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*Cooperative*  
**ECONOMIC INSECT  
REPORT**

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CURRENT SERIAL RECORDS

*Issued by*

**PLANT PEST CONTROL DIVISION**

**AGRICULTURAL RESEARCH SERVICE**

**UNITED STATES DEPARTMENT OF AGRICULTURE**

# AGRICULTURAL RESEARCH SERVICE

## PLANT PEST CONTROL DIVISION

### SURVEY AND DETECTION OPERATIONS

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

All reports and inquiries pertaining to this release, including the mailing list, should be sent to:

Survey and Detection Operations  
Plant Pest Control Division  
Agricultural Research Service  
United States Department of Agriculture  
Federal Center Building  
Hyattsville, Maryland 20782

## COOPERATIVE ECONOMIC INSECT REPORT

## HIGHLIGHTS

Current Conditions

GREENBUG moderate to heavy on winter wheat in area of Kansas. (p. 941). FALL ARMYWORM heavy on some wheat in Oklahoma; damaging pasture grasses in Alabama. (p. 942).

MEXICAN BEAN BEETLE heavy on soybeans in Virginia. (p. 943).

FALL WEBWORM in Oklahoma and HICKORY SHUCKWORM in Alabama heavy on pecans. APHIDS may reduce 1968 pecan crop in southern Alabama. (p. 944).

SCREW-WORM infestations increased in Texas. (p. 946).

Prediction

PALE WESTERN CUTWORM moth flights heavy in western Nebraska; heavy larval infestations predicted in small grain for panhandle and southwestern areas. (p. 942).

Detection

New State records include ASIATIC OAK WEEVIL in Illinois (p. 949), a JUNE BEETLE in Nevada (p. 945), and a SPIDER MITE in Hawaii (p. 949).

For new county records see page 949.

Special Reports

Insects Not Known to Occur in the United States

A MOSQUITO (Culex tritaeniorhynchus Giles). (p. 951).

Cereal Leaf Beetle Quarantine Map. Centerfold.

Reports in this issue are for week ending October 6 unless otherwise indicated.

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Cereal Leaf Beetle Quarantine (map) centerfold.

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WEATHER BUREAU'S 30-DAY OUTLOOK

MID-OCTOBER TO MID-NOVEMBER

The Weather Bureau's 30-day outlook for mid-October to mid-November is for temperatures to average below seasonal normals in the eastern quarter of the Nation and also in the gulf coast region. Above normal temperatures are indicated for the western half of the Nation except for near normal over the southern Plains. Elsewhere near normal temperatures are in prospect. Precipitation is expected to be subnormal over the northern and central Plains and west of the Divide except for near normal totals in the Far Northwest. Above normal amounts are indicated for the Northeast while near normal precipitation is anticipated in unspecified areas.

Weather forecast given here is based on the official 30-day "Resume and Outlook" published twice a month by the Weather Bureau. You can subscribe through the Superintendent of Documents, Washington, D. C. 20250. Price \$5.00 a year.

For Weather of the Week see page 950.



## SPECIAL INSECTS OF REGIONAL SIGNIFICANCE

ASTER LEAFHOPPER (Macrosteles fascifrons) - OKLAHOMA - Ranged 30-80 per 10 sweeps in volunteer small grain in Major and Woodward Counties. (Okla. Coop. Sur.).

CORN EARWORM (Heliothis zea) - CALIFORNIA - Very heavy on 50-acre milo planting in Hanford, Kings County. (Cal. Coop. Rpt.). NEW MEXICO - Ear infestations ranged 50-80 percent in field and sweet corn at Moriarty, Torrance County; Corrales, Sandoval County; and Albuquerque, Bernalillo County. (Heninger). KANSAS - Damage survey of field corn underway in northeast area; damage generally very light in north-central, northeast, and east-central districts. (Simpson). ARKANSAS - Averaged 1 per row foot of sorghum in Carroll County. (Roberts).

GREENBUG (Schizaphis graminum) - KANSAS - Moderate to heavy on winter wheat in Finney County; damage severe in some fields, heaviest along field margins. (DePew). None in wheat in Clay, Shawnee, Jefferson, Atchison, Doniphan, and Brown Counties. (Simpson). ARKANSAS - Survey negative in northwest area. (Boyer). TEXAS - Found on western wheatgrass from May through September in panhandle area. (Daniels).

POTATO LEAFHOPPER (Empoasca fabae) - VIRGINIA - Averaged 1 adult per sweep in Montgomery County alfalfa. (Isakson).

SPOTTED ALFALFA APHID (Therioaphis maculata) - NEW MEXICO - Counts per 25 sweeps ranged 10-25+ at Albuquerque, Bernalillo County, and 25-75 at Moriarty, Torrance County; light at Corrales, Sandoval County; very light, half teaspoon per 25 sweeps, in central Dona Ana County. (Heninger, Elson). NEBRASKA - Averaged 25 per 100 sweeps in Lincoln County field; ranged 10-167 per 100 sweeps in 12 Dawson County fields and 7-120 per 100 sweeps on 4 Howard County fields; oviparous forms appearing. (Manglitz). KANSAS - Light, 1-5 per 10 sweeps, in few alfalfa fields in Clay, Washington, Riley, Jefferson, and Shawnee Counties. (Simpson). ARKANSAS - Increased slightly in northwest area, ranged 600-800 per 100 sweeps. (Boyer).

TOBACCO BUDWORM (Heliothis virescens) - CALIFORNIA - Moderate on geranium nursery stock in Santa Rosa, Sonoma County, and Santa Cruz, Santa Cruz County. (Cal. Coop. Rpt.).

## CORN, SORGHUM, SUGARCANE

EUROPEAN CORN BORER (Ostrinia nubilalis) - SOUTH DAKOTA - Fall abundance survey completed in Aurora, Brule, Charles Mix, and Douglas Counties; numbers low. Borers per 100 stalks by county: Aurora 0-32 (average 10), Brule 0, Charles Mix 0-80 (average 47), Douglas 2-56 (average 34.5). Some increase noted in Douglas County compared with past years. (Jones). KANSAS - Light in Clay, Ottawa, Cloud, Washington, and Shawnee Counties; light to moderate in Jefferson, Atchison, and Doniphan Counties. (Simpson).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - ALABAMA - Fall survey to determine eastward movement completed in Mobile, Baldwin, Monroe, Butler, Lowndes, Autauga, Chilton, and Coosa Counties. Light near Milton, Autauga County, and near Stanton, Chilton County. Autauga and Chilton are new county records. (Henderson et al.).

