

In Memoriam: James G. Lumbers

# THE TACHINID TIMES

ISSUE 39



Museum news from  
Vienna, Beijing and Washington

*TRENDS IN THE NETHERLANDS*

Biocontrol in British Columbia

*Collecting in China, Andes and USA*

FEBRUARY 2026

# Table of Contents

## ARTICLES

---

- 4** The importance of Natural History Collections and Taxonomy: a tachinid species collected by Johann Natterer during the Austrian scientific expedition to Brazil (1817–1835)  
by Marcelo D. de Santis
- 11** A visit to the Chao Tachinidae collection at IZCAS in Beijing: personal impressions and perspectives  
by Pierfilippo Cerretti
- 15** A return to the Hengduan Mountains of China with a list of newly recorded species from Sichuan and Yunnan  
by Xingyan Zhang, Junjian Li, Chuntian Zhang, Henan Li, Ruiqing Dong, Yang Tang and Xinyi Li
- 38** Trends in the tachinid fauna of *The Netherlands* over the last forty years  
by Theo Zeegers
- 44** “Tree Tachinidae”: brief notes on bristle flies from the Life on Trees project  
by John O. Stireman III
- 49** *Istocheta aldrichi* (Mesnil), a biological control agent of the Japanese beetle, *Popillia japonica* Newman, establishes in British Columbia  
by Paul K. Abram
- 53** One year at the Smithsonian Tachinidae collection, and some updates on tachinids that parasitize Diptera  
by Rodrigo de V. P. Dios and Filipe M. Gudin
- 60** Opportunistic surveys of bristle flies (Tachinidae) in West Virginia (USA) revisited  
by John O. Stireman III
- 71** Thirty-eight years of *The Tachinid Times*  
by James E. O’Hara and Shannon J. Henderson
- 73** ANNOUNCEMENT *Studia Dipterologica* Supplements on Tachinidae
- 74** IN MEMORIAM James G. Lumbers
- 75** STUDENT NEWS Khong Lunaria
- 76** TACHINID BIBLIOGRAPHY
- 87** MAILING LIST

# THE TACHINID TIMES

February 2026, Issue 39

**Chief Editor** JAMES E. O'HARA  
**InDesign Editor** SHANNON J. HENDERSON  
**Staff** JUST US

ISSN 1925-3435 (Print)  
ISSN 1925-3443 (Online)

---

## OFFICE ADDRESS

Canadian National Collection of Insects, Agriculture and Agri-Food Canada, 960 Carling Avenue, Ottawa, Ontario, K1A 0C6, Canada.

## E-MAIL ADDRESSES

james.ohara@agr.gc.ca  
shannon.henderson@agr.gc.ca

## WEBSITE

<https://www.uoguelph.ca/nadsfly/Tach/WorldTachs/TTimes/TThome.html>

## TACHINIDAE RESOURCES

*The Tachinid Times* is hosted on the Tachinidae Resources web pages of the former website of the North American Dipterists Society (NADS) at <https://www.uoguelph.ca/nadsfly/Tach/home.html>. This website is kindly hosted by the University of Guelph through arrangement with Andrew Young of the School of Environmental Sciences, University of Guelph, Guelph, Ontario, Canada.

## DISTRIBUTION

This newsletter is distributed near the end of February each year. It is published simultaneously in hardcopy and online, both based on the same PDF generated from an InDesign file. Hardcopies are distributed to several libraries and to a few readers who request them.

## INSTRUCTIONS TO AUTHORS

This newsletter accepts submissions on all aspects of tachinid biology and systematics. It is intentionally maintained as a non-peer-reviewed publication so as not to relinquish its status as a venue for those who wish to share information about tachinids in an informal medium. All submissions are subjected to careful editing and some are reviewed if the content is thought to need another opinion. Some submissions are rejected because they are poorly prepared, not well illustrated, or excruciatingly boring.

Authors should try to write their submissions in a style that will be of interest to the general reader, in addition to being technically accurate. This is a newsletter, not *Science* or *Nature*. Try to illustrate submissions with high quality images sent to the editor as separate files at the same time as the text. Text files sent with embedded images will not be considered for publication. All content should be original; if copyrighted material (online or in print) is used then permission from the copyright holder is needed. Submitted pictures of tachinids in the field will be considered for the cover, table of contents, or a special section in the newsletter.

Student submissions are particularly welcome. Writing about a thesis study or a side project involving tachinids is a good way to inform others about a study that is underway before it has generated formal publications.

**FRONT COVER** A hilltopping deer nose bot fly, *Cephenemyia* sp. (Oestridae), with unidentified wasp on wing. Gomez Peak, Grant Co., New Mexico, USA.  
Photo: J.E. O'Hara, 27 August 2006

**TABLE OF CONTENTS** Onion Creek Scenic Road northeast of Moab, Utah, USA.  
Photo: J.E. O'Hara, 17 May 2024

**BELOW** Wild horses, Adobe Town Wilderness Study Area, southern Wyoming, USA.  
Photo: J.E. O'Hara, 14 September 2024





# The importance of Natural History Collections and Taxonomy:

a tachinid species collected by Johann Natterer during the Austrian scientific expedition to Brazil (1817–1835)

by Marcelo D. de Santis

Postdoctoral Fellow, Konrad Lorenz Institute for Evolution and Cognition Research (KLI),  
Martinstraße 12, 3400, Klosterneuburg, Austria  
& Associated Scientist, Naturhistorisches Museum Wien  
(Natural History Museum Vienna), 2nd Zoological  
Department, Burgring 7, 1010, Vienna, Austria  
E-mail: mcrlsantis@gmail.com

Figure 1. Johann Natterer ca. 1817–1825.  
(Portrait in Vienna Museum.)

*Practice without theory is blind. Theory without practice is sterile.*  
- Engels, Letter to F.A. Sorge, London, Nov. 29, 1886.

*Before entering into the topic to be discussed, I think a bit of background information would be welcome. Since last year, I have been a Postdoctoral Fellow at the Konrad Lorenz Institute for Evolution and Cognition Research (KLI), at Klosterneuburg, Austria (Fig. 2). For those unaware of this place, this is a Theoretical Biology Institute that supports research in evolutionary biology, with a focus on critically examining the conceptual foundations of biology, resolving longstanding theoretical disputes, and achieving an epistemic unification of particular fields of the life sciences.*

*My own research aligns with this mission: I aim to bring the science of Phylogenetics into closer conversation with newer areas of evolutionary biology, such as Evolutionary Developmental Biology (Evo-Devo). In a recent paper (Santis 2024), for example, I argued that phylogenetic studies should include Evo-Devo data to help distinguish between parallel evolution (which can inform common ancestry) and convergent evolution (which does not). A key motivation behind this work is my concern that systematics has become overly molecular in recent decades. With the rise of DNA sequencing, emphasis has shifted from studying whole organisms to analyzing statistical models and algorithms. As a result, phylogenetics today often focuses primarily on molecules, new techniques, and computational pipelines, rather than on the biology of the organisms themselves. This trend is clear in systematics journals, where DNA-based phylogenies now dominate research across all kinds of life forms. Besides being a systematist, I am a taxonomist by training. Taxonomy also became involved in those gene-centric interpretations of organisms. Approaches like DNA taxonomy and DNA barcoding have gained prominence, supported by large funding initiatives. One example is the [German Barcode of Life \(GBOL\)](#) project, which has a budget of roughly €16 million and aims to build a DNA barcode reference library for Germany's animals, plants, and fungi. It is estimated to cover over 20,000 of the country's 48,000 known animal species. Such projects reflect a broader perspective: a systematist working mostly with molecular data may need deep technical expertise in sequencing and*

bioinformatics—but not necessarily in-depth knowledge of the organisms themselves. While DNA-based methods haven't replaced traditional taxonomy entirely, they have shifted the field's priorities toward a more reductionist approach, where DNA data often drive species hypotheses (for more, see Britz et al. 2020, Wheeler 2024, Williams & Wheeler 2025). To be clear: this is not suggesting we reduce funding for molecular studies. They remain essential. But I do believe we should restore balance by also supporting other areas of systematics, taxonomy, and organismal biology, that engages directly with the form, development, and diversity of living things.



**Figure 2.** Front of Konrad Lorenz Institute for Evolution and Cognition Research (KLI) in Klosterneuburg, Austria. [<https://commons.wikimedia.org/w/index.php?curid=32474240>]

Since Klosterneuburg is very close to Vienna, I contacted Dr. Alexssandro Camargo, the current curator of Diptera at the Natural History Museum Vienna (NHMW) (Fig. 3) and a specialist in robber flies, to arrange a visit to the museum's collection. The NHMW's Diptera collection is historically rich, containing specimens from the 18th and 19th centuries (Fig. 4). These are particularly valuable because they represent organisms from a time when many environments were far less disturbed than they are today. Having the chance to study this collection has been extraordinary. (For more on the collection, with a special focus on Diptera, see O'Hara 2013.) Through the kindness of Dr. Camargo, I could get better knowledge of the tachinids stored there. Although I didn't start with a specific research goal, my long-standing interest in Neotropical Tachinidae, especially the subfamily Dexiinae, led me to begin examining drawers of Neotropical Dexiinae material. That exploration paid off. In short (as published in Santis & Camargo 2025), I discovered a new species of dexiine mixed in with specimens of two already described species. We named it *Chaetotheresia confusa* Santis & Camargo, 2025. The specimens had originally been collected nearly 200 years ago and were first studied by the German entomologist Christian Rudolph Wilhelm Wiedemann (1770–1840) (see Pont 1995 for more about his life and work). Later in 2025, another fascinating discovery emerged: I found another new species among miscellaneous Dexiini material collected by Johann Natterer (Fig. 5), a 19th-Century naturalist whose work is closely tied to the founding of the NHMW. In what follows, I'll explain more about the Natterer family's role in the museum's origins and detail Johann Natterer's remarkable expedition through Brazil in the early 1800s.

Joseph Natterer Sr. (1754–1823) began a career in falconry in Laxenburg, Austria in 1772, at the age of 18. He developed a strong interest in taxidermy and over the years amassed a large collection of stuffed vertebrates. His talents and collection came to the attention of the Holy Roman Emperor Francis II, and in 1794 he moved to Vienna with his wife, two sons (Joseph Jr. and Johann) and stuffed animals to become the first custodian of the Emperor's newly established 'animal cabinet' (Fischer et al. 1976, Weber 2025).

After the Emperor's death (1765), Empress Maria Theresa, his widow, included this natural history collection in her so-called Augustinian Walk of the Hofburg Palace (Fischer et al. 1976). In 1806, when the collection was renamed as "Vereinigtes k.k. Naturalien-Cabinet" (United Imperial Royal Natural History Cabinet), Karl Franz Anton Schreibers (1775–1852), the institution's director, appointed Joseph Natterer Sr. as the first inspector of the zoology department. From that point on, one of his son's, Joseph Natterer Jr., assumed responsibility for the bird and mammal collections. After several years and further changes, this Augustinian Walk was reconstituted in 1810 as the "Die Vereinigten k.k. Naturalien-Cabinette" (United Imperial Royal Natural History Cabinet). Von Schreibers was responsible for the reorganization and expansion of the animal cabinet. Years later, in 1817, he was appointed to lead a major naturalist expedition to Brazil (Santos 2018). This expedition was initiated on the occasion of the royal wedding between the Austrian archduchess Carolina Josefa Leopoldina of Habsburg-Lorraine, daughter of Austria's Emperor Francis I and Empress Maria Tereza and the crown prince regent of Portugal, Brazil and the Algarves, Pedro de Alcântara (1798–1834). Among those chosen to join the famous Austrian scientific expedition to Brazil (1817–1835) was Johann Baptist Natterer (1787–1843) (Fig. 1), son of Joseph Natterer Sr.; one of fourteen naturalists selected (Santos 2018).

Johann Natterer spent 18 years in Brazil (1817–1835), during which he made 10 trips within Brazilian territory (Vanzolini 1993), traversing the country's central plains through the regions of Goiás and Cuiabá, as well as the western province of Mato Grosso. Despite enduring harsh conditions and illnesses, he succeeded in reaching the Amazon basin. He even explored numerous northern tributaries, including the Rio Negro and Rio Branco, journeying as far as the borders with Colombia and Venezuela (Vanzolini 1993). In total, his travels spanned several thousand kilometers across Brazil. The scientific result from the Brazilian expedition was substantial, requiring twelve large shipments for transport back to Vienna. Natterer's final sum of organisms was equally remarkable: 1,146 mammals, 12,293 birds, 1,678 amphibians, 1,621 fish, 32,825 insects, and 1,729 glass jars containing preserved specimens of intestinal worms (Schmutzer 2012). These acquisitions instantly elevated the Vienna Animal Cabinet to possess the most comprehensive collection of South American fauna in the world at that time.



**Figure 3.** The interior of the Natural History Museum Vienna (NHMW).



**Figure 4.** A drawer of Australasian Rutiliini (Dexiinae) in the NHMW.

The sheer volume of material arriving overwhelmed the existing cabinet rooms, making storage and display very difficult. Consequently, in 1821, the Emperor ordered the establishment of a dedicated Brazilian Museum for the Brazilian collections in the Harrach Palace, which existed until 1836. This became the center of all activities related to the Austrian expedition to Brazil (Schmutzer & Feest 2014). After the Museum closed, the natural history objects went to the Imperial Cabinet of Natural History. Some years after Natterer's passing in 1843, tragedy struck on October 31, 1848, when a major fire devastated this storage area. The blaze consumed the skeleton collection, duplicate mammals and birds, Natterer's invaluable field diaries and personal Brazilian collection including his butterfly and other insect collections (Fischer et al. 1976). Years later, the decision was made to no

longer house scientific collections within the palace. In 1871, construction began on the monumental, purpose-built Imperial Natural History Museum and on August 10, 1889, Emperor Franz Joseph I presided over its official opening (Fischer et al. 1976). After World War I, the museum officially became the "Naturhistorisches Museum Wien". Therefore, almost 200 years after Natterer travelled in Brazil, having survived transport on mules within Brazil, transatlantic shipments to Vienna, fire at the Palace and two World Wars, I could see these specimens he collected! I will describe the specimens referred to above as a new species in the genus *Prophorostoma* Townsend. Something worth mentioning is that I have seen many specimens of this genus before, mainly *P. pulchra* Townsend, 1927, but had never spotted any collected by Natterer. A possibility arises that the species is already extinct given that the region where they were collected is severely deforested and has suffered greatly from urbanization.



**Figure 5.** A new species found among miscellaneous Dexiini in the NHMW, collected two hundred years ago in Brazil by Johann Natterer.

## Reflections on Systematics

I think there are some take-home messages from what I have learned from my personal experiences. Scholarships for taxonomic works are rarer than ever. Today, proposing a taxonomic or phylogenetics study that is not firmly based on DNA data stands little chance of being funded. The work I described above was only possible because I had secured a postdoctoral fellowship from the KLI. Without that support, my taxonomic research, like that of many others, would not have been funded. It reflects that many interesting taxonomic works are being relegated to a volunteer effort, carried out informally without dedicated research funding. Today, we can see the effects of a profound commoditization of science, where research is increasingly interpreted through the lens of the market economy. Scientific inquiry is often treated as a business investment (see Levins & Lewontin 1985, Macfarlane 2019, Oliveira 2013). One practical consequence is that expensive technology and high-throughput methods are prioritized over foundational taxonomic work; because describing a new species from a few specimens can be relatively inexpensive compared to large-scale molecular studies. Thus, many times, for species already extinct, as is likely for the new species of *Prophorostoma* I discussed above, can be overlooked. This pattern is particularly pernicious for tachinids, mainly, but certainly not only, from areas like the Neotropics that we know so little about. There are many new species awaiting discovery through both new collection efforts and by study of old specimens in reference museums like the NHMW. When funding neglects such groups, we risk losing the chance to document biodiversity before it disappears.

The diversity of remarkable characters found on tachinid flies has always amazed me. I end by referencing a discovery made some years ago. During my Master's study (2014–2016) I was dissecting females of *Euoestrophasia* Townsend, along with related genera such as *Oestrophasia* B. & B. and *Cenosoma* Wulp. At first, I was not aware that those pretty small things within them were eggs. After some time, I realized they were eggs and larvae. The literature did not mention the existence of microtype eggs in Dexiinae, so at first I did not consider this possibility. But after some deeper analysis and SEM imaging, they in fact turned out to be the rare microtype eggs (Fig. 6) previously known only from a different tachinid subfamily, the Exoristinae. Based on these findings, I began to suspect that this group was quite distinct from its relatives and that its current classification within its tribe might be questionable (as indeed it revealed that way, in which the tribe Oestrophasiini was revalidated, because of the apomorphic eggs, see Santis & Nihei 2022). What this small but

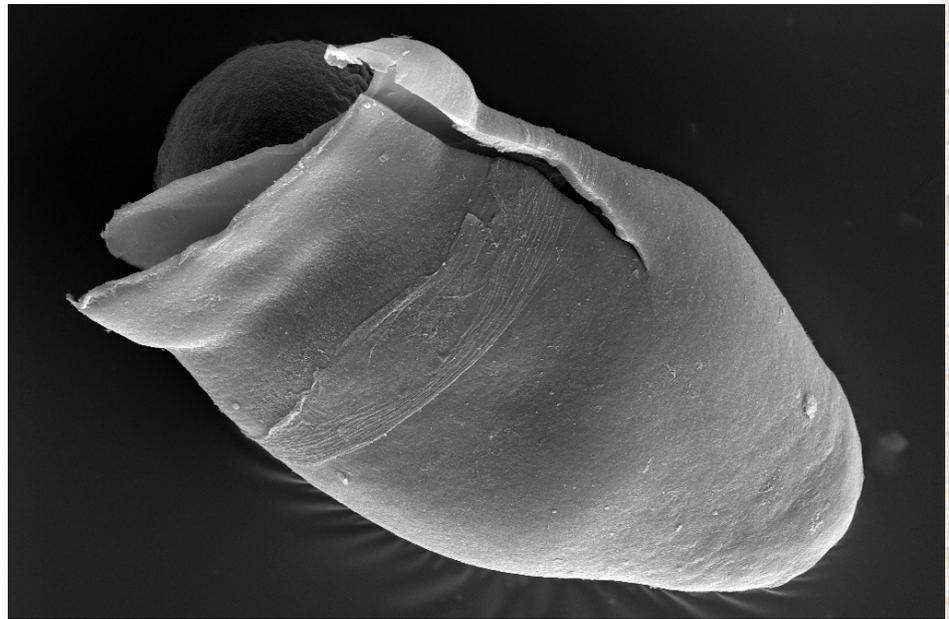


Figure 6. Microtype egg of *Oestrophasia* sp.

significant discovery highlights is the enduring value of morphological study. So much remains hidden, often overlooked in today's molecular-dominated research, sometimes for centuries, preserved in museum drawers, awaiting someone with the time, training, and curiosity to look. Hence preserving anatomical research within tachinid systematics is fundamental, but also calls for more balanced funding and stable career pathways for taxonomists. Supporting such work is about safeguarding our ability to discover, describe, and understand biodiversity in all its forms.

## Acknowledgements

I want to express my gratitude to Alessandro Camargo (NHMW) for his kindness in giving me open access to the Diptera collection of the NHMW. Many thanks for Jim O'Hara (AAFC, Ottawa) for inviting me to write about my experience at the Museum, and for the suggestions and corrections in the text.

## References

- Britz, R., Hundsdoerfer, A. & Fritz, U. 2020. Funding, training, permits—the three big challenges of taxonomy. *Megataxa* 1: 49–52.  
<https://doi.org/10.11646/megataxa.1.1.10>
- Fischer, M., Moschner, I. & Schönmann, R. 1976. Das Naturhistorisches Museum in Wien und seine Geschichte. *Annalen des Naturhistorischen Museums in Wien* 80: 1–24.
- Levins, R. & Lewontin, R. 1985. *The dialectical biologist*. Harvard University Press, Cambridge, MA. 303 pp.
- Macfarlane, B. 2019. The neoliberal academic: illustrating shifting academic norms in an age of hyper-performativity. *Educational Philosophy and Theory* 53: 459–468.  
<https://doi.org/10.1080/00131857.2019.1684262>
- O'Hara, J.E. 2013. A visit to the Vienna Museum with a brief history of the tachinid collection. *The Tachinid Times* 26: 30–38.  
<https://www.uoguelph.ca/nadsfly/Tach/WorldTachs/TTimes/Tach26.html>
- Oliveira, M.B. de. 2013. On the commodification of science: the programmatic dimension. *Science & Education* 22: 2463–2483.  
<https://doi.org/10.1007/s11191-012-9455-7>
- Pont, A.C. 1995. The dipterist C.R.W. Wiedemann (1770–1840). His life, work and collections. *Steenstrupia* 21: 125–154.
- Santis, M.D. de. 2024. Homoplasy as an evolutionary process: an optimistic view on the recurrence of similarity in evolution. *Biological Theory* 19: 267–278.  
<https://doi.org/10.1007/s13752-024-00470-8>
- Santis, M.D. de & Camargo, A. 2025. Lost between types: a new species of *Chaetotheresia* Townsend, 1931 (Diptera: Tachinidae: Dexiinae) discovered 200 years after collecting. *Zeitschrift der Arbeitsgemeinschaft Österreichischer Entomologen* 77: 115–122.
- Santis, M.D. de & Nihei, S.S. 2022. Phylogenetic analysis of the tribe Dufouriini (Diptera, Tachinidae) using a total evidence approach based on adult and immature stages. *Arthropod Systematics & Phylogeny* 80 (Article e69618): 38 pp.
- Santos, R.C.M. 2018. Sobre crânios, idiomas e artefatos indígenas: o colecionismo e a História Natural na viagem de Johann Natterer ao Brasil (1817-1835). *Sociedade e Cultura* 21: 10–26.
- Schmutzer, K. 2012. Metamorphosis between field and museum: collections in the making. *In: Klemun, M., ed., Moved Natural Objects. Spaces in Between. Journal of History of Science and Technology* 5: 68–83.
- Schmutzer, K. 2016. Naturalists at work: expeditions, collections and the creation of “epistemic things”. Pp. 97–119. *In: Klemun, M. & Spring, U., eds., Expeditions as experiments. Practising Observation and Documentation. Palgrave Studies in the History of Science and Technology. Palgrave Macmillan London.* 294 pp.  
[https://doi.org/10.1057/978-1-137-58106-8\\_5](https://doi.org/10.1057/978-1-137-58106-8_5)

- Schmutzer, K. & Feest, C.F. 2014. Brazil in Vienna: encounters with a distant world. *Archiv Weltmuseum Wien* 63–64: 266–285.
- Vanzolini, P.E. 1993. As viagens de Johann Natterer no Brasil, 1817–1835. *Papéis Avulsos de Zoologia* 38 (3): 17–60.
- Weber, N. 2025. *Rulers and raptors. Falcons in courtly Europe, 1600–1793*. Oxford University Press, Oxford. xv + 288 pp.  
<https://doi.org/10.1093/9780198937364.003.0001> [Introduction]
- Wheeler, Q. 2023. *Species, science and society. The role of systematic biology*. Routledge, Oxon. xix + 266 pp.
- Williams, D.M. & Wheeler, Q.D., eds. 2025. *The new taxonomy: a science reimagined*. CRC Press, Taylor & Francis Group. Boca Raton, London & New York. xiv + 247 pp.  
<https://doi.org/10.1201/b22822>

# A visit to the Chao Tachinidae collection at IZCAS in Beijing: *personal impressions and perspectives*

by Pierfilippo Cerretti

*Department of Biology and Biotechnologies  
"Charles Darwin", Sapienza University of Rome,  
Piazzale Aldo Moro 5, 00185, Rome, Italy.  
E-mail: pierfilippo.cerretti@uniroma1.it*

## *Introduction*

Over the past 25 years, I have had the opportunity to visit many of the world's major Tachinidae collections housed in some of the most prestigious natural history institutions. Many of these holdings were assembled and curated by outstanding colleagues whose work has had a lasting impact on the literature on tachinid systematics. While they are too numerous to name individually in this short note, they share a striking feature: the fauna of the southeastern Palaearctic Region—especially across the broad Palaearctic–Oriental transition zone—is generally represented by relatively little material, often originating from old collections from scattered localities. This long-standing gap has shaped my perception of global tachinid diversity for many years. For this reason, the opportunity to visit a major collection specifically centred on East and Southeast Asian fauna was particularly compelling. The only other comparable body of Oriental tachinid material I have examined in person is the extensive collection assembled by Hiroshi Shima (Fukuoka, Japan)—an authority who certainly needs no introduction to the readers of this newsletter. Such collections offer a window onto a component of tachinid diversity that remains comparatively unfamiliar to many researchers working in Europe and North America. The diversity of this portion of Asia is simply overwhelming. Well-curated and extensive holdings are uniquely capable of conveying this richness, sometimes within just a few metres of cabinets. It was an opportunity not to be missed.

During two recent visits to China, in September 2024 and December 2025, kindly hosted by Prof. Dong Zhang (Beijing Forestry University, Beijing) and Prof. Chun-tian Zhang (Shenyang Normal University, Shenyang, Liaoning) and funded by the National Foreign Expert Program of the Ministry of Human Resources and Social Security (MOHRSS), I had the opportunity to gain an overall view of the Chien-ming Chao type tachinid collection preserved at the Institute of Zoology of the Chinese Academy of Sciences (Beijing) (IZCAS) (Figs. 1–4). The institute also houses a large and important general collection of Chinese Tachinidae (Figs. 5–8), much of which has been identified to species level, primarily through the efforts of Chien-ming Chao, Chun-tian Zhang and, in part, Hiroshi Shima (Fukuoka, Japan). By the way, the December 2025 visit was carried out together with Thomas Pape (Natural History Museum of Denmark, Copenhagen), allowing us to jointly explore and discuss the remarkable oestroid holdings there.



**Figure 1.** Dr. Kuiyan Zhang and I in the IZCAS type collection, September 2024.



**Figures 2–4.** 2. Thomas Pape examining the type collection in IZCAS. 3. Selected drawers of Tachinidae type material in the Chao Collection, IZCAS. 4. The type series of *Crosskeya gigas* Shima & Chao, 1988 (Tachinidae, Goniini) in the Chao type collection.

I felt it worthwhile to share here a brief account based largely on personal impressions, because despite the extraordinary importance of Chao's collection and the broader holdings at IZCAS, many fellow tachinidologists may not yet have a clear sense of the scientific value of this material. According to information kindly provided by Dr. Kuiyan Zhang (Fig. 1), the Chao collection at IZCAS houses the type material of 301 tachinid species, comprising a total of 3,186 primary and secondary type specimens. The general collection currently includes 62,196 specimens, now identified as representing 861 species. From an organisational perspective, the collections are divided into two main sections, housed on different floors of the same building and curated by different staff members. The type material (both primary and secondary types) is located on an upper floor under the responsibility of Dr. Kuiyan Zhang. This material can only be examined on site and cannot be removed from the designated rooms; the section is well equipped with microscopes and suitable workspaces. On a lower floor, the remaining holdings (Fig. 5)—unidentified and identified specimens that have not been recognised as type material—are stored and are similarly accessible through well-equipped work areas and microscopes (Fig. 8), under the responsibility of Dr. Chun-yan Jiang. Overall, the specimens are in excellent condition and curated through regular monitoring for potential pest infestations. Even a preliminary examination of the unidentified material reveals specimens of considerable taxonomic interest that should be taken into account in any work dealing with the Chinese, or more broadly Palearctic and Oriental, fauna. For instance, there are remarkable series of taxa known in the literature from only a handful of specimens. In several cases, this material originates from remote and difficult-to-access mountainous regions, many of which are currently undergoing rapid environmental change driven by climate and land-use dynamics.



5



6



7



8

**Figures 5–8.** 5. A view of the general Tachinidae collection at IZCAS. 6. A drawer in the general Tachinidae collection. 7. Wide-angle view of the general insect collections at IZCAS. 8. Thomas Pape working in the IZCAS general collection workspace.

What struck me most was the sheer amount of material belonging to high-altitude elements such as *Hystriomyia*, *Everestiomyia*, and several *Tachina*–*Nowickia*-like flies, as well as other forms that cannot be readily assigned to any currently recognised genus. I recall experiencing a similar feeling during one of my first visits to the Canadian National Collection when—guided by Jim O’Hara and the late Monty Wood—I was confronted for the first time with the astonishing diversity of *Peleteria* and related forms collected along the Andes: perhaps still *Peleteria*, perhaps only “disguised” as such. It is difficult to convey the peculiar yet deeply enjoyable sensation that entomologists experience when faced with this level of taxonomic complexity.

Although I did not have the opportunity to examine every drawer at IZCAS in detail, my general impression is that medium- and large-sized species are considerably better represented than smaller-bodied taxa. This is a common feature of many tachinid collections worldwide, but it also highlights an area where future collecting efforts could—and should—be further strengthened. Overall, the scientific value of these holdings is extremely high. An additional strength of IZCAS is its leadership in large-scale sampling programmes across China employing a wide range of collecting methods, including Malaise trapping. As a result, the collection is steadily and substantially expanding. During our discussions, Dong Zhang, Chun-tian Zhang (Fig. 9) and I shared the view that there is a clear need—and indeed a responsibility—to make a concrete contribution to the international tachinidological community. To this end, we are planning, over the coming years, a careful revision and digitalisation of the primary types of the Chao collection. Our aim is to facilitate taxonomic research on Tachinidae not only within China but also across neighbouring regions, where access to comparative type material remains a major bottleneck.



**Figure 9.** Chun-tian Zhang (left) and Dong Zhang at dinner after our visit to IZCAS, December 2025.

# A RETURN TO THE HENGDUAN MOUNTAINS OF CHINA

## with a list of newly recorded species from Sichuan and Yunnan

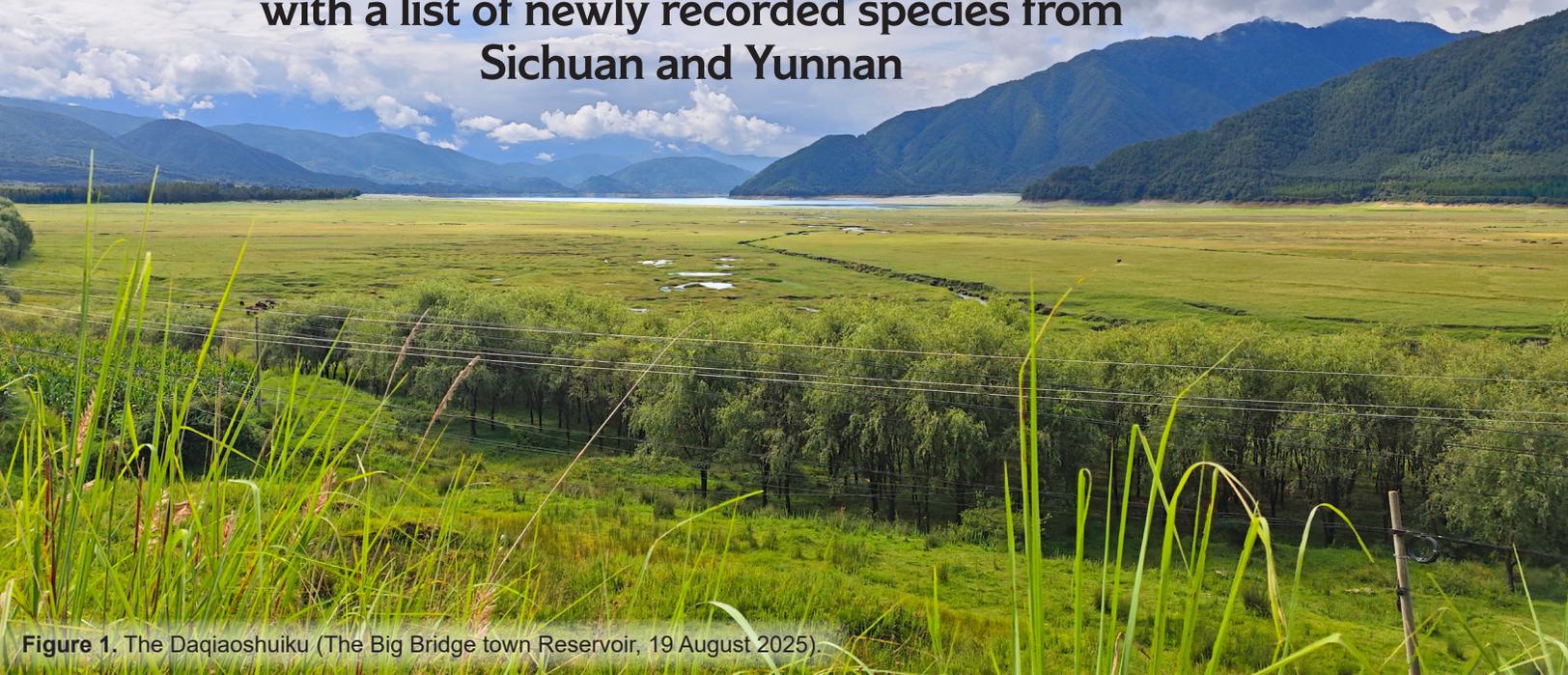


Figure 1. The Daqiaoshuiku (The Big Bridge town Reservoir, 19 August 2025)

by Xingyan Zhang, Junjian Li, Chuntian Zhang, Henan Li, Ruiqing Dong, Yang Tang and Xinyi Li

*Liaoning Key Laboratory of Biological Evolution and Biodiversity, College of Life Science, Shenyang Normal University, Shenyang 110034, PR China*

*E-mail for corresponding author: chuntianzhang@aliyun.com*

Last summer we went to southwestern China to collect tachinid flies (Diptera: Tachinidae) under the support of the National Natural Science Foundation of China (NSFC) General Program (Grant No. 32470459). This fly family is the most diverse and ecologically important group of insect parasitoids except for the parasitic wasps of the Hymenoptera (Stireman et al. 2006). It is also among the most species-rich families of flies and has experienced a relatively recent adaptive radiation across the globe (Stireman et al. 2021).

We had the opportunity to return to the Hengduan Mountains last year, which are recognized as one of the world's 35 biodiversity hotspots (Boufford 2014). Two of us had visited the area previously (in 2017) and the tachinids collected during that expedition were reported on by Zhang et al. (2018).

We set off to the Hengduan Mountains in two groups. Group A consisted of Chuntian Zhang, Henan Li, Ruiqing Dong and Xinyi Li. They travelled in northwestern Yunnan Province and western Sichuan Province from 20 July to 6 August, 2025 (group A in Fig. 2). Group B consisted of Junjian Li, Yang Tang and Xingyan Zhang. They circled the Gongga Mountains in western Sichuan from 8–20 August (group B in Fig. 2). Our two groups collected 2100 tachinid specimens in total, belonging to 187 species. We provide some pictures below of the interesting species we collected in the Hengduan Mountains and give a checklist of the tachinid flies that are newly recorded (nr) at the province level.



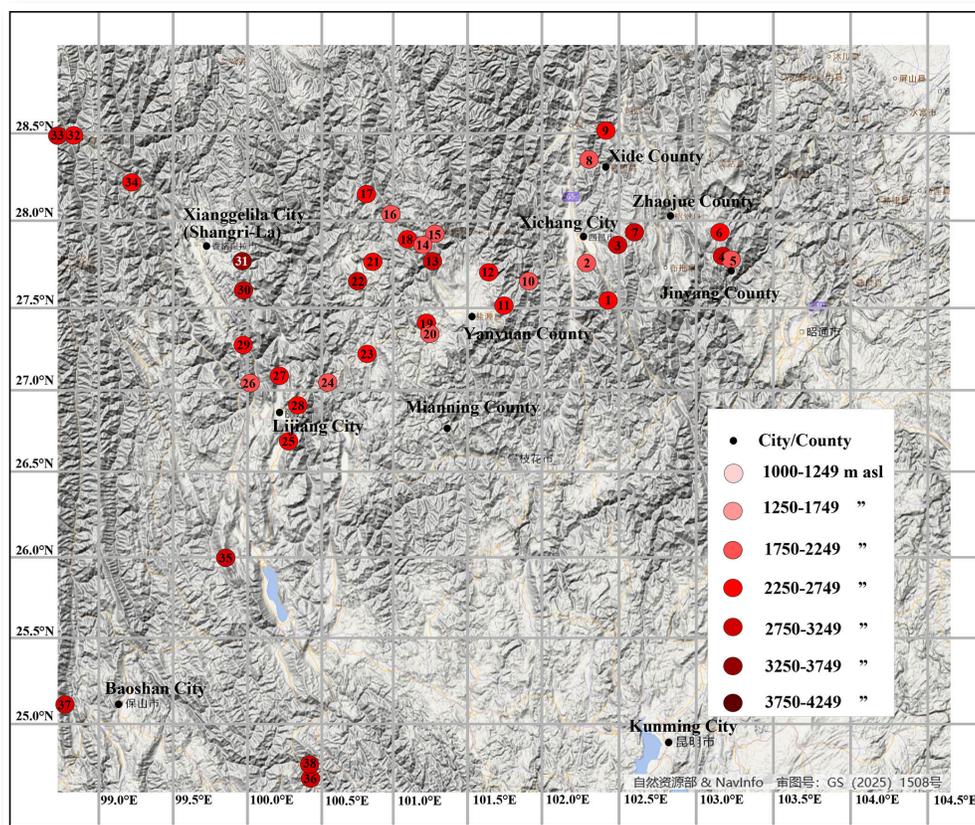
**Figure 2.** Map showing approximately where the two groups collected during the summer of 2025. Group A consisted of Chuntian Zhang, Henan Li, Ruiqing Dong and Xinyi Li. Group B consisted of Junjian Li, Yang Tang and Xingyan Zhang.

## THE HENGDUAN MOUNTAINS

The Hengduan Mountains Region (HDM) in southwestern China is characterized by a spectacular series of seven parallel high mountain ranges: Boshulaling–Gaoligong, Taniantaweng, Nushan, Mangkang–Yunling, Shanuli, Great Snow Mountains, and Qionglai–Minshan Mountains. These are separated by six deep valleys carved by fast-flowing rivers, including the Nujiang (Salween), Lancang (Mekong), Yangtze (Jinshajiang), Yalongjiang, Daduhe, and Minjiang, which run from north to south. The north mountain peaks are over 6000 m high and the valleys are 3000 m deep. As a result of both geography and climate, the northern HDM is generally cold and dry, and the southern HDM is warm and wet. Warm humid air from the Indian Ocean enters China through these river valleys. Climatic variation and rapid uplift-driven diversification over the last eight million years has resulted in the HDM becoming one of the most biologically diverse temperate forest ecosystems in the world. The insect fauna of the HDM is rich in endemic and alpine species, rich stenotopic species with distinct geographical replacement, and rich species derived from primitive groups.

