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U. S. DEPARTMENT OF AGRICULTURE

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

PLANT PEST SURVEY SECTION

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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United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

GRASSHOPPER eggs in panhandle counties of Oklahoma in sufficient numbers to indicate potential damaging infestations. (p. 359).

EUROPEAN CORN BORER winter survival potential threat in Iowa. (p. 359).
Potential remains in Minnesota. (p. 359).

ARMYWORM adults trapped in Nebraska (p. 360) and South Dakota (p. 372).

ALFALFA WEEVIL infesting new county in North Carolina and reported from 13 counties in Georgia, first record of the State. (p. 360). ✓

PEA APHID heavy in Arkansas and Illinois and potential greater for Wisconsin than in 1957. (p. 362).

CODLING MOTH pupation underway in Illinois and Indiana. (p. 365).

SUMMARY OF INSECT CONDITIONS - 1957 - Tennessee. (p. 373). ✓

INSECTS not known to occur in the United States. (p. 375).

Distribution of ARMY CUTWORM. (p. 364). ✓

ADDITIONAL NOTES. (p. 371).

CORRECTIONS. (p. 363).

WEATHER OF THE WEEK ENDING MAY 5

Last week's weather was mild and wet in the East, unseasonably cold and wet in the Mississippi Valley, unusually cold for the season in the Great Plains with precipitation ranging from very light in northern portions to extremely heavy in the south, and near normal temperatures with little or no precipitation prevailed in the Far West. Showers occurred on 4 to 6 days from the lower Great Plains northeastward through New England, generally totaling from 1 to over 3 inches. Heaviest rains fell in the lower Mississippi Valley. The least weekly total reported in Arkansas was 1.74 inches and the highest 12.67 inches at Dumas. Accumulations in northern Louisiana for the past 10 days, where showers occurred daily, ranged from 10 to 12 inches. For the same period in Mississippi, 12 to 28 inches fell in the upper and lower Delta region, the lower half of the north central portion of the State, and upper half of the south central portion of the State. Serious flooding occurred in Texas, Louisiana, Arkansas, and Mississippi, and local flooding in the Ohio Valley and southern Oklahoma.

In most of southern New England moderate to heavy rains fell on April 20, giving Providence, R. I., a total of 7.21 inches of precipitation for the month, the greatest April total in 54 years. At Boston, Mass., precipitation for the past 6 months, November 1957 through April 1958, totaled 40.04 inches, the most for any 6-month period of record there and more than an inch greater than the normal amount for an entire year; this wettest 6-month period follows Boston's driest 10-month period, January through October 1957. Scattered hail damage and a few tornadoes occurred in the lower Great Plains and South. On Sunday May 4, a severe windstorm in southern Maryland destroyed a large number of tobacco barns, with losses estimated at many thousands of dollars. April ended with a near record, late-season cold snap in northern areas east of the Rockies. On the 29th, freezing occurred as far south as Kansas and Missouri, and lows of 6° and 5° were reported from North Dakota and Minnesota respectively. Several states reported slight crop damage. Up to an inch of snow fell in extreme western Kansas, 4 inches in Billings County, North Dakota, and as much as 5 inches in northern New England. (Summary supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - MINNESOTA - Most eggs in clear stage, some in lighter soils or on south slopes in coagulation stage. Eggs in good condition and predation light. (Minn. Ins. Rpt.). WISCONSIN - Chortophaga viridifasciata present in Washington County and Pardalophora apiculata adults active and numerous, Marquette County. (Wis. Coop. Sur.). KANSAS - Spring hatch of rangeland species has begun in northwestern counties. (Matthew). OKLAHOMA - Eggs of Melanoplus bilituratus, M. differentialis, M. bivittatus, Aulocara elliotti, Aelopes turnbulli, Amphitornus coloradus and Philibostroma quadrimaculatum present in panhandle counties in sufficient numbers to indicate potential damaging infestation. Eggpods in good condition, eggs range from no development to well segmented. General hatch anticipated about May 10. Melanoplus spp. beginning to hatch in northwest counties. (Frazier et al.). NEW MEXICO - Nymphs average about 1 per sweep at Gila and Cliff, Grant County, and hatching in large numbers west of Deming, Luna County. (N. Mex. Coop. Rpt.).

EUROPEAN CORN BORER (Pyrausta nubilalis) - DELAWARE - Percent pupation in one field examined in each county was 27 in New Castle, 30 percent in Kent and 47 percent in Sussex. (MacCreary, Conrad). NORTH CAROLINA - Adults emerging from larvae and pupae collected April 21, Pasquotank County. (Farrier). ALABAMA - Overwintered larvae are 30 percent pupated, no adults have emerged. (Eden). MINNESOTA - Winter mortality of 26 percent, though higher than in past years, may not effect reduction in potential for coming season. (Minn. Ins. Rpt.). IOWA - Winter survival 72.9 percent, potential threat for 1958. (Iowa Ins. Inf.). MISSOURI - Averaged 2,266 overwintering larvae per acre in stalk debris on surface of plowed fields, Randolph County, and 2,066 in Johnson County. (Munson).

MORMON CRICKET (Anabrus simplex) - OREGON - Light infestations developing on several sections of rangeland, Gilliam County. Nymphs primarily first and second-instar, hatch not completed April 29. (Chinn).

A BILLBUG - GEORGIA - Heavy on corn in Toombs and Berrien Counties. (Brogdon, Wood).

FALL ARMYWORM (Laphygma frugiperda) - ALABAMA - Damage light to moderate on corn, Baldwin County. (Eden).

FLEA BEETLES - TEXAS - Feeding on corn in Rockwall County. (Hawkins). NEVADA - Damaging seedling corn in Logandale area, Clark County, Averaging 10 per leaf. (Lauderdale, April 25). OKLAHOMA - Light to moderate infestations and damage to seedling corn in Nowata area, Nowata County. (Walton, Arbuthnot).

SEED-CORN MAGGOT (Hylemya cilicrura) - COLORADO - Bait trap counts indicate high adult populations, Weld County. (Exp. Sta.).

SOUTHERN CORN ROOTWORM (Diabrotica undecimpunctata howardi) - ALABAMA - Light infestation damaging corn, Washington County. (Ruffin). MISSISSIPPI - Medium on corn at Petal High School, Forrest County. (Brunson).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - ARKANSAS - Winter survival averaging 1-7 percent. The higher percentages occur in deeper soils. (Whitcomb).

SUGARCANE BEETLE (Euetheola rugiceps) - ALABAMA - Damage light to moderate on corn, Baldwin and Escambia Counties. Replanting required in some areas. (Grimes).

GREENBUG (Toxoptera graminum) - ALABAMA - Apparently decreasing in southern areas. (Grimes). ARKANSAS - Infestations continue in untreated southwest fields and have developed farther east and north. Appeared in 4 southeastern, 2 south central, 4 southwestern and 2 west central counties. (Boyer).

KANSAS - None found in 8 northwest and 3 north central counties. (Matthew).
 OKLAHOMA - Rare in extreme northwest counties, none in panhandle counties.
 Populations being reduced in other sections. (Coppock). NEW MEXICO - None
 found in wheat fields checked, Curry and Roosevelt Counties. (N. Mex. Coop. Rpt.).

APPLE GRAIN APHID (Rhopalosiphum fitchii) - UTAH - Outbreak on greenhouse
 barley at Logan, Cache County; controlled by internal parasite. (Cox,
 Knowlton).

