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Cooperative Economic Insect Report

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PLANT PROTECTION AND QUARANTINE PROGRAMS
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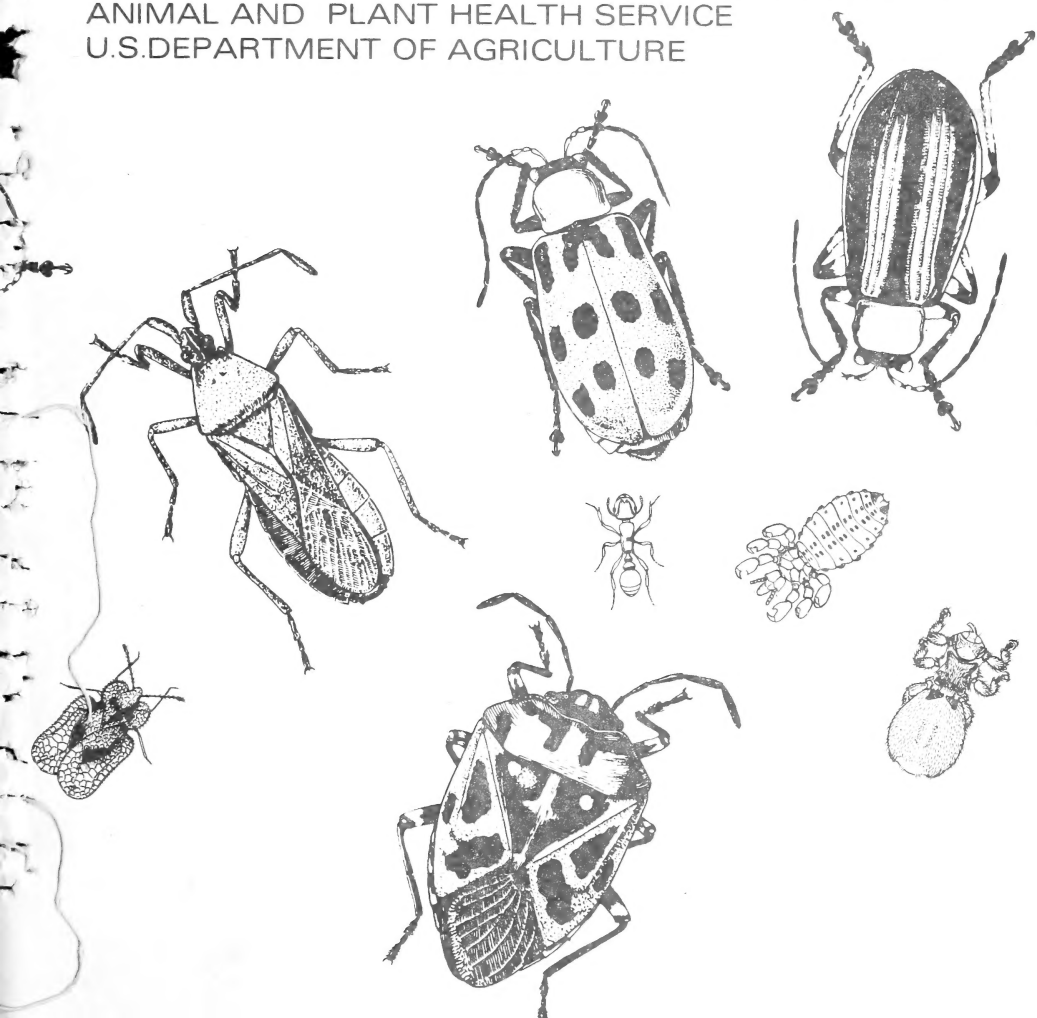

ANIMAL AND PLANT HEALTH SERVICE
PLANT PROTECTION AND QUARANTINE PROGRAMS
ECONOMIC INSECT SURVEY AND DETECTION STAFF

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 Service serves as a clearing house and does not assume responsibility for accuracy of the material.

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Volume 22 April 21, 1972 Number 16

COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Current Conditions

ARMY CUTWORM larvae damaged some alfalfa in Nebraska. (p. 227).

ALFALFA WEEVIL still heavy in Oklahoma. Damaged alfalfa in southwest Missouri. Increased in southern Illinois and central Maryland. Continues above economic levels in portions of Virginia and Kentucky. Above control levels in west Tennessee and limited area of Arkansas. (pp. 228-229).

SCREWWORM cases continue to increase in the U.S. (p. 230).

Detection

- AN APHID collected for the first time in Tennessee. This is a new North American record. Rare species. Record from Europe and England. (p. 231).

A WEEVIL reported for first time from Mississippi for a new State record. (p. 230).

For new county records see page 232.

