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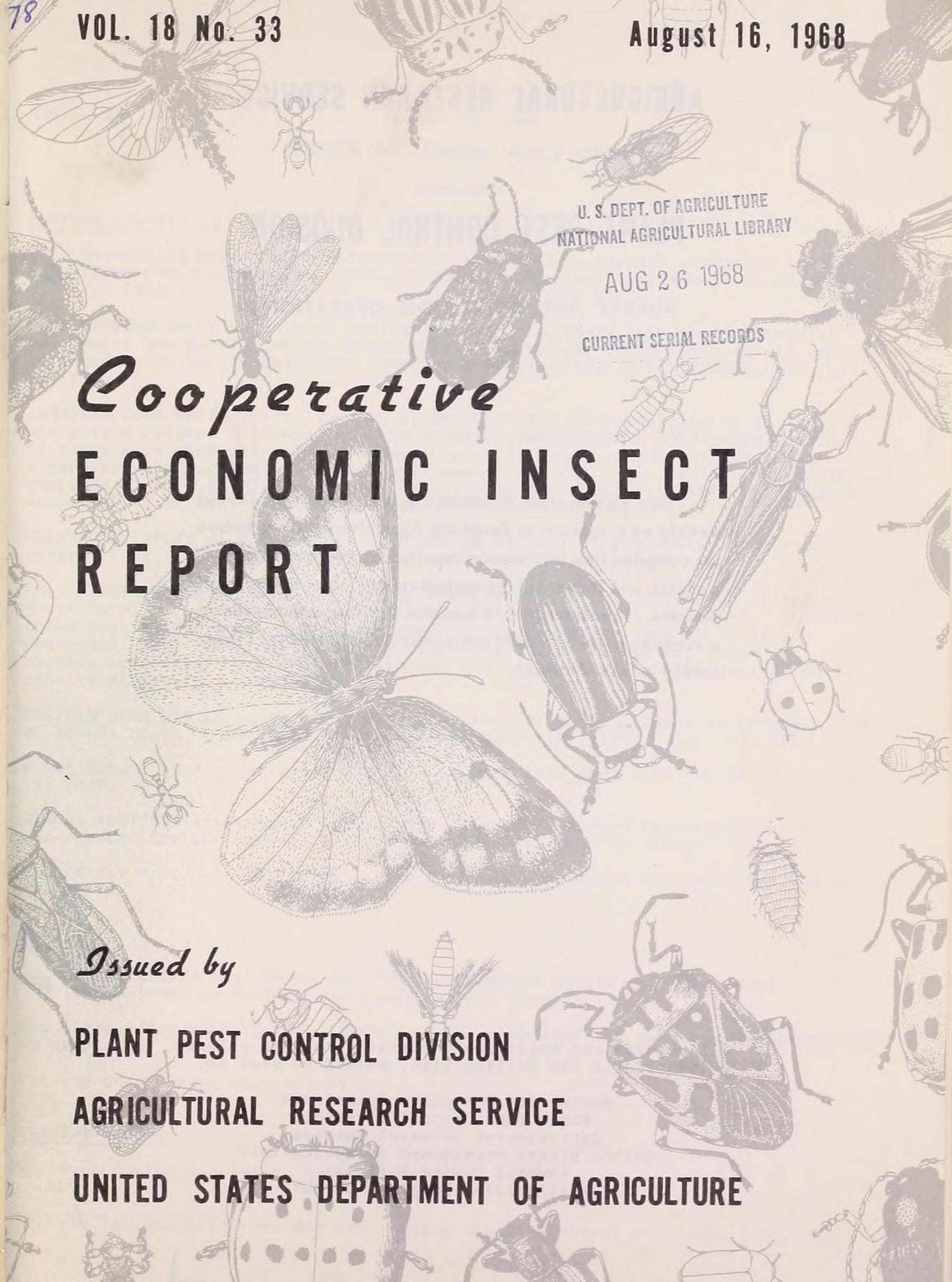
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Cooperative
**ECONOMIC INSECT
REPORT**

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

SURVEY AND DETECTION OPERATIONS

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

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COOPERATIVE ECONOMIC INSECT REPORT**HIGHLIGHTS**Current Conditions

● Previously reported infestations of GREENBUG on sorghum developed into large-scale outbreaks. Texas, Oklahoma, Nebraska, and Kansas hardest hit. (p. 781).

CORN EARWORM heavy on corn in Pontotoc County, Oklahoma, and on 300 acres of sorghum in Montgomery County, Mississippi. CORN LEAF APHID heavy in all sorghum in Arkansas Valley of Colorado; numerous on young sorghum in Oklahoma Panhandle. (p. 782).

EUROPEAN CORN BORER severe in corn in Weld County, Colorado; adults continue heavy in Maryland, Delaware, and New Jersey. SOUTHWESTERN CORN BORER heaviest in sorghum in many years in Maricopa County, Arizona; larvae and damage more widespread than in 1967 in Tuscaloosa County, Alabama. (p. 783). CORN ROOTWORMS numerous in corn in northern areas of Illinois and Missouri. CORN FLEA BEETLE damage heavy in many cornfields in northern Maryland. (p. 784).

GREEN CLOVERWORM damage evident on soybeans in central Wisconsin and north-central Iowa. (p. 787).

BOLL WEEVIL damage serious in western Tennessee; numbers increasing at Florence, South Carolina, and in McLennan and Falls Counties, Texas. (p. 788). BOLLWORM moths high at Florence, South Carolina; larval damage serious in western Tennessee. (p. 789). SPIDER MITES severe on cotton in western Tennessee; problem in northern and central Alabama, and increasing in north-central delta area of Mississippi. (p. 790).

MEXICAN BEAN BEETLE numbers and damage serious on canning beans in Fryeburg area of Maine; heavy on snap and lima beans throughout Maryland. (pp. 791-792).

APPLE MAGGOT adult emergence expected to peak this period in southwest Michigan. (p. 793).

MIMOSA WEBWORM larvae heavy in southeast Missouri; damage to honeylocust more widespread than for several years throughout Indiana. (p. 797).

STABLE FLY annoyance severe on cattle in certain areas of Wisconsin and Indiana. (p. 799).

Detection

● BRAMBLEBERRY LEAFHOPPER (p. 795) and MOTTLED RUSTIC (p. 800) found established in Washington; first records for U.S.

New State records include an ARMORED SCALE in Arizona (p. 785) and A RHOPALID BUG in Hawaii (p. 802).

For new county records see page 803.

Special Report

European Chafer Quarantine Map. Centerfold.

Reports in this issue are for week ending August 9 unless otherwise indicated.

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European Chafer Quarantine Map. Centerfold.

WEATHER OF THE WEEK ENDING AUGUST 12

HIGHLIGHTS: The Far West continued warm and dry. A cold front brought a pleasant weekend to the Central and East following several days of unusually hot humid weather.

PRECIPITATION: Heavy rains fell early in the week along a front that extended across our northern border States from the western Great Plains to New England. Numerous tornadoes and violent thunderstorms occurred from South Dakota and Iowa to Lower Michigan. Most of the tornadoes struck rural areas. A few farmsteads suffered damage to buildings and trees. Besides the heavy showers that accompanied the violent thunderstorms and tornadoes along the front, airmass thunderstorms developed in the hot, humid air south of the front. The showers were mostly light producing an inch or less of rain. In some areas, rainfall ranged from 1 to 2 inches and widely scattered storms dropped several inches in short time intervals. On Thursday, a severe thunderstorm at Burlington, Vermont, dropped hail up to 3 inches in diameter and the wind at Blue Hill Observatory, Milton, Massachusetts, gusted to 90 m.p.h. Heavy downpours fell Friday night in southeastern Nebraska, eastern Kansas, southwestern Missouri, and northern Arkansas with spots recording 4 to 5 inches of rain by Saturday morning. Little or no rain fell in the Far West. Forest fire danger increased in Washington and lightning started hundreds of fires in Oregon. Dust storms occurred in the irrigated valleys of southern Arizona.

TEMPERATURE: Through most of the week, sweltering heat and high humidity maintained a firm grip over most of the Nation from the Rocky Mountains to the Atlantic coast. Cool weather occurred only along our northern border north of the quasi-stationary front that stretched from Montana to Maine. In some eastern areas, last week was the hottest of the season. In North Carolina, it was the hottest week in almost 2 years. Beloit, Wisconsin, registered 100° on Thursday, the first time in several years that the temperature has gone so high anywhere in the State. Temperatures reached 100° to 105° on several afternoons from southern South Dakota to northern Texas. The front began moving late in the week and by the weekend, a broad stream of cool, dry air was bringing unseasonably cool weather and clear skies to much of the central and eastern portions of the Country. Numerous locations in the Northeast registered temperatures in the 40's early Monday morning, August 12. The Far West continued warm to hot throughout the week. The Rocky Mountains and western Plains averaged cooler than normal. Most of the East averaged warmer than normal in spite of the weekend temperature drop. (Summary supplied by Environmental Data Service, ESSA.)

SPECIAL INSECTS OF REGIONAL SIGNIFICANCE

GREENBUG (Schizaphis graminum (In broad sense))* - SOUTH DAKOTA - Destroyed 120 acres of sorghum-sudan crosses 2-3 inches high near Lesterville, Yankton County. Damaged sudan and crosses of sorghum and sudan in Moody, Turner, Yankton, and Hutchinson Counties. Ranged 4,500-5,000 per plant on some sorghum. Killed several fields of sorghum and sorghum crosses near Parkston, Hutchinson County. Predators light in those fields surveyed. (Jones, Kantack). NEBRASKA - Infestations declined sharply in eastern area due to parasitism. Parasites destroyed up to 95 percent of aphids in 2 Saunders County fields August 6. (Roselle). Still high on untreated sorghum near North Platte, Lincoln County; ranged 1,600-2,300 per leaf August 8. Predators and parasites increasing slowly. (Staetz). KANSAS - Infesting most sorghum fields throughout State. Damaging numbers in many fields; up to 2,000 per leaf. Severely damaging late-planted fields. In most areas, populations continue to increase except in occasional heavily infested fields where predators and parasites established. Parasitism ranged 25-50 percent in one heavily infested field in Pottawatomie County. (Brooks et al.). OKLAHOMA - Continues heavy in sorghum in Texas, Cimarron, and Beaver Counties. Counts range 1,500-5,000 per plant on leaves, up to 50 per head on plants with heads. Many fields being sprayed. Young sorghum plants and volunteer small grain plants killed in many areas. Also reported causing severe damage to broomcorn in Cimarron County. High counts also reported from Harper, Woodward, Ellis, Beckham, Washita, Blaine, Jackson, and Marshall Counties. Parasites and predators active in west-central and southwest areas and in Payne County; appear to be causing some decrease in numbers. Survey shows only occasional fields lightly infested in Noble, Kay, and Grant Counties. (Okla. Coop. Sur.). ARIZONA - Unidentified aphid generally heavy on sorghum in most areas of Cochise County; controls applied. (Ariz. Coop. Sur.). TEXAS - The aphid is a serious problem on sorghum in the Panhandle and parts of Rolling Plains. Widespread treatment is being carried out. (Green). Normally, greenbug does not cause serious damage to sorghum in this country. The aphid generally does not reproduce after temperatures reach 90° or higher. However, infestations in this outbreak became worse between June and the latter part of July. USDA and State officials will meet at Fort Collins, Colorado, August 15-16 to discuss current and future plans to combat greenbug outbreaks on sorghum. ARS, in cooperation with affected States, is studying the biology of the pest on sorghum and conducting aerial insecticide tests. (ARS) For previous reports on sorghum see notes carried under greenbug in CEIR 17(37):847, 18(22):461, 18(23):485, 18(24):509, 18(26):573, and 18(31):722. (PPC).

ASTER LEAFHOPPER (Macrosteles fascifrons) - WISCONSIN - Increased in lettuce fields at Montello; problems somewhat greater than normal but far less than at this time in 1967. (Wis. Ins. Sur.). COLORADO - Undetected in Otero and Pueblo County lettuce fields as of August 3; ranged 1-584 per night in light traps last 2 weeks. (Schweissing).

BEET LEAFHOPPER (Circulifer tenellus) - WYOMING - Curly-top symptoms affected 72 of 3,200 plants in 16 sugarbeet fields in Washakie and Big Horn Counties. Adults averaged 0-2 per 100 sweeps in 6 fields checked. (Petersen, Parshall). UTAH - Ranged 2-5 per 10 sweeps in Russian thistle in Deseret and Delta area of Millard County. (Knowlton, Aug. 1). COLORADO - Ranged 0-5 per 100 sweeps on southeastern area sugarbeets. (Schweissing).

CORN EARWORM (Heliothis zea) - NEW YORK - Appeared late in 1968. First noted on sweet corn August 1 in Hudson Valley when 2 sixth instars found in 300 ears at harvest in Stone Ridge; no moths trapped. (N.Y. Wkly. Rpt.). NEW JERSEY - Adults increasing throughout State; problems on corn should increase sharply. (Ins.-Dis. Newsltr.). DELAWARE - Adults increased in blacklight traps in Sussex County; averaged 3-4 per night. (Burbutis). MARYLAND - No adults taken at Centreville blacklight trap yet. Very little damage to sweet corn to date. Less than 1 percent damage to ears in 7 acres of sweet corn near Wye Mills, Talbot County. (U. Md., Ent. Dept.). INDIANA - Infestation less than 2 percent (very

* According to recent taxonomic studies by L.M. Russell. The aphid on sorghum appears to be this species.

light) on late sweet corn and milk-stage field corn in south districts. No adults in blacklight traps as of August 6. (Huber). MINNESOTA - Low on field corn in southern counties; higher on sweet corn. (Minn. Ins. Rpt.). NEBRASKA - Low, infested less than 1 percent of ears in sweet corn field near Mead, Saunders County (Keith), and in Dawson County field corn (Raun). COLORADO - Larvae low on southeast area corn. (Schweissing). OKLAHOMA - Heavy on Pontotoc County corn, moderate to heavy on Kingfisher County grain sorghum; light on Bryan County peanuts. (Okla. Coop. Sur.). MISSISSIPPI - Heavy on 300 acres of sorghum in Montgomery County; controls required. (Dinkins). ARKANSAS - Few larvae in soybeans in Poinsett County; first of season. (Leslie, Boyer). CALIFORNIA - Larvae medium on corn in Concord, Contra Costa County, and Redding, Shasta County. (Cal. Coop. Rpt.).

