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Cooperative
**ECONOMIC INSECT
REPORT**

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ECONOMIC INSECT SURVEY AND DETECTION

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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COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Current Conditions

No SCREW-WORM cases reported in the United States past 3 weeks. (p. 29).

COMMON CATTLE GRUB remains moderate in cattle in Oklahoma. (p. 29).

Special Reports

BOLL WEEVIL hibernation survey for fall of 1969 shows higher numbers than the fall of 1968 in all areas of the Carolinas, southern Tennessee, north delta and hill sections of Mississippi, and northeastern Louisiana. Counts were lower in south and central delta areas of Mississippi and in central Texas. (pp. 31-33).

Survey Methods. Selected References 1948. Part XXIV. (pp. 34-36).

Reports in this issue are for week ending January 9 unless otherwise indicated.

CONTENTS

Special Insects of Regional Significance.....	29
Insects Affecting	
Deciduous Fruits and Nuts.....	29
Man and Animals.....	29
Ornamentals.....	29
Beneficial Insects.....	29
Hawaii Insect Report.....	30
Light Trap Collections.....	30
Corrections.....	30
Boll Weevil Hibernation Survey - Fall 1969.....	31
Survey Methods. Selected References 1948. Part XXIV.....	34

WEATHER OF THE WEEK ENDING JANUARY 12

HIGHLIGHTS: Bitter cold weather persisted over most of the eastern half of the Nation and, combined with strong winds, snow, sleet, and freezing rain halted travel and forced the closing of schools, factories, and industries at many locations. Some warming occurred late in the week.

PRECIPITATION: Generous rains fell along the Pacific coast from Washington to northern California with snow in the nearby mountains. The snow depth now exceeds 100 inches at a few locations in the Cascades. Light snow fell in the Rocky Mountains and Great Plains. Heavy snow fell in the lee of the Great Lakes with some falls in western New York exceeding 24 inches. Light snow fell as far south as northern and central Louisiana and flurries occurred in Tennessee. Sleet, freezing rain, and freezing drizzle fell in many areas from the Ohio River Valley to the northern edge of the Gulf States. Strong winds drifted the snow badly and the deep drifts and glazed roads hindered transportation. Many schools, factories, and businesses in the eastern half of the Nation closed for 1 or more days because of the adverse weather.

TEMPERATURE: Temperatures averaged slightly above normal over California and Nevada and much below normal over the rest of the Nation. Most of Montana and a large area from the central and southern Great Plains averaged 12° to 24° colder than normal. The temperature at Waterloo, Iowa, dropped below 0° about 10 p.m. Sunday evening, January 4, and did not climb to 0° again until Saturday afternoon, January 10. On Thursday afternoon the highest temperatures at Indianapolis, Indiana, and Columbus, Ohio, reached -3° and -2°, respectively. Only twice in 99 years have colder maximums occurred at Indianapolis and -2°, at Columbus was the coldest maximum in the 20th century. In many localities in Ohio, the temperature remained below zero for up to 40 hours. In about 1 year in 10, can temperatures in Ohio be expected to remain below zero for 15 hours. Several deaths from exposure were attributed to the subzero weather in Indiana which continued for 4 consecutive days. In many eastern areas, 20 to 40 m.p.h. winds added to the bite of the frigid temperatures. Temperatures over the West climbed to above normal late in the week and moderated slightly in the East over the weekend. (Summary supplied by Environmental Data Service, ESSA.)

SPECIAL INSECTS OF REGIONAL SIGNIFICANCE

GREENBUG (Schizaphis graminum) - ARIZONA - Light on early planted grains at Yuma, Yuma County. (Ariz. Coop. Sur.). KANSAS - None found on wheat December 30 and 31 in Saline, Ellsworth, and Lincoln Counties. Current survey negative in Shawnee, Osage, Wabaunsee, Geary, Jefferson, Douglas, Anderson, Neosho, and Labette Counties. (Martinez et al.).

