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TORTS

Newsletter of the
Troop of Reputed Tortricid Systematists

HOW MANY SPECIES OF TORTRICIDAE ARE THERE?

Only within the last 15 years or so has a consensus classification of the Tortricidae emerged. Prior to this time, several taxa now considered subfamilies or tribes within Tortricidae were treated as distinct families or parts of other families. The first estimate I could find for the total number of species in the family was in Powell's (1980) paper on the evolution of larval food preferences in microlepidoptera. He estimated that there were over 4,000 species of tortricids; however, the numbers for Cochylini (probably an additional 500-600) were not included because the group was considered a distinct family at that time (i.e., Cochylidae). Roelofs and Brown (1982) estimated that there were over 5,000 described species of Tortricidae worldwide. Powell (1986) and Horak and Brown (1991) both provided similar estimates (i.e., over 5,000). In 1991, Heppner provided that first "counts" of species richness by faunal region. His total of 6,683 tortricid species was repeated in his 1998 paper, Classification of Lepidoptera, Part 1.

Based on a fairly complete checklist of the Tortricidae of the world,we have documented 8,945 described species in the family as of 2001, with well over 10,000 proposed names. It is possible that 0.1% of the names are listed in more than one place in the checklist; and that as many as 4.9% of the names represent synonyms that have not yet been exposed as such. Hence, a conservative estimate of the number of described species of Tortricidae is about 8,500. There also are 7 described species of fossil tortricids. The increase in number of species since 1980 reflects more the number of new species described than it does the discovery of older names or under-estimates. Not since the time of Meyrick, Walsingham, and Busck has the number of described species increased so dramatically.

Below are the numbers of species by tribe (as defined by Horak 1999). Because there are many uncertainties in regards to the correct tribal assignment of many genera, I provide the following caveats. (1) Species placed in *Arotrophora* and related Indo-Australian genera are included in the count for Cnephasiini. (2) Most Old World species described in *Cnephasia* by Meyrick are included in Cnephasiini. (3) The neotropical genus *Mictopsichia* is included in Euliini. (4) The neotropical genera *Orthocomotis* and *Paracomotis* are included in Euliini. (5) The only Old World genus included in Euliini is *Eulia*. (6) Ramapesiini is included in Archipini. (7) The majority of "unplaced" Tortricinae genera are included in Archipini. Most of these decisions are arbitrary and reflect convenience, not taxonomic judgement.

TORTRICINAE (4,379 species)

Phricanthini	21
Tortricini	397
Cochylini	934
Cnephasiini	261
Schoenotenini	206
Euliini	552
Archipini	1,553
Epitymbiini	124
Ceracini	29
Sparganothini	206
Atteriini	39
Unplaced Torticinae	57

CHLIDANOTINAE (280 species)

Polyorthini	144
Chlidanotini	73
Hilarographini	63

OLETHREUTINAE (4,286 species)

Endotheniini	47
Bactrini	121
Gatesclarkeanini	18
Microcorsini	33
Olethreutini	1,128
Enarmoniini	299
Eucosmini	1,715
Grapholitini	897
Unplaced Olethreutinae	28

If you would like an electronic copy of the checklist from which these data are derived, please contact me at jbrown@sel.barc.usda.gov. For many of the tribes I have "in-progress" catalogues that I also am willing to share.

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 2000 and 2001 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.

Dr. Pasquale Trematerra has suggested that we include photographs of the "subscribers" in an upcoming issue of TORTS. If your have a photograph of yourself, please forward it to me as an e-mail attachment, and I will see what I can do about including a page of "mug-shots."

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.

NEW BOOK ON EUROPEAN TORTRICIDAE

Die Tortriciden (Lepidoptera, Tortricidae) Mitteleuropas, Bestimmung - Verbreitung - Flungstandort - Labensweise der Raupen. Josef Razowski, August 2001. Hardback, 6.50" x 9.25". 319 pp. ISBN 80-967540-7-6. Available at http://home.nestra.sk/slamkaf.

"Abstract. The present atlas contains the data describing 597 species of Tortricidae known from Central Europe (Germany, Austria, Poland, Czech Republic, Slovakia and Hungary). As in the preceding parts of this series, color photographs of all species and pen and ink drawings of all genitalia are included. The atlas also contains description of morphological characters for each species, their biology, habitats and distributions. In addition, the data on external variation so characteristic for the leafrollers are added. The list of species comprises the most important synonyms of the Central European taxa."

