953 and 1954, was of little importance in 1955, doubtlessly due to activity and effectiveness of natural enemies. A few reports of abundance were received, but none warranted serious consideration. CUTWORMS (Peridroma margaritosa and Agrotis ypsilon) were encountered in a few areas but not as conspicuous and destructive as in the past few years. The EUROPEAN CORN BORER (Pyrausta nubilalis) wintered over in somewhat larger numbers than the previous year, but the first generation provided only moderate to light infestations this year (1955). However, favorable conditions for the second generation, especially on late planted corn, resulted in considerable loss, estimated at about \$10,000,000.00. Breakage of corn, due to the corn borer, is slight when compared with the severe lodging caused by disease rot. The population of overwintering borers is light in southwestern and southwest central Indiana. The average for the State is 172 borers per 100 plants, higher than for several years.

GRASSHOPPERS, which were major pests in southern Indiana in 1953 and in northern Indiana in 1954, were unimportant in 1955, although there were a few isolated outbreaks in the northern part of the State. Several reports of damage to canning tomatoes were received from northwestern Indiana. It is interesting to note that BLISTER BEETLES were exceptionally abundant in southern Indiana in 1954 and to a lesser extent in 1955. CHINCH BUG (Blissus leucopterus), which threatened in 1955, did not materialize. Even so, there are many bugs in hibernation in some regions and with favorable conditions in the spring of 1956, they could be major pests. MEADOW SPITTLEBUG (Philaenus leucophthalmus) began hatching in central Indiana April 15. Infestations were general but not as severe as in recent years, except in southwestern Indiana, where the infestations were heavier than usual. It has become a regular practice to spray for spittlebugs, which may explain less trouble from this pest. HESSIAN FLY (Phytophaga destructor) became very abundant the past spring, especially in southwestern Indiana, and caused complete losses of the wheat crop in some cases. There were also considerable losses in some other areas. Although most wheat was sowed on the recommended dates,

another factor entered in the picture. There was an unusually large amount of volunteer wheat in the fall of 1954 and many flies were able to pass the winter and attack wheat in the spring of 1955. Another possible reason for the fly abundance in some areas was the dry conditions which prevented fly emergence in the fall and a carry-over until spring. FALL ARMYWORM (Laphygma frugiperda) was rather abundant in August on late-planted corn, including corn for ensilage. CORN EARWORM (Heliothis armigera), which was so abundant in 1954, was of minor importance this year. One of the larger LEAFHOPPERS (Draeculacephala mollipes) was very abundant on corn in August, with reasonable belief that they were responsible for damage to foliage. CLOVER LEAF WEEVIL (Hypera punctata) was very abundant about the middle of April, but soon became heavily diseased and chemical control measures were unnecessary. CLOVER ROOT CURCULIO (Sitona hispidula) caused serious losses to second-year alfalfa in areas in central Indiana. PEA APHID (Macrosiphum pisi) was more abundant than usual in southwestern Indiana on alfalfa. GREEN CLOVERWORM (Plathypena scabra) was abundant in a number of locations, all reports on soybeans. POTATO LEAFHOPPER (Empoasca fabae) was responsible for considerable damage to alfalfa in most areas.

Vegetable Insects

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) was general and abundant during late June and July, damaging melons in southwestern Indiana. STRIPED CUCUMBER BEETLE (Acalymma vittata) was a serious pest of melons and cucumbers in many areas. TOMATO HORNWORMS (Protoparce spp.) were a major pest in tomato fields; also in tobacco fields in southern Indiana. SQUASH BUG (Anasa tristis) was again a serious pest of canning pumpkins in southern counties. GREEN PEACH APHID (Myzus persicae) was abundant in a number of areas in northern Indiana during June and early July. POTATO FLEA BEETLE (Epitrix cucumeris) was unusually abundant on potatoes and eggplant. BEAN LEAF BEETLE (Cerotoma trifurcata) was rather general and common on garden beans and soybeans. IMPORTED CABBAGEWORM (Pieris rapae) was generally abundant in August. The COLORADO POTATO BEETLE (Leptinotarsa decemlineata) was reported by commercial growers as more abundant and destructive than for many years, especially on potatoes and tomatoes in the northern half of the State.

Fruit Insects

PEAR SLUG (Caliroa cerasi) was reported many times as a pest of cherry and pear; more reports than for many years. GREEN JUNE BEETLE (Cotinis nitida) was reported the last of August damaging peaches at Newcastle in central Indiana, farther north than usual. WALNUT CATERPILLAR (Datana integerrima) defoliated walnuts over the State.

Insects Affecting Ornamentals and Shade Trees

BAGWORM (Thyridopteryx ephemeraeformis) was more abundant throughout the State than for a number of years. ELM LEAF BEETLE (Galerucella xanthomelaena) continues as an abundant and destructive pest, especially to Chinese elm. BRONZE BIRCH BORER (Agrilus anxius) has been responsible for the death of many specimen birches throughout the State.

Household and Miscellaneous Pests

BOXELDER BUG (Leptocoris trivittatus) continues as the number one annoying household pest. A CICADA KILLER (Sphecius speciosus) was abundant throughout the State. It was reported as disfiguring lawns. OLD HOUSE BORER (Hylotrupes bajulus) heavily infested a home in Kokomo during August. A SUBTERRANEAN TERMITE (Reticulitermes flavipes) continues as a major pest of homes throughout State. Damp wood or rotten wood termites (Zootermopsis angusticollis) were again found in consignments of fir lumber shipped to South Bend from Oregon.

Insects Affecting Man and Animals

MOSQUITOES - A telephone call from A. L. Klatte of the State Board of Health September 19, reported a serious epidemic of St. Louis encephalitis, in Gibson County. Later A. L. Marshall of the State Board of Health reported that at that time there were 11 cases with three deaths, all being in individuals past the age of 60. Later three more deaths occurred, making a total of six deaths out of 11 cases in this one region. Dr. Marshall stated October 26 that as the investigation proceeded additional cases were added from adjoining areas. By this date 60 cases were being studied as possible cases of encephalitis. He further advised of 15 or 20 cases of encephalitis from Greene County, October 28. Previous studies indicate Culex tarsalis is the principal carrier of this disease, although perhaps other species may be responsible. Mr. Klatte, who conducted the mosquito survey in Gibson County, reports a heavy infestation of mosquitoes, which were predominantly Culex pipiens according

to Determinations by J. A. Clark. According to Dr. Marshall, a complete report will be published as soon as investigations are completed. AMERICAN DOG TICK (Dermacentor variabilis) was reported frequently; however, its seemingly unusual abundance is not reflected in an unusual occurrence of spotted fever. The State Board of Health reports only four known cases (one death) for 1955, in comparison to five in 1953 and five in 1954 (one death).

WEATHER (Continued from page 1030).

The Atlantic Coast storm produced heavy snowfall in the Appalachians and Northeast. Up to 4 inches were reported in western Virginia, 10 inches in western Maryland, 6 to 8 inches in Perry County, Pennsylvania, and 3 to 10 inches in western Massachusetts. Much of this snow melted on the 13th.

In other northern areas snowfall occurred frequently. At the end of the week snow on the ground ranged up to 6 inches in northwestern Wisconsin, 2 to 8 inches in northern Minnesota, 1 to 4 inches over the Dakotas, and depths at lower levels in the State of Washington and the northern Rocky Mountain States ranged up to a few inches. Some higher stations in the Cascades reported over a foot.

(Summary Supplied by U. S. Weather Bureau).

WEATHER BUREAU'S 30-DAY OUTLOOK Mid-November to Mid-December 1955

The Weather Bureau's 30-day outlook for the period from mid-November to mid-December calls for temperatures to average below seasonal normals over most of the area west of the Mississippi, with greatest departures in the Northwest. Above normal temperatures are indicated in Florida and northern New England and near normals elsewhere.

Precipitation is expected to be subnormal in the Pacific Northwest, along the south Atlantic Coast, and in the far Southwest. In the remainder of the Country near or above normal amounts of rain and snow are indicated.

This report released by the Weather Bureau on November 16, 1955.

Weather forecast given here is based on the official 30-day "Resume and Outlook", published twice a month by the Weather Bureau. You can subscribe through Superintendent of Documents, Washington 25, D. C. Price \$4.80 a year, \$2.40 for six months.

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NOVEMBER 25, 1955

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Cooperative
**ECONOMIC INSECT
REPORT**

Issued by

PLANT PEST CONTROL BRANCH

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL BRANCH

ECONOMIC INSECT SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Branch serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Economic Insect Survey Section
Plant Pest Control Branch
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

SPOTTED ALFALFA APHID widespread in several Arizona counties with local heavy infestations in Pima, Pinal, Maricopa and Cochise Counties. Heavy in seedling alfalfa in Dona Ana County, New Mexico and reported in San Juan County of this State for first time. California and Texas also report on this pest. (p. 1049). New infestations in Arkansas. (p. 1054).

CUCUMBER BEETLES very abundant in alfalfa in some areas of Arizona. (p. 1048).

SAN JOSE SCALE abundant in some orchards at Fort Valley, Georgia. New Mexico reports a heavy infestation in Rio Arriba County and California has had medium damage in Tulare County. (p. 1049).

ORCHARD MITE eggs heavy on apple trees in Rio Arriba and Santa Fe Counties, New Mexico. (p. 1049).

TURNIP APHID medium to heavy on turnips in College Station area of Texas. (p. 1051).

CATTLE LICE causing concern on feeder cattle in Utah. (p. 1053).

A HORSE FLY (Tabanus calens) reported from South Carolina for first time. (p. 1053).

SUMMARY OF INSECT CONDITIONS - 1955 - Wyoming (p. 1056), Montana (p. 1058).

STATES reporting this week - 23.

Reports in this issue are for the week ending November 18, 1955, unless otherwise designated.

WEATHER FOR THE WEEK ENDING NOVEMBER 21, 1955

Severe winter weather gripped the Northwest for the second straight week. Over a snow-covered surface minimum temperatures remained at subzero levels most of the week in the northern Rockies, and early in the period they extended from the Dakotas to the Cascades and southward to central portions of Nevada and Utah, southern Colorado and western Kansas. On the 15th many stations in this area reported record-low temperatures for so early in the season, among which were Helena, Montana, -29° ; Spokane, Washington, -11° ; Boise, Idaho, -3° ; and Ely, Nevada, -9° . On the same date Portland, Oregon, had a record-early-season low of 13° as subfreezing minima extended southward along the Pacific Coast to Eureka, California. At Salt Lake City, Utah, a low of -14° on the 16th was 12° lower than the lowest temperature ever before recorded in Salt Lake City during November. In sharp contrast, many eastern stations reported record or near record late-season highs on the 16th. Subfreezing minima in the course of the week occurred everywhere except in the Central Valley and along the coast of California, in southwestern Arizona, the Rio Grande Valley of Texas, Gulf Coastal areas and a few sections along the South Atlantic Coast, and the week was abnormally cold except south of a line joining Washington, D. C., and Albuquerque, New Mexico. Weekly departures from normal ranged from 27° below normal at Havre, Montana, to 6° above normal at Tallahassee, Florida.

Moderate to heavy precipitation occurred in a large area extending from southern New England and the Middle Atlantic States westward to the Mississippi Valley and thence southward over Illinois, Arkansas, and Tennessee, also along the Pacific Coast, in most of the central and northern Great Basin, and in a few localities in the lower Rockies. Elsewhere amounts were generally less than one-half inch with lightest amounts in the South. The Florida Peninsula, western Texas, and southeastern New Mexico received virtually no rain at all.

Most of the precipitation in northern interior areas and on the north Pacific Coast fell in the form of snow. In the Far West snowfall early in the week and again at the weekend left several inches on the ground in northern and central interior areas at lower elevations and much greater amounts in the mountains. Warmer weather at the end of the period melted much of the snow at lower elevations.

In central areas most of the snow fell on the 15th and 16th as an extensive cyclonic storm moved from the lower Great Plains northeastward across the Great Lakes. Near blizzard conditions prevailed in the Dakotas where snowfall generally ranged from 3 to 9 inches and most of it remained on the ground at the end of the period. The storm also left an inch of snow on the ground in most of Kansas, Iowa,

(Continued on p. 1060).

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - NEW MEXICO - Adult survey indicates a total of 2,851,090 acres of cropland and rangeland will be infested next year. Infestations on rangeland make up 2,735,340 acres while 97,750 acres are cropland. Dominant species on rangeland are Drepanopterna femoratum, Aulocara elliotti, Cordillacris occipitalis, Phlibostroma quadrimaculata, Dissosteira carolina, Brachystola magna, Metator pardalinus, Hadrotettix trifasciatus, Ageneotettix deorum, Melanoplus femur-rubrum, M. packardii, M. gladstoni, and in one area of Union County several Dissosteira longipennis were found. (Durkin).

CHINCH BUG (Blissus leucopterus) - NEBRASKA - Fall survey completed in southeastern section of State. Preliminary examinations indicate good carryover population. (Andersen).

HESSIAN FLY (Phytophaga destructor) - NEBRASKA - Fall survey completed in southeast, southwest, and western areas. Fifty tillers examined in each field surveyed with no puparia found. (Hamilton).

APHIDS - TEXAS - Light locally on oats and wheat in Fannin County. (Green).

A CORNSTALK BORER (Diatraea sp.) - NEVADA - Correction: CEIR 5(46):939. This species later identified as a mixture of Heliothis armigera and Laphygma frugiperda. (Gallaway).

CORN EARWORM (Heliothis armigera) - CALIFORNIA - Severe damage to corn reported in Merced, San Diego, and Riverside Counties. (Cal. Coop. Rept., October).

CORN LEAF APHID (Rhopalosiphum maidis) - CALIFORNIA - Severe damage to field corn and milo in all areas of Merced County. (Cal. Coop. Rept., October).

ARMY CUTWORM (Chorizagrotis auxiliaris) - IDAHO - Survey of six fields previously infested in Idaho County in early summer failed to show any signs of presence of the insect. Disease and insecticides drastically reduced populations in Grangeville area. (Portman, Gittins).

SUGARCANE BORER (Diatraea saccharalis) - TEXAS - Medium to heavy local infestations in several sorghum fields in Dimmit and Zavala Counties. (Richardson).

WHITE-FRINGED BEETLES - ALABAMA - Correction: CEIR 5(46):1032 reference to (WFV Prog.) should read (WFB Prog.).

SALT-MARSH CATERPILLAR (Estigmene acrea) - ARIZONA - Migrating larvae very abundant at Buckeye, Maricopa County. (Ariz. Coop. Rept.).

PLANT BUGS - CALIFORNIA - Lycus elisus in all clover seed crops in Sacramento County. (Cal. Coop. Rept., October). ARIZONA - Lycus bug injury noticeable in an alfalfa field west of Phoenix; numerous adults at Solomon, Graham County; Willcox, Kansas Settlement, Elfrida and St. David, Cochise County; Avra Valley, Pima County; nymphs and adults at Buckeye, Maricopa County. Nov.1-10. (Ariz.Coop. Rept.).

LUPINE MAGGOT (Hylemya lupini) - FLORIDA - Averaging one larvae per lupine plant at North Florida Experiment Station, Quincy, Gadsden County, November 1. (Webb).

A LEAF ROLLER (Platynota stultana) - ARIZONA - Damaging alfalfa at Perryville and Buckeye, Maricopa County. (Ariz. Coop. Rept.).

LEAFHOPPERS - ARIZONA - Very abundant on alfalfa at Tucson, Marana, and Avra Valley in Pima County. (Ariz. Coop. Rept.).

A CUCUMBER BEETLE (Diabrotica undecimpunctata subsp.) - ARIZONA - Adults very abundant on alfalfa at Duncan, Greenlee County; Willcox, Elfrida and St. David, Cochise County; and Patagonia, Santa Cruz County. (Ariz. Coop. Rept.).

ALFALFA CATERPILLAR (Colias philodice eurytheme) - CALIFORNIA - Unusually heavy infestation for this time of year in Los Angeles County. (Cal. Coop. Rept., October).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - ARIZONA - Much less abundant in Pinal County and at Theba, Maricopa County, than in September, although the Phoenix-Mesa populations still high. (Ariz. Coop. Rept.).

PEA APHID (Macrosiphum pisi) - CALIFORNIA - A general infestation causing up to severe damage in Monterey County alfalfa. (Cal. Coop. Rept., October). VIRGINIA - Increasing on alfalfa in Roanoke and Mecklenburg Counties. Weather expected to reduce populations. (Morris).

SPOTTED ALFALFA APHID - CALIFORNIA - Moderating in Los Angeles County. Has spread throughout Merced County. Local but heavy infestations in Orange County and light in Placer County. A heavy infestation in 240 acres of alfalfa in San Diego County. Light infestation in part of Solano County and light to severe infestations in Tulare County. (Cal. Coop. Rept., October). ARIZONA - Survey in 85 alfalfa fields showed populations present in all 85 fields in Pima, Pinal, Maricopa, Graham, Greenlee, Cochise, and Santa Cruz Counties. Single fields heavily infested at Avra Valley, Pima County; Eloy, Pinal County; Mesa, Maricopa County, and Bowie and Elfrida, Cochise County. Lady beetles conspicuously absent in Pinal and Maricopa Counties. Nov. 1-10. (Ariz. Coop. Rept.). TEXAS - Heavy, local infestations on alfalfa in Fannin County. (Green). NEW MEXICO - Heavy in most seedling alfalfa stands in Dona Ana County but light to non-existent on established stands. Reported in San Juan County for first time where 1200-1500 acres of alfalfa are heavily infested. (Durkin).

FRUIT INSECTS

CODLING MOTH (Carpocapsa pomonella) - CALIFORNIA - Losses up to 25 percent in San Diego County orchards missing one spray. (Cal. Coop. Rept., October).

ORANGE TORTRIX (Argyrotaenia citrana) - CALIFORNIA - Light to heavy damage to apples in Santa Cruz County. (Cal. Coop. Rept., October).

PEACH TWIG BORER (Anarsia lineatella) - CALIFORNIA - Severe damage, from 30-40 percent, to unsprayed almonds in Merced County. (Cal. Coop. Rept., October).

SAN JOSE SCALE (Aspidiotus perniciosus) - GEORGIA - Has increased and is now abundant in some orchards in Fort Valley area, November 10. (Snapp). NEW MEXICO - Heavily infesting apple trees in one orchard in Espanola Valley, Rio Arriba County. (Durkin). CALIFORNIA - Medium damage in deciduous orchards in Tulare County. (Cal. Coop. Rept., October).

ORCHARD MITES - NEW MEXICO - Eggs very heavy on apple trees in Espanola Valley of Rio Arriba and Santa Fe Counties. (Durkin).

GRAPE MEALYBUG (Pseudococcus maritimus) - CALIFORNIA - Severe damage to grapes in Tulare County. (Cal. Coop. Rept., October).

WOOLLY APPLE APHID (Eriosoma lanigerum) - WASHINGTON - Four living nymphs in about 1000 specimens examined at Pullman after minus 14 degrees on November 15. (Johansen).

Citrus Pest Situation in California for October

CITRUS RED MITE populations low for this time of year in Los Angeles County and very low in Orange County. Light infestations in San Diego County and medium infestations in Santa Barbara County. CITRUS RUST MITE infestations spotted in lemon orchards in Santa Barbara County. CITRUS MEALYBUG infestations medium in all districts reported in San Diego County. Very light infestations in Santa Barbara County. CITRICOLA SCALE infestations light to medium in Tulare County. SOFT SCALE infestations severe in some Tulare County orchards. COTTONY-CUSHION SCALE caused light to severe damage to citrus and some ornamentals in Tulare County and increasing with only a light population of VEDALIA remaining after insecticide application. YELLOW SCALE infestations light to severe in some Tulare County orchards. CALIFORNIA RED SCALE increased sharply in Los Angeles County following hot weather. Local medium infestations in Orange County. Light to medium infestation in Riverside County and medium infestations in San Diego County and greater than at this time last year. Medium infestations in Santa Barbara County. BLACK SCALE infestations light in Riverside County and light in Santa Barbara County. (Cal. Coop. Rept.).

CITRUS RED MITE (Metatetranychus citri) - FLORIDA - Activity increased first week of November and expected to cause leaf drop unless control measures are used. (Pratt, Thompson, Johnson).

HICKORY SHUCKWORM (Laspeyresia caryana) - TEXAS - Local medium infestation on pecan trees in Waller County. (Vaughn).

TWIG GIRDLER (Oncideres cingulata) - TEXAS - Heavy local infestation on pecans around Augusta. (King).

WALNUT APHID (Chromaphis juglandicola) - CALIFORNIA - Severe in 9000 acres of walnuts in Santa Clara County. (Cal. Coop. Rept., October).

WALNUT HUSK FLY (Rhagoletis completa) - CALIFORNIA - Damage in walnut orchards in Sacramento County, very low in treated and untreated orchards in Los Angeles County and far below normal in San Diego County. (Cal. Coop. Rept., October).

BLACK SCALE (Saissetia oleae) - CALIFORNIA - Medium damage to olives in Tulare County. (Cal. Coop. Rept., October).

APHIDS - TEXAS - A medium local hickory bark aphid infestation on pecans near Stonewall. (Davis).

TRUCK CROP INSECTS

BEEF LEAFHOPPER (Circulifer tenellus) - CALIFORNIA - Spraying of Russian-thistle in Fresno, Kings, San Luis Obispo, and Kern Counties totaled 200,340 acres by aircraft and 1,950 acres by ground equipment from October 4-20. Populations higher this season than since 1950. Overall average about 80 per sweep with up to 500 per sweep. (Cal. Coop. Rept., Nov. 11).

SALT-MARSH CATERPILLAR (Estigmene acrea) - CALIFORNIA - Moderate to heavy damage to artichokes and other plants in Santa Cruz County. Heavy damage to lettuce in Riverside County. Moderate to heavy damage to strawberry plants in Santa Cruz County. (Cal. Coop. Rept., October).

TURNIP APHID (Rhopalosiphum pseudobrassicae) - TEXAS - Medium to heavy populations on turnips in College Station area. (Davis).

CABBAGE LOOPER (Trichoplusia ni) - CALIFORNIA - Heavy damage to lettuce fields in Riverside County. (Cal. Coop. Rept., October).

CUTWORMS - CALIFORNIA - Causing medium damage to broccoli, celery, and cucumbers in Santa Barbara County. (Cal. Coop. Rept., October).

POTATO TUBERWORM (Gnorimoschema operculella) - CALIFORNIA - Severe damage to potatoes in Riverside and Santa Barbara Counties. (Cal. Coop. Rept., October).

A ROOT APHID (possibly Pemphigus sp.) - CALIFORNIA - Considerable damage to lettuce and sugar beets in Monterey and San Mateo Counties. (Cal. Coop. Rept., October).

BEEF ARMYWORM (Laphygma exigua) - CALIFORNIA - Feeding on ripe cantaloupes in Los Angeles County. Heavy damage to beans in parts of Riverside County. (Cal. Coop. Rept., October).

TOBACCO HORNWORM (Protoparce sexta) - FLORIDA - Larvae averaging one per tobacco plant in seed bed at Quincy, Gadsden County. (Det. W. B. Tappan). (Denmark).

COTTON INSECTS

SALT-MARSH CATERPILLAR (Estigmene acrea) - CALIFORNIA - Heavy damage to cotton in Riverside County. (Cal. Coop. Rept., October).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

TURPENTINE BEETLES (Dendroctonus spp.) - TEXAS - Continue active in Cherokee, Nacogdoches, Walker, Montgomery, and Tyler Counties. (Tex. For. Pest Com.).

A CARPENTERWORM (Prionoxystus sp.) - ARIZONA - Severe on elms in 2-3 blocks at Williams Air Force Base, Maricopa County, killing large top branches. Very young and mature larvae present. One specimen of leopard moth collected, indicating a mixed infestation. Infested trees being removed. (Ariz. Coop. Rept.).

A PINE SCALE (Toumeyella pinicola) - CALIFORNIA - Moderate to heavy damage to Monterey pines in Santa Cruz County. (Cal. Coop. Rept., October).

ELM SCURFY SCALE (Chionaspis americana) - CALIFORNIA - Reported on elm for first time in San Diego County. (Cal. Coop. Rept., October).

A SCOLYTID (Xyleborus morstatti) - FLORIDA - Adults severely infesting stems of dogwood at Goldstein, Hillsborough County. Numerous twigs killed, November 2. (Thalgott).

CALIFORNIA OAKWORM (Phryganidia californica) - CALIFORNIA - Heavy damage to oaks in Santa Cruz County. (Cal. Coop. Rept., October).

RED-HEADED PINE SAWFLY (Neodiprion lecontei) - TEXAS - Continues to defoliate young pine plantings in San Augustine County. (Tex. For. Pest Com.).

A PUSTULE SCALE (Asterolecanium pustulans) - FLORIDA - All stages averaging 100 or more per stem on Calliandra sp. at Tampa, Hillsborough County. (Thalgott).

MEALYBUGS - CALIFORNIA-Rhizoecus sp. reported damaging cape primrose in Humboldt County. R. falcifer reported becoming widespread in nursery stock in San Diego County. (Cal. Coop. Rept., October).

GRANULATE CUTWORM (Feltia subterranea) - CALIFORNIA - Heavy infestations in dichondra in Los Angeles County. (Cal. Coop. Rept., October).

BEAN LEAF ROLLER (Urbania proteus) - FLORIDA - Adults averaging 50 per plant on oleaster at Quincy, Gadsden County (det. W. B. Tappan) and averaging one per plant of bougainvillea at Sebring, Highlands County, November 11. (Wesson).

A ROOT WEEVIL (Brachyrhinus cribricollis) - CALIFORNIA - Defoliating myrtle in Merced County. (Cal. Coop. Rept., October).

INSECTS AFFECTING MAN AND ANIMALS

CATTLE LICE - UTAH - Many feeder cattle seriously infested since heavy snows. (Knowlton). VIRGINIA - Solenoptes capillatus moderate to heavy on dairy herds at Virginia Polytechnic Institute. Bovicola bovis still light on the V. P. I. herds. (Raffensperger, Turner).

CATTLE GRUBS - KANSAS - Beginning to appear in backs of cattle in central area of State. Of 20 head examined at one location in Saline County, three head each had a single grub. (Matthew).

A HORSE FLY (Tabanus calens) - SOUTH CAROLINA - Taken for first time at Columbia, September 15, by W. J. Goodwin. (Det. A. Stone). New State record. (McAlister).

BENEFICIAL INSECTS

LACEWINGS - CALIFORNIA - Quite abundant along with syrphids in alfalfa fields in Riverside County. (Cal. Coop. Rept., October).

STORED PRODUCTS INSECTS

GRAIN BEETLES - SOUTH CAROLINA - Saw-toothed grain beetle reported as most serious pest in 40 years at Burris Mills, Anderson County. (Johnson, November 12). Trogoderma versicolor found in barley from Spartanburg, September 22. (Det. W. H. Anderson). (McAlister, November 9).

MISCELLANEOUS INSECTS

ANTS - VA. - Winged forms emerging in Richmond and causing concern to home owners. (Matheny).

RECENT INTERCEPTIONS AT PORTS OF ENTRY

Of recent interest was the unusual interception of 2 living adult termites, identified as Coptotermes niger Snyder tunneling in wood packing cases in ships' cargo from Nicaragua at New Orleans, Louisiana. (Berg). This termite is considered a very destructive species in parts of Central America and Colombia. It is said to attack the woodwork of buildings, furniture, and wood articles in storage. It has also been reported causing injury to lead cables in the Canal Zone. Its importance as a pest is also increased by its habit of attacking living trees where its presence is usually not suspected until it is too late for control measures to save the trees. Fruit trees, including avocados, are more frequently infested. Swarming occurs in Central America in the early part of the rainy season, April to June. C. niger has been intercepted on 2 previous occasions: at Seattle, Washington, in packing cases of a doubtful origin, and at Miami, Florida, as a stowaway on an airplane, exact origin doubtful. This insect is not known to occur in the United States.
(Compiled - Plant Quarantine Branch).

ADDITIONAL NOTES

ARKANSAS - New Infestations of SPOTTED ALFALFA APHID in Randolph, Clay, and Mississippi Counties on alfalfa. Presumed to be general over State since infestations found in all four corners and in central counties. BOLL WEEVIL adults still in fields, delaying trash samplings. (Warren).

