

## *Outbreaks of the Apple Red Bug: Difficulties in Identifying a New Pest and Emergence of a Mirid Specialist*

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### ABSTRACT

In the early 1900's two species of plant bugs (Hemiptera: Miridae), both undescribed, became important pests of apple in New York and other northeastern states. M. V. Slingerland, an economic entomologist at Cornell University, corresponded with the leading North American hemipterists in an attempt to obtain a name for one of the bugs, *Heterocordylus malinus*. Although the so-called apple red bug was recognized as new to science, the actual description was left to the European specialist O. M. Reuter. The problem in obtaining a name to be used in a paper on life history reveals the immature state of mirid taxonomy in North America at the beginning of the century. Correspondence between Slingerland and P. R. Uhler, E. P. Van Duzee, and O. Heidemann is discussed, and it is suggested that the episode may have helped influence H. H. Knight to become North America's first specialist in Miridae. It also is shown that Slingerland validated the name *Heterocordylus malinus* in a note on its injury to apple. Because his paper predated the publication of Reuter's formal description, authorship should be credited to Slingerland.

In the first decade of the 20th century two plant bugs of the family Miridae rose from obscurity to threaten New York's apple industry. *Heterocordylus malinus* Reuter, at first called the apple red bug, and *Lygidea mendax* Reuter, the false apple red bug,<sup>1</sup> attracted the attention of orchardists who sought help from entomologists at Cornell University.

Cornell's Mark Slingerland had been aware of *H. malinus* since 1896 and had observed its habits, but it took an outbreak near Syracuse, New York, in spring 1908 to prompt more intensive studies. Unfortunately, his premature death kept him from completing the work. After Slingerland's death in 1909,<sup>2</sup> Cyrus Crosby continued the research and made extensive use of his colleague's preliminary notes and photographs to provide the first life history information.<sup>3</sup> Soon entomologists in the Northeast described their efforts to control the red

bugs; 43 papers appeared during 1915-19 at the peak of research activity.<sup>4</sup> Today these once prominent pests are unfamiliar to growers and to most entomologists associated with the apple industry; both mirid species are suppressed by current management practices.

Some 65 years after the initial outbreak, a present-day entomologist, C. W. Schaefer, reflected on and proposed explanations for the red bugs' "sudden rise, brief glory, and swift fall."<sup>5</sup> As a native insect, *H. malinus* most likely was associated with wild rosaceous hosts like species of hawthorn (*Crataegus*). In western New York it may have adopted apple as a host when this immigrant tree was planted extensively in the mid-19th century. Improved horticultural practices, rather than the greater number of trees, brought increased productivity; thus the fruit and succulent foliage of apple may have offered a more fa-