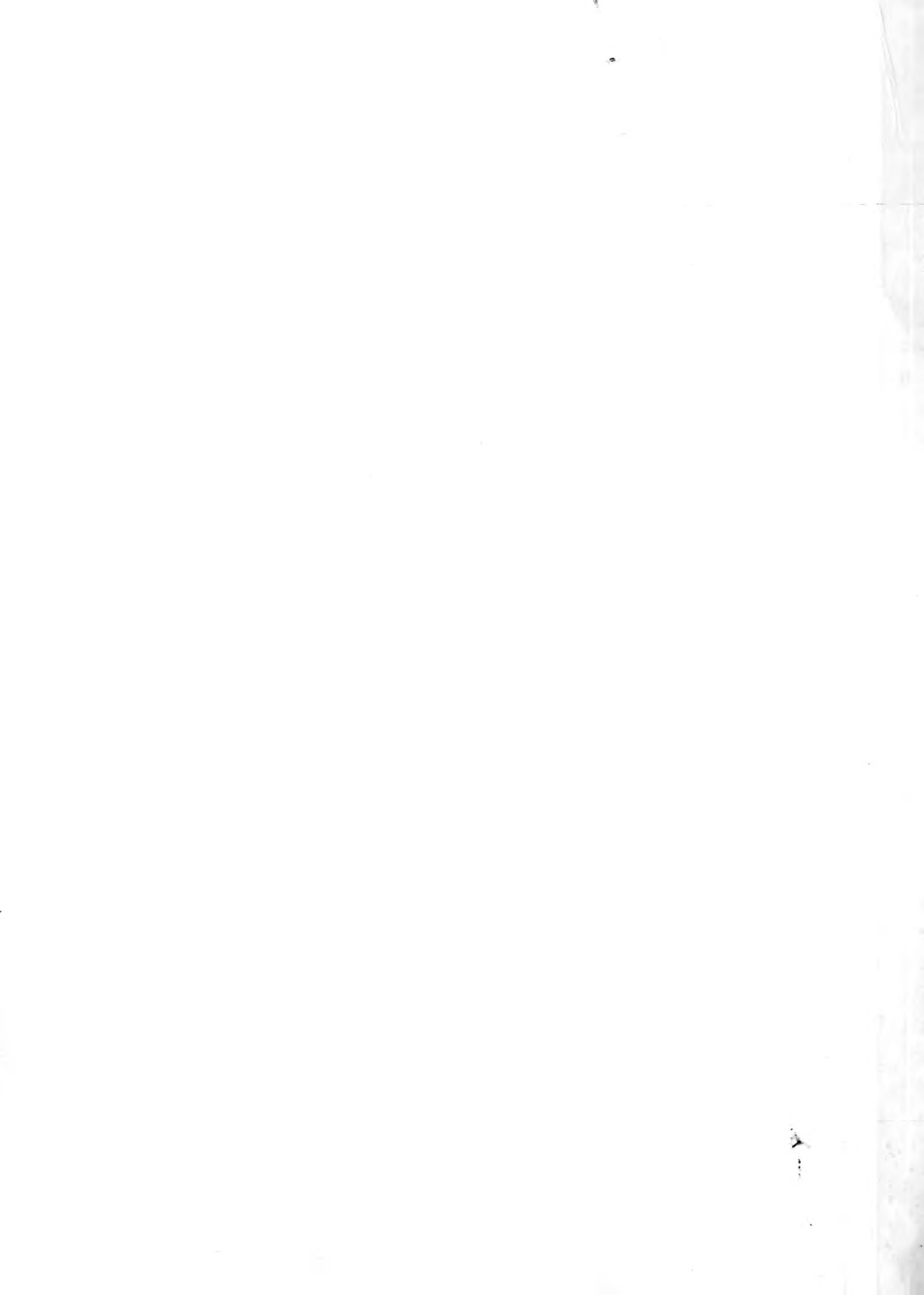


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VOL. 14 No. 35

August 28, 1964

*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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Hyattsville, Maryland 20781

## COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Considerable movement of GRASSHOPPERS into crops observed in Wisconsin, with loss to late oats and damage to cabbage reported; movement into corn and soybeans increased in Minnesota; extremely numerous in some agricultural areas of Utah. (p. 989). EUROPEAN CORN BORER infestations in stalks and tassels of maturing corn increasing in all sections of Maryland, and light trap catches high and about a week earlier than in 1963 in Wisconsin. (pp. 989-990). CORN EARWORM larval feeding moderate to heavy on soybeans in areas of Georgia; moth flights and egg laying heavy over most of Illinois. (p. 990). FALL ARMYWORM whorl infestations continue to be a problem in late corn in all sections of Maryland and considerable whorl feeding noted in areas of Wisconsin. CORN LEAF APHID numbers declining in many areas where previously high. (p. 991). SPIDER MITES spotty but potentially damaging on soybeans in several areas on Eastern Shore of Maryland. SPOTTED ALFALFA APHID increasing on alfalfa in Colorado, South Dakota and Wisconsin. (p. 992). BLISTER BEETLES (*Epicauta* spp.) causing some concern by feeding on silks of corn in Wisconsin and North Dakota. (p. 994).

GREEN CLOVERWORM populations greatly reduced in thumb area of Michigan, but outbreak reported on beans over extensive acreage in western New York (p. 997); also reported damaging soybeans in Ohio. (p. 993).

BOLL WEEVIL increasing on cotton in southern Tennessee and conditions are favorable for buildup. (p. 1000). PINK BOLLWORM larvae and exit holes becoming more numerous in most cotton fields between Solomon and Safford, Arizona. (p. 1001).

DETECTION

New State records reported were WESTERN FLOWER THRIPS (*Frankliniella occidentalis*) in Maryland, which is also apparently a new record for the Eastern United States (p. 1004), and a WALNUT HUSK FLY (*Rhagoletis suavis*) from Delaware (p. 1004). New county records include WESTERN CORN ROOTWORM (*Diabrotica virgifera*) from Putnam, Schuyler, Sullivan, Cass and Jackson Counties, Missouri (p. 991); a BERMUDA-GRASS MITE (*Aceria neocynodonis*) from Merced and Yolo Counties, California (p. 992); and SMALLER EUROPEAN ELM BARK BEETLE (*Scolytus multistriatus*) from Buffalo County, Nebraska (p. 1003).

CORRECTIONS

See page 1007.

SPECIAL REPORTS

Status of the Screw-worm in the Southwest. (p. 1010).

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Reports in this issue are for week ending August 21, unless otherwise indicated.

WEATHER OF THE WEEK ENDING AUGUST 24

Abnormally cool weather continued for the third consecutive week over the Great Lakes region and the Northeast and for the second week over other central and eastern portions of the Nation. Beneficial rains came to most of the Corn Belt.

**TEMPERATURE:** Hot weather continued over Texas and the Far Southwest. Unseasonal coolness continued over the Great Lakes region, the Northeast, and the Midwest. Unusually cool air from the Pacific Ocean spread over the Northwest and moved into the upper Mississippi River Valley. The cool air pushed into the northern Great Plains, the Great Lakes region, and the Ohio River Valley. Midday readings on Thursday were in the 70's over the Dakotas in contrast to Wednesday's afternoon temperatures which were in the 90's or, in some cases, exceeded 100°. The cool weather continued over most of the eastern half of the Nation. Temperatures over the Southeast increased to near normal during the latter part of the week. Temperatures averaged above normal along the Pacific coast, the Mexican border, southern Florida, and in the Washington-Baltimore vicinity, and below normal over the rest of the Nation. Some areas in California averaged 2° to 5° above normal. Wyoming, Nebraska, areas near the northern Great Lakes, and parts of northern New England averaged more than 6° below normal.

**PRECIPITATION:** As the cold front moved across the Great Plains, thunderstorms dropped much needed rain over the Corn Belt. Kirksville, Missouri, received over 3 inches of rain Thursday night and early Friday morning. Locally heavy amounts - up to 3 inches or more - fell in Nebraska, Kansas, Minnesota, Wisconsin, Iowa, and Missouri. Heavy rains at Spring Valley, Minnesota, flooded highways and halted traffic. Gusty winds up to about 70 m.p.h. damaged trees in Prairie Village, a suburb of Kansas City, Kansas. The cold front triggered general shower activity from the northern high plains of Texas southeastward across the State. Amounts ranged widely. San Saba, on the Edwards Plateau, received 8.41 inches Saturday night. Rains of 1 to 5 inches fell over much of the drought area from Oklahoma to the Great Lakes on Friday and Saturday. Although some areas over the Eastern United States received rain almost daily, the weekly totals ranged widely. Some areas received from 0.25 to 1.00 inch; others from 1 to 5 inches. Light snow accumulated on some of the higher mountains of Wyoming and Colorado. (Summary supplied by U.S. Weather Bureau).

CEREAL AND FORAGE INSECTS

**GRASSHOPPERS - WISCONSIN** - Considerable migration into crops observed; treatment reported in Dodge and northern Trempealeau Counties; some loss to late oats reported in Door County; treatment of soybeans contemplated at a location in Walworth County. Migration into and feeding on cabbage reported in Outagamie County. Corn severely damaged in many areas, particularly fields adjacent to cut alfalfa. Melanoplus femurrubrum (red-legged grasshopper) and M. differentialis (differential grasshopper) approximately equal in numbers in field of corn where latter species dominant previous week. Noticeable feeding on needles of red and white pine noted in area. Approximately 20 percent of M. femurrubrum females contained eggs August 19; none found in M. differentialis females same date. Some grasshopper migration may be temporary; some will probably be permanent unless alfalfa becomes more palatable in some areas. (Wis. Ins. Sur.).

**MINNESOTA** - Annual adult survey underway in western edge of State. Counts in area generally lower in alfalfa than few weeks ago, probably because of increased movement into corn and soybeans. Flights noted dropping into Minneapolis on August 16 and could be found in downtown area following day. Averaged 8 per square yard; mostly M. femurrubrum. In southwest districts, counts ranged from less than 1 to 36 per square yard (average 7); averaged 3 per square yard in northwest and 9 in west central districts. M. femurrubrum predominated in all fields surveyed. (Minn. Ins. Rpt.). **NORTH DAKOTA** - Adults generally noneconomic in Mountrail, Burke, Divide, Williams and Barnes Counties, except for few scattered light populations. M. femurrubrum, M. bivittatus (two-striped grasshopper) and M. sanguinipes (migratory grasshopper) dominant in northwest area; M. femurrubrum, M. bivittatus and Chorthippus longicornis dominant in Barnes County. (Brandvik). Mostly noneconomic in Eddy, Foster, Wells, Kidder, Sheridan, Stutsman and Cass Counties; light infestations found in Kidder County and in small areas of Eddy, Sheridan and Cass Counties; M. sanguinipes, M. bivittatus, M. femurrubrum, M. packardii and Camnula pellucida (clear-winged grasshopper) dominant species. C. longicornis found in Cass County. (Scholl). **OHIO** - M. differentialis building up throughout southwest; some feeding damage to field crops noted along grassy fence rows. (Lyon).

