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United States Department of Agriculture,

BUREAU OF ENTOMOLOGY.

THE SPREAD OF THE COTTON BOLL WEEVIL IN 1916.

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The spread of the boll weevil in 1916 was second only in extent to the movement in 1915 which was far greater than in any other year of the weevil's history. The insect barely reached the last year's line in west Texas, and made only a small advance along the greater part of the northern boundary, but in Oklahoma a very strong advance was made, probably the result of the heavy infestation of 1915. The Oklahoma advance reached the limits of cotton production of the north and continued for weeks after much of the cotton was killed by frost. The weevil was still moving a little along the entire border as late as November 20, finding food in sheltered fields, and even attacking frosted squares and bolls. In Arkansas the limit of cotton production in the northwest was reached and there was an unusually great advance in the northeast on account of scarcity of food. The Georgia movement eastward was unusually large and is accounted for by the very large infestation at the beginning of the season, brought about by the great movement of 1915 and a favorable winter. The weevil is now within ten miles of South Carolina and well established in the path of tropical storms which sweep northward.

On account of its great numbers it is probable that the weevil will hold the greater part of the territory gained this year.

In Texas, the limit of the infested area runs from the Rio Grande River in Valverde County, west of Sterling City in Sterling County, west of Crowell in Foard County, and west of Vernon in Wilbarger County.

In Oklahoma the line runs through Frederick in Tillman County, Snyder in Kiowa County, Sentinel in Washita County, Watonga in Blaine County and includes all of Kingfisher and Garfield Counties, north of Pawnee in Pawnee County, through Tulsa in Tulsa County to the northern edge of Sequoyah County.

In Arkansas the line reaches the northern limits of cotton production in the northwest, passes through Shirley in Van Buren County, Cushman in Independence County, Walnut Ridge in Lawrence County, Jonesboro in Craighead County, Wilson in Mississippi County.

In Tennessee the line passes north of Covington in Tipton County, through Jackson in Madison County, Sardis in Henderson County, Dunbar in Decatur County, Hawk in Lawrence County.

In Alabama the line passes south of Athens in Limestone County, through Farley in Madison County, Cottonville in Marshall County, south of Collinsville in DeKalb County, north of Bristow in Cherokee County.

In Georgia the limit of infestation passes south of Fish in Polk County, through Yorkville in Paulding County, through Atlanta in Fulton County, Covington in Newton County, Madison in Morgan County, Greensboro in Greene County, turning south just east of Crawfordville in Taliaferro County, through Davisboro in Washington County, Gertrude in Burke County, Malvern in Jenkins County, Statesboro in Bulloch County, Cuyler in Bryan County, and Bloomingdale in Chatham County, to the ocean very near to the South Carolina line.

The line crosses Florida from the ocean south of Jacksonville, through Russell in Clay County, Archer in Alachua County, and Bronson in Levy County to the Gulf. This line almost corresponds with the limit of cotton production in Florida.

The weevil also occurs in the mountains of Arizona on a wild food plant, *Thurberia thespesioides*, but has not attacked cotton in Arizona or California.

Altogether the weevil invaded over 71,800 square miles of territory in 1916. Only about 128,600 square miles of territory still remain uninfested in the cotton belt. Since entering the United States the weevil has averaged more than 20,000 square miles a year.

