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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 clearinghouse 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

- Winter grain PEST surveys in some southwestern States. (p. 993).
- SPOTTED ALFALFA APHID damaging alfalfa in Payne County, Oklahoma. (p. 993).
- MEADOW SPITTLEBUG survey in New Jersey. (p. 994). PEPPER WEEVIL surveys in New Jersey negative for 1958. (p. 994).
- An IPS BEETLE damaging pines and is threat to timber stands in areas of California. (p. 995).
- First KHAPRA BEETLE find in California for six months. (p. 996).
- INSECT DETECTION: A tineid (Ereunetis minuscula) new to Florida. (p. 994).
- CORRECTION. (p. 996).
- SUMMARY OF INSECT CONDITIONS - 1958 - Oregon (p. 997), Wyoming (p. 1001).
- INSECTS not known to occur in the United States. (p. 1003).

Reports in this issue are for the week ending December 5, unless otherwise designated.

WEATHER OF THE WEEK ENDING DECEMBER 8

Blizzards, heavy snow, sleet, glaze and subzero temperatures in the North Central. Interior and record-breaking heat and dryness in the far Southwest were the main features of the weather of the week. Dry weather has overspread more of the country. Precipitation totals were generally under 1/2 inch. Totals exceeding 2 inches were reported only in the Pacific Northwest, west of the Cascades. In the rest of the Nation there were some areas with amounts over 1 inch in lower New England, parts of Florida and the States bordering Canada. The largest area without measurable precipitation extended from the southwestern Mexican Border States into the central Mountain States. Some nearby States also had small areas without measurable precipitation, as well as a few coastal sections of North Carolina and Virginia. In South Carolina, rainfall since July was slightly over one-half of normal, and around one-fourth of normal for the last 30 days; soil moisture is nearing the critical stage and the soil is too dry for plowing. In the southeastern half of Georgia, there have been some stations with less than 1/2 inch precipitation during the last 6 weeks. Rains in northwestern Florida, generally the first since early November, eased the forest fire danger.

Some icy conditions were reported Tuesday through Sunday, mostly in the northeastern quarter of the country. Freezing rain occurred early in the week in North Dakota and Minnesota and spread further south and east during midweek, falling in many sections from coastal Maine across the Hudson Valley and westward through the upper Mississippi Valley to the eastern Dakotas. This band separated the southern rains from the northern snow areas. Another icy band at midweek extended from Montana and the northern Rockies into the western sections of Kansas and Nebraska and over the east slopes of the mountains in New Mexico and in northern Texas. Colorado reported hazardous conditions over a large area. In the Pacific Northwest, the weekend rains sometimes froze over portions of interior Washington. In northern interior areas east of the Rockies, temperatures for the week averaged from 3° to as much as 11° below normal. Subzero minima during the weekend ranged down to -23° at International Falls, Minnesota. In contrast, averages for the week in the Far Southwest ranged from 4° to 9° above normal, with record-breaking high temperatures for December of 94° at Los Angeles Airport, California, 86° at Yuma, Arizona, and 67° at Ely, Nevada. During the past week, 1 inch or more of new snow fell over interior New England, the Ohio Valley, scattered areas in the Mississippi Valley down through the Arkansas Mountains and the upper mountain regions of the Far West. Travel was hampered by occasional blizzard conditions in North Dakota and by snow squalls from there into northern New York and New England. A 33-inch snowfall in 24 hours, 15 inches falling in 3 hours, and a depth of 56 inches on the ground set new records at Oswego, New York. Boonville, New York, reported an accumulated depth of 46 inches and roads were blocked and cars abandoned north of Syracuse. A heavy snow cover favored northeastern ski resorts for the second consecutive week. (Summary supplied by U. S. Weather Bureau.)

CEREAL AND FORAGE INSECTS

GREENBUG (Toxoptera graminum) - VIRGINIA - Probably this species, severely attacked barley and oats in lower Middlesex County (Edwards) and is heavy on oats and barley on a Nottoway County farm (Rowell, Cassell). OKLAHOMA - Averaged 0-1 per linear foot in scattered fields of fall-seeded wheat in southwestern area of State (VanCleave, Meharg) and 0-25 in north central area (Wood). Considerable numbers occurred in a field of reseeded wheat in the Tonkawa area. (Henderson). TEXAS - Light, non-economical infestations found in 21 of 114 small grain fields examined in 13 scattered counties, November 13-21. Parasites and predators quite numerous in southern part of State. (Chada). None found in 15 fields checked in 5 central counties, December 3. (Hawkins). NEW MEXICO - Averaged 0.5-1.5 per linear foot in 50 percent of wheat fields examined in Quay, Curry and Roosevelt Counties. (N. M. Coop. Rpt.).

APPLE GRAIN APHID (Rhopalosiphum fitchii) - OKLAHOMA - Averaged 0-15 per linear foot in some fall-seeded wheat fields in southwestern area (VanCleave, Meharg) and 0-50 in north central area (Wood).

CORN LEAF APHID (Rhopalosiphum maidis) - OKLAHOMA - Averaged 0-200 per linear foot in some southwestern fields of fall-seeded grain. (VanCleave, Meharg). NEW MEXICO - Averaged 2-4 per linear foot in barley in Quay, Curry and Roosevelt Counties. (N. M. Coop. Rpt.).

ENGLISH GRAIN APHID (Macrosiphum granarium) - TEXAS - Light, non-economical infestations found in 10 of 114 fields of small grain examined, November 13-21. Infestations were located in 7 counties. (Chada). None found in 15 small grain fields examined in 5 central counties, December 3. (Hawkins).