LIGHT TRAP COLLECTIONS

		Pseudal. unipun.	Laphyg. frugip.	Agrotis ypsilon	Feltia spp.	Heliothis armig.	Agrotis glad.	Choriza. aux.	Antic. gemma.
KANSAS									
Hays	11/11-14	4		6				2	
Manhattan	11/14-15	2		5				5	
TEXAS									
College Sta.	11/12-18	772	103	27	64	4	4139		
Winter Haven	11/1-15	117	4	4	83				
Beaumont	11/1-15	23	3	3		8			
LOUISIANA									
Tallah* APKANSAS	11/11-18	587	75	180	164	122	2834		31
Stuttgart	11/3-16	59		13		41			
Vарner	10/27-11/16	100		74		159			
Fayetteville	11/5-18	91		24		47			
ALABAMA									
Auburn	11/13-19	6			19				
FLORIDA									
Gainesville	11/15				1	2			5
Sanford	11/10					4			2
Monticello	11/9				2	2			3
Homestead	11/10					3			
GEORGIA (Counties)									
Clarke	11/6-12				16				
Spalding	11/5-11	3			3				
Tift	11/6-12	6			25	3			10
SO. CAROLINA (Counties)									
Charleston	11/14-20	14	3	8	6	1			34
Oconee	11/13-19	6		1	22	2			

*Three traps at Tallulah.

SUMMARY OF INSECT CONDITIONS - 1955

WYOMING

Reported by Everett W. Spackman

Cereal and Forage Insects

CORN LEAF APHID (Rhopalosiphum maidis) caused severe damage to barley and light damage to oats throughout the small grain areas during July. GRASSHOPPERS were generally severe in crops in Lincoln, Park and Big Horn Counties. Range species caused severe damage in the Big Horn Basin area, Crook County, Campbell County, Fremont County, Johnson County, Sheridan County, Platte County, and Goshen County. A range grasshopper control program was conducted in the following counties: Park, Hot Springs, Sheridan, Johnson, Platte, and Goshen. The adult survey conducted this fall indicates a severe grasshopper problem will occur in 1956. During the month of May a control program for MORMON CRICKET (Anabrus simplex) was conducted in Crook County (5,000 acres) and Johnson County (1,000 acres). Excellent control results were obtained. A small band of Mormon crickets in Johnson County, not controlled this year, will no doubt warrant control measures in 1956. There are a number of "hot spots" throughout the eastern half of Crook County, too small for aerial application in 1955, that will be checked next spring.

ALFALFA WEEVIL (Hypera postica) damage was very limited this season due to the large amount of control applied. PEA APHID (Macrosiphum pisi) was present in large numbers in general in alfalfa. GREENBUG (Toxoptera graminum) reported causing light to heavy damage to barley and oats in Crook County. ARMYWORM (Pseudaletia unipuncta) damaged oats in Goshen County. Control measures were applied and very good control was received. A LEAF ROLLER (Amelia pallorana) infestation was widespread in alfalfa seed crops in the vicinity of the Big Horn Basin. TARNISHED PLANT BUG (Lygus lineolaris) was low in numbers in most of the alfalfa fields checked in the State. Heavy flights of ALFALFA WEBWORM (Loxostege commixtalis) moths laying eggs in June in the vicinity of Goshen County and larvae caused severe damage in Big Horn County. CLOVER SEED CHALCID (Bruchophagus gibbus) was causing severe damage in the alfalfa seed-growing areas again this year. CORN EARWORM (Heliothis armigera) was found in all corn fields examined during August. Infestation was not above normal in the areas where corn is grown. ARMY CUTWORM (Chorizogrotis auxiliaris) caused some damage to corn in June in Goshen County.

WIREWORMS were of great concern during June, causing large loss to corn plantings. PALE WESTERN CUTWORM (Agrotis orthogonia) infested winter wheat plantings in Laramie County during the month of May. SWEETCLOVER WEEVIL (Sitona cylindricollis) caused damage in the vicinity of Hot Springs, Big Horn, Platte, and Goshen Counties. It has not been found in Lincoln County or the area known as the Star Valley.

Truck Crop Insects

POTATO PSYLLID (Paratrioza cockerelli) was reported 10 per 100 sweeps on Lycium in May. It continued to increase on non-economic hosts during June and infest early-planted potatoes and tomatoes. During July there were severe infestations on tomatoes and potatoes in Park and Goshen Counties. TUBER FLEA BEETLE (Epitrix tuberis) was found infesting Lycium in early May, increasing in number per sweep on Lycium in early June when emergence from hibernation was noted. The larvae became very abundant on potatoes in July; good control was obtained on the fields observed. A BLISTER BEETLE was reported causing damage to potatoes in Lincoln County during July. BEET WEBWORM (Loxostege sticticalis) adults were noted causing damage to beets in early July. MEXICAN BEAN BEETLE (Epilachna varivestis) caused damage in a number of fields in Goshen County. This insect has never been reported from the Big Horn Basin as far as known.

Insects of Forest, Shade Trees and Ornamentals

Reports and observations of the EUROPEAN ELM SCALE (Gossyparia spuria) and the OYSTERSHELL SCALE (Lepidosaphes ulmi) infestation were normal during the season. Some control measures were applied in the cities. This fall, as usual, there were many reports of the CLOVER MITE (Bryobia praetiosa) causing a great deal of annoyance by migrating into homes. In general, where control measures were applied, the results were poor. There was apparently no increase in the BOXELDER BUG (Leptocoris trivittatus) populations. A few reports were received of the SPRING CANKERWORM (Paleacrita vernata) causing damage in Goshen County. IMPORTED CURRANTWORM (Nematus ribesi) heavy infestations caused damage to currants and gooseberries during early July in Converse County.

Insects Affecting Man and Animals

MOSQUITTOES were extremely abundant and annoying throughout the State. Abundant moisture early in the season in some areas provided many favorable breeding places. CATTLE GRUB FLIES were annoying in parts of the State. CATTLE LICE reports from various sections of the State indicated normal populations were present. The SHEEP KED (Melanoplus ovinus) infested sheep in the southwestern portion of the State. Generally control measures were applied.

SUMMARY OF INSECT CONDITIONS - 1955

MONTANA

Reported by George Roemhild

Cereal and Forage Insects

GRASSHOPPERS - Melanoplus mexicanus showed up in generally larger numbers this year, especially in the central part of the State. Aulocara elliotti was still the most important range species with local damaging populations in Fergus, Gallatin, Madison and Broadwater Counties. M. bivittatus remained a problem in wheat field borders in the northern part of the State. M. differentialis occurred in corn in the eastern part of the State. M. femur-rubrum caused some crop damage in the lower Yellowstone Valley. Camnula pellucida was a problem in the southwestern area on range. Aeropedellus clavatus did local early damage to range in central area. CORN LEAF APHID (Rhopalosiphum maidis) occurred in tremendous numbers on late-planted barley east of the mountains. No great amount of damage resulted but the huge populations caused alarm. ENGLISH GRAIN APHID (Macrosiphum granarium) occurred in wheat in eastern and northern parts of the State with little or no damage resulting. ALFALFA WEEVIL (Hypera postica) surveys indicate this pest is present in most alfalfa-producing areas east of the mountains with the exception of the extreme northwestern part and the Gallatin and upper Missouri River Valleys.

WIREWORMS and FALSE WIREWORMS occurred extensively through the northern tier of counties and into some of the eastern counties farther south. Soil and climatic conditions allowed some damage even though the fields were planted with treated seed. ARMY CUTWORM (Chorizagrotis auxiliaris) occurred more generally throughout the north central part of the State and was less abundant in the south central part. PALE WESTERN CUTWORM (Agrotis orthogonia) occurred in damaging numbers for the first time in a number of years. Generally the infestation was centered along the upper Yellowstone River and in Madison, Gallatin, and Pondera Counties, and in other small local infestations. A PLANT BUG (Labops hesperus) occurred on barley in Yellowstone Valley, where it did considerable damage, and on wheat in Lewis and Clark County, where moderate damage was sustained. WHEAT JOINTWORM (Harmolita tritici) occurred in damaging numbers in Fergus County and in Rosebud County. WHEAT STEM SAWFLY (Cephus cinctus) has continued to expand its range in the State. Some areas in McCone and Roosevelt Counties suffered damage up to 50 percent along field margins where this pest was unknown four or five years ago. WHEAT HEAD ARMYWORM (Protoleucania albilinea) occurred in small numbers in Toole, Liberty and Hill Counties. LYGUS BUGS (Lygus sp.) occurred generally

state-wide but were only controlled in those areas where alfalfa seed is produced. CLOVER SEED CHALCID (Bruchophaqus gibbus) was known to be harmful in only Rosebud County this year.

Fruit Insects

CHERRY FRUIT FLY (Rhagoletis cingulata) occurred in Ravalli, Missoula, Lake, and Flathead Counties. No outstanding populations were reported. CURRANT FRUIT FLY (Epochra canadensis) is important in most home garden plantings.

Truck Crop Insects

WIREWORMS occurred generally throughout the potato-growing regions in the western mountain valleys. Although very few POTATO PSYLLIDS (Paratrioza cockerelli) were seen this year, the population was greater than for several years. One of the worst infestations of FLEA BEETLES (Epitrix spp.) on sugar beets occurred in Richland County this year. Elsewhere damage was scattered locally. BEET WEBWORM (Loxostege sticticalis) occurred much later than usual and was present in the largest numbers in the northern tier of counties along Milk River.

Insects Affecting Man and Animals

Various species of MOSQUITOES were late this year generally, due to a cold spring. Populations were large but of shorter duration.

Forest, Ornamental and Shade Tree Insects

A GALL APHID (Pemphigus populi-transversus), POPLAR VAGABOND APHID (Mordwilkoja vagabunda) and an ERIOPHYID POPLAR GALL occurred quite extensively throughout the part of the State east of the mountains. ASH PLANT BUG (Neoborus amoenus) was present in large numbers in the south central and central part of the State. This is the second year when populations of this insect have been extremely high. POPLAR AND WILLOW BORER (Cryptorhynchus lapathi) was found for the first time in Montana in Flathead County. ELM LEAF APHID (Myzocallis ulmifolii) occurred in all parts of the State in very large numbers. Many towns carried on control campaigns. A CANKER-WORM was exceedingly abundant on many of the farm and ranch shelter belts in the northern and central counties. COOLEY SPRUCE GALL APHID (Chermes cooleyi) is a perennial pest on most spruce ornamentals in the State. PINE NEEDLE SCALE (Phenacaspis pinifoliae) occurred only rarely this year. SPRUCE BUDWORM (Choristoneura fumiferana) caused defoliation of thousands of acres in forests north of Yellowstone Park and along the Idaho border. SPIDER MITES, various species, were generally down in numbers this year.

Miscellaneous Insects

CLOVER MITE (Bryobia praetiosa) was not as abundant this year as in past two years but still a considerable number of inquiries were received. SOLPUGIDS were quite common and many inquiries regarding their possible damage were answered. DERMESTIDS were the most common and important household insect. Trogoderma versicolor is the most common species. TERMITES (Reticulitermes sp.) were reported from only two places in the eastern part of the State this year. EUROPEAN EARWIG (Forficula auricularia) is becoming a major household and garden pest in the southwestern section, especially in Gallatin and Park Counties.

WEATHER (Continued from p. 1046).

and parts of Nebraska, but the cover in these states melted at the end of the period. Several inches of snow also fell in the Great Lakes region where damaging winds accompanied the storm. Two to 5 inches fell in Indiana, Ohio, the Middle Atlantic States, and southern New England, most of which remained on the ground at the end of the period. This was the first general snowfall of the season in the Northeast.

(Summary Supplied by U. S. Weather Bureau).



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DECEMBER 2, 1955

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Cooperative
**ECONOMIC INSECT
REPORT**

Issued by

PLANT PEST CONTROL BRANCH

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL BRANCH

ECONOMIC INSECT SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Branch serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Economic Insect Survey Section
Plant Pest Control Branch
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

SPOTTED ALFALFA APHID increasing in Salt River Valley of Arizona, damaging new alfalfa stands in Major County, Oklahoma, and continues active in areas of California and Kansas. (p. 1065).

Surveys show more BOLL WEEVIL in hibernation in South Carolina and Louisiana than in fall of 1954. (p. 1066).

Results of STALK BORER survey in Texas in 1955. (p. 1068).

SUMMARY OF INSECT CONDITIONS - 1955 - in Utah. (p. 1070).

SURVEY METHOD for predators on cotton. (p. 1077).

STATES reporting this week - 17.

Reports in this issue are for the week ending November 25, 1955, unless otherwise designated.

WEATHER FOR THE WEEK ENDING NOVEMBER 28, 1955

In the Pacific Northwest the severe cold weather moderated considerably last week, temperatures remained above the zero mark, and weekly averages were 15° to 20° higher than those for the previous week. Between the Continental Divide and Great Lakes, however, the weather was cold and windy with temperatures dropping below zero on 4 or 5 nights, and averaging 17° below normal for the week at Great Falls, Montana, and Bismarck, North Dakota. The lowest temperatures occurred during the week end as a cold wave swept down over the Central Interior to the Gulf of Mexico. On the morning of the 29th cold air covered the entire area east of the Divide, except extreme southern Florida, and freezing extended to some sections of the Gulf Coast - Lake Charles, Louisiana, 30°; Mobile, Alabama, 26°; Pensacola and Appalachicola, Florida, 28° and 31° respectively.

Temperatures were unseasonably high in the southern and central areas early in the week as Fort Worth, Texas, recorded 89° and Kansas City, Missouri, 71° on the 22d, and they continued on the mild side until reduced by the weekend cold wave. From eastern Arizona to the Atlantic Coast temperatures for the week averaged 1° or 2° above normal.

The week's precipitation was moderate to heavy in the Pacific Northwest and in a large area of the South. In central and northern portions of Mississippi and Alabama these rains replenished soil moisture which had been depleted by warm, dry weather in September and early October. In the remainder of the Country precipitation was very light except in a few widely scattered localities.

In Iowa, Missouri, and the central Great Plains soil moisture is short as a result of 6 weeks or more of dry weather. In the latter areas the soil is becoming dry and loose and strong winds last week caused some light to moderate duststorms.

Higher temperatures melted the snow cover at lower levels in the Far West except in regions near the Canadian Border. The cover ranges from 3 up to 10 inches in eastern Washington and from 60 to 80 inches in the Cascades where much new snow fell last week. The snow cover also extends over most of Montana, the Dakotas, Minnesota, and the Great Lakes Region. Depths exceed 6 inches in the northeastern quarter of North Dakota and northern portions of Minnesota and Wisconsin, and range up to 17 inches at International Falls, Minnesota, and 11 inches at Duluth, Minnesota and Bismarck, North Dakota. A trace covers the ground in parts of Indiana, Ohio, and western Pennsylvania.

(Summary Supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

EUROPEAN CORN BORER (Pyrausta nubilalis) - VIRGINIA - Survey showed the average larval population per 100 stalks as follows: 108 in 10 southwestern counties and 204 in 10 northern counties. (Morris).

Stalk Borer Surveys in Texas in 1955

Surveys were made in the northeast and coastal areas of the State from August 22 through September 16 to determine the areas infested with stalk borers and the intensity of infestations. The southwestern corn borer (Diatraea grandiosella) is the dominant species in the northeastern areas, while sugarcane borer (Diatraea saccharalis) is the chief species in the coastal areas. Cornstalk borers were found in 31 of 45 northeast counties. Infestations averaged from 0 to 48 percent by county. Only southwestern corn borer (Diatraea grandiosella) was found in this area. The infestations in general were lighter this year than last. Seven additional counties were found infested: Clay, Harrison, Johnson, Kaufman, Montague, Panola and Rusk. Twenty-seven counties were surveyed for sugarcane borer from August 29 to September 9. The borer was found in either corn or sorghum, or both, in 22 counties. Infestation average in corn ran from 0 to 98.6 percent and 0 to 100 percent in sorghum. Sugarcane and rice fields were inspected in counties where they were grown. Light infestations of sugarcane borers in rice were found in Brazoria, Jackson, Victoria, Waller, Wharton and Matagorda Counties. The heaviest infestations were in Matagorda, Brazoria and Jackson Counties, where a few fields had up to 24 percent of the rice stems infested. Sugarcane was found lightly infested in Brazoria, Jasper and Polk Counties, with very heavy infestations in Newton County. (Davis).

CHINCH BUG (Blissus leucopterus) - NEBRASKA - Examination of one-third of samples collected revealed a light to moderate infestation in southeastern area. Counts from 8 to 555 per square foot. (Andersen).

SOUTHWESTERN CORN BORER (Diatraea grandiosella) - KANSAS - Light infestation in corn field in northern Wabaunsee County. About two percent of stalks girdled and living larvae found in lower part of girdled stalks. (Matthew).

CORN LEAF APHID (Rhopalosiphum maidis) - OKLAHOMA - Reported in two fields in Canadian and Garvin Counties, 25 per linear foot of row, and from Alfalfa and Woods Counties at an average of 20 per linear foot of row. Averaged 38 per linear foot of row on winter barley in Garfield County. (Coppock).

GREENBUG (Toxoptera graminum) - KANSAS - No infestation found in fields examined in Riley, Wabaunsee, Shawnee, Douglas and Jefferson Counties. (Matthew).

SORGHUM MIDGE - SOUTH CAROLINA - Reported damaging grain sorghum in Lancaster County. (Cannon).

SPOTTED ALFALFA APHID - CALIFORNIA - Light to medium in all alfalfa-growing areas in Tehama County. Infestations general over Kings County, where 3123 acres were treated. Moderate damage in Madera County and light to heavy infestations in part of San Bernardino County. (Cal. Coop. Rept.). ARIZONA - In 10 alfalfa fields used for periodic survey in Maricopa County, average population per leaflet November 17-18 was 4.06 compared with 3.36 November 7, 2.74 October 26-27, and 1.50 October 20. A steady increase in populations in Salt River Valley, reaching 12-23 per leaflet November 18. Most heavily infested fields show 25-70 percent damage, despite drastic population reduction by predators, diseases, hay-cutting and insecticides. Adults and larvae of lacewings and syrphid flies more numerous during fall than in spring and summer, although lady beetles not general in Salt River Valley during the fall. (Ariz. Coop. Rept.). OKLAHOMA - Severe damage to newly-planted alfalfa in Major County, with counts in 3 fields averaging 4000 per linear foot of row. Averages of 400-500 per linear foot of row in Kingfisher County. Counts in old alfalfa averaged 2500 per square foot in four fields in Major County and 400 per square foot in three fields in Kingfisher County. Only small numbers in Payne, Logan and eastern Kingfisher County. (Coppock). KANSAS - Infestations from 15-200 per 20 sweeps in alfalfa in Riley, Wabaunsee, Douglas and Jefferson Counties. (Matthew).

YELLOW CLOVER APHID - NEBRASKA - Infestation on red clover still exists south of Columbus. (Andersen). KANSAS - Averaged seven per infested plant in red clover fields of Jefferson County. (Matthew).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - TEXAS - Heavy, widespread infestations on winter peas interplanted with rye and in peanuts in Mason County. (Fuller).

LEAFHOPPERS - OKLAHOMA - Killing small portions of newly-seeded alfalfa in Logan and Kingfisher Counties. (Henderson).

FRUIT INSECTS

FLORIDA RED SCALE (Chrysomphalus aonidium) - FLORIDA -
Correction: CEIR 5(46):1033 - California Red Scale should read Florida
Red Scale. (Pratt).

HICKORY SHUCKWORM (Laspeyresia caryana) - NORTH CAROLINA ..
Causing serious losses to pecans in Alamance County. (Bacon, Jones).

TRUCK CROP INSECTS

EUROPEAN CORN BORER (Pyrausta nubilalis) - PENNSYLVANIA -
Infested 10 percent of pepper fruits in a 3/4-acre plot in Blair County,
October 29. (Udine).

SWEETPOTATO WEEVIL (Cylas formicarius elegantulus) - TEXAS -
Heavy populations in wild morningglory plants over Houston County. (Nix).

COTTON INSECTS

Pink Bollworm Situation, November 1-15

Gin trash inspections continue to give negative results outside known
infested areas. Final inspections for season made in Mississippi,
Louisiana, Oklahoma and Missouri. In 31 counties of eastern half
of Oklahoma, where season's regular gin trash inspections completed,
tabulations show three counties with no infestations, one county with
decrease and 27 counties with increases compared with 1954. The 31
counties showed bollworms at the rate of 2.89 per bushel of trash com-
pared with .18 for 1954. Definite increases in Coleman, McCulloch
and Tom Green Counties, Texas. In Luna County, New Mexico, boll-
worms found at rate of .15 per bushel of trash compared with 1.84 in
1954. In northern Chihuahua, Mexico, counts per bushel of trash showed
reductions over 1954. In Oklahoma, southwest counties, 60 bollworms
were found per lint cleaner inspection compared with an average of five
in 1954. Average number per lint cleaner in El Paso County, Texas,
was 188 compared with 11.5 for 1954. Counts in Dona Ana County,
New Mexico, averaged nine per inspection compared with 4.3 in 1954.
(Pink Bollworm Cont. Prog.).

Boll Weevil Hibernation Survey - Fall 1955

LOUISIANA - Survey for hibernating boll weevils in woods trash was started November 7 and completed November 21. An average of 13,443 live weevils per acre was found in the 200 samples* collected near Tallulah in Madison Parish. This was 5.7 times the average number recorded during the past 19 years, 2.6 times the number found during the fall of 1953, which was the single year in which the greatest number was found during the 19-year period, and 5.0 times the number found during the fall of 1954. The number per point (10 samples) ranged from 726 to 51,062. An average of 3,742 live weevils per acre was found in 130 samples collected in 8 additional parishes: St. Landry, Avoyelles, Rapides, Natchitoches, Red River, Bossier, Ouachita, Tensas. In the 5 parishes where collections were made in 1954 an average of 1.8 times as many weevils was recorded in 1955 as in 1954. For all 330 samples collected in Louisiana an average of 9,621 live weevils per acre was obtained. (Gaines, Newsom, et al).

SOUTH CAROLINA - During the second week of November, 200 square yards of surface woods trash were examined from 20 farms in Florence County. Live boll weevils were found at various rates per farm ranging from 484 to 35,332 per acre with average of 11,398 per acre. This average is the greatest number found during the 13-year period that such examinations have been made. It is 4.9 times the average for the fall of 1954 and 2.3 times the average for the 13-year period. Between November 10 and 28, 300 square yards of surface trash were examined from 5 farms in each of 6 counties: Darlington, Sumter, Clarendon, Laurens, Horry and Orangeburg. Average for all samples taken in these counties in 1955 was 8,260 weevils per acre against 1,499 per acre in 1954, or 5.5 times as many in fall of 1955 as in fall of 1954. (Walker et al).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

MEALYBUGS - OKLAHOMA - Medium infestations on dracaena plants in greenhouses, November 18. (Bower).

A CERAMBYCID (Oberea myops) - VIRGINIA - Correction: 5(46):1036-"Damaging rhododendron and azaleas at one locality on Eastern Shore" should read "Damaging * * * * one locality in Fauquier County. (Morris).

BEAN LEAF ROLLER (Urbanus proteus) - FLORIDA - Correction: CEIR 5(47):1053, Urbania proteus should read Urbanus proteus. (Denmark).

*Each sample is two square yards.

INSECTS AFFECTING MAN AND ANIMALS

CATTLE GRUBS - OKLAHOMA - At Oklahoma City, of 80 cows originating from Muleshoe, Texas, 15 had no grubs, 42 had 1-20, 16 had 20-50, and 7 had 50 or more. Of 31 two-year-old heifers from Osage County, Oklahoma, 10 had no grubs, 13 had 1-20, 7 had 20-50, and one had 50 or more. Of 76 three-year-old steers from Hamilton, Kansas and Pawhuska, Oklahoma, 11 had no grubs, 43 had 1-20, 12 had 20-50. At Enid, Oklahoma, of 18 two-year-old heifers from a 75-mile radius, 3 had no grubs, 7 had 1-20, 7 had 20-50, and one had 50 or more. (Coppock, Nov. 18). Averaged 20-30 per animal in western Payne County, eastern Canadian County and Logan County, November 25. (Howell).

WINTER TICK (Dermacentor albipictus) - PENNSYLVANIA - Collected on cattle in Tioga County. (Gesell).

BROWN DOG TICK (Rhipicephalus sanguineus) - NORTH CAROLINA - Heavy infestation in a home in Wake County. (Farrier).

STORED PRODUCTS INSECTS

Stored Grain Insect Situation, Oklahoma

Survey of six seed warehouses in Alfalfa, Woods, Grant, Kay and Noble Counties showed four premises infested with one or more species. Infestations of BLACK CARPET BEETLE in three locations; INDIAN-MEAL MOTH in two locations; CONFUSED FLOUR BEETLE, CADELLE, and COWPEA WEEVIL each from one location. No KHAPRA BEETLE found, November 18. A survey of 17 bins in Major and northern Blaine Counties showed six bins with one or more species of insects. Grading screens used to screen a one-quart sample. Three of five bins of wheat yielded one CADELLE, 54 BLACK CARPET BEETLE larvae and 11 LESSER GRAIN BORERS. One of three barley bins yielded two CADELLES. One of the two milo bins yielded four CONFUSED FLOUR BEETLES, six LESSER GRAIN BEETLES, five BLACK CARPET BEETLE adults, 78 BLACK CARPET BEETLE larvae. One bin of oats and wheat mixture yielded 26 GRANARY WEEVILS, 8 BLACK CARPET BEETLE larvae, November 25. (Coppock).

GRAIN MITE (Acarus siro) - OREGON - Large numbers in stored wheat at Prineville, November 3. (Det. G. Krantz). (Goeden).

A MITE (Histiogaster carpio) - OREGON - In tapioca starch at a paper mill in Oregon City, October 26. (Det. H. H. S. Nesbitt). (Garoian).

MISCELLANEOUS INSECTS

COCKROACHES - TEXAS - Medium to heavy infestation of Blatella germanica in many homes in Menard County. Apparently resistant to chlordane. (Mullins). VIRGINIA - Heavy infestation in a home in Loudoun County. (Rowell).

GIANT HORNET (Vespa crabro germana) - VIRGINIA - Nesting under eaves, siding and in woods of Blacksburg and annoying families in area. Also stripping bark from lilacs. (Rowell).

POWDER-POST BEETLES - VIRGINIA - Have heavily damaged poplar timbers in a residence at West Point. (Rowell).

SUMMARY OF INSECT CONDITIONS - 1955

UTAH

Reported by G. F. Knowlton, H. E. Dorst, D. W. Davis, H. F. Thornley, F. V. Lieberman, D. R. Parker, G. H. Kaloostian, F. C. Harmston, L. E. Fronk, and County Agricultural Agents.

Cereal and Forage Insects

GRASSHOPPERS caused approximately \$669,000 in crop and range damage. Control was applied to approximately 81,000 acres, which protected vegetation on at least 326,000 acres of crop and range lands. This saved an estimated \$690,000. Aircraft sprayed 66,404 acres; the balance was sprayed by ground equipment. In several areas, spring storms and cold markedly reduced anticipated grasshopper outbreaks. The more injurious species were Melanoplus mexicanus, Camnula pellucida, M. bivittatus, Aulocara elliotti, M. femur-rubrum and M. packardii. MORMON CRICKETS (Anabrus simplex) were baited over 4,358 acres by aircraft in time to minimize range losses. An additional 10,814 acres were baited by ground equipment. SPOTTED ALFALFA APHID infested 21 of Utah's 29 counties during the year. It caused an estimated hay and alfalfa seed loss exceeding \$500,000. PEA APHID (Macrosiphum pisi) damaged canning peas in northern Utah and injured alfalfa in scattered areas. LYGUS BUGS (largely Lygus elisus, L. hesperus and L. desertus) were abundant and commonly injurious to the alfalfa seed crop wherever control was delayed or omitted. Other forage crops and weeds were conspicuously infested throughout the season.