CORN LEAF APHID (Rhopalosiphum maidis) - MARYLAND - Continued to increase on corn; infestations up to 100 percent in all areas. Feeding in whorls and on husks. (U. Md., Ent. Dept.). ALABAMA - Maize dwarf mosaic more widespread on corn in Tuscaloosa County. Numbers variable in all fields. (Holstrum et al.). MICHIGAN - Light to moderate on sweet corn foliage statewide; did not affect ear production. (Thompson, Patterson, Aug. 5). Empusa fungus should control in some fields. (Janes, Aug. 5). ILLINOIS - Moderate to heavy on late-whorl to early silk-stage corn. Alates common in late-maturing fields; migrated from earlier maturing fields. (Ins. Sur. Bull.). WISCONSIN - Highest in southeast and in some central area cornfields. Some fields treated in Waukesha County. Lady beetle adults and larvae numerous in some fields. (Wis. Ins. Sur.). OKLAHOMA - Averaged up to 2,000 per whorl on young sorghum in panhandle counties. Up to 150 per whorl in Woodward County; moderate in Kay County. (Okla. Coop. Sur.). COLORADO - Heavy in sorghum checked in Arkansas Valley; some controls may be needed. Up to 500 per corn plant in Boulder, Weld, Larimer, and Morgan Counties; noneconomic in east area. (Johnson, Schweissing). NEW MEXICO - Corn and sorghum treated at Roswell, Chaves County. (Mathews). ARIZONA - Ranged 1-20 per plant in 80 acres of sorghum in Stewart District, Cochise County. (Ariz. Coop. Sur.). UTAH - Treated 55 acres of barley at Sutherland, Millard County. (Knowlton, Aug. 1).

POTATO LEAFHOPPER (Empoasca fabae) - NEW JERSEY - Ranged 10-354 (average 92) per field (25-sweep samples) in 5 fields in central area. (Ins.-Dis. Newsltr.). OHIO - Adequate rain through July and into August prevented widespread damage common to alfalfa at this time in 1967. Crop growth good with little yellowing past 2 weeks. Ranged 1-3 per sweep in Wayne County where harvest of third cutting begun; some yellowing. Damage spotty due to varying moisture conditions. (Glass). Extensive loss could occur to alfalfa if moist conditions change. (Rose). MICHIGAN - Increasing, but no yellowing yet; 6-28 per sweep in 6 Monroe and Lenawee County fields. (Janes, Aug. 5). INDIANA - Light to moderate yellowing on bud stage to early bloom alfalfa in south-central and southwest districts. Nymphs 7-45 (average 16) per sweep. (Huber). WISCONSIN - Yellowed some alfalfa in central sands area; up to 30 per sweep. Light in other areas. Adults 3 per plant on Columbia County lima beans; scarce on potatoes and snap beans in central area. (Wis. Ins. Sur.). MISSOURI - Ranged per 10 sweeps on alfalfa from 120 in central area to 400 in southeast area. (Munson).

SPOTTED ALFALFA APHID (Therioaphis maculata) - UTAH - On alfalfa seed and forage in west Millard County. Damaged few fields at Sutherland. Light in east Millard County, at Beaver, Beaver County, and at Parowan and Cedar City, Iron County. (Knowlton, Aug. 1). COLORADO - First of season on alfalfa in Crowley, Otero, Bent, and Prowers Counties; up to 60 per 100 sweeps. (Schweissing). NEW MEXICO - Up to 25 per 10 trifoliolate leaves in alfalfa in east Valencia County. (Heninger). OKLAHOMA - Increasing in scattered areas in western and panhandle counties. Controls required in few fields. Ranged 300-400 per 10 sweeps in Tillman County; heavy in Kiowa and Kingfisher Counties. (Okla. Coop. Sur.). KANSAS - Light, 5-15 per 10 sweeps in alfalfa in Shawnee, Douglas, and Franklin Counties. (Simpson). NEBRASKA - Ranged 22-55 per 20 sweeps in Washington County alfalfa field. (Keith).

CORN, SORGHUM, SUGARCANE

EUROPEAN CORN BORER (*Ostrinia nubilalis*) - MAINE - Common in corn entering tassel stage in southern area; serious problem indicated. (Boulanger, Aug. 6). NEW YORK - Moths caught increased slowly to several a night on Hudson Valley sweet corn; about one per sweep in field borders at Lamontville August 1. Adults heavy 2 weeks before expected peak. Egg masses few on whorl-stage plantings; first instars light in few plantings. (N.Y. Wkly. Rpt.). NEW JERSEY - Moths still plentiful in State. (Ins.-Dis. Newsltr.). DELAWARE - Adult flights continue heavy in Sussex County blacklight trap collections. (Burbutis). MARYLAND - Continues heavy in all areas. Adults averaged 87+ per night in light trap at Centreville, Queen Annes County. (U. Md., Ent. Dept.). INDIANA - Ear infestations very light, ranged 0-6 (average 2) percent on milk-stage field corn in south-central and southwest districts; egg masses 1-8 per 50 plants on late corn in same districts. Adults common in field borders, roadsides, and alfalfa in south-central district, but much less common in southwest district. (Huber). ILLINOIS - Abundant in some north-central areas; indicates greater potential second-generation population than expected. About 70 percent of second-generation moths emerged in northern sections. Egg laying will continue in central section for 1-2 weeks and in northern sections for 2-3 weeks. (Ins. Sur. Bull.). Larval average per 100 plants by district: Central 0.3, east 1.6. Average percent plant infestations by district: Central 0.8, east 3.7. Larvae up to 1 per plant (90-100 percent emergence) and egg masses 0-20 per 100 plants (10 percent hatch) in west-southwest district. (Ill. Ins. Rpt.). MISSOURI - First-generation emergence almost complete in central and northern areas. Egg laying begun about 2 weeks ago; should be at peak. First generation generally not heavy, but very heavy in isolated spots. (Munson). WISCONSIN - Flight increasing; some egg laying begun in advanced area of southern Dane County. Development gradual with mostly fifth instars at Plainfield, Waushara County, and at Poynette (30 percent empty pupae) in Columbia County. (Wis. Ins. Sur.). SOUTH DAKOTA - Larvae infested 70 percent of corn in irrigated field in northern Moody County. Larvae still small and feeding in whorls. (Kantack). NEBRASKA - First generation averaged 244 per acre and infested 2.7 percent of stalks in 30 Hall County cornfields; lowest summer population in 14 years for this county August 2. Averaged 1,132 per acre and infested 16.0 percent of stalks in Cuming County; second lowest summer population recorded for this county in last 14 years. (Hill, Keith). COLORADO - Larvae severe in Prospect Valley, Weld County. Damaged 90+ percent of corn plants in one field. Det. by N.H. Weisman. (Hantsbarger, Alldredge).

SOUTHWESTERN CORN BORER (*Diatraea grandiosella*) - ARIZONA - Heaviest in sorghum in many years in Maricopa County. Third generation in progress with partial fourth expected. "Hot spots" noted around Gilbert and Kyrene, Maricopa County. Averaged one per plant in 160-acre field in Stewart District, Cochise County. (Ariz. Coop. Sur.). KANSAS - First-generation emerging in south-central area. Only pupae and empty pupal cases found in fields. First-generation infestation averaged 10-12 percent in fields checked. (Simpson). ALABAMA - Larvae and damage more widespread than in 1967 on corn in Tuscaloosa County. (Holstrum).

WESTERN BEAN CUTWORM (*Loxagrotis albicosta*) - NEBRASKA - Averaged about 7 percent of plants infested in 30 cornfields in Hall County. First to third instars averaged 1.2 per infested plant. (Hill, Keith, Aug. 2). Larvae ranged 1-7 per ear on 5-100 percent of plants in several Dawson County fields; few fresh egg masses. Larvae ranged 1-4 per ear throughout Kearney County field; none found in nearby later-maturing cornfield. Second instar to nearly full-grown larvae noted in infested fields. (Raun). Up to 6 per plant (average 1 per 4 plants) in field near North Platte, Lincoln County. Fresh egg masses and first instar to nearly full-grown larvae present. (Staetz).

STALK BORER (*Papaipema nebris*) - NEBRASKA - Most larvae full grown in eastern area; left giant ragweed to pupate in soil. Ranged from fourth instar to full grown in central district; most remained in ragweed. Parasitism very low in all areas. (Keith). MAINE - Noneconomic although frequently found in corn in southern area. (Boulanger, Aug. 6).

FALL ARMYWORM (Spodoptera frugiperda) - NEW YORK - Several moths trapped on Hudson Valley sweet corn; small larvae in whorls August 1. (N.Y. Wkly. Rpt.). MARYLAND - Damaged 2 percent of 20-acre sweet corn planting near Ingleside, Queen Annes County. (U. Md., Ent. Dept.). COLORADO - Larvae light on southeastern area corn. (Schweissing).

BEET ARMYWORM (Spodoptera exigua) - OKLAHOMA - Damaged sorghum in isolated areas in western counties. Up to 5 per plant destroyed few fields. (Okla. Coop. Sur.).

CORN ROOTWORMS (Diabrotica spp.) - ILLINOIS - Abundant in many fields in northern half of State. (Ins. Sur. Bull.). WISCONSIN - D. longicornis (2-3 per ear common) feeding on ear tips in Rock County. Ranged 5-6 per ear in some Waukesha County cornfields and up to 10 per silk in Crawford County. Emergence far from complete despite presence on fresh silks. Mostly D. longicornis although D. virgifera adults more common in area than in 1967. D. virgifera and D. longicornis ratio 1:50 in one Rock County field and a few Crawford County fields. Mostly pupae August 6 at 5 Rock County sites. (Wis. Ins. Sur.). MINNESOTA - D. longicornis and D. virgifera adults increasing; surveys in southern counties indicate emergence will peak in little over a week. Third instars in soil and roots, but most in prepupal and pupal stage or adults ready-to-emerge. Light with feeding on silks or tassels; 2 per plant (highest) in lighter soil areas of Dakota County. Most cornfields will complete pollination before peak emergence. (Minn. Ins. Rpt.). SOUTH DAKOTA - Adults light as emergence late again. Expect some buildup next 10 days. Most corn will be pollinated prior to peak adult populations. (Jones, Aug. 2). NEBRASKA - D. virgifera and D. longicornis very light in 30 Hall County fields. Mostly D. virgifera 1-5 (average 3) per plant. (Hill, Keith, Aug. 2). Up to 20 per plant in some Dawson County fields. (Raun). Ranged 2-6 per plant in 6 Lincoln County fields. (Staetz). MISSOURI - Adults of D. virgifera, D. longicornis, and D. undecimpunctata howardi continue quite numerous in many cornfields throughout northern two-thirds of State. Silk feeding generally light in earlier planted fields despite numerous adults. Adults infesting late-planted fields that are tasseling and silking; some pollination problems may develop. (Munson).

WESTERN CORN ROOTWORM (Diabrotica virgifera) - ILLINOIS - Found in Kankakee and La Salle Counties past 2 weeks for new county records. (Ins. Sur. Bull.). SOUTH DAKOTA - Adults one per stalk in corn-on-corn field near Beresford, Lincoln County, and 2 per stalk in northern Yankton County as of August 2. Third instars and pupae still in soil. Adults expected to increase next 10 days. Pollination expected to occur ahead of major silk damage by adults. Adults currently increased in some southeastern area cornfields. Adults up to 6 per stalk in 80-acre field near Beresford, Lincoln County. Controls applied to one field near Parkston, Hutchinson County. Adults up to 6 (average 2) per plant in cornfield east of Oral, Fall River County. (Jones, Kantack). OKLAHOMA - Adults up to 50 per row foot; controls required on corn in local areas of Texas County. (Okla. Coop. Sur.). COLORADO - Adults 0-3 per corn plant in Larimer, Weld, Boulder, and Morgan Counties. Adults noted in Arkansas Valley. (Johnson, Schweissing).

NORTHERN CORN ROOTWORM (Diabrotica longicornis) - NEW YORK - Adults on field corn silk August 1 at Hurley, Ulster County. (N.Y. Wkly. Rpt.). DELAWARE - Adults increasing in blacklight trap collection in New Castle County. (Bray). OHIO - Adults emerging throughout State. Lodged corn no apparent problem this season, but numerous adults may affect pollination. (Rose). MICHIGAN - No adults on field corn tassels (90 percent tasseled) August 1 in 130 miles from Jackson, Jackson County, to New Buffalo, Berrien County. No severe damage. General population decline of 3-4 years ago continuing. (Janes).

CORN FLEA BEETLES (Chaetocnema spp.) - MARYLAND - C. pulicaria damage continues medium to heavy statewide. Damage heavy in up to 80-100 percent of corn stands in many fields in Frederick, Anne Arundel, Cecil, Kent, and Queen Annes Counties. (U. Md., Ent. Dept.). ARIZONA - C. ectypa averaged 160 per 100 sweeps in all

sorghum fields checked at Yuma, Yuma County; 1,200 per 100 sweeps in one field. (Ariz. Coop. Sur.).

NITIDULID BEETLES (Carpophilus spp.) - WASHINGTON - Carpophilus sp. infested 75 percent of ears of sweet corn in gardens July 29 at Zillah, Yakima County. (Keene). MARYLAND - C. lugubris infestations increasing, up to 25-60 percent in sweet corn on Eastern Shore. (U. Md., Ent. Dept.).

CHINCH BUG (Blissus leucopterus) - KANSAS - Up to 50 per plant in headed sorghum field in Saline County. (Simpson).

A WHITEFLY (Aleurocybotus occiduus) - ARIZONA - Heavy in young sorghum at Yuma, Yuma County. (Ariz. Coop. Sur.).

SPIDER MITES - WYOMING - Light on bottom 1-2 leaves of plants in cornfields in Washakie, Park, and Big Horn Counties. (Parshall). NEBRASKA - Small colonies of Tetranychus urticae beginning to discolor lower leaves of corn in Dawson County fields. (Raun). COLORADO - T. urticae light on eastern area corn; burn as high as sixth and seventh leaf in many fields. (Johnson, Schweissing).

TURF, PASTURES, RANGELAND

AN ARMORED SCALE (Chortinaspis subchortina) - ARIZONA - Collected on St. Augustine grass at Phoenix, Maricopa County, November 13, 1967, by P. Min. Det. by R.F. Wilkey, confirmed by L.M. Russell and H. McKenzie. This is a new State record. (Ariz. Coop. Sur.).

A LEAFHOPPER (Deltocephalus grex) - CALIFORNIA - Adults heavy on bluegrass lawns, generally in Willows, Glenn County. Much less evident on lawns in 1968 than in several years. (Cal. Coop. Rpt.).

