Entomological Society of Brazil

NEWSLETTER

Year 50 | **July 2025** | Volume 70

ISSN 1676-353X

Activities of the Board

SICONBIOL
18° Simpósio de Controle Biológico
Expo Gramado | Gramado-RS

The program for the largest scientific event on biological control is organized.

There are about 80 days left before the 18th Symposium on Biological Control, an important technical-scientific event. Based in Gramado, RS, this edition will be a grand experience for the technical refreshing of the over a thousand participants expected at the event. This year, the novelty is in the inclusion into the program of the theme focused on bioinputs aimed at protecting plants and animal and human health in the expanded structure with Arena da Inovação, Espaço do Técnico, Technological Advances, and Frontiers of Knowledge in Biological Control. The event will take place between September 14 and 18 at the Centro de Eventos EXPOGRAMADO, with the central theme *The Future of Biological Control is Made of Science and Innovation.*

The event is held by the Entomological Society of Brazil (SEB) and promoted by Embrapa Temperate Climate, Federal University of Santa Maria (UFSM), and the Foundation for Support to Agricultural Research and Development Edmundo Gastal (FAPEG). Currently, it is the largest event in this area in Latin America and one of the largest in the world. The meeting brings together prominent national and international experts in this scenario, held since 1988, with a program aimed at opinion leaders by involving professionals from different areas of biological control, undergraduate and graduate students, and technicians from bioinput companies and public agencies.

Expectations are great, since the current market for bioinputs is growing rapidly, which makes Brazil the world leader in this area. Furthermore, in this edition at Gramado, in addition to the insect-pest area, special attention will be given to the control of diseases and nematodes, along with a programming focused on technicians and a focus on technological development.

The schedule is available on the event website

Those interested in the theme of the event can access the full program at *https://siconbiol.com.br/programacao*. Every day, the program features simultaneous technical lectures between 8:30 and 9:30, following the itinerary of the day with Round Tables, from 10:00 to 12:00, in which exchange of experiences of companies and institutions are presented; from 13:30 to 15:00, the Forums take place, and from 15:30 to 16:30, Siconbiol Talks, a space for discusions on technology, science, and purposes for a resilient and innovative biological control. The daily agenda will include the BioEmCena, with presentations of works that inspire and Sharing Knowledge, with poster sessions and oral presentations of scientific works, as well as the Seeds of Innovation, a section of the program for knowledge of scientific theses presented in three minutes.

If you still want to know who the experts will be at Siconbiol, see *https://siconbiol.com.br/palestrantes*

There is a new date to submit works

To participate in this intense and qualified program, the Organizing Committee extended the date to receive scientific papers for presentation within the various possibilities of dissemination at the event. The new date is July 15.

To submit your work to the event, you must complete the online form. You have to be registered for the event to make your submission. After registration, the author must access the User Area, locate the Abstract option in the internal menu, and fill out the electronic form. Access the area *https://siconbiol.com.br/resumos* within the event website. There, you will find the rules for presenting the abstracts, the thematic areas covered, general information, presentation forms, and award details.

Participation of the SEB in BioSummit 2025

On June 4 and 5, 2025, the Entomological Society of Brazil (SEB) actively participated in the second edition of BioSummit 2025, promoted by the FB Group. The event was held at Expo Dom Pedro, in Campinas, SP, bringing together approximately 1,000 participants from several Brazilian states, five countries, and more than 300 companies. Researchers, representatives of startups, companies, students, and public institutions participated in discussions on the advances and challenges of the bioeconomy, with special emphasis on bioinputs. With an institutional booth, SEB publicized its actions, publications, and scientific events, in addition to having promotional materials for sale. The participation also brought the Society closer to new audiences, strengthened ties with the productive sector, and helped solicit sponsorships for Siconbiol 2025, reinforcing the role of entomology in sustainable agriculture. One of the highlights of SEB's participation in the event was the lecture given by the president of SEB, Angelo Pallini, entitled "Promoting Scientific Excellence: The Role of the Entomological Society of Brazil," which highlighted the role of SEB in promoting entomological science and its interface with themes of innovation and sustainability.

