

ON THE ORTHOPTEROUS FAUNA OF IOWA.*

BY HERBERT OSBORN, AMES, IOWA.

The Preliminary List of the Orthoptera of Iowa, published by Prof. C. E. Bessey in the Seventh Biennial Report of the Iowa Agricultural College, is revised, a number of species being added and a number of names taken from incorrectly determined specimens rectified.

The revised list is represented thus in the following families :—

	Family <i>Forficulidæ</i> .
One species.	
	Family <i>Blattidæ</i> .
Four species.	
	Family <i>Phasmidæ</i> .
One species.	
	Family <i>Acrididæ</i> .
Forty-one species.	
	Family <i>Locustidæ</i> .
Twenty-three species, probably twenty-four.	
	Family <i>Gryllidæ</i> .
Ten species.	
Total, eighty or eighty-one species.	

HOW THE FEMALE OF *CACOECIA SEMIFERANA* PROTECTS HER EGG-CLUSTERS.*

BY C. P. GILLETTE, FORT COLLINS, COLORADO.

The Box Elder Leafroller, *Cacoecia semiferrana*, was very abundant in many places in Colorado last summer, and in July the moths were swarming in the trees in the evening, presumably to deposit their eggs. The eggs were found beneath a gluey mass, somewhat similar to that used by the tent caterpillar in protecting her eggs, but it was largely covered with what appeared to be scales from the moth, placed like the shingles on a roof. A careful examination of these shingled patches under the microscope makes it seem certain that the eggs are first all deposited, the glue is then added, and after this the abdomen is laid at full length in the sticky substance until it hardens, when the abdomen is removed, and the scales covering its under side are drawn and left covering the eggs.

*Abstracts of entomological papers read before the Iowa Academy of the Sciences, Des Moines, Iowa, December 28 and 29, 1891.