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Cooperative
**ECONOMIC INSECT
REPORT**

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

SURVEY AND DETECTION OPERATIONS

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

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CEREAL AND FORAGE INSECTS

ALFALFA WEEVIL (Hypera postica) - NEW JERSEY - Larvae damaging alfalfa 2-3 inches high in southern area; 2-4 first instars found on many stalks April 8. Larvae heavy and causing considerable damage at Barnsboro, Gloucester County; alfalfa 3-4 inches high with 6-9 first to second instars on many stems. Early treatment necessary in some fields. Careful observation urged to avoid loss of first cutting. (Ins.-Dis. Newsltr.). DELAWARE - Young larvae present in most areas on alfalfa; injury remains light. (Burbutis). MARYLAND - Larvae increasing generally on alfalfa in eastern and southern sections; damage noticeable in areas of fields with southern exposures. (U. Md., Ent. Dept.). GEORGIA - Heavy on alfalfa in northwest, north and northeast area; all stages present. (Johnson). ALABAMA - Heavy in Cleburne County; stands perhaps too poor for economical treatment. (Ventruess). TENNESSEE - Large number of small larvae buried in alfalfa plant buds in northern part of State. No spray will reach these larvae; spraying should be delayed. (Mullett, Mar. 30). ARKANSAS - Larvae ranged 30-50 per 100 sweeps in Independence County. New county record. Larvae ranged 50-150 (averaged 100) per 100 sweeps in all fields checked in Mississippi County. (Ark. Ins. Sur.). OHIO - Adult activity and larval feeding noted in many counties in southern third of State. Several fields with 50 percent of alfalfa terminal buds infested. (Muntzing, Easterling, Blair, Rose). No adult or larval activity noted in Columbiana and Mahoning Counties. (Niemczyk). ILLINOIS - Adults ranged 0-6 and larvae 0-400 per 100 sweeps in alfalfa in southern quarter of State. Light feeding injury on terminal growth on up to 62 percent of alfalfa stems in Hardin County. (Ill. Ins. Rpt.). MISSOURI - Ranged 3-100 larvae per 10 sweeps in alfalfa in southern part of southeast district. (Houser, Thomas, Peters). COLORADO - Adults noted in increasing numbers on alfalfa in Weld County; particularly easy to find in recently burned over fields. (Titensor). Adults noticeable on alfalfa in burned fields in Larimer County. (Simpson). UTAH - Adults active in several areas of Box Elder County. (Knowlton). CALIFORNIA - Heavy on alfalfa plantings in northern Butte County; this is a new county record. (Cal. Coop. Rpt.).

CLOVER LEAF WEEVIL (Hypera punctata) - ARKANSAS - Larvae collected on alfalfa in Benton County. (Ark. Ins. Sur.). MISSOURI - Larvae ranged 2-10 per crown in alfalfa in southeastern and east central districts; up to 50 percent of larvae appear diseased. (Houser, Thomas, Peters). ILLINOIS - Occasional adult found in clover and alfalfa in southern area; larvae ranged 0-20 per square foot; up to 160 per 100 sweeps in alfalfa in Randolph County. All larvae checked in laboratory; all H. punctata. (Ill. Ins. Rpt.). OHIO - Total of 11 larvae taken in 150 sweeps in alfalfa in Brown County; larvae present in Franklin and Highland Counties. (Jones, Blair, Rose).

LESSER CLOVER LEAF WEEVIL (Hypera nigrirostris) - MISSOURI - Adults swept from alfalfa in east central district. (Houser, Thomas, Peters).

CLOVER ROOT CURCULIO (Sitona hispidula) - MISSOURI - Adults averaged 5 per 10 sweeps in alfalfa in southeastern district. (Houser, Thomas, Peters). IDAHO - Larval population low in field of second-year red clover at Central Cove, Canyon County, April 12. (Bechtolt).

CLOVER ROOT BORER (Hylastinus obscurus) - IDAHO - Larval numbers low in field of second-year red clover at Central Cove, Canyon County, April 12. (Bechtolt).

SOUTHERN CORN ROOTWORM (Diabrotica undecimpunctata howardi) - OHIO - One adult taken in 150 sweeps in alfalfa in Vinton County. (Rose).

VETCH BRUCHID (Bruchus brachialis) - TEXAS - Spot checks in Hunt County vetch fields revealed 1 per sweep; field not in flower. (Turney).

CORN EARWORM (Heliothis zea) - ARKANSAS - First seasonal record of eggs on crimson clover in Bradley County April 6; counts unusually high; up to 88,000 per acre. (Ark. Ins. Sur.). ALABAMA - Survey in crimson clover yielded 1-2 first to third

instars in numerous locations along roads and in fields in Henry County. (Seibels, Quevas et al.). FLORIDA - Increasing on sweet corn in Palm Beach County area during early April; det by N.C. Hayslip. (Fla. Coop. Sur.).

ALFALFA CATERPILLAR (Colias eurytheme) - ILLINOIS - Small larvae ranged 0-4 per 100 sweeps in clover and alfalfa in southern quarter of State. (Ill. Ins. Sur.).

GREEN CLOVERWORM (Plathypena scabra) - ALABAMA - Light to medium on crimson clover in several locations in Henry County. (McQueen).

CUTWORMS - COLORADO - Larvae active in alfalfa in Windsor area, Weld County. (LaSalle).

PEA APHID (Acyrtosiphon pisum) - WASHINGTON - One apterous adult and 2 second instars from 1965 eggs noted April 8 in alfalfa tips in 12 fields sampled in Columbia Basin, Quincy, to Othello and southward. None found in Benton and Walla Walla Counties. Alfalfa 3-5 inches high. (Halfhill). NEW MEXICO - Light to moderate on alfalfa in Luna, Dona Ana, Eddy, Chaves, Lea and Bernalillo Counties; heavy on alfalfa in Guadalupe County. (N.M. Coop. Rpt.). TEXAS - Moderate to heavy locally in alfalfa in Clay County. Ranged 65-269 per sweep in Hunt County vetch. (Turney). OKLAHOMA - Moderate to heavy in alfalfa in southwest, south central, central, north central and northeast areas; ranged up to 3,250 per 10 sweeps in field checked in Lincoln County; spraying underway in Caddo County. (Okla. Coop. Sur.). MISSOURI - Ranged 50-400 per 10 sweeps in southeast alfalfa; few winged forms present. Parasites and predators present where counts high. (Houser, Thomas, Peters). ILLINOIS - Ranged 100-9,700 per 100 sweeps in clover and alfalfa in southern quarter of State. (Ill. Ins. Rpt.). WISCONSIN - Eggs hatched in southern counties; nymphs apparently less than 24 hours old found in western Dane County alfalfa April 14; temperatures too cold that day and it is assumed hatch occurred April 13. This date 4 days later than in 1964. Some eggs not hatched; one second instar present. Averaged 0.8 nymphs per stem in one field and 0.4 per stem in another. Alfalfa in both fields 0.5 to 2 inches high; nymphs feeding between folded trifoliolate leaves in most instances. (Wis. Ins. Sur.). MARYLAND - Averaged 3 per sweep on alfalfa in Worcester County. (U. Md., Ent. Dept.).

SPOTTED ALFALFA APHID (Therioaphis maculata) - ARIZONA - Light to medium on alfalfa in Graham County and in Chandler-Gilbert area of Maricopa County. (Ariz. Coop. Sur.). ILLINOIS - Ranged 0-6 per 100 sweeps in alfalfa in southern quarter of State. (Ill. Ins. Rpt.). WISCONSIN - No hatch as of April 14 in Dane County. (Wis. Ins. Sur.).

YELLOW CLOVER APHID (Therioaphis trifolii) - ILLINOIS - Averaged 160 per 100 sweeps in red clover field in Randolph County. (Ill. Ins. Rpt.).

APHIDS - ALABAMA - Extremely heavy on Caley peas in Bullock, Sumter, Montgomery, Marengo and other Black Belt counties. (Stone, McCay, Miller, Story, Ledbetter). Heavy on crimson clover in several locations in Henry County. (McQueen). FLORIDA - Adults and nymphs of Aphis sp. heavy on stems and bases of flowers of wild cowpeas at Lake Worth; light on foliage. Aphis sp. heavy on experimental southern peas at Bell Glade; plants about 7 inches tall with 12-100 aphids per plant. (Fla. Coop. Sur.).

TARNISHED PLANT BUG (Lygus lineolaris) - ALABAMA - Nymphs and adults extremely heavy on crimson clover in several locations in Henry County. (McQueen). OKLAHOMA - Light numbers active in most alfalfa checked in central and north central areas. (Okla. Coop. Sur.). ILLINOIS - Adults ranged 6-30 per 100 sweeps in clover and alfalfa in southern quarter of State. (Ill. Ins. Rpt.).

LYGUS BUGS (Lygus spp.) - ARIZONA - Nymphs increasing in alfalfa in Maricopa, Pinal and Graham Counties; none noted in Yuma County. (Ariz. Coop. Sur.). WASHINGTON - L. elisus overwintered adults active in Walla Walla area, Walla Walla County. (Johansen).

BROWN STINK BUG (Euschistus servus) - ALABAMA - Extremely large number of adults noted on crimson clover in several locations in Henry County. (McQueen).

A STINK BUG (Piezodorus guildinii) - FLORIDA - Eggs and nymphs numerous and at least 12 adults collected on wild cowpeas at Lake Worth, Palm Beach County. Det. by W. C. Genung. (Fla. Coop. Sur.).

MEADOW SPITTLEBUG (Philaenus spumarius) - OHIO - Nymphs on 5 of 15 alfalfa terminal buds examined in field near Ripley, Brown County; another field in county also infested. Nymphs not observed in Adams, Jackson and Vinton Counties. (Rose). MARYLAND - First nymphs of season noted April 13 on plantain near Annapolis, Anne Arundel County. (U. Md., Ent. Dept.).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - ARIZONA - Medium on alfalfa in Yuma County; light in Maricopa and Pinal Counties. (Ariz. Coop. Sur.). FLORIDA - Abundant on wild cowpeas at Lake Worth, Palm Beach County. Det. by W. G. Genung. (Fla. Coop. Sur.).

WESTERN FLOWER THRIPS (Frankliniella occidentalis) - ARIZONA - Medium to heavy populations damaged seedling alfalfa in Maricopa, Pinal and Graham Counties. Some controls necessary. (Ariz. Coop. Sur.).

SPIDER MITES - ALABAMA - Severely damaged 100-acre field of Caley peas in Sumter County (Story, Ledbetter); heavy in localized areas on crimson clover in 2 communities in Washington County. (Hoomes). TEXAS - Moderate to heavy on crimson clover in improved pastures in local areas of Hopkins County. (Henry). Heavy on wheat in Floyd County. (Texas Coop. Rpt., Swift).

ENGLISH GRAIN APHID (Macrosiphum avenae) - ARIZONA - Medium to heavy and damaging small grains in Yuma, Maricopa and Pinal Counties. Some controls necessary. (Ariz. Coop. Sur.).

CORN LEAF APHID (Rhopalosiphum maidis) - ARIZONA - Medium to occasionally heavy infestations required some controls in Yuma County. Light infestations noted in Pinal, Maricopa and Graham Counties. (Ariz. Coop. Sur.). NEW MEXICO - Increasing in northern Dona Ana County; controls underway. (N.M. Coop. Rpt.). TEXAS - Light, locally in barley in Jack County. (Turney). OKLAHOMA - Heavy on barley in Jackson County. (Okla. Coop. Sur.).

APPLE GRAIN APHID (Rhopalosiphum fitchii) - OKLAHOMA - Continues present in wheat in most areas but counts decreasing; isolated areas in southwest area with counts up to 500 per linear foot. (Okla. Coop. Sur.). TEXAS - Light to moderate on small grains in Denton County. (Boultinghouse).

GREENBUG (Schizaphis graminum) - TEXAS - Light to moderate on small grain in Denton County. (Boultinghouse). OKLAHOMA - Most counts in wheat light to moderate (40 or fewer per linear foot). Isolated areas with heavy populations, but most wheat 12-15 inches tall and jointing. Now past point of serious damage. Some parasites active. (Okla. Coop. Sur.). COLORADO - Neither this species nor other aphids observed on wheat in Baca County. (Jenkins).

DELPHACID PLANTHOPPERS - FLORIDA - Sogata furcifera complex and Delphacodes propinqua general on sweet corn at Belle Glade and Pahokee, Palm Beach County. (Smith). Former several times more abundant than latter. (Fla. Coop. Sur.).

EUROPEAN CORN BORER (Ostrinia nubilalis) - ILLINOIS - No evidence of pupation in extreme southwestern area. (Ill. Ins. Rpt.). MARYLAND - No pupation observed to April 15 in southern sections. (U. Md., Ent. Dept.). DELAWARE - No pupation of overwintered forms noted in State. (Burbutis).

PALE WESTERN CUTWORM (Agrotis orthogonia) - COLORADO - Trace numbers in wheat in Baca County. (Jenkins).

ARMY CUTWORM (Chorizagrotis auxiliaris) - COLORADO - Trace numbers in wheat in Baca County. (Jenkins).

ARMYWORM (Pseudaletia unipuncta) - MISSOURI - One adult observed in Boone County on April 8. (Jenkins). ALABAMA - Light on wheat foliage in St. Elmo community, Mobile County. (Quevas, Seibels).

CEREAL LEAF BEETLE (Oulema melanopa) - INDIANA - No adult activity or feeding signs noted in northern area as of April 15. This is a 2-3 week delay compared with previous 2 years. (Wilson). ARKANSAS - Surveys in 10 fields in St. Francis County March 29-April 2 negative; surveys of 30 properties in 7 northwestern counties April 5-9 negative. (Ark. Ins. Sur., PPC).