## NORTHWESTERN YUNNAN PROVINCE

Yunnan is a province in southwestern China that is bordered by Laos and Vietnam to the south, northeastern Myanmar to the west, Tibet and Sichuan to the north, and Guizhou and Guangxi to the east. Northwestern Yunnan is located in the transition zone between the Qinghai-Tibet Plateau and the Yunnan-Guizhou Plateau. Here, the Nujiang, Lancang, and Jinsha rivers flow side by side, known as the “Three Parallel Rivers”, creating a complex landscape of high mountains and deep valleys. The dramatic elevation change, from 760 m in the Nujiang Valley to 6,740 m in the Meili Snow Mountains, forms vertical climate zones ranging from tropical to cold temperate and provides habitats for a diversity of species. Due to terrain isolation and the glacial refuge effect, many ancient and unique species have been preserved here, making it a cradle for species evolution. Northwestern Yunnan is at the heart of the Southwest Mountains hotspot region. Together with the Southeast Yunnan and West Guangxi hotspot region, it supports Yunnan’s status as China’s most biodiverse province. Its species density and uniqueness attract global attention, making it one of the richest regions in temperate flora and faunal diversity.



**Figure 3a.** Map showing the collecting localities of group A. The exact localities are given in Table A.

## SICHUAN PROVINCE

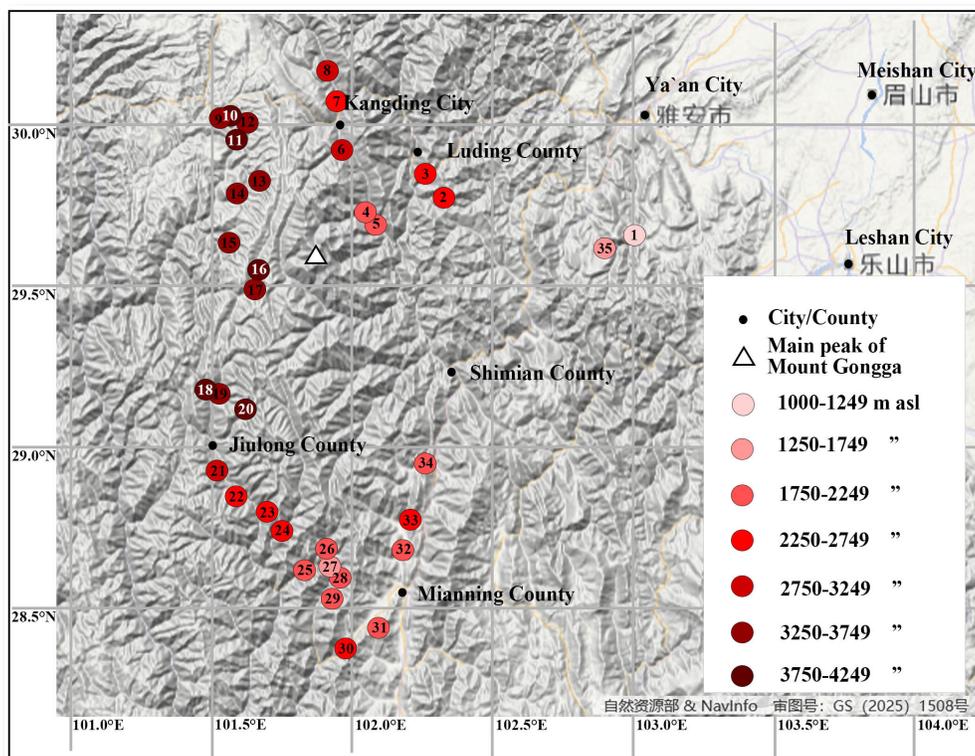
Sichuan is a province in southwestern China, situated in the upper reaches of the Yangtze River and historically known as the “Tianfuzhiguo (Land of Abundance)”. It is bordered by Tibet to the west, Chongqing and Guizhou to the east, Shaanxi, Gansu and Qinghai to the north, and Yunnan to the south. It is approximately 485,000 km<sup>2</sup> and in relative terms is larger than the state of California in the United States and slightly smaller than Spain. The province

has a resident population of about 83.67 million people, with a significant portion living in the capital metropolitan area of Chengdu and the rest mostly spread throughout the fertile Sichuan Basin in the eastern half of the province in smaller cities and towns, and in rural settlements.

## THE GONGGA MOUNTAINS

The Gongga Mountains (Minya Konka) are located in western Sichuan Province. They belong to the Great Snow Mountains and are culturally close to Tibet. They are the highest mountains in Sichuan, and reach a peak elevation of 7,508 m. Our collecting group did not go above 4,000 m for safety, and higher places appeared barren and may not contain much diversity. We started on the east side and collected specimens for 1–2 hours at each place. We usually started in the morning at about 9:00 a.m. and arrived at our first destination around 10:00 a.m. We usually collected for one hour before moving to another location to collect for the rest of the morning. The same routine was followed in the afternoon. We usually left for the next town at around 4:00 p.m. to look for dinner and accommodation.

The weather was foggy and rainy, and only 3 days of the journey were sunny. The city Ya'an by the side of Gongga is called 'the city of rain', and Gongga lived up to its name during our visit. It bothered us at first because our usual strategy was to find tachinids warming up or flying around in sunny places. We did not get good results at the beginning. But soon we found that sweeping is a good way to collect tachinids under such conditions and we were able to get a decent amount of them this way that could not be seen. They were mostly small ones but much better than nothing.



**Figure 3b.** Map showing the collecting localities of group B. The exact localities are given in Table B.

**Table A.** Localities where Group A collected. The numbers correspond with those on the dots in Figure 3a.

No.	Locality	Date (2025)
1	Mt. Luoji, Xichang City, Liangshan, Sichuan	20.VII
2	Qionghai, Xichang City, Liangshan, Sichuan	21.VII
3	Jiefanggou, Zhaojue County, Sichuan	21.VII
4	Baicaopo, Jinyang County, Liangshan, Sichuan	21.VII
5	Baicaopo, Jinyang County, Liangshan, Sichuan	22.VII
6	Bingdi town, Jinyang County, Sichuan	22.VII
7	Jiefanggou, Zhaojue County, Sichuan	22.VII
8	Mianshan town, Xide County, Sichuan	23.VII
9	Nanqing town, Yuexi County, Sichuan	23.VII
10	Pingchuan town, Yanyuan County, Sichuan	24.VII
11	Weicheng town, Yanyuan County, Sichuan	24.VII
12	Runyan town, Yanyuan County, Sichuan	24.VII
13	Mianya town, Yanyuan County, Sichuan	24.VII
14	Liewa town, Muli County, Sichuan	24.VII
15	Qiaowa town, Muli County, Sichuan	25.VII
16	Kangfu village, Keboxiang, Muli County, Sichuan	25.VII
17	The great Muli Monastery, Wachang, Muli County, Sichuan	25.VII
18	Housuo, Muli County, Sichuan	25.VII
19	Tianbazilu, Huangcao town, Yanyuan County, Sichuan	26.VII
20	Yantang town, Yanyuan County, Sichuan	26.VII
21	Lugu Lake, Yanyuan County, Sichuan	26.VII
22	Ning–Lu highway, Lijiang City, Yunnan	26.VII
23	Lijiang–Ninglang highway, Lijiang City, Yunnan	27.VII
24	Lijiang–Ninglang highway, Lijiang City, Yunnan	27.VII
25	Qihe town, Lijiang City, Yunnan	27.VII
26	Mt. Laojun, Shigu town, Lijiang City, Yunnan	28.VII
27	Yushuizhai, Baisha town, Lijiang City, Yunnan	28.VII
28	Mt. Jinhong, Lijiang City, Yunnan	29.VII
29	Hutiaoxia, Shangri-la City, Yunnan	29.VII
30	Haba Snow Mountains, Shangri-la City, Yunnan	30.VII
31	Jiantang town, Shangri-la City, Yunnan	31.VII
32	Yunling village, Mingyong Glacier, Deqin County, Yunnan	2.VIII
33	Mingyong Glacier, Deqing County, Yunnan	2.VIII
34	Baima Snow Mountains, Deqin County, Yunnan	3.VIII
35	Mt. Niaodiao, Eryuan County, Yunnan	4.VIII
36	Taibao Mountains, Longyang, Baoshan City, Yunnan	5.VIII
37	Mt. Baihualing, Longyang, Baoshan City, Yunnan	5.VIII
38	Taibao Mountains, Longyang, Baoshan City, Yunnan	6.VIII

**Table B.** Localities where Group B collected. The numbers correspond with those on the dots in Figure 3b.

<b>No.</b>	<b>Locality (the locality ending with 'cun' meas village)</b>	<b>Date (2025)</b>
1	Zhenggou, Wawushan, Hongya County, Ya'an City	8.VIII
2	Mt. Er'lang, Luding County	9. VIII
3	Mt. Niubei, Luding County	9. VIII
4	Mt. Daping, Yanzigou, Luding County	10.VIII
5	Nanmenguangou, Yanzigou town, Luding County	10.VIII
6	Laoyulin village, Yulin town, Kangding City	10.VIII
7	Qugong village, Yala, Kangding City	11.VIII
8	Wangmu village, Yala, Kangding City	11.VIII
9	Yingguan village, Waze, Kangding City	11.VIII
10	Sac. Mt. Jiangbu, Xiaba, Kangding City	12.VIII
11	Liqi village, Xiaba, Kangding City	12.VIII
12	Size village, Xiaba, Kangding City	12.VIII
13	Geridi village, Jiagenba, Kangding City	13.VIII
14	Lize village, Jiagenba, Kangding City	13.VIII
15	Shangchijixi village, Shade town, Kangding City	14.VIII
16	Waxiazhi, Gonggashan town, Kangding City	14.VIII
17	Shangmuju village, Gonggashan town, Kangding City	14.VIII
18	Temple Jiri, Tanggu village, Jiulong County	15.VIII
19	Tanggu village, Jiulong County	15.VIII
20	Lieta Lake, Tanggu village, Jiulong County	16.VIII
21	Chulonggou, Xiaer town, Jiulong County	16.VIII
22	Longxigou, Naiqu town, Jiulong County	16.VIII
23	Zigangpinggou, Naiqu town, Jiulong County	16.VIII
24	Xuewa town, Jiulong County	17.VIII
25	Duoluo, Jiulong County	17.VIII
26	Sanya town, Jiulong County	17.VIII
27	Luobosigou, Jiulong County	17.VIII
28	Hanjia village, Miansha town, Mianing County	18.VIII
29	Chongyuan village, Miansha town, Mianing County	18.VIII
30	Xiawu village, Ruoshui town, Mianing County	18.VIII
31	Xujiapuzi, Ruoshui town, Mianing County	18.VIII
32	Daqiao reservoir, Daqiao town, Mianing County (Fig. 1)	19.VIII
33	Dianzi village, Daqiao town, Mianing County	19.VIII
34	Liye Road, Liziping, Shimian County	19.VIII
35	Diecui Stream, Longcanggou, Yingjing County	20.VIII



**Figures 4–9.** Habitats in Sichuan (photos by Chuntian ZHANG of Group A). **4.** Qionghai, 21 July 2025. **5.** Bingdizhen, 22 July 2025. **6.** Yuexixian, 23 July 2025. **7, 8.** Road side at Li-Ning highway, 27 July 2025. **9.** Halfway to Shangri-La, 29 July 2025.



10



11



12



13



14



15

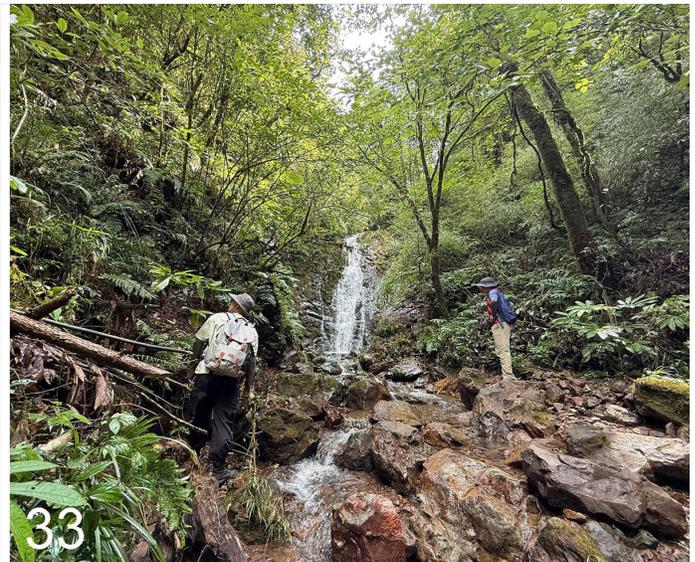
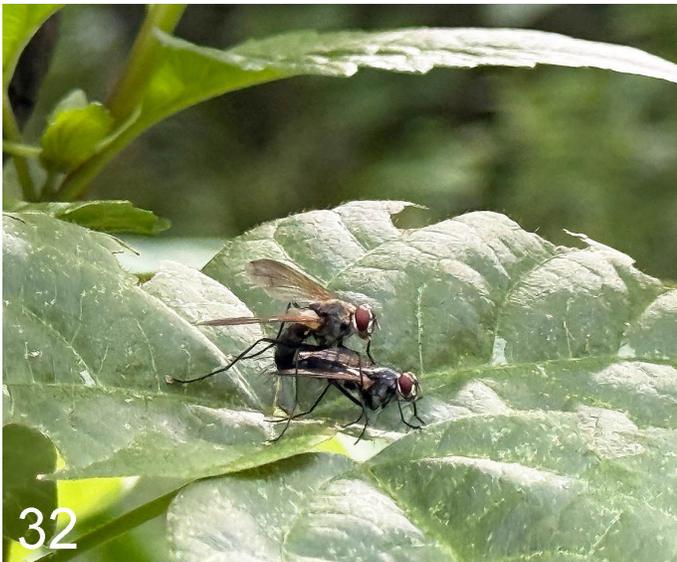
**Figures 10–15.** Fieldwork and local places (photos by Chuntian ZHANG). **10.** Ruiqing DONG collecting in Baicaoipo, Jinyang, Liangshan Prefecture, Sichuan, 22 July 2025. **11.** Henan LI and Ruiqing DONG collecting in Jiefanggou, Zhaojue, Liangshan Prefecture, Sichuan, 22 July 2025. **12.** Ruiqing DONG at Haba Snow Mountain, Yunnan. **13.** Songzanlin Monastery in Shangri-La County, Yunnan, 31 July 2025. **14.** Visiting Dali University, College of Pharmacy, Dali, Yunnan, 4 August 2025. **15.** Local cuisine with different kinds of insects in Kunming, Yunnan, 6 August 2025.



**Figures 16–21.** Habitats in Yunnan (photos by Chuntian ZHANG). **16.** Haba Snow Mountain, 30 July 2025. **17.** Pudacuo, Shangri-La City, 31 July 2025. **18.** Shangri-La, 1 August 2025. **19.** Baima Snow Mountain, dry and hot valley, 3 August 2025. **20.** Mt. Niaodiao, 4 August 2025. **21.** Mt. Taibao, 6 August 2025.



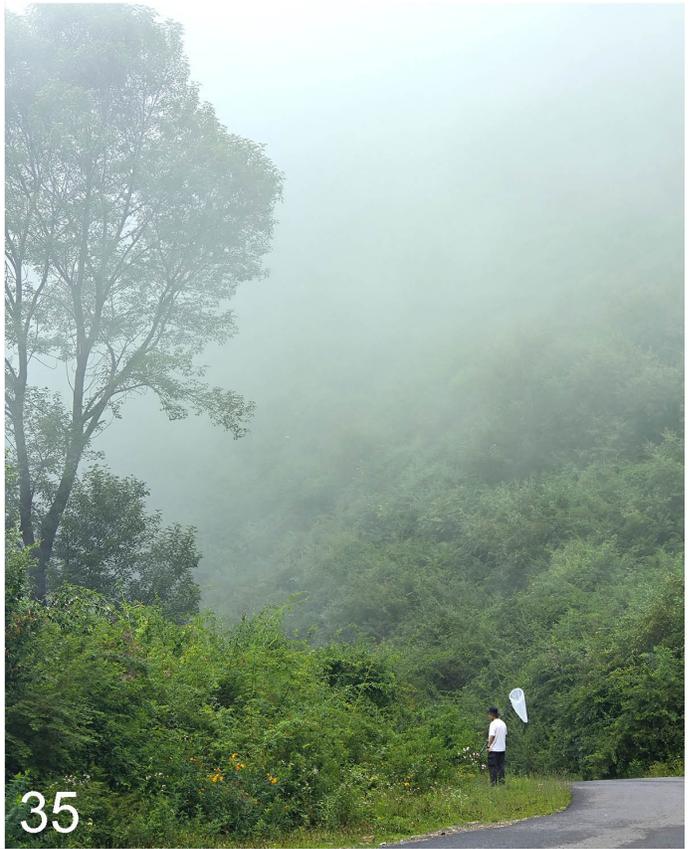
**Figures 22–27.** 22. Additional photos. Monkey carrying a baby monkey, Lushan, Xichang City, Sichuan, 21 July 2025. 23. The Great Muli Monastery and the collection locality, Sichuan, 25 July 2025. 24. Baishuitai Travertine Terraces, Xianggellia (Shangri-la), in the way to Haba Snow Mountains, Yunnan, 30 July 2025. 25. The First Bend of the Yangtze River (Moon Bend) in Benzilan town, Yunnan. 26. Meili Snow Mountains in Dêqên County, Yunnan. 27. Mingyong Glacier, Yunnan, 2 August 2025.



**Figures 28–33.** Photos taken by Yang TANG of Group B in Sichuan. **28.** Collecting in foggy Luding, 10 August 2025. **29.** Flowers, probably *Leucanthemum maximum*, in Wangmucun, Kangding City, 11 August 2025. **30.** Junjian LI and Xingyan ZHANG collecting, Sac. Mt. Jiangbu, Kangding City. **31.** Xingyan ZHANG walked too fast and needed to rest halfway up the mountain, Liqicun, Kangding City, 3500 m. **32.** This mating pair of tachinids are possibly *Sumpigaster subcompressa* (Walker) based on the yellow pruinosity on male scutum, 17 August 2025. **33.** Searching for tachinid flies by the stream, 20 August 2025.



34



35



36



37

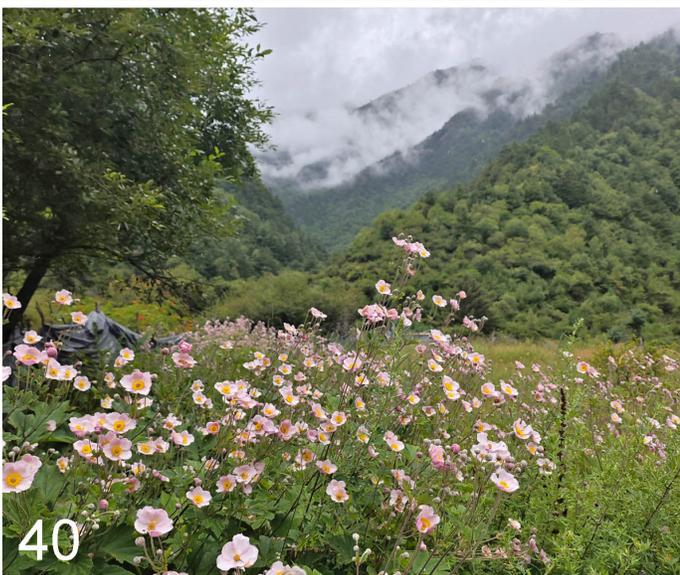
**Figures 34–37.** Members of group B collecting in foggy Luding, Sichuan (photos by Xingyan ZHANG). **34.** The Mitsubishi van we rented. **35.** Yang TANG collecting by the road. **36.** Junjian LI leading us further in search of habitats for tachinids. **37.** Xingyan ZHANG taking a selfie with a cow.



38



39



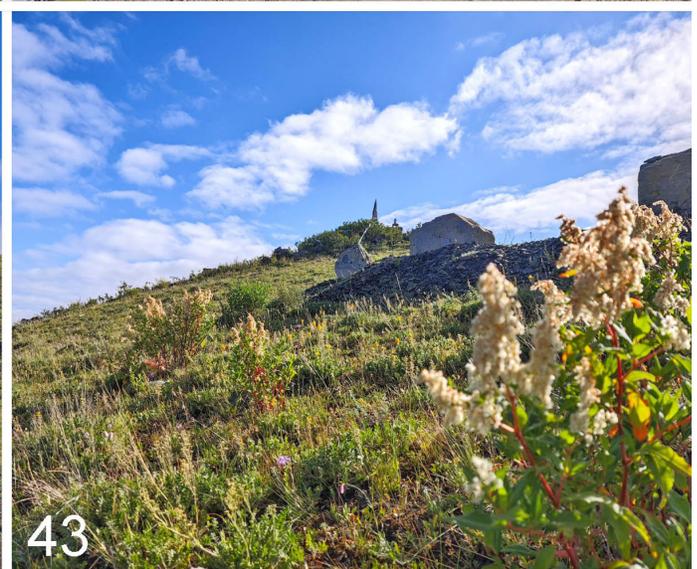
40



41

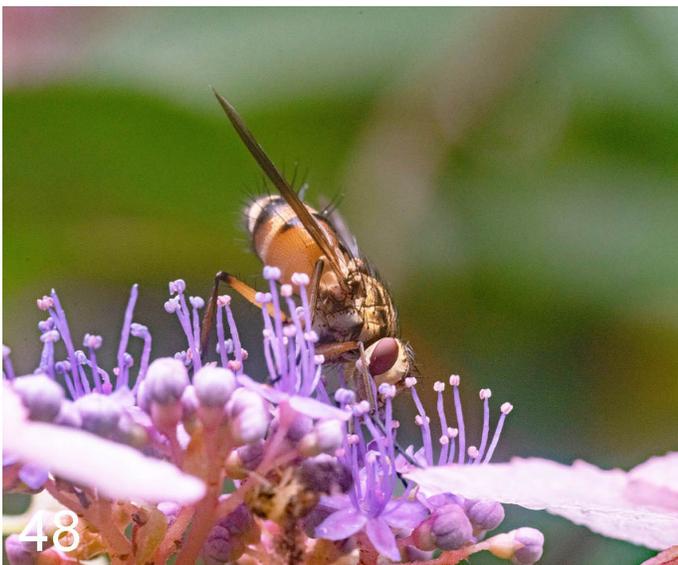


42



43

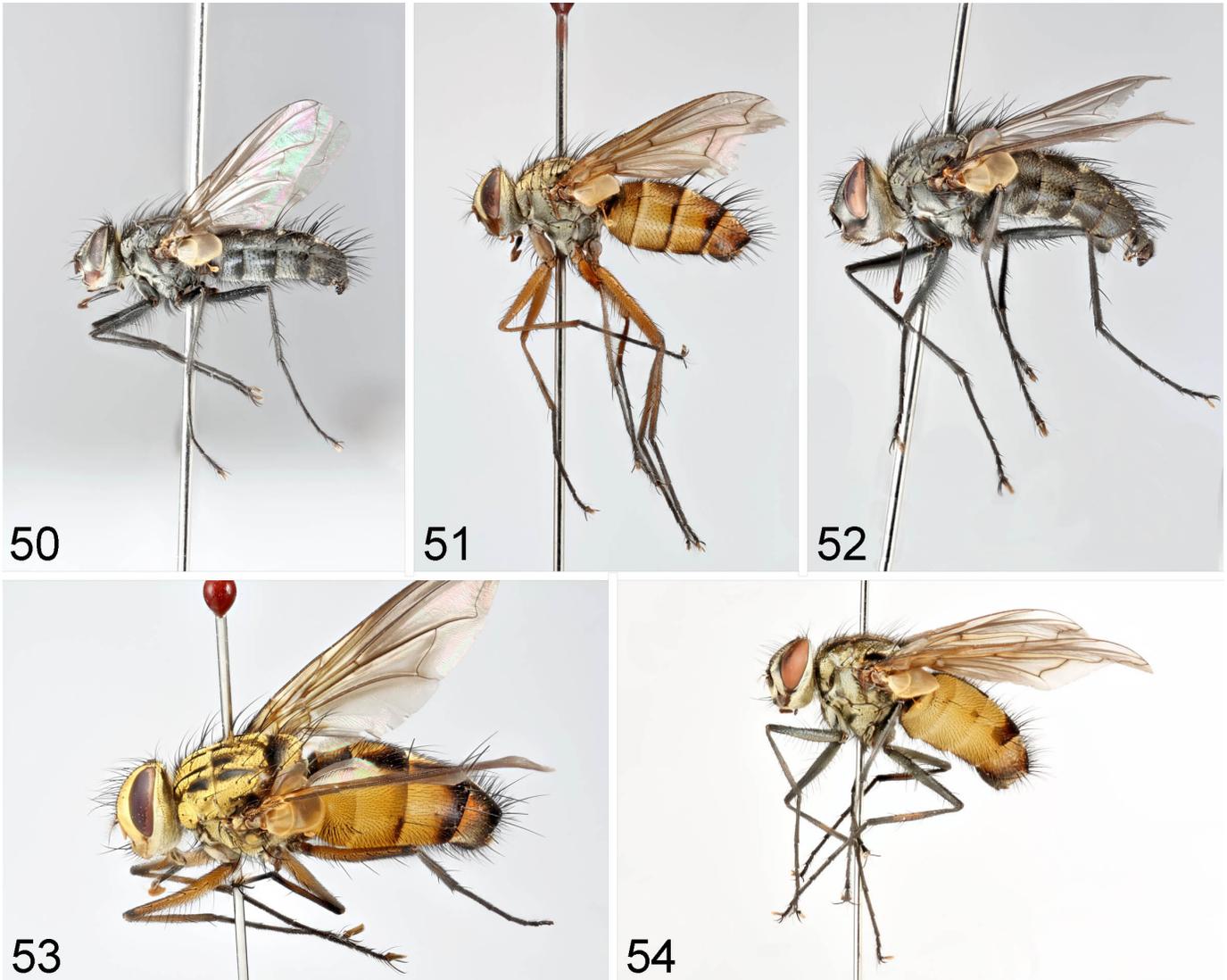
**Figures 38–43.** Habitats in Kangding, Sichuan (photos by Xingyan ZHANG). **38.** The stone has written on it 'alpine garden of China'. The hill is full of different kinds of flowers, and *Dexia alticola* Zhang & Shima was so abundant that even random sweeps could easily catch them. **39.** The hill in the foreground was full of flowers and the other side by the house was not. **40.** The flowering plants are probably *Anemone vitifolia* Buch.-Ham. ex DC.; the fence to the left was covered with black plastic and attracted lots of Exoristinae. We assume that the tachinids were gathered there for the warmth of the black plastic. **41.** First day of sunshine, 12 August 2025. A village in Xiabaxiang, Kangding. **42.** Top of the Sacred Mount Jiangbu. A lot of flowers nearby attracted many tachinids. **43.** Closer look at the grassland showing all the flowers.



**Figures 44–49.** Pictures of tachinid flies taken during the trip by Xingyan ZHANG. **44.** *Estheria hirtinerva* Zhang & Shima, a very common species in Xiabaxiang, Kangding, 12 August 2025. **45.** *Peteina hyperdiscalis* Aldrich, Xiabaxiang, Kangding, 12 August 2025. **46.** *Cylindromyia* (*Cylindromyia*) *brassicaria* (Fabricius), Mt. Gongga, Kangding, 14 August 2025. **47.** *Dinera angustifrons* Zhang & Shima, Lietahu, Jiulong County, 4115 m, 16 August 2025. The yellow flower is one of the few that blooms at that time and at that high elevation; it attracts some bumble bees and tachinid flies. The other place where tachinid flies could be found at that elevation is a kind of Fagaceae tree which is about 2–3 m high and a lot of small insects were hidden under the broad leaves. **48.** *Dexia tenuiforceps* Zhang & Shima, in a pink flower, Longcanggou, Yingjing County, 20 August 2025. **49.** *Panzeria anthophila* (Robineau-Desvoidy) in Geridi Village, Jiagenba, Kangding, 13 August 2025.

## RESULTS

During the summer collections of 2025, ca. 2100 specimens belonging to 187 species were collected. Of these, 49 species are recorded for the first time from Yunnan or Sichuan province. In this section, we provide some pictures of some interesting species that we collected in the Hengduan Mountains, and list the tachinid species that are newly recorded (nr) at the province level.



**Figures 50–54.** Images of some Dexiini species. **50.** *Dinera fuscata fuscata* Zhang & Shima, ♂, B3. **51.** *Dexia alticola* Zhang & Shima, ♂, B6. **52.** *Dinera angustifrons* Zhang & Shima, ♂, B7. **53.** *Dexia tenuiforceps* Zhang & Shima, ♂, B35. **54.** *Dexia chaoi* Zhang & Shima, 1♂, A31.

## Tachinid species newly recorded (nr) at the province level

### DEXIINAE, Dexiini

1. *Dinera chaoi* Zhang & Shima, 2006 nrSC 1♂, A31.

Distr.: China (Sichuan, Yunnan, Qinghai & Xizang).

### Dufouriini

2. *Chetoptilia puella* (Rondani, 1862) nrSC 1♂, A16. (First record from China in Li et al., 2024: 110.)

Distr.: China (Sichuan, Nei Mongol); Russia, Georgia, Europe.

### Rutiliini

3. *Rutilia rubriceps* Macquart, 1847 1♂, A24. (First record from China in Li et al. 2024: 112.)

Distr.: China (Sichuan, Shanxi, Guangxi); India, Sri Lanka, Australia, Indonesia.



Figures 55–58. Images of *Rutilia rubriceps* Macquart. 55, 56. ♂, A24. 57, 58. ♀ Dengchigou, 1539 m, Baoxing County, Sichuan, 18 July 2017, Houcan LIANG. 55, 57 in lateral view; 56, 58 in dorsal view.

## Voriini

4. *Athrycia curvinervis* (Zetterstedt, 1844) nrYN 2♀, B4; 1♀, B22; 1♀, B23; 1♀, A31.

Distr.: China (Yunnan, Sichuan, Jilin, Liaoning, Nei Mongol, Shanxi, Ningxia, Gansu, Qinghai, Xizang, Xinjiang); Russia, Japan, Europe.

5. *Athrycia impressa* (van der Wulp, 1869) nrYN 1♀, A31.

Distr.: China (Yunnan, Sichuan, Heilongjiang, Jilin, Liaoning, Nei Mongol, Beijing, Gansu, Qinghai, Xinjiang); Mongolia, Russia, Central Asia, Europe.

6. *Dexiomimops flavipes* Shima, 1987 nrSC 2♀2♂, B25; 1♀, B30; 1♀, B35.

Distr.: China (Sichuan, Liaoning, Hebei, Shanxi, Shaanxi, Taiwan).

7. *Dexiomimops rufipes* Baranov, 1935 nrSC/YN 3♂, A6; 3♀16♂, A16; 1♀18♂, A14; 1♂, A34; 1♀, A22.

Distr.: China (Yunnan, Sichuan, Heilongjiang, Jilin, Hebei, Zhejiang, Taiwan, Guangdong, Guangxi); Russia, Japan.

8. *Eriothrix micronyx* Stein, 1924 nrSC 5♂1♀, B10; 1♂, B23; 2♂1♀, B11; 1♀, B21; 1♀, B26; 1♀, B12.

Distr.: China (Sichuan, Yunnan, Xinjiang); Russia, Europe.

## EXORISTINAE, Blondeliini

9. *Admontia grandicornis* (Zetterstedt, 1849) nrSC 1♂, B22; 1♂, B16; 2♂, B20; 1♂, B11.

Distr.: China (Sichuan, Yunnan, Jilin, Ningxia, Qinghai); Russia, Europe.

10. *Admontia* sp. 1♂, B20.



Figures 59-60. Images of *Admontia* sp., ♂, B20. 59. Lateral view. 60. Dorsal view.

**11. *Biomeigenia flava* Chao, 1964 nrSC 1♀, A13.**

**Distr.:** China (Sichuan, Yunnan, Liaoning, Shanxi, Ningxia, Zhejiang).

**12. *Blondelia siamensis* (Baranov, 1938) nrSC 1♂, A7; 9♂, A31; 7♂, A13.**

**Distr.:** China (Sichuan, Yunnan, Jilin, Liaoning, Nei Mongol, Shanxi, Ningxia, Hunan, Fujian); Russia, Japan, Thailand.

**13. *Eophyllophila includens* (Walker, 1859) nrSC/YN 2♂, A33; 2♂, A9; 1♂, A30; 1♂, B1.**

**Distr.:** China (Sichuan, Yunnan, Shanxi, Shaanxi, Anhui, Taiwan, Guangdong); India, Indonesia.

**14. *Lixophaga fallax* Mesnil, 1963 nrYN 1♂, A33.**

**Distr.:** China (Sichuan, Yunnan, Jilin, Liaoning, Nei Mongol, Beijing, Shanxi, Henan, Hunan, Guangdong, Guangxi); Japan.

**15. *Uromedina atrata* (Townsend, 1927) nrYN 5♂, A34; 1♂, A36; 1♂, A38.**

**Distr.:** China (Yunnan, Taiwan, Guangdong, Hainan); Russia, Japan, Myanmar, Thailand, Malaysia, Papua New Guinea.

### Eryciini

**16. *Carcelia (Carcelia) caudata* Baranov, 1931 nrSC 1♂, A14; 1♀, A17.**

**Distr.:** China (Sichuan, Yunnan, Liaoning, Beijing, Shandong, Shaanxi, Anhui, Jiangsu, Shanghai, Zhejiang, Jiangxi, Hunan, Guizhou, Fujian, Taiwan, Guangdong, Guangxi, Hainan); Japan, India, Sri Lanka, Malaysia, Indonesia.

**17. *Carcelia (Carcelia) illiberisi* Chao & Liang, 2002 nrSC, YN 8♂, A34; 1♂, A16; 1♂, B25; 1♂, B29; 1♂, A23; 1♂, A31; 1♂, A26; 1♂, A33; 1♂, A6; 4♂, B26.**

**Distr.:** China (Sichuan, Yunnan, Shanxi).

**18. *Carcelia (Euryclea) hemimacartioides* (Baranov, 1934) nrYN 3♂3♀, A31; 1♂, A34; 1♀, A27.**

**Distr.:** China (Sichuan, Yunnan, Beijing, Shanghai, Taiwan); Japan.

**19. *Drino (Palexorista) inconspicuoidea* (Baranov, 1932) nrSC 1♂, A34; 1♀, A13.**

**Distr.:** China (Sichuan, Yunnan, Heilongjiang, Liaoning, Zhejiang, Hunan, Xizang, Taiwan, Guangdong, Hainan); Japan, Melanesia.

**20. *Erycia fasciata* Villeneuve, 1924 nrSC 1♀, B13.**

**Distr.:** China (Sichuan, Liaoning, Nei Mongol); Russia, Europe.

**21. *Nilea hortulana* (Meigen, 1824) nrSC 1♂, A3; 1♂, B9.**

**Distr.:** China (Sichuan, Liaoning, Nei Mongol, Hebei, Shanxi, Shaanxi, Ningxia, Zhejiang, Hainan); Japan, Melanesia, Transcaucasia, Europe.

**22. *Nilea innoxia* Robineau-Desvoidy, 1863 nrSC 1♂, B12.**

**Distr.:** China (Sichuan, Liaoning); Russia, Japan, Europe.

**23. *Nilea rufiscutellaris* (Zetterstedt, 1859) nrSC 1♀, B10.**

**Distr.:** China (Sichuan, Liaoning); Russia, Japan, Europe.

**24. *Phebellia carceliaeformis* (Villeneuve, 1937) nrYN 1♀, A34.**

**Distr.:** China (Sichuan, Yunnan, Hebei).

**25. *Phebellia glauca* (Meigen, 1824) nrSC/YN 1♂, A30; 1♂, A5.**

**Distr.:** China (Sichuan, Yunnan, Heilongjiang, Jilin, Liaoning, Nei Mongol, Ningxia); Russia, Mongolia, Japan, Transcaucasia, Europe.

**26. *Phebellia stulta* (Zetterstedt, 1844) nrYN 1♂, A34.**

**Distr.:** China (Yunnan, Jilin, Liaoning, Nei Mongol, Ningxia); Russia, Japan, Europe.

**27. *Phryxe nemea* (Meigen, 1824) nrYN 1♂, A34; 1♂, B9.**

**Distr.:** China (Sichuan, Yunnan, Liaoning, Nei Mongol, Hebei, Ningxia, Qinghai, Xinjiang); Russia, Japan, Transcaucasia, Europe.

**28. *Phryxe vulgaris* (Fallén, 1810) nrSC 1♂, A31; 3♂1♀, B4; 1♂, A34; 2♀, B9; 1♀, B13; 1♀, B23.**

**Distr.:** China (Sichuan, Yunnan, Heilongjiang, Jilin, Liaoning, Nei Mongol, Hebei, Tianjin, Beijing, Shanxi, Henan, Shaanxi, Ningxia, Qinghai, Xinjiang, Shanghai, Hubei, Chongqing, Xizang, Guangdong); Russia, Mongolia, Japan, Transcaucasia, Middle East, Central Asia, Europe, Canada, USA.

**29. *Pseudoperichaeta palesioidea* (Robineau-Desvoidy, 1830) nrSC 1♂, B15; 1♂, B9.**

**Distr.:** China (Sichuan, Jilin, Nei Mongol); Russia, Mongolia, Transcaucasia, Middle East, Central Asia, Europe.

**30. *Senometopia fujianensis* (Chao & Liang, 2002) nrSC 1♂, B1.**

**Distr.:** China (Sichuan, Zhejiang, Fujian).

**31. *Senometopia parviseta* Shima & Tachi, 2022 nrSC 1♂1♀, A4.**

**Distr.:** China (Sichuan, Yunnan); Japan.

**32. *Senometopia quadrata* Shima & Tachi, 2022 nrSC 1♂2♀, A5.**

**Distr.:** China (Sichuan, Yunnan); Nepal.

**33. *Senometopia rufa* (Baranov, 1931) nrSC 1♂, A34; 1♂, A14.**

**Distr.:** China (Sichuan, Yunnan, Shanxi, Taiwan); Japan.

### Exoristini

**34. *Exorista (Spixomyia) fortis* Chao, 1964 nrYN 1♀, A24.**

**Distr.:** China (Yunnan, Liaoning, Anhui, Zhejiang, Guangdong).

### Goniini

**35. *Eumea linearicornis* (Zetterstedt, 1844) nrSC 1♂, A34; 2♂, A9; 1♂, A33.**

**Distr.:** China (Sichuan, Yunnan, Heilongjiang, Liaoning, Nei Mongol, Hebei, Beijing, Shanxi, Ningxia); Russia, Japan, Transcaucasia, Europe.