The book is extremely attractive and well designed. The color plates are among the best I've seen. The book is full of information on the life history and biology of the included taxa.

LEPIDOPTERA TECHNIQUES MANUAL

Basic Techniques Manual, Memoir #5, Lepidopterists' Society. Compiled by William Winter, edited by William Miller. 7" x 9". 350 pp. Topics include observing butterflies and moths, photography, data recording, identification, collecting techniques, preparing specimens and genitalia, collecting regulations and guidelines, and disposition of collections. $29 for members of the Lepidopterists' Society, $40 for non-members; postage and handling is an additional $4.00 for U.S. and Canada, $6.00 elsewhere. Order from Ken Bliss, Publications Manager, 28 Du Pont Ave., Piscatoway, NJ, 08854-2435, USA.

NEW HOME FOR LEPIDOPTERA COLLECTION AT NATIONAL MUSEUM OF NATURAL HISTORY, SMITHSONIAN INSTITUTION

In 1969 the Lepidoptera collection of the U.S. National Museum of Natural History returned to the museum in downtown Washington, D.C., after 7 years in exile at an off-site facility on Lamont Street in NW Washington. The collection and staff settled "temporarily" in Hall 30, one of several exhibit halls radiating out from the rotunda. Over the next three decades the collection grew and expanded considerably. To accommodate this growth, specific taxonomic groups (e.g., Sphingidae, Saturniidae, Lasiocampidae, Papilionidae) were moved to the Museum Support Center (MSC) in Silver Hill, Maryland. Since about 1995, long-range plans to renovate and update the 5th floor of the East Wing of the museum specifically for the Lepidoptera, Heteroptera, and Arachnida collections have been progressively implemented. And in October and November of 2001, the Lepidoptera collection was moved from its cramped quarters in Hall 30 to its spacious new home on the 5th floor, East Wing. Offices were moved in late November and December 2001. The move required the handling of each individual drawer because of the size and weight of the cabinets, and the fact that many older cabinets were replaced and/or discarded. The "moving team" included staff from the Smithsonian Institution's Division of Entomology, USDA's Systematic Entomology Laboratory, and a number of independent contractors hired specifically for this enormous chore. Prior to the move, the contractors individually transferred nearly 100% of the specimens formerly in cork-bottom drawers or unit trays to foam-bottom trays. They also transferred the larval collection from miscellaneous bottles and vials into new standardized bale-top jars for archival level storage. Coordinated by Marc Epstein, the move went off without a hitch - quickly, efficiently, and with no damage to the collection.

The new range, shared with Heteroptera, occupies approximately 28,000 square feet and supports approximately 40,000 drawers housed in about 1,500 tall steel (29-drawer) cabinets. Staff offices occupy the perimeter of the floor, nearly all of which have scenic views of the surrounding city sights. For the first time, the Lepidoptera collection is on a single floor in a uniform, linear (somewhat phylogenetic) sequence of families. Unfortunately, most of the taxa moved to the MSC will remain there. The new cabinets and drawers provide 30-60% expansion space for the collection, varying from family to family. There also is an area of "half-high" cabinets that provides a sorting area for the pro-tem collection, and an office with facilities for visitors.

The larval collection is on the same floor in a specially constructed alcohol storage room that also holds the huge arachnid collection in new Vidmar cabinets. Also on the same floor are the extensive Lepidoptera reprint collection (about 35 file cabinets), the Lepidoptera genitalia slide collection (about 80,000 preparations), and the Entomology Library.

The Tortricidae portion of the collection includes approximately 160,000 pinned specimens: about 70,000 curated Tortricinae, about 1,200 curated Chlidanotinae, about 62,000 curated Olethreutinae, and about 27,800 uncurated specimens, stored in 670 drawers. The collection includes just over 1,000 primary types of Tortricidae. In addition to the pinned collection, there are approximately 5,000 specimens of larval tortricids stored in alcohol. The collection is strongest in material from the Nearctic and Neotropical regions, with good representations of species from Europe, Japan, and Oceania. The collection is poorest in material from the Afrotropical and Indo-Australian Regions.

The new facility brings the collection at the National Museum to a new level of organization and retrievability, and the staff to a new level of comfort and convenience. If you plan to be near the Washington area in the future, we encourage you to come by and visit our new home. Contact John W. Brown at (202) 382-1778.

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