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THE SPREAD OF THE COTTON BOLL WEEVIL IN 1917

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With one exception, the total advance of the weevil in 1917 is the smallest since 1901. This follows the second largest spread in the history of the weevil, and is due largely to the fact that the greater part of the territory gained toward the end of 1916 was infested so late in the season that the weevils did not have sufficient food supply nor time to establish their hold before killing frosts. Further losses were experienced by the weevil in the spring of 1917, due to the extremely cold weather and the general lateness of the planting season. The result of this setback was that the weevil lost a territory approximately 50 miles wide around the entire belt, and in the prairie regions of Oklahoma and Texas a much larger territory was lost. As will be seen from the table below, the greater part of the territory was regained before the end of the present season. However, there is sufficient indication to warrant the belief that much of this new territory was gained too late to enable the weevil to establish itself. This is especially true of the small amount of new territory gained in Tennessee and of the greater part of the infested territory of Oklahoma. In Texas the weevil is unquestionably permanently established within 50 miles of the western border from the Rio Grande to the Red River. The foothold of the weevil in the black prairie region of northern Texas is more or less precarious.

In Oklahoma it is permanently established only in the more or less wooded southeastern sections. In Arkansas the weevil is fully established as far north as the Arkansas River. The entire State of Mississippi and most of Alabama are in the completely infested territory. Half of Georgia is infested, and practically the entire cotton-growing region of Florida is to be considered permanently infested.

The movement of the weevil in 1917 was retarded earlier than usual by the frosts in the first week of October. Although the movement continued for over a month, it can not be considered that the new territory thus gained will be permanently held. Losses are recorded in Oklahoma, Arkansas, and Georgia. The State of South Carolina has been infested for the first time. The extension of the weevil in Florida is beyond the limits of cotton growing in previous years. The extension of cotton growing in Florida is due to an effort to find uninfested territory, but the weevil is apparently following closely upon this extension.

In Texas the limit of the infested area follows the line established in 1915 and 1916, that is, from the Rio Grande 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, Mountain View in Kiowa County, Watonga in Blaine County, Hennessey in Kingfisher County, thence dips southward to Guthrie in Logan County, Weleetka in Okfuskee County, and Muskogee in Muskogee County.

In Arkansas the line reaches the northern limits of cotton production of the northwest, passes through Shirley in Van Buren County, includes all of Cleburne County, most of Independence County, passes through Elgin in Jackson County, then dips southward to a point in the southern portion of Cross County south of Princedale, and leaves the State at Marion in Crittenden County.

In Tennessee the line includes Simonton in Tipton County, Jackson in Madison County, Wildersville in Henderson County, Cavvia in Carroll County, all of Decatur, Perry, and Hickman Counties, thence turns abruptly southward through Ridley in Maury County and the western part of Giles County.

In Alabama the line passes just north of Athens in Limestone County, through Fearn in Madison County and Hynier in Jackson County.

In Georgia the line crosses Dade County, passes through Guild in Walker County, near Kartah in Chattooga County, Pinson in Floyd County, south of Adairsville, east of Linwood and east of Cartersville in Barton County, through Kennesaw in Cobb County, Tucker and Lithonia in DeKalb County, Covington in Newton County, north of Crawfordville in Taliaferro County, thence southward through Chalker in Washington County, west of Louisville in Jefferson County, through Millen in Jenkins County, and includes the lower part of Screven and most of Effingham Counties.

In South Carolina, the line passes through Hardeeville in Jasper County, and Daufuskie Island in Beaufort County.

In Florida the line crosses the peninsula from Bunnell in St. Johns County through northwest Volusia and Lake Counties across northern Sumter County, and through Inverness in Citrus County.

The weevil also occurs in the mountains of Arizona on a wild cotton food plant (*Thurberia thespesioides*), but does not attack cotton in Arizona or California. It has, however, been found on the Mexican border at Nogales and also at Guaymas and Esperanza in the State of Sonora, Mexico. The presence of the weevil throughout the Laguna District of the State of Coahuila, Mexico, has not been hitherto reported in this series of circulars.