**36. *Frontina tricolor* Shima, 1988 nrSC 1♀, B3.**

**Distr.:** China (Sichuan, Liaoning); South Korea, Japan.

**37. *Gonia olgae* (Rohdendorf, 1927) nrSC 1♂, B4.**

**Distr.:** China (Sichuan, Central, East, Nei Mongol, Northeast), Japan, South Korea, Middle East, Europe.

**38. *Myxexoristops hertingi* Mesnil, 1955 nrSC 1♂, B2; 1♂, B7.**

**Distr.:** China (Sichuan, Ningxia); Russia, Europe.

**39. *Pales carbonata* Mesnil, 1970 nrYN 4♂, A33; 4♂, A34.**

**Distr.:** China (Sichuan, Yunnan, Liaoning, Beijing, Shandong, Shanxi, Ningxia, Gansu, Qinghai, Xinjiang, Anhui, Jiangsu, Shanghai, Zhejiang, Jiangxi, Xizang, Fujian, Taiwan, Guangdong, Hainan); Japan.



Figures 61, 62. Images of species primarily distributed in China. 61. *Pales carbonata* Mesnil ♂, A33. 62. *Nemoreaea fasciata* (Chao & Shi), ♂, A34.

### Winthemiini

40. *Winthemia cruentata* (Rondani, 1859) nrYN 7♂, A34; 5♂, A30; 1♂1♀, B13; 2♀, B17; 1♂, B14; 1♂, B26.

**Distr.:** China (Sichuan, Yunnan, Heilongjiang, Jilin, Liaoning, Nei Mongol, Beijing, Shanxi); Russia, Mongolia, South Korea, Japan, Transcaucasia, Europe.

41. *Winthemia venustoides* (Mesnil, 1967) nrYN 1♂, A35.

**Distr.:** China (Yunnan, Liaoning, Beijing, Shanxi); Japan.

### PHASIINAE, Gymnosomatini

42. *Ectophasia crassipennis* (Fabricius, 1794) nrSC 1♀, B23.

**Distr.:** China (Sichuan, Yunnan, Heilongjiang, Liaoning, Shanxi, Shaanxi, Hubei, Xizang); Russia, North Korea, South Korea, Japan, Transcaucasia, Europe.

### Leucostomatini

43. *Calyptromyia* sp. nrSC/YN 1♀, B24; 3♀, A30.

**Distr.:** China (Sichuan, Yunnan, Heilongjiang, Liaoning, Shanxi, Anhui, Zhejiang, Xizang, Fujian, Taiwan, Guangxi, Hainan); Russia, North Korea, South Korea, Japan, Vietnam.

### Strongygastrini

44. *Melastrongygaster chaoi* Shima, 2015 nrYN 1♂, A35.

**Distr.:** China (Sichuan, Yunnan, Liaoning, Hebei).



Figures 63, 64. *Calyptromyia* sp., ♀, A31. 63. Lateral view. 64. Close-up view of female terminalia.

### TACHININAE, Leskiini

45. *Fischeria bicolor* Robineau-Desvoidy, 1830 nrSC 1♀, B35.

Distr.: China (Sichuan, Gansu); Indonesia, Transcaucasia, Middle East, Central Asia, Europe.

#### Macquartiini

46. *Dicarca fluviatilis* Richter, 1993 nrSC 1♂, B4; 1♀, B13.

Distr.: China (Sichuan, Liaoning); Russia.

#### Megaprosopini

47. *Dexiosoma caninum* (Fabricius, 1781) nrSC 3♂, B3; 1♂, B19.

Distr.: China (Sichuan, Jilin, Liaoning, Ningxia); Russia, Japan, Europe.

#### Polideini

48. *Lydina aenea* (Meigen, 1824) nrSC 1♂2♀, B14; 1♂1♀, B15; 1♂3♀, B10; 1♀, B17.

Distr.: China (Sichuan, Nei Mongol); Russia, Transcaucasia, Europe.

#### Tachinini

49. *Tachina (Tachina) magnicornis* (Zetterstedt, 1844) nrSC 1♀, B10.

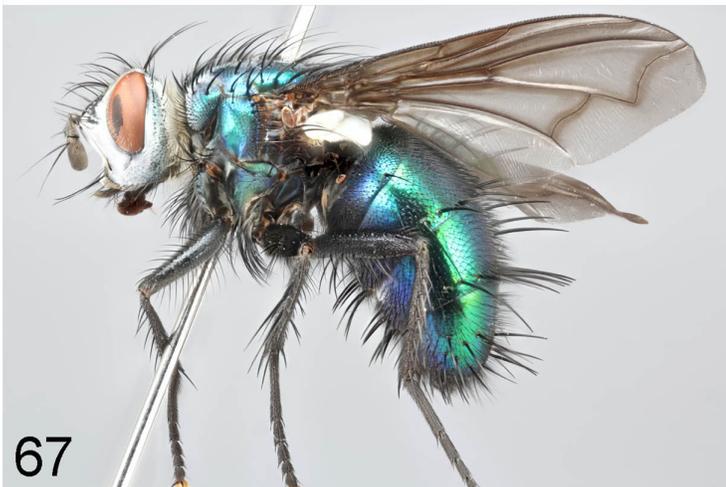
Distr.: China (Sichuan, Heilongjiang, Jilin, Liaoning, Nei Mongol, Hebei, Beijing, Shanxi, Ningxia, Xinjiang); Russia, Mongolia, North Korea, South Korea, Japan, Central Asia, Middle East, Europe.



65



66



67



68

**Figures 65–68.** Tachinids with metallic luster. **65.** *Chrysosomopsis stricta* (Aldrich), ♂, B7. **66.** *Chrysomikia viridicapitis* Chao & Zhou, ♀, Wanglang Nature preserve, Pingwu County, Sichuan, Houcan (coll. LIANG, 20.VII.2016). **67.** *Janthinomyia felderi* (Brauer & Bergenstamm), ♀, B26. **68.** *Chrysomikia grahami* (Villeneuve), ♀, B31.

## ACKNOWLEDGEMENTS

We thank Dr. James E. O'Hara, Canadian National Collection of Insects, Agriculture and Agri-Food Canada for his invitation to write this report and for his helpful suggestions and corrections to an early draft. This field survey and study was supported by the National Natural Science Foundation of China (NSFC No. 32470459).

## REFERENCES

- Boufford, D. 2014. Biodiversity hotspot: China's Hengduan Mountains. *Arnoldia* 72: 24–35.
- Li, J.-j., Yue, L., Nie, X.-t. & Zhang, C.-t. 2024. One new species of *Imitomyia* Townsend and five newly recorded species of Dexiinae (Diptera: Tachinidae) from China. *Zootaxa* 5448: 102–116.  
<https://dx.doi.org/10.11646/zootaxa.5448.1.6>
- O'Hara, J.E., Henderson, S.J. & Wood, D.M. 2020. Preliminary checklist of the Tachinidae (Diptera) of the world. Version 2.1. PDF document, 1039 pp.  
<https://www.uoguelph.ca/nadsfly/Tach/WorldTachs/Checklist/Worldchecklist.html>
- O'Hara, J.E., Zhang, C.-t. & Shima, H. 2020. Tachinidae. Pp. 845–970. *In*: Yang, D., Wang, M.-q. & Li, W.-l., eds., Species catalogue of China. Volume 2. Animals. Insecta (VI). Diptera (3). Cyclorrhaphous Brachycera. Science Press, Beijing. 1170 pp. [In Chinese.]
- Stireman, J.O. III, Cerretti, P., O'Hara, J.E. & Moulton, J.K. 2021. Extraordinary diversification of the “bristle flies” (Diptera: Tachinidae) and its underlying causes. *Biological Journal of the Linnean Society* 133: 216–236.  
<https://doi.org/10.1093/biolinnean/blab010>
- Stireman, J.O. III, O'Hara, J.E. & Wood, D.M. 2006. Tachinidae: evolution, behavior, and ecology. *Annual Review of Entomology* 51: 525–555 + 2 pls.
- Zhang, C.-t., Liang, H.-c. & Li, X.-y. 2018. Collecting tachinid flies (Diptera, Tachinidae) in the Hengduan Mountains of SW China. *The Tachinid Times* 31: 17–39.



# Trends in the tachinid fauna of *The Netherlands* over the last forty years

by Theo Zeegers

EIS Kenniscentrum Insecten, P.O. Box 9517, 2300 RA Leiden, the Netherlands

E-mail: [theo.zeegers@naturalis.nl](mailto:theo.zeegers@naturalis.nl)

## Introduction

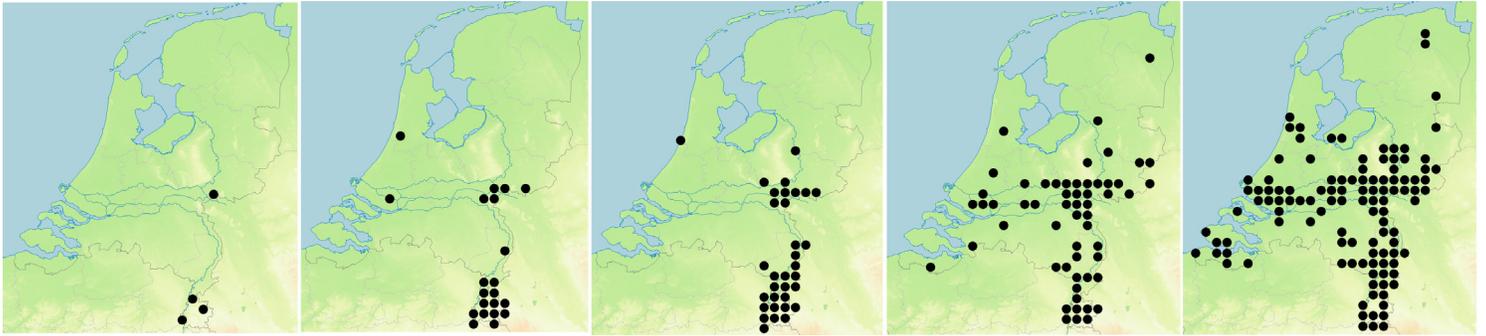
On April 6th, 1985, I caught and identified for the first time in my life a tachinid fly. It was a male of *Tachina* (*Servillia*) *ursina* Meigen. Therefore, last year I celebrated my fortieth anniversary as a tachinidologist. Looking back at forty years, I've seen huge changes in the tachinid fauna of the Netherlands. The aim of this article is to describe and analyze these changes over this period. This is based on both my personal observations, study of nearly all material collected, and on the large database filled by citizen scientist site [Waarneming.nl](https://www.waarneming.nl) (the local Dutch version of [Observation.org](https://www.observations.org), sister site of [iNaturalist.org](https://www.inaturalist.org)).

## Studies on trends of Diptera in western Europe

Trends in hoverflies (or flower flies, Syrphidae) are much better studied than those in tachinids. Long term negative trends have been reported for hoverflies in western Europe and can be considered well established (Gatter et al. 2020, Hallmann et al. 2021, Barendregt et al. 2022, Reemer et al. 2024, van Eck 2024, Zeegers et al. 2024). These trends are established based on large numbers of records often using sophisticated statistical techniques. This type of quality data is obviously not available for Tachinidae. Yet, the number of records of Tachinidae by citizen scientists in the Netherlands on [Waarneming.nl](https://www.waarneming.nl) has risen since 2010 to about 16,000 yearly in 2024 with photographic evidence, half of which has been positively validated. To illustrate the strength of this tool, note that no less than nine species have been recognized for the first time for the Netherlands based on [Waarneming.nl](https://www.waarneming.nl), 3% of all species ever recorded for the Netherlands. Clearly, conspicuous, large and flower-visiting tachinids can be expected to be overrepresented in this database as compared to small, dull and non-flower-visiting species.

## First impressions

It is clear from a quick look at the data that large changes have occurred in the presence and abundance of Dutch tachinid flies over the period 1985–2025. At least 11 species (= 3%) disappeared over this period, whereas 16 newcomers (= 5%) arrived. Many of the latter settled rapidly and are currently widespread. For instance, after the first record of *Cylindromyia bicolor* (Olivier) in the Netherlands in 2015, the species rapidly spread and now occupies two-thirds of the country (Fig. 1). In summer, one can almost literally follow its expansion in real life on the screen of [Waarneming.nl](https://www.waarneming.nl). Similar expansions can also be found in species already present before 1985, such as *Dexia rustica* (Fabricius).



**Figure 1.** Validated records of *Cylindromyia bicolor* on [Waarneming.nl](http://Waarneming.nl) for the years (left to right) 2017, 2019, 2021, 2023 and 2025.

On the other hand, some species that were relatively common in the 1980s have disappeared, such as *Allophorocera ferruginea* (Meigen). More difficult to investigate is the decrease in abundance over time, but in some cases it is obvious. For example, in the 1980s *Panzeria* (or *Eurithia*) *anthophila* (Robineau-Desvoidy) could be found in August on every tenth umbellifer, but in 2025 the number of validated records for all of the Netherlands, produced by a much larger army of citizen scientists, was only 65.

## Materials and methods

For the assessment of the trend for each species over the period 1985–2025, I have used three main sources:

- my personal experience
- database of collected material of Dutch Tachinidae
- validated records of Tachinidae on [Waarneming.nl](http://Waarneming.nl) (mostly from the last decade)

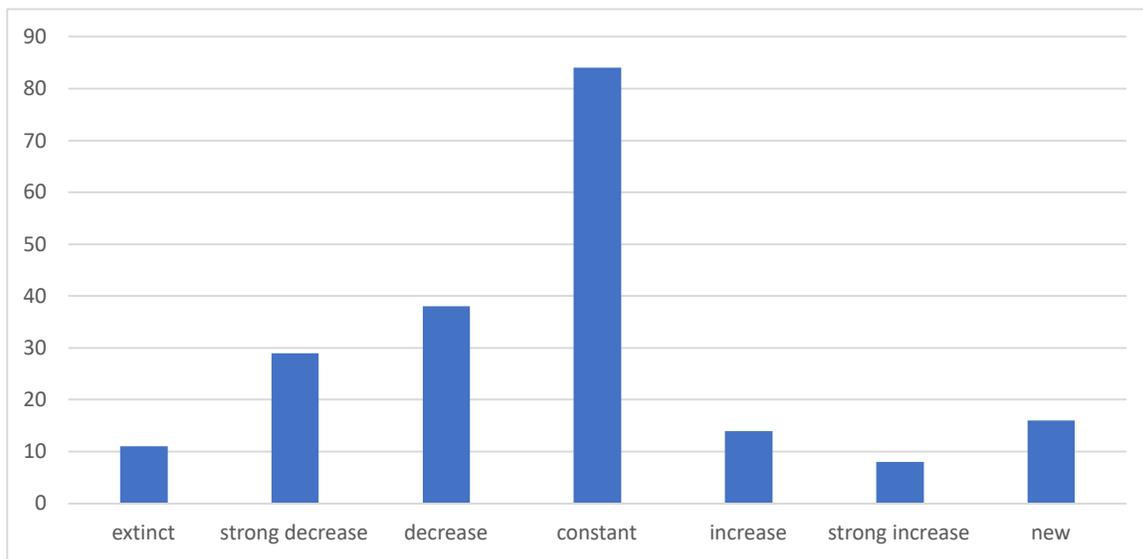
Information on the database of collected material up until 1995 can be found in Zeegers (1998). This database contains records from the field, Malaise traps and reared specimens. The other two sources are dominated by field records. Based on these sources, a trend status is assigned to each species according to the definitions in Table 1. This is not a rigorous statistical process, but an expert judgement. A conservative approach has been applied. When in doubt, the lesser extreme value was assigned.

**Table 1.** Definitions of trend status.

Status	Criteria
New	established after 1985
Strong increase	more than 75% increase over 1985–2025
Increase	more than 33% increase over 1985–2025
Constant	between +/- 33% over 1985–2025
Decrease	more than 33% decrease over 1985–2025
Strong decrease	more than 75% decrease over 1985–2025
Disappeared	recorded after 1985, but apparently no longer present
Not recent	not only recorded before 1985
Too rare to call	data deficit

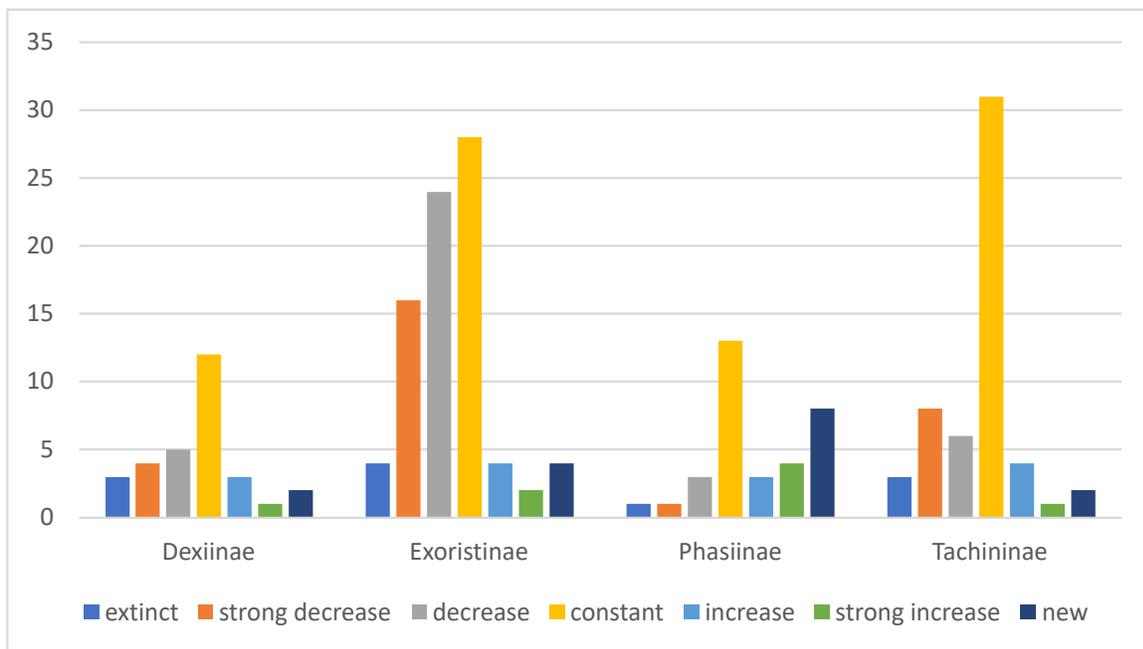
## Results

Of the 345 species of tachinid flies ever found in the Netherlands, trends could be established for 200 species. Fifty-nine of them have not been found after 1985 and 86 are considered “too rare to call”. For species with a trend assigned, two-fifths (84) are considered ‘constant’, two-fifths (78) are decreasing, and only one-fifth (38) are increasing (Fig. 2). So, the general picture is highly dynamic, but with twice as many species decreasing as increasing. Only for ‘new’ the trend is more positive than ‘extinct’, however, that is excluding the 59 species present before 1985 and not present afterwards.



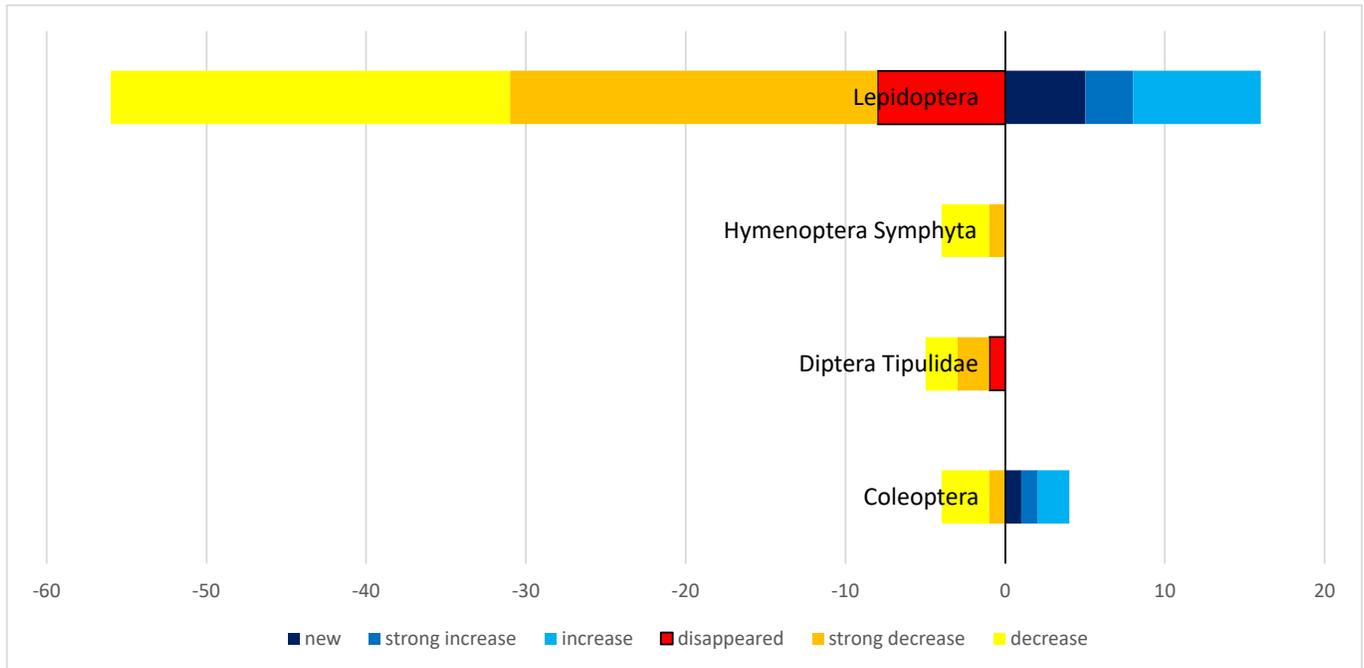
**Figure 2.** Number of species per trend class (Table 1) for the 200 species with an assigned trend.

When we consider the trends since 1985 for the four subfamilies, we find significant differences (Fig. 3). As expected (see below), the Phasiinae have a generally more positive trend, whereas the Exoristinae perform much worse than average.



**Figure 3.** As per Fig. 2, per subfamily.

The hosts of Tachinidae are better known in Europe than elsewhere in the world and have been documented in the Palaearctic host-tachinid catalogue of Tschorsnig (2017). Looking at relations between trends and insect order of hosts, we have already dealt with the Heteroptera because this group of tachinids is identical with Phasiinae. For the other four large host orders, parasitoids of Coleoptera have on average a neutral trend, hence they perform better than the whole family on average (Fig. 4). Tachinids on Diptera (= Tipulidae) and Hymenoptera (= Symphyta) are all or nearly all decreasing. Tachinid parasitoids on Lepidoptera (the majority of Exoristinae and Tachininae), by far the largest group, have more than three times species decreasing in a broad sense than increasing, distinctly worse than for the whole family (twice as much decreasing as increasing).



**Figure 4.** Number of species with an increase in broad sense (= increase, strong increase, new) and decrease in a broad sense (= decrease, strong decrease, extinct) for the four main host orders other than Heteroptera.

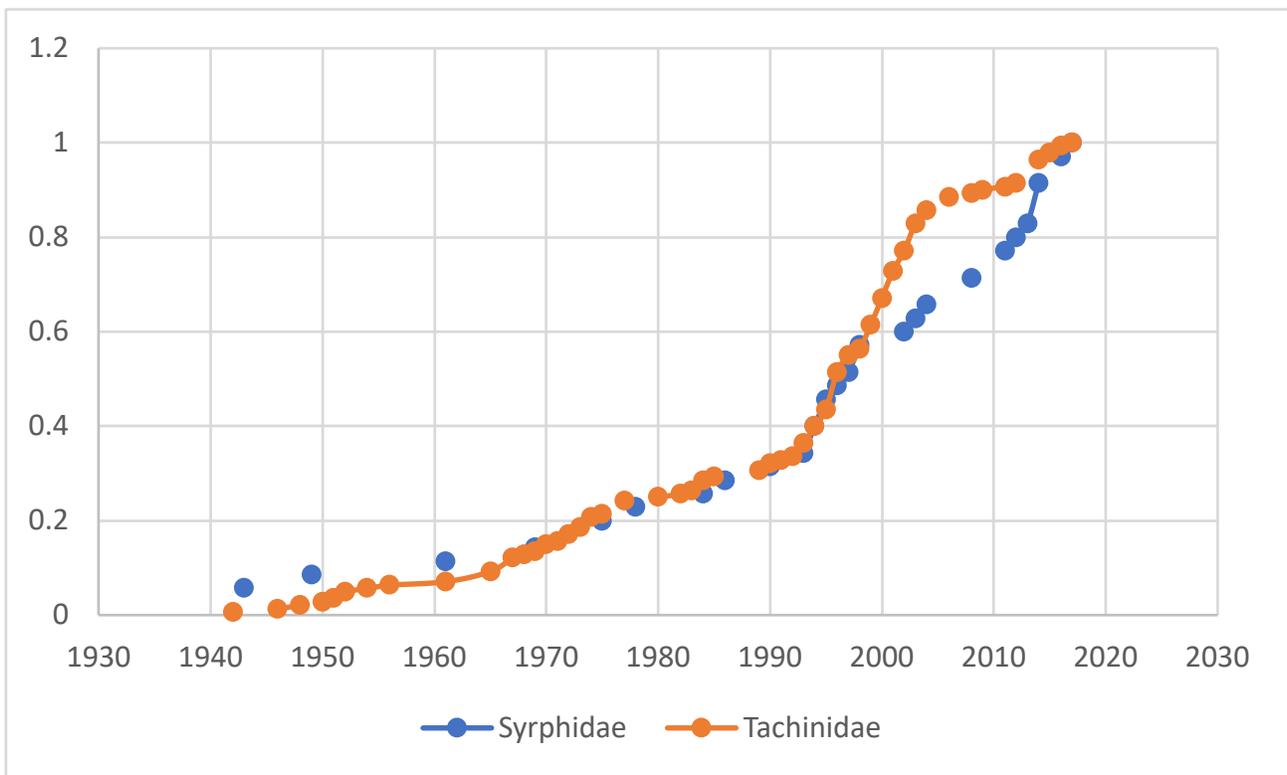
One might argue that flower-visiting species are prone to over-recording by citizen scientists (Ball & Morris 2021). No doubt, this is indeed the case, but there is more going on. While species like *Cylindromyia brassicaria* (Fallén), *C. bicolor*, *Ectophasia crassipennis* (Fabricius) and *Phasia aurigera* (Egger) have undoubtedly rapidly increased, in my experience similar species like *Cylindromyia interrupta* (Meigen) and *Phasia obesa* (Fabricius) have not. Both flower-visiting phasiines *Labigastera forcipata* (Meigen) and *Leucostoma simplex* (Fallén) are on the brink of extirpation in the Netherlands, if they have not already disappeared. Also in other subfamilies, it makes sense to consider sibling species. *Peleteria iavana* (Wiedemann) and *Nowickia ferox* (Panzer) are becoming much more common, while the similar *Peleteria rubescens* (Robineau-Desvoidy) hardly is. The genera *Athrycia* (three species) and *Hyleorus* seem to have vanished from the Netherlands, while *Cyrtophloeoba ruricola* (Meigen), which used to be much rarer, is now regularly recorded even by citizen scientists. Some Exoristinae, like *Phryxe vulgaris* (Fallén), *Phryno vetula* (Meigen) and *Blondelia nigripes* (Fallén) decreased significantly, while *Epicampocera succincta* (Meigen) did not.

To investigate whether a bias is present in our data due to flower visiting, I divided the species into regular versus non-regular flower visitors. I exclude the Phasiinae, since the expansion of many species of Phasiinae in Central Europe is well documented even based on non-photographic evidence (Ziegler 2011). For the remaining species, 40 of the 75 non-regular flower visitors are in decline (53%), whereas for flower visitors the numbers are 27 of 66 (40%). While it seems there might indeed be some bias favouring flower visitors, the difference is not statistically significant and in any case is so small that it can play at best a secondary role. Significantly more decrease than increase is found in both flower visiting and non-flower visiting species.

All in all, the data are admittedly not ideal, but the dynamics observed, in many cases with backup from my personal experience, are too large to be considered artifacts of the dataset. The tachinid fauna of the Netherlands has changed significantly over my lifetime, and not all for the better. Also, nearly all newly-recorded species have likely expanded their ranges due to climate change, so even the positives are negative in many cases.

## Year of last recording

Many species of tachinids supposedly present in the Netherlands in 1939 (de Meijere 1939) have not been recorded after 2017, 140 to be precise. This may be due to the fact that they are extremely rare, difficult to find (for instance only with Malaise or pan traps), or must be reared. Or because they have really disappeared. For each species, the year of last recording is established. With that information, for each given year between 1940 and 2017, we can count the total number of species not recorded thereafter. Figure 5 this number of supposedly extirpated species per year, relative to the final number of extirpated species in 2017. It also shows the same information for hoverflies (Zeegers et al. 2024). The number of extirpated species in 2017 is for Tachinidae much higher (140) than for Syrphidae (35), hence, to compare the shape of the graphs, I calculated the values for each year relative to the number of extirpated species in 2017 (hence, a fraction between 0 and 1, the “cumulative fraction”). Then, the resemblance between both graphs is, in my opinion, stunning. The disappearing rate (the derivative of the graph) has a distinct discontinuity around 1990, after which it is much higher than before. The effect is even stronger in tachinids than in hoverflies. For wild bees, there is no such discontinuity (Zeegers et al. 2024). Since bees are at a lower trophic level than both tachinids and hoverflies, it is tempting to assume that the underlying causes of the discontinuity for tachinids and hoverflies might be the same.



**Figure 5.** Number of extirpated species up to a given year relative to the total number of extirpated species in 2017 for Syrphidae (blue, number of extirpated species = 35) and Tachinidae (orange, number of extirpated species = 140). Year is on X-axis and cumulative fraction on y-axis (see text).

## Acknowledgements

I am grateful to everyone who shared their observations with me and the army of photographers posting on [Waarneming.nl](https://www.waarneming.nl). Bob van Aartsen was responsible for more of half of all records before 2000, hence making an indispensable contribution to the baseline of the database.

## References

- Ball, S.G. & Morris, R.K.A. 2021. Is photographic recording influencing published trends in the relative frequency of invertebrates? *British Journal of Entomology and Natural History* 34: 237–251.
- Barendregt, A., Zeegers, Th., Steenis, W. van & Jongejans, E. 2022. Forest hoverfly community collapse: abundance and species richness drop over four decades. *Insect Conservation and Diversity* 15(5): 510–521. <https://doi.org/10.1111/icad.12577>
- Eck, A. van. 2024. Composition of soldier flies (Diptera, Stratiomyidae) and hoverflies (Diptera, Syrphidae) in Malaise traps in two nature reserves in the Netherlands. Two research periods compared. *Fly Times* 73: 21–40.
- Gatter, Wu., Ebenhöf, H., Kima, R., Gatter, Wa. & Scherer, F. 2020. 50-jährige Untersuchungen an migrierenden Schwebfliegen, Waffenschwebfliegen und Schlupfwespen belegen extreme Rückgänge (Diptera: Syrphidae, Stratiomyidae; Hymenoptera: Ichneumonidae). *Entomologische Zeitschrift Schwanfeld* 130: 131–142.
- Hallmann, C.A., Ssymank, A., Sorg, M., Kroon, H. de & Jongejans, E. 2021. Insect biomass decline scaled to species diversity: general patterns derived from a hoverfly community. *PNAS* 118(2) e2002554117. <https://doi.org/10.1073/pnas.2002554117>
- Meijere, J.C.H. de. 1939. Naamlijst van Nederlandsche Diptera afgesloten 1 April 1939. *Tijdschrift voor Entomologie* 82: 137–174.
- Reemer, M., Smit, J.T. & Zeegers, Th. 2024. Basisrapport voor de Rode Lijst Zweefvliegen 2023. EIS Kenniscentrum Insecten EIS2024-03. <https://kenniscentruminsecten.nl/publicaties/basisrapport-voor-de-rode-lijst-zweefvliegen-2023/>
- Tschorsnig, H-P. 2017. Preliminary host catalogue of Palaearctic Tachinidae (Diptera). <https://www.uoguelph.ca/nadsfly/Tach/WorldTachs/CatPalHosts/Home.html>
- Zeegers, Th. 1998. An annotated checklist of the Dutch tachinid flies (Diptera: Tachinidae). *Entomologische Berichten* 58 (9): 165–200.
- Zeegers, Th., Steenis, W. van, Reemer, M. & Smit, J.T. 2024. Drastic acceleration of the extinction rate of hoverflies (Diptera: Syrphidae) in the Netherlands in recent decades, contrary to wild bees (Hymenoptera: Anthophila). *Journaal van Syrphidae* 3 (1): 1–11. <https://www.syrphidaeintrees.com/jvs/volumes/pdf-volume-3-no-1>
- Ziegler, J. 2011. Rezente Arealerweiterungen bei Wanzenfliegen (Diptera: Tachinidae, Phasiinae) in Nordostdeutschland und eine Übersicht zur Gesamtverbreitung von fünf Arten. *Studia Dipterologica* 18: 29–54.



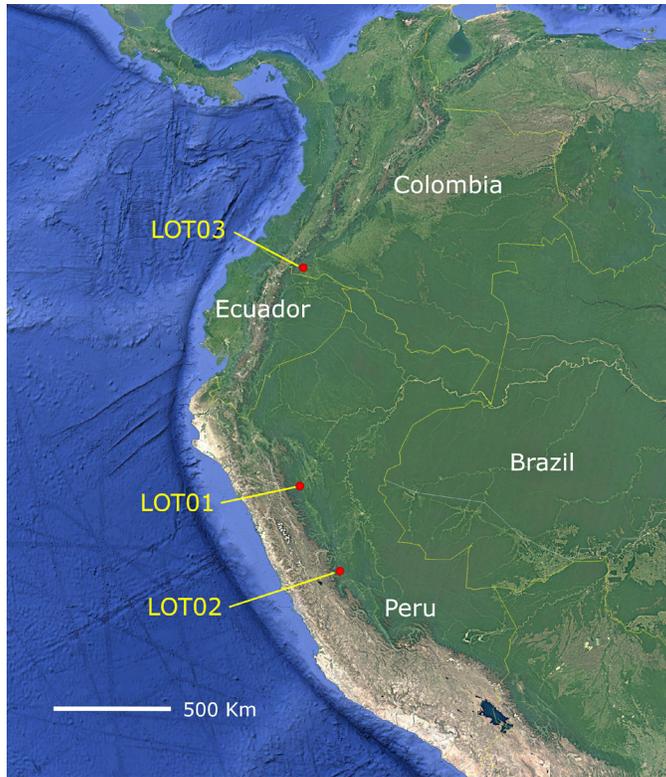
# “Tree Tachinidae”: brief notes on bristle flies from the Life on Trees project

by John O. Stireman III

Department of Biological Sciences, Wright State University, 3640 Colonel Glenn Hwy, Dayton, Ohio 45435, USA  
Email: john.stireman@wright.edu

*The Life on Trees project* is focused on sampling and documenting all of the eukaryotic organisms that are associated with individual trees in the tropical Andes of South America in an attempt to generate baseline knowledge on the diversity of life and species interactions supported by a single tree. This includes epiphytes and vines, mosses and ferns, mushrooms and molds, vertebrates and invertebrates, down to the protozoa living in bromeliad water tanks. The project is a joint initiative of the Royal Belgian Institute of Natural Sciences (RBINS) and the Fonds de Dotation Biotope pour la Nature (FDBPLN), partnering with the Museo de Historia Natural in Peru and the Instituto de Investigación de Recursos Biológicos Alexander von Humboldt in Colombia. It also involves a vast network of collaborating specialists all over the world involved in identifying all of the organisms observed and/or collected.

The project aims not only to comprehensively sample all (eukaryotic) organisms found in the tree but also record exactly where in or on the tree each specimen is collected or observed, from the base of the trunk to the tips of branches (Leponce et al. 2024). This involved a huge array of survey techniques from camera traps and binocular observations of vertebrates to DNA sequencing of leaf samples for fungal endophytes. Survey methods for insects included hand collecting, aerial fogging, flight intercept traps (e.g., Sante-type and SLAM traps), light traps, pan traps, beat sheets, and rearing from galls and dead wood (among other methods; Fig. 1).



**Figure 2.** Locations of the three focal trees along the Andes in western South America.

The Life on Trees (LoT) project is focused on three, large, emergent rainforest trees (Figs. 1, 2):

LOT01 – a 50 m-tall *Dussia tessmannii* (Fabaceae) located in Parque Nacional del Río Abiseo, Peru, in the Amazonian Andean foothills at 400 m a.s.l.