ARMYWORM (Pseudaletia unipuncta) - KANSAS - Early instar larvae averaged 3
 per 100 sweeps in wheat fields, Osborn County. Adults reported from south
 central areas. (Matthew). TEXAS - Appearing in small numbers on vetch,
 Kaufman County. (Christian, Randolph). NEBRASKA - First 6 moths caught in
 light trap at Lincoln, Lancaster County. (Andersen). VIRGINIA - Adults
 active in Richmond City area. (Matheny).

BROWN WHEAT MITE (Petrobia latens) - OKLAHOMA - Averaged 200-400 per linear
 foot in one barley field and up to 10 per foot in widely scattered wheat fields
 in Texas County. Most fields checked had none. Occasional in Beaver and
 Harper Counties. This is first verified report of occurrence in State in past
 12 months. (Coppock).

CHINCH BUG (Blissus leucopterus) - KANSAS - Abundant in several barley fields,
 Douglas County. (Gates). ALABAMA - Light on corn, Washington County. (Ruffin).

ENGLISH GRAIN APHID (Macrosiphum granarium) - NEBRASKA - Average 20 per 100
 sweeps in southwest areas. (Andersen). OKLAHOMA - Extremely light in
 panhandle counties with none in most fields. Average 0-20 per linear foot
 in scattered fields in 4 northwest counties. (Coppock).

WIREWORMS (Limoniuss spp.) - SOUTH DAKOTA - Up to one per linear foot in
 spring wheat, Beadle County. (Hantsbarger).

A WHEAT STEM MAGGOT (Hylemya cerealis) - COLORADO - Damage reported in Briggsdale
 area, Weld County. (Ext. Serv.). No adults taken to April 22 in bait traps,
 Weld County. (Exp. Sta.).

✓ ALFALFA WEEVIL (Hypera postica) - NEW JERSEY - Larvae present in southern
 counties. (Ins.-Dis. NewsI.). DELAWARE - Visible damage due mostly to
 second and third-instar larvae, Kent and Sussex Counties, averaging 40 per
 10 sweeps, Kent County. (MacCreary, Conrad). PENNSYLVANIA - Adults and eggs
 abundant, larvae increasing in alfalfa in south central areas. (Pepper).
 VIRGINIA - Damage to alfalfa ranges medium to heavy in most counties where
 infestations are present. (Morris). NORTH CAROLINA - Ashe County
 found newly infested. (Jones, Farrier). Unsprayed fields total losses,
 Union and Wake Counties. (Spyhalski, Farrier). GEORGIA - Light to moderate
 on alfalfa in Clarke, Jackson, Oconee, Banks, Hart, Washington, Hancock, and
 Stephens Counties and moderate to heavy in Lincoln, Wilkes, McDuffie, Franklin
 and Greene Counties. Confirmed by W. H. Anderson and R. E. Warner. (Johnson).
 COLORADO - Larvae average 3 per 100 sweeps in Mack and Fruita areas, Mesa
 County. (Colo. Ins. Det. Comm.). IDAHO - Egg laying underway in Idaho Falls
 area, Bonneville County, and adults becoming active in Moscow area, Latah
 County. (Manis, Kohl).

AN ALFALFA WEBWORM (Loxostege sp.) - PENNSYLVANIA - Averaging about one per
 alfalfa plant, Mifflin County. (Udine).

ARMY CUTWORM (Chorizagrotis auxiliaris) - COLORADO - Serious damage locally
 to alfalfa, particularly new seedlings in Larimer County. Damaging alfalfa
 in Rio Grande County, numbering 8 per linear foot. (Exp. Sta.). KANSAS -
 Destructive in several seedling alfalfa fields, Rawlins County. Few fields
 sprayed to protect remaining plants from further damage. Averaged 4 per

square foot in heaviest infested fields. Only occasional specimens found in old established alfalfa fields. Non-destructive in 7 other northwestern counties. (Matthew). SOUTH DAKOTA - Spotted infestations in alfalfa and small grains in east central and southeast areas average 3 larvae per square yard. (Hantsbarger).

CLOVER HEAD WEEVIL (Tychius stephensi) - ALABAMA - Heavy in crimson clover, Autauga, Wilcox and Lowndes Counties, light in Lee County. (S. Hays, Guyton, Grimes).

CLOVER LEAFHOPPER (Aceratagallia sanguinolenta) - DELAWARE - Fairly common on clover, eastern Sussex County. (MacCreary, Conrad).

CLOVER LEAF WEEVIL (Hypera punctata) - IDAHO - Larvae common throughout northern alfalfa fields, occasionally averaging 2-3 per crown. Many in late instars in Coeur d'Alene and Post Falls areas, Kootenai County, but predominantly early stages in Sandpoint area, Bonner County, and Bonners Ferry, Boundary County. (Gittins). ILLINOIS - Averaged 6.7 larvae per square foot in the southwest, 4.6 in northwest, 0.5-3.0 in other areas. Maximum in any one field was 22. (Ill. Ins. Rpt.). IOWA - Report 2 larvae per plant in eastern Pottawattamie County. (Iowa Ins. Inf.). VIRGINIA - Larvae averaged 0-60 per 100 sweeps in fields surveyed in southwest areas. Fungus disease beginning to appear in some fields. (Morris).

CLOVER ROOT CURCULIO (Sitona hispidula) - IDAHO - Adults common and often abundant in northern red clover and alfalfa fields, reaching 3 per sweep in alfalfa in Bonners Ferry area, Boundary County, and 2 per sweep in many areas of Kootenai and Bonner Counties. Abundant numbers in one 80-acre red clover field partly responsible for 90 percent decline of stand, Boundary County. (Gittins). PENNSYLVANIA - Small numbers of adults on clover in south central areas. (Pepper).

COWPEA APHID (Aphis medicaginis) - NEW MEXICO - Light in alfalfa near San Juan, Grant County. (N. Mex. Coop. Rpt.).

CUTWORMS - MISSOURI - Averaged 1-2 half-grown larvae per square yard in red clover, Saline County. Mainly Feltia subgothica. (Peters). Much lighter in other legumes and pastures over central and southwest areas. (Kyd, Thomas). KANSAS - No Agrotis orthogonia found in any wheat fields examined in northwestern counties, particularly where infestations existed for past two years. (Matthew). UTAH - Injury less than normal. (Knowlton). IDAHO - More common in clover and alfalfa fields than in past 2 years, averaging 1 per square foot in one alfalfa field near Rathdrum, Kootenai County. (Gittins). COLORADO - A. gladiaria at 8 per linear foot damaging alfalfa, Rio Grande County. (Exp. Sta.). NEW MEXICO - A. orthogonia moderate on late-planted wheat near Clovis, Curry County. (N. Mex. Coop. Rpt.).

A FALSE CHINCH BUG (Nysius sp.) - ALABAMA - Large numbers in vetch and bur-clover, Lee County. (Guyton).

GREEN CLOVERWORM (Plathypena scabra) - ILLINOIS - Averaged 1 per 100 sweeps in central and west outhwest sections. (Ill. Ins. Rpt.).

LESSER CLOVER LEAF WEEVIL (Hypera nigrirostris) - ALABAMA - Becoming more numerous in crimson clover than previously reported. (Guyton). PENNSYLVANIA - Small numbers of adults on clover in south central areas. (Pepper). ILLINOIS - Averaged 11 adults per 100 sweeps in southeast section, with maximum of 50 in any one field. Larvae infested 11 percent of stems in southeast section, 22 percent in southwest section. (Ill. Ins. Rpt.).