WESTERN BEAN CUTWORM (Loxagrotis albicosta) - NEBRASKA - Damaging corn in 30 Hall County fields; ear infestations ranged 4.2-100 percent (average 51); grain loss averaged 3 percent. (Hill et al.).

A WHITEFLY (Aleurocybotus occiduus) - ARIZONA - Heavy in sorghum at Yuma, Yuma County; flights heavy in city. (Ariz. Coop. Sur.). CALIFORNIA - Moderate on 40 acres of sorghum in El Centro, Imperial County. (Cal. Coop. Rpt.).

## SMALL GRAINS

FALL ARMYWORM (Spodoptera frugiperda) - ALABAMA - Controls required in several early planted fall grain fields in Bibb County. (Ventress et al.). OKLAHOMA - Moderate on Bryan County wheat; heavy in Grant, Comanche, and Greer County wheat; averaged 10 per 100 row feet in Garvin County wheat and 1-3 per foot in Noble County rye. (Okla. Coop. Sur.).

PALE WESTERN CUTWORM (Agrotis orthogonia) - NEBRASKA - Adult flights heavy in western area. Heavy larval infestations predicted for panhandle and southwestern areas in 1968. (Pruess, Hagen).

A CRAMBID MOTH (Chilo loftini) - ARIZONA - Heavy on 100 acres of millet in Luke Air Force Base area of Maricopa County. (Ariz. Coop. Sur.).

BROWN WHEAT MITE (Petrobia latens) - OKLAHOMA - Light in Greer County wheat. (Okla. Coop. Sur.).

WHEAT CURL MITE (Aceria tulipae) - KANSAS - Heavy on volunteer wheat in Finney County, none on planted wheat. (DePew).

## TURF, PASTURES, RANGELAND

FALL ARMYWORM (Spodoptera frugiperda) - ALABAMA - Larvae moderate, damaging 60 acres of newly planted pasture and lespedeza in Cleburne County; controls applied. Damaged some Perry County pasture grasses. (Ventress et al.). OKLAHOMA - Averaged 3 per square foot on lawn grass in McAlester, Pittsburg County. (Okla. Coop. Sur.).

GREEN JUNE BEETLE (Cotinis nitida) - VIRGINIA - Larvae severely damaged lawn grass at Fluvanna County location. (Isakson, Watts).

RHODES-GRASS SCALE (Antonina graminis) - ARIZONA - Infesting Bermuda grass lawns at Scottsdale, Maricopa County. (Ariz. Coop. Sur.).

## FORAGE LEGUMES

PEA APHID (Acyrtosiphon pisum) - NEW MEXICO - Counts per 25 sweeps in alfalfa by county: Sandoval, 4-20 at Corrales; Torrance, 10-35 at Moriarty; Bernalillo, 5 to 1 tablespoon at Albuquerque. (Heninger). Few to half teaspoon per 25 sweeps in central Dona Ana County (Elson); light to moderate in alfalfa at Roswell, Chaves County, (Mathews). NEBRASKA - Averaged 14 per 100 sweeps in Lincoln County alfalfa field; ranged 1-1,500 per 100 sweeps in 12 Dawson County fields and 2-13 per 100 sweeps in 4 Howard County fields. (Manglitz). KANSAS - Ranged 0-10 per 10 sweeps in Clay and Washington Counties, 175-250 per 10 sweeps in Atchison and Doniphan Counties. (Simpson). ARKANSAS - Very light in northwest area alfalfa. (Boyer). VIRGINIA - Ranged 10-35 (average 20) per sweep in alfalfa in Roanoke, Floyd, Pulaski, and Montgomery Counties. (Isakson). MARYLAND - Averaged 100+ per sweep on alfalfa near Muirkirk, Prince Georges County. (U. Md., Ent. Dept.).

LYGUS BUGS (Lygus spp.) - ARIZONA - Adults dominant in alfalfa; counts per 100 sweeps averaged 80 in Yuma County, 45 in Pinal and Maricopa Counties. (Ariz. Coop. Sur.). NEW MEXICO - Counts per 25 sweeps in alfalfa by county: Dona Ana, 0-17 in central area, up to 42 in one field (Elson); Torrance, 3-5 at Moriarty; Bernalillo, 5-35 at Albuquerque; Sandoval, 4-8 at Corrales (Heninger). OKLAHOMA - L. lineolaris up to 20 per 10 sweeps in Nowata County alfalfa. (Okla. Coop. Sur.).

PLANT BUGS - NEW MEXICO - Adelphocoris sp. per 25 sweeps in alfalfa by county: Torrance, 3-12 at Moriarty; Sandoval, 10-15 at Corrales; Bernalillo, 5-12 at Albuquerque. (Heninger). OKLAHOMA - A. rapidus averaged 5 per 10 sweeps in Nowata County alfalfa. (Okla. Coop. Sur.).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - ARIZONA - Average per 100 sweeps by county: Pinal 800, Maricopa 325, and Yuma 830. (Ariz. Coop. Sur.). NEW MEXICO - Counts per 25 sweeps in alfalfa by county: Sandoval, 3-12 at Corrales; Bernalillo, 1-2 at Albuquerque. (Heninger). Ranged 0-16 per 25 sweeps in Dona Ana County, averaged 50 per 50 sweeps in field near Tularosa, Otero County. (Elson). OKLAHOMA - Averaged 60 per 10 sweeps in Ottawa County alfalfa field. (Okla. Coop. Sur.). ARKANSAS - Active in northwest area alfalfa; ranged 12-15 per 100 sweeps. (Boyer).

ALFALFA CATERPILLAR (Colias eurytheme) - NEW MEXICO - Counts per 25 sweeps in alfalfa by county: Chaves, 0-3 near Hagerman (Mathews); Torrance, 1-4 at Moriarty; Sandoval, 4-9 at Corrales; Bernalillo, 2-6 at Albuquerque (Heninger); Dona Ana, 0-65 (3-9 in most fields) from La Mesa to Ft. Seldon, heaviest in southern and central areas of county (Elson).

FALL ARMYWORM (Spodoptera frugiperda) - OKLAHOMA - Averaged 1-3 per square foot in Noble County alfalfa; moderate in Bryan County alfalfa, heavy in Comanche County. (Okla. Coop. Sur.).

BEEF ARMYWORM (Spodoptera exigua) - ARIZONA - Averaged 260 per 100 sweeps in alfalfa at Yuma, Yuma County, and 120 per 100 sweeps in Maricopa County. (Ariz. Coop. Sur.).

YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli) - ARIZONA - Increasing in most alfalfa; averaged 25 per 100 sweeps at Yuma, Yuma County, and 55 per 100 sweeps in Maricopa County. (Ariz. Coop. Sur.).

SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) - NEW MEXICO - Counts per 100 sweeps ranged 0-3 in central Dona Ana County alfalfa and 0-7 in Torrance, Sandoval, and Bernalillo Counties. (Elson, Heninger).

ALFALFA WEEVIL (Hypera postica) - VIRGINIA - Larvae ranged 2-14 (average 8) per 10 sweeps in Roanoke, Floyd, Pulaski, and Montgomery Counties. (Isakson). MARYLAND - Adults ranged 1-3 per sweep on alfalfa near Muirkirk, Prince Georges County. (U. Md., Ent. Dept.). NEBRASKA - None taken on alfalfa in Lincoln and Dawson Counties. (Manglitz).

#### SOYBEANS

MEXICAN BEAN BEETLE (Epilachna varivestis) - VIRGINIA - Heavy, averaged 95 per 10 row feet, in Brunswick, Greenville, Southampton, Sussex, and Lunenburg Counties; much damage. (Isakson). MISSISSIPPI - Adults and larvae ranged 1-2 per row foot on some young plants in Oktibbeha County field; pod damage moderate. (Dinkins).

BEAN LEAF BEETLE (Cerotoma trifurcata) - VIRGINIA - Adults light, 4-8 per 10 row feet, in Sussex County. (Isakson).

#### PEANUTS

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - OKLAHOMA - Moderate on Bryan County peanuts. (Okla. Coop. Sur.).



## COTTON

BOLLWORMS (Heliothis spp.) - ARIZONA - H. zea damaging top bolls in Pinal County. (Ariz. Coop. Sur.). MISSISSIPPI - H. zea and H. virescens light in few late fields in Yazoo County. Controls reduced infestations from previous week. (Dinkins).

BOLL WEEVIL (Anthonomus grandis) - MISSISSIPPI - Diapause well underway in delta area. (Dinkins).

## POTATOES, TOMATOES, PEPPERS

POTATO TUBERWORM (Phthorimaea operculella) - CALIFORNIA - Infesting tomato plantings in Monterey and San Benito Counties; prevalent in these areas in 1967. (Cal. Coop. Rpt.).

FALSE CELERY LEAF TIER (Udea profundalis) - CALIFORNIA - Moderate, damaging bell peppers in Visalia, Tulare County. (Cal. Coop. Rpt.).

A LEAF ROLLER MOTH (Platynota stultana) - CALIFORNIA - Heavy on chili peppers in Shafter, Kern County. (Cal. Coop. Rpt.).

MEXICAN BEAN BEETLE (Epilachna varivestis) - MARYLAND - Hundreds of adults in flight on Wicomico County farm. (U. Md., Ent. Dept.).

GREEN PEACH APHID (Myzus persicae) - CALIFORNIA - Heavy on bell peppers in Visalia, Tulare County. (Cal. Coop. Rpt.).

SPIDER MITES (Tetranychus spp.) - CALIFORNIA - T. urticae heavy on eggplant in Anaheim, Orange County. T. marianae heavy on eggplant in La Habra, Orange County, for new host record. (Cal. Coop. Rpt.).

## BEANS AND PEAS

A LEAF MINER FLY (Liriomyza pictella) - CALIFORNIA - Moderate on string beans in Buena Park, Orange County. (Cal. Coop. Rpt.).

## COLE CROPS

CABBAGE LOOPER (Trichoplusia ni) - ARIZONA - Larvae and eggs heavy on 40 acres of red cabbage in Phoenix, Maricopa County. (Ariz. Coop. Sur.).

## DECIDUOUS FRUITS AND NUTS

HICKORY SHUCKWORM (Laspeyresia caryana) - OKLAHOMA - Heavy on Mayes County pecans. (Okla. Coop. Sur.). ALABAMA - Late instars light to heavy in pecan shucks throughout State. (Estes et al.).

FALL WEBWORM (Hyphantria cunea) - OKLAHOMA - Heavy on pecan and other trees in central and eastern areas. (Okla. Coop. Sur.).

APHIDS (Monellia spp.) - ALABAMA - Continue heavy on all pecan trees in Mobile, Baldwin, and other southern counties; 50 per leaflet common in Mobile County. Aphids and other problems caused severe defoliation and reduced nut quality in southern and western areas. May reduce 1968 nut crop. (Deakle et al.).

TWIG GIRDLER (Oncideres cingulata) - OKLAHOMA - Moderate to heavy on Cleveland County pecans. (Okla. Coop. Sur.).



WALNUT HUSK FLY (Rhagoletis completa) - UTAH - Moderate in black walnuts at Clearfield, Davis County. (Knowlton).

PEACH TREE BORER (Sanninoidea exitiosa) - NEW MEXICO - Infestations ranged 75-90 percent near Corrales, Torrance County; some peach trees killed. (Heninger).

FILBERTWORM (Melissopus latiferreanus) - CALIFORNIA - Larvae heavy in Elephant Heart plum fruit at Merced, Merced County. (Cal. Coop. Rpt.).

PEACH TWIG BORER (Anarsia lineatella) - CALIFORNIA - Moderate on Satsuma plum trees at Los Olivos, Santa Barbara County. (Cal. Coop. Rpt.).

YELLOW-NECKED CATERPILLAR (Datana ministra) - CALIFORNIA - Larvae moderate on cherry at San Leandro, Alameda County. (Cal. Coop. Rpt.).

PACIFIC SPIDER MITE (Tetranychus pacificus) - CALIFORNIA - Probably this species heavy in 8 acres of apple trees at Paradise, Butte County. (Cal. Coop. Rpt.).

#### CITRUS

GLOVER SCALE (Lepidosaphes gloverii) - FLORIDA - Adults damaged leaves and bark on 400 of 10,000 sweet orange plants at nursery in Plant City, Hillsborough County. (Vaughan, Oct. 2). Infestation building up; nursery under observation. (Fla. Coop. Sur.).

A COREID BUG (Leptoglossus zonatus) - ARIZONA - General on fruit in Tempe and Mesa areas, Maricopa County. (Ariz. Coop. Sur.).

CITRUS FLAT MITE (Brevipalpus lewisi) - ARIZONA - Treatments applied to prevent scarring of fruit at Yuma, Yuma County. (Ariz. Coop. Sur.).

#### OTHER TROP. & SUBTROP. FRUITS

AN APHID (Pentalonia nigronervosa) - CALIFORNIA - This vector of banana mosaic collected from banana trees at Fullerton, Orange County, for new county record. Only other record in State is from Riverside County. (Cal. Coop. Rpt.).

#### SMALL FRUITS

GRAPE LEAF FOLDER (Desmia funeralis) - CALIFORNIA - Moderate on grapes at Biggs, Butte County. (Cal. Coop. Rpt.).

