# INSECTA MUNDI

A Journal of World Insect Systematics

### 0018

Holotype of *Agathymus escalantei* Stallings, Turner, and Stallings, 1966 (Lepidoptera: Hesperiidae: Megathyminae)

Bret M. Boyd

McGuire Center for Lepidoptera and Biodiversity Florida Museum of Natural History, University of Florida PO Box 112710, Gainesville, FL 32611-2710 Email: bboyd@ufl.edu

Date of Issue: 2 November 2007

Bret M. Boyd Holotype of *Agathymus escalantei* Stallings, Turner, and Stallings, 1966 (Lepidoptera: Hesperiidae: Megathyminae) Insecta Mundi 0018: 1-2

#### Published in 2007 by

Center for Systematic Entomology, Inc. P. O. Box 147100 Gainesville, FL 32614-7100 U. S. A. http://www.centerforsystematicentomology.org/

**Insecta Mundi** is a journal primarily devoted to insect systematics, but articles can be published on any non-marine arthropod taxon. Manuscripts considered for publication include, but are not limited to, systematic or taxonomic studies, revisions, nomenclatural changes, faunal studies, book reviews, phylogenetic analyses, biological or behavioral studies, etc. **Insecta Mundi** is widely distributed, and referenced or abstracted by several sources including the Zoological Record, CAB Abstracts, etc.

As of 2007, **Insecta Mundi** is published irregularly throughout the year, not as a quarterly issues. As manuscripts are completed they are published and given an individual number. Manuscripts must be peer reviewed prior to submission, after which they are again reviewed by the editorial board to insure quality. One author of each submitted manuscript must be a current member of the Center for Systematic Entomology.

Managing editor: Paul E. Skelley, e-mail: skellep@doacs.state.fl.us Production editor: Michael C. Thomas, e-mail: thomasm@doacs.state.fl.us Editorial Board: J. H. Frank and R. E. Woodruff

#### Printed copies deposited in libraries of:

CSIRO, Canberra, ACT, Australia Museu de Zoologia, São Paulo, Brazil Agriculture and Agrifood Canada, Ottawa, Ontario, Canada The Natural History Museum, London, England Muzeum I Instytut Zoologii Pan, Warsaw, Poland National Taiwan University, Taipei, Taiwan California Academy of Sciences, San Francisco, CA, USA Florida Department of Agriculture and Consumer Services, Gainesville, FL, USA Field Museum of Natural History, Chicago, IL, USA National Museum of Natural History, Smithsonian Institution, Washington, DC, USA

#### **Electronic copies in PDF format:**

Printed CD mailed to all members at end of year. Florida Center for Library Automation: purl.fcla.edu/fcla/insectamundi

Author instructions available on the Insecta Mundi page at: http://www.centerforsystematicentomology.org/insectamundi/

ISSN 0749-6737

## Holotype of *Agathymus escalantei* Stallings, Turner, and Stallings, 1966 (Lepidoptera: Hesperiidae: Megathyminae)

Bret M. Boyd McGuire Center for Lepidoptera and Biodiversity Florida Museum of Natural History, University of Florida PO Box 112710, Gainesville, FL 32611-2710 Email: bboyd@ufl.edu

**Abstract.** *Agathymus escalantei* Stallings, Turner, and Stallings, 1966 (Lepidoptera: Hesperiidae) is the only described species of Megathyminae known from a single collected individual. To date, the only images of this specimen are poor black and white illustrations published in the original description. This note presents the first color photographs of the holotype.

#### Additional key words: Agavaceae, Agave tequilana, Agathymus fieldi, Agathymus remingtoni, Guerrero, Mexico.

*Agathymus escalantei* was described by Stallings et al. (1966) from a single adult female collected in Guerrero, Mexico (Fig. 1-2). The type specimen was originally deposited in the collection of Tarsicio Escalante, D. F., Mexico (Stallings et al. 1966). In 1973, the Escalante collection was obtained by the Allyn Museum of Entomology, Sarasota, Florida and is now part of the collection at the McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History, Gainesville, Florida (labels in Fig. 3).