BROWN WHEAT MITE (Petrobia latens) - OKLAHOMA - Heavy in wheat in few isolated areas in southwest; 250-400 per linear foot but numbers decreasing. (Okla. Coop. Sur.). COLORADO - Averaged 50 per linear foot on wheat in Baca County; 200 per linear foot in some fields. (Jenkins).

A CHINCH BUG (Blissus insularis*) - FLORIDA - Recent hatch; first-generation nymphs on St. Augustine grass at Gainesville, Alachua County. During January-March, 80-90 percent of population consisted of adults, but by mid-April 74 percent of population was in first instar and only 24 percent adults. Adults now dying at increasing rate; population trend about same as during corresponding time in 1964. (Kerr).

FRUIT INSECTS

APHIDS - MASSACHUSETTS - Hatching on apple trees in South Amherst, Hampshire County. (Wave). CONNECTICUT - A few aphids, probably Rhopalosiphum fitchii (apple grain aphid) or Anuraphis rosea (rosy apple aphid) or both, hatched and feeding on buds in New Haven. (Savos, Apr. 14). MARYLAND - First hatching of R. fitchii and Aphis pomi (apple aphid) occurred April 6 in Hancock area, Washington County. A. pomi common on apple buds in sections of Washington and Prince Georges Counties. Anuraphis rosea hatched in Hancock area April 12; present in most orchards. (U. Md., Ent. Dept.). ALABAMA - Anuraphis rosea light to medium on apples in Lee, Macon, Autauga and Chilton Counties. (Barwood). OHIO - R. fitchii very concentrated on leaf buds of apple trees in Clermont and Vinton Counties. (Rose). ARIZONA - Myzus persicae (green peach aphid) medium to heavy and damaging terminal growth on peach trees in Graham County. (Ariz. Coop. Sur.).

PEAR PSYLLA (Psylla pyricola) - MASSACHUSETTS - Oviposition observed on pear trees in western area. (Wave). CONNECTICUT - Adults active in Storrs; egg laying not yet occurred. (Savos, Apr. 14).

CALIFORNIA RED SCALE (Aonidiella aurantii) - CALIFORNIA - Heavy on apple tree nursery stock in Chula Vista, San Diego County. (Cal. Coop. Rpt.).

EASTERN TENT CATERPILLAR (Malacosoma americanum) - OHIO - Large numbers observed on apple tree near Owensville, Clermont County. (Rose). TEXAS - Light on stone fruits in Comal and Blanco Counties. (Texas Coop. Rpt., Massey). SOUTH CAROLINA - Present on apples, peaches, wild cherries and plums. (Nettles et al., Apr. 13).

FOREST TENT CATERPILLAR (Malacosoma disstria) - FLORIDA - Severely attacking foliage of young peach trees near Brooksville, Hernando County. (Parker, Owen, Apr. 8).

* Slater, J. A. 1964. A Catalogue of the Lygaeidae of the World. Vol. I:446.

FRUIT-TREE LEAF ROLLER (Archips argyrospilus) - CONNECTICUT - Large numbers of overwintered egg masses noted in New Haven; pest progressively increased in abundance in past 3 years. (Savos, Apr. 14).

RED-BANDED LEAF ROLLER (Argyrotaenia velutiana) - MARYLAND - Moths emerged April 10 on apple in Hancock area, Washington County. (U. Md., Ent. Dept.).

A NOCTUID MOTH (Orthosia hibisci) - OHIO - Ovipositing began April 10; large numbers of eggs laid April 12-16 at Wooster, Wayne County. (Rose).

A CUTWORM (Eupsilia sp.) - OHIO - Oviposition began at Wooster, Wayne County, April 15. (Rose).

GREEN FRUITWORM (Lithophane antennata) - OHIO - Ovipositing began April 15 at Wooster, Wayne County. (Rose).

PLUM CURCULIO (Conotrachelus nenuphar) - ALABAMA - Caused heavy damage to plums; 50 percent of fruit affected on isolated trees in Henry County. A few adults observed on trees in Lee County. (McQueen). NORTH CAROLINA - Present on peach trees in several widely scattered areas of Piedmont. (Griffin, Mount).

A WEEVIL (Achrastenus griseus) - TEXAS - Heavy locally on peach buds in Young County. Det. by H. R. Burke. (McCarroll).

CLICK BEETLES - OREGON - Undetermined species feeding on cherry blossoms in Milton-Freewater area, Umatilla County. (Burkhart).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - OREGON - Heavy infestations building up on cherries, plums and prunes in Milton-Freewater, Umatilla County. (Burkhart). NEW YORK - Overwintering colonies occasionally observed. (N.Y. Wkly. Rpt., Apr. 12).

EUROPEAN RED MITE (Panonychus ulmi) - NEW YORK - Egg numbers low. (N.Y. Wkly. Rpt., Apr. 12). OHIO - Eggs observed in 2 orchards in Vinton and Clermont Counties. No nymphs seen. (Rose).

A LEAF ROLLER MOTH (Platynota stultana) - CALIFORNIA - Larvae damaging young shoots and flowers of grapevines in Fresno County. This is second report of this pest damaging grapes in Fresno County. (Cal. Coop. Rpt.).

GRAPE FLEA BEETLE (Altica chalybea) - ARIZONA - Appearing on grapes in areas of Maricopa County. Some controls required. (Ariz. Coop. Sur.).

A LEAFHOPPER (Erythroneura sp.) - ARIZONA - Medium in grape vineyards in Maricopa County. Controls necessary. (Ariz. Coop. Sur.).

PECAN NUT CASEBEARER (Acrobasis caryae) - ALABAMA - Overwintered larvae feeding on new growth of pecans in Lee and Bullock Counties and other central and southern counties. (Stone et al.). FLORIDA - Larvae taken on stem and leaves of pecan at nursery in Monticello, Jefferson County. (Miller, Apr. 9).

HICKORY SHUCKWORM (Laspeyresia caryana) - TEXAS - Overwintering larvae pupating in pecan shucks in Parker County. (Turney).

MELON APHID (Aphis gossypii) - CALIFORNIA - Heavy on citrus trees in Pauma Valley, San Diego County. (Cal. Coop. Rpt.).

GREEN PEACH APHID (Myzus persicae) - ARIZONA - General and light on citrus in Yuma County. (Ariz. Coop. Sur.).

CITRUS THRIPS (Scirtothrips citri) - ARIZONA - Nymphs increasing rapidly on citrus in Yuma and Maricopa Counties. Damage evident, controls necessary. (Ariz. Coop. Sur.).

Citrus Insect Situation in Florida - Mid-April - CITRUS RUST MITE (*Phyllocoptruta oleivora*) infested 57 percent of groves (norm 57 percent); 36 percent economic (norm 32 percent). Population will increase on new leaves and diminish on old leaves. Overall population expected to be above average. Highest districts south and west. TEXAS CITRUS MITE (*Eutetranychus banksi*) infested 43 percent of groves (norm 38 percent); 22 percent economic (norm 16 percent). Population will increase and be above average. Highest districts south, central and west. CITRUS RED MITE (*Panonychus citri*) infested 35 percent of groves (norm 65 percent); 10 percent economic (norm 39 percent). Although marked increase underway, population will remain below average. Scattered heavy infestations may be expected in all districts. Highest districts north and west. SIX-SPOTTED MITE (*Eotetranychus sexmaculatus*) infested 8 percent of groves; less than 1 percent economic. Population expected to remain below average. GLOVER SCALE (*Lepidosaphes gloverii*) infested 88 percent of groves; 31 percent economic. Further increase expected. Highest districts south, central and east. PURPLE SCALE (*Lepidosaphes beckii*) infested 86 percent of groves; 19 percent economic. Little change expected. Highest districts south and central. CHAFF SCALE (*Parlatoria pergandii*) infested 72 percent of groves; 16 percent economic; decrease expected. Highest districts south and east. BLACK SCALE (*Saissetia oleae*) infested 30 percent of groves; 12 percent economic. Strong increase expected. Highest districts south and east. YELLOW SCALE (*Aonidiella citrina*) infested 63 percent of groves; 20 percent economic. Little change expected. Highest districts south, central and west. APHIDS infested 35 percent of groves; less than 1 percent economic. Population below average. Young groves, especially Temples and Murcotts, will harbor scattered infestations until end of April. WHITEFLY larvae at normal moderate level; adults nearing spring peak of abundance. (W.A. Simanton (Citrus Expt. Sta., Lake Alfred)).

AVOCADO WHITEFLY (*Trialeurodes floridensis*) - FLORIDA - Building up on avocado at Pahokee, Palm Beach County. (Wolfenbarger).

CITRUS MEALYBUG (*Pseudococcus citri*) - CALIFORNIA - Adults heavy on sapote trees locally in San Diego, San Diego County. (Cal. Coop. Rpt.).

SCARABS - FLORIDA - *Pachystethus marginata* and *Euphoria sepulchralis* damaged mango and avocado; *E. sepulchralis* damaged lychee in grove at Canal Point, Palm Beach County. (Wolfenbarger, Apr. 8).

SIX-SPOTTED MITE (*Eotetranychus sexmaculatus*) - CALIFORNIA - Medium locally on avocado trees in San Francisco, San Francisco County. (Cal. Coop. Rpt.).

A SOFT SCALE (*Coccus mangiferae*) - FLORIDA - Eggs numerous on mango at Tampa, Hillsborough County. (Hale, Apr. 9).

CHECKERED BEETLES - TEXAS - Heavy locally on mulberry trees in Coleman County. (Sims).

TRUCK CROP INSECTS

GREEN PEACH APHID (*Myzus persicae*) - FLORIDA - Numerous on potatoes and late cabbage at Hastings, St. Johns County, about April 1. (Workman). CALIFORNIA - Medium on tomato plants in Merced, Merced County. (Cal. Coop. Rpt.).

POTATO APHID (*Macrosiphum euphorbiae*) - ALABAMA - Widespread medium infestation on commercial plantings in Baldwin County; now mostly under control. (Turner).

TOMATO RUSSET MITE (*Aculus lycopersici*) - TEXAS - Causing considerable damage to greenhouse tomatoes in Tarrant County. (Turney).

CUTWORMS - ALABAMA - Medium locally on newly established tomatoes in Slocumb area, Geneva County. (Reynolds). OKLAHOMA - Several species, including *Peridroma*

saucia (variegated cutworm), damaging cabbage and tomato plants in Noble County; unspecified species damaging home gardens in Mayes and Cleveland Counties. (Okla. Coop. Sur.).

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - ALABAMA - Medium and widespread on potatoes in southern Baldwin County. Overwintered adults heavy in home gardens in Henry and Lee Counties. (Turner, Ballew, et al.). OKLAHOMA - Adults feeding on small potato plants in home garden in Noble County; first report of season. (Okla. Coop. Sur.).

POTATO PSYLLID (Paratrioza cockerelli) - ARIZONA - Some decrease of nymphs and eggs noted in potato fields in Maricopa County. (Ariz. Coop. Sur.).

Potato Psyllid, Spring Breeding Areas of Texas and Southeastern New Mexico

The 1965 potato psyllid (Paratrioza cockerelli) survey was completed April 7, 1965. Wild Lycium host plants in all sampling areas were extremely late in leafing out, thus delaying the survey. Dormant plants can still be found in several sampling areas. Weather during March was the coldest experienced in 50 years. Lycium is not leafing uniformly and plant conditions appear to be unfavorable for psyllid reproduction. Very few eggs were found on leaves. Psyllid counts were lower in all sampling areas, except the El Paso and Sanderson areas. (PPC and cooperating agencies).

Potato Psyllid Survey on Overwintering Hosts

Average Number Per 100 Sweeps

| <u>State</u> | <u>District</u> | <u>1963</u> | <u>1964</u> | <u>1965</u> |
|--------------|-----------------------------------------------------------|-------------|-------------|-------------|
| Texas | Big Spring (Howard County) | 21 | 255 | 48 |
| Texas | San Angelo (Tom Green County) | 33 | 155 | 14 |
| Texas | Del Rio (Val Verde and Kinney Counties) | 26 | 52 | 30 |
| Texas | Marathon-Sanderson (Terrell, Pecos and Brewster Counties) | 29 | 8 | 15 |
| Texas | El Paso (El Paso and Hudspeth Counties) | 23 | 25 | 31 |
| New Mexico | Las Cruces (Dona Ana County) | 23 | 9 | 6 |

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DIAMONDBACK MOTH (Plutella maculipennis) - FLORIDA - Heaviest population in 7-8 years observed on acre of abandoned cabbage at Belle Glade, Palm Beach County. Det. W. G. Genung. Larvae ranged 3-12 per head; most larvae on outer leaves. (Fla. Coop. Sur., Apr. 9). ALABAMA - Light to medium on turnips in Mobile and Henry Counties. (Quevas, Seibels). ARIZONA - Larvae numerous on weed hosts in and around rutabagas in Maricopa County. (Ariz. Coop. Sur.).

CABBAGE LOOPER (Trichoplusia ni) - FLORIDA - Larvae very numerous and damaging unsprayed crucifers and potatoes at Hastings, St. Johns County, about April 1. Problem at Homestead, Dade County. Little trouble during spring on cabbage at Belle Glade, Palm Beach County. (Workman, Wolfenbarger, Genung).

IMPORTED CABBAGEWORM (Pieris rapae) - ALABAMA - Light on cabbage near St. Elmo, Mobile County. Heavy in Henry County; 1-3 larvae per small plant. Controls underway. (Quevas, Seibels et al.). GEORGIA - Adults active and laying eggs on turnips and mustards in Gwinnett County; some first instars noted. (Vanderford, Apr. 7).

VEGETABLE WEEVIL (Listroderes costirostris obliquus) - TEXAS - Locally heavy on turnips in Shelby County. (Anderson).