DECIDUOUS FRUITS AND NUTS

PEACH TREE BORER (Sanninoidea exitiosa) - TENNESSEE - Light in treated nursery-grown peach trees in Warren County. (Warren).

SAN JOSE SCALE (Aspidiotus perniciosus) - FLORIDA - All instars on 10 percent of 1,200 pear plants in nursery at Glen St. Mary, Baker County, December 31, 1969. (Collins).

TWO-SPOTTED SPIDER MITE (Tetranychus urticae) - CALIFORNIA - Adults heavy on bark and trunks of peach nursery stock at Lincoln, Placer County. (Cal. Coop. Rpt.).

ORNAMENTALS

A MEALYBUG (Pseudococcus microcircularis) - CALIFORNIA - Gravid adults heavy on orchid roots and planting media in orchid house at Soquel, Santa Cruz County. This species particularly damaging. (Cal. Coop. Rpt.).

AN ARMORED SCALE (Phenacaspis cockerelli) - FLORIDA - Adults heavy on all 30 areca palms in nursery at New Port Richey, Pasco County, December 30, 1969. (Williams).

A NOCTUID MOTH (Argyrogramma basigera) - PENNSYLVANIA - Heavy in small greenhouse in Union County. Variety of hosts damaged. (Gesell).

MAN AND ANIMALS

SCREW-WORM (Cochliomyia hominivorax) - No cases reported in U.S. January 4-10. Total of 55 laboratory-confirmed cases reported in portion of Barrier Zone in Republic of Mexico December 28, 1969, to January 3, 1970, as follows: Baja California 1, Territorio sur de Baja California 1, Sonora 42, Chihuahua 10, Coahuila 1. Total of 6 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 screw-worm flies released: Texas 468,000; Mexico 89,018,000. (Anim. Health Div.).

COMMON CATTLE GRUB (Hypoderma lineatum) - OKLAHOMA - Ranged 0-15 (average 8) per head in steers and 0-14 (average 5) in cows in Payne County. Moderate in Cotton County. (Okla. Coop. Sur.).

HOG LOUSE (Haematopinus suis) - OKLAHOMA - Moderate on hogs in Cotton County. (Okla. Coop. Sur.).

BENEFICIAL INSECTS

HONEY BEE (Apis mellifera) - ARIZONA - Of 89 apiaries (6,055 colonies) inspected during December 1969 in irrigated areas of Maricopa and Pinal Counties, 35 colonies burned and 4,347 found dead. (Ariz. Coop. Sur.).

AN ENCYRTID WASP (Comperia merceti) - OKLAHOMA - Light in home infested with Supella supellectilium (brown-banded cockroach) in Stillwater, Payne County. (Okla. Coop. Sur.).

HAWAII INSECT REPORT

Corn - Nymphs and adults of CORN PLANTHOPPER (Peregrinus maidis) heavy, up to 60 in whorls of young corn and under leaf sheaths of older plants in 10 acres of sweet corn at Halawa, Oahu. Predators absent. (Funasaki).

Pastures - Larvae of a GRASS WEBWORM (Herpetogramma licarsisalis) trace to light in pastures on Maui and Hawaii; trace in pastures on Oahu and Kauai. (Miyahira et al.).

General Vegetables - LEAF MINER FLIES (Liriomyza spp.) generally light in snap beans at Waianae, Oahu; moderate to heavy in 0.5 acre of young cucumber plants in same area. HEMISPHERICAL SCALE (Saissetia coffeae) heavy in 0.25 acre of bittermelon at Ewa, Oahu. (Sawa).

Beneficial Insects - LANTANA DEFOLIATOR CATERPILLAR (Hypena strigata) moderate to heavy on lantana along roadsides and in wastelands at Nawiliwili and Lihue, Kauai, at 3,000 feet elevation. (Sugawa). Probably a BRACONID (Opius melanagromyzae) recovered from field material at Waikapu, Maui, and Kaunakani, Kauai. Adults initially released on both islands in August 1969. (Sugawa, Miyahira).