PEA APHID (Macrosiphum pisi) - DELAWARE - Common on alfalfa statewide, adults collected, Kent and Sussex Counties. (MacCreary, Conrad). PENNSYLVANIA - Heavy

in one field of alfalfa, Franklin County. (Pepper). VIRGINIA - Heavy on alfalfa in Antioch community, Fluvanna County (Smith) and medium on alfalfa in Nelson County (Swain). GEORGIA - Moderate to heavy in alfalfa in 13 northern counties. (Johnson). ALABAMA - Very heavy in vetch and crimson clover, Wilcox and Lowndes Counties. (Grimes). ARKANSAS - Averaged 500-1000 per 10 sweeps in Hope area, Hempstead County. (Boyer). ILLINOIS - Averaged 7,937 per 100 sweeps in southwest, 3,553 in southeast, 0-130 in remainder of State. (Ill. Ins. Rpt.). MISSOURI - Continues slow increase over most of State but remains below economic levels. Disease and predators slightly increased. (Kyd, Thomas). WISCONSIN - Numbers of stem-mothers indicate most overwintering eggs may have hatched and now appear to furnish greater potential than same period in 1957 if conditions are favorable. (Wis. Coop. Sur.). SOUTH DAKOTA - Averaged 1-3 per 10 sweeps in alfalfa in east central and southeast areas. (Hantsbarger). KANSAS - Approximately 6 per 25 sweeps in few alfalfa fields in 8 northwest and 3 north central counties. (Matthew). Non-economic to light in nearly all alfalfa fields in Kansas River Valley. (Gates). OKLAHOMA - Averaged 75-500 per 10 sweeps from alfalfa in Alfalfa County, lighter in adjacent counties. Very light in panhandle counties. (Coppock). TEXAS - Medium on alfalfa, Wharton County. (Garner). Ranged 5-25 per sweep in vetch, Kaufman County. (Randolph). UTAH - Common in alfalfa generally throughout State. (Knowlton). IDAHO - Common in all alfalfa and clover fields sampled in northern counties, adults averaging 3 per sweep in alfalfa. (Gittins). COLORADO - First of season reported in alfalfa in Mack and Fruita areas, Mesa County. (Exp. Sta.) NEW MEXICO - Light to moderate in most alfalfa fields in southern counties. (N. Mex. Coop. Rpt.). OREGON - Building up in Willamette Valley legumes with 10-15 per sweep not uncommon. (Capizzi).

PEA LEAF WEEVIL (*Sitona lineata*) - OREGON - Extensive surveys in Willamette Valley disclosed Linn and Lane Counties are infested. Benton County infested entire length along north-south highway 99W. No economic damage to legumes in these counties, but second-generation adult buildup in mid-summer expected to be serious threat. (Capizzi).

PLANT BUGS - PENNSYLVANIA - *Lygus lineolaris* abundant on alfalfa and clover in south central areas. (Pepper). ALABAMA - Light numbers of *L. lineolaris* in crimson clover, Lee County. (Guyton). ILLINOIS - *L. lineolaris* adults averaged 22-24 per 100 sweeps in southwest, southeast and east sections and *Adelphocoris* spp. nymphs 6 per 100 sweeps in southeast section. (Ill. Ins. Rpt.) KANSAS - *L. lineolaris* averaged 3-8 per 25 sweeps in all alfalfa and wheat fields surveyed in 8 northwestern counties and 4-16 in 3 north central counties. Few nymphs were observed in Osborne and Mitchell Counties. (Matthew). NEBRASKA - Continue to build up in southeast areas, averaging 65 per 100 sweeps. (Andersen). SOUTH DAKOTA - *Lygus* spp. averaged up to one per 10 sweeps in alfalfa in east central and southeast areas. (Hantsbarger). UTAH - Present in alfalfa and numerous on weed hosts generally. (Knowlton). IDAHO - *Lygus* spp. seldom exceeded one adult per sweep in all alfalfa and clover fields sampled in 4 northern counties. *L. hesperus* most commonly encountered species. (Gittins). NEW MEXICO - Adults in alfalfa fields numerous in 5 southern counties. Nymphs becoming very abundant. (N. Mex. Coop. Rpt.).

POTATO LEAFHOPPER (*Empoasca fabae*) - KANSAS - None found in any alfalfa fields examined in 8 northwestern and 3 north central counties. (Matthew).

SPIDER MITES - ALABAMA - Damage to leaves of crimson clover noticeable, Lee County. (Guyton).

SPITTLEBUGS - MASSACHUSETTS - *Philaenus leucophthalmus* hatched at Amherst, Hampshire County, April 23, subsequent development slow due to detrimental weather. (Lavigne). DELAWARE - *P. leucophthalmus* common on dandelion in alfalfa field edges, Kent County. (MacCreary, Conrad). VIRGINIA - *P. leucophthalmus* ranged 1-100 per 100 sweeps in southwest fields. (Morris).

ILLINOIS - P. leucophthalmus averaged 17 nymphs per 100 stems in southeast with hatch complete, 32 in northeast and 21 in northwest with hatch incomplete. (Ill. Ins. Rpt.). IDAHO - Second and third-instar nymphs feeding on Klamathweed and sweetclover, Kootenai and Nez Perce Counties. (Barr).

SPOTTED ALFALFA APHID (Therioaphis maculata) - KANSAS - None found in alfalfa fields examined in 8 northwest and 3 north central counties. In south central areas populations remain low and show little increase. (Matthew). NEW MEXICO - Very light to moderate in Roosevelt, De Baca and Hidalgo Counties, heavy and spotty in Luna, Chaves, Eddy and Dona Ana Counties. (N. Mex. Coop. Rpt.). ILLINOIS - None found. (Ill. Ins. Rpt.). OKLAHOMA - Averaged 0-30 per 10 sweeps in northwestern and panhandle counties and 175 per 10 sweeps in 2 alfalfa fields in Woodward County. (Coppock).

SWEETCLOVER APHID (Myzocallidium riehmi) - ILLINOIS - Averaged 20 per 100 sweeps in one field in southwest section. (Ill. Ins. Rpt.).

SWEETCLOVER WEEVIL (Sitona cylindricollis) - IOWA - Average 2-5 per plant. Adults working heavily in new seedlings of sweetclover. (Iowa Ins. Inf.). MINNESOTA - Damaging new shoots of overwintered sweetclover, most abundant in field margins. (Minn. Ins. Rpt.). NEBRASKA - Remain heavy, 6-8 per 10 crown samples, in southeast sweetclover fields. (Andersen). NORTH DAKOTA - Adults active and feeding on new growth of sweetclover in eastern areas. (N. D. Ins. Rpt.). IDAHO - Heavy feeding damage from exceedingly abundant adults in one 80-acre field of sweetclover mainly responsible for a 50 percent decline in stand near Bonners Ferry, Boundary County. (Gittins). UTAH - Active in Cache County. (Knowlton).

THRIPS - NEW MEXICO - Building up rapidly in seedling alfalfa near Las Cruces, Dona Ana County. (N. Mex. Coop. Rpt.).

VETCH BRUCHID (Bruchus brachialis) - ALABAMA - Heavy on vetch, Lee County. (Guyton). TEXAS - Averaged 2 per 5 sweeps in vetch in Hunt County (Hawkins) and about the same in Kaufman County (Randolph). OREGON - First adults of season noted in Willamette Valley April 28. (Capizzi).

YELLOW CLOVER APHID (Therioaphis trifolii) - ILLINOIS - Averaged 65 per 100 sweeps in southwest section. (Ill. Ins. Rpt.).