WINTER GRAIN MITE (Penthaleus major) - TEXAS - Up to 40-50 per square foot, mostly in volunteer grain, found in 10 of 114 fields examined November 13-21. Infestations were found in 8 counties. Growing conditions are good, damage not apparent. (Chada). Infestations up to 40-50 per square foot found in 2 fields of volunteer grain in McLennan County; light infestations in 2 fields in Navarro County; and 2 fields in Bosque and Falls Counties had light damage. Survey made December 3. (Hawkins).

LEAFHOPPERS - TEXAS - Light infestations in practically all small grain fields. (Chada).

VARIEGATED CUTWORM (Peridroma margaritosa) - TEXAS - Averaged 2 per square foot in field of grain and vetch in Navarro County. (Hawkins).

PINK SCAVENGER CATERPILLAR (Pyroderces rileyi) - PENNSYLVANIA - Two adults in kernel of field corn near Philadelphia, November 22. (Menusan).

APHIDS - CALIFORNIA - Sappaphis foeniculus and Aphis medicaginis medium on clover in the Natoma area of Sacramento County. (Cal. Coop. Rpt.).

PEA APHID (Macrosiphum pisi) - NEW MEXICO - Generally light in alfalfa fields in southern part of State. Winged forms abundant. (N. M. Coop. Rpt.).

SPOTTED ALFALFA APHID (Therioaphis maculata) - VIRGINIA - Remained active on alfalfa in Franklin County. (Rowell, White). OKLAHOMA - Heavy populations seriously damaged or killed alfalfa plants in 2 Payne County fields. (Walton). NEW MEXICO - Generally light in fields in southern counties. (N. M. Coop. Rpt.).

BROWN WHEAT MITE (Petrobia latens) - OKLAHOMA - Small numbers in fall-seeded fields, Tillman and Garfield Counties. (VanCleave, Meharg). TEXAS - None found in small grain examined in north central, central and southern areas, Nov. 13-21 (Chada) or in 5 central counties checked Dec. 3 (Hawkins).

MEADOW SPITTLEBUG (Philaenus leucophthalmus) - NEW JERSEY - Except for 1956, egg mass numbers have declined steadily since the beginning of fall surveys in 1953 and the species has been considered less important as a pest of alfalfa. Egg populations in 1958 are lower than at any time in the past. It appears that the species will be less of a pest in 1959 than at any time since 1954. Highest populations can be expected in Gloucester County and northwestern counties, as usual. (Coop. Sur.).

WHITE GRUBS - VIRGINIA - Cyclocephala sp. believed species responsible for damage of lawn in Boones Mill area, Franklin County, and for complaints of lawn damage in Blacksburg, Montgomery County. (Amos).

FRUIT INSECTS

AN ACORN MOTH (Valentinia glandulella) - VIRGINIA - Larvae caused heavy damage to Chinese chestnuts in Northampton County this fall. Det. H. W. Capps. (Rowell, Nottingham).

HICKORY SHUCKWORM (Laspeyresia caryana) - TEXAS - Damaged pecans in Polk County. (Wrenn).

A TINEID (Ereunetis minuscula) - FLORIDA - Larvae collected on lychee at Clearwater, Pinellas County, constitute first record for State. (Fla. Coop. Sur.).

Citrus Insect Situation, Lake Alfred, Florida, Fourth Week in November -
PURPLE SCALE activity declined. Infestations presently about average, but expected to go to low level in most districts during December. FLORIDA RED SCALE will remain near present high level for next 7-14 days. Although infestations generally will drop during December, level will be high throughout the month. CITRUS RED MITE activity increased, infestation level about normal for this time of year. Higher level expected in December. CITRUS RUST MITE activity decreased on leaves and fruit. Infestations will remain near present levels during December. TEXAS CITRUS MITE infestations decreased and are expected to remain below present levels through the winter. (Fla. Coop. Sur.).

TRUCK CROP INSECTS

A CUTWORM (Proxenus mindara) - CALIFORNIA - Larvae damaged cantaloup plantings in Fresno County earlier in 1958 and are now damaging sweetpotato plantings. Medium numbers of adults taken in light traps, week of December 5. Adults reared from larvae that attacked cantaloup determined as this species by George Okumura. (Forst, Lange).

CARROT WEEVIL (Listronotus oregonensis) - TEXAS - Heavy and feeding on parsley in Hidalgo County. (White).

COWPEA WEEVIL (Callosobruchus maculatus) - CALIFORNIA - Heavy on black-eyed peas in Santa Margarita, San Luis Obispo County. (Cal. Coop. Rpt.).

PEPPER WEEVIL (Anthonomus eugenii) - NEW JERSEY - During June and July, 1958, 32 fields in the previously infested area were checked for this weevil and in September and October 29 fields in the same area were checked again. No weevils were found in either the formal survey or the informal searches. It appears that the infestation, which was established in the Vineland area, did not survive the winter in detectable numbers. (Coop. Sur.).

RED-NECKED CANE BORER (Agrilus ruficollis) - VIRGINIA - Heavy in red raspberry canes in Blacksburg and caused loss of crop. (Willard, Kite).

GREEN PEACH APHID (Myzus persicae) - CALIFORNIA - Light on broccoli in the Arroyo Grande area of San Luis Obispo County. (Cal. Coop. Rpt.).

LEAF MINERS - CALIFORNIA - General on spinach plantings in Woodland area of Yolo County. Oviposition punctures on most cotyledons and first true leaves. No mining at this time. (Stomblor).