HARLEQUIN BUG (Murgantia histrionica) - GEORGIA - Overwintered adults numerous on collards in Spalding County; egg laying underway. (Dupree).

BEAN LEAF BEETLE (Cerotoma trifurcata) - FLORIDA - Troublesome on beans in Gainesville, Alachua County, in early April (Hetrick); fairly heavy on wild cowpeas at Lake Worth, Palm Beach County (Genung, Apr. 11). GEORGIA - Light to moderate in Tift County. (French).

A SCARAB (Pachystethus marginata) - FLORIDA - Causing considerable defoliation to snap beans on commercial farm at Canal Point, Palm Beach County; not damaging well-developed pods. Defoliation not serious at late stage of maturity (early April). (Genung).

COWPEA APHID (Aphis craccivora) - ALABAMA - Rather heavy on cowpeas in home gardens and in 6-acre commercial planting in Henry County. (McQueen).

STRAWBERRY APHID (Pentatrichopus fragaefolii) - WASHINGTON - Populations high for time of year at Vancouver, Clark County; averaged 0.5 per strawberry leaf. (Shanks, Mar. 19). Summer apterous forms, several per leaf, noted on new strawberry foliage on small certified planting at Walla Walla, Walla Walla County. (Landis, Apr. 6).

STRAWBERRY LEAF ROLLER (Ancyliis comptana fragariae) - WASHINGTON - Adults flying during warm afternoons at Pullman, Whitman County. (Johansen).

ORANGE TORTRIX (Argyrotaenia citrana) - OREGON - Larvae feeding and webbing tips of new growth of cane berries in Willamette Valley; activity 2 weeks earlier than normal. (Rosenstiel).

TOBACCO INSECTS

TOBACCO FLEA BEETLE (Epitrix hirtipennis) - GEORGIA - General over tobacco-growing area. (French).

A WEEVIL (Epicaerus formidolosus) - FLORIDA - Adults moderately damaging leaves of tobacco at Jasper, Hamilton County. (Andrews, Apr. 12).

A WIREWORM - GEORGIA - Light to heavy in tobacco in Mitchell and Tift Counties. (French, Girardeau).

TOBACCO BUDWORM (Heliothis virescens) - GEORGIA - Light on tobacco in Mitchell County. (Girardeau).

COTTON INSECTS

BOLLWORM (Heliothis zea) - TEXAS - Occasional specimen feeding on terminals of cotton in lower Rio Grande Valley. (Deer).

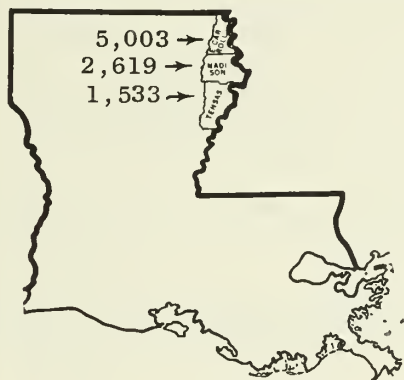
CUTWORMS - TEXAS - Unspecified species ranged light to moderate in scattered areas over most of the Rio Grande Valley. (Deer).

PINK BOLLWORM (Pectinophora gossypiella) - FLORIDA - Larvae infested wild cotton on April 2 and 7 at following locations: Biscayne Bay Keys, Dade County; 5 locations at Cape Sable and 2 locations at Sound Point, Monroe County. (Thompson, Humphries et al.).

DARKLING BEETLES - TEXAS - Unspecified species causing much damage locally in Bee, Refugio, Live Oak and San Patricio Counties. (Deer).

Report on Survival of Boll Weevil as Determined by Surface Trash
Examinations in Louisiana in the Spring - 1965

Spring 1965 collections of surface ground (woods) trash samples (two square yards per sample) were made in the northeast area March 8-16. This area includes Madison, East Carroll and Tensas Parishes. Three samples were collected at each location and 20 locations were used in Madison Parish, 10 in East Carroll Parish and 10 in Tensas Parish. A total of 120 samples was taken.



Average number of boll weevils
per acre of ground trash

The average number of live boll weevil (*Anthonomus grandis*) adults per acre of trash was 2,619 in Madison Parish, 5,003 in East Carroll Parish and 1,533 in Tensas Parish, or an average of 3,051 for the triparish area. In the spring of 1964, the average number of weevils per acre of ground trash in the triparish area was 1,049. Based on the 5,875 live boll weevil adults found per acre of trash in the fall of 1964, winter survival in the triparish area was 52 percent. In Madison Parish, where similar records have been made for the past 29 years, survival for the winter of 1964-1965 was 63 percent compared with the average of 42 percent for the 29-year period. Since these records have been made in Madison Parish, there have been seven winters in which survival was higher than the winter of 1964-1965.

The total rainfall records at the Tallulah Laboratory from December 1, 1964, to March 16, 1965, at which time the spring ground trash collections were completed, was 18.15 inches. In this same period, there were 34 days when the minimum temperature was 32 degrees or less, and 14 days when the temperature was 25 degrees or less. The lowest temperature recorded was 17 degrees on January 17. (T. C. Cleveland, W. P. Scott, J. Williams).

COTTON APHID (*Aphis gossypii*) - TEXAS - Light on cotton in Brazoria and Ft. Bend Counties (Teetes); light in Rio Grande Valley fields and parasites increasing. (Deer).

SPIDER MITES - TEXAS - Moderate in Ft. Bend and Brazoria Counties (Teetes); some light activity reported in local areas of Cameron County (Deer).

THRIPS - TEXAS - Moderate on cotton in Ft. Bend and Brazoria Counties. (Teetes).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

SOUTHERN PINE BEETLE (Dendroctonus frontalis) - NORTH CAROLINA - Potentially serious infestations found in Granville, Gates and Beaufort Counties during aerial survey. Few, scattered spots found in Vance, Warren, Halifax, Hertford and Washington Counties. (N.C. For. Pest Newsltr.).

A BARK BEETLE (Pityophthorus pulicarius) - FLORIDA - Adults taken in terminal pith of pine trees; caused death of many terminals at Starke area, Bradford County. (Read, Apr. 7).

WHITE-PINE WEEVIL (Pissodes strobi) - NORTH CAROLINA - Feeding in white pine planting in Henderson County. (Whitfield, Apr. 9).

SEQUOIA PITCH MOTH (Vespamina sequoiae) - CALIFORNIA - Larval populations high in Pinus spp., probably P. radiata and P. sylvestris, in Santa Cruz County. (Cal. Coop. Rpt.).

PINE TUBE MOTH (Argyrotaenia pinatubana) - NEW JERSEY - Treatments on infested white pines urged. (Ins.-Dis. Newsltr.).

SILVER-SPOTTED TIGER MOTH (Halisidota argentata) - OREGON - Heavy on Scotch and Austrian pines in Multnomah County nurseries; infested trees defoliated in many instances. (Larson, Goeden).

PINE BARK APHID (Pineus strobi) - NEW JERSEY - Treatments on infested white, Scotch and Austrian pines urged. (Ins.-Dis. Newsltr.).

WHITE-PINE APHID (Cinara strobi) - NEW JERSEY - Hatching expected soon; controls urged. (Ins.-Dis. Newsltr.).

CHERMIDS (Chermes spp.) - OREGON - Infesting Douglas-fir and white fir in Willamette Valley; hatching and moving on needles. (Larson).

BLACK PINE LEAF SCALE (Aspidiotus californicus) - MICHIGAN - Immature females noted in scattered infestation on Austrian pine in Allegan County; no eggs observed. (Wallner).

A EURYTOMID (Eurytoma tumoris) - CALIFORNIA - Specimens, probably this species, light on Pinus radiata in Ben Lomond, Santa Cruz County. E. tumoris known to occur locally on Christmas tree farm in county. (Cal. Coop. Rpt.).

EASTERN TENT CATERPILLAR (Malacosoma americanum) - TEXAS - Light on native shrubs in Comal and Blanco Counties. Larvae, probably this species, widespread on native palms in Lipscomb, Roberts, Hemphill and Wheeler Counties. (Texas Coop. Rpt.; Massey, Preston). OKLAHOMA - Active and damaging plums and flowering quince in Payne County; noted on wild plums in Lincoln, Logan, McClain, Pottawatomie, Caddo, Blaine and Payne Counties. (Okla. Coop. Sur.). ALABAMA - Newly established on cherry trees in Marion and Franklin Counties. Heavy feeding now occurring in older infestations in Lee, Bullock, Russell and Henry Counties. (Granberry, et al.). GEORGIA - Second and third instars numerous on wild cherry in south central area; first instars noted on wild cherry in Gwinnett County. (Vanderford). NORTH CAROLINA - Tent making began chiefly on wild cherry trees in many localities in central area about April 6. (Wray). MISSOURI - Larvae building webs in wild cherry as far north as St. Marys, Ste. Genevieve County. Very little feeding. (Houser). ILLINOIS - Small nests common on wild cherries in many areas in southern half of State. (Ill. Ins. Rpt.). INDIANA - Small webs noticeable on trees in southern quarter of State. (Everly). MARYLAND - Small tents appearing in crotches of wild cherry trees in Anne Arundel and Worcester Counties. (U.Md., Ent. Dept.). DELAWARE - First larvae of season noted on wild cherry in Kent County. (Franklin). NEW JERSEY - Hatching expected soon. (Ins.-Dis. Newsltr.).

FOREST TENT CATERPILLAR (Malacosoma disstria) - TEXAS - Second, third and a few fourth instars damaging shade trees over wide areas of Collin and Tarrant Counties. (Turney). Light on oaks in Blanco and Comal Counties. (Texas Coop. Rpt., Massey).

CANKERWORMS - MICHIGAN - Males of Alsophila pometaria (fall cankerworm) and Paleacrita vernata (spring cankerworm) taken in considerable numbers at Livingston County blacklight trap on warm evenings since April 10. Some wingless females of A. pometaria observed on Ingham County trees. (Newman).

GYPSY MOTH (Porthetria dispar) - CONNECTICUT - Survival of eggs through winter has been high. Total infestation by species may be larger than in 1954, the previous record. Major defoliation expected in 1965. (Cooper, Turner; Apr. 8). See CEIR 15(16):343.

ELM LEAF BEETLE (Galerucella xanthomelaena) - OKLAHOMA - Adults active in Kiowa, Bryan, Payne and Haskell Counties; no egg laying noted. (Okla. Coop. Sur.).

EUROPEAN FRUIT LECANIUM (Lecanium corni) - OKLAHOMA - Eggs numerous under scales of females on elms in Stillwater area, Payne County; no crawlers noted. (Okla. Coop. Sur.).

JUNIPER WEBWORM (Dichomeris marginella) - OREGON - Heavy on Pfitzer juniper in Grants Pass. (McLaughlin).

A CARPENTERWORM - MICHIGAN - Larvae, possibly Prionoxystus sp., infested high percent of Fraxinus holotricha in Monroe County nursery; larvae tunnel through xylem and girdle main stems. Plants in unsaleable weakened condition. (Wallner).

A BLISTER BEETLE (Pomphopoea sp.) - NORTH CAROLINA - Damaged ornamental plum trees at Haywood County farm. (Holloway, Jones, Apr. 9).

A SEED BEETLE (Amblycerus robiniae) - COLORADO - Heavy in locust seeds at Fort Collins, Larimer County; 15 percent of seeds destroyed. (Schreiber, Thatcher).

COOLEY SPRUCE GALL APHID (Chermes cooleyi) - INDIANA - Infested ornamental blue spruce trees at La Porte County. (Schuder). OHIO - Infestations reported in McConnelville, Morgan County. Det. by W. K. Delaplane. (Scott).

APHIDS - CALIFORNIA - Macrosiphum rosae (rose aphid) and Myzus persicae (green peach aphid) medium on roses and tulips in Fresno, Fresno County. Myzus ornatus nymphs and adults heavy on Columnea flava in Golden Gate Park, San Francisco, San Francisco County. (Cal. Coop. Rpt.). ARIZONA - Macrosiphoniella sanborni (chrysanthemum aphid) very heavy and damaging ornamentals in Yuma, Maricopa and Pinal Counties. Macrosiphum rosae infestations increasing; damaging roses in Yuma and Maricopa Counties. (Ariz. Coop. Sur.). NEW MEXICO - Cinara tujafilina heavy on arborvitae in Bernalillo and Dona Ana Counties. Honeydew heavy, with sooty mold appearing on interior parts of plants. (N.M. Coop. Rpt.). UTAH - Nymphs of unspecified species present on rose bushes at Moab, Grand County. More numerous, including adults, at St. George, Washington County. (Knowlton). OKLAHOMA - Various species damaging tulips in Payne and Tillman Counties; roses in Kiowa County; violets and chrysanthemums in Tillman County; and portulaca, verbena and pyracantha in Payne County. (Okla. Coop. Sur.). MARYLAND - Aphis pomi (apple aphid) becoming active on crab apples, Macrosiphum rosae becoming active on rose and Macrosiphoniella sanborni becoming active on chrysanthemums. (U. Md., Ent. Dept.).

