



THE PYRALOID PLANET

Volume 17 – December 14, 2023
A Newsletter for Pyraloidea Fans

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* *The Pyraloid Moths of Borneo part 2*

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to send in items for the newsletter about our shared pyraloid passion.

M. Alma Solis

GlobIZ News 2023

20th anniversary of the Global Information System on Pyraloidea (GlobIZ)

Editorial

At this year's 23rd Societas Europaea Lepidopterologica (SEL) Congress in Orleans, France, Richard Mally mentioned that it was the 20th anniversary of GlobIZ. How time flies! It seems like it was just yesterday that I was in Dresden in 2006 to learn about GlobIZ, developed by Matthias Nuss and his team. In this issue of the Pyraloid Planet, Matthias shares with us the latest number of taxa in GlobIZ as usual, and additionally he writes about the interesting origin and history of GlobIZ on its 20th anniversary. This project was about cataloguing Pyraloidea taxa, but also about making it inclusive and possible for specialists worldwide to participate. This is followed by contributions about pyraloids from around the world, including some from new members. I thank everyone who was able



During the 1990s, the technical requirements for carrying out a taxonomic revision were completely different from today. To obtain a global overview of the entomological literature of a group of species, the print editions of the *Index Litteraturae Entomologicae* (Horn & Schenkling 1928–1929) and the *Zoological Record* (1864–2008) were manually studied year by year to obtain relevant references. Another catalogue translated the journal title abbreviations into full words. The next step was to go to libraries and borrow the relevant books and journals. Then, the needed articles were photocopied onto paper, unless they were available as paper reprints from the authors. Shelves were filled with a massive load of paper in the form of copies, reprints, journals, and books. The next step was to compile the nomenclatural data into a catalogue. Some did that on a card index, others in a text file, and still others in a relational database. The latter had to be manually configured. The software and data of that database were saved on a hard disc on a stand-alone desktop computer. It was time-consuming to amalgamate all the nomenclatural informa-



***Scoparia pyralella* (Denis & Schiffermüller, 1775), type species of *Scoparia* Haworth, 1811. Taken by Matthias Nuss, June 2018, Saxony, Germany.**

tion needed for a taxonomic revision. I did this for the Scopariinae (that formerly also included the Heliophilinae and Hoploscopinae) during my PhD research, and for the subsequent published revision and world catalogue (Nuss 1999).

After my PhD defence, Andreas Segerer and I developed a relational database using MS Access software. The zoological names were organized according to species-, genus- and family-group names with the most recent nomenclatural act for a given name, its current nomenclatural status, and linked to its literature reference (older nomenclatural acts could be saved as notes in a field “remarks published”). The most sophisticated part was the development of the taxon report, accomplished with the IT skills of Andreas Segerer, that resulted in a report in the form of a full nomenclatural catalogue when a given name was queried. The development of the literature report was simple in comparison. At this stage, the database still functioned on a single computer, and the pyraloid specialist worked individually on his/her own database, text file, or card index versions. During this time, Reinhard Gaedike at the Deutsches Entomologisches Institut Eberswalde (now Müncheberg, Germany), as well as Michael Shaffer and Brian Pitkin (both deceased) at the Natural History Museum, London, supported our project with many discussions, literature, and information on genus- and species-group names.

In 2001, the Federal Ministry of Education and Research (BMBF) in Germany created a national initiative called GBIF-D to digitize large amounts of biodiversity data and make them publicly available. Among several project applications on insects, which were coordinated by Christoph L. Häuser, was a proposal

by me, in collaboration with Andreas Segerer and an IT company in Leipzig, for a Global Information System on Pyraloidea (in German: Globales Informationssystem Zünslerfalter - GlobIZ). The project was funded in autumn 2002.

The main goal of the GlobIZ application was to transform the MS Access database into an SQL database, which allowed for synchronous editing of data by several experts around the globe via the internet. The SQL database was developed by Gregor Kunert, at that time still a student, but already running his own IT company. The logo was developed by Ellen Herrmann and Ilona Walsch, both from Dresden, who also tested the functionality of the public website. On October 23, 2003, the GlobIZ website was launched via the link <http://globiz.sachsen.de>. Since that time, GlobIZ has been modified to adapt it to new software developments (e.g., internet browsers) and security requirements. Gregor Kunert still maintains the website and its database. For a paper in German on the early genesis of GlobIZ see Nuss & Segerer (2005).



In March 2006, we invited pyraloid specialists from around the world to meet in Dresden with original grant funding to learn about the program and get hands-on experience with GlobIZ. During this meeting, we

also founded the Pyraloid Planet newsletter. Its first issue was published on June 1st, 2006 (http://www.pyraloidea.org/assets/files/PyraloidPlanet_vol1_2006.pdf), and since then a new issue has been published every year (<http://www.pyraloidea.org/index.php?id=16>) thanks to its editors Bernard Landry and Alma Solis.

Currently, the Global Information System on Pyraloidea (GlobIZ) comprises 26,965 pyraloid names for 2,122 genera (+ 1,455 synonyms) and 16,766 species (+ 6,622 synonyms). The updated table in the next page provides an overview by subfamily. The data editing has been done by Matthias Nuss, Richard Mally, Bernard Landry, Francesca Vegliante, Andreas Tränkner, Franziska Bauer, James Hayden, Andreas Segerer, Rob Schouten, Houhun Li, Tatjana Trofimova, M. Alma Solis, Jurate De Prins, and Wolfgang Speidel in the sequence of quantity of data edited or provided.

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Zoological Record. (1864–2008) Thomson Reuters. [published by the Zoological Society of London until 1980, BIOSIS until 2003, then acquired by Thomson Reuters, and now available on-line only <https://clarivate.libguides.com/webofscienceplatform/zr>]

Matthias Nuss

	genera		species	
	valid	synonyms	valid	synonyms
Chrysauginae	130	61	402	128
Epipaschiinae	95	69	738	173
Galleriinae	64	62	271	114
Phycitinae	675	408	3,529	1,573
Pyralinae	135	110	1,316	401
Acentropinae	70	38	799	215
Crambinae	177	124	2,093	1,103
Erupinae	3	4	38	5
Glaphyriinae	75	58	533	207
Heliothelinae	3	3	29	14
Hoploscopinae	2	4	46	2
Lathrotelinae	6	7	45	11
Linostinae	1	0	4	2
Midilinae	11	4	60	11
Musotiminae	23	8	207	26
Odontiinae	87	39	388	144
Pyraustinae	171	106	1,282	646
Schoenobiinae	29	17	241	99
Scopariinae	20	24	588	209
Spilomelinae	345	309	4,157	1,539

2,122 1,455 16,766 6,622

NEWS FROM.....

James Hayden

Pyraloidea on MGCL database

The McGuire Center for Lepidoptera and Biodiversity (MGCL) has recently made its specimen database publicly accessible. It is powered by Specify and is available at <<http://specifyportal.flmnh.ufl.edu/leps/>>. This is the portal through which type specimens, other important specimens, and the results of surveys will be published. It includes specimens belonging to the MGCL and the Florida State Collection of Arthropods (FSCA). Thousands of MGCL specimens are also available through SCAN (<https://scan-bugs.org>), although not

many of those are pyraloids.

