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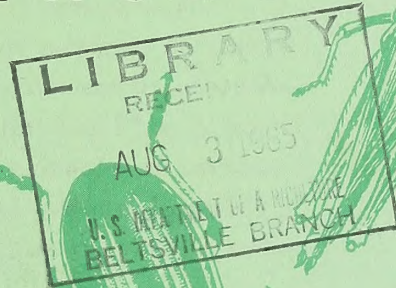
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Cooperative
**ECONOMIC INSECT
REPORT**



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

GRASSHOPPERS damaging regrowth alfalfa, oats and wheat in Wisconsin, moving into corn, soybeans and grain in Minnesota, damaging sweetclover in South Dakota; heavy in southwest and west central Missouri and on rangeland and most crops in several areas of Oklahoma; damaging vegetables in New Mexico. (pp. 847, 848). EUROPEAN CORN BORER spring-generation moth flight nearing peak in northern Wisconsin and pupation underway in southern areas; emergence underway in southern Indiana; second-brood moths noted in Iowa and New Jersey. (p. 849). ARMYWORM migrating in large numbers to corn and sorghum in Colorado and present in oats in Wyoming. Second BLACK CUTWORM adult flight appears greater than that of 1964 in Wisconsin, indicating potential threat if conditions favorable. NORTHERN CORN ROOTWORM adults emerging in Indiana and reported in several other States; root damage and lodging reported. (p. 850). CORN LEAF APHID increased on corn in South Dakota; found on all corn and sorghum in Arkansas Valley of Colorado, abundant on sweet corn in Idaho, heavy on sorghum in Iowa; infesting 50-100 percent of corn checked in several areas of Wisconsin. (pp. 851, 852). ENGLISH GRAIN APHID increased sharply in several areas of Wisconsin, could cause economic losses to wheat; considerable buildup noted in North Dakota. GREENBUG increased sharply in grain in Minnesota; damage apparent in some oats. (p. 852). TWO-SPOTTED SPIDER MITE may become serious on sweet corn in Idaho within 2-3 weeks. (p. 853).

PEA APHID extremely heavy on alfalfa in Minnesota, and heavy in South Dakota, Missouri and New Mexico. (p. 853). SPOTTED ALFALFA APHID increasing on alfalfa in Colorado, Arkansas and Wisconsin. (pp. 853, 854). LYGUS BUGS increasing on alfalfa in Arizona and Idaho, high in Nevada; remain problem on cotton in California. (pp. 854, 865). POTATO LEAFHOPPER yellowing second-growth alfalfa in northern Indiana and yellowing more evident in Wisconsin; damage evident on alfalfa in Maryland. (p. 854). ALFALFA WEEVIL damage heavy on first-crop hay in New Mexico, and damage to alfalfa in Utah heaviest in 10 years. (pp. 854, 855).

CODLING MOTH damaging apple and pear in New Mexico; second-brood larval entrances expected about July 25 in eastern New York. Second-brood larvae of RED-BANDED LEAF ROLLER and ORIENTAL FRUIT MOTH noted in Connecticut and New York, respectively. (p. 856). General increase in APPLE MAGGOT adult emergence reported in several areas. (pp. 856, 857). EUROPEAN RED MITE troublesome in apple-growing areas. (p. 857). BLACK SCALE at highest level in 15 years of record on Florida citrus. (p. 858). POTATO APHID heavy on commercial potatoes on Eastern Shore of Maryland. (p. 860). CABBAGE LOOPER and IMPORTED CABBAGEWORM increasing on crucifers. (p. 861). PEA APHID populations fluctuate on peas in Wisconsin. (p. 862). GREEN PEACH APHID continues to increase on tobacco in Maryland. (p. 863).

BOLL WEEVIL infestations increasing on cotton in several cotton-producing States. (pp. 863, 864). SPIDER MITES a problem on cotton in delta area of Mississippi and in Fresno County, California. (p. 866).

SUGAR-PINE CONE BEETLE causing widespread damage to sugar pine on Klamath National Forest, California, and WHITE-PINE WEEVIL seriously damaging white pine on Arnot Forest, New York. JACK-PINE BUDWORM caused heavy defoliation on Beltrami Island State Forest, Minnesota. (pp. 867, 868). ELM LEAF BEETLE continues serious in several areas. (pp. 868, 869). LOCUST BORER serious in Iowa and Utah. FALL WEBWORM increasing and BAGWORM heavy in some Southern States. (p. 869, 871). MOSQUITOES remain troublesome to man and livestock in some areas. (p. 872).

(Continued on page 846).

DETECTION

New State records reported include: EUROPEAN APPLE SAWFLY (Hoplocampa testudinea) in New Hampshire (p. 857); EUROPEAN RED MITE (Panonychus ulmi) in Colorado (p. 857); a SPIDER MITE (Tetranychus mcDanieli) in New Hampshire (p. 863); LARCH SAWFLY (Pristiphora erichsonii) in Oregon (p. 867); BIRCH LEAF MINER (Fenusa pusilla) in Iowa (p. 870); a SOFT SCALE (Pulvinaria ericicola) in Ohio (p. 870); HOLLYHOCK WEEVIL (Apion longirostre) in Utah (pp. 871, 872); a WHITE-FRINGED BEETLE (Graphognathus leucoloma striatus) in Maryland (p. 875); a PTEROMALID WASP (Cecidostiba dendroctoni) from Mississippi (p. 875). New county records included: HOLLYHOCK WEEVIL (Apion longirostre) in Cache, Utah, Juab, Salt Lake and Davis Counties, Utah, (pp. 871, 872); FACE FLY (Musca autumnalis) in Vernon County, Missouri, (p. 873); and WHITE-FRINGED BEETLES (Graphognathus spp.) from Rutherford County, Tennessee, (p. 875).

CORRECTIONS

See page 876.

SPECIAL REPORTS

Survey to Determine Wireworm Damage to Potatoes During Spring 1965 in Vicinity of Charleston, South Carolina. (p. 860).

Status of the Screw-worm in the Southwest. (p. 880).

Reports in this issue are for week ending July 23 unless otherwise indicated.

WEATHER OF THE WEEK ENDING JULY 27

HIGHLIGHTS: (1) Long-term drought continues, Northeast. (2) Extremely heavy showers at Denver, parts of Missouri, Kentucky, and Tennessee. (3) Hot and humid in most areas east of Rockies.

TEMPERATURE: Hot, humid tropical air pushed northward over the Great Plains and brought temperatures in the high 90's as far north as North Dakota. Pierre, Philip, and Huron, South Dakota, registered 107° on Thursday afternoon before cooler, drier, polar continental air pushed southward from Canada, dropping the temperatures over the northern Great Plains to the 80's and 90's. Ninety-degree temperatures were common near Lake Michigan on Friday and in the Northeast over the weekend. It was the hottest week of the year in Oklahoma. Dew point temperatures were generally in the 70's in the warm air and in the 50's and 60's in the cool air. Temperatures averaged below normal over the western and eastern thirds of the Nation and above normal over the middle third. Most of Idaho and nearby portions of Washington, Oregon, and Montana averaged more than 6° cooler than normal but departures were smaller elsewhere.

PRECIPITATION: There were no important changes in the drought situation in the Northeast. The light sprinkles missed many areas. A few spots received 0.25-0.50 inch of rain but more rain was needed. Thundershowers were scattered over most of the Nation but in most cases produced only light amounts of rain. Wide areas in California and Texas received no rain. Much of the Nation received less than 0.75 inch. A few spots received more than 2 inches. Over 5 inches fell at Denver, Colorado. Heavy rains continued over portions of northwestern and west central Missouri, bringing storm totals in the northwest portion to more than 20

(Weather continued on page 876).

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - WISCONSIN - Development of Melanoplus femurrubrum (red-legged grasshopper) showed little change since report in CEIR 15(30):816, although few adults appearing in more advanced areas of State. Populations somewhat lower in southern areas than in 1964 but appear higher in northern Grant, Iowa and southern Sauk Counties. Dissosteira carolina (Carolina grasshopper) adults common along roadsides; first noted week ending July 16. M. sanguinipes (migratory grasshopper) adults noted causing serious damage to kernels of oats and wheat at several locations near Spring Green, Sauk County; some damage to regrowth alfalfa reported in Fond du Lac County. Nymphs of M. femurrubrum appearing in Eau Claire and Ashland Counties. (Wis. Ins. Sur.). MINNESOTA - Grasshopper movement from roadsides and field margins into corn, soybeans and grain noted in southwest, west central and central districts. Averaged 45 per square yard in one Lac qui Parle County field margin; ranged 18-27 per square yard in adjacent oats and corn, extending 3 rods into fields. Leaf feeding very heavy on oats. M. differentialis (differential grasshopper) predominant species, with nymphs in fourth and fifth instars. Movements into crops also noted in Pipestone, Lyon and Redwood Counties; damage light but will increase. M. femurrubrum dominant species in these counties, but M. differentialis and M. bivittatus (two-striped grasshopper) noted. M. femurrubrum and M. differentialis nymphs generally in second to fourth instars, with high percentage of fifth instar nymphs of M. differentialis present in some fields. Few adults of M. bivittatus observed. Few high grasshopper counts found in few fields in Fillmore, Mower and Olmsted Counties; highest counts found in alfalfa and ranged up to 27 M. femurrubrum per square yard. Highest grasshopper counts present in Pope, Swift, Chippewa and Lac qui Parle Counties in west central district, but populations rather scattered. Counts low in northwest district. (Minn. Ins. Rpt.).

SOUTH DAKOTA - On rangeland during week ending July 12, grasshoppers ranged 3-8 per square yard on Miller Ranch along Moreau River in Dewey and Ziebach Counties, 1-6 in Haakon and Meade Counties and 1-10 in Short Pines area of Harding County. Ageneotettix deorum, Aulocara spp., M. sanguinipes and M. packardii (Packard grasshopper) were species observed; mostly third and fourth instars. Grasshoppers ranged 6-15 per square yard week ending July 16 in range areas near Custer, Custer County, with few adults noted. Species included A. deorum, Aulocara spp., M. occidentalis and M. bivittatus (two-striped grasshopper). (Burge). Grasshoppers averaged 1-2 per square yard in field margins, alfalfa and in brome and grass pastures in Kingsbury, Clark and Codington Counties. West of this area in Beadle County, numbers varied 1-3 per square yard in brome hay and field margins and 5-7 in alfalfa. Up to 15 per square yard counted in alfalfa in Sanborn County, with 4-5 per square yard noted in field margins; averaged 5 per square yard in oat stubble in area. Second to third instars of M. femurrubrum comprised 75 percent of population. (Novotny, Jones, July 19). Ranged 8-20 per square yard in Pennington County and average 10 per square yard in Jones County on soil bank lands. Species included M. differentialis, M. bivittatus, M. sanguinipes and M. femurrubrum. Some M. bivittatus and M. sanguinipes adults present. (Burge, Gardner, Zimmerman, July 19). Grasshoppers ranged 25-30 per square yard in 40-acre field of sweetclover with considerable damage evident east of Gregory, Gregory County; population of 30-35 per square yard stripped alfalfa or sweetclover in 100-acre field east of Mosher, Mellette County; 20 grasshoppers per square yard caused some damage to sorghum adjoining brome-soil bank field north of Ravina, Charles Mix County. Generally, however, grasshoppers averaged 2-3 per square yard in fields and margins in Bon Homme, Gregory and Charles Mix Counties. Species in order of prevalence, M. differentialis, M. bivittatus and M. femurrubrum. (Novotny). Grasshoppers ranged 20-30 per square yard along field margins of corn in Hutchinson County. (Jones, Kantack). NORTH DAKOTA - Grasshopper nymphs ranged from less than 1 to 12 (average 2) per square yard in field margins in Burleigh, Logan, Emmons, McIntosh, Dickey, La Moure, Ransom, Sargent and Richland Counties; field counts ranged from less than 1 to 12 (average 1) per square yard. M. bivittatus and Camnula pellucida (clear-winged grasshopper) dominant species; ranged second instar to adult, mostly third instar. (Scholl). Grasshoppers ranged 2-15 per square yard in Renville, Burke, Williams, McKenzie, Dunn, Pierce, McHenry, Wells and Sheridan Counties. M. bivittatus dominant species. (Cushing).

NEW MEXICO - Grasshoppers causing minor damage to several fields of alfalfa checked near Farmington, San Juan County; counts per 25 sweeps ranged 5-7 at Farmington and 2-5 at Laplata. Light to heavy numbers feeding on foliage and flowers of vegetables in San Juan County. (Heninger). UTAH - Grasshoppers troublesome over much of Salt Lake County. Many homeowners applied controls; much roadside and school lands treated. Hatching still underway. Troublesome in Carbon County about homes especially at Price, Helper and Wellington. All stages of Aulocara elliotti, Melanoplus sanguinipes, M. bivittatus and Trimerotropis sp. present on farms and in foothills of Salt Lake, Box Elder and Cache Counties; nymphal damage to alfalfa, berry crops and flowers about homes increasing in many localities. (Knowlton). Controls applied to 2,000 acres in Kanarraville area, Iron County. Grasshoppers just hatching on 300 acres of rangeland on Cedar Mountain. (Sjoblom, Knowlton). NEVADA - M. sanguinipes adults and late-instar nymphs per square yard ranged 15-20 along field margins and 2-3 within several fields of alfalfa in Fallon, Churchill County. (Martinelli). CALIFORNIA - Grasshoppers infesting 2,000 acres of lower Tulelake game refuge in Siskiyou-Modoc County area; scheduled for aerial treatment later in July. (G. Harmon). OKLAHOMA - Limited surveys in Cherokee and Tulsa Counties revealed adults of several species ranged 15-20 per square yard in crop margins and improved pastures. M. bivittatus, M. differentialis and Hesperotettix speciosus dominant species. M. differentialis and M. bivittatus ranged 10-15 per square yard in pastures in Garvin County. Unspecified grasshoppers reported moderate to heavy on rangeland and most crops in Mayes, Ottawa, Grady, Murray, Washita and Woodward Counties. (Okla. Coop. Sur.). ARKANSAS - Heavy, local population of M. differentialis caused considerable ragging of soybean leaves in a Washington County field. (Ark. Ins. Sur.). MISSOURI - Adult and nymphal grasshopper populations heavy in isolated fields in southwest and west central districts. M. differentialis adults ranged 10-15 per square yard in fence row of field in Vernon County and entering field. In Jasper, Barry and Greene Counties, M. differentialis, M. bivittatus and M. femurrubrum ranged 20-25 per square yard in margins and 10-15 in fields in some pastures and corn; noneconomic in most fields checked. (Houser). OHIO - Nymphs, predominantly M. femurrubrum, numerous on forage crops and stubble in Fairfield, Meigs and Perry Counties; averaged 1 per sweep in field of alfalfa in Meigs County. (Rose). ALABAMA - Grasshoppers present in large numbers in pastures, along roadsides and on wasteland in much of Coosa and Clay Counties. Romalea microptera (eastern lubber grasshopper) noted in light numbers in same area. (Barwood).

SOD WEBWORMS - RHODE ISLAND - Injury to lawn and adults observed in Lincoln, Providence County. (Veilleux). NEW JERSEY - Activity quite common in central counties. (Ins.-Dis. Newsltr.). UTAH - Adults extremely numerous in Salt Lake, Weber, Box Elder and Cache County localities. (Knowlton). ARIZONA - Severe damage by Crambus spp. found in some lawns in Tucson area, Pima County. (Ariz. Coop. Sur.).

TENT CATERPILLARS - CALIFORNIA - Undetermined species damaging 10-15 percent of bitterbrush bushes along State Highway 36 west of Susanville, Lassen County. (J. Hoefler, USFS).

JUNE BEETLES - GEORGIA - Adults of Cotinis nitida (green June beetle) very heavy in pastures in Franklin County. (Ashworth). NEVADA - Polyphylla sp. adults very numerous in lower Clear Creek area, Ormsby County. (Bechtel, Martinelli).

A BILLBUG (Sphenophorus sp.) - NEW JERSEY - Infestation of turf found in Middlesex County. (Ins.-Dis. Newsltr.).

A PLANT BUG (Irbisia solani) - CALIFORNIA - Various stages infested 300 acres of planted grasses in burned-over area on San Bernardino National Forest. Heavy numbers severely damaged 40 acres; currently subsiding. (H. Graham, USFS).

SPITTLEBUGS - GEORGIA - Heavy on Coastal Bermuda grass for silage in Washington County. (Gilmore). Infesting 110 acres of Coastal Bermuda grass in Spalding County; severe on 30 acres. (Tippins). Nymphs numerous on Coastal Bermuda grass in an unspecified area. (Beck).