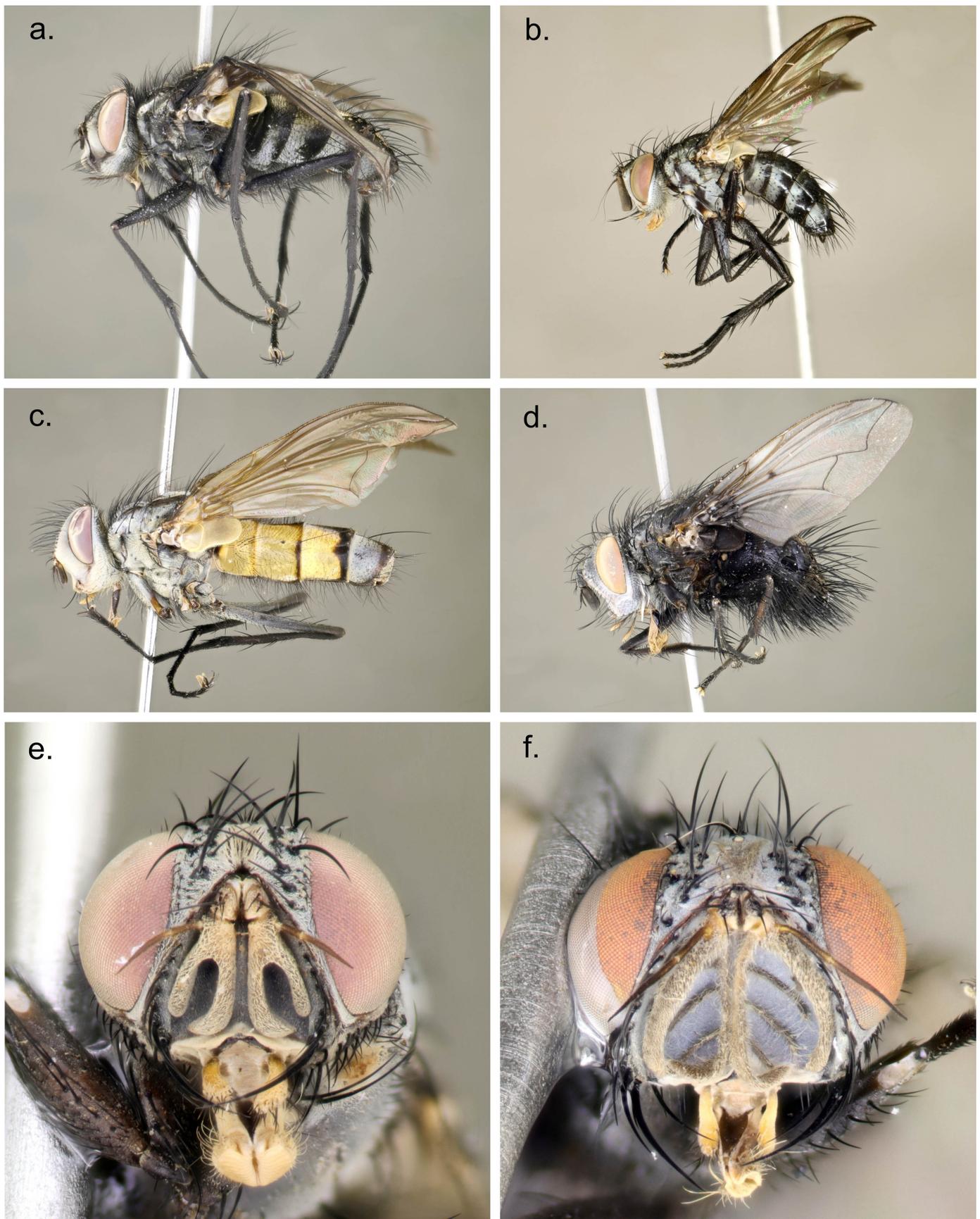
LOT02 – a 32 m-tall *Ficus americana* subsp. *andicola* (Moraceae) utilizing a *Beilschmiedia latifolia* (Lauraceae) for support, located in Parque Nacional Yanachaga-Chemillén, Peru, in Andean montane forest at 2500 m a.s.l.

LOT03 – a 40 m-tall *Brosimum cf. utile* (Moraceae) located in the Natural Reserve La Isla Escondida, Colombia, in the Andes-Amazon transition zone at 850 m a.s.l. [Some samples were obtained at ground level in the vicinity of the LOT03 tree, and these are coded as LOT00.]

Trees were sampled over a limited amount of time, with each type of sampling (pan traps, fogging) employed over a 7–10 day period. Canopy traps were operated for 3 days per month for a year. Details of sampling periods and methods can be found in Leponce et al. (2024) and at the Life on Trees website (<https://www.lifeontrees.org/home/>).

Dr. Marc Pollet of the Institute for Nature and Forest (INBO, Brussels), a dolichopodid expert, did much of the flying insect sampling and has been coordinating identification of fly samples from the LoT project. He contacted me and asked if I was interested in working with the Tachinidae sampled from the project, sorting them to species and morphospecies and reporting this back to the LoT consortium. I am generally interested in the diversity of Neotropical Tachinidae, especially in the Andes (e.g., Stireman et al. 2017, Stireman 2024) and thus, I volunteered to examine the tachinid specimens. Here, I provide a brief overview of my initial findings. I plan to examine and analyze the reported data more thoroughly in a subsequent manuscript.

I received samples already sorted by other collaborating taxonomists, consisting of primarily tachinid flies (along with a few Mesembrinellidae, Sarcophagidae, and Rhinophoridae). They were all preserved in alcohol, which necessitated chemical drying (1–2 days submerged in ethyl acetate and then air-dried) and mounted for identification and morphospecies separation. Many of the specimens were in very poor condition. Most were missing at least some legs and some specimens were completely disarticulated. The very poorest specimens were not mounted, but were examined in ethanol after I had examined and sorted all of the pinned samples. As a first pass, genera were identified largely using the key in Wood & Zumbado (2010) and with reference to specimens in my research collection at Wright State University (JOSC). Many of these identifications are provisional and I still need to go back through the specimens to refine these identifications further. All but a few badly damaged specimens could be assigned to a morphospecies.

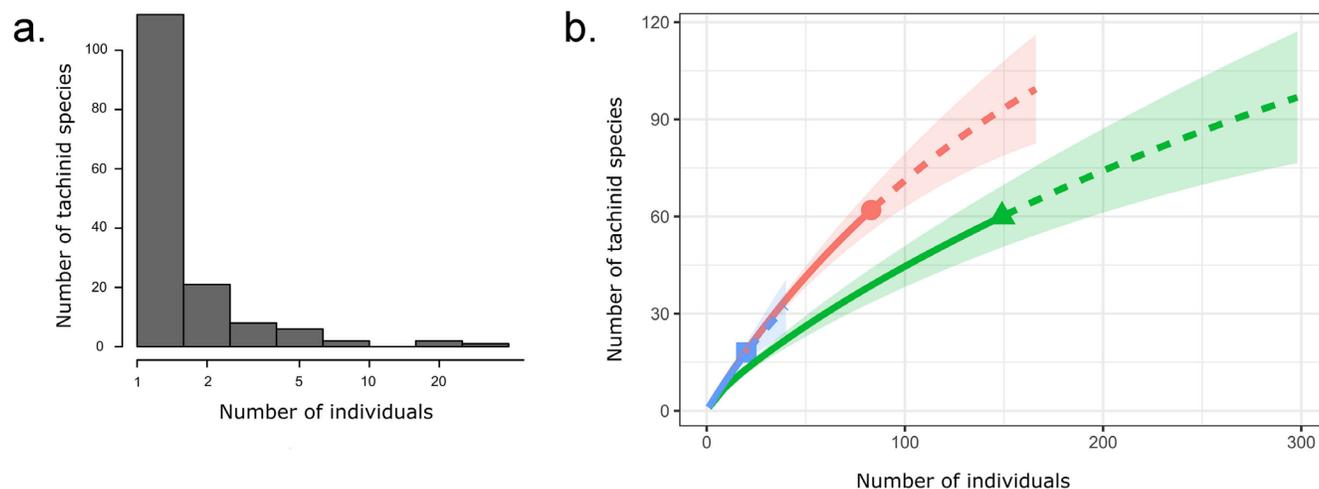


**Figure 3.** A few of the bristle flies sampled by the LoT project. **a.** Genus nr. *Ptilodexia/Dolichocodia* sp. (Dexiini) – the most abundant tachinid collected. **b.** *Calolydella* sp. (Blondeliini), a member of the most diverse tribe collected. **c.** *Zelia* sp. (Dexiini), one of several *Zelia* species collected, illustrating the typical lack of legs of many specimens. **d.** *Gaediopsis* sp. (Goniini). **e, f.** Close-ups of two *Phytomyza* species with highly modified antennae (unfortunately the latter was poorly mounted and glue covers part of the eye).

**Table 1.** Abundance and species richness of Tachinidae from the LoT sampling.

Tree	Individuals	Species
LOT01	83	60
LOT02	149	60
LOT03	20	18
“LOT00”	43	20

A total of 293 bristle fly specimens was collected including representatives of an estimated 153 species (Table 1). Exactly the same number of species were collected from the middle (LOT01) and high (LOT02) elevation trees (60), whereas only 18 species were recorded from the lowland tree (400 m) in Colombia (with another 20 species obtained from the vicinity of this tree). I am not certain why this last tree had so many fewer species; maybe sampling intensity varied among trees, but the findings are consistent with observations that the mid-elevation Andes Mountains are exceptionally rich in Tachinidae. A few examples of the species collected are illustrated in Fig. 3. Very few of the species were found in more than one of the three trees. These are impressive numbers of species given the focus on just three individual trees and the somewhat limited sampling, but nearly three-quarters of these species are represented by just a single individual (Fig. 4a)! This indicates that the sampling is woefully incomplete, which is also evident from the high slopes of the (rarefied) species accumulation curves for each tree (Fig. 4b).



**Figure 4.** **a.** A histogram of the number of individuals tachinid per species recovered (note the number of individuals is on a  $\log_{10}$  scale). **b.** Species rarefaction curves of tachinid richness on each focal tree. Dotted lines are extrapolated species richnesses 95% confidence intervals (shading). LOT01 = red (circle), LOT02 = green (triangle), and LOT03 = blue (square).

It is clear from these high numbers of singletons and high slopes of rarefaction curves that much more sampling would be needed to accurately characterize the diversity and community composition of bristle flies associated with these three individual trees. In the future, I plan to refine my identifications to some extent with reference to C.H.T. Townsend's keys and descriptions of South American taxa (e.g., Townsend 1927), assess the taxonomic composition of taxa, compare collecting methods, and examine the locations on the trees where the specimens were collected (e.g., trunk, major branches, canopy). I also look forward to seeing broader publications by the Life on Trees consortium examining diversity and turnover of all the insects, other animals, plants, and fungi associated with these trees.

## References

- Leponce, M., Basset, Y., Aristizábal-Botero, Á., Baïben, N., Barbut, J., Buyck, B., Butterill, P., Calders, K., Cárdenas, G., Carrias, J.-F., Catchpole, D., D'hont, B., Delabie, J., Drescher, J., Ertz, D., Heughebaert, A., Hofstetter, V., Leroy, C., Melki, F., Michaux, J., Moreno, J.C.N., Poirier, E., Rougerie, R., Rouhan, G., Rufay, V., Scheu, S., Schmidl, J., Vanderpoorten, A., Villemant, C., Youdjou, N., Pascal, O. 2024. Unveiling the above-ground eukaryotic diversity supported by individual large old trees: the "Life on Trees" integrative protocol. *Frontiers in Forests and Global Change* 7: 22 pp.  
<https://doi.org/10.3389/ffgc.2024.1425492>
- Stireman, J.O. III. 2024. A glimpse into the incredible diversity of Ecuadorean Tachinidae. *The Tachinid Times* 37: 20–46.
- Stireman, J.O. III, Dyer, L.A. & Greeney, H.F. III. 2017. Specialised generalists? Food web structure of a tropical tachinid-caterpillar community. *Insect Conservation and Diversity* 10: 367–384.  
<https://doi.org/10.1111/icad.12238>
- Townsend, C.H.T. 1927. Synopse dos generos muscoideos da região humida tropical da America, com generos e especies novas. *Revista do Museu Paulista* 15: 203–385 + 4 pls. + [4 (errata)] pp.
- Wood, D.M. & Zumbado, M.A. 2010. Tachinidae (tachinid flies, parasitic flies). Pp. 1343–1417. *In*: Brown, B.V., Borkent, A., Cumming, J.M., Wood, D.M., Woodley, N.E. & Zumbado, M.A. (eds.), *Manual of Central American Diptera*. Volume 2. NRC Research Press, Ottawa. xvi + 715–1442.

**Figure 1.** The first release of *Istocheta aldrichi* of 2025 in Port Coquitlam, British Columbia, Canada. This photo includes staff and students from Agriculture and Agri-Food Canada, the City of Port Coquitlam, and the City of Kamloops. Photo: Paul Abram.



## *Istocheta aldrichi* (Mesnil), a biological control agent of the Japanese beetle, *Popillia japonica* Newman, establishes in British Columbia

by Paul K. Abram

Agriculture and Agri-Food Canada, Agassiz Research and Development Centre, Agassiz, BC, Canada  
E-mail: paul.abram@agr.gc.ca

The effort to manage small but growing populations of the invasive Japanese beetle, *Popillia japonica* Newman (Coleoptera, Scarabaeidae) continues in British Columbia, Canada (Fig. 1). Since its initial detection in the province in 2017, there has been an effort to eradicate this highly polyphagous scarab pest, but new populations continue to be found in additional locations in the province as the years progress (CFIA 2025) and additional management tactics are being added to the toolbox, including biological control.

In a previous article for *The Tachinid Times* (Makovetski & Abram 2024), we reported on the initial biological control releases of the tachinid *Istocheta aldrichi* (Mesnil) in Port Coquitlam, British Columbia in 2023 and summarized the natural history of, and rearing procedures for, this parasitoid. These releases of adult *I. aldrichi* were done in an urban area where only a relatively small number (< 700 per year) of *P. japonica* were being caught in a network of monitoring traps set out by the Canadian Food Inspection Agency (CFIA 2025). Beginning just a few weeks after these initial releases, several *P. japonica* bearing the hallmark macrotype, white eggs of *I. aldrichi* (Fig. 2) were found in CFIA's traps within 500 m of the *I. aldrichi* release site. While this was promising, we did not yet know whether these releases would result in overwintering and longer-term establishment of *I. aldrichi* in this small *P. japonica* population.

## The first sign of establishment

In 2024, we eagerly awaited news of whether the first *P. japonica* detected in CFIA's traps in Port Coquitlam would be parasitized by *I. aldrichi*. Remarkably, out of the first 11 *P. japonica* trapped that year, six had *I. aldrichi* eggs on them. Additional parasitized *P. japonica* were found in the traps for the next three weeks. Most parasitism was concentrated in the first few weeks of beetle presence in the summer, and was over by the end of July, which is fairly typical for this host-parasitoid association (Clausen et al. 1927, Fleming, 1968, Gagnon et al. 2023). This showed that the offspring of the flies released in 2023 had successfully overwintered, mated, and found hosts to parasitize.



**Figures 2 (left), 3 (right).** 2. An adult *Popillia japonica* bearing the characteristic white, macrotype eggs of *Istocheta aldrichi*. 3. An adult *I. aldrichi*. Photos courtesy of Tim Haye.

## A 'double whammy'

In 2025, we wanted to know two things. First, whether the population of *I. aldrichi* originating from the 2023 release would make it through a second winter. Second, we wanted to test whether doing additional releases of *I. aldrichi* later in the summer could result in a 'second peak' of parasitism.

Similar to 2024, there were three weeks in July – early in the emergence period of *P. japonica* – where parasitism of *P. japonica* by *I. aldrichi* was observed. This demonstrated that the British Columbian *I. aldrichi* population had made it through yet another winter.

After parasitism from the established *I. aldrichi* population had declined, in late July 2025, we released an additional 647 *I. aldrichi* in Port Coquitlam over a period of four weeks. Despite the fact that these releases were very small compared to many biological control releases, numerous additional parasitized *P. japonica* were subsequently caught in traps, over a period of six weeks. The 'double whammy' proof-of-concept worked – these small releases of *I. aldrichi* extended the time period over which *P. japonica* was parasitized by more than two-fold. This showed us that in newly established pockets of *P. japonica* infestation, later-season augmentative releases of *I. aldrichi* could potentially have additional value as a biological control tool and this strategy should be tested further.

As an aside, there is a practical piece of advice we can give to those doing releases of *I. aldrichi* in the future, that we learned the hard way: don't do releases near nests of bald-faced hornets (*Dolichovespula maculata* (Linnaeus)). During the first release of *I. aldrichi* in 2025 (Fig. 3), a number of our released flies were promptly snatched by hungry hornets right in front of our eyes (Fig. 4).



**Figure 4.** A newly documented (but highly unfortunate) trophic interaction? A bald-faced hornet snacking on a recently released *Istocheta aldrichi*. Photo courtesy of Emily Grove.

## **The coming years**

We found it rather remarkable that *I. aldrichi* has been able to establish in such a small and localized *P. japonica* population. We are interested in documenting the longer-term population dynamics of this rather unique biological control situation over the next several years.

In recent years, *P. japonica* has been spreading to new areas of the world (e.g., Washington State USA, Oregon USA, Newfoundland Canada, Italy, Switzerland), which has resulted in somewhat of a ‘revival’ of interest in *I. aldrichi* as a biological control agent (e.g., CABI 2021, Hutchinson et al. 2024, Lasnier et al. 2025, Makovetski et al. 2025, Stillwell et al. 2025). We anticipate that the recent research done in Canada to develop rearing and release techniques and learn more about the natural history of this host-parasitoid association (Gagnon et al. 2023, Pelletier et al. 2023, Legault et al. 2024, Makovetski & Abram 2024) will help to build on earlier foundations (Clausen et al. 1927, Simões & Grenier 1999, McDonald & Klein 2023) for using *I. aldrichi* as a biological control tool to suppress *P. japonica* populations in newly infested areas. Hopefully, the long-term self-sustaining population suppression provided by *I. aldrichi* will reduce the negative economic impacts of *P. japonica* and reduce the need for insecticide-focused management practices.

## **Acknowledgements**

Thanks to Emily Grove and Jason Thiessen (Agriculture and Agri-Food Canada, AAFC) for their collaboration and support on this work. Thanks to all the undergraduate students at AAFC for their work in the lab and field. Thanks

to Jacob Miall, Jean-Philippe Parent, Jacques Brodeur, Simon Legault, and Josée Doyon for their collaboration and providing *I. aldrichi* puparia for releases. Thanks to Jim O'Hara (AAFC, Ottawa) for confirming tachinid identifications. Finally, a huge thanks to all the staff at the CFIA, the BC Ministry of Agriculture, and the City of Port Coquitlam who have collaborated with us on this project.

## References

- CABI. 2021. Classical biological control of Japanese beetle.  
<https://www.cabi.org/projects/classical-biological-control-of-japanese-beetle/>
- Canadian Food Inspection Agency [CFIA] 2025. British Columbia Japanese beetle survey reports.  
<https://inspection.canada.ca/en/plant-health/invasive-pests-and-plants/insects/japanese-beetle/japanese-beetle-bc>
- Clausen, C.P., King, J.L. & Teranishi, C. 1927. The parasites of *Popillia japonica* in Japan and Chosen (Korea), and their introduction into the United States. United States Department of Agriculture. Department Bulletin 1429: 1–55 + 1 pl.
- Fleming, W.E. 1968. Biological control of the Japanese beetle. United States Department of Agriculture. Agricultural Research Service. Technical Bulletin 1383: 1–78.
- Gagnon, M.-E., Doyon, J., Legault, S. & Brodeur, J. 2023. The establishment of the association between the Japanese beetle (Coleoptera: Scarabaeidae) and the parasitoid *Istocheta aldrichi* (Diptera: Tachinidae) in Québec, Canada. Canadian Entomologist 155 (Article e32): 1–11.
- Hutchinson, W.D., Buchholz, E.K., Meys, E.L. & Wold-Burkness, S. 2024. The winsome fly, *Istocheta aldrichi*: a unique biocontrol agent for Japanese beetle in Minnesota. FruitEdge.  
<https://fruitedge.umn.edu/winsome-fly-istocheta-aldrichi-unique-biocontrol-agent-japanese-beetle-minnesota>
- Lasnier, J., Coussergues, C.-H. de, Baril, A. & Vincent, C. 2025. Abundance of Japanese beetle adults and its parasitoid *Istocheta aldrichi* in a Quebec commercial vineyard. Bulletin of Insectology 78: 1–10.
- Legault, S., Doyon, J. & Brodeur, J. 2024. Reliability of a commercial trap to estimate population parameters of Japanese beetles, *Popillia japonica*, and parasitism by *Istocheta aldrichi*. Journal of Pest Science 97: 575–583.
- Makovetski, V. & Abram, P.K. 2024. *Istocheta aldrichi* (Mesnil) makes its biological control debut in British Columbia, Canada. The Tachinid Times 37: 4–10.
- Makovetski, V., Smith, A.B. & Abram, P.K. 2025. Crowdsourced online data as evidence of absence of non-target attack from the century-old introduction of *Istocheta aldrichi* for biological control of *Popillia japonica* in North America. Journal of Pest Science 98: 1451–1462.
- McDonald, R.C. & Klein, M.G. 2023. Establishing the winsome fly, *Istocheta aldrichi* (Mesnil), a major natural enemy of Japanese beetle, *Popillia japonica* Newman adults.  
<https://doi.org/10.13140/RG.2.2.22208.30720>
- Pelletier, M., Legault, S., Doyon, J. & Brodeur, J. 2023. Where and why do females of the parasitic fly *Istocheta aldrichi* lay their eggs on the body of adult Japanese beetles? Journal of Insect Behavior 36: 308–317.
- Simões, A.M.A. & Grenier, S. 1999. An investigation into the overwintering capability of *Istocheta aldrichi* (Mesnil) (Diptera: Tachinidae) a parasitoid of *Popillia japonica* Newman (Coleoptera: Scarabaeidae) on Terceira Island, Azores. Arquipélago - Revista da Universidade dos Açores 17A: 23–26.  
<https://repositorio.uac.pt/entities/publication/8ef2e49f-bb6b-4b03-b91d-1e7519b13c6c>
- Stilwell, P.A., Culotta, J.A., Hutchison, W.D. & Lindsey, A.R. 2025. The genome of *Istocheta aldrichi* (Diptera: Tachinidae), a parasitoid of the Japanese beetle, *Popillia japonica* (Coleoptera: Scarabaeidae). *bioRxiv* [Preprint Server for Biology, posted 4 Nov. 2025].  
<https://doi.org/10.1101/2025.11.02.686142>



# *One Year at the* Smithsonian Tachinidae collection, and some updates on tachinids that parasite Diptera



by Rodrigo de V. P. Dios<sup>1\*</sup> & Filipe M. Gudin<sup>1</sup>

<sup>1</sup>Laboratório de Diptera, Museu de Zoologia, Universidade de São Paulo, Ipiranga, São Paulo, SP, Brazil

\*rodrigodios@gmail.com

RVPD: Orcid: <https://orcid.org/0000-0002-3808-7426>

FMG: Orcid: <https://orcid.org/0000-0002-1081-7597>

As discussed in a previous *Tachinid Times* issue (Dios 2024), the first author is developing a postdoctoral project aimed at solving systematic and taxonomic problems related to bug-killing flies (Tachinidae, Phasiinae). He is also exploring aspects of their biology and obtaining new host records for the family Tachinidae. Back in 2024, he was awarded a grant from the Brazilian funding agency FAPESP to spend a year as a postdoctoral fellow at the Smithsonian National Museum of Natural History (NMNH) in Washington, DC (USA) under the supervision of Dr. Torsten Dikow. So, in December 2024 he moved to Washington to begin his study of one of the largest Tachinidae collections in the world, and one of the most important for the New World fauna. The collection, which has the acronym USNM (based on the former name United States National Museum) has an enormous number of tachinid flies from all over the world, which was studied and organized throughout the years by staff tachinid experts such as J.M. Aldrich, C.W. Sabrosky and N. Woodley, and curated by many others who have visited and improved the collection (H. Guimarães, D.M. Wood, etc.). It also holds an important Type Collection, including most of Townsend's types, as well as Coquillett's and many others. The first author also took a short visit to the American Museum of Natural History (AMNH) in New York to examine some of Townsend's types that are held there.

During the whole year at NMNH, the first author was able to advance his research in many aspects. One of the goals was to explore and find new molecular markers to understand and define species boundaries for Phasiinae, which sometimes do not perform so well with only CO1 barcodes (Lee et al. 2021, Aurélio et al. submitted, Dios *unpublished data*). With the help of Dr. Allan Cabrero (NMNH), genome sequences of different species of *Gymnoclytia* Brauer & Bergenstamm were obtained through low coverage genomes, and are being processed right now. That data will be discussed in a publication that will integrate different molecular markers and morphology.



**Figures 1–3.** Pictures from senior author's postdoctoral fellowship at NMNH in 2025. **1.** Looking at many Phasiinae during the fall in a park near Washington, D.C. (on that flower with insert showing a close-up of *Trichopoda pennipes* (Fabricius, 1781)). **2.** Enjoying the cold winter weather in front of the NMNH. **3.** After the presentation at the Entomological Society of Washington, with the president Dr. Talitta Simões, president-elect Dr. Allen Norrbom and program chair Dr. Renan Carrenho.

Concurrently, some other taxonomic works were completed and published (Dios 2025, Dios & Santis 2026), or are being finished to be submitted soon. The curation of the Tachinidae collection has also been greatly improved, as many parts of it were reorganized to follow a more modern classification. Another main aspect of the fellowship was to gather data from tachinid types (photos and notes), to help with a key to the Brazilian Tachinidae genera that is being prepared and will be published in the future. That data will be crucial not only for the key, but for many future taxonomic revisions, especially for the Neotropical fauna. By the end of the fellowship, in December 2025, a presentation was made at the Entomological Society of Washington monthly meeting.

Additionally, new data from host associations are being gathered by the first author. The dataset had already included around 400 records from the Museu de Zoologia collection (MZUSP), and now it has been increased by more than 700 new host records from around the world obtained at the USNM, some with the host identified only to family, but mostly to genus or species. Due to time constraints, only the Exoristinae, Phasiinae and a big part of the Dexiinae were examined for this purpose at the USNM. Many of the records are new, as hosts are unknown for the majority of tachinid flies. Some of these new records will be published individually, with some already submitted and others in preparation. We also plan to organize new host-tachinid associations in catalogues for a few tribes and maybe subfamilies to update the host records of Guimarães (1977).

Here we present some new records for tachinids that parasitize other Diptera that we found in the miscellaneous collections of MZUSP and USNM. Specific tachinid lineages have adapted to exploit dipteran hosts, attacking

mainly larvae of Limoniidae, Stratiomyidae, Tabanidae, and Tipulidae (Gudin et al. 2022). Currently, at least 17 species of Tachinidae are recorded as parasitoids of Diptera worldwide; see the comprehensive review in Gudin et al. (2022), and the catalogues of Guimarães (1977), Arnaud (1978) and Tschorsnig (2017), comprising the Nearctic, Neotropical, and Palaearctic regions. To our knowledge, there are no published records from the Afrotropical or Oriental regions; historical records in the Australasian Region in larval Calliphoridae, Muscidae, and Tabanidae are pending revisions due to inaccurate identifications of the tachinid species (Spratt & Wolf 1972, Smith 1974, Ferrar 1977, Gudin et al. 2022). In the Nearctic Region, Tabanidae larvae are attacked by the following Dexiini (Dexiinae): *Ateloglossa novaeangliae* (West), *A. isolata* (West), and *Phasiops flavus* Coquillett. Regarding Tipulidae, species of *Admontia* Brauer & Bergenstamm (Exoristinae: Blondeliini) and *Siphona* Meigen (Tachininae: Siphonini) are frequently recorded in the Nearctic and Palaearctic regions, alongside a few isolated records of *Allophorocera arator* (Aldrich), *A. ferruginea* (Meigen) (Exoristinae: Goniini), and *Phyllomyia limata* (Coquillett) (Dexiinae: Voriini). Two species of the Blondeliini genus *Lixophaga* Townsend were recorded in Limoniidae, specifically *L. limoniina* Richter in Russia (Richter 1995), and in Stratiomyidae, namely *L. stratiophaga* Gudin, in Brazil (Gudin et al. 2022), with the latter being the sole record in the Neotropical Region until now. The new records of Tachinidae in dipteran hosts are presented below.

## New dipteran host records of Tachinidae

### NEARCTIC REGION

*Admontia ?pergandei* Coquillett, 1895. Many specimens: USA, California, Sacramento/ Sloughouse, 1922 (USNM).

Host: *Tipula quaylii* Doane, 1909 (Tipulidae).

*Admontia* near *degeerioides* (Coquillett, 1895). Seven specimens: USA, Alaska, 1945 (USNM).

Host: Tipulidae (identified only to family).

Remarks: Both *Admontia* species were identified by Dr. Monty Wood, formerly of the Canadian National Collection of Insects, Ottawa. The genus is taxonomically complex, and even a Blondeliini expert such as Dr. Wood had doubts about the species identity.

### NEOTROPICAL REGION

*Lixophaga aberrans* (Townsend, 1929). One male. Brazil, Rio de Janeiro, Seropédica, Horto Florestal, vi.1984, Carlos D. Freitas col. (MZUSP) (Fig. 6).

Host: *Ptecticus testaceus* (Stratiomyidae) (e.g., Figs. 8, 9).

*Lixophaga famelica* (Wiedemann, 1830). Two females, 2 males. Brazil, Rio de Janeiro, Seropédica, Horto Florestal, vi.1984, Carlos D. Freitas col. (MZUSP) (Figs. 4, 5).

Host: *Ptecticus testaceus* (Fabricius, 1905) (Stratiomyidae) (e.g., Figs. 8, 9).



**Figures 4–9.** 4. *Lixophaga famelica* (Wiedemann, 1830), male (MZUSP). 5. *L. famelica*, female (MZUSP). 6. *Lixophaga aberrans* (Townsend, 1929), male (MZUSP). 7. Holotype male of *Ptilolydella aberrans* Townsend, 1929 [now as *Lixophaga aberrans*], with labels (USNM). 8. *Lixophaga puparium* inside a *Ptecticus* pupa. 9. *Ptecticus testaceus* (Fabricius, 1905) adult and pupa, lateral view (MZUSP).

## Remarks

The stratiomyid larvae of *Ptecticus testaceus* (F.) on both records were collected in fruit of the host plant *Couroupita guianensis* Aubl. (Ericales, Lecythidaceae), popularly known as “abricó-de-macaco”. Two specimens of *P. testaceus* are pinned together as a voucher in the collection (Fig. 9), and the tachinid puparium is inside the stratiomyid pupa shell (Fig. 8). Previously, only *L. stratiophaga* was known as a parasitoid of *P. testaceus* in the Brazilian Amazon rainforest (Gudin et al. 2022), and now we also register here the first records for the Atlantic Forest (i.e., Seropédica).

## On some *Lixophaga* species identifications

It was remarkable to us that the two *Lixophaga* species, *L. aberrans* and *L. famelica*, were found parasitizing the same host species in the same place at the same time. Although unusual, a similar case of co-occurrence was recorded for *L. punctata* (Townsend, 1927) and *Ophirion lenkoi* Gudin, 2023 (Blondeliini) in a nest of the eusocial wasp *Polybia (Myrapetra) scutellaris* (White, 1841) (Hymenoptera: Vespidae) (Gudin 2023). Regarding the records in *Ptecticus* larvae, both *Lixophaga* species are easily distinguished by the color of the pruinosity on the head, thorax and abdomen: golden in males and females of *L. famelica*, and silver in the male of *L. aberrans* (female unknown).

*Lixophaga famelica* is very similar to *L. stratiophaga* and *L. puscolulo* Carrejo & Woodley (recorded from *Neoleucinodes elegantalis* (Guenée) (Lepidoptera: Crambidae) from *Solanum quitoense* Lam. (Solanales, Solanaceae) in Colombia, Carrejo et al. 2013). The three species have a deep golden pruinosity on the entire body and similar chaetotaxy; however, the main differences are found in the male terminalia, mainly in the shape of the cerci and surstyli in lateral view: slightly curved towards posterior region in *L. puscolulo* (Carrejo et al. 2013, Fig. 9), slightly curved towards anterior region in *L. stratiophaga* (Gudin et al. 2022, Fig. 3), and straight in *L. famelica*, visible in the exposed terminalia of the males recorded here. Aldrich (1927) examined and redescribed the holotype male of *Tachina famelica* Wiedemann, deposited in the Naturhistorisches Museum Wien (NHMW), in Vienna, Austria, although without any notes on the male terminalia. According to Papavero (1971), most of the Brazilian material described by Wiedemann had been collected by Friedrich Sellow in the Atlantic Forest. Our colleague Marcelo Santis, while on a postdoc in Vienna (see his article in this issue of *Tachinid Times*) kindly examined the holotype of *T. famelica* for us, which is damaged. However, due to the correspondence in body color, chaetotaxy, and biome, we are confident that the specimens recorded in *P. testaceus* belong to this species.

For determining the single male of *L. aberrans* we had to check the type specimens of a few other *Lixophaga* species, all of them deposited in the USNM. Besides *L. aberrans* (as *Ptilolydella aberrans*), we examined *Lixophaga opsiangusta* Nihei & Dios 2016 (a new name for *Cataphorinia angusta* Townsend, 1927) and *L. brasiliana* (Townsend, 1927), these species all originally described by Townsend and collected from the same place (Itaquaquecetuba, São Paulo, Brazil). The holotypes of both *L. aberrans* and *C. angusta* are males, but differ slightly in general body color, with the first having a darker background, black to dark brown, and black legs, and the latter having a slightly lighter background, brown to reddish colored, and brown legs. The holotype of *L. brasiliana* is a dark female. Superficially, examining only the photos, there is not much external morphological difference. The MZUSP specimen fits the external characters of *L. aberrans*, but the male terminalia are not

exposed, preventing the examination of other potential diagnostic characters now. There is a possibility that some or all these three species could be conspecific; however, a more detailed study is necessary. The examination of more specimens, terminalia morphology and even molecular data, will help us understand if there is variation in body color within this complex.

In this short communication, we present new records of dipteran hosts, expanding our knowledge regarding the diversity and distribution of these tachinids. A broader discussion on the subject, including details on oviposition strategies, can be read in Gudin et al. (2022). With more studies, mainly in the Neotropical Region, we can expect the discovery of much more tachinids that are parasitoids of their fellow dipterans.

## Acknowledgements

We thank MZUSP and NMNH and their employees for providing access to the material examined, space and equipment. Special thanks to Dr. Torsten Dikow (NMNH) for hosting RVPD during the year of 2025. We also thank Dr. Diego Fachin for the identification of the Stratiomyidae fly, and Dr. Marcelo Santis for examining the holotype of *T. famelica* in NHMW. Financial support from the São Paulo Research Foundation (FAPESP) grant 2022/14482-6 and FAPESP BEPE grant 2024/06165-6 to RVPD, and 2024/08327-3 to FMG are gratefully acknowledged.

## References

- Aldrich, J.M. 1927. Redescription of types of American muscoid flies in the collection of the Vienna Natural History Museum with incidental notes. *Proceedings of the United States National Museum* 72: 1–35.  
<https://doi.org/10.5479/si.00963801.72-2703.1>
- Arnaud, P.H., Jr. 1978. A host-parasite catalog of North American Tachinidae (Diptera). United States Department of Agriculture. Miscellaneous Publication 1319: 1–860.
- Aurélio, M.S.L., Hickmann, F., Dios, R.V.P., Corrêa, A.S. & Savaris, M. submitted. Integrative taxonomy of parasitoid flies (Diptera: Tachinidae) associated with stink bug pests (Hemiptera: Pentatomidae) in Brazil. *Scientia Agricola*.
- Carrejo, N., Diaz, A.E. & Woodley, N.E. 2013. A new species of *Lixophaga* Townsend (Diptera: Tachinidae) from Colombia, a parasitoid of *Neoleucinodes elegantalis* (Guenée) (Lepidoptera: Crambidae). *Zootaxa* 3737: 68–76.  
<https://doi.org/10.11646/zootaxa.3737.1.5>
- Dios, R.V.P. 2024. Bug-killing flies (Tachinidae: Phasiinae) in biological control: outcoming taxonomic problems as a starting point. *The Tachinid Times* 37: 47–50.
- Dios, R.V.P. 2025. First record of South American Hermyini, a new species of *Hermya* Robineau-Desvoidy, 1830 (Diptera: Tachinidae: Phasiinae) from Paraguay. *Studies on Neotropical Fauna and Environment* 60: 824–831.  
<https://doi.org/10.1080/01650521.2025.2539993>
- Dios, R.V.P. & Santis, M.D. 2026. Taxonomic update on Cordyligasterini (Diptera: Tachinidae: Dexiinae), new genera synonyms and new species of *Neosophia*. *Entomological Science* 29 (e70003): 11 pp.  
<https://doi.org/10.1111/ens.70003>
- Ferrar, P. 1977. Parasitism of other adult Diptera by Tachinidae in Australia. *Australian Journal of Entomology* 16, 397–401.  
<https://doi.org/10.1111/j.1440-6055.1977.tb00127.x>

- Gudin, F. 2023. Annotated catalog of vespoid hosts (Hymenoptera: Vespidae) of Tachinidae (Diptera), with description of a new species of *Ophirion* Townsend from Brazil. *Zoological Studies* 62 (Article 6): 25 pp.  
<https://doi.org/10.6620/ZS.2023.62-06>
- Gudin, F.M., Soares, M.M.M., Fernandes, D.R.R. & Rafael, J.A. 2022. First record of parasitism in soldier flies by tachinids: *Lixophaga stratiophaga* Gudin, sp. nov. (Diptera: Tachinidae), reared from *Ptecticus testaceus* (Fabricius) (Diptera: Stratiomyidae) in Amazon rainforest and updated catalogue of dipteran hosts of Tachinidae. *Austral Entomology* 61: 387–406.  
<https://doi.org/10.1111/aen.12620>
- Guimarães, J.H. 1977. Host-parasite and parasite-host catalogue of South American Tachinidae (Diptera). *Arquivos de Zoologia* 28: 1–131.  
<https://dx.doi.org/10.11606/issn.2176-7793.v28i3p1-131>
- Lee, K.M., Zeegers, T., Mutanen, M. & Pohjoismäki, J. 2021. The thin red line between species – genomic differentiation of *Gymnosoma* Meigen, a taxonomically challenging genus of parasitoid flies (Diptera: Tachinidae). *Systematic Entomology* 46: 96–110.  
<https://doi.org/10.1111/syen.12450>
- Nihei, S.S. & Dios, R.V.P. 2016. Nomenclatural acts for some Neotropical Tachinidae (Diptera). *Papéis Avulsos de Zoologia* 56: 177–181.
- Papavero, N. 1971. Essays on the history of Neotropical Dipterology, with special reference to collectors (1750–1905). Volume 1. Museu de Zoologia, Universidade de São Paulo, São Paulo. vii + 216 pp.  
<https://doi.org/10.5962/bhl.title.101715>
- Richter, V.A. 1995. A new subgenus and new species of Palaearctic tachinids (Diptera: Tachinidae). *Entomologicheskoe Obozrenie* 74: 913–922. [In Russian; English translation in *Entomological Review* 75(9): 244–254, 1996].
- Smith, K.G.V. 1974. An unidentified cyclorrhaphous dipterous larva parasitic upon an adult *Atherigona* (Diptera: Muscidae) from Australia. *Journal of the Australian Entomological Society* 13: 157–159.  
<https://doi.org/10.1111/j.1440-6055.1974.tb02167.x>
- Spratt, D.M. & Wolf, G. 1972. A tachinid parasite of *Dasybasis oculata* (Ricardo) and *Dasybasis hebes* (Walker) (Diptera, Tabanidae). *Australian Journal of Entomology* 11: 260.  
<https://doi.org/10.1111/j.1440-6055.1972.tb01628.x>
- Tschorsnig, H.-P. 2017. Preliminary host catalogue of Palaearctic Tachinidae (Diptera). Version 1. PDF document, 480 pp.  
<https://www.uoguelph.ca/nadsfly/Tach/WorldTachs/CatPalHosts/Home.html>

Figure 1. The author in front of a 6-metre Malaise trap placed across a dry creek bed at the Romney collecting site.



