



# The Word of the President



## Dear entomologists,

This issue provides important information to our SEB entomologist members of: we have a new Editor of our “Entomology in Focus” Book Series, which is published in partnership with the publisher Springer; a message from the editors of *Neotropical Entomology*, the best-ranked entomology journal in Latin America, with information about the activities performed to promote the journal and attract quality and

highly relevant scientific publications; we will discuss about the future of journal *BioAssay*, which needs to be reorganized and is also looking for a new editor; we will report on the activities carried out during the 15th Siconbiol, including an exclusive interview with Prof. Dr. Marcos Kogan, the keynote speaker at the event. The section “Worth Reading” suggests reading one of the articles published in *Neotropical Entomology*, which obtained “an exceptional achievement” of more than 1,000 downloads! The “Nomenclator Entomologicus” has the new classification of the ectoparasitoid of the cotton boll weevil larvae. In the “Entomology in the Press” section, you

will read the exciting story of the 8-year-old girl, who suffered from bullying due to her love for insects and published a scientific article. In addition, in the section “From the Associates,” the reader will find information on a rare species of insect found in wheat plants.

Good reading!

A strong Society is Society that everyone participates! We count on you!

Fraternal hugs,  
**Eliane D. Quintela**

## Activities of the Board

### New Editor of the Series “Entomology in Focus”

Professor Dr. Simon Luke Elliot has recently been appointed by the President of SEB as the new Editor of the Books Series “Entomology in Focus” (EF). Welcome Dr. Simon, a renowned professor and coordinator of the Postgraduate Program in Entomology at University Federal de Viçosa. His specialty is Ecology, with emphasis on interactions between insects and plants. Before becoming a UFV professor, Prof. Simon, whose academic and professional background was in the UK and the Netherlands, served as Senior Lecturer at the University of Gloucestershire, creating and coordinating several undergraduate courses. We wish you great success as EF Editor. *Entomology in Focus* is the result of a partnership between the Entomological Society of Brazil and Springer for the publication of books on Entomol-

ogy. The Series is intended to accelerate our understanding of insect diversity, lifestyles, and ecology by providing a broad understanding of how these organisms can affect our lives and how we can reduce their harmful effects and exploit the benefits they provide for nature and humans. Therefore, the books in this series should provide a comprehensive overview of basic and/or applied topics in the field of Entomology.

Learn more about EF and consult volumes already published at: <http://www.springer.com/series/10465>

*Eliana Fontes*

### Neotropical Entomology

About a year ago, we took over **Neotropical Entomology**, the best-ranked entomology journal in Latin America, with the determination to maintain the quality of the journal. The quality is thanks to eight years of dedication of the former Editor-in-Chief, Professor Fernando L. Cônsoli. Our aim is to promote **Neotropical Entomology** in different forums as the best journal to publish entomological research conducted in the tropics and to develop other campaigns to attract excellent scientific publications with high relevance for agriculture, environment, and public and veterinary health from the Neotropical Zone.

The Editorial Board of the Journal contains renowned experts from Brazil, Latin America, United States, and Europe, and it is constantly refreshed by their resignation after years of dedication with the entry of new specialists, who bringing new energy and enthusiasm to our job. To

learn about our excellent Editorial Board, please see the Journal’s webpage at <http://www.springer.com/life+sciences/entomology/journal/13744/PS2?detailsPage=editorialBoard>.

Take advantage to browse the entire page and see the latest articles published online. Sign up to receive publication alerts and the index of each new issue of *Neotropical Entomology*.

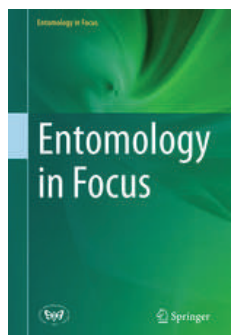
To streamline the publishing process, we have adopted the “Online First” format of Springer, in which articles are published online shortly after they have been accepted. The printed format is produced in an annual volume divided into six issues (February, April, June, August, October, and December).

In 2016, 407 manuscripts from 41 countries and all continents were submitted. This clearly demonstrates the internationalization of our journal! In 2017, we are ahead and have already published all the issues from February to December. We already have articles in the online format ready to be distributed in the next three printed issues. Ascertain the quality of the publications by browsing the Online First articles available

on the **Neotropical Entomology** website.

