

A REVISION OF THE NEOTROPICAL BUTTERFLY GENUS *SECO*
HALL AND HARVEY (LEPIDOPTERA: RIODINIDAE)

JASON P. W. HALL AND DONALD J. HARVEY

Department of Systematic Biology–Entomology, National Museum of Natural History, Smithsonian Institution, Washington, D.C. 20560-0127, U.S.A. (e-mail: jpwHall@hotmail.com)

Abstract.—The South American riodinid genus *Seco* Hall and Harvey is revised. The taxonomy and biology of its species are discussed, locality data and range maps are given, and the adults and male and female genitalia (where known) are illustrated for all species.

Key Words: *Charis*, Neotropics, Riodinini, *Seco*, xeric habitats

A recent phylogenetic review of the Neotropical riodinid genera *Charis* Hübner [1819] and *Calephelis* Grote and Robinson 1869, showed that the heterogeneous *Charis* was paraphyletic with respect to *Calephelis*, prompting the division of *Charis* into three monophyletic genera (Hall and Harvey 2002). One of these genera, *Detritivora* Hall and Harvey 2002 (containing the *cleonus* and *gynaea* groups), has been revised already by Hall and Harvey (2001) and Harvey and Hall (2002). The purpose of this paper is to revise the remaining genus, *Seco* Hall and Harvey 2002, a small group of rare and very poorly known riodinine butterflies that are uniquely restricted to xeric habitats around the periphery of South America. The adults and genital structures of all species (where known) are illustrated, and a distribution map is presented based on an extensive compilation of specimen data.

METHODS

Dissections were made using standard techniques, abdomens being soaked in hot 10% potassium hydroxide solution for approximately five minutes, and subsequently stored in glycerol. Morphological terms for

genitalia follow Klots (1956) and Eliot (1973), and the terminology for wing venation follows Comstock and Needham (1918). The protocol for listing material examined follows Hall (1999).

Seco specimens have been examined and their locality data recorded from the following collections:

- AME Allyn Museum of Entomology, Florida Museum of Natural History, Sarasota, FL, USA
- AMNH American Museum of Natural History, New York, NY, USA
- BMNH The Natural History Museum, London, UK
- CMNH Carnegie Museum of Natural History, Pittsburgh, PA, USA
- DA Collection of David Ahrenholz, St. Paul, MN, USA
- JHKW Collection of Jason Hall & Keith Willmott, Washington, DC, USA
- MUSM Museo de Historia Natural, Universidad Nacional Mayor de San Marcos, Lima, Peru
- SMF Senckenberg Museum, Frankfurt, Germany
- USNM National Museum of Natural History, Smithsonian Institution, Washington, DC, USA