**MISSOURI** - Averaged 8-10 per square yard along highway right-of-way in northern Boone County; two-thirds M. sanguinipes and one-third M. differentialis. Averaged 0-2 per square yard in Chariton, Linn, Sullivan, Putnam, Schuyler, Adair and Macon Counties; dominant species being M. differentialis or M. sanguinipes in about equal number of fields. (Houser, Thomas, Wood). **OKLAHOMA** - Adult survey completed in 45 counties, of which 13 were in west central and northwest areas. Results show 38,000 acres of rangeland infested in Roger Mills, Ellis, Woods and Woodward Counties. Dominant species included Ageneotettix deorum, M. bivittatus, Mermiria maculipennis and Amphitornus coloradus. Populations light in other 9 counties surveyed. (Okla. Coop. Sur.). **UTAH** - More numerous than for past 12 years in Summit County, but not serious. (Moore). Extremely numerous in portions of Nephi-Levan area of Juab County, about some farms in Heber area of Wasatch County and in lower Provo Canyon in Utah County; Melanoplus sanguinipes dominant in these areas. Damaging in few small areas of Kane County. (Hatch, Knowlton). **NEVADA** - Heavy mixed population of M. sanguinipes, M. bivittatus and Camnula pellucida averaged 50 per square yard at Red House, Lander County. (Maloney). Populations of M. sanguinipes, M. packardii (Packard grasshopper), M. femurrubrum and Trimerotropis sp. in Douglas, Lyon, Pershing and Washoe Counties equal to or below populations present in 1963. (Cooney). **ARIZONA** - Heavy populations of several species present on 250,000 acres in areas of Santa Cruz, Cochise and Pima Counties. (Ariz. Coop. Sur.). **CALIFORNIA** - Trimerotropis pallidipennis adults medium in grassland in Burnt Ranch, Trinity County. (Cal. Coop. Rpt.).

**EUROPEAN CORN BORER (Ostrinia nubilalis)** - **MAINE** - Moderately damaged sweet corn in York and Cumberland Counties. (Boulanger, Aug. 15). **NEW YORK** - Second-brood larvae mostly small in Hudson Valley; ranged to fourth stage by mid-August. About 10 percent of early whorl corn shows etching; larvae scarce in silk and ear tips. Moths still present in traps and fields. (N.Y. Wkly. Rpt., Aug. 17). **MARYLAND** - Stalk and tassel infestations continue to increase in maturing corn in all sections. (U. Md., Ent. Dept.). **MICHIGAN** - Adults, eggs, larvae and pupae



generally distributed. (Newman). WISCONSIN - Emergence about complete in southern counties. Blacklight trap catches indicated high counts for August 15-16 and probably marked peak flight. Counts high in most traps; numbers about double and week ahead of last season. Egg mass counts generally low, although 30 fresh masses per 100 plants noted in field near Arlington August 17; substantial hatch in area expected August 20. Observation of 50 plants in field near Spring Green (area more advanced than most other areas) on August 19 revealed the following: 4 fresh egg masses, 5 first stage, 16 second stage, 2 third stage and 2 fourth-stage larvae. Few fresh eggs and second-stage larvae noted on late sweet corn in western Dane County. (Wis. Ins. Sur.). SOUTH DAKOTA - Adult activity at peak in east central region; first and second-stage larvae readily found in southeast. (Hintz). MISSOURI - Infested 15-70 percent of corn plants in north central area; larvae ranged 1-3 per plant with 80 percent in stalks. In west central area, 20-80 percent of plants infested with 1-4 larvae per plant; 100 percent of larvae in stalks. (Houser, Thomas, Wood).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - ARKANSAS - Larvae girdling stalks in southeast; also noted below ground level. Few larvae now spotless. (Ark. Ins. Sur.).

CORN EARWORM (Heliothis zea) - NEW YORK - Eggs hatched during warmer weather earlier in month in Hudson Valley; larvae appearing at harvest most important concern to growers. Light, but comparably serious at present. All stages present; buildup to end of season expected to be medium to heavy, depending on temperature. Apparently serious in Livingston County. (N.Y. Wkly. Rpt., Aug. 17). DELAWARE - Adults increasing in blacklight trap collections in Sussex County. (Burbutis, Crossan). GEORGIA - Moderate to heavy feeding on pods of soybeans noted in Tattnall and Houston Counties. (Vanderford). Heavy damage to pods noted in Dodge County. (Bennett). ARKANSAS - No larvae noted in 10 fields of soybeans checked in Desha and Lincoln Counties; moths noted in these fields. Eggs noted on soybeans in Desha County; larvae observed in 5 of 16 fields checked in Lonoke County, but highest count was 3 per 30 feet of row. (Ark. Ins. Sur.). INDIANA - Third to fifth-stage larvae infesting corn ears in southern quarter of State; 24 percent of ears infested in southwest, 10 percent in south central and 5 percent in southeast section. (Saugstad). ILLINOIS - Moth flights and egg laying continue heavy over most of State. In central section, eggs present on 15-50 percent of ears in recently pollinated corn. In area south of State Route 6, 40-60 percent of ears of late maturing corn infested. (Ill. Ins. Sur.). WISCONSIN - Pupation underway. Blacklight trap counts indicate emergence underway in few areas. Indications are that populations will be heavier than normal this season. Some early harvested corn showed number of ears previously infested. (Wis. Ins. Sur.). NEBRASKA - Very light in field corn in southwest and southern areas. (Bergman). COLORADO - This and Layphygma frugiperda (fall armyworm) infesting corn ears in Prowers County. (Schweissing). UTAH - Caused moderately severe damage to sweet and field corn throughout Kane County. (Hatch, Knowlton). Infestation ranged 75-95 percent in sweet corn in Utah County home gardens. (Knowlton). MAINE - Light numbers caused light damage to sweet corn during mid-August in Auburn, Androscoggin County. (Boulanger).

ARMYWORM (Pseudaletia unipuncta) - MAINE - Problem was generally severe throughout State in late July. Summary by county as follows: York - populations and damage heavy to pasture grasses and corn in Berwick, Springvale, Sanford, Alfred, Saco, Kennebunk and Lebanon. Cumberland - infestation and damage heavy in hayfields at Fort Hill Road, Gorham and other locations; parasites and wilt disease attacked population at Fort Hill. Knox and Lincoln - heavy and severely damaged forage throughout both counties. Waldo - heavy numbers heavily damaged hayfields in Lincolnville, Northport and Waldo. Androscoggin and Sagadahoc - heavy populations heavily damaged grasses and other field crops in Auburn, Lisbon, Minot and Sabattus. Franklin - light to heavy infestations and damage reported primarily on corn in Farmington and vicinity; infestation varied greatly; in one area near New Sharon, sizable flocks of birds fed on larvae. Washington - numbers and damage light on grasses and corn in Jonesboro area; moderate to heavy populations caused moderate damage to grasses in Meddybemps area. (Boulanger, Aug. 15).



DELAWARE - Adult numbers continue to increase in blacklight trap collections in Sussex County; average over 15 per night. (Burbutis, Crossan). CALIFORNIA - Medium on Sudan grass in Laton, Fresno County. (Cal. Coop. Rpt.).

FALL ARMYWORM (Laphygma frugiperda) - NEW YORK - Trap catches relatively high in Hudson Valley; 15 moths taken August 13 at Poughkeepsie; such numbers not usually taken until September. All stages present; larvae and leaf etching continue to appear in small percentage of pretassel plants. (N.Y. Wkly. Rpt., Aug. 17). MARYLAND - Whorl infestations continue a problem in late corn in all sections; infestation over 55 percent in one Queen Annes County field. (U. Md., Ent. Dept.). GEORGIA - Heavy on hay crop in Lowndes County. (Kessler). OHIO - Larvae infesting corn near Batavia, Clermont County. (Hamilton, Holdsworth). WISCONSIN - Considerable feeding within whorls of late corn noted in Arlington, Theresa and Cedar Grove areas. (Wis. Ins. Sur.). COLORADO - Infested up to 50 percent of emerging tassels in some corn in eastern Prowers County. This and Heliothis zea (corn earworm) infesting ears in all areas of county. (Schweissing).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - OKLAHOMA - Averaged 1 per 10 peanut plants in Ft. Cobb area, Caddo County. Populations down due to pupation. (Okla. Coop. Sur.).

NORTHERN CORN ROOTWORM (Diabrotica longicornis) - OHIO - Heavy adult populations observed feeding on corn silks in field continuously in corn for 7 years in Wayne County. (Barry). INDIANA - Adult populations very low in southern quarter of State; averaged less than 5 percent of plants infested. (Saugstad). Adults feeding on silks and tips of corn ears in Franklin and Decatur Counties; ranged 1-35 per ear and averaged 9 per ear in more heavily infested fields; ranged 0-10 (average 4) per ear in Decatur County. (Matthew). MISSOURI - Light to heavy in north central area; adults feeding within ear in early planted corn causing some kernel damage; silk feeding heavy on late planted corn. (Houser, Thomas, Wood).

WESTERN CORN ROOTWORM (Diabrotica virgifera) - MISSOURI - Adult survey completed; new county records for week ending August 22 include Putnam, Schuyler and Sullivan Counties. Infestations extremely light in all counties surveyed. (Houser, Thomas, Wood). Cass and Jackson Counties, reported in CEIR 14(34):963, also new county records. (PPC). WYOMING - Spotty infestation in Goshen County corn decreasing; adults averaged 2-3 per plant in infested fields. (Marks).

A FLEA BEETLE (Systema taeniata) - CALIFORNIA - Heavy on corn in Perris, Riverside County. (Cal. Coop. Rpt.).

CORN LEAF APHID (Rhopalosiphum maidis) - NEW YORK - Number apparently receding in Poughkeepsie area; no black tassels noted, although some dingy. (N.Y. Wkly. Rpt., Aug. 17). MARYLAND - Continues a problem on corn in all sections but damage to ears about over. (U. Md., Ent. Dept.). INDIANA - Adults and nymphs of little consequence on corn in southern quarter of State. Light infestations noted on 25 percent of plants in southwest, 28 percent of plants in south central and 62 percent of plants in southeast sections. (Saugstad). MICHIGAN - Populations generally declining. (Dowdy). WISCONSIN - Collapse of populations noted in most fields, although apparent increase also noted in some sweet corn where parasites and predators destroyed. Some sweet corn in Dodge County treated, and field corn in county showing serious injury. (Wis. Ins. Sur.). OKLAHOMA - Populations moderate in sorghum in Beaver, Texas and Cimarron Counties in panhandle area. (Okla. Coop. Sur.). COLORADO - Appearing in whorls of sorghum in all areas of Arkansas Valley. (Schweissing). WYOMING - Number of colonies in sorghum and corn in Goshen County decreasing. Lady beetle adults and larvae present in large numbers. (Marks). IDAHO - Populations drastically reduced in corn in southwest area during past 2 weeks. High populations of lady beetles and lacewings noted in all fields of corn. (Scott).