In a meeting of the editorial board, which was attended by two former Editors-in-Chief of the journal, we discussed and reviewed some aspects of the editorial policy. To maintain the standard of excellence achieved by **Neotropical Entomology**, we defined the main objectives of the editorial policy for the next two years:

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*Professor Dr. Simon Luke Elliot, new editor of the “Entomology in Focus” (EF) book series.*



- To actively publicize **Neotropical Entomology** as the best ranked Entomology journal in Latin America;
- Increase the participation of experts from other countries in the Neotropical region on the Editorial Board, which we have already achieved to a great extent;
- Increase the impact factor with actions such as: - Shortening the manuscript revision time; - Focus on emerging entomological issues and strong appeal to the entomological community and society in general in the Forum Section, by assigning a dedicated Editor to this Section; - Promote greater visibility of the journal through the dissemination in different scientific forums related to Entomology.

We are open to suggestions to improve **Neotropical Entomology**; please send us an email with your ideas.

Eliana Fontes / Editor

Raul Laumann / Associate Editor

#### The future of BioAssay journal

The future of the BioAssay journal has been a concern among SEB's members, because although it is already 10 years old, it has no impact factor, it is not indexed, it has a very overarching name, and it has published few articles.

Some partners believe that to avoid competing with **Neotropical Entomology**, this journal should be the vehicle to disseminate SEB to the productive sector, by bringing relevant information and local research data. There are excellent researchers who collect valuable data in the most diverse cultures and pests throughout the country, which are presented only at scientific events. Some quality data would not be appropriate for publishing in journals that target the academic audience because they are restricted to local interest. In this case, there would be no need to obtain an impact factor, and perhaps **BioAssay** might receive a larger number of citations than **Neotropical Entomology** if relevant data from



local research, various technical recommendations, etc. were disseminated.

The suggestion is that we create a new journal. It was suggested that we change the name of the journal to "Arthropods Bioassays" and publish "Short Reports" (as was the idea when it was conceived), as in the "Journal of Arthropod Management Tests" (<http://amt.oxfordjournals.org/>), published by the Entomological Society of America (ESA). The idea is to publish the journal online, in Portuguese and English. Could you please send us suggestions about this change and about an editor for the journal? Please send suggestions to [secretaria@seb.org.br](mailto:secretaria@seb.org.br).

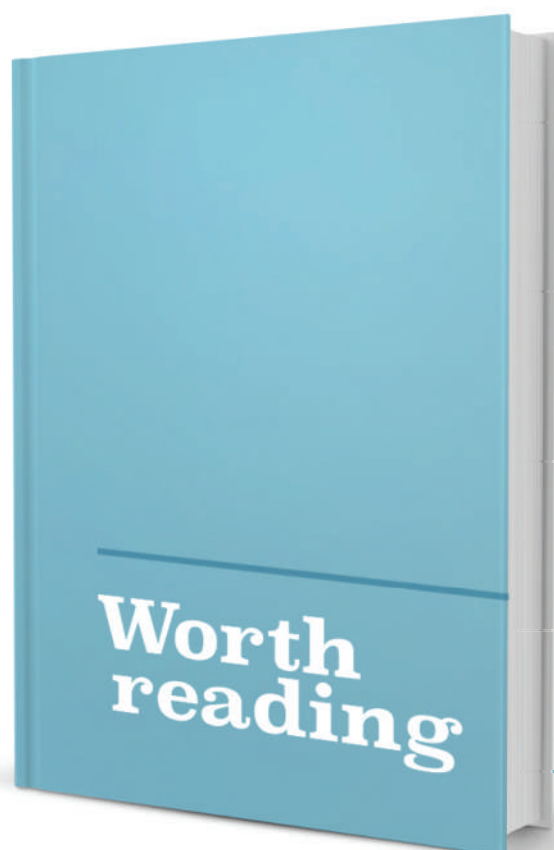
Eliane D. Quintela

## Nomenclator entomologicus

98. The cotton boll weevil, *Anthonomus grandis* Boheman, 1843 (Coleoptera: Curculionidae) has as one of its main natural enemies the ectoparasitoid of *Catolaccus grandis* (Burks, 1954) (Hymenoptera: Pteromalidae) larvae. Gibson (2013) studied the genera of *Pteromalidae* *Lyrcus* Walker 1842, *Catolaccus* Thomson 1878, *Eurydinotelooides* Girault 1913, *Trimeromicrus*

Gahan 1914, and *Jaliscoa* Bouček 1993, re-evaluating and redefining their limits, to better reflect their morphological characteristics. Nine of the 13 *Catolaccus* species from the New World were transferred to other genera, among them *C. grandis*. Therefore, *Jaliscoa grandis* (Burks, 1954) is the valid name for this important parasitoid of the cotton boll weevil. **Reference:**

Gibson, G.A.P. 2013. Revision of the species of *Jaliscoa* Bouček within a review of the identity, relationships and membership of *Jaliscoa*, *Catolaccus* Thomson, *Eurydinotelooides* Girault, *Lyrcus* Walker and *Trimeromicrus* Gahan (Hymenoptera: Pteromalidae). *Zootaxa* 3612: 1-85. <http://dx.doi.org/10.11646/zootaxa.3612.1.1>. Valmir Antonio Costa.



