

Research Article

The George H. Bradley Black Fly Papers (Diptera: Simuliidae)

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Abstract: Dr. George H. Bradley, a former USDA and Army entomologist, conducted research on a variety of medically important insects during his career; most notably mosquitoes (Diptera: Culicidae) and black flies (Diptera: Simuliidae). Much of Dr. Bradley's personal library was donated to the Mississippi Entomological Museum at Mississippi State University after his death. Six of Dr. Bradley's papers in that library, apparently never published, were discovered concerning the ecology and biology of the southern buffalo gnat, which he called *Eusimulium pecuarum*, (now known as *Cnephia pecuarum*). These unpublished works provide much needed and never before seen information on this medically important pest. This current paper now makes those papers freely available with open access to interested researchers at the link provided.

Keywords: Black flies, Simuliidae; *Cnephia pecuarum*; southern buffalo gnat

Introduction

George H. Bradley (1893-1983) was an American medical entomologist who had a long and distinguished career during the 20th Century as a public health official in the U.S. Centers for Disease Control and the U.S. Department of Agriculture. He was Associate Entomologist, Division of Insects Affecting Man and Animals, Bureau of Entomology and Plant Quarantine, U.S. Department of Agriculture during the 1930s; Head of the Entomology Division, Office of Malaria Control, Public Health Service, during World War II; and later, Chief Entomologist, Centers for Disease Control, Atlanta, Georgia. Dr. Bradley was one of the primary workers in the National Malaria Eradication program which ended in 1951 (Bradley 1966). Dr. Bradley published on a variety of medical and veterinary pests, but most notably mosquitoes (Diptera: Culicidae) (Bradley and McNeel 1928, Bradley, Bellamy et al. 1940, Bradley 1948, King, Bradley et al. 1960, Bradley 1966) and black flies (Diptera: Simuliidae) (Bradley and McNeel 1928, Bradley 1935a, Bradley 1935b). During the early 1930s he conducted detailed experiments on black flies in various small rivers in the Mississippi Delta. Results of at least two of these experiments were published (Bradley 1935a, Bradley 1935b), but several others were not. The purpose of this paper is to make these unpublished papers available to the public.

Materials and Methods

Much of Dr. Bradley's personal library was donated to the Mississippi Entomological Museum (MEM), Mississippi State University after his death via Col. Bill Pearson, the U.S. Army consultant to the Surgeon General who received his Master of Science degree in Entomology from Mississippi State University. MEM personnel and the authors closely examined his handwritten and typed papers and discovered six of his black fly papers were (apparently) never published other than one-paragraph summaries in the USDA Insect Pest Survey Bulletin (Bradley and McNeel 1928, Bradley 1934).

Results and Discussion

Six never published papers of Dr. Bradley's concerning the ecology and biology of the southern buffalo gnat, which he called *Eusimulium pecuarum*, now known as *Cnephia pecuarum* (Adler, Currie et al. 2004), have been re-typed, the photos and figures scanned, and digital files stored on a server at the MEM, Mississippi State University. They are now available for free and open access to interested researchers at the link below. *Note: the research and writing associated with these projects were performed while Dr. Bradley was employed by the USDA and are most likely public domain. We have made no attempt to claim copyright for these works. Further, we made no effort to scientifically review, correct, or edit the works. They are presented in their original form.*

<http://mississippientomologicalmuseum.org.msstate.edu/MEM.Pubs/BradleyPapers.html>

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