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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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Survey and Detection Operations  
Plant Pest Control Division  
Agricultural Research Service  
United States Department of Agriculture  
Washington 25, D. C.

## COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Egg masses of EUROPEAN CORN BORER reported rather generally; hatching noted in most States. First generation appears to be ahead of corn in Midwest; only light damage expected. (pp. 666-667). ARMYWORM feeding moderate to heavy on wheat and corn in southwest Ohio, and infestations reported in several other States, with some controls applied. (p. 667). CEREAL LEAF BEETLE reported from additional areas of Michigan and Ohio; Kent and Ionia Counties, Michigan, and in Northwest, Bridgewater and Jefferson Townships of Williams County, Ohio. (pp. 667, 695). ALFALFA WEEVIL continues damaging. Controls needed in Summer Lake Refuge area of Oregon. Spread in 1963 to June 14 has been extensive in eastern half of country. (pp. 669-670). SPOTTED ALFALFA APHID generally light; buildup was heavy within 2 weeks of second cutting of alfalfa in Dona Ana County, New Mexico. (p. 671).

BOLLWORM most serious threat to cotton at present in Texas; populations occurring somewhat earlier than normal. TOBACCO BUDWORM moderate to heavy in central Texas and causing damage to terminals and fruit. (p. 681). SPIDER MITES major pest problem on cotton in Imperial County, California, on June 3; also numerous in Madera County, California. (p. 683).

CALIFORNIA FIVE-SPINED IPS and WESTERN PINE BEETLE damaging in California. (p. 683). ELM LEAF BEETLE moderate to heavy over most of Oklahoma, and damage reported in Kansas, New Mexico and Alabama. (p. 685). EUROPEAN ELM SCALE populations heavy on elms in areas of California, Kansas and New Mexico. (p. 686). BIRCH LEAF MINER causing severe injury on untreated birches in Vermont, and caused moderate to severe damage in most areas of Maine. (pp. 686, 696). BAGWORM beginning to feed as far north as New Jersey and Illinois. (p. 687). ROSE CHAFER active in Northeast and in Michigan. (pp. 688, 695).

MOSQUITOES becoming more of a nuisance in several States. HORN FLY and FACE FLY increasing. (pp. 692, 695, 696). BLACK FLIES annoying in parts of Maryland, Minnesota and Idaho (p. 692), and extremely heavy throughout Maine (pp. 692, 696).

A GIANT AFRICAN SNAIL (*Achatina fulica*) discovered on April 16, 1963, at Hakalau, Hawaii; second major infestation discovered on island. Eradication underway from time of find. First infestation successfully eradicated in 1958. (p. 698).

DETECTION

A PYRALID MOTH (*Dicymolomia julianalis*) reported for first time in Delaware. (p. 694). A WHITEFLY (*Dialeurodes kirkaldyi*) recorded for first time in Dade and Broward Counties, Florida. (p. 689). See CEIR 13(19):498 for first record of this species in the United States. CEREAL LEAF BEETLE (*Oulema melanopa*) found in Kent and Ionia Counties, Michigan; total of 13 counties now infested in State. (p. 695).

CORRECTIONS and ADDITIONAL NOTES

See pages 695 and 696, respectively.

SPECIAL REPORTS

Status of the Screw-worm in the Southwest. (p. 690).

Hawaiian Insect Notes. (p. 698).

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Reports in this issue are for week ending June 14, unless otherwise indicated.



## WEATHER BUREAU 30-DAY OUTLOOK

MID-JUNE TO MID-JULY 1963

The Weather Bureau's 30-day outlook for the period mid-June to mid-July calls for temperatures to average below normal and rainfall above normal in northeastern and southwestern sections of the United States. Warmer than normal temperatures and subnormal rainfall are expected over the South and Northwest. In other areas, near normal weather should prevail.

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

### WEATHER OF THE WEEK ENDING JUNE 17

Summer heat continued over the southeastern third of the United States, with afternoon temperatures climbing into the 90's as far north as Lower Michigan. A high pressure area centered over central Canada pushed cooler air into our North Central and Northeastern States. Some sharp temperature contrasts existed across the front between the opposing air masses. Traverse City, Michigan, registered 91° Monday afternoon while the mercury at Escanaba climbed no higher than 55°. Meanwhile, cooling rains spread onto the lower California coast, across Nevada and Utah, and into Idaho and Montana. Light snow fell at Ely, Nevada, and the thermometer dropped to 32°. Although cool air poured southward over the North Central and Northeastern States, afternoon and evening thundershowers resumed daily in the hot, humid air that remained in control to the south. The differing air masses gave rise to heavy thundershowers and a few tornadoes that spread from the Ohio Valley into Pennsylvania. Thursday afternoon was extremely hot from the sandy Southwest to the central Plains. Temperatures exceeded 100° in some Kansas localities and 90° as far north as Pierre, South Dakota. Overnight temperatures remained warm over much of the Country. They dipped to freezing or cooler at the higher elevations in the Rocky Mountains. Bryce Canyon, Utah, registered a frosty 28° on Friday morning. Flagstaff, Arizona, registered 29°. A cooler spot was Foxpark, Wyoming, where the weekly minimum was 19°.

In the East, the cool air gradually pushed southward bringing comfortable temperatures to the East Central States. By the weekend, the front extended from the Texas Panhandle to North Carolina. The Gulf States continued to swelter with afternoon temperatures approaching or, in some cases, exceeding 100°. Western locations experienced the return of extreme heat Sunday afternoon. Temperatures soared to 100° or higher over the southwestern deserts and in the interior valleys of California. One of the highest temperatures of the week, 110°, was registered at Yuma, Arizona, Sunday afternoon. Southeastern Washington and some parts of Oregon registered temperatures in the 90's. Pendleton scored a sizzling 96°. Temperatures for the week averaged above normal over the southeastern quarter of the Nation, over the High Plains, and in the Far Northwest. Below normal averages occurred over the southern Rockies and intermountain deserts of Utah, Arizona, and northwestern New Mexico; also over the northeastern quarter of the Nation. Departures ranged from +6° over parts of the Deep South and in southeastern Washington to -6° in New York, New England (except Maine), northwestern New Mexico, southwestern Utah and southeastern Nevada.

Rainfall during the week was extremely spotty. Some scattered areas from the northern Rockies to Missouri received more than 2 inches. A few counties in Kansas received nearly 5 inches. One of the largest weekly totals was 7.60 inches at Los Angeles, Texas. Numerous areas received less than 0.50 inch. These included some areas near the Gulf coast, most of New Mexico and Arizona, and parts of Oregon, Washington and the northern High Plains. (Summary supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - OREGON - First hatching noted in upper Klamath Marsh, June 11. First reports also from Swan Lake, Sprague Lake and Ft. Klamath. (Vertrees). IDAHO - Nymphal survey June 4-5 along Boise River (south and middle forks in parts of Ada, Boise and Elmore Counties) indicates a wide and fairly uniform distribution; species Aulocara elliotti, Melanoplus sanguinipes, Oedaleonotus enigma and Schistocerca sp.; development ranged from egg to occasional fourth instar, with approximately 75 percent in first and second instars. Counts per square yard on north shore of Arrow Rock Reservoir and east along river to Alexander Flat ranged from 200 two miles east of Arrow Rock Dam to 20 in Alexander Flat vicinity. Counts 5-75 per square yard from Arrow Rock Dam south via Grouse-Woodtick Creeks to McDonald Ranch south of Grape Mountain. Average counts 75 per square yard in area of Fish and Game Ranch. (Nonini). UTAH - Grasshopper populations light to moderate at many field stops in Uintah and Duchesne Counties, and light in Manila-Antelope area of Daggett County. Spottedly numerous over large area of Nephi-Levan dryland wheat and adjacent retired acreages of Juab County. Pardalophora haldemanii winged and more numerous than usual. An occasional Melanoplus spp. winged, but most 1-4 instar. A. elliotti nymphs numerous in many farm areas and on some range. Large hatch of grasshoppers noted in foothill limited areas of Davis and Salt Lake Counties. (Knowlton). COLORADO - Unidentified nymphs number 300 per square yard on cropland borders in Routt County. Growers in Dolores County applied controls. (Hantsbarger). NEW MEXICO - No grasshopper hatch noted in Colfax and Union Counties up to June 7. Light, spotted hatch noted in Quay County. (N. M. Coop. Rpt.). TEXAS - Moderate to heavy populations of several species widespread and causing damage to pastures in Anderson County. (Stephenson). Hatch remains light in panhandle and south plains counties; turf much improved since rains. (Tex. Coop. Rpt.; Russell et al.). KANSAS - Grasshoppers numerous in certain western areas. Counts in margins of wheat fields in Wallace County, west central, and Sherman County, northwest, averaged 5-10 nymphs per square yard. Development second instar to adult. Counts in other counties generally lower. Species primarily M. sanguinipes, M. femurrubrum and Hesperotettix speciosus. (Peters). MISSOURI - Light to moderate numbers of Melanoplus spp. found throughout alfalfa fields and pastures in southwest. High numbers of small nymphs still being reported from hatching areas. Marginal damage showing up in row crops in dry spots in southwest area. (Munson, Thomas, Wood).

NEBRASKA - Grasshopper counts in Pine Ridge Range area in northwest section of State ranged from noneconomic to 60 per square yard in pockets. Dominant species Ageneotettix deorum, first to fourth instar, 70 percent; Aulocara elliotti, first to fourth instar, 10 percent; Amphitornus coloradus, first to third instar, 5 percent; Trachyrhachys kiowa, first to third instar, 5 percent; and Phlibostroma quadrimaculatum, first to third instar, 2 percent. Remaining percentage comprised Arphia conspersa, A. sulphurea, Eritettix simplex, Psoloessa delicatula and Xanthippus corallipes latifasciatus. All overwintering species adult, with females gravid and some egg deposition indicated. Adult blister beetle and sarcophagid fly activity also present. Populations in Beaver Valley area, Sheridan County, 90 percent A. elliotti (third instar to adult) and ranged up to 300 per square yard. A. deorum, first to fourth instar, along the butte area were 30-60 per square yard. (Bell). M. bivittatus activity very evident in Boyd County. (Bergman). NORTH DAKOTA - Grasshoppers concentrated in lush vegetation in roadsides; however, a period of hot, dry weather could cause concern in some areas. (N. D. Ins. Sur.). Nymphal survey conducted in Morton, Oliver, Mercer, Grant, Stark, Hettinger, Adams, Bowman, Slope and Golden Valley Counties showed marginal counts of less than 1 to 30 (average 6) per square yard. Field counts ranged from less than 1 to 15 (average 2) per square yard. Field counts highest in soil bank land, sweetclover and alfalfa. Development ranged from first through fourth instar; 5 percent in fourth instar. Dominant species M. bivittatus, M. sanguinipes and M. packardii. Counts on rangeland

in Slope County ranged 6-12 (average 8) per square yard; Ageneotettix deorum and Aulocara elliotti in first and second instars and M. sanguinipes ranged from first through third instar. (Brandvik). In Burleigh, Kidder, Stutsman and Wells Counties, survey indicated 0-30 nymphs per square yard. Roadside margins in Burleigh County north of Sterling and south of McKenzie had 30 per square yard. M. bivittatus and M. sanguinipes dominant and ranged from first through third instar. In Robinson area of Kidder County, marginal infestations of 10 per square yard found; M. sanguinipes dominant. M. sanguinipes also averaged 10 per square yard in alfalfafield near Courtenay, Stutsman County; development first and second instars. In Hurdsfield-Harvey area, Wells County, 15-30 nymphs counted in field margins; Camnula pellucida, A. deorum and M. bivittatus dominant; most in first instar. (Olson). MINNESOTA - Adults of M. confusus found in light, sandy soils of Anoka County. Hatching of M. femur-rubrum and M. differentialis started in Anoka and Sherburne Counties; first instars 10-30 per square yard in some fields. Light hatch occurred in west central district; tentatively identified as C. pellucida and M. bivittatus. Hay harvest started; egg hatch expected to accelerate. (Minn. Ins. Rpt.). WISCONSIN - Grasshoppers averaged as high as 20 per sweep in alfalfafield in Green County and nymphs becoming noticeable in most thin alfalfa in southern part of State. M. sanguinipes and M. bivittatus populations insignificant in Marinette and Oconto Counties; highest count 10 per square yard; development up to fourth instar in area. M. confusus adults present in central area. (Wis. Ins. Sur.). ILLINOIS - Melanoplus spp. nymphs varied 0-240 per 100 sweeps in grassy roadsides in west district and 0-3,000 per 100 sweeps in northwest district. Development mostly first instar, with an occasional second instar. (Ill. Ins. Rpt.). OHIO - Highest counts of M. differentialis were 55 first instars per 50 sweeps in a second-cutting field of alfalfa in Brown County, southern area. (Lyon). MISSISSIPPI - Various species medium to heavy on soybeans in Sharkey County, and heavy on pastures in Jefferson Davis and Forrest Counties. (Ouzts).

EUROPEAN CORN BORER (Ostrinia nubilalis) - ARKANSAS - First-generation larvae pupating in west central area. (Ark. Ins. Sur.). MISSOURI - Egg masses ranged 0-30 per 100 plants in central and northwest areas; leaf feeding damage observed on 0-40 percent of plants. Counts made only in most susceptible fields; those with plants over 30 inches extended height. (Munson, Thomas, Wood). IOWA - Moths 80 percent emerged at Ankeny June 6. First egg hatch also occurred June 6. Egg masses 20 per 100 plants on 23-inch corn (extended) on June 7. Moth flight heavy at Ames June 3 and 4. Egg masses 50 or more per 100 plants (6-20 inches) in Henry County on June 5, and 75 per 100 plants on 6-inch corn in Belmond area, Wright County, on June 10. (Iowa Ins. Inf.). MINNESOTA - Moth emergence occurred in west central and east central districts. Pupation 80 percent in west central district; larvae and pupae difficult to find in east central district. Corn 8-12 inches high in districts. (Minn. Ins. Rpt.). WISCONSIN - Egg masses average 2 per plant on corn examined in southern counties which had extended leaf length of 18 inches or more. Whorl feeding noted locally in Walworth County. Main first-generation flight over; sufficient food present for second generation. (Wis. Ins. Sur.). ILLINOIS - Egg masses per 100 plants averaged 108 in northwest, 106.3 in west, 27.5 in central, 10 in east and 43.3 in west-southwest. Percent of plants infested averaged 18.9 in northwest, 29.5 in west, 10 in east, 9.8 in central and 30 in west-southwest. Larvae per infested plant averaged 1.3 in northwest (first instar), 1.5 in central (78 percent first instar and 22 percent second instar), 1 in east (80 percent first instar and 20 percent second instar) and 0.3 in west-southwest (first instar). Average height of corn in inches 31.4 in northwest, 44.1 in west, 38.1 in central, 35.8 in east and 44.3 in west-southwest. Recent hot weather caused very rapid borer development; therefore, corn development behind that of borer which reduces possibility of severe damage this year. (Ill. Ins. Rpt.). INDIANA - First instars present in early corn in Vermillion County. About 20 percent of plants with shot-hole injury. (Gould). OHIO - Egg deposition occurred on June 8 in Wooster area. Many adults collected from blacklight traps in same area. (Guthrie). MARYLAND - Larvae beginning to infest more advanced field and sweet corn in Frederick and



Prince Georges Counties; moth catches very low in light trap at Centreville. Numbers should increase week of June 24. (U. Md., Ent. Dept.). DELAWARE - First young larvae found in early sweet corn in Sussex County; infestations ranged 8-30 percent. (Burbutis). PENNSYLVANIA - Adults observed flying in Lancaster County corn. (Pepper). NEW JERSEY - First egg masses found in Middlesex County on sweet corn; deposition fairly heavy over weekend (June 8). Egg masses also found in Burlington County. (Ins.-Dis. Newsltr., June 11). NEW YORK - Moths active in Hudson Valley. Egg masses present and hatching expected to begin by June 8. (N. Y. Wkly. Rpt., June 10). CONNECTICUT - Egg laying underway. (Savos).