EUROPEAN CORN BORER (Ostrinia nubilalis) - INDIANA - Adult emergence well underway in southern third of State; 238 adults taken in blacklight trap in Posey County July 9-16. Infestations of fourth and fifth-stage larvae ranged 2-60 (average 4-8) percent in eastern half of State. (Huber). Infestations range 2-6 percent in fields checked in west central and northwest areas. (White). MICHIGAN - Some young larvae detected boring into sweet corn in Berrien County. (Ruppel). ILLINOIS - Pupation of first generation varies 33-75 percent in area from St. Louis north to State Route 6; some adults already emerged and emergence and egg laying will continue for next 3 weeks. First-generation populations low in area; populations ranged 0-3 larvae per 100 stalks except in extreme western area where average population per county ranges from 8 to maximum of 12 larvae per 100 stalks. Control for second generation will be profitable only in certain fields of sweet corn, some hybrid production fields and extremely late maturing fields. (Ins. Sur. Bul.). IOWA - Annual survey to determine abundance of first brood conducted July 14-16; averaged 27.8 percent of plants infested with average of 38.5 borers per 100 plants, compared average of 31.9 percent plants infested with average of 52 borers per 100 plants in 1964. Dissections in Boone County July 16 showed average of 17 borers per 100 plants. First adult emergence at Ankeny noted July 14 and 3 second-brood adults taken in light trap July 15; at Hamburg 3 taken July 14. (Iowa Ins. Inf.). WISCONSIN - Pupation underway in southern areas. Dissections revealed pupation of 20 percent in both Green and Sauk Counties; no pupation indicated in Grant County. Most larvae feeding in tassel areas of corn except in drier areas where feeding more common in stalks. Few early fields heavily infested although most infestations less than 10 percent. Spring generation moth flight apparently nearing peak in more northerly areas. (Wis. Ins. Sur.). MINNESOTA - Egg masses still found in west central district, but counts low. Number of infested plants per 100 averaged as follows by district: Southwest 17, south central 10, southeast 3, west central 19, central 7. (Minn. Ins. Rpt.).

SOUTH DAKOTA - Damaged 40-50 percent of corn plants examined in Charles Mix County; up to 75-80 percent of whorls damaged in single plants. Larvae in second instar and entering stalks. (Jones, July 16). NEBRASKA - First-brood pupation ranges 45-60 percent in central area; no adult emergence observed. (Rhine, Roselle). DELAWARE - Adults averaged 5 per night in blacklight trap collections in Sussex County. (Burbutis, Woodall). NEW JERSEY - Second-brood moths appearing in Middlesex County. Egg laying can now be expected in southern counties. (Ins.-Dis. Newsltr.). NEW YORK - Mostly fifth instars and pupae noted in sweet corn in Hudson Valley. Moths which lay eggs for second brood emerging; first collected July 17. (N.Y. Wkly. Rpt.). VERMONT - Controls necessary to prevent injury to sweet corn. (MacCollom, July 19).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - ARKANSAS - Adult emergence averaged 20 percent in southeast area; these adults will produce third generation. (Ark. Ins. Sur.).

CORN EARWORM (Heliothis zea) - VERMONT - Controls still necessary to protect sweet corn from injury. (MacCollom, July 19). NEW YORK - Occasional large larva noted in harvested ears of sweet corn in Hudson Valley. No moths taken in light trap at Poughkeepsie, but emergence from overwintered pupae in cartons increased. (N.Y. Wkly. Rpt., July 19). RHODE ISLAND - Heavy in unsprayed sweet corn in Smithfield and Johnston, Providence County. (King). NEW JERSEY - Continued protection of corn recommended for remainder of season. (Ins.-Dis. Newsltr). ALABAMA - Larvae heavy and pupating in fields of early corn in Monroe, Greene and Perry Counties. Moths appearing and eggs being laid on cotton, grain sorghum and other crops. (Hawkins et al.). ILLINOIS - None found in whorls or on silks of corn in northwest, west or east districts; larvae ranged 0-4 (average 0.1) per 100 silks on field corn in west-southwest. (Ill. Ins. Rpt.). OKLAHOMA - Larvae moderate and reported damaging peanuts in Choctaw County. Moderate (21 per 100 terminals) on peanuts in Tulsa County and light (4 per 100 terminals) in Creek County. Reported moderate on corn in Washita County. (Okla. Coop. Sur.). NEW MEXICO - Light to moderate in field corn at Farmington, San Juan County. (Heninger). COLORADO - Trace numbers found on corn in Lucerne area, Weld County. (Urano). UTAH - Larvae infested 10

percent of tassels in field of sweet corn in northern area; eggs on newly formed silks very low. Early market corn comparatively free of injury. (Dorst). NEVADA - Young larvae of this and Prodenia praefica (western yellow-striped armyworm) light and spotted in alfalfa in Fallon and Swingle Bench areas, Churchill County. (Cooney, Martinelli).

ARMYWORM (Pseudaletia unipuncta) - COLORADO - Large numbers migrating from grassland and small grains to corn and sorghum in several areas of Otero County. (Schweissing). Quite generally distributed in eastern area of State. (Jenkins). Serious on barley in Weld and Larimer Counties; controls required. (Konkite, Jenkins, Hantsbarger). WYOMING - Large numbers present in oats in Platte and Goshen Counties; ranged 2-8 (average 5.5) larvae per square foot. Ranged 0-1 (average 0.25) per square foot in alfalfa in area. (Marks). NEBRASKA - Larvae ranged 5-15 per square foot in oats in Alliance area, including portions of Scotts Bluff, Sheridan, Sioux and Box Butte Counties. (Andersen). MINNESOTA - Larvae appearing in barley in northwest; third-stage larvae ranged from trace to 1 per square yard. Lodged areas in fields should be checked. (Minn. Ins. Rpt.). DELAWARE - Adults averaged 20 per night in blacklight trap collections in Sussex County. (Burbutis, Woodall).

FALL ARMYWORM (Spodoptera frugiperda) - WYOMING - Light to moderate numbers causing some damage to field and sweet corn in Platte County; average of 4 plants in 100 found infested. Det. by F. A. Lawson. (Marks). COLORADO - Found on corn in all areas of Arkansas Valley; infestation averaged 5 percent or less, but as much as 20 percent in some fields in isolated areas. Most larvae about to pupate. Controls erratic. (Schweissing). FLORIDA - Few larvae noted on sugarcane at Apopka, Orange County, July 8; infested approximately 1 percent of 2,000 plants inspected. (Musgrove).

BLACK CUTWORM (Agrotis ipsilon) - WISCONSIN - Large numbers of adults continue to be taken in several blacklight traps. Second flight appears to be greater than that of 1964 season, indicating potential threat if conditions favorable. Much depends on attractiveness of grasses compared with that of crops where high populations present. (Wis. Ins. Sur.).

LESSER CORNSTALK BOERE (Elasmopalpus lignosellus) - GEORGIA - Heavy in young corn in Franklin County. (Jordan).

SORGHUM WEBWORM (Celama sorghiella) - ALABAMA - Light numbers observed on heads of grain sorghum in Perry County. (McQueen).

NORTHERN CORN ROOTWORM (Diabrotica longicornis) - WISCONSIN - Recently emerged adults noted in Spring Green area, Sauk County. Peak emergence will not occur for several weeks. (Wis. Ins. Sur.). MISSOURI - Averaged 6-7 (range 1-13) adults per silk mass on field of continuous corn in Linn County where no soil insecticide used. (Peters, Thomas, Craig). ILLINOIS - Adults per 100 corn plants by district as follows: Northwest, 0-32 (average 3.2) on 0-20 (average 2) percent of plants; west, 0-408 (average 31.3) on 0-60 (average 7.06) percent of plants; east, 0-20 (average 2.7) on 0-20 (average 2.2) percent of plants; beetles ranged 0-36 (average 4.0) in central and 0-20 (average 1.5) in west-southwest areas per 100 corn plants. (Ill. Ins. Rpt.). INDIANA - Adults emerging throughout State. Averaged as high as 10-12 per silk in some localized areas of southeast and east central sections. Generally, adults averaged 1-2 per silk and infestations ranged 15-30 percent of fields checked. (Huber). Heavy larval population caused lodging of 20 percent of 300-acre field of popcorn 3 feet tall in Newport area of Vermillion County. (Lehker). OHIO - All stages reported on corn in Van Wert County; some root systems so weakend plants easily pulled by hand. Late-planted corn most severely infested, especially if field continuously in corn. (Polivka). Adults reported on corn near Wapakoneta, Auglaize County. (Brown). Approximately 70 percent of corn plants inspected in field near Reedsville, Meigs County, with one or more beetles present, occurred over most of plant, in silk, at bases of leaves, around tassels. (Rose). NEW YORK - Ranged 1-20 per corn plant in Cayuga County; pupation underway. Some corn varieties appear particularly susceptible to attack. (N.Y. Wkly. Rpt., July 19).

SOUTHERN CORN ROOTWORM (Diabrotica undecimpunctata howardi) - ILLINOIS - Adults not observed on corn in northwest. Counts per 100 plants in other districts as follows: Northwest, 0-28 (average 2.6); west, 0-28 (average 5.4); central, 0-12 (average 1.44); west-southwest, 0-88 (average 10.1). (Ill. Ins. Rpt.). NEBRASKA - Few adults observed in central area; averaged less than one per 5 stalks. (Rhine, Roselle). GEORGIA - Adults numerous in fields of peanuts in Early and Terrell Counties. (Morgan).

WESTERN CORN ROOTWORM (Diabrotica virgifera) - SOUTH DAKOTA - Small numbers of adults emerged, with 7 and 10 per plant noted in McCook and Yankton Counties, respectively. (Jones, July 19). NEBRASKA - Larvae present in small numbers; pupation and adult emergence proceeding rapidly. Adults ranged 15-20 per plant on sweet corn interplanted with field corn in Platte County. Recovery of corn from larval damage excellent due to moisture. (Rhine, Roselle).

CORN ROOTWORMS (Diabrotica spp.) - SOUTH DAKOTA - Adults emerging in numbers over southern area. Heavy adult populations expected over wide area and some controls may be necessary. Necessity for control to protect silks for proper pollination will depend on adult numbers and degree of silk feeding damage during pollination. (Kantack, July 19). IOWA - Causing problems in western third of State where proper controls not applied. Seriously damaged field of corn in Taylor County; 60-70 percent of plants wilting and lodging; no controls used on second-year corn following soybeans. Averaged 5 per corn plant at Newell, Buena Vista County; damage severe; rain scarce and root growth poor. (Iowa Ins. Inf., July 19). MINNESOTA - Most larvae in second and third stages; prepupae and pupae present in most fields. Light emergence of D. longicornis (northern corn rootworm) noted in Wright County. Excellent moisture conditions aided in growth of new roots on damaged corn plants. Few heavily damaged, though stunted, fields showing good recovery. (Minn. Ins. Rpt.).

CEREAL LEAF BEETLE (Oulema melanopa) - ILLINOIS - Controls applied to 10,546 acres July 1-3 for suppression in 3 known infested counties as follows: Will 2,375, Kankakee 4,075 and Vermilion 4,096. Treatments covered all areas where beetles found in State. Second treatment applied July 8 to 320 acres in Vermilion County and 320 acres in Kankakee County in areas where larvae found. (Lanier). INDIANA - In St. Joseph and La Porte Counties, 75-80 percent of summer adults from oats entered aestivation. (Wilson). MICHIGAN - Activity very low, except in extremely late oats where few eggs and some light larval activity noted. (Dowdy).

A SAP BEETLE (Glischrochilus quadrisignatus) - WISCONSIN - Adults becoming more common in fields of corn where associated with Ostrinia nubilalis. (Wis. Ins. Sur.). ILLINOIS - Adults varied 0-164 (average 18) per 100 corn plants in east district. (Ill. Ins. Rpt.). OHIO - Reported on sweet corn in Auglaize County. (Brown, Delaplane). Although common on field corn over much of State, not usually numerous on plants unless aphids or Ostrinia nubilalis also present. (Rose).

CORN LEAF APHID (Rhopalosiphum maidis) - IDAHO - Abundant and general on leaves and stalks of sweet corn in Canyon County. Some predator control evident. (Bechtolt). Heavily damaged whorls and newly emerged tassels of milo at Huston, Canyon County. Lady beetles, lacewings and syrphid fly larvae abundant. (Homan). NEVADA - Varied 10-150 per sweep on grain in Mason Valley, Lyon County. (Cooney). COLORADO - Can be found in all corn and sorghum fields in Arkansas Valley; however, lady beetle populations (all stages) high and aphid numbers considered unimportant. (Schweissing). WYOMING - Noted for first time this season on corn plants in Platte County; fields averaged 15 percent infested. (Marks). NEW MEXICO - Light on barley near Laplata, San Juan County. (Heninger). NEBRASKA - Large numbers present on whorls of sorghum; light on tassels of corn. No damage indicated. (Rhine, Roselle). SOUTH DAKOTA - Numbers increased on corn in Hutchinson County (see CEIR 15(29):781). Averaged over 300 per tassel on corn in McCook County. (Nearman, July 19). MINNESOTA - Found on all cornstalks checked for Ostrinia nubilalis (European corn borer) in southwest, south central, southeast, west central and central districts; numbers light on whorls and emerging tassels. (Minn. Ins. Rpt.). WISCONSIN - Infested 50-100 percent of corn plants examined in eastern Dane, northern Dodge, portion of Fond du Lac, Sheboygan, Calumet,

Winnebago and Green Lake Counties. More variation exists in southwest area, with some fields heavily infested and others free of aphids. Winged forms becoming more numerous; some mummies appearing. Few lady beetles noted. Colonies forming on silks and ear tabs on some sweet corn. (Wis. Ins. Sur.). IOWA - Heavy on sorghum in Woodbury County; averaged 500 per plant on 25-30 inch plants. Heavy on corn in Crawford County. (Iowa Ins. Inf., July 19). MISSOURI - Infesting nearly 100 percent of corn plants observed in west central and southwest districts, but numbers remain low (5-50 per plant). (Houser). ILLINOIS - No colonies found on corn plants in northwest; colonies present on 0-4 (average 0.47) percent of plants in west district, 0-20 (average 1.4) in central district, 0-40 (average 5.67) percent in east district and 0-12 (average 1.5) percent of plants in west-southwest district. Infestation varies from very small colony to heavy populations discoloring leaves or tassels of plants. (Ill. Ins. Rpt.). INDIANA - Generally light throughout State. As high as 80 percent of corn infested in some fields in southernmost counties, but heavy to severe populations average only 1-2 percent of total corn infested. (Saugstad). Isolated, light to moderate infestations present as far north as Wells County area, northeast. Ranged 10-50 per tassel on most infested plants, with occasional plant having up to 3,000 aphids. (Huber). OHIO - Populations, apparently Rhopalosiphum maidis increasing on field corn; in field near Ashville, Pickaway County, aphids present on approximately 50 percent of plants inspected; concentrations of aphids on one-third of these plants so great that parts of leaves and stalk concealed. About 70 percent of corn plants in field in Meigs County infested but instances of great concentrations of aphids fewer on individual plants. Winged forms noted in both fields. Lady beetles and few syrphid fly larvae found feeding on aphids. (Rose). Increased numbers of aphids reported on field corn near London, Madison County. (Wood). NEW YORK - Appearing in tassels of sweet corn in Hudson Valley. (N.Y. Wkly. Rpt., July 19). MARYLAND - Light to date on field corn but expected to increase in all sections. (U. Md., Ent. Dept.). ALABAMA - Heavy on grain sorghum in Perry County. Large numbers of Chrysopa oculata (golden-eye lacewing), Hippodamia convergens (convergent lady beetle) and Coccinella novemnotata (a lady beetle) feeding on aphids. (McQueen).

ENGLISH GRAIN APHID (Macrosiphum avenae) - MINNESOTA - Populations increased sharply in some grain fields in west central, southwest, central, southeast and northwest districts. Increases not evident in all fields, generally only in more advanced fields well headed out and beginning to turn; ranged 80-2,240 per 100 sweeps. Present on ripening heads of wheat and could cause economic loss. Predators very numerous in some fields; may aid in reducing aphid numbers. Evaluation of predator population and time of harvest should be considered before application of control measures. (Minn. Ins. Rpt.). NORTH DAKOTA - Considerable buildup occurred on wheat in southeast and east central areas. Treatment not recommended at present. (Frye, Thomasson). NEVADA - Very light on grain in Mason Valley, Lyon County. (Cooney). IDAHO - Parasitized and diseased aphids noted at Jerome, Jerome County. (Priest). Wheat in eastern half of Twin Falls County heavily infested; many fields treated. (Youtz).

GREENBUG (Schizaphis graminum) - MINNESOTA - Increased sharply in more advanced fields of grain; ranged up to 50 per sweep in some fields of oats in west central district. Damage apparent in some fields. Control probably not justified as harvest will begin soon. (Minn. Ins. Rpt.). TEXAS - Easily found on western wheatgrass (Agropyron smithii) in panhandle area; populations much heavier than during summer of 1964. (Daniels).

CHINCH BUG (Blissus leucopterus) - ILLINOIS - Adults present on 0-8 percent of corn plants out in fields at rate of 0-16 per 100 plants in east district. (Ill. Ins. Rpt.). INDIANA - Adults dispersed and present in alfalfa, soybeans, roadside grasses and corn throughout east central area. (Huber).

WHEAT STEM MAGGOT (Meromyza americana) - SOUTH DAKOTA - Some damage to spring wheat noted in north central and northeast districts. Number of white heads per 100 square feet ranged from low of 11 at Haven, Potter County, to high of 205 at Conde, Spink County. Estimated percent loss ranged from 0.5 at Haven to high of 8 at Conde. (Kieckhefer).

WHEAT STEM SAWFLY (Cephus cinctus) - MICHIGAN - Some light damage to mature wheat noted in 4 fields in Monroe County. Downed stalks averaged less than 1 percent in 3 fields, approximately 1 percent in other field checked. (Laser, Newman).

FIELD CRICKETS (Gryllus spp.) - NORTH DAKOTA - Averaged 5 per square yard in margin of field of wheat near Charbonneau, McKenzie County. (Frye, Thomasson).