The McGuire Leps database will contribute to data aggregators and to the Global Biodiversity Information Facility. In addition to types, I intend to catalog material examined in publications, rare and endangered species, and those collected outside their normal range. For example, it is important to photograph and catalog specimens of tropical “strays” and ephemeral populations collected in Florida and southern Texas to contribute to the U.S. national checklist. The database also includes high-resolution photomicrographs of dissection slides. The process is outlined here: <https://www.floridamuseum.ufl.edu/mcguire/news/2022/02/secret-morphology/>.

Thanks to Debbie Matthews, Keith Willmott, and the Florida Museum’s Office of Museum Technology for moving the database forward.



Jurate and Willy De Prins

Pyraloidea on Afromoths.net

You may have noticed that the Afromoths website (www.afromoths.net) has been completely revamped by the Belgian programmers at GBIF. It doesn’t look different but it contains more features and possibilities than the first version, for example, the taxonomic categories “tribus” and “subgenus” are now included. Search possibilities have been enhanced enabling the search for two different keywords, e.g., show all the photos of the family Crambidae from the MNHN; or, show all the species of the genus *Zitha* recorded from South Africa.

One of the most advanced features is that changes can be made directly online.

Previously, we stored the information about Afrotropical moths in a relational offline Microsoft Access database, and twice a year that information was published online by the GBIF programmers. Now, we can add photos and other information instantly, and invite other entomologists to join our team as administrators of specialized groups. The Afromoths database is mirrored in the GBIF environment, see <https://www.gbif.org/dataset/65c9103f-2fbf-414b-9b0b-e47ca96c5df2>.

You can help us by sending photos of specimens, especially for those species which have no pictures in the Afromoths website. Also, all additional information on distribution, foodplants, etc. is welcome. Thank you very much for your cooperation.

Guillaume Leraut Pyralidae studies

Recently, projects have been conducted on Pyralidae, especially on *Pyralis lienigialis* (Pyralinae) (Europe), *Birinius russeolus* and *Exuperius negator* (Phycitinae) (South America) to clarify their taxonomy and distribution, thanks to contributions by colleagues and new data from the historical collections of the French National History Museum.

A work in progress is the revision of a cluster of genera and species traditionally assigned to the genus *Spatulipalpia*. *Spatulipalpia* and closely related genera (Phycitinae, tribe Cryptoblabini) are known from all tropical and subtropical parts of the Old World, from Western Africa and Madagascar to India, Vietnam, and Australia. Species have some uncommon features among the Phycitinae, such as modified labial palpi, long tufts of scales on the antennal scape, maxillary and labial palpi (see image below taken by Jona-

than Brecko, Royal Museum of Central Africa). Data related to this species group is still welcomed, especially from the Australasian region, which should be completed in 2024.

Finally, I am pleased to announce that I gave a presentation to the Paris Lepidopterists' Society (ALEF) in November 2023 on the topic of Malagasy Pyralidae. This conference was a real and unexpected success. I hope it provided encouragement to lepidopterists to collect pyraloid moths during their expeditions, especially in tropical areas (Madagascar, but also e.g., Guyana, Vietnam)!



Spatulipalpia mimarcha Meyrick, holotype

Yves Basset Pyraloidea of Barro Colorado Island, Panama

The Arthropod Initiative at the Smithsonian Tropical Research Institute has been monitoring selected insect taxa at several sites in the tropics since 2009, including at the ForestGEO permanent plot of Barro Colorado Island in Panama. The taxa currently being monitored at Barro Colorado Island include Flatidae, Reduviidae, Passalidae, Platypodinae, Dynastinae, Rhopalocera (all butterflies), Geometridae, Arctiinae, Pyraloidea, Saturniidae, Formicidae, Halictidae, and

Euglossini. These monitoring programs are to detect long-term changes driven by climatic change, as reflected in priority assemblages. We aim to identify species traits that predispose populations to decline and contrasting those traits among various insect taxa. Our results so far indicate that patterns in population trends greatly differ among insect taxa and species, with clear winners and losers.

Our reference insect collection for Barro Colorado Island includes +76,000 pinned insects and is supported by a large on-line insect database with +680,000 insect records. This includes about 390 and 110 species of Crambidae and Pyralidae, respectively. From this material we have obtained 953 sequences representing 310 BINs (DNA barcodes) deposited in the project BCIPY of the Barcode of Life Database. We are interested in the analysis of a time series for Pyraloidea 2009-2023 (15 years) but would prefer, as far as possible, to have “clean” data in terms of species assignment and possible identifications.



***Midila soror* Munroe**

We would welcome collaboration with Pyraloidea experts to study any material of interest and/or interpret the trends of time series. We can loan or donate specimens of interest (see image below). More information at <https://striresearch.si.edu/yves-basset-lab/> and a recent paper at <https://www.sciencedirect.com/science/article/pii/S1470160X23003850>. If interested, please contact Yves Basset at basset@si.edu.

Andrei Sourakov ***Terastia meticulosalis* in California**

The erythrina stem borer (ESB), *Terastia meticulosalis*, represents a complex of similar-looking crambid species that attack coral beans and coral trees worldwide. In the last decade, these moths have become a widely reported horticultural pest in southern California, where coral trees are used in landscaping. These tropical trees are beautiful when in bloom and drought tolerant, which makes them ideal for landscaping use in that area.



***Terastia meticulosalis* Guenée**

In Florida, ESB together with its sister species, *Agathodes monstrialis*, and a tiny leafminer, *Leucoptera erythrinella* (Lyonetiidae) are very common on the native coral bean (*E. herbacea*), but in southern California, until recently, these insect pests were absent.



Coral tree in California nursery



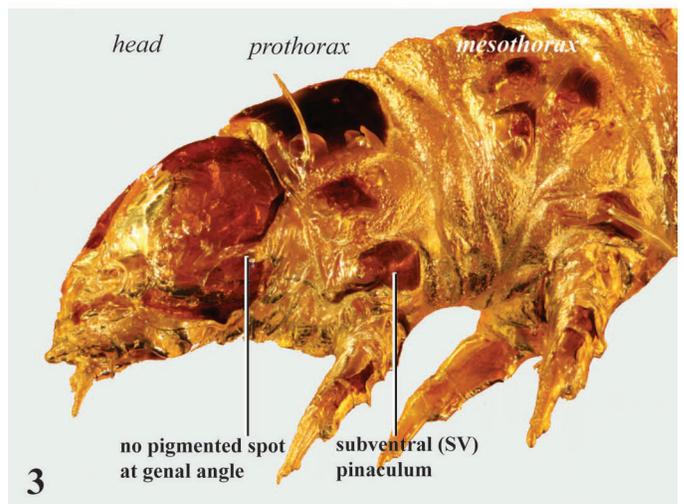
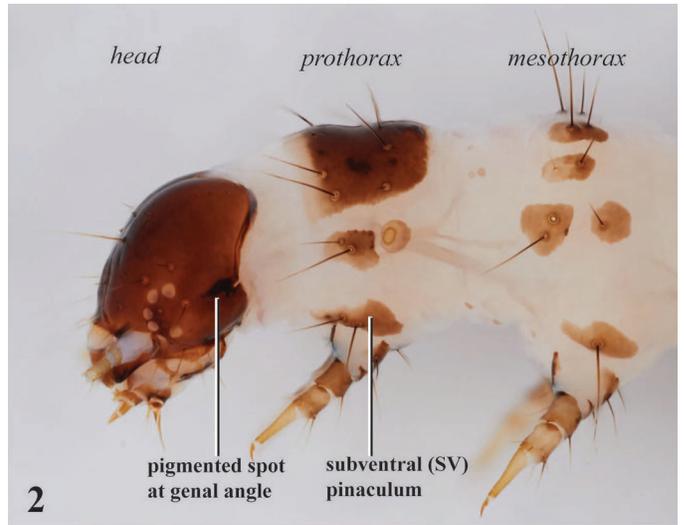
Coral tree flowers (& hummingbird), closeup

