



Word from the President



This newsletter has great news to share about our Society: the creation of SEB Jovem and the increase in the impact factor of *Neotropical Entomology* journal. SEB Jovem is already pushing forward with a lot of participation on social networks! In the first half of the year, the regional representatives and the SEB Jovem logo were selected. The board of SEB thanks the coordinator, Cherre Bezerra da Silva, for his dedication and commitment to the creation of SEB Jovem. *Neotropical Entomology*

has achieved significant increase in its impact factor, confirming its evolution in the last 5 years. We congratulate all who contributed to this excellent result.

Read the report of the meeting about the Zoological Area Societies Forum, held in Curitiba, PR, and attended by the secretary general of SEB, Carmen Pires. In June, the board of SEB met in Santo Antônio de Goiás, GO, to verify the proposed activities by the parties were already executed, and to plan the next activities. Also check out the traditional sections of ISEB such as Worth reading, Entomology in the Press, Nomenclator Entomologicus, Members, and more recent sections such as Events in Entomology in 2019, Your Picture, EntomoArt!, and Comic strip”.

The next major biological control event in Latin America is the 16th Siconbiol, promoted by our society! The organizers of this event have prepared an incredible scientific and social agenda so that everyone can enjoy unforgettable moments with their colleagues! We will be waiting for you in Londrina in August.

Send your contributions to the Newsletter!

We appreciate the participation of Entomologists in our society.

See you later,
Eliane D. Quintela

Activities of the Board

SEB Jovem creation and winning logo

SEB Jovem was created in the first half of 2019. The young entomologists (undergraduate, graduate, and early-career professionals) consist of a coordinator and six members. The purpose of the group is to provide visibility to young people, to promote the diversity and integration of entomologists at the beginning of their career, and to contribute to their entrance and success in the labor market.

As coordinator of SEB Jovem, together with the board of SEB, I organized the selection of members and the logo. We congratulate the following selected members: Aline Guidolin, André Almeida Alves, Caio Cesar Truzzi, Eduardo Engel, Eliaber Barros Santos, and Ellen Patricia Souza. We received a total of 27 excellent applications from all regions of Brazil, except from North. As we received a larger number of candidates from the Southeast region (13 applications), we chose three members from this region to maintain the proportion. Vacancies for members from the North and abroad remain open until candidates are selected (if you are



Official logo of SEB Jovem, by Gabriella Maciel.



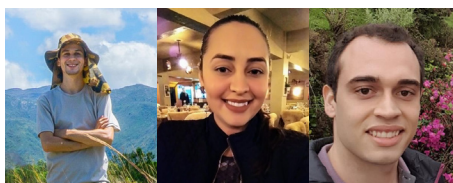
Cherre Bezerra da Silva
Coordinator of SEB Jovem



Eduardo Engel
SEB Jovem
Member - South

Aline Guidolin
SEB Jovem
Member - Southeast

Eliaber Barros Santos
SEB Jovem
Member - Northeast



André Almeida Alves
SEB Jovem
Member - Southeast

Ellen Patricia Souza
SEB Jovem
Member - Centralwest

Caio Cesar Truzzi
SEB Jovem
Member - Southeast

interested please contact the SEB secretary). For the selection of the logo, we received more than 90 proposals, all of high quality and creativity. We congratulate Gabriella Priscila Maciel for creating the chosen logo. We would also like to thank all the candidates who participated in the process to select the logo and members of SEB Jovem.

Cherre Bezerra da Silva
Coordinator of SEB Jovem

Neotropical Entomology

Congratulations to excellent editors of *Neotropical Entomology* for the significant increase in impact factor. Our sincere gratitude to the Editor-in-Chief, Eliana Fontes, and to the Substitute Chief Editor, Raul Laumann. We thank every editor, the publisher Springer, and everyone involved in this process! The following table exhibits the evolution of the impact factor, rank, and quartile in the last 5 years.

Year	Impact Factor	Rank	Quartile
2014	0.772	58/92	Q3
2015	0.834	55/94	Q3
2016	0.756	58/93	Q3
2017	0.886	57/96	Q3
2018	1.090	50/98	Q3

Forum of Societies in the Zoology Area Meeting

On May 30, Carmen Pires participated, as SEB representative, a meeting of the Forum of Societies in the Zoology Area, which took place in Curitiba, PR. This Forum was created on May 9, 2007, in Brasília, in a meeting at the Ministry of Science and Technology. It is made up of 14 scientific societies and is coordinated by SBZ - Sociedade Brasileira de Zoologia. The main objective of the forum is to integrate the national scientific societies in the areas of zoology to represent the scientific community to society and government agencies.