ARMYWORM (Pseudaletia unipuncta) - MARYLAND - Heavily infesting 10 acres of barley at Walkersville, Frederick County. (U. Md., Ent. Dept.). OHIO - Moderate to heavy feeding damage occurred on wheat and corn in Madison, Greene, Pickaway, Fayette and Highland Counties, southwest area; controls applied. (Lyon, Ewart, Triplehorn, Jones, Grover, Blair, Treece, Herron, Hamrick). Also damaging in Hancock County, northwest area. (Blair, Kroetz). ILLINOIS - Infestations occurred in several areas; none extremely severe, but many required controls to prevent economic losses to wheat and corn. (Ill. Ins. Rpt.). WISCONSIN - Larvae 6 per foot along edge of wheat and rye fields in Walworth County. Some head clipping noted, but most injury restricted to marginal rows adjacent to tall grass. None found in lodged portions of fields and only insignificant numbers appeared in oats. Larval development ranged from third to fifth stage. (Wis. Ins. Sur.). MINNESOTA - Second and third instars light in oats in Carver County. (Minn. Ins. Rpt.). IOWA - Small larvae moving into corn from fencerows in many sections of State. (Iowa Ins. Inf., June 10). CALIFORNIA - Extremely heavy on cover crop in almond orchard in Escalon, San Joaquin County. (Cal. Coop. Rpt.).

CORN EARWORM (Heliothis zea) - TEXAS - Heavy, local populations causing serious damage to grain sorghum in Cameron County. (Tex. Coop. Rpt.; Day). Light, widespread populations causing damage to corn in Caldwell and Guadalupe Counties. (Tex. Coop. Rpt.; Massey). OKLAHOMA - Light on alfalfa in Tillman, Kiowa and Caddo Counties, southwest; 2-5 per 10 sweeps. In Payne County, north central, corn 25 percent infested. Heavier infestations reported from Hughes, Cotton and Garvin Counties. Counts in corn in southwest generally lower. Infestations in sorghum light (5-10 per 100 plants) in Kiowa, Tillman (southwest) and Wagoner (northeast) Counties. (Okla. Coop. Sur.). ARKANSAS - Adult collections increasing in light traps. (Ark. Ins. Sur.).

CUTWORMS - IOWA - Agrotis ipsilon and Feltia subgothica destroyed 1,000 to 2,000 acres of corn in Black Hawk, Clinton, Henry, Marion, Polk, Story and Washington Counties. (Iowa Ins. Inf., June 10). ALABAMA - Undetermined species causing light damage to field of peanuts in Coffee County. (Stephenson).

SOD WEBWORMS - NEW JERSEY - Activity of unspecified species increasing in lawns. (Ins.-Dis. Newsltr., June 11). MARYLAND - Larvae of Crambus sp. caused severe injury to young corn after sod in a Washington County field. (U. Md., Ent. Dept.). ILLINOIS - Moths of unspecified species abundant for past 10-14 days; egg laying underway in healthy, luxuriant bluegrass. (Ill. Ins. Rpt.).

CEREAL LEAF BEETLE (Oulema melanopa) - OHIO - Specimens collected from 9 different properties in Williams County, northwest area. Found in sections 10, 11, 14, 15, 21 and 29 of Northwest Township. Section 21 of Bridgewater Township and section 31 of Jefferson Township also infested. Larvae predominant stage found in oats; adults expected to emerge within next two weeks. Heavy rainfall temporarily limited survey in oat and wheat fields. (Shepherd, Cowden, Lyon).

SOUTHERN CORN ROOTWORM (Diabrotica undecimpunctata howardi) - IOWA - Adults feeding on leaves of corn in most of State. (Iowa Ins. Inf., June 10). ILLINOIS - Adults feeding on 10-20 (average 14) percent of corn plants in northwest district and 0-30 (average 13) percent in west. Adults per 100 plants 0-20 (average 12) in northwest and 0-10 (average 5) in west. (Ill. Ins. Rpt.). OHIO - Many

gravid females observed in home gardens in southern area. (Lyon). OKLAHOMA - Light in southwest area alfalfa; 2-5 per 10 sweeps. (Okla. Coop. Sur.). ALABAMA - Considerable numbers on young corn in Clay County. (Harris, Barwood, Davis).

CORN FLEA BEETLE (Chaetocnema pulicaria) - MARYLAND - Light to moderate on field and sweet corn in Frederick and Montgomery Counties. (U. Md., Ent. Dept.).

WHITE-FRINGED BEETLES (Graphognathus spp.) - MISSISSIPPI - Heavy on corn in Pearl River County; controls applied. (Ouzts).

BLUEGRASS BILLBUG (Sphenophorus parvulus) - OHIO - Adults caused moderate damage to young corn in northeast Medina County; about 1 per 10 plants. Corn planted with minimum tillage in land which had been in bluegrass for several years. (Rings, Triplett, Schurr).

WIREWORMS (Melanotus spp.) - MISSOURI - Damage to corn continues to show up in spots throughout State. (Munson, Thomas, Wood).

EUROPEAN CHAFER (Amphimallon majalis) - NEW YORK - Development as of June 7 was 25 percent pupae and 75 percent prepupae. At same time in 1962 all were pupae and some adults. Flights of adults likely to be little later in 1963. First adult flight in 1961 reported on June 9. (N. Y. Wkly. Rpt., June 10).

CORN BLOTCH LEAF MINER (Agromyza parvicornis) - DELAWARE - First miners of season present on corn in western Kent County. (Burbutis). MISSOURI - Observed on corn in central, west central, southwest and northwest areas. (Munson, Thomas, Wood).

CORN LEAF APHID (Rhopalosiphum maidis) - OKLAHOMA - Infestations in sorghum and corn light to moderate; 10-40 per plant in Kiowa, Tillman (southwest), Wagoner (northeast) and Choctaw (southeast) Counties. Johnson grass along roadsides and fencerows heavily infested. (Okla. Coop. Sur.). NEVADA - Averaged 30 per sweep on barley in Douglas County. (Cooney, Parker).

CORN ROOT APHID (Anuraphis maidiradicis) - DELAWARE - Very numerous on corn roots in large commercial field in New Castle County. (Burbutis). MARYLAND - Conspicuously infesting corn fields in Montgomery and Washington Counties. (U. Md., Ent. Dept.).

GRAIN APHIDS - OREGON - Medium populations of Macrosiphum avenae noted on wheat and barley in Klamath Falls area. (Vertrees). COLORADO - Rhopalosiphum fitchii, M. avenae and Schizaphis graminum present in trace to high populations on spring grains in Montrose, Mesa, Larimer and Weld Counties. High populations in Montrose and Mesa Counties required controls. (Bulla, Jenkins). NORTH DAKOTA - Trace numbers of S. graminum found on barley near Ellendale, and on oats near Linton. (N. D. Ins. Sur.). MINNESOTA - Counts of S. graminum generally lower; an occasional field has 600 per 100 sweeps, but most ranged 0-60 in east central and central districts. (Minn. Ins. Rpt.). WISCONSIN - Populations of M. avenae and S. graminum little changed in southern and southwestern areas; counts 1-6 per sweep. Little, if any "red leaf" disease observed. Counts considerably higher in northeast in parts of Shawano, Oconto and Marinette Counties where S. graminum counts run as high as 40 per sweep. Sections of oat fields in these counties yellowed, stunted, and a report from Oconto County indicates some fields being plowed. (Wis. Ins. Sur.). PENNSYLVANIA - M. avenae fairly common on oats in Potter and Elk Counties. (Adams).

CHINCH BUG (Blissus leucopterus) - OKLAHOMA - Light populations, 5 per 100 plants, reported on corn in Wagoner and Muskogee Counties, eastern area. (Okla. Coop. Sur.).

A GRASS BUG (Thyridius pacificus) - OREGON - Damaging wheat in Klamath Falls area. Also concentrated on quackgrass, wild rye grass and other native grasses. (Vertrees).

**FALSE CHINCH BUG (*Nysius ericae*)** - UTAH - Nymphs very numerous in fields and on range in Kanab area of Kane County and range areas of Levan and Mills in Juab County. (Knowlton).

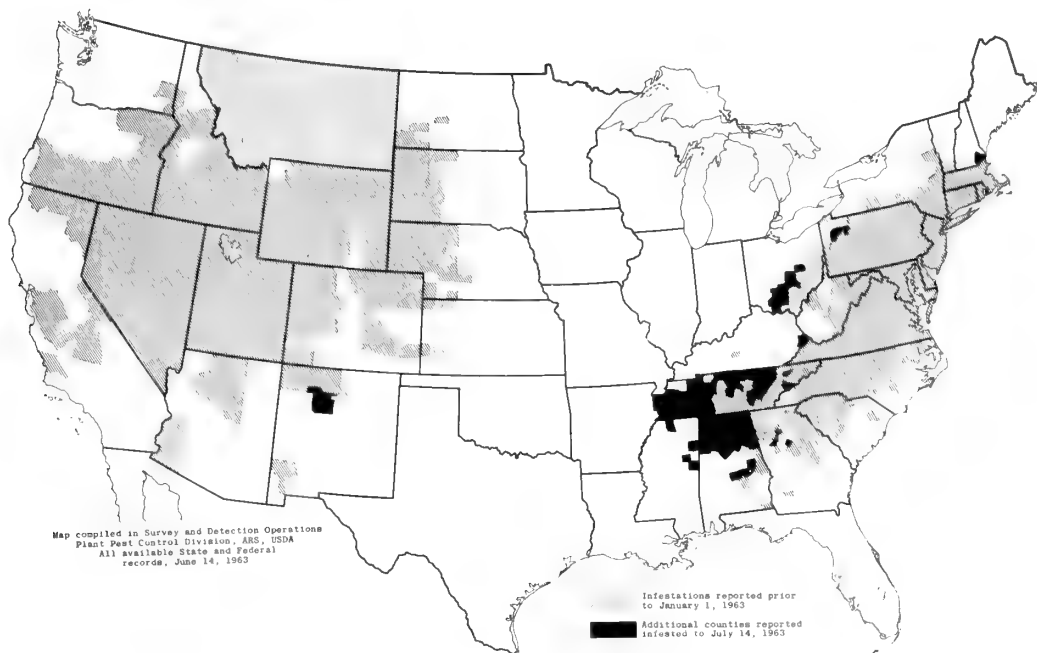
**HAIRY CHINCH BUG (*Blissus leucopterus hirtus*)** - NEW JERSEY - Activity increasing. (Ins.-Dis. Newsltr., June 11).

**THRIPS - CALIFORNIA** - *Frankliniella occidentalis* and *Anaphothrips zeae* (=longipennis) medium on milo in Westmorland. (Cal. Coop. Rpt.). **MISSOURI** - Feeding injury of unspecified species evident on small corn and grain sorghum in areas throughout most of State. (Munson, Thomas, Wood). **NORTH DAKOTA** - *Limothrips denticornis* beginning to move into barley in southeast. (Colberg).

**MITES - OREGON** - Damaging barley and oats in Klamath Falls area. Aerial controls necessary. Species probably *Petrobia latens*. (Vertrees).

**ALFALFA WEEVIL (*Hypera postica*)** - VERMONT - Found in East Rupert, Bennington County, and probably present in southern Rutland County; larvae averaged 1 per 10 sweeps. (MacCollom, June 10). **CONNECTICUT** - Larvae a problem in New Haven County. (Savos). **NEW YORK** - Population peaked in Hudson Valley; larvae averaged 110 per sweep, about one-half to two-thirds of 1962 peak. Present known infestation in State located mostly to the south and east of a line from Binghamton, Broome County, to Glens Falls, Warren County. (N. Y. Wkly. Rpt., June 10).

**PENNSYLVANIA** - All stages present in some Franklin County alfalfa; treatment needed in some fields on second growth 2-6 inches high. (Pepper). All stages present in Greene County alfalfa; damage present in spring-treated fields and complete loss in untreated fields. (Udine). Light, but readily noticeable on alfalfa in Forest, McKean and Elk Counties; some damage evident in Elk County. (Adams). First record for Forest County. **DELAWARE** - Larvae, all stages, average 2-3 per sweep on untreated alfalfa in western Kent County; causing



Distribution of Alfalfa Weevil

noticeable injury to second growth in one field. (Burbutis). MARYLAND - Larvae averaged 8-12 per sweep on second-growth alfalfa in Frederick County; treatments needed. (U. Md., Ent. Dept.). OHIO - Heavy damage to second-cutting alfalfa observed in some Washington County fields, southeast; newly emerged adults 1-6 per square foot in one field. Feeding damage effectively reduced in treated fields. (Gehres, Blair). Moderate to heavy damage to second-cutting alfalfa observed in several southeast counties; 60-80 larvae per 50 sweeps in alfalfa-field near Pomeroy, Meigs County. No adults found. (Lyon). Infestations observed at 9 different stops in Columbiana County, northeast area. No great economic damage found. (Myers, Blair). ARKANSAS - Specimens, tentatively determined as this species, averaged 6 per 100 sweeps in Crittenden County, east central area. (Ark. Ins. Sur.). COLORADO - Larvae low in Otero and Weld Counties; 0-20 per 100 sweeps. Fields of uncut alfalfa in Larimer and Weld Counties show losses of 10-25 percent in quality. (Jenkins, Schweissing). WYOMING - Larvae averaged 85 per 100 sweeps in alfalfa in Goshen County. (Fullerton). UTAH - Much alfalfa hay being cut shows moderate damage by this pest; however, adults still more abundant than normal in most alfalfa areas examined recently over much of State, including Daggett County, northern Kane County, northern Washington County and Monticello area in San Juan County, and areas north. (Knowlton). NEVADA - Larvae 20-150 per sweep in most alfalfa in Douglas and southern Washoe Counties, with heavy damage in many fields. Pupation underway. (Cooney, Parker). OREGON - Damaging alfalfa for first time in Summer Lake Refuge area. Controls will be needed. (Moser). IDAHO - Larvae causing injury to several fields in Bingham County. (Bishop).

CLOVER WEEVILS (Hypera spp.) - OHIO - H. nigrirostris heavy and H. meles light to moderate on red clover in Ross County, south central area. (Glass, Blair). H. punctata heavy in west central and southwestern counties; adults more plentiful on alfalfa than in any previous year remembered. (Blair).

CLOVER SEED WEEVIL (Miccotrogus picrostris) - IDAHO - Ranged up to 15 per sweep in field of white clover in Cottonwood area, Idaho County. (Portman).

A LEAF BEETLE (Colaspis sp.) - MISSOURI - Damage to soybeans planted after clover reported in a few fields in northeast. (Munson, Thomas, Wood).

MEXICAN BEAN BEETLE (Epilachna varivestis) - DELAWARE - First adults of season found present on soybeans in Sussex County; feeding injury light to moderate. (Burbutis). ALABAMA - This species and Cerotoma trifurcata feeding on kudzu in Clay County; numbers few. (Harris, Barwood, Davis).

PALE-STRIPED FLEA BEETLE (Systema blanda) - MARYLAND - Adults moderate on alfalfa at Jefferson, Frederick County. (U. Md., Ent. Dept.).

SPOTTED BLISTER BEETLE (Epicauta maculata) - UTAH - Very numerous in some alfalfa and on range in Mills area, Juab County. (Knowlton).

PEA APHID (Acyrtosiphon pisum) - IDAHO - Very low; ranged up to average of 20 per sweep in red clover and alfalfa checked in Parma and Wilder areas. (Waters). Common in alfalfa in Bingham County; ranged 5-25 per sweep. (Bishop). NEVADA - Averaged 100 per sweep in most alfalfa checked in Douglas and southern Washoe Counties. (Cooney, Parker). UTAH - Moderately numerous to light in Daggett, Uintah, Duchesne and Wasatch Counties. Moderately numerous in alfalfa in Nephi-Mills area of Juab County. (Knowlton). ARIZONA - Decreased on alfalfa in Safford area; infestations now light. Counts in Yuma area about 18-20 per sweep. (Ariz. Coop. Sur.). COLORADO - Populations very high in Mesa and Delta Counties; 8,000-12,000 per 100 sweeps. Low populations present in Arkansas Valley and northern area. (Bulla, Jenkins, Schweissing). OKLAHOMA - Populations low in alfalfa in southwest, central and north central areas; ranged 25-100 per 10 sweeps. Infestations still lighter in southeast and east counties. Some fields in Garvin County moderately infested; 400 per 10 sweeps. (Okla. Coop. Sur.).

WYOMING - Averaged 600 per 100 sweeps in alfalfa in Goshen County. (Fullerton). NEBRASKA - Average per 10 sweeps 4 in Howard County alfalfa (Calkins) and 2 in Cuming County (Bergman). NORTH DAKOTA - Ranged from a trace to 300 per 10 sweeps on alfalfa and sweetclover. (N. D. Ins. Sur.). MINNESOTA - Increased on alfalfa; average per 100 sweeps by districts 4,500 in east central, 4,600 in central and 200 in west central. Predators numerous. (Minn. Ins. Rpt.). WISCONSIN - Many small nymphs present in alfalfa and populations expected to increase; counts per sweep ranged 1-40. (Wis. Ins. Sur.). MARYLAND - Averaged 6 per sweep on second-growth alfalfa in Frederick County. (U. Md., Ent. Dept.).