Special Reports

Insects Not Known to Occur in the United States
A BARK BEETLE (Tomicus piniperda) (pp. 234-236).

Reports in this issue are for week ending April 14 unless otherwise indicated.

CONTENTS

WEATHER OF THE WEEK ENDING APRIL 17

Reprinted for weekly Weather and Crop Bulletin supplied by environmental Data Service, NOAA.

PRECIPITATION: Showers fell Monday from Missouri to Pennsylvania. Light rains fell along the northern Pacific coast and snow flurries occurred in the northern Rocky Mountains. Most of the precipitation early in the week was light. Showery weather occurred Tuesday along a Quasi-stationary front, that stretched from Utah to Maryland. Showers were scattered from Utah to Kansas, but were more general from Missouri to the lower Ohio River Valley. Snow whitened the northern Great Plains. A Pacific storm soaked the coast from Vancouver, Washington, to Brookings, Oregon, with lighter showers southward to San Diego, California. Snow flurries occurred in the higher elevations in Washington. Another low along the eastern slopes of the Rocky Mountains produced a mixture of wet snow and rain in Montana and Wyoming. A band of thunderstorms stretched along the stationary front from the middle Mississippi River Valley to the middle Appalachians. A low developed in Utah Wednesday and crossed the central Rocky Mountains and intensified Thursday. High winds associated with a storm kicked up clouds of dust and sand over parts of the southwest. Gusts peaked at 60 m.p.h. or higher in spots in the interior of southern California and in Arizona, New Mexico, and north western Texas. Low visibility and strong winds slowed highway travel. Meanwhile, blizzards raged in Montana, Wyoming, Colorado, and the northern portions of Nevada and Utah. Six inches of snow fell Thursday forenoon at Owyhee, Nevada. Late Thursday, a storm was centered over western Kansas, a Quasi-stationary front extended from the storm center to another low off the coast of New England. Warm, moist, tropical air covered an area south of the front and arctic air lay north of the front. A long band of thunderstorms marked the frontal zone. Some of the thunderstorms produced hail and high winds. Some of "dry" thunderstorms filled air with dust and sand. Snow and cold rain fell north of the front. A storm centered over western Kansas moved toward the Great Lakes, followed by another, that developed in Texas and moved northeastward over the weekend. Weather of the week continued on page 233.

SPECIAL INSECTS OF REGIONAL SIGNIFICANCE

ARMY CUTWORM (Euxoa auxiliaris) - WYOMING - Larvae averaged less than 1 per 10 linear feet in 4 wheatfields in Goshen and Platte Counties. Up to 3 per square foot on weeds adjacent to Goshen County fields. Larvae 2 per 10 square feet in Platte County alfalfa field. (Parshall). COLORADO - Larvae light, averaged 1 per linear foot of wheat in Douglas and Elbert Counties. (Marquardt). NEBRASKA - Infested wheat and alfalfa in central and southwest districts. Count of 1.5 per square foot in first year alfalfa in Hitchcock County; about 15 percent of stand destroyed. Up to 4.5 per foot in 2 Lincoln County fields and up to 1.5 per square foot in 6 Dawson County fields. (Manglitz et al.).

ARMYWORM (Pseudaletia unipuncta) - OHIO - Moths appeared at Wooster, Wayne County and at Reynoldsburg, Franklin County. (Rings). KANSAS - Moths taken at blacklight trap at Manhattan, Riley County. (Bell).

BEET LEAFHOPPER (Circulifer tenellus) - WYOMING - Total of 1,280 samples of weed hosts taken during week of April 3-7 in Washakie and Big Horn Counties. Leafhoppers averaged 0.09 per square foot as compared to 0.13 in 1971 and 0.12 in 1970. (Patch et al.).

GREENBUG (Schizaphis graminum) - OKLAHOMA - Averaged 5 per linear foot in Major County wheatfield. Absent or very light in other fields in Major, Alfalfa, Woods, Woodward, Harper, and Ellis Counties. (Okla. Coop. Sur.). KANSAS - None or very light populations in wheat in southeast, south-central, and southwest districts. (Bell).

SPOTTED ALFALFA APHID (Therioaphis maculata) - NEW MEXICO - Light in alfalfa in Bernalillo, Eddy, and Chaves Counties, heavy in some isolated fields. (Mathews, Heninger). OKLAHOMA - Ranged 5-250 per 10 sweeps of alfalfa in northwest area. Light parasitism in Alfalfa County field. (Okla. Coop. Sur.).

TOBACCO BUDWORM (Heliothis virescens) - ALABAMA - First adults of season at lights in Lee County. (McQueen).