#### ORNAMENTALS

A JUNE BEETLE (Cotinis texana) - NEVADA - Live female collected on crown of rose-bush in home garden at Las Vegas, Clark County. Det. by R. C. Bechtel. This is new State record. (Bechtel, Zoller).

TEA SCALE (Fiorinia theae) - FLORIDA - Damaged leaves on 225 of 300 camellias at Fruitland Park, Orange County, (Bentley, Oct. 4); severe on holly at Gainesville, Alachua County, (Ayers). SOUTH CAROLINA - Many complaints of infestations on camellias. (Nettles et al., Oct. 10).

CITRUS MEALYBUG (Planococcus citri) - CALIFORNIA - Heavy on fuchsia nursery stock at Gridley, Butte County. (Cal. Coop. Rpt.).

A SAWFLY (Schizocerella pilicornis) - CALIFORNIA - Heavy; almost destroyed 10 acres of purslane at Seeley, Imperial County. (Cal. Coop. Rpt.).

SPIDER MITES - FLORIDA - Tenuipalpus pacificus adults moderately damaged leaves on 50 of 100 orchids at nursery in Valrico, Hillsborough County. (Simmons, Oct. 6). CALIFORNIA - Tetranychus urticae heavy on iris plants at Anaheim, Orange County. (Cal. Coop. Rpt.).

#### FOREST AND SHADE TREES

ELM LEAF BEETLE (Pyrrhalta luteola) - VIRGINIA - Heavy on American elm at Providence Forge, Charles City County. (Isakson, Gilley). NEW MEXICO - Found on Siberian elm at Moriarty, Torrance County, for new county record. (Heninger).

FALL WEBWORM (Hyphantria cunea) - NEW MEXICO - Heavy, killing many trees throughout Alamogordo, Otero County; very heavy at Roswell, Chaves County. (Elson, Mathews).

MIMOSA WEBWORM (Homadaula albizziae) - OKLAHOMA - Averaged 100 per 300 leaves on mimosa at McAlester, Pittsburg County. (Okla. Coop. Sur.).

PINE WEBWORM (Tetralopha robustella) - MARYLAND - Larvae damaging pine seedlings at Easton, Talbot County. (U. Md., Ent. Dept.).

DOUGLAS-FIR TUSSOCK MOTH (Hemerocampa pseudotsugata) - NEW MEXICO - Survey at Ruidoso, Lincoln County, indicated very few eggs laid. Spray program apparently reduced population. Few adults not yet emerged. (Elson).

#### MAN AND ANIMALS

MOSQUITOES - Larvae of Aedes vexans, Anopheles quadrimaculatus, Culex pipiens quinquefasciatus, C. restuans, and C. salinarius collected October 5-12 in Jefferson Parish. Adults decreasing in light traps; A. vexans and C. salinarius dominant. (Stokes).

SCREW-WORM (Cochliomyia hominivorax) - Additional 13 cases reported for October 1-7 in Texas - Bexar 1, Edwards 1, Kendall 1, Kerr 1, Kinney 2, Mason 1, Presidio 2, Medina 1, Uvalde 2, Val Verde 1. Total of 133 cases reported in U.S. October 7-14 as follows: TEXAS - Atascosa 4, Bandera 3, Bastrop 1, Bexar 6, Blanco 3, Brewster 3, Burleson 2, Caldwell 5, Comal 2, De Witt 1, Dimmit 1, Edwards 5, Frio 4, Gillespie 2, Hays 5, Jim Hogg 1, Karnes 1, Kendall 5, Kerr 2, Kimble 2, Kinney 19, Llano 1, Mason 1, Maverick 9, McMullen 1, Medina 7, Menard 1, Presidio 3, Starr 1, Stonewall 1, Terrell 2, Tom Green 1, Uvalde 8, Val Verde 7, Webb 3, Wilson 1, Zavala 9. Total of 206 cases reported in portion of Barrier Zone in Republic of Mexico as follows: Baja California 7, Territorio sur de Baja California 26, Sonora 24, Chihuahua 100, Coahuila 20, Nuevo Leon 7, Tamaulipas 22. Total of 67 cases reported in Mexico south of the Barrier Zone. Barrier Zone is area where eradication operation underway to prevent establishment of self-sustaining population in U.S. Sterile screw-worm flies released: Texas 50,998,000, California 264,000, Mexico 75,844,000. (Anim. Health Div.).

HORSE BOT FLY (Gasterophilus intestinalis) - OKLAHOMA - Averaged 12 per head on Muskogee County horses. (Okla. Coop. Sur.).

FACE FLY (Musca autumnalis) - NEBRASKA - Ranged 0-5 (averaged 1.7) per face on 17 cows near Lincoln, Lancaster County. (Perdue). SOUTH DAKOTA - Light, up to 5 per face, on cattle on Black Hills Forest grazing land west of Hill City, Pennington County. (Jones).

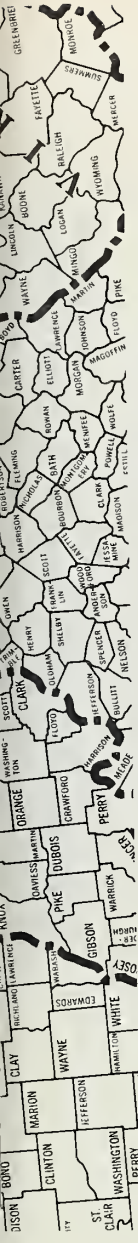
HORN FLY (Haematobia irritans) - MISSISSIPPI - Averaged 500 per head on 20 head of untreated Oktibbeha County cattle. (Dinkins). OKLAHOMA - Ranged 200-300 per head on Craig County cattle; less than 100 per yearling and 50-75 per mature cow in Payne County. (Okla. Coop. Sur.).

Regulated articles and their certification periods are as follows:

<u>Crop or Article</u>	<u>Certification Period</u>
Small grains such as Barley, Oats, and Wheat (1)	June 1 - Nov. 30
Corn Fresh Market (sweet corn) ..... Ear Corn, other than sweet corn	Year-Round ..... August 1 - March 31
Grass and Forage Seed (1)	Year-Round
Hay (except marsh hay) (2)	June 1 - Jan. 15
Straw and Marsh Hay	July 1 - Feb. 28
Sod	Year-Round







**Counties Partly Regulated**

**INDIANA**

Consult your State or Federal plant pest control inspector or your county agent for assistance regarding areas under regulation and requirements for moving regulated articles.