SPOTTED ALFALFA APHID (Therioaphis maculata) - NEW MEXICO - Heavy populations built up in Dona Ana County alfalfa within 2 weeks of second cutting. Most growers cut hay early rather than attempt to treat these fields. (N. M. Coop. Rpt.). OKLAHOMA - Light, 10-150 per 10 sweeps, in north central, southwest, central and western areas. Fields in southeast negative in some cases, moderate in others; ranged up to 500 per 10 sweeps. Light to moderate in south central area. (Okla. Coop. Sur.). KANSAS - Counts lower in northern area; about 1 per 20 sweeps. (Peters). NEBRASKA - Counts per 10 sweeps in alfalfa 10 in northeast (Bergman) and 4 in Howard County (Calkins). MISSOURI - Two very light infestations found in southwest; first of season. (Munson, Thomas, Wood).

POTATO LEAFHOPPER (Empoasca fabae) - DELAWARE - Adults present on alfalfa in New Castle and western Kent Counties. (Burbutis). MARYLAND - Ranged 1-4 per sweep on alfalfa in central and western areas. (U. Md., Ent. Dept.). PENNSYLVANIA - Population low on alfalfa in Lancaster County. (Pepper). WISCONSIN - Nymphs appearing in some alfalfa although adults in alfalfa generally low. (Wis. Ins. Sur.). MINNESOTA - Counts per 100 sweeps on alfalfa 10 in east central district, 90 in central and 20 in west central district. Nymphs present in east central and central districts. (Minn. Ins. Rpt.).

LEAFHOPPERS - MARYLAND - Aceratagallia sanguinolenta and other brown species extremely abundant on recently cut alfalfa at Buckeystown, Frederick County. (U. Md., Ent. Dept.). OHIO - Adults of Empoasca sp. ranged 6-95 per 50 sweeps in southern and southeastern areas. (Davidson, Lyon).

TARNISHED PLANT BUG (Lygus lineolaris) - DELAWARE - Adults averaged 2-3 per 10 sweeps on wheat and alfalfa in western New Castle and western Kent Counties. (Burbutis). MARYLAND - Adults common in alfalfa and clover in Frederick County. (U. Md., Ent. Dept.). OKLAHOMA - Light on alfalfa; 5 per 10 sweeps in southwest and 30 per 10 sweeps in south central area. (Okla. Coop. Sur.).

LYGUS BUGS (Lygus spp.) - IDAHO - Ranged up to 35 per sweep in some untreated alfalfa seed fields in Canyon County; mostly nymphs. (Waters). WYOMING - Adults averaged 50 per 100 sweeps and nymphs 40 per 100 sweeps in alfalfa in Goshen County. (Fullerton). COLORADO - Increased on alfalfa in Prowers, Bent, Otero, Crowley and Pueblo Counties; counts 200-500 per 100 sweeps. (Schweissing). NEW MEXICO - Treatments of alfalfa seed fields to prevent damage underway in Dona Ana County. (N. M. Coop. Rpt.). ARIZONA - Very numerous in seed alfalfa at Safford Experiment Farm; counts average 850-950 adults and nymphs per 100 sweeps. In hay alfalfa, only light to medium populations present. (Ariz. Coop. Sur.). UTAH - Very numerous in alfalfa at Vernal-Naples area, Uintah County; all stages of nymphs present; 85 percent L. elisus. All stages of nymphs numerous on alfalfa in Nephi-Mills area of Juab County and Vernal-Duchesne area of Uintah County; 75 percent L. elisus. (Knowlton). NEVADA - Adults and nymphs varied 7-40 per sweep in alfalfa hay fields in Douglas and southern Washoe Counties. (Cooney, Parker).

PLANT BUGS (Lygus lineolaris, Adelphocoris lineolatus, A. rapidus) - MINNESOTA - Nymphs numerous; average per 100 sweeps 300 in east central and central districts and 150 in west central district. (Minn. Ins. Rpt.).



THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - ARIZONA - Increased slightly on alfalfa; averaged 60-150 adults per 100 sweeps. (Ariz. Coop. Sur.).

MEADOW SPITTLEBUG (Philaenus spumarius) - WISCONSIN - Nymphs decreased and adults becoming more common in alfalfa. Adults range as high as 8 per sweep in fields in Walworth and Waukesha Counties and 10 per sweep in southern Grant County. (Wis. Ins. Sur.). OHIO - Ninety-five percent adult in southwestern, southern and southeastern areas; highest counts on first-cutting red clover field in Greene County (225 adults per 50 sweeps). (Lyon). PENNSYLVANIA - Adults common in Lancaster and Franklin Counties. (Pepper). MARYLAND - Adults present but not numerous in alfalfa and clover in central and western areas. (U. Md., Ent. Dept.). DELAWARE - First adults of season present on alfalfa in western Kent and New Castle Counties. (Burbutis). VERMONT - Prevalent on most legumes. (MacCollom, June 10).

SEED CHALCIDS (Bruchophagus spp.) - IDAHO - B. platyptera averaged 4 per sweep in one second-year red clover seed field near Wilder. Numbers of B. roddi low in alfalfa seed fields near Parma, ranging 0-1 per 10 sweeps. (Waters).

ALFALFA CATERPILLAR (Colias eurytheme) - MARYLAND - Larvae light in alfalfa in Allegany and Frederick Counties. (U. Md., Ent. Dept.). OHIO - Larvae present in many alfalfa and red clover fields in southwest; no economic damage could be estimated. (Lyon).

GARDEN WEBWORM (Loxostege similalis) - OKLAHOMA - Light infestations common in many southwest, south central and north central fields; 2-5 per 10 sweeps. (Okla. Coop. Sur.). MISSOURI - Very light infestations, 0-4 per 10 sweeps, observed in alfalfa in southwest. (Munson, Thomas, Wood).

GREEN CLOVERWORM (Plathypena scabra) - MARYLAND - Moderate numbers of half-grown larvae swept from second-growth alfalfa on 2 farms in Frederick County. (U. Md., Ent. Dept.).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - ALABAMA - Causing light damage to field of peanuts in Covington County. (Stephenson).

RED-NECKED PEANUTWORM (Stegasta basqueella) - OKLAHOMA - Light on peanuts in Marshall County. (Okla. Coop. Sur.).

YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli) - OKLAHOMA - Light in alfalfa in southwest; 1.5 per 10 sweeps. (Okla. Coop. Sur.). DELAWARE - First larvae of season present on corn in western Kent County. (Burbutis).

THRIPS - GEORGIA - Unspecified species light to moderate on peanuts throughout southern area. (Johnson). MARYLAND - Unspecified species increasing on corn and soybeans on lower Eastern Shore. (U. Md., Ent. Dept.). DELAWARE - Sericothrips variabilis fairly common on soybeans in western Sussex County. (Burbutis). OKLAHOMA - Frankliniella spp. heavy, 25 per row foot, on peanuts in Marshall and Bryan Counties, southern area. (Okla. Coop. Sur.).

CRICKETS - MISSOURI - Reported feeding on leaves of soybeans and cotton along Mississippi River levies in southeast; counts range 3-7 per square yard. Some infestations serious enough to warrant controls. (Munson, Thomas, Wood).

STRAWBERRY SPIDER MITE (Tetranychus atlanticus) - DELAWARE - Very heavy on clover in central Kent County; causing severe injury. (J. Mellott).

FRUIT INSECTS

CODLING MOTH (*Carpocapsa pomonella*) - VERMONT - No evidence of emergence to June 7. First adults expected by June 14. (MacCollom, June 10). NEW YORK - Emergence proceeded rapidly during week of June 2 in Niagara County; egg laying heavy. First eggs hatched June 9 in Monroe County; emergence increased markedly week of June 2 in 5 seeded cages located in principal fruit-growing areas of county. Emergence as follows: June 2 - 11; June 3 - 14; June 4 - 16; June 5 - 18; June 6 - 12; June 7 - 14; June 8 - 7; and June 9 - 21. Thousands of larvae used in the 5 seeded cages from which these records came. (N. Y. Wkly. Rpt., June 10). OHIO - Adults emerged June 14 at Wooster, Wayne County; survival percentage much lower than usual. (Forsythe). INDIANA - First and second brood activity in Vincennes area, Knox County, will overlap. Few adults still emerging from overwintering larvae and early first-generation larvae ready to leave apples. (Hamilton, June 11). MISSOURI - First brood about ended. New entries due in southeastern area but none reported. (Wkly. Rpt. Fr. Grs., June 12). WISCONSIN - Larvae entered fruit at Gays Mills; eggs probably began hatching in that area about June 7-8; treatments underway. Two blacklight traps at Gays Mills yielded 18 adults June 4-7; trap at Madison yielded 26 adults June 6-10; and trap at Middleton yielded 4 adults June 6-9. (Wis. Ins. Sur.). CALIFORNIA - Heavy on peach trees in Sacramento, Sacramento County. (Cal. Coop. Rpt.).

RED-BANDED LEAF ROLLER (*Argyrotaenia velutinana*) - INDIANA - Number of adults coming to bait traps in Vincennes area, Knox County, increasing and second-brood eggs now being laid. (Hamilton, June 11).

EYE-SPOTTED BUD MOTH (*Spilonota ocellana*) - MAINE - Light populations and damage noted in southern area. (Boulanger, June 10).

ORIENTAL FRUIT MOTH (*Grapholitha molesta*) - NEW YORK - Larvae found in peach terminals in Niagara County June 6. (N. Y. Wkly. Rpt.). OHIO - Twig-feeding populations appear low; very little first-brood injury in Wayne County. (Forsythe). INDIANA - Adults started reappearing in bait traps on June 9 in Vincennes area, Knox County, following no captures since May 8. Egg hatch expected to start about June 18. (Hamilton). MISSOURI - Mostly pupated in Kansas City area; fresh twig injury noted in southeastern area June 7. (Wkly. Rpt. Fr. Grs., June 12). ALABAMA - Continues active in peach twigs in Lee County. (McQueen).

PEACH TREE BORER (*Sanninoidea exitiosa*) - WISCONSIN - Reared from larvae taken from peach tree in Madison; species not common in State. (Wis. Ins. Sur.).

PEACH TWIG BORER (*Anarsia lineatella*) - CALIFORNIA - Heavy on peach trees in Sacramento, Sacramento County. (Cal. Coop. Rpt.). COLORADO - Pupation beginning in peach terminals in Mesa County. (Bulla).

PLUM CURCULIO (*Conotrachelus nenuphar*) - VERMONT - Peak activity passed. (MacCollom, June 10). RHODE ISLAND - Occasional adult still collected on untreated apple in Kingston area, Washington County, but peak abundance probably passed. (Mathewson). NEW YORK - Egg laying began in Niagara County about May 28. (N. Y. Wkly. Rpt.). OHIO - Adults abundant on apples at untreated orchard near London, Madison County. Serious oviposition and adult feeding punctures on all apples on 3 trees in orchard; 10-14 punctures per apple commonly observed. (Lyon). Moderate to heavy damage on plum fruit in Wayne County and moderate damage to apples noted. (Forsythe). MINNESOTA - Noted on apples near Hastings; controls recommended. (Minn. Ins. Rpt.).

PERIODICAL CICADAS - INDIANA - Heavy oviposition started about June 5 in Vincennes area, Knox County. Peak egg laying probably occurred but cannot yet be determined. Growers using controls secured good results, but now having considerable difficulty in preventing fertile females in wooded areas surrounding orchard from migrating into orchards. (Hamilton, June 11). MISSOURI - At least one orchard sustained some damage by egg laying in southeastern area; oviposition now nearly over in that area which is the only area of State reporting cicadas this year. (Wkly. Rpt. Fr. Grs., June 12).

APPLE APHID (Aphis pomi) - MAINE - Winged migrants appearing in most areas by June 9. (Boulanger). MASSACHUSETTS - Heavy buildup on watersprouts noted. (Wheeler). RHODE ISLAND - Alates appearing and small amounts of reproduction commenced in apple orchards in Kingston, Washington County; very spotty. (Mathewson). CONNECTICUT - More appearing on terminal growth. (Savos). WISCONSIN - Built up on watersprouts in Door County week of June 1, but no movement to terminals occurred. (Wis. Ins. Sur.).

ROSY APPLE APHID (Anuraphis rosea) - NEVADA - Light to heavy on apple in southern Washoe County. (Bechtel, Parker).

WOOLLY APPLE APHID (Eriosoma lanigerum) - NEW MEXICO - Relatively heavy on untreated apple trees in Dona Ana, Bernalillo and Sandoval Counties. (N. M. Coop. Rpt.). ALABAMA - Caused severe injury at ground level to first-year apple trees in Lee County. (Moore).

PEAR PSYLLA (Psylla pyricola) - NEW YORK - Several orchards in western part of State indicate populations numerous despite routine control programs. Careful surveillance suggested. Seasonal development in western area as follows: March 25 - adult migration from hibernation sites; March 30 - first oviposition; April 18 - first hatch; and May 26 - first adults of summer brood. (N. Y. Wkly. Rpt., June 10). CONNECTICUT - Building up to damaging proportions on check trees; some growers in central part of State having little difficulty on control. (Savos).

OYSTERSHELL SCALE (Lepidosaphes ulmi) - MAINE - Light numbers and damage noted in Corinth, Penobscot County. (Boulanger, June 10).

SAN JOSE SCALE (Aspidiotus perniciosus) - FLORIDA - Severe on pear at Rockledge, Brevard County. (Levan, June 5). ALABAMA - Caused severe damage to apple trees and to fruit (one tree) in Lee County. (Bagby).

LOCUST LEAF MINER (Xenochalepus dorsalis) - OHIO - Feeding injury on leaves of apple trees near London, Madison County; leaves 10-45 percent skeletonized. Fifteen to twenty locust trees adjacent to orchard. Adults frequently numbered 5-10 per leaf. Damaged soybeans, grape and lima beans. (Lyon). Noted in Columbiana County; heavy on oats, wheat, ash trees and weeds; no economic damage except for some leaf skeletonizing of red oak. (Custer, June 3).

EUROPEAN RED MITE (Panonychus ulmi) - MAINE - Spotty in State; in southern area, populations range light to heavy. Few moderately heavy infestations in central area. Damage in most areas none or light to June 10. Females noted in Leeds on June 3; few if any eggs present then; eggs found in area south of Auburn, Androscoggin County. (Boulanger, June 10). VERMONT - Troublesome on Red Delicious apples where controls poor or neglected. (MacCollom, June 10). NEW YORK - Not numerous in Orleans County but can be found, mostly adults. (N. Y. Wkly. Rpt., June 10). RHODE ISLAND - Scattered, localized masses of eggs noted in cherry orchards in Kingston, Washington County; no evidence of hatching. (Mathewson). CONNECTICUT - Development slowed by cool, wet weather. (Savos). OHIO - Counts revealed 2 per plum leaf and one or fewer per apple leaf in Wayne County orchards. (Forsythe, June 6).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - OREGON - Building up on pears in Medford area. (Berry). CONNECTICUT - Eggs and adults appear more numerous than European red mite. (Savos). MASSACHUSETTS - Buildup heavy on watersprouts. (Wheeler).

PEAR RUST MITE (Epitrimerus pyri) - NEW YORK - Found in Niagara County May 29; mostly just underneath calyx lobes on fruit. (N. Y. Wkly. Rpt., June 10). OREGON - Continues present on pears in Medford area, Jackson County. (Berry).

ORCHARD MITES - INDIANA - Temperatures ideal for development in Vincennes area, Knox County; degree of populations present in any orchard varies extensively. (Hamilton, June 11). MISSOURI - Beginning to appear in greater numbers, but in scattered, isolated spots in Kansas City area. If weather continues hot, more mite trouble anticipated. (Wkly. Rpt. Fr. Grs., June 12).

CHERRY FRUITWORM (Grapholitha packardi) - NEW JERSEY - Flight continues heavy, particularly in untreated blueberry fields. (Ins.-Dis. Newsltr., June 11).

CHERRY FRUIT FLY (Rhagoletis cingulata) - NEW YORK - Emergence in Monroe County very slow to June 12. Seeded cage in Brockport zone yielded following: June 1, 1; June 2, 2; June 3-6, none; June 7, 7; June 8, 12. (N. Y. Wkly. Rpt., June 10).

BLACK CHERRY APHID (Myzus cerasi) - WISCONSIN - Building up in greater numbers on sour cherry than in recent years in Door County; could become a problem. (Wis. Ins. Sur.).

PECAN PHYLLOXERA (Phylloxera devastatrix) - ALABAMA - Caused heavy damage in large pecan orchard in Marengo County; very light and isolated infestations on few trees in Elmore and Lee Counties. (Gossard, Bagby).

BLACK-MARGINED APHID (Monellia costalis) - NEW MEXICO - Building up rather rapidly on pecan trees in Las Cruces area, Dona Ana County. (N. M. Coop. Rpt.).