CORN, SORGHUM, SUGARCANE

CHINCH BUG (Blissus leucopterus leucopterus) - TEXAS - Infestations heavy near Giddings in Lee County on grain sorghum. Infested all grain sorghum checked in Groesbeck area of Limestone County. Heavy on grain sorghum in McLennan County. (Spivey et al.).

SOUTHWESTERN CORN BORER (Diatraea grandiosella) - ALABAMA - Limited surveys indicate larval survival very high in corn stubble in northern areas. (Murphy et al.).

MAIZE BILLBUG (Sphenophorus maidis) - ALABAMA - Adults light to moderate in 6 to 8-inch-high corn at Pansey in Houston County. (Roney).

SMALL GRAINS

BROWN WHEAT MITE (Petrobia latens) - CALIFORNIA - Counts of 20 per stem of barley at Paso Robles, San Luis Obispo County. (Cal. Coop. Rpt.). NEVADA - Heavy on grain at Lovelock, Pershing County.

About 500 acres (not irrigated) involved, mites moving from grain to alfalfa. In similar irrigated fields, mites no problem. (Stitt). OKLAHOMA - Counts in most fields ranged 5-50 per linear foot and up to 200 in some northwest area wheatfields. (Okla. Coop. Sur.). TEXAS - Heavy on small grains in some panhandle counties. (Green).

FORAGE LEGUMES

ALFALFA WEEVIL (Hypera postica) - IDAHO - First eggs of season at Melba, Canyon County. (Homan). UTAH - Adults noted in Cache and in Davis Counties. (Knowlton, Thornley). Damage light in Grand and San Juan Counties. (Jones). COLORADO - Larvae up to 6 per 10 sweeps in Prowers County, up to 10 in Otero County alfalfa. (Schweissing). NEW MEXICO - Light in alfalfa at Albuquerque, Bernalillo County. (Heninger). TEXAS - Infested alfalfa in Wilbarger and Motley Counties past 14 days. Larvae ranged 1-3 per bud in Motley County. Apparently declining in these counties. (Pallmeyer, Boring). OKLAHOMA - Declined in southern area alfalfa. Infestations still heavy in other counties and in east-central, central, southwest, west-central, and north-central areas. Light to moderate (larvae ranged 10-100 per 10 sweeps) in northwest area with only occasional adults noted. (Okla. Coop. Sur.).

KANSAS - H. postica generally light in alfalfa in south-central, southwest, and northeast districts. (Bell). MISSOURI - Heavy throughout southern half of State. Some alfalfa fields defoliated in southwest area. Controls applied throughout southern areas. (Munson). ILLINOIS - Populations increased almost ten times in southern one-fourth of State. Counts of 1,300 larvae per 100 sweeps in Jackson and Perry County area. Damage economic south of Washington and White Counties. (Ill. Ins. Sur.). INDIANA - Larval feeding light on 2 to 6-inch-tall alfalfa in southern district. Larvae in all fields examined, as far north as Vigo and Morgan Counties, with first instars dominant. As oviposition continues, first instar larval numbers expected to increase. (Meyer). MARYLAND - Increased in central areas. First and second instar larvae damage ranged 2-10 percent in most fields in Harford, Baltimore, Montgomery, and Prince Georges Counties. One field showed 90 percent of tips injured. (U. Md., Ent. Dept.).

VIRGINIA - Sampled 20 fields (196 acres), 56 percent of tips infested and defoliation averaged 17.7 percent. Increased from previous week, indicates problem increasing in Coastal Plain and southern Piedmont. Larval populations in northern Piedmont should not be economic for few weeks. Damage in mountain regions remains light. Twelve of 20 fields sampled; 60 percent exceeded economic threshold. (Allen). KENTUCKY - Percent tips of alfalfa infested by larvae ranged by county: 40-100 in Warren and 68-85 in Barren as of April 7. Currently in Warren County 90-100 percent of tips infested in fields surveyed. (Scheibner, Barnett). Infested 25+ percent of tips in Hardin and Caldwell Counties; controls applied. (Raney, Barnett). H. postica larvae averaged 46.2 and eggs 180 per square foot in some Fayette County fields. (Parr, Barnett).

TENNESSEE - Adults 4-5 per stalk in alfalfa surveyed in south-central areas. (Cagle). Populations at control levels in older western area fields. (Locke). ALABAMA - Larval feeding on 50-80 percent of leaves on untreated alfalfa in small field in Marshall County. (Murphy et al.). ARKANSAS - Increased in Fayetteville,

Washington County. Previous surveys in this field show counts of 300-1,200 per 100 sweeps past 21 days. Currently 150 larvae in single sweep in this field. (Boyer).