GREENBUG (Schizaphis graminum) - TEXAS - Found on western wheat grass during June, July and August in panhandle area; however, populations significant in only Deaf Smith and Hansford Counties. Det. by M. A. Palmer. (Daniels).

CHINCH BUG (Blissus leucopterus) - ARKANSAS - Noted inside sheaths of corn in southeast; numbers higher than for past few years. Surveyed area very dry. (Ark. Ins. Sur.). OHIO - Second-generation adults noted as heavy along grassy roadside of pasture in Highland County. (Lyon).

FALSE CHINCH BUGS (Nysius spp.) - NEW MEXICO - Spotted, light to moderate populations causing minor damage to grain sorghum in Luna County. (N.M. Coop. Rpt.).

RICE STINK BUG (Oebalus pugnax pugnax) - ARKANSAS - Averaged 4 adults and 1.2 nymphs per 100 rice heads in 16 fields surveyed in Lonoke County. This is slightly lower than previous week. (Little).

CONCHUELA (Chlorochroa ligata) - NEW MEXICO - Damage to heads of grain sorghum very noticeable in many fields in Deming-Columbus area, Luna County. (N.M. Coop. Rpt.).

CORN BLOTCH LEAF MINER (Agromyza parvicornis) - CALIFORNIA - Larvae medium in corn leaves at Lemoore, Kings County. (Cal. Coop. Rpt.).

SPIDER MITES (Tetranychus spp.) - COLORADO - Increasing on untreated corn in Otero, Crowley, Pueblo, Prowers and Bent Counties. Present on tenth leaf in Otero, Pueblo and Crowley Counties; well established on lower leaves in Prowers and Bent Counties. Light on lower leaves of sorghum in many Arkansas Valley fields. (Schweissing). No change in situation on corn in Weld County as reported previous week. (Urano). WYOMING - Continue feeding on corn in Goshen County fields; damage very light to moderate with mites found on highest leaves. Populations small. (Marks). MARYLAND - Spotty but potentially damaging populations on soybeans in several areas of Eastern Shore. (U. Md., Ent. Dept.). DELAWARE - Mostly T. atlanticus (strawberry spider mite), continued to increase on soybeans in many areas. (Burbutis, Crossan).

A BERMUDA-GRASS SCALE (Odonaspis ruthae) - FLORIDA - Severe on stem of Bermuda grass at Ft. Pierce, St. Lucie County. (Campbell, Aug. 4).

A BERMUDA-GRASS MITE (Aceria neocynodonis) - CALIFORNIA - Heavy on Bermuda grass in Merced, Merced County, and in Davis, Yolo County. Species causes short, stunted shoot clusters along runners. Mowing of grass does not eliminate this pest as it does some other species. Merced and Yolo Counties are new county records. (Cal. Coop. Rpt.).

WHEAT CURL MITE (Aceria tulipae) - CALIFORNIA - This species and Aculus mckenziei (a rust mite) infesting western wheat grass in Morongo Valley, San Bernardino County. (Cal. Coop. Rpt.).

SPOTTED ALFALFA APHID (Therioaphis maculata) - WISCONSIN - Marked increase noted in several fields of regrowth alfalfa over past few weeks. Winged forms approaching 40 percent in some fields; remain below 10 percent in fields where parasitism evident. Averaged 23 per sweep in field of new seeding alfalfa in Brodhead area. (Wis. Ins. Sur.). SOUTH DAKOTA - Increasing in southeast region of State; nymphs and adults ranged 350-500 per 100 sweeps in Lincoln County. (Hintz). NEBRASKA - Averaged 114 and 242 per 10 sweeps in 2 fields, respectively, in Dundy County. (Kindler, Stevens). Averaged 84 per 10 sweeps in Hayes County and 330 per 10 sweeps in Furnas County. (Bergman). OKLAHOMA - Very light (1-10 per 10 sweeps) in alfalfa checked in Beaver, Harper, Blaine and Kingfisher Counties. (Okla. Coop. Sur.). COLORADO - Increasing on alfalfa in all areas of Arkansas Valley; counts varied generally 100-600 per 100 sweeps; high populations found in some Crowley County fields with 5,000-6,000 per 100 sweeps. (Schweissing). None reported on alfalfa in Weld County. (Urano). CALIFORNIA - Medium on 2,000 acres of alfalfa in Lancaster, Los Angeles County. (D. May, Ext. Serv.).

PEA APHID (Acyrtosiphon pisum) - MARYLAND - Ranged 20-150 per sweep on alfalfa in Frederick and Queen Annes Counties. (U. Md., Ent. Dept.). OHIO - Counts remain low in forage fields throughout State. (Lyon). INDIANA - Adults and nymphs generally low on alfalfa throughout southern quarter of State; averaged 4 per sweep. Maximum population observed, 25 per sweep in Gibson County. (Saugstad). MISSOURI - Ranged 5-10 per sweep on alfalfa in northwest area. Populations increasing due to cooler weather. (Houser, Thomas, Wood). WISCONSIN - Populations increasing in some fields of regrowth alfalfa; populations average 100 per sweep in few fields. (Wis. Ins. Sur.). NEBRASKA - Ranged 15-60 per 10 sweeps on legumes in southwest and southern areas. (Bergman). WYOMING - Large populations present earlier in Goshen County alfalfa tapering off. Averaged 785 adults and nymphs per 100 sweeps in third hay crop. (Marks). COLORADO - Populations on alfalfa declining in Arkansas Valley; predator numbers increasing. (Schweissing). UTAH - Moderately damaged several fields of alfalfa in Wasatch and Summit Counties. (Knowlton).

POTATO LEAFHOPPER (Empoasca fabae) - MARYLAND - Light to moderate on alfalfa in Frederick and Queen Annes Counties and on soybeans in Queen Annes and Worcester Counties. (U. Md., Ent. Dept.). OHIO - Increasing in alfalfa in Darke County; averaged 1.3 per sweep. (Lyon). INDIANA - Adults and nymphs averaged 4 per sweep on alfalfa in southern quarter of State. (Saugstad). MICHIGAN - Adults ranged 4-8 per sweep in 5 fields of alfalfa in Oakland, Washtenaw and Livingston Counties. (Newman). MISSOURI - Averaged 2 per sweep in northwest area alfalfa. (Houser, Thomas, Wood). NEBRASKA - Averaged 22 per 10 sweeps in Chase County alfalfa. (Bergman).

TARNISHED PLANT BUG (Lygus lineolaris) - OHIO - Averaged 29 per 25 sweeps in Highland County alfalfa; this most abundant plant bug species on alfalfa in area. (Lyon).

ALFALFA PLANT BUG (Adelphocoris lineolatus) - OHIO - Averaged 10 per 25 sweeps of alfalfa in Auglaize County; predominant plant bug in west central area. (Lyon).

LYGUS BUGS (Lygus spp.) - WYOMING - Adults and nymphs averaged 87 per 100 sweeps in Goshen County alfalfa. (Marks). NORTH DAKOTA - Some buildup in alfalfa in southwest observed; 2-3 per sweep counted near Lidgerwood. (Frye, Gage).

MEADOW SPITTLEBUG (Philaenus spumarius) - MARYLAND - Adults generally below 1 per sweep on alfalfa in Frederick and Queen Annes Counties. (U. Md., Ent. Dept.). INDIANA - Adult counts per 10 sweeps on alfalfa averaged 4 in south central and 18 in south eastern sections. (Saugstad).

GREEN CLOVERWORM (Plathypena scabra) - OHIO - Seriously damaged soybeans in Seneca County. (Gamble). Light to moderate damage noted on soybean foliage throughout most fields in northwest and west central sections; little or no feeding occurred on pods, indicating treatment is questionable. (Lyon). MARYLAND - Light on alfalfa in Frederick and Queen Annes Counties and on soybeans in Worcester County. (U. Md., Ent. Dept.). NEW JERSEY - Survey of soybeans in Cranbury area, Middlesex County, showed low numbers in every field examined. (Ins.-Dis. Newsltr.).

ALFALFA CATERPILLAR (Colias eurytheme) - ARIZONA - Increasing on alfalfa throughout State; larvae ranged 125-150 per 100 sweeps. (Ariz. Coop. Sur.). MISSOURI - Averaged 0.5-1 larva per sweep on southwest area alfalfa. (Houser, Thomas, Wood).

VARIEGATED CUTWORM (Peridroma saucia) - ARIZONA - Increased in alfalfa following recent rains; heavy damage noted in fields in Graham and Gila Counties. (Ariz. Coop. Sur.).

GARDEN WEBWORM (Loxostege similalis) - ARIZONA - Infestations in alfalfa apparently spreading on Yuma Mesa and in Yuma Valley of Yuma County; ranged light to moderate. Light populations occurring in Graham County. (Ariz. Coop. Sur.).

VELVETBEAN CATERPILLAR (Anticarsia gemmatalis) - GEORGIA - Defoliation moderate on soybeans in Gordon County (Johnson) and moderate to heavy on same crop in Tattall and Houston Counties (Vanderford).

YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli) - DELAWARE - Larvae infesting alfalfa in Kent and Sussex Counties; adults very numerous in blacklight trap collections in Sussex County. (Burbutis, Crossan). ARKANSAS - Small numbers continue to be noted in soybeans; numbers have been fewer this late in season during past years than now present. (Ark. Ins. Sur.).

A LOOPER (Trichoplusia sp.) - GEORGIA - Caused light to moderate defoliation of soybeans in Gordon County (Johnson), and moderate to heavy defoliation in Effingham and Chatham Counties (Vanderford).

ALFALFA WEEVIL (Hypera postica) - UTAH - Larvae caused moderate damage to alfalfa in several Wasatch and Summit County second-crop fields. (Knowlton). WYOMING - Second-generation larvae averaged 325 per 100 sweeps in Goshen County alfalfa. (Marks). MARYLAND - Adults and larvae light on alfalfa in Frederick and Queen Annes Counties. (U. Md., Ent. Dept.).

LESSER CLOVER LEAF WEEVIL (Hypera nigrirostris) - IDAHO - New adults averaged 1 per 2 sweeps in many fields of red clover in Canyon County. (Waters).

MEXICAN BEAN BEETLE (Epilachna varivestis) - GEORGIA - Caused moderate to heavy defoliation of soybeans in Tattall and Houston Counties. (Vanderford).

BEAN LEAF BEETLE (Cerotoma trifurcata) - MARYLAND - Adults increasing on soybeans on lower Eastern Shore. (U. Md., Ent. Dept.).