Miscellaneous Pests - Total of 713 GIANT AFRICAN SNAILS (Achatina fulica) destroyed during December on Kauai; 710 at Poipu, 3 at Wahiawa and none at Nawiliwili. Poisoned bait applications continued at Poipu. No live snails recovered at Kona, Hawaii, during December. (Sugawa, Yoshioka).

Man and Animals - Total of 110 Aedes vexans nocturnus and 2,118 Culex pipiens quinquefasciatus collected in 52 light traps operated on Oahu during December. Aedes catches per trap ranged 0-40 (average 2.1) at Punaluu, and Culex catches ranged 0-524 (average 40.7) of Ewa. (Mosq. Contr. Br., Dept. of Health).

LIGHT TRAP COLLECTIONS

FLORIDA - Gainesville, 12/31-1/8 - Black cutworm (Agrotis ipsilon) 3, granulate cutworm (Feltia subterranea) 5, variegated cutworm (Peridroma saucia) 1.

CORRECTIONS

CEIR 19(50):882 - Wheat: North Dakota, WSM should read WSS.

CEIR 19(50):893 - Legend: Add WSS, wheat stem sawfly.

Boll Weevil Hibernation Survey - Fall 1969

The fall collections of surface ground (woods) trash samples (two square yards per sample) have been completed in six Southern States by State and Federal agencies to determine the number of boll weevil (Anthonomus grandis) adults that went into hibernation. A total of 3 samples was collected at each location in the Carolinas, Mississippi, Louisiana, and Texas; 12 samples were taken in Tennessee. Thirty locations were sampled in each area in North and South Carolina; the number of counties per area from which samples were taken varied from 3 to 6. In Mississippi, a total of 45 samples was taken from 15 locations in each of 4 areas; each area was composed of 2 counties. A total of 45 locations was sampled in northeastern Louisiana: 20 locations in Madison Parish, 10 in Tensas Parish, and 5 each in East Carroll, West Carroll, and Richland Parishes. This is the second year trash samples have been collected in Richland Parish. In Texas, 75 samples were taken from 25 locations in 4 counties, with either 6 or 7 locations sampled in each county.

Average counts (live weevils per acre) were higher than those of 1968 in all areas of the Carolinas, the southern tier of counties in Tennessee, the north delta and hill sections of Mississippi, and in northeastern Louisiana. Counts were lower in the south and central delta areas of Mississippi and in central Texas. The number of weevils per acre entering hibernation in the central delta decreased from 2,052 in 1968 to 540 in 1969.

In Florence County, South Carolina, where fall examinations have been made since 1942 (except for the fall of 1946), the number of weevils per acre (5,918) is higher than in 1968 and about the same (5,972) as in the fall of 1966.

The survey in Tennessee was conducted in McNairy, Hardin, Fayette, and Hardeman Counties where infestations were heaviest during the growing season. Live weevils per acre averaged 1,815 in those counties. This compares with 1,210 in 1968, 7,580 in 1967, 7,120 in 1966, 1,211 in 1965, 807 in 1964, 1,089 in 1963, 3,633 in 1962, and 3,025 in 1961. The figures for 1965 through 1961 are for McNairy County only.

The State average for Mississippi was 3,105 live boll weevils per acre of ground trash. This compares with 2,768 in 1968, 6,304 in 1967, 2,956 in 1966, 7,325 in 1965, 4,545 in 1964, 3,010 in 1963, 6,213 in 1962, and 8,403 in 1961.