OBSCURE SCALE (Chrysomphalus obscurus) - ALABAMA - Caused heavy damage in large pecan orchard in Marengo County. (Gossard, Bagby).

PECAN NUT CASEBEARER (Acrobasis caryae) - GEORGIA - Light on pecans in southern area. (Johnson). ALABAMA - Damage by first generation appears about ended in central and southern areas; some dead larvae noted in small, affected pecans. (McQueen).

PECAN LEAF CASEBEARER (Acrobasis juglandis) - ALABAMA - Light on pecans in orchards in Lee County. (McQueen).

FOREST TENT CATERPILLAR (Malacosoma disstria) - TEXAS - Moderate, widespread infestations stripping pecan trees in De Witt County. (Tex. Coop. Rpt.; Smith).

FALL WEBWORM (Hyphantria cunea) - ALABAMA - Considerable infestations in Henry, Barbour and Russell Counties, and lesser numbers noted in Lee County on pecans; condition static in Mobile County. (Seibels et al.). TEXAS - Heavy, widespread infestations defoliating pecan trees in Calhoun County. (Tex. Coop. Rpt.; Bales).

MEXICAN FRUIT FLY (Anastrepha ludens) - CALIFORNIA - Third bait spray application for 1963 underway at San Ysidro, San Diego County, in border areas adjacent to Tijuana, Mexico. Trapping in area continues, with 2,900 traps in operation in border and buffer zones. All detection methods negative in State this year. (Cal. Coop. Rpt.).

CITRUS RUST MITE (Phyllocoptruta oleivora) - FLORIDA - Moderate on citrus at Bereah, Polk County (Keen, Denmark) and at Thonotosassa, Hillsborough County (Simmons, June 4).

YUMA SPIDER MITE (Eotetranychus yumensis) - ARIZONA - Spot treatment continues in Yuma area. (Ariz. Coop. Sur.).

CITRUS WHITEFLY (Dialeurodes citri) - FLORIDA - Severe on Key lime at Dania, Broward County. (Brown, June 4).

CITRUS THRIPS (Scirtothrips citri) - ARIZONA - Treatment continues in Yuma area; high counts required second treatment to some young citrus in some groves. (Ariz. Coop. Sur.).

WESTERN GRAPE LEAF SKELETONIZER (Harrisina brillians) - CALIFORNIA - Over 1,500 yard-hosts inspected in towns of Kerman, Firebaugh, Mendota, Coalinga and Biola in Fresno County, with negative results. In Livermore area, Alameda County, numerous adult collections made in known infested area. Controls began June 3; no extension of infestation reported. (Cal. Coop. Rpt.).

GRAPE BERRY MOTH (Paralobesia viteana) - MISSOURI - Very small, young larvae now present in grapes; controls recommended where there is at least a partial grape crop. (Wkly. Rpt. Fr. Grs., June 12).

A FALSE CHINCH BUG (Nysius raphanus) - CALIFORNIA - Adults heavy on grapes in Hughson area, Stanislaus County, and very heavy in drying fields in Merced, Merced County. (Cal. Coop. Rpt.).

PAPAYA FRUIT FLY (Toxotrypana curvicauda) - FLORIDA - Collected in Steiner traps in guava and kumquat trees at Homestead, Dade County. (Fay, May 14).

A CECIDOMYIID (Dasyneura vaccinii) - MAINE - Localized but heavy infestations reported on blueberries in Hancock County. (Boulanger, June 10).

A CRANBERRY BLOSSOMWORM (Epiglaea apiata) - NEW JERSEY - Very active on cranberry bogs; immediate controls urged. (Ins-Dis. Newsltr., June 11).

CRANBERRY FRUITWORM (Acrobasis vaccinii) - NEW JERSEY - Flight continues heavy, particularly in untreated blueberry fields. (Ins.-Dis. Newsltr., June 11).

A LEAF ROLLER MOTH (Sparganothis sp.) - NEW JERSEY - Now very active in cranberry bogs; immediate controls urged. (Ins.-Dis. Newsltr., June 11).

LEAF-FOOTED BUG (Leptoglossus phyllopus) - ALABAMA - Light on blueberries in Covington County. (Stephenson).

#### TRUCK CROP INSECTS

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - RHODE ISLAND - Hatching general in Kingston and adjacent parts of Washington County. (Kerr). NEW YORK - Noticeable in Suffolk County, especially in tomato and eggplant fields. Earliest eggs hatched on potatoes in Suffolk County but generally few in number. Egg masses now much more numerous; fair number of larvae expected after June 10. (N. Y. Wkly. Rpt., June 10). NEW JERSEY - Hatching on potato plots at Adelphia, Monmouth County. (Ins.-Dis. Newsltr., June 11). DELAWARE - Very heavy on commercial tomato planting in western Kent County; larvae causing rather severe feeding injury. (Burbutis). MARYLAND - Larvae destructive to garden potatoes on several farms in Montgomery and Frederick Counties. (U. Md., Ent. Dept.). OHIO - Primarily last instars collected from potato plants in southern area; 14 larvae representing all instars noted locally in Scioto County; no adults found in State. (Lyon). UTAH - Larvae appearing in numbers in Weber and Davis Counties in potato fields; numerous on tomatoes in some Davis County communities. (Knowlton).

POTATO FLEA BEETLE (Epitrix cucumeris) - MAINE - Moderate numbers, probably this species, causing moderate damage to tomatoes, cucumbers and potatoes in Presque Isle, Aroostook County. (Boulanger, June 10). RHODE ISLAND - Statewide on potatoes, tomatoes and broccoli. (Mathewson). PENNSYLVANIA - Ranged light to heavy on potatoes in Potter and Erie Counties. (Adams). MARYLAND - Heavy on potatoes at Jefferson, Frederick County. (U. Md., Ent. Dept.). WISCONSIN - First-generation adults began feeding on solanaceous crops but injury light; averaged 1 per potato plant in Kenosha County. Attacking potatoes in Langlade County. (Wis. Ins. Sur.). NORTH DAKOTA - Some feeding observed on potatoes in southeast. (N. D. Ins. Sur.). NEBRASKA - Adults feeding on potatoes and tomatoes in Lancaster County. (Bergman).



WIREWORMS - OHIO - Undetermined species damaged 55 acres of potatoes in Fulton County; counts 8-10 per seed piece in several areas of field, primarily last instars. Controls underway. (Overton, June 5).

POTATO PSYLLID (Paratrioza cockerelli) - COLORADO - Nymphs and adults found on early potatoes in Weld County; adults range 1-4 per 100 sweeps. On Lycium sp. in Weld County, counts range 10-40 per 100 sweeps. Not found on tomatoes in Prowers, Bent, Otero, Crowley and Pueblo Counties. (Jenkins, Schweissing).

POTATO LEAFHOPPER (Empoasca fabae) - WISCONSIN - Few adults noted in certain potato fields in Kenosha County. Counts remain at 1 per plant in marginal portion of lima bean fields in Rock County. (Wis. Ins. Sur.). PENNSYLVANIA - Adults average about 3 per plant on potatoes in Greene County. (Udine). None on potatoes in Potter and Erie Counties. (Adams).

POTATO APHID (Macrosiphum euphorbiae) - NEW JERSEY - Moderate on potatoes at Adelphia, Monmouth County. (Ins.-Dis. Newsltr., June 11). MARYLAND - Light to moderate on garden tomatoes on 2 farms in Frederick County. (U. Md., Ent. Dept.).

GREEN PEACH APHID (Myzus persicae) - COLORADO - Found in one of 8 early potato fields in Weld County; colony observed on sugar beet plant in same county. (Berry, Jenkins).

Potato Aphids in Maine - Populations of BUCKTHORN APHID (Aphis nasturtii), POTATO APHID (Macrosiphum euphorbiae), GREEN PEACH APHID (Myzus persicae) and FOXGLOVE APHID (Acyrtosiphon solani) very low at Presque Isle and vicinity, Aroostook County. A. nasturtii predominates, with trace numbers of M. euphorbiae. Spring migrations of A. nasturtii and M. euphorbiae started about June 5, the usual time. While no potato plants infested with A. solani found, indications are that spring migration of this species started about or soon after June 7. Survey of aphid abundance on Canada plum, primary host of Myzus persicae, on June 10-11 in 26 thickets distributed over northeastern Maine, failed to reveal any M. persicae. (Shands et al.)

MEXICAN BEAN BEETLE (Epilachna varivestis) - ALABAMA - Caused heavy damage to lima beans locally in Covington County; extremely heavy on lima beans in Mobile County, with heavy egg laying on over 50 percent of plants in many fields. Several overlapping generations seem to be occurring. (Stephenson, Seibels, Wallace). MARYLAND - Adults infesting garden beans in Frederick and Montgomery Counties. (U. Md., Ent. Dept.). DELAWARE - Adults fairly common on snap beans, causing noticeable feeding injury in commercial field in central Sussex County. (Burbutis). OHIO - Overwintering adults and newly laid eggs noted on garden beans in many southern counties; 3-4 adults per leaf on some plants. Eggs on undersides of leaves numbered approximately 40-50 per aggregate. Adults mating and laying eggs. (Lyon). COLORADO - Not found on beans in Weld County. (Jenkins).

WESTERN SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata undecimpunctata) - OREGON - Few adults appearing on bush beans in Jefferson area. (Hanna).

PEA WEEVIL (Bruchus pisorum) - OREGON - Adults heavy past 3 weeks in Woodburn-Canby-Brooks area pea fields; ranged 15-40 per 10 sweeps. (Hanna).

COTTON SQUARE BORER (Strymon melinus) - ALABAMA - Causing light damage to southern peas and lima bean pods throughout Mobile County. (Seibels).

PEA APHID (Acyrtosiphon pisum) - WISCONSIN - Many small nymphs present in peas; late and midseason peas rapidly attaining populations where controls may be needed. Counts per sweep in early peas ranged 1.5-4.5 in Dane, Rock and Walworth Counties and averaged 10 per sweep in Sauk and Iowa Counties. Counts per sweep in late peas ranged 2-21 in same 5 counties. Some pea acreage treated after counts reached 60-70 per sweep week of June 1. (Wis. Ins. Sur.). OREGON - Light and scattered in freezing variety peas; adults noted in Woodburn area. (Hanna).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - ALABAMA - Appears to be increasing on southern peas and beans in Mobile County. (Seibels).

LEAF-FOOTED BUG (Leptoglossus phyllopus) - ALABAMA - This species and Lygus spp. numerous on southern peas and beans in Mobile County. (Seibels, Wallace).

SEED-CORN MAGGOT (Hylemya platura) - OHIO - Approximately 95 percent damage to lima beans in home garden near Orrville, Wayne County. Conspicuous damage to cotyledons noted; counts of 10-14 maggots per bean seedling in several locations. (Sleesman, Lyon, June 4).

CABBAGE APHID (Brevicoryne brassicae) - WISCONSIN - Abundant on some plantings of cabbage in Kenosha and Racine Counties. (Wis. Ins. Sur.).

DIAMONDBACK MOTH (Plutella maculipennis) - WISCONSIN - Larvae noticeable and causing some injury to cabbage in southeast; up to 4 per leaf noted. (Wis. Ins. Sur.). MARYLAND - Destructive to garden cabbage at Jefferson, Frederick County. (U. Md., Ent. Dept.).

IMPORTED CABBAGEWORM (Pieris rapae) - MAINE - Adults light on cole crops in Yarmouth-Cape Elizabeth area, Cumberland County. (Boulanger, June 10). MARYLAND - Larvae destructive to garden cabbage at Jefferson, Frederick County. (U. Md., Ent. Dept.). OHIO - Frequently observed flying in southwestern, southern and southeastern areas. (Lyon).

CABBAGE LOOPER (Trichoplusia ni) - NEW MEXICO - Problem in lettuce fields near Los Lunas, Valencia County, and in Bernalillo County where adequate controls not used. Also problem in home gardens on cabbage, lettuce and eggplants in many areas of State. (N. M. Coop. Rpt.).

CABBAGE MAGGOT (Hylemya brassicae) - MAINE - Numbers moderate, with heavy damage to cauliflower and radish in Scarborough; heavy egg deposits on cabbage and cauliflower in Cape Elizabeth, both in Cumberland County. The former case concerns well-developed maggots, first of season. In the latter area, only eggs observed. Light damage also reported at Yarmouth. (Boulanger, June 10). NEW YORK - Causing losses in some areas; improper treatments may be cause. Quite severe on newly set transplants in Niagara County and continues to show as plants are handled. Very little preventive action taken in seedbeds. (N. Y. Wkly. Rpt., June 10). PENNSYLVANIA - Causing considerable injury to cabbage in home gardens in Lancaster and Franklin Counties. (Pepper). WISCONSIN - This species probably responsible for severe damage to radishes in Shawano County. (Wis. Ins. Sur.).

SPINACH LEAF MINER (Pegomya hyoscyami) - RHODE ISLAND - Mining spinach and chard in Kingston, Washington County. (Mathewson). NEW YORK - Caused considerable damage to spinach and beets in Suffolk County home gardens week of May 29. (N. Y. Wkly. Rpt.). NEW JERSEY - Heavy on spinach and chard in Cumberland County and on chard in Morris County; controls recommended. (Ins.-Dis. Newsltr., June 11). WISCONSIN - Relatively heavy on planting of red beets in Kenosha County; other plantings in area with insignificant numbers of miners. Most now beginning to pupate. (Wis. Ins. Sur.). WYOMING - Larvae numerous in leaves of sugar beets throughout Goshen County. (Fullerton). UTAH - This species, or perhaps P. betae, mined up to 35 percent of older, larger leaves in some sugar beet patches. Damage well above average for time of year. (Dorst, Knowlton).

LEAF MINERS - CONNECTICUT - Unspecified species feeding on spinach, Swiss chard and beet leaves; controls recommended. (Savos).

BEEB WEBWORM (Loxostege sticticalis) - WYOMING - Flight large in and around sugar beet and alfalfa fields in Goshen County. (Fullerton). COLORADO - Adults continue to appear at light traps in Otero County; no eggs or larvae found on sugar beets in county. (Schweissing). NORTH DAKOTA - Adults observed along roadsides in southwestern counties. (N. D. Ins. Sur.).

GARDEN WEBWORM (Loxostege similalis) - COLORADO - Adults, eggs and first instars present in sugar beet and cabbage fields in Weld and Adams Counties. (Colo. Ins. Sur.).

WESTERN BLACK FLEA BEETLE (Phyllotreta pusilla) - IDAHO - Injuring young sugar beets in fields near Aberdeen. (Bishop).

BEEF LEAFHOPPER (Circulifer tenellus) - UTAH - Occasional specimen recovered on wild mustards in Ashley Valley of Uintah County. Curly top ranged 0-1 percent on tomatoes at Hooper, Box Elder County; 2 diseased in 300 tomato plants examined. (Dorst). IDAHO - Abundant in sugar beet fields near Aberdeen. (Bishop). COLORADO - Numbered 0-1 per square foot of beet row in Mesa County and 0-2 per square foot in Delta County. (Bulla).

STRIPED CUCUMBER BEETLE (Acalymma vittata) - MAINE - Heavy and damaging cucumbers in Auburn, Androscoggin County. (Boulanger, June 10). NEW YORK - Present on 2-leaf gourd plants at Hurley, Ulster County, June 3. (N. Y. Wkly. Rpt.). CONNECTICUT - Controls recommended in home gardens. (Savos). DELAWARE - Adults very common on cucumbers locally in western Kent County and present on water-melons in southwestern Sussex County. (Burbutis). WISCONSIN - This and other cucumber beetles caused severe damage to cucumbers in Walworth County; controls needed. (Wis. Ins. Sur.). OKLAHOMA - Moderate in garden areas of Marshall County. (Okla. Coop. Sur.). COLORADO - Appearing erratically on cantaloup in Prowers, Bent, Otero and Pueblo Counties. (Schweissing).

SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) - OKLAHOMA - Moderate on cantaloups in Custer County. (Okla. Coop. Sur.). CONNECTICUT - Controls recommended in home gardens. (Savos).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - CALIFORNIA - Larvae light in cantaloup planting in El Centro, Imperial County. (Cal. Coop. Rpt.).

SQUASH BUG (Anasa tristis) - OKLAHOMA - Light to moderate in most cucurbit-growing areas of State. (Okla. Coop. Sur.).

EARWIGS - ARIZONA - Apple bait spread in cantaloup fields to control undetermined species in Yuma area. (Ariz. Coop. Sur.).

ASPARAGUS BEETLE (Crioceris asparagi) - NEW YORK - Active in Niagara County. (N. Y. Wkly. Rpt., June 10). DELAWARE - Eggs and larvae present on asparagus foliage locally in New Castle County. (Burbutis). KANSAS - Moderate on asparagus in Shawnee County. (Charlton, Guldner).