BLISTER BEETLES - MARYLAND - Adults of Epicauta spp. light on soybeans in Worcester County and on alfalfa in Queen Annes County. (U. Md., Ent. Dept.). WISCONSIN - E. pennsylvanica (black blister beetle) populations high in many alfalfa fields in southern area; ranged 1-12 per sweep. Feeding on corn silks common in some fields. Cows in Fond du Lac County reported to refuse chopped feed containing this pest. (Wis. Ins. Sur.). NORTH DAKOTA - Heavy feeding by E. pennsylvanica on corn silks noted near Havana and Lidgerwood. (Frye, Gage). MISSOURI - Adults averaged 1-3 per sweep in alfalfa in northwest; E. pennsylvanica comprised two-thirds of population and Epicauta sp. one-third. (Houser, Thomas, Wood). OKLAHOMA - Unspecified species moderate in alfalfa in Mayes County. (Okla. Coop. Sur.).

THRIPS (Frankliniella spp.) - OKLAHOMA - Abundant on peanuts in Caddo County. (Okla. Coop. Sur.).

SUNFLOWER MOTH (Homoeosoma electellum) - NORTH DAKOTA - Larvae feeding on sunflower seed in Galchutt area, Richland County. (Frye, Gage).

#### FRUIT INSECTS

CODLING MOTH (Carpocapsa pomonella) - MINNESOTA - Second-generation larvae noted entering fruit in Minnetonka area, Hennepin County. (Minn. Ins. Rpt.). WISCONSIN - Second-brood moths active in Door County; 5 taken in light trap August 14-17. Blacklight trap catches in Dane County indicate greater activity. (Wis. Ins. Sur.). MICHIGAN - Few adults still present in southwest area. (Dowdy). INDIANA - Adults continue to appear in bait traps in Vincennes area; flight remains heavy. (Cleveland). NEW YORK - Summer-brood flight heavy since August 3 in eastern area with apparent peak August 10; fresh larval entries common on unsprayed apples. Emergence continues slow in Niagara County. (N.Y. Wkly. Rpt., Aug. 17).

FALL WEBWORM (Hyphantria cunea) - PENNSYLVANIA - Obvious on cherry and other trees in southern Chester County. (Cole, Aug. 7). Very heavy on cherry near Susquehanna River in northern York County. (Sleesman).

RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) - MAINE - Appreciable damage by first and second broods reported in several southwestern area orchards. (Boulanger, Aug. 15). WISCONSIN - Noticeable feeding by second-brood larvae reported in Sheboygan area. (Wis. Ins. Sur.).

PEACH TREE BORERS - MICHIGAN- Sanninoidea exitiosa (peach tree borer) and Synanthedon pictipes (lesser peach tree borer) larvae caused major injury to peaches near ground level in southwest area generally; similarly damaged sweet cherries, tart cherries and plums to lesser degree. This is perennial problem in area. (Carpenter, Conrad).

PEACH TWIG BORER (Anarsia lineatella) - CALIFORNIA - Larvae medium in peach fruit locally in Bakersfield, Kern County. (Cal. Coop. Rpt.).

APPLE APHID (Aphis pomi) - MAINE - Still troublesome with strong population increases in several areas. Increased rapidly during early August on untreated McIntosh and Red Delicious foliage in Monmouth area, Kennebec County. (Boulanger, Aug. 15).

SAN JOSE SCALE (Aspidiotus perniciosus) - FLORIDA - All stages severe on stem and bark of peach at Glen St. Mary, Baker County. (Collins, Aug. 5).

WHITE PEACH SCALE (Pseudaulacaspis pentagona) - FLORIDA - All stages severe on stem and bark of persimmon at Glen St. Mary, Baker County. (Collins, Aug. 5).

APPLE MAGGOT (Rhagoletis pomonella) - MAINE - Peak emergence occurred July 17; adult emergence in cages declined steadily after late July. (Boulanger, Aug. 15). MASSACHUSETTS - Adults more abundant than usual on early apple varieties in Bristol, Middlesex, Worcester and other eastern counties. (Wave). NEW YORK - Fly emergence continues at low level in eastern area; emergence moderate in one of two traps in Niagara County with female numbers still high; infested McIntosh apples found August 13 in semicommercial orchard in Clinton County. (N.Y. Wkly. Rpt., Aug. 17). MICHIGAN - Low adult populations generally distributed throughout fruit areas; 20 flies taken on 2 sticky-board traps in Oakland County during week ending August 17. (Carpenter, Siefert). WISCONSIN - Adults active in unsprayed early apple varieties in Door County, but activity in cages in area indicates emergence from soil has dropped to nearly zero. Catches in ammonia bait traps in Dane County very low. (Wis. Ins. Sur.). MINNESOTA - Adult activity decreasing. (Minn. Ins. Rpt.).

VINEGAR FLIES (Drosophila spp.) - MICHIGAN - Numbers of adults increasing about some fruit establishments in Berrien County. (Belter).

EUROPEAN RED MITE (Panonychus ulmi) - MICHIGAN - All stages present and populations still high in some southwest area apple and plum orchards; miticides and cool weather generally reduced high populations present in many orchards 2-3 weeks ago. Egg hatch reduced and recently deposited eggs located on twigs, calyx end of apples and on foliage. (Carpenter, Conrad). INDIANA - Active on peach; ranged up to 50 mites per leaf in scattered orchards in southwest. (Cleveland). NEW YORK - Declined from previous high levels in some commercial orchards in Clinton County due to tremendous amounts of acaricides and probably aided by subnormal temperatures. Continues chief problem in many Niagara County orchards, especially prune, which show considerable bronzing; population appears on down grade. (N.Y. Wkly. Rpt., Aug. 17). MASSACHUSETTS - Bronzing foliage in some eastern area apple orchards. (Wave). MAINE - Activity variable in scattered locations; numbers increased in some orchards but decreased in others. Cool, wet period in early August should begin population reductions. (Boulanger, Aug. 15).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - MICHIGAN - Populations on apples generally reduced in southwest area by miticidal sprays against Panonychus ulmi (European red mite). Infestations on peaches and tart cherries more common than usual. (Carpenter).

A SPIDER MITE (Tetranychus mcDanieli) - UTAH - Damaging in some apple and cherry orchards in Weber County. (Knowlton).

PEACH SILVER MITE (Aculus cornutus) - MICHIGAN - Caused leaf bronzing on tart cherries in southwest area orchards. Controls not recommended because of sporadic nature of infestations and delayed season injury. (Carpenter).

WALNUT CATERPILLAR (Datana integerrima) - MICHIGAN - Young larvae and webbing noted on black walnut near Frankenmuth, Saginaw County. (Berlein).

NAVEL ORANGEWORM (Paramyelois transitella) - CALIFORNIA - Causing light to medium damage to almond fruit in Arbuckle, Colusa County. (Cal. Coop. Rpt.).

BLACK PECAN APHID (Melanocallis caryaefoliae) - CALIFORNIA - Adults and nymphs on pecan medium in Little Rock, Los Angeles County; light in Visalia, Tulare County; and medium in Carmichael, Sacramento County. (Cal. Coop. Rpt.).

COTTONY-CUSHION SCALE (Icerya purchasi) - FLORIDA - Severe on stem of Citrus sp. at Apopka, Orange County. (Musgrove, Aug. 10).

Citrus Insect Situation in Florida - Mid-August - CITRUS RUST MITE (Phyllocoptruta oleivora) infested 48 percent of groves (norm 64 percent); 32 percent economic (norm 49 percent). Summer peak occurred at mid-August and was below normal level. A decreasing trend will prevail until late September and will be more evident from the leaf infestation. Some infestations on fruit will increase. Highest districts are west and south. CITRUS RED MITE (Panonychus citri) infested 57 percent of groves (norm 51 percent); 37 percent economic (norm 29 percent). TEXAS CITRUS MITE (Eutetranychus banksi) infested 59 percent of groves (norm 38 percent); 33 percent economic (norm 19 percent). These spider mites are slightly above normal abundance but will continue to decrease to low level. Scattered moderate to heavy infestations may be expected in north and east districts. Abundance of PURPLE SCALE (Lepidosaphes beckii), GLOVER SCALE (L. gloverii), CHAFF SCALE (Parlatoria pergandii), YELLOW SCALE (Aonidiella citrina), and BLACK SCALE (Saissetia oleae) slightly lower than reported at end of July. (See CEIR 14(34): 967-970). East district has populations of Glover, chaff and black scales in high range. Black scale also high in south district. A SNOW SCALE (Unaspis citri) and a LESSER SNOW SCALE (Pinnaspis strachani) are above normal abundance but infestations are spotty and are important only in limited areas. WHITEFILES infested 65 percent of groves (norm 53 percent); 31 percent economic (norm 15 percent). Population will continue to be above normal. Adults will become numerous in late August. Increase in transparent larval form on undersides of leaves, which is honeydew excreting stage, expected in mid-September. MEALYBUGS will show marked decrease in all districts. Population will be above normal low level for September. APHIDS will appear briefly on new growth but are not expected to be of much importance. (W. A. Simanton (Citrus Expt. Sta., Lake Alfred).

GRAPE BERRY MOTH (Paralobesia viteana) - MICHIGAN - Few adults present. New adult brood expected in late August or early September. (Carpenter).

LEAFHOPPERS - NEVADA - Populations heavy on grape and apple in Reno area of Washoe County. (Bechtel).



TRUCK CROP INSECTS

GREEN CLOVERWORM (Plathypena scabra) - MICHIGAN - Larvae on navy beans in thumb area of Lower Peninsula greatly reduced in numbers. Survey in Saginaw County on August 18 revealed only few larvae where large populations present earlier; adults and pupae present in fields on same date but varied greatly among fields checked. Counts highest on late maturing bean varieties with succulent foliage. (Wells, Vasold, Baker, Bortel). NEW YORK - Extensive area of bean acreage infested in western part of State. Infestation has not been as heavy nor outbreak so general in many years; red and white kidney beans apparently most affected. Larvae eating holes in leaves, snipping off newly set buds and eating holes in more mature buds. Damage difficult to determine, but severely infested fields probably should be treated. Most concentrated feeding on foliage and pods of red and white kidney beans in Orleans County; only leaf injury noted on pea and black turtle beans. Several fields treated show good control. Larvae found in every field of beans inspected in Livingston County; damage appears most severe on red and white kidney beans; some of difference apparently due to more advanced maturity of other varieties. Damage somewhat less in fields sprayed 2-4 weeks ago. (N.Y. Wkly. Rpt., Aug. 17). NEW JERSEY - Infested lima beans in Cape May County earlier in month, but infestations not sufficient to justify controls. (Ins.-Dis. Newsltr.).

MEXICAN BEAN BEETLE (Epilachna varivestis) - MAINE - Infestation and damage light on kidney bean planting in Woolwich, Sagadahoc County. (Boulanger, Aug. 15). NEW YORK - More numerous than in 1963 in Livingston County, but relatively few bean fields justify controls. (N.Y. Wkly. Rpt., Aug. 17). RHODE ISLAND - Adults appearing in gardens in Pawtucket, Providence County. (Sorensen, Mathewson). MICHIGAN - Pupae and newly emerged adults numerous in spots in some fields of navy beans in Saginaw County; some recently laid egg masses noted but larvae rare in area. (Wells, Vasold). COLORADO - Larvae noted on bean plants in Otero and Pueblo Counties; damage not serious in fields observed. (Schweissing). UTAH - Damage well below normal in Heber Valley area, Wasatch County. (Knowlton).