Phenotypically, A. escalantei is distinguishable from all other known species of Agathymus by coalesced pale yellow macules within the discal cell and cells M<sub>a</sub>, CuA<sub>1</sub>, and CuA<sub>2</sub> which form a nearly continuous "creamy lemon-yellow" area on the forewing dorsum. Stallings et al. (1966) noted that this species most closely resembles Agathymus fieldi Freeman occurring to the north of A. escalantei in Jalisco, Mexico (Freeman 1960, 1969). Geographically, A. escalantei occurs closest to Turnerina hazelae (Stallings and Turner) (Hesperiidae, Megathyminae) known from the Chilpancingo area, Guerrero, Mexico (Mielke 2005), but they are not closely related. Freeman (1969) placed A. escalantei within the "remingtoni" species complex based exclusively on adult characteristics (including pale yellow macules of the dorsal surface and dull white overscaling of ventral surface). Within the "remingtoni" species complex, Freeman (1969) also included A. remingtoni Stallings and Turner, A. estelleae Stallings and Turner, A. valverdiensis Freeman, and A. fieldi, but noted problems of grouping A. escalantei with these species. While A. remingtoni, A. estellae, and A. valverdiensis form a unified group with similar phenotypes, using Agave species of the "marginatae" group (Agavaceae) as larval hosts, and primarily occurring in northeastern Mexico (Freeman 1969, see also Gentry 1982), the potentially more closely allied Agathymus fieldi occurs to the southwest of these species feeding on Agave tequilana Weber (Agavaceae) (Freeman 1969, see also Gentry 1982). Agathymus escalantei differs from all "remingtoni" species complex taxa by the enlargement of the macules in the discal cell and cell CuA, of the forewing and almost complete lack of macules on the hindwing of females. The life history and distribution of A. escalantei remains unavailable for comparison. Without additional specimens, details of life history, and determination of host plant associations, its taxonomic placement is equivocal.

#### Acknowledgments

I thank George T. Austin, Jaret Daniels, Christine Eliazar, Jacqueline Y. and Lee D. Miller, and Andy Warren of the McGuire Center for Lepidoptera and Biodiversity, for help with literature searches, reviews of the manuscript, and technical support, and Carmen Pozo, ECOSUR, Chetumal, Mexico, for help with locating records.

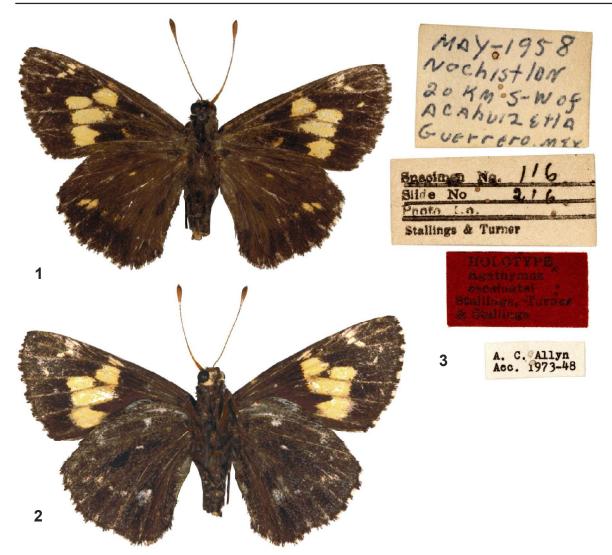


Figure 1-3. Holotype Agathymus escalantei. 1) Dorsal view. 2) Ventral view. 3) Labels.

#### Literature Cited

- **Freeman, H. A. 1960.** Notes on *Agathymus* in Texas, and the description of a new species from Mexico. Journal of the Lepidopterists' Society 14:58-62.
- Freeman, H. A. 1969. Systematic review of the Megathymidae. Journal of the Lepidopterists' Society 23(supplement 1):1-58.

Gentry, H.S. 1982. Agaves of Continental North America. University of Arizona Press; Tucson. 670 p.

- Mielke, O. H. H. 2005. Catalogue of the American Hesperioidea: Hesperiidae (Lepidoptera). Vol. 6. Heteropterinae: Megathyminae. Sociedade Brasileira de Zoologia; Curitiba, Brazil. 1387-1536 p.
- Stallings, D. B., J. R. Turner, and V. N. Stallings. 1966. Two new species and two new subspecies of Megathymidae from Mexico and the United States. Journal of the Lepidopterists' Society 20:163-172.

Accepted October 22, 2007.