U. S. Department of Agriculture  
Agricultural Research Service  
Plant Pest Control Division  
Cooperating with affected States  
Revised August 1967

Infestations also occur in southern Ontario, Canada. The Department of Agriculture of Canada is enforcing regulations to prevent artificial spread.

(See reverse for list of regulated articles.)

**CLAY CO.**

- Twps. - Brazzil
- Cass
- Dick Johnson
- Jackson
- Perry
- Posey
- Sugar Ridge
- Van Buren
- Washington

**DEARBORN CO.**

- Twps. - Harrison
- Jackson
- Kelso
- Logan
- Manchester
- Miller
- York

**BEAVER CO.**

- Beaver Falls (City)
- Twps. - Ambridge\*
- Baden\*
- Beaver\*
- Big Beaver
- Borough
- Bridgewater
- Brighton
- Chippewa
- Conway\*
- Darlington\*
- Darlington

**JENNINGS CO.**

- Twps. - Columbia
- Geneva
- Sand Creek

**OWEN CO.**

- Twps. - Harrison
- Jackson
- Jennings
- Montgomery
- Morgan
- Taylor
- Wayne

**VERMILION CO.**

- Twps. - Highland

**VIGO CO.**

- Twps. - Nevins
- Otter Creek

**RIPLEY CO.**

- Twps. - Adams
- Center
- Delaware
- Franklin
- Jackson
- Johnson
- Laighery
- Otter Creek
- Washington

**PENNSYLVANIA**

- Daugherty
- East Rochester\*
- Eastvale\*
- Economy\*
- Ellwood City\*
- Fallston\*
- Franklin
- Freedom\*
- Glasgow\*
- Harmony
- Homewood\*
- Industry\*
- Koppel\*
- Marion

- Midland\*
- New Brighton\*
- New Galilee\*
- New Sewickley
- North Sewickley
- Ohioville\*
- Patterson
- Patterson Heights\*
- Pulaski
- Rochester\*
- Rochester
- South Beaver
- West Mayfield\*
- White

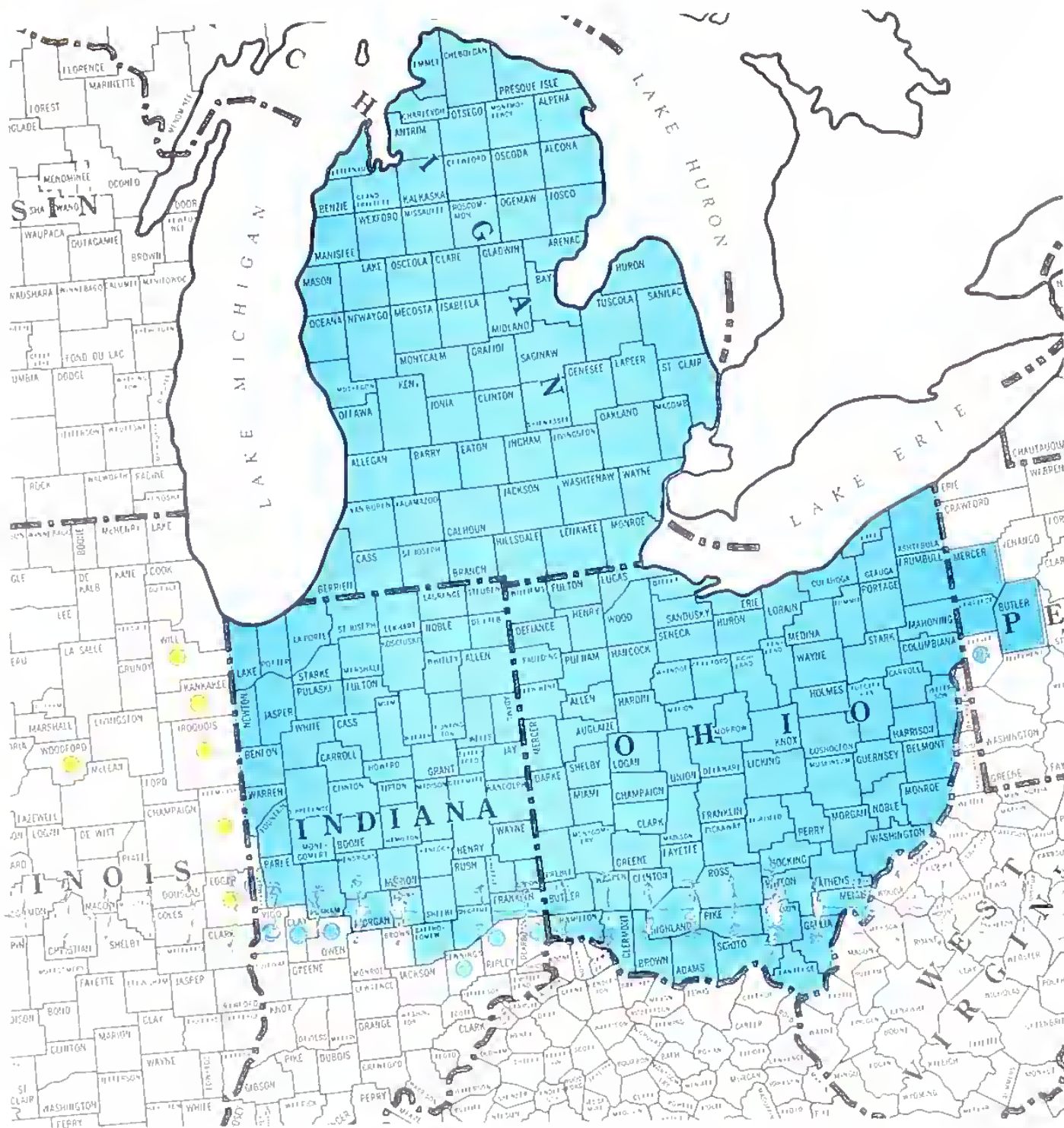
\* Boroughs



# CEREAL LEAF BEETLE

## UNIFORM STATE QUARANTINES

- Counties entirely colored are completely regulated; counties with blue dot are partially regulated.
- Yellow dot: Overall eradication treatments made; no quarantine regulations necessary.
- Certificates are required for movement of regulated articles from a blue area into or through a white or yellow area.