In the 5-parish area surveyed in northeast Louisiana, live boll weevils averaged 3,557 per acre. The average per parish was 4,518 in Madison, 2,091 in East Carroll, 4,596 in Tensas, 1,128 in Richland, and 1,451 in West Carroll. During the past 33 years that these records have been made in Madison Parish, there were only 10 years when the number of weevils per acre was higher than in 1969. In East Carroll Parish the number of weevils per acre was the largest since 1966 and compares with an average of 7,014 per acre for the prior 13 years. In Tensas Parish where these records have been made for the past 14 years, the number of weevils per acre (4,596) compares with the 14-year average of 5,554. In Richland Parish, where collections were begun in 1968, the average number of weevils per acre was 1,128 in 1969 compared with 2,581 for that year. Collections were begun in West Carroll Parish in 1967 and the 1969 average (1,451) compares with 2,420 in 1968 and 14,681 in 1967. Collection of woods trash was started November 17 and completed November 24. The average minimum temperature for this period was 37°, with a low of 26° recorded November 20. The average maximum temperature for the period was 66°. The total rainfall recorded during this period was 2.34 inches, and was recorded on November 19.

In central Texas, boll weevils averaged 1,647 per acre in the fall of 1969 compared with 4,070 in 1968, 4,942 in 1967, 4,877 in 1966, 4,425 in 1965, 4,406 in 1964, 517 in 1963, 1,781 in 1962, and 4,114 in 1961. Fewer weevils entered hibernation in the fall of 1969 in McLennan County than in any year except 1962 and 1963, both drought years. In Limestone and Falls Counties, counts were lower

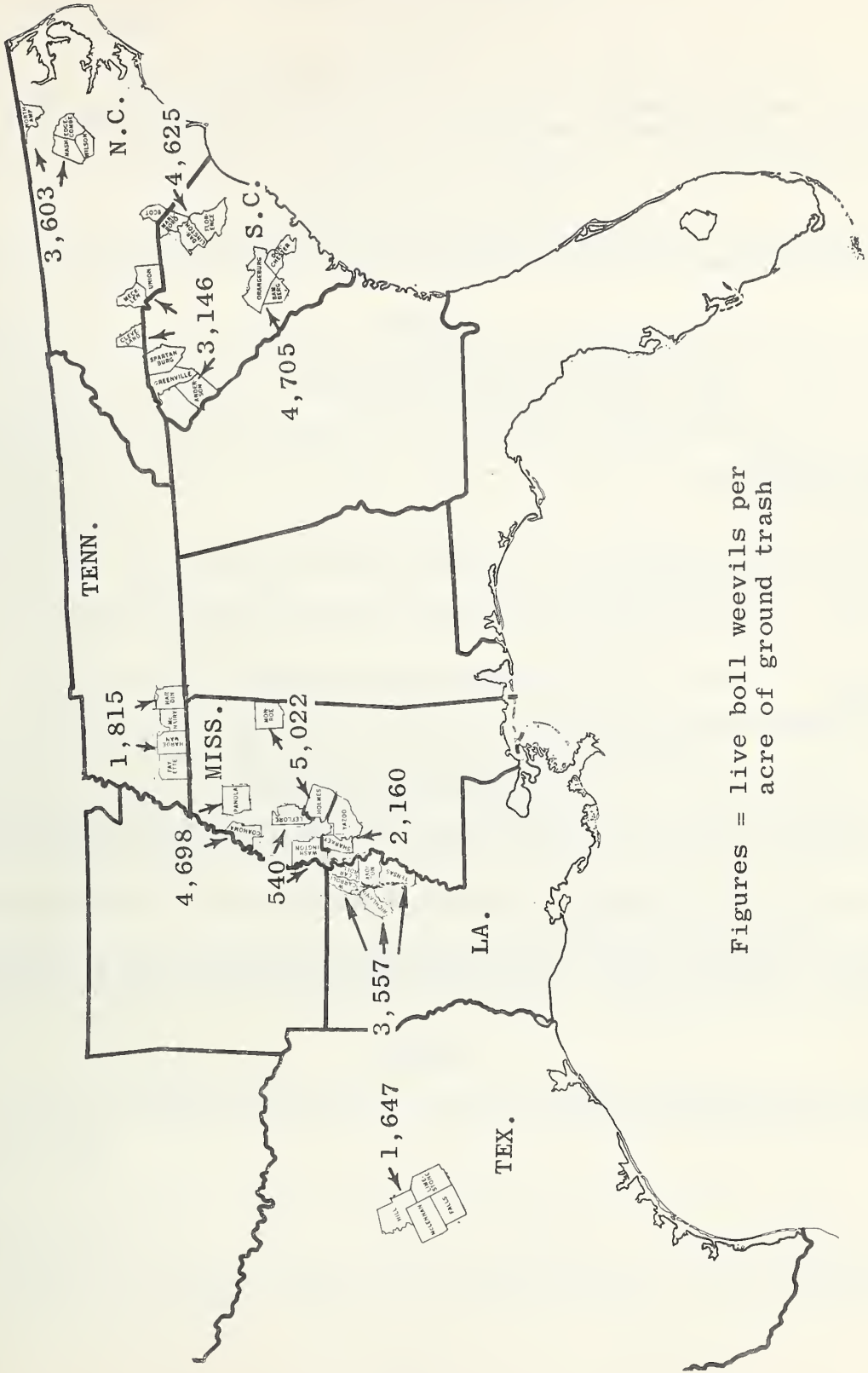
than any year except 1963. In Hill County, counts were lower than this year only in 1962, 1963, and 1968. The area average (1,647) was lower in 1969 than any year except 1963. Very hot, dry weather during 1969 prevented a weevil buildup during the growing season. Most cotton was harvested early and stalks destroyed. This early harvest and stalk destruction prevented a late-season buildup and low numbers of weevils entered hibernation. A freeze occurred on November 15 (normal for the area) and cotton that had not previously been destroyed was killed. (H.M. Taft, A.R. Hopkins, J.H. Locke, T.R. Pfrimmer, T.C. Cleveland et al., and C.B. Cowan).