COCCIDS - CALIFORNIA - Eriococcus pittospori (a dactylopiid scale) ranged light to medium on coprosoma in San Francisco, San Francisco County. Aspidiotus cyanophylli (an armored scale) heavy on empress and barrel cactus nursery stock in Chula Vista, San Diego County. (Cal. Coop. Rpt.). NEW MEXICO - Gossyparia spuria (European elm scale) heavy on some Chinese elms in Albuquerque, Bernalillo County. (N. M. Coop. Rpt.). FLORIDA - Adults of Ischnaspis longirostris (black

thread scale) severely damaging blue latan palm (Latania loddigesii) at Dania, Broward County. (Shirah, Apr. 9). Diaspis boisduvalii scattered and severely damaging Cattleya spp. at Miami, Dade County. (Herrmann, Apr. 9). All stages of Asterolecanium pustulans severe and damaging Cassia fistula at Boca Raton, Palm Beach County. (Long, Apr. 7). Adults of Parlatoria proteus severely damaging leaves of vanda orchid and nymphs of Pseudococcus sp. severely damaging stem and flower of Phalaenopsis spp. at Miami. (Herrmann, Apr. 9). Aspidiotus lataniae and Chionaspis americana taken on hackberry (Celtis laevigata) at Gainesville, Alachua County. (Dekle, Mar. 30). Last 2 scales are new host records for Florida Division of Plant Industry. (Fla. Coop. Sur.). NORTH CAROLINA - Unaspis euonymi (euonymus scale) severe on euonymus in Alleghany County. (Cooper, Robertson). Florinia theae (tea scale) infested camellia in Wayne County. (Goforth, Robertson).

A THRIPS (Frankliniella sp.) - FLORIDA - Immatures severe on leaves of crinum-lily at Tampa, Hillsborough County. (Hale, Apr. 9).

A PSYLLID (Psylla americana) - CALIFORNIA - Nymphs and adults, probably this species, medium on willow nursery stock in Half Moon Bay, San Mateo County. (Cal. Coop. Rpt.).

NATIVE HOLLY LEAF MINER (Phytomyza ilicicola) - INDIANA - Damaged ornamental plantings in Evansville, Vanderburgh County. (Schuder). MARYLAND - Pupation in infested American hollies well advanced in College Park area, Prince Georges County. (U. Md., Ent. Dept.).

BIRCH LEAF MINER (Fenusa pusilla) - OREGON - Adults emerged; large numbers on developing leaves of birch in Multnomah County nurseries. (Larson, Goeden).

ERIOPHYID MITES - MICHIGAN - Nalepella tsugifoliae recently found attacking Canada hemlock in Wayne and Kalamazoo Counties. Plants in Kalamazoo County represented infested nursery stock imported from out of State. This is the first report of this eriophyid in the State. (Wallner). CALIFORNIA - Eriophyes heteromeles heavy on buds of Christmasberry (Photinia arbutifolia) at Fallbrook, San Diego County. Trisetacus quadrisetus medium on Juniperus procumbens nursery stock in Torrance, Los Angeles County. (Cal. Coop. Rpt.).

A SLUG (Arion ater) - UTAH - Found on roses at Heber City, Wasatch County, August 18, 1964; det. by J. P. E. Morrison. (Knowlton, Daniels). This is the first ARS record of this species in the State. (PPC).

INSECTS AFFECTING MAN AND ANIMALS

MOSQUITOES - MARYLAND - Pupae of Aedes grossbecki collected April 14 at Hillsmere Shores, Anne Arundel County. (U. Md., Ent. Dept.). NORTH CAROLINA - Aedes sollicitans (salt-marsh mosquito), Aedes canadensis, and Anopheles bradleyi adults and larvae light in Pamlico County. (Ashton). FLORIDA - Mansonia perturbans principal species biting man in 10-minute period at dusk in hammock area at Gainesville, Alachua County. (Esser, Apr. 12). Other species taken: Aedes atlanticus/tormentor, Psorophora ferox and Anopheles crucians. (Fla. Coop. Sur.). OKLAHOMA - Culiseta inornata larvae heavy, up to 200 per dip, in temporary pools in Payne and Noble Counties. Mating swarms noted in several areas. (Okla. Coop. Sur.).

COMMON CATTLE GRUB (Hypoderma lineatum) - OKLAHOMA - Few grubs still present in backs of cattle in Mayes County. Adults moderate to heavy on and around cattle in east central, southeast and south central areas. Light in Cleveland County. (Okla. Coop. Sur.).

FACE FLY (Musca autumnalis) - MARYLAND - Very light numbers noted at Beltsville, Prince Georges County, April 12. This is first report of season in State. (J. H. Fales).

HORN FLY (Haematobia irritans) - ALABAMA - Widespread, but light, on cattle in Bullock County. (Stone). OKLAHOMA - Light but active in Choctaw, McIntosh and Cotton Counties. (Okla. Coop. Sur.).

HORSE FLIES - OKLAHOMA - Tabanus mularis active and annoying cattle in Noble and McIntosh Counties. Unidentified species active in moderate numbers in Choctaw County. (Okla. Coop. Sur.).

SHEEP KED (Melophagus ovinus) - UTAH - Very numerous on sheep being sheared in western Box Elder County. (Knowlton, Finch).

MIDGES - ARKANSAS - Undetermined species heavy and annoying in Russellville-Dardanelle area, Pope County, near newly formed Arkansas River lake. (Ark. Ins. Sur.).

CATTLE LICE - OKLAHOMA - Several species heavy on cattle in McIntosh, Haskell, Latimer, Logan and Noble Counties. Moderate in Mayes and Murray Counties. (Okla. Coop. Sur.). UTAH - Very abundant on unsprayed herds in western Box Elder County. (Knowlton, Finch). Heavy on some beef cattle in south central Kane County. (Knowlton).

LONE STAR TICK (Amblyomma americanum) - OKLAHOMA - Light to moderate on cattle in Choctaw and Latimer Counties. (Okla. Coop. Sur.). MISSOURI - First report of season for Boone County, April 10. (Wingo). NORTH CAROLINA - Moderate and quite active at edge of marsh in Pamlico County. (Ashton).

AMERICAN DOG TICK (Dermacentor variabilis) - OKLAHOMA - Becoming common in central and eastern sections. Dogs in rural areas average up to 15 per animal. (Okla. Coop. Sur.). MISSOURI - First report of season in Boone County, April 9. (Wingo).

EAR TICK (Otobius megnini) - CALIFORNIA - Heavy on beef cattle in late March and early April in Auburn area, Placer County, and San Andreas area, Calaveras County. (E. Loomis).

WASPS - NEW JERSEY - Becoming a problem around homes. (Ins.-Dis. Newsltr., Apr. 15).

HOUSEHOLD AND STRUCTURAL INSECTS

TERMITES - MASSACHUSETTS - Swarms causing increasing number of inquiries from homeowners in western section. (Wave). CONNECTICUT - Reticulitermes flavipes (eastern subterranean termite) swarming statewide. (Savos). NEW YORK - Unspecified species frequent problems in Nassau County for past few weeks. (N.Y. Wkly. Rpt., Apr. 12). NEW JERSEY - Swarms present in many areas. (Ins.-Dis. Newsltr., Apr. 15). MARYLAND - Reticulitermes spp. swarms continue at high rate in central and southern sections of State. Number one structural pest. (U. Md., Ent. Dept.). NORTH CAROLINA - R. flavipes swarming in Wake and Guilford Counties. (Wray, Robertson, Apr. 9). TEXAS - Large swarms of unspecified species occurring in Brazos County. (Newton). OHIO - R. flavipes swarms reported in Cincinatti, Hamilton County, and in Wayne and Wyandot Counties. (Goldman, Delaplane, Courtright). MISSOURI - Reticulitermes sp. reported swarming in central section. (Daugherty, Apr. 9). UTAH - R. hesperus (western subterranean termite) infesting several homes in the Garland-Tremonton area of Box Elder County. (Knowlton, Finch). IDAHO - R. hesperus flight emerged at Homedale, Owyhee County, and home infested at Orofino, Clearwater County. (Portman). WASHINGTON - R. hesperus winged adults present near Endicott, Whitman County. (Luce, Brannon).

CERAMBYCID BEETLES - NORTH CAROLINA - Phymatodes varius emerged from oak firewood in home in Wake County. Det. by H. Moore. (Mount). ALABAMA - Hylotrupes bajalus (old-house borer) damaging church pew in Heflin, Cleburne County. (Farrington).

INDIANA - Megacyllene caryae (painted hickory borer) adults annoying, emerging from firewood in home in Greencastle, Putnam County. (Myers). CALIFORNIA - Neoclytus conjunctus larvae heavy in oak firewood in Vallejo, Solano County. (Cal. Coop. Rpt.).

CARPENTER ANTS (Camponotus spp.) - NEW YORK - Frequent problem for past few weeks in Nassau County. (N.Y. Wkly. Rpt., Apr. 12). MASSACHUSETTS - Number of specimens and inquiries from homeowners in western section increasing. (Wave). MARYLAND - C. pennsylvanicus (black carpenter ant) found in basement of home at Silver Spring, Montgomery County. (U. Md., Ent. Dept.). NORTH CAROLINA - C. pennsylvanicus present in home and yard in Robeson County. (Robertson). CALIFORNIA - C. maccooki heavy and entering residence in Coloma, El Dorado County. (Cal. Coop. Rpt.).

ANTS - CONNECTICUT - Many species swarming statewide. (Savos). NORTH CAROLINA - Acanthomyops interjectus (larger yellow ant) found in large numbers around home in Gaston County. (Wray, Apr. 9). OKLAHOMA - Tapinoma sessile (odorous house ant) swarming in house in Pawnee, Pawnee County. (Okla. Coop. Sur.). CALIFORNIA - Iridomyrmex humilis (Argentine ant) medium in residence in Glen Ellen, Sonoma County, and heavy in residence in San Francisco, San Francisco County. (Cal. Coop. Rpt.).

CLOVER MITE (Bryobia praetiosa) - MARYLAND - A nuisance in home at Beltsville, Prince Georges County. (U. Md., Ent. Dept.). DELAWARE - Numerous home infestations in many areas of State. (MacCreary). NEW JERSEY - Very prevalent in central counties. (Ins.-Dis. Newsltr., Apr. 15). OHIO - Found in home in Adams County. (Rose). IDAHO - Infestations reported from homes in Boise, Lewiston, Caldwell and Rosewell. (Inverso, Portman, Bechtolt, Waters).

BROWN STINK BUG (Euschistus servus) - SOUTH CAROLINA - Found in home in Abbeville County. (Nettles, et al., Apr. 13).

A CECIDOMYIID MIDGE (Lestremia sp.) - CALIFORNIA - Adults heavy and entering apartment house in San Carlos, San Mateo County. (Cal. Coop. Rpt.).

COCKROACHES - CONNECTICUT - Blattella germanica (German cockroach) infested home in Bridgeport, Fairfield County. (Savos). ALABAMA - B. germanica extremely heavy in home in Covington County. (Stephenson). OREGON - B. germanica and Periplaneta americana (American cockroach) heavy in home at Corvallis, Benton County. (Capizzi).

CAMEL CRICKETS - CONNECTICUT - Found in basement in West Hartford. (Savos).

PILLBUGS - OHIO - Active in Hardin, Pike and Seneca Counties. (Klingler, McFerren, Gamble, Delaplane).

CARPET BEETLES - NORTH DAKOTA - Continue to be reported by homeowners in various areas. (Frye). CONNECTICUT - Adults found at Enfield; larvae active at many locations in State. (Savos).

WEBBING CLOTHES MOTH (Tineola bisselliella) - COLORADO - Adults heavy in home in Denver. (Colo. Ins. Sur.).

RED-LEGGED HAM BEETLE (Necrobia rufipes) - NORTH CAROLINA - Infested cured meat in Wayne County home. (Goforth, Wright).

STORED-PRODUCT INSECTS

POTATO TUBERWORM (Gnorimoschema operculellum) - MICHIGAN - Adults and larvae heavy in potato warehouse in Detroit, Wayne County. (Hoffman, Wells).

SWEETPOTATO WEEVIL (Cylas formicarius elegantulus) - ALABAMA - Heavy locally in stored sweetpotatoes in Coppinville community, Coffee County. This is now the only known infestation in the county. (Stephenson).

KHAPRA BEETLE (Trogoderma granarium) - ARKANSAS - Surveys of 17 properties in 3 northeastern counties, April 5-9, were negative. (Ark. Ins. Sur.).

BENEFICIAL INSECTS

LADY BEETLES - NEW MEXICO - Abundant in areas where aphid infestations heavy. (N.M. Coop. Rpt.). TEXAS - Moderate numbers present in cereal and forage areas of Hunt County; however, apparently not controlling harmful insect species. (Turney). ARKANSAS - Numbers very light. (Ark. Ins. Sur.). OKLAHOMA - Hippodamia convergens (convergent lady beetle) larvae and adults found in many small grain and alfalfa fields in central and southwestern sections. (Okla. Coop. Sur.). ALABAMA - Large numbers of adults and larvae of H. convergens feeding on aphids in crimson clover in Henry County and other southern counties; numerous adults appearing on wheat and other crops in Mobile County. Lesser numbers of Coleomegilla maculata fuscilabris and Cycloneda sanguinea also present. (McQueen). ILLINOIS - Various species, mainly H. convergens, H. parenthesis and a spotted species, vary 0-20 per 100 sweeps in alfalfa and clover in southern quarter of State. (Ill. Ins. Rpt.).

A LEAF BEETLE (Agasicles sp.) - FLORIDA - Taken on alligator-weed (Althernanthera sp.) at Jacksonville, Duval County. (Denmark, Apr. 9). An introduced species released for biological control. (Fla. Coop. Sur.).

LACEWINGS - NEW MEXICO - Abundant in areas where heavy aphid infestations occur. (N.M. Coop. Rpt.). TEXAS - Moderate numbers present in Hunt County cereal and forage areas; apparently not controlling harmful insect species. (Turney). OKLAHOMA - Chrysopa spp. adults common in most alfalfa fields in central section. (Okla. Coop. Sur.). ILLINOIS - Adults of Chrysopa oculata (golden-eye lacewing) vary 0-7 per 100 sweeps in clover and alfalfa in southern quarter of State. (Ill. Ins. Rpt.).