# Opportunistic surveys of bristle flies (Tachinidae) in *West Virginia (USA)* revisited

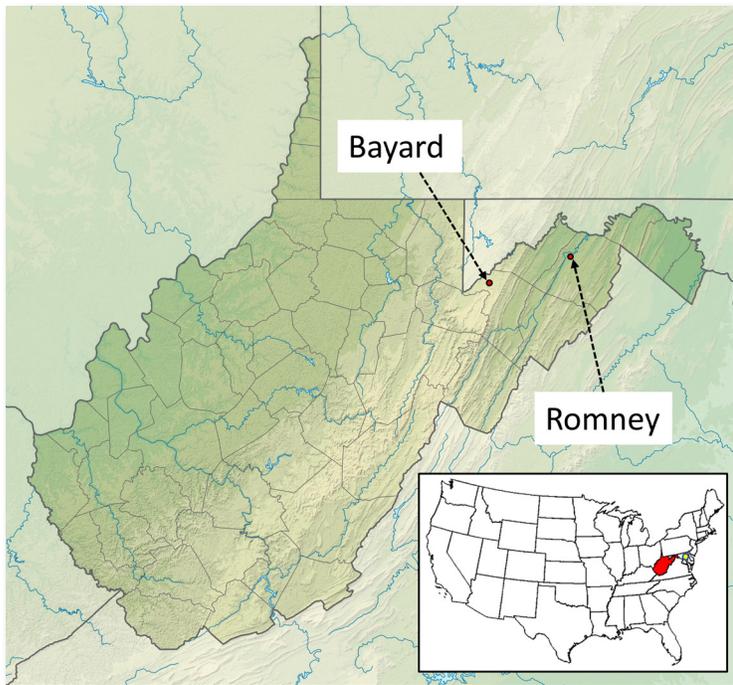
by John O. Stireman III

Department of Biological Sciences, Wright State University, 3640 Colonel Glenn Highway, Dayton, Ohio 45435, USA. E-mail: john.stireman@wright.edu

*A few years ago*, I and my former student Juan Manuel Perilla López, wrote an article for *The Tachinid Times* reporting and describing our collections of Tachinidae from two sites in eastern West Virginia, USA in 2020 and 2021 (Stireman & Perilla López 2022). These collections were not made as part of a focused survey effort, but rather as opportunistic “side collecting” that was conducted while visiting and recreating with friends who owned cabins and surrounding lands in these areas. I have visited one of these sites where an old friend and colleague Harold F. Greeney owns a small cabin (“Romney”, see below) several additional times, both before the article was published (2012 and 2013) and since then (2022 and 2025). During each such visit, usually for only a few days, I spent at least a little time opportunistically collecting bristle flies in the area. In addition, this past year, Greeney spent several months UV-lighting to acquire insect images for AI training as part of his work with Limelight Biodiversity (<https://limelightbiodiversity.com>). Among the many insects he photographed and collected at the UV-light sheet were some bristle flies that I was able to examine. Here, I update the findings of Tachinidae occurrence and diversity from the previous Stireman & Perilla López (2022) article with specimens from these additional collections along with some notes and discussion.

## Collecting sites and methods

West Virginia is a small, heavily forested, and relatively sparsely populated state in the eastern United States (see Stireman & Perilla López 2022 for more background information on the state). The collections reported here were made in the eastern panhandle of the state (Allegheny Mountain region), primarily from the Romney area, but also with one collection near Bayard (Fig. 2). Both areas are characterized by mixed coniferous and deciduous forests, with the main Romney site considered the oak/hickory forest type (although with abundant pines), and the Bayard site edging into the maple/beech/birch forest type. One specimen, collected from the Dolly Sods Wilderness near the Bayard site, is also included.

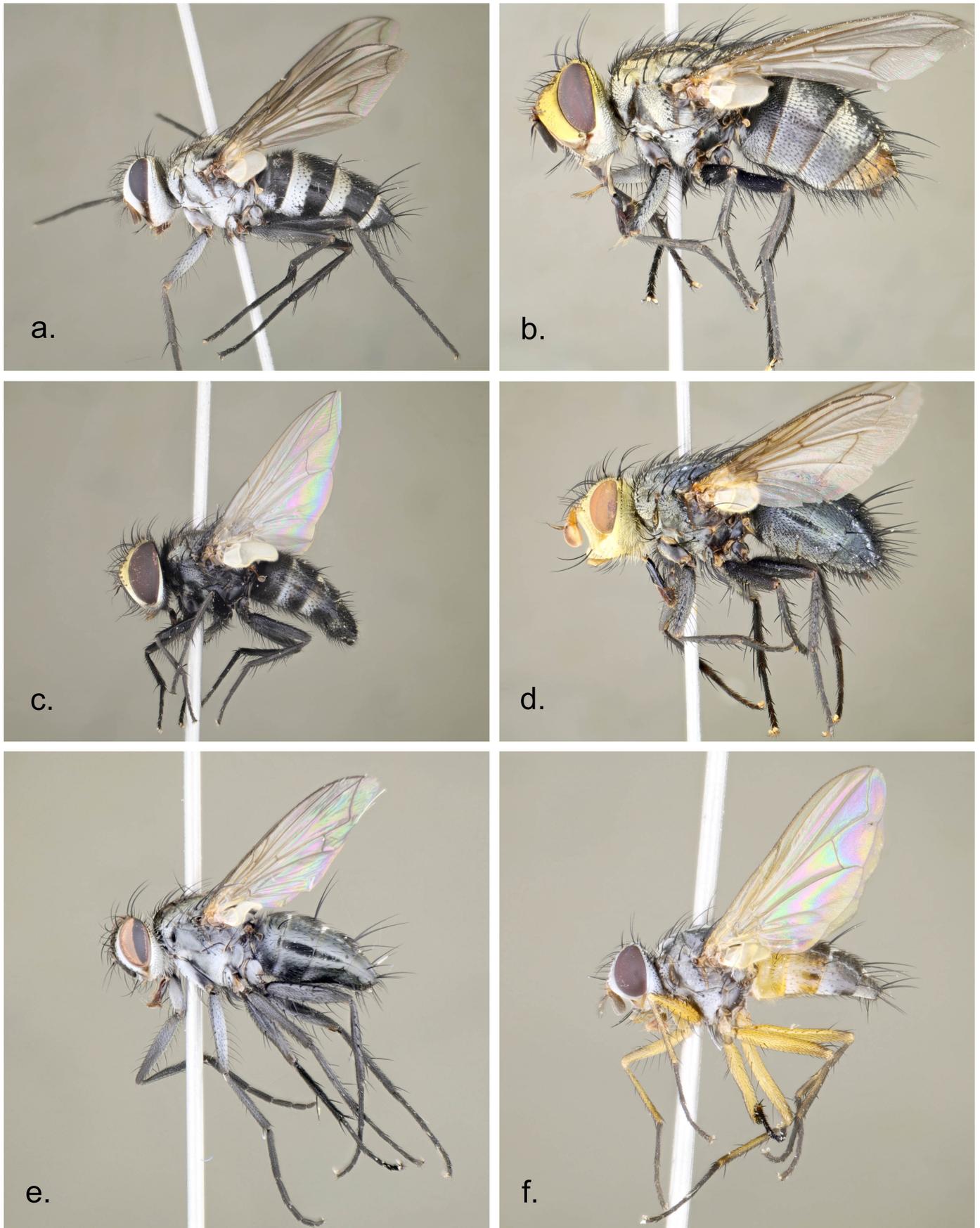


**Figure 2.** Locations of the two major collecting sites in the eastern panhandle of West Virginia, USA. Romney site: Hampshire Co., ca. 39.40°, -78.70°, 225 m. Bayard site: Grant Co. Bayard, ca. 39.25°, -79.33°, 900 m.

using published keys in the literature when available and with reference to identified specimens in the JOSC collection. Many of these identifications were tentative, and this is indicated by a “cf.”, or “?” in the species designation. Other specimens appeared distinct from known species, did not match descriptions, or did not key out well, and these are indicated by “sp. nr.” or “n. sp.” when the species appeared highly distinct from any described species. In some cases, there was considerable variation in color or other features among what appeared to be closely related forms. Some of these were lumped together as one species and some were left as “morphospecies” or “varieties” in the compiled species lists. A maximum estimate of species richness was made by assuming all these distinct forms represented distinct species, a minimum estimate by assuming all such varieties and doubtfully separated species represent intraspecific variation, and a moderate estimate by lumping only the most doubtful varieties and morphospecies. However, it should be noted, even the most liberal estimate could be overlooking cryptic species (genitalia were sometimes exposed but not dissected).

Most collecting was done by hand with an insect net, generally at forest edges along roads or streams between the hours of 9 a.m. and 6 p.m. Sometimes this was aided by spraying foliage with a honey-cola-water solution. Collecting was conducted over 1–4 days during each visit to a site (aside from UV collecting in 2025 which was sporadic). Hand collecting was supplemented by occasional 6-metre Malaise trapping (Fig. 1) and, on one occasion, yellow pan traps. Malaise traps were emptied at dusk. A relatively small proportion of tachinids was collected via Malaise trapping, possibly due to non-ideal placement and limited duration (1–3 days). All specimens were collected by me, J.M. Perilla López, or H.F. Greeney (UV light).

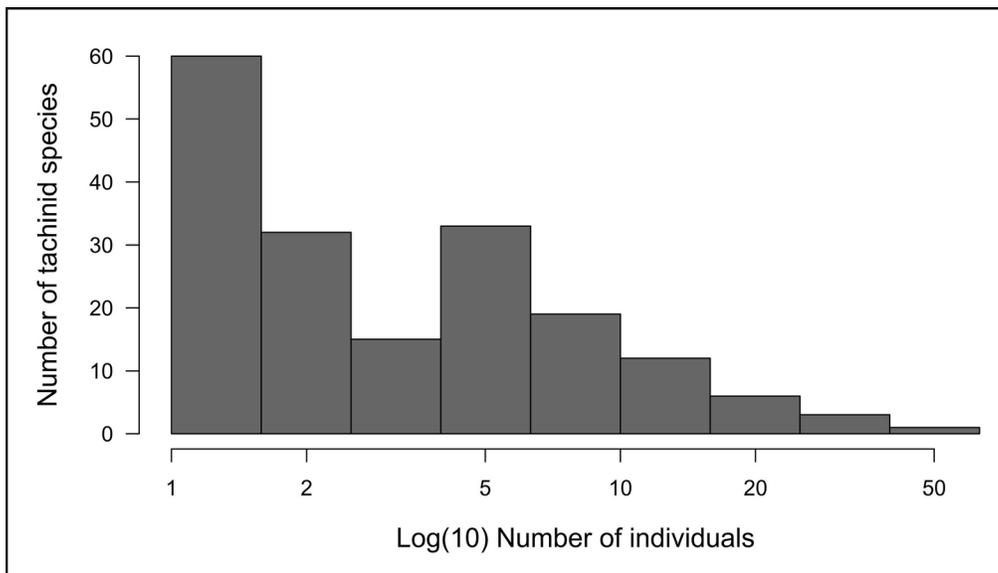
Generic identifications of tachinid specimens were made using Wood (1987) and with reference to specimens in the JOSC collection at Wright State University (Dayton, OH). Species were identified



**Figure 3.** Examples of some of the species collected from the Romney site in West Virginia: **a.** *Zelia metalis/nitens* ♀ (UV-light). **b.** *Mystacella chrysoprocta* (Wiedemann) ♀. **c.** *Myiopharus* n. sp.? ♂. **d.** *Archytas aterrimus* complex (#1a) ♀. **e.** *Paradidyma singularis* (Townsend) ♀ (UV-light). **f.** *Cholomyia inaequipes* Bigot ♀ (UV-light).

## Results and Discussion

A total of 899 (471 males, 428 females) tachinids were collected from West Virginia across the six main collecting visits (July 2012, June 2013, September 2020, June 2021, June 2022, July 2025) and a few supplementary collections (e.g., UV-light collecting in 2025). The total estimated number of species collected ranges from a highly conservative minimum of 177 to a liberal maximum of 198, with a moderately conservative estimate of 181 (Table 1). This represents a substantial (29–44%) increase over the 137 species reported in Stireman & Perilla López (2022), with an additional 254 specimens. Examples of some of the species collected are shown in Figure 3. Given the limited sampling period (mostly just June, July and September) and opportunistic nature of collecting, the total number of species is impressive. The estimate well exceeds the number of species collected by Inclan & Stireman (2011; i.e., 117) in a Malaise trap in Ohio over 399 days of sampling with a similar total number of individuals collected (883). The distribution of species abundances (Fig. 4), as is often the case when sampling Tachinidae and other diverse groups of insects, is highly skewed towards the left (i.e., many “rare” species, few common ones). As I have argued in nearly all my analyses of bristle fly communities (e.g., Stireman et al. 2017, Burington et al. 2020, Stireman & Perilla López 2022, Stireman 2024, Stireman 2026). Many of the general patterns of diversity and composition of the fauna were examined in Stireman & Perilla López (2022) and many of these patterns remain the same. Thus, I will only highlight a few items of special interest.



**Figure 4.** Species abundance distribution of tachinids over all the author’s collections from West Virginia. Note that the Y-axis is  $\log_{10}$  number of individuals.

## 2025 collection

First, I should note that the collecting seemed rather “weak” last year (2025) relative to 2021 and other previous years. It felt that I invested relatively high effort with limited returns. I collected a total of ca. 34 species and 67 individuals (not counting specimens taken from UV-light) using a combination of hand collecting, Malaise trapping, and (limited) yellow pan trapping over about four days of collecting. The reasons for this low abundance (but relatively high ratio of species to individuals) are unclear. It could have been a seasonal lull (between spring/early summer and late summer/fall seasons), it may have been related to the precipitation and temperatures that year (it had been quite rainy in the weeks before I arrived), or perhaps it reflects longer term changes in the community.

## Confusing groups

A few bristle fly groups were particularly difficult to separate into clear species. The *Archytas aterrimus/instabilis* complex in the eastern U.S. has been confusing me for some years (e.g., see Stireman et al., 2020; also note that the specimens listed in that article as *A. apicifer* were probably *A. aterrimus*). There are at least three species in this mix, probably more, but male genitalia look quite similar (in undissected specimens). Furthermore, the females appear different than the males, with some forms having submetallic greenish to bluish coloration on tergites 3 and 4 contrasting with black or brownish tergite 5, whereas male abdomens tend to be of one color dorsally (although sometimes with a dusting of whitish microtomentum basally). Body size also varies quite dramatically among forms, although the significance of this is not clear. In the dexiine genus *Uramya*, I have separated specimens of *U. pristis* from West Virginia into at least four “varieties” based primarily on color pattern (e.g., microtomentum of head, thorax, and abdomen; see Stireman & Perilla López 2022). These, however, seem more likely to represent intraspecific variation as the forms are not always clearly distinct and all four occurred just in the Bayard site collection. Finally, there is much uncertainty in the *Lixophaga variabilis* collections, as well as some other *Lixophaga* specimens. Several distinct forms exist, varying in head and abdominal coloration (gray-white, bronzy, golden) and thickness of abdominal bands, as well as the shape and setation of palpi. There are only partial keys to the species of *Lixophaga* (e.g., Curran 1935: 22–23) and the genus appears to be highly diverse and highly confusing at a broader level across the Americas (Wood 1985). The sexes may also differ in coloration, adding additional confusion. I suspect that there remain many undescribed species of this genus in North America.

## UV-collecting

Collections from a UV-light sheet at night were a new addition to my West Virginia tachinid sampling. UV lights are not generally thought of as being useful for collecting tachinids aside from a few truly nocturnal groups (e.g., Ormiini, Palpostomatini, some Blondeliini). Greeney UV-lighted at the Romney site nearly every night for about three months in 2025. He was not focused on Tachinidae, or even flies generally, and likely overlooked some tachinid flies that visited the lights. He also only collected specimens that he was able to photograph on the sheet, which excluded individuals that did not sit still long enough for a photo (or that he was unable to collect after photographing). Still, he was able to photograph and collect approximately 30 species of Tachinidae from his UV-light (Table 1). Some of these taxa are likely nocturnal or at least crepuscular (e.g., *Anisia*, *Cryptomeigenia*, *Cholomyia*) but most belong to genera that are active during the day (e.g., *Carcelia*, *Ceracia*, *Deopalpus*, *Lespesia*, *Peleteria*, *Thelaira*, *Winthemia*). These may be individuals that were just “hanging around” the area of the UV-light and ended up flying to it due to mixed signals about whether it was day or night. It is not uncommon to see the occasional diurnal insect at UV lights, especially in the early evening hours. For example, Greeney also photographed and collected several robberflies (Asilidae) at the light. Yet some other relatively common diurnal groups (e.g., *Archytas*, *Hyphantrophaga*, *Uramya*) were never found at the UV-light. In some species, presence at lights could be an indication of crepuscular activity at or near dusk or dawn, such as species of *Admontia*, *Ptilodexia*, *Zelia*, *Paradidyma* and *Exoristoides*, which likely locate hosts somewhat indirectly using olfactory rather than visual cues. Interestingly, sex ratios were almost equal for UV-light collected specimens (15 males and 17 females).

I hope to return to West Virginia regularly to visit friends and collect at these sites and elsewhere to understand better the undoubtedly rich fauna of the area. Ideally, I would visit in a variety of seasons and perhaps find some good spots for hilltop collecting to get a better picture of the bristle fly fauna. In addition to documenting occurrence and diversity patterns, these collections provide valuable specimens that can be used in future taxonomic studies of particular taxa.

## Acknowledgements

I would like to thank Harold Greeney for inviting me out to visit and collect, hanging out, and for sharing specimens collected from UV-lights. Juan Manuel Perilla López collected some of the specimens in 2021 and 2022 (and was a fun field colleague). I would like to give special thanks to Jim O'Hara for editing this and my previous articles over the years, and for overseeing publication of *The Tachinid Times* for the past 38 years!

## References

- Burington, Z.L., Inclán-Luna, D.J., Pollet, M. & Stireman, J.O. III. 2020. Latitudinal patterns in tachinid parasitoid diversity (Diptera: Tachinidae): a review of the evidence. *Insect Conservation and Diversity* 13: 419–431.  
<https://dx.doi.org/10.1111/icad.12416>
- Curran, C.H. 1935. New American Diptera. *American Museum Novitates* 812: 1–24.
- Inclán, D.J. & Stireman, J.O. III. 2011. Tachinid (Diptera: Tachinidae) parasitoid diversity and temporal abundance at a single site in the northeastern United States. *Annals of the Entomological Society of America* 104: 287–296.  
<https://doi.org/10.1603/ANI0047>
- Stireman, J.O. III. 2024. A glimpse into the incredible diversity of Ecuadorean Tachinidae. *The Tachinid Times* 37: 20–46.
- Stireman, J.O. III. 2026. “Tree Tachinidae”: brief notes on bristle flies from the Life on Trees project. *The Tachinid Times* 39: 44–48.
- Stireman, J.O. III, Dyer, L.A. & Greeney, H.F. 2017. Specialised generalists? Food web structure of a tropical tachinid-caterpillar community. *Insect Conservation and Diversity* 10: 367–384.  
<https://dx.doi.org/10.1111/icad.12238>
- Stireman, J.O. III, O'Hara, J.E. & Perilla López, J.M. 2020. A brief survey of tachinids from the Ozark Plateau of Missouri, USA. *The Tachinid Times* 33: 25–40.
- Stireman, J.O. III & Perilla López, J.M. 2022. Opportunistic surveys of “bristle flies” (Tachinidae) in West Virginia, USA. *The Tachinid Times* 35: 37–51.
- Wood, D.M. 1985. A taxonomic conspectus of the Blondeliini of North and Central America and the West Indies (Diptera: Tachinidae). *Memoirs of the Entomological Society of Canada* 132: 1–130.
- Wood, D.M. 1987. Tachinidae. Pp. 1193–1269. *In: McAlpine, J.F., Peterson, B.V., Shewell, G.E., Teskey, H.J., Vockeroth, J.R. & Wood, D.M., eds., Manual of Nearctic Diptera. Vol. 2. Agriculture Canada Monograph 28: vi + 675–1332.*

**Table 1.** Species, morphospecies, and forms of Tachinidae collected in eastern West Virginia with abundances of males and females month-year collection information. Species in bold were collected at a UV-light at night, a single asterisk (\*) indicates only some (or one) specimens were found at the light, two asterisks (\*\*) indicates that the species was only found at the UV light.

Subfamily/Tribe	Species	M	F	Tot	Collection(s)
<b>Dexiinae</b>					
Dexiini	<i>Ateloglossa</i> cf. <i>cinerea</i> Coquillett	1		1	VII.2012
Dexiini	<i>Billaea</i> cf. <i>interrupta</i> (Curran)	1		1	VI.2021
Dexiini	<i>Billaea</i> cf. <i>trivittata</i> (Curran)	3	2	5	VI.2021
Dexiini	<i>Prosenoides assimilis</i> Reinhard	2	3	5	VI.2022
Dexiini	<i>Ptilodexia incerta</i> West	2	1	3	VII.2012, VI.2013
Dexiini	<b><i>Ptilodexia rufipennis</i></b> * (Macquart)	6	2	8	IX.2020, VII.2025, IX.2025
Dexiini	<b><i>Zelia metalisnitens</i></b> **		1	1	VIII.2025
Dexiini	<i>Zelia vertebrata</i> Say complex	1		1	VI.2022
Sophiini	<i>Cordyligaster septentrionalis</i> Townsend	3	2	5	VI.2021, VI.2022
Uramyiini	<i>Uramya limacodis</i> (Townsend)	6		6	VI.2013, VI.2021
Uramyiini	<i>Uramya pristis</i> (Walker)	18	8	26	VI.2021, IX.2020, VI.2022, VII.2025
Uramyiini	<i>Uramya pristis</i> var. 1	3	6	9	VII.2012, VI.2013, IX.2020, VI.2021
Uramyini	<i>Uramya pristis</i> var. 2		2	2	IX.2020, VI.2021
Uramyini	<i>Uramya pristis</i> var. 3		1	1	IX.2020
Uramyini	<i>Uramya</i> n. sp.?		1	1	VI.2021
Voriini	<i>Athrycia cinerea</i> (Coquillett)		1	1	IX.2020
Voriini	<i>Campylocheta eudryae</i> (Smith)		1	1	IX.2020
Voriini	<b><i>Campylocheta</i> cf. <i>nasellensis</i></b> * (Reinhard)	1	1	2	VI.2022, VI.2025
Voriini	<i>Campylocheta plathypenae</i> (Sabrosky)	1		1	VI.2021
Voriini	<i>Chaetonopsis spinosa</i> (Coquillett)		3	3	VII.2025
Voriini	<i>Spathidexia cerussata</i> Reinhard	11		11	VI.2021
Voriini	<i>Spathidexia dunningii</i> (Coquillett)	1	3	4	IX.2020
Voriini	<b><i>Thelaira americana</i></b> * Brooks	5	2	7	VII.2012, IX.2020, VI.2021, VII.2025, VIII.2025
Voriini	<i>Voria aurifrons</i> (Townsend)		3	3	VII.2012, VI.2021
<b>Exoristinae</b>					
Acemyiini	<b><i>Ceracia dentata</i></b> * (Coquillett)	5	1	6	VI.2021, VI.2022, VII.2025
Blondeliini	<b><i>Admontia perganderi</i></b> * Coquillett		2	2	VI.2022, VI.2025
Blondeliini	<b><i>Anisia gilvipes</i></b> ** (Coquillett)		1	1	VII.2025
Blondeliini	<i>Anoxynops aldrichi</i> (Curran)	12	1	13	VI.2021, VI.2022, VII.2025
Blondeliini	<i>Belida chaetoneura</i> (Coquillett)		1	1	VI.2022
Blondeliini	<i>Belida dexina</i> (Townsend)		1	1	VI.2022
Blondeliini	<i>Blondelia</i> cf. <i>eufitchiae</i> (Townsend)		1	1	VI.2022, IX.2025
Blondeliini	<i>Blondelia hyphantriae</i> (Tothill)	4	6	10	IX.2020, VI.2021
Blondeliini	<b><i>Blondelia</i> cf. <i>paradexoides</i></b> ** (Townsend)	1	1	2	IX.2025
Blondeliini	<i>Blondelia</i> sp. 2	2	2	4	VI.2021
Blondeliini	<i>Calolydella lathamii</i> (Curran)	1	17	18	IX.2020
Blondeliini	<i>Compsilura concinnata</i> (Meigen)	5	2	7	IX.2020, VI.2021
Blondeliini	<b><i>Cryptomeigenia dubia</i></b> * Curran		2	2	VI.2022, VII.2025
Blondeliini	<i>Cryptomeigenia</i> sp. nr. <i>muscooides/flavibasis</i> Curran	1		1	VI.2022
Blondeliini	<b><i>Cryptomeigenia triangularis</i></b> ** Curran		1	1	VI.2025
Blondeliini	<i>Eucelatoria auriceps</i> * (Aldrich)	7		7	VI.2013, VI.2021, VI.2022, VI.2025, VII.2025

Subfamily/Tribe	Species	M	F	Tot	Collection(s)
Blondeliini	<i>Eucelatoria borealis</i> Burington?		1	1	IX.2020
Blondeliini	<b><i>Eucelatoria dimmocki</i></b> * (Aldrich)	1	4	5	VI.2021, VI.2022, VII.2025
Blondeliini	<i>Eucelatoria</i> sp. ( <i>tenella</i> grp.)		1	1	VII.2025
Blondeliini	<i>Lixophaga diatraeae</i> (Townsend)	1		1	VII.2012
Blondeliini	<i>Lixophaga</i> sp. nr. <i>diatraeae</i> (Townsend)	4	7	11	IX.2020
Blondeliini	<i>Lixophaga</i> cf. <i>mediocris</i> Aldrich	1	3	4	VII.2012, VI.2021
Blondeliini	<i>Lixophaga</i> cf. <i>unicolor</i> Smith		1	1	IX.2020
Blondeliini	<i>Lixophaga</i> cf. <i>variabilis</i> (Coquillett) #1		3	3	VI.2022
Blondeliini	<i>Lixophaga</i> sp. nr. <i>variabilis</i> #3*		7	7	VII.2012, VII.2025
Blondeliini	<i>Lixophaga</i> sp. nr. <i>variabilis</i> #4		2	2	VII.2025
Blondeliini	<i>Lixophaga parva</i> Townsend	1		1	IX.2020
Blondeliini	<i>Lixophaga</i> sp. nr. <i>parvaldiatraeae</i>	1		1	VII.2012
Blondeliini	<i>Medina</i> cf. <i>barbata</i> (Coquillett)		1	1	VI.2021
Blondeliini	<i>Myiopharus</i> sp. nr. <i>aberrans</i> (Townsend)	1		1	IX.2020
Blondeliini	<i>Myiopharus americanus</i> (Bigot)	2		2	IX.2020
Blondeliini	<i>Myiopharus canadensis</i> Reinhard	1		1	IX.2020, VI.2021
Blondeliini	<i>Myiopharus sedulus</i> (Reinhard) (or nr.)	1	2	3	IX.2020, VI.2021
Blondeliini	<i>Myiopharus</i> n. sp.?	1		1	VII.2025
Blondeliini	<i>Opsomeigenia</i> cf. <i>pusilla</i> (Coquillett)	2	3	5	IX.2020, VI.2021, VI.2022
Blondeliini	<i>Oswaldia aurifrons</i> (Townsend)	1	1	2	IX.2020, VI.2021
Blondeliini	<i>Oswaldia conica</i> (Reinhard)	8	8	16	IX.2020, VI.2021, VI.2022
Blondeliini	<i>Oswaldia</i> cf. <i>valida</i> (Curran)	1	5	6	VII.2012, VI.2013, IX.2020, VI.2021
Blondeliini	<i>Phyllophilopsis nitens</i> (Coquillett)	5		5	VI.2013, VI.2022
Blondeliini	<i>Thelairodoria setinervis</i> * (Coquillett)	8	3	11	IX.2020, VI.2021, VI.2022, VII.2025
Blondeliini	<i>Vibrissina</i> cf. <i>leiby</i> (Townsend)	1	3	4	VI.2021, VI.2022
Blondeliini	<i>Vibrissina</i> sp. nr. <i>leiby</i> (Townsend)		2	2	VI.2022
Blondeliini	<i>Vibrissina</i> cf. <i>nigriventris</i> ** (Smith)		1	1	VII.2025
Blondeliini	<i>Vibrissina spinigera</i> (Townsend)	4	1	5	VI.2021
Blondeliini	<i>Zaira</i> cf. <i>nocturnalis</i> (Reinhard)	1		1	IX.2020
Eryciini	<i>Aplomya theclarum</i> (Scudder)	16	3	19	VI.2021
Eryciini	<i>Carcelia amplexa</i> (Coquillett)	5		5	IX.2020
Eryciini	<i>Carcelia diacrisae</i> Sellers	10	1	11	VI.2021
Eryciini	<i>Carcelia</i> sp. nr. <i>flavirostris</i> (Wulp)	1	4	5	VI.2021, VI.2025
Eryciini	<b><i>Carcelia formosa</i></b> * (Aldrich & Webber)	6	2	8	VII.2012, VI.2021, VI.2025
Eryciini	<i>Carcelia inflatipalpus</i> (Aldrich & Webber)	4	1	5	VI.2021, VI.2022
Eryciini	<i>Carcelia lagoae</i> (Townsend)	1		1	VII.2012
Eryciini	<i>Carcelia olenensis</i> Sellers	2		2	VII.2012, VI.2021
Eryciini	<i>Carcelia</i> cf. <i>perplexa</i> Sellers	1		1	IX.2020
Eryciini	<i>Carcelia reclinata</i> (Aldrich & Webber)		1	1	VII.2012
Eryciini	<i>Drino</i> cf. <i>bakeri</i> (Coquillett)		1	1	VI.2021
Eryciini	<i>Drino</i> sp. nr. <i>bakeri</i> (Coquillett)		1	1	VI.2013
Eryciini	<i>Drino rhoeo</i> (Walker)		1	1	IX.2020
Eryciini	<i>Lespesia anisotae</i> (Webber)	2	1	3	VI.2021
Eryciini	<i>Lespesia</i> cf. <i>schizurae</i> (Townsend)	1	1	2	VI.2021, VI.2025
Eryciini	<i>Lespesia datanarum</i> (Townsend)	1		1	VII.2012

Subfamily/Tribe	Species	M	F	Tot	Collection(s)
Eryciini	<b><i>Lespesia stonei</i></b> * Sabrosky	15	1	16	VII.2012, IX.2020, VI.2021, VI.2025
Eryciini	<i>Lydella radialis</i> (Townsend)		1	1	VI.2013
Eryciini	<i>Nilea cf. lobeliae</i> (Coquillett)	1		1	VII.2012
Eryciini	<i>Nilea sternalis</i> (Coquillett)		1	1	IX.2020
Eryciini	<i>Nilea cf. valens</i> (Aldrich & Webber)	5	5	10	IX.2020, VI.2021, VII.2025
Eryciini	<i>Phebellia cf. trichiosomae</i> (Sellers)	2	1	3	IX.2020
Eryciini	<i>Phebellia helvina</i> (Coquillett)		2	2	IX.2020
Eryciini	<i>Phryxe pecosensis</i> (Townsend)		1	1	IX.2020
Eryciini	<i>Proopia cf. nigripalpis</i> (Rob.-Des.)	1	1	2	IX.2020
Eryciini	<i>Zizyphomyia cf. crescentis</i> (Townsend)		2	2	VI.2021
Euthelairini	<i>Eupelecotheca celer</i> Townsend	34	5	39	VI.2021
Exoristini	<i>Austrophorocera einaris</i> (Smith)	13	3	16	VII.2012, IX.2020, VII.2025
Exoristini	<i>Austrophorocera stolidia</i> (Reinhard)	3		3	IX.2020
Exoristini	<i>Austrophorocera</i> n. sp.?	1		1	IX.2020
Exoristini	<i>Austrophorocera</i> sp. 2		3	3	IX.2020
Exoristini	<i>Austrophorocera</i> sp. 3		5	5	IX.2020
Exoristini	<i>Austrophorocera</i> sp. 4		1	1	IX.2020
Exoristini	<i>Chetogena edwardsilclaripennis</i> complex		1	1	VII.2025
Exoristini	<i>Chetogena subnitens</i> (Aldrich & Webber)	2	1	3	VI.2021
Exoristini	<i>Exorista dydas</i> (Walker)		1	1	IX.2020
Exoristini	<i>Exorista cf. larvarum</i> (L.)	1	1	2	VII.2025
Exoristini	<i>Exorista mella</i> (Walker)	7	2	9	VII.2012, VI.2013, IX.2020, VI.2021
Exoristini	<i>Tachinomyia apicata</i> Curran	1		1	V.2010
Exoristini	<i>Tachinomyia cf. panaetius</i> (Walker)		1	1	VII.2025
Exoristini	<i>Tachinomyia variata</i> Curran	8	6	14	VII.2012, VI.2021, VI.2022
Goniini	<i>Belvosia bifasciata</i> (Fabricius)	1	1	2	VII.2012
Goniini	<i>Belvosia borealis</i> Aldrich		2	2	VI.2013
Goniini	<i>Belvosia unifasciata</i> (Robineau-Desvoidy)	21	11	32	VI.2013, VI.2021, VI.2022
Goniini	<b><i>Chaetogaedia analis</i></b> * (Wulp)	1	9	10	VII.2012, VI.2013, IX.2020, VI.2021, VI.2022, VI.2025, VII.2025
Goniini	<i>Distichona autumnalis</i> (Townsend)	3	3	6	IX.2020, VI.2022
Goniini	<i>Euceromasia cf. spinosa</i> Townsend	1	7	8	VII.2012, VI.2013, IX.2020, VI.2022
Goniini	<i>Euceromasia</i> sp. nr. <i>spinosa</i> ?		1	1	VI.2022
Goniini	<i>Euceromasia</i> sp. 3		1	1	IX.2020
Goniini	<i>Euexorista rebaptizata</i> Gosseries		1	1	IX.2020
Goniini	<i>Eumea</i> sp. nr. <i>caesar</i> (Aldrich)	2		2	VI.2021
Goniini	<i>Houghia coccidella</i> (Townsend)		5	5	IX.2020, VI.2021
Goniini	<i>Houghia</i> sp. nr. <i>setipennis</i> (Coquillett)	1	2	3	VI.2021, VII.2025
Goniini	<i>Houghia?</i> n. sp.?	2		2	VI.2022
Goniini	<i>Hypertrophomma opacum</i> Townsend		2	2	VI.2021
Goniini	<i>Hyphantrophaga blanda</i> (Osten Sacken)	26	24	50	IX.2020, VI.2021
Goniini	<i>Hyphantrophaga blandida</i> (Coquillett)		8	8	IX.2020
Goniini	<i>Hyphantrophaga cf. euchaetiae</i> (Sellers)	1		1	VI.2021
Goniini	<i>Hyphantrophaga</i> sp. nr. <i>sellersi</i> (Sabrosky)	1	1	2	VI.2021
Goniini	<i>Hyphantrophaga virilis</i> (Aldrich & Webber)		6	6	IX.2020, VI.2021

Subfamily/Tribe	Species	M	F	Tot	Collection(s)
Goniini	<i>Leschenaultia bicolor</i> (Macquart)		1	1	VI.2022
Goniini	<i>Leschenaultia</i> sp. nr. <i>reinhardi</i> Toma & Guimarães	2	4	6	IX.2020, VI.2021
Goniini	<i>Mystacella chrysoprocta</i> (Wiedemann)		2	2	IX.2020, VII.2025
Goniini	<i>Patelloa</i> cf. <i>leucaniae</i> (Coquillett)		4	4	IX.2020
Goniini	<b><i>Patelloa meracanthae</i>*</b> (Greene)	3	4	7	VI.2022, VII.2025
Goniini	<i>Pseudochaeta</i> cf. <i>frontalis</i> Reinhard		1	1	VI.2021
Goniini	<i>Pseudochaeta pyralidis</i> Coquillett	5	2	7	IX.2020, VI.2021, VII.2025
Goniini	<i>Pseudochaeta siminina</i> Reinhard	1	1	2	IX.2020
Winthemiini	<i>Hemisturmia parva</i> (Bigot)	2		2	VI.2021, VI.2022
Winthemiini	<i>Hemisturmia</i> n. sp.?	2		2	VI.2021
Winthemiini	<i>Winthemia</i> sp. nr. <i>abdominalis</i> (Townsend)	2		2	VI.2021, VI.2022
Winthemiini	<i>Winthemia</i> cf. <i>aurifrons</i> Guimarães	4	2	6	IX.2020
Winthemiini	<i>Winthemia</i> sp. nr. <i>borealis</i> Reinhard	1		1	VI.2021
Winthemiini	<i>Winthemia datanae</i> (Townsend)		9	9	IX.2020, VI.2022
Winthemiini	<i>Winthemia occidentis</i> Reinhard	1	2	3	VI.2021
Winthemiini	<i>Winthemia</i> sp. nr. <i>occidentis</i>	1		1	VI.2021
Winthemiini	<i>Winthemia quadripustulata</i> (Fabricius) form C	4		4	VI.2021
Winthemiini	<i>Winthemia</i> cf. <i>rufonotata</i> (Bigot)		1	1	IX.2020
Winthemiini	<b><i>Winthemia rufopicta</i>*</b> (Bigot)	7	7	14	VII.2012, IX.2020, VI.2021, VI.2022
Winthemiini	<i>Winthemia</i> cf. <i>sinuata</i> Reinhard	1		1	VI.2021
<b>Phasiinae</b>					
Cylindromyiini	<i>Cylindromyia binotata</i> (Bigot)	1		1	VI.2022
Cylindromyiini	<i>Cylindromyia fumipennis</i> (Bigot)	1	1	2	VI.2021
Cylindromyiini	<i>Cylindromyia</i> cf. <i>interrupta</i> (Meigen)	1	2	3	IX.2020
Gymnosomatini	<i>Gymnoclytia occidua</i> (Walker)	5	1	6	IX.2020, VI.2021
Gymnosomatini	<i>Gymnosoma par</i> Walker	2		2	IX.2020, VI.2021
Gymnosomatini	<i>Trichopoda lanipes</i> (Fabricius)	3	2	5	VI.2013, VI.2022
Gymnosomatini	<i>Trichopoda pennipes</i> (Fabricius)	2	5	7	VII.2012, VI.2021, VII.2025
Gymnosomatini	<i>Trichopoda plumipes</i> (Fabricius)	3	3	6	VII.2012
Gymnosomatini	<b><i>Xanthomelanodes arcuatus</i>*</b> (Say)	2	3	5	VI.2022, VIII.2025
Phasiini	<i>Phasia</i> cf. <i>robertsonii</i> (Townsend)		2	2	VI.2022
Strongygastriini	<i>Strongygaster triangulifera</i> (Loew)	3	1	4	VII.2012, VI.2021, VII.2025
<b>Tachininae</b>					
Ernestiini	<i>Gymnocheila ruficornis</i> Williston		1	1	VI.2022
Ernestiini	<i>Linnaemya comta</i> (Fallén)	1		1	VI.2021
Ernestiini	<i>Panzeria nigripalpis</i> (Tothill)	1		1	IX.2020
Ernestiini	<i>Panzeria platycarina</i> (Tothill)	1	10	11	IX.2020
Graphogastrini	<i>Graphogaster</i> sp.	1		1	IX.2020
Graphogastrini	<i>Phytomyptera</i> cf. <i>melissopodis</i> (Coquillett)		1	1	VII.2025
Graphogastrini	<i>Phytomyptera</i> sp. nr. <i>tarsalis/usitata</i>	2		2	VII.2025
Leskiini	<i>Clausicella turmalis</i> (Reinhard)		1	1	VI.2021
Leskiini	<b><i>Genea aurea</i>**</b> James	1		1	VII.2025
Leskiini	<i>Genea pavonacea</i> * (Reinhard)	9	4	13	IX.2020, VI.2021, VII.2025
Leskiini	<i>Genea</i> sp. nr. <i>texensis</i> (Townsend)	1		1	IX.2020
Leskiini	<i>Leskia</i> prob. <i>depilis</i> (Coquillett)		1	1	IX.2020
Minthoini	<i>Paradidyma affinis</i> Reinhard	1	1	2	IX.2020
Minthoini	<i>Paradidyma petiolata</i> Reinhard	2	1	3	VI.2021

Subfamily/Tribe	Species	M	F	Tot	Collection(s)
Minthoini	<i>Paradidyma</i> sp. nr. <i>petiolata</i>		1	1	VI.2021
Minthoini	<b><i>Paradidyma singularis</i></b> * (Townsend)		5	5	VI.2021, VI.2022, IX.2025
Minthoini	<b><i>Paradidyma</i> sp. nr. <i>singularis</i> sp.2**</b>		1	1	VII.2025
Myiophasiini	<b><i>Cholomyia inaequipēs</i></b> * Bigot	2	1	3	VI.2022, VII.2025, VIII.2025
Nemoraeni	<i>Xanthophyto antennalis</i> (Townsend)		1	1	VII.2025
Polideini	<i>Chrysotachina infrequens</i> O'Hara		1	1	VI.2021
Polideini	<i>Chrysotachina slossonae</i> (Coquillett)	1	1	2	VI.2021, VI.2022
Polideini	<b><i>Exoristoides blattarius</i></b> * O'Hara	1		1	VII.2025
Polideini	<i>Hystericia abrupta</i> (Wiedemann)		3	3	IX.2020
Polideini	<i>Mauromyia brevis</i> (Coquillett)	1		1	VI.2021
Siphonini	<i>Ceromya ballioloriens</i> O'Hara		3	3	IX.2020
Siphonini	<b><i>Ceromya elyii</i></b> * (Walton)	1	2	3	VII.2025
Siphonini	<i>Siphona (Siphona) illinoiensis</i> Townsend	4	4	8	IX.2020, VI.2021
Tachinini	<i>Archytas aterrimus</i> (Robineau-Desvoidy) (true?)	1	6	7	VII.2013, IX.2020, VI.2021, VI.2022, VII.2025
Tachinini	<i>Archytas aterrimus</i> 3 (sp. nr. #1)	3	4	7	VII.2012
Tachinini	<i>Archytas aterrimus</i> sp. 1		17	17	IX.2020, VI.2022, VII.2025
Tachinini	<i>Archytas aterrimus/instabilis</i> Curran #1	1		1	VI.2021
Tachinini	<i>Archytas aterrimus/instabilis</i> #1a	1	3	4	VII.2012, VI.2021, VII.2025
Tachinini	<i>Archytas lateralis</i> (Macquart)	4		4	IX.2020, VI.2021
Tachinini	<i>Copecrypta ruficauda</i> (Wulp)	6	1	7	VI.2021
Tachinini	<i>Deopalpus contiguus</i> (Reinhard)	1		1	VI.2021
Tachinini	<b><i>Deopalpus hirsutus</i></b> * Townsend	11		11	VI.2021, VI.2022, VII.2025
Tachinini	<i>Jurinia pompalis</i> (Reinhard)		2	2	IX.2020
Tachinini	<b><i>Peleteriaanaxias</i></b> * (Walker)	1	5	6	VI.2021, VII.2025

# Thirty-eight years of THE TACHINID TIMES

by James E. O'Hara & Shannon J. Henderson

Canadian National Collection of Insects, Agriculture and Agri-Food Canada, 960 Carling Avenue, Ottawa, Ontario, K1A 0C6, Canada. E-mails: james.ohara@agr.gc.ca, shannon.henderson@agr.gc.ca

Forty years ago, as the senior author toiled away on a study of the world *Siphonini* in a graduate student office in far-off Edmonton, the idea of a newsletter on tachinids began to take shape. The world was different back then. If I wanted a reprint from an author, or had a question for one of the esteemed tachinidologists of the day (and there were many<sup>1</sup>), or wished to communicate with another graduate student<sup>2</sup>, then I had to mail a letter and wait a few weeks for a reply to arrive by land, sea or air.

