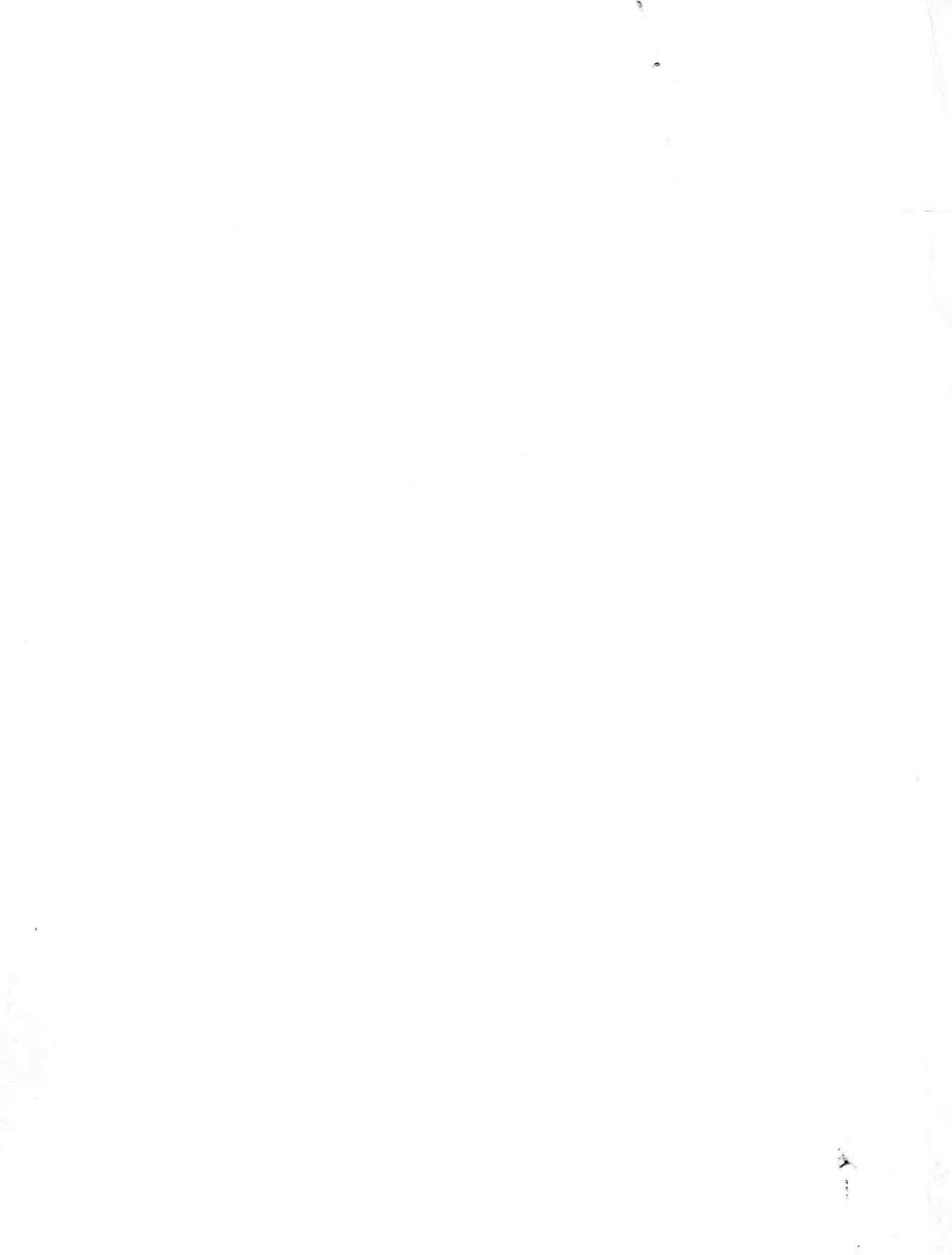
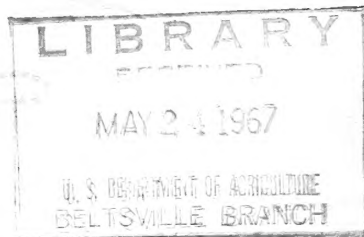


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Cooperative
**ECONOMIC INSECT
REPORT**

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 clearing house and does not assume responsibility for accuracy of the material.

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COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Current Conditions

ARMY CUTWORM damaging wheat in 3 Montana counties. CORN LEAF APHID heavy in many fields of grain in Arizona, moderate to heavy on corn and sorghum several areas of Texas, and continues to build up on young corn in Yazoo County, Mississippi. Light numbers of GREENBUG carried into Wisconsin and SIX-SPOTTED LEAFHOPPER entered Minnesota 2 weeks earlier than usual on strong southerly winds. (p. 403).

TOBACCO BUDWORM heavy on shade-grown tobacco at Quincy, Florida. EUROPEAN CORN BORER winter mortality less than normal in Minnesota. (p. 404). Very heavy hatch of GRASS BUGS reported in areas of Utah where serious outbreak occurred on wheat-grass last year. (p. 405).

ALFALFA WEEVIL widespread in Albuquerque area of New Mexico, building up rapidly in Colorado, and heavy in other areas. Larval collections in Cherokee County, Kansas, brings eastern and western infestations into a single State. (p. 406). MEADOW SPITTLEBUG medium to heavy on red clover in 2 Maryland counties and heavier than normal on clover and alfalfa in Prince Edward County, Virginia. (p. 407).

BOLL WEEVIL counts per acre higher than at same time last year in Waco area of Texas and high numbers survived the winter in central Alabama. (p. 408). THRIPS becoming problem on cotton throughout delta area of Mississippi. (p. 409).

COLORADO POTATO BEETLE more numerous than in 1966 and POTATO FLEA BEETLE heavier than for several years on Eastern Shore of Virginia. (p. 410). STRAWBERRY APHID heavier than normal on strawberries at Vancouver, Washington. (p. 414).

Predictions

EUROPEAN CORN BORER could be problem on Eastern Shore of Virginia this spring and summer and potential for damaging populations exists in several areas of Minnesota. CORN FLEA BEETLE numbers well above normal in New Paltz area of Hudson Valley, New York, and commercially significant outbreak of Stewarts bacterial wilt appears probable on unprotected early sweet corn. (p. 404).

Detection

New State records include SWEETPOTATO WEEVIL in North Carolina (p. 419) and CITRUS RED MITE in Arizona (p. 413).

For new county records see page 419.

Correction

European Pine Shoot Moth map in CEIR 17(14):272 and 17(16):320. Delete Spokane County, Washington, as infestation considered eradicated.

Special Reports

Bibliography on Imported Fire Ant. (pp. 422-430).

Insects Not Known to Occur in the United States

MELON WEEVIL (Baris granulipennis (Tournier)). (p. 431).

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WEATHER OF THE WEEK ENDING MAY 15

HIGHLIGHTS: Winter persisted in the Canadian border areas. Fourth cold week in most of north half. Another wet week in much of the South and East but continued dry in the Arizona-New Mexico area and in Florida.

PRECIPITATION: Late season storms dumped several inches of snow in the western mountains, portions of the northern Plains, and the Lakes region. Violent weather occurred over the middle sections of the Country where the hot, moist gulf air met the cold air from the north. Weekly totals exceeded 1 inch from eastern Oklahoma to southern New York, ranged from 2 inches to more than 4 inches from the Missouri-Arkansas border to central Kentucky. Kennett, Missouri, reported 6+ inches and Cairo, Illinois, 10+ inches. Hail fell in 10 States from

Weather continued on page 421.

SPECIAL INSECTS OF REGIONAL SIGNIFICANCE

ARMYWORM (*Pseudaletia unipuncta*) - DELAWARE - Adults averaged 2 per night in blacklight traps in Sussex County. (Burbutis). MARYLAND - Adults averaged 3 per night in blacklight trap at Snow Hill, Worcester County. (U. Md., Ent. Dept.). FLORIDA - Four larvae taken in 100 sweeps of oats, none from wheat at Gainesville, Alachua County. (Mead). MISSOURI - Some leaf feeding observed in southeast area on wheat and barley in areas of rank growth where plants are down. Larvae averaged 1-2 per square foot with high count of 8 per square foot. (Jones). ILLINOIS - First to third instars ranged from 1 per 3 feet of row to 3 per foot of row on wheat in southwest; averaged 10 per foot of row in southeast area field. (Ill. Ins. Rpt.).

ARMY CUTWORM (*Chorizagrotis auxiliaris*) - IDAHO - Larvae averaged 12-15 per linear foot of row in 120 acres of newly seeded alfalfa and 1 per square foot in 200-acre, one-year-old alfalfa field near Weiser, Washington County; 80 percent third instars May 8. Many larvae soft as though diseased and color variable to whitish. Infestation not general throughout county. (Hackler, Portman). MONTANA - Light in alfalfa and damaging winter wheat in Yellowstone, Carbon, and Cascade Counties. (Pratt). COLORADO - Present in many crops in Weld County. Wheat either sprayed or has outgrown damage. (Boyer).

BEEF LEAFHOPPER (*Circulifer tenellus*) - CALIFORNIA - Treatments applied to leafhopper concentrations in favorable overwintering foothill areas of western San Joaquin Valley; approximately 18,000 acres of rangeland treated. Controls continue in western Kern County where second generation developing in localized areas. (Cal. Coop. Rpt.).

CORN EARWORM (*Heliothis zea*) - MARYLAND - First adult of season taken May 4 in blacklight trap at Snow Hill, Worcester County. (U. Md., Ent. Dept.). GEORGIA - Larvae light to moderate in whorls of corn in southern area. (French).