MOLE CRICKETS - GEORGIA - Destroyed stand of millet in southern part of State. (Jordan).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - COLORADO - Very small numbers noted on lower leaves of corn in Bent and Otero Counties. May not be problem this season. (Schweissing). IDAHO - Population of 1-8 per leaf reported in alfalfa seed field near Parma, Canyon County. (Waters). Abundant and general on sweet corn in Canyon County; may become serious problem within 2-3 weeks. (Bechtolt).

PEA APHID (Acyrtosiphon pisum) - MINNESOTA - Populations on alfalfa so high accurate counts cannot be obtained; estimates for all districts range 500-15,000 per 100 sweeps. Predators increased but not keeping pace with aphid populations. (Minn. Ins. Rpt.). WISCONSIN - Ranged 15-20 per sweep in alfalfa in northeastern counties, 30-40 per sweep in southern and southwestern counties. Parasities and predators appearing slowly. (Wis. Ins. Sur.). INDIANA - Trace numbers present on third-growth alfalfa in southern half of State; ranged 2-14 per sweep on second-growth alfalfa in northern half of State. (Huber, Saugstad, White). MISSOURI - Numbers increased slightly on alfalfa in Vernon County; averaged 3,000 per 100 sweeps. (Houser). NEBRASKA - Counts low in alfalfa in southwest and central areas. (Manglitz). SOUTH DAKOTA - Averaged over 6,000 per 100 sweeps in alfalfa west of Arlington, Kingsbury County. (Novotny, July 19). Averaged 60 per 100 sweeps of second-growth alfalfa near Spearfish, Lawrence County. (Jones). WYOMING - Ranged 450-600 per 100 sweeps in alfalfa in Platte, Goshen and Laramie Counties. (Marks). COLORADO - Ranged 0-2,000 per 100 sweeps in alfalfa in Prowers, Bent, Otero and Crowley Counties; this is decrease from previous reports. Aphid predators decreasing. (Schweissing). A. pisum populations leveled off in Mesa County where second cutting underway and numbers very light in Garfield County. (Bulla). NEW MEXICO - Moderate to heavy in alfalfa checked near Farmington, San Juan County, with some damage evident. Lighter population noted in alfalfa near Laplata. (Heninger). UTAH - Population remains light in Iron County. (Knowlton). NEVADA - Generally light in all alfalfa checked in Churchill, Lyon and Pershing Counties; highest count of 100 per sweep found in one field in Mason Valley, Lyon County. (Cooney, Martinelli). MARYLAND - Increasing slightly in alfalfa, up to 50 per sweep, in Frederick County. (U. Md., Ent. Dept.).

SPOTTED ALFALFA APHID (Therioaphis maculata) - WISCONSIN - Increasing noticeably in alfalfa; three to fourfold increases noted in several fields with counts of over 100 per sweep. Winged forms very common in some fields. Colonies present in alfalfa in northern Grant and Iowa Counties not infested during 1964 season. (Wis. Ins. Sur.). ILLINOIS - Averaged 60 per 100 sweeps in field of alfalfa in Ogle County; mostly winged forms. (Ill. Ins. Rpt.). MISSOURI - Averaged 100 per 100 sweeps in alfalfa checked in southwest and west central districts. (Houser). ARKANSAS - Increased on alfalfa due to reduced rainfall; one field in Crittenden County treated. Increasing in northwest area. (Ark. Ins. Sur.). OKLAHOMA - Ranged 300-500 per 10 sweeps in alfalfa in Washita County; reported heavy in Grady County. Ranged 15-280 per 10 sweeps in alfalfa checked in Tulsa, Le Flore, Sequoyah and Payne Counties. (Okla. Coop. Sur.). NEBRASKA - Counts per 50 sweeps in alfalfa by county as follows: Dundy 0-28 (average 6), Red Willow 13-38 (average 25), Howard 3-10 (average 6). (Manglitz). SOUTH DAKOTA - Wingless and winged forms present in alfalfa underplanted in field of wheat west of Arlington, Kingsbury County. No estimate of numbers made, but honeydew easily observed. (Novotny, July 19). Averaged 100 winged and wingless forms per 100 sweeps in alfalfa east of Willow Lake in southeast Clark County. (Jones, July 19). COLORADO - Numbers and distribution on alfalfa increasing in Prowers, Bent, Otero, and Crowley Counties; range 0-50 per 100 sweeps. Aphid predators decreasing. (Schweissing). No T. maculata found on Mesa County alfalfa. (Bulla).

ARIZONA - Spotty populations increasing and affecting alfalfa in Graham County; averaged 8 per trifoliolate leaf. (Ariz. Coop. Sur.). NEVADA - None observed in Lyon or Pershing Counties. (Cooney, Martinelli).

LYGUS BUGS (Lygus spp.) - IDAHO - Increasing on alfalfa in Canyon County; second insecticide applications made on many seed fields, many others should be treated. (Waters). WYOMING - Adults and nymphs ranged 70-85 per 100 sweeps in alfalfa in Platte, Goshen and Laramie Counties. (Marks). COLORADO - Numbers low on alfalfa in Prowers, Bent, Otero and Crowley Counties. (Schweissing). NEW MEXICO - Ranged 5-30 per 25 sweeps in San Juan County alfalfa (Heninger), and 15-35 adults and nymphs per 25 sweeps in alfalfa near Deming, Luna County (Mathews). ARIZONA - Nymphs increasing on blooming alfalfa in Graham, Greenlee and Maricopa Counties; range 600-2,000 per 100 sweeps. (Ariz. Coop. Sur.). NEVADA - Varied 2-50 per sweep in alfalfa in Churchill, Lyon and Pershing Counties. Highest counts found in Fallon and Stillwater areas, Churchill County. (Cooney, Martinelli).

TARNISHED PLANT BUG (Lygus lineolaris) - MARYLAND - Adults moderate on alfalfa in Frederick and Queen Annes Counties. (U. Md., Ent. Dept.).

ALFALFA PLANT BUG (Adelphocoris lineolatus) - INDIANA - Ranged from 3 per 5 sweeps to 8 per sweep in some alfalfa in northern half of State; nymphs and adults approximately equal in numbers. (Huber, White). NEBRASKA - Light in alfalfa in central and southwest areas. (Manglitz). SOUTH DAKOTA - Averaged 42 adults and nymphs per 100 sweeps in second-growth alfalfa near Spearfish, Lawrence County. (Jones).

SAY STINK BUG (Chlorochroa sayi) - ARIZONA - Moderate to heavy infestations of 10-40 per 100 sweeps found in most Graham County alfalfa. (Ariz. Coop. Sur.).

POTATO LEAFHOPPER (Empoasca fabae) - NEBRASKA - Averaged approximately 10 per 50 sweeps in alfalfa in Dundy, Red Willow and Howard Counties. (Manglitz). MISSOURI - Adults and nymphs ranged 100-200 per 100 sweeps in alfalfa in Vernon, Jasper, Barry and Greene Counties. (Houser). WISCONSIN - Populations in alfalfa vary according to time of cutting; exceed 100 per sweep in uncut or early cut fields, numbers much lower in more recently cut fields. Yellowing increasingly more evident. (Wis. Ins. Sur.). INDIANA - Yellowing of second-growth alfalfa apparent in northern half of State. Ranged as high as 16 per sweep (mostly nymphs) in localized portion of area. Adults light on third-growth alfalfa 4-8 inches high in southern half of State. (Huber, Saugstad, White). MARYLAND - Ranged 2-25 per sweep on alfalfa in Frederick and Queen Annes Counties; damage evident in several fields. (U. Md., Ent. Dept.). DELAWARE - Increased noticeably on soybeans in areas of Kent County. (Burbutis, Woodall). NEW YORK - Continues to damage alfalfa throughout State; particularly numerous in southern tier of counties and in Hudson River Valley. Growers urged to treat so as to obtain as much alfalfa as possible this drought year. (N.Y. Wkly. Rpt.). VERMONT - Easily found on legumes in all areas. Some injury noticeable. (MacCollom, July 19).

LEAFHOPPERS - NORTH CAROLINA - Damage becoming noticeable on peanuts in untreated fields in Coastal Plain growing areas. (Robertson). GEORGIA - Moderate to heavy on peanuts in Worth County. (McGill, French).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - OKLAHOMA - Increasing in alfalfa checked in east central area. Ranged 9-15 per 10 sweeps in Muskogee, Sequoyah and Le Flore Counties; ranged 3-4 per 10 sweeps in Tulsa and Payne Counties. Widespread but light in soybeans in east central area. (Okla. Coop. Sur.). ARKANSAS - Minor girdling damage to alfalfa and soybeans reported in eastern area. (Ark. Ins. Sur.).

ALFALFA WEEVIL (Hypera postica) - NEW MEXICO - Very serious on first-crop hay in San Juan County; damage heavy in many fields. (Albert). Average counts per 25 sweeps in San Juan County fields following first cutting of alfalfa as follows: Farmington, 2-9 larvae, 1 adult; Laplata, 1-5 larvae, 1 adult. (Heninger). COLORADO - Very few observed on alfalfa in Mesa County. (Bulla). UTAH - Damage to

alfalfa heaviest in 10 years in Salt Lake County. (Parrish, Knowlton). NEVADA - Larvae and adults low in all alfalfa checked in Churchill, Lyon and Pershing Counties. (Cooney). SOUTH DAKOTA - All stages present on second-growth alfalfa near Spearfish, Lawrence County; third-stage larvae predominate. Larvae ranged 300-400 and adults 60-80 per 100 sweeps in untreated fields. Some damage occurring to second-growth alfalfa, but not anticipated to be substantial if high temperatures of 95-100°F. continue. (Jones). OHIO - First-generation adults averaged 8 per sweep near Canfield, Mahoning County. (Flessel). DELAWARE - Adults still present in alfalfa in most areas of State. (Burbutis, Woodall).

BLISTER BEETLES - OHIO - Epicauta pestifera (margined blister beetle) averaged 1 per 5 sweeps in field of alfalfa near Harrisonville, Meigs County. (Rose). SOUTH DAKOTA - Probably Lytta stygica damaged 5-10 percent of soybean plants in fields in Beadle, Deuel, Lincoln, McPherson, Miner and Yankton Counties. Infestations mostly spotty in fields, thus damage estimated. (Kantack, July 19). MISSOURI - Epicauta sp. adults causing heavy damage in small isolated spots within fields of alfalfa and soybeans in southwest and west central districts. (Houser). OKLAHOMA - E. occidentalis and Epicauta sp. noted feeding on soybeans in Bixby area, Tulsa County. Epicauta sp. reported heavy on soybeans in local areas of Ottawa County. (Okla. Coop. Sur.). NEW MEXICO - Epicauta sp. adults ranged 0-3 per 25 sweeps in San Juan County. (Heninger). IDAHO - E. puncticollis ranged 1-2 per sweep on spring rape in Idaho County. (Cook).

BEAN LEAF BEETLE (Cerotoma trifurcata) - OKLAHOMA - Light numbers noted in all fields of soybeans checked in east central area. (Okla. Coop. Sur.). NORTH CAROLINA - This and Popillia japonica (Japanese beetle) commonly observed feeding on soybeans in Hyde, Washington and Beaufort Counties. Leaf feeding generally noticeable but not sufficient to cause damage. (Mount).

PALE-STRIPED FLEA BEETLE (Systema blanda) - COLORADO - Ranged 50-100 per 100 sweeps on alfalfa in Prowers, Bent, Otero and Crowley Counties. Injury apparent but not generally serious. (Schweissing).

ALFALFA CATERPILLAR (Colias eurytheme) - MARYLAND - Light to medium on alfalfa surveyed in Frederick and Queen Annes Counties. (U. Md., Ent. Dept.). WISCONSIN - Larvae more common in alfalfa in southwest area; averaged 1 per sweep in many fields. (Wis. Ins. Sur.). NEW MEXICO - Light to moderate in San Juan County alfalfa. (Heninger).

WESTERN YELLOW-STRIPED ARMYWORM (Prodenia praefica) - OREGON - Light to heavy in some alfalfa near Grants Pass, Josephine County. Feeding by present generation appears about complete; most larvae beginning to pupate June 22. (Larson). NEVADA - This and Heliothis zea (corn earworm) light and spotted in alfalfa in Fallon and Swingle Bench areas of Churchill County. (Cooney, Martinelli).

GREEN CLOVERWORM (Plathypena scabra) - MARYLAND - Light to medium on soybeans in Queen Annes and Worcester Counties. Moths common in blacklight trap near Snow Hill, Worcester County. (U. Md., Ent. Dept.).

BEET ARMYWORM (Spodoptera exigua) - ALABAMA - Light larval populations feeding on soybeans in Monroe County; also feeding on rough pigweed in fields. (Culpepper et al.).

ALFALFA LOOPER (Autographa californica) - UTAH - Adult catches in blacklight trap at Logan, Cache County, decreased markedly. (Davis, Knowlton).

ZEBRA CATERPILLAR (Ceramica picta) - NEVADA - Early stage larvae varied 2-7 per sweep in several fields of alfalfa in Fallon and Stillwater areas, Churchill County. (Cooney, Martinelli).

RED-NECKED PEANUTWORM (Stegasta bosqueella) - GEORGIA - Larvae averaged 30 per 100 terminals on peanuts in Early County. (Morgan). ALABAMA - Inspection of fields in

Geneva and Houston Counties revealed light infestations. More important Heliothis zea (corn earworm) and Anticarsia gemmatalis (velvetbean caterpillar) not present in any field observed. (Bond).

GARDEN WEBWORM (Loxostege similalis) - MISSOURI - Full-grown larvae averaged 100 per 100 sweeps in alfalfa in west central and southwest districts; damage light. Only occasional web found in most soybeans in same areas, but heavy damage reported in occasional field. Adults plentiful in most fields. (Houser).
ARKANSAS - Second and third-stage larvae present in some fields of alfalfa in Washington County; ranged 150-200 per 100 sweeps of 15-inch net in one field. (Ark. Ins. Sur.).

WEBWORMS (Loxostege spp.) - OKLAHOMA - Reported heavy in alfalfa in Muskogee County; averaged 8 per 10 sweeps in Tillman County. (Okla. Coop. Sur.).

DIAMONDBACK MOTH (Plutella maculipennis) - IDAHO - Larvae ranged 5-10 per sweep on spring rape in Idaho County. (Cook). Adults active in Moscow area, Latah County. (Portman).

FRUIT INSECTS

CODLING MOTH (Carpocapsa pomonella) - CONNECTICUT - Larval damage found on unsprayed trees at New Haven. (Savos, July 21). NEW YORK - Decided increase noted in number of moths taken in bait traps in eastern area July 14 indicating summer-brood moths in flight. New larval entrances expected about July 25. Last moth emerged in cage in Niagara County July 15. (N.Y. Wkly. Rpt.). MICHIGAN - Second-brood adult found in rearing cage in St. Joseph County July 12. (Conrad). UTAH - Occasional adult taken in light trap at Benjamin, Utah County. (Knowlton). NEW MEXICO - Light to heavy numbers damaging apples and pears in improperly or untreated orchards in Farmington-Aztec area, San Juan County. Many trees had 70-95 percent of fruit damaged. (Heninger).

RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) - CONNECTICUT - Adults taken in traps indicate second-generation larvae may be active. Growers with history of late-season problems should check susceptible varieties carefully. (Savos, July 21).

ORIENTAL FRUIT MOTH (Grapholitha molesta) - NEW YORK - Second-brood larvae entering twigs in early zones of Monroe County; still between broods in late zones. Entering peach twigs in Niagara County and eggs readily found in some unsprayed quince orchards. (N.Y. Wkly. Rpt., July 19).

YELLOW-NECKED CATERPILLAR (Datana ministra) - INDIANA - Larvae heavy on apples in one area of Cass County. (Matthew).

A PHYCITID MOTH (Acrobasis tricolorella) - MICHIGAN - Larvae, probably this species, feeding inside cherries in many orchards in Oceana County. (Wooley).

RESPLENDENT SHIELD BEARER (Coptodisca splendoriferella) - WISCONSIN - Adult emergence beginning in untreated orchard at Madison. Larval mines reduced apple leaf areas considerably. Population extremely heavy and largest found in over 25 years. (Wis. Ins. Sur.).

APPLE MAGGOT (Rhagoletis pomonella) - VERMONT - Emergence heavier than usual in Chittenden County. (MacCollom, July 19). CONNECTICUT - Adult emergence increased drastically, indicating probable peak in most orchards. In areas where population low due to drought, peak of adult emergence can be expected later. (Savos, July 21). NEW YORK - Adult emergence increased in eastern area July 12; 2-3 times level of preceding week. Females more numerous than males as of July 15. No general increase noted in Monroe and Niagara Counties. Emergence heavy in Clinton County. (N.Y. Wkly. Rpt., July 19). WISCONSIN - Total of 5 adults caught in ammonia bait trap in untreated apple orchard and 41 taken from trap in crab apple tree. Adults and nearly grown larvae numerous in neglected orchard in western

Dane County. Larvae most abundant. (Wis. Ins. Sur.). MINNESOTA - Now emerging in Duluth area. Controls recommended. (Minn. Ins. Rpt.).

CHERRY MAGGOT (Rhagoletis cingulata) - NEW YORK - Considerable numbers appearing in some blocks where spray schedule not followed in Monroe County. Becoming serious problem along State Route 104 in Niagara County where many small blocks unsprayed. (N.Y. Wkly. Rpt., July 19). MICHIGAN - Substantial numbers still emerging in orchards in Oceana County. (Wooley).

EUROPEAN APPLE SAWFLY (Hoplocampa testudinea) - NEW HAMPSHIRE - Larvae collected in abandoned orchard at East Kingston, Rockingham County. Det. by D. W. S. Sutherland, confirmed by D. R. Smith. This is a new State record. (Sutherland, June 18).

