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VOL. 14 No. 42

October 16, 1964

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*Cooperative*  
**ECONOMIC INSECT  
REPORT**

*Issued by*

**PLANT PEST CONTROL DIVISION**

**AGRICULTURAL RESEARCH SERVICE**

**UNITED STATES DEPARTMENT OF AGRICULTURE**

# AGRICULTURAL RESEARCH SERVICE

## PLANT PEST CONTROL DIVISION

### SURVEY AND DETECTION OPERATIONS

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 Division serves as a clearinghouse and does not assume responsibility for accuracy of the material.

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## COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

FALL ARMYWORM still damaging small grains and pastures over large areas of Texas (p. 1141) and damaging young alfalfa in Noble County, Oklahoma (p. 1152). GRASSHOPPERS damaging fall grain in many central and northern localities of Utah. (p. 1142).

CITRUS RED MITE at lowest level observed during 14 years of record on Florida citrus, and GLOVER SCALE population above normal for time of year on same crop with further increase expected. (p. 1143). A PINK CITRUS RUST MITE (Aculus pelekassi) and CITRUS RUST MITE caused moderate damage to sweet orange nursery plants at Eustis, Lake County, Florida; citrus rust mite also severe on several hundred sweet orange nursery trees at Lake Jem. (p. 1144).

CABBAGE LOOPER serious and damaging cabbage, collards and turnips throughout most of Alabama, and continues heavy on lettuce in Yuma County, Arizona, with treatments still required. (p. 1144). SQUASH BUG heavy and damaging truck crop gardens at Tucumcari, New Mexico. (p. 1145).

PINK BOLLWORM poses possibility of heavy losses to cotton in southern Eddy County, New Mexico. Larvae of CABBAGE LOOPER, a LEAF TIER (Udea profundalis) and a NOCTUID MOTH (Proxenus mindara) heavy in cotton in Shafter area of Kern County, California. (pp. 1145, 1146).

VARIABLE OAK LEAF CATERPILLAR and other lepidopterous larvae defoliating oaks in several additional areas of Oklahoma. (p. 1148).

DETECTION

A new United States record reported was a DELPHACID PLANTHOPPER (Delphacodes havanae) collected on rice on Rabbit Island in the Belle Glade area of Florida; this species is of no known economic importance. (p. 1142). New State records were OAK SKELETONIZER (Bucculatrix ainsliella) in Tennessee, (p. 1148); EUROPEAN SPRUCE SAWFLY (Diprion hercyniae) in Wisconsin, (p. 1148); and a BARK BEETLE (Stephanoderes farinosus) in Hawaii (p. 1156). New county records reported were ALFALFA WEEVIL (Hypera postica) in Knox County, Indiana, and Lee County, Arkansas, (p. 1141); EUROPEAN CORN BORER (Ostrinia nubilalis) in Jones County, North Carolina, (p. 1142); a BERMUDA-GRASS MITE (Aceria neocynodonis) in Tehama County, California, (p. 1143); ELM LEAF BEETLE (Galerucella xanthomelaena) in Lincoln and Red Willow Counties, Nebraska, (p. 1148); an APHID (Pterocomma populifoliae) in Humboldt County, California, (p. 1149); and CUBAN-LAUREL THRIPS (Gynaikothrips ficorum) in Hawaii County, Hawaii, (p. 1156).

CORRECTIONS and ADDITIONAL NOTES

See page 1152.

SPECIAL REPORTS

Status of the Screw-worm in the Southwest. (p. 1154).

Hawaiian Insect Notes. (p. 1155).

Distribution Maps of Some Economic Insects in Ohio. (pp. 1157, 1158).

Reports in this issue are for the week ending October 9, unless otherwise indicated.

WEATHER OF THE WEEK ENDING OCTOBER 12

Unseasonably cold polar air gripped the eastern two-thirds of the Nation. Much of the country received no rain or only light showers.

TEMPERATURE: A mound of high pressure stretched from Texas to New England. The temperatures in the clear, cool air dropped to 32° or lower over most of the northern half of the Nation. Fort Smith, Arkansas, registered 35° on Tuesday morning, October 6. The temperature dropped to 48° at Corpus Christi, Texas, on Wednesday and to 40° at New Orleans, Louisiana, on Thursday. Maximums in the 60's and 70's were common along the gulf on several afternoons. Temperatures averaged below normal over almost the entire country east of the Rocky Mountains. Wide areas from Minnesota to Louisiana and eastward to the Appalachians averaged more than 12° colder than normal. Mild weather persisted from the Pacific Ocean to the Rocky Mountains. Temperatures averaged above normal over the entire area except along the northern and central California coast. Most of Nevada averaged more than 6° warmer than usual. Yuma, Arizona, registered 100° to 104° on six afternoons.

PRECIPITATION: Rains at midweek brought amounts ranging from light sprinkles to one-half inch to the Far Northwest. The central Great Plains received showers Sunday, October 11. Rain or snow over the Great Lakes region amounted to less than one-half inch. Scattered locations in the Southeast received more than one inch. The first measurable snow of the season fell in Wisconsin. Ironwood, Michigan, received 4 inches of snow on the 6th and 2 inches fell at Marquette on the 9th. An area near Grand Marais, Minnesota, received 6 inches on the 7th. Light flurries fell in northern New York at midweek and over much of the State on Saturday. Burlington, Vermont, received its first snow on the 7th. Snow fell over the northern hills in New England on the night of October 10. (Summary supplied by U.S. Weather Bureau).

CEREAL AND FORAGE INSECTS

PEA APHID (Acyrtosiphon pisum) - WISCONSIN - Populations continue to vary, ranging from 1-2 per sweep to 500 per sweep. Alates common in many fields; few males appearing. No eggs yet noted. (Wis. Ins. Sur.). UTAH - Numbers increased on alfalfa in several areas of State. (Knowlton). NEVADA - Varied 2-10 per sweep in alfalfa in Fallon, Churchill County, and Lovelock, Pershing County. (Cooney).

SPOTTED ALFALFA APHID (Therioaphis maculata) - WISCONSIN - Populations variable; averaged 300 per sweep in field of uncut alfalfa near Brodhead, Green County; counts in this field comparable to same time last season. Aphid populations 100 percent this species in some fields. Parasites and predators generally quite scarce in alfalfa. (Wis. Ins. Sur.). KANSAS - Damaged small, seedling alfalfa in Lincoln and Ottawa Counties. (Gates). OREGON - Appearing for first time this season on alfalfa in Hermiston area, Umatilla County. Infestations observed light. (Bierman, Oct. 3).

LYGUS BUGS (Lygus spp.) - ARIZONA - Increasing in alfalfa in Graham County. (Ariz. Coop. Sur.). NEVADA - Varied 4-10 per sweep in alfalfa in Fallon, Churchill County, and Lovelock, Pershing County. (Cooney). WYOMING - Adults averaged 14 per 100 sweeps in fields of alfalfa in Fremont County. (Marks).

ALFALFA PLANT BUG (Adelphocoris lineolatus) - WYOMING - Averaged 6 adults per 100 sweeps in Fremont County alfalfa. (Marks).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - ARIZONA - Populations remain high on alfalfa in Graham and Yuma Counties. (Ariz. Coop. Sur.). SOUTH CAROLINA - Injured alfalfa in Laurens County. (Nettles et al., Sept. 28).

ALFALFA CATERPILLAR (Colias eurytheme) - ARIZONA - Larval counts continue to decrease on alfalfa in all areas. (Ariz. Coop. Sur.).

FORAGE LOOPER (Caenurgina erechtea) - MARYLAND - Moderate numbers of larvae active on alfalfa at New Windsor, Carroll County. (U. Md., Ent. Dept.).

GREEN CLOVERWORM (Plathypena scabra) - MICHIGAN - Some newly emerged adults collected October 7 in Branch County. (Newman).

ALFALFA WEEVIL (Hypera postica) - WYOMING - Adults averaged 12 per 100 sweeps in alfalfa in Fremont County. (Marks). ARKANSAS - Collected from alfalfa September 30 in Lee County. This is a new county record. (Ark. Ins. Sur.). INDIANA - Larval specimens collected May 13 and June 16 in Knox County determined this species. This is a new county record. (Bram). MARYLAND - Light adult numbers noted in alfalfa at New Windsor, Carroll County. (U. Md., Ent. Dept.).