A WHITEFLY (Aleurocybotus occiduus) - ARIZONA - Averaged about 20,000 per 100 sweeps in Sudan grass field at Yuma, Yuma County. (Ariz. Coop. Sur.).

SOD WEBWORMS - ILLINOIS - Moths flying over lawns at dusk. Second generation laying eggs past 2-3 weeks. (Ins. Sur. Bull.). OKLAHOMA - Crambus spp. larval damage noted on golf courses in Tulsa and Kay Counties. (Okla. Coop. Sur.). ARIZONA - Crambus spp. heavy in 3 tifgreen lawns in northwest Phoenix, Maricopa County. (Ariz. Coop. Sur.).

A PSYCHID MOTH (Apterona crenulella) - UTAH - Numerous on big sage and other range plants in area near Laketown, Rich County; lighter in mountains west of Garden City and Woodruff. Light in areas checked in Logan Canyon, Cache County. Numerous on sage, rabbitbrush, and some other range plants at Goshen, Utah County. (Knowlton, Aug. 1).

RHODES-GRASS SCALE (Anthonia graminis) - ARIZONA - Moderate on many Bermuda and St. Augustine grass lawns in Salt River Valley area, Maricopa County; averaged 14 infested sheaths per foot. (Ariz. Coop. Sur.).

CHINCH BUG (Blissus leucopterus) - OKLAHOMA - Heavy in 20 percent of lawns checked in Marshall County. (Okla. Coop. Sur.).

FORAGE LEGUMES

ALFALFA WEEVIL (Hypera postica) - MAINE - Adult emergence essentially complete by July 29 in York and Cumberland Counties. Much variation in feeding damage on heavily infested second-growth alfalfa in late July and early August. (Boulanger). MICHIGAN - Adults (1968 brood) almost 1 per sweep in Lenawee and Monroe Counties; cocoons and pupae difficult to locate. Mostly third instars ranged 7-32 per 200 sweeps. (Janes, Aug. 5). WISCONSIN - Dane, Milwaukee, and Green Counties are

new county records. (Wis. Ins. Sur.). SOUTH DAKOTA - Light, 4 adults and 10 second and third instars per 100 sweeps, in second-growth alfalfa near Spearfish, Lawrence County. (Jones). COLORADO - Larvae 0-700 per 100 sweeps on alfalfa in Otero and Pueblo Counties. Damage not noted. (Schweissing). WYOMING - Larvae 0-500 (average 78) per 100 sweeps in second-crop alfalfa in Johnson, Sheridan Park, Big Horn, and Washakie Counties. Adults 27 per 100 sweeps in Johnson County; some noted in other counties. About 40 percent of second-crop alfalfa harvested. (Parshall). UTAH - Larvae 1-5 per 10 sweeps in most alfalfa in Millard, Utah, Salt Lake, and Juab Counties. Very light, 0-1 per 10 sweeps, in Millard County alfalfa. Not heavy at Beaver, Beaver County, or at Parowan and Cedar City, Iron County. (Knowlton, Aug. 1). OREGON - Adults 1 per 100 sweeps in alfalfa field near Aurora, Marion County; no larvae. (Westcott).

PEA LEAF WEEVIL (Sitona lineatus) - OREGON - Averaged 3 per sweep in mature, second-cutting alfalfa field near Aurora, Marion County; leaf damage 10 percent. (Westcott).

ASIATIC OAK WEEVIL (Cyrtopistomus castaneus) - INDIANA - Adults noted in alfalfa for first time this season in southernmost 2 tiers of counties of south-central area; ranged 1-2 per 5 sweeps. Adults common around lights and entering buildings in same area. (Huber). MISSOURI - One adult collected from red clover in Scott County for a new county record. (Hanning, Huggans).

CORN ROOTWORMS (Diabrotica spp.) - NEBRASKA - Adults increasing on alfalfa; D. virgifera averaged 15 and D. undecimpunctata howardi 10 per 20 sweeps in 2 Washington County fields. (Keith).

FLEA BEETLES (Systema spp.) - ARIZONA - Averaged 98 per 100 sweeps in alfalfa field at Yuma, Yuma County. (Ariz. Coop. Sur.).

BLACK BLISTER BEETLE (Epicauta pennsylvanica) - SOUTH DAKOTA - Damaged alfalfa in Beadle and Lake Counties; controls applied in some cases. (Ball, Berndt). COLORADO - Adults 20-50 per 100 sweeps on alfalfa in Boulder, Weld, Larimer, and Morgan Counties. (Johnson).

GREEN CLOVERWORM (Plathypena scabra) - INDIANA - Larvae ranged from 2 per 5 sweeps to 8 per sweep (average 2 per sweep) on southwest and south-central area alfalfa. (Huber). WISCONSIN - Nearly full-grown larvae common on alfalfa in central area; averaged 2 per sweep in many fields. (Wis. Ins. Sur.).

BEET ARMYWORM (Spodoptera exigua) - ARIZONA - Averaged 600 per 100 sweeps in some alfalfa in Yuma Valley; larval damage in some fields in Yuma Valley. (Ariz. Coop. Sur.). NEW MEXICO - Larvae averaged 1-3 per 25 sweeps in eastern Valencia County alfalfa. (Heninger).

ALFALFA CATERPILLAR (Colias eurytheme) - WISCONSIN - Adults prevalent in central area alfalfa. (Wis. Ins. Sur.). COLORADO - Larvae 10-70 per 100 sweeps on alfalfa in Boulder, Larimer, Weld, and Morgan Counties. (Johnson). NEW MEXICO - Larvae averaged 1-2 per 25 sweeps in alfalfa in Los Lunas area, Valencia County. (Heninger).

PEA APHID (Acyrtosiphon pisum) - NEVADA - Up to 300 per sweep in alfalfa seed fields in Lovelock, Pershing County; controls required. (Conley). UTAH - Sometimes very numerous in succulent alfalfa. Averaged 300+ per 10 sweeps in some fields in Cedar City, Iron County; 50-1,000+ per 10 sweeps in occasional Delta, Hinckley, Deseret, and Boggs areas of Millard County. (Knowlton). WYOMING - Nymphs and adults averaged 67 per 100 sweeps in alfalfa in north-central area. (Parshall). COLORADO - Ranged 50-15,000 per 100 sweeps on eastern area alfalfa. (Schweissing, Johnson). NEW MEXICO - Light to moderate in alfalfa in Los Lunas area, Valencia County. (Heninger). NEBRASKA - Increasing slightly on alfalfa in eastern area; ranged 95-115 per 20 sweeps in 2 Washington County fields. (Keith).

MEADOW SPITTLEBUG (Philaenus spumarius) - MISSOURI - Collected in Scott County by L.R. Hanning and J.L. Huggans for a new county record. (Munson).

LEAFHOPPERS (Aceratagallia spp.) - ARIZONA - Averaged 1,973 per 100 sweeps in alfalfa field at Yuma, Yuma County. (Ariz. Coop. Sur.).

LYGUS BUGS (Lygus spp.) - INDIANA - L. lineolaris nymphs 3 per sweep on southern district alfalfa. (Huber). WYOMING - Adults and nymphs 34-600 (average 125) per 100 sweeps in alfalfa in north-central area. (Parshall). COLORADO - Adults and nymphs 50-60 per 100 sweeps on alfalfa in north-central counties; light in Arkansas Valley. (Johnson, Schweissing). UTAH - L. elisus, L. hesperus, and Lygus spp. high in Millard County; repeated controls on alfalfa seed fields. (Knowlton, Aug. 1). ARIZONA - Counts per 100 sweeps ranged 200-420 (average 310) in alfalfa at Yuma, Yuma County, and averaged 425 in Pinal County. (Ariz. Coop. Sur.). NEVADA - Especially nymphs increasing in alfalfa seed fields in Lovelock, Pershing County; controls required. (Conley).

GRASSHOPPERS - MINNESOTA - Highest, 36-45 per square yard, in alfalfa and grass fields in western half of Sherburne County. Economic south of Luverne, Rock County; controls expected in some fields this week. Ranged 8-18 per square yard in some alfalfa in Pipestone, Nobles, and Chisago Counties. Melanoplus femurrubrum (second instar to adult) predominant in all fields surveyed. M. differentialis (fourth and fifth instar) and M. bivittatus (adults) light in some fields and roadsides. Roadside counts in Chippewa and Swift Counties remain high, 24-36 per square yard. M. femurrubrum predominant, but in many cases "slant-faced" species 30 percent of population. Margin feeding light in soybeans and cornfields. (Minn. Ins. Rpt.). WISCONSIN - Third, fourth, and a few fifth instar M. femurrubrum up to 15 per square yard in few scattered areas, primarily sandy soil fields; lighter than in previous years. Some damage to older alfalfa field in Wood County with up to 50 per square yard; many M. sanguinipes adults in same field. Dissosteira carolina adults common at this site, but less common in Marquette County field. M. confusus adults prevalent and a few Camnula pellucida and Arphia spp. adults noted in Wood County. M. bivittatus adults scarce. (Wis. Ins. Sur.). MICHIGAN - Rapidly increasing on alfalfa; ranged 76-104 in 200 sweeps. (Janes, Aug. 5).

ALFALFA SEED CHALCID (Bruchophagus roddi) - NEVADA - Increasing in seed alfalfa fields in Lovelock, Pershing County. (Conley).

SOYBEANS

GREEN CLOVERWORM (Plathypena scabra) - MICHIGAN - Moderate increase (68) week ending July 31 at Lenawee County blacklight station. No similar counts in soybean-growing areas as of August 5. (Janes). INDIANA - Larvae 1-4 per 5 row feet in southern districts; increased to 1-8 (average 2) per 5 row feet in central areas. Larvae mostly early instars; damage very light. (Huber). ILLINOIS - Larval average per row foot by district: Central 5.6, east 3.1, and west-southwest 3.2. (Ill. Ins. Rpt.). Killed by a fungus disease and parasitic flies. High temperatures and humidities favored spread and development of this disease; up to 30-50 percent of larvae affected. Some larvae pupated. Numbers generally lower than week ago in most areas; still high in some fields. (Ins. Sur. Bull.). WISCONSIN - Damage evident on soybeans in central area. (Wis. Ins. Sur.). MINNESOTA - Very small to 0.5 inch long on soybeans and alfalfa in southwest, south-central, and southeast districts; numbers light. (Minn. Ins. Rpt.). IOWA - Larval damage continues in north-central area; adults very abundant in central area. (Iowa Ins. Sur.). NEBRASKA - Ranged 3-11 (average 9) per 25 sweeps in 5 fields in Dodge, Washington, and Burt Counties. (Keith).

CABBAGE LOOPER (Trichoplusia ni) - ARIZONA - This species and Estigmene acrea (salt-marsh caterpillar) increasing at Yuma, Yuma County; controls may be required. (Ariz. Coop. Sur.).

MEXICAN BEAN BEETLE (Epilachna varivestis) - VIRGINIA - Very light in Sussex, Southampton, Nansemond, Isle of Wight, and Dinwiddie Counties. (Allen). INDIANA - Adults 0-4 (average 1) per 5 row feet in south-central district; damage very light, less than 5 percent foliar loss, in all fields surveyed. (Huber).

BEAN LEAF BEETLE (Cerotoma trifurcata) - MARYLAND - Foliar loss 40 percent in 20-acre planting near Millington, Kent County. Increasing in all sections; damage light to medium. (U. Md., Ent. Dept.). NEBRASKA - Ranged 3-13 (average 5) per 25 sweeps in 5 fields in Dodge, Washington, and Burt Counties. (Keith).

GREEN STINK BUG (Acrosternum hilare) - MISSISSIPPI - Heavy in Scott County; treatment required. (Dinkins).

GRASSHOPPERS - VIRGINIA - Damage light on 20 acres in Nottoway County. (Allen). MARYLAND - Melanoplus spp. damage light to 5 percent on 100-acre stand near Churchill, Queen Annes County. (U. Md., Ent. Dept.).

COTTON

BOLL WEEVIL (Anthonomus grandis) - ALABAMA - Continues general and heavy throughout southern and central areas. Controls general, widespread, and very effective. Larvae in many bolls and available squares. Increasing steadily in northern area. Some punctured square infestations up to 38-48 percent; ranged 2-25 percent in most fields. Controls more general in area. Infestation 10-26 percent in 9 fields in Morgan County; no controls applied. (Ledbetter et al.). Overwintering weevils and current brood have not developed as expected in northern area. One of higher and more general infestations in northern area found in Jackson and De Kalb Counties; total infestations usually lowest in these 2 counties. (McQueen). SOUTH CAROLINA - Populations generally increasing at Florence; larvae very heavy in untreated cotton fields. Larvae infested 0.1-54.0 percent of treated plots and 6-95 percent of untreated plots. Adults per 100 squares ranged 0.1-2.0 in treated plots and 0.5-5.0 in untreated plots. Five overwintered adults in 6 male traps; 2,848 to date. First or second generation on trap plants 52; 81 to date. (Taft et al.). TENNESSEE - Serious damage continues over regularly infested portion of cotton-growing area. Punctured squares ranged 8-95 (average 34) percent in treated and untreated fields in southern tier of counties. Abandonment of some fields partly responsible for high count. Some dead larvae in squares picked from ground, killed probably by dry weather. Less mortality where cotton rank and shades middles. (Locke). MISSISSIPPI - Remained low in most areas. Heavy in localized areas of most sections. Average percent infestation by county: Scott, 9 in 4 fields; Clay, 8 in 4; Sharkey, 8 in 30; Yazoo, 8 in 30; Hinds, 4 in 14, Washington, 2 in 10; Quitman, 3 in 65 fields. (Dinkins). Percent punctured squares averaged 5.1 (maximum 92) in 17 of 29 fields checked in delta counties; infestation over 10 percent in only 3 fields. (Pfrimmer et al.). LOUISIANA - Weevils emerging from squares on ground past 10 days. Punctured square counts increased sharply. Weevil emergence will be more or less continuous remainder of season. Shortening of insecticide application interval to 4 or 5 days recommended. (Tynes, Aug. 2). No weevils recovered from caged traps in Madison Parish. Total of 5 weevils taken from 10 winged traps (5 males in each) and 2 from 5 winged traps (5 females in each); 3 of weevils overwintered. Percent punctured squares ranged 1-77 (average 21.3) in 131 of 132 experimental plots examined and 4-35 (average 16) in 10 fields surveyed. (Cleveland et al., Aug. 8). ARKANSAS - Infested 4,094 (57.6 percent) of fields surveyed; above treatment level in 646 fields. Total of 484 fields treated this period. (Boyer, Barnes). OKLAHOMA - Light to moderate on cotton in Beckham, Washita, Blaine, Kiowa, and Cleveland Counties. Infestation averaged 6 percent in Jackson County. Heavy on older Marshall County cotton. (Okla. Coop. Sur.). TEXAS - Populations increased sharply with heavy "hatchout" at end of reporting period in McLennan and Falls Counties. Damaging infestations found in 12 of 15 treated fields and in 8 of 10 untreated cotton fields. Percent punctured

squares ranged 5-34 (average 16.5) in treated fields and 5.5-62.4 (average 34.7) in untreated fields. (Cowan et al.). For Boll Weevil in High Plains see page 801.