A PLANT BUG (Adelphocoris superbus) caused some injury to buds on alfalfa seed crops. SWEETCLOVER WEEVIL (Sitona cylindricollis) spread to several additional counties. ALFALFA WEEVIL (Hypera postica) was damaging where early spring control was omitted. An estimated 30 percent of all alfalfa grown in Utah received early-spring stubble spray, in spite of rains. ALFALFA CATERPILLAR (Colias philodice eurytheme) damaged more than 1000 acres of second crop alfalfa in Millard County; generally moderate elsewhere. A LEAF TIER (Amelia pallorana) caused only light injury. ARMY CUTWORM (Chorizandra auxiliaris) caused spotted injury to alfalfa, small grains and range in many counties. WESTERN YELLOW-STRIPED ARMYWORM (Prodenia praeifica) damaged alfalfa and sometimes truck crops in Cache, Morgan, Weber, Summit and Wasatch Counties; damage by P. ornithogalli was local in southern Utah. BROWN WHEAT MITE (Petrobia latens) caused losses of two to three bushels per acre on about 5000

acres of wheat and barley. However, in general, timely rains kept populations low. Fall populations were high (50 to 100 per linear foot of drill row) on about 3000 acres. CORN LEAF APHID (Rhopalosiphum maidis) damaged thousands of acres of spring barley in twelve counties, and corn and irrigated wheat to a lesser extent. In some areas ENGLISH GRAIN APHID (Macrosiphum granarium) injured wheat. MIRIDS (largely Stenotus binotatus) caused damage to grasses in several areas. STINK BUGS (Chlorochroa sayi and others) caused only light damage to small grains and alfalfa seed. Local injury to corn from sap beetles, to alfalfa and wheat from leafhoppers, to alfalfa from treehoppers, western harvester ant, and miscellaneous mites. CLOVER SEED CHALCID (Bruchophagus gibbus) caused economic damage quite generally in seed-producing areas.

Fruit Insects

APHID infestations generally were below normal during the season. However, the BLACK CHERRY APHID (Myzus cerasi) caused conspicuous damage commonly. WOOLLY APPLE APHID (Eriosoma lanigerum) was a problem in many apple orchards. CODLING MOTH (Carpocapsa pomonella) infestations varied from low to more than fifty percent injured apples and pears. FRUIT TREE LEAFROLLER injury was moderate. A LEAFHOPPER (Colladonus geminatus) was scarce in alfalfa fields. SAN JOSE SCALE (Aspidiotus perniciosus) found in many small orchards. CLOVER MITE (Bryobia praetiosa) was most common and damaging mite, with spotted injury from EUROPEAN RED MITE (Metatetranychus ulmi) and moderate late season damage from TWO SPOTTED SPIDER MITE (Tetranychus telarius, T. mcdanielli, and, at Moab, T. canadensis on apple and peach. T. canadensis was recorded in Utah for first time in 1955. (Det. E. W. Baker). A CHERRY RUST MITE (Vasates fockeui) and PEACH SILVER MITE (Vasates cornutus) also infested orchards in several counties. PEAR-SLUG (Caliroa cerasi) caused moderately severe damage to cherries and some injury to pear, plum and hawthorn foliage. The CALIFORNIA PRIONUS (Pricnus californicus) killed 12 apple trees and 36 apricot trees in a large orchard at Holladay. CAT-FACING INSECTS caused slightly less damage to peaches, pears and apples than during 1954. PEACH TREE BORER (Sanninoidea exitiosa) damage was general and often serious in stone fruit orchards throughout the State. PEACH TWIG BORER (Anarsia lineatella) caused moderate to light injury to apricots, peaches, and sometimes to plums. PEAR THRIPS (Taeniothrips inconsequens) were moderately numerous in spring. CHERRY FRUIT-WORM (Grapholitha packardii) infested cherries in a few Utah and Cache County orchards. SHOT HOLE BORERS damaged cherry, peach and

apricot trees in some old, neglected or weakened orchards. What appeared to be WALNUT HUSK FLY severely damaged English and black walnuts at Ogden. WESTERN GRAPE LEAF SKELETONIZER (Harrisina brillians) was almost completely controlled by parasites. GRAPE BERRY MOTH (Polychrosis viteana) larval damage was about fifty percent of 1954, in Washington County. CURRANT APHID (Cappitophorus ribis) commonly attacked and distorted leaves of red currant. Injury from other berry-crop aphids generally was moderate. CURRANT FRUIT FLY damage was normal. STRAWBERRY LEAFROLLER injury occasionally was conspicuous. SNOWY TREE CRICKET injury fairly common, and the STRAWBERRY CROWN MOTH (Ramosia bibionipennis) infested strawberry plants at Provo. ROOT WEEVILS (Brachyrhinus ovatus, B. rugosostriatus, and sometimes B. sulcatus) caused damage to many strawberry patches, with occasional injury to raspberries.

Truck Crop Insects

TOMATO FRUITWORM (Heliothis zea (Boddie))* surveys showed egg population on tomato leaves averaged 0.5 per hundred leaves in late June and early July. The count decreased with egg deposition on early corn very low. At main fruit set on tomatoes in early August, egg population had decreased from 0.07 to 0.01 eggs per hundred leaves; consequently, no insecticides were applied to canning corn or tomatoes, saving growers about \$80,000, which is normally expended for control of this insect on these two crops. Infestation on early market sweet corn in northern Utah in July averaged less than three percent. In canning corn in August and September, infestation increased slightly but generally averaged less than ten percent. Infestation on market corn in southern Utah was 50-100 percent. TOMATO RUSSET MITE (Vasates lycopersici) infestations were light in three tomato fields in northern Utah. BEET LEAFHOPPER (Circulifer tenellus) in the eight local breeding grounds of northern and eastern Utah had a low overwintering population, except the Rozel, Tooele Valley, Skull Valley and West Mountain areas, which averaged 0.02, 0.013, 0.018 and 0.013 leafhoppers, respectively. Light-form migrants or long distance migrants and nymphs were observed in the local breeding grounds of northern Utah in early May. Leafhopper population on susceptible crops was moderate to heavy in southern and central areas and light to moderate in northern area. Light populations are 0.3 to 0.5 per square foot, moderate 0.6 to 0.9, and heavy over 1 per square foot.

*Todd, E. L. 1955. The distribution and nomenclature of the corn earworm. Jour. Econ. Ent. 48(5):600, 602-603.

Curly top damage to tomatoes in the canning crop area of northern Utah averaged about eight percent. Damage to early market planting in southern Utah averaged about 60 percent. Sugar beet yields in the lower portion of central Utah were reduced approximately three tons per acre this year because of populations of over one beet leafhopper per foot of beet row in early spring. A VINEGAR GNAT (Drosophila melanogaster) was present in large numbers on tomatoes in northern Utah in mid-to-late September. Populations were slightly below a year ago. APHIDS were below normal in general on potatoes, celery, beans and carrots. SIX-SPOTTED LEAFHOPPER (Macrostelus fascifrons), a LEAFHOPPER (Empoasca filamenta), and POTATO PSYLLID (Paratrioza cockerelli) caused spotted injury, but were below normal in abundance. FLEA BEETLES caused serious damage to young corn and fall injury to small beets planted for seed crop in Washington County. MELON APHID (Aphis gossypii) damaged melons and cucumbers in local areas. SQUASH BUG (Anasa tristis) caused normal injury. CORN LEAF APHID (Rhopalosiphum maidis) and mites caused local damage to sweet corn in northern and central areas and to corn in Washington County. No POTATO TUBERWORM (Gnorimoschema operculella) found in field inspections, sorting sheds or cellars. COLORADO POTATO BEETLE (Leptinotarsa decemlineata) was damaging in south Kane County; few in Weber and Davis Counties. MEXICAN BEAN BEETLE (Epilachna varivestis) damaged beans in several counties. SPOTTED AND STRIPED CUCUMBER BEETLES caused moderate cucurbit damage. ASPARAGUS BEETLES (Crioceris asparagi) produced limited damage in Weber and Davis Counties. ONION THRIPS (Thrips tabaci) injury was common and average. CUTWORMS damaged sugar beets in Carbon County. GARDEN CENTIPEDE caused scattered damage in home gardens.

Forest, Ornamental and Shade Tree Insects

The BLACK HILLS BEETLE (Dendroctonus ponderosae) is still active in ponderosa pine stands of the Dixie National Forest and Bryce Canyon National Park. Control reduced populations in areas where applied but new infestations appeared. A FIR NEEDLE MINER (Epinotia meritana) has been increasing in severity in Bryce Canyon National Park and Dixie National Forest during the past few years. Approximately 10,000 acres are now infested and the trend is toward increasing severity. A MEALYBUG (Puto sp.) on 60,000 acres of Englemann spruce on the Fishlake and Dixie National Forests is active on reproduction, poles, and sawtimber. Infestations are increasing in extent and severity. DOUGLAS-FIR BEETLE (Dendroctonus pseudotsugae) is killing timber in many fir stands. Infestations are spotty in character but rather widely distributed. A BLOTCH LEAF MINER (Paraleucoptera albella) damaged thousands of cottonwood trees along the Sevier River. MOUNTAIN PINE BEETLE (D. Monticolae) has become more severe on Wasatch National Forest.

BOXELDER LEAF ROLLER (Gracilaria nequandana) damage was much less extensive than in 1954. COOLEY SPRUCE GALL APHID (Chermes cooleyi) and the PINE NEEDLE SCALE (Phenacaspis pinifoliae) damaged susceptible hosts in various localities. ROUND-HEADED and FLAT-HEADED BORERS damaged ash, maple and other shade trees. LEAFHOPPER damage to elms was below average. A MITE, Tetranychus canadensis, infested mulberry and walnut and Eotetranychus well-doni infested weeping willows at Moab. LEAFHOPPERS (Erythroneura ziczac and other spp.) severely damaged Virginia creepers during late summer in many localities. ROSE LEAFHOPPER (Typhlocyba rosae) was a common pest, discoloring rose foliage. Mite damage was moderate to roses. SPIREA APHID (Aphis spiraeicola) became extremely numerous. Aphids were also common on oleander in Washington County, on pyracantha in some areas, and on willows. GLADIOLUS THRIPS (Taeniothrips simplex) injured gladiolus, while the western flower thrips has been abundant in most garden and wild flower blossoms. WHITE GRUBS damaged lawns in a number of localities. EUROPEAN EARWIG (Forficula auricularia) again was a serious pest in yards, home vegetable gardens, and attacking ripe fruits about the home grounds.

Insects Affecting Man and Animals

CATTLE LICE caused above normal damage last winter in most livestock areas of Utah. CATTLE GRUBS (Hypoderma lineatum and H. bovis) caused moderate to high bot infestations, with flies running cattle in most counties. NOSE BOTS were fairly common in sheep. HORN FLY (Siphona irritans) was abundant and caused economic loss throughout Utah. STABLE FLY (Stomoxys calcitrans), HORSE FLIES and DEER FLIES were moderately annoying generally; severe in limited areas. HOUSE FLY (Musca domestica) often was abundant where livestock were kept. ROACHES, including German, brown-banded and oriental, infested many homes, some hotels, auto courts, restaurants, a hospital and stores. SUBTERRANEAN TERMITES damaged numerous homes, garages and other buildings. POULTRY MITES and LICE, and HOG LICE were fairly common, sometimes present in great abundance. EAR TICK (Otobius megnini) was less troublesome than during 1954 or 1953. TICKS, particularly Dermacentor andersoni, were numerous during spring on cattle and horses, and sometimes attacked persons on range lands. BLOW FLIES were common, and Wohlfahrtia opaca larvae sometimes attacked livestock, mink and other animals. A SNIPE FLY (Symphoromyia hirta) annoyed man in a number of canyons. SHEEP KED (Melophagus ovinus) was abundant and injurious generally in winter.

MOSQUITO populations in northern Utah were lower during the spring of 1955 than during the previous spring, because of prevailing cold weather in March and April. In Cache County, adult mosquito activity became apparent during the last week in April, when a few Culex tarsalis and Anopheles freeborni were taken while biting humans in houses and out of doors. With warmer weather in May, buildup of several Aedes species was accelerated and considerable annoyance to urban and rural residents resulted from attacks by Aedes dorsalis, A. increpitus, and A. vexans. High populations of Culex tarsalis became noticeable by the middle of July. In the Logan Canyon and certain other recreational areas of northern Utah, Aedes pullatus was pestiferous during July. High populations of Culex tarsalis and Aedes dorsalis were found in irrigated areas, where the improper management of water was responsible for production of numerous broods of mosquitoes. Annoyance from Mansonia perturbans was higher in 1955 than during the previous season, whereas the opposite was the case with Culex erythrothorax. Mosquito control in Weber County involved 18,000 acres treated by aircraft, 6,000 acres by ground sprayer, plus extensive misting; 16,597 feet of ditches dug and 3,998 feet cleaned. A total of 11,871 gallons of insecticide was used for fogging along 2,625 miles of roadway. Six light traps, operated from April 15 to October 1 at six locations, averaged 31.5 mosquitoes per night. The three operated on the western shore line, nearer Great Salt Lake, averaged 59.5 per night, while in residence areas to the east the average was 4.2 mosquitoes per night. A total of 17,900 Gambusia fish were planted to aid control.

SURVEY METHODS

Predators on Cotton

Predators were surveyed by various methods in two fields of cotton in the Arkansas-Mississippi River Delta at Varner, Arkansas, for 6 weekly counts, June 29-August 4. Blooms were available for only the last 5 and the last 3 counts. No insecticides were used during the period of observations.

Table 1. Combined totals of predators for 6 weekly counts in 2 fields. Counts made by sweeping, shaking plants over cloth stretched on board frame, examining whole plants, blooms, terminals, leaves and squares.

	Sweeping 2400 swps.	Shaking 317 plts.	Examination of -				Total	
			317 whole plants	800 blms.	1200 tmls.	1200 lvs.	2200 sq.	
Lady beetles								
adults	25	35	34	22	17	15	31	179
larvae	7	19	8	14	5	1	5	59
Banded thrips								
adults	5	51	88	10	4	47	2	207
Insidious fl. bug - adults	3	56	54	22	33	6	31	205
nymphs	0	19	53	13	22	6	11	124
Big-eyed bug								
adults	22	20	18	5	14	2	1	82
nymphs	4	10	7	5	2	0	2	30
Lacewing fly								
adults	10	2	11	0	3	2	2	30
larvae	2	19	18	10	1	0	4	54
eggs	0	0	132	5	3	34	15	189
Total	78	231	423	106	104	113	104	1159

Lady beetles are well distributed over plants. Banded thrips and lacewing eggs are concentrated on leaves. Big-eyed bugs are concentrated on terminals and insidious flower bugs on squares and terminals. If predators are counted while making examinations of squares, terminals and leaves for pest insects, these habits can be used. Count thrips on leaves only; big-eyed bugs on terminals only, etc.

Table 2-Comparative efficiency of different methods of counting predators

Method	Hours required*	Predators per man hour	Predators per unit
Sweeping	0.23 for 200 sweeps	32	9 for 200 sweeps
Shaking plants over cloth-covered frame	0.19 for 10 plants	52	7.3 for 10 plants
Examining whole plants	0.28 for 10 plants	63	13.0 for 10 plants
Examining blooms	0.35 for 100 blooms	35	13.25 for 100 blms.
Examining terminals	0.28 for 100 terminals	34	8.7 for 100 tmls.
Examining leaves	0.24 for 100 leaves	39	9.4 for 100 leaves
Examining squares	0.365 for 200 squares	23	9.5 for 200 sqs.

*In sampling a field "walking time" would have to be added to this.

Sweeping, shaking plants over a cloth-covered frame, and inspection of blooms have little to recommend them. They are inefficient and qualitatively do not appear to give a true sample. Examination of whole plants was the most efficient method. To examine 30 plants required 50 minutes and yielded 52 predators. To examine 100 leaves, 100 terminals, and 200 squares required about the same amount of time and yielded only 23 predators. Qualitatively, examination of whole plants yielded relatively more lacewing eggs and fewer adults of insidious flower bug and lady beetles than did examination of terminals, leaves and squares.

Conclusions: The predator population can be adequately surveyed by taking counts while making the usual survey for boll weevil, bollworm, flea-hopper, spider mites and aphids. In making special counts for predators only, examination of whole plants is more efficient. (Charles Lincoln).

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DECEMBER 9, 1955

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Cooperative
**ECONOMIC INSECT
REPORT**

Issued by

PLANT PEST CONTROL BRANCH

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL BRANCH

ECONOMIC INSECT SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Branch serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Economic Insect Survey Section
Plant Pest Control Branch
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

BEEF LEAFHOPPER widespread on spinach in Dimmit and Zavala Counties, Texas. (p. 1081).

INDIAN-MEAL MOTH and Ephestia spp. heavily infesting new-crop peanuts in some counties of Georgia. (p. 1083).

SUMMARY OF INSECT CONDITIONS - 1955 - in Mississippi (p. 1085) and Tennessee (p. 1088).

WEATHER BUREAU'S 30-DAY OUTLOOK

December 1955

The Weather Bureau's 30-day outlook for December calls for temperatures to average above normal in the Southeast and near normal in the Middle Atlantic States, the Ohio Valley, and West Gulf States. In the remainder of the nation below normal temperatures are expected, with the coldest weather in the Northern Plains.

Precipitation in the form of rain and snow is predicted to exceed normal in States bordering the Mississippi and Ohio Valleys, the Northern Rocky Mountains, and the West Coast. Subnormal amounts are indicated in the Southwest and Southeast, and near normal elsewhere.

This report released by the Weather Bureau on December 2, 1955.

Weather forecast given here is based on the official 30-day "Resume and Outlook", published twice a month by the Weather Bureau. You can subscribe through Superintendent of Documents, Washington 25, D. C. Price \$4.80 a year, \$2.40 for six months.

WEATHER FOR THE WEEK ENDING DECEMBER 5, 1955

Last week's weather was characterized by unseasonably low temperatures and widespread precipitation which extended the snow cover in the western half of the Nation and restored soil moisture in much of the South.

As a cold Arctic air mass which covered the central United States at the beginning of the period moved out over the Atlantic by December 2, temperatures gradually moderated until the weekend, when another surge of cold Arctic air overspread virtually the entire country again reducing temperatures to well below normal levels.

Early in the week minimum temperatures fell to subzero levels from the Great Lakes to the Rockies, and freezing occurred everywhere except on the West Coast and in a few extreme southern localities. On the morning of November 30 Tallahassee, Jacksonville, and Tampa, Florida reported 26°, 29°, and 37° respectively, and freezing and light frost occurred in inland areas of the Florida Peninsula as far south as Polk County.

Average temperature departures for the week were 18° below normal in western North Dakota tapering off to about 3° below near the Coasts and in the extreme South. In the North Central Interior where the severe cold weather has persisted for 4 or 5 weeks the past November was one of the coldest on record.

Precipitation occurred daily in the Great Lakes region and adjacent areas and the Pacific Northwest. On December 1 and 2, rain or snow fell everywhere except in the Florida Peninsula and a few spots in the far Southwest.

The week's moisture, totaling from 1 to 6 inches from eastern Texas to Georgia, restored soil moisture in many areas where it had been depleted by the summer and fall drought. In parts of Missouri and the central and lower Great Plains, however, amounts were too light to afford relief to the dry surface soils.

Moderate to heavy snows fell over much of the western half of the Nation and in northern areas east of the Mississippi. Heaviest snow in the Central Interior fell during the weekend storm when amounts exceeding a foot were measured in South Dakota and parts of Minnesota. Thunder and lightning occurred at Minneapolis during this storm, the first such occurrence there in December since 1891. At the end of the period snow covered most of the Rocky Mountain ranges, the Cascades, and the Sierras above 3,500 feet. In central areas snow now covers the ground north of a line running from northwestern Kansas to Alpena, Michigan, with extreme depths of 14 inches in eastern South Dakota, 24 inches at Duluth, Minn., and 29 inches at Houghton, Mich. Depths in northern New England range from 2 to 10 inches.

(Summary Supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

SPOTTED ALFALFA APHID - ARIZONA - In nine alfalfa fields used for periodic check in Maricopa County, average population was 3.58 per leaflet, November 29, compared with 3.46 November 17-18, despite the fact that populations were greatly reduced between dates. Average population in six untreated fields was 5.21 per leaflet November 29, compared with 3.39 November 17-18. Populations in one untreated field reached 22.27 per leaflet and foliage damage was about 60 percent. Increase begun in late September and early October still in progress. Predator population low in late November. (Ariz. Coop. Rept.). TEXAS - Light local infestation on alfalfa in Dimmit County. (Richardson). NEBRASKA - Aphid has survived 8 degrees below zero in Platte and Republican River Valleys. (Connin, Andersen).

CLOVER ROOT CURCULIO (Sitona hispidula) - GEORGIA - Moderate leaf feeding by adults on crimson clover seedlings in Spalding County, November 21. (Tippins).

LUPINE MAGGOT (Hylemya lupini) - GEORGIA - Caused 100 percent damage to terminals of lupine in experimental plots in Tift County, November 28. (Benton). FLORIDA - First adults of season on lupine, Alachua County. (Kuitert).

FRUIT INSECTS

LESSER PEACH TREE BORER (Synanthedon pictipes) - GEORGIA - Depositing eggs in commercial peach orchard in central area, November 15. Latest oviposition record under orchard conditions on record. (Snapp).

TRUCK CROP INSECTS

SWEETPOTATO WEEVIL (Cylas formicarius elegantulus) - ALABAMA - Specimens collected from six properties near Ashford, Houston County. This is a first record for the county. MISSISSIPPI - A heavy infestation found in Leake County. No additional infestations found. LOUISIANA - A total of 21 infestations found in a delimiting survey of Lincoln Parish. One infestation found in Union Parish. (Sweetpotato Weevil Prog., Nov. 25).

BEET LEAFHOPPER (Circulifer tenellus) - TEXAS - Light to heavy widespread infestation on spinach in Dimmit and Zavala Counties. Populations from 5-60 per 100 sweeps. (Richardson).

CROSS-STRIPED CABBAGEWORM (Evergestis rimosalis) - FLORIDA - Infesting collards at rate of one per plant in St. Lucie County, November 22. (Williams).

OBLIQUE-BANDED LEAF ROLLER (Archips rosaceana) - VIRGINIA - On strawberry plants in Appomattox County October 3. (Det. USDA). (Smith).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

OBSCURER SCALE (Chrysomphalus obscurus) - MARYLAND - Heavy infestation on pin oak at Hagerstown, Washington County. (U. Md., Ent. Dept.).

A BRUCHID (Althaeus hibisci) - VIRGINIA - Extremely heavy on hibiscus at one locality in Franklin County, August 31. Emerging from seeds and pods in large numbers. (Det. G. B. Vogt). (Amos).

CRAPEMYRTLE APHID (Myzocallis kahawaluokalani) - FLORIDA - Nymphs and adults averaging 25 per leaf on crapemyrtle at Clearwater, Pinellas County, November 17. (Miller). Averaging 100 per plant on crapemyrtle at Sarasota, Sarasota County, November 15. (Bickner).

A WHITEFLY (Tetraleurodes sp.) - FLORIDA - Many eggs and nymphs per leaf of scrub oak at Lady Lake, Lake County, November 17. (Holder).

WHITE PEACH SCALE (Pseudaulacaspis pentagona) - FLORIDA - Averaging many per Japanese persimmon at Tampa, Hillsborough County, November 11. (Thalgott). Adults averaging 50 per stem on geranium and 50 per stem on goldenrain tree at Holly Hill, Volusia County, November 22 (Roberts) and on kudzu vine at Gainesville, Alachua County (Morse).

WHITE GRUBS - ARIZONA - Reported as more of a nuisance than usual this year in Tucson, particularly damaging to young nursery stock. Areas near lights most vulnerable. (Ariz. Coop. Rept.).

APHIDS - OKLAHOMA - In combination with spider mites, a heavy infestation occurred on chrysanthemums in one greenhouse in Oklahoma County. (Bower). ARIZONA - Cinara tujafilina nuisance on arborvitae in Tucson. Prevalent in spring and fall, secreting honeydew in quantities. (Ariz. Coop. Rept.).

LARGER CANNA LEAF ROLLER (Calpodes ethlius) - FLORIDA - Larvae averaging two per canna leaf at Hialeah, Dade County, November 1. (Daigle).

A WASP MOTH (Lymire edwardsii) - FLORIDA - All leaves of banyan trees damaged by larvae at Lakeland, Polk County. (Whitmore).

INSECTS AFFECTING MAN AND ANIMALS

SHEEP SCAB MITE (Psoroptes equi ovis) - VIRGINIA - Infesting 117 of 1224 sheep inspected in November. (Va. Livestock Bul., November).

STORED PRODUCTS INSECTS

Stored Grain Insect Situation, Oklahoma

Twelve of 28 bins of farm-stored grain were infested in Craig, Delaware, Ottawa, Nowata and Rogers Counties. A one-quart sample was taken in each bin. One of four bins of wheat yielded 213 RICE WEEVILS; one of four bins of barley yielded 123 RICE WEEVILS and 23 FLAT GRAIN BEETLES; one of two bins of milo yielded 167 RICE WEEVILS. Bins of corn, rye and vetch, sudan, soybeans and oats yielded only light infestations of other insects. (Coppock).

A SOLDIER FLY (Hermetia illucens) (Det. W. W. Wirth) - VIRGINIA - Larvae in complex with otitid larvae infesting a trench silo in Surry County, September 1. (Amos).

CONFUSED FLOUR BEETLE (Tribolium confusum) - MARYLAND - Moderate infestation of adults and larvae contaminating powdered milk at dairy in Baltimore. (U. Md., Ent. Dept.).

INDIAN-MEAL MOTH (Plodia interpunctella) - GEORGIA - In complex with Ephestia spp. heavily infesting a new crop of peanuts in Tift, Colquitt, Mitchell and Early Counties, November 17. (La Hue).

A GRAIN BEETLE (Ahasverus advena) - VIRGINIA - In complex with Typhaea stercorea, in large numbers in wheat at one locality in Augusta County, November 11. Beetles came to surface of grain when treated. (Det. USDA). (Morse).

MISCELLANEOUS INSECTS

BROWN-BANDED ROACH (Supella supellectilium) - MARYLAND - Annoying in homes in Hyattsville, Prince Georges County. (U. Md., Ent. Dept.).

TERMITES - FLORIDA - Swarming of Reticulitermes virginicus in Broward County, November 11 and 15. (Det. L. A. Hetrick). (Soowal).

CARPET BEETLES - OKLAHOMA - Damage to rugs and clothing in Oklahoma County. (Bower).

Light Trap Collections

TEXAS (College Station, 11/25-12/2): Pseudaletia unipuncta 219; Laphygma frugiperda 7; Agrotis ypsilon 5; A. gladiaria 243; Feltia spp. 42; (Winter Haven, 11/16-30): P. unipuncta 167; L. frugiperda 3; A. ypsilon 11; Heliothis zea 4; Feltia spp. 219. LOUISIANA (three traps, Tallulah, 11/24-12/2): A. gladiaria 10; A. ypsilon 2; Feltia subterranea 4; H. zea 1; P. unipuncta 7. GEORGIA (Spalding Co., 11/19-25): Feltia subterranea 1; (Tift Co., 11/20-26): P. unipuncta 3; H. zea 4; A. ypsilon 15; F. subterranea 9. ALABAMA (Auburn, 11/26-12/2): A. malefida 4; A. gladiaria 1; L. frugiperda 1. (Arant).

SUMMARY OF INSECT CONDITIONS - 1955

MISSISSIPPI

Prepared by J. M. Langston
and R. E. Hutchins

Cereal and Forage Insects

CLAY-BACKED CUTWORM (Agrotis gladiaria) damaged some corn in Oktibbeha County in April and in Forrest County in May. CHINCH BUG (Blissus leucopterus) damaged corn in various parts of the State during April, May and June. SUGARCANE BEETLE (Euetheola ruficeps) was very numerous and caused widespread damage to young corn in various areas during April, May and June. LESSER CORNSTALK BORER (Elasmopalpus lignosellus) caused some damage to stands of corn during May, June and July. CORN EARWORM (Heliothis zea) damaged ears of corn during early summer. Other insects causing damage to corn during May include SOUTHERN CORN ROOTWORM (Diabrotica undecimpunctata howardi) and WHITE-FRINGED BEETLES (Graphognathus sp.) in Forrest County; GRASSHOPPERS (several species) in southern part of the State. CORN SILK BEETLE (Luperodes brunneus) was reported from Jefferson Davis County in June and from Lincoln County in July. YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli) damaged corn in Rankin and Oktibbeha Counties. EUROPEAN CORN BORER (Pyrausta nubilalis) was received from Panola County in August.