SOUTHERN CORN ROOTWORM (Diabrotica undecimpunctata howardi) - MARYLAND - Adults common in field of alfalfa at New Windsor, Carroll County. (U. Md., Ent. Dept.).

FALL ARMYWORM (Laphygma frugiperda) - TEXAS - Continues to damage small grains and native and improved pastures over wide portion of central, north central, northeast and coastal bend areas of State. (Texas Coop. Rpt.). SOUTH CAROLINA - Caused extremely serious damage in midsummer or later to immature ears of corn in Orangeburg County. (Nettles et al., Oct. 6).

ARMYWORM (Pseudaletia unipuncta) - ARKANSAS - Undetermined species reported in CEIR 14(38):1065 as causing heavy damage to pastures in Washington County determined as this species. Adults observed in large numbers in Fayetteville area during past few weeks; light trap records show moths were numerous in Morrilton area from early June through early September. Heavy infestation in fall-sown oats treated in Benton County October 1; approximately 100 dead larvae per square foot noted in some locations after controls applied. (Ark. Ins. Sur.). SOUTH CAROLINA - Extremely heavy flight at Clemson September 19-25. (Nettles et al.).

BLACK CUTWORM (Agrotis ipsilon) - MICHIGAN - Sizeable collection of adults taken in Livingston County blacklight trap evenings of October 3 and 4. (Newman).

SUGARCANE BORER (Diatraea saccharalis) - TEXAS - Heavy, local populations causing severe damage to stubble-crop grain sorghum in Brazoria County. (Teetes).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - ALABAMA - Considerable lodging in field corn as result of girdling by this species reported in Franklin County. (Ponder).

EUROPEAN CORN BORER (Ostrinia nubilalis) - NORTH CAROLINA - Larvae infesting 10 percent of corn stalks in field in Jones County; some lodging occurring. Det. by D. A. Mount. This is a new county record. (Franck).

A PLUME MOTH (Platyptilia antirrhina) - CALIFORNIA - Larvae heavy in milo in Chico, Butte County. (Cal. Coop. Rpt.).

NORTHERN CORN ROOTWORM (Diabrotica longicornis) - MICHIGAN - Damage by larvae and adults resulted in stalk lodging and poor pollination in some Monroe County corn fields. (Nevel, Newman).

DUSKY SAP BEETLE (Carpophilus lugubris) - UTAH - Common in sweet corn at Kanab, Kane County. (Knowlton).

CORN LEAF APHID (Rhopalosiphum maidis) - ARIZONA - Controls applied to one field of corn in Yuma County; populations continue light in other fields. (Ariz. Coop. Sur.).

A DELPHACID PLANTHOPPER (Delphacodes havanae) - FLORIDA - Single male specimen taken on rice at a farm on Rabbit Island, Belle Glade, Palm Beach County, October 2. This is the first specimen in the Florida State collection of Arthropods and also constitutes a new U.S. record. This planthopper has been recorded in Cuba, British Guiana and Guatemala. As far as is known, the species is of no economic importance. (Humphries, Weaver).

DELPHACID PLANTHOPPERS - FLORIDA - Species found in small numbers on rice on Rabbit and Kramer Islands in the Belle Glade area of Palm Beach County included Sogata fúrcifera complex, Delphacodes puella, D. propinqua and D. humilis. (Humphries, Weaver, Oct. 2).

SORGHUM MIDGE (Contarinia sorghicola) - ARIZONA - Populations decreased as result of cutting of sorghum for ensilage. (Ariz. Coop. Sur.). TEXAS - Heavy, local populations noted on stubble-crop grain sorghum in Brazoria County. (Teetes). KANSAS - Light damage to sorghum, probably by this species, noted in Riley County. (Peters).

HESSIAN FLY (Phytophaga destructor) - KANSAS - Only trace infestation noted in volunteer wheat in southeast area. No planted wheat examined, as lack of moisture prevented planting of much wheat this fall. (Peters).

GRASSHOPPERS - UTAH - Unspecified species damaging fall grain in several areas in Box Elder County; mostly Melanoplus sanguinipes (migratory grasshopper), still numerous and feeding on large areas of fall wheat in area south of Howell. (Knowlton, Finch). Grasshoppers still sufficiently numerous to damage fall grains and new lawns in many central and northern localities. (Knowlton, Davis). NORTH DAKOTA - Numbers of eggs lower than adult survey indicated at many locations in northcentral and south central parts of State. Less than 1 percent of eggs infested or destroyed by parasites and predators. Larvae of carabids, bee flies and blister beetles noted at most locations. (Brandvick). WISCONSIN - Approximately 50 percent of M. femurrubrum (red-legged grasshopper) females still contain eggs. (Wis. Ins. Sur.).



FIELD CRICKETS (Gryllus spp.) - WISCONSIN - Populations high in roadside grasses in many locations in southern counties; high population noted in field of corn in Walworth County. Considerable feeding on corn ears on ground noted. (Wis. Ins. Sur.).

SPIDER MITES - COLORADO - Tetranychus spp. remain active and damaging on sorghums in Arkansas Valley. (Hantsbarger). NEVADA - Unspecified species continue heavy on corn in Fallon, Churchill County, and in Lovelock, Pershing County. (Cooney).

RHODES-GRASS SCALE (Antonina graminis) - ARIZONA - Damaging zoysia and Bermuda grasses in Tucson area of Pima County. (Ariz. Coop. Sur.).

A BERMUDA-GRASS MITE (Aceria neocynodonis) - CALIFORNIA - Light on Bermuda grass in Red Bluff, Tehama County. This is a new county record. (Cal. Coop. Rpt.).

### FRUIT INSECTS

#### Quarterly Citrus Insect and Mite Outlook in Florida - October through December

This outlook is based on the assumption that weather beyond the period of the current U.S. Weather Bureau's 30-day outlook will be normal. Therefore, the forecasts given below cannot be viewed with the same degree of confidence as those in the "Citrus Insect and Disease Summary" usually released twice each month.

CITRUS RUST MITE (Phyllocoptruta oleivora) population will be lower than average in October, but heavy infestations expected in scattered groves in all districts. Buildup will continue until mid-December when about 40 percent of groves will have important infestations. CITRUS RED MITE (Panonychus citri) increases will occur in October and November. Population expected to remain below normal with about 20 percent of groves developing moderate to heavy infestations. TEXAS CITRUS MITE (Eutetranychus banksi) will continue low during October then gradually increase through December. About 15 percent of groves will have moderate to heavy infestations. WHITEFLY populations will continue above average during October then hold to normal low level in November and December. GLOVER SCALE (Lepidosaphes gloverii), YELLOW SCALE (Aonidiella citrina), CHAFF SCALE (Parlatoria pergandii), Unaspis citri and Pinnaspis strachani will continue above normal abundance. Scattered groves and portions of groves may show important increases. L. gloverii will be most numerous scale insect in most groves. GRASSHOPPERS and PLANT BUGS expected to be normally abundant; migration to citrus from drying cover crops and adjacent pasture land will cause problems in some groves. (W. A. Simanton).