BOLLWORMS (*Heliothis* spp.) - SOUTH CAROLINA - Numbers very high, 2,166 *H. zea* and 25 *H. virescens* taken during period in light traps at Florence; total collected to date 3,107 *H. zea* and 44 *H. virescens*. Percent larval infestations ranged 0.1-2.0 in treated plots and 0.5-5.0 in untreated plots. (Taft et al.). **TENNESSEE** - Larval damage serious throughout western area; more serious in southern portion of area. All instars were found, but were mostly small larvae; this condition indicates new "hatchout" early this week. Eggs or larvae ranged 1-16 (average 4) per 100 terminals in about 90 percent of fields surveyed. (Locke). **MISSISSIPPI** - *H. zea* and *H. virescens* generally light statewide. Flight activity light and eggs few on plants. Decreased greatly in Yazoo County. Average percent infestation by county: Scott, 6 in 4 fields; Quitman, 4 in 65; Hinds, 3 in 2; Washington, 1 in 10; Sharkey, 1 in 30 fields. (Dinkins). Percent *H. zea* damaged squares averaged 1 (maximum 9) in 21 of 29 fields in delta counties. Few eggs and larvae in squares and bolls; almost no eggs or larvae in terminals. Moths very low in light traps. Larvae medium to heavy in few fields in south delta; light in central delta. (Pfrimmer et al.). **LOUISIANA** - Eggs and small larvae increased in Morehouse and Pointe Coupee Parishes and at Red River experiment station. Apparently beginning of expected increase. Moths caught in light trap at experiment station also increased. Infestations expected in all fields in State within next 7 days. (Tynes, Aug. 2). Percent *H. zea* damaged squares ranged 1-23 (average 6.7) in 125 of 132 experimental plots examined and 1-10 (average 4.9) in 10 fields surveyed in Madison Parish. Damaged bolls ranged 1-2 percent in 50 of 76 plots examined. (Cleveland et al., Aug. 8). **ARKANSAS** - Very light in State. Of larvae collected in Woodruff County, 153 determined *H. zea* and 4 *H. virescens*. *H. zea* eggs, larvae, and/or both found in 3,888 (54.6 percent) of fields surveyed. Percent damaged squares averaged less than 1 in 758 fields, 1-2 in 1,789 fields, 2-5 in 1,803 fields, 5-8 in 510 fields, and 8+ in 114 fields; no damaged squares in 2,140 fields. Total of 746 fields treated this period; 539 additional fields treated for *Anthonomus grandis* and *H. zea*. (Boyer et al.). **MISSOURI** - Larvae ranged 0-5 per 100 plants in 149 of 516 fields surveyed. (Jones). **OKLAHOMA** - *H. zea* averaged 8 per 100 terminals in Jackson County. Heavy in Pontotoc County; light to moderate in other south-central, southwest, and west-central counties. (Okla. Coop. Sur.).

TEXAS - Light in Bailey, Crosby, Dawson, Gaines, Garza, Martin, Lynn, and Terry Counties; medium in Yoakum County. (Almand, Aug. 6). Control more difficult this period as higher percentage of *H. virescens* larvae in McLennan and Falls Counties. Eggs ranged 0-9.7 (average 3) and larvae 0.5-20.9 (average 6.6) per 100 terminals in 15 treated fields; eggs 1.5-14.2 (average 3.8) and larvae 1.8-15.8 (average 8.1) per 100 terminals in 10 untreated fields. Percent damaged squares ranged 2-31.6 (average 12.2) in treated fields and 6.2-48.2 (average 16.5) in untreated fields. Percent damaged bolls ranged 2-16.5 (average 8.8) in treated fields and 6.8-33.5 (average 13.8) in untreated fields. Of larvae previously collected on cotton, 47 percent determined *H. virescens*. (Cowan et al.). **NEW MEXICO** - *H. zea* mostly light, but occasionally heavy in Chaves County; few controls applied. (Mathews).

CABBAGE LOOPER (*Trichoplusia ni*) - SOUTH CAROLINA - Very heavy although virus disease eliminated many populations at Florence. Total of 303 moths taken in light trap during period; total to date 799. (Taft et al.). **ALABAMA** - Heavy in many fields in Pickens and Greene Counties; lighter in Montgomery County. (Corder et al.). **MISSISSIPPI** - Noneconomic in several fields in delta counties. (Pfrimmer et al.).

BEE T ARMYWORM (*Spodoptera exigua*) - TEXAS - Light in Cochran County. Damaging in some areas of Bailey County; up to 40 percent square damage. (Almand, Aug. 6).

COTTON LEAF PERFORATOR (*Bucculatrix thurberiella*) - ARIZONA - Control difficult in many fields and becoming problem from Yuma Valley to Roll in Yuma County. Increasing at Eloy, Pinal County, and Gila Bend, Maricopa County. (Ariz. Coop. Sur.).

COTTON SQUARE BORER (Strymon melinus) - OKLAHOMA - Moderate in Beckham and Washita Counties. (OKla. Coop. Sur.).

PLANT BUGS - ALABAMA - Lygus lineolaris, Adelphocoris rapidus, and Psallus seriatus continue problem in many fields in northern area, especially in Jackson, Madison, Morgan, and Colbert Counties. (Ledbetter et al.). MISSOURI - Ranged 0-27 per 100 plants in 494 of 516 fields surveyed. (Jones). ARKANSAS - Counts per 100 terminals ranged 1-19 (light) in 5,161 fields, 20-39 (medium) in 129 fields, and 40+ (heavy) in 2 fields. None found in 1,822 fields. Total of 9 fields treated this period. (Boyer, Barnes). TEXAS - Psallus seriatus light in Bailey, Dawson, Garza, Hale, Martin, Swisher, and Yoakum Counties. Generally light to heavy infestations ranged up to 44 percent in Floyd and Crosby Counties. (Almand, Aug. 6).

LYGUS BUGS (Lygus spp.) - ARIZONA - Controls required on fields not in pink bollworm spray program at Yuma, Yuma County. Averaged 40 per 100 sweeps in Maricopa and Pinal Counties and about 3 per plant at Bowie and Stewart District in Cochise County. (Ariz. Coop. Sur.). LOUISIANA - L. lineolaris damage has been heavy in spots, but most have left fields. (Tynes, Aug. 2.). TENNESSEE - L. lineolaris damage continues over western area, especially in rank cotton. (Locke).

SPIDER MITES - TENNESSEE - Damage severe over untreated western area fields. Further increase expected as weather very favorable for buildup. (Locke). ALABAMA - Mostly Tetranychus urticae continues problem in most central and northern areas. Infestation general and heaviest on record in Montgomery County. Damage in areas of Lawrence, Cullman, and Lee Counties; controls general. (McQueen). MISSISSIPPI - T. urticae buildup heavy in some north-central delta counties. Control very difficult in Tunica County. Heavy in 65 Quitman County fields. (Dinkins). Light in 5, medium in 3, and heavy in 1 of 29 fields checked in delta counties. (Pfrimmer et al.).

TOBACCO

TOBACCO FLEA BEETLE (Epitrix hirtipennis) - VIRGINIA - Increasing, especially on nonirrigated tobacco in Pittsylvania County. (Dominick). MARYLAND - Damage light to medium throughout southern area. (U. Md., Ent. Dept.).

GREEN PEACH APHID (Myzus persicae) - VIRGINIA - Noneconomic in Pittsylvania County, probably due to high temperatures, predators, and disease. (Dominick). Light to moderate in Dinwiddie County. (Allen). MARYLAND - Remains light to medium; early tobacco being cut. (U. Md., Ent. Dept.).

SUGARBEETS

BEEET WEBWORM (Loxostege sticticalis) - KANSAS - Numbers and damage light in Grant County. (Brooks). WYOMING - Larvae averaged 2 per 100 sweeps in Big Horn, Park, and Washakie Counties. (Parshall).

NOCTUID MOTHS - COLORADO - Spodoptera exigua and Ceramica picta larvae damaged fields in some areas of lower Arkansas Valley. (Schweissing).

SAY STINK BUG (Pitedia sayi) - ARIZONA - Averaged 20 per 100 sweeps in 80 acres at Bonita, Cochise County (Ariz. Coop. Sur.).

LYGUS BUGS (Lygus spp.) - WYOMING - Adults and nymphs ranged 4-26 (average 10) per 100 sweeps in Big Horn, Park, and Washakie Counties. (Parshall).

MISCELLANEOUS FIELD CROPS

SUNFLOWER MOTH (Homoeosoma electellum) - NORTH DAKOTA - Larvae of this species and Phalonia hospes averaged 2-3 per head in 50 percent of heads in sunflower field near Hunter, Cass County. (Frye, Lana). Counts per 100 heads ranged up to 160 (average 32) in Pembina County and up to 216 (average 58) in Grand Forks County; H. electellum dominant. (Kaatz).

SUNFLOWER BEETLE (Zygogramma exclamationis) - NORTH DAKOTA - Larvae per 100 heads on sunflower ranged 32-120 (average 60) in Pembina County and 0-16 (average 8) in Grand Forks County. Adults averaged less than 1 per 100 heads in same fields. (Kaatz).

POTATOES, TOMATOES, PEPPERS

EUROPEAN CORN BORER (Ostrinia nubilalis) - NEW YORK - Moths emerged from potato stalks in abandoned field in Hudson Valley. (N.Y. Wkly. Rpt., Aug. 5). NEW JERSEY - Damage light in Cumberland County pepper field. (Ins.-Dis. Newsltr.). MARYLAND - Heavy in 1.5-acre potato planting near Fairland, Prince Georges County. (U. Md., Ent. Dept.). MICHIGAN - Adults increasing at Lenawee County blacklight station; peak emergence expected next 7 days. Some egg laying; will increase next 2 weeks. Warm, moist weather will accelerate emergence. (Janes, Aug. 5).

CABBAGE LOOPER (Trichoplusia ni) - WISCONSIN - Second instars to pupae, probably this species, up to 1 per plant on potatoes in Portage County; damage less in Waushara County. (Wis. Ins. Sur.). COLORADO - Larvae 0-10 per 100 sweeps on tomatoes in Pueblo, Otero, and Prowers Counties. (Schweissing).

TOMATO FRUITWORM (Heliothis zea) - KANSAS - Very light in commercial tomato plantings in southwest area. (Brooks).

Potato Aphids in Maine - Aphis nasturtii, Myzus persicae, Macrosiphum euphorbiae, and Acyrtosiphon solani increased 2-3 times on untreated potatoes during continued dry weather in Presque Isle district; averaged less than 2 per plant (3 leaves). Continue very light on untreated late-planted potatoes in Houlton and Lee districts; numerous in some early planted fields. M. euphorbiae and A. nasturtii predominant followed by M. persicae and A. solani. (Shands et al.).

GREEN PEACH APHID (Myzus persicae) - RHODE ISLAND - Mostly alates on potatoes in Washington County. (Field). WISCONSIN - Colonies begun to increase on Waushara County peppers. (Wis. Ins. Sur.).

POTATO APHID (Macrosiphum euphorbiae) - WISCONSIN - Not serious on potatoes in Portage County; controls required earlier in commercial potato field in Marquette County. (Wis. Ins. Sur.).

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - MAINE - Few adults in untreated potato field near Houlton. (Shands et al.). RHODE ISLAND - Remains problem in poorly sprayed potato fields in Washington County. (Kerr). COLORADO - Larvae 0-6 per potato plant in Weld County; damage heavy in some fields. (Johnson).

PEPPER MAGGOT (Zonosemata electa) - NEW JERSEY - Total of 140 adults trapped on 4 stickyboards at Cedarville August 1-7. (Ins.-Dis. Newsltr.).

BEANS AND PEAS

MEXICAN BEAN BEETLE (Epilachna varivestis) - MAINE - Found in scattered localities; numbers and damage serious on canning beans in Fryeburg area. Damage so severe as to decrease production in one large planting. Damage slight to negligible in other plantings although numbers increasing and more active.

(Boulanger, Aug. 6). MARYLAND - Continued heavy on unsprayed snap and bush lima beans in all sections. (U. Md., Ent. Dept.). COLORADO - Adults spotty but general (0-10 per plant) in untreated bean fields in Pueblo and Otero Counties. (Schweissing).

CABBAGE LOOPER (Trichoplusia ni) - WISCONSIN - Few bean fields treated for probably this species in Portage County; damage less in Waushara County. (Wis. Ins. Sur.).

BEAN APHID (Aphis fabae) - MARYLAND - Injury moderate on 20 percent of 5-acre bush lima bean planting near Crumpton, Queen Annes County. (U. Md., Ent. Dept.).

TARNISHED PLANT BUG (Lygus lineolaris) - NEW JERSEY - Buildup continues on beans in southern counties. (Ins.-Dis. Newsltr.).

COLE CROPS

CABBAGE LOOPER (Trichoplusia ni) - MICHIGAN - Favored by past and present warm temperatures. Largest increase at Montcalm County blacklight station; usually about 3 per week, now 9. (Janes, Aug. 5). NEW JERSEY - Adults increased in blacklight traps past week. (Ins.-Dis. Newsltr.).

IMPORTED CABBAGEWORM (Pieris rapae) - CALIFORNIA - Larvae medium on kale in Valley Ford and broccoli in Bodega, Sonoma County; very damaging to most cole crops in 1968. (Cal. Coop. Rpt.).

CUCURBITS

MELON APHID (Aphis gossypii) - MARYLAND - Continued heavy on cucurbits on Eastern Shore. (U. Md., Ent. Dept.). ALABAMA - Medium to heavy on 25 acres of water-melons in Coosa County; controls applied. (Walls, Bagby).

SQUASH BUG (Anasa tristis) - MARYLAND - Damage heavy on garden squash in Prince Georges and Anne Arundel Counties. (U. Md., Ent. Dept.). OKLAHOMA - Heavy on several cucurbits in Payne County gardens. (Okla. Coop. Sur.).