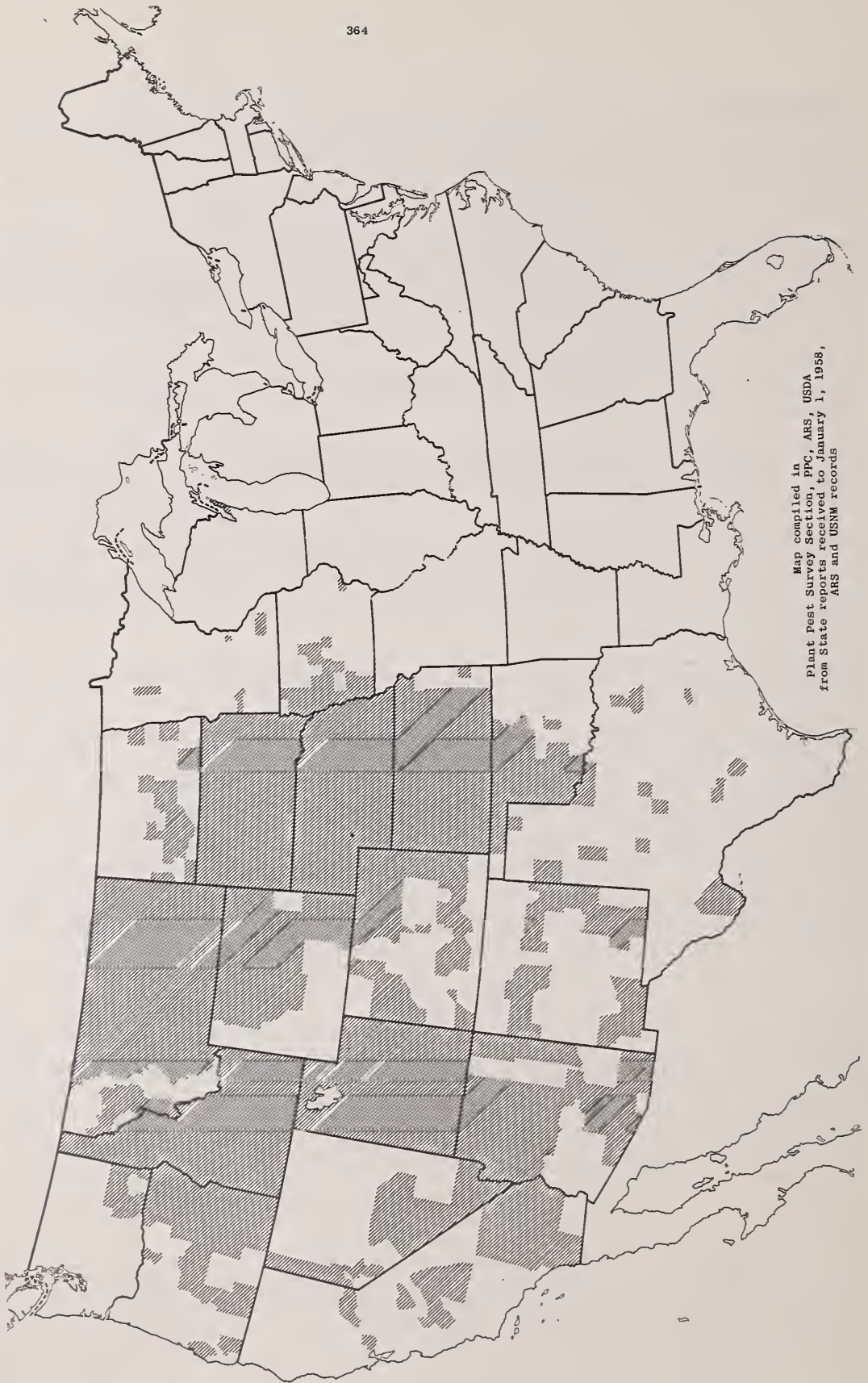
YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli) - ALABAMA - Light infestations of late instar larvae in crimson clover and oats, Lee and Baldwin Counties. (Grimes, Guyton).

CORRECTIONS

CEIR 8(17):317 GRASSHOPPERS - ARIZONA - Trimeritropis should read Trimerotropis.

CEIR 8(17):321 CLOVER MITE - NEW MEXICO - Should read, "Larvae very abundant in orchards not sprayed with dormant sprays."

DISTRIBUTION OF ARMY CUTWORM (*CHORIZAGROTIS AUXILIARIS*)



Map compiled in
Plant Pest Survey Section, PPC, ARS, USDA
from State reports received to January 1, 1958,
ARS and USNM records

FRUIT INSECTS

CODLING MOTH (Carpocapsa pomonella)- INDIANA- Pupating in warm parts of packing sheds at Orleans. Some emergence expected by May 10. (Marshall). About 25 percent pupated by April 28 at Vincennes. (Hamilton). ILLINOIS - Pupation well underway as far north as Belleville. (Meyer).

RED-BANDED LEAF ROLLER (Argyrotaenia velutinana)- INDIANA - Adults continue to lay eggs at Vincennes, None hatched to April 29. (Hamilton). NEW JERSEY - Adults active, no larvae observed. (Ins. Dis. Newsl.). ILLINOIS - Hatching April 27 at Carbondale, New eggs masses still being found. (Meyer). DELAWARE - Eggs began hatching prior to April 29. (MacCreary, Conrad).

EYE-SPOTTED BUD MOTH (Spilonota ocellana) - IDAHO - Hatching in Moscow area; first and second instars present. Damage to developing apple buds minor. (Manis).

FRUIT TREE LEAF ROLLER (Archips argyrospila) - IDAHO - Hatching occurred and first to second instar larvae present on apples in Moscow area. Damage is minor. (Manis).

APHIDS - INDIANA - Anuraphis roseus and Rhopalosiphum fitchii infestations increasing rapidly on apples at Orleans. (Marshall). MISSOURI - Few Aphis pomi reported last week. (Wkly. Rpt. Fr. Grow., May 10). UTAH - Myzus persicae present on peach trees at Fillmore and Kanosh. (Rickenback). ALABAMA - Large numbers of Eriosoma lanigerum and A. roseus on apple trees in Lee County. A. pomi rather scarce. (Guyton). NEW MEXICO - Extremely heavy populations of M. persicae curling peach leaves at Faywood, Grant County. Moderate to heavy infestations on peach trees throughout Dona Ana County. Heavy infestations of E. lanigerum on apple trees near Sherman, and spotty infestations along Mimbres River in Grant County. (N.Mex. Coop. Rpt.). DELAWARE - A. roseus collected in New Castle County, May 1. (MacCreary, Conrad).

CATFACING INSECTS - INDIANA - Period of greatest damage by Lygus lineolaris about over at Orleans. Stink bugs, principally Euschistus servus euschistoides & E. tristigmus present in peach orchards at Orleans, greatest damage by these species should occur within next 10 days. Acrosternum hilare should appear within next week and injury should increase rapidly thereafter. (Marshall, Apr. 29). Only few L. lineolaris remain in peach orchards at Vincennes. Peak activity occurred week of April 14. Populations of stink bugs continue to be light in peach orchards. Increase likely with warm weather. (Hamilton). ILLINOIS - Populations of stink bugs expected to increase rapidly at Carbondale. L. lineolaris still present on peaches. (Meyer). MISSOURI - Stink bugs active in southeastern area. (Wkly. Rpt. Fr. Grow.).

LESSER PEACH TREE BORER (Synanthedon pictipes)- TEXAS - Light infestation on peaches in Anderson County. (Showers).

RED-LEGGED FLEA BEETLE (Derocrepis erythropus) - PENNSYLVANIA - Numerous and causing damage to peach in Berks County. (Menusan, Apr. 22).

EUROPEAN RED MITE (Panonychus ulmi)- MASSACHUSETTS - Eggs hatching. (Crop Pest Cont. Mess.). INDIANA - Hatching slow at Orleans. (Marshall). Populations relatively light at Vincennes, April 29. (Hamilton). DELAWARE - Overwintering eggs hatched in Kent County by April 25. (MacCreary, Conrad). IDAHO - Hatching begun on apple trees in Moscow area. (Manis).