BOLL WEEVIL HIBERNATION SURVEYS - FALL 1969

Area (State and County)	Number of Weevils Per Acre	
	1968	1969
<u>NORTH AND SOUTH CAROLINA</u>		
South Central South Carolina (Orangeburg, Bamberg, and Dorchester Counties).	1,640	4,705
Coastal Plain of South and North Carolina (Florence, Darlington, and Marlboro Counties, S.C.; Scotland County, N.C.).	3,403	4,625
Piedmont of South and North Carolina (Anderson, Greenville, and Spartanburg Counties, S.C.; Mecklenburg, Cleveland, and Union Counties, N.C.).	2,205	3,146
North Central North Carolina (Nash, Northampton, Wilson, and Edgecombe Counties).	914	3,603
<u>TENNESSEE</u>		
Southern Tier of Counties (McNairy, Fayette, Hardin, and Hardeman).	1,210	1,815
<u>MISSISSIPPI</u>		
South Delta (Sharkey and Yazoo Counties (area 1)).	4,104	2,160
Central Delta (Washington and Leflore Counties (area 2)).	2,052	540
North Delta (Coahoma and Panola Counties (area 3)).	2,916	4,698
Hill Section (Holmes and Monroe Counties (area 4)).	1,998	5,022
<u>LOUISIANA</u>		
Northeastern (Madison, East Carroll, Tensas, West Carroll, and Richland Parishes).	3,137	3,557
<u>TEXAS</u>		
Central (Falls, Hill, Limestone, and McLennan Counties).	4,070	1,647

See map on following page.

BOLL WEEVIL HIBERNATION SURVEYS - FALL 1969



Figures = live boll weevils per acre of ground trash

SURVEY METHODS

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Part XXIV

Additional copies of Parts I through XXIV of this bibliography are available from Economic Insect Survey and Detection.

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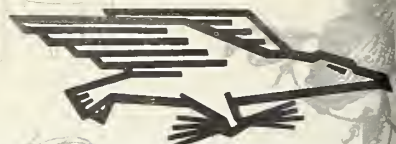
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