CORN LEAF APHID (*Rhopalosiphum maidis*) - ARIZONA - Heavy populations, 500-700 per 100 sweeps, continue to cause 20-25 percent damage in many grain fields in Pinal and Maricopa Counties. Some controls also necessary in sorghum. (Ariz. Coop. Sur.). NEW MEXICO - Light, spotted infestations noted in barley in Deming area, Luna County. (Elson). TEXAS - Moderate to heavy on terminals of corn and grain sorghum; widespread in Waller, Ft. Bend, Brazoria, and Lee Counties. Very common on young plants. (Sparks et al., May 5). OKLAHOMA - Moderate in whorls of young Johnson grass in Cotton County pecan orchard. (Okla. Coop. Sur.). MISSISSIPPI - Buildup continues on young corn in Yazoo County; most of increase result of migration from mosaic infected Johnson grass. (Dinkins).

GREENBUG (*Schizaphis graminum*) - MINNESOTA - Light numbers blown into State April 14. Ranged 0-2 per 100 sweeps on small grain in southeast, east-central, and central districts. Absent from most spring grains. Very light on rye and roadside grasses. (Minn. Ins. Rpt.). SOUTH DAKOTA - Nymphs 4, alates 1 per 40 feet of row on 3-inch oats near Beresford, Clay County, May 4. (Kieckhefer).

POTATO PSYLLID (*Paratrioza cockerelli*) - COLORADO - Matrimony-vine starting to leaf in San Luis Valley area, and is further advanced in other areas of State. Periodic checks of these plants should be made. (Jenkins).

SIX-SPOTTED LEAFHOPPER (*Macrosteles fascifrons*) - MINNESOTA - Carried by strong southerly winds April 14 into State about 2 weeks earlier than in 1966. Numbers low due to cool weather. Ranged 0-20 per 100 sweeps on alfalfa, small grains, and roadside grasses in southeast, south-central, and central districts. (Minn. Ins. Rpt.). FLORIDA - One of most numerous insects in 100 sweeps of oats at Gainesville, Alachua County; 20 adults from oats, 2 from wheat. (Mead).

SPOTTED ALFALFA APHID (*Therioaphis maculata*) - NEW MEXICO - Remains mostly very light in Chaves County alfalfa. May be due to exceptionally cold weather past 3 weeks. Temperature now rising. (Mathews). KANSAS - None found in any alfalfa

checked in Cherokee or Crawford Counties. (Simpson). NEBRASKA - Survey negative in Dawson and Buffalo Counties. (Keith). WISCONSIN - Trace numbers observed in Janesville area, Rock County. (Wis. Ins. Sur.).

TOBACCO BUDWORM (Heliothis virescens) - FLORIDA - Heavy on shade-grown tobacco since plants put in field at Quincy. (Tappan).

TOBACCO HORNWORM (Manduca sexta) - FLORIDA - Only 1 adult female taken in black-light trap this season and no larvae noted at Quincy. (Tappan).

CORN, SORGHUM, SUGARCANE

EUROPEAN CORN BORER (Ostrinia nubilalis) - NEW JERSEY - Spring survey of corn for overwintering borers indicates winter mortality averaged 63.6 percent. This figure approximately 11 percent higher than at same time in 1966, indicating less of a problem than in 1966. (Ins.-Dis. Newsltr.). VIRGINIA - Could be problem this spring and summer on Eastern Shore. Single moth taken in light trap by May 11, 1966. On nights of May 1 and 2, 1967, 24 and 43 moths collected, respectively. (Hofmaster). ILLINOIS - Pupation 100 percent in southern area; emergence underway. Pupation 8 percent in south-central area, 4 percent in central area. (Ill. Ins. Rpt.). MISSOURI - Abundance survey in New Madrid County May 9-10 showed 114 forms per acre on corn after planting; pupation 100 percent, moth emergence 33 percent. (Keaster). MINNESOTA - Overwintering mortality less than normal. Average percent mortality by district: Southwest 10, south-central 7, west-central 6, southeast 25, central 19. Weather in June will be important in determining degree of infestation. Most economic problems probably will be in northwest district. Potential for damaging numbers exists in southwest, south-central, and west-central districts if weather ideal. (Minn. Ins. Rpt.). SOUTH DAKOTA - Winter mortality appears higher in east-central district. Over 90 percent of cornland plowed or disked. Average percent mortality ranged 10-35; average lowest (7.5) in Yankton County, highest (48) in Moody County. (Jones, Jessen). NORTH DAKOTA - Larvae collected from sweet corn in Burke and Divide Counties. Both new county records. Now recorded from all counties in State. (Brandvik).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - MISSOURI - Twenty percent of 10 forms found on 25 southeast area farms were pupae. (Keaster).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - FLORIDA - Caused 25-percent reduction in 10-acre field of corn at Macclenny, Baker County. (Strayer).

CUTWORMS - TEXAS - Lacinipolia renigera caused heavy and widespread damage on corn throughout Hidalgo and Starr Counties. (Schuster, May 5). ILLINOIS - Agrotis ipsilon larvae damaged corn in southwest area. (Ill. Ins. Rpt.).

CORN FLEA BEETLE (Chaetocnema pulicaria) - NEW YORK - Few observed on clumps of green rye at New Paltz in Hudson Valley. Total of 1,300 sweeps of rye and grass April 30 and May 1 at 13 sites resulted in 100 flea beetles of 5 species being taken; 33 were C. pulicaria. This is well above normal for area and a commercially significant outbreak of Stewarts bacterial wilt on unprotected early sweet corn appears probable. (N. Y. Wkly. Rpt., May 8). DELAWARE - First adults of season on young corn in Sussex County. (Burbutis). MARYLAND - Adults appearing on young, early planted corn in Wicomico and Worcester Counties. (U. Md., Ent. Dept.). VIRGINIA - This vector Stewarts disease abundant in some sweet corn on Eastern Shore. Controls recommended. (Hofmaster). MISSOURI - Ranged 1-5 per seedling corn plant in southern and central areas. (Munson).

CORN ROOTWORMS (Diabrotica spp.) - GEORGIA - D. undecimpunctata howardi heavy in Brooks County corn. (Carr). MINNESOTA - D. virgifera expected to be increased problem in south-central district this season. (Minn. Ins. Rpt.).

CHINCH BUG (Blissus leucopterus) - TEXAS - Continues heavy beneath lower leaf sheaths of corn and grain sorghum in Waller, Lee, and Liberty Counties; some severe stunting. Moderate, 4-5 per 5 plants, on 15-inch corn near Fairfield, Freestone County, and 1 per 5 plants on 6-inch grain sorghum near Waco, McLennan County. (Richardson et al., May 5).

SEED-CORN MAGGOT (Hylemya platura) - OHIO - Destroyed approximately 5 percent of corn seedlings in Wayne County field. (Barry). NEW JERSEY - Total of 383 collected on 5 sticky boards at Cedarville May 9. (Ins.-Dis. Newsltr.).

SMALL GRAINS

ENGLISH GRAIN APHID (Macrosiphum avenae) - FLORIDA - Declining on oats and wheat at Gainesville, Alachua County. (Mead). ARKANSAS - Low in wheat, 100-150 in 100 sweeps, in White and Jackson Counties. (Ark. Ins. Sur.). ARIZONA - Light in milo in Bowie area, Cochise County; averaged 20 per 100 sweeps. Damage estimated at 2 percent, but increasing. (Ariz. Coop. Sur.). SOUTH DAKOTA - Nymphs 8 per 40 feet of row in 3-inch oats near Beresford, Clay County, May 4. (Kieckhefer). MINNESOTA - Moved into State early; ranged 0-20 per 100 sweeps of rye in southeast, east-central, and central districts. Occasional rye field in southeast district shows feeding spots by small colonies. Aphids moved into crowns due to cool weather. (Minn. Ins. Rpt.).

GRAIN APHIDS - OREGON - Moderate to heavy in some fields of winter wheat in Umatilla County. (Every). VIRGINIA - Building up on barley in Spotsylvania County. (Kash, May 5).

PALE WESTERN CUTWORM (Agrotis orthogonia) - NEBRASKA - Caused scattered damage on wheat in southern Kimball County. (Andersen). COLORADO - Present in many crops in Weld County. Wheat either sprayed or has outgrown damage. (Boyes).

WHEAT HEAD ARMYWORM (Faronta diffusa) - KANSAS - Very light, 1-3 per 10 sweeps, in a few southeast area wheat fields. (Simpson).

HESSIAN FLY (Mayetiola destructor) - ILLINOIS - Larvae stunting wheat in Johnson County. Puparia prevalent. (Ill. Ins. Rpt.).

WHEAT STEM MAGGOT (Meromyza americana) - TEXAS - Light with some damage of wheat in Denton County. (Turney, May 5).

BROWN WHEAT MITE (Petrobia latens) - NEVADA - Averaged 3 per leaf in several fields of small grain in Lovelock, Pershing County; averaged fewer in other fields in the area. (Martinelli). COLORADO - Abundant in few fields of wheat in Montrose County; ranged 2-6 per plant. Controls applied in one field. (Bulla).

TURF, PASTURES, RANGELAND

GRASS BUGS - UTAH - Very heavy hatch of Labops spp. and Irbisia spp. reported on range grasses over large areas in Garfield and Kane Counties and southern portions of State. (Knowlton). Single nymph taken on wheatgrass in Pines area west of Bryce Canyon National Park April 27. (Thornley, Knowlton). Labops hesperius second and third instar nymphs numerous on crested wheatgrass near Rubys Inn, Garfield County; damage light. Infestation general in same areas of county where damage occurred in 1966. Damage conspicuous to severe on 3 to 5-inch high crested wheatgrass south of Alton, Kane County, where Irbisia spp. and L. hesperius were damaging last year. Farmers and ranchers concerned about current situation. (Knowlton, Lindsay).