SPOTTED ASPARAGUS BEETLE (Crioceris duodecimpunctata) - DELAWARE - Adults present to fairly common on asparagus foliage in New Castle County. (Burbutis).

ONION MAGGOT (Hylemya antiqua) - WISCONSIN - Caused severe damage to onions in Shawano County. (Wis. Ins. Sur.). MINNESOTA - Controls good at Castle Rock; skips at row ends heavily infested. (Minn. Ins. Rpt.). COLORADO - Adults appearing in bait traps in Montrose County; no maggots in onion fields. (Bulla).

THRIPS - DELAWARE - Undetermined species abundant and causing heavy injury to onions on truck farm in southwestern Sussex County. (Burbutis). COLORADO - Thrips tabaci ranged 0-25 per onion plant in Prowers, Bent, Otero and Pueblo Counties. (Schweissing).

RHUBARB CURCULIO (Lixus concavus) - RHODE ISLAND - Adults collected in Kingston, Washington County. (Mathewson). OHIO - Larvae noted in rhubarb stalks from home garden in Washington County. Early instars present; some stalks yielded 6-8 larvae. (Lyon).

SIX-SPOTTED LEAFHOPPER (Macrosteles fascifrons) - NEW YORK - Continued buildup in Orange County; lettuce stunt and drop continues evident. (N. Y. Wkly. Rpt., June 10).

STRAWBERRY WEEVIL (Anthonomus signatus) - MAINE - Populations and damage moderate to heavy in Orono area, Penobscot County. (Boulanger, June 10).

STRAWBERRY APHID (Pentatrichopus fragaefolii) - NEW JERSEY - First flight continues; controls recommended. (Ins.-Dis. Newsltr., June 11).

OMNIVOROUS LEAF TIER (Cnephasia longana) - OREGON - Larvae found on late blossoms of strawberries not properly treated around Gresham areas; appeared to be late hatch. (Hanna).

BAGWORM (Thyridopteryx ephemeraeformis) - KANSAS - Numerous on strawberries in home garden in Riley County. Ranged 0-2 per leaf and causing considerable defoliation. (Knutson, Peters).

CYCLAMEN MITE (Steneotarsonemus pallidus) - MAINE - Populations and damage light on strawberry plants in home planting in Farmington, Franklin County. (Boulanger, June 10). CONNECTICUT - Noted on strawberries in Putnam June 6-13. (Savos). MINNESOTA - Appearing on some strawberry plants. (Minn. Ins. Rpt.).

FLEA BEETLES (undetermined) - VERMONT - Activity increased on tomatoes and potatoes. (MacCollom, June 10). NEW YORK - Noticeable in Suffolk County, especially in tomato and eggplant fields. Active in Niagara County on tomatoes, potatoes and cabbage. (N. Y. Wkly. Rpt., June 10). CONNECTICUT - Active on potatoes, peppers, tomatoes and other plants. (Savos). MISSOURI - Continue troublesome in home gardens. (Wkly. Rpt. Fr. Grs., June 12).

CUTWORMS - NEW YORK - Noticeable in Suffolk County, especially in tomato and eggplant fields. (N. Y. Wkly. Rpt., June 10). MINNESOTA - Particularly damaging in vegetable gardens in metropolitan areas on tomatoes. (Minn. Ins. Rpt.). NEBRASKA - Peridroma saucia larvae causing damage to garden vegetables in Lancaster County. (Roselle). CALIFORNIA - Feltia subterranea medium on tomato fruit in El Centro, Imperial County. (Cal. Coop. Rpt.).

APHIDS (undetermined) - MARYLAND - Light on strawberry plantings surveyed in Wicomico County. (U. Md., Ent. Dept.). NEW JERSEY - Considerable populations on untreated raspberries. (Ins.-Dis. Newsltr., June 11). RHODE ISLAND - Apparent on spinach in Kingston, Washington County. (Mathewson). MINNESOTA - Conspicuous on strawberries south of St. Paul and Hastings areas. (Minn. Ins. Rpt.).

SPIDER MITES (undetermined) - ARIZONA - Contributing factor in early decline of some cantaloup fields. (Ariz. Coop. Sur.). ALABAMA - Causing heavy damage to beans, tomatoes and other garden plants in Lee County. (Bagby et al.). MARYLAND - Caused heavy damage to small strawberry plantings in Baltimore County. (U. Md., Ent. Dept.). MINNESOTA - Conspicuous on strawberries south of St. Paul and Hastings areas. (Minn. Ins. Rpt.).

## TOBACCO INSECTS

TOBACCO BUDWORM (Heliothis virescens) - GEORGIA - Light to moderate on tobacco in southern area. (Johnson).

TOBACCO FLEA BEETLE (Epitrix hirtipennis) - GEORGIA - Light on tobacco in southern area. (Johnson).

## COTTON INSECTS

BOLL WEEVIL (Anthonomus grandis) - SOUTH CAROLINA - Active in all counties except those in extreme northwestern area. Some punctured squares noted in unprotected cotton. (Cott. Ltr., June 11). Adults ranged 5-98 per acre in 3 untreated fields in Florence area compared with 23-604 in 4 untreated fields at same time in 1962. Emergence in area ranged from light to medium; maximum emergence will not occur until additional rainfall occurs. (Taft et al.; June 12). GEORGIA - Percent punctured squares ranged 0-5 (averaged 3). (Johnson). FLORIDA - Light on cotton at Sneads, Jackson County. (Gary, June 7). ALABAMA - Only 5 live weevils located in some 16 fields scouted totaling approximately 800 acres in Henry County. Square infestations ranged 0-8 percent, mostly 2 percent, in fields affected. Percent punctured squares averaged 2 percent in Dallas County. (Cott. Scouts, Griffin et al.). MISSISSIPPI - Light on cotton in delta area, and in Jeff. Davis, Lowndes and Monroe Counties; controls applied. (Ouzts). TENNESSEE - Few weevils found feeding on terminal buds in Hardin, Chester and McNairy Counties; all in early cotton. Weather favorable for emergence from hibernation. (Locke). LOUISIANA - Emergence of overwintering weevils continues low in Tallulah area. One live weevil removed from hibernation cage on June 14; first of season. Field populations remain low and range from none to very light. (Smith et al.). TEXAS - Infestations increasing slowly in most areas of State; no economic populations reported. (Tex. Coop. Rpt.). Percent punctured squares in McLennan and Falls Counties averaged 0.3 in 94 early treated, early planted fields and 1.5 percent in 12 untreated fields. (Cowan et al.).

A WHITE-FRINGED BEETLE (Graphognathus leucoloma pilosus) - ALABAMA - Fifty percent of stand destroyed in one 10-acre cotton field near Repton, Conecuh County. (Lemons).

BOLLWORM (Heliothis zea) - CALIFORNIA - Detectable in Imperial County cotton having squares, but populations light. (Downing, June 3). ARIZONA - Causing some concern in Casa Grande area; controls required. (Ariz. Coop. Sur.). OKLAHOMA - Occasional larva found on early planted cotton seedlings in Tillman County, southwest. (Okla. Coop. Sur.). TEXAS - Most serious threat to cotton at present. Populations occurring somewhat earlier than normal. Light to heavy in Rio Grande Valley, coastal bend and upper coastal regions of State. Light populations and increased egg laying observed in central area. (Tex. Coop. Rpt.). SOUTH CAROLINA - Total of 148 adults trapped to June 12 in light trap in Florence area compared with 332 at same time in 1962. (Taft et al.; June 12).

TOBACCO BUDWORM (Heliothis virescens) - TEXAS - Moderate to heavy populations prevalent in central area causing damage to terminals and fruit. (Tex. Coop. Rpt.).

BOLLWORMS (Heliothis spp., et al.) - SOUTH CAROLINA - Present in many Coastal Plain and lower Piedmont counties. (Cott. Ltr., June 11). GEORGIA - Eggs ranged 3-12 (averaged 6) per 100 terminals; larvae ranged 0-4 (averaged 2) per 100 terminals. (Johnson). ALABAMA - Larvae 0-32 and eggs 0-30 per 100 terminals on cotton in Dallas and Autauga Counties; 0-18 larvae and considerable egg laying in Henry and Lee Counties. Adults of H. zea and H. virescens noted in all cotton fields checked. (Cott. Scouts, Griffin et al.). MISSISSIPPI - Light to medium on cotton in delta area, and in Jeff. Davis, Lowndes and Monroe Counties; controls applied. (Ouzts). Eggs ranged 0-9 (averaged 1) per 200 terminals in delta counties. (Pfrimmer et al.). LOUISIANA - Egg hatching underway in Tallulah



area; controls required in some experimental plots. Spotted infestations of small larvae observed feeding in squares in some plots. (Smith et al.).

PINK BOLLWORM (Pectinophora gossypiella) - ARIZONA - Total of 183 moths emerged from test cages at Safford Experimental Farm, Graham County, first 10 days of June; peak emergence. (Ariz. Coop. Sur.).

BEE T ARMYWORM (Spodoptera exigua) - CALIFORNIA - Low populations in Imperial County cotton. (Downing, June 3). TEXAS - Light infestations reported in some central areas. (Tex. Coop. Rpt.).

CABBAGE LOOPER (Trichoplusia ni) - GEORGIA - Light on cotton in southern area. (Johnson). ALABAMA - Few small larvae noted in squaring cotton in Henry County. (Cott. Scouts).

COTTON LEAFWORM (Alabama argillacea) - TEXAS - Present in Rio Grande Valley and coastal bend counties. (Tex. Coop. Rpt.).

SALT-MARSH CATERPILLAR (Estigmene acrea) - CALIFORNIA - Migrating into cotton from adjacent weedy areas and barley fields in Tulare Lake Basin. (Leigh, June 5).

YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli) - TENNESSEE - Found in number of cotton fields in western area; causing some scattered damage. (Locke).

COTTON FLEAHOPPER (Psallus seriatus) - ARIZONA - Causing some concern in Casa Grande area; controls required. (Ariz. Coop. Sur.). OKLAHOMA - Moderate, 20 per 100 terminals, in Garvin County, southern area. (Okla. Coop. Sur.). TEXAS - Infestations still a problem in some central and northwest areas where cotton beginning to square. (Tex. Coop. Rpt.). In McLennan and Falls Counties, averaged 6.5 per 100 terminals in 95 treated fields and 11.6 in 13 untreated fields (average 7.1). This compares with 13.6 per 100 terminals in 86 fields previous week. (Cowan et al.). LOUISIANA - Populations in several experimental plots in Tallulah area highest for past several years. (Smith et al.). MISSISSIPPI - Light on cotton in delta area and in Calhoun, Copiah, Montgomery and Prentiss Counties. (Ouzts). Collected in 12 of 33 fields checked in delta counties. Averaged 0.85 (ranged 0-8) per 100 sweeps. (Pfrimmer et al.). ALABAMA - Adults and nymphs light in Henry County cotton. (Cott. Scouts).

BLACK FLEAHOPPERS - MISSISSIPPI - Collected in 5 of 33 cotton fields checked in delta counties; ranged 0-2 per 100 sweeps. (Pfrimmer et al.). ARIZONA - Spanogonicus albofasciatus appearing in Yuma and Safford area cotton fields; controls started in Maricopa County. (Ariz. Coop. Sur.).

LYGUS BUGS (Lygus spp.) - CALIFORNIA - Abundant in alfalfa and potatoes in Kern County; adult migration to cotton expected when alfalfa is cut and potatoes harvested. (Leigh, June 5). Counts low in cotton in Imperial County except in fields adjacent to recently cut alfalfa. (Downing, June 3). ARIZONA - Building up in Maricopa County cotton. Several fields treated in Casa Grande area. (Ariz. Coop. Sur.).

TARNISHED PLANT BUG (Lygus lineolaris) - ALABAMA - Very light in Henry County cotton; some small squares destroyed in all fields scouted. (Cott. Scouts). MISSISSIPPI - Light to medium on cotton in delta area, and in Copiah, Montgomery and Prentiss Counties. (Ouzts). Collected in 24 of 33 fields checked in delta counties. Averaged 2.36 (ranged 0-9) per 100 sweeps. (Pfrimmer et al.).

A FALSE CHINCH BUG (Nysius raphanus) - CALIFORNIA - Localized infestations in Kern and Madera Counties continue a threat where moving from weed hosts to adjacent cotton. (Leigh, June 5; Burton).

**APHIDS - SOUTH CAROLINA** - County agents report that infestations have been more severe on young cotton than ever before. Root infesting species damaging cotton in Berkeley, Colleton, Dillon, Kershaw and Orangeburg Counties; damage more widespread than at anytime during past 15 years. (Cott. Ltr., June 11).

**GEORGIA** - Aphis gossypii light on cotton in southern area. (Johnson).

**TENNESSEE** - Infestations reduced in western area. (Locke). **TEXAS** - A. gossypii light to moderate in some central areas. (Tex. Coop. Rpt.).

**OKLAHOMA** - Aphis sp. very light in Kiowa and Major Counties. (Okla. Coop. Sur.).

**CALIFORNIA** - A. craccivora very abundant on cotton through May in Madera County; however, parasites and predators brought infestations under control. (Johnson, June 4). A. craccivora continues severe in some Kern County fields. Parasites and predators brought most infestations under control. (Leigh, June 5).

**LEAFHOPPERS (Empoasca spp.) - ALABAMA** - Present in all cotton examined in southern and central areas, but no damage noted. (Cott. Scouts).

**GRASSHOPPERS - TEXAS** - Several species causing damage to cotton in fields near pastures in central, eastern and western areas. (Tex. Coop. Rpt.).

**THRIPS - SOUTH CAROLINA** - County agents reported infestations on young cotton have been more severe than ever before. (Cott. Ltr., June 11). **MISSISSIPPI** - Medium to heavy in Choctaw, Tallahatchie and Tunica Counties; controls applied. (Ouzts). **TENNESSEE** - A problem only in late and slow-growing cotton in western area. (Locke). **TEXAS** - Heavy damage by several species reported in some cotton which survived flooding in northwestern area. (Tex. Coop. Rpt.). **OKLAHOMA** - Frankliniella spp. ranged light in areas which had heavy showers to moderate in other areas. Southwestern counties report 1-3 per plant. Southern and southeastern counties have higher populations. (Okla. Coop. Sur.). **ARIZONA** - Continue present in cotton in all areas; counts averaged 1-7 per 15 plants in Safford area. (Ariz. Coop. Sur.). **CALIFORNIA** - Injury evident in practically all Madera County cotton fields; however, with recent warm weather, cotton outgrowing early damage. (Johnson, June 4).

**SPIDER MITES - CALIFORNIA** - Major pest problem in Imperial County cotton. Many fields, especially those adjacent to alfalfa or sugar beets, required controls. (Downing, June 3). Tetranychus atlanticus present in all fields examined in Kern County. In few fields, 75-90 percent of plants infested. T. telarius evident, but infestations light. (Leigh, June 5). T. pacificus present in many Fresno County fields, but infestations generally light. (Leigh, June 5). Heavy infestations of unspecified species observed in early planted cotton adjacent to alfalfa or weedy areas in Madera County; some controls necessary. (Johnson, June 4). **ARIZONA** - Treatments applied for control of Tetranychus spp. in several Yuma County fields. (Ariz. Coop. Sur.). **TENNESSEE** - Some movement of unspecified species into cotton fields noted in western area. (Locke). **ALABAMA** - Undetermined species light in isolated areas of 3 Henry County fields. (Cott. Scouts).

#### FOREST, ORNAMENTAL AND SHADE TREE INSECTS

**ENGRAVER BEETLES (Ips spp.) - MISSISSIPPI** - Heavy, isolated infestations occurring on pines in Forrest County. Controls applied. (Ouzts). **CALIFORNIA** - I. confusus appearing in blow-down ponderosa pine timber in 5,500-acre stand in Bass Lake area, Sierra National Forest; approximately 1,600 trees infested. This could result in serious buildup in growing timber. (J. Murphy, USFS).

**WESTERN PINE BEETLE (Dendroctonus brevicomis) - CALIFORNIA** - Building up in several one and 2-acre stands of ponderosa pines, with as many as 30 trees per acre killed. (D. Pengilly, USFS). D. brevicomis and Ips spp. appearing in single trees and groups of ponderosa pines in 640-acre area in Bodkin Cabin area, Mendocino National Forest; some 160 trees already killed. (W. J. Bradley, USFS).