CLOVER MITE (Bryobia praetiosa complex) - UTAH - Half grown or larger in orchards in Weber and Davis Counties. (Davis). NEW MEXICO - Light infestations on apple trees near Cliff and Faywood, Grant County, causing some damage to foliage. (N. Mex. Coop. Rpt.).

PEAR LEAF BLISTER MITE (Eriophyes pyri) - UTAH - Conspicuous in apples and pears, few Utah County orchards. (Knowlton).

PLUM CURCULIO (Conotrachelus nenuphar) - INDIANA - Damage should increase rapidly on peaches at Orleans. (Marshall). Populations very light in commercial orchards at Vincennes. Peak activity not reached yet. (Hamilton). ILLINOIS - Emergence expected to increase rapidly with warm weather. (Meyer). GEORGIA - First larva of season found in orchard on April 24. Larva was 2-3 days old when found. Adults now depositing eggs in recently exposed peaches. (Snapp, Apr. 25).

PECAN LEAF CASEBEARER (Acrobasis juglandis) - TEXAS - Feeding on pecan leaves in Brazos County. (Randolph). ALABAMA - Causing considerable damage to pecan foliage in Baldwin County. Infestations light in northern part of county. (Wilson, Grimes).

A SAWFLY - TEXAS - Feeding on pecan in Brazos County. (Randolph).

SCALES - NEW MEXICO - Light infestation of scales, probably Lecanium spp., on pecan trees near Mesilla, Dona Ana County. (N. Mex. Coop. Rpt.).

TRUCK CROP INSECTS

VEGETABLE WEEVIL (Listroderes costirostris obliquus) - ALABAMA - Causing serious damage to turnips in Baldwin County. (Grimes).

TURNIP APHID (Rhopalosiphum pseudobrassicae) - ALABAMA - Completely destroyed 3-acre field of turnips in Baldwin County. (Grimes).

IMPORTED CABBAGEWORM (Pieris rapae) - ALABAMA - Causing serious damage to cabbage in Baldwin County. (Grimes).

CABBAGE MAGGOT (Hylemya brassicae) - MASSACHUSETTS - Eggs found in Bristol County April 25, also present in Taunton area. (Crop Pest Cont. Mess.). NEW JERSEY - Adults active. (Ins. Dis. Newsl.).

CABBAGE APHID (Brevicoryne brassicae) - ALABAMA - Very prevalent on cabbage in Baldwin County. (Grimes).

CUCUMBER BEETLES - GEORGIA - Light to moderate infestations of Acalymma vittata on cucumbers and watermelons in Tattnall County. (Johnson). NEW MEXICO - Diabrotica spp. and Acalymma spp. damaging young cantaloups and melons at Virden, Hidalgo County. Diabrotica spp. damaging lettuce near Los Lunas, Valencia County. (N. Mex. Coop. Rpt.).

SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) - GEORGIA - Light to moderate infestations on cucumbers and watermelons in Tattnall County. (Johnson). ALABAMA - Causing damage to beans in Baldwin County. (Grimes).

TOMATOWORMS - TEXAS - Heliothis zea and Protoparce sp. infestations increasing in lower Rio Grande Valley, Protoparce sp. with greatest increase in Mission area. (Deer). Protoparce quinque maculata infesting tomatoes in Winter Haven area. (Harding).

SPIDER MITES - TEXAS - Causing most damage to tomatoes in lower Rio Grande Valley. (Deer).

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - GEORGIA - Light infestations of adults and larvae on tomatoes in Tattnall County. (Johnson).

A LEAF MINER (Liriomyza guytoni)- ALABAMA - Light infestation on tomato leaves in Lee County. (Guyton).

WIREWORMS - OKLAHOMA - Continues to damage potatoes in Bixby area. (Walton, Arbuthnot).

ASPARAGUS BEETLES (Crioceris spp.) - NEW JERSEY - Present in considerable numbers. (Ins. Dis. NewsI.). DELAWARE - C. asparagi depositing eggs on asparagus spears in Kent County. (MacCreary, Conrad).

THRIPS - NEW MEXICO - Moderate infestations on lettuce near Los Lunas, Valencia County, and Las Cruces, Dona Ana County. Building up considerably on onions throughout Dona Ana County. From 80-85 percent population were Frankliniella occidentalis; others Thrips tabaci. (N. Mex. Coop. Rpt.).

CABBAGE LOPPER (Trichoplusia ni)- NEVADA - Adults very numerous and attracted to lights in Las Vegas area, Clark County. (Lauderdale, April 25). NEW MEXICO - Eggs very abundant on about 600 acres of lettuce in Bernalillo County; no larvae found. Moderate number of eggs on about 400 acres of lettuce in Valencia County; some young larvae. Continues to be problem in lettuce fields in Dona Ana County. (N. Mex. Coop. Rpt.).

LEAFHOPPERS - NEW MEXICO - Buildup of leafhoppers, probably Empoasca abrupta, in lettuce in Dona Ana and Eddy Counties. (N. Mex. Coop. Rpt.)

LYGUS BUGS - OREGON - Abundant enough to cause damage to young sugarbeets in Hermiston area. Three fields averaged 1.2 per linear foot of row May 1. (Capizzi). ALABAMA - Light numbers of Lygus lineolaris on squash in Baldwin County. (Grimes).

BEET LEAFHOPPER (Circulifer tenellus) - OREGON - Populations in Hermiston area May 1 average 1-2 adults per linear foot of row. Beets in 4-6 leaf stage. (Capizzi).

BEET WEBWORM (Loxostege sticticalis) - COLORADO - High population potential exists in the San Luis Valley where overwintering forms average up to several hundred per square foot. Disease and parasites may reduce the population. (Exp. Sta.).

MEXICAN BEAN BEETLE (Epilachna varivestis) - GEORGIA - Moderate to heavy infestations on beans and field peas in Tattnall County. (Johnson). ALABAMA - Becoming prevalent on beans in Baldwin County. (Grimes).

STRAWBERRY LEAF ROLLER (Ancylis comptana fragariae) - KANSAS - Emergence beginning in northeastern counties during week of April 22. (Eshbaugh). INDIANA - Pupation begun at Orleans. (Marshall).

STRAWBERRY WEEVIL (Anthonomus signatus) - DELAWARE - Common and damaging strawberries in southern Sussex County. (MacCreary, Conrad). VIRGINIA - Light on strawberries some areas in Accomack County. No severe damage reported. (Rogers).

TARNISHED PLANT BUG (Lygus lineolaris) - IOWA - Seriously damaging strawberry fruit and foliage in conjunction with slugs. (Iowa Ins. Inf.).

TOBACCO INSECTS

TOBACCO FLEA BEETLE (Epitrix hirtipennis) - NORTH CAROLINA - Light damage some plant beds in Granville County. (Chamberlin). Present in Hertford County. (Ballentine, Weisman). VIRGINIA - Damage very light to light to tobacco plants around margins of tobacco plant beds in Chatham area of Pittsylvania County. (Dominick). FLORIDA - Adults averaged 7 per tobacco plant on 200 inspected in plant bed at Quincy, Gadsden County. (Tappan, Mar. 27).

CUTWORMS - FLORIDA - Causing moderate damage to newly-set tobacco in the shades. (Tappan).

BUDWORMS (Heliothis spp.) - GEORGIA - Moderate infestations on tobacco in Bulloch, Evans, Tattnall and Candler Counties. (Johnson).