Citrus Insect Situation in Florida - End of September - CITRUS RUST MITE infested 47 percent of groves (norm 59 percent); 26 percent economic (norm 37 percent). Increasing but expected to remain below normal and in moderate range in October. Infestations on fruit and leaves similar intensity. Highest districts west and south. CITRUS RED MITE infested 25 percent of groves (norm 40 percent); 3 percent economic (norm 19 percent). Now at lowest level observed during 14 years of record. Only 0.91 percent of 9,700 leaves examined in September infested. These leaves from 97 groves, none of which sprayed within 30 days before count. All districts low. Gradual increase expected and few scattered groves will develop moderate to heavy infestations. TEXAS CITRUS MITE infested 21 percent of groves (norm 15 percent); 3 percent economic (norm 4 percent). Near normal level for September. About as abundant as citrus red mite and same outlook applies. GLOVER SCALE infested 66 percent of groves (norm 19 percent); 19 percent economic (norm 1 percent). Population much above normal for time of year and approaching high range. Further increase expected. Highest districts south, east and central. PURPLE SCALE (Lepidosaphes beckii) infested 66 percent of groves (norm 56 percent); 5 percent economic (norm 2 percent). Above normal but in low range; slight increase expected. Highest districts south and east. CHAFF SCALE infested 54 percent of groves (norm 30 percent); 12 percent economic

(norm 1 percent). Above normal and in low range; little change expected. Highest districts south and east. YELLOW SCALE (Aonidiella citrina) infested 46 percent of groves (norm 9 percent); 11 percent economic (norm 1 percent). Above normal and in low range; little change expected. Central only high district. BLACK SCALE (Saissetia oleae) infested 29 percent of groves (norm 31 percent); 9 percent economic (norm 11 percent). Near normal and in low range; slight increase expected. Although all districts in low range, a few heavy infestations persist in central district. WHITEFLIES infested 70 percent of groves (norm 59 percent); 29 percent economic (norm 12 percent). Above normal and in moderate range; little change expected. Highest districts west and central. (W. A. Simanton, (Citrus Expt. Sta., Lake Alfred)).

ORANGE-DOG (Papilio cresphontes) - CALIFORNIA - Larvae and adults heavy on local citrus in Winterhaven, Imperial County. (Cal. Coop. Rpt.). ARIZONA - Increasing on orange and other citrus throughout Pinal County. Possible control on 80 acres of young nursery stock. (Ariz. Coop. Sur.).

A SPITTLEBUG (Clastoptera sp.) - FLORIDA - Caused moderate to severe damage to 4,500 grapefruit trees. (Levan, Holley, Sept. 29).

A PINK CITRUS RUST MITE (Aculus pelekassi) - FLORIDA - Infested 50 percent of 27,886 sweet orange nursery plants at Eustis, Lake County; caused moderate damage. (Bentley, Oct. 2).

CITRUS RUST MITE (Phyllocoptruta oleivora) - FLORIDA - Severe on several hundred sweet orange nursery trees at Lake Jem (Fatic, Sept. 30) and moderately damaging to 90 percent of nearly 3,000 sweet orange nursery trees at Eustis, Lake County. (Bentley, Oct. 6).

SPOTTED TUSSOCK MOTH (Halisidota maculata) - CALIFORNIA - Heavy on apple trees in Capitola, Santa Cruz County. (Cal. Coop. Rpt.).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - OREGON - Heavy on tops of DeAnjou pear trees in Jackson County; caused early browning and defoliation. (Berry, Oct. 3).

FILBERTWORM (Melissopus latiferreanus) - OREGON - Infested peaches in Yamhill County. (Every, Oct. 3).

HICKORY SHUCKWORM (Laspeyresia caryana) - ALABAMA - Large number of larvae in pecans on trees and on ground in Washington County. (Estes).

WALNUT HUSK FLY (Rhagoletis completa) - CALIFORNIA - Heavy in walnuts in Fremont and Hayward, Alameda County. (Cal. Coop. Rpt.).

PECAN WEEVIL (Curculio caryae) - OKLAHOMA - Moderate to heavy on pecans in Cleveland County. (Okla. Coop. Sur.).

A FALSE POWDER-POST BEETLE (Amphicerus cornutus) - CALIFORNIA - Adults medium on pomegranate twigs in Holtville, Imperial County. (Cal. Coop. Rpt.).

#### TRUCK CROP INSECTS

CABBAGE LOOPER (Trichoplusia ni) - ALABAMA - Serious and damaging numbers on cabbage, collards and turnips throughout most of State. (McQueen). ARIZONA - Continues heavy on lettuce in Yuma County; treatments continued. (Ariz. Coop. Sur.).

LOOPERS - SOUTH CAROLINA - Populations extremely low on collards in Lexington County; disease probably important factor. (Nettles et al., Oct. 6).

CUTWORMS - NEW MEXICO - Damaging fruit of tomatoes in contact with soil in home gardens in Las Cruces area, Dona Ana County. (N.M. Coop. Rpt.).

TOMATO FRUITWORM (Heliothis zea) - ARIZONA - Populations spotty on lettuce in Yuma County. (Ariz. Coop. Sur.).

BEEF ARMYWORM (Spodoptera exigua) - ARIZONA - Continued treatment necessary on lettuce in Yuma County. (Ariz. Coop. Sur.).

IMPORTED CABBAGEWORM (Pieris rapae) - ALABAMA - Serious and damaging numbers on cabbage, collards and turnips throughout most of State. (McQueen).

MEXICAN BEAN BEETLE (Epilachna varivestis) - ALABAMA - Heavy on old bean vines in southern and western counties. (McQueen).

SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) - ALABAMA - Large numbers of adults feeding on wild cucumbers and gourds in Randolph County. (Barwood, Brackeen).

WESTERN POTATO FLEA BEETLE (Epitrix subcrinita) - CALIFORNIA - Adults light on potato plantings in Tulalake, Modoc County. (Cal. Coop. Rpt.).

A SAP BEETLE (Carpophilus sp.) - NORTH CAROLINA - Infested sweetpotatoes injured while cutting vines in Onslow County field. Injured sweetpotatoes in field for 3 weeks heavily infested. (Mount).

TOBACCO WIREWORM (Conoderus vespertinus) - NORTH CAROLINA - Noted feeding on cull sweetpotatoes in field near Orrum, Robeson County. (Mount).

TOMATO PSYLLID (Paratrioza cockerelli) - COLORADO - Caused reduced yields in garden tomatoes in Fort Collins area, Larimer County; nymphs continue active. Unidentified parasite reared from third, fourth and fifth instars. (Thatcher).

SQUASH BUG (Anasa tristis) - NEW MEXICO - Heavy and damaging squash plants in truck crop gardens at Tucumcari, Quay County. (N.M. Coop. Rpt.).

#### COTTON INSECTS

BOLLWORMS (Heliothis spp.) - ARIZONA - Light in Yuma County but continue to injure late squares and bolls in Graham County. (Ariz. Coop. Sur.). ARKANSAS - Additional larvae determined. Total of 2,646 H. zea larvae and 40 H. virescens larvae collected from cotton. H. virescens larvae comprised 1.49 percent of total collected during 1964 season compared with 5.9 percent in 1963 season. (Ark. Ins. Sur.). ALABAMA - Larvae taken from gin trash samples during survey for Pectinophora gossypiella (pink bollworm) in Randolph County. (Barwood, Brackeen).

PINK BOLLWORM (Pectinophora gossypiella) - NEW MEXICO - Survey in southern Eddy County indicated late damage to cotton. Infestations ranged 0-100 percent in green bolls; averaged 23 percent. Damage to early crop appeared very light in fields checked. Infestations appear lighter this season than at same time in 1963; however, definite possibility of heavy, late losses from infested terminal bolls exists; this would result in late cotton crop. (N.M. Coop. Rpt.). ARIZONA - Moths taken in 2 traps and larvae collected in gin trash in Pinal County. One of fields yielding moths produced moths in July of this year. (Ariz. Coop. Sur.).

CABBAGE LOOPER (Trichoplusia ni) - CALIFORNIA - Larvae of this species and Udea profundalis (a leaf tier) heavy on cotton in Shafter, Kern County. (T. Leigh).

COTTON LEAF PERFORATOR (Bucculatrix thurberiella) - ARIZONA - Remains heavy in Yuma area but no treatments applied. (Ariz. Coop. Sur.).

SALT-MARSH CATERPILLAR (Estigmene acrea) - ARIZONA - Increases in cotton very noticeable in Thatcher and central areas of Yuma County. (Ariz. Coop. Sur.).

A NOCTUID MOTH (Proxenus mindara) - CALIFORNIA - Larvae heavy on cotton in Shafter, Kern County. (T. Leigh)

BOLL WEEVIL (Anthonomus grandis) - ALABAMA - Considerable numbers taken from gin trash samples during survey for Pectinophora gossypiella (pink bollworm) in Randolph County. (Barwood, Brackeen).