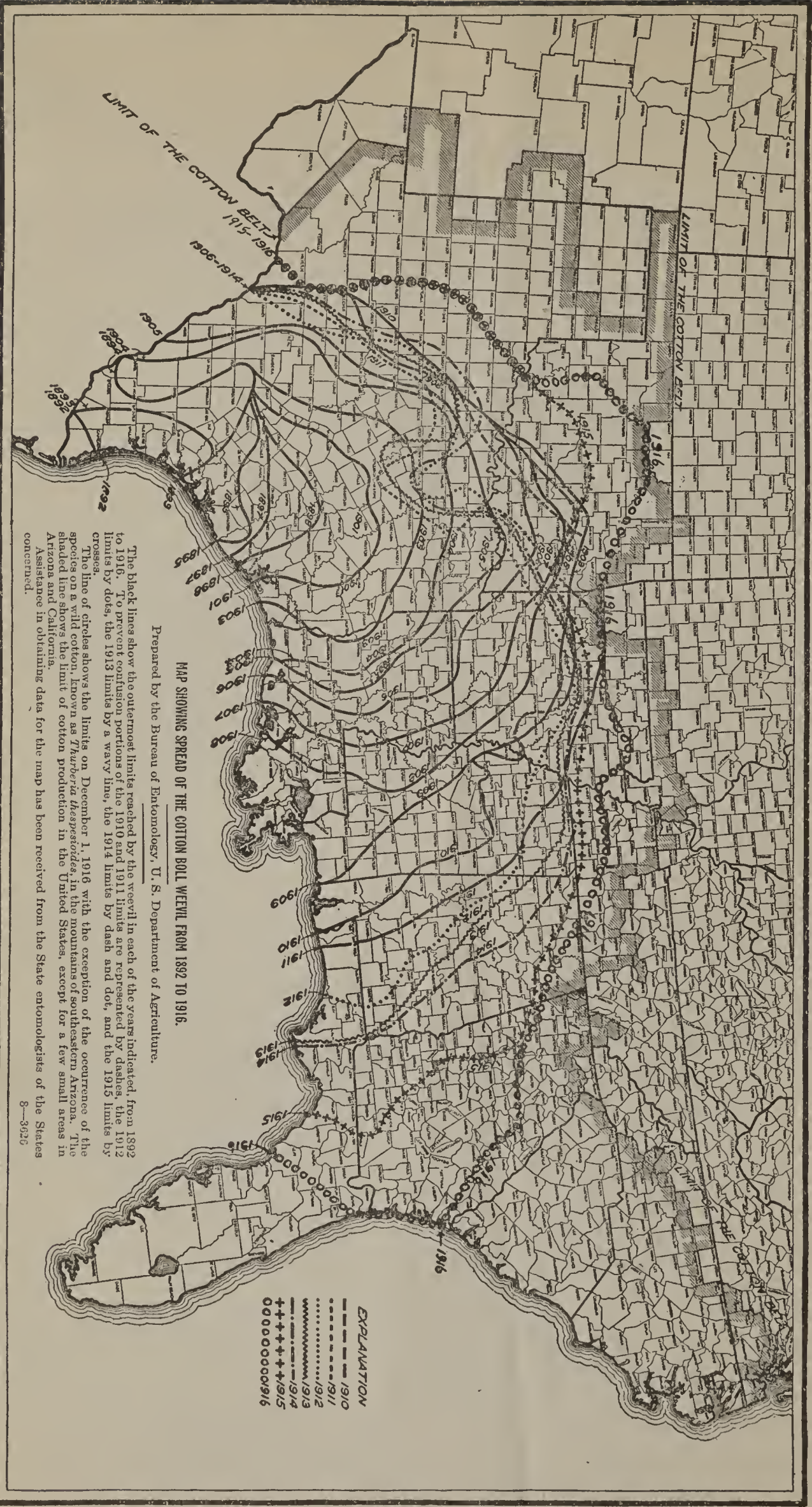
The following table shows the gains in square miles during the year 1916, by States.

Total area in square miles infested by the boll weevil in 1916.

State.	Year first infested.	Area infested in 1915.	Gain in 1916.	Area infested in 1916.
		<i>Sq. Miles.</i>	<i>Sq. Miles.</i>	<i>Sq. Miles.</i>
Texas	1892	182, 600		182, 600
Louisiana	1903	40, 800		40, 800
Oklahoma	1906	23, 300	17, 900	41, 200
Arkansas	1906	31, 500	9, 000	40, 500
Mississippi	1907	46, 340		46, 340
Alabama	1910	46, 400	2, 700	49, 100
Florida	1911	13, 100	7, 200	20, 300
Tennessee	1914	1, 700	4, 000	5, 700
Georgia	1915	13, 400	31, 000	44, 400
Total		399, 140	71, 800	480, 940

LATEST INFORMATION received on December 8, after the map was made, brings the line in Georgia east from Crawfordville in Taliaferro County through Thomson in McDuffie County to a point 7 miles southwest of Augusta in Richmond County.

This indicates that all of Burke, Screven, Effingham, and Chatham Counties which border South Carolina are infested. s-3026



MAP SHOWING SPREAD OF THE COTTON BOLL WEEVIL FROM 1892 TO 1916.

Prepared by the Bureau of Entomology, U. S. Department of Agriculture.

The black lines show the outermost limits reached by the weevil in each of the years indicated, from 1892 to 1916. To prevent confusion portions of the 1910 and 1911 limits are represented by dashes, the 1912 limits by dots, the 1913 limits by a wavy line, the 1914 limits by dash and dot, and the 1915 limits by crosses.

The line of circles shows the limits on December 1, 1916, with the exception of the occurrence of the species on a wild cotton, known as *Thurberia hesperoides*, in the mountains of southeastern Arizona. The shaded line shows the limit of cotton production in the United States, except for a few small areas in Arizona and California. Assistance in obtaining data for the map has been received from the State entomologists of the States concerned.

- EXPLANATION
- 1910
 - - - 1911
 - 1912
 - ~~~~~ 1913
 - · - · - 1914
 - + + + + + 1915
 - o o o o o o o o 1916