A THRIPS (Sericothrips variabilis) - DELAWARE - Common to very abundant on some lima beans in areas of Sussex County. (Burbutis, Crossan).

SEED-CORN MAGGOT (Hylemya platura) - MAINE - Caused heavy damage to snap beans at Canton, Oxford County. Injury occurred earlier in season and not reported until mid-August. (Boulanger).

TOMATO FRUITWORM (Heliothis zea) - UTAH - Causing some damage to tomatoes in canning-crop area of central and northern parts of State. Peak egg deposition occurred August 15; counts decreased recently. (Dorst, Knowlton).

BLACK CUTWORM (Agrotis ipsilon) - COLORADO - Damaging potato tubers in Gilcrest area, Weld County. (Felton).

HORNWORMS (Protoparce spp.) - NEW MEXICO - Continue a problem on tomato plantings in home gardens in Las Cruces area, Dona Ana County. (N.M. Coop. Rpt.). MINNESOTA - Observed feeding on foliage of fruit of tomato in St. Paul area. (Minn. Ins. Rpt.).

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - MAINE - Infestation rather heavy during late July in New Sharon area, Franklin County, but no damage estimate made. Infestation and damage light in Portland area, Cumberland County. (Boulanger, Aug. 15). MARYLAND - Light to moderate numbers of larvae noted on 15 acres of tomatoes in Salisbury area, Wicomico County. (U. Md., Ent. Dept.). WISCONSIN - Few noted on potatoes in Waushara County after systemics apparently became ineffective. (Wis. Ins. Sur.).

TOBACCO FLEA BEETLE (Epitrix hirtipennis) - CALIFORNIA - Heavy on eggplant in El Cajon, San Diego County. (Cal. Coop. Rpt.).



POTATO APHID (Macrosiphum euphorbiae) - OHIO - Heavy infestations building up on potatoes in central section. Severe infestation noted in Licking County. (Wagner).

GREEN PEACH APHID (Myzus persicae) - COLORADO - Increasing slightly in late potato-growing area of Weld County. Controls appear very effective. (Uran, Berry). DELAWARE - Common on pepper in Kent and Sussex County. (Burbutis, Crossan). MARYLAND - Light to moderate on commercial peppers in Worcester County. (U. Md., Ent. Dept.).

Aphids on Potatoes in Maine - Although still very small, total aphid numbers increased somewhat during week ending August 22 on foliage of untreated potatoes at Presque Isle and vicinity in Aroostook County. There area bout 4 Macrosiphum euphorbiae (potato aphid) and 4 Myzus persicae (green peach aphid) on 3 leaves per plant (top, middle, bottom), with trace numbers of Aphis nasturtii (buck-thorn aphid) and Acyrtosiphon solani (foxglove aphid). By the 3-leaf method, 80 percent of plants infested with Macrosiphum euphorbiae, 45 percent with Myzus persicae, and 91 percent by all species combined. Activity of entomogenous fungi - light during early part of period - increased substantially during past few days. (Shands et al.).

A MEALYBUG (Phenacoccus solani) - CALIFORNIA - Nymphs and adults medium on tomato planting in Tustin, Orange County. (Cal. Coop. Rpt.).

POTATO PSYLLID (Paratrioza cockerelli) - COLORADO - Increased from 0-2 per 100 sweeps to 2-4 per 100 sweeps on borders of potato fields in Rio Grande County. Controls applied to most fields. (Jenkins). WYOMING - Numbers decreasing on Goshen County potatoes; averaged less than one adult per 100 sweeps. (Marks).

STRIPED CUCUMBER BEETLE (Acalymma vittata) - MAINE - Numbers and damage on cucumbers were light during mid-July in Sanford and Portland areas of York and Cumberland Counties, respectively, and to gourds in Orono area, Penobscot County. Populations and damage to cucumbers were light in Portland area in early July. (Boulanger). MARYLAND - Adults evident on late cucumbers in Worcester County. (U. Md., Ent. Dept.).

MELON APHID (Aphis gossypii) - MARYLAND - Continues serious on cantaloups and late cucumbers on Eastern Shore. (U. Md., Ent. Dept.).

SQUASH BUG (Anasa tristis) - MARYLAND - Heavy on garden squash at Sudlersville, Queen Annes County. (U. Md., Ent. Dept.).

IMPORTED CABBAGEWORM (Pieris rapae) - MAINE - Light populations caused light damage to cabbage in late July in Monmouth, Kennebec County. (Boulanger).

CABBAGE APHID (Brevicoryne brassicae) - DELAWARE - Appearing on young cabbage in eastern Kent County. (Burbutis, Crossan).

A FLEA BEETLE (Systema taeniata) - CALIFORNIA - Heavy on sugar beet in Perris, Riverside County. (Cal. Coop. Rpt.).

ONION THRIPS (Thrips tabaci) - COLORADO - Increasing on onions in Prowers and Bent Counties; populations ranged 50-60 per plant. (Schweissing). UTAH - Caused moderate to normal damage in northern area. (Knowlton). IDAHO - Probably this species damaging onion fields in southwest area. (Scott).

SIX-SPOTTED LEAFHOPPER (Macrosteles fascifrons) - MAINE - Populations and injury on lettuce moderate during mid-July in Portland area, Cumberland County. (Boulanger).

SWEETPOTATO WEEVIL (Cylas formicarius elegantulus) - FLORIDA - Larvae and pupae found in 12 of 15 sweetpotato plants inspected August 12 at Goulds, Dade County. (Brown).

CARROT RUST FLY (Psila rosae) - MAINE - Infestation and damage heavy on carrots in mid-July in Isleboro, Waldo County. (Boulanger).

CUTWORMS - IDAHO - Serious in several hopyards near Wilder, Canyon County. Few third-stage larvae present, but majority in first and second stages; eggs still hatching. Populations quite general throughout any one yard; average about 30 per plant. (Scott).

STRAWBERRY LEAF ROLLER (Ancyliis comptana fragariae) - NEBRASKA - Infesting strawberries in Thayer County. (Bergman).

RED-NECKED CANE BORER (Agrilus ruficollis) - MAINE - Moderate populations caused moderate to heavy damage to raspberries in Farmington and vicinity of Franklin County. (Boulanger, Aug. 15).

A GROUND BEETLE (Harpalus pennsylvanicus) - CALIFORNIA - Causing light damage to strawberry at Chicago Park, Nevada County. (Cal. Coop. Rpt.).

GRASSHOPPERS - UTAH - Damaged raspberries in Heber-Midway area of Wasatch County. (Knowlton).

CYCLAMEN MITE (Steneotarsonemus pallidus) - MAINE - Infested strawberries in home plantings in Franklin County; no degree of infestation or damage given. (Boulanger, Aug. 15). MINNESOTA - Damage to everbearing strawberry varieties in Excelsior and Hopkins areas severe. (Minn. Ins. Rpt.).

CABBAGE LOOPER (Trichoplusia ni) - DELAWARE - Scarce on lima beans and pumpkin-squash in Sussex County and on cabbage in Kent County. (Burbutis, Crossan). MARYLAND - Generally increasing on tomatoes and crucifers on lower Eastern Shore. (U. Md., Ent. Dept.).

BEEF LEAFHOPPER (Circulifer tenellus) - COLORADO - Ranged 10-50 per 100 sweeps on sugar beets and tomatoes in all areas of Arkansas Valley. (Schweissing)

POTATO LEAFHOPPER (Empoasca fabae) - DELAWARE - Adults and nymphs very numerous on some lima beans in Sussex County. (Burbutis, Crossan). MARYLAND - Light to moderate on beans, tomatoes and squash on Eastern Shore. (U. Md., Ent. Dept.).

VINEGAR FLIES (Drosophila spp.) - MICHIGAN - Adult numbers building up and causing annoyance around some vegetable establishments in Berrien County. (Belter).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - MAINE - Reported on strawberries in home plantings in Franklin County; degree of infestation and damage not reported. (Boulanger, Aug. 15). OHIO - Infesting pole and bunch beans in Adams County. (Mowbray, Holdsworth). FLORIDA - Infested 25,000 strawberry plants August 3 and 8,000 of 10,000 plants August 17 at Plymouth, Orange County. (VanPelt).

SPIDER MITES (Tetranychus spp.) - COLORADO - Heavy populations damaging goose-berry plants in Loveland area, Larimer County. (Hantsbarger). MARYLAND - Infestations noticeable on tomatoes in Anne Arundel County. (U. Md., Ent. Dept.).

#### TOBACCO INSECTS

GREEN PEACH APHID (Myzus persicae) - MARYLAND - Light to heavy infestations continue on tobacco in all sections. Winged forms numerous. (U. Md., Ent. Dept.).

TOBACCO BUDWORM (Heliothis virescens) - MARYLAND - Few scattered, light infestations noted on tobacco in St. Marys County. (U. Md., Ent. Dept.).

HORNWORMS (Protoparce spp.) - MARYLAND - Second brood light to date on tobacco in all sections. (U. Md., Ent. Dept.).

TOBACCO FLEA BEETLE (Epitrix hirtipennis) - MARYLAND - Adults continue to increase on late tobacco in southern areas. (U. Md., Ent. Dept.).

#### COTTON INSECTS

BOLL WEEVIL (Anthonomus grandis) - OKLAHOMA - Infestation light to moderate in Jackson, Greer, Tillman and Choctaw Counties; ranged 6-13 percent. (Okla. Coop. Sur.). MISSOURI - Found in only one field in Dunklin County; 25 percent of squares punctured. (Harrendorf, Jones). MISSISSIPPI - Infestations up in many fields in delta counties; some localized migration occurring; where control programs underway, population remains low or nonexistent. (Pfrimmer et al.). TENNESSEE - Continues to increase in southern counties and conditions very favorable for buildup. Migration occurring from fields "cutting out" into those fields where squares and young bolls plentiful. Some fields not infested all season now have infestations ranging 1-32 percent punctured squares. Counts in infested fields averaged 21 percent punctured squares compared with 12 percent previous week. Control underway in many fields for first time this season. (Locke). GEORGIA - Punctured squares ranged 8-88 percent (average 44 percent) in 18 fields checked in northwest, north and northeast sections. (Johnson). In 1,436 fields checked in 21 counties, percent punctured squares ranged 1-10 in 22 percent of fields, 11-25 in 32 percent of fields, 26-50 in 12 percent of fields and over 50 in 8 percent of fields. (Jordan). SOUTH CAROLINA - Continues to build up in most fields due to emergence of second-generation weevils and shortage of squares in older cotton. Percent punctured squares in well treated fields continues extremely low, even in areas where untreated fields average 50-100 percent damage. (Cott. Lett., Aug. 17). In Florence area, peak emergence of second generation now past, although large number of adults now in field; untreated fields practically 100 percent infested. Controls should be continued through August. (Taft et al., Aug. 20). NORTH CAROLINA - Under control in areas where good insecticidal program followed. (Cott. News Lett., Aug. 17).