A WEEVIL (Anthonomus sp.) - ARIZONA - Continues to increase in Pinal County with fruiting parts on much cotton being infested. (Ariz. Coop. Sur.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

PINE APHIDS - NEVADA - Cinara sp. heavy on branches and twigs of piñon pine on east slope of White Mountains, Esmeralda County. Egg deposition heavy on needles. (Bechtel, Martinelli). CALIFORNIA - Pineus sp., probably coloradensis, heavy on Pinus contorta in Yosemite National Park at Sunrise Camp. (Boyle, USFS).

BALSAM WOOLLY APHID (Chermes piceae) - Two new localized infestations found on Roan and Grandfather Mountains of NORTH CAROLINA and TENNESSEE. (South. For. Pest Rptr., Oct. Summ.).

A PINE NEEDLE SCALE (Phenacaspis sp.) - GEORGIA - Attacked shortleaf pine in Fannin County; Chilocorus stigma (twice-stabbed lady beetle) preying very effective natural control. (South. For. Pest Rptr., Oct. Summ.).

SOUTHERN PINE BEETLE (Dendroctonus frontalis) - ALABAMA - Increased during June on Talladega Ranger District, west of Talladega and Horseblock Mountains. Number of infested trees increased from 1.0 per thousand acres in January to 8.5 in July. Remained constant or slightly increased on Shoal Creek, Oakmulgee and Tuscaloosa Districts. GEORGIA - Confined to Rabun County on Chattahoochee National Forest. Infested trees increased from June levels of 0.3 per thousand acres to 0.8 during late August. Controls held population to low level. Limited activity present in most Piedmont area of State but brood production low; controls not necessary. LOUISIANA - Confined to West Bay area of Allen Parish; currently at relatively low level. MISSISSIPPI - Increased on Homochitto Ranger District and intermingled private land in late spring; activity continued throughout summer. NORTH CAROLINA - Severity increased in upper Piedmont during July and August. Outbreak populations present in portions of Davidson, Davie, Forsyth, Guilford, Randolph and Yadkin Counties; estimated 8,500 trees infested in this area in late August. SOUTH CAROLINA - Sudden increase occurred in Francis Marion National Forest during late June; level increased to 18.2 infested trees per thousand acres. Increased also on parts of upper Piedmont and mountain regions; level of infestation increased to 11.7 trees per thousand acres on Tyger District and 6.0 on Enoree during August. Measurable population had not been present in Enoree District since late summer of 1963. Again epidemic in Andrew Pickens District; level of infestation 12.9 trees per thousand acres in August. (South. For. Pest Rptr., Oct. Summ.).

BLACK TURPENTINE BEETLE (Dendroctonus terebrans) - MISSISSIPPI - Activity widespread on Biloxi Ranger District, De Soto National Forest. NORTH and SOUTH CAROLINA - Secondary invader in trees infested with D. frontalis (southern pine beetle) in areas where latter species epidemic. TEXAS - Increased activity reported on Angelina National Forest; about normal in remainder of State in logging, stumping and naval stores operations. (South. For. Pest Rptr., Oct. Summ.). ARKANSAS - This species and Ips spp. still active across pine areas of State; heaviest in western area but limited to few local trees or small acreage. Some activity increasing in some sites not well suited to pine production over State. Young reproduction in heavy stands most commonly attacked; attention urged into winter. D. terebrans activity limited mostly to harvest-damaged trees, lightning strikes and shade trees in lawn areas; controls urged on valuable trees. (Ark. For. Pest Rpt., Oct.). OKLAHOMA - Killing drought-weakened pines in small area in western McCurtain County. (Okla. Coop. Sur.).

BARK BEETLES - Ips avulsus buildups occurred earlier in summer in ALABAMA and GEORGIA; subsided in July and August. Approximately 11.3 trees per thousand acres killed on Talladega and Shoal Creek Districts. NORTH CAROLINA - Ips spp. common secondary invaders in Dendroctonus frontalis (southern pine beetle) epidemic areas. SOUTH CAROLINA - I. avulsus activity detected over eastern half of Tyger and Enoree Districts and portions of Long Cane and Edgefield Districts of Sumter National Forest. ARKANSAS - Ips spp. active on Mena Ranger District, Ouachita National Forest, in area burned last fall. (South. For. Pest Rptr., Oct. Summ.). OREGON - Large numbers of Dendroctonus spp. leaving yellow pine poles used in construction in Jackson County. (Berry).

A PINE WEEVIL (Pissodes radiatae) - CALIFORNIA - Medium on bishop pine (Pinus muricata) twigs in Fort Bragg, Mendocino County. (Cal. Coop. Rpt.).

A WESTERN FALSE HEMLOCK LOOPER (Nepytia sp.) - OREGON - Heavy flight occurred in east Portland suburban area week of October 12. Eggs laid on shade and ornamental Douglas-firs; light to heavy defoliation may occur in localized areas next spring. (Orr, USFS).

EUROPEAN SPRUCE SAWFLY (Diprion hercyniae) - WISCONSIN - Collected for the first time in State near Amery, Polk County. Det. by B. D. Burks. (Wis. Ins. Sur.).

BAGWORM (Thyridopteryx ephemeraeformis) - NORTH CAROLINA - Caused considerable damage to white pine plantation near Asheville, Buncombe County. (South. For. Pest Rptr., Oct. Summ.). TEXAS - Caused considerable damage to elms in local areas of Potter and Swisher Counties. (Tex. Coop. Rpt., Meisch).

A LIMACODID MOTH (Prolimacodes badia) - NORTH CAROLINA - Larvae reported feeding on maple trees at residence in Caldwell County; det. by D. A. Mount. (Andrews).

FALL CANKERWORM (Alsophila pometaria) - NORTH DAKOTA - Female emergence reached peak in southeastern areas. (Frye).

FALL WEBWORM (Hyphantria cunea) - NEW MEXICO - Problem on shade trees in most southern counties; especially heavy on poplar and fruitless mulberry trees in Las Cruces area, Dona Ana County. (N.M. Coop. Rpt.). ARKANSAS - Activity remained heavy in northwest area throughout summer, lighter than normal elsewhere. Nearly all larval feeding ceased; entering winter quarters. (Ark. For. Pest Rpt., Oct.). Active again on Pea Ridge National Military Park; controls underway. (South. For. Pest Rptr., Oct. Summ.).

VARIABLE OAK LEAF CATERPILLAR (Heterocampa manteo) - OKLAHOMA - Defoliating oak trees in Atoka, Pushmataha, McCurtain, Le Flore and Latimer Counties (southeast), Pontotoc County (south central), Pottawatomie and Seminole Counties (central), Washington and Tulsa Counties (northeast) and Pawnee and Payne Counties (north central). Other lepidopterous larvae found on oaks in southeast include: Anisota stigma (spiny oakworm) in Le Flore and Latimer Counties; Datana ministra (yellow-necked caterpillar) in McCurtain County, Schizura unicornis (unicorn caterpillar) in Atoka County, Acronycta afflicta (a noctuid) in Atoka and McCurtain Counties and H. astarte (a notodontid) in Le Flore, Johnston and Pottawatomie Counties. Det. by W. A. Drew. (Okla. Coop. Sur.).

WESTERN OAK LOOPER (Lambdina fiscellaria somnaria) - OREGON - Adult flight medium in infested oak groves in Polk and Yamhill Counties. (Larson, Oct. 3).

OAK SKELETONIZER (Bucculatrix ainsliella) - TENNESSEE - Detected in Hawkins County; 20,500 acres involved. (South. For. Pest Rptr., Oct. Summ.). This is the first ARS record for the State. (PPC).

NANTUCKET PINE TIP MOTH (Rhyacionia frustrana) - OKLAHOMA - Heavy in small shortleaf pines in Pushmataha and McCurtain Counties; light in Le Flore County. (Okla. Coop. Sur.).

A LEAF-FOOTED BUG (Leptoglossus clypealis) - NEBRASKA - Adults heavy on ponderosa pine windbreak in Lincoln County. Severe browning and needle drop evident; many nymphs present. (Pruess).