I went on a fact-finding trip to California and found that ESB, formerly absent there, is now firmly established and widespread due to plant trade and wide use of *Erythrina* species in landscaping. To read more about this trip, please visit my blog post: "Coral Trees of Los Angeles and the Moths that Attack them: Erythrina Stem Borer and Banana Moths Feeding on Erythrina in Southern California."



Erythrina stem borer (ESB) damage

**Théo Léger and Alma Solis
Spilomeline fossil from Dominican amber**



***Penestola bufalis* (Guenée) (above) & *Penestola wichardi* Solis, Léger & Neumann (below)**

We described a new species of fossil from Dominican amber, *Penestola wichardi* Solis, Léger & Neumann, 2023, named in honor of Wilfried Wichard, a paleoentomologist, who donated the specimen to the Museum für Naturkunde, Berlin. All the images were stunning but, unfortunately, we could only publish a few (Figs. 2, 3, 5, 6). This species is the first spilomeline fossil described, and the first from Dominican amber.

Reference

Solis, M. A., T. Léger, & C. Neumann. 2023. First pyraloid (Insecta, Lepidoptera) caterpillar from Dominican amber. *Nota Lepidopterologica*. 46: 245-154. <https://doi.org/10.3897/nl.46.108745>

Alma Solis

Spilomelinae, Phycitinae, and Midilinae taxa

This year was about taxa in different subfamilies from different countries, Phycitinae from northwestern Mexico, a genus of Midilinae from Costa Rica, and the beautiful, diverse genus *Lineodes* from Peru. My colleague and coauthor Clorinda Vergara, a professor at the Universidad Nacional Agraria La Molina in Lima, collected and reared *Lineodes* larvae feeding on different solanaceous species (Solis & Vergara, 2023) (Figs. 1, 2). The species included the common *Lineodes integra* Zeller which occurs throughout the Western Hemisphere and was reared on tomato, *L. undulata* Walsingham which was reared on *Capsicum* sp. (commonly known as aji), and *L. vulcanalis* Landry, which was reared on wild tobacco. The last two plants represent new host records, and this is the first report of *L. undulata* since it was described over a 100 years ago from Peru by Walsingham. Also, I described two new species from specimens in the NMNH collection, *L. leuschneri*, after Ron Leuschner, an avid American collector who donated his collection of pyraloids to the NMNH, and *L. ravenalis*, in honor of my coauthor's Clorinda Vergara's mentor Dr. Klaus Raven Büller. The latter is one of the most elegant-looking pyraloids I have ever seen (Fig. 3).

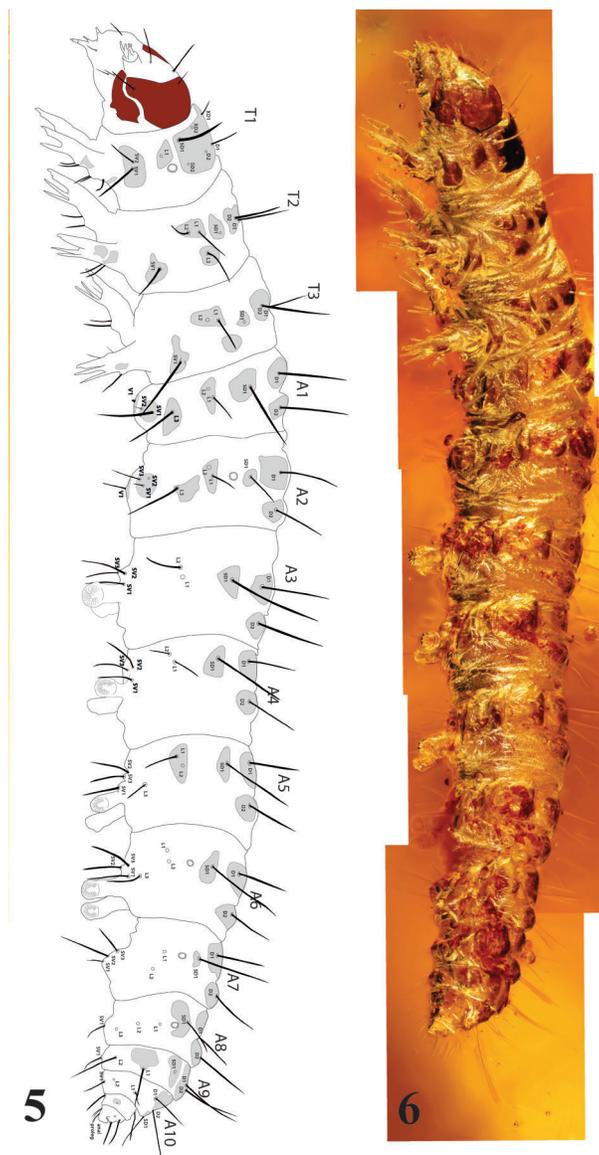


Fig. 1. *Lineodes undulata* Walsingham pupa



Fig. 2. *Lineodes undulata* Walshingham larval head & diagnostic prothoracic segment



Fig. 3. *Lineodes ravenalis* Solis

On *Cacographis*: I had been waiting almost my entire career for someone to rear larvae of a Midilinae species to confirm the identity of immatures that had been intercepted since 1954 at U.S. ports and originated in Mexico, Guatemala, and Costa Rica, in association with various genera in the plant family Araceae (Fig. 4). I was able to find additional material in vials of the “unsorted, unidentified” jars, because I had each vial databased in the NMNH pyraloid alcohol collection.



Fig. 4. *Cacographis* larva in taro root intercepted at U.S. port

Javier Vargas Alvarado, a professor at the University of Costa Rica, reared larvae of *Cacographis osteolalis osteolalis* Lederer that were causing damage to taro plants at a farm (Solis et al., 2023a). This provided me with a chance to describe the first larva of the Midilinae. This subfamily is part of the wet habitat clade (Fig. 4), and I mentioned the diagnostic or synapomorphic characters in Regier et al. (2012). There are three species known to occur in Costa Rica, including the type species *C. osteolalis*, which occurs throughout the Western Hemisphere, and *C. undulalis* Schaus, an uncommon endemic species in Costa Rica with very large adults (Fig. 5).



