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TORTS

Newsletter of the
Troop of Reputed Tortricid Systematists

WHAT IS THE RANGE OF *ARGYROTAENIA CITRANA*?

Argyrotaenia citrana (Fernald), the orange tortrix or apple skinworm of the economic literature, is a small archipine that occurs along the western coast of North America, from Canada to Mexico. Based on specimens in the insect collection of the U.S. National Museum of Natural History, it has been recorded from British Columbia, Washington, Oregon, California, and Baja California. Freeman (1944) and Obraztsov (1961) both reported it only from the West Coast.

The species is highly polyphagous and has was reported to be a pest of citrus in California. Powell (1964) indicated that it is one of the most polyphagic species of North American Lepidoptera.

John Heppner recently mentioned to me that *A. citrana* has been reported in the literature as occurring on citrus in Florida, but according to Dr. Heppner, it is likely that these records are in error. One source of Florida records is Kimball's (1965) Lepidoptera of Florida, in which he lists several records of the species on orange. Kimball cites Thompson (1939) as reporting the species in Florida on young grapefruit and mature orange and grapefruit. Apparently these citations have proliferated in the literature, and the distribution of the species is now commonly reported as including Florida.

Bondar (1915) reported *A. citrana* as attacking *Citrus* in Brazil, and this record probably was the source of subsequent citations (e.g., Essig 1926, Ebeling 1959). However, Bondar (1929) later reported this an error in identification (see Powell 1964). It is likely that this species also was misidentified by Pastrana (in ms) based on the previous literature, and that *A. citrana* does not occur in Argentina either.

Argyrotaenia citrana was reported as attacking oranges in Spain, but Basinger (1938) pointed out that the description of the larva observed in Spain did not match that of *A. citrana*.

Based on evidence from mitochondrial DNA and laboratory hybridization trials, Landry et al. (1999) concluded that *Argyrotaenia citrana* is not clearly distinct from *A. franciscana*. Although they did not propose the synonymy of the two, their data strongly suggest that neither speices is monophyletic relative to the other. Hence the two may be considered more appropriately as synonyms, with *A. franciscana* as the correct name based on priority.

Bondar, G. 1915. Insectos damninhos a agricultura, fasc. III. Plagas das laranjeiras e outras auranciaceae. Duprat & Co., Sao Paulo, Brazil.

Bondar, G. 1929. Insectos damninhos e molestias da laranjeiras do Brazil. Boll. Lab. Path. Veg. 7: 1-79.

Ebeling, W. 1959. Subtropical fruit pests. Univ. Calif. Div. Sci. 436 pp.

Essig, E. O. 1926. Insects of western North America. Macmillan Co., New York. 1035 pp.

Freeman, T. N. 1944. A review of the North American species of the genus *Argyrotaenia* Stephens (Lepidoptera, Tortricidae). Sci. Agric. 25: 81-94.

Kimball, C. P. 1965. The Lepidoptera of Florida: an annotated checklist. Arthropods of Florida and neighboring land areas, vol. 1. Fla. Dept. Agric., Div. Plant Industry, Gainesville. 363 pp.

Landry, B., J. Powell & F. Sperling. 1999. Systematics of the *Argyrotaenia franciscana* (Lepidoptera: Tortricidae) species group: evidence from mitochondrial DNA. Ann. Entomol. Soc. Amer. 92: 40-46.

Obraztsov, N. 1961. Descriptions of and notes on North and Central American species of *Argyrotaenia*, with description of a new genus (Lepidoptera, Tortricidae). Amer. Mus. Novit. 2048: 1-42.

Powell, J. 1964. Biological and taxonomic studies on tortricine moths, with reference to the species in California. Univ. Calif. Publ. Entomol. 32: 1-317.

Thompson, W. 1939. Control of purple scale and whiteflies with lime-sulphur. Fla. Agric. Exp. Sta. Rept. 1937-1938: 146-147.