SQUASH VINE BORER (Melittia cucurbitae) - MARYLAND - Heavy killing in garden plantings statewide. (U. Md., Ent. Dept.).

SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) - OKLAHOMA - Heavy, damaged Payne County cantaloups. (Okla. Coop. Sur.).

GENERAL VEGETABLES

ONION MAGGOT (Hylemya antiqua) - CALIFORNIA - Larvae, probably this species, heavy on onion bulbs in Sebastopol, Sonoma County. (Cal. Coop. Rpt.).

SPINACH LEAF MINER (Pegomya hyoscyami) - MAINE - Numbers and damage moderate on table beets in Jonesboro area. (Boulanger, Aug. 6).

ONION THRIPS (Thrips tabaci) - COLORADO - Up to 10 per plant on onions in north-eastern area; up to 100 per plant in Arkansas Valley. (Johnson, Schweissing).

SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) - DELAWARE - Adults increased on vegetables in New Castle County. (Burbutis).

6. Used mechanized soil-moving equipment.

Used mechanized soil-moving equipment is exempt ** if cleaned and repainted.

- * Information as to designated laboratories may be obtained from an inspector
- ** Exempt if not exposed to infestation after cleaning or other prescribed handling.



RESTRICTIONS ARE IMPOSED ON MOVEMENT OF REGULATED ARTICLES FROM A REGULATED AREA AS FOLLOWS :

1. RED INTO OR THROUGH WHITE OR BLUE.
2. BLUE INTO ANY OTHER AREA WHEN REQUIRED BY APPROPRIATE STATE QUARANTINE OR BY AN AUTHORIZED INSPECTOR.

CONSULT YOUR STATE OR FEDERAL PLANT PEST CONTROL INSPECTOR OR YOUR COUNTY AGENT FOR ASSISTANCE REGARDING EXACT AREAS UNDER REGULATION AND REQUIREMENTS FOR MOVING REGULATED ARTICLES.

Revised Jan. 15, 1968

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
PLANT PEST CONTROL DIVISION
COOPERATING WITH AFFECTED STATES

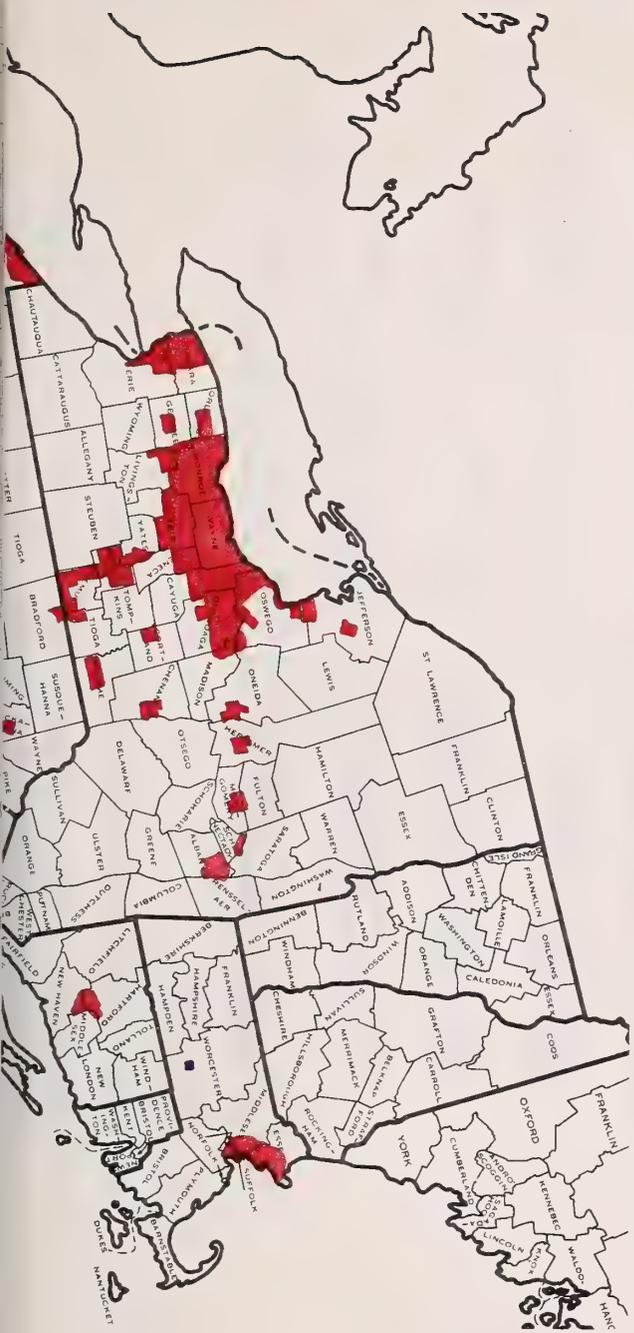
SEE REVERSE SIDE FOR REQUIREMENTS CONCERNING CERTIFICATION OF REGULATED ARTICLES.

EUROPEAN CHAFER QUARANTINE

COUNTIES ENTIRELY COLORED ARE COMPLETELY REGULATED; COUNTIES PARTIALLY COLORED ARE PARTIALLY REGULATED.

STATE AND FEDERAL REGULATIONS. (ERADICATION NOT IN PROGRESS OR PLANNED)

STATE REGULATIONS ONLY. (SUPPRESSIVE TREATMENTS IN PROGRESS OR PLANNED)

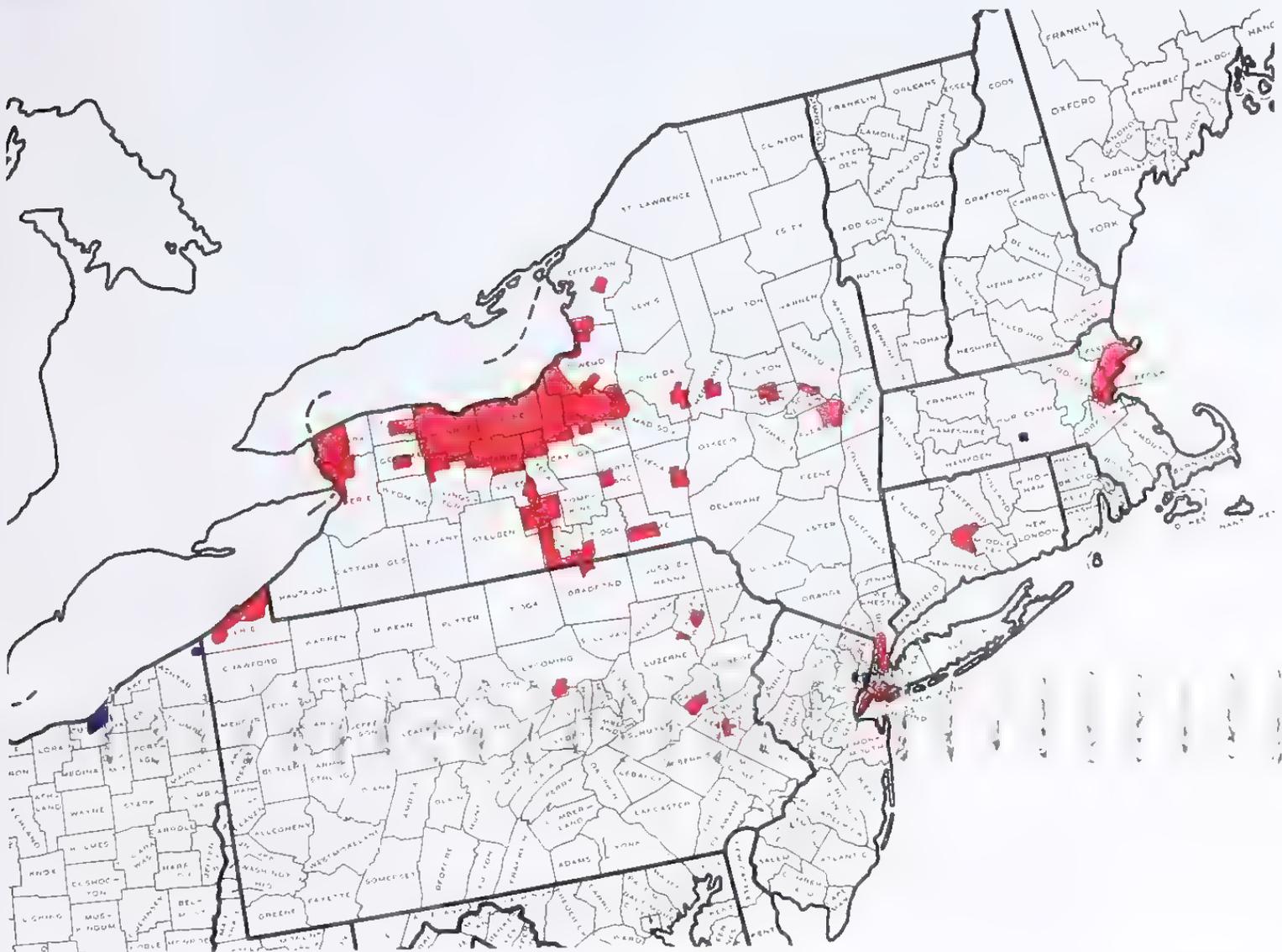


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SEE REVERSE SIDE FOR REQUIREMENTS CONCERNING CERTIFICATION OF REGULATED ARTICLES.

THE FOLLOWING CROPS OR ARTICLES MUST BE MOVED UNDER CERTIFICATE OR PERMIT YEAR-ROUND EXCEPT AS INDICATED

1. Soil, compost, decomposed manure, humus, muck, and peat, separately or with other things.

Soil samples shipped to Corps of Engineers Soil Laboratories are exempt.

Soil samples of one pound or less shipped to designated laboratories * are exempt.

Compost, decomposed manure, humus, and peat are exempt ** if dehydrated, ground, pulverized, or compressed.

2. Plants with roots, except soil-free aquatic plants, moss, and Lycopodium (clubmoss or ground-pine or running pine).
3. Grass sod.
4. Plant crowns and roots for propagation.
5. True bulbs, corms, rhizomes, and tubers of ornamental plants when freshly harvested or uncured.

True bulbs, corms, rhizomes, and tubers (other than clumps of dahlia tubers) of ornamental plants are exempt ** if free of soil.

6. Used mechanized soil-moving equipment.

Used mechanized soil-moving equipment is exempt ** if cleaned and repainted.

* Information as to designated laboratories may be obtained from an inspector

** Exempt if not exposed to infestation after cleaning or other prescribed handling.

THE FOLLOWING CROPS OR ARTICLES MUST BE MOVED UNDER CERTIFICATE
OR PERMIT YEAR-ROUND EXCEPT AS INDICATED

1. Soil, compost, decomposed manure, humus, muck, and peat, separately or with other things.

Soil samples shipped to Corps of Engineers Soil Laboratories are exempt.

Soil samples of one pound or less shipped to designated laboratories * are exempt.

Compost, decomposed manure, humus, and peat are exempt ** if dehydrated, ground, pulverized, or compressed.

2. Plants with roots, except soil-free aquatic plants, moss, and Lycopodium (clubmoss or ground-pine or running pine).
3. Grass sod.
4. Plant crowns and roots for propagation.
5. True bulbs, corms, rhizomes, and tubers of ornamental plants when freshly harvested or uncured.

and tubers (other than clumps

DECIDUOUS FRUITS AND NUTS

APPLE MAGGOT (Rhagoletis pomonella) - MAINE - Adult emergence apparently peaked July 29; male:female ratio rapidly approached 1:1 in subsequent 5 days. Emergence heavy and sustained in "seeded" cages at experimental farm in Monmouth. (Boulanger). NEW JERSEY - Adults trapped August 1-7 by county: Gloucester, 33 on 3 stickyboards; Burlington, 27 on 2 stickyboards; Mercer, 59 on 2 stickyboards. (Ins.-Dis. Newsltr.). MICHIGAN - Adult emergence expected to peak in southwest area orchards this week; peak expected in most northern stations next 2 weeks. (Janes, Aug. 5). INDIANA - Adults on bait boards decreased from 123 to 19 at Vincennes. (Dolphin, Aug. 5). WISCONSIN - Highest numbers caught July 31 to August 7 at Baraboo (98) in Sauk County. (Wis. Ins. Sur.). MINNESOTA - Adults light and still active in Lake Minnetonka areas and at Preston; controls must continue in commercial orchards. (Minn. Ins. Rpt.).

TEPHRITID FLIES (Rhagoletis spp.) - MICHIGAN - Adults infested 4 properties in Benzie County, 3 in Manistee County, 2 in Leelanau County, and 1 each on Oceana and Grand Traverse Counties week ending July 26. Larvae in 5 of 8 pint tart cherry samples July 22 in 40-year-old 30-acre block containing many replant trees in Jackson County. (Hanna). CALIFORNIA - R. indifferens larvae heavy in dooryard cherries locally in Happy Camp, Siskiyou County. This section in treatment area. (Cal. Coop. Rpt.).

CODLING MOTH (Carpocapsa pomonella) - INDIANA - Adult activity moderate, 38 males taken in virgin female traps at Vincennes. Most instars present; new entries still found. (Dolphin, Aug. 5). MICHIGAN - Second-brood emergence begun in Oceana County; emerging in southern area past 10-14 days. (Janes, Aug. 5).

ORIENTAL FRUIT MOTH (Grapholitha molesta) - ALABAMA - Recent generation cut branch tips from many peach trees in Lee County. (McQueen). OREGON - No moths taken in traps since treatment of infested orchards in the Medford area, Jackson County. (Larson).

PEACH TWIG BORER (Anarsia lineatella) - WASHINGTON - First of second generation found July 26 in peaches at Rick Island, Douglas County. (Anthon).

LESSER PEACH TREE BORER (Synanthedon pictipes) - INDIANA - Male captures increased from 136 to 216 at Vincennes; second generation emergence begun. (Dolphin, Aug. 5)

TORTRICID MOTHS (Argyrotaenia spp.) - INDIANA - A. velutinana male captures continue to increase at Vincennes orchard; 655 males taken in 30 sex lure traps (third adult flight) compared with 525 previous period. (Dolphin, Aug. 5). OREGON - A. citrana larvae caused much damage to apples near Salem, Marion County. (Stephenson). Current adult generation about to emerge. (Westcott).

APPLE APHID (Aphis pomi) - MAINE - Winged migrants moderate to heavy in many areas; young colonies developing on terminal growth. Reinfested previously treated terminal growth in Monmouth area July 30-31. (Boulanger). RHODE ISLAND - Heavy on leaves of apple sucker growth in Providence County. (Field).