PEA APHID (Acyrthosiphon pisum) - NEVADA - Populations reduced to 10 per sweep of alfalfa by predators. (Hoff, et al.). NEW MEXICO - Light in alfalfa in Eddy and Chaves Counties. (Mathews). Ranged 10-30 per 25 sweeps in Bernalillo County. (Heninger). KANSAS - Generally light in alfalfa in southeast, south-central, southwest, and northeast districts, except one field in Sumner County where infestation 1,000+ per 10 sweeps and plant yellowing noted. (Bell). OKLAHOMA - Averaged 800 per 10 sweeps on alfalfa in Garfield County. Ranged 5-200 per 10 sweeps in northwest area, parasitism light in most fields. Moderate still in most areas with only few scattered reports of heavy numbers. (Okla. Coop. Sur.).

WESTERN YELLOWSTRIPED ARMYWORM (Spodoptera praefica) - WASHINGTON - Moths ranged 1-17 in 19 of 50 pheromone traps in Walla Walla County. (Halfhill).

ALFALFA LOOPER (Autographa californica) - WASHINGTON - Moths ranged 1-50 in 36 of 50 pheromone traps in Walla Walla County. (Halfhill, Apr. 5).

ALFALFA CATERPILLAR (Colias eurytheme) - COLORADO - Larvae ranged 1-10 per 10 sweeps of alfalfa in Prowers County. (Schweissing).

ALFALFA WEBWORM (Loxostege commixtalis) - IDAHO - Damage light on 300 acres of alfalfa in Canyon County. (Homan).

COTTON

BEET ARMYWORM (Spodoptera exigua) CALIFORNIA - Counts of this species and Frankliniella occidentalis (western flower thrips) damaging in Imperial County. (Cal. Coop. Rpt.).

SUGAR BEETS

BEET ARMYWORM (Spodoptera exigua) - CALIFORNIA - Populations unusually heavy with some root damage in some Imperial County fields. (Cal. Coop. Rpt.).

MISCELLANEOUS FIELD CROPS

WESTERN FLOWER THRIPS (Frankliniella occidentalis) - ARIZONA - Populations heavy in safflower fields in Maricopa and Yuma Counties; no damage. (Ariz. Coop. Sur.).

DECIDUOUS FRUITS AND NUTS

EUROPEAN RED MITE (Panonychus ulmi) - OHIO - Eggs noted on apple trees at green tip stage in Clermont County. Eggs ranged 30-40 per bud on Cumberland variety and 100-125 per half inch of stem; 10-15 per bud on Colorado red delicious and 60-80 per half inch of stem; 8-15 per bud of Colorado red york and 40-60 per half inch of roughened stem. Eggs 50 per bud and 150 per half inch of peach stem in Clermont County. Cold weather destroyed most peach buds in southern areas. (Fox).

PEAR PSYLLA (Psylla pyricola) - MICHIGAN - Egg laying underway in Berrien, Van Buren, and southern Allegan Counties. Optimum control may be too late for adults in this area. (Sauer).

ORNAMENTALS

A WEEVIL (Scyphophorus acupunctatus) - MISSISSIPPI - Specimens collected from century plants in Mississippi City, Harrison County, by M. M. Price on March 23, 1972. Determined by V. H. Owens, confirmed by R. E. Warner. This is a new State record. This species native of southwestern U.S. and northern Mexico. Reported from California, New Mexico, Texas, Oklahoma, Arkansas, and Hawaii. (Robinson).

FOREST AND SHADE TREES

ELM LEAF BEETLE (Pyrrhalta luteola) - OKLAHOMA - Adults on Siberian elm in Payne County and egg laying underway. First report of season. Adults in Major and Cleveland Counties. (Okla. Coop. Sur.). KANSAS - Adults, no eggs, on leaves of Siberian elm at Manhattan, Riley County. First of season. (Bell).

A TENT CATERPILLAR (Malacosoma incurvum discoloratum) - NEVADA - Control needed on cottonwoods at Mesquite, Clark County (Williams) light in Moapa Valley, Clark County. (Zoller).

MOURNINGCLOAK BUTTERFLY (Nymphalis antiopa) - NEVADA - Heavy and scattered on elm trees at Las Vegas, Clark County. (Zoller).