ELM LEAF BEETLE (Galerucella xanthomelaena) - COLORADO - Adults dispersing to overwintering sites in Larimer County. (Thatcher). NEBRASKA - Adults heavy in home in Lincoln County; some elm trees severely defoliated. (Pruess). This report and report in Red Willow County, cf. CEIR 14(32):915, two westernmost points of infestation in State. These are new county records. (Bergman).

LARGER ELM LEAF BEETLE (Monocesta coryli) - Epidemic in parts of Greenwood and McCormick Counties, SOUTH CAROLINA, Jones, Jasper and Putnam Counties, GEORGIA, Cannon County, TENNESSEE, and general throughout Piedmont regions of ALABAMA and NORTH CAROLINA. (South. For. Pest Rptr., Oct. Summ.).

LOCUST LEAF MINER (Xenochalepus dorsalis) - TENNESSEE - Damage appears widespread over eastern and central areas. (South. For. Pest Rptr., Oct. Summ.).

APHIDS - CALIFORNIA - Adults and nymphs of Pterocomma populifoliae light on willow tree nursery stock in Arcata, Humboldt County. This is a new county record. Nymphs of Chaitophorus populellus heavy on silver poplar in Pleasant Hill, Contra Costa County. Lachnus salignus locally heavy on willow trees in Santa Maria, Santa Barbara County. (Cal. Coop. Rpt.).

BROAD-WINGED KATYDID (Microcentrum rhombifolium) - ARIZONA - Large numbers feeding on elms and other cultivated vegetation in Casa Grande, Pinal County. (Ariz. Coop. Sur.).

WALKINGSTICK (Diapheromera femorata) - ARKANSAS - Populations appear lower on Mena Ranger District, Ouachita National Forest, than in 1963. (South. For. Pest Rptr., Oct. Summ.).

A FALSE SPIDER MITE (Brevipalpus californicus) - CALIFORNIA - Heavy on maple trees in Oroville, Butte County. (Cal. Coop. Rpt.).

A CUBAN MAY BEETLE (Phyllophaga bruneri) - FLORIDA - Collected on ylang-ylang (Cananga odorata) and black sapote (Diospyros ebenaster) on September 28 by R. E. Brown in Miami, Dade County; these are new host records. (Fla. Coop. Sur.).

BANDED CUCUMBER BEETLE (Diabrotica balteata) - FLORIDA - Moderate on 25 Jerusalem-thorn (Parkinsonia aculeata) plants in nursery in Miami, Dade County. (Knowles, Sept. 24).

FULLER ROSE BEETLE (Pantomorus godmani) - CALIFORNIA - Heavy locally on roses in Armona, Kings County. (Cal. Coop. Rpt.).

A BARK BEETLE (Xylosandrus compactus) - FLORIDA - Moderate on 10 percent of 100 dendrobium plants at orchid company in Homestead, Dade County. (Knowles, Sept. 23).

BLACK BLISTER BEETLE (Epicauta pennsylvanica) - NORTH CAROLINA - Infested asters in Gaston County. (Robertson).

AZALEA LACE BUG (Stephanitis pyrioides) - NORTH CAROLINA - Infested 2 large groups of azaleas locally in Alamance County. (Robertson).

A PYRRHOCORID BUG (Largus cinctus californicus) - CALIFORNIA - Nymphs medium on ornamental strawberry in Santa Barbara, Santa Barbara County. (Cal. Coop. Rpt.).

COCCIDS - FLORIDA - Pseudaulacaspis pentagona (white peach scale) taken on stem of marlberry (Ardisia sp.) at La Belle, Hendry County, (Smith, Sept. 9); Duplaspidiotus tesserata infested stems of orchid at St. Petersburg, Pinellas County, (Miller, Sept. 11). These are new host records for State Department of Plant Industry. (Fla. Coop. Sur.). P. pentagona severe on stems of Chinese mulberry (Morus cathayana) at Ocala, Marion County. (Holder, Sept. 28). Unaspis euonymi (euonymus scale) severe on 95 percent of 30-40 euonymus plants inspected at Citra, Marion County. (Holder, Sept. 29). Pseudococcus adonidum (long-tailed mealybug) severe on 141 philodendron plants at Jacksonville, Duval County. (Barrett). P. citri (citrus mealybug) caused moderate damage to 10 percent of 500 Hoya sp. at nursery in Apopka, Orange County. (Holley, Musgrove, Sept. 22). Coccus viridis (green scale) infested gardenia at nursery in Conway, Orange County; 100 plants quarantined. (Crews, Sept. 30).

LARGER CANNA LEAF ROLLER (Calpodes ethlius) - FLORIDA - Caused moderate damage to 30 canna plants at Seffner, Hillsborough County. (Simmons, Sept. 25).

A CHRYSAUGID MOTH (Galasa nigrinoides) - NORTH CAROLINA - Heavy locally on boxwood in Burke County. (Wray, Sept. 21).

A GRASSHOPPER (Schistocerca obscura) - FLORIDA - Moderate on 10 schefflera plants at nursery in Bradenton, Manatee County. (Bickner, Sept. 23).

BULB MITE (Rhizoglyphus echinopus) - CALIFORNIA - Heavy on daffodil bulbs in nursery in Chico, Butte County. (Cal. Coop. Rpt.).

PRIVET MITE (Brevipalpus obovatus) - CALIFORNIA - Medium on orchid flowering stock in Capitola, Santa Cruz County. (Cal. Coop. Rpt.).

#### INSECTS AFFECTING MAN AND ANIMALS

MOSQUITOES - FLORIDA - Totals for 20-minute bite collections at Gainesville, Alachua County, October 3 as follows: Aedes infirmatus 58, Psorophora ferox 3 and Mansonia perturbans 2; totals for 15-minute collections on October 8 were Aedes infirmatus 17, Psorophora ferox 3 and Aedes atlanticus/tormentor 3. (Esser). OKLAHOMA - Several species heavy in Cotton County, moderate in Bryan, Payne and Cleveland Counties, and light in Washington County. (Okla. Coop. Sur.). NEVADA - Adults of Aedes dorsalis heavy in Lovelock, Pershing County. (Cooney).

HOUSE FLY (Musca domestica) - WYOMING - Adults causing considerable annoyance to homeowners and in restaurants in Fremont County. (Marks). OKLAHOMA - Moving into homes in large numbers in Payne County. Moderate in dairy barns in Cleveland County. (Okla. Coop. Sur.).

FACE FLY (Musca autumnalis) - MARYLAND - Light on dairy cattle at Mitchellville, Prince Georges County. (U. Md., Ent. Dept.).

BLACK BLOW FLY (Phormia regina) - SOUTH CAROLINA - Infested dehorned cattle in Orangeburg County; det. by C. W. Sabrosky. (Nettles et al., Sept. 14).

HORSE FLIES (Tabanus spp.) - OKLAHOMA - Heavy on cattle in Kay and Noble Counties; light (1 per 5 head) in Pushmataha County. (Okla. Coop. Sur.).

HORN FLY (Haematobia irritans) - UTAH - Continues annoying to cattle in pastures near Brigham City, Box Elder County, and in southern Cache County. (Knowlton). COLORADO - Adults averaged 200 per untreated animal on cattle in Las Animas County. (Hantsbarger). OKLAHOMA - Counts per head by county as follows: Payne, 200 on yearling steers; Pushmataha, 300 on bulls; Cleveland moderate to heavy; Bryan, Muskogee and Mayes moderate; and Cotton heavy. (Okla. Coop. Sur.).

SHEEP KED (Melophagus ovinus) - WYOMING - Common in farm flocks in Fremont County; only small populations found. (Marks).

BROWN DOG TICK (Rhipicephalus sanguineus) - OKLAHOMA - Heavy on dogs in Payne County. (Okla. Coop. Sur.).

PUSS CATERPILLAR (Megalopyge opercularis) - NORTH CAROLINA - Abundant on apple trees locally in Rockingham County; one person required medical attention from contact with larvae. (Wray, Sept. 18).

AN ASSASSIN BUG (Triatoma sp.) - TEXAS - Light, local infestations causing concern to residents of Guadalupe County. (New).