BLACK PEACH APHID (Brachycaudus persicaecola) - CALIFORNIA - Nymphs and adults heavy on peach trees at Carlsbad, San Diego County. (Cal. Coop. Rpt.).

PEAR PSYLLA (Psylla pyricola) - MICHIGAN - Up to 200 eggs per pear leaf; severe damage may occur on pears unless controls applied. (Wooley, Aug. 5).

SAN JOSE SCALE (Aspidiotus perniciosus) - WASHINGTON - Second generation in "white cap" stage on unsprayed pears at Yakima, Yakima County, July 29. Crawler mortality heavy due to high temperatures. (Johnson).

GREEN JUNE BEETLE (Cotinis nitida) - OKLAHOMA - Damaged ripening peaches in Payne County. (Okla. Coop. Sur.).

PEAR-SLUG (Caliroa cerasi) - CALIFORNIA - Larvae heavy in pear foliage in Bodega, Sonoma County. (Cal. Coop. Rpt.). COLORADO - Scaling surface of leaves on cherry and plum trees in Weld County. (Rothman).

EUROPEAN APPLE SAWFLY (Hoplocampa testudinea) - VERMONT - Damaged apples at Shoreham. (MacCollom).

EUROPEAN RED MITE (Panonychus ulmi) - MAINE - Continues to increase in orchard where controls deteriorating. (Boulanger, Aug. 6). NEW JERSEY - This species and/or Tetranychus urticae generally light in most apple orchards in Atlantic, Burlington, Camden, Gloucester, and Cumberland Counties. (Ins.-Dis. Newsltr.). INDIANA - Heavy in local commercial apple orchards at Vincennes; required 1-4 treatments as of August 5. (Dolphin). WASHINGTON - Severe on 10 acres of peaches in lower Yakima Valley, Yakima County, July 21. (Anthon).

SPIDER MITES (Tetranychus spp.) - MICHIGAN - Appearing in some Oceana County orchards. (Janes, Aug. 5). MAINE - T. urticae more abundant than normal in many orchards; damage near economic level in some areas. Controls generally effective in commercial orchards. (Boulanger, Aug. 6). WASHINGTON - T. mcdanieli severe on cherries July 25 at Rock Island, Douglas County. (Anthon).

MITES - NEW YORK - Continue major orchard pest in Ulster County. (N.Y. Wkly. Rpt., Aug. 5). MAINE - Aculus schlechtendali light to moderate on apples in several areas; injury light although numerous enough to cause damage. (Boulanger, Aug. 6).

WALNUT CATERPILLAR (Datana integerrima) - NEW YORK - Major problem on Suffolk County walnuts. (N.Y. Wkly. Rpt.). OHIO - Defoliation severe on numerous walnut trees, up to about 80 percent of leaves consumed in Erie County. Larvae averaged 1+ inch in length and slightly over half grown. Partially defoliated walnut trees also common in central area. (Rose). WISCONSIN - Becoming third instars August 6 in southern Dane County; defoliation apparent. (Wis. Ins. Sur.). NEBRASKA - First to third instars moderate to heavy on walnut trees in eastern area. (Keith).

PECAN NUT CASEBEARER (Acrobasis caryae) - ALABAMA - "Drop" of small pecans light to medium in most counties, especially in southern and central areas. (Bagby et al.).

WALNUT HUSK FLY (Rhagoletis completa) - OREGON - First adult of season taken in traps at Portland August 1. (Anderson).

PECAN LEAFROLL MITE (Aceria caryae) - OKLAHOMA - Curling pecan leaves in Tulsa, Lincoln, and Okmulgee Counties. (Okla. Coop. Sur.).

CITRUS

Citrus Insect Situation in Florida - End of July - CITRUS RUST MITE (Phyllocoptruta oleivora) infested 78 percent of groves (norm 60 percent); 58 percent economic (norm 41 percent). Much above normal and in very high range. Further increase expected until mid-August followed by decrease extending to mid-September. Highest districts west, south, and central; east has high count on fruit but not on leaves. TEXAS CITRUS MITE (Eutetranychus banksi) infested 73 percent of groves (norm 68 percent); 49 percent economic (norm 42 percent). Will drop from high range by end of August and continue to decrease. Will be slightly above normal level for August. Highest districts west, central, and south. CITRUS RED MITE (Panonychus citri) infested 52 percent of groves (norm 65 percent); 27 percent economic (norm 37 percent). Did not attain high range as reported in error at mid-July. Remained at moderate level, much below normal for July. Decrease to low level expected. Highest district central. BLACK SCALE (Saissetia oleae) infested 93 percent of groves (norm 79 percent); 79 percent economic (norm 61 percent). Has started to decrease from mid-July peak which was much above normal and at very high level. Greater decrease expected after mid-August. All districts still high. GLOVER SCALE (Lepidosaphes gloverii) infested 63 percent of groves (norm 80 percent); 4 percent economic (norm 32 percent). PURPLE SCALE (L. beckii) infested 49 percent of groves (norm 71 percent); none economic (norm 8 percent). CHAFF SCALE (Parlatoria pergandii) infested 23 percent of groves (norm 66 percent); none economic (norm 7 percent). YELLOW SCALE (Aonidiella citrina) infested 67 percent of groves (norm 62 percent); none economic (norm 10 percent). An ARMORED SCALE (Unaspis citri) infested 18 percent of groves; 4 percent economic. Four of 5 above armored scales below normal abundance. Moderate to heavy infestations of L. gloverii and/or U. citri will occur in scattered groves. Little change in scale situation expected in August. MEALYBUGS infested 81 percent of groves; 26 percent economic. Slightly above normal for July. Gradual decrease expected. WHITEFLIES infested 56 percent of groves; 31 percent economic. Population moderate and above July normal. Decrease expected. (W.A. Simanton (Citrus Expt. Sta., Lake Alfred)).

CALIFORNIA RED SCALE (Aonidiella aurantii) - FLORIDA - Found on Hamlin orange at Zolfo Springs, Hardee County, May 12 by R.D. Williams and V.G. Brown. This is a new Florida Department of Plant Industry county record. (Fla. Coop. Sur.).

CITRUS RUST MITE (Phyllocoptruta oleivora) - CALIFORNIA - Heavy, damaged grapefruit trees in Spring Valley, San Diego County. (Cal. Coop. Rpt.).

SMALL FRUITS

BRAMBLEBERRY LEAFHOPPER (Macropsis fuscula (Zetterstedt)) - WASHINGTON - Heavy infestation found on Rubus sp. at two locations on McChord Air Force Base, Pierce County, July 24, 1968. Collected and determined by S. Nakahara, Plant Quarantine Division, ARS. Confirmed by J.P. Kramer. This is a new United States record. An outbreak of this leafhopper was discovered on loganberry on Lulu Island, British Columbia, in 1952. Heavy infestations have occurred in the Lulu Island area since 1952 causing considerable damage to various brambleberries through feeding on flowers and fruit and through heavy honeydew deposits. Infestations have been difficult to control. This insect assumed a more important economic status when it was shown to be the vector of the destructive Rubus stunt virus of Europe in 1953. This virus is not known to occur in North America. M. fuscula infests Rubus spp. and occurs in several countries of Europe as well as in British Columbia, Canada. The insect overwinters in the egg stage in canes of wild and cultivated Rubus spp. Eggs hatch in late May in British Columbia, about the time loganberries begin to blossom. Nymphs are numerous by mid-June. There are 5 instars, each stage requiring about 10 days. Adults appear in midsummer. There is apparently only one generation a year. In the Netherlands, the virus is spread from old to new berry plantations by adults. For additional details see CEIR 9 (12): 209-210. (PPC).

A GEOMETRID MOTH (Coryphista meadii) - CALIFORNIA - Larvae medium; damaged blueberry leaves at Santa Rosa, Sonoma County. (Cal. Coop. Rpt.).

RASPBERRY CANE MAGGOT (Pegomya rubivora) - MAINE - Numbers and damage moderate at East Madison; first report of species in several years. (Boulanger, Aug. 6).

GRAPE ERINEUM MITE (Eriophyes vitis) - CALIFORNIA - Medium on grape leaves at Sonoma, Sonoma County. (Cal. Coop. Rpt.).

ORNAMENTALS

ARBORVITAE LEAF MINER (Argyresthia thuiella) - MAINE - Substantial injury above 1967 levels in Cumberland County. (Boulanger, Aug. 6).

LILAC LEAF MINER (Gracillaria syringella) - MAINE - Injury level above that of 1967 in Cumberland County. (Boulanger, Aug. 6).

STRAWBERRY ROOT WEEVIL (Brachyrhinus ovatus) - OHIO - Heavy in block of 500 arborvitae plants in Lucas County; controls recommended. (Jones).

YELLOW SCALE (Aonidiella citrina) - FLORIDA - Found on bird-of-paradise at St. Cloud, Osceola County, June 11 for a new Florida Department of Plant Industry host record. (Fla. Coop. Sur.).

A SLUG (Arion ater) - WASHINGTON - Severe on property at Pullman, Whitman County; apparently present past 3 years. This is a new county record. First record of establishment east of Cascade Mountains in State. Damage to ornamentals, particularly petunias, expected. (Harwood, Getzin, Aug. 2).

FOREST AND SHADE TREES

DOUGLAS-FIR TWIG WEEVIL (Cylindrocopturus furnissi) - WASHINGTON - Mostly adults severely damaged Christmas tree farms August 1 at Shelton, Mason County; killed trees under 2.5 feet and leaders and twigs on commercial size trees. Progressively heavier in recent years. (Saunders).

WHITE-PINE WEEVIL (Pissodes strobi) - OHIO - Pupae in wilted terminals in damaged natural stand of white pine in Lake County. Wilted terminals on leaders of about 25 percent of trees; typical symptoms on tree leaders up to 50 feet above ground. (Campbell).

FLATHEADED FIR BORER (Melanophila drummondi) - OREGON - Adults extremely numerous at various localities throughout State (from sea level to 7,000+ feet) last 3 weeks. Most abundant on Douglas-fir logs around lumberyards and cleared areas. (Westcott).

PINE COLASPIS (Colaspis pini) - MISSISSIPPI - Heavily damaged needles of young pines in approximately 20 acres of Montgomery County. (Dinkins). OKLAHOMA - Averaged 5 per tree on 5-foot pines in McCurtain County. (Okla. Coop. Sur.).

CONIFER SAWFLIES (Neodiprion spp.) - MINNESOTA - N. lecontei mostly in second instar with some third in northern Pine County. Survey negative on State Highway 23 from Sandstone to Duluth and on U.S. Highway 61 from Hinckley to Duluth. (Minn. Ins. Rpt.). WISCONSIN - Nearly full-grown N. pinetum larvae common on white pine 8 feet tall in Sheboygan County August 1. (Wis. Ins. Sur.).

NANTUCKET PINE TIP MOTH (Rhyacionia frustrana) - OKLAHOMA - Third-generation adults emerging from pines checked in McCurtain County. (Okla. Coop. Sur.).

ZIMMERMAN PINE MOTH (Dioryctria zimmermani) - MINNESOTA - In spruce at Lake City, Wabasha County. Emergence of moths already begun. (Minn. Ins. Rpt.).

COOLEY SPRUCE GALL APHID (Adelges cooleyi) - IOWA - On blue spruce at Maquoketa, Jackson County, and at Dubuque, Dubuque County. Problem appears widespread. Emerged July 17. (Iowa Ins. Inf.).

PINE NEEDLE SCALE (Phenacaspis pinifoliae) - NEW MEXICO - Light to heavy, damaged mugho pine at Albuquerque, Bernalillo County; killed some very heavily infested branches. (Heninger). OHIO - Hatch in progress; first-generation crawlers dispersing on Scotch pine in Lake County August 6. (Campbell).

AN APHID (Eulachnus agilis) - OHIO - Numbers on Scotch pine much lower than in 1967 in northeastern area. (Campbell).

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - OREGON - Newly emerged adults from dead elm at Lakeview, Lake County; larvae and pupae in bark. Entire trunk riddled with emergence holes. This is a new county record. (Goeden, Westcott).

ASIATIC OAK WEEVIL (Cyrtepidomus castaneus) - ALABAMA - Adults heavy around buildings in localized area of Birmingham, Jefferson County; no damage reported. Previously reported from Cleburne and Lee Counties. Jefferson County is a new county record. (Granberry).

ELM LEAF BEETLE (Pyrrhalta luteola) - ARIZONA - Heavy on elms at Sedona, Coconino County. (Rover). COLORADO - Larvae feeding heavily on Chinese elms in Weld County. (Rothman). MAINE - Heavy with damage at Fryeburg, Oxford County. (Boulanger, Aug. 6). RHODE ISLAND - Heavy; defoliated Washington County elms. (Jackson, Field).

ALDER FLEA BEETLE (Altica ambiens) - WASHINGTON - Heavier than usual in 1968; serious damage July 29 near Davenport, Lincoln County. (Brown). OREGON - Adults, but mostly larvae feeding heavily on alder at various locations along crest of Cascade Mountains. (Goeden, Westcott).

A LEAF BEETLE (Phytodecta pallida) - MINNESOTA - Larvae and adults numerous on poplar and willow in nurseries at Minneapolis, St. Paul, and further south. (Minn. Ins. Rpt.).

A BUPRESTID BEETLE (Brachys ovatus) - MAINE - Moderate to heavy damage to Cumberland County oaks; problem common in that area. (Boulanger, Aug. 6).

CERAMBYCID BEETLES - NEW YORK - Elaphidionoides villosus major problem on Suffolk County oaks. (N.Y. Wkly. Rpt., Aug. 5). VERMONT - E. villosus caused heavy drop of twigs on ornamental oaks at Burlington, Chittenden County. (MacCollom). MAINE - Megacyllene robiniae damage common in Cumberland County; serious in large plantings of young and older trees at Cumberland. (Boulanger, Aug. 6).

MIMOSA WEBWORM (Homadaula anisocentra) - OKLAHOMA - Damaged 25 percent of leaves on a tree at Stillwater, Payne County, for a new county record. Leaf damage up to 5 percent in several locations at Chouteau, Mayes County. (Okla. Coop. Sur.). MISSOURI - Larvae heavy in southeast area. (Munson). IOWA - Found on Moraine and Sunburst locust at Atlantic, Cass County, for a new county record. (Iowa Ins. Sur.). INDIANA - Damage to honeylocust more widespread than for several years statewide. Heaviest damage, up to 60 percent browned foliage, in southern areas. (Huber). NEW JERSEY - Common on mimosa in central and southern counties. (Ins.-Dis. Newsltr.).