GREEN PEACH APHID (Myzus persicae) - FLORIDA - Averaged 10 per plant on 300 tobacco plants inspected in beds at Havana, Gadsden County. Potential still as great in 1958 as in previous years. (Tappan, Mar. 20).

SPRINGTAILS - NORTH CAROLINA - Many Achorutes armatus, few Pseudachorutes saxatilis and Priostoma constricta, present locally on tobacco plant beds in Alamance County. No evidence of damage. (Dodson, Wray).

COTTON INSECTS

BOLL WEEVIL (Anthonomus grandis) - GEORGIA - First adults trapped on tanglefoot at Tifton, Tift County. (Morgan). TEXAS - Winter survival from hibernation cages at Waco was 1.8 percent, compared with 0.66 in 1957 for the same date. (Parenica, et al., May 2).

COTTON APHID (Aphis gossypii) - TEXAS - Infesting cotton in 2 to 4-leaf stage, Wharton County. (Cason). Few observed in Brazos River bottom, Burleson County. (Turney). On seedlings in all fields inspected, McLennan and Falls Counties. (Parenica et al.).

COTTON FLEAHOPPER (Psallus seriatus)- TEXAS - Seasonal emergence in hibernation cages was 7,119 at Waco, compared with 21,212 for same date in 1957. (Parenica et al., May 2).

GARDEN SPRINGTAIL (Bourletiella hortensis)- NORTH CAROLINA - Injuring cotton locally, Hertford County, and reported from other localities in Coastal Plain. (Ballentine, et al.).

SPIDER MITES - TEXAS - On seedlings along edges of some fields, McLennan and Falls Counties. (Parenica et al., May 2).

THRIPS - NEW MEXICO - Beginning to build up in Dona Ana County. (N. Mex. Coop. Rpt.).

Cotton Insects in Lower Rio Grande Valley, Texas: FLEAHOPPERS increasing throughout the Valley, heaviest in Citrus City, McCook, Hargill, Raymondville and Lyford areas with as many as 100 per 100 terminals. SPIDER MITES increasing in many fields, greatest in San Benito, Los Fresnos and Brownsville areas. Some THRIPS reported in the Brownsville area. BOLLWORMS causing some terminal damage in widely scattered fields. (Deer).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

BARK BEETLES - TEXAS - Pityophthorus spp. and Ips spp. caused mortality of merchantable pine in eastern Trinity County, during March. (Young).

BAGWORM (Thyridopteryx ephemeraeformis) - OKLAHOMA - Heavy on juniper in Purcell area, McClain County. (Coppock, Vick).

BIRCH LEAF MINER (Fenusa pusilla) - OREGON - Adults emerging in Portland area, Multnomah County. (Nicollason, April 30).

BLACK TURPENTINE BEETLE (Dendroctonus terebrans) - TEXAS - Heavy infestation north of Honey Island, Hardin County, during March. (Young).

GYPSY MOTH (Porthetria dispar) - PENNSYLVANIA - Eggs hatching in Luzerne County, April 28. (Nichols).

PALES WEEVIL (Hylobius pales) - PENNSYLVANIA - Adults feeding on pines in Schuylkill County. (Menusan).

PINE BARK APHID (Pineus strobi) - PENNSYLVANIA - Numbers increasing on pine in southeastern areas. (Menusan).

PINE SAWFLIES (Neodiprion spp.) - ARKANSAS - Few specimens of Neodiprion sp. feeding on shortleaf pine in Perry County are first sawfly record for county. Second and third instar larvae of N. taedae linearis in Warren area, Bradley County. No larvae of N. virginiana complex found in El Dorado area, Union County, where it was an active feeder in fall of 1957. Live pupae found in leaf trash under 1957 host trees. (Boyer). NEW JERSEY - Active in Warren County. (Ins.-Dis. Newsl.).

TENT CATERPILLARS (Malacosoma spp.) - UTAH - Small larvae in shade trees in northern localities. (Knowlton). ARKANSAS - Single specimens of M. disstria collected in Drew and Ouachita Counties are only records since 1949. M. americanum common in most areas of State. (Boyer). NEW JERSEY - Causing some concern over State. (Ins.-Dis. Newsl.). NORTH CAROLINA - Local on maple, elm and wild cherry throughout Coastal Plain and Piedmont areas. (Scott, Farrier). OKLAHOMA - M. americanum statewide in native plums with severe damage in some western counties. (Coppock). TEXAS - Larvae developing throughout eastern hardwoods. (Young). ALABAMA - M. americanum causing light damage to shade trees, Madison County. (Ruffin). M. disstria heavy in wooded areas of Baldwin and Mobile Counties, few on oak trees in Wilcox and Lowndes Counties. (Hyche, Grimes).

TIP MOTHS - TEXAS - Adults emerging throughout eastern areas during March. (Young).

APHIDS - NEVADA - Increasing rapidly on plants and shrubs in home gardens in Reno-Sparks area, Washoe County. (Lauderdale, April 25). NEW MEXICO - Macrosiphum rosae extremely heavy on roses in Dona Ana, Luna, Hidalgo and Grant Counties. (N. Mex. Coop. Rpt.).

AZALEA LACE BUG (Stephanitis pyrioides) - ALABAMA - Adults and nymphs causing considerable damage to azaleas in Lee County. (Guyton).

HACKBERRY NIPPLE GALL (Pachypsylla celtidis-mamma) - OKLAHOMA - Common on hackberry in Platte National Park. (Coppock, Vick).

ORANGE TORTRIX (Argyrotaenia citrana) - OREGON - Occasional mature larvae feeding in developing holly leaves, April 27. (Larson).

INSECTS AFFECTING MAN AND ANIMALS

AMERICAN DOG TICK (Dermacentor variabilis) - NEW JERSEY - Active in central areas of the State. (Ins.-Dis. Newsl.).

CATTLE GRUBS (Hypoderma spp.) - OKLAHOMA - Adults annoying cattle in northwest and panhandle counties. (Coppock).

HORN FLY (Siphona irritans) - OKLAHOMA - Average 50-500 per mature cow in northwest counties, lighter in panhandle counties. (Coppock).

SECONDARY SCREW-WORM (Callitroga macellaria) - KANSAS - Activity reported from Chase, Kingman, Harper, Pawnee and Clay Counties. (Ratcliff).

SALT-MARSH MOSQUITO (Aedes sollicitans) - NORTH CAROLINA - Heavy in 6 coastal counties. (Ashton).

BENEFICIAL INSECTS

PREDATORS - ARKANSAS - Building up slowly in most areas. Lady beetle larvae average 15 per 10 sweeps in Hope area, Hempstead County. (Boyer). OKLAHOMA - Nabis spp. averaged 0-4 per 10 sweeps in most northwest alfalfa fields.

(Coppock). S. DAK. - Nabis spp. average 1 per 10 sweeps in central area winter wheat fields and Hippodamia tridecimpunctata and H. convergens one per 10 sweeps in alfalfa in southeast and east central areas. (Hantsbarger).

ILLINOIS - Lady beetles averaged 11 and 13 per 100 sweeps in southeast and southwest areas. Damsel bugs averaged 16 per 100 sweeps in southeast section. (Ill. Ins. Rpt.).

A KLAMATHWEED BEETLE (Chrysolina gemellata) - IDAHO - Active on Klamathweed in Clearwater drainage area. (Barr).

MISCELLANEOUS INSECTS

BROWN STINK BUG (Euschistus servus) - GEORGIA - Present at Tifton, Tift County. (Morgan, April 22).

CARROT BEETLE (Ligyrus gibbosus) - NEBRASKA - Very abundant in light trap at Lincoln, Lancaster County. (Andersen).