### Counties Partly Regulated

#### INDIANA

- |   |   |   |
|---|---|---|
| <p><b>CLAY CO.</b><br/>Twp. - Brozil<br/>Coss<br/>Dick Johnson<br/>Jackson<br/>Perry<br/>Posey<br/>Sugar Ridge<br/>Von Buren<br/>Washington</p> | <p><b>JENNINGS CO.</b><br/>Twp. - Columbio<br/>Genevo<br/>Sond Creek</p> <p><b>OWEN CO.</b><br/>Twp. - Horriion<br/>Jockson<br/>Jennings<br/>Montgomery<br/>Morgon<br/>Taylor<br/>Wayne</p> | <p><b>RIPLEY CO.</b><br/>Twp. - Adoms<br/>Center<br/>Delowore<br/>Franklin<br/>Jockson<br/>Johnson<br/>Laughery<br/>Otter Creek<br/>Washington</p> <p><b>VERMILION CO.</b><br/>Twp. - Highlond</p> <p><b>VIGO CO.</b><br/>Twp. - Nevins<br/>Otter Creek</p> |
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#### PENNSYLVANIA

- |  |  |   |
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| <p><b>BEAVER CO.</b><br/>Beaver Falls (City)<br/>Twp. - Ambrldge*<br/>Boden*<br/>Beaver*<br/>Big Beaver<br/>Borough<br/>Bridgewater<br/>Brighton<br/>Chippewo<br/>Conwoy*<br/>Dorlington*<br/>Darlington</p> | <p>Dougherty<br/>East Rochester*<br/>Eastvole*<br/>Economy*<br/>Ellwood City*<br/>Follston*<br/>Franklin<br/>Freedom*<br/>Glogow*<br/>Hormony<br/>Homewood*<br/>Industry*<br/>Koppel*<br/>Morion</p> | <p>Midland*<br/>New Brighton*<br/>New Golilee*<br/>New Sewickley<br/>North Sewickley<br/>Ohioville*<br/>Potterson<br/>Potterson Heights*<br/>Puloski<br/>Rochester*<br/>Rochester<br/>South Beaver<br/>West Moyfield*<br/>White</p> |
|--|--|---|

\* Boroughs

Consult your State or Federal plant pest control inspector or your county agent for assistance regarding areas under regulation and requirements for moving regulated articles.

U. S. Department of Agriculture  
Agricultural Research Service  
Plant Pest Control Division  
Cooperating with affected States  
Revised August 1967

Infestations also occur in southern Ontario, Canada. The Department of Agriculture of Canada is enforcing regulations to prevent artificial spread.

(See reverse for list of regulated articles.)

Regulated articles and their certification periods are as follows:

<u>Crop or Article</u>	<u>Certification Period</u>
Small grains such as Barley, Oats, and Wheat (1)	June 1 - Nov. 30
Corn	
Fresh Market (sweet corn)	Year-Round
.....	.....
Ear Corn, other than sweet corn	August 1 - March 31
Gross and Forage Seed (1)	Year-Round
Hay (except marsh hay) (2)	June 1 - Jan. 15
Strow and Marsh Hay	July 1 - Feb. 28
Sod	Year-Round
Used Harvesting Machinery	Year-Round
Fodder and Plant Litter	Year-Round

- (1) Small grains (except oats and barley) and grass and forage seed, cleaned to meet State seed sales requirements are exempt from certification.
- (2) Pelletized hay is exempt from certification and treatment requirements.





(1)  
Small grains (except oats and barley) and grass and forage seed,  
cleaned to meet State seed sales requirements are exempt from  
certification.

(2)  
Pelletized hay is exempt from certification and treatment require-  
ments.

STABLE FLY (Stomoxys calcitrans) - OKLAHOMA - Averaged 2 per head on untreated Payne County cattle. (Okla. Coop. Sur.).

BED BUG (Cimex lectularius) - ALABAMA - Heavy in several poultry houses and hatcheries in State. Reports apparently increased in State during year. (Led-better).

LONE STAR TICK (Amblyomma americanum) - OKLAHOMA - Larvae ranged 50-75 per drag, nymphs and adults 1-2 per drag in Muskogee County. (Okla. Coop. Sur.).

BLACK WIDOW SPIDER (Latrodectus mactans) - NEVADA - Heaviest in many years in northwestern counties. Large numbers continue to enter various buildings and grammar school at Carson City, Ormsby County; numerous in classrooms. (Nev. Coop. Rpt.). UTAH - Entered laundry room in university dormitory at Logan, Cache County. (Knowlton).

#### STORED PRODUCTS

RICE WEEVIL (Sitophilus oryzae) - ALABAMA - Adults very heavy on corn ears in Mobile, Baldwin, Monroe, Butler, Lowndes, and other central counties; ranged 25-30 in some ears of softer varieties in Baldwin and Monroe Counties. (Estes et al.).

SQUARE-NECKED GRAIN BEETLE (Cathartus quadricollis) - ALABAMA - Adults light to moderate in corn ears in Mobile, Baldwin, Monroe, Butler, Lowndes, and other central counties; up to 5 adults in some ears of softer varieties in Baldwin and Monroe Counties. (Estes et al.).

PINK SCAVENGER CATERPILLAR (Sathrobrotia rileyi) - ALABAMA - Larvae in nearly all damaged ears examined in Mobile, Baldwin, Monroe, Butler, Lowndes, Autauga, Chilton, and Coosa Counties. (Henderson et al.).

#### BENEFICIAL INSECTS

DAMSEL BUGS (Nabis spp.) - ARKANSAS - Continue active on northwest area alfalfa. (Boyer).

ASSASSIN BUGS (Sinea spp.) - ARIZONA - Averaged 40 per 100 sweeps on Maricopa and Pinal County alfalfa. (Ariz. Coop. Sur.).

BIG-EYED BUGS (Geocoris spp.) - ARIZONA - Averaged 45 per 100 sweeps on Maricopa and Pinal County alfalfa. (Ariz. Coop. Sur.).

LADY BEETLES - NEW MEXICO - Ranged 1-30 per 25 sweeps in alfalfa in Bernalillo, Dona Ana, Sandoval, and Torrance Counties. (Elson, Heninger).

#### FEDERAL & STATE PLANT PROTECTION PROGRAMS

CITRUS BLACKFLY (Aleurocanthus woglumi) - MEXICO - Biological Control Zone - Inspected 19,291 trees on 98 properties in 3 municipios of southern Tamaulipas. Found light infestations on 2,540 trees on 34 properties. Chemical Control Zone - Inspected 35,951 trees on 267 properties in States of Tamaulipas and Nuevo Leon. Found one infested tree 1 mile south of Linares, Nuevo Leon. Additional 18 infested trees found on 3 infested properties 1 mile northeast of Linares making total of 88 infested trees on these 3 properties. Inspection of 262 trees on 16 properties in Baja California negative. At Linares, 1,681 trees on 2 properties received third insecticide application; first spray applied to 5,619 trees on 4 properties. Second and third treatments made on 2 infested properties and environs at Hermosillo, Sonora. Area treated comprised 27 properties with 197 citrus trees. (PPC Mex. Reg., Aug. Rpt.).