FALL WEBWORM (Hyphantria cunea) - OHIO - Webbing more evident on roadside wild cherry in central area as larval feeding progressed July 28. (Hanson). Damage and webbing widespread on various deciduous trees as populations increase. (Rose). ILLINOIS - Defoliated certain trees, especially birch, ash, and elm. (Ins. Sur. Bull.). WISCONSIN - Second instars common on trees and shrubs in south-central areas from Rock and Walworth Counties to southern Marquette County. (Wis. Ins. Sur.).

BAGWORM (Thyridopteryx ephemeraeformis) - MARYLAND - Continued to defoliate in all areas. Heavy numbers defoliated several large clumps of willow, locust, and sweetgum along Baltimore and Washington Parkway between Laurel and Greenbelt in Prince Georges County. Continues most common pest of ornamentals. (U. Md., Ent. Dept.).

WHITE-MARKED TUSSOCK MOTH (Hemerocampa leucostigma) - MINNESOTA - Larvae damaged linden trees at Minneapolis and St. Paul; readily controlled with various insecticides. Late reports indicate cocoons fairly common on bark of elms at south Minneapolis. (Minn. Ins. Rpt.).

CATALPA SPHINX (Ceratonia catalpae) - OHIO - Early instars beginning to feed on catalpa foliage in Delaware County (Hanson) and probably elsewhere in State (Rose).

ELM LEAF APHID (Myzocallis ulmifolii) - OKLAHOMA - Averaged 20 per leaf on elm checked in Payne County; moderate to heavy in Cleveland and Blaine Counties. (Okla. Coop. Sur.).

MAN AND ANIMALS

MOSQUITOES - NEVADA - Culex pipiens quinquefasciatus and C. tarsalis larvae light to heavy at Las Vegas, Clark County. (Hicks). UTAH - Very troublesome in many farm areas and communities of western and eastern Millard County and in Manti and Ephraim areas of Sanpete County. (Knowlton). MINNESOTA - Continued high in light traps July 27 to August 2 with over 28,000 females; about 87 percent Aedes vexans. Mansonia perturbans declined from high of previous 2 weeks. A. vexans 80+ percent of total bite collections. Scattered but generally heavy brood resulted from heavy August 6 rains; adults will emerge about August 15-16. Densities especially high in this brood due to very large numbers of eggs laid by females of previous broods. Hot, humid nights with little wind made annoyance especially acute. (Minn. Ins. Rpt.). WISCONSIN - Hot weather accelerated activity and development. With increased outdoor activities of humans, biting severe except in few areas in central and northern counties. A. vexans no longer dominant. A. sticticus as common as A. vexans; A. sticticus predominant in some areas. Psorophora ciliata in black-light trap near Mazomanie. Annoyance moderate to severe to cattle in many areas. (Wis. Ins. Sur.). MICHIGAN - Continue very annoying; decreasing due to drier weather. (Janes, Aug. 5). CONNECTICUT - Most irritating pests of past few weeks. (Savos, July 31). RHODE ISLAND - Culex spp. and Aedes spp. numerous throughout State. (Field). MAINE - Very troublesome in many areas this year; much annoyance during July from M. perturbans which has been especially abundant. (Boulanger).

SCREW-WORM (Cochliomyia hominivorax) - Total of 163 cases reported in U.S. July 28 to August 3 as follows: TEXAS - Atascosa 18, Bee 2, Bexar 1, Brewster 3, Brooks 26, Coke 1, Concho 1, De Witt 1, Duval 1, Edwards 2, Frio 1, Gonzales 2, Guadalupe 1, Hidalgo 1, Irion 1, Jim Hogg 2, Jim Wells 3, Karnes 8, Kenedy 11, Kinney 1, Kleberg 9, La Salle 1, Live Oak 7, Mason 2, McMullen 1, Medina 2, Nueces 1, Pecos 10, Refugio 1, San Patricio 1, Starr 8, Terrell 9, Uvalde 1, Val Verde 4, Victoria 1, Webb 1, Willacy 4, Wilson 5; ARIZONA - Greenlee 2, Maricopa 1, Mohave 1, Pima 1, Pinal 1; NEW MEXICO - Hidalgo 2. Total of 452 cases reported in portion of Barrier Zone in Republic of Mexico as follows: Territorio sur de Baja California 48, Sonora 79, Chihuahua 65, Coahuila 131, Nuevo Leon 70, Tamaulipas 59. Total of 70 cases reported in Mexico south of Barrier Zone. Barrier Zone is area where eradication operation underway to prevent establishment of self-sustaining population in U.S. Sterile screw-worm flies released: Texas 52,220,000; New Mexico 1,580,000; Arizona 8,920,000; California 100,000; Mexico 33,908,000. (Anim. Health Div.).

FACE FLY (Musca autumnalis) - OREGON - Very light, averaged less than one per face, near Dairy and Klamath Marsh; up to 6 per face near Fort Klamath, Klamath County. This is a new county record. (Goeden). UTAH - Collected July 12 at Payson, Utah County, for a new county record. Det. by W.J. Hanson. (Knowlton). SOUTH DAKOTA -

Remained low, 0-4 per face, on untreated herds surveyed in northern Yankton, Clay, Hutchinson, Turner, and Lincoln Counties; higher, 0-6 per face, on untreated cattle south of Geddes, Charles Mix County. (Balsbaugh et al.). NORTH DAKOTA - Up to 4 (average less than one) per face on beef herds in Nelson, Ramsey, McHenry, and Rolette Counties for new county records. Up to 30 (average 10) per face on beef herds in Richland and Ransom Counties. Economic only in sandhills area of Richland and Ransom Counties in 1968. (Brandvik). MISSOURI - Averaged 5.2, 3.8, 13.8, 2.3, 12.1, 4.7, and 1.6 per cow (10-cow counts) on 7 herds in central area. (Thomas). ILLINOIS - Average per face by district: Southeast 7, west 5, southwest 18, northwest 9, and west-southwest 40. (Ill. Ins. Rpt.). INDIANA - Annoyance moderate to severe on pastured cattle throughout State; favored by recent heavy showers and humid conditions. (Huber). WISCONSIN - Continued moderately annoying in all areas. (Wis. Ins. Sur.). MICHIGAN - Annoying southern area cattle. (Shinkle, Aug. 5). VERMONT - Heavy throughout State. (MacCollom). MAINE - Increasing with much annoyance to dairy cattle; up to 20 per face in southern area July 29. (Boulanger).

HOUSE FLY (Musca domestica) - VERMONT - Heavy throughout State. (MacCollom). WISCONSIN - Numbers and activity increased noticeably. Becoming household pest as far north as Vilas County. Population varies greatly in cattle barns depending on control, but general increase apparent. (Wis. Ins. Sur.).

HORN FLY (Haematobia irritans) - MISSISSIPPI - Average per head by county: Jefferson 10, Hinds 20, and Yazoo 1,500 (untreated). (Dinkins). OKLAHOMA - Averaged 225 per head on cows and yearlings and 500 per head on bulls in Payne and Noble Counties. Heavy on livestock in Mayes and Ottawa Counties; moderate in Craig and Cleveland Counties. (Okla. Coop. Sur.). MISSOURI - Averaged 410.0, 355.0, 387.5, 143.5, 399.0, 0.5, and 232.5 per cow (10-cow counts) on 7 central area herds. (Thomas). ILLINOIS - Average per head by district: Southeast 406, west 72, southwest 152, northwest 205, and west-southwest 185. (Ill. Ins. Rpt.). WISCONSIN - Continued moderately annoying in all areas. (Wis. Ins. Sur.). SOUTH DAKOTA - Heavy, 150-350 per side, on cattle in northern Yankton and Clay Counties. (Jones, Kantack, Aug. 2). Currently moderate to high on untreated cattle herd south of Geddes, Charles Mix County; 20-700 (average 175) per side on cows. Averaged 250 per side on cattle checked in Hutchinson, Turner, and Lincoln Counties. (Alleman, Kantack). NEBRASKA - Ranged 300-350 per side on 4 herds pastured near Lincoln, Lancaster County. (Campbell). UTAH - Ranged 35-200 per head in some herds near Parowan and Paragonah and up Parowan Canyon, Iron County. (Knowlton, Aug. 1).

STABLE FLY (Stomoxys calcitrans) - INDIANA - Annoyance moderate to severe on pastured cattle throughout State; favored by recent heavy showers and humid conditions. (Huber). ILLINOIS - Average per head by district: Southeast 4, west 3, southwest 22, northwest 0, and west-southwest 34. (Ill. Ins. Rpt.). WISCONSIN - Numerous and annoying cattle severely in Calumet, Columbia, Clark, and Jefferson Counties; annoyance moderate in most other sections. (Wis. Ins. Sur.). NEBRASKA - Heavy, 25-30 per leg, on 3 dairy and 5 feedlot herds. (Campbell).

TABANID FLIES - UTAH - Troubled campers and picnikers in Cedar Canyon and in meadows near Cedar Brakes, Iron County, and Duck Creek, Kane County. Annoyed horses at Springville and Spanish Fork, Utah County, and at Centerville and Kaysville, Davis County. Chrysops sp. annoyed horses and humans at Delta Reservoir and Desert and Oasis areas of Millard County. (Knowlton, Aug. 1). OKLAHOMA - Average per head in Payne and Noble Counties: Tabanus abactor 2, T. lineola complex 3, and T. sulcifrons 0.5; T. atratus 1 per 10 head. Tabanus spp. ranged 3-10 per head in Ottawa County. Heavy in Bryan County, moderate in Craig County, and light in Mayes County. (Okla. Coop. Sur.). WISCONSIN - Chrysops spp. continued numerous near marshes and woods; numbers or biting did not increase. Annoyed cattle and humans. (Wis. Ins. Sur.). RHODE ISLAND - Many Chrysops spp. adults annoying throughout State. (Field).

SNIFE FLIES (Symphoromyia spp.) - UTAH - In Iron County: Numerous in Parowan Canyon; more numerous and annoying in meadows on range around Cedar Brakes

National Monument; much more numerous and troublesome in Cedar Canyon. (Knowlton, Aug. 1).

BROWN RECLUSE SPIDER (Loxosceles reclusa) - OKLAHOMA - Several infestations in Ottawa County homes. (Okla. Coop. Sur.).

MISCELLANEOUS WILD PLANTS

MOTTLED RUSTIC (Caradrina morpheus (Hufnagel)) - WASHINGTON - Specimens of this noctuid moth collected in light traps operated by Plant Quarantine Division, ARS; 2 specimens collected at Blaine, Whatcomb County, July 21, 1966, by C.A. Leckie and determined by S. Nakahara; total of 5 specimens collected at McChord Air Force Base, Pierce County, June 14 and 20, 1967, by D.M. Pike and determined by W.R. Baurer and S. Nakahara, respectively. Confirmed by E.L. Todd. This is a new United States record. Report not released earlier because of taxonomic questions. C. morpheus is a European species that feeds on various low plants including goosefoot, knotweed, and dandelion. This noctuid moth known to occur in eastern and western Canada. Common over most of England but occurs less frequently in the northern part and in Wales, Ireland, and Scotland. Little is known concerning economic importance. The larva is brownish or grayish brown to ochreous on the back; the central line is whitish, with broken edging of brown; there is a series of blackish arrowhead markings on each side of the central line; spiracles blackish; head dark brown and very glossy. Adult forewings pale brown; stigmata dark brown or blackish, generally distinct; hind wings whitish, tinged with smoky on the veins. Larvae feed from August through the fall. Moths fly from June to August; there may be a second flight in October. (PPC).

A WEEVIL (Cosmobaris americana) - OREGON - Adults on Chenopodium sp. in Baker County July 25. This is a new county record. (Goeden, Westcott).

STORED PRODUCTS

A POWDER-POST BEETLE (Minthea rugicollis) - VIRGINIA - Adults collected from stacks of cured Banaks lumber in Augusta County June 6, 1968. Lumber shipped from South America. Det. by T.J. Spilman. (Coffey). Previously recorded in United States from Florida and reported in CEIR 18(32):772. (PPC).

BENEFICIAL INSECTS

LADY BEETLES - WYOMING - Adults per 100 sweeps averaged 13 on alfalfa in north-central area and 6 in sugarbeet fields in Park, Big Horn, and Washakie Counties. (Parshall). ARIZONA - Rodolia cardinalis eliminated Icerya purchasi (cottony-cushion scale) from citrus grove on west side of Salt River Valley. Built up from few specimens released several weeks ago in Maricopa County. (Ariz. Coop. Sur.).

DAMSEL BUGS (Nabis spp.) - WYOMING - Adults averaged 48 per 100 sweeps on north-central area alfalfa. (Parshall). UTAH - N. alternatus unusually numerous, 2-11 per 10 sweeps, in alfalfa field at Hinckley; this and other species 5-12 per 10 sweeps in alfalfa at Sinks near Deseret, Millard County. Sprays decreased predators in many western Millard County alfalfa seed fields. (Knowlton, Aug. 1).

A BIG-EYED BUG (Geocoris punctipes) - ARKANSAS - Principal species in alfalfa on university farm; ranged 150-200 per 100 sweeps, 90+ percent nymphs. (Boyer).

GREEN LACEWINGS (Chrysopa spp.) - ARIZONA - Averaged 50 per 100 sweeps on Pinal County alfalfa. (Ariz. Coop. Sur.).

BENEFICIAL INSECTS - NEW MEXICO - Counts per 25 sweeps on alfalfa in eastern Valencia County: Lady beetles 5-10, damsel bugs 4-12, green lacewings 0-4, and syrphid flies 0-8. (Heninger).

HONEY BEE (*Apis mellifera*) - UTAH - Had to be fed following late June frost in eastern Millard County; frost damage extensive on seed alfalfa. (Knowlton, Aug. 1).

A PHYTOSEIID MITE (*Zetzellia mali*) - WASHINGTON - Averaged 5-10 per leaf on young apple trees at Moxee, Yakima County. (Johnson, Aug. 2).

FEDERAL AND STATE PLANT PROTECTION PROGRAMS

BOLL WEEVIL (*Anthonomus grandis*) - TEXAS - In High Plains area, medium to heavy with punctured squares 10-40 percent in Mitchell County outside control zone. Inside the control zone - Infestations averaged 10 percent in southeastern Garza County; punctured squares 25-30 percent in 2 fields. Detected in 25 of 35 fields in Kent County; economic in 3 fields. Infested 34 of 35 fields in Dickens County; generally increasing, damage economic in one field. Infested about half of fields surveyed in Howard County outside control zone; generally light but damage 51 percent in one field. (Almand, Aug. 6). For Boll Weevil in other areas see page 789.