BLACK WIDOW SPIDER (Latrodectus mactans) - NEVADA - Large numbers around and entering garages, sheds and some homes in Reno, Washoe County. (Coop. Rpt.).



### HOUSEHOLD AND STRUCTURAL INSECTS

ANTS - ARIZONA - Forelius spp. and Tapinoma spp. nesting in yards and invading homes in Casa Grande and Eloy areas, Pinal County. (Ariz. Coop. Sur.).

NORTHERN MOLE CRICKET (Gryllotalpa hexadactyla) - NORTH CAROLINA - Collected in Lenoir County home. (Wray, Sept. 24).

WEEVILS - OREGON - Brachyrhinus spp. entering homes in Medford area, Jackson County. (Berry, Oct. 3). NORTH CAROLINA - Cossonus corticola caused concern; present in closet in Gaston County home. (Wray, Sept. 29).

GOLDEN BUPRESTID (Buprestis aurulenta) - OREGON - Entering homes in Medford area, Jackson County. (Berry, Oct. 3).

A FALSE POWDER-POST BEETLE (Polycaon stouti) - CALIFORNIA - Light in hardwood flooring in residence in Santa Maria, Santa Barbara County. (Cal. Coop. Rpt.).

A MILLIPED - MICHIGAN - Adults continue much more numerous than usual in some Lower Peninsula counties; 3 quarts of specimens removed from Ingham County garage recently. (Palmer).

### STORED-PRODUCT INSECTS

A CUCUJID (Oryzaephilus mercator) - CALIFORNIA - Heavy in dry dog food in retail store in Atascadero, San Luis Obispo County. (Cal. Coop. Rpt.).

INDIAN-MEAL MOTH (Plodia interpunctella) - NEW MEXICO - Moderate to heavy in sacked feed and seed in several feed stores in Quay County. (N.M. Coop. Rpt.).

LEPIDOPTEROUS LARVAE - UTAH - Heavily infesting large grain storage buildings at Moab, Grand County. Heavy in rolled barley in storage bins at Loa, Wayne County. (Knowlton, Argyle, Chapman).

TOBACCO MOTH (Ephestia elutella) - SOUTH CAROLINA - Infested tobacco packhouse; damaged some tobacco. Det. by Dr. R. C. Fox. (Nettles et al., Oct. 6).

Stored-Grain Pests in Alabama - RICE WEEVIL (Sitophilus oryzae) and SQUARE-NECKED GRAIN BEETLE (Cathartus quadricollis) noted in most corn examined in Washington, Clarke, Marengo, Perry, Bibb, Monroe and Dallas Counties. (Estes, Henderson, et al.). Floor sweepings at feed mill in Ranburne, Cleburne County, showed considerable numbers of SQUARE-NECKED GRAIN BEETLE, CONFUSED FLOWER BEETLE (Tribolium confusum), SAW-TOOTHED GRAIN BEETLE (Oryzaephilus surinamensis), RICE WEEVIL, YELLOW MEALWORM (Tenebrio molitor) and LARDER BEETLE (Dermestes lardarius). (Barwood, Brackeen).

Stored-Grain Pests in Maryland - CADELLE (Tenebroides mauritanicus) larvae heavy, GRANARY WEEVIL (Sitophilus granarius) adults light and SAW-TOOTHED GRAIN BEETLE adults light in stored barley at Mitchellville, Prince Georges County. (U. Md., Ent. Dept.).

### BENEFICIAL INSECTS

LADY BEETLES - GEORGIA - Chilocorus stigma (twice-stabbed lady beetle) very effective natural control of infestation of Phenacaspis sp. in Fannin County. (South. For. Pest Rptr., Oct. Summ.). ALABAMA - Gin trash samples collected in Randolph County showed high numbers of Coleomegilla maculata fuscilabris and Hippodamia convergens (convergent lady beetle), with latter species being twice as numerous as former species. (Barwood, Brackeen).

A GROUND BEETLE (Calosoma sycophanta) - ALABAMA - Considerable numbers of adults emerging in grassy areas previously infested with Pseudaletia unipuncta (armyworm) in Lee County. (Barwood).

DAMSEL BUGS (Nabis spp.) - WYOMING - Adults averaged 18 per 100 sweeps in alfalfa fields of Fremont County. (Marks).

FLOWER BUGS (Orius spp.) - WYOMING - Adults averaged 46 per 100 sweeps in alfalfa fields of Fremont County. (Marks).

A NEMESTRINID FLY (Neorhynchocephalus sackenii) - OREGON - Heavy parasitism by larvae on Melanoplus sanguinipes (migratory grasshopper) on rangeland in 20-mile area between Heppner and Vinson, Morrow County. Parasitism ranged 50-67 percent; very high considering low grasshopper population. Incidence of parasites may become higher; parasitism just well started. (Prescott, Oct. 3).

#### CORRECTIONS

CEIR 14(31):893 - HAWAIIAN INSECT NOTES - ANTHOCORID BUGS - End of line 6 should read Montandoniella...

CEIR 14(40):1107 - SPOTTED ALFALFA APHID (Therioaphis maculata) - WISCONSIN - Last sentence should read: "Sexual forms still absent. (Wis. Ins. Sur.)."

CEIR 14(41):1135 - STATUS OF THE SCREW-WORM (Cochliomyia hominivorax) IN THE SOUTHWEST - Table 2A, 1963 Ratio of Positive Cases to 100 Cases Negative. Change figure for "current cases" from 5.1 to 5,100.0.

#### ADDITIONAL NOTES

NEBRASKA - Considerable WESTERN CORN ROOTWORM (Diabrotica virgifera) adult activity noted in fields of corn in Hall County; tend to concentrate in leaf sheath on lower half of stalk. CORN LEAF APHID (Rhopalosiphum maidis) very light on some corn plants and CORN EARWORM (Heliothis zea) infestation and damage less than 1 percent on corn in Hall County. (Bergman). Lachnus sp. (an aphid) severe on ponderosa pine in Lincoln County. (Pruess).

OKLAHOMA - FALL ARMYWORM (Laphygma frugiperda) damaging young alfalfa in Noble County; averaged approximately 1 per square foot. CORN EARWORM heavy on sweet corn and light on tomatoes in home gardens in Kay County. Unspecified APHIDS heavy on cucumbers and squash in same area. (Okla. Coop. Sur.).

LIGHT TRAP COLLECTIONS

State	Locality	Date	Temp- ture °F	Precipi- tation	Type of trap *	Artocle (black cutworm)	Carposina pomonella (codling moth)	Chorizandra auxiliana (army cutworm)	Heliothis scabra (lett-moth caterpillar)	Perona caryophyllae (wheat head caterpillar)	Polya subtrana (granulate cutworm)	Heliothis virescens (tobacco budworm)	Heliothis zea (corn earworm)	Larvaea trufiperda (fall armyworm)	Locustella comitella (alfalfa weevil)	Locustella striatella (garden webworm)	Locustella striatella (beet webworm)	Locustella striatella (beet webworm)	Oenothera nubifera (Annapurna corn borer)	Peridroma saucia (variegated cutworm)	Prodenia ornithogalli (yellow-tri-pod armyworm)	Prodenia quinquemaculata (tobacco hornworm)	Prodenia sexta (tobacco hornworm)	Phaenocarpa (armyworm)	Spodoptera eximia (beet armyworm)	Trichoplusia ni (cabbage looper)	Major crop **
FLORIDA	Gainesville	10/5			BL																						
GEORGIA	Tifton	9/24-30	54-88	None	BL																						
MISSISSIPPI	Stoneville	10/3-9	37-83	0.04"	MV	4																					
NEBRASKA	Stoneville	10/3-9	37-83	0.04"	BL	4																					
	Chappell	9/17-24				2	39																				
	Bushnell	9/22-28				30	193																				
	Ogallala	9/22-27				1	13																				
	Kearney	9/24-30				14	67																				
	North Platte	9/25-10/1				233	1008																				
NORTH DAKOTA	Fargo	10/2-9				6																					
SOUTH CAROLINA	Charleston	9/28-10/4	68-87	3.48"	BL	28		0		18	1	103	41														
	Charleston	10/5-10	50-79	None	BL	8		0		0	0	13	27														
	Clemson	9/26-10/2				29		0	4	4		72	754														
TEXAS	Waco	10/3-9			BL	10		1		25	0	57	8														
	Brownsville	10/1-6			4 BL	136		5		9	0	2966	1733														
WISCONSIN	Platteville	9/30-10/3			BL	4						15															
	Mazomanie	9/30-10/5			BL	29						14															
	Madison	9/30-10/7			BL	66						42															
	Middleton	9/30-10/7			BL	2						1															
	De Forest	9/30-10/5			BL	6						6															
WYOMING	Laramie	9/10-16					2																				
	Centennial	9/11-17					19																				
	Cheyenne	9/17-23				4	37																				