SEB representatives at the institutional booth during BioSummit 2025: Solange Augusto, Renata Coutinho, and Angelo Pallini.

BioAssay

BioAssay

Dear colleagues,

In this second newsletter of 2025, we can relate that we continue our editorial activities at BioAssay. Just in the first half of this year, we have already received more submissions than all of last year, and we expect this number to reflect the number of articles published. However, to obtain new indexes, it is necessary to achieve some goals, and one of them is indexing in DOAJ (Directory of Open Access Journals). For this, we need to publish at least ten articles in the current year, and we still need the support of SEB members to submit their research articles to BioAssay. We believe that our journal is a good choice for the publication of its articles because it has the backing of an important scientific society like SEB, publishes all articles with open access and DOI, has no limit on the number of pages, does not charge submission and/or publication fees, has a short period between submission and the final decision, and is in several international indexes. Access our website, follow our social networks on Instagram, Facebook, and X (you will find a link to social media on our page - *https://www.bioassay.org.br/*), and submit your scientific papers for publication in BioAssay. BioAssay belongs to the SEB, and the SEB belongs to all of us.

Elio Cesar Guzzo
Editor-in-Chief of BioAssay
Embrapa Tabuleiros Costeiros
Daniell Rodrigo Rodrigues Fernandes
Executive Editor of BioAssay
National Institute of Amazonian Research

Introducing Neotropical Entomology's new logo

Neotropical Entomology has grown and evolved, and it was time to think of its branding. Branding is a key moment for any organization. It shows growth, evolution, and a renewed commitment to the public. One of the main elements in any branding effort is introducing a new logo. It represents the brand's identity and sets the tone for future direction.

They say a picture is worth a thousand words, and a fresh logo can do wonders for a consolidated journal like ours. That's why we embarked on a journey to create a new logo that perfectly represents and reflects the dynamic of our journal and the dedication of our team of professionals, our global reach, and our exciting future.

Creating a new logo can be a challenging and risky task, as it should represent the past, present, and future of Neotropical Entomology. A considerable amount of time, effort, and resources was invested into creating a visual identity that should aim to effectively represent our journal's values and ideas in a quality and attractive manner.

After a series of meetings between the SEB directorate and the designers, lots of brainstorming, sketching, and trial and error, we are excited to announce the launch of Neotropical Entomology's newly designed logo and brand identity.

The logo took inspiration from the head of an insect facing the observer and used the initials of the Neotropical Entomology name to complete the details of the face. The logo was designed within a geometric frame, with a focus on simplicity, balance, and functionality. The font, while being aesthetically pleasing, is also practical and functional.

The new Neotropical Entomology logo will serve as the central pillar of our visual identity, ensuring a unified and recognizable presence across all platforms. It will be prominently featured on our official website, in all our digital and print publications, social media profiles, and promotional materials. Furthermore, the logo will adorn our official correspondence, presentations, and will be incorporated into merchandise and event materials, such as conferences and workshops. This consistent application will not only reinforce the journal's professionalism and modernity but also facilitate instant brand recognition by researchers, students, and enthusiasts worldwide.

Dr. Khalid Haddi
Editor-in-Chief Neotropical Entomology
Dra. Juliana Hipólito
Deputy Editor-in-Chief Neotropical Entomology

Neotropical Entomology

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Entomology in the Press

Cockroaches on the Plate, No! Cultural and Economic Obstacles Limit the Future of Entomophagy

Although insects could be a promising sustainable source of protein, the study published in the journal npj Sustainable Agriculture (2025) reveals that psychological and economic barriers still prevent their widespread acceptance. Research shows that feelings of revulsion, ingrained eating habits, and the high cost of insect-based products make them difficult to adopt on a large scale, especially in developed countries. For entomologists and professionals who study insects, the research reinforces the importance of educational actions and market strategies to change social perceptions.

