

1928

The Distribution of White Grubs in Iowa in 1927

H. E. Jaques
Iowa Wesleyan College

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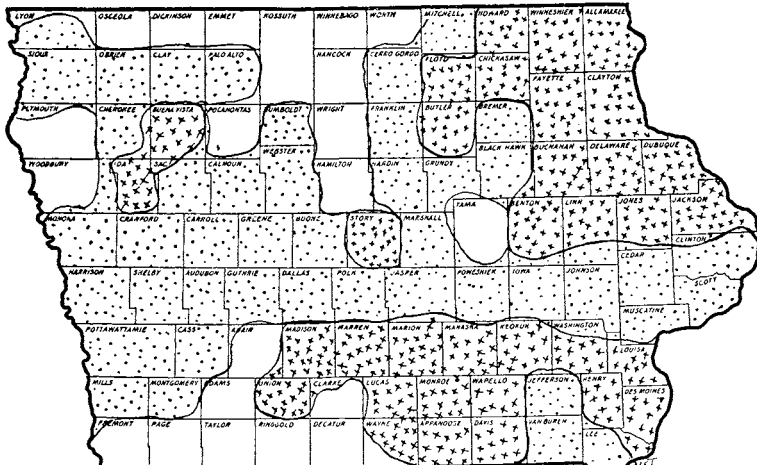
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


THE DISTRIBUTION OF WHITE GRUBS IN IOWA IN 1927

H. E. JAQUES

White grubs with their heavy damage to corn, timothy, blue grass, potatoes and strawberries cause one of the largest items of losses due to insects on the farms of Iowa. This loss attains its maximum each third year when "Brood A" of the white grubs is in its most destructive stage. The spring and summer of 1927 was one of these times. During and following the period of damage a thorough, comprehensive survey was made to determine the extent of the infested area and relative seriousness of the attack. Observation and reports were made in every county. The County Agricultural Agents, the State Entomologist, farmers, bankers and others contributed to the data from which the accompanying map has been made. The area of heaviest loss for northeastern Iowa covers much the same territory in both extent and location as in 1924, 1921, 1918 and 1915. The heavy infestation in southeastern Iowa began in 1921 and the area was enlarged to the west in 1924 and



White Grub Distribution 1927.

-  Regions of Medium to Heavy Loss
-  Regions of Lighter Damage
-  Regions with little or no apparent loss

made a still further westward advance in 1927. The regions of lighter damage are the most extensive of those of any time since these surveys began to be made.¹

The grubs thus located will do early damage during the spring of 1928 but ordinarily pupate about the middle of May and will make their next appearance as adult May beetles in the spring of 1929. Pupation was deferred in 1925 until in several regions corn was seriously damaged as late as July.

From April to July of 1927 May beetles, the adults of brood B, which is thought to be the least destructive of the three broods, were in flight. It was a poor year for collecting because of the cool nights. Over six thousand May beetles were collected from eight different parts of the state, however, and have been separated by species as follows, all of which are of the genus *Phyllophaga*.

LENG'S CAT- ALOG No.	NAME	No. OF SPECIMENS	LENG'S CAT- ALOG No.	NAME	No. OF SPECIMENS
13497	futulis	836	13530	rugosa	1186
13501	prunina	1	13534	implicata	3811
13506	inversa	316	13537	nitida	1
13508	micans	9	13538	hirticula	154
13511	fusca	31	13540	ilicis	5
13514	hornii	3	13544	crenulata	3
13517	drakei	1	13563	tristis	74
13522	fraterna	3		Total	6436
13523	fosteri	2			

A comparison by percentage of the total collected for the five most numerous species for the years 1926 and 1927 proves interesting and when carried out for a few more years should give some light on their life cycle for this region.

Percentage of Total Collected

SPECIES	BROOD A 1926	BROOD B 1927
<i>futulis</i>	0.13	0.13
<i>fusca</i>	0.50	0.005
<i>rugosa</i>	0.05	0.19
<i>implicata</i>	0.02	0.59
<i>hirticula</i>	0.24	0.02

One species, *nitida*, which we have not heretofore collected, was taken. The total number of species of the genus *Phyllophaga* now known to occur in Iowa is thirty-one.

The identifications were made by Mr. Robert J. Sim and many helped with the collecting.

¹ Jaques, H. E. Brood A of the May beetles extends its range in Iowa. Proc. Ia. Acad. Sci. vol. XXIX, pp. 163, 164; and Jaques, H. E. The 1924 outbreak of Brood A of white grubs in Iowa. Proc. Ia. Acad. Sci., vol. XXXII, pp. 423, 424.