JAPANESE BEETLE (Popillia japonica) - VIRGINIA - Large numbers skeletonizing leaves of cherry, apple and other trees in yards in Blacksburg, Montgomery County. (Kosztarab, July 19).

GREEN JUNE BEETLE (Cotinis nitida) - OKLAHOMA - Continues to damage ripening fruit in Payne, Noble, Woodward and Garvin Counties. (Okla. Coop. Sur.). ARIZONA - Heavy damage observed on stone fruits in Pima, Graham and Cochise Counties. (Ariz. Coop. Sur.).

OLIVE SCALE (Parlatoria oleae) - CALIFORNIA - Medium on plum fruit in Willows; Glenn County. (Cal. Coop. Rpt.).

WOOLLY APPLE APHID (Eriosoma lanigerum) - NEW MEXICO - Mostly light on apple foliage in orchards checked near Farmington, San Juan County. Unspecified species heavy and curling leaves in untreated or improperly treated apple orchards in same area. (Heninger).

PEAR PSYLLA (Psylla pyricola) - OREGON - Building up in unsprayed pear orchards in Jackson County. Honeydew heavy on leaves and fruit. (Larson, Berry).

EUROPEAN RED MITE (Panonychus ulmi) - MASSACHUSETTS - Beginning to bronze leaves in some orchards in western section where controls were poor. (Wave, July 17). NEW YORK - Very heavy in many Monroe County apple orchards; also found in number of prune and pear orchards. Becoming general problem in Orleans County. Easily found but not generally causing much injury in Niagara County. (N.Y. Wkly. Rpt., July 19). MARYLAND - Extremely heavy on several apple varieties in large home planting at Annapolis, Anne Arundel County. Also on plum and peaches in same area. (U. Md., Ent. Dept.). OHIO - Increasing at Wooster, Wayne County, where some counts reached 100 or more per leaf. Discolored leaves common. (Forsythe). Similar condition noted near Zaleski, Vinton County, with estimated 75-150 mites per leaf on unsprayed Rome Beauty apple trees. Sprayed trees in same orchard had very few mites. (Rose). INDIANA - Building up on apples in Knox County area. Adults and nymphs range as high as 60 per leaf in some orchards. (Cleveland). COLORADO - Taken for first time in orchard on Rogers Mesa, Delta County. Up to 10 adults and 10-20 eggs per leaf in 100-acre infested area. Controls underway where high populations present. (Bulla).

ORCHARD MITES - CONNECTICUT - Panonychus ulmi (European red mite) and Tetranychus telarius (two-spotted spider mite) hard to find in most orchards. Egg laying continues at high rate for both species in experimental block in New Haven. (Savos, July 21). MISSOURI - P. ulmi and T. telarius very low in orchards in central section. Slight build-up in southeast section is distinct threat due to lack of rain. (Wkly. Rpt. Fr. Grs., July 21). COLORADO - T. telarius increasing on bindweed cover in Delta County. Controls underway. (Bulla). OREGON - T. telarius and P. ulmi serious in apple and pear orchards in Douglas County. (Vertrees). T. telarius building up in peach orchards in Lane County. (Tinker).

APPLE RUST MITE (Aculus schlechtendali) - NEW YORK - Extremely high numbers found on 5-year-old apple trees examined in Clinton County July 13. Foliage distinctly bronzed. No other mite species present. Noted for first time this season in Monroe County; noted July 15 in one Niagara County orchard. (N.Y. Wkly. Rpt.). MICHIGAN - This and Epitrimerus pyri (pear rust mite) found in orchard near Byron Center, Kent County. (Wooley).

PEAR RUST MITE (Epitrimerus pyri) - OREGON - Russeting pears in some improperly sprayed orchards in Jackson County. (Larson, Berry).

A PLUTELLID MOTH (Argyresthia eugeniella) - FLORIDA - Larvae generally infesting and severely damaging fruit of cattley guava at Miami, Dade County. (Herrman, July 15).

Citrus Insect Situation in Florida - Mid-July - CITRUS RUST MITE (Phyllocoptruta oleivora) infested 45 percent of groves (norm 65 percent); 28 percent economic (norm 41 percent). Although below average for State as whole, spotty heavy infestations common. Further increase expected through mid-August; will be more evident on fruit than leaves. Highest districts west, south and central. CITRUS RED MITE (Panonychus citri) infested 76 percent of groves (norm 77 percent); 51 percent economic (norm 50 percent). Recent sharp increase will continue through July causing summer peak one month later than usual. Population expected to be above average and in high range until mid-August. All districts high. TEXAS CITRUS MITE (Eutetranychus banksi) infested 88 percent of groves (norm 72 percent); 75 percent economic (norm 46 percent). Highest recorded population continues. Decrease started but spotty heavy infestations expected in all districts. All districts high. GLOVER SCALE (Lepidosaphes gloverii) infested 82 percent of groves; 32 percent economic. Will decrease but population will continue above normal. Highest districts south, east and central. BLACK SCALE (Saissetia oleae) infested 89 percent of groves; 65 percent economic. Highest population in 15 years of record. Decrease expected from mid-July to mid-August. All districts high. CHAFF SCALE (Parlatoria pergandii), YELLOW SCALE (Aonidiella citrina), a SNOW SCALE (Unaspis citri) and a LESSER SNOW SCALE (Pinnaspis stachani) are above normal; none in high range and all decreasing. MEALYBUGS have reached summer peak much above normal level. Population will decrease but will be in high range until mid-August. (W. A. Simanton, (Citrus Expt. Sta., Lake Alfred)).

FRUIT FLIES (Anastrepha spp.) - FLORIDA - Joint State-Federal efforts to delimit and evaluate infestation of A. suspensa continue. No commercial citrus infested thus far. (Fla. Coop. Sur.). One adult male of A. edentata, a native species, taken in McPhail trap in sapodilla on Elliott Key, Dade County. (Humphries)

MEXICAN FRUIT FLY (Anastrepha ludens) - MEXICO - Total of 13 native adults trapped at Tijuana and 3 at Ensenada for season to July 2. Fourth to seventh marked, sterile male fly releases made in Tijuana and fourth to sixth releases made in Ensenada; 435,204 sterile marked flies recaptured in traps during June. (PPC Mex. Reg., June Rpt.).

MEDITERRANEAN FRUIT FLY (Ceratitis capitata) - MEXICO - Total of 3,083 traps inspected 5,678 times negative. (PPC Mex. Reg., June Rpt.).

CITRUS BLACKFLY (Aleurocanthus woglumi) - MEXICO - Chemical Control Zone - Inspection of 158,394 citrus trees on 1,667 properties in States of Nuevo Leon, Tamaulipas, Baja California and Sonora revealed one light infestation in Linares, Nueve Leon, and one light infestation in Hermosillo, Sonora; 82,445 were nursery trees. Second spray treatment applied to 3,535 trees on 13 properties in Municipios Villagran, Guemez and Victoria, Tamaulipas, revealed 716 infested trees on 12 properties. Five trees in Municipio Villagran yielded 6 infested leaves; leaves destroyed. Early detection of this infestation particularly important due to proximity to chemical control zone. Parasite liberation needed on 40 properties in States of Campeche, Guerrero, Morelos, Sinaloa, Tabasco, Yucatan and Zacatecas and the Territory of Baja California; possibility of parasite captures on 26 properties in States of Colima, Michoacan and Vera Cruz and Territory of Quintana Roo. Total

of 403,700 Prospaltella opulenta (a eulophid) received from Ciudades Victoria, Tamaulipas and Apatzingan, Michoacan; 385,800 released in Villahermosa, Tabasco and Durango, Durango. (PPC Mex. Reg., June Rpt.).

SWALLOWTAIL BUTTERFLIES (Papilio spp.) - ARIZONA - Large populations appearing in backyard citrus plantings in Pima and Maricopa Counties. (Ariz. Coop. Sur.).

HICKORY SHUCKWORM (Laspeyresia caryana) - GEORGIA - Reported increasing throughout pecan areas of State. (Buttram). Moderate in Telfair County. (Fletcher).

ALABAMA - Early damage caused pecan trees to drop nuts in varying degrees in Lee and other counties. (Bagby et al.).

PECAN NUT CASEBEARER (Acrobasis caryae) - GEORGIA - Moderate on pecans in Telfair County. (Fletcher).

WALNUT CATERPILLAR (Datana integerrina) - VIRGINIA - Defoliated pecan tree in Nansemond County. (Isakson, Smith, July 16). OKLAHOMA - Noted on pecans in Garvin County. (Okla. Coop. Sur.).

FALL WEBWORM (Hyphantria cunea) - OKLAHOMA - Heavy damage occurring on pecan, walnut, hickory and persimmon trees in north central, northeast, east central and south central areas. (Okla. Coop. Sur.).

PECAN SPITTLEBUG (Clastoptera achatina) - ALABAMA - Nymphs heavy on nuts and buds of 5 pecan trees in Jackson County. (White).

APHIDS - GEORGIA - Black and yellow species heavy on pecans in many parts of southwest district and light to heavy in south. (Buttram, Fletcher, French). OKLAHOMA - Unspecified species ranged 2-3 per leaf on walnut trees checked in Payne County. (Okla. Coop. Sur.). NEW MEXICO - Unspecified species heavy on black walnut trees in Farmington-Aztec area, San Juan County. Honeydew very heavy. (Heninger).

WALNUT HUSK FLY (Rhagoletis completa) - OREGON - Adults noted in walnut trees in Jackson County. Detection surveys underway in uninfested areas of State. (Larson).

GRASSHOPPERS (Melanoplus spp.) - OKLAHOMA - M. bivittatus (two-striped grasshopper) and M. differentialis (differential grasshopper) reported feeding on lower leaves of pecan trees in Garvin County. (Okla. Coop. Sur.).

A FALSE POWDER-POST BEETLE (Amphiderus cornutus) - NEVADA - Adults heavy on almond trees at east Las Vegas, Clark County. (Zoller).

BLUEBERRY MAGGOT (Rhagoletis mendax) - MASSACHUSETTS - Very numerous and laying eggs in ripening fruit in neglected blueberry plantings in southeastern section. (Tomlinson, July 16). NEW JERSEY - Adults still emerging strongly, especially in Rubel and Jersey blocks. Continued controls recommended. (Ins.-Dis. Newsltr.). MICHIGAN - Adults flying in considerable numbers and expected to continue for 10-14 days. (Burger).

MEADOW SPITTLEBUG (Philaenus spumarius) - MICHIGAN - Populations much higher than normal on cultivated blueberries in Berrien, Muskegon, Ottawa, Van Buren and Allegan Counties and will cause concern if pattern continues. (Burger, Newman, Nelson).

CRANBERRY FRUITWORM (Acrobasis vaccinii) - MASSACHUSETTS - Peak flights and heavy egg laying occurred on July 14-16 in southeastern section. (Tomlinson).

FIREWORMS - NEW JERSEY - Severe infestations of Rhopobota naevana (black-headed fireworm) and Acleris minuta (yellow-headed fireworm) found in some unsprayed cranberry bogs. (Ins.-Dis. Newsltr.).

GRAPE BERRY MOTH (Paralobesia viteana) - MISSOURI - May increase in commercial vineyards. (Wkly. Rpt. Fr. Grs., July 21).

TRUCK CROP INSECTS

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - CONNECTICUT - Feeding on egg plants and tomatoes in home gardens. (Savos.). NEW YORK - Egg masses still present on potatoes in Suffolk County. (N.Y. Wkly. Rpt., July 19). MARYLAND - Larvae causing conspicuous damage to several commercial tomato fields in Worchester County. (U. Md., Ent. Dept.). MICHIGAN - First-generation larvae nearing pupation on research plots in Clinton County. Second-brood adults will emerge in 10-14 days. (Wells).

BLISTER BEETLES - GEORGIA - Infesting tomatoes in Spalding County. (Dupree). MISSOURI - Epicauta spp. adults causing moderate to severe damage to gardens in southwestern district. (Houser). OKLAHOMA - E. conferta reported damaging tomato vines in Payne County. Unspecified species reported moderate in home gardens in Choctaw County. (Okla. Coop. Sur.). IDAHO - E. puncticollis infestations general; scattered damage in potato fields in Bonneville County. (Weston). Numerous in Boise area. (McCarthy).

Survey to Determine Wireworm Populations During the Fall and Spring of 1964-1965 Season and Damage to Potatoes During Spring, 1965, in Vicinity of Charleston, South Carolina - SOUTHERN POTATO WIREWORM (Conoderus falli) constituted 93 percent of larvae found in cultivated soil in 19 untreated fields on 13 farms during October 1964. The all-species population in various fields ranged 0-10.7 larvae per square foot in top 6 inches of soil; average 2.7. Examination at packing sheds during June 1965 of 200 tubers from each of 10 farms revealed that 0 to 19.7 percent, by weight, showed wireworm injury (feeding of any degree) and 0 to 6.4 percent showed enough injury to be classed as "damaged" by Federal-State market inspectors. Proportion showing injury averaged 6.5 percent and that showing damage 1.6 percent. Shipping-point inspection certificates issued by Federal-State inspectors to Charleston area potato growers during June 1965 showed that none of 290 lots of tubers inspected had wireworm damage in excess of 6 percent (current U.S. Grade 1 tolerance allowance for "damage" due to all effects). Damage of 3-6 percent occurred in 5.9 percent of lots and damage of 1.5 to 2.9 percent in 35.5 percent. Wireworm population and degree of damage to potatoes during 1964-1965 season were about the same as occurred during preceding 7 years, but were much lower than that prevailing during 1956 and 1957. (A. Day, P.M. Andres, W.J. Reid).

GREEN PEACH APHID (Myzus persicae) - RHODE ISLAND - This and Macrosiphum euphorbiae (potato aphid) building up serious populations in fields in Kingston area, Washington County. (Kerr). DELAWARE - Present on peppers in Kent and Sussex Counties. (Burbutis, Woodall). MARYLAND - Light to medium on peppers in Worchester and Wicomico Counties. (U. Md., Ent. Dept.). WISCONSIN - Colonies forming on untreated potatoes in Grant County. (Wis. Ins. Sur.). UTAH - This and M. euphorbiae moderate on potatoes at North Logan, Cache County. (Knowlton). CALIFORNIA - Nymphs and adults heavy on eggplant in Fresno, Fresno County. (Cal. Coop. Rpt.).

POTATO APHID (Macrosiphum euphorbiae) - DELAWARE - Present on peppers and tomatoes in New Castle County. (Burbutis, Woodall). MARYLAND - Heavy in several commercial tomato fields on Eastern Shore. (U. Md., Ent. Dept.). OHIO - Both pink and green color phases numerous on unsprayed tomato plants at Marietta, Washington County. Damage light. (Racer, Rose). COLORADO - Aphids, mainly this species, low with 0-30 per 100 leaves on potatoes in Weld County. Could continue low due to prevailing weather. (Jenkins).

Aphids on Potatoes in Maine - Small populations on untreated potatoes in Presque Isle area, Aroostook County, continue to increase at considerably reduced rate due to action of entomogenous fungi. Average of 0.43 aphid on 3 leaves per plant with 24 percent of plants infested. This is 1.1 times the average and 1.4 times the percent of plants infested last week. Populations on untreated potatoes examined in other areas increased at usual rate. Macrosiphum euphorbiae (potato aphid) predominates followed by Myzus persicae (green peach aphid) and Aphis nasturtii (buckthorn aphid). (Shands et al.).

POTATO PSYLLID (Paratrioza cockerelli) - WYOMING - Adults averaged 2-4 per 100 sweeps in both untreated and early systemic treated fields of potatoes in Goshen and Laramie Counties. Nymphs averaged 0 per 100 leaves in treated fields and 3-8 per 100 leaves in untreated fields. (Marks). COLORADO - Counts generally low in Weld County potato fields with regular timed topical treatments. Noticeable buildup in fields with systemic treatment. Counts high in some fields in Eaton area. (Urano). Adults vary 0-4 per 100 sweeps in tomatoes in Arkansas Valley. High in Newdale and Fowler areas. (Schweissing). NEW MEXICO - Spotted heavy infestations noted in tomato patches in Farmington-Aztec area, San Juan County. Several plants dying or appear to have psyllid yellows. (Heninger).

SAY STINK BUG (Chlorochroa sayi) - NEVADA - Medium and causing stem wilting on potatoes in Diamond Valley, Eureka County. (Hampton).

BEEF LEAFHOPPER (Circulifer tenellus) - UTAH - Curly top disease ranges 5-20 percent in early market tomatoes in southern section. Trace of curly top in canning tomatoes in northern section. (Dorst).

POTATO LEAFHOPPER (Empoasca fabae) - NEW JERSEY - Counts from 10 fields in central section ranged 22-300 and averaged 118 per 25 sweeps on July 23. (Ins.-Dis. Newsltr.). WISCONSIN - Nymphs averaged about 3 per leaflet in commercial potato field in Grant County. Populations vary on lima beans with some treatment necessary in Rock County and southeastern counties. (Wis. Ins. Sur.).

STALK BORER (Papaipema nebris) - SOUTH DAKOTA - Damaged 100 percent of potato stalks in some small gardens in Brookings County. Also infesting few tomato stems in Brookings and McCook Counties. (Kantack, July 16). WISCONSIN - Several inquiries received concerning larvae in rhubarb and raspberry canes. (Wis. Ins. Sur.).