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BURKS, J.M.; PHILPOTT, S.M. Local and Landscape Drivers of Parasitoid Abundance, Richness, and Composition in Urban Gardens. **Environmental Entomology**, v.46, n.2, p.201-209, 2017. DOI: <http://doi.org/10.1093/ee/nvw175> Published: 08 March 2017



# Entomology on the Press

## Girl who suffered bullying for loving insects published scientific article

Insect lover Sophia Spencer, 8 years old, has published a scientific paper with the help of researcher Morgan Jackson and the Entomological Society of Canada (ESC). This occurred because the girl suffered bullying from her schoolmates because she liked these animals very much, until her mother decided to send a letter to the institute.

In the text, her mother explained Sophia's situation and asked for help to encourage her daughter to continue her love of insects and even pursue a career in the field: "If someone could maybe talk to her for even five minutes, or who won't mind being a pen pal for her, I would appreciate it so much."

The Society ended up seeing the letter and posting it on their Twitter, which generated great repercussion and the creation of the tag #BugsR4Girls. Soon the story became famous and she began to receive messages of affection and encouragement from all over the world, and that is where Morgan Jackson's invitation initiated.

The researcher made an impact analysis of the girl's story in a special issue of the *Annals of the Entomological Society of America* and invited Sophia to write part of the text. The article details how the tweet and tag contributed to the scientific commu-

nication and public perception of entomology and, as a case study, also summarizes several useful social media lessons for other scientific communicators.

In the part that she wrote, Sophia says that she loves slugs, centipedes, and snails, but that her favorite insects are undoubtedly the hoppers and that she wants to be an entomologist when she grows up, probably to study locusts. "It felt good to have so many people support me, and it was cool to see other girls and grown-ups studying bugs," Sophia recounts.

After that the girl is more confident and does not suffer any more from her colleagues, who today make a point of talking about it with her: "And now I have a microscope somebody sent to me, and when I bring it to school, the kids in my school, whenever they find a bug they come and tell me and say "Sophia, Sophia, we found a bug!"



*Insect lover Sophia Spencer, 8 years old, has published a scientific paper with the help of researcher Morgan Jackson and the Entomological Society of Canada (ESC).*

**Jackson, Morgan D. and Spencer, Sophia. Engaging for a Good Cause: Sophia's Story and Why #BugsR4Girls. *Annals of the Entomological Society of America*, Vol. 110, n. 5, P 439–448. 2017. <https://doi.org/10.1093/aesa/sax055>**

Source:

<http://revistagalileu.globo.com/Ciencia/noticia/2017/09/menina-que-sofria-bullying-por-amar-insetos-publicou-artigo-cientifico.html>;

## Report about the 15th Siconbiol

### Message from the President of Siconbiol



The 15th Biological Control Symposium (SICONBIOL) was held June 4 to 8, 2017 at the Hotel JP in Ribeirão Preto, SP. The Sociedade Entomológica do Brasil

(SEB) sponsored this event and the organizers this year were FCAV / UNESP and ESALQ / USP, under the General Coordination of Professor Ricardo Polansky. The event was attended by 707 participants from 25 countries and all Brazilian states. This included 157 speakers, 31 organizing committee members, and the support of 12 postgraduate students. The 330 works presented included 265 posters and 65 oral presentations. The organizing committee of the 15th SICONBIOL counted on the internationalization of the event to provide an environment conducive to the quality of scientific debate and to promote the exchange between Brazilian and foreign participants.