Link to the report: *https://g1.globo.com/meio-ambiente/noticia/2025/06/26/insetos-serao-a-carne-do-futuro-estudo-diz-que-nojo-e-custo-barram-avanco-na-utilizacao.ghtml*

Link to the article: *https://www.nature.com/articles/s44264-025-00075-z*

Out of Control Insects: Climate Change Propels Pests into Europe (and soon, the world)

A study published in Science of the Total Environment shows that climate change is driving the expansion of invasive insects in European agriculture. Cooler winters and prolonged summers favor the survival and increase in the number of generations per year of these pests. Highly adaptable exotic species are spreading faster, putting crops at increasing risk. For entomologists, the warning is clear: it is necessary to intensify monitoring, update distribution prediction models, and collaborate on international control strategies. The advance of these insects threatens not only agricultural production but also native biodiversity and food security.

Link to the report: *https://noticias.uol.com.br/ultimas-noticias/deutschewelle/2025/06/23/insetos-invasores-ameacam-agricultura-da-europa.htm*

Swarm of Locusts: They Don't Happen as We Expected

A study published in the journal Science in February 2025 revealed how desert locusts form highly coordinated swarms. Contrary to what has been thought, they do not simply follow the movements of neighbors, but use a simple neural representation to adjust their direction based on the visual perception of others. This discovery came from experiments that combined field, lab, and virtual reality. For professionals who study insects, the study brings a new paradigm to understand collective behavior, focusing on minimal cognitive processing rather than purely physical models. This paves the way for new strategies to monitor and control these pests that cause enormous agricultural losses.

Link to the report: *https://www1.folha.uol.com.br/ciencia/2025/03/cientistas-revelam-origem-dos-enxames-de-gafanhotos.shtml*

Link to the article: *https://www.science.org/doi/10.1126/science.adq7832*

Old Treasure: Brazil Repatriated Insect Fossils from the Araripe Basin

In April 2025, Brazil recovered 25 insect fossils from the Araripe Basin in Ceará that were being sold illegally abroad. The discovery occurred after a researcher identified the specimens on a sales website and alerted the Brazilian Attorney General's Office (PGR), which initiated the investigation. The fossils, dated to approximately 120 million years ago, were in an excellent state of conservation, allowing for detailed analyses of extinct species. This material has great importance for the study of insect evolution and the understanding of Lower Cretaceous ecosystems.

Link to the report: *https://www1.folha.uol.com.br/ciencia/2025/04/brasil-consegue-repatriar-25-fosseis-de-insetos-da-bacia-do-araripe.shtml*

Society Members

Professor Frederico Salles, from the Federal University of Viçosa (UFV) and an active member of our scientific community, is leading a pioneering initiative in 2025: the assessment of the risk of extinction of insects in the orders Ephemeroptera, Plecoptera, and Tricoptera in Brazil. Supported by ICMBio/MMA, this project marks the first inclusion of Plecoptera and Tricoptera in a national survey of this size, significantly expanding on previous work with Ephemeroptera.

With a team of about 15 experts, the group led by Prof. Salles completed the thorough "assessment workshop" in May, analyzing approximately 450 species by IUCN criteria to classify their risk. The current phase is "validation," ensuring the robustness of the data.

This effort is vital, as the final report will support public conservation policies, directing attention to critical areas. Worryingly, the reassessment of Ephemeroptera since 2019 showed no improvement; five species had increased risk, indicating a worrying situation, especially in places with a strong human impact, such as the Doce River Basin.

The inclusion of more groups and the collaborative character, with the participation of graduates, such as Mellis Rippel, reinforces the scope and importance of the study. SEB is proud of members like Professor Salles, who, through science, decisively contribute to protecting our biodiversity.

Information based on material published on June 25, 2025, on the UFV Entomology Graduate Program website: *www.pos.entomologia.ufv.br*.

Publicize Your Page

Hymenoptera Laboratory of the Museum of Zoology at USP – coordinates research focused on the systematics, evolution, and biology of wasps, bees, and ants. Linked to the Museum of Zoology at the University of São Paulo. Instagram: @hymenopteralab

ESALQ/USP Insect Biology Laboratory – develops research on biological control, nutrition, and insect breeding for pest management, with emphasis on agricultural applications. Connected with the "Luiz de Queiroz" College of Agriculture, University of São Paulo. Instagram: @biologiadeinsetos.esalq

Graduate Program in Entomology at INPA – dedicated to research in Amazonian entomology, focusing on the region's biodiversity and ecology of insects. Connected to the National Institute of Amazonian Research Instagram: @ppg.ent.inpa

Entomology Course at UFPR –offers courses, events, and scientific dissemination related to the study of insects, emphasizing teaching and research. Connected to the Federal University of Paraná. Instagram: @cursodeentomologia.ufpr

EntomoArt!