ARMYWORM (Pseudaletia unipuncta) lightly infested a 100-acre wheat field in Lowndes County April 22, and severely damaged small grain in Clay County May 20. GREENBUG (Toxoptera graminum) caused serious damage to barley in a 100-acre field in Lowndes County on March 16. CLOVER MITE (Bryobia praetiosa) was causing damage to vetch in Adams County, clovers in Jackson, Jones and Covington Counties, and clover and other plants in Oktibbeha County in March and April. A BLISTER BEETLE (Epicauta sp.) was noted feeding on soybeans in some counties. SORGHUM WEBWORM (Celama sorghiella) caused severe damage to sorghum grown for seed in Clay and Lowndes Counties in September. Two infestations of GROUND PEARLS (Margarodes sp.) were found in Forrest County where lawn grass was being killed. Another infestation was reported in Pearl River County. A new infestation of a WHITE-FRINCED BEETLE (Graphognathus peregrinus) was recently found in Newton County.

Fruit Insects

WALNUT CATERPILLAR (Datana integerrima) occurred on walnut and pecan trees in July and August. ORIENTAL FRUIT MOTH (Grapholitha molesta) was reported from Panola County early in June on peach trees.

PECAN BUD MOTH (Gretchena bolliana) damaged a young pecan orchard in Madison County in July. HICKORY SHUCKWORM (Laspeyresia caryana) damaged pecan nuts in Bolivar County. SHOT-HOLE BORER (Scolytus rugulosus) damaged peach trees in Monroe, Lauderdale and Quitman Counties.

Truck Crop Insects

MEXICAN BEAN BEETLE (Epilachna varivestis) was not reported during the early part of the season, but caused damage in Franklin County in October. BLACK CUTWORM (Agrotis ypsilon) damaged vegetables in Jackson County in October and GRASSHOPPERS caused damage there in May. SEED-CORN MAGGOT (Hylemya cilicrura) injured planted potatoes in March in Grenada County and in April in Webster County. VEGETABLE WEEVIL (Listroderes costirostris obliquus) larvae damaged vegetables in Jones County early in March. Adults and larvae caused more than usual damage in April in Covington, Forrest, Leake and Webster Counties. The adults were reported as unusually numerous in Bolivar and Lowndes Counties early in May, and adults were received from Choctaw County late in June. PICKLEWORM (Diaphania nitidalis) caused serious damage to cucurbits in Marshall County in August. FALL ARMYWORM (Laphygma frugiperda) was feeding on turnips in Oktibbeha County and on peppers in Holmes County in October. SOUTHERN ARMYWORM (Prodenia eridania) was reported the first time this year on October 7, and was damaging vegetables in Itawamba County October 28. SWEETPOTATO WEEVIL (Cylas formicarius elegantulus) was found in Rankin County on October 21. Other pests reported damaging vegetables include SPIDER MITES (Tetranychus sp.) June 3 and 24; BLISTER BEETLE (Epicauta sp.) June 10; FALSE CHINCH BUG (Nysius ericae) in July and October.

Cotton Insects

BOLL WEEVIL (Anthonomus grandis) was the most important enemy of cotton in Mississippi in 1955. These insects were out of hibernation and began puncturing cotton squares in early June. Numerous rains in July were favorable to high infestations during that month, but the lack of rains during August and September gave farmers a chance to control the insects, resulting in a good yield of cotton per acre. BOLLWORM (Heliothis zea) damaged cotton squares in various counties about July 1, and by mid-August heavy infestations were reported, especially from the "delta" counties. Eggs were still being laid early in September and cotton bolls were being damaged in a number of counties. COTTON LEAFWORM (Alabama argillacea) appeared in some sections of the State in October after the crop was made, and no damage was caused. Other insects causing a small amount of damage to cotton were GRASSHOPPERS of several species, WHITE-FRINGED BEETLES (Graphognathus sp.) in Forrest County in May and CORN SILK BEETLE (Luperodes brunneus) in July.

Forest, Ornamental and Shade Tree Insects

FOREST TENT CATERPILLAR (Malacosoma disstria) was reported from Jones County March 25. Adults of SOUTHERN LYCTUS BEETLE (Lyctus planicollis) were received from Humphreys and Prentiss Counties about April first. AN IPS BEETLE (Ips grandicollis) damaged pine trees in Jackson County early in May, while I. calligraphus and I. avulsus were received from Wayne County early in October. COTTONWOOD LEAF BEETLE (Chrysomela scripta) seriously defoliated a newly established 50-acre cottonwood plantation in Bolivar County in July. Other insects reported on trees were RED-HEADED PINE SAWFLY (Neodiprion lecontei) on pine in August and YELLOW-NECKED CATERPILLAR (Datana ministra) on oak in September. AN OAK SCALE (Lecanium quercifex) was reported from Attala, Hinds, Oktibbeha and Madison Counties on shade trees early in April. FLAT-HEADED APPLE TREE BORER (Chrysobothris femorata) was received in May with the information that oak shade trees were being killed. FALL WEBWORM (Hyphantria cunea) was reported from Oktibbeha County on May 27 and September 2, from Wayne County September 2, and from Jackson County October 7. ELM LEAF BEETLE (Galerucella xanthomelaena) defoliated elm trees in Marshall County early in June, and in Tippah County early in August. This is the first time this insect has caused damage in this State. BAGWORM (Thyridopteryx ephemeraeformis) damaged shrubbery in Itawamba County in June and in Oktibbeha County in August. IRIS BORER (Macronoctua onusta) was received in August from Coahoma County for the first time. This is the second county from which this insect has been received. A heavy infestation of WHITE PEACH SCALE (Pseudaulacaspis pentagona) was reported from Washington County early in September. FULLER ROSE BEETLE (Pantomorus godmani) and P. taeniatus damaged azalea plants in Forrest and Lamar Counties in September.

SUMMARY OF INSECT CONDITIONS - 1955

TENNESSEE

Reported by R. P. Mullett

Cereal and Forage Insects

ARMYWORMS were not nearly so abundant or so destructive as in the preceding two years. Roughly 52,000 acres were infested in 1955. Controls were applied to approximately 33,000 acres. Of the 52,000 acres infested, approximately 15,000 acres were very lightly infested and little damage was sustained. It is estimated that on the areas on which controls were applied, a saving of \$660,000 was made. The economic loss was estimated to be \$100,000. Major outbreaks were in middle Tennessee, with severe infestation in two or three western counties. There was little infestation in the eastern third of the State. Serious local outbreaks of CUTWORMS (Agrotis gladiaria, Feltia subgothica) occurred in March and April in scattered areas in pastures over the State. Widespread infestations of SUGARCANE BEETLE (Euethoela rugiceps) occurred in the western part of the State on corn. Scattered serious infestations occurred in middle and eastern Tennessee. This insect also attacked cotton and strawberries in very local situations. CORN BORER was prevalent over the State. Infestations were light.

FALL ARMYWORM (Laphygma frugiperda) appeared in the State but was confined to budworm activities in late corn and did little damage. No army-type outbreaks occurred in newly-sown small grains and pastures as in previous years. Heavy local infestations of various species of BLISTER BEETLES were noted in alfalfa fields scattered across the State. MEADOW SPITTLEBUG (Philaenus leucophthalmus), which has been building up the previous two years in the eastern third of the State, was much reduced on alfalfa and clovers, apparently by the extremely cold spell which occurred about the time this insect normally appears. PEA APHID (Macrosiphum pisi) was abundant on alfalfa in April but was fairly well controlled by parasites. The GRASSHOPPER infestation which appeared generally over the State early in the season was drastically curtailed for some reason. SORGHUM WEBWORM (Celama sorghiella) caused heavy, scattered damage in this crop over the State. Extensive control efforts were carried on against this pest, particularly in the western part of the State. SORGHUM MIDGE (Contarina sorghicola) also caused light damage in local areas in middle Tennessee. Control efforts were applied for control of BEAN LEAF BEETLE (Cerotoma trifurcata) in scattered situations in the western part of the State.

Cotton Insects

At the start of the season very few BOLL WEEVILS (Anthonomus grandis) could be found coming out of hibernation. However, a very favorable season for this insect developed and by the end of July numbers had build up to serious outbreak proportions in the eight southwestern counties. Widespread control efforts were put into effect, although such efforts were hampered by rank growth of cotton. Virtually all tractor-operated insect control efforts had to be stopped because of the extreme height of the crop at the end of the season. BOLLWORMS caused little damage to the cotton this year. There were scattered local infestations of SPIDER MITES, and no LEAFWORMS appeared in this State. CORN BORER was found infesting small portions of a very few cotton fields.

Truck Crop Insects

Common vegetable insects were present this summer in normal numbers over the State. The MEXICAN BEAN BEETLE (Epilachna varivestis), which was virtually non-existent last year, returned to normal numbers this season. Light infestations of CORN EARWORM (Heliothis zea) were found in commercial pepper-producing areas. TOBACCO BUDWORM (Heliothis sp.) was the most serious tobacco pest this year, although widespread control efforts kept this pest in check. HORNWORMS (Protoparce sp.) were not much of a problem. A few VEGETABLE WEEVILS (Listroderes costirostris obliquus) were found scattered over middle Tennessee in tobacco beds but caused only minor damage.

Forest, Ornamental and Shade Tree Insects

Large numbers of ELM LEAF BEETLES, LOCUST LEAF MINERS, MIMOSA WEBWORMS and EASTERN TENT CATERPILLARS were present all over the State, causing widespread defoliation of their respective host trees. BAGWORMS also were quite prevalent on conifers and various conifer shrubs. An outbreak of LINDEN LOOPER (Erannis tiliaria) defoliated 200-300 acres of timber in Greene and Hawkins Counties. Serious infestations of SOUTHERN PINE BARK BEETLE, which existed in upper Tennessee last season, were drastically reduced this year by weather conditions being unfavorable for this insect. An infestation of JAPANESE BEETLE (Popillia japonica) was located in Johnson County. The infestation covered about 700 acres. Eradicative measures were applied by the State Department of Agriculture.

Cattle Pests

HORN FLY (Siphona irritans) was quite prevalent this season over the State. CATTLE GRUBS (Hypoderma spp.) were present in

moderate, normal numbers. No cases of SCREW-WORMS (Callitroga hominivorax) were reported this year. HOUSE FLIES were slow in starting but build up in July and August in large numbers around dairy barns. LICE infestations were few and scattered.

Household Pests

BOXELDER BUGS, FLEAS, CLOVER MITES and TERMITES were widely reported in homes. Many people reported being bothered by mosquitoes around the home, the first of any such general report in several years. Many infestations of POWDER POST BEETLE were also present.

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DECEMBER 16, 1955

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Cooperative
**ECONOMIC INSECT
REPORT**

Issued by

PLANT PEST CONTROL BRANCH

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL BRANCH

ECONOMIC INSECT SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Branch serves as a clearing house and does not assume responsibility for accuracy of the material.

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Economic Insect Survey Section
Plant Pest Control Branch
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

GREENBUG populations noted in several Texas Panhandle counties. Medium infestation on barley in Eddy County, New Mexico. (p. 1093).

WHEAT STEM SAWFLY loss estimates for 1955 in North Dakota. (p. 1093).

Spread of the SPOTTED ALFALFA APHID in the United States (map). (after p. 1093).

WALNUT HUSK FLY reported from Utah for first time. (p. 1095).

BOLL WEEVIL hibernation survey results in Virginia. (p. 1095).

FRUIT INSECT conditions - 1955 - in New York and New England. (p. 1098).

SUMMARY OF INSECT CONDITIONS - 1955 - in South Dakota (p. 1102) and Nevada (p. 1105).

WEATHER FOR THE WEEK ENDING DECEMBER 12, 1955

Unseasonably cold weather persisted over most of the Nation for the second consecutive week as cold Arctic air continued to flow southward east of the Rocky Mountains. The week's precipitation was moderate to heavy in Florida and the Pacific States, but generally very light elsewhere and virtually all in the form of snow in northern areas.

Subzero minima occurred daily in northern Great Plains and upper Mississippi Valley, with Bemidji, Minnesota, recording -28° on Friday. In Minnesota frost penetration was 6 to 12 inches on the 9th except in central portions of the State, where it was reported as 24 inches. Navigation in the Mississippi River at St. Paul, Minnesota, ended on December 1. Temperatures for the week averaged 21° below normal at Huron, South Dakota. Subfreezing minima, occurring throughout the week in most interior sections, extended to northern Florida and coastal sections of Alabama at the end of the period - Mobile, Alabama 30° and Tallahassee, Florida, 31° on Sunday morning.

(Continued next page).

In the Great Plains and Mississippi Valley the week's precipitation was virtually nil. In the lower Great Plains where the ground is bare, soil drifting was reported in eastern portions of Colorado and New Mexico.

The week's snowfall was mostly light although occurring frequently in the Great Lakes region. Most of the snowfall in the East occurred on the 9th when a low pressure area moved up the Atlantic Coast. Two to 7 inches fell in the Appalachians and 1 to 3 inches on the outer islands of southern New England. Heavy snow, however, fell in Washington and Oregon, increasing the heavy cover in the Cascades. There was little change in the extent of snow cover during the week. Snow depths in the Cascades now range up to 105 inches at Paradise Ranger Station, Washington. Silver Lake, Utah reported the greatest depth in the Rockies, 50 inches.

A deep snow cover remained in the eastern Dakotas, Minnesota, and upper Lakes region. In South Dakota most of the 2 to 15 inches which fell during the storm of December 2 to 4 (the state's sixth heaviest snow-storm on record) remained on the ground. In the upper Lakes region Duluth, Minnesota, reports 23 inches and Houghton, Michigan, 32.

(Summary Supplied by U. S. Weather Bureau).

Reports in this issue are for the week ending December 9, 1955, unless otherwise designated.

CEREAL AND FORAGE INSECTS

GREENBUG (Toxoptera graminum) - TEXAS - Of 22 counties surveyed in panhandle area, populations were found in Potter, Randall, Deaf Smith, Castro, Parmer, Swisher, Briscoe, Floyd, Hale and Hansford Counties, with from 1-8 per row foot. Populations were quite spotty and generally higher in volunteer fields. Predators fewer than during previous survey. (Daniels, Cleveland, Ashdown). NEW MEXICO - Infestations medium on barley stands in Loving area of Eddy County. (Durkin).

BROWN WHEAT MITE (Petrobia latens) - TEXAS - Populations generally low over most of panhandle, but some populations were as high as 15 per linear foot of row, particularly in northern counties. (Daniels, Cleveland, Ashdown).

SPOTTED ALFALFA APHID - NEW MEXICO - Populations increasing on young alfalfa stands in Rio Grande and Pecos River Valleys. (Durkin).

APHIDS - NEW MEXICO - Aphids collected from sweetclovers (Melilotus indica and M. officinalis) in Hatch area of Dona Ana County identified by Louise M. Russell as SPOTTED ALFALFA APHID and SWEETCLOVER APHID (Myzocallidium riehi). Aphids on M. officinalis were mainly M. riehi with a few spotted alfalfa aphids present; however, populations on M. indica consisted of about one-half spotted alfalfa aphids and one-half sweetclover aphids. Spotted alfalfa aphid nymphs of various instars noted on M. indica. A seedling stand of 10 acres of M. indica virtually wiped out. (Durkin). OKLAHOMA - A check of 22 alfalfa fields in seven northern counties showed infestations at all points. Crop damage occurred in Kay, Grant, Garfield and Kingfisher Counties. Number of aphids per square foot averaged as follows: Noble, 80; Kay, 7200; Grant, 8000; Garfield, 5900; Kingfisher, 6150; Canadian, 900; Oklahoma, 260. (Coppock). SOUTH CAROLINA - Several instances of damage in Clemson area. (Chamberlain, Dec. 1). Damage noted at Greenwood, Newberry, Saluda, Florence and Johnsonville on early-planted oats. (Turner).

WHEAT STEM SAWFLY (Cephus cinctus) - NORTH DAKOTA - Infestation in wheat for 1955 totaled 2,428,000 acres infested with estimated 1,987,545 bushels loss. Favorable harvesting conditions helped to keep losses down. (N. D. Ins. Rept. Serv.).

LEAFHOPPERS - TEXAS - Heavy local infestations on young oats in Menard County. (Mullins).

CHINCH BUG (Blissus leucopterus) - ILLINOIS - Annual survey showed ratings as follows: very severe infestation in four counties; severe in five counties; moderate in 17 counties; and light in 11 counties. Remaining 35 counties rated as non-economic. The 19 counties rated severe or very severe in 1954 compare with 9 counties in the same categories in 1955. Very severe rating is based on 2000-and-up bugs per square foot and the severe rating is 1000-2000 per square foot. Counties rated very severe were DuPage, Kendall, LaSalle and Grundy. Those rated severe were Will, Kankakee, Iroquois, Tazewell and Stark. (Petty). NEBRASKA - Fall survey shows a light to very severe infestation in the southeastern area. Counts from 20-2983 per square foot. (Andersen). ARKANSAS - Infestations in all counties surveyed but lighter than in 1954. Heaviest infestations in Craighead, Clay and Lawrence Counties. (Warren).

GRASSHOPPERS - NORTH DAKOTA - Survey for eggs shows a general build-up of economic species in eastern area south of Highway No. 7 and extending southwestward to the Missouri River. Slope, Adams and Bowman Counties showed a build-up over 1954. Widely scattered infestations occurred in northwestern area, especially in the Buford-Trenton district and southeast of Williston in Nesson Flats into Mountrail County and northwestern McLean County. In 1955, 79,200 acres in 22 counties were sprayed voluntarily by farmers to protect 281,000 acres. Savings estimated at nearly \$400,000 with a crop loss of \$161,700. (N. D. Ins. Rept. Serv.).

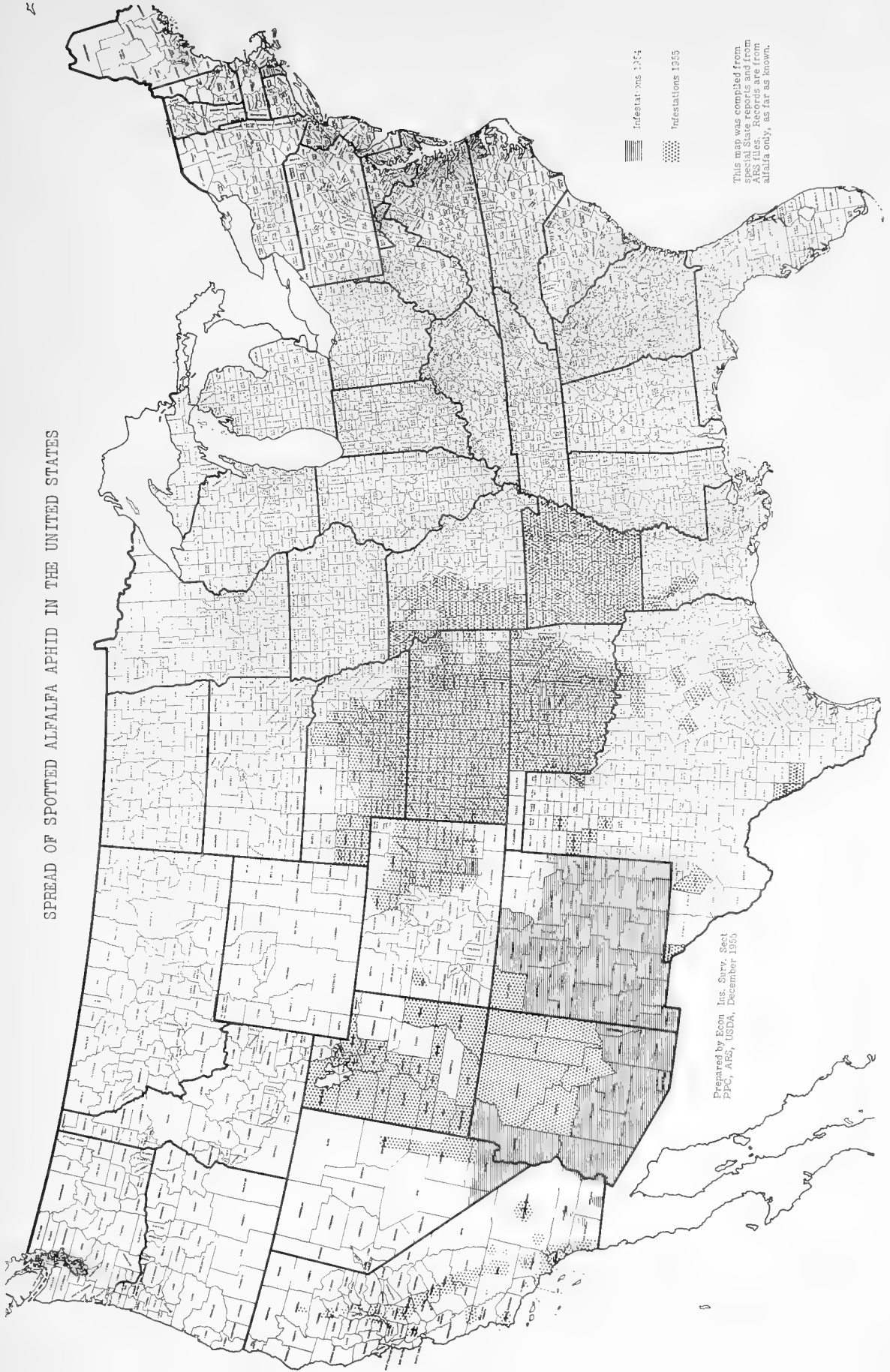
CORN LEAF APHID (Rhopalosiphum maidis) - TEXAS - In complex with Rhopalosiphum fitchii, a few were found in survey of panhandle area. (Daniels, Cleveland, Ashdown).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - TEXAS - Heavy widespread populations caused considerable damage to inter-planted rye and winter peas in Mason County. (Daniels, Cleveland, Ashdown).

RHODES-GRASS SCALE (Antonina graminis) - FLORIDA - Averaging hundreds per square foot on St. Augustine grass at Plantation Key, Monroe County. Extremely heavy infestation and large patches of grass killed by this species or by chinch bugs earlier. (Denmark, Weems, November 27).

LUPINE MAGGOT (Hylemya lupini) - FLORIDA - Infestation of larvae five percent one field and 15-20 in another at Gainesville, Alachua County. (Det. L. C. Kuitert). (Denmark).

SPREAD OF SPOTTED ALFALFA APHID IN THE UNITED STATES



Infestations 1954
Infestations 1955

This map was compiled from the files of the Agricultural Research Service, USDA. Records are from alfalfa only, as far as known.

Prepared by Econ. Ins. Surv. Sect.
PPC, ARS, USDA, December 1955

FRUIT INSECTS

WALNUT HUSK FLY (Rhagoletis completa) - UTAH - Infested 20-99 percent of English walnuts on infested trees and appears to be established at Ogden. First record of this pest in State. (Det. R. H. Foote). (Knowlton).

TRUCK CROP INSECTS

SQUASH BUG (Anasa tristis) - NEW MEXICO - Large numbers under old lumber in Mesilla Park. (Durkin).

A LEAF MINER (Liriomyza sp.) - ARIZONA - Rearing studies on 80 acres of volunteer cantaloupe October 6-24 in Maricopa County showed 1.1 parasites to one leaf miner adult. Parasites predominantly Halticoptera aenea. (Ariz. Coop. Rept.).

TURNIP APHID (Rhopalosiphum pseudobrassicae) - SOUTH CAROLINA - Light to moderate infestations in cabbage plant beds, moderate to heavy infestations on turnips and mustard in Charleston area. (Cuthbert, Dec. 7).

IMPORTED CABBAGEWORM (Pieris rapae) - SOUTH CAROLINA - Light scattered infestations in cabbage fields in Charleston area. (Cuthbert, Dec. 7).

CABBAGE LOOPER (Trichoplusia ni) - SOUTH CAROLINA - Moderately infesting a few commercial cabbage plantings. (Cuthbert, Dec. 7).

COTTON INSECTS

Boll Weevil Hibernation Survey - Fall 1955 - in Virginia
Between November 22-30, 200 square yards of surface woods trash, examined from five farms in each of four counties, showed average of 1476 weevils per acre in hibernation this fall. This compares with 2033 for 1954. Averages by county 1955 and 1954: Southampton 1549 and 2759, Brunswick 1258 and 2130, Mecklenburg 1646 and 484. One additional county, Nansemond, was inspected this year. An average of 1452 per acre was found in this county. (Walker, Morris et al).

PINK BOLLWORM (Pectinophora gossypiella) - ARIZONA - Gin trash inspection showed a slightly higher infestation in Greenlee County but lower in Graham and Cochise Counties. None have been found outside these counties in Arizona and none in CALIFORNIA. (Pink Bollworm Cont. Prog. Rept. Nov. 16-30).

INSECTS AFFECTING MAN AND ANIMALS

SCREW-WORM (Callitroga hominivorax) - ARKANSAS - Found in navel wounds of swine in early October. One of few positive records for State. (Warren).

CATTLE GRUBS - OKLAHOMA - Of 108 cattle received for slaughter at Oklahoma City, 16 had no grubs; 39 had 1-10; 33 had 11-20; 28 had 21-50; and two had over 50. (Coppock).

CATTLE LICE - UTAH - Most important insect problem at present. (Knowlton).

PIGEON FLY (Pseudolynchia canariensis) - FLORIDA - Ten adults taken from one pigeon at Gainesville, Alachua County. (Det. D. W. Anthony). (Denmark).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

LONG-TAILED MEALYBUG (Pseudococcus adonidum) - FLORIDA - Hundreds per copper-leaf plant at Plantation Key, Monroe County, November 27. All stages present. (Weems, Denmark).

STORED PRODUCTS INSECTS

Stored Grain Insect Situation, Arkansas

In the Stuttgart-Dewitt area, 118 bins of rice and oats examined in November showed these infestations: RICE WEEVIL in three bins; Tribolium sp. in 18; SAW-TOOTHED GRAIN BEETLE in 21; LESSER GRAIN BORER in six; ANGOUMOIS GRAIN MOTH in three bins; INDIAN-MEAL MOTH in 12; FLAT GRAIN BEETLE in eight; FUNGUS BEETLES in two; CADELLE in three; and PSOCIDS in four. Far fewer insects found in November than in October. (Rouse).

A CORNWORM (Pyroderces rileyi) - ARKANSAS - Infestations have caused damage to unharvested and harvested corn in Crittenden County and adjacent areas. (Warren).

MISCELLANEOUS INSECTS

OLD HOUSE BORER (Hylotrupes bajulus) - VIRGINIA - In combination with powder post beetles (Lyctus sp.) has heavily damaged floors in an old colonial house in Bedford County. Infestation active for many years. (Rowell).

A FUNGUS BEETLE (Alphitobius piceus) - OREGON - Occurring in large numbers in chicken litter at Milton-Freewater. (Det. M. C. Lane). (Capizzi).

TERMITES - MARYLAND - Infesting home at Catonsville, Baltimore County. (U. Md., Ent. Dept.).

BOXELDER BUG (Leptocoris trivittatus) - UTAH - Annoying in homes and offices in several counties. (Knowlton).

Light Trap Collections

TEXAS (College Station, 12/3-8): Pseudaletia unipuncta 107; Agrotis ypsilon 18; Feltia spp. 12; Agrotis gladiaria 52. LOUISIANA (three traps at Tallulah, 12/3-9): P. unipuncta 47; A. ypsilon 35; Feltia subterranea 17; A. gladiaria 22; Heliothis zea 5. ARKANSAS (Stuttgart, 11/17-12/7): P. unipuncta 18; A. ypsilon 6; H. zea 5. (Varner, 11/17-12/6): P. unipuncta, 29; A. ypsilon 48; H. zea 36. (Fayetteville 11/19-12/7): P. unipuncta 7; A. ypsilon 2. FLORIDA (Homestead, 11/23 & 12/2): Feltia subterranea 1; Heliothis sp. 1. (Monticello, 11/23 & 11/29): F. subterranea 1. (Sanford, 12/2): Anticarsia gemmatilis 1; F. subterranea 1; H. zea 1. (Gainesville, 12/7): F. subterranea 1. GEORGIA (Spalding County, 11/27-12/2): P. unipuncta 1; A. ypsilon 2; F. subterranea 2. (Tift County, 11/27-12/2): F. subterranea 3. SOUTH CAROLINA (Charleston, 11/30-12/5): P. unipuncta 6; A. ypsilon 7; F. subterranea 5.