It seemed to me as my correspondence grew that everyone was busy with their own or joint projects and knew relatively little about what others were doing. This was the nature of communicating by mail. Computers and printers had recently replaced typewriters and carbon copies but e-mail and the World Wide Web were still years away. Perhaps, I thought, there would be interest in a newsletter devoted to tachinids that could keep everyone informed about the research interests of others. I discussed this idea with Monty Wood in Ottawa and he offered to be co-editor of the first issue. We sent out a request in 1987 for news that could be published in the inaugural issue of *The Tachinid Times*, and in March 1988 the first issue was printed, photocopied, and mailed to tachinidologists around the world.

*The Tachinid Times* was successfully launched in 1988 but faced uncertainty for a couple of years due to the retirement of Monty in Ottawa and my graduation from the University of Alberta in 1987. Monty withdrew from the newsletter and focused on other activities, in particular the building of a field station in Monteverde, Costa Rica and taking on the task of identifying the tachinids being reared from caterpillars in Area de Conservación Guanacaste, Costa Rica by Dan Janzen and his team. I was busy with a contract studying the life history of nematode eyeworms (*Thelazia* spp.) in face flies (*Musca autumnalis*) and was pursuing my tachinid interests in my spare time. But then, in the fall of 1989, my future and that of *The Tachinid Times* became more certain when I was hired at the then-named Biosystematics Research Centre on the Central Experimental Farm in Ottawa, home to the Canadian National Collection of Insects, Arachnids, and Nematodes.

The production of an online "html" version of the newsletter started with issue 9 (1996) and then the ability for us to post PDFs online began with issue 14 (2001). The distribution of the newsletter gradually changed from physical copies being mailed to institutions and individuals to PDFs sent via email to those on the Mailing List. Colour images were introduced in issue 14 (2001) and images in general became a more prominent feature of the newsletter as technology improved for both typesetting and image management.

<sup>1</sup> Arnaud, Chao, Cortes, Crosskey, Draber-Monko, Dupuis, Guimarães, Herting, Kugler, Mellini, Mesnil, Richter, Sabrosky, Shima and Wood.

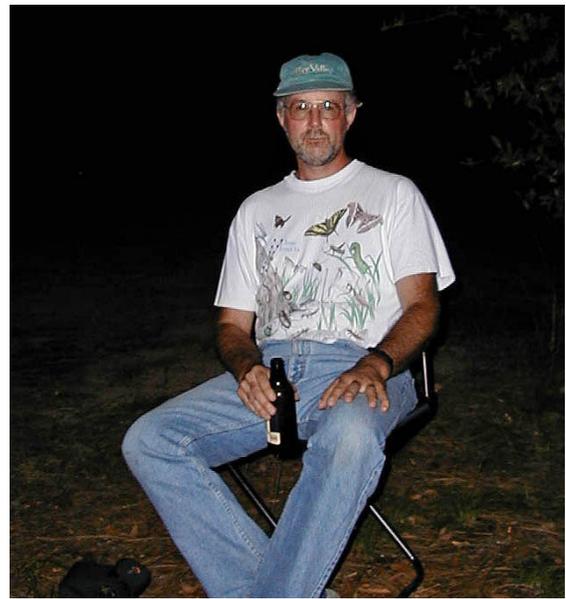
<sup>2</sup> Andersen, Barraclough, Cantrell, Tschorsnig and Woodley.

The current style and layout of *The Tachinid Times* was introduced in 2013 (issue 26) when its production shifted to Adobe InDesign. Shannon took over the technical and artistic aspects of the production stream, as well as the management of its online presence on our [Tachinidae Resources](#) website. Jim focused on editing submissions and interacting with authors.

The current issue, number 39, marks 13 years of the current iteration of *The Tachinid Times*. This will be the last for the team of Jim and Shannon, but hopefully not for the newsletter itself. We will canvass our colleagues over the coming months to see if an individual or team would like to take over production of the newsletter. Please reach out to us if you are reading this and wish to get involved.

Over the coming months, Jim will be transitioning to an Honorary Research Associate with the Canadian National Collection and Shannon will be transferring to another role within Agriculture and Agri-Food Canada. Our best wishes,

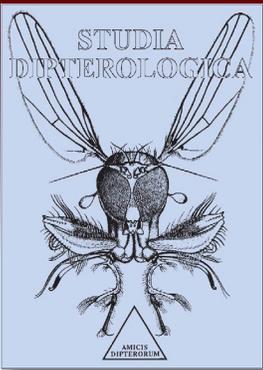
*J. G. O'Hara*      *Shannon*



**Top Left.** Shannon in her office in the Diptera Unit of the Canadian National Collection of Insects on the Central Experimental Farm, Ottawa, Canada, July 2006. Photo by Jim O'Hara.

**Top Right.** Jim in Ida Canyon, Huachuca Mountains, Arizona, USA, August 1999. Photo by John Stireman.

**Left.** Shannon and Jim in the Diptera Unit of the CNC, February 2026. Jim is holding a drawer of Australian Tachinidae. Photo by Scott Brooks.



# ANNOUNCEMENT

## STUDIA DIPTEROLOGICA Supplements on Tachinidae

There have been two *STUDIA DIPTEROLOGICA* Supplements published on the Tachinidae, the first by Joachim Ziegler in 1998 and the second by James O'Hara in 2002. Each of these is available from the author in digital form in the original format. Please contact the author if you are interested in obtaining a copy for your personal use.

We thank **Andreas Stark** (Halle, Germany), the owner of Ampyx-Verlag, for allowing these Supplements to be available from the authors. They are not to be distributed by recipients of the free digital copies.



**Ziegler, J. 1998. Die Morphologie der Puparien und der larvalen Cephalopharyngealskelette der Raupenfliegen (Diptera, Tachinidae) und ihre phylogenetische Bewertung. [The morphology of the puparia and of the cephalo-pharyngeal skeleton of mature larvae of tachinid flies (Diptera, Tachinidae) and their phylogenetic significance.] Studia dipterologica. Supplement 3: 244 pp.**

**Contact:**

Dr. Joachim Ziegler  
Museum für Naturkunde  
Leibniz-Institute for Research on Evolution and Biodiversity  
Invalidenstrasse 43, 10115 Berlin, GERMANY  
E-mail: [langeziegler@online.de](mailto:langeziegler@online.de)



**O'Hara, J.E. 2002. Revision of the Polideini (Tachinidae) of America north of Mexico. Studia dipterologica. Supplement 10: 170 pp.**

**Contact:**

Dr. James E. O'Hara  
Canadian National Collection of Insects  
Agriculture and Agri-Food Canada  
K.W. Neatby Bldg., 960 Carling Ave.  
Ottawa, Ontario, K1A 0C6 CANADA  
E-mail: [james.ohara@agr.gc.ca](mailto:james.ohara@agr.gc.ca)

# In Memoriam

James G. Lumbers (1986–2025)

The sad and unexpected passing of James Lumbers was communicated to dipterists last year in the following post on *dipterists.org* from Keith Bayless of the Australian National Insect Collection (CSIRO, Acton, ACT):

“It pains me to inform you that former Australian National Insect Collection student James G. Lumbers passed away unexpectedly and tragically 25 September 2025. Some of you might have known him as a burgeoning tachinid expert and a student in Fly School 2017 in Wrightwood, CA. He contributed a great deal to our field during his studies. He was a coauthor on five papers, spanning taxonomy, biological control, and alpine pollination ecology. James was an intrepid field biologist and collected flies throughout Australia, including critical post-bushfire malaise samples (see *Fly Times* 64, pl. 7). He collected specimens which have been designated as holotypes of at least six new species. His robust and thorough thesis research on Rutiliini will also be submitted for publication. Most of all, James was a careful and engaged scientist who was always up for a deep dive into theoretical minutiae or an impromptu adventure. He will be missed.”

— Keith Bayless, 7 October 2025

James completed and submitted his MPhil thesis on rutiliine tachinids to the ANU College of Science, Australian National University, in 2024. His MPhil degree was posthumously awarded in 2025, and his thesis is available at the link below in his list of tachinid publications.

## Tachinid publications of James Lumbers:

- Lumbers, J. 2017. Student News. *The Tachinid Times* 30: 33–35.
- Lumbers, J., Lessard, B., Rowell, D. & Yeates, D.K. 2018. Insect death metal – taxonomy and phylogeny of the Australian bristle fly genus *Rutilia* Robineau-Desvoidy (Tachinidae). P. 164. *In*: Kirk-Spriggs, A.H. & Muller, B.S., eds. Abstract volume, 9th International Congress of Dipterology, Windhoek. xxii + 346 pp.
- Lumbers, J. 2024. Molecular phylogenomics of the bristle fly tribe Rutiliini (Diptera: Tachinidae). A thesis submitted for the degree of MPhil (Evo, Ecol and Gen, RSB), ANU College of Science, The Australian National University. ix + 73 pp. + Appendices 1, 2, 4–7. <https://openresearch-repository.anu.edu.au/items/8f2d6a3e-12a2-48ec-9d25-3d77b267866c>
- Martins, C., Afonso, C., Valente, C., Reis, A.R., O’Hara, J., Lumbers, J., Branco, M. & Gonçalves, C.I. 2023. *Anagonia lasiophthalma* (Diptera: Tachinidae): survey, identification, and biological traits of a new biological control agent of the *Eucalyptus* snout beetle, *Gonipterus platensis* (Coleoptera: Curculionidae). *Biological Control* 187 (Article 105136): 11 pp.



James at his poster on Australian *Rutilia* R.-D. (Tachinidae: Dexiinae: Rutiliini) during the 9th International Congress of Dipterology, Windhoek, Namibia, November 2018. Photo by J.E. O’Hara.

# STUDENT NEWS

by Khong Lunaria

*Department of Biological Sciences  
Wright State University  
3640 Colonel Glenn Hwy  
Dayton, Ohio 45435, USA.  
Email: lunaria.2@wright.edu*



Khong collecting beetles and flies at Big Dune, Nevada.

I am a first-year Master's student in Biological Sciences at Wright State University, working under the supervision of Dr. John Stireman. I obtained my BSc in Public Health in December 2023 from University of Nevada, Reno (UNR). During the summer of '22, I started an internship with the Washoe County Health Department, working for the Vector-Borne Disease Prevention Program where I found my fascination with insects. My supervisor at the time, Will Lumpkin, was a coleopterist and he taught me how to collect beetles and pin them. I've been in love with arthropods ever since. I took the only Entomology class available at UNR with Dr. Lee Dyer to be better at identifying critters for aquatic surveys. A family that really caught my eye in the Ento lab was Tachinidae. I remember seeing the most "metal" looking fly with yellow, orangey bodies, armored with dark bristles. I had never before seen a fly the size of my thumb so that was impressive. After taking Ento, I was an undergraduate elf for two different PhD students where I helped them sort insect samples and identify them to the family level. In July 2023, my professor told me that the 10th International Congress of Dipterology would be in Reno and the organizers need volunteers. I reached out to Dr. Martin Hauser and I was accepted as a volunteer. During the Congress, I helped in various capacities, registering attendees, running the information table, selling merch, cleaning up, and even bought COVID test kits when everyone got sick at the end of the meeting. I met so many cool dipterists, ranging in age from early 20s to mid 80s, and learned so much about flies, that this experience gave me an idea to pursue graduate school. I reached out to Dr. Hauser for a graduate school advisor recommendation based on my interests in flies and he recommended Dr. Stireman because he does great work with tachinids. So here I am, signing my life away to graduate school. Just kidding, I am having a great time with my project.

My thesis project is based on fly samples that were acquired from the *Thailand Inventory Group for Entomological Research* (TIGER). TIGER was a large-scale survey effort where arthropods were collected across 30 national parks in Thailand in the early 2000s. My project aims to shed light on diversity patterns of tachinid flies in Thailand and understand how their community composition varies across geography, habitats, and land use. I am super stoked about this project and expect that it will produce the first comprehensive baseline record of tachinid species richness and occurrence across Thailand. I look forward to sharing my findings with you all in the future.

# TACHINID BIBLIOGRAPHY

Included here are references on the Tachinidae that have been found during the past year and have not appeared in past issues of this newsletter. This list has been generated from an EndNote 'library' and is based on online searches of literature databases, perusal of journals, and reprints or citations sent to me by colleagues. The complete bibliography, incorporating all the references published in past issues of *The Tachinid Times* and covering the period from 1980 to the present is available online at: <https://www.uoguelph.ca/nadsfly/Tach/WorldTachs/Bib/Tachbiblio.html>. I would be grateful if omissions or errors could be brought to my attention.

Please note that citations in the online Tachinid Bibliography are updated when errors are found or new information becomes available, whereas citations in this newsletter are never changed. Therefore, the most reliable source for citations is the online Tachinid Bibliography.

I am grateful to Shannon Henderson for performing the online searches that contributed most of the titles given below and for preparing the EndNote records for this issue of *The Tachinid Times*.

**A**bbas, A., Saddam, B., Ullah, F., Hassan, M.A., Shoukat, K., Hafeez, F., Alam, A., Abbas, S., Ghramh, H.A., Khan, K.A., Iqbal, R., Dara, M.Z.N., Ali, J. & Zhao, C.R. 2025. Global distribution and sustainable management of Asian corn borer (ACB), *Ostrinia furnacalis* (Lepidoptera: Crambidae): recent advancement and future prospects. *Bulletin of Entomological Research* **115**: 105–120. DOI: <https://doi.org/10.1017/S0007485324000919>

Abrego, L.J. & Santos, M.A. 2025. First record of parasitism by *Lespesia archippivora* (Diptera: Tachinidae) on *Gonodonta fulvangula* (Lepidoptera: Noctuidae). *Entomotropica* **40**: 8–12.

Adamič Zamljen, S., Bohinc, T. & Trdan, S. 2025. Cabbage stink bug (*Eurydema ventralis* Kolenati, 1846) (Hemiptera: Pentatomidae)—An increasingly important pest in Europe. *Agriculture* **15** (16) (Article 1779): 23 pp. DOI: <https://doi.org/10.3390/agriculture15161779>

Adjaoke, A.M., Adjimoti, W.K., Adjakpa, T.T., Dagberou, P.R., Ezin, I.A. & Yabi, I. 2025. Status of *Spodoptera frugiperda* (JE Smith, 1797) (Lepidoptera: Noctuidae) as natural enemies of corn agrosystems in the central part of Benin Republic (West Africa). *International Journal of Biological and Chemical Sciences* **19**: 602–615. DOI: <https://doi.org/10.4314/ijbcs.v19i2.16>

Agnihotri, M., Dogra, R., Joshi, R. & Beg, H. 2025. Parasitic flies. Pp. 94–122. *In*: Omkar, ed., *Flies. Agricultural and public-health perspectives*. CRC Press, Boca Raton. xi + 320 pp. DOI: <https://doi.org/10.1201/9781003482581-8>

Akato Chishi, J., Neog, Pankaj, Imtinaro, L., Devi, Hijam Shila, Waluniba, Sema, Tinatoly & Pavan, Sabbithi. 2025. Diversity of insect pests and their natural enemies in lowland rice agroecosystem of Nagaland. *Journal of Advances in Biology & Biotechnology* **28**: 95–105. DOI: <https://doi.org/10.9734/jabb/2025/v28i62376>

Amezcuá-Rojas, M., González-Maldonado, M.B., Hernández-Zetina, D.A., Hernández-Ríos, J.R. & Cruz-Cobos, F. 2025. Registro de taquíidos parasitando a *Gloveria* sp. en pinos de Durango, México. *Southwestern Entomologist* **50**: 955–959. DOI: <https://doi.org/10.3958/059.050.0323>

Andrew, H. 2025. *Pales processionae* (Ratzeburg) (Diptera, Tachinidae) found in Surrey in 2020. *Dipterists Digest (Second Series)* **32**: 113–114.

Apland, J.S. & Koski, M.H. 2025. Isolating the effects of floral temperature on visitation and behaviour of wild bee and fly pollinators. *Functional Ecology* **39**: 2496–2508. DOI: <https://doi.org/10.1111/1365-2435.70037>

Armanda, A.R. & Bjeliš, M. 2025. Overview of invasion and control management options of *Cydalima perspectalis* (Lepidoptera, Crambidae). *Sumarski List* **149**: 67–76. DOI: <https://doi.org/10.31298/sl.149.1-2.6>

Arzumanyan, M., Tarzyan, N., Rulik, B. & Pont, A. 2025. A preliminary checklist of the Diptera of Armenia. *ZooKeys* **1262**: 241–288. DOI: <http://doi.org/10.3897/zookeys.1262.168630>

Asritha, C., Kambrekar, D.N., Kandakoor, S.B., Hiremath, S.M. & Ramesha, N.M. 2025. Comparative analysis of pollinator diversity, abundance, and foraging activity patterns on fennel (*Foeniculum vulgare*) and black cumin (*Nigella sativa*) in the Northern Transitional Zone of Karnataka, India. *International Journal of Bio-Resource and Stress Management* **16** (10): 1–7. DOI: <https://doi.org/10.23910/1.2025.6299>

**B**arrett, M.R., Phillips, K., Duplais, C. & Thaler, J.S. 2025. Parasitoid tachinid fly, *Celatoria setosa*, reduces performance, oviposition, and pheromone emission in herbivore pest, *Acalymma vittatum*. *Environmental Entomology* **54**: 1007–1015. DOI: <https://doi.org/10.1093/ee/nvaf069>

Barták, M., Kejval, Z., Lutovinovas, E., Michelsen, V. & Roháček, J. 2025. New and interesting records of Diptera on glacial sand deposits in Silesia (NE Czech Republic). Part 4 – Calyptratae. *Acta Musei Silesiae, Scientiae Naturales* **74**: 21–44. DOI: <https://doi.org/10.2478/cszma-2025-0002>

- Basham, D., Raper, C. & Falk, S. 2025. *Tachina (Eudoromyia) magnicornis* (Zetterstedt) (Diptera, Tachinidae) new to Britain. *Dipterists Digest (Second Series)* **32**: 162–167.
- Bazié, B.F., Dao, M.C.E., Kabré, S. & Gnankine, O. 2025. Behavior of potential insect pollinators visiting *Moringa oleifera* flowers. *International Journal of Tropical Insect Science* **45**: 1985–1994.  
DOI: <https://doi.org/10.1007/s42690-025-01589-2>
- Benito, N.P., Gudin, F.M., Silva, E.P. da, Specht, A., Fidelis, E.G. & Lopes, R.B. 2025. Larval and larval pupal parasitoids associated with major owlet moth pests of soybean and maize in the Brazilian savanna: measures to preserve them in crop succession. *Neotropical Entomology* **54** (Article 47): 14 pp.  
DOI: <https://doi.org/10.1007/s13744-025-01262-w>
- Beza-Beza, C.F., Soghigian, J., Bailey, E., Johnston, N.P., Cassel, B.K., Bayless, K.M., Wells, J.D., Yeates, D.K., Wallman, J.F., Yan, L.-p., Thomas-Cabianca, A., Hickner, P.V., Grzywacz, A., Meiklejohn, K.A., Torres, T.T., Scott, M.J., Mikaelyan, A., Zhang, D., Cerretti, P., Szpila, K., Pape, T. & Wiegmann, B.M. 2025. Phylogenomics and the evolution of larval feeding habits in the blow flies (Diptera: Calliphoridae). *Systematic Entomology* **51** (1) (e70018): 19 pp.  
DOI: <https://doi.org/10.1111/syen.70018>
- Bilginturan, S. & Bilginturan, M. 2025. Non-target effect of *Bacillus subtilis* on the parasitoid *Drino inconspicua* (Meigen, 1830) (Diptera: Tachinidae). *Turkish Journal of Science and Engineering* **7**: 101–105.  
DOI: <https://doi.org/10.55979/tjse.1706739>
- Bokan, S.C., Mohod, D.N., Latpate, C.B. & Neharkar, P.S. 2025. Impact of alternate season on the biology of uzi fly, *Exorista bombycis* on mulberry silkworm in Maharashtra. *Journal of Entomological Research* **49**: 503–507.  
DOI: <https://doi.org/10.5958/0974-4576.2025.00084.2>
- Boyd, K.S., Groden, E., Donahue, C. & Drummond, F.A. 2025. Parasitoids attacking the browntail moth, *Euproctis chryorrhoea* (Lepidoptera: Erebidae), during a regional outbreak in Maine, and factors influencing their abundance. *Northeastern Naturalist* **32**: 363–387.  
DOI: <https://doi.org/10.1656/045.032.0302>
- Brückner, C. 2025. Beobachtungen seltener und interessanter Dipteren-Arten inklusive Neufunde im Raum Berlin/ Brandenburg. *Märkische Entomologischen Nachrichten* **27**: 1–90.
- Bryant, T.B. & Reay-Jones, F.P.F. 2025. Pest status and management of stink bugs (Hemiptera: Pentatomidae) in field corn in the southeastern United States. *Journal of Integrated Pest Management* **16** (1) (Article 26): 14 pp.  
DOI: <https://doi.org/10.1093/jipm/pmaf027>
- Caballero-Chan, V.M., González-Moreno, A., Ballina-Gómez, H.S. & Alvarado-López, C.J. 2025. Diversidad funcional y composición de comunidades de insectos en niveles diferentes de perturbación. *Revista Mexicana de Biodiversidad* **96** (e965613): 14 pp.  
DOI: <https://doi.org/10.22201/ib.20078706e.2025.96.5613>
- Cajé, S., Moura Lima, I.M.M. de, Mielke, O.H.H. & Casagrande, M.M. 2025. Immature stages of white belt owlet butterfly *Opoptera fruhstorferi* (Röber, 1896) (Lepidoptera, Nymphalidae, Satyrinae) and its natural enemy, with a summary of Brassolini parasitoids. *Zoological Studies* **64** (Article 51): 20 pp.  
DOI: <https://doi.org/10.6620/ZS.2025.64-51>
- Caloca, P., Suárez, D., Peña, G. & Ruiz, C. 2025. First report of *Trichopoda pictipennis* (Diptera, Tachinidae) for the Canary Islands. *Biodiversity Data Journal* **13** (e137821): 10 pp.  
DOI: <https://doi.org/10.3897/BDJ.12.e137821>
- Carles-Tolrá, M. 2024. Novedades faunísticas de dípteros calípteros para la Península Ibérica e Islas Baleares (Diptera, Brachycera, Calypratae). *Boletín de la Sociedad Entomológica Aragonesa* **75**: 35–42.
- Cerretti, P., Mei, M., Ascenzi, A., O'Hara, J.E., Parchami-Araghi, M. & Stireman, J.O. III. 2025. New genera and species of Afrotropical Tachinidae (Diptera). *Integrative Systematics* **8**: 145–170.  
DOI: <https://doi.org/10.18476/2025.694996>
- Cerretti, P., Nania, D., Di Marco, M., Meier, R., Ascenzi, A., Evenhuis, N. & Pape, T. 2025. Declining rates of species description call for improved taxonomic strategies: insights from a megadiverse insect order. *Systematic Entomology* **51** (1) (e70019): 10 pp.  
DOI: <https://doi.org/10.1111/syen.70019>
- Chan-Canché, R.J., González-Moreno, A., Rodríguez-Vélez, B. & Sarmiento-Cordero, M.A. 2025. Parasitoids of *Spodoptera frugiperda* (Lepidoptera: Noctuidae) in maize crop of the Yucatan Peninsula: new records and updated knowledge in Mexico. *Entomological News* **132**: 584–597.  
DOI: <https://doi.org/10.3157/021.132.0414>
- Chellappan, M., Murthy, J.S.V., Thodikayil, R.M. & Unnikrishnan, N. 2025. Flies for biological control in environmental engineering. Pp. 63–83. *In*: Omkar, ed., *Flies. Agricultural and public-health perspectives*. CRC Press, Boca Raton. xi + 320 pp.  
DOI: <https://doi.org/10.1201/9781003482581-6>

- Chemyreva, V.G., Yoon, S. & Ku, D.-S. 2025. Revision of the genus *Lepidopria* Kieffer (Hymenoptera, Diapriidae, Diapriinae) of the world fauna. *Journal of Hymenoptera Research* **98**: 1107–1126.  
DOI: <https://doi.org/10.3897/jhr.98.169802>
- Ciner, İ., Atay, T. & Öztemiz, S. 2025. Tachinid (Diptera: Tachinidae) parasitoids reared from hemipteran hosts in Bolu and Düzce (Türkiye) Provinces. *Turkish Journal of Agriculture & Forestry* **13**: 914–916.  
DOI: <https://doi.org/10.24925/turjaf.v13i4.914-916.7307>
- Cingolani, M.F., Barakat, M.C., Cerretti, P., Chirinos, D.T., Ferrer, F., Vega, J.G., Grenier, S., Kondo, T., Pape, T., Plowes, R., Salas, J., Vargas, G., Whitmore, D. & Dindo, M.L. 2025. Dipteran parasitoids as biocontrol agents. *BioControl* **70**: 285–300.  
DOI: <https://doi.org/10.1007/s10526-025-10317-1>
- D**amasia, D.M., Bambharolia, R.P., Deshmukh, A.J., Kachhela, H.R. & Shukla, A. 2025. Study of techinid [sic] fly parasitization to *Helicoverpa armigera* Hubner on chickpeas crop. *The International Journal of Applied Research in Veterinary Medicine* **20-1** (Part B): 91–95.  
DOI: <https://doi.org/10.5281/zenodo.17078567>
- Darling, D.C. 2025. Perilampidae. Pp. 542–557. *In*: Heraty, J. & Woolley, J., eds., *Chalcidoidea of the world*. CAB International. xv + 870 pp.  
DOI: <https://doi.org/10.1079/9781800623545.0050>
- Dawson, B.M., Johnston, N.P., Cerato, S., Rowbottom, R., Spurr, C., Davis, A. & Rader, R. 2025. Adding non-floral resources increases wild insect abundance but not yield in Australian hybrid carrot crops. *Basic and Applied Ecology* **84**: 21–28.  
DOI: <https://doi.org/10.1016/j.baae.2025.01.007>
- Delvare, G. 2025. Chalcididae. Pp. 256–279. *In*: Heraty, J. & Woolley, J., eds., *Chalcidoidea of the world*. CAB International. xv + 870 pp.  
DOI: <https://doi.org/10.1079/9781800623545.0017>
- Dios, R. de V.P. 2025. First record of South American Hermyini, a new species of *Hermya* Robineau-Desvoidy, 1830 (Diptera: Tachinidae: Phasiinae) from Paraguay. *Studies on Neotropical Fauna and Environment* **60**: 824–831.  
DOI: <https://doi.org/10.1080/01650521.2025.2539993>
- Dios, R. de V.P. & Santis, M.D. de. 2026. Taxonomic update on Cordyligasterini (Diptera: Tachinidae: Dexiinae), new generic synonyms and new species of *Neosophia* Guimarães. *Entomological Science* **29** (1) (e70003): 11 pp.  
DOI: <https://doi.org/10.1111/ens.70003>
- Dios, R. de V.P., Gudin, F.M. & Lamas, C.J.E. 2025. The first wasp-deceiving Calyprtrae fly: *Brevialata deceptrix* Dios & Gudin, gen. et sp. nov. (Diptera: Tachinidae), a new parasitoid of *Agelaia vicina* (de Saussure, 1854) (Hymenoptera: Vespidae) and the first record of reduced wings in the family. *Austral Entomology* **64** (Article e12730): 10 pp.  
DOI: <https://doi.org/10.1111/aen.12730>
- Dominguez, J.A., Latham, B., Bitner, L., Mongui, L.C., Rossinow, A., Xiong, Y., Schmidt, B.V., Vu, Q.-a., Torres-Lopez, B.L., Henderson, P.A., Mason, A.C. & Lee, N. 2025. Resource competition affects developmental outcomes of the acoustic parasitoid fly *Ormia ochracea*. *Annals of the Entomological Society of America* **118**: 303–314.  
DOI: <https://doi.org/10.1093/aesa/saaf018>
- E**eden, Z. van, Muller, B.S., Plessis, H. du & Van den Berg, J. 2025. Biological control agents and levels of parasitism of *Agrotis segetum* (Lepidoptera: Noctuidae) in grain production regions of South Africa. *African Entomology* **33** (1) (e23652): 11 pp.  
DOI: <https://doi.org/10.17159/2254-8854/2025/a23652>
- Escobero, C., Gómez-Martínez, C., Cursach, J., González-Estévez, M.A. & Lázaro, A. 2025. Traits of hymenopterans, dipterans and plants that indicate vulnerability to landscape homogenization. *Basic and Applied Ecology* **87**: 55–65.  
DOI: <https://doi.org/10.1016/j.baae.2025.06.001>
- España-Luna, M.P., Lozano-Gutiérrez, J., De la Cruz-Cardiel, S.R., Rosa-Rodríguez, R. de la, Balleza-Cadengo, J. & González-Gaona, E. 2025. Parasitoides asociados al esqueletonizador de la vid (*Harrisina brillians*) en Zacatecas, México. *Southwestern Entomologist* **50**: 671–680.  
DOI: <https://doi.org/10.3958/059.050.0301>
- Evenhuis, N.L., Pape, T. & Ziegler, J. 2026. Nomenclatural studies toward a world list of Diptera genus-group names. Part VIII: Hermann Loew. *Zootaxa* **5749**: 1–231.  
DOI: <https://doi.org/10.11646/zootaxa.5749.1.1>
- F**alcon-Brindis, A. & Villanueva, R.T. 2025. A battle of armies: massive attack of natural enemies to the true armyworm *Mythimna unipuncta* (Haworth, 1809) (Lepidoptera: Noctuidae) in forage crops. *Insecta Mundi* **1130**: ii + 1–13.
- Falk, S. & Basham, D. 2025. *Spallanzania hebes* (Fallén) (Diptera, Tachinidae) new to Britain. *Dipterists Digest* (Second Series) **32**: 152–154.
- Farminhão, C. & Castro, S. 2025. Visual attraction cues associated with tachinid pollination: insights from colour variation in *Succisella microcephala* (Caprifoliaceae).