\* BL = blacklight; I = incandescent; MV = mercury vapor; 0 = other  
 \*\* alf. = alfalfa; beet = garden beet and/or sugar beet; cole = cole crops (crucifers); cott. = cotton; FC = field corn;  
 grain = small grains; leg. = legumes (unspecified); lett. = lettuce; pean. = peanut; pepp. = pepper; pot. = potatoes;  
 SC = sweet corn; sol. = solanaceous plants (unspecified); soy. = soybean; TC = truck crops (unspecified or mixed);  
 tob. = tobacco; tom. = tomato.

STATUS OF THE SCREW-WORM (*Cochliomyia hominivorax*) IN THE SOUTHWEST

During the period October 4 - 10, TEXAS reported 4 screw-worm cases in 3 counties: Hidalgo (1), Brewster (2) and Pecos (1). No cases reported from NEW MEXICO; one case reported from Santa Cruz County, ARIZONA. Republic of Mexico reported 215 cases: Veracruz (8), San Luis Potosi (2), Nuevo Leon (2), Chihuahua (93), Sonora (79), Zacatecas (2), Durango (19), Tamaulipas (9) and Coahuila (1). Sterile screw-worm flies released: Texas 20,974,250, New Mexico 2,888,000, Arizona 4,440,000 and Mexico 72,636,000.

Year	Positive Cases		Negative Cases		Ratio of Positive Cases to 100 Cases Negative	
	Current	Cumulative	Current	Cumulative	Current	Cumulative
1962	1,675	41,437	52	2,498	3,221.1	1,658.8
1963	578	4,484	179	8,488	322.9	81.7
1964	4	119	134	4,837	2.98	2.46

Table 1. Comparison of specimens reported during corresponding weeks in 1962 and 1963 in Southwestern Eradication Area.

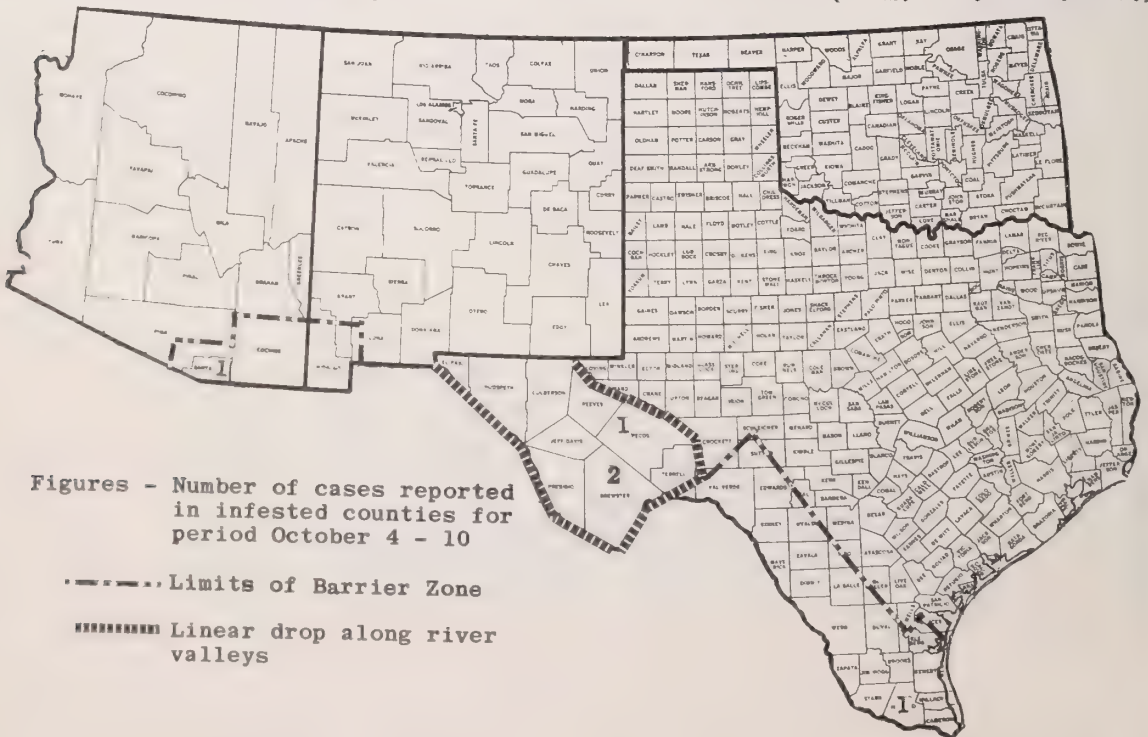
Year	1963		1964		1963	
	Current	Cumulative	Current	Cumulative	Current	Cumulative
1963	390	4,209	37	1,129	1,054.05	372.8
1964	189	2,916	34	1,574	555.8	185.2

Table 2. Comparison of specimens reported during corresponding weeks and in a corresponding area in 1963 in the United States-Mexico Barrier Zone.\*

Year	1963		1964		1963	
	Current	Cumulative	Current	Cumulative	Current	Cumulative
1963	109	1,286	5	155	2,180.0	829.7
1964	184	2,760	6	713	3,066.6	387.09

Table 2A. Mexican portion of Barrier Zone only.

\* Barrier Zone - Area in which screw-worm eradication operations are being carried out in an effort to prevent establishment of self-sustaining screw-worm population in the United States. (Anim. Dis. Erad. Div.).



### HAWAIIAN INSECT NOTES

The following notes on Hawaii insect conditions were presented at the 705th meeting of the Hawaiian Entomological Society held on September 14, 1964.

A GRASSHOPPER (Schistocerca vaga (Scudder)) - The second local specimen of this grasshopper, an adult male, was captured by J. W. Beardsley August 10 on Sand Island, Oahu, in area directly across road from U.S. Coast Guard Station; an additional 8 specimens (3 females and 5 males) were captured August 12 in an area of approximately 50 acres in the immediate vicinity of the U.S. Coast Guard grounds by Beardsley and others. Many additional grasshoppers were noted in the area, but not collected; additional grasshoppers were noted and several collected the following afternoon. A number of other locations on Sand Island, near the airport and in the vicinity of the infested area, were searched with negative results. A single adult female was collected the afternoon of August 18 near the Funai boat works off Sand Island access road; the specimen died after 36 hours. So far, this is the only known specimen collected outside of Sand Island. In laboratory tests, grasshoppers fed readily on sugarcane leaves, Napier grass leaves and leaves of MacArthur palm, and fed slightly on leaves of citrus and pineapple. One female deposited an egg mass in soil, but it is not known if the eggs are viable. Of 4 females and 5 males held alive, only 1 female (collected August 14) remained alive. Several of the other specimens were apparently injured during capture. Inasmuch as this infestation is apparently very localized, it appears that there is a good chance for eradication. (J. W. Beardsley).

Spraying for S. vaga has been completed; approximately 320 acres of vegetation were treated. Of interest was the capture of 5 nymphs of this species, probably third stage, on a common weed (Waltheria americana). Also of interest was the finding of a wingless GRASSHOPPER (Paraidemona mimica Scudder), many of which were feeding on pickleweed (Batis maritima) growing along ditches. (J. Kim).

A PARASITIC TACHINA FLY (Trichopoda pennipes (F.)) was recovered for the first time on the island of Maui. Field recoveries indicated that parasitism of southern green stink bug (Nezara viridula (L.)) was approximately 40 percent. (J. Kim, N. Miyahira).