MAN AND ANIMALS

SCREWWORM (Cochliomyia hominivorax) - Total of 160 cases reported in U.S. April 9-15 as follows: TEXAS: Atascosa 5, Bandera 2, Bexar 1, Brewster 1, Brooks 2, Cameron 1, Dimmit 4, Duval 4, Bee 12, Caldwell 1, Colorado 1, Comal 2, De Witt 5, Frio 1, Hidalgo 7, Jim Hogg 12, Kenedy 2, Kinney 2, La Salle 1, Live Oak 5, Maverick 6, Fayette 1, Goliad 9, Gonzales 4, Guadalupe 1, Jim Wells 4, McMullen 3, Medina 7, Starr 6, Terrell 3, Uvalde 1, Webb 10, Zapata 7, Zavala 1, Karnes 10, Kleberg 1, Lee 1, Mills 1, San Patricio 3, Wilson 2. ARIZONA: Cochise 7, Pinal 1. Total of 304 cases reported in portion of Barrier Zone in Republic of Mexico as follows: Sonora 149, Chihuahua 29, Coahuila 25, Nuevo Leon 45, Tamaulipas 56. Total of 65 cases reported in Mexico south of Barrier Zone. Barrier Zone is area where eradication operation underway to prevent establishment of self-sustaining population in U.S. Sterile screwworm flies released: Texas 92,702,000; Arizona 6,680,000; Mexico 16,570,000. (Anim. Health).

HORN FLY (Haematobia irritans) - OKLAHOMA - Ranged 500-800 per head on cattle in Major County and 150-300 per head in Payne and Noble Counties. Heavy in Marshall and Cotton Counties and moderate in Garvin and Garfield Counties. (Okla. Coop. Sur.).

SHEEP BOT FLY (Oestrus ovis) - INDIANA - First larva recovered on April 13 in Warren County. (Chandler).

MOSQUITOES - MINNESOTA - General hatch of Aedes abserratus, A. excrucians, A. fitchii and A. stimulans in Ramsey and Hennepin Counties. (Minn. Pest Rpt.).

HOUSE FLY (Musca domestica) - OKLAHOMA - Increasing in untreated barns in Payne County. Averaged 9 per Scudder grid. (Okla. Coop. Sur.).

HOUSEHOLDS AND STRUCTURES

BROWN SPIDER BEETLE (Ptinus clavipes) - IOWA - Collected in home at Alden, Hardin County, April 7. This is a new county record. (Iowa Ins. Sur.).

MISCELLANEOUS WILD PLANTS

AN APHID (Decorosiphon corynothrix) - TENNESSEE - Specimens collected near Roan Mountain, Carter County, June 4, 1971 by W. Tolbert. Host Polytrichum sp. (probably commune or juniperinum). Determined by L. M. Russell. This is a new North American record. Recorded in Europe and England. Nothing known of biology. (PP).

BENEFICIAL INSECTS

CONVERGENT LADY BEETLE (Hippodamia convergens) - ARKANSAS - Continues dominant in northwest areas. Reproduction underway, larvae found in most green vegetation. (Boyer). OKLAHOMA - All stages common in alfalfa in northwest area. Ranged 2-40 per 10 sweeps. Present in most wheatfields checked. (Okla. Coop. Sur.). KANSAS - Adults in alfalfa. Populations (average per 10 sweeps) as follows in counties indicated (fields per county in parentheses): Butler 2-14 (2); Cowley 9-9 (2); Sumner 2-15 (5); Sedgwick 1-7 (5); Harper 1-2 (2); Kingman 6-13 (3); Harvey 13 (1); Riley 1-3 (3); Ford 7 (1); Meade 5 (1); and Gray 9 (1). (Bell). COLORADO - Adults of this species and H. parenthesis in alfalfa of Prowers County. (Schweissing).

DAMSEL BUGS (Nabis spp.) - KANSAS - Ranged 2-6 per 10 sweeps in 3 Riley County alfalfa fields. (Bell). OKLAHOMA - Mostly adults, ranged 1-2 per 10 sweeps in most alfalfa in northwest area. (Okla. Coop. Sur.).

HONEY BEE (Apis mellifera) - UTAH - Noted at apricot blossoms in Cache County, April 6 and at cherry blossoms in Box Elder County, April 1. (Knowlton). OHIO - Lost 5 out of 55 colonies during winter in Cuyahoga County. Adults noted in few abandoned buildings in Portage County. (Custer).

A BRACONID (Microctonus colesi) - OHIO - Specimens recovered in Meigs County. This is a new county record. (Flessel).

A FLOWER BUG (Orius insidiosus) - OKLAHOMA - Adults up to 1 per 10 sweeps in most northwest area alfalfa fields. (Okla. Coop. Sur.).

FEDERAL AND STATE PLANT PROTECTION PROGRAMS

A GRASS BUG (Labops sp.) - UTAH - Moderate on 640 acres of crested wheatgrass in Millard County. (Judd).

MORMON CRICKET (Anabrus simplex) - UTAH - Outbreak of first and second instar nymphs on 160 acres of rangeland in Juab County. (Judd).

General Vegetables - CARMINE SPIDER MITE (Tetranychus cinnabarinus) eggs, nymphs, and adults 200+ per square inch on older leaves in 0.5 acre of eggplant at Kahaluu, Oahu. (Kawamura).