TOMATO FRUITWORM (Heliothis zea) - UTAH - Egg survey on tomato leaves in fields in northern section shows very low population. (Dorst). MISSOURI - Larvae feeding on tomatoes in gardens in Jasper County. (Houser).

TOBACCO HORNWORM (Protoparce sexta) - INDIANA - Larvae noted on potatoes and tomatoes in southeastern section. (Huber).

VARIEGATED CUTWORM (Peridroma saucia) - OREGON - Probably this species attacking pepper and tomato plants at Waterville, Lane County. Averaged 4 larvae per plant. (Tinker).

CABBAGE LOOPER (Trichoplusia ni) - NEW JERSEY - Small larvae expected soon on cole crops in south section. Preventive controls recommended. (Ins.-Dis. Newsltr.). MARYLAND - Medium on large cabbage planting near Severna Park, Anne Arundel County. (U. Md., Ent. Dept.). NEW MEXICO - Light and causing minor damage to cabbage in Farmington area, San Juan County. (Heninger). NEVADA - Larvae medium to heavy on potatoes in Smith Valley, Mason Valley and Fernley, Lyon County, and in Lovelock, Pershing County. Controls applied to most fields. (Coop. Rpt.).

IMPORTED CABBAGEWORM (Pieris rapae) - NEW YORK - High population on newly transplanted cabbage in Niagara County. (N.Y. Wkly. Rpt., July 19). NORTH DAKOTA - Larval feeding well underway on cole crops in southeast. (Frye, Thomasson). UTAH - Damage increasing in home gardens in Salt Lake County. (Knowlton). NEW MEXICO - Larvae severely damaging cabbage in gardens and commercial plantings at Farmington, San Juan County. (Heninger).

CABBAGE MAGGOT (Hylemya brassicae) - NORTH CAROLINA - Very damaging on commercial cabbage in Watauga County in untreated fields and in fields receiving a standard chlorinated hydrocarbon. (Falter).

HARLEQUIN BUG (Murgantia histrionica) - OKLAHOMA - Moderate and damaging broccoli in Kay County. (Okla. Coop. Sur.).

CABBAGE APHID (Brevicoryne brassicae) - RHODE ISLAND - On cabbage in Peace Dale, Washington County. (Sorensen, Mathewson). NEW MEXICO - Probably this species heavy to very heavy and severely curling leaves of cabbage and related plants in Farmington area, San Juan County. (Heninger).

MEXICAN BEAN BEETLE (Epilachna varivestis) - MARYLAND - Conspicuous spotty damage in 20 acres of lima beans at Indiantown, Worcester County. (U. Md., Ent. Dept.). NEBRASKA - Small numbers in field beans in western area. (Andersen). COLORADO - Larvae common in beans in Weld County. Controls being applied. (Urano). NEW MEXICO - Light infestations a problem on pole beans at Farmington, San Juan County. (Heninger).

LEAFHOPPERS - NEW YORK - Observations in Geneva and Canandaigua areas, Ontario County, indicate populations on beans should be controlled. Building up on beans and other crops in Monroe County. (N.Y. Wkly. Rpt., July 19).

TARNISHED PLANT BUG (Lygus lineolaris) - DELAWARE - Nymphs common on lima beans in Kent and Sussex Counties. (Burbutis, Woodall).

PEA APHID (Acyrtosiphon pisum) - WISCONSIN - Populations fluctuate considerably in pea fields, ranging 0-200 per sweep in Dane, Dodge, Fon du Lac, Sheboygan, Calumet, Winnebago, Green Lake and Iowa Counties. Numbers somewhat lower in north-eastern counties. Young nymphs common and parasitism remains low. (Wis. Ins. Sur.).

BEAN APHID (Aphis fabae) - OREGON - High populations began building up on seed beans in Douglas County week of July 12. (Vertrees).

SPIDER MITES (Tetranychus spp.) - MARYLAND - Destructive to garden beans at several places in Anne Arundel and Queen Annes Counties. (U. Md., Ent. Dept.).

OKLAHOMA - Heavy in home gardens in Woodward County. (Okla. Coop. Sur.).

THRIPS - NEW YORK - Numerous on cucumbers for pickles in Niagara County. (N.Y. Wkly. Rpt., July 19). NEW MEXICO - Heavy on onion plants in gardens at Farmington, San Juan County. (Heninger). COLORADO - Thrips tabaci (onion thrips) continues low in most onion fields in Arkansas Valley; varying 0-10 per plant. Some fields high. (Schweissing). NEVADA - Medium to heavy infestations of T. tabaci required treatment of many onion fields in Mason and Smith Valleys, Lyon County. (Martinelli, Rivers).

ONION MAGGOT (Hylemya antiqua) - COLORADO - Damage 5-10 percent in onions in Vine-land area; 30 percent in some fields. (Schweissing).

BEET WEBWORM (Loxostege sticticalis) - MINNESOTA - Adults flying in sugar beet fields in Renville County. No larvae found. (Minn. Ins. Rpt.)

LYGUS BUGS (Lygus spp.) - OREGON - Average 3 per sweep in table beet seed fields in Douglas County. Damage not serious. (Vertrees).

STRIPED CUCUMBER BEETLE (Acalymma vittatum) - OKLAHOMA - Moderate on commercial watermelons and cantaloups checked in Bixby area, Tulsa County. (Okla. Coop. Sur.). DELAWARE - Larvae heavy in cantaloup fruit in southwest Sussex County. (Bray, MacCreary). RHODE ISLAND - Common in gardens throughout State, especially in Peace Dale and Slocum, Washington County, and in North Smithfield, Providence County. (Mathewson, King).

SQUASH BUG (Anasa tristis) - NEVADA - Heavy, with heavy damage on 40 acres of cantaloups in Moapa Valley, Clark County. (Bunker). NEW MEXICO - Building up on squash and cucumber in Farmington, San Juan County. Mostly adults. (Heninger).

OKLAHOMA - Moderate in gardens in Choctaw County. Adults moved from destroyed squash to bell peppers in Tulsa County. (Okla. Coop. Sur.). MARYLAND - Eggs heavy in large squash planting at Annapolis, Anne Arundel County. (U. Md., Ent. Dept.).

PALE-STRIPED FLEA BEETLE (Systema blanda) - GEORGIA - Destroying blossoms of butternut squash in Spalding County. (Dupree).

SWEETPOTATO WEEVIL (Cylas formicarius elegantulus) - LOUISIANA - Surveys of seed-beds, volunteer plants and wild hosts revealed newly infested properties in Livingston, East Baton Rouge, Natchitoches, Tangipahoa and Washington Parishes. MISSISSIPPI - Extensive surveys in Jones and Perry Counties revealed one infestation in Perry and 2 in Jones. (PPC South. Reg., June Rpt.).

A CARRION BEETLE (Silpha ramosa) - CALIFORNIA - Medium and damaging strawberry fruit locally in Valley Center, San Diego County. (Cal. Coop. Rpt.).

EUROPEAN EARWIG (Forficula auricularia) - UTAH - Ruined strawberry crop at Clarkston, Cache County. (Knowlton).

CYCLAMEN MITE (Steneotarsonemus pallidus) - NEW HAMPSHIRE - Serious on strawberries at Charleston. (Reeves, Sutherland).

A SPIDER MITE (Tetranychus mcdanieli) - NEW HAMPSHIRE - Found on raspberries at Newport, Sullivan County. Det. by Reeves. This is a new State record. (Sutherland, June 14).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - OREGON - All stages on hops in Grants Pass area, Josephine County. Most growers applied third spray week of July 19. (McLaughlin).

TOBACCO INSECTS

GREEN PEACH APHID (Myzus persicae) - MARYLAND - Populations continue to build up on tobacco in all tobacco-growing counties. Treatments underway. (U. Md., Ent. Dept.).

TOBACCO FLEA BEETLE (Epitrix hirtipennis) - MARYLAND - Numbers above normal on tobacco in all tobacco-growing areas. (U. Md., Ent. Dept.).

HORNWORMS (Protoparce spp.) - MARYLAND - Light to medium on tobacco in St. Marys County. (U. Md., Ent. Dept.). WISCONSIN - Second-stage larvae of P. sexta (tobacco hornworm) noted on Dane County tobacco plants. (Wis. Ins. Sur.).

TOBACCO BUDWORM (Heliothis virescens) - MARYLAND - Not a problem on tobacco during past 2 seasons. (U. Md. Ent. Dept.).

COTTON INSECTS

BOLL WEEVIL (Anthonomus grandis) - SOUTH CAROLINA - Infestations increasing generally in Florence area; migration expected week ending July 28. Adults ranged 0-3 per 100 squares in treated plots and 0-7 per 100 squares in untreated plots. Larval infestations ranged 0.1-3 percent in treated plots and 71-100 percent in untreated plots. (Taft et al., July 21). Damage continues at higher than average level. Percent infestation 8 in treated fields and 42 in untreated fields compared with 4 and 24 percent, respectively, for 1964. Population pressure expected to increase in Coastal Plain area because of migration to begin about July 24 and heavy emergence of first-generation weevils. Migration in Piedmont area will occur about August 1. (Cott. Ltr., July 16). TENNESSEE - No substantial increase in population indicated within regularly infested portion of cotton-growing area. Of fields found infested, punctured squares averaged 11 percent compared with 12 percent previous week and 3 percent at this time in 1964.

Larval mortality very high due to dry weather, but some hatch still occurring in infested area. Most of heavier infested fields treated at least once. In event of rain over area during next 2 weeks, weevil populations could be considered major problem. (Locke). GEORGIA - Punctured squares ranged 6-27 percent in 5 fields in Terrell County. (French). Many fields in Colquitt, Stewart, Webster and Jenkins Counties range 11-25 percent punctured squares, some with 26-50 percent punctured squares and few with over 50 percent punctured squares. (Smith et al.). ALABAMA - Infestations continue high. Square counts somewhat lower where good control schedule followed. "Hatch outs" becoming somewhat overlapping and continuous in most of State, except in larger northern cotton-producing counties. Report from Bailey in Madison Counties indicates "hatch out" has occurred; square counts less than 10 percent on 16 farms and 10-36 percent on 7 farms. (McQueen). LOUISIANA - Infestation ranged 1-46 (average 10) percent in 106 fields in Madison Parish. Single weevil collected from 10 cotton plants in field of soybeans probably overwintered individual. (Cleveland et al., July 22). MISSISSIPPI - Punctured squares found in 24 of 27 fields examined in delta counties; infestation averaged 6.14 percent with high of 43.8 percent. (Pfrimmer et al., July 22). OKLAHOMA - Increasing in cotton in southern half of Jackson County. Infestation ranged 4-16 percent in cotton checked in Tillman County, moderate in Choctaw County; averaged 33 percent in garden planting checked in Tulsa County but only 4 percent in fields in Wagoner, Muskogee and Sequoyah Counties. (Okla. Coop. Sur.). TEXAS - Infestations increased in McLennan and Falls Counties as new generation of weevils found in several fields. Part of increase also due to shortage of squares in some fields. Damaging numbers found in 11 of 29 treated and 11 of 17 untreated fields inspected. Infestation averaged 9 (range 0-22) percent punctured squares in treated fields and averaged 20.8 (range 0.2-58) percent in untreated fields. Overall average 10.7 percent. (Cowan et al.).

BOLLWORMS (Heliothis spp., et al.) - SOUTH CAROLINA - Field populations low in Florence area, but expected to increase soon. Larval infestations ranged 0.1-3.4 percent in treated plots and 0-4 percent in untreated plots. Total of 40 H. zea (bollworm) and 13 H. virescens (tobacco budworm) taken in light trap. (Taft et al., July 21). Some buildup occurred; numerous eggs and young larvae reported in Orangeburg area. (Cott. Ltr., July 16). TENNESSEE - Infestation continues very light in cotton on western area, although most fields checked showed some injury. Controls not justified at this time. (Locke). GEORGIA - Eggs ranged 0-6 and larvae 0-5 per 100 terminals in 5 fields in Terrell County. Larvae very heavy in 2 fields in Coffee County, damage heavy. (French). Infestations light to moderate in most fields in Colquitt, Stewart, Webster and Jenkins Counties, with heavy infestations in few fields. (Smith et al.). ALABAMA - Larvae and eggs increased in Monroe, Perry and few other southern counties. Considerable increase reported in Madison County; counts range 2-5 per 100 terminals. H. zea larvae emerged from ears of older corn throughout southern and central sections and entered soil to pupate. (McQueen). LOUISIANA - Damaged squares averaged less than 1 (range 0-9) percent in 106 fields examined in Madison Parish. Eggs averaged 2 (range 1-12) and larvae less than one (ranged 0-9) per 100 terminals. Total of 197 H. zea and 16 H. virescens adults taken in light trap. (Cleveland et al., July 22). MISSISSIPPI - Eggs found in only 5 of 27 fields checked in delta counties; averaged 0.61 per 100 terminals. Injured squares found in 15 fields at rate of 0.72 percent. Moth flight continues low. (Pfrimmer et al., July 22). ARKANSAS - Numbers of H. zea and H. virescens moths taken on sugar lines continued to decrease. In Jefferson County, 1,327 fields of cotton checked; larvae found in 72 percent of fields compared with 63 percent previous week and eggs found in 63 percent of fields compared with 68 percent previous week. Larvae per 100 terminals in these fields ranged 1-3 in 431 fields, 4-10 in 401 fields, 11-25 in 125 fields and 4 fields had 26 larvae per 100 terminals. Percent square damage as follows: None in 308 fields, less than one in 163 fields, 1-2 in 350 fields, 2.1-4 in 289 fields, 4.1-6 in 166 fields and over 6 percent in 51 fields. (Ark. Ins. Sur.). MISSOURI - Larvae ranged 0-5 and eggs 0-5 per 100 terminals in 14 percent of fields checked week ending July 21. (Jones). OKLAHOMA - Egg counts ranged up to 80 percent on larger cotton just irrigated in Jackson County; averaged 1 percent in Tillman County and ranged 16-36 percent in Wagoner, Muskogee and

Sequoyah Counties. (Okla. Coop. Sur.). TEXAS - Infestations decreased from previous week in McLennan and Falls Counties. Eggs averaged 5.9 (range 0.3-31) and larvae averaged 7 (range 0-22) per 100 terminals in 31 treated fields; eggs averaged 4.7 (range 0-12) and larvae averaged 8.4 (range 0-21.5) per 100 terminals in 18 untreated fields. Square injury averaged 7 (range 0-26.9) percent in 29 treated fields and 8.4 (range 0-21.3) percent in 17 untreated fields. Boll injury averaged 8 percent in 29 treated fields and 10 percent in 17 untreated fields. Of 571 larvae collected 188 or 33 percent determined as H. virescens. (Cowan et al.). NEW MEXICO - H. zea larvae and damage reported on cotton in Dona Ana, Luna, Chaves and Eddy Counties. (Kloepfer, Mathews). ARIZONA - Light infestations of H. zea appearing in cotton in Graham, Pima, Greenlee, Pinal and Maricopa Counties. Egg counts continue below normal. (Ariz. Coop. Sur.). CALIFORNIA - Found in many fields of cotton in Fresno County, but not yet at economic levels. (Stromberg, July 14). Present but low in cotton in Shafter area, Kern County. (Leigh, July 16). Recent weather ideal for activity in Imperial County. Definite increase in egg deposition noted, especially in northern half of valley. At present time, very few larvae surviving past early stages, but if present weather condition persists, bollworms could become serious problem even with present complement of parasites and predators. (Campbell, July 15).

BEE T ARMYWORM (Spodoptera exigua) - ALABAMA - Few larvae noted in Monroe County cotton. Other infestations occurring in soybeans and on rough pigweed near cotton fields. (Guilder et al.). ARIZONA - Light numbers appearing on cotton in areas of Graham and Greenlee Counties. Light damage found in Pima area of Graham County. (Ariz. Coop. Sur.). CALIFORNIA - Few larvae found in cotton in Fresno County; situation still bears watching. (Stromberg, July 14). Evident in many fields in Kern and Tulare Counties. Natural occurring virus disease becoming widespread and killing many larvae. (Leigh, July 16).

CABBAGE LOOPER (Trichoplusia ni) - GEORGIA - Heavy population defoliating cotton in Toombs County. (Daniels). MISSISSIPPI - Few larvae found in some fields in delta counties. (Pfrimmer et al., July 22).

PINK BOLLWORM (Pectinophora gossypiella) - ARIZONA - Larvae found in cotton fields in Graham County and in Mesa area of Maricopa County as result of bloom inspections. (Ariz. Coop. Sur.).

APHIDS - NORTH CAROLINA - Increasing in some fields of cotton near Rocky Mount. (Robertson). SOUTH CAROLINA - Some spotty to light infestations noted in Florence area cotton. (Taft et al., July 21). ALABAMA - Aphis gossypii (cotton aphid) heavy in one field in Monroe County. Aphids of little concern on cotton this season; may be due to use of more suitable aphicides used in programs against heavy buildup of Anthonomus grandis (boll weevil) this season. (McQueen).

LYGUS BUGS (Lygus spp.) - ARIZONA - Light to moderate populations found in cotton throughout central and eastern areas. Few heavy infestations found in Pinal and Maricopa Counties. (Ariz. Coop. Sur.). CALIFORNIA - Remain problem on cotton in Fresno County. More nymphs appearing in fields; continued increase due to egg hatch can be expected. Counts highest in Burrel-Helm area and smaller fields on east side of county. Many damaged blossoms noted. (Stromberg, July 14). Present in cotton in most areas of Kings County. Many transient populations encountered from recently cut alfalfa nearby. (McCutcheon, July 8). Increasing in some areas of Imperial County due to adult migration from nearby alfalfa. Square damage observed in some fields; few fields treated. Predators apparently holding down nymphal populations in most fields. (Campbell, July 15). Heavy movements into cotton in Shafter area of Kern County evident throughout much of San Joaquin Valley; some movements related to harvest of alfalfa, some to drying of nearby pastures and range areas, and some to movement from safflower fields. Many reports of control failures. Apparently heavy migrations reinfested fields where controls previously successful. (Leigh, July 16).