AN ARMORED SCALE (Hemiberlesia lataniae) - CALIFORNIA - Medium on stems and leaves of dichondra at Vista, San Diego County. This an unusual infestation as this scale usually associated with ornamentals, avocado, and loquat. (Cal. Coop. Rpt.).

BLUEGRASS WEBWORM (Crambus teterrellus) - MISSOURI - Full-grown larvae observed in bluegrass lawns in central area. (Munson).

THRIPS (Chirothrips spp.) - ARIZONA - Increasing populations caused light damage to Bermuda grass seed heads in commercial seed fields of Yuma County. (Ariz. Coop. Sur.).

WHITE GRUBS (Phyllophaga spp.) - NEBRASKA - Damaging bluegrass pastures in 2 central counties. (Keith). KANSAS - Additional severe damage to brome grass reported in Elk and Butler Counties. (Simpson).

FORAGE LEGUMES

ALFALFA WEEVIL (Hypera postica) - NEW MEXICO - Appears widespread in Albuquerque area, Bernalillo County; larvae 5-6 per 25 sweeps in alfalfa checked. (Heninger). UTAH - Activity limited past 2 weeks. (Knowlton, May 8). COLORADO - Building up rapidly on established alfalfa, as well as new seedlings. Adults range 2-6 per 10 sweeps in Lucerne and Eaton areas, Weld County. Eggs hatching; larvae ranged 0-2 per 10 sweeps. Many adults still mating as early larvae appear. Alfalfa should be watched during next 10 days to determine necessary action. (Rothman). KANSAS - Larvae collected in Ellis County and collected in Cherokee County. These are new county records. None found in Crawford County. (Simpson et al.). NEBRASKA - Survey negative in western Buffalo County. (Keith). MISSOURI - Collected for first time in Benton County. (Munson). ILLINOIS - Larvae per sweep by district: Southeast 25-52, southwest 0-11, west-southwest 15-47, east-southeast 2-22; ranged 1-5 in east and central districts. (Ill. Ins. Rpt.). WISCONSIN - Adult collected in southwestern Kenosha County near Twin Lakes May 1. (Wis. Ins. Sur.). INDIANA - Continued moderate to heavy in southern half of State. Eggs hatching as far north as U.S. Highway 24. New county records: De Kalb, Noble, Lagrange, Elkhart, St. Joseph, La Porte, Porter, Starke, and Jasper. (Huber). OHIO - Low temperatures and rain slowed larval development and alfalfa growth. Spraying warranted in southwest, southeast, central, and east-central counties. Fields in Coshocton and Jefferson Counties 10-30 percent destroyed with leaves 50-100 percent damaged. (Rose). Leaf or terminal damage 0-75 percent in numerous fields in Wayne, Ashland, Medina, and Holmes Counties; treatment in progress in Holmes County. Damage heavier on new seedlings than older stands. Alfalfa 7-14 inches high. (Glass). Larval populations increased in west-central area; 8 per sweep in Mercer County field May 4. (DeBrosse). CONNECTICUT - None found on alfalfa May 4 and 8. (Savos). NEW YORK - Small numbers of adults and few larvae found in Ulster County alfalfa; eggs easily found at bases of plants. Adults and larvae found south of Wellsville Allegany County; no eggs found. Allegany County is new county record. (N.Y. Wkly. Rpt., May 8). NEW JERSEY - Larval damage continues to increase in southern counties. Controls applied by most growers in Cumberland, Salem, and Gloucester Counties by May 10. Fresh top growth appearing in fields sprayed 2-3 weeks ago, but very little new growth in fields sprayed 1 week ago due to cool weather. Damage varies from field to field. Larvae per 25 tips ranged 10-175 in 3 fields in Gloucester, Salem, and Cumberland Counties; 80-96 percent of tips showed damage. (Ins.-Dis. Newsltr.). MARYLAND - Larvae heavy, over 100 per sweep, on untreated alfalfa in Wicomico County. Egg laying continues in central areas; cocoons appearing in Howard and Wicomico Counties. First-generation adults appeared at Beltsville, Prince Georges County, May 11; these are first of season. (U. Md., Ent. Dept.). SOUTH CAROLINA - Young larvae present on new alfalfa; controls will be necessary if cool weather continues. (Nettles et al., May 9). ALABAMA - Damaged Regal white clover in Jefferson County. (Griffin).

EGYPTIAN ALFALFA WEEVIL (Hypera brunneipennis) - ARIZONA - Control efforts still necessary to retard heavy infestations in alfalfa in Picacho area, Pinal County. Remained economic problem much later than normal. (Ariz. Coop. Sur.).

CLOVER LEAF WEEVIL (Hypera punctata) - IDAHO - Larval damage heavy on 70 acres of white clover near Mohler, Lewis County. (Dailey). MONTANA - On alfalfa in Carbon and Yellowstone Counties. Damage minor. (Pratt). KANSAS - Adults light, 1-3 per 10 sweeps, in Cherokee and Crawford Counties. No larvae found. (Simpson et al.). INDIANA - Caused heavy damage in fall seeded alfalfa and clover mixtures in areas of White, Carroll, Delaware, and Wells Counties. Larvae 12-20 per square foot in these fields. (Huber). VIRGINIA - Last instars infesting red clover in Westmoreland County. Damage extensive in several fields. (Isakson, Ptucha).

LESSER CLOVER LEAF WEEVIL (Hypera nigrirostris) - MARYLAND - Larvae infesting 20 percent of stems of red clover near Centreville, Queen Annes County. (U. Md., Ent. Dept.).

CLOVER HEAD WEEVIL (Hypera meles) - TEXAS - Larvae in nearly all crimson clover producing counties in northeast section. Few heavy infestations, 1-2 larvae per 1-2 heads, scattered in area, mostly in Nacogdoches, Panola, Cherokee, and Rusk Counties. (Parker, May 5).

A WEEVIL (Hypera sp.) - CALIFORNIA - Medium on burclover in Chico area, Butte County. (Cal. Coop. Rpt.).

PEA APHID (Acyrtosiphon pisum) - WASHINGTON - Extremely abundant on new alfalfa growth in Walla Walla County; stunting severe. Probably due to mild winter and warm February. Large acreages treated with organophosphorus insecticides past 2 weeks. (Johansen, May 8). NEVADA - Very light on alfalfa in Dixie Valley, Pershing County. (Martinelli) - UTAH - Mostly nymphs in Salt Lake City area alfalfa. (Knowlton, May 8). ARKANSAS - Continues to decline in alfalfa and vetch in all areas. (Ark. Ins. Sur.). KANSAS - Decreased from high of 5,000 per 10 sweeps in Labette County to 25-50 per 10 sweeps. Parasitism and predators, mainly lady beetles, increased to high levels. (Simpson). NEBRASKA - Low in all fields surveyed in central area. (Keith). IOWA - Average per sweep on alfalfa by County: Lucas 2, Monroe 3, Wapello 2, Jefferson 2, Henry 2, Des Moines 18, Lee 82, Van Buren 81, Davis 48, Clarke 5. (Mast). MINNESOTA - Due to cool weather, numbers extremely low in most alfalfa in southeast, east-central, and central districts. (Minn. Ins. Rpt.). WISCONSIN - Populations decreased significantly. Counts vary 0-4 per 10 sweeps in Sauk, Dane, Rock, Grant, and Lafayette Counties. (Wis. Ins. Sur.). ILLINOIS - Counts highest, 90-250 per sweep in southwest Ranged 5-10 per sweep in alfalfa and clover in east district. (Ill. Ins. Rpt.).

CLOVER APHID (Nearctaphis bakeri) - MARYLAND - Nymphs damaging red clover near Centreville, Queen Annes County. (U. Md., Ent. Dept.).

TARNISHED PLANT BUG (Lygus lineolaris) - MISSOURI - Found in all alfalfa checked; adults and nymphs 10-80 per 10 sweeps. (Munson). IOWA - Adults averaged less than 5 per 10 sweeps of alfalfa and red clover in southeast. (Mast). WISCONSIN - Adults common throughout southern area; vary from less than 1 to 6 per 10 sweeps. (Wis. Ins. Sur.).

LYGUS BUGS (Lygus spp.) - ARIZONA - Nymphs and adults remain light in Cochise and Graham Counties, but increasing in alfalfa in Yuma and Maricopa Counties. (Ariz. Coop. Sur.). NEW MEXICO - Counts per 25 sweeps by county as follows: Chaves 10-12 adults, 8-12 nymphs; Bernalillo 2-5 adults; Quay 1-3 adults. (Mathews, Henger, Kloefer). KANSAS - Increased during past month. Adults ranged 15-30 per 10 sweeps on alfalfa in southeast. (Simpson et al.).

RAPID PLANT BUG (Adelphocoris rapidus) - WISCONSIN - First-instar nymphs found in western Dane County. (Wis. Ins. Sur.).

MEADOW SPITTLEBUG (Philaenus spumarius) - MARYLAND - Nymphs medium to very heavy on red clover in Howard and Queen Annes Counties. Controls needed in some fields (U. Md., Ent. Dept.). VIRGINIA - Nymphs heavier than usual on clover and alfalfa in Prince Edward County (Peery); prevalent in red clover in Westmoreland County (Ptucha).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - ARIZONA - Unusually light for time of year in alfalfa throughout southern area. (Ariz. Coop. Sur.).

CLOVER HEAD CATERPILLAR (Grapholitha interstinctana) - MISSOURI - Adults per 10 sweeps in red clover averaged 10 in north-central and 2 in west-central areas. (Munson).

GREEN CLOVERWORM (Plathypena scabra) - KANSAS - Averaged 3-8 per 10 sweeps on alfalfa in Cherokee and Crawford Counties. (Simpson et al.).