- Journal of Pollination Ecology **39**: 344–355.  
DOI: [https://doi.org/10.26786/1920-7603\(2025\)892](https://doi.org/10.26786/1920-7603(2025)892)
- Franzén, M., Salis, R., Hall, M., Gaytán, A., Forsman, A., Roslin, T. & Tack, A.J.M. 2025. A cryptic moth species drives major outbreak dynamics on oak without escaping its natural enemies. *Forest Ecology and Management* **597** (Article 123181): 8 pp.  
DOI: <https://doi.org/10.1016/j.foreco.2025.123181>
- Freitas, A.V.L., Kaminski, L.A., Magaldi, L.M., Gueratto, P.E., Silva-Brandão, K.L., Francini, R.B., Paluch, M., Tavares, E.V. & Medeiros Melo, A.B. de. 2025. A new *Actinote* Hübner (Lepidoptera: Nymphalidae: Heliconiinae: Acraeini) from northeastern Brazil. *Neotropical Entomology* **54** (Article 107): 10 pp.  
DOI: <https://doi.org/10.1007/s13744-025-01311-4>
- Freudenfeld, M., Štenc, J., Hadrava, J., Mikát, M., Matoušková, E., Daňková, K., Jor, T., Ryšan, T., Koupilová, K., Simon-Pražák, J., Dvořák, T. & Janovský, Z. 2025. Interannual differences in pollinator contributions to pollen transfer are mainly driven by changes in pollinator abundance. *AoB Plants* **17** (2) (plaf009): 11 pp.  
DOI: <https://doi.org/10.1093/aobpla/plaf009>
- Fujita, I. 2025. First record of *Billaea kolomyetzi* Mesnil, 1970 (Diptera, Tachinidae) from Hokkaido. *Hana Abu* **60**: 27–29.
- Fujita, I. & Kirisawa, R. 2025. *Therobia* sp. (Diptera, Tachinidae) collected from Sadogashima Is., Japan. *Hana Abu* **60**: 20–21.
- Gallagher, J.H., Broder, E.D., Wikle, A.W., O’Toole, H., Durso, C. & Tinghitella, R.M. 2024. Surviving the serenade: how conflicting selection pressures shape the early stages of sexual signal diversification. *Evolution* **78**: 835–848.  
DOI: <https://doi.org/10.1093/evolut/qpae035>
- Gamboa-Barrantes, N., Rojas-Malavasi, G., Fuchs, E.J., Hanson, P., Montero, B.K., Zumbado, M.A., Madrigal-Brenes, R. & Barrantes, G. 2025. Diversity and abundance of insect visitors in four crops within a Costa Rican highland region. *Revista de Biología Tropical* **73** (S2) (e64701): 12 pp.  
DOI: <https://doi.org/10.15517/rev.biol.trop.v73iS2.64701>
- Gazzea, E., Conti, L., Rossi, E., Cerretti, P., Mei, M., Paniccia, D., Battisti, A. & Marini, L. 2025. High temporal beta-diversity of pollinators in early successional forests after windthrow. *Ecology and Evolution* **15** (6) (e71571): 14 pp.  
DOI: <https://doi.org/10.1002/ece3.71571>
- Gontijo, L.M., Torres, J.B., Abram, P.K., Alfaro-Tapia, A., Arredondo-Bernal, H.C., Biondi, A., Cloyd, R.A., Costamagna, A.C., Desneux, N., D’Ottavio, M., Furlong, M.J., Greco, N.M., Labbé, R., Hill, M., Lavandero, B., Li, T.H., Lomelí-Flores, J.R., Lucas, E., Messelink, G.J., Rocca, M., Rodríguez García, M., Parra, J.R.P., Peñalver-Cruz, A., Sokame, B.M., Thackeray, S., Urbaneja, A., Vargas, G., Zalucki, M.P. & Zang, L.S. 2025. Insect biological control: a global perspective. *Entomologia Generalis* **45**: 879–904.  
DOI: <https://doi.org/10.1127/entomologia/3237>
- Gudin, F.M. & Nihei, S.S. 2025. Revision of taxonomy, immature stages, host associations, and oviposition strategy of the genus *Xanthozona* Townsend, 1908 (Diptera: Tachinidae), with an identification key to similar genera of Neotropical Tachinini. *Revista Brasileira de Entomologia* **69** (2) (Article e20240113): 18 pp.  
DOI: <https://doi.org/10.1590/1806-9665-RBENT-2024-0113>
- Guo, H. & Wang, C.-z. 2025. Harnessing semiochemicals for parasitoid-based biological control: from laboratory identification to field applications. *Crop Health* **3** (Article 21): 22 pp.  
DOI: <https://doi.org/10.1007/s44297-025-00061-4>
- Guzzo, E.C., Specht, A., Santos, J.C.F. dos, Silva, P. de A. & Toma, R. 2025. Review of Sarcophagidae and Tachinidae (Diptera) parasitic flies associated to *Mocis latipes* (Guenée, 1852) (Lepidoptera: Erebidae), with novel parasitism records for Alagoas and Brazil. *Neotropical Entomology* **54** (Article 119): 18 pp.  
DOI: <https://doi.org/10.1007/s13744-025-01328-9>
- Habel, J.C., Ulrich, W., Segerer, A.H., Greifenstein, T., Knubben, J., Moriniere, J., Günter, A., Schmitt, T. & Hausmann, A. 2025. Organic farming fosters arthropod diversity of specific insect guilds – evidence from metabarcoding. *Conservation Genetics* **26**: 847–857.  
DOI: <https://doi.org/10.1007/s10592-025-01707-0>
- Hansel Friedman, M.S., Reddy, A.M., Grewell, B.J., Harms, N.E., Cibils-Stewart, X., Cabrera Walsh, G., Faltlhauser, A. & Pratt, P.D. 2025. Life history and host range characteristics of *Paracles azollae* Berg, 1877 (Lepidoptera: Erebidae), an herbivore considered for biological control of invasive species of *Ludwigia* L. (Onagraceae) in the United States. *The Pan-Pacific Entomologist* **101**: 243–255.  
DOI: <https://doi.org/10.3956/2025-101.3.243>
- Haris, A., Józán, Z., Schmidt, P., Glemba, G., Tomozii, B., Csóka, G., Hirka, A., Šima, P. & Tóth, S. 2025. Climate change influences on Central European insect fauna over the last 50 years: mediterranean influx and non-native

- species. *Ecologies* **6** (1) (Article 16): 66 pp.  
DOI: <https://doi.org/10.3390/ecologies6010016>
- Hawkes, W.L., Menz, M.H.M. & Wotton, K.R. 2025. Lords of the flies: dipteran migrants are diverse, abundant and ecologically important. *Biological Reviews* **100**: 1635–1659.  
DOI: <https://doi.org/10.1111/brv.70017>
- Hébert, C., Béland, J.-M., Dupont, A. & Berthiaume, R. 2025. The lethal and sublethal effects of aerial applications of *Bacillus thuringiensis* subsp. *kurstaki* on the spruce budworm and its parasitism. *Forests* **16** (11) (Article 1666): 18 pp.  
DOI: <https://doi.org/10.3390/f16111666>
- Hébert, R., Jackson, M., Namayandeh, A., Taillefer, A.G., Ghahari, K., Solecki, A., Savage, J., Gibson, J., Rivera, J., Cannings, R., Borkent, A., Giroux, M., Barrie, C. & Kits, J.H. 2025. Checklist of the flies (Diptera) in Canada. Advanced Books, Pensoft, Sofia. ii + 688 pp.  
DOI: <https://doi.org/10.3897/ab.e151196>
- Henderson, P.A., Qazi, M.B., Lee, N. & Cole, E.S. 2025. Reproductive anatomy and embryogenesis of a viviparous, phonotactic, parasitoid fly. *Annals of the Entomological Society of America* **118**: 346–357.  
DOI: <https://doi.org/10.1093/aesa/aaaf021>
- Hernández-Castellano, C., Valladares, D.N., Calleja, J.A., Serrano, E., CONSORTIUM, Incremento & Perea, R. 2025. Overabundant populations of large wild herbivores disrupt plant–pollinator networks in a Mediterranean ecosystem. *Plant Biology* **27**: 1047–1057.  
DOI: <https://doi.org/10.1111/plb.70053>
- Herreid, J.S. & Jabbour, R. 2025. Chalcidoidea as hyperparasitoids. Pp. 779–788. *In*: Heraty, J. & Woolley, J., eds., Chalcidoidea of the world. CAB International. xv + 870 pp.  
DOI: <https://doi.org/10.1079/9781800623545.0068>
- Hou, P., Liu, L., Ma, X., Wang, J.-f. & Wang, Q. 2025. The mitochondrial genome sequence of tachinid fly, *Hemyda hertingi*, from China. *Microbiology Resource Announcements* **14** (10) (e00460-25): 4 pp.  
DOI: <https://doi.org/10.1128/mra.00460-25>
- Hoy, R.R. 2025. Hawaiian love songs: coevolutionary conflict between mate attraction and parasite escape. *Current Biology* **35**: R189–R191.  
DOI: <https://doi.org/10.1016/j.cub.2025.01.038>
- Huaman-Pilco, A.F., Santillán-Huaman, N., Huaman-Pilco, J., Hernandez-Diaz, E., León-Alcántara, E.E., Díaz-Valderrama, J.R. & Ix-Balam, M. 2025. First report of the pine defoliator *Glena bisulca* (Lepidoptera: Geometridae) and its parasitoid, the black fly *Trichophora melas* (Diptera: Tachinidae), in Peru. *Phytoparasitica* **53** (Article 33): 8 pp.  
DOI: <https://doi.org/10.1007/s12600-025-01256-9>
- Hubenov, Z. 2025. The dipterans (Insecta: Diptera) of the Stara Planina Mountains, Bulgaria. *Acta Zoologica Bulgarica* **77**: 23–39.  
DOI: <https://doi.org/10.71424/azb77.1.002800>
- Hubenov, Z. 2025. Fauna, distribution and areographical structure of the dipterans (Insecta: Diptera) from the high Bulgarian mountains. *Acta Zoologica Bulgarica* **77**: 149–172.  
DOI: <https://doi.org/10.71424/azb77.1.002830>
- Hubenov, Z. 2025. Review of the hosts of the family Tachinidae (Diptera: Insecta) in Bulgaria. *Acta Zoologica Bulgarica* **77**: 131–144.  
DOI: <https://doi.org/10.71424/azb77.1.002812>
- Hubenov, Z. 2026. Contribution to the tachinids (Diptera: Tachinidae) of Vietnam. *ZooNotes* **293**: 1–4.  
DOI: <https://doi.org/10.69085/zn20250293>
- Islam, T., Qadir, J., Kant, R., Aryan, S. & Pavankumar, S. 2025. Infestation of mulberry leaves by LEAF Roller/ Webber – (*Diaphania pulverulentalis*) Hampson and (*Glyphodes pyloalis*) Walker and its management strategies. *Asian Research Journal of Agriculture* **18**: 82–88.
- Janšta, P. & Delvare, G. 2025. Torymidae. Pp. 631–647. *In*: Heraty, J. & Woolley, J., eds., Chalcidoidea of the world. CAB International. xv + 870 pp.  
DOI: <https://doi.org/10.1079/9781800623545.0059>
- Jashenko, R., DeLoach, C.J. & Ilina, V. 2025. Two of the most promising potential agents from Kazakhstan for the biocontrol of Russian olive (*Elaeagnus angustifolia*) in the USA with an annotated list of its pest insects from Central Asia. *Forests* **16** (4) (Article 614): 26 pp.  
DOI: <https://doi.org/10.3390/f16040614>
- Kaçar, G. & Koca, A.S. 2025. Pupal parasitoids and parasitism rates of the fall webworm *Hyphantria cunea* (Drury) (Lepidoptera: Erebidae) in Düzce. *Turkish Journal of Biological Control* **16** (2): 24–36. [In Turkish with English abstract.]  
DOI: <https://doi.org/10.31019/tbmd.1727722>
- Kang, T.-h. & Kim, H.-j. 2025. Research on parasitoid flies (Diptera: Tachinidae) as natural enemies of fall webworm (*Hyphantria cunea* Dury). *Korean Journal of Applied Entomology* **64**: 351–358. [In Korean with English abstract.]  
DOI: <https://doi.org/10.5656/KSAE.2025.11.0.061>

- Kebede, M., Degaga, E.G., Gofitshu, M., Amenta, M.W., Gurmu, A.K., Fite, T., Haile, D. & Lalisa, L. 2025. Native parasitoids attacking the fall armyworm, *Spodoptera frugiperda* (Lepidoptera: Noctuidae) in maize and sorghum agroecosystems: evidence from eastern Ethiopia. *Biocontrol Science and Technology* **36**: 129–148. DOI: <https://doi.org/10.1080/09583157.2025.2585276>
- Kenis, M., Klopstein, S., Lee, M., Lee, S. & Seehausen, M.L. 2025. Will an accidentally introduced parasitoid save European box trees? *CABI Agriculture and Bioscience* **6** (1) (Article 0081): 7 pp. DOI: <https://doi.org/10.1079/ab.2025.0081>
- Kerkig, P., Quicke, D.L.J. & Buntika, A.B. 2025. Molecular food web of Lepidopteran hosts and their parasitoids in a tropical secondary forest in Thailand. *Tropical Natural History* **25**: 37–56. DOI: <https://doi.org/10.58837/tnh.25.1.262564>
- Komagata, S. 2025. First record of *Eliozeta helluo* (Diptera: Tachinidae) in Kyoto Prefecture. *Hana Abu* **59**: 19–20.
- Kong, H.-l., Guo, D., Zhang, L., Xie, D.-j., Wilson, K. & Jiang, X.-f. 2025. Enhanced immune responses of gregarious larvae contribute to successful adult migration in the migratory oriental armyworm. *Journal of Integrative Agriculture* **24**: 3141–3154. DOI: <https://doi.org/10.1016/j.jia.2025.02.003>
- Kulijer, J. 2025. New observations of alien species *Trichopoda pictipennis* Bigot, 1876 (Diptera: Tachinidae) for the Balkan Peninsula. *Entomologia Croatica* **24**: 56–61. DOI: <https://doi.org/10.17971/ec.24.1.6>
- Langat, B.K., Namu, F.N. & Ngari, A.G. 2025. Farmers practices, pesticide use, pest and disease dynamics in smallholder potato farming systems in Kuresoi South, Nakuru, Kenya. *African Journal of Environmental Science and Technology* **19**: 204–212. DOI: <https://doi.org/10.5897/AJEST2025.3366>
- Lasnier, J., Coussergues, C.-H. de, Baril, A. & Vincent, C. 2025. Abundance of Japanese beetle adults and its parasitoid *Istocheta aldrichi* in a Quebec commercial vineyard. *Bulletin of Insectology* **78**: 1–10. DOI: <https://doi.org/10.3897/bull.insectology.152754>
- Lee, J.H. & Pemberton, R.W. 2025. A comparison of the parasite complexes attacking congeneric *Lymantria* moths sharing the same habitat in Gyeonggi Province, Korea. *Biocontrol Science and Technology* **36** [2026]: 94–107. DOI: <https://doi.org/10.1080/09583157.2025.2581613>
- Liang, W.-j., Cao, Z.-j., Sun, S.-w., Wei, H.-y., Zou, T., Wei, J.-x. & Liu, Y. 2025. Filterless vector light field photodetector based on photonic-electronic co-designed non-Hermitian silicon nanostructures. *Optics Express* **33**: 2395–2405. DOI: <https://doi.org/10.1364/OE.550582>
- Lim, J. 2025. The role of parasitic Hymenoptera in biological control of forest insect pests in South Korea: a review of invasive and native species management. *Biological Control* **208** (Article 105854): 11 pp. DOI: <https://doi.org/10.1016/j.biocontrol.2025.105854>
- Lin, C., Yang, Q.-c., Wu, Y.-l., Hou, P., Zhang, B. & Yang, D. 2025. New taxa of Diptera from China in 2023. *Biodiversity Science* **32** (11) (Article 24328): 55 pp. [In Chinese with English abstract.] DOI: <https://doi.org/10.17520/biods.2024328>
- Liu, X.-s., Ji, J.-y., Lai, Y.-p., Zhang, D., Cerretti, P. & Zhang, C.-t. 2025. *Chaomyia*, a new monotypic genus of Tachinidae from the Qinghai-Tibet Plateau, China (Arthropoda, Insecta, Diptera, Tachinidae). *ZooKeys* **1236**: 283–295. DOI: <https://doi.org/10.3897/zookeys.1236.141122>
- Liu, Y., Zhao, L.-y. & Ding, X.-k. 2025. A low-frequency multi-band piezoelectric MEMS acoustic sensor inspired by *Ormia ochracea*. *Micromachines* **16** (4) (Article 451): 19 pp. DOI: <https://doi.org/10.3390/mi16040451>
- López-Murcia, W., Valderrama, J.D. & Baena-Bejarano, N. 2025. Composición temporal de dípteros en un relicto de bosque seco tropical en Huila. *Caldasia* **46**: 587–602. DOI: <https://doi.org/10.15446/caldasia.v46n3.105334>
- Loxdale, H.D. 2025. Positive and negative ecology, a conceptual overview. *Ecologies* **6** (2) (Article 33): 23 pp. DOI: <https://doi.org/10.3390/ecologies6020033>
- Maestracci, P.-Y., Plume, L. & Gibernau, M. 2025. Anthophilous insects' seasonal variation in Corsican thermo-Mediterranean shrubland maquis. *Biodiversity Data Journal* **13** (e144560): 22 pp. DOI: <https://doi.org/10.3897/BDJ.13.e144560>
- Makovetski, V., Smith, A.B.T. & Abram, P.K. 2025. Crowdsourced online data as evidence of absence of non-target attack from the century-old introduction of *Istocheta aldrichi* for biological control of *Popillia japonica* in North America. *Journal of Pest Science* **98**: 1451–1462. DOI: <https://doi.org/10.1007/s10340-025-01891-5>
- Malik, S., Kumari, S., Singh, R., Kumar, R. & Chauhan, V. 2025. Worldwide distribution and management of fall armyworm: a review. *Environment and Ecology* **43**: 624–634. DOI: <https://doi.org/10.60151/envec/NAIQ2596>

- Martínez-Mota, R., Vásquez-Aguilar, A.A., Hernández-Rodríguez, D., Suárez-Domínguez, E.A. & Krömer, T. 2025. Close neighbors, not intruders: investigating the role of tank bromeliads in shaping faunal microbiomes. *PeerJ* **13** (5) (e19376): 18 pp. DOI: <https://doi.org/10.7717/peerj.19376>
- Matallana-Puerto, C.A., Costa, S.C., Araujo, A.S., Guilherme, C.P., Ament, D.C., Fachin, D.A., Savaris, M., Dios, R. de V.P., Madeira-Ott, T., Silva, V.C., Oliveira, P.E. & Cardoso, J.C.F. 2025. The hidden Diptera diversity in *Aristolochia* trap-flowers: revealing the identity of pollinators through taxonomic knowledge. *Journal of Applied Entomology* (preprint). DOI: <https://doi.org/10.1111/jen.13472>
- Meng, A.-j., Wang, H., Ye, L.-f., Zhi, Y., Zhang, C.-t. & Liu, J.-y. 2025. The complete mitochondrial genome of *Aneogmena fischeri* (Brauer & Bergenstamm, 1891) (Diptera: Tachinidae) with phylogenetic analysis. *Mitochondrial DNA Part B* **10**: 709–713. DOI: <https://doi.org/10.1080/23802359.2025.2528573>
- Misrieva, B.U. & Misriev, A.M. 2025. Species composition of tachinid flies in grape agro-ecosystems in the Republic of Dagestan. *Zashchita i Karantin Rastenii* **3**: 18–20. [In Russian with English abstract.] DOI: [https://doi.org/10.47528/1026-8634\\_2025\\_3\\_18](https://doi.org/10.47528/1026-8634_2025_3_18)
- Modise, N.O., Cozien, R.J., Jordaens, K., Shuttleworth, A. & van der Niet, T. 2025. Short-tongued fly pollination of the vomit-scented *Crassula peploides* (Crassulaceae) in the southern African Drakensberg Mountains. *South African Journal of Botany* **183**: 218–228. DOI: <https://doi.org/10.1016/j.sajb.2025.05.016>
- Mollah, M.M.I. & Arifuzzaman, M. 2025. Prevalence and abundance of biological control agents in transplanted Aman Rice Field at Dumki Upazila of Patuakhali District. *Journal of the Patuakhali Science and Technology University* **14**: 103–110.
- Murray, J.B. 2025. Recent drop in numbers of the common earwig, *Forficula auricularia sensu lato* Linnaeus 1758 (Dermaptera) in Britain. *Entomologist's Record and Journal of Variation* **137**: 163–178.
- Mursyidin, A.H. & Muhammad Qudsiah, S. dan. 2025. Identification of insect vectors, diseases, and the potential of natural enemies in chili pepper (*Capsicum frutescens* L.) plantations in East Lombok Regency. *Jurnal Agrotek Lestari* **11**: 10–24. [In Indonesian with English abstract.] DOI: <https://doi.org/10.35308/jal.v11i1.10777>
- Niazi, F.W.K., Tahir, R., Usman, M., Chirag, S., Ali, M., Hamayun, M., Rehman, A., Ahmed, S. & Adeel, M. 2025. Harnessing tachinid parasitoids for sustainable pest management in agriculture. *Global Research Journal of Natural Science and Technology* **3**: 1040–1071. DOI: <https://doi.org/10.53762/grjnst.03.03.45>
- O'Hara, J.E. 2025. Tachinid collecting in southwestern Saskatchewan, with a list of species of the Canadian Prairies. *The Tachinid Times* **38**: 23–59.
- O'Hara, J.E. 2026. A new species of *Neomintho* Brauer & Bergenstamm and provisional reclassification of the tribe Euthelairini (Tachinidae, Exoristinae). *Zootaxa* **5757**: 144–158. DOI: <https://doi.org/10.11646/zootaxa.5757.2.3>
- Ohmiya, M. 2025. Some records of Calypratae (Diptera, Cyclorrhapha, Schizophora) collected from Tokunoshima Is., Kagoshima Pref., Japan. *Hana Abu* **60**: 50–55.
- Ohmiya, M. 2025. Some remarkable records of Calypratae flies (Diptera, Cyclorrhapha, Schizophora) from Iwate Pref., Japan. *Hana Abu* **60**: 58–62.
- Ohmiya, M. & Ohishi, H. 2025. Some records of Diptera from Takayama City, Gifu Pref., Japan. *Hana Abu* **59**: 41–43.
- Ohmyia, M. & Kawase, H. 2025. Some remarkable records of Calypratae flies (Diptera, Cyclorrhapha, Schizophora) in the alpine zone of Gifu Pref., Japan (from 2018 to 2019). *Hana Abu* **60**: 48–50.
- Ojumoola, O.A., Usman, A.A., Falola-Olasunkanmi, J.A. & Lawal, M.T. 2025. Identification of *Drino quadrizonula* Thomson and *Chelonus* sp. as larval parasitoids of *Spodoptera frugiperda* J.E. Smith in the Guinea Savanna agroecological zones of Nigeria. *Agriculturae Conspectus Scientificus* **90**: 233–241.
- Ourahmoun, H., El-Hawagry, M., Kettani, K., Chergui, B., Belhaj, A., Daief, M.D. & Soliman, M.M. 2026. Climate change impact on the geographic distribution of important tachinid parasitoids in Morocco: a species distribution modelling study. *The Journal of Basic and Applied Zoology* **87** (Article 5): 15 pp. DOI: <https://doi.org/10.1186/s41936-026-00545-x>
- Panda, A., Ahad, I., Ahmad, J., Venkatesan, T. & Fatimah, N. 2025. Tachinid fly, *Tachina sobria*: a new emerging natural enemy of insects under temperate conditions—first report. *International Journal of Tropical Insect Science* (preprint). DOI: <https://doi.org/10.1007/s42690-025-01636-y>
- Permatasari, G.A., Hidayat, P., Kasmiatun, Azhar, A. & Buchori, D. 2025. Tree islands alter tritrophic interactions among plants, herbivore, and parasitoids in oil palm habitats in Bungku Village, Jambi, Sumatra. *Jurnal Entomologi Indonesia* **22**: 126–140. [In Indonesian with

English abstract.]

DOI: <https://doi.org/10.5994/jei.22.2.126>

- Pinheiro, R.A., Silva, L.F., Cabral, M.J.S., Fernandes, P.A.G., Toma, R., Santos, C.A., Zanuncio, J.C. & Soares, M.A. 2025. *Moreiria maura* (Diptera: Tachinidae), parasitoid of *Dione juno juno* (Lepidoptera: Nymphalidae) in Brazil. *Brazilian Journal of Biology* **85** (e294921): 3 pp. DOI: <https://doi.org/10.1590/1519-6984.294921>
- Plashkova, B. 2025. New host record for the parasitoid fly *Phryxe nemea* (Meigen, 1824) (Diptera: Tachinidae) in Bulgaria. *ZooNotes* **283**: 1–4. DOI: <https://doi.org/10.69085/zn20250283>
- Poorani, J., Naumann, S., Anuradha, C., Thanigairaj, R. & Prashina Mol, P. 2025. Report of *Eupterote orientalis* (Fabricius, 1793), one of the oldest described species of Eupterotidae (Lepidoptera: Bombycoidea), as a sporadic pest of banana in South India, with notes on its biology and natural enemies. *Phytoparasitica* **53** (3) (Article 40): 15 pp. DOI: <https://doi.org/10.1007/s12600-025-01266-7>
- Poorani, J. & Thanigairaj, R. 2025. Report of *Xanthopimpla punctata* (Fabricius) as a pupal parasitoid of banana bagworm, *Manatha albipes* Moore (Lepidoptera: Psychidae) from South India. *Specimen* **48**: 2 pp. DOI: <https://doi.org/10.56222/28166531.2025.48>
- Pourghader, J., Cui, W.-l., Farahikia, M., Lai, J.-p., Karimi, M., Ke, C.-h. & Miles, R. 2025. Bioinspired flow-sensing capacitive microphone. *Journal of the Acoustical Society of America* **157**: 3897–3906. DOI: <https://doi.org/10.1121/10.0036772>
- Qadir, J. & Islam, T. 2025. Life cycle and morphology of uzi fly, *Exorista bombycis* (Louis). *Vigyan Varta* **6**: 116–118.
- Qadir, J., Islam, T., Pavankumar, S., Kant, R. & Aryan, S. 2024. *Nesolynx thymus* (Girault) as an effective biocontrol agent of uzi fly, *Exorista bombycis* (Louis). *International Journal of Theoretical & Applied Sciences* **16**: 93–98.
- Quicke, D.L.J., Fleming, A.J., Wood, D.M., Woodley, N.E., Manjunath, R., Naik, S., Smith, M.A., Sharkey, M.J., Hallwachs, W., Janzen, D.H., Fernández-Triana, J., Whitfield, J.B., Hebert, P.D.N. & Butcher, B.A. 2025. Tachinid flies (Diptera), caterpillar hosts (Lepidoptera) and their food plants, reared in Área de Conservación Guanacaste (ACG), northwestern Costa Rica: documenting community structure with the aid of DNA barcodes. *Diversity* **17** (9) (Article 658): 34 pp. DOI: <https://doi.org/10.3390/d17090658>
- Rahim, N. 2025. Pupal mortality of the pine processionary moth *Thaumetopoea pityocampa* (Denis & Schiffemüller, 1775) (Lepidoptera, Notodontidae) in Aleppo pine and Atlas cedar forests of northern Algeria. *Arxius de Miscel·lània Zoològica* **23**: 109–116. DOI: <https://doi.org/10.32800/amz.2025.23.0109>
- Rajan, I. & Cutler, G.C. 2025. Effects of kaolin clay on flea beetles and other pests and non-target insects on tatsoi. *Canadian Journal of Plant Science* **105**: 1–10. DOI: <https://doi.org/10.1139/cjps-2024-0259>
- Ranjith, A.P. & Kedar, S.C. 2025. New species of *Lemophagus* Townes, 1965 (Hymenoptera, Ichneumonidae, Campopleginae) from India reared as a larval parasitoid of *Crioceris nigroornata* Clarke, 1866 (Coleoptera: Chrysomelidae). *Journal of Hymenoptera Research* **98**: 743–755. DOI: <https://doi.org/10.3897/jhr.98.154760>
- Rayner, J.G., Eichenberger, F., Bainbridge, J.V.A., Zhang, S.-z., Zhang, X., Yusuf, L.H., Balenger, S., Gaggiotti, O.E. & Bailey, N.W. 2024. Competing adaptations maintain nonadaptive variation in a wild cricket population. *Proceedings of the National Academy of Sciences of the United States of America* **121** (32) (e2317879121): 9 pp. DOI: <https://doi.org/10.1073/pnas.2317879121>
- Razmi, M., Jafarlu, M. & Karimpour, Y. 2025. Discovery of the first webspinners (Embioptera, Insecta) in Iran and associated bristle fly parasitoid. *Journal of the Entomological Research Society* **27**: 415–427. DOI: <https://doi.org/10.51963/jers.v27i3.2873>
- Rezaei, M., Mehrabadi, M., Talebi, A.A. & Atapour, M. 2025. Impact of host suitability on some biological and behavioral traits of the tachinid *Compsilura concinnata*. *Bulletin of Insectology* **78**: 11–19. DOI: <https://doi.org/10.3897/bull.insectology.152894>
- Robles-Pérez, R., Cortez-Isiordia, K.A., Vejar-Cota, G., Arvizu-Gómez, J.L., Robles-Bermúdez, A. & Isiordia-Aquino, N. 2025. Primer registro de *Lydella jalisco* Woodley, 1994 (Diptera: Tachinidae) como parasitoide de *Eoreuma loftini* (Dyar, 1917) (Lepidoptera: Crambidae), en Nayarit, Mexico. *Revista Chilena de Entomología* **51**: 509–515.
- Rodbell, E.A., Kaur, N. & Schell, S. 2025. Short-horned grasshopper (Orthoptera: Acrididae) ecology and management in the Western United States. *Journal of Integrated Pest Management* **16** (1) (Article 33): 12 pp. DOI: <https://doi.org/10.1093/jipm/pmaf030>
- Rojas-Malavasi, G., Gamboa-Barrantes, N., Vargas-Rodríguez, A., Fuchs, E.J., Hanson, P., Montero, B.K., Zumbado, M.A., Madrigal-Brenes, R. & Barrantes, G. 2025. Floral visitor diversity of ruderal plants in San

- Gerardo de Dota, Costa Rica: a highland agricultural-natural landscape. *Revista de Biología Tropical* **73** (S2) (e64684): 15 pp.  
DOI: <https://doi.org/10.15517/rev.biol.trop.v73iS2.64684>
- Routray, S., Singh, H.S., Verma, R., Kumar, Y., Keerthi, M.C. & Singh, S. 2026. Outbreak of *Hyposidra talaca* Walker (Lepidoptera: Geometridae) as a new sporadic pest of mango in Northern India: insights from morphological, molecular, and ecological studies. *Phytoparasitica* **54** (Article 6): 15 pp.  
DOI: <https://doi.org/10.1007/s12600-025-01333-z>
- Ruan, X.-y., Wang, S.-s. & Lai, Y.-p. 2025. Investigation and identification of parasitic natural enemy tachinid resources of *Gynaephora qinghaiensis*. *Chinese Journal of Biological Control* **41**: 269–275. [In Chinese with English abstract.]  
DOI: <https://doi.org/10.16409/j.cnki.2095-039x.2024.07.006>
- Safarova, E. & Mahmudova, K. 2025. Absheron Region Garden and forest plant pests and their integrated entomophage complexes. *Nature & Science* **7** (9): 24–27.  
DOI: <https://doi.org/10.36719/2707-1146/60/24-27>
- Santis, M.D. de & Camargo, A. 2025. Lost between types: a new species of *Chaetotheresia* Townsend, 1931 (Diptera: Tachinidae: Dexiinae) discovered 200 years after collecting. *Zeitschrift der Arbeitsgemeinschaft Österreichischer Entomologen* **77**: 115–122.
- Santis, M.D. de & Couri, M.S. 2025. An additional Mexican species for the Neotropical genus *Eudexia* Brauer and Bergenstamm (Tachinidae, Dexiini), with a redescription and lectotype fixation. *Zootaxa* **5636**: 188–192.  
DOI: <https://doi.org/10.11646/zootaxa.5636.1.10>
- Santis, M.D. de, Dios, R. de V.P., Lamas, C.J.E. & Mengual, X. 2025. Contribution to the Neotropical Campylochetaini: a review of *Campylocheta* Rondani, 1859 (Diptera: Tachinidae) with new synonyms, three new species and an identification key to Neotropical species. *Austral Entomology* **64** (4) (e70018): 22 pp.  
DOI: <https://doi.org/10.1111/aen.70018>
- Santis, M.D. de & Mengual, X. 2025. A new species of *Neosophia* Guimarães, 1982 (Tachinidae, Dexiinae, Cordyligasterini), with an updated identification key. *Journal of Insect Biodiversity* **61**: 19–25.  
DOI: <https://doi.org/10.12976/jib/2025.61.1.3>
- Santis, M.D. de & Mengual, X. 2025. A new species of *Ptilodexia* (Diptera: Tachinidae: Dexiinae) from Ecuador, with a key to the South American species. *Integrative Systematics* **8**: 127–131.  
DOI: <https://doi.org/10.18476/2025.202609>
- Santis, M.D. de, Torres-Domínguez, D.M. & Mulieri, P.R. 2025. A new Argentinean species of *Sturmiodesia* Townsend (Diptera: Tachinidae), with an updated species key. *Studies on Neotropical Fauna and Environment* **60**: 573–582.  
DOI: <https://doi.org/10.1080/01650521.2025.2505499>
- Seo, M., Jeong, D., Hoon Paik, C., Yeon Hong, S., Hye Oh, J. & Hyun Roh, G. 2025. Toxicity assessment of insecticides to indigenous lepidopteran larval parasitoids in the soybean field. *The Korean Journal of Pesticide Science* **29**: 81–89. [In Korean with English abstract.]  
DOI: <https://doi.org/10.7585/kjps.2025.29.2.81>
- Shermatov, M.R., Mukhammedov, M.M., Kayumova, O.I., Botirov, E.A., Mirzaeva, G.S. & Kimyonazarov, S.Q. 2025. First record of *Euzophera alpherakyella* Ragonot, 1887 (Lepidoptera: Pyralidae: Phycitinae) from Uzbekistan. *Acta Biologica Sibirica* **11**: 663–668.  
DOI: <https://doi.org/10.5281/zenodo.15347333>
- Shi, L., Wang, Z.-w., Ma, R., Wang, Y.-w. & Yang, Y.-g. 2025. A survey of the Calyptratae (Diptera) in the Northern Primitive Forest Region of Greater Khingan Mountains, Inner Mongolia with a checklist of fifty-five species. *Zootaxa* **5683**: 451–491.  
DOI: <https://doi.org/10.11646/zootaxa.5683.4.1>
- Shima, H., Tachi, T. & Zhang, W.-x. 2025. The genus *Blepharella* Macquart (Diptera: Tachinidae) from the Oriental Region. *Journal of Natural History* **59**: 1647–1687.  
DOI: <https://doi.org/10.1080/00222933.2025.2486489>
- Sielezniew, M., Sielezniew, I., Bystrowski, C., Gwiazdowska, A., Hilszczański, J., Rutkowski, R., Sapieszko, K., Shaw, M.R. & Jaworski, T. 2025. Natural enemies in the last Central European population of the Danube clouded yellow butterfly (*Colias myrmidone*). *The European Zoological Journal* **93** [2026]: 32–45.  
DOI: <https://doi.org/10.1080/24750263.2025.2601368>
- Silva, D.J., Santos, T.T., Negrisoli, A.S. Jr., Acevedo, J.P.M., Vega, J.G., Löhr, B.L. & Guzzo, E.C. 2025. Bioecology of the parasitism of *Billaea rhynchophorae* (Blanchard, 1937) (Diptera: Tachinidae) in *Rhynchophorus palmarum* (L., 1758) (Coleoptera: Curculionidae) in Brazil. *Scientia Plena* **21** (7): 14 pp.  
DOI: <https://doi.org/10.14808/sci.plena.2025.070202>
- Singh, A., Kumar, V., Guha, L. & Bhatia, N.K. 2024. Integrated management of uzi fly infestation in muga silkworm rearing. *The Agriculture Magazine* **4**: 278–280.
- Sivell, O. 2025. For the love of bristles – adventures with tachinids at the Natural History Museum, London. *The Tachinid Times* **38**: 4–11.