Fig. 5. *Cacographis osteolalis osteolalis* Lederer (left) & *C. undulalis* Schaus (right)

But there was the problem of which scientific name should be applied to the third species. Munroe (1970) revised the subfamily and described several subspecies with *C. osteolalis*, including *C. osteolalis azteca* from Mexico, Honduras, and Guatemala. He did not include Costa Rica in that taxon's range access to only one specimen in the American Museum of Natural History, New York, that he "excluded from the type series." After studying genitalia preparations made by one of my predecessors, Hahn Capps, in which the valvae were removed and flattened on slides, I realized that *Cacographis* adult male genitalia showed only very subtle differences.



Fig. 6. Map of *Cacographis* species (by Taina Litwak)

With adult NMNH material collected by William Schaus and others from Central America, one specimen from southwestern Costa Rica collected by myself in the early 1990s and used for molecular work for Regier et al. 2012,

and morphological and DNA barcode study of a long series from the Guanacaste Area of Conservation in northwestern Costa Rica (in collaboration Daniel Janzen and Winnie Hallwachs), I had enough material to thoroughly study *C. o. azteca* and elevate it to species status. A full revision of *Cacographis* with more material and molecular characters is needed (Fig. 6).

The genesis of the third paper, on the Phycitinae of the Tarahumara region of northwestern Mexico (Solis et al., 2023b), was not a happy one.



Fig. 7. Yecora Pista locality, Sonora, Mexico

Last summer, I received a loan return of over 3000 specimens from Herb Neunzig, a major worker on New World Phycitinae and one of the co-authors. I called Caroline Neunzig, his wife, who notified me that his physical state would not allow him to work anymore. She asked me about the Tarahumara manuscript, and I said I would send it to her in the Fall (it was another paper that was "mothballed" during my 10-year tenure as Research Leader of the Systematic Entomology Laboratory). After I finished the first draft, I sent it to Manuel Balcazar, also a coauthor, who did

not respond. I managed to contact another lepidopterist from Mexico, who told me that Manuel had passed away in 2021. Manuel and I spent a year and a half collecting moths in northwestern Mexico through a grant funded by CONABIO (Solis 2003); this study would not have been possible without his participation. Every other month he would drive north from Colima with collecting equipment and students, meet me at Hermosillo Airport, and we would drive east together into the Sierra Madre Occidental (Fig. 7, 8).

Herb & I dedicated a new species in his honor, *Caristanius balcazarius* Neunzig & Solis. We described two other new species, and identified 32 species, all figured (Fig. 9). We found 5 species to be endemic to Mexico, 10 that are new records for Mexico, 7 that are northernmost records, and 9 that are southernmost records. We also provided an Appendix of 61 Phycitinae species described from Mexico. We provided images of the localities, a table of the collecting localities and their vegetation type (pine, deciduous, and oak forests, and cultivated areas), and another table with the phycitine species and local distributions.



Fig. 8. La Culebra Creek, Sonora, Mexico

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Regier, J.C., C. Mitter, M.A. Solis, J.E. Hayden, B. Landry, M. Nuss, T. J. Simonsen, S.-H. Yen, A. Zwick & M. P. Cummings. 2012. A molecular phylogeny for the pyraloid moths (Lepidoptera: Pyraloidea) and its implications for higher-level classification. *Systematic Entomology*. 37:635-656.

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Solis, M. A., H. H. Neunzig, & M. A. Balcazár Lara. 2023b. Phycitinae (Pyralidae) of the Sierra Tarahumara region in northwestern Mexico. *Journal of the Lepidopterists' Society*. 77(3): 143-158.

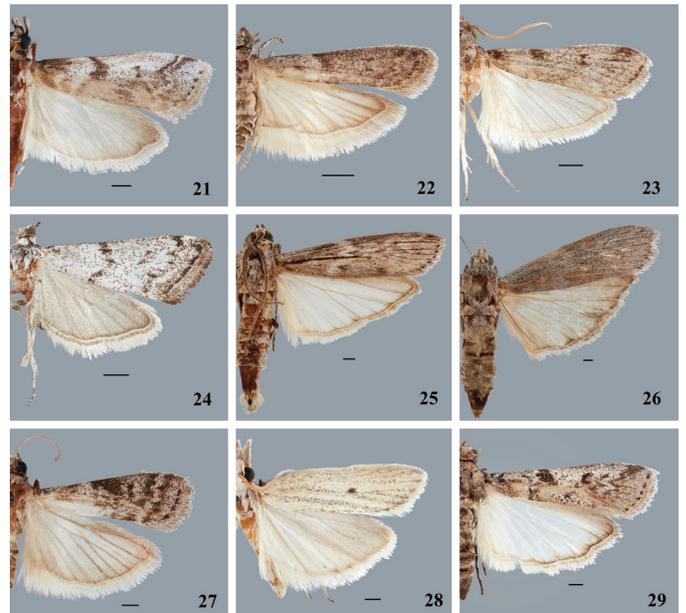


Fig. 9. Partial plate from the Phycitinae of the Tarahumara region, Mexico

Scott Miller

Mural at STRI with sloth moths

Scott shares the image below of a mural of a sloth with sloth moths (Chrysauginae) at the Smithsonian Tropical Research Institute (STRI), Panama.



NEW BOOKS....

THE PYRALOID MOTHS OF BORNEO Part 2

by Terry Whitaker, Stephen Sutton, & Henry Barlow (article submitted by Richard Mally)

We are pleased to announce that Part 2 of the *Pyraloid Moths of Borneo* book series is now available. This represents the second of three volumes covering species historically treated as 'Pyralidae,' but now divided between the superfamily Thyridoidea and the families Pyralidae and Crambidae in the superfamily Pyraloidea. This volume (Figure 1) encompasses 452 named species and 386 unnamed morphotypes from all Crambidae subfamilies present on Borneo, except for the larger part of the Spilomelinae genera. The remainder of Spilomelinae, starting with *Glycythyma*, will be published in Part 3, with its

expected publication in late 2025.

The volumes of *Pyraloid moths of Borneo* do not serve as formal monographs describing species and revising genera. Instead, they act as preliminary guides to the Pyralidae and Crambidae fauna of Borneo, with the aim of encouraging the taxonomic community to undertake necessary formal descriptions and revisions.