Fruits and Nuts - COCONUT SCALE (Aspidiotus destructor) generally trace in commercial papaya plantings in windward Oahu. About 50 percent of trees in one acre plantings at Kahaluu and Kaaawa, Oahu with small, spotty colonies on 5 percent of leaves. Collected 400+ larvae of a NOCTUID MOTH (Melipotis indomita) under loose bark and debris at base of 3 kiawe trees at Sand Island and one at Hickam, Oahu first week of April. Light trap collections indicates adult population heavy during last week of March (182 from one trap) but declined during first two weeks of April. (Kahale).

Beneficial Insects - A BLACKBERRY SKELETONIZER (Schreckensteinia festaliella) larvae and eggs on terminal leaves of blackberry. Larvae of Apotoforma sp. (a tortricid moth) infested 75 percent of the terminal leaves also. Percent of internodes of puncture vine infested by a PUNCTUREVINE STEM WEEVIL (Microlarinus lypriformis) on Maui as follows: Waikapu 66, Puunene 89, Kihei 42, and Lahaina none. (Miyahira). Infestation of fruits and terminals of Indian rhododendron (Melastoma malabathricum) during March by MELASTOMA BORER (Selca brunella) averaged 21 percent. On Kauai, 4 and 39 percent of fruits infested at Knudsen Gap and Hanahanapuni, respectively. (Sugawa).

DETECTION

New North American Record - AN APHID (Decorosiphon corynothrix) - TENNESSEE - Carter County. (p. 231).

New State Record - A WEEVIL (Scyphophorus acupunctatus) - MISSISSIPPI - Harrison County. (p. 230).

New County Records - A BRACONID (Microctonus colesi) - OHIO Meigs (p. 231). BROWN SPIDER BEETLE (Ptinus clavipes) - IOWA - Hardin (p. 231).

LIGHT TRAP COLLECTIONS

	Temperature °F.	Precipitation (inches)	Type of trap (BL = blacklight, I = incandescent, MV = mercury vapor, O = other)	Agrotis ipsilon (dingy cutworm)	Estigmene acrea (salt marsh caterpillar)	Enoa auxiliaris (gray cutworm)	Faronta diffusa (wheat head armyworm)	Feltia subterranea (granulate cutworm)	Heliothis virescens (tobacco budworm)	H. zea (bollworm, corn earworm, tomato fruitworm)	Laspeyresia pomonella (codling moth)	Loxostege commixtalis (alfalfa webworm)	Loxostege sticticalis (garden webworm)	Loxostege rantalis (beet webworm)	Mandura quinquemaculata (tomato hornworm)	Mandura sexta (tobacco hornworm)	Ostrinia nubilalis (European corn borer)	Pectinophora gossypiella (pink bollworm)	Peridroma saucia (variegated cutworm)	Pseudaletia unipuncta (armyworm)	Spodoptera exigua (beet armyworm)	Spodoptera frugiperda (fall armyworm)	Spodoptera orthogalli (yellowstriped armyworm)	Trichoplusia ni (cabbage looper)	Crops
FLORIDA																									
Gainesville 4/7-13			BL				8	1											1						
KANSAS																									
Manhattan 4/14			BL	3		1											11		9						
MISSOURI																									
Portageville 4/7-13			BL	1													5		110						
MISSISSIPPI																									
Stoneville 4/7-13	36-87		2BL	38	2		1										74		225			4			
OHIO																									
Reynoldsburg 4/7-14			BL														1		2						
Wooster 4/7-14			BL														1		1						
TENNESSEE																									
Dyer 4/10-14			BL	116													68		692			2			
Hardeman 4/10-14			BL	233	1		1										520		2316			30		34	
Lake 4/10-14			BL	132													300		8876			1		1	
Madison 4/10-14			BL	44													78		480			3		1	
TEXAS																									
Waco 4/7-14			BL	77	1		91										58		36	1		24			

Weather of the week continued from page 226.

These storms and associated fronts produced scattered light to heavy thunderstorms over much of the eastern half of the Nation. Heavy showers fell from the Missouri Bootheel to the middle Ohio River Valley, Saturday forenoon. Weekly totals at spots in Kentucky exceeded 8 inches. Flash flooding occurred many places in southern Illinois, Kentucky, and nearby parts neighboring States. Meanwhile, light snow fell in the northern and central Rocky Mountains and northern Great Plains. Light rains fell at midweek in the northern portions of Arizona and New Mexico. The small weekly totals are especially significant because of extremely dry weather which has persisted in those States since December 1971.