COTTON INSECTS

PINK BOLLWORM (Pectinophora gossypiella) - NEW MEXICO - Inspection of infested cotton fields in southern Dona Ana County showed that recent freezing temperatures killed larvae in top green bolls, but an occasional live larva was found in lower dry bolls. (N. M. Coop. Rpt.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

SOUTHERN PINE BEETLE (Dendroctonus frontalis) - NORTH CAROLINA - Situation improved over last report of infestation of pine in Tyrrell County. (Green). See CEIR 8(37):803.

WESTERN PINE BEETLE (Dendroctonus brevicomis) - CALIFORNIA - Caused considerable killing of groups of pines in Nevada-Yuba County areas. Results of logging activities considered responsible for insect increase. (Gunter, Noyes).

AN IPS BEETLE (Ips plastographus) - CALIFORNIA - Considerable damage to Monterey pine in Cambria area, San Luis Obispo County. Heavy infestations developed as result of logging operations and are aggressively attacking and killing large numbers of trees. Scattered infestations in Carmel-Point Lobos area constitute threat to timber stands. (Struble).

OAK SKELETONIZER (Bucculatrix ainliella) - PENNSYLVANIA - Cocoons covering bark of oak in Erie County, Sept. 29. (Adams).

A SAWFLY (Neodiprion pratti pratti) - NORTH CAROLINA - Reported in CEIR 8(21):415 as Neodiprion sp. prob. dyari and in CEIR 8(46):941 as Neodiprion sp., determined as this species by B. D. Burks. (Farrier).

SCALE INSECTS - TEXAS - Icerya purchasi damaged ornamentals in Limestone County. (Kinchelse). CALIFORNIA - Aspidiotus camelliae medium on holly in Watsonville, Santa Cruz County. Lineaspis cupressi heavy on juniper in the Coalinga area, Fresno County. (Cal. Coop. Rpt.).

A BARK APHID (Pterocomma smithae) - MARYLAND - On willow in Ellicott City and Rockville. Many eggs on twigs. (U. Md., Ent. Dept.).

INSECTS AFFECTING MAN AND ANIMALS

CATTLE GRUBS (Hypoderma spp.) - UTAH - Appearing in backs of some cattle in Millard and Box Elder Counties. (Knowlton).

SHEEP SCAB MITE (Psoroptes equi var. ovis) - VIRGINIA - Found on 518 of 538 sheep inspected in the State during October. (Morris).

STORED-PRODUCT INSECTS

KHAPRA BEETLE (Trogoderma granarium) - CALIFORNIA - Single, heavy infestation reported from Ripley, Riverside County, is first infestation reported in 6 months. (Cal. Coop. Rpt.).

BENEFICIAL INSECTS

PREDATORS - OKLAHOMA - Hippodamia convergens averaged 0-1 and Nabis sp. 0-2 per linear foot in fields of fall-seeded grain in southwestern area of State. H. convergens averaged up to 600 per square foot in little bluestem grass in the same area. (VanCleave, Meharg).

MISCELLANEOUS INSECTS

BROWN-BANDED ROACH (Supella supellectilium) - MARYLAND - Troublesome to homeowners in Westminster, Rockville and Silver Spring. (U. Md., Ent. Dept.).

A SUBTERRANEAN TERMITE - UTAH - Damaged a home at Ephraim, Sanpete County. (Knowlton).

CORRECTION

CEIR 8(48):963 - PEA APHID - OKLAHOMA - Averaged 5-25 per sweep in some alfalfa fields in northeastern area.

LIGHT TRAP COLLECTIONS

	<u>Pseudaletia</u> <u>unipuncta</u>	<u>Agrotis</u> <u>ypsilon</u>	<u>Feltia</u> <u>subterranea</u>	<u>Heliothis</u> <u>zea</u>
<u>LOUISIANA</u>				
Baton Rouge 11/28-12/4	4	16	28	2
Franklin 11/28-12/4		2	2	
<u>MISSISSIPPI</u>				
*State College 11/22-24	14	3		3

*Two traps - State College.

SUMMARY OF INSECT CONDITIONS - 1958

OREGON

Prepared by Joseph Capizzi*

Highlights: PAINTED-LADY was a major problem, attacking many vegetables during early summer. Forewarned by large light trap collections at Salem and Walla Walla, extremely large numbers of BLACK and VARIEGATED CUTWORMS that appeared in the State were not unexpected. ALFALFA LOOPER was one species of looper that caused considerable damage from Umatilla County west to Linn and Benton Counties. CABBAGE LOOPER was a problem throughout the season in the northern Willamette Valley. ORIENTAL FRUIT MOTH continued to gain locally in the Salem area with twice as many moths collected in baitpans (347) as in 1957. Twenty orchards are known infested. CYCLAMEN MITE was found in commercial strawberry plantings in the Willamette Valley. Nineteen of 196 fields inspected were found infested this fall. BEET ARMYWORM, uncommon in Oregon, appeared in large numbers attacking truck crops and damaged ripening fruit. SPOTTED ALFALFA APHID invaded the State September 13. Subsequent surveys established its presence in four northern counties.