A PINE REPRODUCTION WEEVIL (Cylindrocopturus eatoni) - CALIFORNIA - Severely damaging ponderosa pines in Twin Rocks Ridge area, Mendocino National Forest; 50-70 trees killed in 2-acre stand. Adults and larvae present in twigs; needles show typical feeding damage. This is native timber stand, not a plantation. (J. C. Hilman, USFS).

JACK-PINE BUDWORM (Choristoneura pinus) - WISCONSIN - Few third-stage larvae observed June 5 in Marinette County, but second stage predominates. Third stage predominated June 7 on stands in west central area, with some fourth-stage larvae appearing. Substantial larval populations present in parts of Polk and Burnett Counties first week of June; populations low or declining elsewhere. (Wis. Ins. Sur.).

EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana) - RHODE ISLAND - Larvae and pupae found in about equal frequency in Newport County nursery. No evidence of adults. (Kerr, Mathewson). INDIANA - Larvae in final stage in La Porte County; much lighter than usual. (Schuder).

NANTUCKET PINE TIP MOTH (Rhyacionia frustrana) - ARKANSAS - Second-generation larvae active in State. (Ark. Ins. Sur.).

ZIMMERMAN PINE MOTH (Dioryctria zimmermani) - INDIANA - Infestation in untreated area of La Porte County averaged 20 percent during week of June 10. Larvae entering whorls. (Schuder).

SPRUCE NEEDLE MINERS ("Recurvaria" spp.) - MINNESOTA - A problem in most spruce in State; will soon pupate. (Minn. Ins. Rpt.).

COOLEY SPRUCE GALL APHID (Chermes cooleyi) - WISCONSIN - Colonies prevalent on Douglas-fir in Dane County. (Wis. Ins. Sur.). UTAH - Galls developing on blue and Engelmann spruce in areas of Uintah, Duchesne and Weber Counties. (Knowlton). PENNSYLVANIA - Large hatch occurred on Douglas-fir in Bucks and Montgomery County areas. (Cole).

PINE NEEDLE SCALE (Phenacaspis pinifoliae) - NEW YORK - Crawlers settled by June 5 in infestations over several hundred acres in Cayuga County. (N. Y. Wkly. Rpt.).

SPRUCE BUD SCALE (Physokermes piceae) - DELAWARE - Severe on spruce in an area of New Castle County. (Bray).

SPITTLEBUGS (Aphrophora spp.) - MINNESOTA - A. parallela increasing in Brainerd area, Crow Wing County. (Minn. Ins. Rpt.). WISCONSIN - Approximately two-thirds of A. saratogensis eggs observed in Marinette County hatched May 27. Several localized, moderately heavy A. parallela infestations reported first week of June; nymphs in second stage in Marinette County May 27. (Wis. Ins. Sur.). NEW YORK - Moderate numbers, probably A. parallela, present on white pine in Watkins Glen, Schuyler County; about as abundant on Scotch pine in Cayuga and Tioga Counties as in 1962. (N. Y. Wkly. Rpt., June 10).

BALSAM GALL MIDGE (Cecidomyia balsamicola) - WISCONSIN - New galls observed on new growth of balsams in Langlade County June 5. This is same stand in which adults observed May 16. (Wis. Ins. Sur.).

CONIFER SAWFLIES - MINNESOTA - Neodiprion pratti banksianae fairly numerous throughout jack pine range in central and east central areas. First-stage Diprion similis larvae observed in Crow Wing County; adults still ovipositing. (Minn. Ins. Rpt.). WISCONSIN - Neodiprion nanulus nanulus larvae in late stages June 6 in a Columbia County red pine plantation; defoliation much less severe than in 1962. D. similis oviposition observed June 3 in Oneida County. (Wis. Ins. Sur.). NEW YORK - Considerable activity by unspecified species reported in pine trees in Orange County. Moderate to severe Neodiprion sertifer population

damaging red, Scotch and Austrian pines in Christmas-tree plantation near Utica, Oneida County; larvae varied in size and development, but many appeared full grown. N. sertifer infestations reported in many Broome County plantations. (N. Y. Wkly. Rpt., June 10).

LARCH SAWFLY (Pristiphora erichsonii) - WISCONSIN - Third and fourth-stage larvae relatively heavy on Dane County larch June 7. (Wis. Ins. Sur.).

CANKERWORMS - NEW YORK - Generally lighter throughout Suffolk County this season but some areas badly infested. Minor problem at St. James and Ronkonkoma this year, although extremely heavy in 1962 and 1961; heavy at Wading River for second season, but may be lighter in 1964; heavy at Nassau Point, Aquebogue, Hampton Bays, Riverhead and Southold and may be heavy in 1964. Heaviest all over Suffolk in 1960 and 1961, then gradually moved eastward; no heavy populations reported on south shore at present, except in Hampton area. (N. Y. Wkly. Rpt., June 10). WISCONSIN - Larvae of Alsophila pometaria and Paleacrita vernata nearly full grown in Columbia and Marquette Counties; defoliation nearly complete in localized areas. Lady beetle larvae feeding on larvae in Columbia County. (Wis. Ins. Sur.). NORTH DAKOTA - Unspecified species abundant on trees and shrubs over State. (N. D. Ins. Sur.). CALIFORNIA - Alsophila pometaria larvae medium on elder trees in Rio Nida area, Sonoma County. (Cal. Coop. Rpt.).

EASTERN TENT CATERPILLAR (Malacosoma americanum) - MAINE - Infestations and damage light on several tree species in Androscoggin and Sagadahoc Counties. (Boulanger, June 10). RHODE ISLAND - Dispersal subsided; cocoons common; occasional migrating larvae still being found. (Mathewson). NEW YORK - Heavier in Suffolk County than in 1962; spotty throughout county. (N. Y. Wkly. Rpt., June 10). WISCONSIN - Pupating in southern counties. (Wis. Ins. Sur.).

FOREST TENT CATERPILLAR (Malacosoma disstria) - MINNESOTA - Low numbers present in northern portion of State; caused no serious defoliation. (Minn. Ins. Rpt.).

FALL WEBWORM (Hyphantria cunea) - TEXAS - Causing serious defoliation of shade trees in Calhoun County. (Tex. Coop. Rpt.; Bales). KANSAS - Heavy on several trees in Riley County. Heavy webbing noted on one elm in Saline County. (Charlton).

GYPSY MOTH (Porthetria dispar) - MAINE - Infestation and damage light on maples and other trees in Androscoggin and Sagadahoc Counties. (Boulanger, June 10). RHODE ISLAND - Larvae collected in Cranston, Providence County. (Cartier).

PECAN NUT CASEBEARER (Acrobasis caryae) - OKLAHOMA - Infested 40 percent of nut-cluster samples in Carter County. Heavy infestations reported in Cotton, Murray, Bryan, Okmulgee and Mayes Counties. (Okla. Coop. Sur.).

ELM LEAF BEETLE (Galerucella xanthomelaena) - NEW MEXICO - Light to heavy numbers appearing on Chinese elms in Albuquerque area, Bernalillo County. All stages noted; defoliation very pronounced in some areas. (N. M. Coop. Rpt.). KANSAS - Feeding by first-generation larvae completed on American and Siberian elms in Saline County; leaves 10-75 percent injured; pupation underway. First-generation larvae caused slight damage to Siberian elms in Ford County; about 50 percent first generation pupae and second-generation adults present; few egg clusters noted. (Thompson). OKLAHOMA - Moderate to heavy over most of State. (Okla. Coop. Sur.). ALABAMA - Larvae, adults and eggs range light to medium on isolated elms in Clay, Chambers and Lee Counties. (Barwood et al.).

IMPORTED WILLOW LEAF BEETLE (Plagioderia versicolora) - RHODE ISLAND - Abundance about normal on willow and poplar in Kingston, Washington County. (Mathewson).

LOCUST LEAF MINER (Xenochalepus dorsalis) - DELAWARE - Adults and larvae common on black locust in an area of New Castle County. (Burbutis).

A LEAF BEETLE (Anomoea laticlavata) - DELAWARE - Adults present on black locust in an area of New Castle County. (Burbutis).

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - CALIFORNIA - Larvae and adults medium locally in elms in Arlington, Riverside County. (Cal. Coop. Rpt.).

WALKINGSTICK (Diaperomera femorata) - WISCONSIN - Hatching underway June 5 in Marinette County; nymphs observed ascending from ground vegetation. No nymphs observed in area May 27. (Wis. Ins. Sur.).

A LEAF-EATING GRASSHOPPER (Dendrotettix quercus) - WISCONSIN - Nymphs observed emerging from egg pods in duff in Marinette County. In some localities, continuous streams of nymphs observed climbing up large oaks June 5. All nymphs were in first stage. (Wis. Ins. Sur.).

WOOLLY ALDER APHID (Prociphilus tessellatus) - GEORGIA - Heavy on silver maple throughout northern portion of State. (Coleman).

A LARCH APHID - WISCONSIN - Populations very heavy on European larch in Dane County. (Wis. Ins. Sur.).

AN ASH PLANT BUG (Neoborus pacificus) - CALIFORNIA - Nymphs and adults heavy on ash trees in El Cajon, San Diego County. (Cal. Coop. Rpt.).

EUROPEAN ELM SCALE (Gossyparia spuria) - CALIFORNIA - Larvae and adults heavy on Chinese elms in Gilroy, Santa Clara County. (Cal. Coop. Rpt.). NEW MEXICO - Moderate to heavy and severely damaging American elms in some areas of Albuquerque, Bernalillo County. (N. M. Coop. Rpt.). KANSAS - Very heavy on American elms in Saline County; crawlers migrating to leaves; more than 50 percent of branches dead on most trees in western third of Salina. Crawlers settled on leaves of American elms in Ford County. Siberian elms more frequently attacked than in previous years. (Thompson). NEBRASKA - Eggs beginning to hatch in Omaha area, Douglas County. (Roselle).

SCURFY SCALE (Chionaspis furfura) - KANSAS - Locally heavy on willows in Barton County; eggs hatching. (Thompson).

TULIPTREE SCALE (Toumeyella liriodendri) - ARKANSAS - Infesting tupiltrees in Clay County, northeast. (Ark. Ins. Sur.).

AN OAK KERMES SCALE (Kermes pubescens) - KANSAS - Heavy on bur oak in Jackson County May 29. (Thompson). PENNSYLVANIA - Moderate on several dozen pin oaks shipped from out of State to nursery at York, York County. (Negley).

BIRCH LEAF MINER (Fenusa pusilla) - MAINE - Infestations and damage light on birch in Presque Isle, Orono and Jonesboro. First-generation adults still active in Orono area, Penobscot County, June 5; larvae about two-thirds grown. (Boulanger, June 10). VERMONT - Severe injury appearing on unsprayed birches. (MacCollom, June 10).

MAPLE PETIOLE BORER (Caulocampus acericaulis) - CONNECTICUT - A problem on maples at Newtown and Storrs. (Savos).

ELM SAWFLY (Cimbex americana) - NEBRASKA - Larvae present in eastern portion of State. (Roselle).

AN OAK GALL (Callirhytis punctata) - OHIO - Galls present on small branches of oak at Hartsville, Stark County; galls approximately 1.5 inches in diameter. (Neiswander).

ERIOPHYID MITES - KANSAS - Aceria fraxinivorus heavy on ash trees in Franklin and Saline Counties. (Charlton, Guldner). UTAH - Unspecified species damaging many poplars at Manila and some poplars in Sheep Creek area, Daggett County. (Knowlton).

BAGWORM (Thyridopteryx ephemeraeformis) - TEXAS - Locally moderate to heavy populations stripping leaves from hackberry in Cooke County. (Turney). ARKANSAS - Larval feeding increasing. (Ark. Ins. Sur.). OKLAHOMA - Damage increasing in severity generally. Infestations moderate to heavy in Stillwater area, Payne County, and Ardmore area, Carter County; lighter in Garvin County. (Okla. Coop. Sur.). KANSAS - Light to moderate on evergreens in Saline, Shawnee and Franklin Counties. (Charlton, Guldner). ILLINOIS - Hatching in central area; will hatch soon in northern area. (Ill. Ins. Rpt.). OHIO - Many empty cases observed in Highland and Clark Counties; no larvae found. High winter mortality may have reduced populations. (Kennedy, Cooley). DELAWARE - First larvae of season found feeding on sycamore in Sussex County and locust in New Castle County, June 10. (Burbutis). NEW JERSEY - Beginning to feed on arborvitae. (Ins.-Dis. Newsltr., June 11).

FRUIT-TREE LEAF ROLLER (Archips argyrospilus) - IDAHO - Larvae abundant in Twin Falls and Moscow areas on variety of broadleaf trees and shrubs. Damage extensive in some instances, but larvae now reaching full growth and pupating. (Gibson, Manis).

LEAF ROLLER MOTHS - NEVADA - Choristoneura sp. larvae heavy and damaging dogwood, quince, cultivated and wild roses, and 2 unidentified garden shrubs in southern Washoe County, and wild rose in Minden, Douglas County. (Bechtel, Lauderdale, Parker). KANSAS - Larvae of Fascista cercerisella light to moderate on redbud in Saline County. (Charlton). INDIANA - Tortrix pallorana adults emerging in La Porte County. Infestation averaged 3 percent on Christmas-tree plantation. (Schuder).

MIMOSA WEBWORM (Homadaula albizziae) - ALABAMA - Noted on mimosa in Mobile County. (Seibels). ARKANSAS - Larval feeding damage appearing in northwest area. (Ark. Ins. Sur.). OHIO - First hatch of season observed June 8 on honeylocust in Washington County. (Ellis).

LILAC BORER (Podosesia syringae syringae) - KANSAS - Moderate on lilac in Franklin County; frass and some pupal cases noted. (Charlton, Guldner). IOWA - Adults emerged June 5 at Ames, Story County. (Iowa Ins. Inf.).

AN OLETHREUTID MOTH (Eucosoma gloriola) - NEW YORK - Typical larval injury common on 1962 growth of Scotch, red and white pines in several Oneida and Franklin County Christmas-tree plantations. Damage to 1963 growth not yet apparent. (N. Y. Wkly. Rpt., June 10).

SALT-MARSH CATERPILLAR (Estigmene acrea) - ALABAMA - Considerable numbers causing concern to nurserymen over Mobile County area. (Seibels).

TOBACCO BUDWORM (Heliothis virescens) - FLORIDA - Moderate on red silk-oak (Grevillea banksi fosteri) at Ft. Lauderdale, Broward County (June 4), and angels-trumpet (Datura arborea) at Holly Hill, Volusia County (June 6). (Fla. Coop. Sur.).

ASH-GRAY ELISTER BEETLE (Epicauta fabricii) - NORTH DAKOTA - Adults stripping foliage from caragana hedge in Bismarck area, Burleigh County. (Olson).

BLACK VINE WEEVIL (Brachyrhinus sulcatus) - RHODE ISLAND - Pupating in Middletown, Newport County. (Mathewson). CONNECTICUT - Adults active in some areas. (Savos). PENNSYLVANIA - Moderate numbers of adults emerging on Taxus sp. in Dauphin County, and infesting same host at Harrisburg. (Simons). OHIO - Adults heavy about roots of Taxus sp. near Westlake, Cuyahoga County. Approximately 0.5 acre infested, with one-third of plants dead. Injury severe. (Kile).



HOLLYHOCK WEEVIL (Apion longirostre) - MARYLAND - Adults caused heavy injury to hollyhock buds at Buckeystown, Frederick County. (U. Md., Ent. Dept.).

COCKLEBUR WEEVIL (Rhodoaenus tredecimpunctatus) - MARYLAND - Adults punctured tips of sunflowers at Brinklow, Montgomery County, June 6. (U. Md., Ent. Dept.).

A BARK WEEVIL (Magdalis austera substriga) - NEW YORK - Large numbers found widely scattered on Scotch pine Christmas-tree plantations in Cayuga County. (N. Y. Wkly. Rpt., June 10).

ROSE CHAFER (Macrodactylus subspinosus) - MASSACHUSETTS - Emerging and will require controls on many ornamentals. (Wheeler). RHODE ISLAND - Adults building up in gardens in Narragansett, Washington County, and Warwick, Kent County. (Mueller, Mathewson, Cartier). CONNECTICUT - Active on ornamentals. (Savos).

A ROSE CURCULIO (Rhynchites bicolor wickhami) - NEVADA - Adults heavy on wild rose in southern Washoe and Douglas Counties. (Bechtel, Cooney, Parker).

A TUMBLING FLOWER BEETLE (Mordellistena sp.) - COLORADO - Numerous on iris flowers in Moffat County. (Hantsbarger).