DAMSEL BUGS - ALABAMA - Present in clover and vetch in southern part of State. (McQueen). ILLINOIS - Adults of Nabis sp. vary 0-13 per 100 sweeps in clover and alfalfa in southern quarter of State. (Ill. Ins. Rpt.).

A FLOWER BUG (Orius insidiosus) - ALABAMA - Numerous in clover and vetch in southern part of State. (McQueen). ARKANSAS - Numbers lighter than normal. (Ark. Ins. Sur.).

A BIG-EYED BUG (Geocoris punctipes) - ALABAMA - Numerous in clover and vetch in southern area. (McQueen).

FLOWER FLIES - NEW MEXICO - Abundant in areas where aphid infestations heavy. (N.M. Coop. Rpt.).

HONEY BEE (Apis mellifera) - ALABAMA - Large numbers pollinating and collecting nectar in clover and vetch in southern area. (McQueen).

PARASITIC WASPS - TEXAS - Moderate numbers present in cereal and forage areas of Hunt County; apparently not controlling harmful insect species. (Turney). OKLAHOMA - Several species noted in alfalfa in central section. Lysiphlebus testaceipes, an aphid parasite, active in Payne County. (Okla. Coop. Sur.).

A LYNX SPIDER (Oxyopes salticus) - ARKANSAS - Numbers in crimson clover unusually high. (Ark. Ins. Sur.).

MISCELLANEOUS INSECTS

IMPORTED FIRE ANT (Solenopsis saevissima richteri) - ALABAMA - Mounds continue numerous and widespread with increased activity in Washington, Henry, and other affected counties. (Hoomes). ARKANSAS - Delimiting surveys in Union and Ashley Counties and detection surveys in Lafayette, Miller and Pulaski Counties, March 29-April 2, were negative. Delimiting surveys in Ashley and Union Counties continued April 5-9, and revealed 3 additional infested areas in Union County. (Ark. Ins. Sur.).

GRASSHOPPERS - ALABAMA - First and second instars quite plentiful in fields and roadsides in Henry County. (McQueen). MINNESOTA - Checks of eggs in Wright County showed no development during past fall and spring. Eggs very numerous in fields surveyed. Some egg pods attacked by predators, primarily carabid beetles, but at low levels. (Minn. Ins. Rpt.).

FIELD CRICKETS - ALABAMA - Light in yards throughout Washington County. (Hoomes).

BERTHA ARMYWORM (Mamestra configurata) - WASHINGTON - Numerous large and small larvae, probably this species, migrating from fallow land near orchard northwest of Yakima, Yakima County. (Landis).

NOCTUID MOTHS - WISCONSIN - Flight occurred April 11; although none caught, it is suspected that most were Lithophane laticinerea, Eupsilia spp. and Orthosia spp. (Wis. Ins. Sur.).

A CUBAN MAY BEETLE (Phyllophaga bruneri) - FLORIDA - Adults appeared for first time in abundance this season about April 7; peak expected around May 1 at Miami, Dade County. (Wolfenbarger).

POWDER-POST BEETLES (Lyctus spp.) - UTAH - L. africanus infested bamboo chopsticks in Salt Lake City, Salt Lake County. Det. by T. J. Spilman. (Bell, Knowlton). NORTH DAKOTA - Adults of Lyctus sp. taken from bamboo window shade in home in Fargo area, Cass County. (Frye).

A BLISTER BEETLE (Anthocomus bipunctatus) - OHIO - Adults reported in Cincinnati, Hamilton County. Det. by W. K. Delaplane. (Tyree).

A FLOWER FLY (Ceriana signifera) - FLORIDA - Adults of this rarely collected species taken in Steiner trap in Manatee County April 8. (Chancey).

CORRECTIONS

CEIR 15(15):217 - DETECTION - AN ANT (Paratechna melanderi) should read (Paratrechna melanderi).

CEIR 15(16):339 - BLISTER BEETLES - TEXAS - Madison County should read Mason County.

CEIR 15(16):343 - GYPSY MOTH - CONNECTICUT - Date for credit should read April 8.

LIGHT TRAP COLLECTIONS

| Location | Temperature °F. | Precipitation (inches) | Type of trap | Arctos luteolus (black cutworm) | Carpocapsa pomonella (codling moth) | Chorlaerotiis auxillaris (army cutworm) | Estimote area (salt-marsh area) | Favosia diffusa (wheat head armyworm) | Feltia subterranea (granulate cutworm) | Heliothis virescens (tobacco budworm) | H. zea (bollworm, corn earworm, tomato fruitworm) | Lophocare comitatis (alfalfa webworm) | Lophocare similis (garden webworm) | Lophocare sticticalis (beet webworm) | Ostrinia nubilalis (European corn borer) | Peridroma saucia (variegated cutworm) | Prodenia ornithogalli (yellow-stripped armyworm) | Protoparce quinquefasciata (tomato hornworm) | Protoparce sexta (tomato hornworm) | Pseudodeltia unipuncta (armyworm) | Spodoptera eximia (beet armyworm) | Spodoptera frugiperda (fall armyworm) | Triphoplistia (cabbage looper) | Trops |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------------|----------------------|---------------------------------|-------------------------------------|-----------------------------------------|---------------------------------|---------------------------------------|----------------------------------------|---------------------------------------|---------------------------------------------------|---------------------------------------|------------------------------------|--------------------------------------|------------------------------------------|---------------------------------------|--------------------------------------------------|----------------------------------------------|------------------------------------|-----------------------------------|-----------------------------------|---------------------------------------|--------------------------------|-------|
| | | | | | | | | | | | | | | | | | | | | | | | | |
| ARKANSAS Hope 4/8-16 Kelso 4/8-16 | | | | | | | | | | | | | | | | | | | | | | | | |
| FLORIDA Gainesville 4/15 | | | BL | | | | | | | | | | | | | | | | | | | | | |
| GEORGIA Tifton 4/1-7 Tifton 4/8-14 | 44-74 63-84 | 1.2 0.0 | BL BL | | | | | | | | | | | | | | | | | | | | | |
| MISSISSIPPI Rolling Fork 4/9-15 Stoneville 4/9-15 Stoneville 4/9-15 Tunica 4/9-15 | 54-85 54-85 | 0.46 0.46 | BL BL MV BL | | | | | | | | | | | | | | | | | | | | | |
| MISSOURI Portageville 4/10-16 | | | | | | | | | | | | | | | | | | | | | | | | |
| SOUTH CAROLINA Clemson 4/1-9 | | | BL | | | | | | | | | | | | | | | | | | | | | |
| TENNESSEE (Counties) Madison 4/6-12 Maury 4/6-12 Robertson 4/6-12 Cumberland 4/6-12 Greene 4/6-12 Blount 4/6-12 Johnson 4/6-12 | | | | | | | | | | | | | | | | | | | | | | | | |
| TEXAS Brownsville 4/8-14 Waco 4/10-16 | 70-93 | Trace | 5 BL BL | | | | | | | | | | | | | | | | | | | | | |

* BL = blacklight; I = incandescant; MV = mercury vapor; 0 = other
 ** alf. = alfalfa; beet = garden beet and/or sugar beet; cole = cole crops (crucifers); cott. = cotton; FC = field corn; grain = small grains; leg. = legumes (unspecified); lettuce = lettuce; peanut = peanut; pepp. = pepper; pot. = potatoes; SC = sweet corn; sol. = solanaceous plants (unspecified); soy. = soybean; TC = truck crops (unspecified or mixed); tob. = tobacco; tom. = tomato.

HAWAIIAN INSECT NOTES

The following notes on Hawaii insect conditions were presented at the 711th meeting of the Hawaiian Entomological Society held in March 1965.

A WEEVIL (Orthorhinus klugi Boheman) was found on live terminal branches of Acacia koaia at Kawaihae Uka, Kohala Mountains, in January and February 1965. According to Dr. Elwood Zimmerman, specialist in this group, who examined specimens, this weevil is an Australian pest species new to Hawaii. In Australia, weevils of this genus are known to attack Acacia spp., grapevines, citrus and many other orchard and forest trees. Through March 1965, larvae of this weevil have not been found on A. koaia and there have been no signs of the weevil in other native trees and shrubs in this area of Hawaii. (C. J. Davis).

A TORTRICID MOTH (Enarmonia walsinghami (Butler)) caused considerable mortality to terminal twigs of the rare koa-like tree Acacia koaia at Kawaihae Uka, Kohala Mountains. Active work by this native twig borer was observed on young trees from 4 to 5 feet tall. On older trees, 50-75 percent of terminal growth was killed. This is an example of a native insect that occasionally causes considerable damage to its native host. The species has been recorded from Acacia koa and A. koaia. (C. J. Davis.).

The eighteenth host of a twig-boring BARK BEETLE (Xylosandrus compactus (Eichhoff)) was recorded in a recent survey by W. C. Mitchell and C. J. Davis. The new host, Prosopis sp., commonly known as kiawe or algaroba, was recorded near the old Coast Geodetic Station at Barbers Point, Oahu. In addition to X. compactus, two other scolytids, Stephanoderes farinosa and Hypothenemus sp., were also present. (C. J. Davis).

A LEAF-MINING WEEVIL (Hypurus bertrandi (Perris)) was found damaging leaves of Batis maritima (pickleweed) on March 3, 1965, at Barbers Point, Oahu, by C. J. Davis and W. C. Mitchell. This is a new host record for this species which had previously been recorded only from portulaca on the major islands of the Hawaiian group. (C. J. Davis).

AN ENSIGN SCALE (Nipponorthezia guadalcanalia Morrison) - Approximately twelve adult specimens were collected from leaf litter collected at an altitude of approximately 1,500 feet on Mt. Tantalus, Round Top, near Honolulu. The ortheziids were extracted in a Berlese funnel. This is a new insect record for the Hawaiian Islands, and the second new ortheziid to be discovered here in the past two years. This discovery brings the known ortheziid fauna of Hawaii to 3 species. N. guadalcanalia is known from Guadalcanal and the Micronesian Islands of Palau, Yap, Truk and Kusiae. All Micronesian specimens seen by Dr. J. W. Beardsley have been taken in Berlese funnel extractions from leaf litter, etc., often in the company of such hypogaecic mealybugs as Geococcus coffeae Green. This suggests that N. guadalcanalia is probably a root-infesting species. Det. by J. W. Beardsley. (Beardsley).

AN ANT (Quadristruma emmae (Emery) (= Epitritus wheeleri Donisthorpe)) - Specimens of this tiny, hypogaecic ant with elongated forceps-like mandibles, were exhibited. These specimens were taken from Berlese funnel extractions from the same leaf litter which yielded the aforementioned new ortheziid. Det. by J. W. Beardsley. (Beardsley).

A SAP BEETLE (Carpophilus oculatus Murray) - Two adults of this nitidulid beetle were collected from unidentified seeds taken at various locations on Oahu, April 2, 1964. Det. by W. A. Connell. This constitutes a new insect record for the State. (E. S. Shiroma).

Several specimens of a LEAFHOPPER (Protalebrella brasiliensis (Baker)) were collected by sweeping weeds in the Hickam-Fort Kam area on Oahu on October 20, 1964, by D. Girard, F. Kato and E. Shiroma. This cicadellid was first reported by Dr. C. R. Joyce when a single specimen was collected in a light trap at the Public Health Service Quarantine Station in September 1960, and is now apparently widespread. More specimens were subsequently collected in the same area in July 1961 and January 1962. The last report of this leafhopper was in July 1962 when Mr. J. Kim reported damage to Lippia sp. in the Makiki area. Det. by J. P. Kramer. (E. S. Shiroma).

A number of specimens of a BILLBUG (Sphenophorus venatus vestitus (Chittenden)) were collected in grass at the Mililani Memorial Garden, Waipahu, Oahu, that had been killed by the fungus Beauveria bassiana (Bals.) Vuill. This fungus has many hosts and in favorable environments can be highly pathogenic. The fungus was determined by I. M. Hall. (W. C. Mitchell).

ADDITIONAL NOTES

PENNSYLVANIA - ALFALFA WEEVIL (Hypera postica) hatched on alfalfa in southeast section. GREEN PEACH APHID (Myzus persicae) and APPLE APHID (Aphis pomi) hatched on apple trees in southeast and south central sections. (Menusan). TERRAPIN SCALE (Lecanium nigrofasciatum) scattered generously on maples in Westmoreland and Ligonier, Westmoreland County, April 2. Requests for information on TERMITES beginning later than in 1964; caused more than usual concern in slab floor houses. (Udine).

GEORGIA - PECAN NUT CASEBEARER (Acrobasis caryae) very heavy on isolated pecans in Wilcox County; 4-5 larvae per terminal of new growth. (Buttram). Feeding by CIGAR CASEBEARER (Coleophora serratella) moderate on pecan in Tift County. (Trench). FLATHEADED APPLE TREE BORER (Chrysobothris femorata) killed several young apple trees in Upson County. (Spivey). HORN FLY (Haematobia irritans) averaged 51 per animal on cattle in Putnam County and 4-5 per animal in Butts County. Unspecified CATTLE LICE averaged 3 per square inch on 110 cattle in Putnam County. (Roberts).

Change in the Scientific Name of a Springtail

This is to call to attention that the scientific name of Entomobrya unostriigata Stach is not now valid for records for the United States, and that the name should be Entomobrya knaba (Wray). This has been under study for some time. Dr. Stach of Poland named a species from Spain as Entomobrya unostriigata some years ago, and in 1950, Dr. D. L. Wray named a very similar species from Utah as Drepanura knaba. Since that time, it has been proven that knaba is an Entomobrya, but that the species is different from the European unostriigata. Therefore, the United States species should be E. knaba. Dr. Stach, in his recent book on European Entomobryidae recognizes E. knaba as a separate species from his E. unostriigata, separated by a much different genital plate and other morphological characters. Upon his publications and correspondence from him, Dr. Wray is now using Entomobrya knaba (Wray) as the valid name for the United States species in his determinations.