Digital representation of the native Mandaçaia bee (*Melipona quadrifasciata anthidioides*)
Author: Maria Gabriela Castro - Doctoral Student - Entomology Program – ESALQ/USP

Entomology Events

V National Congress of Entomology Online (V CONAENT)
Dates: August 6 to 8, 2025
Location: Online
Description A fully online congress featuring lectures, short courses, and opportunities to submit and present scientific papers. The online mode facilitates the participation of researchers from all over Brazil.

VIII International Symposium on Entomology of Viçosa (SIEV)
Dates: August 23 to 28, 2025
Location: Federal University of Viçosa (UFV), Viçosa, MG, Brazil
Description: This biannual event is organized by students of the Graduate Program in Entomology at UFV, with support from the Entomological Society of Brazil (SEB). The central theme of this edition is "Insects and Climate: invisible connections, global effects," addressing various aspects of entomology, from ecology to pest management in a context of climate change.

XVIII Symposium on Biological Control (SICONBIOL)
Dates: September 14 to 18, 2025
Location: Gramado, RS, Brazil
Descrição: One of the main events in Brazil on biological control, SICONBIOL brings together researchers and professionals to discuss the latest trends and technologies in the area, including using natural enemies for pest management.

XXVII Myrmecology Symposium (MIRMECO)
Dates: November 2 to 6, 2025
Location: Recife, PE, Brazil
Description: This Symposium, dedicated exclusively to the study of ants (myrmecology), addresses aspects of biology, ecology, behavior, and conservation of these fascinating social insects.

XIV Meeting on Bees (ESA)
Dates: November 19 to 22, 2025
Location: Ribeirão Preto, SP, Brazil
Description: The meeting focuses on research and conservation about bees, addressing topics such as pollination, beekeeping, taxonomy, and ecology of these important insects, which play a crucial role in ecosystems and agriculture.

Nomenclator entomologicus

124. The genus *Phthia* Stål, 1862 was divided into five genera, among which the genus *Phthiacnemia* Brailovsky, 2009, to which *Phthia picta* Drury, 1770 was transferred. Therefore, the valid name of the tomato bug is *Phthiacnemia picta* (Drury, 1770) (the only known species in the genus).

References
Brailovsky, H. 2009. Revision of the *Phthia* generic complex with a description of four new genera (Hemiptera: Coreidae: Coreinae: Leptoscelini). Acta Entomologica Musei Nationalis Pragae, 49(1): 59–74. CoreoideaSF Team. Coreoidea Species File Online. Version 5.0/5.0. <http://Coreoidea.SpeciesFile.org>. Accessed on 15 May 2025.
Roberto A. Zucchi (ESALQ/USP)

125. *Dorisiana drewseni* (Stål, 1854), a species of cicada recognized by its association with coffee culture, was transferred to the genus *Acanthoventris* Ruschel, 2023 (Ruschel et al. 2023) and should now be referred to as *Acanthoventris drewseni* (Stål, 1854). The genus *Acanthoventris* may be characterized by the spine-shaped projection of the anterior margin of the second sternite. Three species were transferred to this genus, and another new species was described, many exhibiting external morphology similar to *A. drewseni*, forming a species complex. Sanborn (2024) transferred one more species and expanded the distribution of others. This form *A. drewseni*, which previously had wide distribution in Brazil (Martinelli & Zucchi 1997), is now restricted to Minas Gerais, Goiás, and the Federal District. The occurrence of species in the country's coffee plantations must be reviewed to identify the species correctly.

References
Martinelli, N. M. & Zucchi, R. A. (1997). Cigarras (Hemiptera: Cicadidae: Tibicinidae) associadas ao cafeeiro: distribuição, hospedeiros e chave para as espécies. Anais da Sociedade Entomológica do Brasil, 26: 133-143.