WESTERN FLOWER THRIPS (Frankliniella occidentalis) - NEVADA - Nymphs and adults heavy in alfalfa in Moapa Valley, Clark County; caused bud damage and leaf distortion. (Zoller).

PEANUTS

A CERAMBYCID BEETLE (Derobrachus brevicollis) - GEORGIA - Light on seedlings in Baker County. (Morgan).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - FLORIDA - Heavy in 30-acre field near McIntosh, Marion County. (Strayer).

THRIPS - FLORIDA - Damage heavy on leaves in 30-acre field in McIntosh, Marion County. (Strayer).

COTTON

BOLL WEEVIL (Anthonomus grandis) - TEXAS - Found in 16 of 35 cotton fields inspected in McLennan and Falls Counties; averaged 59 per acre, maximum 500 per acre. This compares with average of 5 per acre during corresponding week of 1966. One weevil collected on flight screens. (Cowan et al.). LOUISIANA - Single weevil found in young cotton plants pulled for thrips examination in Madison Parish. (Cleveland et al.). ALABAMA - Development of cotton in northern counties not sufficiently advanced for making counts. High numbers survived winter in Dallas County, central area. (McQueen).

BOLLWORMS (Heliothis spp.) - TEXAS - Of 13 eggs or larvae collected from various wild hosts in Falls and McLennan Counties and reared to fifth instar, 12 determined as H. zea and 1 H. virescens. Total of 18 H. zea larvae collected from 10 fields of cotton. (Cowan et al.). ARKANSAS - Development later than normal. No eggs or larvae found on clovers during early April although spring season earlier than normal. First moths taken in light trap at Hope, Hempstead County, April 7, and at Kelso, Desha County, April 20. Larvae heavier than normal in crimson clover first week in May. Delay in emergence probably due to drier than normal conditions during late March and much of April. (Ark. Ins. Sur.). ALABAMA - Few larvae observed in terminal buds on 6-leaf stage cotton on Dallas County farm. One larva observed on cotton in Cherokee County. (McQueen).

GRANULATE CUTWORM (Feltia subterranea) - ARIZONA - Scattered populations causing "skips" in cotton plantings in areas of Yuma, Pinal, and Maricopa Counties. (Ariz. Coop. Sur.).

COTTON FLEAHOPPER (Psallus seriatus) - TEXAS - Averaged 0.3 per 100 linear feet in 25 untreated fields in Falls and McLennan Counties. None found in 10 systematically treated fields. Also present on several wild hosts in area; averaged 35 per 100 plants in field of horsemint. (Cowan et al.).

APHIDS - TEXAS - Medium in one and light in 12 of 21 untreated fields and light in, 4 of 10 systemically treated fields in Falls and McLennan Counties. (Cowan et al.). ARIZONA - Aphis gossypii very light in cotton in Kansas settlement area of Cochise County. Scattered but heavy populations continue to cause light to moderate damage in Maricopa and Yuma Counties. (Ariz. Coop. Sur.).

THRIPS - ARIZONA - Frankliniella occidentalis light on cotton in Cochise and Graham Counties; moderate to heavy generally in areas of Pinal, Yuma, and Maricopa Counties. (Ariz. Coop. Sur.). TEXAS - Thrips medium in one and light in 17 of 21 untreated fields in Falls and McLennan Counties. Light in 2 of 10 systemically treated fields. (Cowan et al.). LOUISIANA - Averaged 6.35 per plant in untreated field of young cotton and ranged 0.11-0.50 per plant in 4 treated fields in Madison Parish May 1-5. Counts per plant ranged 0-2.59 in one untreated field and 0-0.77 in 4 treated fields May 8-12 in same area. (Cleveland et al.). MISSISSIPPI - Becoming problem throughout delta area, especially on cotton planted without seed treatment. Range light to heavy throughout area. (Dinkins, Young). ALABAMA - F. fusca heavy, 1-5 per plant, on Dallas County farm. (McQueen).

TOBACCO

CABBAGE LOOPER (Trichoplusia ni) - FLORIDA - Moderate on shade-grown tobacco at Quincy. (Tappan).

BUDWORMS - GEORGIA - Moderate to extremely heavy across tobacco belt. (French).

FLEA BEETLES - FLORIDA - Controlled on commercial shade-grown tobacco at Quincy. Heavy on unsprayed tobacco; about 25 percent of leaves show some damage. (Tappan).

TOBACCO FLEA BEETLE (Epitrix hirtipennis) - MARYLAND - Few adults noted on tobacco in beds in Anne Arundel County. (U. Md., Ent. Dept.).

A WEEVIL - SOUTH CAROLINA - Seriously damaging 4 acres of tobacco in Jasper County. Controls recommended. (Nettles et al., May 9).

GREEN PEACH APHID (Myzus persicae) - FLORIDA - Controlled with insecticides in commercial shade-grown plantings in Quincy area, Gadsden County. Unsprayed tobacco indicates potential remains high. (Tappan).

GARDEN SPRINGTAIL (Bourletiella hortensis) - MARYLAND - Light on border plants in beds in Anne Arundel County. (U. Md., Ent. Dept.).

SUGARBEETS

GREEN PEACH APHID (Myzus persicae) - WASHINGTON - Nymphs light on sugarbeets in lower Yakima Valley, Yakima County. (Wallis, May 8).

PALE WESTERN CUTWORM (Agrotis orthogonia) - COLORADO - Damaging in few sugarbeet fields in Delta County area. Some controls applied. (Bulla).

MISCELLANEOUS FIELD CROPS

LYGUS BUGS (Lygus spp.) - ARIZONA - Increasing populations, averaging 40 nymphs per 100 sweeps, causing light damage to safflower approaching bloom stage in Pinal and Maricopa Counties. (Ariz. Coop. Sur.).

WEEVILS (Brachyrhinus spp.) - OREGON - Full-grown larvae a problem in some hop fields in Multnomah and Marion Counties. (Every).

CUTWORMS - OREGON - Probably Euxoa spp. damaged hops in Hermiston area, Umatilla County. Infestations very light and spotty in the Willamette Valley. (Every).

POTATOES, TOMATOES, PEPPERS

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - MARYLAND - First adults of season found May 9 on newly set tomatoes in Wicomico County. Mating adults seen on garden potatoes in Anne Arundel County. (U. Md., Ent. Dept.). VIRGINIA - Adults active and appear more numerous than in 1966 on Eastern Shore. First egg masses noted at Painter, Accomack County, April 24; common at present time. (Hofmaster). MISSOURI - High numbers of adults, eggs, and very small larvae observed on potatoes in west-central area. Counts averaged 2 adults per plant with 2.5 egg masses per plant. Some egg masses recently hatched and some hatching. (Munson).

FLEA BEETLES (Epitrix spp.) - MARYLAND - Adults 1-2 per tomato plant in Wicomico County and 1-3 per potato plant in Anne Arundel County. (U. Md., Ent. Dept.). VIRGINIA - E. cucumeris more numerous than for several years on Eastern Shore. Dry weather apparently favorable. (Hofmaster).

BEE T ARMYWORM (Spodoptera exigua) - NEVADA - Light on tomato seedlings in Moapa Valley, Clark County. (Zoller). ALABAMA - Few first-generation larvae observed on potatoes in Baldwin County. (McKenzie et al.).

CABBAGE LOOPER (Trichoplusia ni) - TEXAS - Light and widespread feeding on tomatoes in Jasper County. Larvae as high as 15-20 per plant. (Gaskamp, May 5).

BEANS AND PEAS

ALFALFA WEEVIL (Hypera postica) - MISSISSIPPI - Infested snap beans in Tunica County. Adults feeding on stems at ground level. Approximately 10-20 percent of plants killed. Large number of weevils in field, but exact count not made. Weevils could be found congregated under dirt clods around stems. (Dinkins, May 8).

BEAN LEAF BEETLE (Cerotoma trifurcata) - ALABAMA - Adults infesting snap beans in Mobile County. (Bolton et al.).

MEXICAN BEAN BEETLE (Epilachna varivestis) - ALABAMA - Light on beans in Mobile County. (Bolton et al.).

PEA APHID (Acyrtosiphon pisum) - DELAWARE - Averaged 4 per 10 sweeps in most areas on peas. (Burbutis).

COLE CROPS

CABBAGE LOOPER (Trichoplusia ni) - TEXAS - Light and widespread feeding on cabbage in Jasper County. Larvae as high as 15-20 per plant. (Gaskamp, May 5).

IMPORTED CABBAGEWORM (Pieris rapae) - MARYLAND - Adults laying eggs on young cabbage plants near Mt. Zion, Anne Arundel County. (U. Md., Ent. Dept.). NEW YORK - Adults observed May 1 in Ithaca, (N. Y. Wkly. Rpt., May 8).

YELLOW-MARGINED LEAF BEETLE (Microtheca ochroloma) - ALABAMA - Adults and larvae light on turnips in home garden near Grand Bay, Mobile County. Seldom reported except in Mobile and Baldwin Counties. (Diller, Seibels).

FLEA BEETLES - NEW YORK - Heavy in cabbage seed beds in areas of Monroe County. First activity in Erie County noted May 1. (N. Y. Wkly. Rpt., May 8). OHIO - First occurrence of season on radishes in a garden in Union County. (Gibson).

CABBAGE MAGGOT (Hylemya brassicae) - MASSACHUSETTS - Adults laying eggs on cole crops. First egg laying noted in Waltham area May 14. Egg laying will be slow if cool weather continues. (Crop Pest Cont. Mess.).

CUCURBITS

BRISTLY CUTWORM (Lacinipolia renigera) - TEXAS - Damage heavy and widespread on cantaloupe throughout Hidalgo and Starr Counties. (Schuster, May 5).

SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) - TEXAS - Adults light and feeding on watermelon foliage near Giddings, Lee County. (Spivey, May 5). MISSISSIPPI - This beetle and Acalymma vittatum caused heavy foliage damage on several acres of cucumbers in Madison County. Control being applied. (Dinkins, Young).

GENERAL VEGETABLES

RHUBARB CURCULIO (Lixus concavus) - OHIO - Caused some damage to rhubarb in Clinton County. (Fladt, Miller).

WIREWORMS - ALABAMA - Heavy, with average of 3 or more per plant, under potatoes, corn, okra, beans, and peas in several areas of Chilton County. Much damage observed. (Futral).

A CUTWORM (Euxoa sp.) - CALIFORNIA - Medium on asparagus in Fresno, Fresno County. (Cal. Coop. Rpt.).

ONION THRIPS (Thrips tabaci) - IDAHO - Infestations observed on onion seed fields, fall and spring planted bulbs, and seed to seed in Caldwell and Nampa areas, Canyon County. Some treated fields contain only nymphs. (Bechtolt).

SPINACH LEAF MINER (Pegomya hyoscyami) - WASHINGTON - Eggs light in many spinach fields. (Wallis, May 8).

ONION MAGGOT (Hylemya antiqua) - NEW JERSEY - Total of 67 collected on 5 sticky boards at Cedarville, May 9. (Ins.-Dis. Newsltr.).

BULB MITE (Rhizoglyphus echinopus) - CALIFORNIA - Medium on onion plantings in Seeley, Imperial County. (Cal. Coop. Rpt.).

DECIDUOUS FRUITS AND NUTS

CODLING MOTH (Carpocapsa pomonella) - OREGON - First adults of season in bait traps May 3 in Milton-Freewater area apple orchards, Umatilla County. (Burkhart). COLORADO - Continues to appear in attractant traps; erratic counts of 0-50 moths in single traps. Cool temperatures retarding main first-brood flight. (Bulla). MISSOURI - Few entries on apples in southeast area. (Wkly. Rpt. Fr. Grs). INDIANA - Adult emergence about 33 percent in overwintering band cage at Vincennes. Of 38 males caught in 2 virgin female traps, 25 caught night of May 4 when flight conditions favorable. (Dolphin). MARYLAND - No adult emergence at Hancock, Washington County, as of May 9. (U. Md., Ent. Dept.). NEW YORK - First pupae of season under tree bands May 1. Moths not expected before May 15; continued cool temperatures could delay appearance several days. (N. Y. Wkly. Rpt., May 8).

EYE-SPOTTED BUD MOTH (Spilonota ocellana) - CONNECTICUT - Larvae very abundant at Storrs, but few at New Haven. (Savos, May 10).

ORIENTAL FRUIT MOTH (Grapholitha molesta) - MISSOURI - First-brood moths in southeast area; little egg laying due to adverse weather. (Wkly. Rpt. Fr. Grs.).

RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) - INDIANA - Several small adults of first summer brood in bait pans at Vincennes. (Dolphin, May 8). MARYLAND - Few last instars in unsprayed apple orchard at Hancock, Washington County. (U. Md., Ent. Dept.).

EASTERN TENT CATERPILLAR (Malacosoma americanum) - MARYLAND - Few tents on unsprayed peaches at Hancock, Washington County. (U. Md., Ent. Dept.). CONNECTICUT - Numbers low throughout State, but may be overlooked because of small size. (Savos, May 10).

LESSER PEACH TREE BORER (Synanthedon pictipes) - INDIANA - Of 120 males caught in virgin female traps in Vincennes area orchard, 108 caught May 4-5 when temperatures were in 70's. (Dolphin).

WHITE-MARKED TUSSOCK MOTH (Hemerocampa leucostigma) - TEXAS - Larvae light to moderate; some defoliation of fruit trees throughout Wharton County causes concern. (Smith, May 5).

PECAN NUT CASEBEARER (Acrobasis caryae) - NEW MEXICO - Adults emerging in Carlsbad area, Eddy County. Total of 21 moths collected night of May 9 in 2 blacklight traps and one argon light trap. (Mathews, Nielsen). TEXAS - Heavy on pecans near Seguin, Guadalupe County; 533 pupae under 100 bands. Half to full-grown larvae light to moderate in Wise County. (New, Turney, May 5).

PECAN LEAF CASEBEARER (Acrobasis juglandis) - TEXAS - Moderate on pecans in Bandera County. (Lindig, May 5).

FALL WEBWORM (Hyphantria cunea) - TEXAS - First-generation larvae light on pecan foliage near Hempstead, Waller County; some control necessary. (Richardson, May 5). ALABAMA - Larvae increased in size and numbers; problem in unsprayed pecan orchards near St. Elmo, Mobile County. (Bolton et al.).

ROSY APPLE APHID (Dysaphis plantaginea) - COLORADO - Few colonies in Mesa County orchards where no early season controls applied. (Bulla). INDIANA - Colony growth and dispersion localized in Vincennes area. (Dolphin, May 8). MARYLAND - Heavy in unsprayed apple orchards at Hancock, Washington County; stem mothers numerous. (U. Md., Ent. Dept.). CONNECTICUT - Less abundant but still found in many orchards. (Savos, May 10).

APHIDS - VIRGINIA - Eriosoma lanigerum infesting roots and stems of apple trees in Hanover County. (Jennings). CONNECTICUT - Aphis pomi less abundant but still found in many orchards. (Savos, May 10). MASSACHUSETTS - Rhopalosiphum fitchii

stem mothers depositing nymphs on apple foliage at Amherst. (Crop Pest Cont. Mess.). OREGON - Myzus cerasi infesting 5 percent of cherry trees in Jackson County. Increasing populations rolling leaves. (Berry).

PEAR PSYLLA (Psylla pyricola) - CONNECTICUT - Only 10-20 percent of eggs hatched at Storrs and New Haven. (Savos, May 10). MASSACHUSETTS - Earliest eggs hatched in Amherst May 10. Egg laying heavy on expanding leaf buds inspite of cool weather. (Crop Pest Cont. Mess.). NEW YORK - Eggs 25 percent hatched May 4 in Ulster County. (N. Y. Wkly. Rpt.).

ARMORED SCALES - CALIFORNIA - Aspidiotus juglansregiae medium on peach nursery stock at El Cajon, San Diego County. (Cal. Coop. Rpt.). OREGON - Aspidiotus perniciosus eggs on all unsprayed and improperly cared for Jackson County orchards. (Berry).

GRAPE MEALYBUG (Pseudococcus maritimus) - OREGON - New infestation in Jackson County pear orchard; previously confined to pear orchard in another part of county. Very light on less than 1 percent of trees in one orchard. (Berry).

PECAN PHYLLOXERA (Phylloxera devastatrix) - TEXAS - Galls light to moderate on pecans at Hempstead, Waller County, and throughout Wise County. (Richardson, Turney, May 5).

ROSE CHAFER (Macroductylus subspinosus) - SOUTH CAROLINA - Seriously damaged apple fruits at Mountain Rest, Oconee County. (Nettles et al., May 9).

CHERRY FRUIT FLY (Rhagoletis cingulata) - FLORIDA - Adult in McPhail trap at Plant City, Hillsborough County. (Vaughan, May 5).

EUROPEAN RED MITE (Panonychus ulmi) - IDAHO - Nymphs abundant on apple tree in Twin Falls, Twin Falls County. (Youtz). Eggs found in 3 apple and plum orchards near Payette, Payette County. (Matsen, Portman). MISSOURI - Light in few fruit orchards in southwest area. (Wkly. Rpt. Fr. Grs.). INDIANA - Mobile forms ranged 0-6 per 100 leaves in commercial orchards in east-central counties. (Matthew). Cool, wet weather reduced numbers at Vincennes. Counts of 0.43 mite per leaf in single check orchard, but populations varied from orchard to orchard. (Dolphin, May 8). MARYLAND - Adults and eggs evident on unsprayed apples at Hancock, Washington County. (U. Md., Ent. Dept.). CONNECTICUT - Overwintering eggs hatching at New Haven. Hatch about 80 percent in Storrs. (Savos, May 10). NEW YORK - Continues to appear on unsprayed trees in Ulster County. Hatched May 4 in southern part of fruit belt in Lake Ontario region; May 6 in Monroe area. (N. Y. Wkly. Rpt.).

SPIDER MITES - CALIFORNIA - Bryobia rubrioculus medium on prune trees in Colusa, Colusa County. (Cal. Coop. Rpt.). UTAH - B. rubrioculus eggs hatched on cherry trees at Brigham City, Box Elder County. (Knowlton). MISSOURI - Tetranychus spp. light on fruit trees in southwest area. (Wkly. Rpt. Fr. Grs.)

PEAR RUST MITE (Epitrimerus pyri) - OREGON - All stages present in unsprayed and poorly sprayed pear orchards of Jackson County; no damage apparent in commercial orchards. (Berry).

CITRUS

CITRUS RED MITE (Panonychus citri) - ARIZONA - On lemons in 8 citrus sections on the Yuma Mesa in Yuma County. First detected on May 3. Det. May 4 by D. M. Tuttle. This is a new State record. (Ariz. Coop. Sur.).

SOFT SCALES - FLORIDA - Saissetia oleae adults on stems of about 80 percent of 25 grapefruit plants at Plant City. (Vaughan, Apr. 28). ARIZONA - Recent survey revealed very light infestations of Coccus hesperidum in 8 to 12-year-old groves on the Yuma Mesa in Yuma County. (Ariz. Coop. Sur.).

SMALL FRUITS

GRAPE FLEA BEETLE (Altica chalybea) - GEORGIA - Larvae light on grapes in Sumter County. (Garner).

WEEVILS (Brachyrhinus spp.) - OREGON - Full-grown larvae a problem in some strawberry fields in Multnomah and Marion Counties. (Every).