FRUIT INSECT CONDITIONS - 1955
 NEW YORK - NEW ENGLAND STATES
 New York - New England Fruit Spray Specialists' Conference
 November 2, 1955

This summary has been compiled from reports submitted by cooperators in each state or area. (E. H. Wheeler and A. I. Bourne).

Symbols: G - of general concern as contrasted to L - of local importance only. 0 - negligible; 1, slight (less than 5% losses and/or injury) minimum effort gave satisfactory protection; 2, moderate (5-20% losses) satisfactory control required full program with good timing; 3, serious (20% up) special effort or emergency treatments required above and beyond a normal full program of preventive measures.

CROP AND PEST	Me.	N. H.	Vt.	Mass.	R. I.	Conn.	New York	
							Hudson Valley	Champ. Valley
<u>APPLE</u>								
Plum curculio	G-1	G-2	L-2	G-1	G-2	G-2	G-1	G-1
Apple maggot	G-1-2	G-1	G-1	G-1	G-2	G-3	G-1	L-1
				L-2			L-2	
Codling moth	L-3	G-0	G-2	G-1	G-1	G-3	G-1-2	G-2
	G-2			L-2				
Red-banded leafroller	G-1	G-1	L-1	G-2	G-1	L-2	G-2	G-2
Apple sawfly				L-0	L-0	L-3	L-1	
						G-1		
Bud moth	L-1-2	G-1	L-0-1	L-1	G-1	L-1	L-0	L-2
Rosy apple aphid	L-1	G-0	G-1	G-0	G-2	L-2	L-0	L-0
Apple aphid	G-2	G-3		G-2	G-2	G-1	G-1	G-2
						L-2		
White apple leafhopper	L-1	G-0	L-0		G-1	L-0	L-0	L-2
European red mite	G-2-3	G-2	G-1	G-1	L-2	G-3	G-3	G-3
Two-spotted spider mite				G-2			G-1	
		G-3	L-2-3	L-3	G-2	G-3	L-2	G-2-3
Clover mite		G-0		L-0	G-2	L-0	L-0	
Yellow mite	L-1	G-1		L-0	G-2	L-0		

CROP AND PEST (Continued)	Me.	N. H.	Vt.	Mass.	R. I.	Conn.	New York	
							Hudson Valley	Champ. Valley
Red bug and tarn- ished plant bug	G-2	G-0	G-1-2	G-1	G-1	G-1	L-1	G-1
San Jose scale		G-0	L-2	L-1	L-0	G-1	L-0	
Oyster shell scale	L-1	L-1		L-0-1	L-1	L-0	L-0	L-2
Japanese leafhopper					L-1	L-0		
Forest tent caterpillar			G-1-2					
Oriental fruit moth						L-0		
Apple seed chalcid	L-1							
<u>PEAR</u>				G-1				
Pear psylla		G-1		L-2	L-1	G-1	G-1	L-2
Pear midge		G-0			L-1	L-1	L-1	
Blister mite		L-0		L-1	L-1	L-1	L-0	
Codling moth		G-0		L-1	L-2	G-2	G-2	L-2
<u>PEACH</u>								
Plum curculio	L-1-2	G-1		G-1	G-2	G-2	G-1	
Oriental fruit moth		G-0		G-1	G-2	G-2	G-0	
Peach tree borer		G-1		G-1	G-2	G-1	L-1	
Two-spotted spider mite		G-3		G-1	L-1	G-2	G-0	
European red mite		G-1		L-0	L-2	G-2	L-1	
Plant bugs				G-1		G-1		
	L-1	G-1		L-2	L-1	L-3	L-1	
<u>CHERRY</u>							G-0	
Fruit fly					L-1		L-1	
Plum curculio					G-2		G-1	
Black cherry aphid				G-1	L-0		G-0	
<u>PLUM AND PRUNE</u>								
Plum curculio				L-2*	G-2	G-2	G-1	G-2
Plum aphid					L-1		L-0	G-2

*On Beach Plums

CROP AND PEST (Continued)	Me.	N. H.	Vt.	Mass.	R. I.	Conn.	New York	
							Hudson Valley	Champ. Valley
European red mite				L-0	L-1	G-1	G-1	G-3
McDaniel mite								G-3
Plum gouger				G-2*				
<u>GRAPE</u>								
Berry moth	L-1	G-1		G-1	L-1	G-2	L-1	
Cane girdler				L-2	L-1		L-1	
Leafhopper	L-2	G-1			L-1		G-0	
Tomato and blister galls		G-2		L-2-3	L-1	G-2	G-0	L-2
Japanese beetle				L-3**				
<u>BLUEBERRY</u> (Cultivated)								
Cranberry fruitworm	G-2	G-1		G-1	L-2	L-1		
Cranberry weevil				L-2	L-1	L-1		
Stem borer				L-1	G-2	L-1		
Fruit fly (maggot)		G-1		G-1	L-2	G-2		
Cherry fruitworm	G-2-3			G-2				
Stem gall				L-2				
<u>BLUEBERRY (Wild)</u>								
Fruit fly (Maggot)		G-2		G-1				G-0
<u>STRAWBERRY</u>								
Weevil	L-1	G-1		L-0	L-0	L-1	L-1	
Rootworm	L-1	G-1		L-0	L-0	L-1	L-1	
White grub	G-2-3	G-1		L-1	L-1	L-2		
Spittlebug		G-0		G-0	L-1	G-0	G-0-1	
Leaf roller	G-1	G-1		L-1	L-1	L-1	L-1	
Two-spotted spider mite		G-1	G-2	L-1-2	L-1	G-2	G-0	L-1-2
Cyclamen mite	G-3	G-1		L-2	L-1			

*On Beach Plums

**Eastern Massachusetts

CROP AND PEST (Continued)	Me.	N. H.	Vt.	Mass.	R. I.	Conn.	New York	
							Hudson Valley	Champ. Valley
Cutworm	G-1	G-0		G-1	L-1	L-3		
Tarnished plant bug			G-2					
Strawberry root aphid			G-2					
Whitefly				G-1				
<u>RASPBERRY</u>								
Fruitworm		G-0		L-1	L-1	L-1	L-0	
Cane borer	G-1	G-1		L-1	L-2	L-1		
Two-spotted spider mite		G-0		L-2-3	L-1	G-2		
<u>GENERAL FEEDERS</u>								
Japanese beetle		L-1	L-1	G-1 L-2	G-2	G-1 L-3	G-0	L-3
Rose chafer		G-1	L-1	G-2	G-1	G-1	G-0	

New Distribution Records: MASSACHUSETTS - European apple sawfly (at Waltham, eastern Massachusetts - Granville, western Massachusetts. CONNECTICUT - European apple sawfly on border in Connecticut Valley. CHAMPLAIN VALLEY (N. Y.): McDaniel mite noted in a few additional orchards of Clinton County. HUDSON VALLEY (N. Y.): European apple sawfly in southern Ulster County (confirmation of 1954 reports). NEW HAMPSHIRE - Phenacoccus aceris (apple mealy bug) found May 24 in Hancock. Heavy infestation on several trees. In early June found light infestation in Contoocook on neglected trees. MAINE - New York weevil.

Unusual outbreaks: MASSACHUSETTS - Giant hornet (V. crabro germana). Cherry fruit worm was more damaging than cranberry fruitworm on cultivated blueberries. CONNECTICUT - Two-spotted mite and codling moth; heavy russeting on Baldwins. CHAMPLAIN VALLEY (N. Y.) - Red and McDaniel mites built up more than usual due, presumably, to heat. Red-banded leafroller has gradually become more difficult to control during past three years. HUDSON VALLEY (N. Y.) - Fruit-tree leafroller generally present but causing little commercial damage. MAINE - Leaf curling midge.

Abnormal seasonal occurrences: MASSACHUSETTS - Apple maggot - late activity. Heavy population. Control only fair on late varieties. Red-banded leafroller - partial third brood. Late activity. Plum curculio - population very high. Control good. European corn borer - in some

orchards near corn plantings 5-10 percent infestation of McIntosh drops. HUDSON VALLEY (N. Y.) - Probable partial third brood of red-banded leafroller, increased second brood codling moth. NEW HAMPSHIRE - Weather conditions must have been favorable for overwintering and hatching of aphid eggs. Very heavy infestation of apple aphid soon after bud break in most areas of the state.

Unusual Contributing Factors: MASSACHUSETTS - Prolonged drought followed by abundance of rainfall (backlash of two hurricanes). High temperature and prolonged drought favored apple aphid and two-spotted mite abundance and added to damage caused. Plentiful rainfall in 1954 promoted abundance of Japanese beetle in 1955. CONNECTICUT - High temperatures in July and August. CHAMPLAIN VALLEY (N. Y.) - Persistent hot weather made most insects a little more difficult than usual to control. HUDSON VALLEY (N. Y.) - Hot, dry summer, if that is unusual.

SUMMARY OF INSECT CONDITIONS - 1955

SOUTH DAKOTA

Reported by T. A. Burge, G. B. Spawn,
J. A. Lofgren and W. M. Hantsbarger

Cereal and Forage Insects

ARMY CUTWORM (*Chcristagrotis auxiliaris*) infestations were reported from several sections, mainly in Tripp, Gregory, Brule, Aurora, Douglas, Davison, Charles Mix, Dewey and Butte Counties. Most damage was to alfalfa in early spring with but slight marginal damage to wheat. Losses were estimated at approximately \$60,000 and approximately 6,500 acres were treated for control. EUROPEAN CORN BORER (*Pyrausta nubilalis*) surveys in early spring indicated a winter survival of approximately 75 percent. Pupation was underway by May 7. Conditions for egg laying were favorable in some areas where corn was not far enough advanced to be attractive for egg deposition but cool nights delayed egg laying over a longer period so that the majority of eggs were deposited after June 15. Eggs hatched during first part of July and shot-hole injury was quite prevalent over the State by July 15. Pupation started the last week in July and reached 50 percent in the east central region by August 12. Flight of second-brood moths was quite heavy with some fairly high second-generation egg counts. Development of the second brood was not as severe as anticipated. The fall survey indicates an average of 121 borers per 100 plants for counties surveyed. Highest average infestation was 345 borers per 100 plants in Bon Homme County. GRASSHOPPERS - By the last

week of May, Melanoplus bivittatus, M. mexicanus and M. differentialis eggs had started to hatch. Weather at this time was quite favorable for development. Cool and wet weather the latter part of June took a heavy toll of nymphs, especially in the central regions. The result was light, scattered infestations of M. bivittatus, M. differentialis and M. mexicanus in the central counties and west of the Missouri River with Camnula pellucida dominant in the hay meadows of western Pennington County. Infestations east of the Missouri River ran from light to threatening mainly in legumes with the dominant species being M. femur-rubrum. The egg survey in most instances corroborated the findings of the adult survey. Losses due to grasshoppers in 1955 are estimated at \$483,700 and there were approximately 97,000 acres treated for control. CORN EARWORM (Heliothis zea) was quite prevalent in 1955, especially in the more eastern areas. In some fields two larvae per ten plants were found. Adults of SOUTHERN CORN ROOTWORM (Diabrotica undecimpunctata howardi) were extremely numerous, especially in the southeastern portion of the State, although they were found as far north as Marshall County. Beetles were found on a number of plants, including squash, cucumbers, sun flowers, goldenrods, alfalfa and corn. Adults of D. longicornis were observed in southeastern counties, but never in great numbers. Adults of WESTERN CORN ROOTWORM (D. virgifera) were found feeding upon corn silks in Bon Homme and Moody Counties. CORN LEAF APHID (Rhopalosiphum maidis) was very abundant on corn earlier in the season but predators and warm, dry weather reduced the numbers to non-economic levels. ENGLISH GRAIN APHID (Macrosiphum granarium) and CORN LEAF APHID infestations were found throughout the State on small grain, especially oats and barley. Some damage occurred to late barley.

ALFALFA WEEVIL (Hypera postica) infestations of economic importance were confined to the Black Hills area although the insect continues to spread eastward. Adults and larvae were picked up almost to the eastern edge of Perkins County. Approximately 21,000 acres were treated for alfalfa weevil control. BLISTER BEETLES, predominantly Epicauta pennsylvanica and E. fabricii, were very numerous in alfalfa fields of the central regions, where some local injury occurred. In some areas counts reached 42 beetles per 10 net sweeps. SIX-SPOTTED LEAFHOPPER (Macrosteles fascifrons) was abundant in alfalfa throughout the eastern part of the State, particularly in September, when counts reached 248 adults per 10 net sweeps. High populations of PEA APHID (Macrosiphum pisi) were encountered earlier in the summer with counts up to 1360 per 10 net sweeps in alfalfa. Infestations decreased by July 10 due to hot, dry weather and also because of predators, especially lady beetles, which were numerous. SWEETCLOVER WEEVILS (Sitona cylindricollis) were active early in the season, feeding on both old clover and new seedings. Some damage occurred to new seedings in some areas. CLOVER SEED CHALCID (Bruchophagus gibbus) was quite prevalent in alfalfa. Many

areas reported damage to seed crops, especially in south central areas. TARNISHED PLANT BUG (Lygus lineolaris) was not abundant although found commonly in clover and alfalfa. Highest average infestations observed were about 3 per net sweep. ALFALFA PLANT BUG (Adelphocoris lineolatus) occurred in about the same numbers as Lygus with up to 4.2 per net sweep. RAPID PLANT BUG (Adelphocoris rapidus) was prevalent in alfalfa and clover but never in economic numbers.

Vegetable Crop Pests

APHIDS, several species, were troublesome to a number of vegetable crops, especially potatoes and tomatoes. POTATO LEAFHOPPER (Empoasca fabae) was abundant on untreated potatoes and "hopperburn" was noted from several localities. SQUASH BUG (Anasa tristis) occurred in greater numbers than usual in eastern areas, feeding on various vine crops, including melons and squashes. SPOTTED AND STRIPED CUCUMBER BEETLES were very abundant in gardens throughout the eastern counties.

Pests of Shade Trees and Ornamentals

CANKERWORM infestations were noted in the spring, especially on apple and elm trees where some defoliation occurred. Heavy infestations of SCURFY SCALE (Chionaspis furfura) occurred, especially on willows in eastern areas. Scattered infestations of YELLOW-NECKED CATERPILLAR (Datana ministra) in the eastern areas defoliated basswood and oaks. BRONZE BIRCH BORER (Agrilus anxius) infestations were found on several birches in eastern areas. FALL WEBWORM (Hyphantria cunea) was more abundant than usual, feeding on a wide variety of hosts. Damage was limited to partial defoliation of some trees.

Insects of Man and Animals

HOUSE FLY (Musca domestica), and STABLE FLY (Stomoxys calcitrans) were very abundant and caused considerable annoyance in most areas of the State. HORN FLY (Siphona irritans) infestations ranged up to 600 per animal in untreated herds. CATTLE GRUBS (Hypoderma spp.) occurred in normal numbers. Many reports received of the AMERICAN DOG TICK (Dermacentor variabilis) in wooded areas of the State. MOSQUITOES and BLACK FLIES were very troublesome early in the spring but annoyance decreased rapidly with warm, dry weather in most sections.

Fruit Pests

CODLING MOTH (Carpocapsa pomonella) was more prevalent this season and the second generation was especially damaging to late varieties in home orchards in the Southeast. APPLE MAGGOT (Rhagoletis pomonella) was present in about normal numbers.

Stored Grain Pests

Heavy infestations of SAW-TOOTHED GRAIN BEETLE (Oryzaephilus surinamensis) occurred in eastern areas, especially in farm-stored oats and corn. This pest also was found very commonly upon stored food products in the home. INDIAN-MEAL MOTH (Plodia interpunctella) was quite prevalent upon shelled corn held in storage.

Household Pests

STRAWBERRY ROOT WEVIL (Brachyrhinus ovatus) was more numerous than usual this year from many sections of the State. CARPET BEETLES (Attagenus sp. and Anthrenus sp.) caused damage in many areas. Damage occurred to woolen garments in a department store. BOXELDER BUG (Leptocoris trivittatus) was more prevalent during the fall than for several years. CLOVER MITES (Bryobia praetiosa) were very annoying in homes during late winter and early spring of 1955.

SUMMARY OF INSECT CONDITIONS - 1955

NEVADA

Reported by H. E. Gallaway

Cereal and Forage Insects

Cropland infestations of GRASSHOPPERS were mostly localized to individual fields requiring limited control. Dominant species were Melanoplus mexicanus, M. femur-rubrum and M. bivittatus. Severe populations of Camnula pellucida developed on the range and native wild hay pasture lands primarily in the northeastern part of the State (Elko and White Pine Counties). Populations of C. pellucida ranged from 20 to 100 per square yard adjacent to important crop area. A cooperative control program was initiated to check this build-up. Approximately 10,000 acres of the most severe infestations were controlled with good results. The adult survey indicates a threat of C. pellucida in the northeastern portions, a slight increase of M. packardii, especially along drain ditches and margins, and Cratypedes neglectus in meadow and open rangelands adjacent to agricultural valleys throughout the central and western parts of the State. Approximately 3000 acres infested by MORMON CRICKET (Anabrus simplex) in the Diamond Mountains of Eureka County were treated during 1955. The adult survey of 1955 indicates a build-up in the following mountain ranges that will require control during 1956: Eureka County, Diamond Mountains; Humboldt County, Sonoma Range; Pershing County, East Range; Lander County, Galena Range. HARVESTER ANTS were major insect pests throughout most of the western ranges. Limited control work

is done each year in agricultural valleys. However, thousands of acres of rangeland are destroyed each year. ALFALFA WEEVIL (Hypera postica) populations continued at normal numbers throughout most of the central and northern areas. There was a definite increase to economic population in the southeastern part (Lincoln County). While the weevil has been present in this area for many years, it has not become of major economic importance. However, this year severe losses occurred in the Pahrnagat Valley. During September adults averaged one per sweep in many alfalfa fields. In the northern and central areas an estimated 70 percent of the 120,000 acres of alfalfa contained economic populations or was treated for control.

In the southern regions of the State SPOTTED ALFALFA APHID has become number one in importance. First found in Nevada during September 1954, populations have increased and spread to all alfalfa fields in Clark County and southern Nye County. By mid-May 1955 economic populations had developed in most fields infested in 1954. The populations dropped to a low point during August with a build-up starting in mid-September and continuing through October. Most fields required control for each cutting; however, during October and November some individuals had to treat new plantings three times for protection of seedlings. During 1955 migrations extended up the eastern side of the State, in the direction of prevailing winds, reaching the Pahrnagat Valley (Lincoln County) in mid-June and the White River Valley (White Pine County) during August. In White Pine County economic populations developed in individual fields on second-crop alfalfa and carried over into the third cutting. This northern migration now places the aphid at 39° N. latitude and 5500 feet elevation in economic populations.

During 1955, populations of ALFALFA CATERPILLAR (Colias philodice eurytheme) showed a general increase. Economic populations, confined to individual fields, occurred in Clark, Nye and Churchill Counties. In the south severe populations did not develop to the extent of past years, primarily due to the control work on spotted alfalfa aphid. Larval count averaged 6 per sweep during September. YELLOW-STRIPED ARMYWORMS - General infestation of economic numbers in Moapa Valley (Clark County) during September, with counts in many fields averaging 25-30 per sweep. Local infestations occurred in the Churchill County areas. Control work exclusively for this insect was limited to a few fields; however, additional control was received in conjunction with spotted alfalfa aphid work. During September populations of the THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) averaged 10-15 per sweep throughout most fields in the south. LYGUS BUG populations were general throughout the State with counts of 7 to 10 per sweep in most fields. Severe infestations of CORN EARWORM (Heliothis zea) were general throughout most cornfields, many fields having 100 percent infestations, while some individual

fields were almost totally destroyed, especially in the southern areas. Some control was done on field corn but, due to improper timing, results were poor.

Truck Crop Insects

ONION THRIPS (Thrips tabaci) was a major pest in all onion fields whether for green onion or dry onion production. In the southern areas populations reached economic numbers in green onion fields during late February and early in March; then again on fall plantings during late October and early November. In the dry onion areas of west central Nevada economic populations developed during late June and required control during the remainder of the season. ONION MAGGOT (Hylemya antiqua) was somewhat confined to individual fields throughout the dry onion producing areas. Severe damage was encountered during late April and early May, generally along the margins, with total destruction limited to a few small fields. It has not become a serious pest in the southern areas.

Cotton Insects

Cotton insect pests were light during 1955. TWO-SPOTTED SPIDER MITE in economic numbers was limited to a few small spots in three fields. BOLLWORM was lighter this year than in the past, with less than an estimated 1/10 of 1 percent infested bolls. Boll counts during pink bollworm survey showed 0.02 percent bollworms (Heliothis spp. et al) with negative results for the major cotton insect pests and light damage due to a cotton stainer. LYGUS BUGS were abundant in all fields and may have contributed to blossom drop and poor set of the first flowers.

Shade Tree and Ornamental Insects

ELM LEAF BEETLE (Galerucella xanthomelaena) continued as the number one pest of shade trees. This insect has now spread to all communities in a 100 mile radius of Reno. Most American and cork elm trees not treated were 100 percent defoliated by July 15; second brood began appearing on August 10, causing some defoliation to second growth leaves. VIRGINIA CREEPER LEAFHOPPER (Erythroneura ziczac) again defoliated most of the Virginia-creeper throughout western Nevada. It was about three weeks later developing severe populations than during 1954.

Stored Grain Insects

Isolated infestations of the LESSER GRAIN BORER (Rhyzopertha dominica) did considerable damage to stored grains during the late spring and early summer and calls were received in regard to the SAW-TOOTHED GRAIN BEETLE (Orzaephilus surinamensis) and YELLOW MEALWORM (Tenebrio molitor) in rare instances. Non-economic numbers of CARPET BEETLES were present in most buildings and the major livestock feed yards were inspected three or more times for Khapra beetle during the year with negative results.

Household Insects

Major pests affecting the household and home gardeners were clover mite, earwig, lawn moth, black widow spider, mealworm, saw-toothed grain beetle, ants, termites, and European earwig. TERMITE infestations are becoming more numerous in western and southern Nevada. This year swarming termites were unusually active in late winter and early spring and again in early fall (October). CLOVER MITES became a major pest in many areas of western Nevada during late April and May, and again during October. EUROPEAN EARWIG (Forficula auricularia) in economic numbers now occurs in most towns and cities in western Nevada in a radius of 150 miles of Reno and in the southern part of the State.

Insects Affecting Man and Animals

The general list of insects, cattle grubs, lice, flies, mosquitoes, gnats and ear tick affecting livestock were normal in numbers except in the southern part of the State, where unusual summer rains bred severe populations of mosquitoes and gnats, creating problems of control. Most livestock men now enter into a program of lice and fly control. A number of identifications and calls were received concerning BED BUG infestations in private homes from many points throughout the State.

General

One of the major pests in the State affecting agriculture is the root knot nematode. No report on pest problems is complete without listing this pest as one of major importance.

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DECEMBER 23, 1955

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Cooperative
**ECONOMIC INSECT
REPORT**

Issued by

PLANT PEST CONTROL BRANCH

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL BRANCH

ECONOMIC INSECT SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Branch serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Economic Insect Survey Section
Plant Pest Control Branch
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

SPOTTED ALFALFA APHID damaging alfalfa in Johnston and Pottawatomie Counties, Oklahoma. (p. 1114). Texas, Kansas and California also report on this pest. (p.1111).

Additional collection of CITRUS BLACKFLY reported from lower Rio Grande Valley of Texas. (p. 1115).

SUMMARY OF INSECT CONDITIONS - 1955 - in New Mexico (p. 1116) and Maryland (p. 1120).

WEATHER BUREAU'S 30-DAY OUTLOOK

Mid-December 1955 to Mid-January 1956

The Weather Bureau's 30-day outlook for mid-December 1955 to mid-January 1956 calls for temperatures to average above normal in the Southwest and near normal along the Gulf Coast and in northern New England. In the remainder of the country below normal temperatures are expected, with the coldest weather in the Northern Plains.

Greater than normal amounts of snow are indicated in the northern third of the nation from the Great Lakes westward to the Pacific coast. Rainfall is expected to be above normal along the West Coast and below normal in the East. Subnormal precipitation is indicated in the southern half of the country, except near normal in the Tennessee Valley and along the Gulf Coast.

This report released by the Weather Bureau on December 16, 1955.

Weather forecast given here is based on the official 30-day "Resume and Outlook", published twice a month by the Weather Bureau. You can subscribe through Superintendent of Documents, Washington 25, D. C. Price \$4.80 a year, \$2.40 for six months.

WEATHER FOR THE WEEK ENDING DECEMBER 19, 1955

Unusually cold weather persisted over most of the United States for the third consecutive week as cold Arctic air continued to flow southward over the North American Continent. In many northern areas temperatures have averaged below normal since the first of November, and in some north-central sections the prolonged cold spell at this time is reminiscent of the winter of 1917-1918. Although temperatures were below normal virtually the entire week east of the Rockies, the lowest temperatures were recorded at most stations in that region the last 2 days of the period when minima fell to subzero levels from eastern Washington to the Great Lakes and southward in the Great Plains to Kansas and Missouri. A blizzard increased the severity of the weather in the Dakotas and some adjacent areas on the 13th and 14th, as a low pressure area passed eastward through southern Canada.

Minima fell to below-freezing levels each day in interior areas, on 4 mornings on the north Pacific Coast, and at most Gulf coastal stations from Appalachicola, Fla., to Houston, Texas, near the end of the period. Near freezing and scattered frost also occurred in the south-central portion of Florida on Saturday. Ponds, lakes (except the Great Lakes), and many streams in northern areas east of the Rockies are now frozen over. Ice is 11 inches thick on Lake Pepin at Minneapolis, Minn., 12 inches in the lake near Greenville, Maine, and floating ice was reported in the river at Harrisburg, Pa. Heavy precipitation during the week was limited to the central and north Pacific Coast, the lower Mississippi Valley, and the lower east coast of Florida. A few scattered northern areas received moderate amounts, but the lower Great Plains and Southwest had little or none at all. This was the eleventh consecutive dry week in Oklahoma where the soil is dry and loose and considerable dust occurred. Fall-seeded grains need rain badly throughout the lower Great Plains. There was little or no change in the snow cover during the week as snowfall was light and mostly limited to northern areas. Paradise Ranger station, Wash., reported a depth of 101 inches, Silver Lake, Utah 59, Houghton, Mich., 41, and Big Moose, N. Y. 14 inches. (Summary Supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

SPOTTED ALFALFA APHID - CALIFORNIA - Light infestations in alfalfa in Imperial County. Medium infestations in 2500 acres in San Diego County. Light to heavy infestations in San Bernardino County and light infestations in Santa Barbara County. Infestations general in Kern County and general in Kings County, where 3123 acres were treated. Moderate damage in Madera County and severe infestations in all alfalfa districts of Merced County. Some heavy infestations in Orange County and heavy in all districts of Fresno County. Light to medium infestations in Tehama County. (Cal. Coop. Rept., Nov.). TEXAS - Medium local infestations on alfalfa in Kaufman County. (Hawkins). KANSAS - Nymphs taken from sweeps of alfalfa December 16 at Manhattan, Riley County. Counts 1-5 per sweep. (Peters).

LEAF ROLLERS - TEXAS - Medium to heavy, local populations of Platynota nigrocervina and Sparganothis sulfurana (det. H. W. Capps) on alfalfa in Brazos River bottom of Burleson County. (Brazzel).

APHIDS - NORTH CAROLINA - Damaging small grain in some fields in Onslow County. Severity of infestations, probably greenbug, varies with oat varieties in Harnett County. (Jones).

CORN EARWORM (Heliothis zea) - CALIFORNIA - Heavy infestations in field corn in Merced County. (Cal. Coop. Rept., Nov.).