- Sivell, O., Raper, C. & O'Hara, J.E. 2025. *Musca albifrons* Linnaeus, 1761—a long-forgotten name for the common Palaearctic species *Eriothrix rufomaculata* (De Geer, 1776) (Diptera: Tachinidae). *Integrative Systematics* **8**: 171–176.  
DOI: <https://doi.org/10.18476/2025.473640>
- Smith, D. & Raper, C. 2024. *Hebia flavipes* Robineau-Desvoidy (Diptera, Tachinidae) new to Scotland. *Dipterists Digest (Second Series)* **31**: 244.
- Stein, F. & Gailing, O. 2025. Identification of BOLD engine deficiencies and suggestions for improvement based on a curated *Tachina* (Diptera) record set. *PLoS ONE* **20** (8) (e0331216): 18 pp.  
DOI: <https://doi.org/10.1371/journal.pone.0331216>
- Stireman, J.O. III & Stetz, L.A. 2025. Notes on the occurrence of *Compsilura concinnata* (Meigen) in southwest Ohio, U.S.A. *The Tachinid Times* **38**: 15–22.
- Stuke, J.-H., Wübbenhorst, J., von der Heyde, L., Kehlmaier, C., Würtele, I. & Schacht, W. 2025. Bemerkenswerte Zweiflügler aus Niedersachsen und Bremen VIII (Diptera). *Entomologische Zeitschrift mit Insekten Börse* **135**: 43–52.
- Svacha, P. & Vlasák, J. 2025. A unique pupal cocoon of fungal origin in *Pseudovadonia livida* (Cerambycidae: Lepturinae). *Annales Zoologici* **75**: 389–397.  
DOI: <https://doi.org/10.3161/00034541A>  
NZ2025.75.1.018
- Syamala, R.R., David, K.J., Thammayya, S.K. & Mohanrao, R. 2025. Tachinid flies. Pp. 123–149. *In*: Omkar, ed., *Flies. Agricultural and public-health perspectives*. CRC Press, Boca Raton. xi + 320 pp.  
DOI: <https://doi.org/10.1201/9781003482581-8>
- Tadle, F.P.J., Adnan, S., Fagan-Jeffries, E., Thistleton, B. & Spafford, H. 2025. Potential parasitoids for management of fall armyworm (*Spodoptera frugiperda* J. E. Smith [Lepidoptera: Noctuidae]) in horticulture systems of tropical Australia. *Austral Entomology* **64** (3) (e70016): 11 pp.  
DOI: <https://doi.org/10.1111/aen.70016>
- Tago, T. 2025. Records of *Therobia japonica* (Tachinidae) from Saitama Pref., Japan. *Hana Abu* **59**: 1–2.
- Tian, C., Tang, J., Zhu, Q.-y., Guo, X.-q., Shu, Q.-l., Gu, Z.-y., Li, F.-c. & Li, B. 2025. A novel detoxification strategy of *Bombyx mori* (Lepidoptera: Bombycidae) to dimethoate based on gut microbiota research. *Journal of Economic Entomology* **118**: 858–867.  
DOI: <https://doi.org/10.1093/jee/toaf028>
- Tillman, P.G. & Grabarczyk, E.E. 2025. Success of parasitism of *Nezara viridula* and *Halyomorpha halys* (Hemiptera: Pentatomidae) by *Trichopoda pennipes* (Diptera: Tachinidae) in the southeastern United States. *Journal of Insect Science* **25** (3) (ieaf046): 9 pp.  
DOI: <https://doi.org/10.1093/jisesa/ieaf046>
- Toma, R. & Pinheiro, R.A. 2025. New species of *Oromasiphya* Townsend (Diptera: Tachinidae) with a key to the species. *Zootaxa* **5729**: 163–174.  
DOI: <https://doi.org/10.11646/zootaxa.5729.1.7>
- Van Driesche, R.G., Cock, M.J.W. & Winston, R.L. 2025. The role of Chalcidoidea in biocontrol. Pp. 691–713. *In*: Heraty, J. & Woolley, J., eds., *Chalcidoidea of the world*. CAB International. xv + 870 pp.  
DOI: <https://doi.org/10.1079/9781800623545.0063>
- Varga, N. 2025. New records of Tachinidae from Hungary (Diptera). *Folia Entomologica Hungarica* **86**: 11–16.  
DOI: <http://doi.org/10.17112/FoliaEntHung.2025.86.11>
- Varga, N. & MacGowan, I. 2025. New findings of Muscomorphan flies (Diptera, Brachycera) in Hungary. *Journal of Insect Biodiversity and Systematics* (preprint).  
DOI: <https://doi.org/10.48311/jibs.12.01.59>
- Villanueva-Hernández, C.E. & Núñez-Farfán, J. 2025. Searching for a common host: parasitoids of *Lema daturaphila* on *Datura stramonium* in central Mexico. *PeerJ* **13** (e18675): 23 pp.  
DOI: <https://doi.org/10.7717/peerj.18675>
- Wang, H.-z. & Zhang, J.-s. 2023. Species identification and phylogenetic studies of parasitic fly in *Gynaephora qinghaiensis*. *Chinese Journal of Applied Entomology* **60**: 1559–1569. [In Chinese with English abstract.]  
DOI: <https://doi.org/10.7679/j.issn.2095-1353.2023.149>
- Wang, J.-d., Lin, H.-t., Shang, X.-k., Shan, H.-l., Li, J.-h., Pan, X.-h., Yin, J., Zou, C.-w., Chen, B.-s. & Gao, S.-j. 2025. Current status and research progress of sugarcane stem borers management. *European Journal of Agronomy* **168** (Article 127644): 18 pp.  
DOI: <https://doi.org/10.1016/j.eja.2025.127644>
- Wang, S.-s., Li, Y.-c., Xie, W.-h., Pu, Y.-x., Shen, Z.-y., Wang, M.-x., Zhu, J., Shen, X.-j. & Tang, S.-m. 2025. Molecular characterization and targeting of the hatching enzyme EsHE in *Exorista sorbillans* identifies abamectapir as a potent ovicidal agent. *Pesticide Biochemistry and Physiology* **217** (Article 106884) [2026]: 10 pp.  
DOI: <https://doi.org/10.1016/j.pestbp.2025.106884>

- Wen, X. & Ding, Y.-t. 2025. Spatiotemporal dynamics of a memory-diffusion predator-prey system with two delays and nonlocal competition. *Journal of Nonlinear Modeling and Analysis* **7**: 2157–2181.  
DOI: <https://doi.org/10.12150/jnma.2025.2157>
- Wessel, A., Ehlers, S., McCravy, K.W. & Thomas, J.A. 2025. Insect bioacoustics and biotremology. Pp. 53–130. *In*: Erbe, C. & Thomas, J.A., eds., *Exploring animal behavior through sound*. Volume 2. Springer, Cham. xiii + 581 pp.  
DOI: [https://doi.org/10.1007/978-3-031-83460-8\\_2](https://doi.org/10.1007/978-3-031-83460-8_2)
- Wikle, A.W., Broder, E.D., Gallagher, J.H., Dominguez, J., Carlson, M., Vu, Q., Tinghitella, R.M. & Lee, N. 2025. Neural and behavioral evolution in an eavesdropper with a rapidly evolving host. *Current Biology* **35**: 1074–1084.  
DOI: <https://doi.org/10.1016/j.cub.2025.01.019>
- Woolley, J., Dal Molin, A. & Polaszek, A. 2025. Signiphoridae. Pp. 596–602. *In*: Heraty, J. & Woolley, J., eds., *Chalcidoidea of the world*. CAB International. xv + 870 pp.  
DOI: <https://doi.org/10.1079/9781800623545.0054>
- Wurst, F.F. & Aguilar, J.S. 2025. The practical use of tachinids and their beneficial effect in conjunction with other biological controllers in sugarcane growing in Venezuela. *Journal of Bacteriology & Mycology* **13**: 29–31.  
DOI: <https://doi.org/10.15406/jbmoa.2025.13.00393>
- Wyckhuys, K.A.G. et al. 2025. Human versus machine: can generative AI anticipate insect biological control outcomes? *Computers and Electronics in Agriculture* **242** (Article 111317) [2026]: 10 pp.  
DOI: <https://doi.org/10.1016/j.compag.2025.111317>
- Xie, Y.-f., Yu, J.-x., Deng, W., Peng, S.-f., Li, C., Wen, X.-y., Zhong, W.-h. & Li, M. 2025. Biological control strategies and integrated arthropod pest management for *Camellia oleifera*. *Insects* **16** (12) (Article 1244): 16 pp.  
DOI: <https://doi.org/10.3390/insects16121244>
- Xu, H., Wang, C.-w., Zhang, R., Liang, Y., Li, M.-q., Ci, T.-t., Wang, Y.-y., Wang, W.-j., Zhang, Y.-n., Pan, Z.-j., Liu, X.-z., Yi, T.-s., Zhang, C.-t., Cui, X.-y., Chen, X., Li, J.-b. & Rasmann, S. 2025. Harnessing leguminosae typical scents for a more effective and eco-friendly pheromone trapping of pest. *Journal of Agricultural and Food Chemistry* **73**: 17519–17528.  
DOI: <https://doi.org/10.1021/acs.jafc.5c05015>
- Yamashita, K. 2025. Effect of pruning on the removal of the tea moth, *Nitobe sieboldii*, and mortality factors in the larval stage. *Tea Industry Research Report* **139**: 21–27.  
DOI: [https://doi.org/10.5979/cha.2025.139\\_21](https://doi.org/10.5979/cha.2025.139_21)
- Yang, H.-w., Xiu, M.-h., Zhu, J.-g., Wang, R.-s. & Shi, C.-m. 2025. Diversity of trophic interactions between scorpions and insects. *Zoological Systematics* **50**: 281–292.  
DOI: <https://doi.org/10.11865/zs.2025401>
- Yankoski, T., Pruess, N. & Hartley, C. 2025. A serendipitous rearing of *Spilochaetosoma californicum* Smith (Diptera: Tachinidae) from a scorpion collected for the Sophia M. Sachs Butterfly House in Missouri, U.S.A. *The Tachinid Times* **38**: 12–14.
- Yeh, Y.-h., Deto, H. & Miyashita, T. 2025. Disentangling biotic and abiotic factors influencing host–parasitoid interactions of butterflies, tachinid flies, and nematodes. *Ecological Research* **40** (5) (e70000): 9 pp.  
DOI: <https://doi.org/10.1111/1440-1703.70000>
- Yoo, J.J. & Darling, D.C. 2025. Taxonomic revision of the *Perilampus carolinensis* species complex (Hymenoptera: Chalcidoidea: Perilampidae), and the description of five new species. *Zootaxa* **5621**: 151–195.  
DOI: <https://doi.org/10.11646/zootaxa.5621.2.1>
- Yu, G.-y. & Wang, H. 2023. *The Beijing Forest Insect Atlas (III) — Diptera*. Science Press, Beijing. xxii + 292 pp. [In Chinese with English abstract.]
- Yuan, H., Fu, W.-b., He, S.-l., Li, T.-j. & Chen, B. 2025. Study of mitogenomes provides implications for the phylogenetics and evolution of the infraorder Muscomorpha in Diptera. *Ecology and Evolution* **15** (1) (e70832): 16 pp.  
DOI: <https://doi.org/10.1002/ece3.70832>
- Yuya, A.I., Degaga, E.G., Degefu, D.T. & Bekele, G.D. 2025. Impact of maize-legume intercropping systems on fall armyworm, *Spodoptera frugiperda* (J.E. Smith) infestation levels and natural enemy complex. *International Journal of Tropical Insect Science* **45**: 989–1005.  
DOI: <https://doi.org/10.1007/s42690-025-01487-7>
- Zeeegers, T., Eck, A.P.W. van, Pennards, G.W.A. & Hoekstra, P.H. 2026. The Tachinidae (Diptera) of Mongolia, with the description of seven new species. *Erforschung Biologischer Ressourcen der Mongolei* **15**: 81–127.
- Zhang, J.-y., Peng, J.-y., Wu, X.-m., Shi, Y.-f., Xu, W.-p., Wang, Y.-y., Zhang, R., Li, Z.-q. & An, B.-w. 2025. Optical vibration sensing bionic vector hydrophone based on mechanically coupled structure. *Micromachines* **16** (11) (Article 1196): 18 pp.  
DOI: <https://doi.org/10.3390/mi16111196>
- Zuk, M. 2025. The unholy glory of parasitoids. *American Entomologist* **71** (3): 24–25.  
DOI: <https://doi.org/10.1093/ae/tmaf041>



# MAILING LIST

*Telephone numbers and E-mail addresses are included where known.*

- Acquisitions Section, Department of Library Services,  
Natural History Museum, Cromwell Road, London, SW7  
5BD, UNITED KINGDOM
- Entomology Library, Peabody Museum, Yale University, New  
Haven, Connecticut 06511, USA
- Dr. Paul Abram, Agassiz Research and Development  
Centre, Agriculture and Agri-Food Canada, 6947 Hwy  
#7, Agassiz, British Columbia, V0M 1A0, CANADA  
[E-mail: paul.abram@agr.gc.ca]
- Dr. Peter Adler, Department of Entomology, Clemson  
University, Long Hall, Box 340365, Clemson, South  
Carolina 29634-0365, USA [Tel: 864-656-5044, ext.  
5070; E-mail: padler@clemson.edu]
- Catarina Barros Afonso, Rua Abade da Loureira, 171, 1 Esq,  
4700-356 Braga, PORTUGAL [Tel: (00351) 911775247;  
E-mail: afonso.catarina@gmail.com]
- Dr. Evgeniy V. Aksenenko, Voronezh State University,  
Voronezh, 394006, RUSSIA [Tel: 7 4732 208884;  
E-mails: entoma@mail.ru, phasiinae@gmail.com]
- Deivys M. Alvarez G., Departamento de Zoologia, Instituto  
de Biociências, Universidade de São Paulo, Rua do  
Matão, Travessa 14, nº 101, São Paulo-SP, CEP 005508-  
0900, BRAZIL [E-mail: deivysalvarez@gmail.com]
- Roberto Andreocci, Dipartimento di Biologia e Biotecnologie  
“Charles Darwin”, Sapienza Università di Roma, Piazzale  
A. Moro 5, 00185, Rome, ITALY  
[E-mail: roberto.andreocci@libero.it]
- Mike Ashworth, 6 Farm Lane, Warrington WA4 3BZ,  
UNITED KINGDOM [Tel: +44 7710 482530; E-mail:  
mikeashworth1957@yahoo.co.uk]
- Dr. Turgut Atay, Plant Protection Central Research Institute,  
Ankara, TURKEY [E-mail: turgutatay60@hotmail.com]
- Dr. Susana Avalos, Zoología Agrícola, Facultad de  
Ciencias Agropecuarias, Avda Valparaíso, s/n Ciudad  
Universitaria, Universidad Nacional de Córdoba,  
Córdoba, ARGENTINA [E-mail: d-avalos@agro.unc.edu.ar]
- Mike Baldwin, 5340 Tudor Top Circle, Anchorage, Alaska  
99507, USA [Tel: 907-222-0316;  
E-mail: akmrbbaldwin@gmail.com]
- María Candela Barakat, Centro de Estudios Parasitológicos y  
de Vectores (CEPAVE, CONICET), Universidad Nacional  
de La Plata, La Plata, Buenos Aires, ARGENTINA  
[E-mail: candelabarakat@cepave.edu.ar]
- Dr. David Barraclough, School of Biological and  
Conservation Sciences, George Campbell Building,  
University of KwaZulu-Natal, Durban 4041, SOUTH  
AFRICA [Tel: 031-260-1612; E-mail: barracloughd@  
ukzn.ac.za]
- Dr. Maurizio Benelli, Research Officer, Department of  
Biological Sciences, Fauna Park, 205b Culloden Road,  
Macquarie University, NSW 2109, AUSTRALIA [Tel:  
+61 (2) 9850 4189; E-mail: maurizio.benelli@mq.edu.au]
- Mr. Christer Bergström, Säves väg 10, S-752 63 Uppsala,  
SWEDEN [E-mail: christer.bergstromzeta@outlook.com]
- Dr. Prakash M. Bhoje, 26, Sarswati Patil Nagar, Padali Khurd,  
Tal. Karveer, Dist. Kolhapur, Maharashtra, INDIA  
[E-mail: pmb\_bhoje@yahoo.co.in]
- Dr. Jeremy D. Blaschke, Department of Biology, Union  
University, 1050 Union University Drive, Jackson,  
Tennessee 38305, USA [Tel: 731-661-5768; E-mail:  
jblaschke@uu.edu]
- Mr. Jeff Boettner, Department of Plant, Soil and Insect  
Sciences, Fernald Hall, University of Massachusetts,  
Amherst, Massachusetts 01003, USA  
[E-mail: boettner@psis.umass.edu]
- Dr. Zelia L. Burington, Department of Biological Sciences,  
3640 Colonel Glenn Highway, Wright State University,  
Dayton, Ohio 45435, USA [E-mail: keroplatus@gmail.com]
- Dr. Cezary Bystrowski, Forest Research Institute, ul. Braci  
Lesnej nr 3, 05-090 Raszyn, POLAND  
[E-mail: C.Bystrowski@ibles.waw.pl]
- Dr. Hye-Woo Byun, Invertebrates Research Division,  
National Institute of Biological Resources, Environmental  
Research Complex, Gyoungseo-dong, Seo-gu, Incheon,  
404-170, SOUTH KOREA [Tel: 82-32-590-7154;  
E-mail: hwbyun@korea.kr]
- Dr. Bryan K. Cantrell, 3 Wingarra Street, Yeerongpilly,  
Queensland, 4105 AUSTRALIA [Tel: 61 7 3848 7904;  
E-mail: bjlcantrell@ozemail.com.au]
- Dr. Ronald D. Cave, Indian River Research & Education  
Center, University of Florida, 2199 South Rock Road, Ft.  
Pierce, Florida 34945, USA [Tel: 772-468-3922 x 145;  
E-mail: rdcave@ifas.ufl.edu]
- Dr. Pierfilippo Cerretti, Dipartimento di Biologia e  
Biotecnologie “Charles Darwin”, Sapienza Università di  
Roma, Piazzale A. Moro 5, 00185, Rome, ITALY  
[E-mail: pierfilippo.cerretti@uniroma1.it]
- Dr. Fernanda Cingolani, Centro de Estudios Parasitológicos y  
de Vectores (CEPAVE, CONICET), Universidad Nacional  
de La Plata, La Plata, Buenos Aires, ARGENTINA [Tel:  
+54 9221 5015821; E-mail: fernandacingolani@cepave.edu.ar]
- Dr. D.E. Conlong, SASA Experiment Station, Private Bag  
X02, Mount Edgecombe, 4300, Natal, SOUTH AFRICA  
[Tel: (031) 593205; E-mail: xentdc@sugar.org.za or  
conlong@iafrica.com]
- Heather Cumming, Plant Health Risk Assessment Unit,  
Canadian Food Inspection Agency, 1400 Merivale Road,  
Tower 1, Ottawa, Ontario K1A 0Y9, CANADA  
[E-mail: Heather.Cumming@inspection.gc.ca]
- Dr. Jeffrey Cumming, Canadian National Collection of  
Insects, Agriculture and Agri-Food Canada, 960 Carling  
Avenue, Ottawa, Ontario K1A 0C6, CANADA [Tel: 613-  
759-1794; E-mail: jeff.cumming@agr.gc.ca]
- Dr. Gregory A. Dahlem (retired), Department of Biological  
Sciences, Northern Kentucky University, Highland

- Heights, KY 41099, USA [E-mail: dahlemg@gmail.com]
- Mr. Abhijit Somanrao Desai, Zoology Department, Shivaji University, Kolhapur, Maharashtra, INDIA [E-mail: desai\_abhi25@rediffmail.com]
- Prof. Maria Luisa Dindo, Dipartimento di Scienze e Tecnologie Agro-Alimentari (DISTAL), Alma Mater Studiorum Università di Bologna, Viale Fanin, 42, 40127 Bologna, ITALY [Tel: +39 051 2096288; E-mail: marialuisa.dindo@unibo.it]
- Dr. Rodrigo de Vilhena Perez Dios, Pós-doutorando, Laboratório de Díptera, Museu de Zoologia, Universidade de São Paulo, Av. Nazaré, 481, 04263-000 - Ipiranga, São Paulo/SP, BRAZIL [Tel: 55-11-2065 8135; E-mail: rodrigodios@gmail.com]
- John Dobson, 46 Elmwood Avenue, Kenton, Harrow, Middlesex, HA3 8AH, UNITED KINGDOM [Tel: 07800 869 579; E-mail: bugs@jdobson.co.uk]
- Ms. Stephanie Erb, Lethbridge Research Centre, Agriculture and Agri-Food Canada, P.O. Box 3000, Lethbridge, Alberta T1J 4B1, CANADA [E-mail: stephanie.erb@agr.gc.ca]
- Dr. Neal L. Evenhuis, Department of Natural Sciences, Bishop Museum, 1525 Bernice Street, Honolulu, Hawaii 96817-2704, USA [Tel: 808-848-4138; E-mail: neale@bishopmuseum.org]
- Dr. Alan J. Fleming, Research Associate, Canadian National Collection of Insects, Agriculture and Agri-Food Canada, 960 Carling Avenue, Ottawa, Ontario K1A 0C6, CANADA [E-mail: ajfleming604@gmail.com]
- Mr. John P. Flynn, 274 Hainton Avenue, Grimsby, North East Lincolnshire, DN32 9LS, UNITED KINGDOM [E-mail: jpflynn100@hotmail.com]
- Dr. Prabhu C. Ganiger, PC Unit, AICRP on Small Millets, University of Agricultural Sciences, GKVK, Bangalore, Karnataka, INDIA [E-mail: prabhuganiger@gmail.com]
- Dr. Serge Gaponov, Voronezh State University, Voronezh, 394006, RUSSIA [Tel: 7 4732 208884; E-mail: gaponov2005@yahoo.ca]
- Dr. Mehdi Gheibi, Department of Plant Protection, Faculty of Agricultural Sciences, Shiraz Islamic Azad University, P.O. Box: 71993-4, Shiraz, Fars Province, IRAN [E-mail: mehghheibi@yahoo.com]
- Dr. Ebrahim Gilasian, Insect Taxonomy Research Department, Iranian Research Institute of Plant Protection, Agricultural Research, Education and Extension Organization (AREEO), Tehran 19395-1454, IRAN [Tel: 0098 (21) 22418982; E-mail: gilasian@iripp.ir, egilasian@yahoo.com]
- Dr. Marjolaine Giroux, Service des renseignements entomologiques, Collections entomologiques et recherché, Insectarium de Montréal, 4581, rue Sherbrooke E., Montréal, Québec H1X 2B2, CANADA [Tel: 514-872-0661; E-mail: marjolaine.giroux@montreal.ca]
- Dr. Catarina I. Gonçalves, RAIZ, Instituto de Investigação da Floresta e Papel, Eixo, Aveiro, PORTUGAL [E-mail: catarina.goncalves@thenavigatorcompany.com]
- Dr. Christian González, Instituto de Entomología, Facultad de Ciencias Básicas, Universidad Ciencias de la Educación, Santiago, CHILE [E-mail: christian.gonzalez@umce.cl]
- Dr. Simon Grenier, 6 rue des Mésanges, 69680 Chassieu, FRANCE [Tel: (0)4 78 90 46 51; E-mail: simon-grenier@orange.fr]
- Filipe Macedo Gudin, Departamento de Zoologia, Instituto de Biociências, Universidade de São Paulo, Rua do Matão, Travessa 14, n. 101, São Paulo - SP, CEP 05508-0900, BRAZIL [Tel: +55 11 3091 7511; E-mail: filipe.gudin@gmail.com]
- Dr. Ho-Yeon Han, Department of Life Science, Yonsei University, 234 Maeji-ri, Wonju-si, Gangwon-do 220-710, SOUTH KOREA [E-mail: hyhan@yonsei.ac.kr]
- Mr. Håkon Haraldseide, Ålavikvegen 4, 4250 Kopervik, NORWAY [E-mail: hharaldseide@gmail.com]
- Dr. Martin Hauser, Plant Pest Diagnostics Branch, California Department of Food & Agriculture, 3294 Meadowview Road, Sacramento, California 95832-1448, USA [Tel: 916-262-1190; E-mail: martin.hauser@cdfa.ca.gov]
- Shannon Henderson, Canadian National Collection of Insects, Agriculture and Agri-Food Canada, 960 Carling Avenue, Ottawa, Ontario K1A 0C6, CANADA [Tel: 613-759-1794; E-mail: shannon.henderson@agr.gc.ca]
- Rose Hiskes, The Connecticut Agricultural Experiment Station, 153 Cook Hill Rd., Windsor, Connecticut 06095, USA [E-mail: Rose.Hiskes@ct.gov]
- Dr. Zdravko Hubenov, Institute of Zoology, Bulgarian Academy of Sciences, Boul. "Tsar Osvoboditel" 1, 1000 Sofia, BULGARIA [E-mails: zkhubenov@abv.bg, zhubenov@nmnhs.com]
- Dr. Ryoko Ichiki, Japan International Research Center for Agricultural Sciences, 1-1, Ohwashi, Tsukuba, Ibaraki 305-8686, JAPAN [E-mail: richiki22@gmail.com]
- Dr. Diego J. Inclán, Instituto Nacional de Biodiversidad, Sección Invertebrados, Rumipamba 341 y Av. de los Shyris, Quito, ECUADOR [E-mail: djinclan@gmail.com]
- Dr. Daniel H. Janzen, Department of Biology, University of Pennsylvania, Philadelphia, Pennsylvania 19104, USA [Tel: 215-898-5636; E-mail: djanzen@sas.upenn.edu]. When in Costa Rica, Dan can be reached at Guanacaste Conservation Area: Tel: 506-695-5598, best to call at night or on weekends.
- Shin Komagata, Graduate School of Integrated Sciences for Global Society, Kyushu University, Fukuoka City, Fukuoka, 819-0395 JAPAN [E-mail: komagatashin@gmail.com]
- Dr. Ulrich Kuhlmann, Executive Director, Global Operations, CABI Bioscience Centre Switzerland, Rue des Grillons 1, CH-2800 Delémont, SWITZERLAND [Tel: +41-32-421 4882; E-mail: u.kuhlmann@cabi.org]
- Mr. A.R. Lahiri, Asst. Zoologist, Diptera Section, Zoological Survey of India, Prani Vigyan Bhavan, 'M' Block, New Alipur, Calcutta - 700 053, INDIA
- Prof. Dr. Gerlind U.C. Lehmann, Humboldt University Berlin, Department of Biology, Evolutionary Ecology, Invalidenstrasse 110, 10115 Berlin, GERMANY [E-mail: gerlind.lehmann@t-online.de]
- Alice Lenzi, Dipartimento di Biologia e Biotecnologie "Charles Darwin", Sapienza Università di Roma, Piazzale V. Massimo 6, 00162, Rome, ITALY [E-mail: alice.lenzi1996@gmail.com]
- Dr. Gerardo Liljeström, Museo de La Plata, Paseo del Bosque S/N, 1900 La Plata, ARGENTINA [E-mail: gerardo@cepave.edu.ar]

- Dr. John T. Lill, George Washington University, Department of Biological Sciences, 2023 G Street, NW, Suite 340, Washington, DC 20052, USA [Tel: 202-994-6989; E-mail: lillj@gwu.edu]
- Josh Lincoln, V.M.D., 107 Nannacher Road, Waterbury, VT 05676, USA [E-mail: Jkhlincoln@gmail.com]
- Dr. Richard L. Lindroth, Department of Entomology, 1630 Linden Drive, University of Wisconsin, Madison, Wisconsin 53706, USA [Tel: 608-263-6277; E-mail: lindroth@entomology.wisc.edu]
- Khong Lunaria, Department of Biological Sciences, Wright State University, 3640 Colonel Glenn Highway, Dayton, Ohio 45435, USA [E-mail: lunaria.2@wright.edu]
- Dr. Erikas Lutovinovas, Lithuanian Entomological Society, Akademijos 2, LT-08412 Vilnius, LITHUANIA [E-mail: wohlfahrtia@gmail.com]
- Dr. Jean-Michel Maes, Museo Entomologico, AP 527, Leon, NICARAGUA [Tel: 505-3116586; E-mail: jmmaes@ibw.com.ni]
- Victoria Makovetski, University of Victoria, Department of Biology, Victoria, British Columbia, CANADA [E-mail: vi2001ka@gmail.com]
- Dr. Steve Marshall, Professor Emeritus, School of Environmental Sciences, University of Guelph, Guelph, Ontario N1G 2W1, CANADA [E-mail: samarsha@uoguelph.ca]
- Cátia A.H. Martins, Department of Agricultural and Food Sciences, Alma Mater Studiorum University of Bologna, Viale Fanin 42, 40127 Bologna, ITALY [E-mail: catia.martins2@unibo.it]
- Dr. Peter G. Mason, Canadian National Collection of Insects, Agriculture and Agri-Food Canada, 960 Carling Avenue, Ottawa, Ontario K1A 0C6, CANADA [Tel: 613-759-1908; E-mail: peter.mason@agr.gc.ca]
- Manuel Mejia, Entomólogo, Agencia de Regulación y Control de la Bioseguridad y Cuarentena para Galápagos, Puerto Ayora, Santa Cruz, Galápagos, ECUADOR 200350 [Tel: +583 958756580; E-mail: manuelmejiaatoro@gmail.com]
- Rafael Menjivar, Crop Protection Department, Faculty of Agronomy, University of El Salvador, San Salvador, EL SALVADOR [E-mail: rafael.menjivar@ues.edu.sv]
- Dr. Kevin Moulton, Department of Entomology and Plant Pathology, University of Tennessee, 2431 Joe Johnson Drive, 205 Ellington Plant Sciences Bldg., Knoxville, Tennessee 37996-4560, USA [Tel: 865-974-7950; E-mail: jmoulton@utk.edu]
- Dr. Pablo Ricardo Mulieri, CONICET Museo Argentino de Ciencias Naturales “Bernardino Rivadavia”, Av. Angel Gallardo 470, C1405DJR, Buenos Aires, ARGENTINA [E-mail: mulierii@yahoo.com]
- Dr. Satoshi Nakamura, Japan International Research Centre for Agricultural Sciences, 1-2 Ohwashi, Tukuba, Ibaraki, 305, JAPAN [Tel: 0298-38-8318; E-mail: nsatoshi@affrc.go.jp]
- Dr. Vincent Nealis, Pacific Forestry Centre, Forestry Canada, 506 West Burnside Road, Victoria, British Columbia V8Z 1M5, CANADA [Tel: 250-363-0663; E-mail: vnealis@pfc.cfs.nrcan.gc.ca]
- Dr. Silvio S. Nihei, Departamento de Zoologia, Instituto de Biociências, Universidade de São Paulo, Rua do Matão, Travessa 14, n. 101, São Paulo - SP, CEP 05508-900, BRAZIL [E-mail: silvionihei@gmail.com]
- Dr. Enio Nunez, Secretaria de Estado de Agricultura do Rio de Janeiro, Núcleo de Defesa Agropecuária Vassouras, Rua Fernando Pedrosa Fernandes, 20, Sala 16, Centro, Vassouras - RJ - CEP 27.700-000, BRAZIL [Tel: 0055 24 2471 6841; E-mail: enionunez@engineer.com]
- Dr. James E. O'Hara, Canadian National Collection of Insects, Agriculture and Agri-Food Canada, 960 Carling Avenue, Ottawa, Ontario K1A 0C6, CANADA [Tel: 613-759-1795; E-mail: james.ohara@agr.gc.ca]
- Marcelo Pansonato, Coleção de Entomologia – Diptera, Museu de Zoologia, Universidade de São Paulo, Avenida Nazaré, 481, Ipiranga, São Paulo-SP, CEP 04263-000, BRAZIL [E-mail: marcelopansonato@hotmail.com]
- Dr. Thomas Pape, Zoological Museum, Entomology Department, Natural History Museum of Denmark, Universitetsparken 15, DK-2100 Copenhagen Ø, DENMARK [Tel: +45 3532 1106; E-mail: tpape@snm.ku.dk]
- Dr. Mehrdad Parchami-Araghi, 39 Seguin St., Ottawa, Ontario, K1J 6P2, CANADA [E-mail: maraghi20@yahoo.ca]
- Dr. Juan Manuel Perilla López, Bogotá, COLOMBIA [E-mail: jmperillal@gmail.com]
- Dr. Jaakko Pohjoismäki, Department of Biology, University of Eastern Finland, Room 340, P.O. Box 111, FI-80101 Joensuu, FINLAND [Tel. +358-2944-53052; E-mail: jaakko.pohjoismaki@uef.fi]
- Dr. Bandekodigenahalli M. Prakash, Evolutionary Biology Laboratory, Evolutionary and Organismal Biology Unit, Jawaharlal Nehru Centre for Advanced Scientific Research, Jakkur Post Office, Bangalore – 560064, INDIA. E-mail: prakashbm@gmail.com
- Prof. Hosagavi P. Puttaraju, Division of Biological Sciences, School of Natural Science, Bangalore University, Bangalore – 560056, INDIA [Tel: (R) +91-80-23284880; (O) +91-80-22961923; E-mail: puttarajuhp@hotmail.com]
- Dr. R.S. Ramya, Division of Genomic Resources, ICAR - National Bureau of Agricultural Insect Resources, P. Bag No. 2491, H.A. Farm Post, Bellary Road, Bengaluru, 560024 Karnataka, INDIA [E-mail: ramya.ento@gmail.com]
- Mr. Chris Raper, c/o Tachinid Recording Group, <http://tachinidae.org.uk/> [E-mail: chris.raper@tachinidae.org.uk]
- Marie Roche, European Biological Control Laboratory, USDA – ARS, Campus International de Baillarguet, 810, Avenue du Campus Agropolis, 34980 Montferrier-sur-Lez, FRANCE [Tel: 04 99 62 30 47; E-mail: mroche@ars-ebcl.org]
- Dr. Antonio Rodríguez, Department of Wildlife, Fish and Environmental Studies, Swedish University of Agricultural Sciences (SLU), SE-90183 Umeå, SWEDEN [E-mail: incamyia@gmail.com]
- Dr. Jens Roland, Department of Biological Sciences, University of Alberta, Edmonton, Alberta T6G 2E9, CANADA [Tel: 403-492-1180; E-mail: jroland@ualberta.ca]
- Dr. Tomas Roslin, Spatial Foodweb Ecology Group, Department of Agricultural Sciences, University of Helsinki, FI-00014, Helsinki, FINLAND [E-mail: tomas.roslin@helsinki.fi]

- Paul A. Rude, 1357 Addison Street, Berkeley, California 94702, USA [Tel: 510-644-3725; E-mail: paul.rude@berkeley.edu]
- Dr. Marcelo Domingos de Santis, Postdoctoral Fellow, Konrad Lorenz Institute for Evolution and Cognition Research, Martinstraße 12 A-3400, Klosterneuburg, AUSTRIA [E-mail: mrclsantis@gmail.com]
- Josenilson Rodrigues dos Santos, Doutorando em Ciências Biológicas (Zoologia), Lab. de Biodiversidade e Sistemática de Díptera, Dep. de Entomologia, Museu Nacional, UFRJ, Quinta da Boa Vista, São Cristóvão, RJ, BRAZIL [E-mail: jrsantos@mn.ufrj.br]
- Ken R. Schneider, 366 28th Street, San Francisco, California 94131, USA [Tel: 650-784-9627; E-mail: kschneil000@gmail.com]
- Dr. Franz-Rudolf (Rudi) Schnitzler, Manaaki Whenua-Landcare Research NZ Ltd., Private Bag 92170, Auckland Mail Centre, Auckland 1142, NEW ZEALAND [Tel: +64 9 574 4202; E-mail: schnitzlerr@landcareresearch.co.nz]
- Prof. Dr. Ulrich Schulz, Fachhochschule Eberswalde, Fachbereich Landschaftsnutzung und Naturschutz, Fachgebiet Angewandte Tierökologie und Zoologie, Friedrich Ebertstr. 28, 16225 Eberswalde, GERMANY [E-mail: Ulrich.Schulz@hnee.de]
- Mr. Peter Sehnal, Internationales Forschungsinstitut für Insektenkunde, Naturhistorisches Museum Wien, Burgring 7, A-1014 Wien, AUSTRIA [E-mail: peter.sehnal@nhm-wien.ac.at]
- Dr. Michael Sharkey, The Hymenoptera Institute, 116 Franklin Ave. Redlands, California, USA [Tel: (859) 396-1649, E-mail: msharkey@uky.edu]
- Miss Nilam N. Shendage, Zoology Department, Shivaji University, Kolhapur, Maharashtra, INDIA [E-mail: nilomkar.shendage@gmail.com]
- Dr. Hiroshi Shima, 2-11-1-406 Kusagae, Chuo-ku, Fukuoka 810-0045, JAPAN [E-mail: shimarcb@kyudai.jp]
- Mr. Dnyaneshwar Shinde, Bhogawati College, Kurukali, Kolhapur, Maharashtra, INDIA [E-mail: dragonfly.2009@rediffmail.com]
- Dr. Mike Singer, Department of Biology, Wesleyan University, Hall-Atwater Labs, Rm.259, Middletown, Connecticut 06459, USA [Tel: 860-685-2548; E-mail: msinger@wesleyan.edu]
- Dr. Jeffrey Skevington, Adjunct Professor, Carleton University, Ottawa, Ontario, K1S 5B6, CANADA [E-mail: jhskevington@gmail.com]
- Dr. John O. Stireman III, Department of Biological Sciences, 3640 Colonel Glenn Highway, 235A, BH, Wright State University, Dayton, Ohio 45435, USA [Tel: 1-937-775-3192; E-mail: john.stireman@wright.edu]
- Dr. Teresa Stoepler, Postdoctoral Associate, Virginia Tech, AHS Jr. Agricultural Research and Extension Center, 595 Laurel Grove Rd., Winchester, Virginia 22602, USA [Tel: 540-869-2560 x42; E-mail: teresa.stoepler@gmail.com]
- Dr. Xuekui Sun, 26 Courtney Cres, Richmond Hill, Ontario L4E 4B9, CANADA [Tel: 905-237-0240; E-mail: xuekuisun@hotmail.com]
- Dr. Takuji Tachi, Biosystematics Laboratory, Kyushu University, Motooka, Fukuoka 819-0395, JAPAN [E-mail: tachi@scs.kyushu-u.ac.jp]
- Dr. Ronaldo Toma, Fiocruz-Mato Grosso do Sul, Rua Gabriel Abrão, S/N, Jardim das Nações, Campo Grande, Mato Grosso do Sul, Cep: 79081-746, BRAZIL [Tel: 55-67-91262772; e-mail: rtkuna1@gmail.com]
- Diana Torres, Grupo de Estudios sobre Sistemática y Ecología de Dípteros Caliptrados, División Entomología, Museo Argentino de Ciencias Naturales “Bernardino Rivadavia”, Av. Angel Gallardo 470, C1405DJR, Buenos Aires, ARGENTINA [E-mail: dianamarcela24@gmail.com]
- Dr. Luis Miguel Torres-Vila, Jefe de Sección de Protección Integrada, Servicio de Sanidad Vegetal, Consejería de Medio Ambiente y Rural PAYT, Avda. Luis Ramallo s/n, 06800 Mérida, Badajoz, SPAIN [Tel. +34 924 002530 or +34 924 002529; e-mail: luismiguel.torres@juntaex.es]
- Dr. Hans-Peter Tschorsnig, (retired from) Staatliches Museum für Naturkunde, Rosenstein 1, D-70191 Stuttgart, GERMANY [E-mail: tschorsnig.ehrenamt@smns-bw.de]
- Mr. Godard Tweehuysen, Librarian, Library Netherlands Entomological Society, Plantage Middenlaan 45, NL-1018 DC Amsterdam, NETHERLANDS [Tel: + 31(0)20 5256246; E-mail: biblio@nev.nl]
- Guy Van de Weyer, Pieter Breughellaan, 26, B-2840-Reet, BELGIUM [Tel: 003238889269; E-mail: guido.vandeweyer@skynet.be]
- Prof. Jaromír Vaňhara, Department of Botany and Zoology, Faculty of Science, Masaryk University, Kotlářská 2, 611 37 Brno, CZECH REPUBLIC [Tel: +420 532 146 323; E-mail: vanhara@sci.muni.cz]
- Dr. Gergely Várkonyi, Friendship Park Research Centre, Finnish Environment Institute, Lentiirantie 342B, FI-88900 Kuhmo, FINLAND [E-mail: gergely.varkonyi@ymparisto.fi]
- Dr. Philippe Vernon, UMR 6553, CNRS, Université de Rennes 1, Station Biologique, 35380, Paimpont, FRANCE [Tel: +33 (0)2.99.61.81.69; E-mail: philippe.vernon@univ-rennes1.fr]
- Natalia Vinasco [Arias], Ag. Eng. University of Caldas, Agricultural Science Faculty, Manizales, COLOMBIA [Tel: (57) 321-8739817; E-mail: vinasco.natalia@gmail.com]
- Mr. Wang Qiang, College of Life Science, Nankai University, Tianjin 300071, P.R. CHINA [E-mail: wqmy\_mvp@126.com]
- Dr. Doreen Watler, 179 Irving Avenue, Ottawa, Ontario K1Y 1Z6, CANADA [E-mail: doreenwatler1@gmail.com]
- Mr. Nik Wiman, Department of Entomology, Washington State University, Tree Fruit Research and Extension Center, 1100 N. Western Ave, Wenatchee, Washington 98801, USA [Tel: 509-663-8181, ext. 277; E-mail: nwiman@wsu.edu]
- Dr. Isaac Winkler, Postdoctoral Research Associate, Cornell College, Mt Vernon, Iowa 52314, USA [E-mail: isw971@gmail.com]
- Dr. Helena K. Wirta, Spatial Foodweb Ecology Group, Department of Agricultural Sciences, University of Helsinki, FI-00014, Helsinki, FINLAND [E-mail: helena.wirta@helsinki.fi]
- Dr. Norman E. Woodley, 8920 S Bryerly Ct., Hereford, Arizona 85615, USA [Telephone: 240-750-7629; E-mail: normwoodley@gmail.com]

- Mr. Nigel Wyatt, Department of Life Sciences, Natural History Museum, Cromwell Road, London, SW7 5BD, UNITED KINGDOM [Tel: 0207 942 5197; E-mail: N.Wyatt@nhm.ac.uk]
- Dr. Erick Yabar L., P.O. Box 115, Cusco, PERU [E-mail: e\_yabar@yahoo.com]
- Dr. Andrew Young, Assistant Professor, School of Environmental Sciences, University of Guelph, Guelph, Ontario, N1G 2W1, CANADA [E-mail: andrew.young@uoguelph.ca]
- Dr. Theo Zeegers, Eikenlaan 24, NL 3768 EV Soest, THE NETHERLANDS [Tel: + 35 5885858; E-mail: th.zeegers@xs4all.nl]
- Dr. Zhang Chuntian, Liaoning Key Laboratory of Evolution and Biodiversity, Shenyang Normal University, 253 North Huanghe Street, Shenyang 110034, P.R. CHINA [Tel: 86 (24) 86578950; E-mail: chuntianzhang@aliyun.com]
- Dr. Joachim Ziegler, (retired from) Museum für Naturkunde, Leibniz-Institute for Research on Evolution and Biodiversity, Invalidenstrasse 43, 10115 Berlin, GERMANY [E-mail: joachim.ziegler@mfn-berlin.de]
- Gastón Zubarán, División Entomología, Museo Argentino de Ciencias Naturales “Bernardino Rivadavia”, Av. Angel Gallardo 470, C1405DJR, Buenos Aires, ARGENTINA [E-mail: zubgaston@gmail.com]
- Mr. Manuel A. Zumbado, Unidad de Atrópodos, Instituto Nacional de Biodiversidad (INBio), 22-3100, Santo Domingo, Heredia, COSTA RICA [Tel: 506-507-8222; E-mail: mzumbado@inbio.ac.cr]