This information was abstracted from a letter to Plant Pest Control from Dr. Wray.

INTERCEPTIONS OF SPECIAL INTEREST AT U.S. PORTS OF ENTRY

Some important interceptions that were reported by the Plant Quarantine Division, ARS, USDA, during January 1965, follow. These reports are based on identifications received from Federal taxonomists at the U.S. National Museum during the month, and include any of special interest from recent months that were not previously reported.

A TEPHRITID FLY (Acanthiophilus sp., near helianthi (Rossi)) (a pest of safflower in Turkey) once in mail at the D.C. Plant Inspection Station.

GIANT AFRICAN SNAIL (Achatina fulica Bowdich) 3 times in baggage at Honolulu, Hawaii.

LEEK MOTH (Acrolepia assectella (Zell.)) 4 times in ships' stores; Detroit (2), Michigan; Jacksonville (1), Florida; New York (1), New York.

CITRUS BLACKFLY (Aleurocanthus woglumi Ashby) 2 times in baggage at Eagle Pass, Texas.

MEXICAN FRUIT FLY (Anastrepha ludens (Loew)) 54 times; at Calexico (3) and San Ysidro (3), California; Corpus Christi (1), Dallas (2), Eagle Pass (3), El Paso (11), Houston (2), Laredo (23) and Roma (1), Texas; John F. Kennedy International Airport (2), New York; Miami (1) and Tampa (1), Florida; New Orleans (1), Louisiana.

A SEED BEETLE (Bruchus signaticornis Gyll.) (pest of lentils in central Europe and Mediterranean areas) 3 times; twice in baggage at New York, New York, and once in stores at Boston, Massachusetts.

A SEED BEETLE (Callosobruchus analis (F.)) (pest of legumes in southeast Asia) 2 times in stores; Corpus Christi (1), Texas; Seattle (1), Washington.

PEACH FRUIT MOTH (Carposina niponensis Wlsm.) 7 times at Honolulu, Hawaii.

MEDITERRANEAN FRUIT FLY (Ceratitis capitata (Wied.)) 49 times; at Baltimore (1), Maryland; Boston (5), Massachusetts; Chicago (3), Illinois; Cleveland (1), Ohio; Honolulu (5), and Hilo (1), Hawaii; John F. Kennedy International Airport (12) and New York (11), New York; Mobile (1), Alabama; New Orleans (1), Louisiana; Tampa (1), Florida; San Juan (6), Puerto Rico.

A TEPHRITID FLY (Ceratitis sp., possibly colae (Silv.)) once in cola nut pods in air baggage at Boston, Massachusetts.

ASIATIC RICE BORER (Chilo suppressalis (Walker)) once in air baggage at Travis AFB, California.

AN AVOCADO SEED WEEVIL (Conotrachelus aguacatae (Barber)) 4 times in avocado in baggage at Brownsville, Texas.

MELON FLY (Dacus cucurbitae Coq.) once in stores at San Diego, California.

ORIENTAL FRUIT FLY (Dacus dorsalis Hendel) 6 times in baggage at Honolulu, Hawaii.

A PYRAUSTID MOTH (Evergestis forficalis (L.)) (a pest of crucifers) 9 times in stores; at Baltimore (1), Maryland; New York (2), New York; San Juan (6), Puerto Rico.

BEAN BUTTERFLY (Lampides boeticus (L.)) once in sesbania flowers in air baggage at Honolulu, Hawaii.

CABBAGE MOTH (Mamestra brassicae (L.)) 22 times in ships' stores; at Boston (1), Massachusetts; Corpus Christi (1), Texas; Duluth (1), Minnesota; one time in Hawaii; Mobile (2), Alabama; Norfolk-Newport News (1), Virginia; New York (8), New York; Port Everglades (1) and Tampa (1), Florida; San Juan (5), Puerto Rico.

AN OLETHREUTID MOTH (Matsumuraeses phaseoli (Mats.)) 4 times in ships' stores; twice each at Portland Oregon, and Seattle, Washington.

CEREAL LEAF BEETLE (Oulema melanopa (L.)) once in air baggage in soil with plants at Chicago, Illinois.

LARGE WHITE BUTTERFLY (Pieris brassicae (L.)) (pest of crucifers) once in ships' stores at Philadelphia, Pennsylvania.

A CECIDOMYIID SEED MIDGE (Plemeliella abietina Seitner) twice in seed of Picea sp. in mail at Hoboken, New Jersey.

EUROPEAN CHERRY FRUIT FLY (Rhagoletis cerasi (L.)) 3 times, twice in stores and once in mail; at Boston (2), Massachusetts; Chicago (1), Illinois.

A BARK BEETLE (Scolytus scolytus (F.)) once in elm logs in cargo at Port Everglades, Florida.

A NOCTUID MOTH (Sesamia nonagrioides (Lef.)) (a small grain pest) once in seed corn in air baggage at Boston, Massachusetts.

AN AVOCADO SEED MOTH (Stenoma catenifer (Wlsm.)) 23 times; at Brownsville (7), Houston (2), and Laredo (6), Texas; Miami (4), Florida; New Orleans (1), Louisiana; San Pedro (2) and San Ysidro (1), California; San Juan (1), Puerto Rico.

A THRIPS (Taeniothrips distalis Karney, or near a species of the sjostedti group) (pest of legumes in the Orient) once in Seattle, Washington, on gladiolus, dahlia and chrysanthemum cut flowers in baggage.

A TEPHRITID FLY (Terellia sp.) live adults twice with safflower seed in air mail at the D.C. Plant Inspection Station.

WHITE GARDEN SNAIL (Theba pisana (Müller)) 23 times; at Baltimore (1), Maryland; Boston (2), Massachusetts; Cleveland (1), Ohio; Dover (4), Delaware; one time in Hawaii; John F. Kennedy International Airport (5) and New York (7), New York; New Orleans (2), Louisiana.

KHAPRA BEETLE (Trogoderma granarium Everts) 65 times; at Baltimore (7), Maryland; Chicago (1), Illinois; Charleston (2), South Carolina; Corpus Christi (1), Texas; Detroit (2), Michigan; Houston (2), Texas; New Orleans (4), Louisiana; New York (20), New York; Philadelphia (16), Pennsylvania; Portland (2), Oregon; San Francisco (1) and San Pedro (2), California; San Juan (2), Puerto Rico; Savannah (1), Georgia; Tampa (1), Florida; Toledo (1), Ohio.

OAT CYST NEMATODE (Heterodera avenae) 5 times; McGuire AFB (2), New Jersey; John F. Kennedy International Airport (1), New York; Toledo (1), Ohio; New Orleans (1), Louisiana.

GOLDEN NEMATODE (Heterodera rostochiensis) 10 times; at Boston (4), Massachusetts; McGuire AFB (3), New Jersey; Baltimore (1), Maryland; Jacksonville (1), Florida; San Francisco (1), California.

SUMMARY OF INSECT CONDITIONS IN THE UNITED STATES - 1964
(continued from page 372)

STORED-PRODUCT INSECTS

After a period of several months in which there were no known infested properties, KHAPRA BEETLE (Trogoderma granarium) again appeared in the United States. During 1964 eight infestations were found in Arizona. These included such diversified operations as a hog farm, a chicken ranch, a State experiment farm and a feed mill. Prior to 1964, the last infestations were found in Arizona in July, 1962; in California in January, 1962; in New Mexico in May, 1959; and in Texas in April, 1960. The Plant Quarantine Division of the U. S. Department of Agriculture continued to intercept infested ships on numerous occasions.

Light infestations of other species of Trogoderma were general in CALIFORNIA and were usually associated with mill and storage debris. Light to heavy infestations of Trogoderma sp. occurred in many farm and commercial properties in NEW MEXICO, with one abnormally heavy infestation at Las Cruces, Dona Ana County. "Trogoboard" traps were used as part of the negative khapra beetle survey in WASHINGTON. In NEVADA, Attagenus alfieri was collected in a feed store in Clark County for a new State record, and Trogoderma simplex was light to medium in trap nests of Megachile rotundata (a leafcutting bee) in southern Washoe County. FURNITURE CARPET BEETLE (Anthrenus flavipes) damaged various stored products in TEXAS. Small numbers of BLACK CARPET BEETLE (Attagenus piceus) were common around stored agricultural commodities throughout NORTH DAKOTA. Anthrenus sp. was reported in VIRGINIA during 1964.

CIGARETTE BEETLE (Lasioderma serricorne) was commonly reported as a pest of various cereals and spices in all sections of MARYLAND. This species was also reported in VIRGINIA. Cigarette beetle and DRUGSTORE BEETLE (Stegobium paniceum) were of economic importance in ALABAMA and were found on a number of stored products in GEORGIA. Cigarette beetle damaged various stored products in TEXAS.

LESSER GRAIN BORER (Rhyzopertha dominica) was a problem in stored grains in NORTH CAROLINA, and was a pest of economic importance in ALABAMA. A BOSTRICHID BEETLE (Prostephanus truncatus) and BEAN WEEVIL (Acanthoscelides obtectus) damaged various stored products in TEXAS. Bean weevil occurred in stored beans and in pantry packages in CALIFORNIA. Bean weevil and PEA WEEVIL (Bruchus pisorum) often attacked peas and beans in storage in Alabama. A COLYDIID BEETLE (Murmidius ovalis) was found in stored shelled corn in Johnson County, NEBRASKA, for the first known record in the State.

SQUARE-NECKED GRAIN BEETLE (Cathartus quadricollis), FLAT GRAIN BEETLE (Cryptolestes pusillus), and SAW-TOOTHED GRAIN BEETLE (Oryzaephilus surinamensis) each contributed minor amounts to the severe damage to stored corn in LOUISIANA. These three species were also pests of economic importance in ALABAMA. Adults of saw-toothed grain beetle were reported to be quite abundant and a nuisance in certain parts of VIRGINIA. FOREIGN GRAIN BEETLE (Ahasverus advena) was also reported in Virginia. Saw-toothed grain beetle infested a wide variety of stored products in MARYLAND, including farm-stored barley at two locations in the southern part of the State. Stored grain pests, mostly saw-toothed grain beetle, increased in CONNECTICUT during 1964. In September, stored wheat, sorghum, oats and barley in KANSAS were surveyed for storage pests. These surveys indicated saw-toothed grain beetle was the major pest and RUSTY GRAIN BEETLE (Cryptolestes ferrugineus) was next in importance. Saw-toothed grain beetle was a stored grain pest in WYOMING and a major pest in WASHINGTON in 1964. Saw-toothed grain beetle was occasionally a storage pest of consequence in CALIFORNIA, where very light populations occur infrequently in feed lots and grain storage debris. Rusty grain beetle was a pest of stored figs in California. Occasionally heavy infestations of saw-toothed grain beetle were found in stored grain and feed in the southern counties of NEW MEXICO. Flat grain beetle and saw-toothed grain beetle damaged various stored products in TEXAS.

PECAN WEEVIL (Curculio caryae) was reported in VIRGINIA during the year. RICE WEEVIL (Sitophilus oryzae) was the most important insect problem in stored grain in NORTH CAROLINA and stored corn in ALABAMA and LOUISIANA. Rice weevil and GRANARY WEEVIL (Sitophilus granarius) damaged various stored products in TEXAS, and were pests in all stored grains in KANSAS. Rice weevil was collected in a feed store in Clark County, NEVADA, for a new State record. Granary weevil was a major pest in commercial grain storage in WASHINGTON.

A HAIRY FUNGUS BEETLE (Typhaea sterocorea), CORN SAP BEETLE (Carpophilus dimidiatus) and CADELLE (Tenebroides mauritanicus) were pests of economic importance in ALABAMA. Cadelle was reported in VIRGINIA and heavily infested farm-stored barley at Mitchellville, Prince Georges County, MARYLAND. Cadelle was a pest of all stored grains in KANSAS. BROWN SPIDER BEETLE (Ptinus clavipes) and cadelle damaged various stored products in TEXAS. Brown spider beetle and Ptinus verticalis were pests in stored bone meal and safflower seed in CALIFORNIA. Corn sap beetle was found infesting cotton seed and DUSKY SAP BEETLE (Carpophilus lugubris) was a pest of stored figs in California during 1964. WHITE-MARKED SPIDER BEETLE (Ptinus fur) was found in a feed store in Douglas County, NEVADA. This was a new county record, and the second record for the State. In August, an infestation of CONFUSED FLOUR BEETLE (Tribolium confusum) in a boxcar of grain at Woonsocket, Providence County, RHODE ISLAND, caused the purchaser to reject the shipment. Infestations of DARK MEALWORM (Tenebrio obscurus) were reported in VIRGINIA during 1964. RED FLOUR BEETLE (Tribolium castaneum), confused flour beetle, YELLOW MEALWORM (Tenebrio molitor), Gnathocerus maxillosus, and BROAD-HORNED FLOUR BEETLE (Gnathocerus cornutus) were pests of economic importance in ALABAMA. Red flour beetle contributed a minor amount of the serious damage to stored corn in LOUISIANA. Confused flour beetle, red flour beetle, and Tenebrio sp. damaged various stored products in TEXAS. Confused flour beetle was a pest in all stored grains in KANSAS. Red flour beetle was a stored grain pest in WYOMING and WASHINGTON and occasionally in CALIFORNIA during the year. In NEW MEXICO, yellow mealworm was commonly found in barns and feed storage areas and heavy infestations of red flour beetle were occasionally found in stored grain and feed in the southern counties.