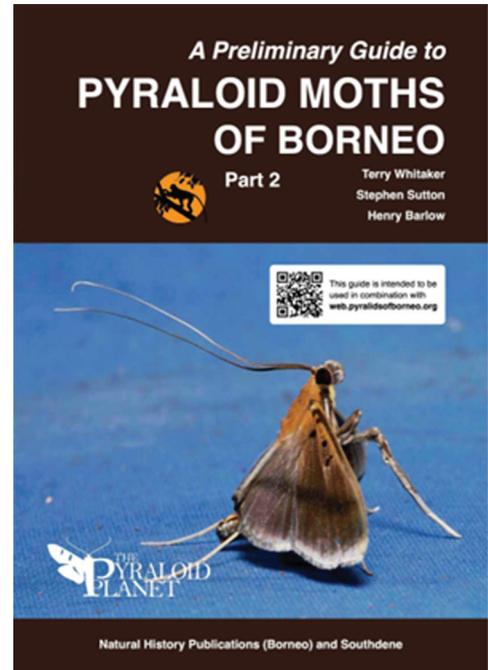


Fig. 1. Cover page, *Pyraloid Moths of Borneo*

This Guide is intended to be the portal to the website <https://web.pyralidsofborneo.org>. We have kept it simple, with only enough text to link it to the site. The key feature of the website is the 'Checklist', which has an effective search engine enabling easy and quick access to all 838 species and morpho-species in print volume Part 2. The respective species pages online comprise a description of the adults and information on taxonomy, life history, distribution, habitat and similar species. Images in this Guide and the website are drawn from the pool of circa 20,000 images collected since 2005 and assembled into

Plates in the printed book.

Each of the 27 Plates comprises of seven rows of five images across, thus 35 images per Plate (Figure 2). The Plates are arranged by subfamilies in alphabetical order, from Acentropinae, Crambinae, Cybalomiinae, Glaphyriinae, Hoploscopinae, Lathroteliinae, Musotiminae, Odontiinae, Pyraustinae, Schoenobiinae and Scopariinae to Spilomeliinae. Genera and species are listed in alphabetical order. Unnamed morphospecies judged to be in a particular genus follow as numbered species (sp. 1, sp. 2, etc.).

On the Plates, all species are shown at a standard size, irrespective of their actual size. For clarity, we have deep-etched most of them, but for some species, we have used the original published image. In other cases, even though the species is known to occur in Borneo, we have not been able to obtain an image, so we have used 'grey-outs'. Each page facing Plates 1–27 has a Plate Legend to the component figures. These Plate Legends give the current scientific name, the author's name and the year in which the species was described, followed by a variety of data about the taxon and specimen. The 27 Plates of named and unnamed species are complemented by six Plates of live adult specimens showing natural resting postures.

Terry Whitaker, Stephen Sutton & Henry Barlow (2023): A Preliminary Guide to Pyraloid Moths of Borneo. Part 2: Crambidae (1st part) sensu Regier J.C. et al. 2012. Natural History Publications (Borneo) Sdn Bhd in association with Southdene Sdn Bhd. <https://www.nhp-borneo.com/Size - A4; Pages – 82, ring bound; ISBN 978-983-812-208-5; Index to Genera & Species>.

For orders of copies and a quote including postage, please contact hsbar1944@

[gmail.com or misssallylee@yahoo.com](mailto:misssallylee@yahoo.com), or visit Natural History Publications (Borneo) at <https://www.nhpborneo.com/>.

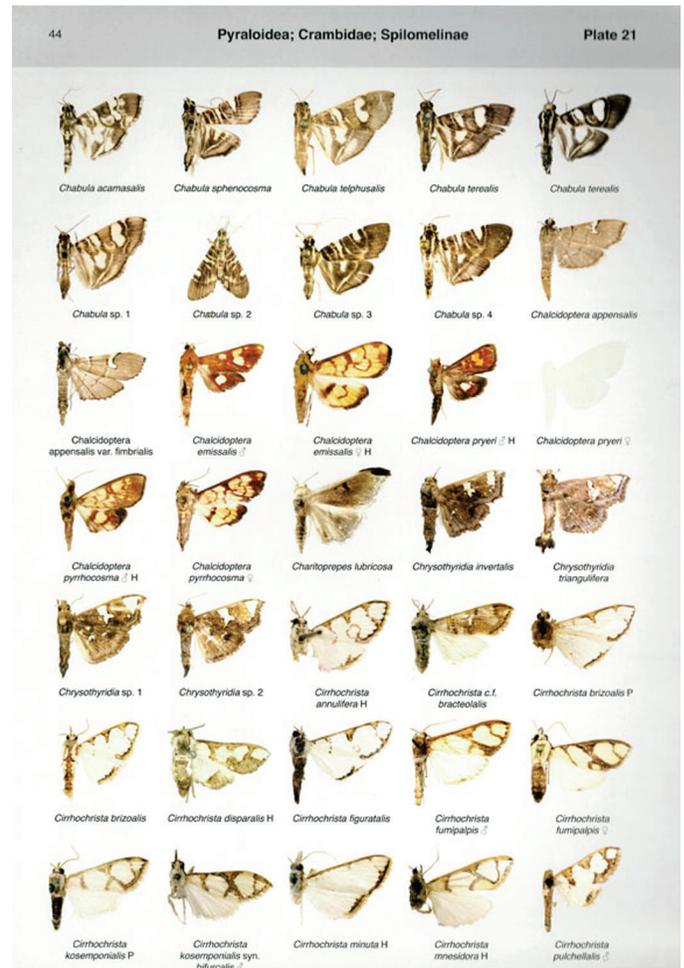


Fig. 2. Example of a plate.

A GUIDE TO THE PYRALIDAE AND CRAMBID MOTHS OF BRITAIN AND IRELAND by Mark Parsons & S.P. Clancy

This guide covers the pyralid and crambid moths of Britain and Ireland and is the first such review since Goater (1986). The fauna of Britain and Ireland has changed considerably since that publication, which covered 208 species. The present volume covers 248 species. These additions have

either arrived naturally through immigration, through importation (such as by the horticultural trade) or in single cases have been added through taxonomic considerations (*Delplanqueia inscriptella* (Duponchel)) or been probably overlooked (*Elophila rivulalis* (Duponchel)). Several of these species are now established and spreading. A further 27 species that have been intercepted at airports, etc. are covered briefly as these have the clear potential to be found. The ranges of many native species have changed in that time, with several species moving north, and there have been improvements in our understanding of many species' autoecology. This book discusses and summarise these changes.

Introductory chapters briefly cover their morphology, finding pyralids and crambids, conservation, immigration and summarise the broad changes to the fauna. A selected bibliography and further reading section is also included. The species accounts form the mainstay of the book, these liberally illustrated by images of each species at rest and often include images of the larvae and habitats. The accounts typically cover a description, similar species, flight season, life cycle, larval foodplants, habitat and status and distribution. An outline map is provided for resident species. Records of scarcer immigrants are given in full. Following the species accounts are 10 specimen plates and sections providing a selection of genitalia figures for more difficult to determine species, a foodplant list with associated species and a listing of vernacular names.