STRAWBERRY APHID (Chaetosiphon fragaefolii) - WASHINGTON - Averaged 5 per leaf, 3-6 times heavier than normal, on strawberries at Vancouver, Clark County. (Shanks, May 8).

WESTERN GRAPE LEAF SKELETONIZER (Harrisina brillians) - NEVADA - First larvae of season observed at Las Vegas, Clark County. (Zoller).

ORNAMENTALS

APHIDS - CALIFORNIA - Aphis spiraeicola heavy on spirea nursery stock and A. fabae heavy on maytenus nursery stock at Saratoga, Santa Clara County. A. spiraeicola increasing rapidly in many locations. (Cal. Coop. Rpt.).

ARMORED SCALES - CALIFORNIA - Abgrallaspis cyanophylli heavy on Mammillaria sp. nursery stock in Fontana, San Bernardino County. (Cal. Coop. Rpt.). NEVADA - Lepidosaphes ulmi heavy on lilac in Reno and Sparks, Washoe County. (Gustafson, Lauderdale). UTAH - Diaspis carueli damaging low growing junipers at Salt Lake City, Salt Lake County, and on university campus at Logan, Cache County. (Knowlton).

SOFT SCALES - FLORIDA - Saissetia coffeae nymphs and adults general on 20 percent of 500 plants of Duff's swordfern in nursery at Windermere, Orange County; controls necessary. (Ware, May 4). All stages of Pulvinaria psidii moderate to severe on 75 fiddleleaf figs at nursery in West Melbourne, Brevard County. (Levan, May 5).

BAGWORM (Thyridopteryx ephemeraeformis) - ALABAMA - Eggs hatched in northern area. Small larvae feeding on cedar, willow, and other plants. (Patterson et al.). MISSOURI - Eggs hatching in central area. (Munson).

MIMOSA WEBWORM (Homadaula albizziae) - ALABAMA - First-generation larvae very light on honeylocust in Dallas County and mimosa in Lee County. (McQueen).

KATYDIDS - ALABAMA - Amblycorypha sp. and probably Microcentrum retinerve ragging new leaves of camellia plants in Mobile County. (Bolton et al.).

BULB MITE (Rhizoglyphus echinopus) - MISSISSIPPI - Damaged 10-20 percent of bulbs in gladiolus field in Lamar County. (Dinkins, Cochran).

FOREST AND SHADE TREES

SPITTLEBUGS (*Aphrophora* spp.) - OHIO - *A. parallela* nymphs appearing on pines in east-central and southeast areas. Young nymphs on pines in Harrison and Noble Counties; light on about 1-5 percent of terminal branches. (Rose). ALABAMA - *A. parallela* nymphs heavy and widespread on pines in Fayette, Bibb, Jefferson, Morgan, and other northern counties; as many as 25 spittle masses per tree common. (Pitts et al.). MINNESOTA - *A. saratogensis* killed and extensively flagged pines in central area. (Minn. Ins. Rpt.).

APHIDS - OHIO - Large populations of *Cinara strobi* on last year's growth of some white and Scotch pines in Union County. (Gibson). MINNESOTA - *C. strobi* actively feeding and causing some damage to windbreak white pine in southeast area. (Minn. Ins. Rpt.). COLORADO - *Periphyllus negundinis* nymphs and adults damaging boxelder trees at Rifle, Garfield County; populations high with hundreds per terminal. (Hantsbarger).

CHERMIDS - INDIANA - *Adelges cooleyi* common on Christmas-tree plantations in St. Joseph and Elkhart Counties. (Clark). OHIO - *Pineus strobi* infesting mixed 20-acre planting of red and white pines in Scioto Trail State Forest in Ross County. About 20 percent of white pine stems completely covered by white cottony secretions. (Hay, Apr. 26). Newly hatched nymphs of *Phylloxera caryaecaulis* on hickory buds in Ashtabula County in northeast area. (Still).

WESTERN TENT CATERPILLAR (*Malacosoma pluviale*) - OREGON - Tents appearing on apple trees and roadside brush in western area. Populations about 50 percent less than last year. (Larson).

SILVER-SPOTTED TIGER MOTH (*Halisidota argentata*) - OREGON - Infestations light, 1 percent, on Scotch, Austrian, and ponderosa pines in Willamette Valley. (Larson).

WHITE-MARKED TUSsock MOTH (*Hemerocampa leucostigma*) - TEXAS - Larvae light to moderate; some defoliation of shade trees throughout Wharton County causing concern. (Smith, May 5).

FALL CANKERWORM (*Alsophila pomataria*) - WISCONSIN - Numerous first instars and few second instars feeding on half-grown elm leaves in Mazomanie area. (Wis. Ins. Sur.).

SPRUCE NEEDLE MINER (*Taniva albolineana*) - INDIANA - Common in Christmas-tree plantations in St. Joseph and Elkhart Counties. (Clark).

CONIFER SAWFLIES (*Neodiprion* spp.) - OHIO - *N. sertifer* infestations continue on Scotch, red, white, and other pines over much of State. Conditions relatively unchanged due to cold, wet weather of past week. Some Scotch pines averaged about 3 colonies per tree in Union County; larvae 0.75 inch long. (Gibson). Second to fourth instars of *N. pratti pratti* infesting some 20-year-old shortleaf pines in 60-acre plantation in Athens County. (Hanson, May 5).

A SAWFLY (*Messa populi*) - CALIFORNIA - Medium on Fremont cottonwood trees at Riverside, Riverside County. (Cal. Coop. Rpt.).

A ROUNDHEADED WOOD BORER (*Enaphalodes rufulus*) - OHIO - Heavy on 2 stands of red oak of about 30 acres each in Scioto Trail State Forest, Ross County; larvae about full grown. Smaller trees damaged. (Hay, Apr. 26).

MAY BEETLES (*Phyllophaga* spp.) - OKLAHOMA - Moderate; damaging elms and other shade trees in Payne and Cleveland Counties. (Okla. Coop. Sur.).

CECIDOMYIID MIDGES (*Retinodiplosis* spp.) - OREGON - Larvae infesting 10 percent of lodgepole pines in Willamette Valley; yellow needles on branch tips. (Every).

SPIDER MITES (Oligonychus spp.) - CALIFORNIA - O. subnudus heavy on pines in Oxnard, Ventura County. (Cal. Coop. Rpt.). CONNECTICUT - Overwintering eggs of O. ununguis hatched in Storrs. (Savos, May 13).

MAN AND ANIMALS

MOSQUITOES - UTAH - All larval stages and some adult emergence in Rich County areas. (Roberts). LOUISIANA - Larval collections in Jefferson Parish contained Anopheles quadrimaculatus, Aedes vexans, Culex pipiens quinquefasciatus, C. restuans, and C. salinarius. Mansonia perturbans decreasing in light traps; Aedes vexans and Psorophora confinnis increasing. (Stokes). MINNESOTA - Aedes excrucians and A. fitchii dominant in 992 larval samples. Culiseta inornata present in 173 samples. Many single-brooded Aedes pupated as of May 9. (Minn. Ins. Rpt.). WISCONSIN - Adults of Aedes sticticus, A. stimulans and Aedes spp. emerging in northern Iowa County. Adults emerging in few areas, but not a nuisance. (Wis. Ins. Sur.).

HORN FLY (Haematobia irritans) - MISSISSIPPI - Counts per head by county as follows: Issaquena, 200 on 500 cattle; Bolivar, 50 on 300 head; Pike, 60 on 100 head; Hinds, 57 on 475 head; Chicawasaw, 500 on 75 head. (Dinkins, Young). OKLAHOMA - Continues light in Payne County. Moderate in Mayes, Cleveland, and Choctaw Counties. (Okla. Coop. Sur.).

FACE FLY (Musca autumnalis) - IDAHO - Hibernating flies in homes at Craigmont, Lewis County, and Stites, Idaho County. Idaho County is new county record. (Dailey, Gephart). MONTANA - Active in Bitterroot Valley homes. (Pratt).

SCREW-WORM (Cochliomyia hominivorax) - Total of 5 cases reported in U. S. May 7-13 as follows: TEXAS - Hidalgo 1, Presidio 1, Starr 1, Val Verde 1; ARIZONA - Maricopa 1. Total of 39 cases reported in portion of Barrier Zone in Republic of Mexico April 30-May 6 as follows: Sonora 23, Chihuahua 2, Coahuila 2, Nuevo Leon 3, Tamaulipas 9. Total of 52 cases reported in Mexico south of Barrier Zone. Barrier Zone is area where eradication operations are underway to prevent establishment of self-sustaining populations in U. S. Sterile screw-worm flies released May 7-13: Texas 18,424,000, Arizona 1,940,000, Mexico 108,436,000. (Anim. Health Div.).

CATTLE GRUBS (Hypoderma spp.) - UTAH - Moderate on cattle at Ephraim, Sanpete County; adult occasionally noted. (Knowlton).

HOG LOUSE (Haematopinus suis) - OKLAHOMA - Moderate on hogs in Comanche County. (Okla. Coop. Sur.).

LONE STAR TICK (Amblyomma americanum) - OKLAHOMA - Ranged up to 1,000 per head on cows in Cherokee County; heavy on cattle in Choctaw County; moderate in Mayes County. (Okla. Coop. Sur.). MISSISSIPPI - This and Dermacentor variabilis in mixed populations averaged 8 per head on 475 cattle in Hinds County. (Dinkins, Young).

AMERICAN DOG TICK (Dermacentor variabilis) - WISCONSIN - Increasing in north-western counties. (Wis. Ins. Sur.). NEW JERSEY - Active in Middlesex County. (Ins.-Dis. Newsltr.).

CHICKEN MITE (Dermanyssus gallinae) - MISSISSIPPI - Very abundant in chicken houses in Oktibbeha County. Some flocks showing effects. Over 500 on roosting pole 8 feet long. (Combs).