Heavy numbers of INDIAN-MEAL MOTH (Plodia interpunctella) were noted in bags of soybeans at Fairland, Montgomery County, MARYLAND. This pest was also reported in VIRGINIA. ANGOUMOIS GRAIN MOTH (Sitotroga cerealella) was heavy in stored corn and small grains on several farms in the southern section of Maryland. AMERICAN PLUM BORER (Euzophera semifuneralis) was found tunnelling in stored sweetpotatoes in Edgecombe County, NORTH CAROLINA, in October. The infestation was very light, but was an unusual occurrence. ALMOND MOTH (Cadra cautella) attacked stored peanuts in ALABAMA. Angoumois grain moth and Indian-meal moth were a problem in stored grains in North Carolina, pests of economic importance in Alabama, and two of the most important stored corn pests in LOUISIANA. Almond moth, Indian-meal moth, and angoumois grain moth damaged various stored products in TEXAS. Indian-meal moth was the most common pest of stored grain and feed in NEW MEXICO. NAVEL ORANGEWORM (Paramyelois transitella) was a storage pest of almond and walnut meats and some dried fruits in CALIFORNIA. Indian-meal moth was quite frequently reported from pantry storage, and occasionally in dried fruit, in California. MEAL MOTH (Pyralis farinalis) was a stored grain pest in WYOMING. Angoumois grain moth was the most noted insect pest of stored corn in KANSAS. Indian-meal moth was a pest in all stored grains in Kansas and was observed in grain storage facilities in various areas of NORTH DAKOTA.

In ARKANSAS, widespread effective control measures kept pests under control and no significant changes in infestations occurred. No heavy infestations were reported in NEW JERSEY, where Indian-meal moth, saw-toothed grain beetle, cigarette beetle, drugstore beetle, and mealworms were the primary stored product pests. MUSHROOM MITE (Tyrophagus putrescentiae) occurred in grain storage and stored beans locally in CALIFORNIA.

BENEFICIAL INSECTS

CONVERGENT LADY BEETLE (Hippodamia convergens) and TRANSVERSE LADY BEETLE (Coccinella transversoguttata) were abundant on alfalfa in Walla Walla County, WASHINGTON, by late April; the first pupae appeared by mid-May in Benton County. In CALIFORNIA, LADY BEETLES (Hippodamia spp.) were particularly plentiful in croplands until summer; Cryptolaemus montrouzieri was the primary predator on Pseudococcus citri (citrus mealybug). VEDALIA (Rodolia cardinalis) occurred in sufficient numbers and distribution in California to reduce Icerya purchasi (cottony-cushion scale) to below economic levels. Above normal populations of lady beetles in Lyon County alfalfa fields in NEVADA assisted in suppressing a severe Acyrtosiphon pisum (pea aphid) outbreak in July. Several species of lady beetles were abundant in WYOMING on crops throughout the State. Convergent lady beetle and TWO-SPOTTED LADY BEETLE (Adalia bipunctata) were abundant in most areas of NORTH DAKOTA. Hippodamia spp. populations remained at a constant level in NEBRASKA; locally, numbers increased following aphid buildups. Lady beetles were present in normal numbers in KANSAS in 1964.

Lady beetles aided substantially in keeping populations of destructive pests in NEW MEXICO under control. Populations were high in alfalfa, small grain and cotton fields during spring and early summer in that State. Several species of lady beetles were found attacking economic pests in TEXAS. Convergent lady beetle was commonly found in OKLAHOMA. Various species of lady beetles were important predators of aphids and larvae and eggs of Lepidoptera in ARKANSAS. Activity was first noted in northwest Arkansas on March 28 and reproduction was well underway in that area on April 17. Adults and larvae of all species of lady beetles were noted in the weekly survey for predators in cotton fields in Arkansas. Convergent lady beetle was the most important predator in cotton fields of ALABAMA; however, Coccinella novemnotata and Coleomegilla maculata fuscilabris were also predators in cotton fields.

A few adults of Hippodamia parenthesis, convergent lady beetle, Coccinella novemnotata and Coleomegilla maculata fuscilabris were active in alfalfa fields in southern ILLINOIS in early April; the first larvae were observed in that area on April 28. Lady beetles were common in clover and alfalfa fields in Illinois and they fed heavily on Rhopalosiphum maidis (corn leaf aphid). Larvae of two-spotted lady beetle preyed upon Phenacoccus dearnessi (a mealybug) in WISCONSIN.

Two-spotted lady beetle and Coleomegilla maculata were reported locally in VIRGINIA; convergent lady beetle was reported also. Several species of lady beetles, especially convergent lady beetle, were helpful in reducing aphid populations on alfalfa, corn and tobacco throughout the season in MARYLAND. During late fall and early winter homeowners in NEW HAMPSHIRE submitted lady beetles which indicated that these beneficial insects were more abundant than normal. This abundance was probably the result of high aphid populations earlier in the season. Transverse lady beetle and THIRTEEN-SPOTTED LADY BEETLE (Hippodamia tredecimpunctata tibialis) were very active in potato fields of MAINE in late June and early July. Thirteen-spotted lady beetle was the predominant species.

A GROUND BEETLE (Calosoma sycophanta), a predator of Porthetria dispar (gypsy moth), was released experimentally in the Bellows Falls area of VERMONT. Predation by C. scrutator helped control Heterocampa guttivitta (saddled prominent) larvae in WISCONSIN. H. guttivitta caused severe to complete defoliation of more than 200 acres of timber on Chambers Island in Door County. GROUND BEETLES were found attacking economic pests in TEXAS.

A PUNCTURE-VINE SEED WEEVIL (Microlarinus lareynii) and a PUNCTURE-VINE STEM WEEVIL (M. lypriformis) heavily infested puncture-vine plants in Clark County and southern Nye County, NEVADA. These beetles were successfully established in one of the 2 release sites in Churchill County, but apparently were unsuccessful in overwintering in Lincoln and Mineral Counties. A GORSE WEEVIL (Apion ulicis) was released near Doe Bay, San Juan County, WASHINGTON, for control of gorse

(Ulex europaeus). THREE-LINED POTATO BEETLE (Lema trilineata) adults were very destructive to Jimson-weed in cornfields at several locations in Queen Annes County, MARYLAND. BLISTER BEETLES were common around grasshopper eggs over the State of NORTH DAKOTA.

A EULOPHID (Tetrastichus julis) was introduced into INDIANA as a biological control for Oulema melanopa (cereal leaf beetle). A total of 154 adults was released in severely infested oatfields in St. Joseph County during May and early June. These gregarious larval parasites originated in Italy and were collected by USDA and Purdue University entomologists during April and early May. Evaluation of whether or not this species is established in Indiana will be undertaken in the spring of 1965. Tetrastichus incertus was released in fields lightly infested with Hypera postica (alfalfa weevil) in ILLINOIS; 1,900 specimens were released in Hardin, Massac, Johnson and Pulaski Counties between May 25 and June 4. One of the principal parasites of Ostrinia nubilalis (European corn borer) in SOUTH DAKOTA was the eulophid, Sympiesis viridula, which was present throughout the corn-growing regions of the State. Ten individuals of Phycspira varicornis were reared from several thousand overwintering nymphs of Gossyparia spuria (European elm scale) which were collected on elm branches in KANSAS. Rearing was done at the USDA Insect Identification and Parasite Introduction Station at Moorestown, New Jersey.

BRACONIDS (Opius spp.) were extremely scarce during 1964 in NEW YORK on Rhagoletis pomonella (apple maggot); only 16 females and 10 males were collected in apple maggot emergence cages (rate of parasitism was only 0.11 percent). In WISCONSIN, Trioxys utilis, a parasite of Therioaphis maculata (spotted alfalfa aphid), was relatively common in early May and again in late August. Apanteles militaris was instrumental in controlling localized outbreaks of Pseudaletia unipuncta (armyworm). In one instance, about 80 percent of the P. unipuncta larvae were parasitized in Wisconsin. Macrocentrus gifuensis, a parasite of Ostrinia nubilalis, was present throughout the corn-growing region of SOUTH DAKOTA. Populations of Aphidius spp. adults ranged 7-32 per sweep in seed alfalfa in Walla Walla County, WASHINGTON, by June. Unspecified braconids attacked economic pests in TEXAS during the season.

AN ICHNEUMON (Netelia leo arizonensis) appeared in heavy flights locally in the Antelope Valley of Los Angeles County, CALIFORNIA, in May. Horogenes punctorius, a parasite of Ostrinia nubilalis, was present throughout SOUTH DAKOTA in the corn-growing regions. Ophion spp. were caught in large numbers in blacklight traps in WISCONSIN in mid-May; these ichneumons are associated with Phyllophaga spp. (white grubs) and cutworms. Tersilochus sp. has shown promise in laboratory tests as a parasite of Oulema melanopa in INDIANA. This ichneumon is a single-generation species with obligatory diapause.

A MINUTE EGG PARASITE (Trichogramma minutum) was very helpful throughout ALABAMA in controlling Heliothis zea (bollworm) and H. virescens (tobacco budworm). Other PARASITIC WASPS were noted in cotton fields of Alabama; these also aided in keeping a balance of pests in other crops and plant growth, especially in corn, crimson clover and in gardens. Parasitic wasps were above normal in alfalfa fields of Lyon County, NEVADA, where they assisted in suppressing a severe outbreak of Acyrtosiphon pisum in July. An ENCYRTID (Ooencyrtus kuwanai), a parasite of Nygmia phaeorrhoea (brown-tail moth), Porthetria dispar (gypsy moth), Stilpnotia salicis (satin moth) and Apanteles melanoscelus (a braconid), was observed infesting P. dispar egg masses in VERMONT. A EUPELMID (Eupelmus popa), a parasite of Contarina sorghicola (sorghum midge), was reported in grain sorghum heads in Uvalde County, TEXAS. PARASITIC HYMENOPTERONS were very active in holding down aphid numbers in ARKANSAS. The earliest record in northwestern Arkansas was March 6; activity continued through the warm weather into early November.

A DAMSEL BUG (Nabis ferus) was common in alfalfa fields in the Kingston area of Washington County, RHODE ISLAND. Nabis spp. were again common in most alfalfa, clover and tobacco fields of MARYLAND during the summer months. Various species

of damsel bugs were predators in cotton fields of ALABAMA. Nabis sp. was common in legume and corn fields throughout the season in ILLINOIS. In NEBRASKA, Nabis sp. fluctuated from light to moderate throughout the season, depending upon local aphid buildups. Damsel bugs were present in normal numbers in KANSAS. Nabis spp. were commonly found in OKLAHOMA. Nabis spp. were active as late as November in ARKANSAS and attacked economic pests in TEXAS. Damsel bug populations were high in alfalfa, small grain and cotton fields of NEW MEXICO during spring and early summer. These bugs aided substantially in keeping populations of destructive pests under control in New Mexico. N. ferus was plentiful in cotton fields of CALIFORNIA. Larger populations of Nabis spp. were noted in 1964 in WYOMING than had been recorded in 1963. The highest numbers were found in alfalfa and sugar beet fields in July and August.

BIG-EYED BUGS (Geocoris spp.) were plentiful in CALIFORNIA cotton fields. Populations were abundant throughout WYOMING in alfalfa fields; populations were about the same as in 1963. The highest populations were found in Park, Big Horn, Sheridan, Johnson and Goshen Counties of Wyoming. In ARKANSAS, G. punctipes was the most important of the various species of predators on a wide variety of crops. The earliest activity was noted in the northwestern section of Arkansas on March 6; activity continued until late October. G. punctipes was a predator in cotton in ALABAMA.

A FLOWER BUG (Orius tristicolor) was plentiful in cotton fields of CALIFORNIA. Orius spp. were particularly abundant in alfalfa and corn fields in WYOMING where populations were generally larger than in 1963. Orius sp. adults were present in light, scattered numbers on legumes in NEBRASKA. O. insidiosus was found in normal numbers in KANSAS and commonly found in OKLAHOMA. Populations of MINUTE PIRATE BUGS were high in alfalfa, small grain and cotton fields in NEW MEXICO during the spring and early summer; these aided substantially in keeping populations of destructive pests under control. O. insidiosus was found attacking economic pests in TEXAS. O. insidiosus was the number-one predator of Heliothis zea (bollworm) eggs in ARKANSAS. Seasonal activity began a little later than some other predators. The first record in northern Arkansas was April 17 with activity continuing into early November. Orius spp. were important predators in cotton fields of ALABAMA, and were well distributed in soybean fields on the lower Eastern Shore of MARYLAND during late summer.

WHEEL BUG (Arilus cristatus) was found in TEXAS where it attacked economic pests. Populations of ASSASSIN BUGS were high in alfalfa, small grain and cotton fields of NEW MEXICO; they aided substantially in keeping populations of destructive pests under control. Assassin bugs were important predators in cotton fields in ALABAMA.

GREEN LACEWING adults were submitted by homeowners in NEW HAMPSHIRE, indicating that these beneficial insects were more abundant than normal; probably due to the high aphid populations earlier in the season. Green lacewing adults were very abundant in the field and at windows in RHODE ISLAND. They were also collected on sticky boards and in light traps. Larvae were found whenever aphids were abundant in Rhode Island. GOLDEN-EYE LACEWING (Chrysopa oculata) was a predator in cotton fields of ALABAMA.

The first adult of golden-eye lacewing of the season in ILLINOIS was observed in the southern area on April 7 and the first larvae on May 12. Both adults and larvae were common in aphid-infested corn and legume fields of Illinois. A green lacewing (Chrysopa sp.) was abundant in NORTH DAKOTA. The largest populations of Chrysopa spp. were found in alfalfa fields in southeastern WYOMING but only slightly smaller populations were found in most other areas of the State. Chrysopa sp. larvae and adults were found on legumes and corn throughout the season in NEBRASKA. LACEWINGS were present in normal numbers in KANSAS. Chrysopa spp. were commonly found in OKLAHOMA and ARKANSAS. In the latter State, they are very important predators. The first larvae of the season were recorded on April 24 and were recorded on alfalfa as late as early November in Arkansas. Golden-eye lacewing attacked economic pests in TEXAS. Green lacewing populations

were high in alfalfa, small grain and cotton fields of NEW MEXICO during spring and early summer, and aided in keeping populations of destructive pests down. Populations of Chrysopa carnea and of a BROWN LACEWING (Symphorobius californicus) were heavier than in past years in CALIFORNIA.