The meeting in Curitiba was attended by 12 of the 14 Societies that make up the Forum. The following agenda were discussed: 1) joint strategies to strengthen the Societies participating in the Forum; 2) strategies for organization and greater dynamism of the Forum; 3) proposal to organize a symposium about the Forum of Societies at the next Brazilian Congress of Zoology; 4) Creation of Working Groups to discuss specific topics, such as the Bill being



Representatives of the Societies that participated in the meeting of the Forum of Societies of the Area of Zoology



negotiated in the National Congress with the objective of liberating the hunting of wild animals, Science and Technology Policies, Education Policies, Biodiversity Law (CGEN, SISGEN, SISBIO).

SEB Board of Directors Meeting

On June 3, the board meeting of SEB took place in Santo Antônio de Goiás, GO. The meeting was attended by President Eliane Quintela, Treasurer Flávia Barbosa, Secretary General Carmen Pires, Substitute Editor-in-Chief of the *Neotropical Entomology* Raul Laumann, SEB Jovem Coordinator Cherre Bezerra, Executive Secretary Renata Coutinho, and Trainee Beatriz dos Santos. The purpose of the meeting was to discuss the work of the board and plan the next activities. The



SEB Board of Directors meeting in Santo Antônio de Goiás, GO, on June 3 2019. From left to right: Cherre Bezerra, Renata Coutinho, Beatriz dos Santos, Eliane Quintela, Flávia Barbosa, Carmen Pires and Raul Laumann.

meeting dealt with SEB Jovem matters; report about Forum of Societies in the Zoology Area; Work plan; Performance in Public Policies; *Neotropical Entomology*; Regional Representatives; Creation of a database of taxonomists and insect breeding locations; and updating the “Who’s Who”. Some activities have been delegated to the participants. Entomologists who are interested in collaborating with ideas for the improvement of our Society, please contact us (secretaria@seb.org.br).

Siconbiol 2019

is coming soon!



The 16th Siconbiol, to be held in Londrina, PR, August 11-15, 2019, is approaching. The Organizing Committee, together with the Board of SEB, are eager to share some news that was kindly prepared. The rich and very diverse scientific programming can be viewed in its entirety at www.siconbiol.com.br. On August 11, the grand opening ceremony will occur with the lecture by Dr. José R. P. Parra from ESALQ/USP. Also at this ceremony, the president of the International Congress of Entomology will present about ICE 2020. On Monday, a room will be reserved for biological control of diseases, where

we expect a massive presence of phytopathologists. Two symposia, held by *Neotropical Entomology* and IOBC, in partnership with SEB, will take place at Siconbiol, aiming at increasing cooperation between the institutions. In addition to the rich scientific programming, cultural programming is packed. On August 12, we will have the 1st Entomological Race of SEB. For socializing, there will be a big event with a 3-hour music show, the best FOOD TRUCKS of Londrina, and a great display of insects. On the 13th, we will have a social at the “Valentinos” bar, one of the most traditional in Londrina, with the band Sr. Bonifácio, which plays the best of Classic Rock from the 1980s. On Thursday, we will close the event at lunch with a great barbecue for socializing where the guests can taste the traditions of the real gaúcho barbecue. Approximately 500 have already registered for the event. You cannot stay out of this, come to Londrina! Access www.siconbiol.com.br and guarantee your registration. Follow our Facebook and Instagram pages to stay up to date.

Adeney de Freitas Bueno
President of the 16th Siconbiol

Entomology in Focus

Challenges in the use of synthetic insecticides and the selection of resistant populations of pest insects

Publications that detect the existence of populations of insect pests resistant to insecticides have become frequent. One reason is that more scientists are working in this line of research, so it is natural that the number of publications increases. However, the productive systems in Brazil characterized by subsequent planting of crops in a succession has become more complex and intensive.

Polyphagous species benefit from these cultures by counting on two or even three host cultures, on the same property, throughout the year. Thus, insects do not need to migrate long distances in search of hosts; therefore, the number of generations of the pest in the same area rises. Consequently, these species are in constant contact with insecticides, which are most often the same molecules used for pest control in both crops. Thus, the process for selection of resistance becomes intensive due to the low rotation of active ingredients. For some Lepidoptera species, selection pressure on insecticides had been reduced with the advent of transgenic corn and cotton cultivars with *Bacillus thuringiensis* (Bt) protein expression, since the need for chemical control was significantly reduced. However, the misuse of this technology led to a rapid breakdown of resistance, for example, *Spodoptera frugiperda* to some Bt proteins, again raising the number of insecticide sprays in cultivars of those cultures expressing proteins in which resistance has broken down.