AN EARTHWORM MITE (Fuscuropoda agitans) - ALABAMA - Heavy in fish bait worm bed in Franklin County. (Ponder).

HOUSEHOLDS AND STRUCTURES

A TERMITE (Reticulitermes tibialis) - MONTANA - Damaging records in courthouse at Ryegate and in warehouse at Billings. (Pratt).

STORED PRODUCTS

CARPET BEETLE (Anthrenus scrophulariae) - MISSISSIPPI - Completely destroyed 20 cases of paint brushed in Lauderdale County. (Cochran, Dinkins).

COWPEA WEEVIL (Callosobruchus maculatus) - ALABAMA - Heavy, emergence holes in practically every seed of 5 bushels of cowpea seed stored in barn in Talladega County. (Tanner et al.).

MISCELLANEOUS WILD PLANTS

CLOVER MITE (Bryobia praetiosa) - CALIFORNIA - Heavy on malva plants in Vista, San Diego County. (Cal. Coop. Rpt.).

A SCARAB (Aphodius sp.) - CALIFORNIA - Larvae, probably A. vittatus, in soil and annual flowers in Oroville, Butte County. (Cal. Coop. Rpt.).

BENEFICIAL INSECTS

LADY BEETLES - IDAHO - Up to 5 egg masses and many adults per tree observed in apple and plum orchards near Payette, Payette County. (Matsen, Portman). NEW MEXICO - Averaged 1-3 adults per 25 sweeps in alfalfa in Bernalillo County. (Heninger). MISSOURI - Hippodamia convergens and Coleomegilla maculata adults and larvae ranged 20-50 per 10 sweeps in alfalfa and red clover in west central area. (Munson). IOWA - H. convergens and C. maculata adults active on alfalfa and red clover in southeast. Some egg laying observed. (Mast).

LACEWINGS (Chrysopa spp.) - UTAH - Adults active at Salt Lake City. Moderate in Washington County alfalfa and orchards May 3. (Knowlton).

DAMSEL BUGS (Nabis spp.) - IOWA - Adults very active on alfalfa and red clover in southeast. (Mast).

FLOWER BUGS (Orius spp.) - NEW MEXICO - Adults averaged 6-8 per 25 sweeps in Chaves County alfalfa. (Mathews).

ICHNEUMON WASPS - ILLINOIS - Bathyplectes curculionis reared from alfalfa weevil larvae collected April 13 in Johnson County and May 4 in Williamson County. These are new county records. Centeterus sp. reared from alfalfa weevil cocoon collected April 12 in Williamson County and from cocoon collected April 13 in Johnson County. Det. by W. E. LaBerge. (White). MISSOURI - Adults of B. curculionis collected in alfalfa field in Texas County. (Puttler). This is a new county record. (Munson). CALIFORNIA - B. curculionis adults heavy in burclover stands in Lake Cachuma, Santa Barbara County. (Cal. Coop. Rpt.).

A PHYTOSEIID MITE (Typhlodromus occidentalis) - OREGON - Overwintering forms of this species and Zetsellia spp. very abundant during early spring in Milton-Freewater, Umatilla County, apple and prune orchards. (Every).

FEDERAL & STATE PLANT PROTECTION PROGRAMS

SWEETPOTATO WEEVIL (Cylas formicarius elegantulus) - NORTH CAROLINA - Weevils found in storage house at Tabor City, Columbus County, March 20, 1967. This is a new State record. Infested sweetpotatoes found in storage at Saint Pauls, Robeson County, March 27, 1967. This is a new county record. Determinations made by R. E. Warner. Inspections of storage and growing sites negative in Duplin, Pender, Lincoln, Lenoir, Scotland, Bladen, Brunswick, Wayne, Onslow, New Hanover, Sampson, and Cumberland Counties. (N. C. Dept. Agr.). SOUTH CAROLINA - Surveys made in areas where sweetpotatoes were received from infested storage house mentioned above. Plantings in Horry and Marion Counties found infested. Infested sweetpotatoes also found in retail stores in Charleston and Columbia. Surveys negative in Barnwell, Calhoun, Dillon, and Orangeburg Counties. (PPC South. Reg., Mar. Rpt.).

WHITE-FRINGED BEETLES (Graphognathus spp.) - GEORGIA - Reducing corn stands in Colquitt County. Brown, Bayne).

GRASSHOPPERS - OKLAHOMA - Hatch general in Beckham, Caddo, Custer, Roger Mills, Washita, Comanche, Greer, Jackson, Kiowa, Tillman, and Grady Counties. Nymphs 4-15 per square yard; 90 percent first and second instars. Ageneotettix deorum, Melanoplus bivittatus, Aulocara elliotti, Phlibostroma quadrimaculatum, and Amphitornus coloradus dominant; several banded-wing species also present. Light hatch noted in 9 eastern counties; averaged less than 1 nymph per square yard. M. bivittatus, M. occidentalis, and Boopedon nubilum observed. (Okla. Coop. Sur.). WISCONSIN - Overwintering nymphs, probably Arphia conspersa, common on some alfalfa in Walworth County. (Wis. Ins. Sur.). MINNESOTA - Most eggs in clear to early coagulation stages. Few M. bivittatus eggs in protected, sunny sites show early eye spot development. Economic infestations this season should be widely scattered and localized; noneconomic to light in most areas. (Minn. Ins. Rpt.). SOUTH DAKOTA - High percentage of eggs segmented in Wasta area, Pennington County. Hatch expected with few warm days, particularly in sandy soil region of southern Tripp County. (Burge, Zimmerman).

CARIBBEAN FRUIT FLY (Anastrepha suspensa) - FLORIDA - Continues to increase on dooryard fruits in southern half of State; much higher this year than last year at same time. (Fla. Coop. Sur.).

CITRUS WHITEFLY (Dialeurodes citri) - CALIFORNIA - Total of 110 city blocks treated in Sacramento. Of these, 31 repeat treatments initiated second application in south part of area. (Cal. Coop. Rpt.).

GYPSY MOTH (Porthetria dispar) - CONNECTICUT - Eggs hatching at South Windsor. Winter egg counts indicate larvae should not be problem in most areas. (Savos, May 10).

PINK BOLLWORM (Pectinophora gossypiella) - CALIFORNIA - Single male moth taken in sex lure trap at Blythe, Riverside County, May 4. This is first field collection for 1967. Cotton late due to adverse weather; many fields will be replanted when ground dries. (Cal. Coop. Rpt.).

INSECT DETECTION

New State Records

CITRUS RED MITE (Panonychus citri) - ARIZONA - Detected May 3, 1967, in Yuma County. Det. by D. M. Tuttle. (p. 413).

SWEETPOTATO WEEVIL (Cylas formicarius elegantulus) - NORTH CAROLINA - In storage house in Columbus County March 20, 1967. Det. by R. E. Warner. (p. 419).

New County Records

EUROPEAN CORN BORER (Ostrinia nubilalis) - NORTH DAKOTA - Larvae in Burke and Divide Counties. (p. 404).

ALFALFA WEEVIL (Hypera postica) - KANSAS - Ellis and Cherokee Counties. MISSOURI - Benton County. INDIANA - De Kalb, Noble, Lagrange, Elkhart, St. Joseph, La Porte, Porter, Starke, and Jasper Counties. NEW YORK - Allegany County. (p. 406).

FACE FLY (Musca autumnalis) - IDAHO - Idaho County. (p. 416).

AN ICHNEUMON WASP (Bathyplectes curculionis) - ILLINOIS - From alfalfa weevil larvae collected April 13, 1967, Johnson County and May 4, 1967, Williamson County. (p. 419).

SWEETPOTATO WEEVIL (Cylas formicarius elegantulus) - NORTH CAROLINA - Robeson County. (p. 419).

CORRECTIONS

CEIR 17(19):387 - LESSER PEACH TREE BORER (Synanthedon americanum) should read (Synanthedon pictipes).

CEIR 17(16):320 - European Pine Shoot Moth map. Delete Spokane County, Washington, as infestation considered eradicated. Make same deletion on map in 17(14):272.

LIGHT TRAP COLLECTIONS

State	Locality	Date	Temp- ture °F	Precip- itation inches	Type of trap	Crops	
						BL - Blacklight NY - Inadequate NY - Inadequate NY - Inadequate NY - Inadequate	Other
FLORIDA	Gainsville 5/10				HL	1	1
ILLINOIS	Champaign 5/4-10	40-63	1.35			8	14
KANSAS	Great Bend 5/5, 8					1	2
MARYLAND	Centreville 5/4-10					11	
	Snow Hill 5/2-9					5	
MISSISSIPPI	Stoneville 5/6-12	56-92	0.55	2BL		31	17
	Rolling Fork 5/6-12	54-92	0.2	BL		5	6
	Tunica 5/6-12	49-90	2.5	BL		12	13
NEBRASKA	Lincoln 4/29-5/5					4	1
	Mead 4/29-5/5						
TENNESSEE (Counties)							
	Ames 5/2-8					4	16
	Madison 5/2-8					12	8
	Mauzy 5/2-8					4	10
	Robertson 5/2-8					5	2
	Cumberland 5/2-8					2	7
	Greene 5/2-8					2	2
	Knox 5/2-8					13	4
	Johnson 5/2-8					30	9
TEXAS	Waco 5/6-12					26	8
WISCONSIN (Counties)							
	Madison 5/6-12					1	4
	Mazomanie 5/6-12					4	3
	Platteville 5/6-12						28

HAWAII INSECT REPORT

Corn, Sugarcane - NEW GUINEA SUGARCANE WEEVIL (*Rhabdoscelus obscurus*) adults heavy in some cane fields in Lihue, Kauai. Adults averaged 40 per trap during 2-week period. Strong preference for certain varieties of cane noted. (Au).