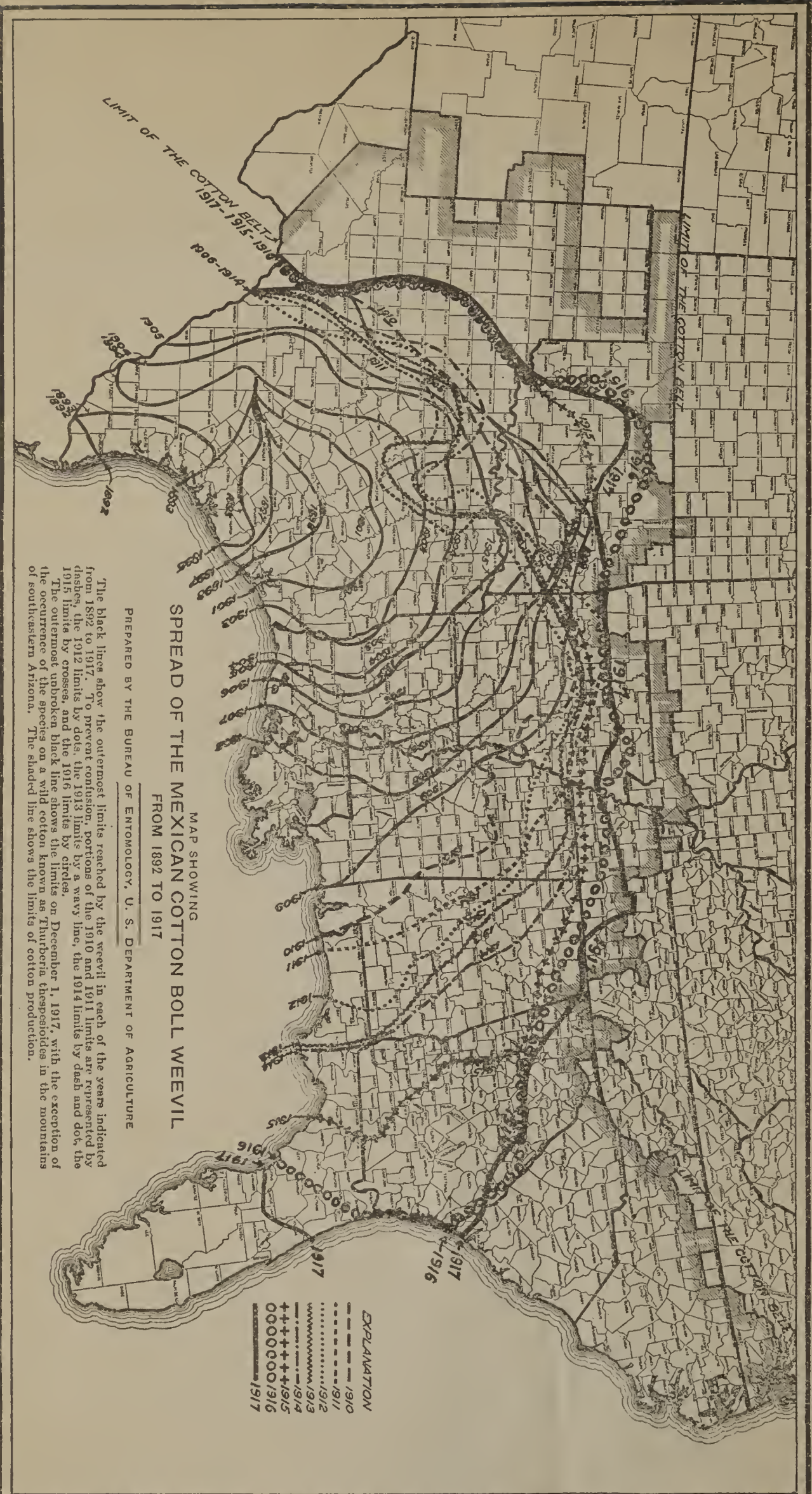
Altogether the weevil invaded only 12,800 square miles of new territory during 1917 and lost 5,000 square miles of formerly infested territory, making a net gain of 7,300 square miles. Only about 121,300 square miles of territory still remain uninfested in the cotton belt. Since entering the United States the weevil has averaged more than 15,000 square miles a year.

The following table shows the gains and losses in square miles during the year 1917, by States:

Total area in square miles infested by the boll weevil in 1917.

State.	Year first infested.	Area infested in 1916.	Gain in 1917.	Loss in 1917.	Area infested in 1917.
		<i>Sq. miles.</i>	<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	41,200	.....	2,200	39,000
Arkansas.....	1906	40,500	.....	1,500	39,000
Mississippi.....	1907	46,340	.....	.....	46,340
Alabama.....	1910	49,100	1,500	.....	50,600
Florida.....	1911	20,300	5,700	.....	26,000
Tennessee.....	1914	5,700	3,400	.....	9,100
Georgia.....	1915	44,400	1,900	1,800	44,500
South Carolina.....	1917	300	300
Total.....	480,940	12,800	5,500	488,240

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EXPLANATION

— 1910
 - - - 1911
 1912
 ~~~~~ 1913  
 - . - . - 1914  
 + + + + + 1915  
 0 0 0 0 0 0 1916  
 ——— 1917

The black lines show the outermost limits reached by the weevil in each of the years indicated from 1892 to 1917. 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, the 1915 limits by crosses, and the 1916 limits by circles.

The outermost unbroken black line shows the limits on December 1, 1917, with the exception of the occurrence of the species on a wild cotton known as *Thurberia chespedesoides* in the mountains of southeastern Arizona. The shaded line shows the limits of cotton production.

**MAP SHOWING  
 SPREAD OF THE MEXICAN COTTON BOLL WEEVIL  
 FROM 1892 TO 1917**

PREPARED BY THE BUREAU OF ENTOMOLOGY, U. S. DEPARTMENT OF AGRICULTURE