A WEEVIL (Anthonomus sp.) - ARIZONA - Populations increasing in Aztec and Hyder areas of Yuma County and in Stanfield and Quartz areas of Pinal County. (Ariz. Coop. Sur.).

BOLLWORMS (Heliothis spp.) - CALIFORNIA - Populations evident throughout cotton-growing area; larvae ranged 1-12 per 100 terminals. (Leigh, Aug. 14). Economic levels common throughout Kern County; problems serious in Rosedale area; conventional terminal counts not adequate as many eggs laid on lateral terminals, hence complete inspection of plants necessary to adequately evaluate population during week ending August 6. Populations continued higher in Rosedale area during week ending August 13; larval counts of 15-18 per 100 terminals common, but average probably 4-6. (Black). ARIZONA - Damage continues heavy in Pima, Pinal and Maricopa Counties. Lighter but economic infestations present in Cochise, Greenlee, Graham and Yuma Counties. (Ariz. Coop. Sur.). NEW MEXICO - Number of eggs on cotton plants in southern Dona Ana County increased; larval damage spotted, with only few growers applying controls. (N.M. Coop. Rpt.). OKLAHOMA - Infestations light (3-9 percent) in Jackson, Tillman, Greer and Osage Counties; reported as heavy in Choctaw County. (Okla. Coop. Sur.). MISSOURI - Eggs range 0-23 and larvae 0-22 per 100 terminals in 72 percent of fields scouted. Controls applied to 220 fields. (Harrendorf, Jones). ARKANSAS - Moth flight continues heavy at Kelso in southeast area and at Morrilton in central area. Number of moths taken in light trap at Kelso slightly higher than previous week; number collected at Morrilton approximately twice number collected previous week. (Ark. Ins. Sur.). MISSISSIPPI - Light trap catches in delta counties decreasing after peak of August 15-16. Egg deposition continued; many eggs laid down in plant. Small larvae in blooms and under dried blooms on boll, as well as in terminals and squares. (Pfrimmer et al.). TENNESSEE - All stages continue a problem in rank cotton in western area. Larvae and eggs ranged 1-18 per 100 terminals in infested fields, compared with 1-11 previous week. (Locke). GEORGIA - Eggs ranged 6-27 (average 16) and larvae ranged 3-12 (average 6) per 100 terminals. (Johnson). In 1,436 fields checked

in 21 counties, eggs per 100 terminals ranged 1-10 in 39 percent of fields, 11-25 in 39 percent of fields, 25-50 in 14 percent of fields and over 50 in 8 percent of fields. (Jordan). SOUTH CAROLINA - Larvae appearing in many fields; should be easily controlled in fields where 5-day schedule still being maintained. (Cott. News Lett., Aug. 17). Larval infestations in Florence area ranged 0.1-2 percent in treated plots and 9-26 percent in untreated fields. (Taft et al., Aug. 20). NORTH CAROLINA - Increasing in some areas. (Cott. News Lett., Aug. 17).

PINK BOLLWORM (Pectinophora gossypiella) - ARIZONA - Larvae and exit holes becoming numerous in most cotton fields between Solomon and Safford in Graham County. (Ariz. Coop. Sur.).

CABBAGE LOOPER (Trichoplusia ni) - MISSISSIPPI - Disease destroyed populations in many fields in delta counties; some larvae still present in many fields but populations not economic in most instances. (Pfrimmer et al.). GEORGIA - Light in 18 fields checked in northwest, north and northeast areas. (Johnson). SOUTH CAROLINA - Presently not a problem in most of State. (Cott. Lett., Aug. 17).

BEE T ARMYWORM (Spodoptera exigua) - CALIFORNIA - Severe, widespread infestation developed in Tulare Lake area of Kings County. Only occasional larvae found in other areas. (Leigh, Aug. 14).

YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli) - ARKANSAS - Small numbers continue to be taken in cotton. In past years, fewer specimens have been seen this late in season than now present. (Ark. Ins. Sur.).

COTTON LEAF PERFORATOR (Bucculatrix thurberiella) - ARIZONA - General in Yuma County; some infestations heavy. Very light in Graham County. (Ariz. Coop. Sur.).

SALT-MARSH CATERPILLAR (Estigmene acrea) - ARIZONA - Light infestations observed in areas of Pinal and Graham Counties. (Ariz. Coop. Sur.).

A LEAF ROLLER MOTH (Platynota stultana) - CALIFORNIA - Larvae common in some fields in Shafter area, Kern County; feeding in terminals, squares and small bolls. (Leigh, Aug. 14).

APHIDS - CALIFORNIA - Present in practically all fields in Kern County; not of major concern, although slight amount of honeydew observed in few fields. (Black, Aug. 13). MISSISSIPPI - Light in fields throughout delta counties. (Pfrimmer et al.). TENNESSEE - Present in most rank cotton in western area. (Locke). SOUTH CAROLINA - Occasional infestation noted in Florence area. (Taft et al., Aug. 20).

LYGUS BUGS (Lygus spp.) - CALIFORNIA - Increasing in some Kern and Tulare County fields; ranged 2-15 per 50 sweeps. (Leigh, Aug. 14). Economic levels found in scattered fields throughout Kern County week ending August 6; serious nymphal populations developing in some fields that did not show substantial adult populations earlier. Populations generally same during week ending August 13; approaching economic level in many fields but extremely high counts not encountered. (Black). ARIZONA - Populations remain heavy in most cotton-growing areas; some decrease noted in Pinal, Maricopa and Graham Counties. (Ariz. Coop. Sur.).

STINK BUGS (Chlorochroa spp.) - NEW MEXICO - Mostly C. ligata (conchuela), with few C. sayi (Say stink bug), damaging cotton in Columbus area, Luna County; occasional adults also noted in cotton in southern Dona Ana County. (N.M. Coop. Rpt.).

PLANT BUGS - ARIZONA - Nymphs of Adelphocoris superbus (superb plant bug) appearing in damaging numbers in Solomon area of Graham County; averaged 35 per 100 sweeps. (Ariz. Coop. Sur.). MISSOURI - Several species ranged 0-34 per 100 terminals in southeast area cotton. (Harrendorf, Jones).

SPIDER MITES - CALIFORNIA - Abundant in many Kern County fields during week ending August 8. Tetranychus telarius (two-spotted spider mite) readily found in tops of plants in many fields. Few fields still have T. atlanticus (strawberry spider mite) as evidenced by bottom defoliation. Spider mite populations increased in many fields during week ending August 13 and infestations in upper portions of plant evident throughout county. (Black). MISSOURI - Tetranychus spp. found in only 10 percent of fields scouted; infestations noneconomic. (Harrendorf, Jones). MISSISSIPPI - Infestations scattered over delta counties, with heavy populations developing in many spots. Recommended controls continue satisfactory. (Pfrimmer et al.). TENNESSEE - Continue major problem over western area; further increase expected where controls not applied. Some infestations severe and considerable damage occurring. (Locke). SOUTH CAROLINA - Present in many counties but suppressed or controlled in most instances. (Cott. Lett., Aug. 17). Occasional infestation noted in Florence area. (Taft et al., Aug. 20).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

DOUGLAS-FIR TUSSOCK MOTH (Hemerocampa pseudotsugata) - OREGON - Three centers of epidemic defoliation occurred near Antelope Mountain, King Mountain and Gold Hill on the Malheur National Forest. Defoliation of true firs and Douglas-fir ranged from light to severe. Surveys underway to determine need for control in 1965. (Lund).

PINE TUSSOCK MOTH (Dasychira plagiata) - WISCONSIN - About 75 percent of eggs in Douglas County on August 12 had hatched. Egg parasitism appears less than in 1963. Browning of tops due to feeding of recently hatched larvae in untreated trees in Gordon area. (Wis. Ins. Sur.).

PANDORA MOTH (Coloradia pandora) - OREGON - Adults in flight attracted to lights in large numbers at Chemult, August 1-7. Eggs laid on shingles, lighted signs and other places. This flight is 5 miles against the prevailing wind from known infestation center. (Lund).

AN OLETHREUTID MOTH (Eucosma gloriola) - NEW YORK - Damage to Scotch pine light at Little Genesee, Allegany County; restricted to lateral shoots on most trees. (N.Y. Wkly. Rpt., Aug. 17).

RED-HEADED PINE SAWFLY (Neodiprion lecontei) - VERMONT - Abundant and defoliating pines in plantations in areas of Chittenden and Franklin Counties. (MacCollom, Aug. 17). MICHIGAN - Larval numbers and damage light to moderate on 5 to 15-year-old pines near Channing, Dickinson County. (Mattson). WISCONSIN - Occasional colonies of nearly full-grown larvae on jack pine in Burnett, Washburn and Douglas Counties, week of August 10. (Wis. Ins. Sur.). MINNESOTA - Seventy percent of infested trees in east central and northeast show feeding completed. (Minn. Ins. Rpt.).

PINE TORTOISE SCALE (Toumeyella numismaticum) - NEW YORK - Serious on some red and Scotch pines in Christmas tree plantings at Little Genesee, Allegany County. Sooty mold heavy on infested trees. (N.Y. Wkly. Rpt., Aug. 17). WISCONSIN - Many areas previously infested appear to have been controlled by various coccinellids this summer. (Minn. Ins. Rpt.).

ELM LEAF BEETLE (Galerucella xanthomelaena) - VERMONT - Severely damaged elm foliage in many areas of State. (MacCollom, Aug. 17). OHIO - Severe feeding on elms in Miami County. All stages present. (Lyon). OKLAHOMA - Heavy in Cherokee, Haskell, Mayes, Dewey and Kingfisher Counties. Light in Beaver County. (Okla. Coop. Sur.). ARIZONA - Very numerous and damaging trees in Globe area of Gila County. (Ariz. Coop. Sur.). COLORADO - Damaging elms in Pueblo and Fremont Counties. (Haines, Svedman). UTAH - Injury continues serious in parts of Kane County. (Hatch, Knowlton).

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - NEBRASKA - Collected from elms in Buffalo County. This is a new county record. (Bergman).

BLACK VINE WEEVIL (Brachyrhinus sulcatus) - PENNSYLVANIA - Feeding on landscape size hosts in King of Prussia, Chester County, August 6. (Cole). Heavy damage on a block of yew in Luzerne County, August 4. Several dead and dying plants. (Andreychik).

CARPENTERWORM (Prionoxystus robiniae) - COLORADO - Attacking elms in Washington County. (Travis).

ORANGE-STRIPED OAKWORM (Anisota senatoria) - RHODE ISLAND - No evidence of larvae in areas of Washington County where found previous several years. (Mathewson).