APHIDS - MAINE - Light numbers causing light damage to maples in Presque Isle, Aroostook County. Heavy populations causing moderate injury to roses in Orono, Penobscot County. (Boulanger, June 10). CONNECTICUT - Increasing on many ornamentals. A problem on roses at Wallingford. (Savos). NEW JERSEY - Building up rapidly on several ornamental plants, shrubs and trees. (Ins.-Dis. Newsltr., June 11). UTAH - Conspicuous on various shade trees and ornamentals at Logan, Cache County. Curling leaves of crab apple and snowball bushes at Manila, Daggett County; largely controlled by lady beetles and minute pirate bugs. (Knowlton). WISCONSIN - Aphis spiraeicola colonies well developed on new shoots of spirea in Dane County. (Wis. Ins. Sur.). IOWA - Macrosiphum rosae deformed rose buds in Le Grand, Marshall County; leaves sticky with honeydew. (Iowa Ins. Inf., June 10).

LACE BUGS - NEW JERSEY - Unspecified species building up rapidly on several ornamental shrubs, plants and trees. (Ins.-Dis. Newsltr., June 11).

EUONYMUS SCALE (Unaspis euonymi) - OKLAHOMA - Heavy on euonymus in Ardmore area, Carter County. (Okla. Coop. Sur.). NEW JERSEY - Crawlers active on euonymus and pachysandra. (Ins.-Dis. Newsltr., June 11). NEW YORK - Hatching underway during past 7-10 days at Ithaca, Tompkins County. (N. Y. Wkly. Rpt., June 10). CONNECTICUT - Crawlers active on euonymus. (Savos).

OYSTERSHELL SCALE (Lepidosaphes ulmi) - CONNECTICUT - Crawlers active on wide variety of plants. A problem on lilac at Winsted. (Savos). NEW YORK - Crawlers active at Huntington, Long Island, June 5. (N. Y. Wkly. Rpt.). NEW JERSEY - Crawlers active on lilac. (Ins.-Dis. Newsltr., June 11). COLORADO - Crawlers settled on twigs of lilac in Larimer County. (Jenkins).

AN ORCHID MEALYBUG (Pseudococcus importatus) - CALIFORNIA - New infestation found on cattleya in orchidhouse at Los Angeles, Los Angeles County. Several plants involved; eradication treatment planned. (Cal. Coop. Rpt.).

COCCIDS - MASSACHUSETTS - Diaspis carueli crawlers appearing. (Wheeler). PENNSYLVANIA - Diaspis carueli heavy on juniper nursery stock in Bucks County. (Cole). MARYLAND - Numerous adults of Pseudococcus sp. noted crawling from yews to ground in Bel Air, Harford County. Eriococcus azaleae infested azaleas at Pikesville, Carroll County. (U. Md., Ent. Dept., June 7). ALABAMA - Neolecanium parvucornum and Chrysomphalus obscurus heavy on Japanese magnolia in Mobile County. (Seibels). IDAHO - Lecanium fletcheri severe on yew in Orofino, Clearwater County. (Fitzsimmons). NEVADA - Saissetia hemisphaerica heavy on Pyraecantha sp. in Reno, Washoe County. (Bechtel). ARIZONA - Icerya purchasi heavy on pittosporum shrubs in Safford area, Graham County. (Ariz. Coop. Sur.). CALIFORNIA - Asterolecanium arabisidis locally heavy on Pittosporum tobira nursery stock in Ukiah, Mendocino County. (Cal. Coop. Rpt.).

Coccids in Florida - Pseudaulacaspis pentagona severe on Acalypha wilkesiana at Orlando, Orange County (June 4), and severe on Diospyros sp. at Glen St. Mary, Baker County (June 7). Lepidosaphes camelliae and Florinia theae severe on Ilex cornuta burfordii at Orlando (June 4). Asterolecanium bambusae and Odonaspis penicillata severe on Bambusa sp. and Howardia biclavata severe on Gardenia jasminoides at Ft. Lauderdale, Broward County, early in June. Eucalymnatus tessellatus heavy on Jasminum sp. at Pompano Beach, Broward County (June 5). (Fla. Coop. Sur.).

ROSE LEAFHOPPER (Edwardsiana rosae) - UTAH - Discoloring rose foliage at Ogden, Brigham City, Delta, Nephi, Mona and other localities in central and northern areas. (Knowlton).

AZALEA WHITEFLY (Pealius azaleae) - RHODE ISLAND - Adults active on azalea in Greenville area, Providence County. (King, Mathewson).

A WHITEFLY (Dialeurodes kirkaldyi) - FLORIDA - Light on several species of jasmine in Broward County (June 5) and severe in Miami area, Dade County (June 6). (Fla. Coop. Sur.). These are new county records. See CEIR 13(33):620 for first report from Dade County.

HACKBERRY NIPPLE GALL (Pachypsylla celtidismamma) - IOWA - Galls prominent on hackberry leaves statewide. (Iowa Ins. Inf., June 10).

THRIPS - CALIFORNIA - Frankliniella occidentalis adults extremely heavy on rose flowers in Sutter Creek, Amador County. (Cal. Coop. Rpt.). KANSAS - F. tritici ranged 1-9 per rose bud in Riley County. (Charlton). WISCONSIN - First adult feeding by Dendrothrips ornatus underway in Dane County. Controls should be applied to prevent yellowing of privet. (Wis. Ins. Sur.). OHIO - Unspecified species damaging rose buds in Lawrence County. (Crawford, Blair). CONNECTICUT - Iridothrips iridis a problem on iris in Wilton. (Savos).

A SUBTERRANEAN TERMITE (Reticulitermes sp.) - MARYLAND - Workers severely damaged yews at University Park, Prince Georges County, June 10. (U. Md., Ent. Dept.).

COLUMBINE LEAF MINER (Phytomyza minuscula) - DELAWARE - Very heavy in an area of Sussex County. (Burbutis).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - MAINE - Troublesome in greenhouses in Cumberland, Oxford and York Counties; some heavy infestations observed. (Boulanger, June 10). MARYLAND - Heavy on hollyhocks at Buckeystown, Frederick County. (U. Md., Ent. Dept.). KANSAS - Light to moderate on evergreens in Saline County. (Charlton).

SPIDER MITES - CALIFORNIA - Oligonychus coniferarum heavy on junipers locally in Sacramento, Sacramento County. (Cal. Coop. Rpt.). UTAH - Unspecified species injuring junipers in Nephi and Levan, Juab County. (Knowlton). NEBRASKA - Heavy populations of undetermined species caused considerable damage to redcedar shelterbelt in Lancaster County, and heavy populations damaging evergreens in Deuel County. (Bergman). MARYLAND - Oligonychus spp. infesting azaleas at College Park and hemlock at Greenbelt, Prince Georges County. (U. Md., Ent. Dept.). ALABAMA - Unspecified species causing heavy damage to roses and other plants in gardens and flower beds in Lee County. (Bagby et al.).

CYCLAMEN MITE (Steneotarsonemus pallidus) - CALIFORNIA - Light on African-violets in greenhouse in Sacramento, Sacramento County. (Cal. Coop. Rpt.).



MOSQUITOES - MAINE - Reports indicate numbers extremely heavy over entire State; much above normal. (Boulanger, June 10). RHODE ISLAND - Complaints concerning unspecified species numerous in Providence County. (King). MARYLAND - Aedes grossbecki collected June 11, 1963, in home at Kensington, Montgomery County. Det. by J. Mallack and W. E. Bickley. This is a new county record. (U. Md., Ent. Dept.). IOWA - Sixteen biting specimens collected in 5 minutes on June 4 from one individual in Ames, Story County; 11 Aedes vexans, 3 Aedes trivittatus, 2 Aedes sticticus. Number of actual bites per minute much higher. Culex spp. larvae ranged 10-200 per tire June 5 in trapped water at tire stores and filling stations in Ames June 5. (Iowa Ins. Inf., June 10). WISCONSIN - Aedes vexans larval populations very high in temporary pools in Madison area, Dane County; potential for large population greater than normal. Adult emergence should begin during period June 16-22. Reports from field indicate other species becoming more noticeable, especially in areas near rivers and lowlands. Controls underway in Columbia and Dane Counties. (Wis. Ins. Sur.). MINNESOTA - During period June 2-8, total of 763 larval collections made; Aedes vexans present in 316, Culiseta inornata in 273, Culex restuans in 199. Fourteen other species taken in small numbers. Trap collections increased somewhat during last few days. In 38 15-minute bite collections, 161 A. vexans taken. (Minn. Ins. Rpt.). NORTH DAKOTA - In Fargo area, Cass County, Aedes vexans emergence heavy; Aedes dorsalis troublesome during morning hours, although no more abundant than usual; Culex tarsalis appeared in light trap for first time this season during period June 1-7. A. vexans and A. dorsalis also troublesome at Williston, Williams County. (N. D. Ins. Sur.). OKLAHOMA - Psorophora spp. and Aedes spp. moderate in most low-lying areas of State. (Okla. Coop. Sur.). TEXAS - Unspecified species heavy and causing annoyance in Lubbock County. (Tex. Coop. Rpt.; Russell et al.). MISSISSIPPI - Psorophora spp. light in delta area. (Ouzts). ARIZONA - Unspecified species building up. (Ariz. Coop. Sur.). UTAH - Unspecified species troublesome in Sheep Creek and Deep Creek areas, Daggett County; Jensen-Vernal and Gusher areas, Uintah County; Duchesne-Myton area, Duchesne County; Logan-Logan Canyon area, Cache County. Also annoying in fields west of Orem, Utah County; in Delta-Hinkley area, Millard County; at Mills, Juab County. (Knowlton).

HORN FLY (Haematobia irritans) - MISSISSIPPI - Heavy on livestock in Choctaw, Hinds, Madison and Pearl River Counties. Controls applied. (Ouzts). ARKANSAS - Increased during first 2 weeks of June in most areas. (Ark. Ins. Sur.). OKLAHOMA - Counts of 300-500 per head general over State. Counts high as 1,200 per head on bulls and 150 per head on calves reported from Choctaw, Pushmataha and McCurtain Counties, southern area. (Okla. Coop. Sur.). NEBRASKA - Ranged 6-300 per head on beef and dairy animals in northeast area. (Bergman). NORTH DAKOTA - Counts remain low. (N. D. Ins. Sur.). ILLINOIS - Varied 0-50 per animal in northwest and 0-250 per animal in west district. (Ill. Ins. Rpt.). IOWA - Counts increased to 10-15 per animal due to hot weather. (Iowa Ins. Inf., June 10).

CATTLE GRUBS (Hypoderma spp.) - IOWA - "Heel flies" running cattle in Lyon, Cherokee, Howard and Allamakee Counties. H. bovis larvae ready to emerge from backs of dairy cows in Howard County. (Iowa Ins. Inf., June 10). OHIO - "Heel flies" causing cattle to run wildly in central and southern areas. Often, entire dairy herd may stampede from one end of field to other end. (Lyon).

STABLE FLY (Stomoxys calcitrans) - MISSISSIPPI - Heavy on livestock in Madison County. Controls applied. (Ouzts). OKLAHOMA - Ranged 3-6 per head in Stillwater area, Payne County. (Okla. Coop. Sur.). IOWA - Counts increased to 5-10 per animal due to hot weather. (Iowa Ins. Inf., June 10). NORTH DAKOTA - Not troublesome at present. (Noetzel).

FACE FLY (Musca autumnalis) - IOWA - Ranged 3-5 per face with advent of hot weather. (Iowa Ins. Inf., June 10). ILLINOIS - Varied 0-2 per face on cattle in west and northwest districts. Generally too windy and too cool for good fly activity. (Ill. Ins. Rpt.).

TABANIDS - OKLAHOMA - Tabanus spp. populations of 3-6 per head attacking livestock in southeastern and north central areas of State. Chrysops spp. ranged 2-7 per head on livestock in Payne County, north central. (Okla. Coop. Sur.).

MISSISSIPPI - Various species heavy in Madison and Hinds Counties. Controls applied. (Ouzts).

BLACK FLIES - MAINE - Unspecified species extremely heavy statewide. (Boulanger, June 10). MARYLAND - Simulium spp. annoying residents on many properties in central and western sections. (U. Md., Ent. Dept.). MINNESOTA - Unspecified species numerous and biting at International Falls and Brainerd. (Minn. Ins. Rpt.). IDAHO - Simulium spp. adults severely annoying horses at Soda Springs and Franklin, and calf at Nezperce. (Duren, Dailey).

MIDGES - OHIO - Huge swarms annoying at local restaurants in Toledo, Lucas County. (Triplehorn, Lyon). UTAH - Numerous and irritating in Mills area, Juab County, and Delta area, Millard County. (Knowlton).

CAT FLEA (Ctenocephalides felis) - CALIFORNIA - Heavy in lawn areas locally in San Jose, Santa Clara County. (Cal. Coop. Rpt.).

GRAIN THRIPS (Limothrips cerealium) - CALIFORNIA - Populations medium in El Cajon, San Diego County; residents complaining of being bitten. (Cal. Coop. Rpt.).

SWALLOW BUG (Oeciacus vicarius) - CALIFORNIA - Heavy on walls of house where swallows nest in Carpinteria, Santa Barbara County. (Cal. Coop. Rpt.).

VESPID WASPS (Polistes spp.) - RHODE ISLAND - New nests causing concern to homeowners in various parts of State. (Mathewson).

TICKS - RHODE ISLAND - Complaint of stubborn dog-and-house infestation of Rhipicephalus sanguineus in East Greenwich, Kent County. (Mathewson).

CONNECTICUT - R. sanguineus taken from child in Plantsville. Unspecified species creating problem in Stonington. (Savos). PENNSYLVANIA - Unspecified species reported in large numbers from several locations in Montgomery County and annoying to pets and children. (Cole). MINNESOTA - Dermacentor variabilis numerous and active in Minneapolis-St. Paul area. (Minn. Ins. Rpt.). OKLAHOMA - Amblyomma americanum reported heavy in Pushmataha and McCurtain Counties; populations appear to be diminishing. Larvae should appear in great numbers momentarily. (Okla. Coop. Sur.).

MITES - CALIFORNIA - Sternostoma sp., probably tracheacolum, heavy in tracheae of canaries in aviary in Clements, San Joaquin County. Ornithonyssus sylviarum invading residence and biting inhabitants in Marysville, Yuba County. (Cal. Coop. Rpt.). WISCONSIN - Ornithonyssus bacoti infested child's crib in Madison, Dane County. (Wis. Ins. Sur.).

A BROWN SPIDER (Loxosceles reclusa) - OKLAHOMA - Becoming more numerous in Stillwater area, Payne County. (Okla. Coop. Sur.). KANSAS - Numerous in house in Riley County, with estimated 400 in window wells and finished basement. (Knutson). There have been several reports concerning this species, but no cases of person being bitten have been reported this year. (Peters).

A SCORPION (Vejovis minimus) - CALIFORNIA - Specimen of this variant collected in Orinda, Contra Costa County. Det. by H. L. Stahnke. Species has extremely mild venom. (Cal. Coop. Rpt.).

#### HOUSEHOLD AND STRUCTURAL INSECTS

LARDER BEETLE (Dermestes lardarius) - PENNSYLVANIA - Infestation found in a Cameron County home. (Adams). IOWA - Adults and larvae reported from Carroll, Hardin, Iowa, Linn, Jackson, Palo Alto and Poweshiek Counties. (Iowa Ins. Inf.). MINNESOTA - Reported from numerous homes. (Minn. Ins. Rpt.). COLORADO - Numerous in attic of house in Larimer County. (Hantsbarger).

BLACK CARPET BEETLE (Attagenus piceus) - NORTH DAKOTA - Caused severe damage to wool carpeting in home in Minot, Ward County. (N. D. Ins. Sur.).

COCKROACHES - MARYLAND - Blatta orientalis infested home at Rockville, Montgomery County; Blattella germanica heavy in home at Riverdale, Prince Georges County. (U. Md., Ent. Dept.).

OLD-HOUSE BORER (Hylotrupes bajulus) - MARYLAND - Heavily damaged posts in barn at Clear Spring, Washington County. (U. Md., Ent. Dept.).

TERMITES - MARYLAND - Winged forms of Reticulitermes sp. collected around porch post at Kensington, Montgomery County, May 31. (U. Md., Ent. Dept.). COLORADO - Unspecified species found in crawl space under home in Larimer County; winged forms present. Grade stakes on building site in Douglas County found infested. (Hantsbarger).

PAVEMENT ANT (Tetramorium caespitum) - MARYLAND - Winged forms and workers appearing in and around homes in Baltimore and Montgomery Counties and in Baltimore. (U. Md., Ent. Dept.). PENNSYLVANIA - Numerous in a York County home. (Pepper).

CARPENTER ANTS (Camponotus spp.) - CONNECTICUT - Creating problems in Canaan and Scotland. (Savos). MARYLAND - C. ferrugineus collected from ceiling of home at Annapolis, Anne Arundel County. (U. Md., Ent. Dept.). ALABAMA - C. ferrugineus infesting dwelling in Franklin County. (Warren, Ledbetter).