NEW BOOK ON CHINESE TORTRICIDAE

Lepidoptera. Tortricidae. Insecta Volume 27. Fauna Sinica. Liu Youqiao and Li Guangwu, 2002. Hardback, 6.5" x 9.25", 463 pp. + 136 pages of drawings. Published by Science Press, Beijing, China. The abstract is as follows:

"The present work deals with the Tortricid fauna of China. It comprises two parts, the General Account and Systematic Account; each of which is divided into four Chapters and three Chapters as follows:

I. General Account
- Chapter 1. Phylogeny and Classification
- Chapter 2. Morphology
- Chapter 3. Biol. and Economic Importance
- Chapter 4. Geographical Distribution

II. Systematic Account
- Chapter 1. Subfamily Chlidanotinae
- Chapter 2. Subfamily Tortricinae
- Chapter 3. Subfamily Olethreutinae

The Tortricidae (leafrollers) is one of the largest families of Microlepidoptera, with over 5,000 described species in the world and a large number still to be recorded in Tropics and Asia. Historically, tortricid classification has progresses from entire morphology to an emphasis on genitalia structure.

Tortricinae and Olethreutinae are recorded as Subfamilies of Tortricidae. Chlidanotinae is treated as a separate Subfamily too. The Cochylini, previously given family rank, is now treated as a tribe of Tortricidae. And Carposinidae still remain as a family and put it under Copromorphoidea. Thus, Tortricidae are the only family in the Tortricoidea.

In this fauna, morphological description, habit, host plant and distribution of 3 speces, 2 genera, 1 tribe on Chlidanotinae; 296 species, 50 genera, 7 tribes on Tortricinae and 259 species, 77 genera, 3 tribes on Olethreutinae of China are presented.

In this fauna, each species have definite number, for example, number 1 describe *Cnephasitis apodicta*, then no. 1 in the figures of adult, male and female genitalia are all *Cnephasitis apodicta*, others are on the analogy of this."

The book is in Chinese, but there are an abstract, keys to genera, index, and bibliography all in English following the main body of the Chinese text. There are large-size drawings of each adult, and smaller drawings (12 per page) of the male and female genitalia.

NEW BOOK ON EUROPEAN MICROLEPIDOPTERA

A Guide to the Microlepidopera of Europe. Museo Regionale di Scienze Naturali, Torino. Umberto Parenti, 2000. Hardback, 7"x9.75", 432 pp., including 132 color plates and 24 black-and-white plates. The book can be order from Museo Regionale di Scienze Naturali, Via Giolitti 36 - 10123 Torino, Italy.

According to the introduction, this Guide has been written primarily for younger naturalists. It includes basic chapters on morphology, collecting methods, and systematics. The last mentioned chapter constitutes the bulk of the text and features brief discussions and descriptions of each superfamily, frequently accompanied by drawings of the head, forewings, or genitalia. The vast majority of the book is comprised of the plates - 156 of them. The first 24 plates include black-and-white photographs of larval damage, larvae, and adults in natural resting posture. The remaining plates feature georgeous photographs of spread moths, with data on their distirbution and host plants on the opposing, facing page.

The book is very attractive, with excellent color reproduction, quality paper, and strong binding. It should stimulate and encourage both beginners and experienced lepidopterists to explore the world of the lesser known Lepidoptera.

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SOLICITATION FOR YOUR CONTINUED INPUT

Per the current concept of TORTS, the next issue of the newsletter will include a bibliography of papers published in 2001 and 2002 that deal primarily with Tortricidae. Hence, I would be pleased to receive titles and full literature citations of papers you have published (or seen published) on Tortricidae over the last two years. Please send them to me by e-mail at jbrown@sel.barc.usda.gov.

Also, please take a moment and review the mailing address and e-mail listed by your name and make sure it is correct and/or complete. Please provide me with any changes.

If you have suggestions of other items you would like to see included in the newsletter, please feel free to pass them along to me. Thank you.

CONGRATULATIONS!

TORTS "member" Eugenie Phillips recently completed her graduate work and filed her doctoral dissertation at the University of California, Berkeley. She has returned to Costa Rica to continue in her position as Curator of Lepidoptera at Instituto Nacional de Biodiversidad in Santo Domingo de Heredia, Costa Rica. Jenny's dissertation focused on the systematics of the genus *Amorbia*, with an emphasis on the species in Costa Rica.

TORTS "member" Daniel Rubinoff, who graduated from the Univeristy of California, Berkeley in Spring 2002, recently accepted a position in the Department of Entomology at the University of Hawaii.

The TORTS Newsletter is distributed twice annually: January-February and July-August. For information contact: John W. Brown, Systematic Entomology Laboratory, USDA, c/o National Museum of Natural History, Washington, D.C. 20560-0168, USA. Phone: 202 382-1778. E-mail: jbrown@sel.barc.usda.gov