COMSTOCK MEALYBUG (Pseudococcus comstocki) - CALIFORNIA - Initial biological control attempt at Porterville, Tulare County, progressing satisfactorily. Released first 40,000 Cryptolaemus montrouzieri (a lady beetle) September 13; adults and larvae feeding heavily on mealybugs October 6. Parasite releases September 27-28 included 2,710 Allotropa burrelli (a platygasterid wasp) and 485 Clausenia purpurea (an encyrtid wasp). Also plan release of Pseudaphycus sp. (an encyrtid wasp) in this infestation. (Cal. Coop. Rpt.).

GRASSHOPPERS - KANSAS - Melanoplus sanguinipes moderate to heavy, 10-20 per square yard, along roadsides and margins of wheat fields in Clay, Washington, Marshall, and Atchison Counties. (Simpson).

JAPANESE BEETLE (Popillia japonica) - MARYLAND - Several adults feeding on favored hosts in Caroline and Dorchester Counties October 1-7. (U. Md., Ent. Dept.).

KANSAS - Summer trapping program ended in September; results negative for year. (Simpson).

MEXICAN FRUIT FLY (Anastrepha ludens) - MEXICO - Total of 2,181 inspections made of 560 traps on 555 properties at Ensenada, Tecate, and Tijuana, Baja California. Captured 3 unmarked flies, 1 male and 1 female at Ensenada and 1 male at Tecate during August; determinations pending. Examination of 2 pounds of fallen host fruit at Ensenada negative. Inspection of 17 pounds of fallen sapota fruit at Tijuana revealed larvae in fruit from 3 properties; determination pending. Captured 14,350 marked A. ludens during August: Tijuana 12,993; Tecate 1,355; Ensenada 2. Captured 14 native flies for season: Tecate 1, Tijuana 13. Released 3,555,000 sterile A. ludens pupae in Tijuana and Tecate. (PPC Mex. Reg.).

PINK BOLLWORM (Pectinophora gossypiella) - CALIFORNIA - Second male taken in San Joaquin Valley from sex lure trap at Oildale, Kern County; about 10 miles from Edison find. Intensive visual inspection and trapping underway. (Cal. Coop. Rpt.).

NEVADA - Trapped 2 gravid females and 25 males October 4-9 in Pahrump Valley, Nye County: Collected 20 males by sex lure, 3 by argon light adjacent to a sex lure trap, and 2 males and 2 females by argon light with sex lure "wick" under light source. (Nev. Coop. Rpt.). ARIZONA - General in top cotton crop in Pinal County; larvae in lint cleaners in Pinal and Yuma Counties. (Ariz. Coop. Sur.).

NEW MEXICO - Continues increasing with warm weather. Larvae infested 4-36 percent of green bolls in Roswell area and 16-52 percent in Hagerman area, Chaves County; in up to 72 percent of bolls in Artesia area, Eddy County. (Mathews). Increasing rapidly, infesting 20-88 percent of green bolls in area from Brazito to Leasburg in Dona Ana County. (Campbell, Elson).



HAWAII INSECT REPORT

New State of Hawaii Record - A SPIDER MITE (Oligonychus stickneyi) moderately damaging Bermuda grass at Hickam Air Force Base, Oahu. Det. by F. Haramoto. (Mitchell, Funasaki).

Turf, Pasture - Larvae of a PYRAUSTID MOTH (Psara licarsisalis) light to heavy, up to 75 per square foot, on Kikuyu grass at KuaLoa Ranch in Kaaawa, Oahu; damage severe in spots and spreading; 80 percent of eggs on buffalo grass parasitized by a minute egg parasite (Trichogramma sp.) in Ewa. (Davis et al.).

Corn and General Vegetables - BEET ARMYWORM (Spodoptera exigua) moderate to heavy in young corn field in Waianae, Oahu; damage light to green onions in Waimanalo. (Yamamoto, Sato). All stages of SOUTHERN GREEN STINK BUG (Nezara viridula) heavy on corn and soybeans on 650 acres at 4,600 feet elevation on Waikii, Hawaii. This is highest elevation of activity recorded on this island to October 13, 1967. (Yoshioka). LEAF MINER FLIES (Liriomyza spp.) moderate to heavy on tomatoes and beans in Waianae, and light on green onions in Waimanalo, Oahu. (Yamamoto, Sato). CARMINE SPIDER MITE (Tetranychus telarius) moderate to heavy on snap beans in Waimanalo. (Sato). All stages of a PLATASPID BUG (Coptosoma xanthogramma) very light on snap beans in Hauula, Oahu; 3-5 adults per vine. (Sato).

Fruits - RED-BANDED THRIPS (Selenothrips rubrocinctus) adults and nymphs severely scarring guava fruits at Malama-Ki in Puna, Hawaii Island. (Yoshioka).

Beneficial Insects - LANTANA LEAF BEETLE (Octotoma scabripennis) adults and larvae numerous on lantana throughout South Kona. (Yoshioka).

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INSECT DETECTION

New State Records

ASIATIC OAK WEEVIL (Cyrtopistomus castaneus) - ILLINOIS - Collected at lights by C. S. Cutright July 24, 1967, at Effingham, Effingham County. Swept from alfalfa by C. E. White September 7 at Neoga, Cumberland County. Collected about buildings by C. Cowser September 11 at Oconee, Shelby County. (Petty).

A JUNE BEETLE (Cotinis texana) - NEVADA - Live female taken on rosebush in home garden at Las Vegas, Clark County. Det. by R. C. Bechtel. (p. 945).

A SPIDER MITE (Oligonychus stickneyi) - HAWAII - Damaging Bermuda grass at Hickam Air Force Base, Oahu. Det. by F. Haramoto. (p. 949).

New County Records

ASIATIC OAK WEEVIL (Cyrtopistomus castaneus) - ILLINOIS - Cumberland and Shelby Counties. (See above).

SOUTHWESTERN CORN BORER (Zea diatraea grandiosella) - ALABAMA - Autauga and Chilton Counties. (p. 941).

AN APHID (Pentalonia nigronervosa) - CALIFORNIA - Orange County. (p. 945).

ELM LEAF BEETLE (Pyrrhalta luteola) - NEW MEXICO - Torrance County. (p. 946).



INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

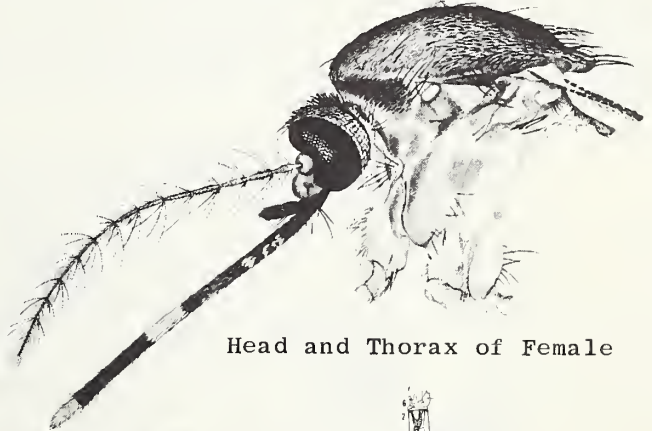
A MOSQUITO (Culex tritaeniorhynchus Giles)

Economic Importance: This species is considered to be the most important vector of Japanese B encephalitis in the Oriental region. As many as 6,000 cases with nearly 4,000 deaths occurred in the summer of 1924 in Tokyo. Death rates in epidemics have ranged from 40 to 70 percent among the Japanese. The disease, a virus which attacks the central nervous system, is somewhat similar to western (WE) and eastern (EE) encephalitis in the United States. A related species of mosquito, Culex tarsalis Coq., is a principal vector of WE in the U. S. Outbreaks of Japanese B encephalitis are sporadic in humans. Culex tritaeniorhynchus prefers to feed on cattle and pigs. Occasionally, the species feeds on birds.

Distribution: Bonin Islands, Burma, Central African Republic, Ceylon, China (Manchuria), Dahomey, Egypt, Gambia, Ghana, Guam, India, Indonesia, Iran, Iraq, Israel, Japan, Kenya, Korea, Lebanon, Malagasy Republic, Malaysia, Maldive Islands, Mozambique, Nigeria, Pakistan, Philippines, Ryukyu Islands (including Okinawa), Saudia Arabia, Senegal, Syria, Taiwan, Tanzania, Thailand, Togo, Turkey, Viet-Nam, U.S.S.R. (Armenia, Azerbaidzhan, Georgia, and Turkmen).



Adult Female



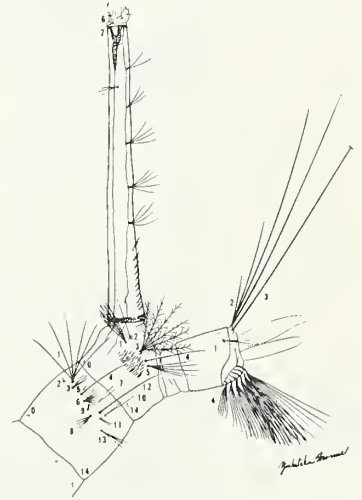
Head and Thorax of Female



Head of Male



Comb Scale



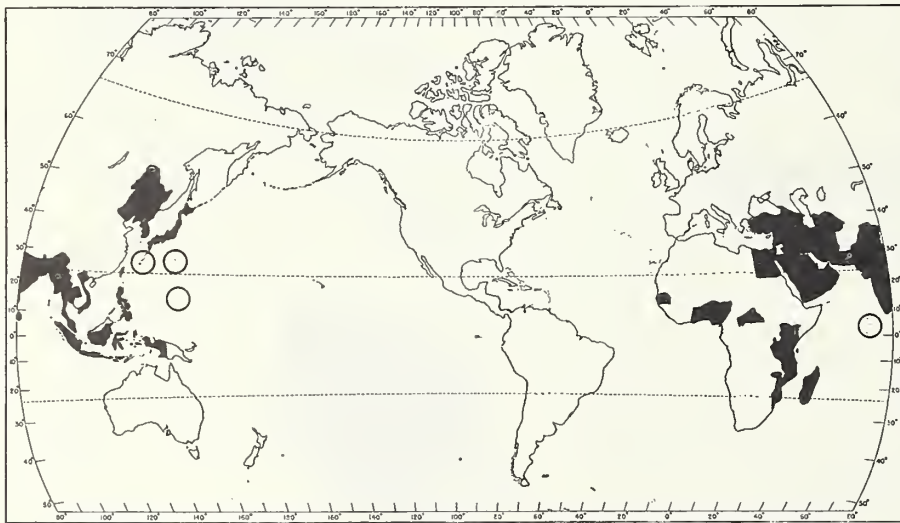
Larval Siphon and Terminal Segments



Hosts: Cattle, pigs, birds, and man.

Life History and Habits: The biology in Japan is as follows: Overwintering females appear in late March or early April. Under laboratory conditions, a female deposits up to 4 egg masses, each of which contains about 50-200 eggs. Hatching occurs in 2 days and pupation in 10 days. Adults appear in 2 days. Although most females enter hibernation in September, males continue to swarm until the beginning of November. Mating was observed in the swarms. Larvae have been collected under various situations in other parts of the Orient. They frequent hyacinth ponds, streams, swamps, temporary and semipermanent ground water habitats. Reports of their being in tidal marshes of low salinity and occasionally in tins or drums sunk in the ground have been made.

Description: ADULT - Female - Length 5 mm. or less. Generally may be identified by its small size, brown scaling on the scutum and accessory pale scaling on the lower surface of the proboscis. The species is difficult to distinguish from others in the vishnui subgroup but the long filamentous teeth of the buccopharyngeal armature are diagnostic. Male - Palpus longer than proboscis; two bands on long segment and 1 each at bases of last two segments. Fore and mid leg with unequal tarsal claws; the larger with a branch at about the middle but smaller with one close to its base. LARVA - Fourth stage - Length about 5 mm. not including siphon. Characterized by arrangement of bristles on thorax (hairs 1, 2, 3, 5, 6-P single pectinate, 4, 8-P bifid, pectinate, 7-P trifid, pectinate 14-P single, simple), shape of comb scales (which are fan shaped), and by anatomical characters of the siphon. The long narrow siphon usually with 5 pairs of 3 or 4 forked subventral bristles and one pair of 2 or 3 forked lateral bristles.



General Distribution of Culex tritaeniorhynchus Giles

Selected References: 1. Bram, R. A. 1967. Amer. Ent. Inst. Contrib. 2(1):1-296. 2. Colless, D. H. 1957. Ann. Trop. Med. and Parasitol. 51(1):102-116. 3. Colless, D. H. 1959. Ann. Trop. Med. and Parasitol. 53(3):259-267. 4. La Casse, W. J. and Yamaguti, S. 1950. Mosquito Fauna of Japan and Korea. Part I:230-236. 5. Wada, Y. and Coauthors. 1967. Trop. Med. (Nagasaki) 9(1):45-47. Figure of adult after La Casse and Yamaguti. Other figures after Bram.

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