Turf - Larvae and adults of a BILLBUG (*Sphenophorus venatus vestitus*) light to medium in zoysia lawns throughout Kalaheo, Kauai. Damage moderate to heavy on one lawn with average of 3 larvae and 2 adults per square foot. (Au).

Vegetables - MELON FLY (*Dacus cucurbitae*) larvae causing heavy damage to immature squash (tongan) in Waianae, Oahu; approximately 75 percent of fruits infested. Brown oviposition injury visible on fruits. Adults light. (Shinbara). All stages of SWEETPOTATO WEEVIL (*Cylas formicarius elegantulus*) light to medium in 1.5-acre sweetpotato field in Waikane, Oahu. (Sato). BEE T ARMYWORM (*Spodoptera exigua*) larvae light on green onion at Waianae, Oahu; one or more larvae on 2-3 tubular leaves of every plant. An armyworm, probably this species, damaging whorls of young corn plants in 16-acre field at Kahuku, Oahu. Larvae 1-4 per plant on 50 percent of 1-foot high plants. (Funasaki).

Fruits - OBSCURE MEALYBUG (*Pseudococcus obscurus*) moderate to heavy in few spots of 200-acre passion-fruit farm in Kahului, Maui. Light numbers of a lady beetle, *Cryptolaemus montrouzieri*, seen amid mealybugs. (Miyahira).

General Pests - CHINESE ROSE BEETLE (*Adoretus sinicus*) adults very active from lowland areas of Kahului up through Makawao on Maui. Numerous adults attracted to night lights. Heavy foliar damage noted on corn, soybean, rose, apple, and peanut. (Miyahira).

Man and Animals - A CATTLE GRUB (*Hypoderma* sp.) infestation noted on young calves in Kohala and Waimea, Hawaii Island. (Garcia). MOSQUITOES - Total of 2,292 *Aedes vexans nocturnus* and 9,023 *Culex pipiens quinquefasciatus* taken in 47 light traps operated on Oahu by Mosquito Control Branch, Department of Health, during April. *Aedes* spp. counts highest at Waiahole, Kaneohe, and Ewa; *Culex* spp. counts highest at Waiahole, Kailua, Kaneohe, Waianae, and Nanakuli. (Haw. Ins. Rpt.).

Beneficial Insects - MELASTOMA BORER (*Selca brunella*) infesting approximately 6,000 acres of *Melastoma malabathricum* during recent survey in Kilohana Crater area of Kauai. This is roughly one-third of 17,500 acres covered by *Melastoma* and *Rhodomyrtus*. (Au).

Weather continued from page 402.

Texas to the Carolinas. In some storms in Nebraska, Missouri, Arkansas, and Tennessee, hail ranged from 2.5 to 3 inches in diameter and was sometimes accompanied by winds of gale or hurricane force. Tornadoes occurred but heavy damage was not reported. Rainless areas included the deserts of California and eastward to the High Plains of Texas, and the Deep South from southern Louisiana to the southern Atlantic coast. Southern Florida remained extremely dry.

TEMPERATURE: Winter held fast over the northern and central Great Plains for the 4th consecutive week. It was the 7th cool week west of the Rockies. Above-normal temperatures prevailed from New Mexico to southern Georgia and Florida. It was the 8th warm week in southern Florida and the 11th warm week in the lower Rio Grande Valley. As subfreezing to near-freezing temperatures occurred nightly over the northern and central States, portions of the South sweltered under record-breaking heat. On Wednesday, Wichita, Kansas, registered 100°, tying the record for May. Abilene, Texas, beat their previous May record maximum when their temperature climbed to 107° on Wednesday. On Saturday, Tallahassee and Jacksonville, Florida, established new May record maximums with 96° and 100° respectively. Week temperatures averaged 10° or more below normal from Nevada to New York and 10° above normal over central Texas. (Summary supplied by Environmental Data Service, ESSA).

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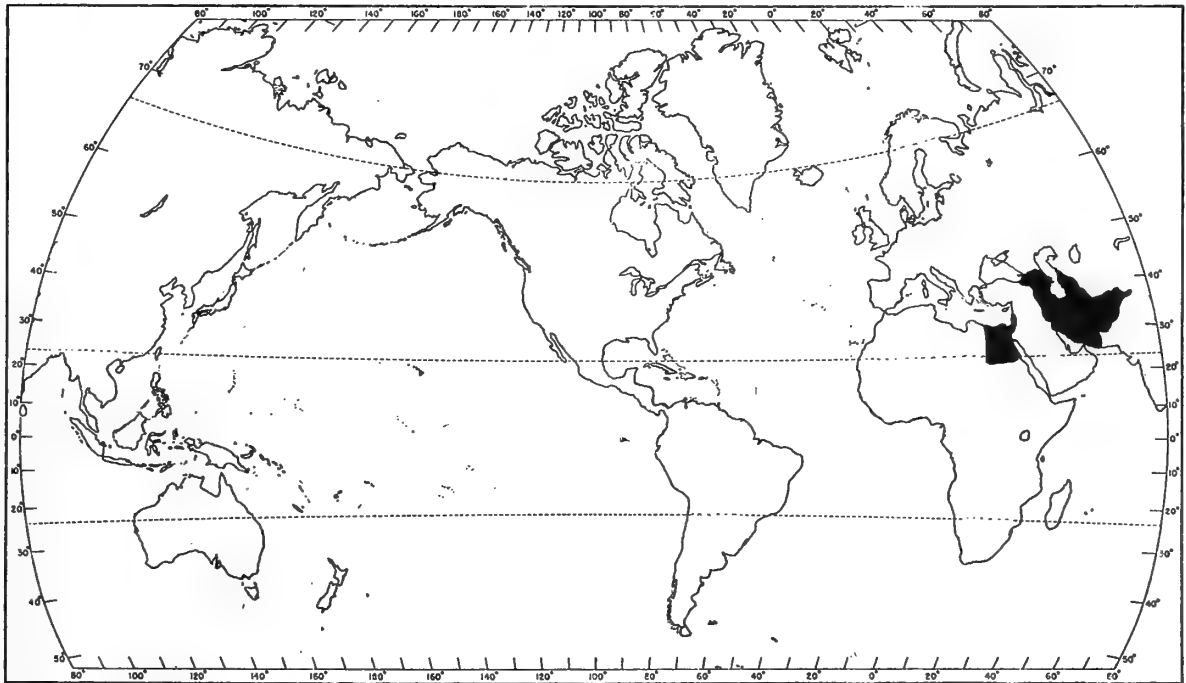
INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

MELON WEEVIL (Baris granulipennis (Tournier))

Economic Importance: The species, first described from Egypt, is a serious pest of watermelons, melons and cucumbers in Israel. Occasionally, heavy populations occur in Egypt. A 10-percent infestation of watermelons has been reported from Afghanistan. Ovipositing females cause economic damage by girdling the stem ends of fruit. As a result, fruit development is stunted. Larval feeding within melons may cause malformation or shriveling. At times attacked fruit dries on the vine.

Distribution: Egypt, Iran, Israel, U.S.S.R. and Afghanistan (specimens determined as probably B. granulipennis).

Hosts: Watermelons, melons and cucumbers.



General distribution of Baris granulipennis (Tournier)

Life History and Habits: In Israel, overwintering adults appear near the end of May or early June when the first fruits develop. The female gnaws small cavities in the peel and places one egg in each, but may deposit many in one fruit. Incubation requires 3 to 6 days. Upon hatching, the larva goes deeper into the fruit where it feeds on the pulp and soft seeds. When summer temperatures reach above 30°C, the larva may complete its development in 12 to 14 days. However, the larval stage may vary if conditions are unfavorable. Larvae usually attack young soft fruit from the size of a walnut to that of a grapefruit. Pupation takes place within a cocoon in the pulp of the fruit. The adult emerges in about 12 days. There are 2-3 generations a year in Israel.

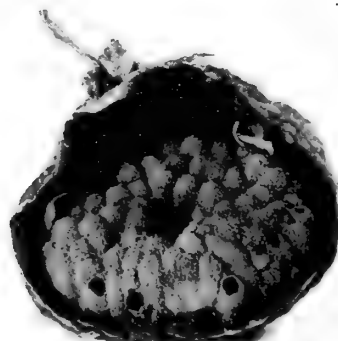
Description: ADULT - Length 4.5 - 5 mm; width 2 mm. Reddish brown to black, densely punctured. Rostrum 1.2 times longer than prothorax, slender strongly curved, uniformly tapering, dorsally with dense coarse punctures; laterally the punctures still coarser, slightly fused into striations. Each puncture with silvery seta. Antennae red-brown. Prothorax transverse, sides rounded, strongly constricted at apex, posterior angles rounded. Elytra wide, anteriorly nearly parallel and straight, narrowing posteriorly. Legs colored as body, densely punctured, each puncture with seta, tibiae long, third segment wide, deeply cleft, with dense brushlike tarsal pads. Abdomen convex, laterally with coarse punctures, becoming finer medially. EGG - white, translucent, elliptical; 0.5 mm. long. LARVA - Length 9 mm., width 3 mm.; white with pink median line along dorsum. Larva widest at posterior third, tapers slightly towards the head. Head red; labrum and mandibles brownish-red. PUPAL CELL - Length 6-8 mm; width 4-5 mm. Various shades of brown, elliptical. PUPA - Length 5 mm; width 3 mm. White, rostrum reaching about one-third of body.



Oviposition punctures on young watermelons. Courtesy Commonw. Inst. Ent.



Watermelon infested with larvae. Courtesy Commonw. Inst. Ent.



Cocoons in dried watermelon peel. Courtesy Commonw. Inst. Ent.

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