J. Ent. Res. Soc. 2(2): 1-25, 2000 *ISSN:1302-0250*

Discovery of New Populations of Striped Ground Crickets in Western North America: Distribution, Subdivision, and Introduction Detected by Allozyme Data

Amy C. WEIBEL* and Daniel J. HOWARD**

*Department of Biological Sciences, Wayne State University Detroit, Michigan 48202 e-mail: aweibel@sun.science.wayne.edu

**Department of Biology, New Mexico State University Las Cruces, New Mexico 88003 e-mail: dahoward@nmsu.edu

ABSTRACT

The *Allonemobius fasciatus* and *A. allardi* cryptic species complexes of striped ground crickets (Orthoptera, Gryllidae) have been well studied in the eastern United States but have not been extensively collected or characterized in the western United States. To further an understanding of these groups, we collected along four transects in the United States west of the Mississippi River. The crickets were analyzed electrophoretically and compared to eastern representatives of the two complexes. With the exception of two new species discovered in the grasslands of the central United States, all crickets collected from western areas could be assigned to previously described species. *Allonemobius fasciatus* occurs coast-to-coast, displays great genetic differentiation across its range, and appears to have been recently introduced to the Pacific Northwest. *Allonemobius allardi* has a less extensive range than *A. fasciatus* and displays less genetic differentiation. *Allonemobius socius* occurs in California but was not found in the interior of the United States.

Key words: *Allonemobius*, electrophoresis, heterozygosity, phylogeny, distribution

INTRODUCTION

Speciation, the process by which new species are formed and thus the process responsible for the diversity of life on earth, is relatively poorly understood by biologists. The questions that remain to be answered include: what role does natural