LEAFHOPPERS - CALIFORNIA - Empoasca fabae (potato leafhopper) again found in fields along foothills of Sierras. (Stromberg, July 14). Leafhopper adults moving into cotton from nearby beet fields in Imperial County; nymphs increasing. Treatments required in some cotton. (Campbell, July 15). E. fabae evident in some cotton in Shafter area of Kern County, particularly along eastern side of valley. Fields should be checked for feeding signs. (Leigh, July 16).

PLANT BUGS - TENNESSEE - Infestations found throughout cotton-growing area, but well below control level. Damage to small squares evident in all fields checked. (Locke). LOUISIANA - Fleahoppers found in 14 of 53 fields checked in Madison Parish; ranged 1-10 per 100 sweeps. Lygus lineolaris (tarnished plant bug) ranged 1-3 per 100 sweeps in 21 of 53 fields checked. (Cleveland et al., July 22). MISSISSIPPI - L. lineolaris and fleahoppers continue to be found in many fields in delta counties. Most infestations light, but high in occasional field. (Pfrimmer et al., July 22). MISSOURI - Several species ranged 0-19 per 100 plants in 93 percent of fields checked during week ending July 21. (Jones). TEXAS - Psallus seriatus (cotton fleahopper) averaged 1.7 per 100 terminals in 31 treated fields and 3.8 per 100 terminals in 18 untreated fields in McLennan and Falls Counties. (Cowan et al.).

SAY STINK BUG (Chlorochroa sayi) - ARIZONA - Moderate infestations occurring in cotton in Graham, Greenlee and Maricopa Counties. (Ariz. Coop. Sur.).

SPIDER MITES - SOUTH CAROLINA - Some spotty to light infestations noted on cotton in Florence area. (Taft et al., July 21). Damage causing serious concern in number of counties including Calhoun and Laurens. (Cott. Ltr., July 16). TENNESSEE - Infestations increasing on cotton in western area; more numerous in northwestern portion of cotton-growing area. Spot control still feasible in most instances. Further increase expected, as weather conditions ideal at this time. (Locke). GEORGIA - Tetranychus telarius (two-spotted spider mite) infestations appear on decline in Oconee County (Jordan); building up in fields on regular treatment schedules in Spalding County (Tippins). ALABAMA - Increased number of light infestations reported in some northern counties, especially Jackson, Madison and Colbert. Not yet of major concern. (McQueen). MISSISSIPPI - Continue number-one problem in many fields in delta counties. T. telarius present in more fields than in any recent year; T. cinnabarinus appearing in some fields. (Pfrimmer et al., July 22). MISSOURI - Spot treatments for Tetranychus spp. applied to 191 acres in 22 fields during week ending July 21. (Jones). OKLAHOMA - Tetranychus spp. averaged 20 per leaf in field of cotton in Webbers Falls area, Muskogee County. None found in other fields in area. (Okla. Coop. Sur.). CALIFORNIA - Control of these pest greatest concern among Fresno County cotton growers; many fields being treated. (Stromberg, July 14). T. telarius and T. pacificus (Pacific spider mite) found in some fields in northern Kings County. T. atlanticus (strawberry spider mite) still causing some problems. (McCutcheon, July 8). Spider mites evident in many fields of cotton in Shafter area of Kern County; growers urged to check fields carefully, particularly for more T. atlanticus which causes severe defoliation of lower portion of plants. (Leigh, July 16).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

BARK BEETLES (Dendroctonus spp.) - OREGON - D. pseudotsugae (Douglas-fir beetle) attraction sampling in Marys Peak Watershead, Benton County, revealed decreased population on standing trees; apparently result of resinous (pitch out) which killed adults in invaded trees. High density of attack resulted in overcrowding, high mortality and buildup of parasites and predators. (Rudinsky). CALIFORNIA - D. brevicomis (western pine beetle) causing continuous ponderosa pine tree losses in Indian Scotty Campgrounds; 41 trees killed in 5-acre area. (J. Rush, USFS). VIRGINIA - Dendroctonus spp. infesting pine trees in yard in Patrick County. (Isakson, Olinger, July 14). D. frontalis (southern pine beetle) infested 2 new small (6-tree) spots on loblolly pine in Surry County; 10 additional spot infestations reported in Fluvanna County; 0.5 to 3 acres in May; 3 additional 0.1 acre in June. Numerous additional infestations noted in Amelia County; several new spots noted in Charlotte, Mecklenburg and Appomattox Counties. Infestations confirmed in 2 spots in Campbell County and one spot (0.25 acre) in loblolly pine in Henry County. Five individual infestations on 1-10 loblolly pines killed in Virginia Beach; 4 new infestations of 1-30 trees located in Accomack County. One infestation (10 trees) in Northampton County. Several small (up to 0.25 acre) spots noted in Caroline County in May; single 15-acre spot noted in Richmond County in May. Dendroctonus spp. noted in spots of one to many trees in Brunswick County; up to 24 trees in Sussex County on 5 tracts (1-3 trees) of shortleaf pines in Mecklenburg County; one tract in Henry County. (Morris, Va. Div. Forestry). ALABAMA - D. terebrans (black turpentine beetle) damaged 10-15 pines around home under construction in Greene County; trees suffered bruises and bark injury. Other small infestations noted in county. (Johnston et al.).

ENGRAVER BEETLES (Ips spp.) - VIRGINIA - Active in scattered 1-2 tree spots in Dinwiddie County and 1-10 tree spots in Sussex County. Killing Virginia pine in 4 spots (0.1 acre) in Fairfax County; active in Campbell County, killing 2 Virginia pines. Active in 5 spots in Essex County. (Morris, Va. Div. Forestry).

BARK BEETLES (Phloeosinus spp.) - NEVADA - Adults and larvae medium to heavy in felled incense cedar in Incline Village area, Washoe County. (Bechtel, Christner, Martenelli).

SUGAR-PINE CONE BEETLE (Conophthorus lambertiana) - CALIFORNIA - Causing widespread damage to sugar pines in Collins Creek and adjacent areas of Klamath National Forest. (N. E. Dirksen, USFS).

PALES WEEVIL (Hylobius pales) - VIRGINIA - Damage scattered over single 100-acre loblolly pine plantation in Brunswick County; 0.5-acre tract in Appomattox, 3-acre tract in Mecklenburg and tract in Isle of Wight Counties noted. (Morris, Va. Div. Forestry).

WHITE-PINE WEEVIL (Pissodes strobi) - NEW YORK - Caused serious damage to white pine and killed 15 percent of leaders on 10-20 foot loblolly pines in Arnot Forest at Newfield. (N.Y. Wkly. Rpt., July 16).

LARCH SAWFLY (Pristiphora erichsonii) - OREGON - Infesting 2,500 acres of mature western larch; caused light to heavy defoliation in White River drainage on Mount Hood National Forest in 1964. This is a new State record. Det. by D. R. Smith. (Orr, USFS). WISCONSIN - Single female observed ovipositing on new growth of tamarack in Lincoln County stand July 20. No other evidence of current sawfly activity apparent. (Wis. Ins. Sur.).

INTRODUCED PINE SAWFLY (Diprion similis) - MINNESOTA - Fourth instars reported at Floodwood; middle to late instars of first generation still feeding at Brainerd, Park Rapids and Bemidji areas. Some cocooning started; populations generally light; moderate on White Earth State Forest. (Minn. Ins. Rpt.). NORTH DAKOTA - Late instars on Scotch pine in Richland County. (Dawson, Conley, Kennedy).

CONIFER SAWFLIES (Neodiprion spp.) - CALIFORNIA - N. abietis complex causing severe damage to 160 acres of white fir Christmas trees in Smith Peak and 800 in Freeman Creek; 160 acres in Crocker Mountain and 100 acres in Bagley Pass, Plumas County, infested. (C. Wagner, USFS). Damaging 20-30 acres of white fir in Cedar Pass Campgrounds, Modoc County. (K. Smith, USFS). MINNESOTA - N. pratti banksianae (jack-pine sawfly) feeding completed in central area. All sizes of N. lecontei (red-headed pine sawfly) larvae feeding on roadside jack pines in central district. Mostly middle instars; some very heavy infestations present. (Minn. Ins. Rpt.). WISCONSIN - N. pinetum (white-pine sawfly) mostly fifth instar; observed on ornamental white pine in Monroe County July 13; defoliation very light. (Wis. Ins. Sur.). VIRGINIA - N. pratti pratti noted in all counties of District 4 (Farmville); spotty and considerably lighter than in 1964. Severely defoliated 6-acre tract of Virginia and shortleaf pines in Henry County in May and single loblolly pine plantation in Caroline County. Larvae of N. lecontei defoliating 7 loblolly pines in plantation in Clarke County. (Morris, Va. Div. Forestry).

COOLEY SPRUCE GALL APHID (Chermes cooleyi) - WYOMING - Galls becoming numerous on blue spruce at Laramie, Albany County. (Robb).

CONIFER APHIDS (Cinara spp.) - WYOMING - Numerous on spruce trees at Laramie, Albany County. (Fronk, Lawson). UTAH - Numerous on some blue spruce Christmas trees in Riverton area, Salt Lake County. (Knowlton). IDAHO - C. engelmanniensis infestation in Moscow, Latah County, held in check by lady beetles and syrphid flies. (Portman). Infestation appeared for third year on spruce in Nezperce, Lewis County. (Dailey).

PINE NEEDLE SCALE (Phenacaspis pinifoliae) - NEW JERSEY - Second-generation crawler activity expected soon; controls recommended. (Ins.-Dis. Newsltr.). WISCONSIN - About 10 percent hatched in advanced area of western Dane County July 20; few crawlers appearing on needles. Specimens, presumably this species, on spruce near Madison, Dane County, revealed eggs only on July 13. Nurserymen urged to use controls in advanced areas. (Wis. Ins. Sur.). UTAH - Heavy on some blue spruce in Salt Lake City area. (Knowlton). IDAHO - Infested Douglas-fir at Nezperce, Lewis County; well parasitized. (Dailey).

SARATOGA SPITTLEBUG (Aphrophora saratogensis) - WISCONSIN - Chemical control on several small plantings will start about July 22. (Wis. Ins. Sur.).

A SPITTLEBUG (Aphrophora canadensis) - CALIFORNIA - Heavy on pine in Arcata, Humboldt County. (Cal. Coop. Rpt.).

JACK-PINE BUDWORM (Choristoneura pinus) - MINNESOTA - Emergence nearly complete as far north as Bemidji; active and laying eggs; 3,000 acres heavily defoliated on Beltrami Island State Forest. Severe defoliation south and west of Bemidji. (Minn. Ins. Rpt.).

NANTUCKET PINE TIP MOTH (Rhyacionia frustrana) - VIRGINIA - Active on loblolly pines in numerous plantations in Frederick and Clark Counties; damage slight. (Morris, Va. Div Forestry).

AN OLETHREUTID MOTH (Eucosma gloriola) - NEW YORK - Common in leaders of pine on Arnot Forest at Newfield. (N.Y. Wkly. Rpt., July 16).

SPIDER MITES - WISCONSIN - Heavy on red pine, white-cedar, balsam fir and blue spruce in west central counties past few weeks; discoloration of red pine in Columbia County plantation and curling of new growth on balsam fir in Monroe County Christmas tree planting quite apparent July 15. (Wis. Ins. Sur.). MARYLAND - Various species infesting spruce, hemlock, hollyhocks, petunias, maples and other plants statewide. (U. Md., Ent. Dept.).

ELM LEAF BEETLE (Galerucella xanthomelaena) - RHODE ISLAND - Feeding evidence common statewide. (Mathewson). DELAWARE - Adults abundant on elms locally in

Sussex County. (Burbutis, Woodall). ALABAMA - Southernmost infestation noted in Marengo County; more severe in Hale, Perry, Greene, Montgomery, Autauga and other central counties. Many trees defoliated in Sumter County. (Story et al.). MISSOURI - Second-generation pupae plentiful in Jasper County; pupation about 50 percent complete July 22. (Houser). OKLAHOMA - Heavy on elms in Choctaw and Murray Counties. Large number of adults noted at lights in Stigler, Haskell County. (Okla. Coop. Sur.). NEW MEXICO - Light to heavy on Chinese elms at Farmington; lighter at Laplata, San Juan County. (Heninger). ARIZONA - Heavy damage still apparent on elms in Graham, Pinal and Maricopa Counties. (Ariz. Coop. Sur.). OREGON - Early damage appearing in Jackson, Josephine and Douglas Counties on elms. Appears worse than in 1964. (Larson).

LARGER ELM LEAF BEETLE (Monocesta coryli) - ALABAMA - First report of infestations on elms in Lee County this season; defoliating some American elms along stream. (McQueen).

LOCUST LEAF MINER (Xenochalepus dorsalis) - VIRGINIA - Severe in parts of Amherst County in June. Caused slight browning to black locust in 2 spots in Wise and Lee Counties. (Morris, Va. Div. Forestry).

LOCUST BORER (Megacyllene robiniae) - UTAH - Extremely bad; killing and severely damaging many black locusts at Kearns, Salt Lake County, and Bountiful, Davis County. Damage common elsewhere in these counties. (Knowlton, July 17). IOWA - Larvae severely damaging locust trees near Portsmouth, Shelby County. (Iowa Ins. Inf., July 19).

A LEAF-MINING WEEVIL (Odontopus calceatus) - VIRGINIA - Causing about 50 percent defoliation of yellow-poplar in Lee, Scott, Buchanan and Wise Counties. Active throughout District 9 (Tappahannock) causing minor defoliation of yellow-poplar. Caused extensive browning of leaves in Lee, Wise, Lancaster and Northumberland Counties June 15 and 18. (Morris, Va. Div. Forestry). OHIO - Found as far north as Delaware County. (Donley).

COLUMBIAN TIMBER BEETLE (Corthylus columbianus) - VIRGINIA - Attacked 28 yellow-poplars in tract in Nelson County in May and 6 yellow-poplars on tract in Augusta County. (Morris, Va. Div. Forestry).

FALL WEBWORM (Hyphantria cunea) - MISSOURI - Webs becoming large in southern third of State. Very numerous in southwestern district; observed on persimmon, black walnut, hickory, pecan, mulberry and sycamore trees. (Houser). ARKANSAS - Light in State past few weeks; increasing at rapid rate. Webs becoming more numerous and increasing in size; most webs 1-2 feet in diameter. (Ark. Ins. Sur.). ALABAMA - Increasing in southern and western areas on pecan, hickory and persimmon trees. (Welch, Story, et al.). DELAWARE - Young larvae common on variety of trees locally in New Castle County. (Burbutis, Woodall).

SPRING CANKERWORM (Paleacrita vernata) - UTAH - Caused light damage to poplars and flowering apples in Holladay, Salt Lake County, where damage extensive in 1964. (Burningham, Knowlton).

FOREST TENT CATERPILLAR (Malacosoma disstria) - UTAH - Adults decreased in light trap collections at Logan, Cache County, following peak in early July. (Davis). Fairly numerous in trap at Benjamin, Utah County, July 13. (Knowlton).

GYPSY MOTH (Porthetria dispar) - RHODE ISLAND - Oviposition observed in Cranston and Lincoln, Providence County, and Warwick, Kent County. (Veilleux). MICHIGAN - Approximately 6,000 traps set in Ingham, Eaton, Clinton, Ionia, Shiawassee, Jackson and Calhoun Counties; trapping negative. (Ring et al.).

SATIN MOTH (Stilpnotia salicis) - VERMONT - Larvae defoliating aspen in Orleans County. (MacCollom, July 19).

TIGER SWALLOWTAIL (Papilio glaucus) - IOWA - Larvae defoliating linden at Walnut, Pottawattamie County. (Iowa Ins. Inf., July 19).

BIRCH LEAF MINER (Fenusa pusilla) - IOWA - Found in leaves of white birch in Fayette County. This is a new State record. (Iowa Ins. Inf., July 19).

SAWFLIES - VERMONT - Larvae defoliating mountain-ash in Chittenden County. (MacCollom, July 19).

A GALL WASP (Callirhytis conigera) - ALABAMA - Heavily damaged old red oak tree in Greene County; large galls formed on most limbs and twigs; adults emerged. (McQueen).

LACE BUGS - NEW JERSEY - Building up on sycamore; controls recommended. (Ins.-Dis. Newsltr.). OKLAHOMA - Corythucha ciliata (sycamore lace bug) damaging sycamores in Pawnee County; unidentified species causing heavy damage to pyracantha and light on American elm in Payne County. (Okla. Coop. Sur.).

A LEAF-FEEDING GRASSHOPPER (Dendrotettix quercus) - WISCONSIN - Populations, probably this species, high in area of Jackson County. (Wis. Ins. Sur.).

OYSTERSHELL SCALE (Lepidosaphes ulmi) - UTAH - Heavy attack causing death of many limbs of ash trees in Salt Lake City-Murray area, Salt Lake County. (Knowlton).

BEECH SCALE (Cryptococcus fagi) - NEW JERSEY - Observed on beech trees in residential areas of Morris County. (Ins.-Dis. Newsltr.).