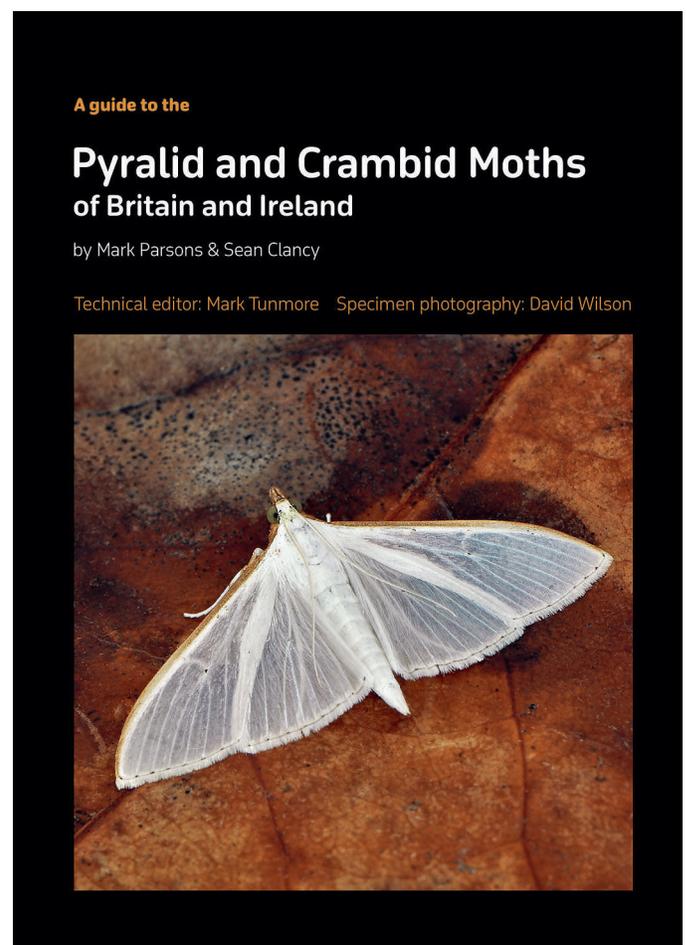
In addition to providing a comprehensive coverage of the British and Irish fauna this book aims to make this group of species even more accessible to further encourage recording in these changing times, to promote the investigation of autecological requirements

of individual species and to help inform any potential conservation studies.

Reference

Goater, B. 1986. British Pyralid Moths. Harley Books, Colchester.

Parsons, M.S & Clancy, S.P. 2023. **A Guide to the Pyralid and Crambid Moths of Britain and Ireland.** Atropos Publishing, Lizard. (508pp.) £80, available for £65 (+ £30 postage) from Atropos Books www.atroposbooks.co.uk



A review by Matthias Nuss

Common Purple & Gold, Banded Sable, Painted Meal Moth, and Tawny Grey are just four out of the nearly 250 pyraloid species treated in this impressive and up to date

handbook. It is packed with information, illustrated with many excellent photographs to identify species and finding them in nature. I recommend the book to beginners, citizen scientists and advanced users alike. A must have for anyone interested on pyraloids in Ireland, Great Britain and beyond. [Alma Solis comment: I have been told that I will receive this book as a present this holiday season!]

A “smattering” of publications

PYRALIDAE

Chrysauginae

Becker, V. O. 2023. The species in the genus *Azamora* Walker, 1858 whose larvae feed on *Passiflora* sp. (Passifloraceae) in Tropical America (Lepidoptera: Pyralidae, Chrysauginae). SHILAP Revista de lepidopterología. 51(203): 407-417.

Epipaschiinae

Kim, H., T.-G. Lee, Y.-B. Cha, C.-M. Jang, J.-N. Kim, U. Bayrasaikan, & Y.-S. Bae. 2023. Two new species of the genus *Stericta* Lederer (Lepidoptera, Pyralidae, Epipaschiinae) from Laos and Cambodia. Zootaxa. 5285(1): 196-200.

Leraut, G.H.C. 2023. Notes on some Epipaschiinae from the Indochinese Peninsula and description of a new subspecies from Thailand (Lepidoptera: Pyralidae). Revue Française d'Entomologie Générale. 5(6): 131-136.

Ranjan, R., N. Singh, & J.S. Kirti. 2022. A new genus, three new species and a new species record of Epipaschiinae (Lepidoptera: Pyralidae) from India. Zootaxa. 5222(4): pp. 385-394.

Ranjan, R., N. Singh, & J.S. Kirti. 2023. A new species of *Coenodomus* Walsingham, 1888 (Epipaschiinae, Pyralidae, Lepidoptera) from India. Zootaxa. 5264(4): 593-598.

Tanagal, V., M. Schankara Murthy, & P. M. Reddy. 2023. A checklist of Indian Epipaschiinae (Lepidoptera, Pyraloidea, Pyralidae). Entomon. 48(1): 51-62.

Galleriinae

Nonglait, K.C.L., K. S. Das, C.B. Marwein, J.M. Kharthangmaw, & S. Choudhury. 2023. Scanning electron microscopy study of the antennal sensilla of cob borer, *Stenachroia elongella* (Lepidoptera: Pyralidae). Microscopy Research and Technique. <https://doi.org/10.1002/jemt.24294>

Phycitinae

Garre, M., J. Girdley, R.M. Rubio, J.J. Guerrero, & A.S. Ortiz. 2023. DNA barcoding relationships and habitat description of *Pso-rosa ferrugatella* Turati, 1924 in Spain (Lepidoptera: Pyralidae, Phycitinae). SHILAP Revista de lepidopterología. 51: 359-366.

Huertas-Dioniso, M. & P.M. Bernabé-Ruiz. 2023. Immature stages of Lepidoptera (LXIII). *Nyctegretis ruminella* (La Harpe, 1860) in Huelva, España (Lepidoptera: Pyralidae: Phycitinae). SHILAP Revista de lepidopterología. 51(201): 123-131. [Immatures feeding on *Pistacia lentiscus* L., also observed on *Verbascum thapsus* L. and *Tamarix canariensis* Willd.]

Leraut, G.H.C. 2022. A Sahelian Phycitinae new to the Tibesti and its distribution (Lepidoptera, Pyralidae). Revue Française d'Entomologie Générale. 4(3): 81-84. [*Euzo-phaera lunulella* (Costa)]

Leraut, G.H.C. 2022. Review of the Anerastiini genera *Maliarpha* Ragonot, 1888, *Toshitamia* Sasaki, 2012, *Villiersoides* Marion, 1957 and *Hosomeiga* Sasaki, 2012: an old-world genera cluster (Lepidoptera: Pyralidae). *Revue Française d'Entomologie Générale*. 3(7): 162-177.

Leraut, G.H.C. 2022. Revision of the Afrotropical taxon *Spatulipalpia stomataula* Meyrick, 1933, with a new synonym (Lepidoptera, Pyralidae). *Revue Française d'Entomologie Générale*. 4(9): 261-264.

Leraut, G.H.C. 2023. Note de nomenclature: éclaircissements sur la disponibilité des noms de genre *Amonia* et *Ammonia*. *Revue Française d'Entomologie Générale*. 5(6): 173-178.

Nel, J. & S. Peslier. 2023. Trois microlépidoptères nouveaux pour la Crète (Grèce) (Lepidoptera, Carposinidae et Pyralidae Phycitinae). *Revue de l'Association Roussillonnaise d'Entomologie*. 32(2): 148-149.