### International Committee promotes round table discussion at XV Siconbiol

The International Committee (IC) of SEB organized a roundtable to discuss biological control in Latin America. Antônio R. Panizzi, SEB's international delegate, highlighted the role of the IC to promote biological control in Latin America. Bruno Zachrisson of IDIAP-Panama, who coordi-

nated the discussions, spoke about the prospects for biological control in Central America. Yelitza Colmenarez from CABI and IOBC presented the main biological control programs in South America and the Caribbean. Maria Stella Zerbinio from INIA-Uruguay discussed the biological control of bedbugs in Southern Cone countries. Finally, José R. P. Parra, from USP-Brazil, discussed the impact of biological control on the key agricultural pests in Latin America.

This was the first event promoted by the International Committee of SEB since its implementation in 2016. Additional activities are being planned for the next XXVII Brazilian Congress of Entomology, to be held in Gramado, Rio Grande do Sul, from September 2 to 6, 2018.



*From left to right: Bruno Zachrisson (IDIAP, Panama, SEB International Representative in Central America), Antônio R. Panizzi (SEB International Delegate), Maria Stella Zerbinio (INIA, Uruguay, SEB International Representative in South America), Yelitza Colmenarez (CABI South America, President of IOBC-NTRS), José R.P. Parra (ESALQ-USP), and Eliane D. Quintela (SEB President).*

## From the Associates

### A rare insect specimen found on wheat plant

Last winter, a rare insect species was found on a wheat plant feeding on the earhead in Passo Fundo, RS. The species was identified by Dr. Jocélia Grazia as *Copeocoris truncaticornis* (Stål) (Hemiptera: Heteroptera: Pentatomidae). The insect shows extremely developed pronotal angles, as shown in the photo. This characteristic possibly originated the name of the truncaticornis species which in Latin means 'truncated horns'. Apparently, this is the first record of its occurrence on wheat, and the host plants of the species are unknown. This species was originally described in Brazil and occurs also in Argentina and Uruguay.

*Antônio R. Panizzi*



# Interview with Prof. Dr. Marcos Kogan

## “A new vision about integrated pest management”

Interviewed by Alexandre de Sena Pinto

During the 15th SICONBIOL (Biological Control Symposium), held in Ribeirão Preto, SP, from June 4 to 8, 2017, Dr. Marcos Kogan (Oregon State University, OR, USA) gave the keynote speech entitled “Exploring synergisms of biocontrol and plant resistance in level III IPM.”

Internationally renowned and extremely friendly and accessible researcher, Dr. Marcos Kogan, gave us an interview about his lecture and his view on Integrated Pest Management (IPM).

### You presented the keynote speech about Level III IPM. What are the IPM levels?

There is no single IPM. What exists is an ongoing program, ranging from a highly primitive program to a highly sophisticated one. There are at least three levels of IPM. The first level (**IPM level I**) is directed at Population Ecology. It is necessary to understand and to know how IPM applies in the field. This is the traditional IPM, and about 95% of existing programs are at level I. Here insecticides are one of the options for integration of control tactics, and pests are considered in isolation along with the interactions between pests, weeds, and diseases.

**Level II** takes into account the Community Ecology. The important thing is to understand the interactions between pests, diseases, and weeds, because they all have a function within this ecosystem. Or they may be detrimental to one another or even provide some benefit, as some weeds benefit some pests. The main question is: “How can we balance all this and understand this Community Ecology?”

In **Level III**, the ecological basis is the Ecosystem, which is much more complicated, but much more realistic. IPM should be taken to this level of integration, considering all pests and their interactions as well as all control methods and their interactions, to optimize pest management. This case would provide a much more beneficial ecological balance from the environmental, economic, and social points of view, with little human intervention.

At **Level I**, decision making is the level of economic damage and it is more or less basic and fundamental. Progressively, the environmental costs of treatments should be taken into account and not just the level of economic damage. Of course, quantifying this cost-benefit is much more complex. Mathematical models are involved. Within this axis, the complexity of decision-making systems rises.

### So, you agree that you would need to redefine the term IPM?

I proposed a definition (laughs!). This happened a while ago in an article on the History of IPM in the *Annual Review of Entomology*<sup>1</sup> and one of the reasons I thought that the definition should be reformulated is to facilitate the adoption of IPM by Weed Science and Phytopathology, which cannot use an entomological interpretation. Weed scientists say, “We may have something close to the level of economic damage, but we have to consider the seed bank, which if accumulates is quite serious, even if the present weed population is insignificant (without reaching a level of

economic damage). If you leave that seed bank, next year, where there was one, there will be 10, where there were 10, there will be 100. So that does not apply.” I proposed a definition that IPM is a decision-making system that considers the economic, social, and environmental aspects of the control methods used. The emphasis, rather than being on control tactics, is on decision making.