Larvae of FLOWER FLIES were above normal in Lyon County, NEVADA, in alfalfa where they assisted in suppressing a severe outbreak of Acyrtosiphon pisum in July. Syrphus spp. were very effective in reducing aphid populations in CALIFORNIA, and adults and larvae were very abundant in alfalfa fields of NEW MEXICO which were infested with A. pisum in the Farmington-Aztec area of San Juan County. Flower flies attacked economic pests in TEXAS. Larvae were present in normal numbers in KANSAS. Larvae of various species were conspicuous in alfalfa and tobacco fields infested with aphids in MARYLAND. Flower flies were important predators in cotton fields in ALABAMA.

A ROBBER FLY (Tolmerus prairiensis) was common on rangeland near Bowman, NORTH DAKOTA; one specimen was observed feeding on an adult grasshopper. A TACHINA FLY (Winthemia quadripustulata) was instrumental in controlling localized outbreaks of Pseudaletia unipuncta (armyworm) in WISCONSIN. Approximately 2,400 specimens of Parasetigena agalis were released in Rockingham, Windham County, VERMONT; this tachina fly is a parasite of Porthetria dispar (gypsy moth).

No recoveries of a CINNABAR MOTH (Tyria jacobaeae) have been made in WASHINGTON since it was released in Clark County in 1960. This arctiid moth feeds on tansy ragwort (Senecio jacobaea).

A PHYTOSEIID MITE (Typhlodromus occidentalis) destroyed eggs and adults of Tetranychus mcdanieli (a spider mite) on apple in Chelan and Douglas Counties, WASHINGTON, during late spring.

HONEY BEE (Apis mellifera) honey production was less than in 1963 in WASHINGTON; fruit tree pollination was critical because of the shortage of strong colonies in some localities. Honey production was expected to be down from 1962 and 1963 in KANSAS, but otherwise production was the largest since 1950. The State's 46,000 colonies were expected to yield 44 pounds of honey per colony for a total of 2,024,000 pounds. A total of 3,054 colonies were inspected for disease; 6 colonies were infected with American foulbrood and 15 colonies were infected with European foulbrood. These were not "blanket" inspections, but were made mostly on requests from individual beekeepers prior to moving, buying or selling colonies. There were some reports of winter losses in RHODE ISLAND. The first honey bee swarm was noted May 13. There was a heavy honey production in some parts of Rhode Island.

ALKALI BEE (Nomia melanderi) males began emerging one week later than normal in WASHINGTON; late June in Franklin County, and mid-June in Walla Walla County. The peak of flight activity was delayed 1-2 weeks and only continued for about 16 days. A few females were observed renesting as late as fall in Washington. Alkali bee was reported in WYOMING in 1964. Populations of alkali bee in NEVADA, especially those produced in artificial beds, were at medium to high levels in most alfalfa seed producing areas. Emergence began in mid-May in the southern area and in mid-July in the northern area.

Other important pollinating bees reported included: A LEAFCUTTING BEE (Megachile rotundata) in WASHINGTON. M. rotundata began emerging from field nest stations in Grant County in late June, which was 2 weeks late for that part of Washington; the second generation was delayed and renesting was reduced by the onset of cold weather. The first queens of a BUMBLE BEE (Bombus mixtus) emerged at the normal time in Washington; about June 1 in Pacific County. Cranberry flowering was delayed 3 weeks by cool weather and B. mixtus, the major pollinator, was ineffective. Populations by M. rotundata were high in Humboldt, Lander, Pershing and Washoe Counties, NEVADA. Emergence occurred almost 2 weeks before that of Nomia melanderi (alkali bee) in Nevada. Bumble bees were somewhat less common in RHODE ISLAND than they were in 1963.

Over 6 million parasites and/or predators were released by the University of California during 1964. These include the following:

BRACONIDS

Agathis sp.
Apanteles sp.
Bracon cushmani
Ephedrus plagiator
Euphorus pallipes
Phanerotoma flavitestacea
Trioxys pallidus

ICHNEUMONS

Bathyplectes sp.
Campoplex haywardi

A CHALICID

Diversinervus elegans

EULOPHIDS

Aphelinus sp.
A. varipes
Aphytis sp.
A. hispanicus
A. melinus
Coccophagoides sp.
Dasycapus parvipennis
Tetrastichus incertus

ENCYRTIDS

Comperiella bifasciata
Copidosoma koehleri

A TORYMID

Eupteromalus nidulans

PTEROMALIDS

Muscidifurax raptor
Spalangia cameroni
S. drosophilae
S. endius
S. nigroaenea

A GALL WASP

Trybliographa sp.

A DIAPRIID

Trichopria sp.

A COREID BUG

Chelinidea vittiger

A LADY BEETLE

Rhizobius sp.

A PUNCTURE-VINE SEED WEEVIL

Microlarinus lareynii

A SCIOMYZID FLY

Sepedon bifida

PHYTOSEIID MITES

Amblyseius hibisci
A. swirskii
Iphiseius degenerans
Phytoseiulus persimilis
Typhlodromus limonicus
T. rickeri

MISCELLANEOUS INSECTS

Surveys continued in the JAPANESE BEETLE (Popillia japonica) eradication area in Sacramento, Sacramento County, and West Sacramento, Yolo County, CALIFORNIA. Over 10,000 traps were placed in the six-county area surrounding the previously known infestations. All results have been negative for any form of Japanese beetle for two years. The Japanese beetle infestation in the Battle Creek area of Calhoun

and Kalamazoo Counties, MICHIGAN, now extends about two miles east from the 1963 infested area, and is the largest known to occur in the State. Relatively light samplings were taken from the other infested counties in Michigan. In ILLINOIS, some extension of known infestations occurred, but no new infestations were found. The first adult of the season was taken in a trap near East St. Louis, Illinois, on June 8. Japanese beetle was light to heavy on flowers, fruit trees, wild roses, and other ornamentals throughout VIRGINIA. Adults appeared later than usual in MARYLAND and were generally light to moderate on favored host plants with the heaviest numbers occurring in parts of Queen Annes, Montgomery and Prince Georges Counties. Turf damage by Japanese beetle grubs was very low in NEW JERSEY, and adult populations declined in most areas. Populations were very low and of short duration in MASSACHUSETTS, where first adults were noted on July 3 in the Amherst area of Hampshire County. In RHODE ISLAND, the first adults were collected in Kingston, Washington County, on June 23 and in Newport, Newport County, on June 25. Populations were extremely low for the third consecutive year. The only heavy populations reported were on the Jamestown shore of Newport County and on a single property in Exeter, Washington County. In MAINE, the first adults were observed in Auburn, Androscoggin County, on June 29.

ASIATIC GARDEN BEETLE (Maladera castanea) is now known to occur in Ashtabula, Cuyahoga, Columbiana and Washington Counties of OHIO, but did not cause appreciable damage in 1964. Asiatic garden beetle was less conspicuous in RHODE ISLAND than in previous years. EUROPEAN CHAFER (Amphimallon majalis) was found infesting approximately 4,500 acres in Erie County, PENNSYLVANIA, east of the area treated in 1963.

In FLORIDA, two new counties were found infested with IMPORTED FIRE ANT (Solenopsis saevissima richteri). These were probably extensions of older infestations. In SOUTH CAROLINA, only one new county was reported infested during 1964. In GEORGIA, all seven counties found infested during the year were contiguous to previously infested counties. The imported fire ant is becoming more widespread in ALABAMA and mounds appear more concentrated in the old infested area. Three new counties were added to the list of infestations in MISSISSIPPI. The imported fire ant continued to spread northward in LOUISIANA, especially up the valleys of the Red and Mississippi Rivers. All parishes in the State, except three, have now been found infested. Three new counties were found infested in TEXAS and the infested areas in other counties increased.

Eradication of STRIPED MEALYBUG (Ferrisia virgata), by spraying host plants, continued in Brawley, El Centro, Imperial and Winterhaven in Imperial County, CALIFORNIA. Known infestations of this pest occurred in 43 city blocks. Survey and detection for CITRUS WHITEFLY (Dialeurodes citri) continued all year in California. The grid system of survey has been used for two years and is proving to be a useful detection tool in populated areas. Several new infestations were found during 1964 and some reinfestation occurred. Eradication treatment began in mid-November 1964, and will extend into the spring of 1965. The area to receive treatment has been reduced from 1,400 city blocks to 700 city blocks.

A field infestation of a SLUG (Arion ater) was found in Hayward, Alameda County, CALIFORNIA. This is a new county record, and the farthest south this slug has been taken. In June, an ASSASSIN BUG (Empicoris reticulatus) was collected at Tecate, San Diego County, California. This is the first time this species has been found on the west coast.

Large numbers of ANT-LIKE FLOWER BEETLES (Notoxus spp.) were found in blooms and terminals of cotton plants in Dona Ana, Luna, Sierra, Hidalgo, Chaves, Eddy, Otero, Lea, and Roosevelt Counties of NEW MEXICO. A CLERID BEETLE (Trichodes sp.), determined by D. M. Anderson, and the adults and larvae of a BLISTER BEETLE (Nemognatha lutea lutea), determined by T. J. Spilman, were found in nests of alfalfa leafcutting bees at Flowell, Millard County, UTAH

Large numbers of a CICADA (Cacama variegata) were present in the southwestern section of TEXAS and an unspecified MITE damaged commercial earthworm beds in

many parts of the State. In NEVADA, infestations of a FALSE CHINCH BUG (Nysius sp.) in yards and home gardens were heaviest in Clark, Lincoln, Elko and Washoe Counties. Migration from rangeland to residential areas began in April in the south and extended into September in the north. Larvae of a SAWFLY (Schizocerella pilicornis) were abundant on purslane in NORTH DAKOTA.

CICADA KILLER (Sphecius speciosus) was numerous in the Panhandle of OKLAHOMA during August. A few reports of cicada killer were received in VIRGINIA. These wasps were active and annoying near sandy areas at several places in central MARYLAND and the number of complaints was considerably above normal.

In MARYLAND, two species of insects were abundant in the litter of broiler houses, LESSER MEALWORM (Alphitobius diaperinus) adults in a broiler house in Worcester County, and an undetermined PSOCID in several broiler houses in the Salisbury area, Wicomico County, during July.

EUROPEAN CORN BORER (Ostrinia nubilalis) and FALL ARMYWORM (Spodoptera frugiperda) populations were high during August and September in NEW JERSEY. The CORN EARWORM (Heliothis zea) outbreak in New Jersey in August resulted in the highest populations since 1955. These species were extremely difficult to control and could easily be found in sweet corn in most areas of the State late in the season.

LIST OF CONTRIBUTORS

ALABAMA

H. F. McQueen

ALASKA

R. H. Washburn

ARIZONA

D. G. Fullerton

ARKANSAS

W. P. Boyer

CALIFORNIA

R. M. Hawthorne

COLORADO

L. E. Jenkins et al.

CONNECTICUT

J. P. Johnson and M. Savos

DELAWARE

P. P. Burbutis; assisted by
R. W. Lake.

FLORIDA

F. W. Mead, W. A. Simanton,
A. M. Phillips and W. G. Genung

GEORGIA

W. C. Johnson

ILLINOIS

Clarence White and Ronald Meyer

INDIANA

R. A. Bram

KANSAS

L. L. Peters; assisted by personnel
of State Board of Agriculture, Div.
Ent.; Dept. Ent., Kansas State
Univ.; U.S.D.A.

LOUISIANA

L. D. Newsom et al.

MAINE

L. W. Boulanger

MARYLAND

W. C. Harding, Jr.

MASSACHUSETTS

H. E. Wave

MICHIGAN

A. C. Dowdy et al.

MINNESOTA

R. G. Flaskerd

| | |
|-----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| MISSOURI R. E. Munson et al. | PENNSYLVANIA E. J. Udine |
| NEBRASKA P. W. Bergman et al. | RHODE ISLAND J. A. Mathewson et al. |
| NEVADA R. C. Bechtel | SOUTH DAKOTA S. D. Hintz |
| NEW HAMPSHIRE J. G. Conklin and A. H. Mason | TENNESSEE R. P. Mullett and J. H. Locke |
| NEW JERSEY F. C. Swift and L. M. Vasvary | TEXAS M. V. Meisch |
| NEW MEXICO G. L. Nielsen | UTAH G. F. Knowlton et al. |
| NEW YORK A. A. Muka; assisted by coop- erators of Weekly News Letter. | VERMONT J. W. Scott |
| NORTH CAROLINA D. A. Mount | VIRGINIA J. M. Grayson, R. N. Hofmaster et al. |
| NORTH DAKOTA R. D. Frye | WASHINGTON C. A. Johansen; cooperating with Federal, State and field entomolo- gists. |
| OHIO R. W. Rings et al. | WISCONSIN M. S. Conrad |
| OKLAHOMA D. C. Arnold | WYOMING W. D. Marks |

Included in the "Summary of Insect Conditions in the United States - 1964" are the following special reports:

1. Summary of Fruit Insect Conditions, 1964, New York-New England Fruit Spray Specialists' Conference, compiled by L. W. Boulanger, Maine Agricultural Experiment Station, from the conference held at Orono, Maine, October 20-21, 1964.
2. The highlight section of Forest Insect Conditions in the United States - 1964, compiled by the Forest Service, U.S. Department of Agriculture.

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