Roy, V., J. Mpika, G. J. Kergoate, G.F.T. Mboussy, & Attibayeba. 2023. Diversity of insect pests of common bean and pigeon pea in the Republic of Congo revealed by DNA barcoding. *African Entomology*. 31: e15329 (8 pages) <https://doi.org/10.17159/2254-8854/2023/a1532> [beetles and includes *C. cautella* and *Mussidia*]

Sammut, P., A. Seguna, J.J. Borg, & A. Catania. 2023. On the presence of *Ephestia woodiella* Richards & Thomson, 1932 in the Maltese Islands (Lepidoptera: Pyralidae, Phycitinae). *SHILAP Revista de lepidopterología*. 50(200): 677-679.

Shivakumara, K.T., M.C. Keerthi, P.R. Shashank, J. Komal, A.C. Polaiyah, R. S. Ramya, T. Venkatesan, D. Sagar, R. Casini, I. M. Mousa, H.O. Elansary, & A. M. El-Sabrou. 2023. Detection and molecular characterization of *Copamyntis obliquifasciella* (Hampson, 1896)

infesting medicinal plant, *Cassia fitula* L. from India. *Journal of Applied Research on Medicinal and Aromatic Plants*. 37: e100517.

Tsvetkov, E.V. 2022. A new species of the genus *Epischnia* Hübner, 1825 from Kazakhstan (Lepidoptera: Pyraloidea, Pyralidae, Phycitinae). *SHILAP Revista de lepidopterología*. 50(200): 637-641.

Yepishin, V. 2023. Additional information on the taxonomy of genus *Asclerobia* Roesler, 1969 (Lepidoptera; Pyralidae). *Zootaxa*. 5336(2): 247-258.

Pyralinae

Çalışkan, S. S., S. Candan, & N. Ö. Koçakoğlu. 2023. Ultrastructure of the sencilla on proboscis of adult *Tretopteryx pertusalis* (Lepidoptera: Pyralidae). *Transactions of the American Entomological Society*. 149: 179-184.

Ranjan, R., N., Singh, & J.S. Kirti. 2023. On the taxonomy of genus *Endotricha* Zeller (Pyralinae, Pyralidae, Lepidoptera) with description of three new species from India. *Zootaxa*. 5323(1): 56-70.

Shin, Y.-M., H. S. Lee, I.-K. Kim, C.-J. Kum, & M.B. Choi. 2023. Host range expansion of nest-parasitic moths *Pyralis regalis* and *Hypsoptygia maritalis* in social wasps nest: new findings and implications for biological control. *Diversity*. 15: 789. <https://doi.org/10.3390/d15060789>

CRAMBIDAE

Acentropinae

Romero, F. 2022. Aquatic and semi-aquatic Lepidoptera in Argentina: updated list, distribution and life habits. *Acta Zoologica Lilloana*. 66(2): 121-148.

Crambinae

Kim, Y., M. Qi, S. Wang, & H. Li. 2023. Taxonomy of the genus *Calamotropha* Zeller (Lepidoptera: Crambidae: Crambidae) from China. 5297(4): 451-482.

Landry, B., J. Bilat, J. Hayden, M. A. Solis, D. C. Lees, N. Alvarez, T. Léger, & J. Gauthier. 2023. The identity of *Argyria lacteella* (Fabricius, 1794) (Lepidoptera, Pyraloidea, Crambinae), synonyms, and related species revealed by morphology and DNA capture in type specimens. Zookeys. 1146: 1-42. [details about this collaborative paper was on p. 5 of The Pyraloid Planet, Volume 16, 2022]

Sinev, S.Yu., & S.K. Korb. 2022. A new species of the genus *Neocrambus* Bleszynski, 1957 (Lepidoptera: Crambidae) from Central Asia. Zootaxa. 5209(5): 594-597.

Tonğa, A. & M. Rütemoğlu. 2023. First report and molecular identification of *Chilo partellus* (Swinhoe, 1885) in South-eastern Türkiye: invasion continues (Lepidoptera: Crambidae). SHILAP Revista de lepidopterología. 51(203): 395-405.

Glaphyriinae

Becker, V.O. 2023. A review of the New-World genera *Alatuncusia* Amsel, 1956, and *Dichochroma* Forbes, 1944 with new synonymies, new combinations, and description of two new species (Lepidoptera, Crambidae, Glaphyriinae). SHILAP Revista de lepidopterología. 51(201): 27-36.

Hernández-Romero, O., N. Bautista-Martínez, L. Soto-Rojas, J. Romero-Napoles, C. J. García-Ávila. 2023. Characterization of *Hellula phidilealis* (Lepidoptera: Pyralidae) larval instars by application of the Dyar Rule. Florida Entomologist. 105(4): 313-315.

Odontiinae

Liu, L., Y. Zhang, S.-C. Yan, B. Yang, & G.-R. Wang. 2023. Ultrastructural and descriptive study on the adult body surface of *Heortia vitessoides* (Lepidoptera: Crambidae). Insects. 14: 687. <https://doi.org/10.3390/insects14080687>

Scopariinae

Huemer, P., J. Nel, T. Varenne, & J. Schmid. 2023. *Syrianarpia faunieralis* ssp. *labonnei* Varenne, Nel & Schmid, 2022, stat. rev. (Lepidoptera, Crambidae, Scopariinae). Revue de l'Association Roussillonnaise d'Entomologie. 32(3): 191-194.

Nel, J. & T. Varenne. 2023. Un problème taxonomique: sur la présence de deux espèces d'*Anarpia* Chapman, 1912 en Europe (Lepidoptera, Crambidae, Scopariinae). Revue de l'Association Roussillonnaise d'Entomologie. 32(3): 195.

Spilomelinae

Alipanah, H. & F. Slamka. 2023. A revision of the subfamily Spilomelinae (Lepidoptera, Crambidae) in Iran with description of a new species. Zootaxa. 5248(1): 1-70.

Becker, V.O. 2023. The identity of *Syllepte incomptalis* Hübner (Lepidoptera: Crambidae: Spilomelinae) with synonymies, new combinations and new species. Revista Brasileira de Entomologia. 67(1): e20220093. [A response to this paper is in press in Zootaxa by Solis, Mally, Hayden, and Nuss]

Cook, L.M. & J. Muggleton. 2023. Encounters with the colour forms of the box-tree moth *Cydalima perspectalis* (Walker, 1859) (Lep.: Crambidae). Entomologist's Record and Journal of Variation. 135: 83-87.

Gao, Y., J. Zhang, Q. Wang, Q. Liu, & B. Tang. 2023. The complete mitochondrial genome of Box Tree Moth *Cydalima perspectalis* and insights into phylogenetics in Pyraloidea. *Animals*. 1045: 1-13.

Guo, J.-M. & X.-C. Du. 2023. Five new species of *Bradina* Lederer (Lepidoptera, Crambidae) from China, with remarks on the morphology of the genus. *ZooKeys*. 1158: 49-67.

Huang, S.-Q. & X.-C. Du. 2023. Revision of the genus *Charitoprepes* Warren (Lepidoptera, Crambidae), with the description of a new species from China. *ZooKeys*. 1149: 171-179.