Cereal and Forage Insects: GRASSHOPPER populations (predominately Melanoplus spp.) were the lowest recorded in the Willamette Valley for several years. From USDA reports, this was true of the entire State in 1958. MORMON CRICKET (Anabrus simplex) nymphs averaged 25 per square yard on 3500 acres of rangeland in Gilliam County April 29. Near freezing weather the week of May 17 decreased this infestation to less than one per square yard. A LEAF MINER (Phytomyza nigra) was more numerous than for several years on grass and grain fields in Benton and Lane Counties. CUTWORMS (Peridroma margaritosa and Agrotis ypsilon) damaged several hundred acres of barley and some oat fields were 10-30 percent damaged in lower Klamath Lake area June 23. CORN EARWORM (Heliothis zea) was very abundant with nearly all fields 100 percent infested in the upper Columbia River counties by harvest time. Increased infestations developed in the mid-Willamette Valley counties during 1958, with cannery samples showing losses ranging to 7 percent of ear weight. Late season losses showed 60-90 percent of ears damaged. A FLEA BEETLE (probably Diachus auratus) caused unusual amount of damage to crimson clover in Polk County. The overwintering generation appeared in large numbers in early May. A MITE (Siteroptes graminum) implicated in the transmission of "silvertop disease" to fescue, was recovered from Chewings fescue in January, and found in diseased grass stems in Clackamas County June 11. OMNIVOROUS LEAF TIER (Cnephasia longana) populations were low compared with those of 1957. ENGLISH GRAIN APHID (Macrosiphum granarium) was light to moderate in wheat near Milton-Freewater and small fields near Pratum, and increased in Umatilla County by mid-season but was not reported as damaging from any other growing areas. As a yellow dwarf virus vector, it was of concern in spring planted barley and oats in the Willamette Valley. PEA LEAF WEEVIL (Sitona lineata) damaged legumes during the spring from Columbia County south through Polk and Marion Counties. Increase in range noted through Linn and Benton Counties and well into Lane County. Pea leaf weevil disappeared from Polk and Yamhill County legume fields between July 23-30 probably because of extremely hot weather. CLOVER ROOT CURCULIO (Sitona hispidula) was numerous in Klamath County from early March on alsike clover but was not unusually abundant elsewhere during 1958. PEA APHID (Macrosiphum pisi) did not build

*With the assistance of entomologists from the State Department of Agriculture, Oregon State College and other agencies.

up excessively in the Willamette Valley but high populations appeared in Gilliam and Umatilla Counties in early April and late May. In Ontario, controls on alfalfa were necessary the end of May. Alsike clover and alfalfa were seriously infested in early June in Klamath County. In Jackson County, populations varied from field to field throughout the season. ALFALFA WEEVIL (Hypera postica) was not a serious threat during 1958. LYGUS BUGS (Lygus spp.) were generally abundant and damaged seed legumes where controls were delayed or omitted. Particular areas of above normal infestation were near Ontario-Adrian, and in Umatilla County on alfalfa. CLOVER SEED WEEVIL (Miccotrogus picirostris) caused moderate damage to alsike clover in Klamath County and to ladino in Linn County in early June. CLOVER ROOT BORER (Hylastinus obscurus) was serious locally in Marion County in first-year red clover seed fields. A BILLBUG (Calendra venatus confluens) damaged lawns in Benton County and Merion blue grass fields in Marion County. HESSIAN FLY (Phytophaga destructor) incidence was low in 1958, with light early season damage to winter wheat in Polk, Marion and Yamhill Counties. A NITIDULID (Meligethes nigrescens) began migrating to red clover July 4, two weeks earlier than in 1957. Pole beans were not in blossom at this time. Emergence reached a rapid peak and populations dropped below economic levels by July 21. TWO-SPOTTED SPIDER MITE (Tetranychus telarius) populations were high in Umatilla County alfalfa fields during July and control was necessary.

Fruit Insects: CODLING MOTH (Carpocapsa pomonella) emerged May 1 in Jackson County, May 8 in the Willamette Valley and May 11 and 14 at The Dalles and Hood River respectively. In Jackson County a partial third brood developed. More fruit injury occurred than usual. In Hood River, infestations were heavy and larger catches were made than at any time since 1953. BLACK CHERRY APHID (Myzus cerasi) emerged in the mid-Willamette Valley about March 16, built up in many cherry orchards in May and gradually dropped by early August. First-brood nymphs of PEAR PSYLLA (Psylla pyricola) were observed March 11 in the Medford area, considerably in advance of 1957. Heavy natural mortality occurred early in the season in Jackson County. Control was less difficult than in 1957. In the Willamette Valley, pear psylla was more abundant than usual. PEAR THRIPS (Taeniothrips inconsequens) populations were generally lower than in 1957. ORIENTAL FRUIT MOTH (Grapholitha molesta) trapping continued on a large scale throughout the State. The first moth was collected near Salem May 7. Populations increased in known infested orchards. Fruit damage was noted for the first time in this area. CALIFORNIA PEAR-SLUG (Pristiphora californica) - An unusual occurrence in the Medford area caused considerable defoliation to pear orchards in early May. EUROPEAN RED MITE (Panonychus ulmi) built up in Benton County apple orchards in early July. A slight increase over 1957 was noted in Jackson County. TWO-SPOTTED SPIDER MITE continued to show resistance to organic phosphates in the Medford area. Spotty infestations occurred in Jackson County pear orchards. In the Willamette Valley, populations built up on stone fruits in late August. At Hood River, this and Eotetranychus carpini were more abundant during July on apples and pears than in the previous four years. PEACH SILVER MITE (Vasates cornutus) became quite abundant on peach foliage after harvest in the Medford area. A PLUM NURSERY MITE (Vasates fockeui) severely damaged prune nursery stock in Portland and young prune trees in the Willamette Valley in early August. RED-HUMPED CATERPILLAR (Schizura concinna) was abundant in poorly kept apple orchards in Deschutes County in August, and appeared locally in apple, prune and other fruit orchards in Milton-Freewater. PEACH TWIG BORER (Anarsia lineatella) numbers were larger than normal in the Willamette Valley during June and caused late summer fruit damage in a few Clackamas County peach orchards. APPLE APHID (Aphis pomi) eggs were on 5 percent of apple trees in several orchards at Milton-Freewater in February. Eggs in the Medford area were not as abundant as in 1957. Apple aphid was active and moderately plentiful in Benton County apple orchards by March 16. PEAR LEAF BLISTER MITE (Eriophyes pyri) eggs ranged from few to 154 per bud February 17 at Medford.