AN ANTHOCORID BUG (Montandoniella moraguesi Puton), a predator of Cuban-laurel thrips (Gynaikothrips ficorum (Marchal)) and imported from the Philippines by N. Krauss, was recently recovered in the Pauoa area of Honolulu. Many adults and various nymphal stages were observed on leaves of Ficus retusa infested with Cuban-laurel thrips. The initial release of 100 adults of this predator was made June 2, 1964, in this area. From observations, it appears that M. moraguesi has become well established. (J. Kim).

AN APHID (Brachycolus heraclei Takahashi) - A heavy population of this aphid destroyed a celery planting in Lualualei Valley, Waianae, Oahu, the latter part of July 1964. (W. C. Mitchell, J. Kim).

A single adult of a TINEID MOTH (Ereunetis simulans (Butler)) was reared from larvae collected on monkeypod trees at Punchbowl National Cemetery the latter part of August 1964. Larvae were tunneling the bark of these trees; damage to the cambium was noted at several places. Larvae are scavengers feeding on fungi and have not been reported attacking live trees. Another insect species is perhaps involved with the observed damage, which was apparently incidental to feeding by E. simulans larvae in the bark. Det. by J. W. Beardsley. (W. C. Mitchell).

AN OLETHREUTID MOTH (Cryptophlebia ombrodelta (Lower)) - A larva was intercepted boring in a seed pod of Prosopis pallida (kiawe) from Oahu by C. Jones. This is a new host record for this species in the State. (E. S. Shiroma).

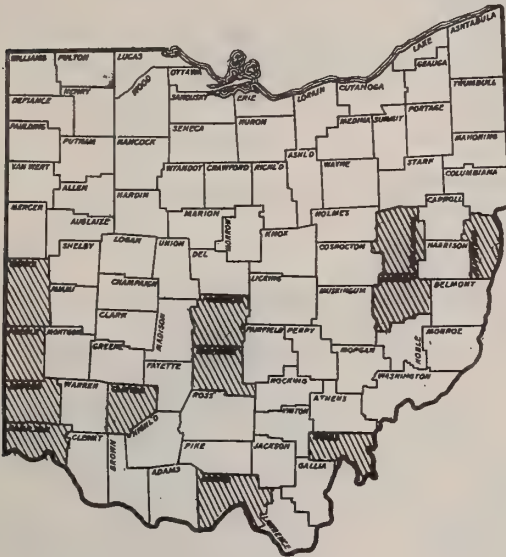
AN APHID (Neophyllaphis araucariae Takahashi), first discovered by B. Hu and N. Neff in Kapoho, Hawaii, on April 28, 1964, has subsequently been intercepted several times on Araucaria excelsa (Norfolk Island pine) being shipped out of the State. (E. S. Shiroma, B. Hu).

CUBAN-LAUREL THRIPS (Gynaikothrips ficorum (Marchal)) was reported from Hawaii on August 16, 1964, infesting banyans in Waiialoa Park, Hilo, Hawaii. This constitutes a new island record as well as a new record for Hawaii County. Of interest were larvae of an undetermined lacewing (Neuroptera) preying on the thrips. (J. Kim, E. Yoshioka).

A BARK BEETLE (Stephanoderes farinosus Blandford) - This beetle borer was reared from dying twigs of Litchi chinensis collected on Oahu. Det. by Dr. S. Wood, Brigham Young University. This is a new State record. (J. Kim, H. Nakao).

Distribution Maps of Some Economic Insects in Ohio

Reproduced on this and the following page are distribution maps prepared in Ohio (additional ARS records, if any, added). These maps give graphic illustration of the known distribution of plant pests. We are pleased to receive this type of information and would like to encourage other States to prepare maps of insect distribution. Such maps will be run as space is available. Distribution records as of October 9, 1964.



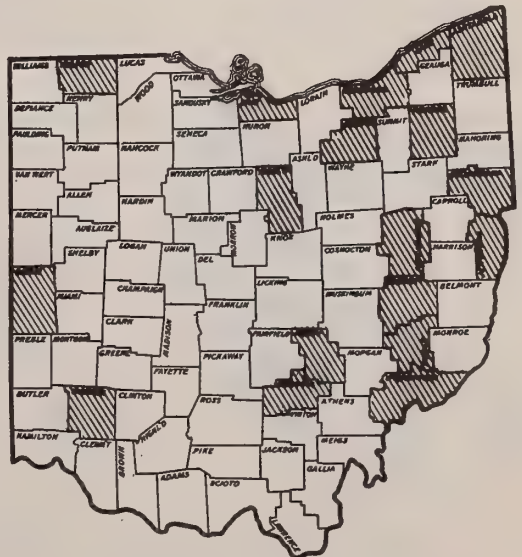
GREEN BUG (Schizaphis graminum)



APPLE FLEA WEEVIL  
(Rhynchaenus pallicornis)



PEAR PSYLLA (Psylla pyricola)



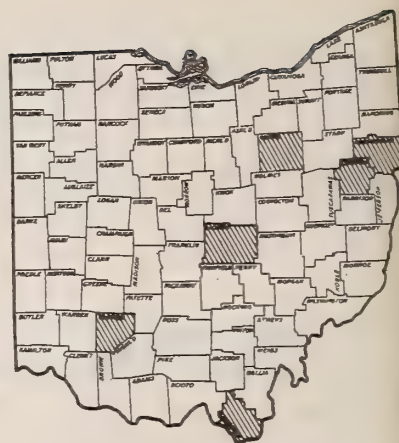
PEAR LEAF BLISTER MITE  
(Eriophyes pyri)



CHERRY FRUIT FLY  
(Rhagoletis cingulata cingulata)



EUROPEAN PINE SHOOT MOTH  
(Rhyacionia buoliana)



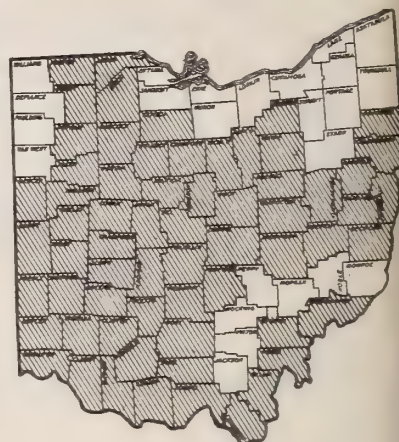
PALES WEEVIL (Hylobius pales)



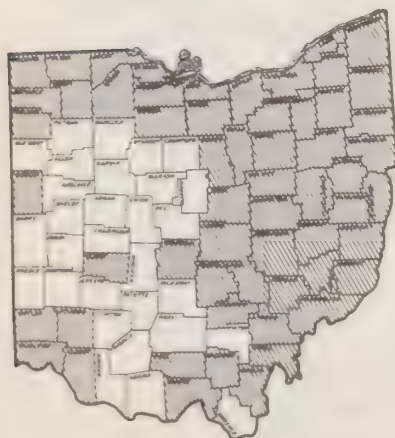
EUROPEAN PINE SAWFLY  
(Neodiprion sertifer)



ASIATIC OAK WEEVIL  
(Cyrtopistomus castaneus)



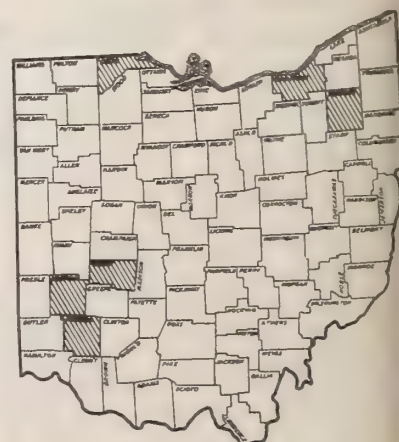
MIMOSA WEBWORM  
(Homadaula albizziae)



ROSE CHAFER  
(Macroductylus subspinosus)



ASIATIC GARDEN BEETLE  
(Maladera castanea)



A GERANIUM PLUME MOTH  
(Platyptilia pica)





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