FRUIT INSECTS

Citrus Insect Situation, California, in November

CITRUS RUST MITE populations still light in San Diego County. A MITE (Brevipalpus lewisi) infestation heavy on tangerines in Imperial County. CITRUS RED MITE infestations medium in lemon orchards in Santa Barbara County. CITRUS BUD MITE infestations light to medium in lemon plantings in Santa Barbara County. COTTONY-CUSHION SCALE infestations moderate in citrus plantings in Imperial County and light to severe damage to citrus and ornamentals in Tulare County. BLACK SCALE infestations light to heavy in San Bernardino County. CALIFORNIA RED SCALE infestations light to medium in Santa Barbara County lemon orchards. Some YELLOW SCALE infestations severe in Tulare County. (Cal. Coop. Rept.).

WALNUT HUSK FLY (Rhagoletis completa) - CALIFORNIA - Correction: CEIR 5(47):1050. Report of occurrence in Sacramento County was in error. (Cal. Coop. Rept., Nov.).

GRAPE PHYLLOXERA (Phylloxera vitifoliae) - CALIFORNIA - Light to severe damage to grape roots in Tulare County. (Cal. Coop. Rept., Nov.).

PEACH TWIG BORER (Anarsia lineatella) - CALIFORNIA - Crack tests of harvested nuts showed considerable damage to almonds in Merced County. (Cal. Coop. Rept., Nov.).

TRUCK CROP INSECTS

APHIDS - CALIFORNIA - Causing medium damage to truck crops in Tulare County. Heavy damage to broccoli, cabbage, cauliflower and celery in Santa Barbara County and infesting cauliflower in Alameda County. Some heavy infestations of Brevicoryne brassicae in cabbage fields in Orange County and light infestations in broccoli in Santa Cruz County. Heavy infestations on cole crops in Monterey County. An unusually heavy infestation of a carrot aphid (Sappaphis foeniculus) damaged several hundred acres in Los Angeles County. First time control was necessary. (Cal. Coop. Rept., Nov.).

TOMATO PINWORM (Keiferia lycopersicella) - CALIFORNIA - Late tomatoes in Merced County 85 percent infested. (Cal. Coop. Rept., Nov.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

Forest Insect Situation, Arkansas, as of December 1
IPS BEETLES activity reduced greatly in south central and southeastern areas by salvage work and cooler, wet weather. No reports of increased activity of BLACK TURPENTINE BEETLE. PALES WEEVIL activity has fallen off on pine production. Bulk of damage in 1955 within south central area. TWIG GIRDLER concentration, mostly on hickory, higher than usual in Howard-Polk County area. (Ark. State For. Comm.).

INSECTS AFFECTING MAN AND ANIMALS

SHEEP KED (Melophagus ovinus) - KANSAS - Light infestation on feeder sheep at one location in Johnson County with counts averaging 1-2 per wool-part examination. (Matthew).

CATTLE GRUBS (Hypoderma sp.) - KANSAS - Examination of 49 cattle at Manhattan, Riley County, December 7, showed 61 percent infested. Counts from 0-15 per animal with an average of three. Examination of 69 steers in a herd in Johnson County showed 98 percent infested and ranged from 0-39 with an average of nine per head. (Matthew).

HOUSE FLIES - ARIZONA - Flies, mainly Musca domestica, population indices of two small towns in southeastern Maricopa County and north-western Pinal County. Average of five highest grill counts in nine blocks was as follows: November 6-12, 57.0; November 13-19, 18.2; November 20-26, 42.2; November 27-December 3, 17.6; December 4-10, 37.8. (Ariz. Coop. Rept.).

MOSQUITOES - CALIFORNIA - Larval occurrence of Culex tarsalis and Aedes nigromaculis steadily decreased in all regions examined. Small numbers of these species reported in a few Central Valley and southern localities. Foul-water Culex sp. main control problem in most areas. Culiseta sp. has steadily increased in the coastal region and Anopheles sp. continues in a few scattered areas in northern Central Valley. Culex tarsalis indices have steadily decreased in all areas except for slight increase in southern region. (Cal. Coop. Rept., Nov.).

BENEFICIAL INSECTS

LADY BEETLES - CALIFORNIA - With other predators, helping to check spotted alfalfa aphid in Orange County, but not as efficiently as during warmer weather. Predators falling behind aphid populations due to cool nights in San Diego County. (Cal. Coop. Rept., Nov.).

STORED PRODUCTS INSECTS

STORED RICE INSECTS - TEXAS - A survey of 13 bins of rough rice made in Beaumont area showed light infestations of moths and their larvae on the surface. (Bowling).

MISCELLANEOUS INSECTS

Light Trap Collections

TEXAS (College Station, 12/12-16): Pseudaletia unipuncta, 22; Agrotis ypsilon, 6; Feltia subterranea, 2. ALABAMA (Auburn, 12/3-9): Feltia spp., 2. SOUTH CAROLINA (Charleston, 12/5-11): P. unipuncta, 10; A. ypsilon, 14; Feltia subterranea, 4; Heliothis zea, 1.

Golden Nematode Survey, North Central States

Survey in important potato-producing areas of north central United States showed no infestations in Michigan, Wisconsin, Minnesota, North and South Dakota. Altogether, 8461 samples representing 85,991 acres in 88 counties were processed. (G N Cont. Prog.). In course of processing samples for golden nematode, a wheat nematode, Heterodera punctata, was recovered from Kittson and Clay Counties, Minnesota (Minn. Ins. Rept. Serv., Dec. 12) and from Pembina, Walsh, Towner and Grand Forks Counties, North Dakota. (N. D. Ins. Rept. Serv., Dec. 9).

ADDITIONAL NOTES

OKLAHOMA - CATTLE LICE very active in Harper County. CATTLE GRUBS 6-10 per head on several examined in Harper County. (Owens). Of 315 head of cattle received at Oklahoma City, December 12, 115 had no grubs; 51 had 1-10; 68 had 11-20; 71 had 20 or over (10 unaccounted for). SPOTTED ALFALFA APHID infestations severe in Johnston County. Seven alfalfa fields surveyed averaged 500 to 42,000 per square foot of alfalfa crown area. Other south central counties showed less severe to moderate infestations. Extensive damage to newly-planted alfalfa in Pottawatomie County. Lack of green growth probably limiting increase. Aphids active at temperatures in 40's. (Coppock).

FLORIDA - GREEN SCALE adults moderately infesting citrus stems near Ft. Pierce, St. Lucie County, December 6. (Campbell). MINING SCALE adults severely infesting papaya at Stuart, Martin County, December 5. (Baker, Campbell, Williams). COCONUT SCALE in all stages severely infesting hyophorbe palm at Indian Rocks, Pinellas County. (Hill). Averaging 1000 per leaf on jambolan plum at Miami, Dade County. (Dowling). SOFT SCALE adults averaging 50 per leaf on orchid at Miami, Dade County. (Dowling). RED-HEADED PINE SAWFLY larvae collected on slash pine at Palmetto, Manatee County. Leaves all eaten, December 6. Larvae destroyed leaves on lower limbs of longleaf pines at Live Oak, Suwanee County. (Garland). A SCALE (Parlatoria crotonis) in adult stage averaged 200 per leaf on croton at Miami, Dade County, December 2. (Shepard, Dowling). A WAX SCALE (Ceroplastes sp. probably rubens) in nymphal stage averaged 200 per leaf on false aralia at Miami, Dade County, December 5. (Dowling). SOUTHERN GREEN STINK BUG nymphs averaged 50 per crotalaria plant near Ft. Pierce, St. Lucie County. (Williams, Campbell).

ADDITIONAL NOTES (Continued)

TEXAS - Nine larvae of CITRUS BLACKFLY (Aleurocanthus woglumi) were collected from a single leaf of a grapefruit tree in a 30-acre orchard near Mercedes in Hidalgo County, November 18. Arrangements were made immediately with Texas Department of Agriculture officials for spraying the infested orchard. (Cit. Blackfly Cont. Proj.).

VIRGINIA - CATTLE LICE (Solenoptes capillatus and Bovicola bovis) infestations still very light on dairy cattle at Blacksburg. (Turner, Raffensperger).

RECENT IMPORTANT INTERCEPTIONS AT PORTS OF ENTRY

Of unusual interest was the recent interception of a living adult weevil, identified as Anthonomus rectirostris (L.) in the seeds of Prunus nipponica in the mails from Japan at the Washington, D. C. Inspection House (Gouldman). This insect has been reported injurious to cherries in Switzerland, Germany, Sweden and other parts of Europe. Principal injury is due to the adults feeding on the young fruits causing considerable early drop. Adults also damage the fruits by oviposition punctures. In addition, the larvae feed inside the seeds but their injury is usually of minor importance. Anthonomus rectirostris seems to occur principally in wild cherries where occasional heavy populations build up that migrate to cultivated cherries to inflict heavy damage particularly in the vicinity of wooded areas, fence rows or hedges.

Observations on the biology of the insect in Switzerland indicate it hibernates in the adult stage in grass or leaves underneath the cherry trees. In the spring, adults feed on young leaves and fruits for two to four weeks. The adult females deposit eggs in the fruits near the seed from the first of May until the middle of June. Each female lays about 13 eggs. On hatching, the larvae bore into the seed, feed until about the end of July, then cut an exit hole for the future adults, and pupate in the seed. Pupal stage lasts about 2 weeks and adults emerge in August.

Living specimens of A. rectirostris have been intercepted occasionally in recent years in cherry seeds from Austria, Bulgaria, Czechoslovakia, Denmark, France, Germany and Japan at various ports. It is not known to occur in the United States. (Compiled by Plant Quarantine Branch).

SUMMARY OF INSECT CONDITIONS

NEW MEXICO

Reported by J. J. Durkin

Cereal and Forage Insects

GRASSHOPPERS were the major insect problem in the State. A survey of adult grasshoppers showed close to 3 million acres of range and crop land with threatening to very severe infestations. During the spring and summer of 1955, 458,003 acres of rangeland were sprayed at a total cost of \$205,674. Losses to grasshoppers on range and crop lands over the State are estimated at \$2,500,000. They were numerous on cereal and forage crops in spotted areas over the State. Almost every county had light to heavy infestations on field crops. Grasshoppers caused severe damage to field crops in Mora, Taos, Santa Fe, San Juan, Rio Arriba and Bernalillo Counties. The SPOTTED ALFALFA APHID began building damaging infestations in May and continued to cause damage until mid-July. Most growers were familiar with the aphid after the sneak attack in 1954, so damage was fairly light, but control costs were heavy, probably costing farmers in the State over one million dollars. After mid-July the rains seemed to keep the aphid under control until late September, when it began building up again in some areas, only to subside and appear again on seedling stands in November. LYGUS BUGS (Lygus elisus and L. hesperus) and SAY STINK BUG (Chlorochroa sayi) damaged alfalfa seed crops in Quay County. These two pests took over when the spotted alfalfa aphid populations diminished.

CORN EARWORM (Heliothis zea) and ALFALFA CATERPILLAR (Colias philodice eurytheme) were numerous in some areas but were controlled in most cases by cutting early before too much loss was sustained. PEA APHID (Macrosiphum pisi) populations were high in alfalfa during most of the growing season. Ordinarily, the pea aphid is a minor pest only during the first month of the growing season, but abnormally cool weather throughout the summer seemed to keep it thriving in the northern half of the State from April to October. BLISTER BEETLES caused damage to alfalfa crops in a few areas in Lea, Rio Arriba, and Grant Counties. STINK BUG populations were heavy on barley and oats in irrigated sections during June. GRAIN APHIDS also infested barley fields throughout the State but damage was light. CORN LEAF APHID (Rhopalosiphum maidis) was a pest on broom corn in Quay County but control measures were effective. CORN EARWORM heavily infested field corn, sweet corn, and broom corn in Quay County and other areas of the State. TWO-SPOTTED SPIDER MITE (Tetranychus telarius) was heavy on corn in Torrance and Valencia Counties. FALSE CHINCH BUGS (Nysius spp.) were severe on sorghums in Curry County.

Fruit Insects

CODLING MOTH (Carpocapsa pomonella) was a problem in all fruit-growing areas. Orchards on recommended spray schedule had little loss, but in those not sprayed, as high as 25 percent of the apples were lost. WOOLLY APPLE APHID (Eriosoma lanigerum) occurred in light to heavy infestations throughout the State depending on control measures. Heavy build-ups during harvest were noted in several areas. ORCHARD MITES (Tetranychus telarius, Bryobia praetiosa and Metatetranychus ulmi) were also present in orchards throughout the State. Populations increased rapidly during harvest and eggs are extremely numerous in many orchards. LEAFHOPPERS were very numerous in orchards in Bernalillo, Santa Fe, San Juan, and Rio Arriba Counties. BUFFALO TREEHOPPER (Stictocephala bupalus) damage was light to moderate in most fruit-growing areas. GRAPE LEAFHOPPERS (Erythroneura sp.) were very abundant on grapes in Dona Ana County, causing severe damage to foliage. JUNE BEETLES (Cotinis texana and Phyllophaga spp.) were numerous on grapes and peaches in Dona Ana and San Juan Counties. MEALYBUGS were found on grapes in De Baca County, but the infestation was very light and no damage was apparent. PECAN APHIDS (Monellia costalis and Melanocallis caryaefoliae) were heavy on pecans in the Mesilla Valley during the early part of the summer. A WEEVIL (Eucllyptus derivatus) was found in large numbers on wild cherry trees in Lincoln County.

Vegetable Insects

ONION THRIPS (Thrips tabaci) was a major pest on onions in the Mesilla Valley. Damage was not extensive because control measures were effective. TOMATO HORNWORMS (Protoparce spp.) populations were heavy on tomatoes in the Deming area and caused early defoliation. TOMATO FRUITWORM (Heliothis zea) severely damaged tomatoes in the Deming area, where some growers lost as much as 25 percent of crop. LEAF MINERS (Liriomyza spp.) were an early season pest of cantaloupes in the Tucumcari area and in the Mesilla Valley. MELON APHID (Aphis gossypii) was a problem on melons throughout the season in Dona Ana County and in the Tucumcari area. MEXICAN BEAN BEETLE (Epilachna varivestis) damaged beans in spotted areas but were not the serious problem they have been in past years. GRASSHOPPERS destroyed several small bean plantings in Mora and Taos Counties. CABBAGE LOOPER (Trichoplusia ni) and BEET ARMYWORM (Laphygma exiqua) attacked seedling lettuce early in the season, but after heavy losses to such insects last year, growers were ready and control was effective. SPOTTED CUCUMBER BEETLES (Diabrotica sp.) were present on most crops, but no damaging infestations were reported.

Cotton Insects

SEED-CORN MAGGOT (Hylemya cilicrura) caused damage to newly-planted cottonseed in April and May and made replanting necessary in some areas. DARKLING BEETLES were numerous in the Pecos Valley and injured young seedlings. THRIPS (Frankliniella spp. and Thrips tabaci) and APHIDS (Aphis medicaginis and A. gossypii) plagued growers in all cotton-growing areas from early May to mid-July. BOLLWORMS (Heliothis zea) were the worst pest of the season, causing severe damage in Chavez and Luna Counties and threatening the cotton crop in other areas. COTTON FLEAHOPPER (Psallus seriatus) was moderately abundant in most cotton fields, causing square drop and damaging terminal growth, but was not considered a severe threat. LYGUS BUGS (Lygus hesperus and L. elisus) were present in most fields, but no heavy infestations were reported, and damage was light. SUPERB PLANT BUG (Adelphocoris superbus) caused severe damage to a few fields in Dona Ana County, but elsewhere was not considered important. COTTON LEAFWORM (Alabama arcillacea) was very light and caused light damage in a few spotted areas.

CABBAGE LOOPER (Trichoplusia ni) appeared in Eddy County, but damage was very light. SAY STINK BUG damaged several areas by staining lint and causing premature and uneven opening of bolls. In most areas their presence was not evident until the injury was found. PINK BOLLWORM (Pectinophora gossypiella) was not a major concern, but one field in southern Dona Ana County had a 10 to 15 percent infestation and lint cleaner inspections indicated that Lea, Eddy and Dona Ana Counties may have had light to medium infestations in some areas. TWO-SPOTTED SPIDER MITE (Tetranychus telarius) infestations were generally light, with a few heavy late-season infestations in widely-scattered areas. Heavy infestations occurred where plant populations were low and soils were light.

Insects of Ornamentals and Shade Trees

APHIDS were heavy on American elm, pecans, roses, euonymus, arborvitae, and willow. CALIFORNIA PRIONUS (Prionus californicus) damaged willows, cottonwoods, poplars, and other softwoods throughout the State. PINE NEEDLE SCALES (Phenacaspia pinifoliae) were problem on cedar trees in Santa Fe. EUONYMUS SCALE infestations were heavy on euonymus in Albuquerque. SPIDER MITES webbed and discolored cypress and juniper trees throughout the State. TENT CATERPILLARS (Malacosoma spp.) damaged cottonwoods, poplars, and pecans. BAGWORM infestations were light to medium in a few spotted areas over the State and were most numerous on Chinese elm. A NITIDULID (Conotelus mexicanus) damaged rose buds and blooms in Dona Ana County.

Insects Affecting Man and Animals

HORN FLY (Siphona irritans) populations were very high in most cattle-raising areas over the State. Counts in Dona Ana County averaged 500 per animal. CATTLE LICE were a problem on range and dairy cattle during the winter months. SCREW-WORMS caused concern in several areas of the State. COMMON CATTLE GRUB (Hypoderma lineatum) infestations were very heavy on range cattle, causing as much as a two-dollar-per-head cut in market value. HOUSE FLIES and MOSQUITOES were a problem in many areas after heavy rains in July. BOXELDER BUGS were very numerous in several cities and were a general nuisance around homes, motels and in business districts. CLOVER MITES (Bryobia praetiosa) were a nuisance in homes. SPRINGTAILS were also a nuisance in homes and were especially numerous after application of cottonseed hulls to lawns. A CARABID (Calosoma semilaeve) appeared in large numbers in many cities in the southern half of the State, causing concern to hotel, motel, and restaurant operators. BLOOD-SUCKING ASSASSIN BUGS and BEDBUGS were numerous in Espanola and Tucumcari.

Beneficial Insects

LADY BEETLES (Hippodamia convergens and H. parenthesis) were very numerous in alfalfa fields and moderately abundant in cotton fields early in the growing season. A DAMSEL BUG (Nabis ferus) and a COLLOPS (Collops vittatus) were moderately abundant in cotton and alfalfa. A BIG-EYED BUG (Geocoris punctipes) was numerous in cotton fields in most areas. LACEWINGS (Chrysopa spp.) were very numerous in cotton fields in the State. In some areas, bollworm populations and damage were very low, possibly because of high lacewing populations. A CARABID (Calosoma semilaeve) adults and larvae were very numerous on range and dry land farms in Lincoln and Socorro Counties.

Miscellaneous Insects

WHITE-LINED SPHINX (Celerio lineata) was very numerous on rangelands and migrated in armies across highways and open fields. In populated areas, it caused concern, but no damage to crops or home gardens was reported, and the loss on rangeland was negligible. GEOMETRID LARVAE (Sterrhia bonifata) were very numerous on one- and two-year old baled hay in a hay barn in Dona Ana County.

SUMMARY OF INSECT CONDITIONS - 1955

MARYLAND

Compiled by W. C. Harding, Jr.

More Important Pests in 1955

CORN EARWORM (Heliothis zea) caused serious ear damage to early and late sweet corn and field corn and was more than normally destructive to pods of late snap and lima beans as well as soybeans. Damage was heaviest on the Eastern Shore.

FALL ARMYWORM (Laphygma frugiperda) on late sweet corn crop was heavier than usual. During August late field corn from Calvert to Carroll Counties was damaged considerably with some replanting necessary.

EUROPEAN CORN BORER (Pyrausta nubilalis) damage to canning corn was about normal, with some damage to wheat and potatoes. The 1955 fall infestation survey showed the State average of borers per 100 plants to be 140. In 1954 it was 41 per 100 plants. This year the principal increase was on the Eastern Shore, where the average for 9 counties was 246 per 100 plants as compared with 55 per 100 in 1954. On the basis of 3 percent damage for each borer per stalk (USDA), it is estimated that the loss in Maryland for 1955 amounted to 713,000 bushels valued at approximately \$1,076,630.

ALFALFA WEEVIL (Hypera postica) was again destructive on first-growth alfalfa, and the second growth in some areas was held back by larvae and adults. Its range was extended somewhat and now the weevil is economically destructive in all counties except Allegany and Garrett. Spraying was general over most of the State.

PEA APHID (Macrosiphum pisi) was abundant on alfalfa in the spring and growers included materials in their sprays to control it. Populations were heaviest the latter part of April in central Maryland and on the Eastern Shore.

Estimates on the loss of hay by all insects amount to \$2,000,000. Loss of alfalfa hay to the alfalfa weevil is estimated at \$750,000.

HORNWORMS (Protoparce spp.) caused moderate to heavy damage in late August to the southern Maryland tobacco crop. Some fields were

so badly damaged as to be not worth harvesting. Two hurricanes interrupted all field work so that practically nothing could be done before August 20.

FLEA BEETLES - 1955 was the worst year for the tobacco flea beetle (Epitrix hirtipennis) on record. Heavy damage was done to plants in the field, and in many instances injury was noticeable to the choice mid-leaves. Estimated loss of tobacco due to flea beetles and hornworms amounted to \$1,158,000. Flea beetles were also injurious on potatoes, tomatoes, and corn, and were unusually abundant on cabbage and other crucifers during early 1955.

CUTWORMS - Damage to corn, tomatoes, beans, and potatoes was moderate to heavy during the spring and early summer. They were unusually severe on crops planted after sod. Over 2,000 acres of the above crops had to be partly or completely replanted. The predominating cutworm moths caught in the black light trap at Fairland were the black cutworm (Agrotis ypsilon) and the variegated cutworm (Peridroma margaritosa).

UNSPOTTED TENTIFORM LEAF MINER (Callisto geminatella) - First commercial damage on apples occurred during 1954. Serious defoliation of many orchards took place in 1955. Special sprays will be needed in 1956 for control if this insect continues abundant.

MOSQUITOES were a serious problem in 1955, especially in the Chesapeake Bay area where the salt-marsh mosquito (Aedes sollicitans) was abundant. This species was observed as far inland as College Park. In central Maryland the principal biting mosquito was the northern house mosquito (Culex pipiens). Other fresh water species encountered were Aedes vexans and Aedes canadensis. Heavy rains in August played an important part in the population increase.

Other Insects by Crops

Corn and Grain Insects

ARMYWORM (Pseudaletia unipuncta) was light over the entire State in 1955, with some damage to barley and wheat in St. Marys and Talbot Counties. CORN FLEA BEETLE (Chaetocnema pulicaria) populations were lighter than in 1954. A CORN SAP BEETLE (Carpophilus lugubris) infestations in harvested sweet corn ranged from light to heavy. A SOD WEBWORM (Crambus sp.) damaged young corn in Allegany and Garrett Counties in June. WIREWORMS damaged newly-sprouted corn in some areas. HESSIAN FLY (Phytophaga destructor) damage to wheat was heavy in central and western Maryland.

Insects of Forests, Shade Trees and Ornamentals

PINE SAWFLY surveys revealed light to heavy defoliation by Neodiprion pratti pratti of approximately 1,500 acres of Virginia and pitch pine in central and southern Maryland in May. On the Eastern Shore during May, Neodiprion americanus americanus inflicted light to moderate foliage damage to 500 acres of loblolly pine. NANTUCKET PINE MOTH (Rhyacionia frustrana) did severe tip damage to 200 acres of red and Scotch pine watershed plantings in Baltimore County.

LOCUST LEAF MINER (Chalepus dorsalis) caused heavy defoliation on black locust in all sections in June and July. ELM LEAF BEETLE (Galerucella xanthomelaena) was heavy on American elm in most sections. SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus), principal insect vector of Dutch elm disease, was found in Montgomery County in August emerging from bark of elm trees killed by the disease. ASIATIC OAK WEEVIL (Cyrtopistomus castaneus) damaged oak foliage in Baltimore County in August. EASTERN TENT CATERPILLAR (Malacosoma americanum) was heavy on wild cherry and fruit trees. MIMOSA WEBWORM (Homadula albizziae) caused webbing on mimosa trees during the summer over most of the State. BAGWORM (Thyridopteryx ephemeraeformis) was severe on arborvitae and cedar. EUONYMUS SCALE (Unaspis euonymi) was common on euonymus and bittersweet. LACE BUGS were heavy on azaleas and rhododendrons in many areas. OLIVE SCALE (Parlatoria oleae) was moderate to heavy on privet hedge in Baltimore City.

BOXWOOD LEAF MINER (Monarthropalpus buxi) was troublesome in April and May and the BOXWOOD PSYLLID (Psylla buxi) was injurious to English boxwood. HOLLY LEAF MINERS were present on holly in April in all sections. SPIDER MITES were heavy on untreated ornamentals, especially spruce and arborvitae, during the summer. IRIS BORER (Macronoctua onusta) damaged the shoots and leaves of iris at College Park in July. JAPANESE BEETLE (Popillia japonica) populations were low generally; however, there were more than usual number of reports of damage to ornamentals and crops.

Hay and Forage Insects

MEADOW SPITTLEBUG (Philaenus leucophthalmus) populations on alfalfa and clover were less than in 1954; there were some localized heavy populations principally on red clover. POTATO LEAFHOPPER (Empoasca fabae) was generally light on alfalfa over the State, some damage to later cuttings in central Maryland. GRASSHOPPERS again caused local damage to alfalfa and clover, principally in Montgomery

and Frederick Counties, during July and August. LESSER CLOVER LEAF WEEVIL (Hypera nigrirostris) was injurious to red and ladino clover in different sections. Adults in June held back new red clover growth in Queen Annes County. Lepidopterous larvae swept from alfalfa during the spring and summer included GREEN CLOVERWORM (Plathypena scabra), ALFALFA CATERPILLAR (Colias philodice eurytheme) and GARDEN WEBWORM (Loxostege similalis). In addition, the YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli) larvae held back new alfalfa seedings in Baltimore County in early October.

*See Soybean Insects, p. 1126

Insects of Fruit and Nuts

CODLING MOTH (Carpocapsa pomonella) damage to apples has continued to increase during the past two years. There are indications that it has built up some resistance to DDT. RED-BANDED LEAF ROLLER (Argyrotaenia velutinana), a serious pest of apples in 1955, is causing commercial damage in many orchards; it appears to be more difficult to control than a few years ago. ROSY APPLE APHID (Anuraphis roseus) caused some damage in commercial orchards during 1955. The dinitro materials appear to be less effective against this pest than they were a few years ago. ORCHARD MITES were less prevalent in 1955 than in 1954. SCALE INSECTS continue to do damage in isolated apple orchards. Dormant oil sprays gave excellent control, however. DIFFERENTIAL GRASSHOPPER (Melanoplus differentialis) averaged 15 per square yard in apple orchard in Harford County in August. Damage to young trees was heavy.

On peaches PLUM CURCULIO (Conotrachelus nenuphar), ORIENTAL FRUIT MOTH (Grapholitha molesta) and CATFACING INSECTS were found in a few isolated orchards where the spray program was not followed. PEACH TREE BORER (Sanninoidea exitiosa) damage was not reported in peach orchards where the spray program was followed; however, some damage to sour cherries and plums was reported by several growers.

Insect damage to strawberries on the Eastern Shore was comparatively light. In the spring a STRAWBERRY LEAF ROLLER (Ancyliis sp.) and the STRAWBERRY WEEVIL (Anthonomus signatus) did moderate injury to leaves and buds. PUTNAM SCALE (Aspidiotus ancyliis) was found on the leaves, stems and fruit of blueberries in Wicomico County and there was some damage to blueberry foliage at the Agronomy Research Farm by the larvae of Datana drexili in September.

ASIATIC OAK WEEVIL (Cyrtopistomus castaneus) damaged commercial chestnut foliage in Prince Georges County in August. In chestnut orchards where no sprays were applied, damage to the nuts by weevils, principally the SMALL CHESTNUT WEEVIL (Curculio auriger) exceeded 90 percent.