EUROPEAN RED MITE (Panonychus ulmi) - OKLAHOMA - Averaged 5 per leaf on American elms in Stillwater area, Payne County. (Okla. Coop. Sur.).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - MINNESOTA - Heavy on silver maples in Minneapolis-St. Paul area. (Minn. Ins. Rpt.).

SOFT SCALES - OHIO - Lecanium fletcheri (Fletcher scale) increased over past year; number-one problem on juniper and taxus in Portage and Summit Counties. Several thousand azalea plants infested with Pulvinaria ericicola in Portage County near Kent. Appeared more abundant in dense plantings; this is only infested area in State. (Kelly). This is first ARS record for P. ericicola in State. (PPC). VIRGINIA - Pseudophilippia quaintancii noted on pine in King and Queen County July 11. (Morris, Va. Div. Forestry). NEW YORK - Heavy population of Toumeyella liriodendri (tuliptree scale) active in Nassau County park. (N.Y. Wkly. Rpt., July 19).

ARMORED SCALES - RHODE ISLAND - Lepidosaphes yangicola eggs hatched and crawlers appearing generally on winged euonymus in Newport, Newport County, and Warwick, Kent County. (Veilleux). FLORIDA - All stages of Parlatoria proteus generally infesting and moderately damaging Liriope sp. in nursery at St. Petersburg, Pinellas County. (Baker, Bingaman, July 7). NORTH CAROLINA - Fiorina theae (tea scale) infested camellias in Wake County. (Jones). GEORGIA - F. theae heavy on camellias in Laurens County. (Brown). OHIO - Diaspis carueli (juniper scale) infested arborvitae at Woodsfield, Monroe County. (Pollock, Delaplaine). WISCONSIN - Crawlers of Aspidiotus californicus (black pine leaf scale) settled on needles of Mugho pine in Monroe County July 13. (Wis. Ins. Sur.).

DACTYLOPIID SCALES - IDAHO - Crawlers of Gossyparia spuria (European elm scale) infested Siberian elms at Preston. (Roberts). NORTH CAROLINA - Eriococcus azalea (azalea bark scale) infested azalea in Pitt County. (Scott).

APHIDS - UTAH - Black willow, Norway maple and boxelder trees conspicuously sticky with honeydew caused by aphids in Holladay-Cottonwood area, spotty elsewhere in Salt Lake County. (Knowlton, Burningham). Pemphigus sp. galls much less numerous in Garden City and Randolph areas, Rich County, on Populus angustifolia than during past 3 seasons. Macrosiphum eoessigi damagingly abundant at Provo; controls necessary. Scarce or absent in most northern and central areas on hollyhocks examined this spring. Aphis pomi (apple aphid) conspicuously infesting flowering apple foliage south of Salt Lake City. (Knowlton). MINNESOTA - Aphids

causing distortion of silver maple leaves. (Minn. Ins. Rpt.). NEW YORK - Unidentified species still persisting in some privet plantings in Suffolk County. (N.Y. Wkly. Rpt., July 19). NEW HAMPSHIRE - Dactynotus rudbeckiae (goldenglow aphid) deforming delphiniums at Durham. (Conklin, July 16). NEVADA - Aphids heavy on American elms in Ormsby County; honeydew heavy. (Ting). NEW MEXICO - Unspecified species heavy on American elms; severely deforming foliage at Laplata, San Juan County. (Heninger).

WHITEFLIES - GEORGIA - Heavy on ornamental plants in De Kalb County. (Coleman). RHODE ISLAND - Puparia of Tetraleurodes mori (mulberry whitefly) common in Warwick, Kent County, on ornamental mountain-laurel. (Mathewson).

PERIODICAL CICADAS (Magicicada spp.) - VIRGINIA - Damage widespread in northern end of Alleghany County; ranges light to moderate in Shenandoah, Rockingham, Highland and Bath Counties. (Morris, Va. Div. Forestry). OHIO - Nursery stock involving taxus, euonymus, azalea and other shrubs and shade trees heavily damaged during Brood V emergence in West Richfield area, Summit County. (Kelly). Caused severe damage in commercial orchard at Magnolia, Carroll County. (Forsythe).

ROSE LEAFHOPPER (Edwardsiana rosae) - UTAH - Discoloring rose foliage in Kearns-Salt Lake City area, Salt Lake County. (Knowlton).

A LEAFHOPPER (Erythroneura aclys) - OHIO - Very abundant on some redbud trees in Columbus, Franklin County; foliage damaged; leaves grayish. (Davidson).

BAGWORM (Thyridopteryx ephemeraeformis) - OKLAHOMA - Heavy on evergreens in Mayes, Ottawa, Murray and Greer Counties. Moderate in Kay and Garvin Counties. (Okla. Coop. Sur.). MISSOURI - Light to heavy on untreated evergreens throughout State. (Houser). IOWA - Half-grown larvae feeding on deciduous trees at Onawa. (Iowa Ins. Inf., July 19). MARYLAND - Destructive to arborvitae and juniper on several suburban Prince Georges County properties. (U. Md., Ent. Dept.). ALABAMA - Several hundred redcedar trees and many shrubs heavily attacked by larvae in Greene County. (Johnston et al.).

A BAGWORM (Thyridopteryx sp.) - FLORIDA - Larvae infesting coconut at Key West, Monroe County. (Thurston, July 14).

MIMOSA WEBWORM (Homadaula albizziae) - NEW JERSEY - Activity increasing on mimosa and honeylocust trees in central counties. (Ins.-Dis. Newsltr.). MISSOURI - Light to moderate webbing on many mimosa trees in southwestern district. (Houser).

JUNIPER WEBWORM (Dichomeris marginella) - OREGON - Continues to feed on various varieties of ornamental juniper in western area; adults emerged week of July 19 in Jackson County. (McLaughlin, Larson).

AILANTHUS WEBWORM (Atteva aurea) - VIRGINIA - Present on ailanthus in Tappahannock, Essex County on June 17. (Morris, Va. Div. Forestry).

EIGHT-SPOTTED FORESTER (Alypia octomaculata) - NORTH DAKOTA - Moderate larval feeding noted on Virginia-creeper at Minot. (Frye, Thomasson).

STALK BORER (Papaipema nebris) - WISCONSIN - Larvae infesting perennial flowers and other plants. (Wis. Ins. Sur.).

PAINTED LADY (Vanessa cardui) - IDAHO - Larvae abundant and general throughout Fremont County; moving into some gardens adjacent to mowed Canada thistle. Larvae first noted in late June. (Garner).

HOLLYHOCK WEEVIL (Apion longirostre) - UTAH - Very abundant in hollyhock at Coalville, Summit County, June 15, 1965. This constitutes a new State record. Additional collections and new county records since original find as follows: Logan, Cache County, July 3; Payson, Utah County, July 6; Nephi, Juab County, July 7; Kearns and Salt Lake City, Salt Lake County, July 16; and Farmington,

Davis County, July 20. Additional community records include Mona, Juab County, and Provo, Utah County, on July 20. Species apparently present in State for several years. (Knowlton).

ASIATIC GARDEN BEETLE (Maladera castanea) - RHODE ISLAND - Very heavy on property in Peace Dale, Washington County; probably abundant statewide. (Hyland, Mathewson).

JAPANESE BEETLE (Popillia japonica) - MARYLAND - Adults increased on favored ornamental hosts in several areas over State. (U. Md., Ent. Dept.). RHODE ISLAND - Continues negligible statewide. (Mathewson, Veilleux).

NATIVE HOLLY LEAF MINER (Phytomyza ilicicola) - VIRGINIA - Infested holly trees in Culpeper, Culpeper County. (Isakson, Heltzel, July 15).

THRIPS - OREGON - Causing silvering of privet leaves in Jackson County. (McLaughlin). WISCONSIN - Yellowing and whitening of privet hedges due to feeding of Dendrothrips ornatus (privet thrips) becoming increasingly more noticeable. (Wis. Ins. Sur.).

EUROPEAN EARWIG (Forficula auricularia) - COLORADO - Feeding on ornamentals in Larimer, Boulder and Denver Counties in increasing numbers. (Daniels).

ERIOPHYID MITES - OREGON - Undetermined species causing bronzing, rolling and distortion of azalea leaves in propagating beds at Myrtle Creek, Douglas County. (Vertrees).

INSECTS AFFECTING MAN AND ANIMALS

MOSQUITOES - MINNESOTA - Light trap collections in Metropolitan Mosquito Control District for weekend of July 17 totaled 12,327 females; 5,188 previous week. Totals were: Aedes vexans 5,748, Culiseta inornata 3,407, Culex tarsalis 1,546, Mansonia perturbans 442 and Anopheles walkeri 219. In 3,065 larval collections (record number for one week), Aedes vexans found in 1,478, A. cinereus in 122, Culex tarsalis in 820, C. restuans in 678, C. territans in 390, C. pipiens in 232 and Culiseta inornata in 650 collections. In 42 15-minute evening bite collections, 310 females taken; 171 Aedes vexans, 26 A. cinereus, 17 A. excrucians, 12 A. fitchii, 37 Mansonia perturbans, 10 Culiseta inornata and 7 Culex tarsalis. In 247 5-minute daytime collections, 2,133 females taken. A. vexans predominant with 969; A. stimulans, A. excrucians and A. fitchii accounted for 640. Mansonia perturbans, often troublesome at dusk, accounted for 38 specimens. Very substantial brood of A. vexans emerged in southern parts of Scott and Dakota Counties. Very marked increase of A. vexans in Minneapolis-St. Paul area night of July 21; increase occurred due to favorable nighttime temperatures and moderate south-southwest winds which brought hordes of mosquitoes in from southern part of district and beyond; brood still on move and undoubtedly dispersal will continue for 7-10 days. High populations throughout much of northern wooded areas. (Minn. Ins. Rpt.). WISCONSIN - Some activity continues although lessened somewhat; most temporary pools examined free of larvae. One pool in Dane County with estimated 100 Aedes sp. per square foot. (Wis. Ins. Sur.). IOWA - A. vexans predominant species annoying in areas receiving rains. (Iowa Ins. Inf., July 19). NEBRASKA - Aedes sp. numerous in Lincoln area; causing severe discomfort. (Roselle). OKLAHOMA - Several species moderate to heavy; continue annoying in northeast and in wooded areas in east central. (Okla. Coop. Sur.). UTAH - Unusual amounts of rain required mosquito control in Price-Helper-Wellington areas; very troublesome in several areas of Iron County. Very troublesome to people and livestock in Randolph-Woodruff and Allen Canyon. Species largely Aedes idahoensis in Allen Canyon. Troublesome in Lakota-Laketown areas and around Bear Lake, Rich County. Moderately numerous in Logan Canyon, Cache County. (Knowlton). NEVADA - Aedes dorsalis adults heavy at Stillwater, Churchill County, and Lovelock, Pershing County. A. nigromaculis adults extremely abundant in Fernely and Mason Valley, Lyon County. (Cooney). Culex tarsalis adults and larvae heavy at several locations in Las Vegas area, Clark County. (Milner).

FACE FLY (Musca autumnalis) - MISSOURI - Ranged 2-3 per face on cattle in central and north central districts July 23. (Thomas). Adults collected from face of cow in Vernon County July 21; this is a new county record. Ratio of 7 Musca domestica (house fly) to 2 M. autumnalis noted on face of cow. (Houser). UTAH - Troublesome to cattle in foothills above Mendon, Cache County; collected consistently in blacklight traps at Logan. (Hanson, Davis, Knowlton). SOUTH DAKOTA - High numbers continue on stock; up to 12 per head on untreated stock in Charles Mix County. (Jones, Kantack). MARYLAND - Counts in Montgomery and Howard Counties continued lower than in previous years. Ranged 3-8 per face on herds in Montgomery County (averaged 12 per head in 1963 and 1964). Ranged 4-6 in Howard County. (Fales).

HOUSE FLY (Musca domestica) - VIRGINIA - Larvae and pupae medium in hog pen in Caroline County. (Isakson, Eagar, July 20). WISCONSIN - Activity increasing. (Wis. Ins. Sur.). IOWA - Controls urged in feedlots. (Iowa Ins. Inf., July 19). OKLAHOMA - Numbers low in Payne County; heavy in and around homes in Choctaw County. (Okla. Coop. Sur.).

STABLE FLY (Stomoxys calcitrans) - SOUTH DAKOTA - High numbers continue; ranged 75-100 per side on untreated stock in Charles Mix County. (Jones, Kantack). IOWA - Controls urged in feedlots. (Iowa Ins. Inf., July 19). OKLAHOMA - Range 2-3 per head on cattle in Payne County. (Okla. Coop. Sur.).

HORN FLY (Haematobia irritans) - WYOMING - Adults causing considerable annoyance to cattle in some areas of Platte, Goshen and Laramie Counties; estimated 85-225 per animal. (Marks). NEBRASKA - Increasing on cattle in eastern area. (Rhine, Roselle). SOUTH DAKOTA - Numbers continue high; counts on untreated stock in Charles Mix County ranged 200-250 per side. (Jones, Kantack). OKLAHOMA - Decreased in Payne and Noble Counties; moderate on cattle in Murray, Stephens and Mayes Counties. (Okla. Coop. Sur.). ALABAMA - Although present on all herds in western area, unusually light on beef and dairy cattle in Perry, Greene and other nearby counties. (McQueen).

TABANID FLIES - NEVADA - Numerous adults present at Swingle Bench, Churchill County. (Cooney). UTAH - Becoming moderately abundant and troublesome to livestock in Randolph-Woodruff area, Rich County. (Knowlton). OKLAHOMA - Tabanus sulcifrons heavy and T. atratus (black horse fly) moderate on cattle in Choctaw County. (Okla. Coop. Sur.). MISSOURI - Tabanus spp. adults ranged 2-3 per animal on horses and cattle on farm in Barton County. Most specimens green-headed species; numbers slightly heavier since July 1. (Houser, July 21). WISCONSIN - Deer flies annoying in many areas. (Wis. Ins. Sur.). MINNESOTA - Deer flies extremely annoying in forested areas. (Minn. Ins. Rpt.).

BOT FLIES - UTAH - Annoying horses at Farmington, Davis County, and Kaneshville, Weber County, June 17. Gasterophilus intestinalis (horse bot fly) annoying horses near Spanish Fork, Utah County. (Knowlton).

MASKED HUNTER (Reduvius personatus) - UTAH - Entered home at Ogden, Weber County. Three specimens collected in blacklight trap at Benjamin, Utah County, night of July 13. (Knowlton).

WESTERN BLOODSUCKING CONENOSE (Triatoma protracta) - CALIFORNIA - Adult bit person at Coalinga, Fresno County; heavy population in home in Paradise, Butte County. (Cal. Coop. Rpt.).

BLISTER BEETLES (Epicauta spp.) - OKLAHOMA - Caused death of 2 horses; animals ate hay containing large number in Paoli area, Garvin County. (Okla. Coop. Sur.).

TICKS - ALABAMA - Immatures heavy throughout much of Black Belt counties; 25 or more bites on legs and arms not unusual. Vary on cattle. (Johnston et al.). RHODE ISLAND - Dermacentor variabilis (American dog tick) adults found but not widespread problem. (Mathewson). NEW HAMPSHIRE - D. variabilis noted at Amherst. (Sutherland). OKLAHOMA - Amblyomma americanum (lonē star tick) variable on cattle

in Atoka County. Adults range up to 400 per head; larvae increasing; few nymphs found. (Okla. Coop. Sur.).

FLEAS - NEBRASKA - Several incidences of home infestations in Lincoln. (Rhine). OKLAHOMA - Ctenocephalides spp. continue annoying in homes of returning vacationers. (Okla. Coop. Sur.). RHODE ISLAND - Ctenocephalides spp. seasonal complaints appearing. (Mathewson).

HEAD LOUSE (Pediculus humanus capitis) - CALIFORNIA - Heavy on pillow in second class hotel in Venice, Los Angeles County. (Cal. Coop. Rpt.).

CHICKEN MITE (Dermanyssus gallinae) - RHODE ISLAND - Infested home in Warwick, Kent County; associated with swallow nest. (Mathewson).

CHIGGER MITES - IOWA - Present and annoying throughout State. (Iowa Ins. Inf., July 19).

IO MOTH (Automeris io) - OKLAHOMA - Larvae continue irritating to humans in Payne County. (Okla. Coop. Sur.).

HOUSEHOLD AND STRUCTURAL INSECTS

COCKROACHES - NORTH CAROLINA - Cariblatta lutea collected in Wake County home July 18. Det. by C. G. Wright. (Smith). ALABAMA - Many complaints concerning Blattella germanica (German cockroach) in homes in Lee County. (McQueen). GEORGIA - Blatta orientalis (oriental cockroach) infested home in Ellijay; cockroaches infested with roundworms. (Coleman). UTAH - Supella supellecillum (brown-banded cockroach) infested apartment at Logan, Cache County. (Knowlton).

EUROPEAN EARWIG (Forficula auricularia) - RHODE ISLAND - Continues as statewide nuisance. (Mathewson et al.). CONNECTICUT - Continues as number-one household pest. (Savos). NEW YORK - Nuisance in many homes and gardens in Suffolk County. (N.Y. Wkly. Rpt., July 19). UTAH - Unusually abundant in fields and homes in much of Cache County and in several areas of Salt Lake County. (Knowlton, Parrish, Burtenshaw).