TEMPERATURE: The week began with recordbreaking cold over parts of the East. Cape Hatteras registered 26 degrees Monday morning April 10. This is the coldest temperature of record for so late in the spring at Cape Hatteras. Light southerly breezes pushed Monday afternoon temperatures into the 60's as far north as southern Pennsylvania, the warming trend also occurred over mid-America. Grand Island, Nebraska, warmed to 82 degrees Wednesday afternoon and numerous stations in Oklahoma registered 100 degrees or higher. A large powerful storm moved from the Great Basin across the central Rocky Mountains to the central Great Plains at midweek. Northerly winds behind a storm plunged temperatures to below freezing over much of the Great Basin. Winnemucca, Nevada registered 14 degrees Thursday morning. Temperatures Thursday afternoon climbed to the 90's over most of Oklahoma and Texas, reaching 103 degrees at San Angelo, Texas. The northern Great Plains remained in cold air with maximums in the 40's Thursday afternoon. Cold weather pushed far southward over the western United States Friday morning, when Flagstaff, Arizona, registered 5 degrees, in contrast, the East warmed. Kansas City, Missouri, recorded 92 degrees Friday afternoon. The weekend was especially warm from Virginia to Florida, Richmond, Virginia, registered 87 degrees Saturday and 88 degrees Sunday. Maryland remained in the 60's on those days. Temperatures averaged below normal from the Pacific Ocean to the Rocky Mountains and over the Northeast and above normal over rest of the Nation. Parts of the central and southern Great Plains averaged 10 to 16 degrees warmer than normal.

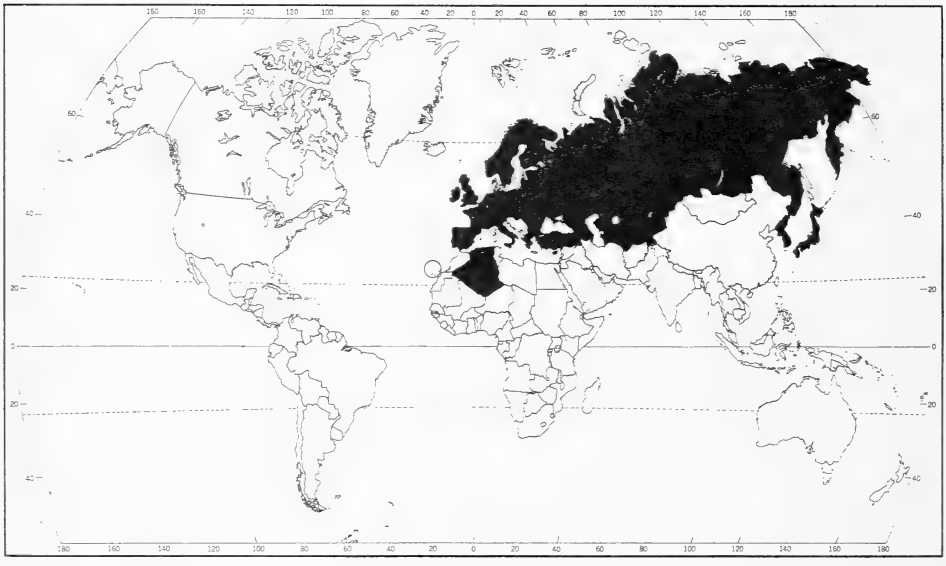
INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

A BARK BEETLE (Tomicus piniperda (Linnaeus))

Economic Importance: An important pest of pine, this scolytid beetle can quickly build up to outbreak numbers lasting many years. One of the most serious outbreaks in central Europe built up to a peak in 4 years. An outbreak in Great Britain devastated pines for 25 years. High populations are made possible by abundant breeding material. Buildups are aggravated by high temperatures and droughts which accelerate beetle development and which lower tree resistance.

Damage is caused by the feeding on phloem under thick bark at the base of the tree and by the feeding on pith in young shoots at the top of the tree. Bark feeding separates the bark from the tree, eventually killing the tree. Shoot feeding deforms the tree, making it grow forked or crooked, or permanently cropping it. Trees near Poznan, Poland, lost about 34 percent in girth increment, 25 percent in height, and 39 percent in volume in six years.