Ruschel, T. P., Bianchi, F. M., Campos, L. A. & Carvalho, G. S. (2023). Total evidence analysis elucidates the tangled systematic scenario within Fidicinini (Hemiptera: Auchenorrhyncha, Cicadidae). Arthropod Systematics & Phylogeny, 81: 35-77.

Sanborn, A. F. (2024). The cicadas (Hemiptera: Cicadidae) of Uruguay with a key to known species and comments on species of the genus Acanthoventris Ruschel including the resurrection of a previously synonymized species. Zootaxa, 5399(4): 301-326.

Douglas H. B. Maccagnan (UEG de Iporá)
Nilza M. Martinelli (UNESP/FCAV)

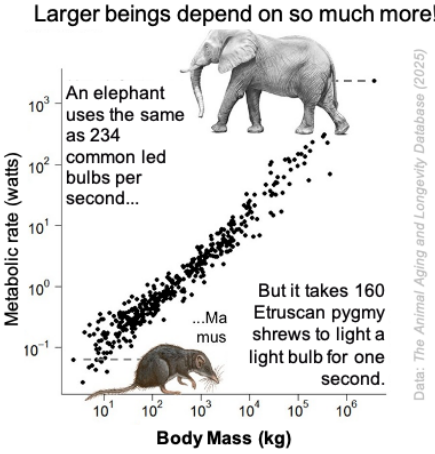
Popularization of Science

In the SEB Newsletter, the Popularization of Science section is our space dedicated to taking entomological discoveries beyond academia. In accessible language, we seek to bring the fascinating world of insects closer to students, teachers, rural producers, and enthusiasts, highlighting the relevance of entomology to society and the conservation of the environment.

In this issue, we are pleased to dive into a thought-provoking research that reveals a fundamental aspect of ant biology: how the metabolism of their colonies, true superorganisms, varies depending on their size and specific ecological characteristics. This is the study **"Divergent evolution of colony-level metabolic scaling in ants"**, published in the *Journal of Animal Ecology* by **Pedro A. C. L. Pequeno** and **Douglas S. Glazier**. This work, which can be accessed at: *https://besjournals.onlinelibrary.wiley.com/doi/epdf/10.1111/1365-2656.70055*, offers new perspectives on the complexity of life in ant society and how evolution shapes their energy use strategies.

1

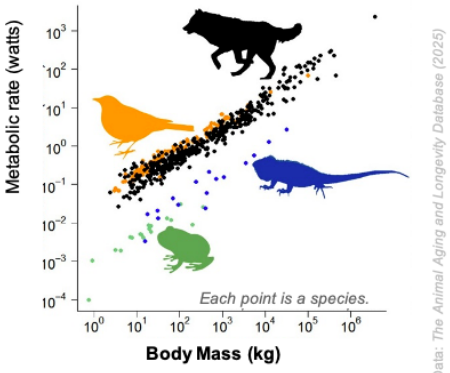
Living things depend on energy.
Larger beings depend on so much more!



For more than 100 years, scientists thought this relationship was fixed: **a law of nature...**

2

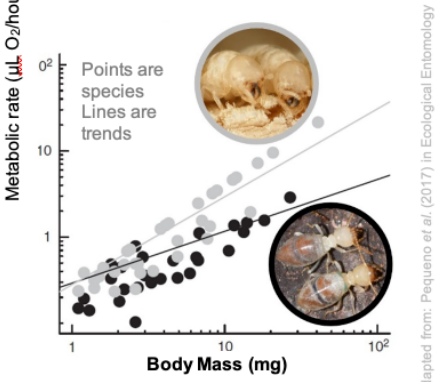
However, new data has accumulated and made it clear that the **relationship between metabolism and size is variable.**



For example, for the same size, some animals (**birds, mammals**) expend more energy than others (**amphibians, reptiles**).

3

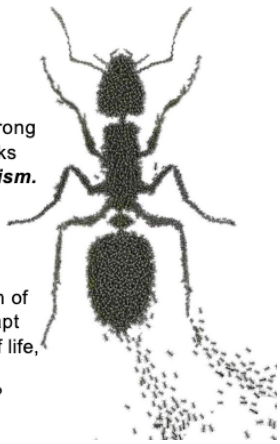
In addition, how much energy use increases with size depends on the **way of life.**



For example, wood-eating termites use more energy when larger than **soil-eating termites,** like worms.