First brood appeared March 4 in Jackson County. Populations appeared on the decrease in 1958. A build-up was observed in Marion and Yamhill County pear orchards in May. Infestations of WOOLLY APPLE APHID (Eriosoma lanigerum) were reported from Yamhill County apple orchards in May. LECANIUM SCALE (Lecanium corni) was fairly abundant in Marion County prune and cherry orchards during the winter months. Peaches in Yamhill and prunes in Marion Counties were reported infested in May. OBLIQUE-BANDED LEAF ROLLER (Archips rosaceana) was heavy in neglected apple orchards in the Willamette Valley during May. WESTERN CHERRY FRUIT FLY (Rhagoletis cingulata indifferens) controls were adequate when spray programs were followed. TWO-SPOTTED SPIDER MITE was generally low in small fruits where it was troublesome in 1957. Build-up in late summer required some control. Strawberries in Yamhill and Marion Counties had spotty infestations in late August and September. STRAWBERRY CROWN MOTH (Ramosia bibionipennis) was heavy in some Washington County hill plantings in March. MEADOW SPITTLEBUG (Philaenus leucophthalmus) hatched in the Willamette Valley the week of April 6. Heavy populations built up on legumes, but remained normal on strawberries in 1958. CURRANT FRUIT FLY (Epochra canadensis) emerged from cages in Marion County April 21 and was no problem where control methods were adhered to. STRAWBERRY APHID (Pentatrichopus fragaefolii) was unusually abundant early in the season in Multnomah County plantings, but dropped off sharply in late summer. ORANGE TORTRIX (Argyrotaenia citrana) was moderate on blackberries and boysenberries in Marion County on May 29, and caused some damage to raspberry plantings in Linn County and boysenberry plantings in Yamhill County, with some fruitloss in June. It was also troublesome in blackberry plantings in Marion County August 8. STRAWBERRY LEAF ROLLER (Ancyliis comptana fragariae) required control in Polk County in early August. CYCLAMEN MITE (Steneotarsonemus pallidus) was found in 19 of 196 strawberry fields surveyed in Willamette Valley during September and October; most fields were lightly infested. These were the first known infestations in commercial plantings in the State.

Nut Insects: Sticky board trap surveys for WALNUT HUSKFLY (Rhagoletis completa) in walnut growing areas of the State were negative. Unusual infestations of walnut by CODLING MOTH were reported from Eugene, Medford and Salem late in the season. A LEAF ROLLER (Archips rosana) populations remained low in most areas throughout the season. First adults were observed June 27 in the Willamette Valley. FILBERTWORM (Melissopus latiferreanus) emerged June 25 in Benton County, the earliest in 11 years. Infestations were spotty (lower than in 1957) in the Willamette Valley. APPLE MEALYBUG (Phenacoccus aceris) is of increasing concern to filbert growers in the Gervais area. Populations increased and reduction of yield was evident in a few orchards. Crawlers were first observed February 16. Egg-laying observed April 14 and by July 11, nymphs were observed feeding on foliage. FALL WEBWORM (Hyphantria cunea) was abundant, with 4-6 tents common per walnut tree in the Salem area July 27. Filberts, apples and other fruit trees were infested in the Willamette Valley, particularly in poorly kept orchards.

Truck Crop Insects: LYGUS BUGS (Lygus spp.) were abundant in Umatilla County sugarbeet fields May 1. Controls were applied intermittently through the year. Over-all damage by ONION MAGGOT (Hylemya antiqua) was light throughout the State. BEAN APHID (Aphis fabae) built up near Jefferson and other Willamette Valley bean growing areas in early July and dropped below economic levels by late July. SLUGS caused severe damage to several bean plantings in Linn and Marion Counties the week of July 13, necessitating replanting. Corn foliage was also injured in Benton County. PAINTED-LADY (Vanessa cardui) was present in outbreak proportions during 1958. Large flights were observed in Linn County in mid-May. In June infestations were general on truck crops and wild host plants throughout the State. Beans, peas and mint were damaged in particular. CUTWORMS (Peridroma margaritosa and Agrotis ypsilon) were abundant in the Willamette Valley, doing economic damage in late June and early July. Corn, beans, mint and beets were seriously damaged in some areas. GREEN PEACH APHID (Myzus persicae) required