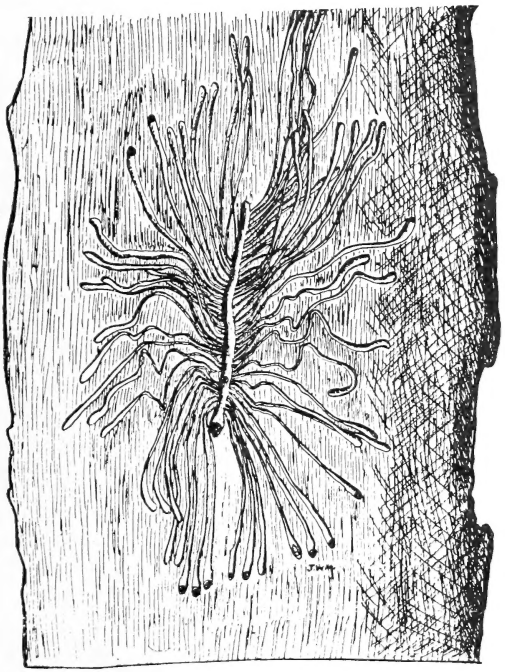
Distribution: Algeria, Austria, Belgium, Bulgaria, Canary Islands, Cyprus, Czechoslovakia, Finland, France, Germany, Great Britain, Greece, Hungary, Italy, Japan, Korea, Madeira, Netherlands, Norway, Poland, Portugal, Rumania, Russia, Spain, Sweden, Switzerland, and Turkey. In the United States this species has been intercepted with packing and crating materials, particularly dunnage, at ports of entry on many occasions since 1946. A find in a New Jersey nursery in 1913-1914 was eradicated. An adult was collected from a detection light trap at Savannah, Georgia, on June 23, 1971. A subsequent cooperative survey did not disclose additional beetles.



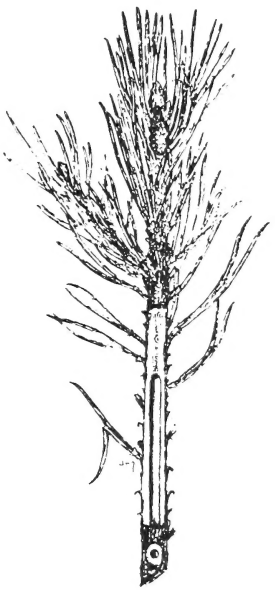
General Distribution of Tomicus piniperda

Hosts: Pines, especially Scotch pine. Chararas reported that Picea excelsa was a minor secondary host and that reports on Abies pectinata and Larix europea were rare.

Life History and Habits: This beetle overwinters as a fully grown larva, pupa, or adult. The last two stages have the highest survival rates. An adult may pass the winter in a pine shoot in Italy, under thick bark in France, or well below the snow line in Finland. During winter, adults may continue to feed in the shoots or in the bark. Emergence begins very early in the spring. In France, adults emerged at 54°F. and as early as February 29. The male and female build an egg gallery under thick bark in a weakened tree, fresh stump, or recently cut material. Healthy trees are attacked by breeding adults if population pressures are heavy. The egg gallery is 3 to 7 inches long, longitudinal, and shaped like a golf club. The larval galleries are 1.5 to 3.5 inches long, irregularly arranged, and often intermingled. Both types of galleries may score the sapwood slightly. Brown and white boring dust from the excavation lies in the bark fissures. From 60 to 160 eggs are laid singly on both walls of the gallery. Hatch is staggered over 14 to 21 days. In France, development from egg to adult averages 85 days, ranging from 55 to 130 days. The new adult cuts an exit hole and flies to the top of a pine tree to feed. It bores into a tender shoot, tunnels toward the tip, and seeks a fresh shoot after 1 to 2 weeks. The shoots quickly wither and brown. Snapped off by wind or rain, the hollow shoots litter the ground beneath the tree.

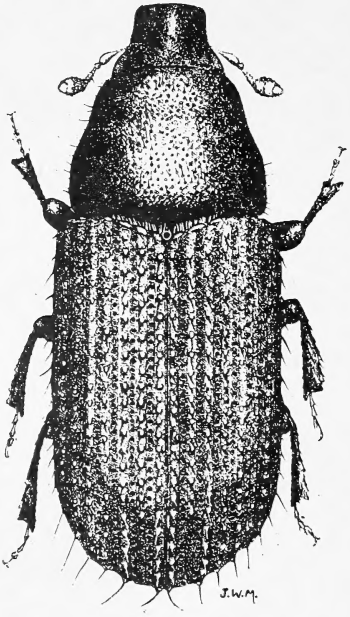


Gallery of
Tomicus piniperda



Pine shoot
tunneled by adult

The number of generations appears to vary. In Scotland, this species produced only one generation consisting of a major spring brood and a minor fall brood. Neither brood bred until the next year. In France at 64° F. and 76 percent relative humidity, this species produced two generations.



Adult

Description: ADULT - Length 3.4-4.5 mm., cylindrical, and dull brown or black with a glossy black thorax. On the declivity of the elytra, rows of tubercles bearing fine hairs alternate with rows of punctures. The second row of tubercles from the junction of the elytra is absent except at the top of the declivity. Beak finely, not densely punctate. LARVA - Length up to 5 mm. fully grown, slightly curved, legless, and white with a yellowish head. EGG - Length 1 mm., oval, smooth, and shining white.

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