CARIBBEAN FRUIT FLY (*Anastrepha suspensa*) - FLORIDA - Remains about constant with many adults trapped in central and southern areas. Guavas and mangoes most common fruits infested past week. Found on fig for a new Florida Department of Plant Industry host record. (Krieter).

GRASS BUGS - UTAH - *Labops hesperius* moderate, lightly marking grasses in meadows above 10,000 feet near Cedar Brakes, Iron County. (Knowlton, Aug. 1).

GRASSHOPPERS - NEW MEXICO - Infested 6-8 thousand acres of rangeland east of Las Vegas, San Miguel County; ranged 10-20 per square yard on about 3,000 acres. First, third, and fourth instars and adults present. (Mathews). **COLORADO** - *Melanoplus femurrubrum*, *M. differentialis*, and *M. bivittatus* heavily damaged potatoes at Gilcrest, Weld County; ranged 15-20 per square yard on borders. (Johnson). **UTAH** - Very numerous in meadows around Beaver, Beaver County; damaged some western Millard County grain fields. Control needed at Pahvant. (Knowlton, Aug. 1). **OREGON** - Up to 5 per square yard in alfalfa field near Aurora, Marion County. (Westcott). **WASHINGTON** - *M. sanguinipes* (75 percent adults) 15-20 per square yard on pasture and range at Chelan and Entiat, Chelan County. (Parkman, Aug. 2). **SOUTH DAKOTA** - Moderate, 20-25 per square yard, on roadsides and field margins in Lincoln County. *M. femurrubrum* and other *Melanoplus* spp. mostly third to fourth instar. (Kantack). **NORTH DAKOTA** - Adult survey completed in Cass, Richland, Ransom, and Sargent Counties. Cropland infestations noneconomic in all areas, but light in parts of southern Cass and northeastern Ransom Counties. Field counts in some alfalfa and soil bank fields up to 20 (average 5) per square yard; marginal counts up to 30 (average 5). *M. bivittatus*, *M. sanguinipes*, and *M. femurrubrum* dominant. Noneconomic on rangeland in most of Richland and Ransom Counties except for several small scattered isolated areas with up to 10 (average 2) per square yard (light) and in small area of northeastern section. *M. sanguinipes* and *M. bivittatus* dominant. (Toczek, Grasser).

GYPSY MOTH (*Porthetria dispar*) - NEW YORK - Pupae and adults noted in Suffolk County. (N.Y. Wkly. Rpt., Aug. 5). **RHODE ISLAND** - Two males taken at Kingston, Washington County. (Benham). **MAINE** - Stripping common at Conway. Moving toward Fryeburg, Oxford County; reaching major proportions. Moderate to heavy at Unionville, Washington County; heavy damaged oaks and then moved into and damaged blueberry fields. (Boulanger, Aug. 6).

JAPANESE BEETLE (*Popillia japonica*) - INDIANA - Adults averaged 5-6 per ear on 25 percent of plants in first 4 border rows of 10-acre cornfield near South Bend, St. Joseph County. (Porter). **MARYLAND** - Damaged 4 percent of 30-acre sweet corn

planting near Queen Anne, Queen Annes County. (U. Md., Ent. Dept.). OHIO - Adult activity near seasonal peak. (Rose). NEW YORK - Five beetles per 100 silks on field corn August 1 at Hurley, Ulster County. (N.Y. Wkly. Rpt., Aug. 5). CONNECTICUT - Abundant in scattered locations on shrubs, flowers, and vegetables. (Savos, July 31).

PINK BOLLWORM (Pectinophora gossypiella) - CALIFORNIA - Intensive detection continued. Collected 6 sterile moths but no field moths to date. Released 415,050 sterile moths this week. Percent infestation increased slightly in Imperial and Bard Valleys, Imperial County, and in Palo Verde Valley, Riverside County. (Cal. Coop. Rpt.). ARIZONA - "Hot spots" in many cotton fields at Safford, Graham County. (Ariz. Coop. Sur.).

WHITE-FRINGED BEETLES (Graphognathus spp.) - ARKANSAS - Adults emerging during surveys begun in July. Extension of infested area at Blytheville Air Force Base in Mississippi County; larvae damaged strawberry beds at Leachville. Found in western section of Little Rock, Pulaski County, August 5, 1968, for a new county record and the first record in central area of State. (Owen). TENNESSEE - Found in Rhea County August 5, 1968, for a new county record. (St. Cloud).

HAWAII INSECT REPORT

New State Record - Nymphs and adults of a RHOPALID BUG (Jadera haematoloma) numerous on balloon vine (Cardiospermum halicacabum) in vacant lot in industrial section near Honolulu International Airport on Oahu August 5, 1968, by W. Au. Adults in weeds adjacent to domestic arrival area in airport. Det. by P.D. Ashlock. (Au). Occurs in southern continental United States from Florida to California (PPC).

General Vegetables - BEAN FLY (Melanagromyza phaseoli) heavily damaged 2 to 3-week-old snap beans at Waiahole and Waimanalo, Oahu; plants destroyed by growers. Spray operations intensified in other bean fields to prevent egg laying. Heavy in backyard snap bean seedlings at Wahiawa, Oahu. (Yamamoto, Sato). LEAF MINER FLIES (Liriomyza spp.) and CARMINE SPIDER MITE (Tetranychus telarius) heavily infested many snap bean, cucumber, and tomato fields throughout Oahu, especially in Waianae district. (Yamamoto). SOUTHERN GREEN STINK BUG (Nezara viridula) nymphs and adults unusually numerous on weeds in Kula, Maui, at 2,900 feet elevation; continued migration to adjacent cultivated areas. (Takishita).

Fruits - NEW GUINEA SUGARCANE WEEVIL (Rhabdoscelus obscurus) larvae and adults medium on 6 coconut trees at Lahaina, Maui; larvae in base of leaf-stems. (Miyahira). RED-BANDED THRIPS (Selenothrips rubrocinctus) nymphs and adults generally medium on guava foliage and fruits at Waimanalo, Oahu. Heavily scarred many wild and commercial fruits. (Funasaki).

Ornamentals - Nymphs and adults of a PLATASPID BUG (Coptosoma xanthogramma) light on flowers of Rhodesian wisteria (Bolusanthus speciosus) at Kaneohe, Oahu. This is a new host record. Thousands of adults resting on sea grape, rubber tree, hibiscus, and other plants at Poipu, Kauai. (Kumabe, Sugawa).

Man and Animals - MOSQUITOES - Caught 107 Aedes vexans nocturnus and 3,325 Culex pipiens quinquefasciatus in 48 light traps on Oahu in July. A. vexans nocturnus low in all areas; C. pipiens quinquefasciatus highest at Haleiwa, Waialua, and Waipahu. (Mosq. Cont. Br., Dept. of Health).

Beneficial Insects - Adults of a DUNG BEETLE (Pachylister caffer) medium in cow dung at Haiku, Maui; introduced from Southern Rhodesia in 1957 to control horn fly. (Ah Sam).

INSECT DETECTION

New United States Records

BRAMBLEBERRY LEAFHOPPER (Macropsis fuscata (Zetterstedt)) - WASHINGTON - On Rubus sp. at McChord Air Force Base, Pierce County, July 24, 1968. Collected and det. by S. Nakahara. Confirmed by J.P. Kramer. (p. 795).

MOTTLED RUSTIC (Caradrina morpheus (Hufnagel)) - WASHINGTON - Collected in light traps at Blaine, Whatcomb County, July 21, 1966, by C.A. Leckie. Det. by S. Nakahara. (p. 800).

New State Records

AN ARMORED SCALE (Chortinaspis subchortina) - ARIZONA - Collected on St. Augustine grass at Phoenix, Maricopa County, November 13, 1967, by P. Min. Det. by R.F. Wilkey, confirmed by L.M. Russell and H. McKenzie. (p. 785).

A RHOPALID BUG (Jadera haematoloma) - HAWAII - Nymphs and adults on Cardiospermum halicacabum at Honolulu International Airport on Oahu. Collected by W. Au August 5, 1968. Det. by P.D. Ashlock. (p. 802).

New County Records

WESTERN CORN ROOTWORM (Diabrotica virgifera) - ILLINOIS - Kankakee and La Salle Counties. (p. 784).

ALFALFA WEEVIL (Hypera postica) - WISCONSIN - Dane, Milwaukee, and Green Counties. (pp. 785-786).

ASIATIC OAK WEEVIL (Cyrtepidomus castaneus) - MISSOURI - Scott County. (p. 786). ALABAMA - Jefferson County. (p. 797).

MEADOW SPITTLEBUG (Philaenus spumarius) - MISSOURI - Scott County. (p. 787).

CALIFORNIA RED SCALE (Aonidiella aurantii) - FLORIDA - Hardee County. (p. 795).

A SLUG (Arion ater) - WASHINGTON - Whitman County. (p. 796).

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - OREGON - Lake County. (p. 797).

MIMOSA WEBWORM (Homadaula anisocentra) - OKLAHOMA - Payne County. IOWA - Cass County. (p. 797).

FACE FLY (Musca autumnalis) - OREGON - Klamath County. UTAH - Utah County. (p. 798). NORTH DAKOTA - Nelson, Ramsey, McHenry, and Rolette Counties. (p. 799).

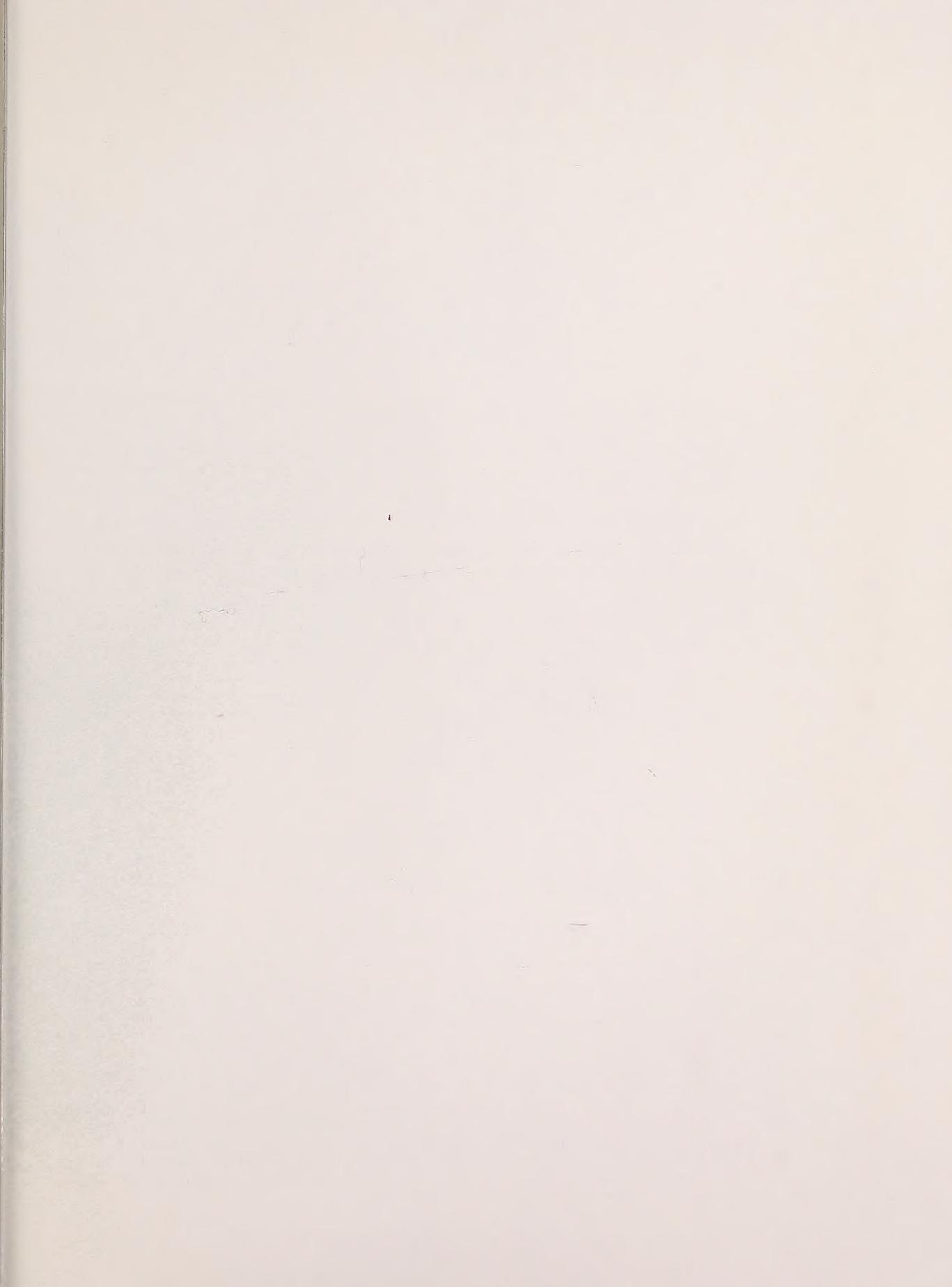
MOTTLED RUSTIC (Caradrina morpheus) - WASHINGTON - Pierce County. (p. 800).

A WEEVIL (Cosmobaris americana) - OREGON - Baker County. (p. 800).

WHITE-FRINGED BEETLES (Graphognathus spp.) - ARKANSAS - Pulaski County. TENNESSEE - Rhea County. (p. 802).

LIGHT TRAP COLLECTIONS

State	County	Date	Trap #	Precipitation	Wind	Temp	Humidity	Time of day	Crops	
									Area	Value
FLORIDA	Monticello	8/1-7	2BL							3
	KANSAS									
	Hiawatha	8/3	BL							4
	Powhattan	8/3,6	BL	81						2
MINNESOTA										
	Crookston	7/31-8/7								
	Fergus Falls	7/31-8/7								
	Shakopee	7/31-8/7								
MISSISSIPPI										
	Stoneville	8/2-9	2BL							96
MISSOURI										
	Portageville	8/3-9								
NEW JERSEY										
	Aura	8/1-7	BL							
	Evesboro	8/1-7	BL	1						
	Plainsboro	8/1-7	BL	6						
	Seabrook	8/1-7	BL	40						
NORTH DAKOTA										
	Bowman	8/4								
	Fargo	8/7								
OHIO										
	Hilliard	8/1-7	BL	30						
SOUTH DAKOTA										
	Brookings	8/5-7	BL	2						
TEXAS										
	Brownsville	8/3-9	2BL	10						
WISCONSIN										
	Madison	8/1-6	BL							



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