STRAWBERRY ROOT WEEVIL (Brachyrhinus ovatus) - MASSACHUSETTS - Bothersome in houses in several areas of western section. (Wave). RHODE ISLAND - Entering homes in Warwick, Kent County, and Providence and Cranston, Providence County. (Mathewson, Veilleux). CONNECTICUT - In homes in Stamford, North Haven, Rockville, Norwich and Higganum. (Johnson, Savos, July 21). NEW JERSEY - Migrating into homes in several areas of State. (Ins.-Dis. Newsltr.). OHIO - Migrating into homes and garage in Hocking and Franklin Counties. (Kuhl, Baertche, Delaplane).

A JAPANESE WEEVIL (Calomycterus setarius) - MASSACHUSETTS - Bothersome in houses in several areas of western section. (Wave, July 17). RHODE ISLAND - Heavy around home in Richmond, Washington County. (Wakefield, Mathewson).

BLACK CARPET BEETLE (Attagenus piceus) - MASSACHUSETTS - Very numerous in home at Marion. (Tomlison).

WHARF BORER (Naccerdes melanura) - NEW HAMPSHIRE - Adults in store basement at Berlin, Coos County; thousands in cellar at Manchester, Hillsboro County. (Conklin, July 14, 17).

A PSYCHID MOTH (Apterona crenulella) - UTAH - Cases very numerous on walls of home in southwestern Salt Lake City. (Knowlton, July 17).

A FALSE CHINCH BUG (Nysius sp.) - NEVADA - Migrating from drying fields into homes and home gardens in southern Washoe County. (Coop. Rpt.).

BENEFICIAL INSECTS

LADY BEETLES - ARKANSAS - Very few Hippodamia convergens (convergent lady beetle) remain in fields in upper Arkansas River Valley; moved to surrounding mountains. (Ark. Ins. Sur.). COLORADO - Lady beetles, probably Microwesia marginata, abundant on mite-infested blue spruce at Palisade, Mesa County, and hollyhocks at Fort Collins, Larimer County. (Anderson, Thatcher). Unspecified species decreasing on alfalfa and moving to corn and sorghum in Prowers, Bent, Otero and Crowley Counties. (Schweissing). WYOMING - Adults and larvae of several species averaged 32 per 100 sweeps in alfalfa fields in Platte, Goshen and Laramie Counties. (Marks). SOUTH DAKOTA - Adults of unspecified species averaged 10-12 per 100 sweeps in second-growth alfalfa near Spearfish, Lawrence County. (Jones). NORTH DAKOTA - H. convergens and Adalia bipunctata (two-spotted lady beetle) much in evidence in most fields where aphids present. (Frye, Thomasson).

DAMSEL BUGS (Nabis spp.) - NORTH DAKOTA - Very evident in fields where aphids present. (Frye, Thomasson). SOUTH DAKOTA - Averaged 6 adults per 100 sweeps in second-growth alfalfa near Spearfish, Lawrence County. (Jones). COLORADO - Decreasing in alfalfa and moving to corn and sorghum in Prowers, Bent, Otero and Crowley Counties. (Schweissing).

GREEN LACEWINGS (Chrysopa spp.) - NORTH DAKOTA - Adults and larvae abundant in most aphid infested fields. (Frye, Thomasson). WYOMING - Adults and larvae numerous in alfalfa fields in Platte, Goshen and Laramie Counties. Adults averaged 24 and larvae 36 per 100 sweeps. (Marks).

ICHNEUMONS - IDAHO - Probably (Campoplex sp., heavily parasitizing full-grown Hemerocampa pseudotsugata (Douglas-fir tussock moth) larvae at Moscow and Orofino. (Manis, Fitzsimmons). FLORIDA - Several Brachycyrtus pretiosus adults taken in Steiner traps at Orange City, Volusia County. Det. by L. M. Walkley. (Desin, June 18).

A PTEROMALID WASP (Cecidostiba dendroctoni) - MISSISSIPPI - This parasite of Dendroctonus frontalis (southern pine beetle) collected in Franklin and Jefferson Counties during April 1965. Det. by B. D. Burks. This is a new State record. (Brazzel).

MISCELLANEOUS INSECTS

A WHITE-FRINGED BEETLE (Graphognathus leucoloma striatus) - MARYLAND - Found in Temple Hills community in Prince Georges County on July 14. This is residential community. Cooperative survey by Maryland State Board of Agriculture and Plant Pest Control Division, U.S. Department of Agriculture underway to delimit infestation and prevent spread. This is a new State record. (U. Md., Ent. Dept.).

WHITE-FRINGED BEETLES (Graphognathus spp.) - Small infestation found at Murfreesboro, Rutherford County, TENNESSEE; this is a new county record. Sizable infestation found at new location in Gibson County; surveys in other Tennessee counties negative. Surveys in several NORTH CAROLINA counties negative except for small extension in Wayne County; adults collected in known infested areas of Wilson, Lenoir and Pender Counties. Small extensions of infested areas found in Candler, Fulton, Laurens and Meriwether Counties, GEORGIA. Extensions of infested areas found in Baldwin, Jefferson, Madison and Morgan Counties, ALABAMA; infestation found in growing area of small nursery in Etowah County. Adults found in new areas in Benton, Lauderdale and Wayne Counties, MISSISSIPPI, and in previously treated areas in Itawamba and Jefferson Davis Counties. (PPC South. Reg., June Rpt.).

WESTERN SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata undecimpunctata) - OREGON - This and unspecified flea beetles heavily damaged field of broomrape in Douglas County. (Vertrees).

BANDED ALDER BORER (Rosalia funebris) - OREGON - Large numbers on walls of Douglas County Courthouse in Roseburg. Apparently attracted by black base coat paint used on building. (Vertrees).

LARGER YELLOW ANT (Acanthomyops interjectus) - IOWA - Swarming in Hancock County. (Iowa Ins. Inf., July 19).

YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli) - UTAH - Adults very numerous in blacklight trap at Logan, Cache County. (Davis, Knowlton).

A PSYCHID MOTH (Fumaria casta) - NEW HAMPSHIRE - Unusual number of inquiries concerning pupae. (Conklin).

EUROPEAN EARWIG (Forficula auricularia) - NEW HAMPSHIRE - Numerous reports noted. (Conklin, Sutherland).

AN ACARID MITE (Caloglyphus berlesei) - CALIFORNIA - Heavy in droppings at poultry ranch in Fontana, San Bernardino County. (Cal. Coop. Rpt.).

CORRECTIONS

CEIR 15(26):703 - An ANTHOCORID BUG (Montandoniella moraguesi Puton) should read Montandoniola moraguesi (Puton). Montandoniella is a palearctic genus and is not found in the Orient. This correction should also be made in Volume 15 on pages 9, 78 and 79.

CEIR 15(30):812 - BLACK CUTWORM (Agrotis ipsilon) - Should read: "... 70-acre field of corn ..."

CEIR 15(30):823 - CABBAGE LOOPER (Trichoplusia ni) - NEVADA - Should read: "... on potato foliage in Mason Valley ..."

(Weather continued from page 846).

inches and 6 to 13 inches at numerous spots in the west central section. The rains flooded lowlands along the small rivers and along the main stem of the Missouri River to below Jefferson City. Thunderstorms in eastern Kentucky and Tennessee dumped flood-producing rains that caused a few drownings and flood damage to residences and business properties. Middlesboro, Kentucky, received 8.4 inches in 6 hours. Rainfall over the rest of the State ranged from none to about 2 inches. A few spots in North Dakota, Nebraska, Kansas, Ohio, Texas, Georgia, and Florida received more than 2 inches. (Summary supplied by U.S. Weather Bureau).

LIGHT TRAP COLLECTIONS

	Temperature	precipitation	Type of trap *	Agrotis ipsilon (black cutworm)	Chorizagrotis auxiliaris (gray cutworm)	Psithyrus acer (salt-marsh caterpillar)	Parona diffusa (wheat head armyworm)	Helia subterranea (granulate cutworm)	Heliothis virescens (tobacco budworm)	H. zea (bollworm, corn earworm, tomato fruitworm)	Loxostege comitatalis (alfalfa webworm)	Loxostege similalis (garban webworm)	Loxostege sticticalis (beet webworm)	Ostrinia nubilalis (European corn borer)	Peridroma saucia (variegated cutworm)	Prodenia ornithogalli (yellow striped armyworm)	Protoparce quinquefasciata (tomato hornworm)	Protoparce sexta (tobacco hornworm)	Spodoptera unipuncta (armyworm)	Spodoptera exiguua (beet armyworm)	Spodoptera frugiperda (fall armyworm)	Trichoplusia ni (cabbage looper)	Crops
ARKANSAS																							
Hope 7/15-21				4				0	37														
Morrilton 7/15-21				10				0	32														
Kelso 7/15-21				3				0	22														
Fayetteville 7/15-21				4				3	112														
FLORIDA																							
Gainesville 7/19			BL				2		2														
ILLINOIS (County)																							
Champaign 7/16-22	62-90	1.42		34										7	108	55		224			6		
MARYLAND																							
Centreville 7/13-19				22					0					73	13								
Snow Hill 7/13-19				18					15					119	53								
MASSACHUSETTS																							
East Wareham State Bog 7/11			BL																				
MICHIGAN (Counties)																							
Berrien 7/17-23			BL	7																			
Branch 7/17-23			BL	4																			
Monroe 7/17-23			BL	5																			
Kalamazoo 7/17-23			BL	0																			
Jackson 7/17-23			2BL	9																			
Livingston 7/17-23			BL	10																			
Ionia 7/17-23			BL	8																			
Saginaw 7/17-23			BL	9																			
Sanilac 7/17-23			BL	11																			
Bay 7/17-23			BL	8																			
Ogemaw 7/17-23			BL	8																			
Newaygo 7/17-23			BL	13																			
Iron 7/17-23			BL	7																			
Chippewa 7/17-23			BL	7																			
Menominee 7/17-23			BL	8																			
Schoolcraft 7/17-23			BL	3																			
MINNESOTA																							
Worthington 7/10-16				5																			
Fergus Falls 7/10-16				0																			
Crookston 7/10-16				0																			
Rochester 7/10-16				5																			
Shakopee 7/10-16				0																			
MISSISSIPPI																							
Stoneville 7/16-22	70-100	0.17	2BL	17																			
Rolling Fork 7/16-22	69-98	1.34	BL	7																			
Tunica 7/16-22	64-97		BL	15																			

* BL = blacklight; I = incandescant; 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.

LIGHT TRAP COLLECTIONS

	Temperature °F.	Humidity %	Precipitation (inches)	Type of trap*	Arctia latron (black cotton)	Carpocapsa pomonella (codling moth)	Conotrachelus auxillaris (army cutworm)	Estigmene acrea (salt-marsh caterpillar)	Faenusa diffusa (shear head armyworm)	Peltia subretreana (granulate cutworm)	Heliothis virescens (tobacco budworm)	N. zea (bollworm, corn earworm, tomato fruitworm)	Loxostege compositalis (alfalfa webworm)	Loxostege sticticalis (garden webworm)	Loxostege timidalis (bean webworm)	Detritia nubilalis (European corn borer)	Peridroma saucia (variegated cutworm)	Prodenia ornithogalli (yellow-striped armyworm)	Protoparce quinquefasciata (tomato hornworm)	Protoparce sexta (tobacco hornworm)	Pseudodelia unipuncta (armyworm)	Spodoptera eximia (beet armyworm)	Spodoptera frugiperda (fall armyworm)	Nicotiana glauca (cabbage looper)	Crops**	
MISSOURI Portageville 7/17-23				BL	17							43				82	2	129			57					
NEW JERSEY Aura 7/20,23												5				14		1		1	24					
Edinburg 7/20,23												4				39		1		1	101					
Masonville 7/20,23												16				12		2			58					
Seabrook 7/20,23												3				1		2			73					
Hardingville 7/20,23					8																					
Hurffville 7/20,23					6																					
NORTH DAKOTA Fargo 7/16-23																										
Trotters 7/16-23																										
Sheyenne 7/16-23																										
Bismarck 7/16-23																										
Williston 7/16-23																										
OHIO (Counties) Licking 7/16-22				BL	8																					
Wayne 7/15-21				BL	5																					
Franklin 7/19-21				BL	6																					
SOUTH CAROLINA Charleston 7/19-25			66-92	BL	0																					
SOUTH DAKOTA Brookings 7/14-21				BL	14																					
TENNESSEE (County) Knox 7/13-19					4				16			4														
TEXAS Waco 7/17-23					4				51	6	237															
WISCONSIN Platteville 7/13-19				BL	20																					
Darien 7/13-19				BL																						
Janesville 7/13-19				BL																						
Evansville 7/13-19				BL																						
Mazomanie 7/14-19				BL	9																					
Madison 7/14-20				BL	112	7																				
Middleton 7/14-20				BL	47	2																				
De Forest 7/13-19				BL																						
Arlington 7/13-19				BL																						
Wayne 7/13-19				BL																						
Theresa 7/13-19				BL																						
Nenno 7/13-19				BL																						

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* BL = blacklight; I = incandescant; MV = mercury vapor; O = 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 July 18 - 24, a total of 30 cases was reported in the Southwestern Eradication Area, as follows by States and counties: TEXAS - Medina 2, Zavala 6, Real 1, Terrell 1, Kinney 2, Maverick 1; ARIZONA - Gila 1, Yuma 1, Pima 5, Mohave 1, Maricopa 1, Santa Cruz 1; NEW MEXICO - 1 case each in Chaves, Eddy, Luna, Catron, Grant; CALIFORNIA - Imperial 2. The Republic of Mexico reported 177 cases: Sonora 39, Chihuahua 12, Coahuila 19, Tamaulipas 2, Territory Baja California Sur 27, Durango 58, Veracruz 8, San Luis Potosi 12. Sterile screw-worm flies released: Texas 24,166,250, New Mexico 4,120,000, Arizona 13,880,000, California 1,200,000, the Republic of Mexico 104,078,000.

Year	Positive Cases		Negative Cases		Ratio of Positive Cases to 100 Cases Negative	
	Current	Cumulative	Current	Cumulative	Current	Cumulative
1963	91	2,230	77	4,347	118.18	51.29
1964	3	104	70	4,063	4.28	2.55
1965	30	436	88	3,369	34.09	12.94

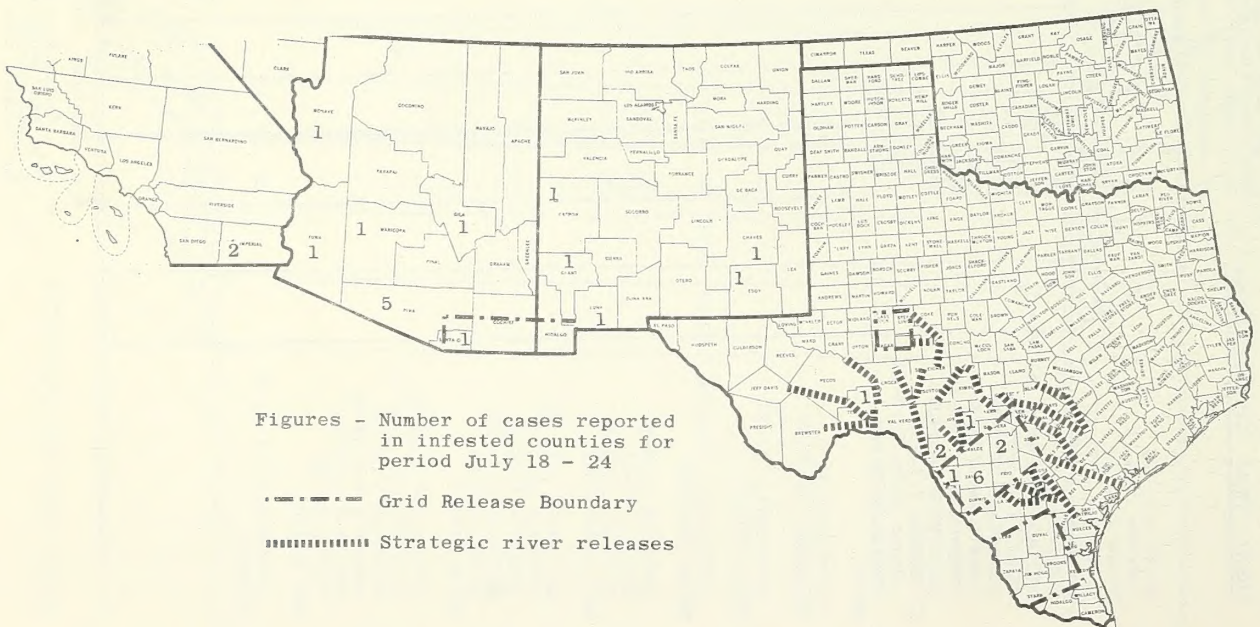
Table 1. Comparison of specimens reported during corresponding weeks in 1963 and 1964 in Southwestern Eradication Area. (1965 area figures include cases reported from Arizona and/or California; 1964 figures reflect those from the 5-State area).

Year	Positive Cases		Negative Cases		Ratio of Positive Cases to 100 Cases Negative	
	Current	Cumulative	Current	Cumulative	Current	Cumulative
1964	99	1,135	44	1,180	225.00	96.18
1965	122	2,653	59	1,395	206.77	190.17

Table 2A. Mexican portion of Barrier Zone only

Year	Positive Cases		Negative Cases		Ratio of Positive Cases to 100 Cases Negative	
	Current	Cumulative	Current	Cumulative	Current	Cumulative
1964	93	1,056	27	493	344.44	214.19
1965	99	2,294	36	761	275.00	301.44

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



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