GYPSY MOTH (Porthetria dispar) - MICHIGAN - No males found. (Lindy). PENNSYLVANIA - Collections as follows: 2 males from 1 trap at Lackawaxen, Pike County, July 27; 1 male in trap and 3 egg masses at Kresgeville, Monroe County, August 3; and 1 male in trap in Pike County, August 17. (Campbell). MASSACHUSETTS - Moths still taken at Sagamore and Wareham. (Tomlinson).

A GALL WASP (Neuroterus saltatorius) - CALIFORNIA - Heavy on oak in several locations in Sacramento, Sacramento County, and in Sanger, Fresno County. Unusually heavy in yards. (Cal. Coop. Rpt.).

WALKINGSTICK (Diaperomera femorata) - WISCONSIN - Reported plentiful in Wisconsin Rapids area. Few specimens noted received from widely scattered areas from Rock to Douglas Counties. (Wis. Ins. Sur.).

WESTERN FLOWER THRIPS (Frankliniella occidentalis) - MARYLAND - Collected from chrysanthemums at La Vale, Allegany County, August 11, 1964, by C. W. McComb. This is a new State record and apparently a new record for eastern United States. Det. by K. O'Neill. (U. Md., Ent. Dept.).

A WALNUT HUSK FLY (Rhagoletis suavis) - DELAWARE - Adults very abundant on English walnut trees. Freshly laid eggs observed in husks, Aug. 19, 1964. Collected by P. P. Burbutis and L. P. Kelsey in Felton, Kent County. This is a new State record. (Burbutis, Crossan).

BAGWORM (Thyridopteryx ephemeraeformis) - MARYLAND - Heavy on arborvitae at Corsica Neck, Queen Annes County. (U. Md., Ent. Dept.). OHIO - Several shrubs infested in Columbus, Franklin County. (Jones). NEBRASKA - Moderate to heavy and quite widespread on southern and eastern evergreens. (Bergman). OKLAHOMA - Moderate to heavy on evergreens in Mayes and Cherokee Counties. Light in Texas County. (Okla. Coop. Sur.).

TOBACCO BUDWORM (Heliothis virescens) - CALIFORNIA - Medium larval populations on geraniums in Chico, Butte County. (Cal. Coop. Rpt.).

MIMOSA WEBWORM (Homadaula albizziae) - MARYLAND - Moderate to heavy on honeylocust and mimosa in all sections. (U. Md., Ent. Dept.). OHIO - Populations quite conspicuous on honeylocusts in southwest. Few small trees had total leaf browning. (Lyon).

LILAC BORER (Podosesia syringae syringae) - NORTH DAKOTA - Moderate infestation in nursery at Valley City. (Frye, Gage).

A LEAF ROLLER (Anchylopera spireaefolina) - NORTH DAKOTA - Heavy leaf rolling on spirea in most southeastern areas. (Frye, Gage).

FALL WEBWORM (Hyphantria cunea) - MARYLAND - Conspicuous webs on several hosts in central areas. (U. Md., Ent. Dept.). NORTH DAKOTA - Larvae abundant on walnut, apple and crabapple in Hankinson area. (Bergman).

CATALPA SPHINX (Ceratonia catalpae) - OHIO - Severe feeding on catalpa trees at several locations throughout southwest. Larvae ready to pupate. (Lyon).

GARDEN WEBWORM (Loxostege similalis) - GEORGIA - Heavy damage to amaranth on Capitol grounds. (Johnson).

COCCIDS - PENNSYLVANIA - Fiorinia externa infesting all hemlocks in a nursery in King of Prussia, Chester County, August 6. (Cole). MARYLAND - Toumeyella liriodendri (tuliptree scale) heavy on tuliptrees on properties in Frederick and Prince Georges Counties. (U. Md., Ent. Dept.). GEORGIA - Icerya purchasi light to moderate on several plants in a nursery in Berrien County. (Ratcliffe). FLORIDA - In Hillsborough County: Icerya purchasi (cottony-cushion scale) moderate on stem of Pittosporum tobira at Limona, August 12 (Simmons); Coccus viridis (green scale) severe on Ixora coccinea, and Pinnaspis strachani severe



on hibiscus at Plant City (Custead, Aug. 13). Pseudaonidia clavigera light on Camellia sp. at Tampa, Hillsborough County. This is new locality in county. (Hale, Miller, Aug. 14). INDIANA - Infestations of Fiorinia theae (tea scale) on rhododendron in La Porte and Elkhart Counties. (Favinger, Clark). CALIFORNIA - Pseudococcus aurilanus heavy locally on araucaria trees in park in Encinitas, San Diego. (Cal. Coop. Rpt.).

APHIDS - DELAWARE - Macrosiphoniella sanborni (chrysanthemum aphid) present to fairly common on chrysanthemums in most areas of State. (Burbutis, Crossan). RHODE ISLAND - Undetermined species on many willows in Middletown, Newport County. (Sorensen, Mathewson).

LACE BUGS - NEW YORK - Heavy on azaleas in Nassau County and damaging andromeda in Suffolk County. (N.Y. Wkly. Rpt., Aug. 17). NEW JERSEY - Heavy on many ornamental plants, shrubs and shade trees. (Ins.-Dis. Newsltr.). OHIO - Heavy populations feeding on underside of hackberry leaves in Fairfield, Butler County. (Schenck, Aug. 10).

#### INSECTS AFFECTING MAN AND ANIMALS

FACE FLY (Musca autumnalis) - MARYLAND - Generally light, 0-12 per head, on dairy cattle in Frederick County. (U. Md., Ent. Dept.). OHIO - Population increases on beef and dairy animals in Highland County. Counts of 15 flies per dairy animal and 25 per beef animal in several herds. Pinkeye common. (Wolfer). INDIANA - Averaged 3 per face in southwest, 4 in south central and 2.5 in southeast. (Saugstad). ILLINOIS - In western area, 5-10 adults per animal on pastured cattle. (Ill. Ins. Rpt.). WISCONSIN - Continues a problem in Ashland County and less of a problem in Bayfield County than previous week. Affecting cattle in Langlade County. (Wis. Ins. Sur.). NORTH DAKOTA - Averaged less than 10 per cow and less than 5 per calf in sandhill area of southeast. (Noetzel).

HOUSE FLY (Musca domestica) - NORTH DAKOTA - Populations from farm to farm quite variable. Highest counts less than 10 per square yard. A considerable number on range cattle in sandhill area of southeast. (Noetzel). COLORADO - Considerable irritation to livestock in Fremont, Teller, Park, Custer and Pueblo Counties. (Gilmore, Jenkins).

A FLY (Musca sp.) - NEW MEXICO - Very annoying in and around homes at Albuquerque, Bernalillo County, and in Las Cruces, Dona Ana County. (N.M. Coop. Rpt.).

HORN FLY (Haematobia irritans) - WYOMING - Continues to annoy livestock in Goshen County. Estimated 100-150 adults per animal. (Marks). UTAH - Moderately numerous on Wasatch and Summit County herds. (Knowlton). COLORADO - Considerable irritation to livestock in Fremont, Teller, Park, Custer and Pueblo Counties. (Gilmore, Jenkins). OKLAHOMA - Populations moderate in Osage, Payne, Mayes and Haskell Counties. (Okla. Coop. Sur.). NEBRASKA - Counts of 50-750 per animal in Furnas, Chase, Hayes, Hitchcock and Red Willow Counties. (Bergman). NORTH DAKOTA - Counts of less than 100 per cow in untreated herds and less than 5 in treated herds in sandhill area of southeast. (Noetzel). GEORGIA - Counts of 100-1,000 (average of 600 per cow) in a herd in Chatham County. (Vanderford). MARYLAND - Ranged 8-44 per head on dairy cattle in Frederick County. (U. Md., Ent. Dept.). INDIANA - Counts of 75 per head on cattle in southwest, 50 in south central and southeast. (Saugstad). ILLINOIS - In western area, 0-20 flies per animal on pastured cattle. (Ill. Ins. Rpt.).

TABANIDS - NORTH DAKOTA - Counts of less than 1 per animal of Tabanus lineola in sandhill area of southeast. High counts in 1965 appear remote at this time. (Noetzel). OKLAHOMA - Tabanus spp. heavy on livestock in Choctaw County. (Okla. Coop. Sur.). COLORADO - Tabanus sp. and Chrysops sp. caused considerable irritation to livestock in Fremont, Teller, Park, Custer and Pueblo Counties. (Gilmore, Jenkins). UTAH - Undetermined species annoying horses and cattle in areas of Utah, Wasatch and Summit Counties. (Knowlton).

STABLE FLY (Stomoxys calcitrans) - ILLINOIS - In western area, counts of 0-4 per animal on pastured cattle. (Ill. Ins. Rpt.). NORTH DAKOTA - Counts of 10-30 in sandhill area of southeast. Highest counts from dairy animals and stock kept near buildings. (Noetzel). COLORADO - Considerable irritation to livestock in Fremont, Teller, Park, Custer and Pueblo Counties. (Gilmore, Jenkins). MARYLAND - Counts of 3-50 per head on dairy cattle in Frederick County. (U. Md., Ent. Dept.). WISCONSIN - Reported as number one fly problem. (Wis. Ins. Sur.).

MOSQUITOES - COLORADO - Considerable irritation to livestock caused by Culex sp., Aedes sp. and Anopheles sp. in Fremont, Teller, Park, Custer and Pueblo Counties. (Gilmore, Jenkins). UTAH - Undetermined species annoying in areas of Millard, Summit and Wasatch Counties. (Knowlton). MINNESOTA - Metropolitan Mosquito Control District's collections as follows: 541 larval samples of which Aedes vexans found in 329 and Culex tarsalis in 43; 701 females taken in light traps of which 298 were A. vexans and 127 C. tarsalis; in evening and daytime biting collections, A. vexans was dominant. (Minn. Ins. Rpt.).

SHEEP KED (Melophagus ovinus) - UTAH - Moderately numerous in farm flocks at Heber, Wasatch County. (Knowlton).

LONE STAR TICK (Amblyomma americanum) - OKLAHOMA - Heavy on cattle in Haskell, Cherokee and Choctaw Counties. (Okla. Coop. Sur.).

BLACK WIDOW SPIDER (Latrodectus mactans) - UTAH - Reports from homes in Weber and Salt Lake Counties. (Knowlton).

WASPS - MARYLAND - Annoying to several homeowners in Montgomery and Prince Georges Counties. (U. Md., Ent. Dept.). NEW JERSEY - Of concern to homeowners. (Ins.-Dis. Newsltr.).

#### HOUSEHOLD AND STRUCTURAL INSECTS

EUROPEAN EARWIG (Forficula auricularia) - MAINE - Continued troublesome to homeowners in Portland area and generally throughout coastal region of Cumberland County. Light around homes in Rockland area, Knox County; annoyance level low. (Boulanger, Aug. 15). RHODE ISLAND - Still common statewide, but numbers decreasing. (Sorensen, Mathewson). UTAH - Abundant and generally annoying in Heber area of Wasatch County. (Knowlton).