Another example of insect-pest that has benefited from intensive productive system and thus the number of sprays with insecticides to control it has increased each harvest is the whitefly *Bemisia tabaci*. Low-efficiency reports of active ingredients, once thought to be effective, have become prevalent. These reports are described by

farm technical teams or extension agents, especially in technical visits that occurred first few weeks of March 2019. After visiting several cotton growing properties in Mato Grosso, we verified that the severity of *B. tabaci* attacks on cotton, especially after soybean harvest, has increased significantly and this is a widespread problem in the state.

Including seed treatment, during the first 50 days after plant emergence, the cotton crop in Mato Grosso receives about 5–6 applications of insecticides to control this pest. Practically 100% of the sprays use only neonicotinoids, and within this chemical group, almost all applications are only one active ingredient. In addition, a scientifically supported criterion for control decision is not used, although there is the level of control established for this pest. When asked why they do not use other chemical groups that are more efficient and selective to natural enemies, the response is always related to the higher cost of these molecules, although they realize that the risk of insecticide resistance is imminent. To paraphrase Dr. Peter Ellsworth of the University of Arizona, keep in mind that an expensive insecticide is one that it does not satisfactorily control the pest, as additional applications will be need.

The cited examples demonstrate that the greatest challenge for efficient use of chemical control is linked to the low availability of rural extension in our country, be it public or private. Many of farmers’ pest control challenges are not due to lack of research, but rather transfer of technology, because the answers to the problems have already been found.

Avoiding generalizations, most consultancies are increasingly specialized in achieving higher production ceilings, not in the phytosanitary control of crops, as they opt for preventive pest control and consequently increase the number of sprays. The solution to this impasse is not so simple. Because to offer a more efficient consulting service, they must

provide the pest monitoring service or the producer must conduct or hire a pest monitor, and this in theory would raise the cost of production. However, several experiments have found that investing in good monitoring and compliance with pest control levels provides a significant cost savings and reduces secondary problems of insecticide misuse such as pest resurgence, population explosions of other species, and selection of populations resistant to insecticides. In short, the best resistance management strategy is the presence of effective technology transfer so that we can effectively implement Integrated Pest Management and thus reduce the selection of insecticide-resistant individuals and any other control tactics.

Rafael Major Pitta – Embrapa Agrossilvopastoral
Jacob Crosariol Neto – Instituto Mato-Grossense do Algodão
Guilherme Gomes Rolim – Instituto Mato-Grossense do Algodão

Entomology in the Press

In an interview, Celso Godinho Jr. shared with the public some of his passion for coleoptera. The enthusiast commented that this passion began in childhood, when he was charmed by the shape, size, and color of these insects. Over the decades, he has gathered more than 100,000 specimens of beetles from Brazil and around the world, which have been studied in detail. Historical and zoological information, as well as illustrations of some of these specimens, have been gathered in the main bibliographical reference existing in the Portuguese language: “Besouros e seu Mundo” (Beetles and their World).

Source: <http://observacoesnaturalistas.blogspot.com/>



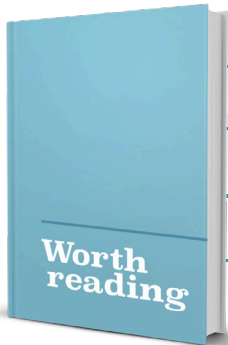
Nomenclator entomologicus

103. The identities of two morphs that appear closely related to *Doryctobracon areolatus* (Szépligeti), braconid parasitoids of fruit-infesting fruit flies, were clarified by means of morphometric and molecular analyses. The morphs represent two species

– *D. whartoni* and *D. adaime* – both described by Marinho & Penteado-Dias (2017). Additionally, the analyses show that *D. areolatus* corresponds to a complex of cryptic species.

Reference. Marinho, C. F., Cônsoli, F. L., Pente-

ado-Dias, A. M., Zucchi, R. A. 2017. Description of two new species closely related to *Doryctobracon areolatus* (Szépligeti, 1911) (Hymenoptera, Braconidae), based on morphometric and molecular analyses. *Zootaxa* 4353(3): 467-484.



Viviani, V. R.; Gabriel, G. V.; Bevilacqua, V. R. et al. (2018). The proton and metal binding sites responsible for the pH-dependent green-red bioluminescence color tuning in firefly luciferases. *Scientific Reports* 8(1): 17594.

Abreu, F. V. S.; Ribeiro, I. P.; Ferreira-de-Brito, A. et al (2019). *Haemagogus leucocelaenus* and *Haemagogus janthinomys* are the primary vectors in the major yellow fever outbreak in Brazil, 2016–2018. *Emerging Microbes & Infections* 8(1): 218-231.