CLOVER MITE (Bryobia praetiosa complex) - UTAH - Some home infestations very heavy and troublesome in northern and central areas. (Knowlton). NEW JERSEY - Very numerous. (Ins.-Dis. Newsl.).

PAINTED-LADY (Vanessa cardui) - NEVADA - Migrations heavy in areas of Ormsby, Churchill and Pershing Counties. (Nev. Coop. Rpt., April 25). UTAH - Migration conspicuous in northern and central areas, with heavy flights sometimes noted. (Knowlton).

TERMITES (Reticulitermes spp.) - NEW JERSEY - Still swarming in many areas. (Ins.-Dis. Newsl.).

WHITE-LINED SPHINX (Celerio lineata) - NEVADA - Adults very numerous and attracted to light in Las Vegas area, Clark County. (Lauderdale, April 25).

ADDITIONAL NOTES

CALIFORNIA - PEA APHID light on alfalfa in Orland, Glenn County. GREEN PEACH APHID medium on alfalfa in Williams area, Colusa County. CLOVER LEAF WEEVIL medium on alfalfa in Montague area, Siskiyou County. *Macrosiphum dirhodum* medium on barley Walnut area, Los Angeles County. DEVASTATING GRASSHOPPER on alfalfa light in Imperial area, medium Seeley and Winterhaven areas and heavy in Calexico-Holtville areas of Imperial County. A THRIPS reported from alfalfa as medium in Lodoga area and heavy in Maxwell area of Colusa County and medium in Lancaster area of Los Angeles County. Medium infestation of CORN EARWORM damaging safflower in College City area, Colusa County. CALIFORNIA PEAR-SLUG medium on pear trees at Grass Valley, Nevada County, and a BAGWORM was reported as medium on twigs of young pear trees at same locality. WHITE-LINED SPHINX heavy on Borrego Springs area grapes. MEALY PLUM APHID heavy on prune at La Mesa, San Diego County. BLACK SCALE medium on olive in Maxwell, Colusa County, and heavy on pear in Butte City area, Glenn County. SAN JOSE SCALE heavy on pears at same locality. PEAR PSYLLA reported for first time from Santa Cruz County as medium on pear. SUGAR-BEET WIREWORM continuing to damage commercial onions at La Puente, Los Angeles County. CABBAGE LOOPER building up in cabbage in San Fernando Valley and light in Orange County cabbage. BEET LEAFHOPPER increasing in Maricopa-Taft areas of Kern County, averaging 10-35 per 10 sweeps, 25 percent being spring adults. Control spraying begun April 21. No noticeable change in other areas. SPRUCE SPIDER MITE heavy on Monterey pine at San Pablo, Contra Costa County. FRUIT TREE LEAF ROLLER medium on ash trees in Orland, Glenn County. APPLE GRAIN APHID medium on black acacia at Santa Cruz Santa Cruz County. *Culiseta inornata* widespread in most parts of State. *Culex tarsalis* present in substantial numbers in extreme southwest and in San Joaquin Valley, where *Aedes nigromaculis* is appearing in relatively small numbers. (Cal. Coop. Rpt.).

IDAHO - ALFALFA WEEVIL adults and larvae less than one per sweep, Canyon County. Overwintering adults of CABBAGE SEEDPOD WEEVIL active and abundant on volunteer stands of rape. CLOVER LEAF WEEVIL pupating in southwestern areas. Adults of CLOVER ROOT CURCULIO common in all alfalfa fields sampled in Latah and Nez Perce-Counties occasionally reaching 4 per sweep. LADY BEETLE adults average 10 per 20 sweeps in most alfalfa fields. Common and often abundant on alfalfa and clover fields sampled, Nez Perce and Latah Counties, occasionally reaching 7 per sweep some fields sampled. LYGUS BUGS average one per sweep in Arena Valley alfalfa. PEA APHID 5 per sweep in Canyon County alfalfa. Light in some fields sampled in Nez Perce County and apparently absent in others sampled in Nez Perce and Latah Counties. (Waters, Manis, Gittins).

NEW YORK - EUROPEAN RED MITE hatching in Orange and Ulster Counties. Average 1-2 per leaf in several blocks examined in Rockland County. TWO-SPOTTED SPIDER MITE plentiful on several strawberry fields in Monsey area, Bockland County. ROSEY APPLE APHID curling leaves in unsprayed blocks examined in Ulster County. CORN FLEA BEETLE present but scarce in Hudson Valley CABBAGE MAGGOT adults laying eggs in Nassau County. ALFALFA WEEVIL readily collected in Hudson Valley, larvae feeding on aflafila buds, Nassau County and larvae and adults were collected in Orange County. PEA APHID averaged 1-10 per sweep in Orange County and are present in most legume fields throughout the State. (N. Y. Wkly. Rpt.).

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. yps.	Felt. subt.	Eueth. rugic.	Perid. marg.	Prod. ornith.	Heliothis zea vires.	
ALABAMA (County)								
Lee 4/26-5/3	52	11		599			8	
ARKANSAS								
Fayetteville 4/13-26	20	12			11			
Hope 4/21-23	9	1			5		1	
Stuttgart 4/10-23	183	12			3			
ILLINOIS								
Urbana	82	9			15			
LOUISIANA								
Baton Rouge 4/24-30	2	21	17	29	5			
Franklin 4/24-30	1	3	4	10	6	3		
MISSISSIPPI								
Grenada 4/28-5/2	16	3						
Senatobia 4/22-25	40	9					1	
*Stoneville 4/26-5/2	78	13	6		24	26	3	12
MISSOURI								
Sikeston 4/15-30	149	6			95			
NEBRASKA								
North Platte 4/20-27					7			
SOUTH CAROLINA								
Clemson 4/26-5/2	26	3		3	2	11	1	
SOUTH DAKOTA								
Brookings 5/2	2							
TENNESSEE (Counties)								
Blount 4/22-28	53	4			11	13		
Cumberland	14	6			16	3		
Greene	15	1			4	2		
Johnson	65	8			9	4		
Madison	33	4			11	3		
Maury	170	10			18	7		
Robertson	24	3			10	3		
TEXAS								
Brownsville 4/23-25	4		32		4	2		
Weslaco 4/1-15	199	139	235		222	30	54	19
Winter Haven 4/28		31	18		84	27	21	

*Four traps Stoneville

SUMMARY OF INSECT CONDITIONS - 1957

TENNESSEE

Prepared by R. P. Mullett

Cereal and Forage Insects: ARMYWORM (Pseudaletia unipuncta) appeared in numbers in several areas of the State in early May. When the larvae were first found, they were quite small. In a week or ten days they disappeared and caused no damage during 1957. This was apparently due to a hot, dry period in April which resulted in high parasite populations. SUGARCANE BEETLE (Euethola rugiceps), which has been quite destructive in the past three or four years, was present in only one or two isolated areas in 1957. FALL ARMYWORM (Laphygma frugiperda) was widespread in corn over the State, appearing early in the summer and causing heavy damage in some areas. Control was widespread generally. MEADOW SPITTLEBUG (Philaenus leucophthalmus) was heavy in alfalfa and clover in isolated areas and higher altitudes in the eastern third of the State. SPOTTED ALFALFA APHID (Therioaphis maculata) occurred throughout the State in very small numbers, with no outbreaks or damage being reported. Scattered infestations of GREEN JUNE BEETLE (Cotinis nitida) larvae caused some replanting of corn locally. SORGHUM WEBWORM (Celama sorghiella) was not as heavy as in past years but caused scattered damage in western areas.