Vegetable Insects

BEAN LEAF BEETLE (Cerotoma trifurcata) did light to moderate damage to snap beans on the Eastern Shore in May and June. MEXICAN BEAN BEETLE (Epilachna varivestis) populations on commercial plantings of snap beans and lima beans were heavier than in 1954. Infestations of the STRIPED CUCUMBER BEETLE (Acalymma vittata) and the SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) on beans and cucurbits were about normal. TWO-SPOTTED SPIDER MITE (Tetranychus telarius) was light on beans and POTATO LEAFHOPPER (Empoasca fabae) populations on snap beans were below normal. SEED-CORN MAGGOT (Hylemya cilicrura) caused some replanting of beans in Caroline County. Other pests that caused bean growers concern were THRIPS and the BEAN APHID (Aphis fabae). HORNWORMS (Protoparce spp.) were heavier than usual on the tomato crop. TOMATO RUSSET MITE (Vasates lycopersici) infestations were reported from five counties; however, damage was comparatively light. VINEGAR GNATS (Drosophila sp.) were serious at canneries in August and September. COLORADO POTATO BEETLE (Leptinotarsa decemlineata) did moderate to heavy damage to both tomatoes and potatoes in all sections early in the season. PEA APHID (Macrosiphum pisi) infestations on peas about normal. ASPARAGUS BEETLE (Crioceris asparagi) adults were abundant on commercial plantings in Cecil and Kent Counties in late May. WIREWORMS were troublesome in localized areas, principally on the Eastern Shore, damaging both potatoes and sweetpotatoes. TORTOISE BEETLES and FLEA BEETLES again damaged sweetpotato foliage in Wicomico, Somerset and Worcester Counties. IMPORTED CABBAGEWORM (Pieris rapae) butterflies were unusually abundant over the State and larval infestations were quite general on cabbage, broccoli and kale throughout the season. CABBAGE LOOPER (Trichoplusia ni) was quite abundant during the summer on cabbage and broccoli on the Eastern Shore. YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli) and the GARDEN WEBWORM (Loxostege similalis) damaged newly emerged spinach in Kent County in September. The 1955 State-Federal WHITE-FRINGED BEETLE Survey in Maryland proved negative.

Tobacco Insects

Light to moderate injury was done to plants in beds by GREEN JUNE BEETLE (Cotinis nitida) larvae, FLEA BEETLES and CUTWORMS. VEGETABLE WEEVIL (Listroderes costirostris obliquus) larvae inflicted spotty damage to plants in beds in St. Marys and Calvert Counties. Damage this year was heavier than last year, and the weevil is apparently extending its range in southern Maryland. Plants newly set in the field were troubled with cutworms and in Prince Georges County there was light damage to young plants by the STALK BORER (Papaipema nebris) in May. TOBACCO BUDWORM (Heliothis virescens)

did moderate damage to plants in the field. GREEN PEACH APHID (Myzus persicae) was light on tobacco in 1955, practically no treating done.

Insects Affecting Man and Animals

BLACK FLIES (Simulium sp.) and EYE GNATS (Hippelates sp.) were extremely troublesome during the summer to residents in different sections, particularly suburban Washington. In the fall many reports were received from various sections of the State of stinging caterpillars, including the SADDLEBACK CATERPILLAR (Sibine stimulea) and PUSS CATERPILLAR (Megalopyge opercularis). A survey in January of young beef cattle in Montgomery County showed that 75 out of 110 animals on five farms were infested with CATTLE GRUBS. There were from one to 30 grubs per animal. Around Maryland dairy and beef farms there were the usual numbers of BITING FLIES, and the HOUSE FLY (Musca domestica) was heavy around dairy and beef barns in all localities. A heavy infestation of NORTHERN FOWL MITE (Bdellonyssus sylviarum) was found on 2,000 white leghorn chickens at Chestertown in February; controls were applied. FOWL TICKS (Argas persicus) found attacking young chickens in Harford County.

Stored Products Insects

ANGOUMOIS GRAIN MOTH (Sitotroga cerealella) was heavy in stored corn in central Maryland in September. CADELLE (Tenebroides mauritanicus) damaged stored wheat and other small grains in Washington and Talbot Counties. INDIAN-MEAL MOTH (Plodia interpunctella) injured small grains in storage in Washington County.

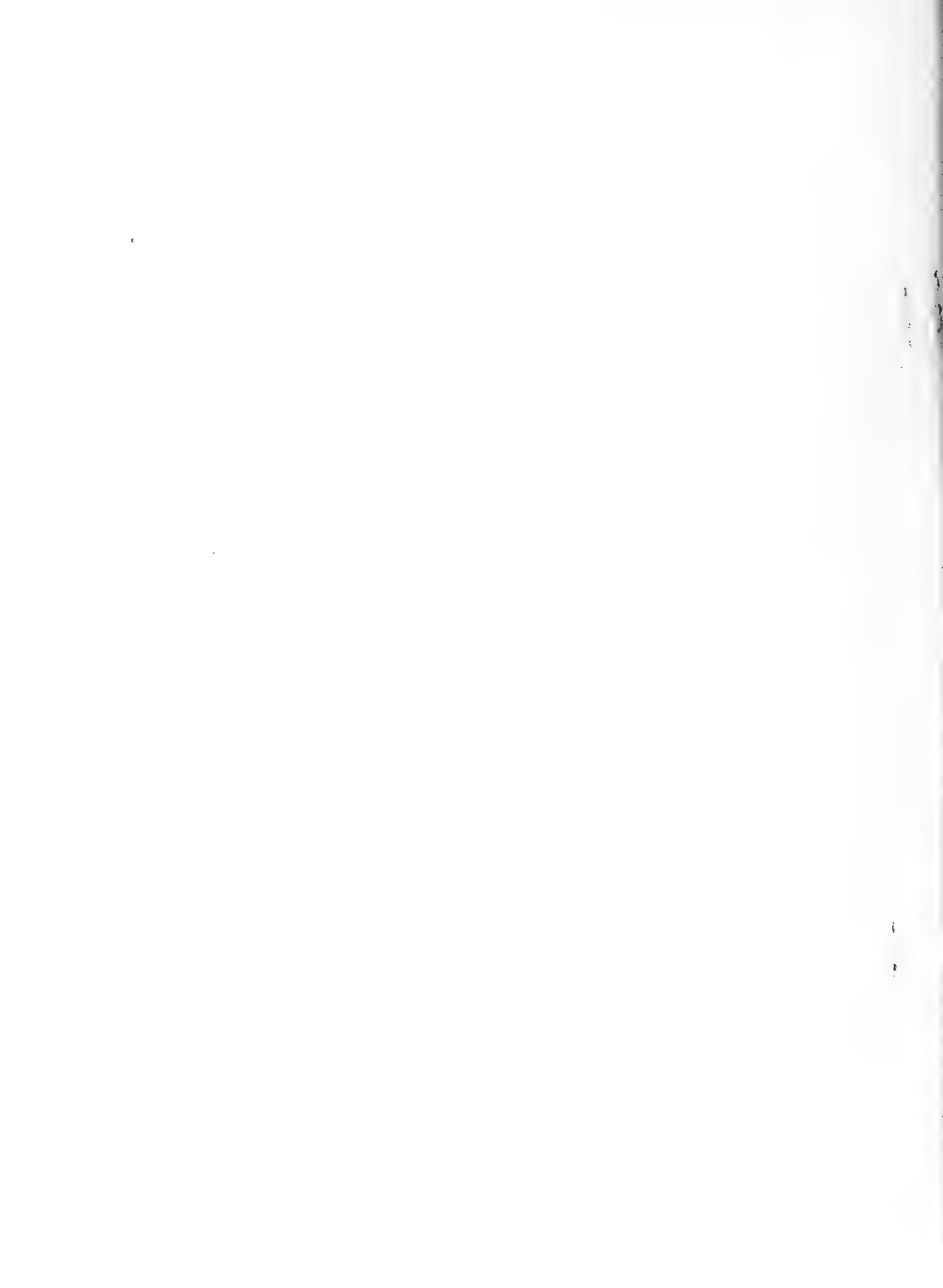
Household Insects

Numerous reports were received of the BOXELDER BUG (Leptocoris trivittatus) congregating on and entering homes in the winter and spring. Small numbers of a MURKY MEAL CATERPILLAR (Aglossa caprealis) larvae were found in homes in Prince Georges and Dorchester Counties. In late summer the ASIATIC OAK WEEVIL adults caused homeowners in central Maryland concern by flying to screens and windows at night. Other insects that caused householders trouble during the year were OLD HOUSE BORER (Hylotrupes bajulus), ELM LEAF BEETLE (Galerucella xanthomelaena), BLACK WIDOW SPIDER (Latrodectus mactans), ANTS, TERMITES* and COCKROACHES. The BROWN-BANDED ROACH (Supella supellectilium) is becoming more plentiful.

*Dominant species in Maryland is Reticulitermes flavipes (Kollar); however, Reticulitermes virginicus (Banks) was identified from Port Deposit, Cecil County, in June.

Soybean Insects

Principal pests of soybeans during the year were the GREEN CLOVER-WORM, BEAN LEAF BEETLE, and the JAPANESE BEETLE. A fungus disease (Spicaria rileyi) was found quite common on the green clover-worm in September. C. G. Thompson, Beekeeping and Insect Pathology Section, found the former quite effective in controlling the insect. STRAWBERRY SPIDER MITE (Tetranychus atlanticus) was much lighter this year than in 1954. Unusual damage to young soybean foliage from the feeding of the CLOVER ROOT CURCULIO (Sitona hispidula) was noted in St. Marys County in June; the soybeans had followed ladino clover.



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Cooperative
ECONOMIC INSECT
REPORT

Issued by

PLANT PEST CONTROL BRANCH

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL BRANCH

ECONOMIC INSECT SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Branch serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Economic Insect Survey Section
Plant Pest Control Branch
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

BOLL WEEVIL hibernation counts in Georgia. (p. 1130).

Status of KHAPRA BEETLE as of December. (p. 1131).

Status of EUROPEAN CORN BORER in 1955. (pp. 1133-1149).

WEATHER FOR THE WEEK ENDING DECEMBER 26, 1955

The disastrous floods on the West Coast dominated the weather picture for the past week. Heavy, almost continuous rains, in central and northern California and in western portions of Oregon and Washington, with rising temperatures melting the snow, have sent many streams on a rampage. The Sacramento River system has been hardest hit, although Truckee, Klamath, Russian and Eel Rivers also went out of control. To date the Red Cross lists 23 persons known dead and 67 reported dead. Newspapers report the death total as 46 - 34 in California and 12 in Oregon. Great numbers have been evacuated from their homes until the water recedes, and preliminary damage estimates exceed \$150 million. Very high winds with gusts to and exceeding 100 miles per hour occurred in Washington on the 20th, causing some timber and property damage, and in the Colorado and Wyoming areas on the 23rd, raising clouds of dust. Elsewhere in the Nation temperatures returned to normal and and above after a prolonged cold spell.

Abnormally high temperatures were associated with persistent southwesterly winds along the West Coast and Chinook winds east of the Continental Divide caused temperature departures as high as 20° above normal in Wyoming and Colorado. The high temperatures caused rapid melting of snow in the mountains, contributing to the high flow in the streams of the West Coast. In the Southeast temperatures were below

normal during the first part of the period, but a rapid rise in temperature on the 24th and 25th resulted in some record highs occurring east of the Rockies. Ashland, Kansas, reported a temperature of 90° on the 24th. The Northeast averaged much below normal for the period, although there was a brief respite on the 24th and 25th.

Except for small sheltered areas, precipitation was heavy along the West Coast from just below San Francisco northward. Preliminary total amounts as high as 31.60 inches have been reported in this area for a 10-day period starting about the 15th. On the 18th heavy snow fell in Washington, with amounts ranging from 3 inches east of the Cascades to 2 feet at higher elevations. Dry weather continues in the high plains, with strong winds blowing dust in some areas. Almost daily light showers of snow or rain occurred in the Great Lakes region. In the Southeast there was little or no precipitation, and from New Jersey northward one to three inches of snow fell on the 22nd.

Reports in this issue are for the week ending December 23, unless otherwise designated.

CEREAL AND FORAGE INSECTS

SPOTTED ALFALFA APHID - OKLAHOMA - Moderate to heavy infestations occurred in 29 alfalfa fields in 11 southwestern counties. All major alfalfa-producing areas were surveyed, except the Panhandle, during November-December, and all areas showed moderate to heavy infestations. No increases expected, due to low temperatures. (Coppock).

CHINCH BUG (Blissus leucopterus) - MISSOURI - Results of fall abundance survey showed the following: 15 counties very severe compared with 8 in 1954; *14 moderate compared with 3 in 1954; and 15 counties light compared with 3 in 1954. Counties with very severe rating: Atchison, Nodaway, Harrison, Holt, Andrew, Platte, Clay and Vernon. Counties with severe rating: Worth, Gentry, Lafayette, Butler, New Madrid and Scott. Counts ranged from 0-26,080 per square foot. (Kyd, Thomas).

FRUIT INSECTS

PECAN WEEVIL (Curculio caryae) - GEORGIA - Larvae infesting nuts in store at Fitzgerald. Origin of nuts in Ben Hill County, December 8. (Murphy).

TRUCK CROP INSECTS

CABBAGE APHID (Brevicoryne brassicae) - ARIZONA - Light to heavy on 40 acres of cabbage at Phoenix, December 2, causing light damage. Area treated. (Ariz. Coop. Rept.).

POTATO TUBERWORM (Gnorimoschema operculella) - MARYLAND - Sixty-five bushels of potatoes ruined at Mitchellville. Damage well advanced by November 30. (U. Md., Ent. Dept.).

COTTON INSECTS

THURBERIA WEEVIL (Anthonomus grandis thurberiae) - ARIZONA - Adults and larvae taken in late cotton bolls at Carmen, southern Pima County. Heavier than has been seen in area for some time. (Ariz. Coop. Rept.).

EUROPEAN CORN BORER (Pyrausta nubilalis) - MISSOURI - Examination of cotton stems, December 15, showed 1-2 percent of damaged stalks contained overwintering fifth instar larvae. (Kyd, Thomas).

* 6 counties severe compared with 11 in 1954;

Boll Weevil Hibernation Counts, Georgia

Fall examinations of surface trash from woods adjacent to old cotton fields, to determine the number of boll weevils in hibernation, were made in four regions in Georgia from November 7 to December 5, 1955. The average for the State was 799 live weevils per acre of surface trash. This compares with 99 weevils a year ago. Averages for areas where samples were collected were as follows: northwest (Gordon County) 378; north central (Spalding, Butts, Pike Counties) 242; east central (Burke County) 629; and south (Tift County) 1,742. Five samples or 90 square feet were taken from each of 42 farms. Live weevils were found on 30 percent of the farms examined. The maximum number of weevils per acre found on one farm was 9,680 in Tift County. Samples from the same farms will be examined during the spring to determine the winter survival of weevils. (Beckham).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

SPIDER MITES (Tetranychus sp.) - OREGON - Damaging 100 cyclamen plants in a greenhouse at Albany. (Bock).

GREEN PEACH APHID (Myzus persicae) - WASHINGTON - Infestations numerous on greenhouse carnations in western area this fall. (Doucette).

A PRIVET MITE (Brevipalpus inornatus) - WASHINGTON - Occurring on azaleas in western area and at Portland. (Doucette).

INSECTS AFFECTING MAN AND ANIMALS

HOUSE FLIES - ARIZONA - Flies, mainly Musca domestica, populations indices of two small towns in southeastern Maricopa and northwestern Pinal Counties average of five highest grill counts in nine blocks, December 11-17: 65.2, (Ariz. Coop. Rept.).

CATTLE GRUBS - MISSOURI - Above normal to high numbers of grubs in backs of cattle in several counties in the southwest, west central and central areas. (Kyd, Thomas).

CATTLE LICE - UTAH - Continue to seriously infest cattle in several counties. (Knowlton). NORTH DAKOTA - Short-nosed cattle louse, Haematopinus eurysternus, appears to be building up to injurious numbers in Red River Valley on beef cattle where no control applied. Herefords more heavily infested than Shorthorn or Angus. (N. D. Ins. Rept. Serv.).

LOUSE FLIES - VIRGINIA - Adults found on grouse killed in Wythe County (Copenhaver). Another specimen found on grouse at Roanoke. (Rowell).

SHEEP SCAB MITE (Psoroptes equi ovis) - VIRGINIA - Sixty sheep dipped in Clarke County. Control complete. (Gerken).

STORED PRODUCTS INSECTS

Khapra Beetle Situation, December

Since the inception of the Khapra Beetle Program in January, 1955, 25,748 properties in 29 states have been inspected. Infestations have been found in 296 properties: 78 in Arizona, 214 in California, and 4 in New Mexico. The 296 infested establishments contain some 92,653,000 cubic feet. To date eradication fumigations have been carried out on 131 properties containing 51,653,000 cubic feet. Thirty of the treated properties are in Arizona, 97 in California, and 4 in New Mexico. Some 165 properties containing 41,000,000 cubic feet are to be treated. (Khapra Beetle Cont. Prog., Dec. 19).

Survey of 10 Premises in Willamette Valley, Oregon, December 24

From 8-10 larvae of MEDITERRANEAN FLOUR MOTH per quart surface sample of stored grain. GRANARY WEEVIL, SAW-TOOTHED GRAIN BEETLE and FOREIGN GRAIN BEETLE were common but not in large numbers. In sacked feed and grain, CONFUSED FLOUR BEETLE and Ptinus ocellus Brown and Ptinus sp. probably fur were most numerous. (Geoden).

MISCELLANEOUS INSECTS

A PHALANID (Manruta elingua) - UTAH - Four specimens collected at Kanab at lights on October 12. Apparently new to the State. (Det. E. L. Todd). (Knowlton).

AN ANOBIID BEETLE (Xyletinus peltatus) - VIRGINIA - Larvae and adults heavily damaged timbers in residence at West Point, November 21. (Det. T. J. Spilman and W. H. Anderson). (Rowell).

ORIENTAL COCKROACH (Blatta orientalis) - MARYLAND - Infesting home in Baltimore, December 8. (U. Md., Ent. Dept.).

Light Trap Collections

GEORGIA (Spalding County, 12/3-9): Feltia subterranea 1; (Tift County, 12/3-9: Feltia spp. 16; Heliothis zea 7; Anticarsia gemmatilis 2.

STATUS OF THE EUROPEAN CORN BORER IN 1955

Survey Data Provided by State Agricultural Agencies
Compiled and Summarized by
Leo G. K. Iverson and C. W. Shockley
Economic Insect Survey Section, Plant Pest Control Branch
United States Department of Agriculture

Agricultural agencies in 23 States reported on surveys conducted in their States to determine the abundance and distribution of the European corn borer (Pyrausta nubilalis) in 1955. All survey data, summaries or records of field observations were submitted to the Economic Insect Survey Unit serving them. This is a compilation of all information submitted by the State agencies.

Distribution

The European corn borer was known to occur in 37 States in 1955. In some States only a few counties are infested while in others the borer has been found in all areas. No additional States were reported as infested in 1955. Several States, however, reported new county records indicating a continued spread of the insect. These were as follows: Alabama 10, Arkansas 18, Georgia 5, Mississippi 2, Nebraska 1, Oklahoma 3, Tennessee 1, Virginia 7. Specimens were taken in Obion County, Tennessee in 1953; however, the record has not been previously carried in this report.

The area in the United States now known to be infested includes a total of 1,644 counties as shown on Map 1.

Counties reported as infested for the first time in 1955 are as follows:

<u>Alabama</u>	<u>Arkansas, Con't.</u>	<u>Oklahoma</u>
Blount	Logan	Canadian
Cherokee	Monroe	Ottawa
Colbert	Pope	Payne
De Kalb	Randolph	
Etowah	St. Francis	<u>Nebraska</u>
Franklin	Stone	Kimball
Jackson	White	
Lawrence	Woodruff	<u>Tennessee</u>
Limestone	Yell	Obion
Morgan		
	<u>Georgia</u>	<u>Virginia</u>
<u>Arkansas</u>	Chattooga	Alleghany
Arkansas	Floyd	Buchanan
Craighead	Polk	Craig
Cross	Walker	Dickenson
Franklin	Whitfield	Lee
Greene		Louisa
Independence	<u>Mississippi</u>	Patrick
Jackson	Marshall	
Lawrence	Panola	
Lincoln		

Abundance

The 1955 corn borer abundance surveys began in late August and continued through November. These surveys are designed to measure the fall population of corn borer larvae. The participating states were encouraged to time their surveys to include a high percentage of mature larvae whenever possible. In all cases, except for minor differences in compiling data, the accepted survey methods were used.

Nine of the eleven Eastern States surveyed in the fall of 1955 showed increases in borer population. Some of the more important increases were in Delaware, from 60 borers per 100 stalks in 1954 to 241 in 1955; Maryland, from 41 to 140; New Jersey, from 28 to 177; Rhode Island, from 39 to 131. (see table 1).

Table 1.--Summary by States of European corn borer abundance in corn, fall of 1955, compared with data for 1954.

	1954		1955		Counties surveyed		
	Number of counties surveyed	Average number of borers per 100 plants	Number of counties surveyed	Average number of borers per 100 plants	Number of counties surveyed	Borers per 100 plants 1954: 1955	
<u>Eastern U.S.</u>							
Connecticut	8	8	8	27	8	8	27
Delaware	3	60	3	241	3	60	241
Maine	-	-	-	-	-	-	-
Maryland	23	41	23	140	23	41	140
Massachusetts	1	4	-	-	-	-	-
New Hampshire	7	46	8	25	7	46	24
New Jersey	12	28	12	177	12	28	177
New York	19	17	14	19	14	17	19
Pennsylvania	29	19	34	68	28	19	62
Rhode Island	5	39	5	131	5	39	131
Vermont	5	4	14	3	5	4	3
Virginia	7	123	3 <u>1/</u>	155	7	125	155
West Virginia	3	13	3	32	3	13	32
Total - - -	121		145		115		
Average <u>8/</u> - - -						33	90
<u>North Central States</u>							
Illinois	44	215	42	339	42	225	339
Indiana	20	102	6 <u>2/</u>	172	20	102	172
Iowa	12 <u>3/</u>	497	12 <u>3/</u>	351	99	497	351
Kansas	25	26	18	26	17	29	28
Kentucky	7	52	-	-	-	-	-
Michigan	3 <u>4/</u>	69	4 <u>5/</u>	62	17	69	62
Minnesota	65	72	65	96	65	72	96
Missouri	24	148	23	130	16	184	149
Nebraska	33	353	50	170	33	353	186
North Dakota	21	26	5 <u>6/</u>	47	19	37	47
Ohio	30	153	30	124	26	159	134
South Dakota	41	394	38	129	37	424	131
Wisconsin	8 <u>7/</u>	28	8 <u>7/</u>	82	61	28	82
Total - - -	487		555		452		
Average <u>8/</u> - - -						230	183
<u>United States</u>							
Total - - -	608		700		567		
Average <u>8/</u> - - -						190	164

1/ 3 districts representing 21 counties. 5/ 4 districts representing 18 counties.
2/ 6 districts representing 92 counties. 6/ 5 districts representing 19 counties.
3/ 12 districts representing 99 counties. 7/ 8 districts representing 61 counties.
4/ 3 districts representing 17 counties. 8/ Weighted on basis of number of counties.

In the North Central States, five of 12 States surveyed recorded increases over the 1954 fall population. Illinois recorded an average of 225 borers per 100 stalks in 1954 and 339 in 1955. Increases from 102 to 172 were reported in Indiana, from 72 to 96 in Minnesota, from 37 to 47 in North Dakota, from 28 to 82 in Wisconsin. The three States of the North Central group having the highest averages in 1954 showed considerable decreases this year: Iowa dropped from 497 to 351, Nebraska from 353 to 186, South Dakota from 424 to 131. Other States in this area showing slight to appreciable decreases were Kansas, Michigan, Missouri and Ohio. Persistent drought was generally considered the principal cause for the decreasing borer population.

The European corn borer, considered by many as a serious pest only to corn, caused considerable damage to pimiento peppers in northern Alabama in 1955. Shipment of peppers had to be discontinued before the entire crop could be harvested.

The corn borer caused a small amount of economic damage in Arkansas during the past season. Although no serious losses occurred, evidence of feeding and lodging was present.

For the entire area of the United States surveyed for European corn borer, based on comparable counties, the average number of borers per 100 plants decreased from 190 in 1954 to 164 in 1955.

A summary of the 1954 and 1955 surveys by States is given in table 1. The data for both States and Counties or Districts are presented in table 2. Map 2 shows counties and districts surveyed in 1955 and the approximate infestation levels.