Bezerra Da Silva, C. S.; Price, B. E.; Walton, V. M. (2019). Water-deprived parasitic wasps (*Pachycrepoideus vindemmiae*) kill more pupae of a pest (*Drosophila suzukii*) as a water-intake strategy. *Scientific reports* 9: 3592.

Dorigo, A. S.; Rosa-Fontana, A. S.; Soares-Lima, H. M. et al. (2019). In vitro larval rearing protocol for the stingless bee species *Melipona scutellaris* for toxicological studies. *PLoS One* 14(3): e0213109.

Sousa, K. K. A.; Silva, N. N. P.; Querino, R. B. et al. (2019). Diversity, seasonality, and egg parasitism of hemipteran (Coreidae and Pentatomidae) from a cowpea crop in northeastern Brazil. *Florida Entomologist* 102(1): 29-35.

Entomology Events in 2019

- XVIII congresso Ibérico de Entomologia – July 10 to 13, Madrid, Spain.
- III Course of Entomology in the Amazônia – July 22 to 26, Manaus, AM, Brazil.
- II International Workshop on Chemical Ecology of Multitrophic Interactions – July 29 – 31, Lavras, MG, Brazil.
- MedTrop – July 28 to 31, Belo Horizonte, MG, Brazil.
- V Brazilian Phytosanitary Congress – August 7 to 9, Curitiba, PR, Brazil.
- 16th Biological Control Symposium (Siconbiol) – August 11 to 15, Londrina, PR, Brazil.

- II Entomology Congress of Piauí – August 18 to 21, Teresina, PI, Brazil.
- Biocontrol LATAM – August 28 to 30, Campinas, SP, Brazil.
- VI Entomology Symposium at UFV – September 15 to 20, Viçosa, MG, Brazil.
- V Symposium of Thermitology (V SymTermes) – September 1 to 5, Universidade Federal do ABC, São Bernardo do Campo, SP, Brazil.
- XIth International Symposium on Thrips and Tospoviruses – September 21 to 25, Kunming, China.

- XXIV Symposium on Mirmecology – September 30 to October 4, Belo Horizonte, MG, Brazil.
- I Latin American Symposium on Biological Control – October 8 to 11, Chillán, Chile.
- XI Brazilian Meeting of Chemical Ecology – October 23 to 26, Maceió, AL, Brazil.
- I Brazilian Congress about Insects in Human and Animal Food – November 6 to 8, Montes Claros, MG, Brazil.
- XII International Pollination Course – November 17 to 29, Ilha do Cardoso, SP, Brazil.

Comic Strip

Artist: Renan Geovani Mansano
Graphic Design –
Universidade Estadual de Londrina - PR



Your Picture

Author: André Alberto Witt

Observation: photo sent to the photo contest promoted by CBE 2018, in Gramado, RS.

>> Send to the editors

(informativoseb@gmail.com) your best insect photograph, in digital format, to be selected and published here! It should contain the following information: author's name, academic background, title, and place where it was taken.



EntomoArt!

Edessa meditabunda (F)

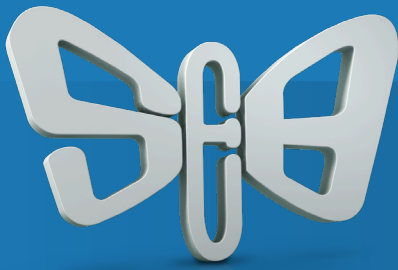
Artist: Giulianne Simizu Calizotti

Biologist - External Collaborator - Universidade Estadual de Londrina, Londrina, PR.>>

>> Send to editors

(informativoseb@gmail.com) your best art containing insects, in digital format, to be selected and published here! It should contain the following information: author's name, academic background, and title.





SEB MEMBERSHIP 2019

Professional	Student*	Foreigners
Online Journal R\$ 150,00	Online Journal R\$ 75,00	Online Journal US\$ 75,00
Online and Printed Journal R\$ 200,00	Online and Printed Journal R\$ 100,00	Online and Printed Journal US\$ 120,00

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Entomological Society of Brazil

NEWSLETTER



Editors

Élison Fabrício Bezerra Lima

UFPI - Universidade Federal do Piauí
elisonfabricio@hotmail.com

João Antonio Cyrino Zequi

UEL - Universidade Estadual de Londrina
joaozequi@gmail.com

Wanessa Scopel

UNEMAT - Universidade do Estado de Mato Grosso
scopelw@hotmail.com

Rodovia GO-462, Km 12
Santo Antônio de Goiás - GO
Caixa Postal: 179 CEP: 75375-000
Fone: (62) 3533-2206

www.seb.org.br

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