Every IPM book that is released in the world, the authors propose new definitions. We did a survey of the definitions of IPM and found something close to 80 to 90 different definitions (laughs!).

### How can plant volatile compounds be important for IPM?

Like everything about nature, there is nothing that is 100% good or 100% bad.

Some volatiles attract natural enemies and this is positive, because if the plant is attacked by herbivores, promoting the production of these volatile compounds, some insect parasitoids or predators are attracted by these substances. This has been proved by Science. But most of the experiments were done in laboratories and it is not known exactly how this works in Nature. This type of research uses “Y” olfactometers, where a stream of air passes through a receptacle in which the leaf releases these mentioned volatiles and the other volatilizes no compound. The insect walks and chooses one or the other option. In many cases, the insect was observed moving toward the volatile. This gave the predator a survival advantage, as he ended up going to plants with a good chance of having his prey there.

The down side is that although some of these volatiles are attractive to some insects, they are repellent to others. It is a matter of analyzing the final balance.

### Could mathematical modeling be important in understanding this dynamic?

Studies have attempted to develop models of these systems, but this depends on the fidelity of these models to the biological reality. I have not seen these test models, but there are attempts at modeling.

From the point of view of the biology of these systems, the most important is the progress of identifying the biochemical cycles that generate these volatile complexes and the identification of volatiles, which is a complex of compounds. Again, it is a “double-edged sword,” because they are complex, genetic control is also complex. We might think, “Well, if we know the genes that control the biochemistry of volatiles, then we can take those genes and transfer them to a genome of interest, and use that to our advantage.” But there are probably several genes that collaborate in sequence or simultaneously in the production of these compounds. Therefore, breeding based on genetic engineering is still quite questionable.

### Then is there a use that volatile plant compounds could have for IPM?

It is more complex. What I wanted to emphasize is that there should be two systems: one of endogenous defenses and one of exogenous defenses. The endogenous defense system is formed by constitutive (induced) compounds that the plant itself produces to defend itself against herbivores and eventually attract natural enemies. Exogenous defenses are developed within the plant community



and not necessarily the compounds produced by a single plant to attract the beneficial insects, but by the “companion plants”.

This refers to habitat management, which involves maintaining pollen and/or nectar-producing plants that attract and increase populations of pollinators and natural enemies, as well as increasing herbivore populations that ultimately attract their natural enemies. The techniques of use are very variable.

Habitat management is a very current subject with a focus on small agricultural areas such as strawberries, etc. For Brazil, habitat management needs to be reassessed and the question to ask is: “How much is the farmer willing to sacrifice from the planting area to maintain sites of attraction and multiplication of pollinators and natural enemies which benefit the rest of the crop?” Like everything else, the dilemma is a matter of scale. From an ecological point of view, habitat management is effective because it respects the complex processes that have developed with the evolution of these plant communities. In giant monocultures, how can we adapt habitat management to this? This will depend a lot on the creativity of the researchers.

Contour farming, for example, could be a strategy to keep these plants attractive in extensive monocultures. In other words, it is possible in a collaboration between farmers and the demonstration of its efficiency by the researchers. Habitat management is a matter of adaptation to the different realities, as it has already been proven in experiments.

### How much does the United States use IPM today?

You know that currently they do not have a definition of IPM that allows us to make a clear evaluation. They do IPM and their evaluation on this subject considers IPM when at least two control tactics are integrated, such as chemical control with biological control. Although they do some evaluation, based on only two integrated tactics, I find this somewhat artificial.

The ideal IPM would be one in which biological control is highly efficient, but there would be only a control tactic. That case, then, would not be IPM? I think it much more important to consider the IPM threshold. In my view, IPM is not so much the number of integrated control tactics, but much more the combinations between the tactics and the decision processes. When these decision-making processes are realistic and have the focus that allows the efficiency of the implemented treatments to be judged, it reaches the IPM threshold and from then onwards it reaches the levels I, II, and III proposed in the lecture.

<sup>1</sup> Kogan, M. 1998. *Integrated Pest Management: Historical Perspectives and Contemporary Developments. Annual Review of Entomology* 43:1, 243-270.





## SEB MEMBERSHIP 2017

Professional	Student*	Institution	Foreigners
Online Journal <b>R\$ 150,00</b>	Online Journal <b>R\$ 75,00</b>	Online Journal <b>R\$ 150,00</b>	Online Journal <b>US\$ 75,00</b>
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Entomological Society of Brazil

### INFORMATIVE



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