CARPENTER BEES - NEW JERSEY - Unspecified species again causing some concern to homeowners. (Ins.-Dis. Newsltr., June 11). CONNECTICUT - Xylocopa virginica boring in home in New Britain. (Savos). RHODE ISLAND - X. virginica very heavy in rustic siding of 2 adjacent houses in Peace Dale area, Washington County. (Mathewson, Bromley).

#### BENEFICIAL INSECTS

LADY BEETLES - ALABAMA - Large numbers of Hippodamia convergens and Coleomegilla maculata fuscilabris (mostly H. convergens) in all cotton fields examined. (McQueen). MISSISSIPPI - Unspecified species present in many cotton fields in delta counties. (Pfrimmer et al.). COLORADO - Chilocorus stigma feeding on scale insects infesting honeylocust in Mesa County. (Bulla). WYOMING - Adults of several species averaged 35 per 100 sweeps in Goshen County alfalfa; very few larvae present. (Fullerton). NORTH DAKOTA - Several species, predominantly H. convergens and Adalia bipunctata, moderate in most fields where aphids present. (N. D. Ins. Sur.).

A MELYRID BEETLE (Collops quadrimaculatus) - ALABAMA - Very noticeable on cotton throughout State. (McQueen).

GOLDEN-EYE LACEWING (Chrysopa oculata) - ALABAMA - Eggs, larvae and adults noted in all cotton fields checked. (McQueen).

DAMSEL BUGS (Nabis spp.) - WYOMING - Adults averaged 22 per 100 sweeps in Goshen County alfalfa. (Fullerton). ALABAMA - Few noted in all cotton fields examined. (McQueen). MISSISSIPPI - Present in many cotton fields in delta counties. (Pfrimmer et al.). OHIO - N. ferus adults ranged 40-45 per 50 sweeps in Brown County forage fields. (Lyon).

BIG-EYED BUGS (Geocoris spp.) - MISSISSIPPI - Present in many cotton fields in delta counties. (Pfrimmer et al.). ALABAMA - G. punctipes nymphs and adults very active in all cotton fields checked. (McQueen). Few G. punctipes noted in gardens, roadsides and old fields in Clay County. (Harris, Barwood, Davis).



A FLOWER BUG (Orius insidiosus) - ALABAMA - Considerable numbers noted in most cotton fields checked. (McQueen).

ALKALI BEE (Nomia melanderi) - IDAHO - First emergence noted June 9 near Wilder, Canyon County. (Waters).

A LEAFCUTTING BEE (Megachile rotundata) - IDAHO - First general emergence noted in Arena Valley near Parma on June 11. (Waters).

PREDATORY MITES - OREGON - Numerous on pears in Medford area, Jackson County, where two-spotted spider mite populations increasing. (Berry).

#### MISCELLANEOUS INSECTS

JAPANESE BEETLE (Popillia japonica) - CALIFORNIA - Survey continues in 6-county area with 5,700 traps in operation; over 9,000 visual inspections made to June 14. No beetles taken to this date, which is 3 weeks past time first beetle of season taken in 1962 and one week past discovery date in 1961. Second foliage treatment applied with satisfactory coverage in Sacramento, Sacramento County, and West Sacramento, Yolo County. (Cal. Coop. Rpt.). OHIO - Emergence underway near Gallipolis, Gallia County; approximately 3 percent of population adults. Only larvae observed at Kent, Portage County. (Polivka). RHODE ISLAND - Another single adult collected in Kingston, Washington County. Heavy emergence reported on property in Pawtucket, Providence County. (Sayer, Mathewson, Cartier).

NORTHERN MASKED CHAFER (Cyclocephala borealis) - OHIO - Emergence underway near Gallipolis, Gallia County. (Polivka).

LARDER BEETLE (Dermestes lardarius) - RHODE ISLAND - Concentration noted in neglected beehives in East Greenwich, Kent County. (Mathewson).

BARK BEETLES - PENNSYLVANIA - Xyleborus saxeseni and Xyloterinus politus boring into fresh sawed red maple logs in Cameron County, May 7. Det. by D. Anderson. (Adams).

WHITE-FRINGED BEETLES (Graphoganthus spp.) - FLORIDA - Collected from dogfennel in 9 new townships in Holmes County on May 24 and 28 by I. C. Whitehead and N. D. Palmer. Det. by W. Breidenbach. (Fla. Coop. Sur.).

TORTOISE BEETLES - ALABAMA - Metriona bicolor, Agroiconota bivittata and 2 other unidentified species taken from sweetpotatoes, morning-glory and other plants in Clay County. (Harris, Barwood, Davis).

SAP BEETLES (Glischrochilus spp.) - WISCONSIN - Populations increased significantly during past few weeks and many inquiries are being received concerning these pests. (Wis. Ins. Sur.).

A PYRALID MOTH (Dicymolomia julianalis) - DELAWARE - Adults emerged May 27-31 from overwintered bagworm cases collected in Dover, Kent County. This is a first State record. (Bray).

PERIODICAL CICADAS - IOWA - First emergence noted at Des Moines, Polk County, May 18; nymphs still emerging in numbers June 7. Peak emergence occurred May 30-31. Mating began June 2-3, egg laying June 6. Very many cast skins on leaves of trees and various other plants. Many adults with incompletely expanded wings; could be result of hot weather and strong winds. Heavy populations reported in southern half of Washington County. (Iowa Ins. Inf.). ILLINOIS - Brood III reported for first time from De Witt, Knox and Henderson Counties, and Brood XXIII for first time from Greene County. (Ill. Ins. Rpt.).

CICADAS - ARIZONA - Appearing for first time this season in Casa Grande area, Pinal County. (Ariz. Coop. Sur.).

CITRUS WHITEFLY (Dialeurodes citri) - CALIFORNIA - Results of quarter-mile grid section inspection negative in 2-mile extension beyond infested zone; half-mile grid section to be used in next 5-mile zone. (Cal. Coop. Rpt.).

MUSCOID FLIES - IDAHO - Dead and clinging to foliage in Parma area, Canyon County. Attitude similar to that of flies killed by the fungus Entomophthora muscae. (Scott). IOWA - Large numbers of Hylemya platura adults killed by a fungus; hanging on shrubs, leaves of pine and spruce and on weeds. (Iowa Ins. Inf., June 10).

IMPORTED FIRE ANT (Solenopsis saevissima richteri) - FLORIDA - Two mounds found on 50 acres at Tampa, Hillsborough County, June 6 by C. W. Hale and S. A. Fuller. Quarantine requested on all plants within 100 feet of mounds. (Fla. Coop. Sur.).

CLOVER MITE (Bryobia praetiosa) - CALIFORNIA - Heavy adult population migrating from grass areas onto walls of residence in Suisun, Solano County. (Cal. Coop. Rpt.).

#### CORRECTIONS

CEIR 13(23):644 - AN ARCTIID MOTH (Ecpantheria deflorata) - ALABAMA - Should read "...; quite common in western area of Mobile County. (Seibels)."

CEIR 13(24):645 - A LEAF ROLLER MOTH (Sparganosis sp.) should read Sparganothis sp.

CEIR 13(24):655 - COTTONY MAPLE SCALE (Pulvinaria innumerabilis) should read Pulvinaria innumerabilis.

#### ADDITIONAL NOTES

MICHIGAN - New collections of CEREAL LEAF BEETLE (Oulema melanopa) made in Kent and Ionia Counties; total known infested counties in State now 13. Fourth instars and pupae most common stages in primary infestation area of Berrien and Cass Counties. Adults relatively hard to find as over 95 percent of overwintering beetles died. In wheat (most attractive crop for early emerging beetles) life stages present approximately 75 percent pupae, 15 percent large larvae, 5 percent small larvae and 5 percent eggs and old adults. In oats (preferred crop later in spring) ratio about 45 percent pupae, 40 percent large larvae, 10 percent small larvae and 5 percent eggs and adults. No new adults emerged to June 14, but if warm weather prevails, new beetles may be expected within coming week. First pupae observed June 3. (Ring, Castro). BILLBUGS (Sphenophorus spp.) larvae causing considerable injury in several southern counties; adult feeding punctures common in many corn fields. (Everson, Gallun, Steeby, Woodman, Wells). FACE FLY (Musca autumnalis) adults averaged 10 per animal in Ingham County Holstein herd on June 9. Populations in State will likely build up rapidly with extended period of warm weather. (Dowdy). EUROPEAN FRUIT LECANIUM (Lecanium corni) eggs in white stage in Ingham County; expected to turn pink prior to hatch later this month. (Hoffman). Heavy infestations of FLETCHER SCALE (L. fletcheri) on yews and arborvitae in Wayne County, eggs present; moderate on yew in Livingston County. (Dollhopf, Haugard). Emergence of ROSE CHAFER (Macrodactylus subspinosus) noted in Berrien, Van Buren, Wayne, Ottawa, Shiawassee and Ingham Counties. Populations large in Oakland and Lenawee. (Tatter, Carpenter, Kidd, Machiele, Hoffman, Abel, Bless).

NORTH CAROLINA - Tetranychus spp. quite abundant in strawberry field in Columbus County. (Martin). CORN ROOT WEBWORM (Crambus caliginosellus) damaged 50 percent of tobacco plants in Stokes County field; WIREWORMS also caused considerable damage to same field; determined one specimen each of Melanotus communis and

Conoderus lividus. (Mount, Barnes). Tetranychus spp. heavy on arborvitae and red maple in Jackson County. (Wray). WOOLLY ALDER APHID (Prociphilus tessellatus) heavy on silver maple in Davidson County. (Mulder).

MAINE - OYSTERSHELL SCALE (Lepidosaphes ulmi) crawlers numerous in untreated orchards; hatch appears complete. Controls urged. Heavy infestations of STRIPED CUCUMBER BEETLE (Acalymma vittata) continue causing severe damage on cucumbers in Androscoggin and Sagadahoc Counties. FLEA BEETLES, probably Epitrix cucumeris, caused heavy damage in same counties to tomatoes and other plants; moderate infestations and damage noted on potatoes and tomatoes in Cumberland County. Moderate to heavy infestations of BIRCH LEAF MINER (Fenusa pusilla) caused moderate to severe damage in most areas of State; controls excellent. BLACK FLIES and MOSQUITOES noted heavy in all areas. DEER and HORSE FLIES coming into prominence now. (Boulanger).

VERMONT - Emergence of CODLING MOTH (Carpocapsa pomonella) started. HOUSE FLY (Musca domestica) increasing rapidly. FACE FLY (M. autumnalis) averaged 10-15 per animal and HORN FLY (Haematobia irritans) 45 per animal. BLACK FLIES and MOSQUITOES severely annoying pastured cattle in some locations. (MacCollom).

LIGHT TRAP COLLECTIONS

Pseud. Agrot. Perid. Prod. Ostrin. Protoparce Heliothis  
unip. ips. saucia ornith. nubil. quin. sexta zea vires.

FLORIDA

Gainesville 6/10 2

GEORGIA

Tifton 6/6-12 3 2

ILLINOIS (County)

Champaign 6/7-11 49 13 2 1

INDIANA (Counties)

La Porte 5/28-6/10 17 1 1  
Lawrence 5/27-6/10 2 13 20 1 1 2  
Tippecanoe 6/7-12 2 1 1  
Vanderburgh 5/29-6/11 1 5 4

KANSAS

Garden City 6/5-10 1 4 1 1  
Hays 6/3, 7, 10 2 2 2  
Manhattan 6/7-14 256 78 82 95 1 6  
Wathena 5/31, 6/2, 4, 6, 8, 9 10 27 3 30 20 1

MARYLAND

Centreville 6/5-11 4 18 18 8 7

MISSISSIPPI

\*Stoneville 6/7-13 9 24 30 121 3 19 243 24

MISSOURI

Portageville 5/30-6/5 5 6 19 12  
Portageville 6/6-12 26 6 51 43 10

\* Two traps - Stoneville

(Continued on page 697)

LIGHT TRAP COLLECTIONS (Continued)

	Pseud. unip.	Agrot. ips.	Perid. saucia	Prod. ornith.	Ostrin. nubil.	Protoparce quin.	Heliothis sexta	zeae	vires.
<b>NEBRASKA</b>									
Bushnell 5/25-31	6	7		3					
Bushnell 6/1-4	7	2		4					
Lincoln 6/6-12	53	2		3		24			
Kearney 5/25-6/3	4	3		9	149		1		1
North Platte 5/29-6/4	61	39		71	17	3	3		4
Ogallala 5/28-6/4	22	6		19			1		
Scotts Bluff Expt. Sta. 5/28-6/3	15	2		7					
Scotts Bluff Expt. Sta. 6/4-10	45	2		63					1
<b>NORTH DAKOTA</b>									
Fargo 6/8-14	3	2		4		9			
McLeod 6/8-14		2		1	100				
Linton 6/8-14		3		6		1			
<b>OHIO</b>									
Wooster 6/7-13	18	42				7			
Hoytville 6/7-13	2					10			
<b>SOUTH CAROLINA</b>									
Oconee 6/1-7	2			6	24			3	1
Oconee 6/8-14	1	1		4	6		1	1	
Charleston 6/10-16		2		36	15		3	2	2
<b>TEXAS</b>									
Waco 6/8-14	34			28	58			319	12
*Brownsville 6/6-12	2	58		31	3		51	31 1,582	14
<b>WISCONSIN</b>									
Platteville 5/30-6/3	38	1		3		38			
Janesville 6/4-10	58								
Mazomanie 6/5-10	10	3		4		13			
Middleton 6/6-12	23	5		10		17			
Madison 6/6-12	104	14		14		21			
Nenno 6/4-10	40								
Theresa 6/4-10	44								
Wayne 6/4-10	49								
Waldo 6/4-10	34								1
Cedar Grove 6/4-10	31	3							2
<b>WYOMING</b>									
Cheyenne 5/26-31	3	9		17					

Additional light trap collections

ILLINOIS (Champaign 6/11) Laphygma frugiperda - 4. MISSISSIPPI (\*Stoneville 6/7-13) L. frugiperda - 6. TEXAS (\*Brownsville 6/6-12) L. frugiperda - 902; Pectinophora gossypiella - 7. (Waco 6/8-14) P. gossypiella - 1.

\* Two traps - Stoneville; 6 traps - Brownsville.

HAWAIIAN INSECT NOTES

The following notes on Hawaii insect conditions were presented at the 689th meeting of the Hawaiian Entomological Society held on May 13, 1963.

AN OLETHREUTID MOTH (Cryptophlebia ombrodelta) - On April 3, 1963, an apparent heavy infestation of this moth was noted on Bauhinia sp. seed pods on the grounds of the Iolani Palace, Honolulu. This constitutes a new host record for the species. Other new State host records from interceptions made by Federal Plant Quarantine inspectors are: Euphoria longan, Litchi chinensis, Phaseolus vulgaris, Pithecellobium dulce and Poinciana pulcherrima. (D. C. Hamilton, PQD).

A PYRALID MOTH (Cactoblastis cactorum) - A cytoplasmic polyhedrosis virus was found infecting this species on Oahu. This disease was present in epizootic form for the past month. Collections of C. cactorum made at Waahila hill, 16th Avenue, Diamond Head, Punchbowl, Makapuu, Waianae, Kipapa, and Waimea were all found infected with the virus. Although mortality from the disease in the laboratory was very high, it has not yet been ascertained that there is a correspondingly high mortality in field populations. Apparently, this is the first report of a virus disease from this species in the world. (Dr. M. Tamashiro, Univ. of Hawaii).

A GIANT AFRICAN SNAIL (Achatina fulica) - A new infestation of this snail was discovered at Hakalau, island of Hawaii, on April 16, 1963. A single, medium sized specimen was found near the Hakalau Overpass and subsequent investigations disclosed numerous snails, mostly juveniles, on the lower side of the highway. As of the end of April, 106 A. fulica had been collected and destroyed. This is second major infestation discovered on the island of Hawaii. The first was discovered at Keaukaha, Hilo, in 1958, and successfully eradicated. Eradication of the second infestation is considered economically feasible and is underway. (C. J. Davis).

A SUBTERRANEAN TERMITE (Coptotermes formosanus) - During treatment of a residence in Wailuku, Maui, for drywood termites on April 23, 1963, employees of an exterminating company discovered an infestation of this species. To this date, the island of Maui was considered "ground termite free." A small infestation in propagative coconuts was discovered over 30 years ago but was eradicated. Following the present discovery, 3 other infestations were found, 2 additional ones in Wailuku and one in Kahului. Since these infestations appear to be localized, eradication measures are in progress. (C. J. Davis).





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