Cotton Insects: BOLL WEEVIL (Anthonomus grandis) averaged 240 per acre to start the season. Scattered infestations were confined to the southern third of west Tennessee. A very rainy season caused a wide distribution and rapid buildup resulted in eventual heavy infestations. The weevil appeared in extreme northwestern counties in sufficient numbers to cause damage for the first time since 1923. Widespread control efforts were underway in infested areas all during the season, resulting in a saving of \$25,000,000. Losses were estimated at \$10,000,000. COTTON LEAFWORM (Alabama argillacea) appeared in large numbers over the western third of the State and widespread controls were applied.

Truck Crop Insects: Normal numbers of the common vegetable insects were present over the State in 1957. Heavy infestations of STRAWBERRY LEAF ROLLERS occurred across the State. Isolated infestations of STRAWBERRY CROWN MINER (Aristotelia fragariae) appeared in extreme eastern parts of the State. Heavy infestations of A STRAWBERRY ROOTWORM (Paria sp.) were scattered.

Tobacco Insects: TOBACCO BUDWORM (Heliothis virescens) was the most serious pest of tobacco but was kept fairly well under control. HORNWORMS (Protoparce spp.) were low in numbers and caused little damage. TOBACCO FLEA BEETLE (Epitrix hirtipennis) was prevalent in tobacco plant beds at the outset of the season.

Tree and Shrubbery Insects: Large numbers of ELM LEAF BEETLE (Galerucella xanthomelaena) were prevalent over the State. LOCUST LEAF MINER (Chalepus dorsalis) and MIMOSA WEBWORM (Homadula albizziae) were generally less severe than in previous years. Heavy infestations of BAGWORM (Thyridopteryx ephemeraeformis) were present on evergreens across the State. A SPITTLEBUG (Aphrophora sp.) occurred on pines at high altitudes in the eastern third of the State. Brood XIV of PERIODICAL CICADA (Magicicada septendecim) appeared in heavy numbers in counties with higher altitudes in the eastern half of the State. Few EASTERN TENT CATERPILLAR (Malacosoma americanum) were present in 1957.

Cattle Pests: CATTLE LICE were prevalent over the State and SHEEP KED was also present.

Household Insects: FLEAS were extremely numerous around homes across the State and BOXELDER BUGS, CLOVER MITES and ELM LEAF BEETLES were prevalent. TERMITE infestations increased over previous years. Isolated cases of SPRING-TAILS around homes were noted.

Miscellaneous Insects: Heavy infestations of WHITE GRUBS (*Phyllophaga* spp.) occurred in yards particularly in middle portions of the State. Because of widespread publicity given IMPORTED FIRE ANT (*Solenopsis saevissima richteri*) large numbers of ant specimens were received for identification, but no positive determinations were made from the State.

INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

CELERY FLY (Acidia heraclei L.)

Economic Importance: This tephritid is a well-known pest in the British Isles and on the European Continent. The Larvae mine the leaves of celery and



Damage to Celery

parsnip, frequently causing great reduction in the value of the crop. In severe attacks, from 90 to 100 percent of the leaves in a bed of celery may be infested. In such cases, The crop is entirely worthless. The larvae live between the epidermal layers of the leaf, making blister-like patches, which at first are pale but later turn brown. The infested leaf contracts and after a short period shrivels up. The loss of leaves produces small, green, bitter flavored celery. Parsnip foliage is infested in the same manner and when badly attacked, the roots of the plant are small. The pest has been erroneously recorded in the United States.

Distribution: Occurs generally in Europe, with records in England, Wales, Cyprus, Czechoslovakia, Denmark, France, Finland, Italy, Germany, Norway, Sweden, Switzerland and USSR; has also been recorded in the literature from Morocco, North Africa and Asia Minor.

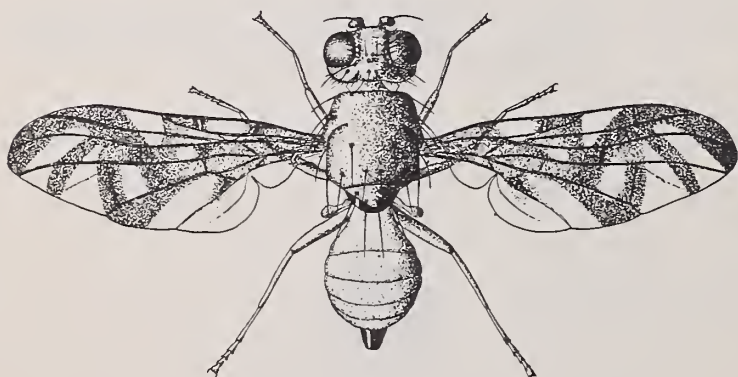
Hosts: Celery and parsnip are the chief cultivated hosts. Various species of Heracleum and Angelica are the most important wild host plants.



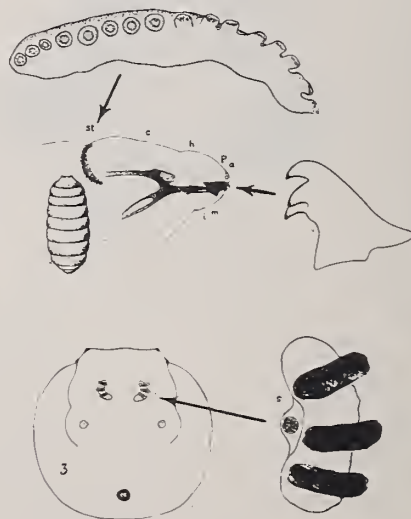
General Distribution of Celery Fly

Life History and Habits: In England, there are two main generations a year, with a possible third, but there is considerable overlapping between broods, therefore adults, larvae and pupae may occur simultaneously. The first adults usually appear from April to early June and the second brood from July onwards. The adults emerge from overwintering puparia in the soil. Eggs are usually deposited singly on the undersurface of the leaf, but sometimes on the upper surface, and hatch in 6 to 14 days. Females deposit up to 100 eggs each. The larva matures in 14 to 19 days within the leaf surface, and pupates either within the leaf or falls and pupates in the soil. In the summer, flies emerge from puparia in 3 to 4 weeks, however, the second-brood maggots may remain in puparia until the next spring. The young larvae live gregariously and may occupy a considerable area in the leaf. Larvae may occasionally be found as late as December in England.

Description: The adult male is variable in color, ranging from light brown to black. Eyes deep green, sometimes tinged with red, widely separated in both sexes. Antennae pale yellow, third segment much larger than second. Head bears number of long bristles. Thorax black or dark brown, shiny, scutellum bears four long bristles which may be pale yellow or black. Abdomen elliptical, rather shining in male, slightly broader than thorax. Female abdomen broader and somewhat pyriform; ovipositor conical and hard. Wings broad, banded with brown wave-like markings, with hyaline areas between the bands. Halteres yellowish. Length of adult, 5mm. The egg is white, elongate oval, 0.5mm. in length. Larva is white, somewhat glistening with greenish tinge. There are 11 segments posterior to the cephalic segment. The anterior spiracles usually with about 18 small lobes. Mandibular sclerite with three distinct hooks, posterior sclerite thin and widely forked. The posterior spiracles each with three lozenge-shaped slits. Length 7mm. Puparium oval, light yellow with wrinkled appearance, length 5mm. (Prepared in Plant Pest Survey Section in cooperation with other ARS agencies.) CEIR 8(19) 5-9-58



Female of Acidia heraclei



Larvae and Pupae (showing mandible on the cephalo-pharyngeal skeleton, caudal and prothoracic spiracles)

Figures (except map) from Lundblad, O. and Lindblom, A. 1925. Meddelande No. 283 fran Centralanstalten for forsoksvasendet pa jordbruksomradet. Entomologiska advelnigen No. 45. 25 pp. Sweden.