control in potato seed acreages of Klamath County in late June and early July. WESTERN STRIPED CUCUMBER BEETLE (Acalymma trivittata) appeared in the Willamette Valley for the first time since 1947, infesting a small planting of squash and cucumbers in Benton County. WESTERN SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata) continued serious on truck crops, home gardens and flower beds, with some alfalfa and peach fruit injury in Yamhill County. Bean plantings in the Willamette Valley were heavily attacked. BEET ARMYWORM (Laphygma exigua) appeared in large numbers from Columbia County south to Jackson County. A variety of crops were attacked. Damage was first observed in late July when large acreages of kale and beets were severely damaged in Benton County. In mid-August, a second generation appeared and damage continued until September 6. CABBAGE APHID (Brevicoryne brassicae) adults and nymphs injured broccoli and young cauliflower plantings in the Gresham-Woodburn-Hillsboro areas August 1-10. Populations built up gradually on the fall crop, were moderate and general August 18-26, and, despite control practices, high populations existed into early September. CABBAGE LOOPER (Trichoplusia ni) infestations so severe as to resist control through July-August and early September existed in Washington, Multnomah and Marion Counties during 1958. Populations on cauliflower and broccoli were higher than those noted for several years. At the same time and location, DIAMONDBACK MOTH (Plutella maculipennis) was moderate but persisted until cauliflower and broccoli were harvested. Controls were only fair. IMPORTED CABBAGEWORM (Pieris rapae) was moderate, resisted controls. TWO-SPOTTED SPIDER MITE built up in late summer on many crops including hops, corn and gooseberries in the Willamette Valley. The spring survey to determine the overwintering population of BEET LEAFHOPPER (Circulifer tenellus) in Morrow and Umatilla Counties began April 15. The over-all mean population for the 220 square foot samples taken was .165 per square foot, considerably smaller than the 1.31 recorded in 1957. More attention needs be directed to breeding areas immediately adjacent beet fields, as roadbanks, ditches, pathways and otherwise disturbed areas support a large population on wild hosts. In addition, volunteer sugar beets in the fields are heavily infested and pose an immediate threat to the emerging new planting. Surveys made in the 4-6 leaf stage on May 1 in the Hermiston area averaged 1-2 beet leafhoppers per linear foot of row. Late season estimates show curly top loss varied with location and time of planting. Ten percent loss to curly top virus disease was common in several Umatilla County sugar beet fields.

Ornamental and Shade Tree Insects: HOLLY LEAF MINER (Phytomyza ilicis) infested a large commercial planting of holly in Portland for the first time. Surveys show no increase in the known infested area of the State, but known infestations generally increased over 1957. ELM LEAF BEETLE (Galerucella xanthomelaena) infested elm throughout the State. POPLAR AND WILLOW BORER (Sternochetus lapathi) heavily damaged willow and poplar in Benton County. FOREST TENT CATERPILLAR (Malacosoma disstria) and WESTERN TENT CATERPILLAR (M. pluviale) emerged in the Willamette Valley by April 20. Infestations on agricultural crops were negligible. Considerable defoliation occurred in host trees along river banks and sloughs.

Beneficial Insects: A SEED INFESTING WEEVIL (Apion ulicis) was released at four new sites, two each in Lane and Curry Counties. This weevil was introduced in 1955 to aid in the control of the gorse plant. Inspection of original release sites in Coos County disclosed huge populations present but still restricted to small areas. KLAMATHWEED BEETLES (Chrysolina spp) show good control of the host weed in all areas of the State. Considerable western acreage is now completely free of the weed. An ALKALI BEE (Nomia melanderi) activity began a month early, ceased a month early.

Household Insects: A SUBTERRANEAN TERMITE (Reticulitermes hesperus) and a DAMPWOOD TERMITE (Zootermopsis angusticollis) are becoming more serious each year. This is partly related to the type of modern home construction that permits easy access and favorable conditions for termite development. CARPET BEETLES appear on the increase as house pests. Other insects troublesome in homes are INDIAN-MEAL MOTH, POWDER POST BEETLES, CLOVER MITE, PLANT BUGS, a WEEVIL (Trachyphloeus bifoveolatus) and BROWN-BANDED ROACH. This last named insect is becoming more generally distributed over the State.

Stored-grain Pests: Total of 228 inspections, initial and repeat, were made for KHAPRA BEETLE during 1958 with negative results. Common pests of stored grains and grain products found were the CADELLE, GRANARY MITE (Glycyphagus destructor), GRAIN MITE (Acarus siro), SAW-TOOTHED GRAIN BEETLE, FLAT GRAIN BEETLE, GRANARY WEEVIL and MEDITERRANEAN FLOUR MOTH. LESSER GRAIN BORER was found in one grain establishment in Grants Pass and two in Ontario.

SUMMARY OF INSECT CONDITIONS - 1958

WYOMING

Prepared by Arlen D. Davison

Highlights: BEET WEBWORM caused the most concern to farmers and ranchers this year. COTTONY MAPLE SCALE was found in two counties of the State. EUROPEAN EARWIG (Forficula auricularia) was found for the first time at Cheyenne, Laramie County.

Cereal and Forage Insects: ALFALFA WEEVIL (Hypera postica) caused moderate damage to alfalfa on the elk refuge in Teton County during June and early July and minor damage to second-cutting alfalfa in Goshen and Lincoln Counties during July. During mid-August populations averaged 30 larvae per 20 sweeps in several fields in northern locations while in others only 2-3 larvae were found. LESSER CLOVER LEAF WEEVIL (Hypera nigrirostris) caused moderate damage to red clover hay in Teton County, on a limited scale in Park County. BEET WEBWORM (Loxostege sticticalis) adults were very abundant in Goshen County in late June but the expected larval population did not develop. Larvae were extremely abundant but restricted feeding to fanweed, lupine, lambsquarters and other weeds in Teton County, caused extensive damage to several bean fields and radish fields during July in Park County, severely damaged sugar beets in the Worland area, although control measures were applied, and destroyed several new alfalfa plantings in Sweetwater and Lincoln Counties. PEA APHID (Macrosiphum pisi) populations varied greatly throughout the season, with 150-200 per 10 sweeps in alfalfa throughout the State in August. During the week of September 12, many western alfalfa fields had as high as 750-800 per 10 sweeps. A heavy infestation retarded growth of second-cutting alfalfa in Platte County. CORN LEAF APHID (Rhopalosiphum maidis) was present throughout the southeastern section from August 1 to September 25, with minor damage reported. HESSIAN FLY (Phytophaga destructor) caused an estimated 2 percent loss of winter wheat in the northeastern part of the State. VARIEGATED CUTWORM (Peridroma margaritosa) caused minor damage in two alfalfa fields in Goshen County during September. An outbreak of MORMON CRICKET (Anabrus simplex) occurred near Casper, Natrona County, the week of July 4. Movement was confined to foothills and rangeland. No serious damage was reported. WHEAT CURL MITE (Aceria tulipae) - Wheat streak mosaic caused moderate losses in isolated areas