Ko, J.-H., A. Albert, & U. Bayarsaikhan. 2023. First report of the genus *Haritalodes* Warren, 1890 from Micronesia (Lepidoptera, Crambidae, Spilomelinae), with description of a new species. *Zootaxa*. 5339(1): 95-100.

Maes, K. V. N. 2023. Studies on Crambidae IV, a new *Stemorrhages* species from Madagascar (Lepidoptera, Pyraloidea, Crambidae, Spilomelinae). *Entomologia Africana*. 28(1): 19-28.

Pasam, M.R., S.M. Muddappa, P., Aralimarad. 2023. Taxonomy of agriculturally important Spilomelinae (Lepidoptera: Pyraloidea: Crambidae) of Karnataka, India. *Oriental Insects*. DOI: 10.1080/00305316.2022.2162142

Rani, K. S., S. Pal, K. T. Shivakumara, & D.G. Krishna. 2023. Morpho-molecular characterization and bioecology of leaf folder, *Pycnarmon cibrata* (Fabricious) on nirgundi (*Vitex negundo*): an aromatic medicinal shrub from India. *Archives of Phytopathology and Plant Protection*. DOI: 10.1080/03235408.2023.2222442

Seizmair, M. 2023. Contribution to the knowledge of the Afrotropical Spilomelinae (Lepidoptera: Crambidae): a new species from

Saudi Arabia, new combinations and distributional updates. *Advances in Entomology*. 11: 223-238.

Tang, C., & X. Du. 2022. Complete mitochondrial genomes of two moths in the tribe Trichaeini (Lepidoptera: Crambidae) and their phylogenetic implications. *Ecology and Evolution*. 13: e3.10188 [*Prophantis octoguttalis* and *P. adusta*]

Thasler, S. 2023. *Duponchelis fovealis* Zeller, 1847 (Lepidoptera: Crambidae, Spilomelinae): Ein weiterer hessischer Fund in Langen auf dem Balkon des Autors. *Nachrichten des Entomologischen Vereins Apollo*. 44(1): 1- 3.

Geographical, Biological, & Multiple Taxa

Albu, V. & S. Albu. 2023. Lepidoptera assemblages along a western slope elevation gradient of the south-central Sierra Nevada Mountains in California. *Journal of the Lepidopterists' Society*. 77(1): 43-58.

Cock, M. J. W., M. Kelly, A.E. Deacon, & M. Gibson. 2022. New records and identifications of butterflies and moths (Lepidoptera) from Tobago, West Indies. *Living World, Journal of the Trinidad and Tobago Field Naturalists' Club*. 2022: 12-29 [9 species of Crambidae, 2 of Pyralidae; Fig. 4 is incorrect: it is *Wanda sadotha* Schaus (*incertae sedis*, Epipaschiinae, Solis 1993) Described from French Guiana, but found is various other countries. USNM has one specimen from Tobago (none from Trinidad)]

Falck, P., O. Karsholt, & F. Slamka. 2022. New data on Pyraloidea from the Canary Islands, Spain 2 (Lepidoptera: Pyralidae, Crambidae). *SHILAP Revista de lepidopterología*. 50(199): 469-488. [Galleriinae, Pyralinae, Phycitinae, Spilomelinae, Pyraustinae, Odontiinae

Leraut, P.J.A. 2022. Description de Pyrales nouvelles de Madagascar. *Revue Française d'Entomologie Générale*. 4(7): 197-208.

Leraut, P.J. A. 2022. Onze espèces de Pyrales nouvelles de Madagascar (Lepidoptera, Pyraloidea). *Revue Française d'Entomologie Générale*. 4(8): 239-253.

Pérez De-Gregorio, J.J. and E. Requena. 2023. Microlepidoptères nous intéressants pour la faune catalane, XIII (Lepidoptera, Pyralidae, Crambidae). *Revue de l'Association Roussillonnaise d'Entomologie*. 32(2): 73-92.

Rajaei, H., L. Aarvik, W. R. Arnscheid, G. Baldizzone, D. Bartsch, B.Å. Bengtsson, O. Bidzilya, P. Buchner, U. Buchsbaum, J. Buszko, V. V. Dubatolov, S. Erlacher, M. Esfandiari, J. J. De Freina, R. Gaedike, P. Gyulai, A. Hausmann, J. Haxaire, D. Hobern, A. Hofmann, N. Ignatev, L. Kaila, A. Kallies, T. Keil, Á.Kiss, I. J. Kitching, A. Kun, A. M. László, G. Leraut, R. Mally, A. Matov, J.-U. Meineke, W. A. Nässig, S. Naumann, V. Nazari, E. J. van Nieukerken, M. Nuss, N. Pöll, A. M. Prozorov, M. M. Rabieh., L. Rákósy, M. Rindoš, J. Rota, R. Rougerie, A. Schintlmeister, A. Shirvani, P. Sihvonen, T. J. Simonsen, S. Y. Sinev, P. Skou, T. Sobczyk, J.-C.Sohn, J. Tabell, G. Tarmann, Z. Tokár, R. Trusch, Z. Varga, A.V. Volynkin, D. Wanke, R. V. Yakovlev, R. Zahiri, P. Zehzad, H.C. Zeller, V. V. Zolothuhin, O. Karsholt. 2023. Catalogue of the Lepidoptera of Iran. In: Rajaei, H. & O. Karsholt (eds): *Lepidoptera Iranica. Integrative Systematics: Stuttgart Contributions to Natural History*. 6(Special Issue): 121-459. [includes the Pyraloidea]

Shermatov, M. R. 2023. Pyraloid moths (Lepidoptera: Pyraloidea) in the agroecosystems of the Fergana Valley (Uzbekistan). *Scientific Review*. 3: 35-40 [In Russian]

Tsvetkov, E. 2023. New data on the fauna of pyraloid moths (Lepidoptera: Pyraloidea) of Dagestan (Russia). *Zootaxa*. 5254(3): 340-356.

Wu, Y., X. Liu, Y. Zhang, H. Fang, J. Lu, & J. Wang. 2022. Characterization of four mitochondrial genomes of Crambidae (Lepidoptera, Pyraloidea) and phylogenetic implications. *Archives of Insect Biochemistry and Physiology*. 12:e21914, <https://doi.org/10.1002/arch.2191> [*Loxostege turbidalis*, *Loxostege aeruginalis*, *Pyrausta despicata*, *Crambus perlellus*]

Pyraloid Enthusiasts

Please refer or forward the details to me about anyone who wishes to be put on the Pyraloid Planet distribution list. **Welcome Matthew Barnes, Antoine Guyonnet, Peter Oboyski, Mark Parsons, Maheswara Reddy Pasam, and Andrei Sourakov, who are newly added to this list.**

If you have any corrections, suggestions, comments on this issue, let me know as soon as possible. More importantly, send additions for next year's edition anytime during the year. The next deadline will be October/November 2024.

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In 2023 Bernard Landry, Richard Mally, and Alma Solis (left to right) at the 23rd Societas Europaea Lepidopterologica (SEL) Congress in Orleans, France, talking about pyraloids, of course!