LARDER BEETLE (Dermestes lardarius) - MICHIGAN - Household infestations in Gratiot and Ingham Counties. (Berlien).

STRAWBERRY ROOT WEEVIL (Brachyrhinus ovatus) - NORTH DAKOTA - Adults abundant in homes in eastern areas. (Frye, Gage).

A SOLPUGID (Eremobates tuberculatus) - CALIFORNIA - Heavy adult populations in a residence in Sacramento, Sacramento County. These have been more prevalent this season than for several years. (Cal. Coop. Rpt.).

#### STORED-PRODUCT INSECTS

CONFUSED FLOUR BEETLE (Tribolium confusum) - RHODE ISLAND - Infestation in grain in box car in Woonsocket, Providence County. Purchaser refused to accept. (Mathewson).

#### BENEFICIAL INSECTS

CICADA KILLER (Sphecius speciosus) - OKLAHOMA - Numerous in Cimarron and Texas Counties. (Okla. Coop. Sur.).

A PELECINID PARASITE (Pelecinus polyturator) - WISCONSIN - Eight adults of this hymenopterous parasite of scarabaeid beetles collected along a 300 foot stretch of pine windbreak near Merrill, Lincoln County, August 13. All beetles were within 4 feet of ground. (Wis. Ins. Sur.).

LADY BEETLES - OKLAHOMA - Hippodamia convergens (convergent lady beetle) numerous in sorghum in panhandle counties. Light in alfalfa in Beaver, Harper, Blaine and Kingfisher Counties. (Okla. Coop. Sur.). WYOMING - Adults and larvae of several species averaged 78 per 100 sweeps in alfalfa, 63 in sugar beets, 46 in beans and 5-8 per plant in corn fields of Goshen County. (Marks).

DAMSEL BUGS (Nabis spp.) - WYOMING - Adults averaged 56 per 100 sweeps in alfalfa, 62 in sugar beets and 50 in bean fields of Goshen County. (Marks).

#### MISCELLANEOUS INSECTS

EUROPEAN CHAFER (Amphimallon majalis) - PENNSYLVANIA - Survey in Philadelphia, Harrisburg and Pittsburgh negative. In Erie County, 76 chafers collected by nets and traps at numerous sites over 4,500 acres. This extension of last year's infestation is 10 miles east of Erie in a band, 1-3 miles wide, along the New York Central Railroad. (Campbell).

#### CORRECTIONS

CEIR 14(16):346 - CATALPA SPHINX (Ceratoma catalpae) should read (Ceratomia catalpae).

CEIR 14(34):963 - SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - MISSOURI - Should read: "Second-generation moth population increasing in southeastern area. (Harrendorf, Jones)."

CEIR 14(34):974 - BOLL WEEVIL (Anthonomus grandis) - MISSOURI - Should read: "First adults of season taken in 12 fields in Dunklin County. (Harrendorf, Jones)."

LIGHT TRAP COLLECTIONS

State	County	Location	Temperature F.	Practical Latitude	Type of trap	Arctia pallon (black cutworm)	Carpodacus gononella (codling moth)	Choristoneura (sawfly)	Estigmene acuta (fall armyworm)	Frontia diligens (wheat head armyworm)	Pala subsericea (granulate cutworm)	Heliothis virescens (tobacco budworm)	Heliothis zea (fall armyworm)	Lophyrus kingbird (fall armyworm)	Locustae comitalis (karen webworm)	Locustae sticticalis (karen webworm)	Estigmene acuta (beet webworm)	Orthopneustis (European corn borer)	Peridroma corn (variegated saucia)	Prodenia ornithogalli (yellow-striped armyworm)	Protoparce quinquefasciata (cotton hornworm)	Protoparce (tobacco hornworm)	Pseudococcyx (cotton hornworm)	Spodoptera unimaculata (beet armyworm)	Spodoptera exiguus (cabbage looper)	Minor trap **	
ARKANSAS		Morrilton 8/13-19				17						6	175														
		Kelso 8/13-19				0						295															
ILLINOIS (County)		Champaign	51-80	1.28"		87					46																
INDIANA (Counties)		Posey 8/11-18				54					397																
		Vanderburgh 8/11-15				83					45	9															
		Harrison 8/11-17				27					12	0															
		Dubois 8/11-18				215					144	0															
		Sullivan 8/11-18				47					16	0															
		Greene 8/11-18									71	0															
		Jackson 8/11-18									14	1															
		Switzerland 8/11-18									17	1															
		Franklin 8/11-17									1	1															
		Parke 8/11, 12, 15									30	0															
		Shelby 8/11-17									10	0															
		Hamilton 8/11-18				86					4	4															
		Tiptecanoe 8/11-18				44					1	1															
		Wells 8/11-17				7					1	1															
		Jasper 8/11				1					4	4															
		Allen 8/11-16									1	1															
		Lake 8/11-13									1	1															
		St. Joseph 8/11-17									0	0															
		Lagrange 8/11-17				1					0	0															
MARYLAND		Centreville 8/12-18				15					23	19															
MICHIGAN (Counties)		Berrien 8/11-17				3																					
		Monroe 8/11-17				17																					
		Branch 8/11-17				21																					
		Livingston 8/11-17				0																					
		Jackson 8/11-17				1																					
		Iron 8/11-17																									
MISSISSIPPI		Stonerville 8/15-21	61-90	2.07"		26					9	840	86														
		Stoneville 8/15-21	61-90	2.07"		18					71	1054	131														
MISSOURI		Portageville 8/15-21				25					579																
		Columbia 8/14-20				4					37																
NEBRASKA		Kearney 7/25-8/13				49					107	84															
		North Platte 7/30-8/5				43					2	4															
		North Platte 8/7-13				19					9	12															
		Gering Valley 8/4-10				17					1																
		Parks 7/23-29				10					79																
		Parks 7/16-22				20					1																
		Scotts Bluff Expt. Sta.				10					2																

\* BL = blacklight; I = incandescent; MV = mercury vapor; 0 = other

\*\* alf. = alfalfa; beet = garden beet and/or sugar beet; cole = cole crops (crucifers); cott. = cotton; FC = field corn; grain = small grains; leg. = legumes (unspecified); lett. = lettuce; pea. = peanut; prpp. = 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

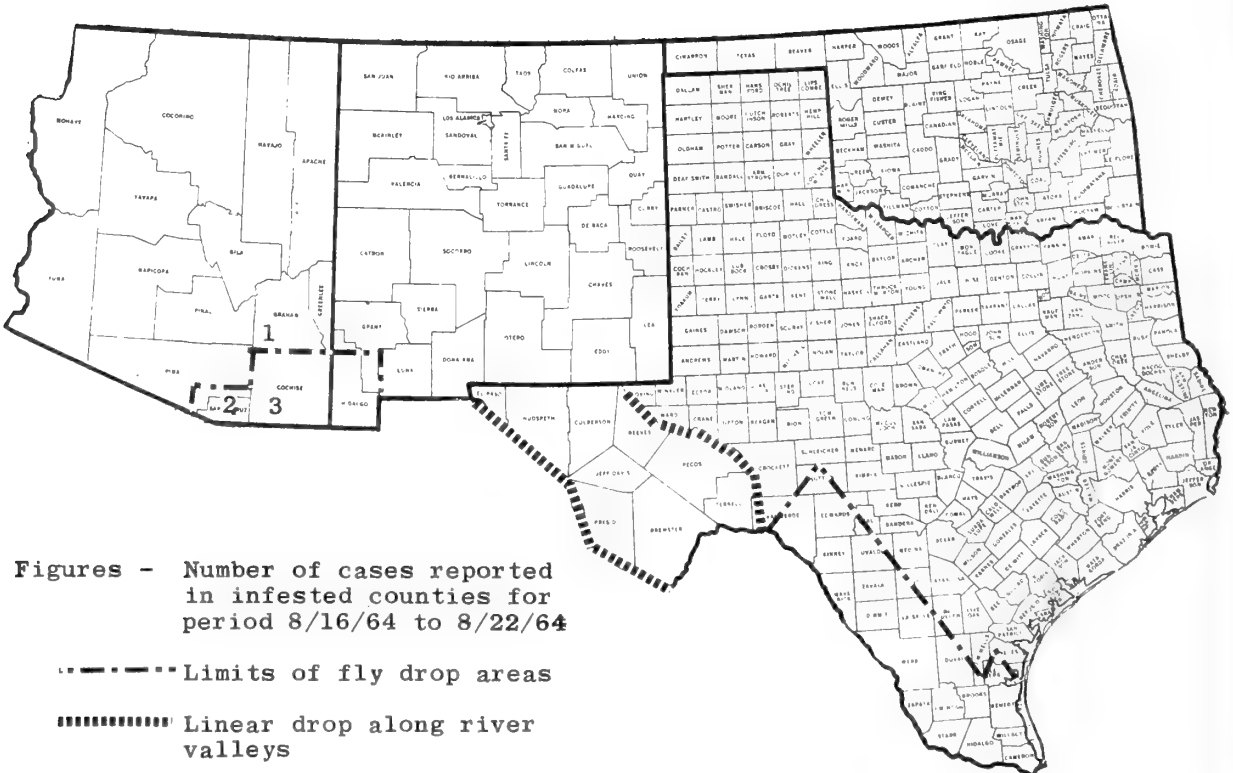
During the period August 16-22, no screw-worm infestations were reported in the Southwestern Screw-worm Eradication Area. Six cases were reported in ARIZONA counties: Cochise (3), Santa Cruz (2) and Graham (1). The Republic of Mexico reported 61 cases from following States: Sonora (20), Chihuahua (22), Durango (9), Tamaulipas (8), San Luis Potosi (1) and Puebla (1). A total of 103,328,650 sterile screw-worm flies was released: 22,235,450 in Texas; 1,000,000 in New Mexico; 7,720,000 in Arizona; and 72,373,200 in Mexico. The following is a comparison of specimens reported during corresponding weeks in 1962 and 1963.

Year	Positive Cases		Negative Cases*		Ratio of Cases Positive to Negative**	
	Current	Cumulative	Current	Cumulative	Current	Cuculative
1962	740	33,188	30	2,227	2,466.6:100	1,490.2:100
1963	58	2,447	81	4,637	71.6:100	52.7:100
1964	0	107	66	4,279	0.0:100	2.5:100

\* The number of cases not screw-worm is an index of the efficiency of the reporting system.

\*\* A comparison of the ratios of screw-worm cases with cases that are not screw-worm is an index of the change in number of screw-worm cases.

(Anim. Dis. Erad. Div.).



Figures - Number of cases reported in infested counties for period 8/16/64 to 8/22/64

- Limits of fly drop areas
- ..... Linear drop along river valleys

MEMORANDUM FOR THE DIRECTOR

RE: [Illegible]

On [Illegible] at [Illegible]  
[Illegible]  
[Illegible]

[Illegible]

[Illegible]

[Illegible]



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