in the spring and in the fall was observed in isolated eastern areas. Efforts to collect the vector have thus far failed but it is undoubtedly present. GRASSHOPPERS caused severe damage to hay and crops in the Mill Creek area northeast of Lander during July and August. The most important species present were Melanoplus packardii, M. bivittatus, Camnula pellucida and nymphs and adults of M. femur-rubrum. M. bivittatus, M. bilituratus and M. femur-rubrum damaged winter wheat in the Albin area, Laramie County, during September. Up to 12 drill rows were destroyed in some fields.

Fruit Insects: PEAR-SLUG (Caliroa cerasi) damaged sweet and sour cherry trees in Goshen and Platte Counties throughout the summer.

Truck Crop Insects: POTATO PSYLLID (Paratrioza cockerelli) populations fluctuated greatly throughout the growing season. Population averaged 8 per 50 sweeps in Cheyenne on June 27 and 44 on matrimonyvine forty miles to the east. None were found on early potatoes. The situation reversed with 55 per 50 sweeps at Cheyenne and 10 at Pine Bluffs on July 11. The population never averaged more than 4 per 100 sweeps on potatoes in southeastern area. The highest count in northern part of State was 10 per 50 sweeps in Washakie County. In general, control measures resulted in very little damage. MEXICAN BEAN BEETLE (Epilachna varivestis) was first observed during the week of June 27 in southeastern Wyoming. By August 1, the population averaged 2 adults and 4 larvae per 100 sweeps in Laramie, Goshen and Platte Counties, with light damage occurring. During the last of August and early September beetles completely defoliated many fields in Goshen County. BEET LEAFHOPPER (Circulifer tenellus) infected several sugar beet fields with the curly top virus in Platte and Converse Counties during early August. The insect was not collected but the resulting disease caused a 20 percent loss in some fields in Platte County and a 1-2 percent loss in Converse County.

Forest, Ornamental and Shade Tree Insects: COTTONY MAPLE SCALE (Pulvinaria innumerabilis) was found in two isolated areas during the summer. It is fairly numerous in Torrington, Goshen County, and was found in one yard in Worland, Washakie County. To date these are the only areas in the State in which it has been found. OYSTERSHELL SCALE (Lepidosaphes ulmi), EUROPEAN ELM SCALE (Gossyparia spuria) and PINE NEEDLE SCALE (Phenacaspis pinifoliae) were common on shade trees and shrubs throughout the State. All have resulted in loss of many yard trees and shrubs.

Insects Affecting Man and Animals: Control programs for CATTLE GRUBS (Hypoderma lineatum and H. bovis) are progressing well. In Sheridan County 1-2 percent of the horses used by several dude ranches were infested with grubs.

Miscellaneous Insects: Several specimens of EUROPEAN EARWIG (Forficula auricularia) were found for the first time in Laramie County.

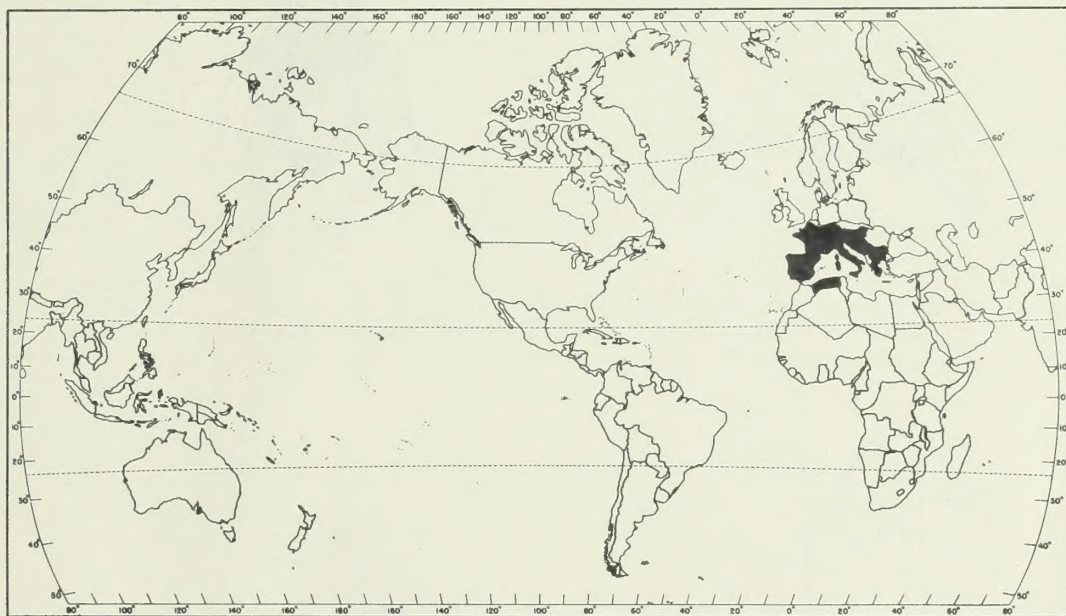
INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

CHESTNUT WEEVIL (Curculio elephas (Gyllenhal))

Economic Importance: This curculio is one of the most serious pests of chestnuts in Europe. The larvae feed in the nuts, often completely destroying them. Additional injury is caused by the adults which puncture the base of the young nuts to feed, causing a premature nut fall as high as 20 percent of the crop in some instances. In Bulgaria it sometimes damages 70 percent of the crop. Larvae of this pest have been intercepted frequently at U. S. ports of entry in past years in chestnuts from Europe.