Table 2 -- European corn borer abundance in corr., fall of 1955, compared with data for 1954

State and county	: Average number: of borers per : 100 plants		State and county	: Average number: of borers per : 100 plants	
	: 1954	1955:		1954	1955
<u>Connecticut</u> (Agr. Expt. Sta.)			<u>Illinois (Cont'd)</u>		
			Northeast--		
District 1			Boone	98	334
Fairfield	14		De Kalb	324	541
Hartford	12	Dist.	Du Page	134	395
Litchfield	3		Lake	103	243
Middlesex	6	Sur.	La Salle	289	532
Average	8	4	Will	445	435
			Average	232	413
District 2			West--		
New London	9	Dist.	Adams	79	107
Tolland	6	Sur.	Brown-Cass	131	248
Windham	6		Hancock	224	215
Average	7	65	Henderson	382	424
			Knox	240	434
State average	8	27 ^{1/}	McDonough	330	323
			Warren	429	391
<u>Delaware</u> (Agr. Expt. Sta.)			Average ^{2/}	259	306
			Central--		
Kent	27	279	Logan	140	291
New Castle	12	121	McLean	490	628
Sussex	142	323	Macon	94	359
State mean	60	241	Peoria	515	300
			Woodford	524	343
			Average	353	384
<u>Illinois</u> (Agr. Expt. Sta.)			East--		
Natural History Survey Div., Ext. Ser.			Champaign	104	622
			Iroquois	511	839
Northwest--			Kankakee	519	600
Bureau	325	270	Livingston	677	887
Jo Daviess	140	609	Vermilion	323	840
Mercer	763	382	Average	427	758
Ogle	422	852			
Whiteside	340	401			
Winnebago	171	414			
Average	360	488			

^{1/} weighted average

^{2/} calculated

Table 2 -- (Cont'd)

State and county	Average number of borers per 100 plants	1954	1955	State and county	Average number of borers per 100 plants	1954	1955
<u>Illinois (Cont'd)</u>				<u>Indiana</u>			
				(Purdue Ag. Exp. Sta.)			
West Southwest--							
Christian	17	117		Northern Counties	160	169	
Greene	3	78		N. Cen. Counties	136	313	
Macoupin	12	30		S. E. Cen. Counties	68	179	
Madison	4	53		S. W. Cen. Counties	24	36	
Pike	18	94		E. Ohio Riv. Cos.	23	208	
Sangamon	<u>38</u>	<u>238</u>		W. Ohio Riv. Cos.	<u>4</u>	<u>Trace</u>	
Average	16	102		State Average	102	172	
East Southeast--				<u>Iowa</u>			
Clark	20	47		(State Dept. of Agr. and Agr. Expt. Sta.)			
Jasper	1	16					
Lawrence	-	36					
Moultrie	<u>23</u>	<u>225</u>		District I--			
Average	14	81		Clay			
Southwest--				Dickinson			
Clinton <u>1/</u>	12	34		Emmet	District Survey	Dist. Surv.	
Jackson	1	23		Lyon			
Randolph	11	10		O'Brien			
St. Clair	21	14		Osceola			
Union	<u>11</u>	-		Palo Alto			
Average	11	20		Sioux			
				Average	417	243	
Southeast--				District II--			
Franklin	3	-		Cerro Gordo			
Jefferson	-	14		Floyd			
Average	<u>3</u>	<u>14</u>		Hancock	District Survey	Dist. Surv.	
State mean comparable counties (42)				Kossuth			
	225	339		Mitchell			
				Winnebago			
				Worth			
				Average	440	376	

1/ Calculated

Table 2 -- (Cont'd)

State and county	:Average number : :of borers per :		State and county	:Average number : :of borers per :	
	:100 plants	:1954		:100 plants	:1954
<u>Iowa (Cont'd)</u>			<u>Iowa (Cont'd)</u>		
District III--			District VI--		
Allamakee			Black Hawk		
Chickasaw	District	District	Bremer		
Clayton	Survey	Survey	Buchanan		
Fayette			Clinton	District	District
Howard			Delaware	Survey	Survey
Winneshiek			Dubuque		
Average	<u>143</u>	<u>194</u>	Jackson		
District IV--			Jones		
Buena Vista			Linn		
Calhoun			Average	<u>340</u>	<u>485</u>
Cherokee	District	District	District VII		
Ida	Survey	Survey	Audubon		
Plymouth			Carroll		
Pocahontas			Crawford		
Sac			Greene	District	District
Woodbury			Guthrie	Survey	Survey
Average	<u>577</u>	<u>278</u>	Harrison		
District V--			Monona		
Butler			Shelby		
Franklin			Average	<u>681</u>	<u>169</u>
Grundy	District	District	District VIII		
Hamilton	Survey	Survey	Boone		
Hardin			Dallas		
Humboldt			Jasper	District	District
Webster			Marshall	Survey	Survey
Wright			Polk		
Average	<u>794</u>	<u>210</u>	Poweshiek		
			Story		
			Tama		
			Average	<u>890</u>	<u>413</u>

Table 2 -- (Cont'd)

Iowa (Cont'd)			Iowa (Cont'd)				
State and county	Average number of borers per 100 plants	1954	1955	State and county	Average number of borers per 100 plants	1954	1955
District IX--				District XII--			
Benton				Davis			
Cedar				Des Moines	District Survey		District Survey
Iowa	District Survey		District Survey	Jefferson			
Johnson				Henry			
Keokuk				Lee			
Louisa				Van Buren			
Muscatine				Wapello			
Scott				Average	244		488
Washington				State mean comparable districts (12)	497		351
Average	579		689				
District X--				<u>Kansas</u>			
Adair				(Ins. Sur.)			
Adams				North Central--			
Cass				Clay	4		2
Fremont	District Survey		District Survey	Cloud	13		8
Mills				Jewell	2		0
Montgomery				Ottawa	-		0
Page				Republic	1		1
Pottawattamie				Washington	6		9
Taylor				Average	5		3
Average	463		202				
District XI--				Northeast--			
Appanoose				Atchison	51		94
Clarke				Brown	27		22
Decatur				Doniphan	86		168
Lucas	District Survey		District Survey	Jackson	36		8
Madison				Jefferson	93		-
Mahaska				Leavenworth	47		29
Marion				Marshall	6		10
Monroe				Nemaha	5		11
Ringgold				Pottawatomie	34		8
Union				Riley	8		2
Warren				Wyandotte	42		44
Wayne				Average	40		40
Average	393		465				

Table 2 -- (Cont'd)

State and county	Average number: of borers per 100 plants		State and county	Average number of borers per 100 plants	
	1954	1955		1954	1955
<u>Kansas (Cont'd)</u>			<u>Maryland (Cont'd)</u>		
Central--			Talbot	14	199
Dickinson	2	-	Washington	136	141
East Central--			Wicomico	94	553
Douglas	80	34	Worcester	<u>80</u>	<u>117</u>
Franklin	2	-	State mean		
Geary	1	-	comparable		
Johnson	33	-	counties (23)	41	140
Miami	1	-	<u>Michigan</u>		
Morris	2	-	(Ext. Ser.)		
Shawnee	49	27	District I--		
Wabaunsee	<u>19</u>	<u>-</u>	Ionia		
Average	24	30	Kent		District
State mean			Ottawa		Survey
comparable			Average	<u>X</u>	<u>36</u>
counties (17)	29	28	District II--		
<u>Maryland</u>			Branch		
(Agr. Expt. Sta.)			Calhoun		District
Allegany	36	39	Eaton		Survey
Anne Arundel	21	45	St. Joseph		
Baltimore	17	81	Average	<u>X</u>	<u>74</u>
Calvert	10	66	District III--		
Caroline	78	554	Ingham		
Carroll	12	53	Jackson		
Cecil	21	93	Lenawee		District
Charles	10	88	Livingston		Survey
Dorchester	90	362	Monroe		
Frederick	29	42	Washtenaw		
Garrett	21	39	Average	<u>X</u>	<u>102</u>
Harford	20	71	District IV--		
Howard	29	60	Genesee		
Kent	26	68	Lapeer		District
Montgomery	42	35	Saginaw		Survey
Prince Georges	22	74	Shiawassee		
Queen Annes	37	174	Tuscola		
St. Marys	39	167	Average	<u>X</u>	<u>34</u>
Somerset	57	97	State Average	69	62

Table 2 -- (Cont'd)

:Average number :			:Average number		
:of borers per :			:of borers per		
State and	:100 plants	:	State and	:100 plants	:
county	:1954	1955 :	county	:1954	1955
<u>Minnesota</u>			<u>Minnesota (Cont'd)</u>		
(State Dept. of Agr.)					
Northwest--			East Central--		
Becker	13	14	Anoka	9	22
Clay	<u>126</u>	14	Chisago	11	22
Average	70	<u>14</u>	Hennepin	23	40
			Isanti	2	19
			Kanabec	24	24
			Mille Lacs	9	17
			Pine	12	14
			Washington	<u>8</u>	<u>14</u>
			Average	12	22
West Central--			Southwest--		
Big Stone	78	124	Cottonwood	104	121
Chippewa	67	145	Jackson	121	232
Douglas	132	85	Lincoln	136	160
Grant	256	75	Lyon	107	320
Lac qui Parle	111	176	Murray	181	226
Otter Tail	66	47	Noble	223	327
Pope	159	54	Pipestone	129	148
Stevens	112	87	Redwood	134	236
Swift	121	108	Rock	<u>230</u>	<u>170</u>
Traverse	226	105	Average	152	216
Wilkin	180	60			
Yellow Medi-	78	224			
cine					
Average	<u>132</u>	<u>108</u>			
Central--			South Central--		
Benton	6	44	Blue Earth	107	205
Carver	66	73	Brown	65	149
Kandiyohi	64	146	Faribault	207	121
McLeod	46	136	Freeborn	50	64
Meeker	21	82	Le Sueur	10	60
Morrison	10	16	Martin	152	195
Renville	36	191	Nicollet	58	101
Scott	60	28	Rice	13	25
Sherburne	2	83	Steele	5	93
Sibley	87	120	Waseca	14	114
Stearns	24	117	Watonwan	<u>113</u>	<u>75</u>
Todd	12	35	Average	72	109
Wadena	2	1			
Wright	<u>21</u>	<u>106</u>			
Average	33	84			

Table 2 -- (Cont'd)

		:Average number:				:Average number			
		:of borers per				:of borers per			
State and		:100 plants		State and		:100 plants			
county		:1954		county		:1954			
		1955:				1955			
<u>Minnesota (Cont'd)</u>				<u>Missouri (Cont'd)</u>					
Southeast--				Central--					
Dakota	12	80		Boone	--	50			
Dodge	8	87		Callaway	18	--			
Fillmore	27	52		Carroll	275	--			
Goodhue	10	34		Chariton	--	77			
Houston	57	36		Clay	68	285			
Mower	45	32		Cole-Osage	52	--			
Olmsted	8	13		Cooper	107	29			
Wabasha	10	47		Howard	129	--			
Winona	<u>39</u>	<u>28</u>		Lafayette	68	111			
Average	24	45		Pike	37	--			
				Platte	62	209			
State mean				Saline	182	78			
comparable				St. Charles	<u>32</u>	--			
counties (65)	72	96		Average	94	<u>120</u>			
<u>Missouri</u>				Southeast --					
(Ext. Serv.)				Butler				36	38
(In. Surv.)				Cape Girardeau				--	20
Northern--				Dunklin				24	210
Andrew	34	156		Mississippi	293	142			
Atchison	180	242		New Madrid	270	453			
Clarke	143	--		Perry	--	4			
Daviess	110	94		Scott	500	46			
Knox	94			St. Genevieve	--	6			
Livingston	--	68		Stoddard	--	<u>145</u>			
Macon	--	109		Average	225	<u>118</u>			
Mercer	361	201		State mean					
Sullivan	108	--		comparable					
Worth	<u>363</u>	<u>226</u>		counties (15)	177	168 *			
Average	174	157							

* Missouri totals corrected to these figures after Table I printed.

Table 2 --(Cont'd).

		:Average number:				:Average number	
		:of borers per				:of borers per	
State and		:100 plants	:	State and		:100 plants	:
county		:1954	1955:	county		:1954	1955
<u>Nebraska</u>				<u>Nebraska (Cont'd)</u>			
(Agr. Expt. Sta.)				Central (Cont'd)--			
(Ins. Survey)							
Northeast--							
Antelope	--	160		Howard	--	150	
Boone	387	160		Keith	--	25	
Boyd	--	160		Lincoln	--	250	
Burt	208	330		Loup	--	183	
Cedar	690	280		Sherman	--	300	
Cuming	514	330		Valley	--	216	
Dakota	740	600		Wheeler	--	100	
Dixon	734	380		York		86	183
Holt	--	130		Average		156	181
Knox	790	350		Southeast--			
Madison	350	130		Cass	32	67	
Pierce	--	160		Gage	3	75	
Stanton	521	160		Johnson	38	100	
Thurston	714	280		Lancaster	70	117	
Wayne	580	220		Nemaha	49	75	
Average	566	255		Otoe	28	100	
East Central--				Pawnee			
Butler	236	88		Richardson	118	100	
Colfax	585	240		Seward	33	125	
Dodge	642	350		Average	129	133	
Douglas	360	117			56	99	
Merrick	521	83		State mean			
Nance	578	170		comparable			
Platte	554	130		counties (33)			
Polk	263	67			353	186	
Sarpy	249	100					
Saunders	163	83					
Washington	468	200					
Average	420	148					
Central--							
Buffalo	--	217					
Custer	--	117					
Dawson	--	333					
Garfield	--	117					
Greeley	--	117					
Hall	--	185					
Hamilton	226	217					

Table 2 --(Cont'd).

State and county	:Average number: :of borers per :100 plants		State and county	:Average number :of borers per :100 plants	
	: 1954	: 1955		: 1954	: 1955
<u>New Hampshire</u> (State Dept. of Agr.)			<u>New York (Cont'd)</u>		
Belknap	87	31	Cortland	5	2
Carroll	51	30	Erie	5	36
Grafton	12	9	Greene	78	-
Hillsboro	37	22	Livingston	9	1
Merrimack	49	48	Monroe	T	4
Rockingham	46	23	Nassau	60	12
Strafford	40	5	Niagara	7	57
Sullivan	-	29	Onondaga	4	4
State mean comparable counties (7)	46	24	Ontario	4	5
			Orleans	T	7
			Otsego	3	5
			Saratoga	5	-
			Schenectady	4	-
			Steuben	22	3
			Suffolk	92	127
			Wayne	7	3
			State mean comparable counties (14)	17	19
<u>New Jersey</u> (State Dept. of Agr. & Ext. Ser.)			<u>North Dakota</u> (Ext. Ser. & Dept. of Agr. & Labor)		
Burlington	46	197	District I		
Camden	63	367	Grand Forks	12	Dist.
Cumberland	31	75	Trail	43	Sur.
Gloucester	56	223	Average	28	69
Hunterdon	12	92	District II		
Mercer	36	394	Cass	62	Dist.
Middlesex	25	250	Richland	93	Sur.
Monmouth	29	242	Average	80	136
Salem	13	94	District III		
Somerset	3	117	Ransom	63	Dist.
Sussex	3	38	Sargent	48	Sur.
Warren	13	31	Average	56	17
State mean comparable counties (12)	28	177			
<u>New York</u> (State Dept. of Agr. & Mkts.)					
Albany	4	-			
Broome	12	4			
Columbia	3	-			

Table 2 --(Cont'd).

State and county	:Average number: :of borers per :100 plants		State and county	:Average number :of borers per :100 plants	
	: 1954	: 1955		: 1954	: 1955
<u>North Dakota (Cont'd)</u>			<u>Ohio (Cont'd)</u>		
District IV			West Central		
Dickey	48		Auglaize	166	219
La Moure	40	Dist.	Champaign	98	47
Logan	--		Clark	173	32
McIntosh	--	Sur.	Darke	262	211
Emmons	--		Logan	60	-
Average	<u>18</u>	<u>6</u>	Mercer	240	195
			Miami	193	106
District V			Shelby	90	128
Barnes	22		Average	<u>160</u>	<u>134</u>
Stutsman	--		Central		
Wells	--	Dist.	Delaware	82	-
Foster	--		Fairfield	-	78
Eddy	3	Sur.	Fayette	44	182
Griggs	--		Licking	-	36
Steele	--		Madison	61	40
Benson	--		Pickaway	186	73
Average	<u>4</u>	<u>6</u>	Average	<u>93</u>	<u>82</u>
			Southwest		
State mean comparable districts (5)	37	47	Butler	301	61
			Clinton	145	-
			Greene	196	113
			Highland	79	105
			Montgomery	235	113
			Preble	317	141
			Warren	238	-
			Ross	-	10
			Average	<u>216</u>	<u>90</u>
Ohio			State mean Comparable counties (26)	159	134
(Agr. Expt. Sta. & Ext. Ser.)					
Northwest					
Allen	110	213			
Fulton	114	133			
Hancock	164	82			
Henry	79	151			
Lucas	106	48			
Ottawa	29	41			
Paulding	193	126			
Putnam	284	283			
Seneca	-	117			
Van Wert	185	481			
Williams	54	94			
Wood	100	72			
Average	<u>129</u>	<u>153</u>			

Table 2 --(Cont'd).

State and county		Average number of borers per 100 plants		State and county		Average number of borers per 100 plants	
		1954	1955	Pennsylvania (Cont'd)		1954	1955
<u>Pennsylvania</u> (State Dept. of Agric.)				<u>Pennsylvania (Cont'd)</u>			
Northwest				Southwest			
Crawford	T ^{1/}	46		Fayette	120	36	
Erie	1	49		Greene	45	36	
Mercer	T	67		Washington	54	75	
Average	<u>T</u>	<u>54</u>		Westmoreland	47	53	
				Average	<u>66</u>	<u>70</u>	
North				South			
Lycoming	6	3		Adams	15	67	
Northeast				Cumberland	27	57	
Sullivan	-	2		Franklin	25	118	
Wyoming	T	18		Fulton	12	41	
Average	<u>T</u>	<u>10</u>		York	14	142	
				Average	<u>19</u>	<u>85</u>	
West				Southeast			
Armstrong	-	65		Berks	10	137	
Beaver	-	121		Bucks	7	78	
Butler	-	78		Chester	10	101	
Indiana	27	43		Dauphin	-	208	
Lawrence	3	74		Lancaster	13	32	
Average	<u>10</u>	<u>76</u>		Lebanon	8	-	
				Montgomery	9	87	
Central				Average			
Juniata	31	82			<u>10</u>	<u>107</u>	
Mifflin	-	97		State mean comparable counties (28)			
Perry	23	36			19	62	
Snyder	10	47		<u>Rhode Island</u>			
Union	9	59		(State Dept. of Agric.)			
Average	<u>18</u>	<u>64</u>		Bristol			
East				Kent			
Lehigh	13	21		Newport			
Luzerne	1	6		Providence			
Northampton	3	41		Washington			
Average	<u>6</u>	<u>23</u>		<u>36</u>			
				<u>38</u>			
				State mean comparable counties (5)			
				39			
				131			

^{1/} Less than one

Table 2 --(Cont'd).

State and county	:Average number: :of borers per :100 plants		State and county	:Average number: :of borers per :100 plants	
	:1954	1955		:1954	1955
<u>South Dakota</u> (Agr. Expt. Sta. Ext. Ser.)			<u>South Dakota (Cont'd)</u>		
North Central			South Central		
Brown	118	122	Aurora	136	130
Edmunds	84	-	Brule	163	18
Faulk	226	48	Charles Mix	860	225
Potter	141	-	Douglas	667	75
Spink	487	122	Gregory	-	36
Average	211	97	Average	456	103
Northeast			Southeast		
Clark	99	59	Bon Homme	697	345
Codington	110	77	Clay	664	293
Day	68	84	Hutchinson	885	295
Deuel	140	99	Lincoln	758	186
Grant	138	285	Turner	874	211
Hamlin	315	140	Union	941	202
Marshall	212	38	Yankton	1,126	158
Roberts	128	80	Average	849	241
Average	151	108	State mean comparable counties (37)	424	131
Central			<u>Vermont</u> (State Dept. Agr.)		
Buffalo	184	14	Addison	-	12
Hand	331	84	Bennington	-	9
Hughes	126	-	Caledonia	-	1
Hyde	164	24	Chittenden	2	4
Jerauld	427	131	Essex	-	1
Sully	81	-	Franklin	-	2
Average	219	53	Grand Isle	3	4
East Central			Lamoille	-	3
Beadle	556	64	Orange	3	0
Brookings	374	133	Orleans	-	0
Davison	465	109	Rutland	-	2
Hanson	542	107	Washington	3	T
Kingsbury	352	103	Windham	-	2
Lake	332	117	Windsor	7	5
McCook	490	134	State mean comparable counties (5)	5	3
Miner	464	30			
Minnehaha	800	122			
Moody	238	172			
Sanborn	175	190			
Average	435	117			

Table 2 --(Cont'd).

State and county	:Average number: :of borers per :100 plants		State and county	:Average number :of borers per :100 plants	
	:1954	1955:		:1954	1955
<u>Virginia</u> (Ins. Sur.)			<u>West Virginia</u> (State Dept. of Agr.)		
North					
Augusta	99		Mason	2	T
Clarke	-		Nicholas	12	38
Culpeper	-		Ohio, Brooke, Marshall	<u>24</u>	<u>58</u>
Fairfax	-	Dist.			
Fauquier	-	Sur.	State mean comparable counties (3)	13	32
Frederick	118				
Loudoun	-				
Rockbridge					
Rockingham	113				
Shenandoah	<u>182</u>		<u>Wisconsin</u> (State Dept. of Agr.)		
Average	<u>128</u>	<u>203</u>			
Southwest			Northwest		
Buchanan	-		Barron		
Dickenson	-		Burnett		
Lee	-		Chippewa		
Patrick	-	Dist.	Dunn	Dist.	Dist.
Scott	-	Sur.	Eau Claire	Sur.	Sur.
Smyth	145		Pierce		
Tazewell	-		Polk		
Washington	139		St. Croix		
Wise	-		Washburn		
Wythe	<u>78</u>		Average	<u>31</u>	<u>50</u>
Average	<u>121</u>	<u>111</u>			
Southeast			North Central		
Prince George	-	87	Clark		
State Average	125	<u>155^{1/2}</u>	Langlade		
			Lincoln	Dist.	Dist.
			Marathon	Sur.	Sur.
			Rusk		
			Sawyer		
			Taylor		
			Average	<u>9</u>	<u>9</u>
<u>1/</u> Weighted average					

Table 2 --(Cont'd).

State and county	:Average number: :of borers per :100 plants		State and county	:Average number: :of borers per :100 plants	
	:1954	1955		:1954	1955
<u>Wisconsin (Cont'd)</u>			<u>Wisconsin (Cont'd)</u>		
Northeast			Southwest		
Brown			Crawford		
Calumet			Grant	Dist.	Dist.
Door	Dist.	Dist.	Iowa	Sur.	Sur.
Kewaunee	Sur.	Sur.	Lafayette		
Manitowoc			Richland		
Marinette			Sauk		
Oconto			Average	<u>33</u>	<u>162</u>
Shawano					
Average	<u>49</u>	<u>36</u>	South Central		
			Columbia		
West Central			Dane		
Buffalo			Dodge	Dist.	Dist.
Jackson			Green	Sur.	Sur.
La Crosse	Dist.	Dist.	Jefferson		
Monroe	Sur.	Sur.	Rock		
Pepin			Walworth		
Trempealeau			Average	<u>24</u>	<u>151</u>
Vernon					
Average	<u>15</u>	<u>108</u>	Southeast		
			Kenosha		
Central			Ozaukee	Dist.	Dist.
Adams			Racine	Sur.	Sur.
Fond du Lac			Sheboygan		
Green Lake			Washington		
Juneau	Dist.	Dist.	Waukesha		
Marquette	Sur.	Sur.	Average	<u>41</u>	<u>64</u>
Outagamie					
Portage			State mean		
Waupaca			comparable		
Waushara			districts (3)	23	82
Winnebago					
Wood					
Average	<u>23</u>	<u>73</u>			



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1955

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Cooperative
**ECONOMIC INSECT
REPORT**

Issued by

PLANT PEST CONTROL BRANCH

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL BRANCH

ECONOMIC INSECT SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Branch serves as a clearing house and does not assume responsibility for accuracy of the material.

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Plant Pest Control Branch
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COOPERATIVE ECONOMIC INSECT REPORT

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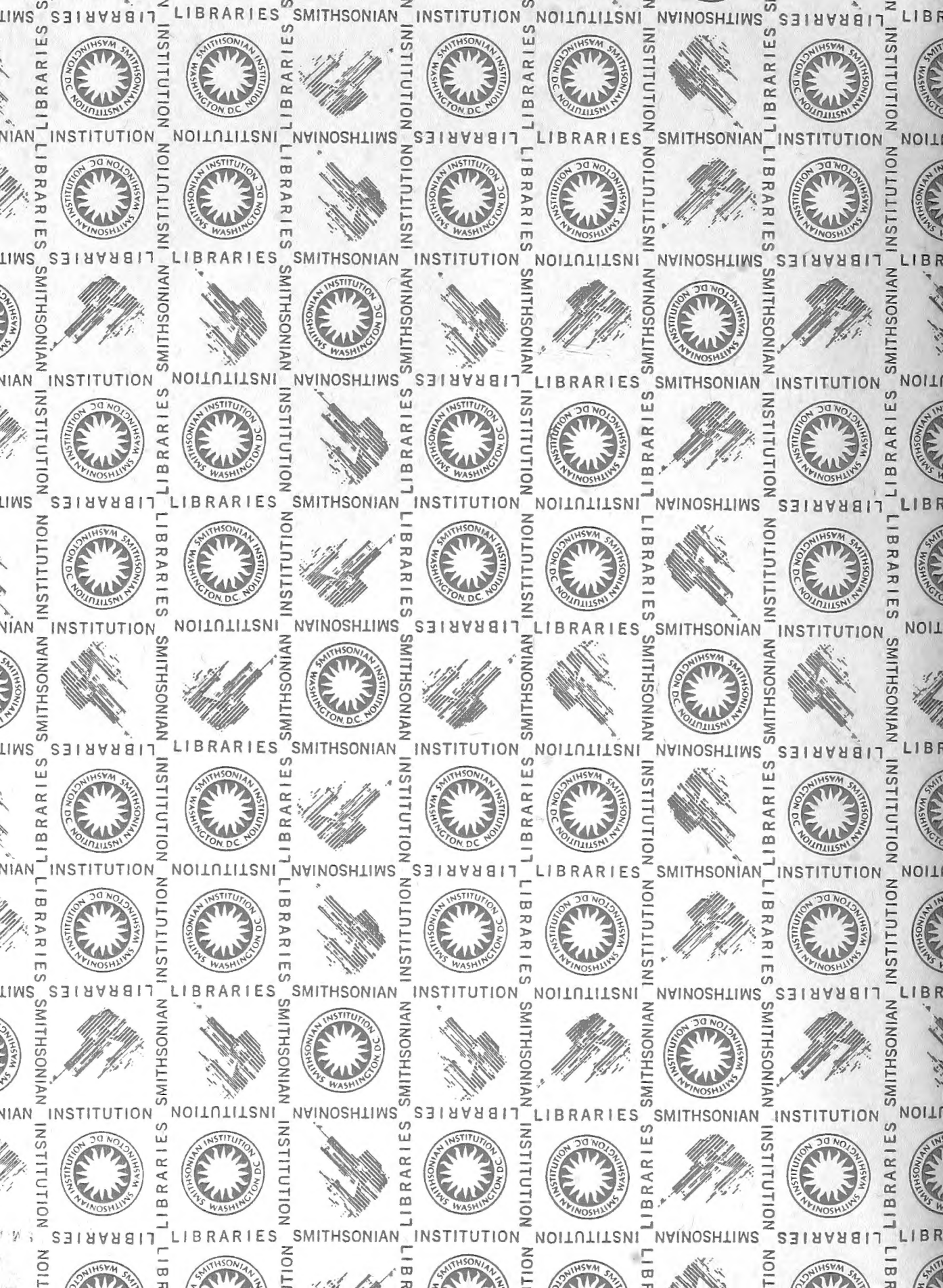
Xyletinus peltatus (an anobiid beetle) 1131

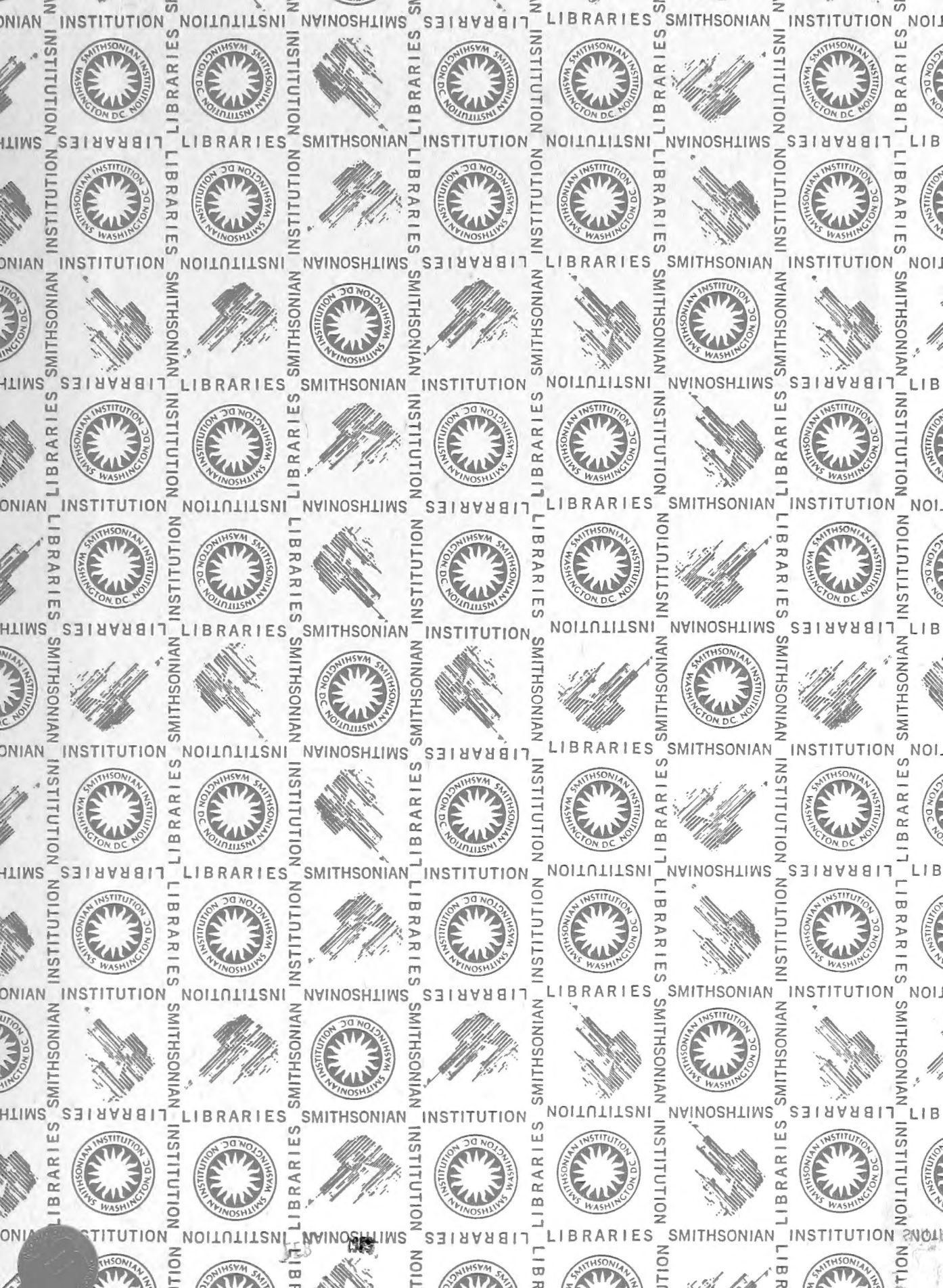
Xylocrius agassizi (a gooseberry borer) 959

Z

Zootermopsis angusticollis (a termite) 169, 1042







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