4

In fact, animals like termites and ants have another "body": they live in **colonies** whose members have distinct functions, like **cells in an individual.**

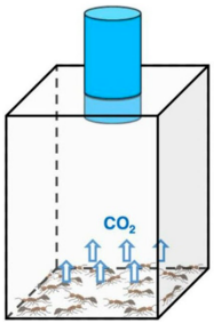


Sometimes this integration is so strong that the colony looks like a ***superorganism.***

Did the metabolism of entire colonies adapt to different ways of life, as if they were individual animals?

5

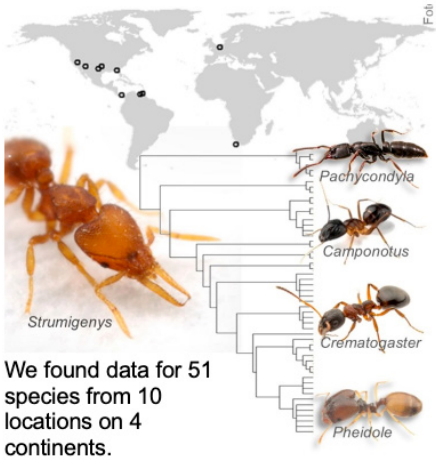
Measuring the energy use of entire ant colonies is challenging, but it is possible to: **respirometry!**



Our energy comes from burning what we eat along with the O_2 we breathe. This releases CO_2, the volume of which indicates this energy!

6

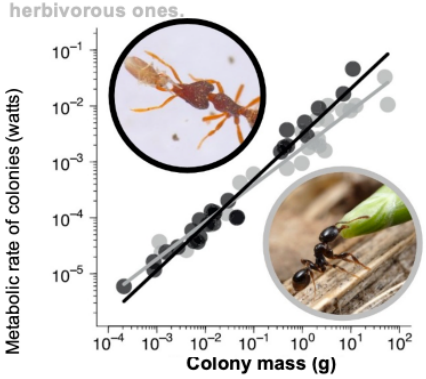
Knowing this, we looked for published data of energy use, size, and way of life of entire ant colonies.



We found data for 51 species from 10 locations on 4 continents.

7

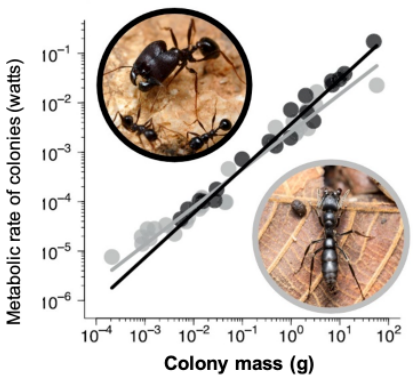
The energy expenditure of a colony grows faster with its size in **predatory** species than in herbivorous ones.



That makes sense: it is harder to hunt animals than to collect plants! Therefore, maintaining a predatory colony is more "expensive"...

8

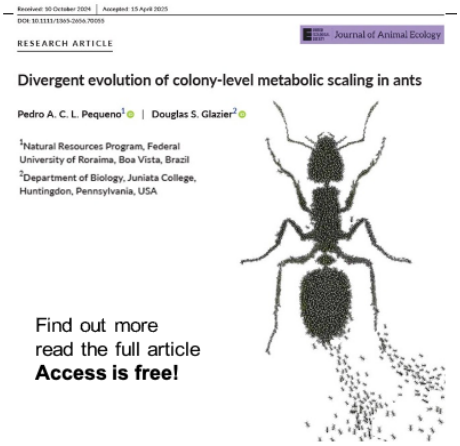
Colony expenditure also grows faster in **polymorphic** (with various types of workers) than in monomorphic species.



Perhaps the division of tasks among workers lets each one intensely do its specialty, increasing the total expenditure...

9

These findings suggest **common principles at different levels of life organization.**



Find out more read the full article **Access is free!**

The ISEB is translated into English by Alene Alder-Rangel, https://alderingles.wixsite.com/revisao-de-ingles

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Entomological Society of Brazil
NEWSLETTER

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