Distribution: Recorded in Italy, France, Austria, Germany, Greece, Bulgaria, Algeria, Spain, Lebanon, Yugoslavia, Portugal, Hungary and Switzerland.

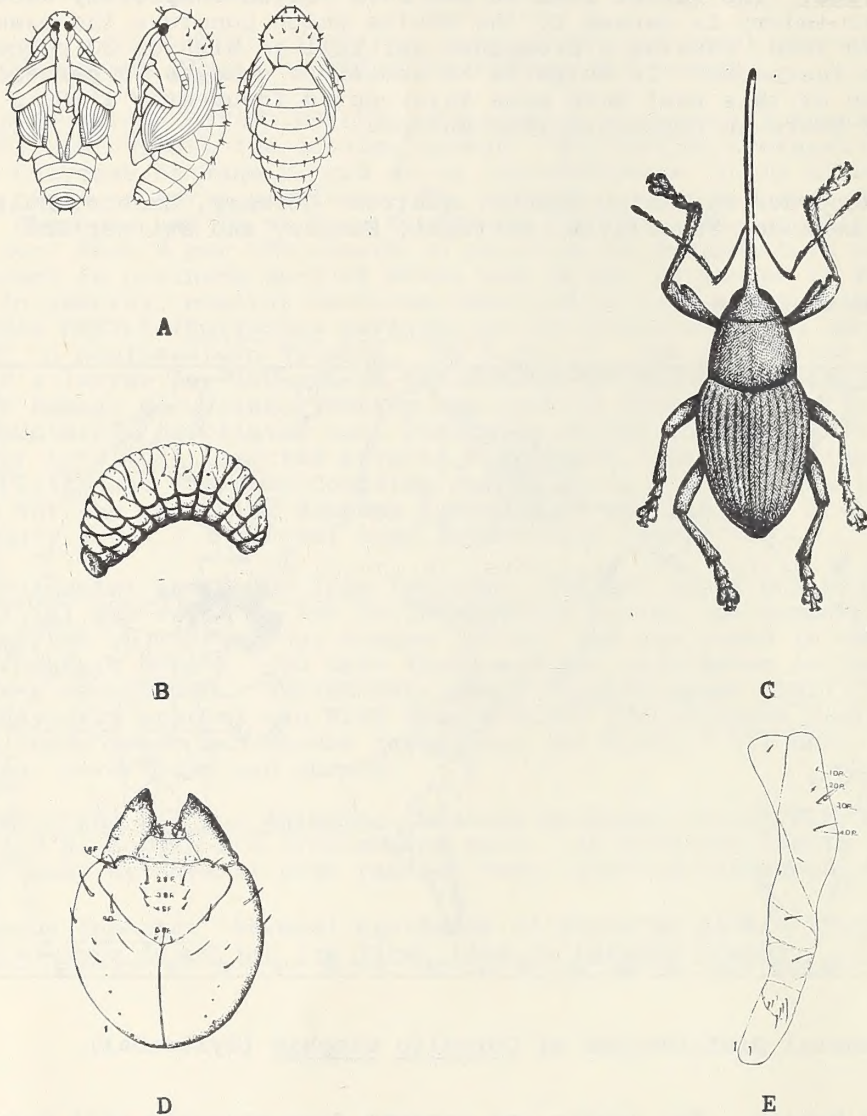
Hosts: Chestnuts and acorns.



General Distribution of Curculio elephas (Gyllenhal)

Life History and Habits: The adults are present from mid-July till October in France. The eggs are deposited singly in little holes made in the fruit. Each female will lay approximately 20 eggs. Larvae enter the cotyledons, their entrance holes rapidly becoming invisible. The presence of larvae in chestnuts is very difficult to detect. Larvae leave chestnuts in about 40 days after the eggs are laid, and enter the soil, where they pass the winter, and pupate about mid-June. Occasionally pupation and adult emergence occur in the nuts. Infested fruits usually fall prematurely and are often attacked by fungi.

Description: The rostrum of the female is as long as the body and twice as long as that of the male. The tarsus is long and slender and the dorsal side is uniformly composed of lanceolate yellowish or grayish scales. Antenna is very long and thin and covered with pubescence. The eyes are large. The general color of the weevil is russet with an ashen overcast from a dense pubescence. Length 6-9 mm. (Prepared in Plant Pest Survey Section in cooperation with other ARS agencies and the U. S. N. M.) CEIR 8 (50) 12-12-58



Figures of *Curculio elephas* (Gyll.) : A-pupa; B-mature larva; C-adult; D-head of mature larva; E-lateral-half of metathorax, mature larva.

Figures (except map): Adult, larva and pupa from Colizza, C. 1928-1929. Bol. del Lab. di Zool. Generale e Agraria 22:244-262. Larval head and lateral-half of metathorax from La Ferla, A. 1945. Bol. R. Lab. Ent. Agrar. Portici 5:308-311.

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