



**IOBC-APRS
Newsletter No. 4
June 2016**



Message from the President



It is again a great pleasure to write to say hello to everyone in this our fourth regional newsletter. I hope everyone has had a productive and stimulating first half of the year with many good things happening.

We continue to rebuild IOBC-APRS. Over the year we welcomed several new members including people from Japan,

Thailand and Vietnam and now have 88 members in 10 countries throughout our region. The new arrangements for payment devised by Ronny appear to have worked well except for Pakistan. I do want to emphasise that IOBC-APRS is very much still in a rebuilding phase. Our numbers are still quite small though growing and if members can keep patience with us during this phase I am sure there will be much greater benefits for all in the years to come.

Our first regional Working Group - Predatory Mites as Biological Control Agents - formed under the co-ordination of Professor Xuenong Xu and Dr Yulin Gao- held its first full scale meetings in May this year. The meeting was an outstanding success with good international participation including our Global President and regional Secretary-General, Dr Barbara Barratt. Many thanks to all the organisers of this and onward to the next meeting to be held in India. See page 4-5 for more details.

We have recently launched a Facebook page (see page 3) to improve our communication amongst the membership. Not everyone is enthused about taking a Facebook membership because of privacy issues and perhaps other platforms such as LinkedIn might be better for a professional society. We are certainly not wedded irrevocably to Facebook but at least it is a start. The important thing is to encourage members to join it and to post items of interest to them and other members. It would be great if we can provoke some discussion on various issues. Many thanks to Leigh for his indispensable help with this.

Contents

Message from the President .	1
IOBC at ICE Orlando	2
Treasurer 's Corner	3
APRS facebook page.....	3
APRS Working Group News ...	4
ISBCA 2017	6
Australian /NZ Ent Soc Conf Nov 2016.....	7
Other news.....	8
Member publications	9

Please keep in mind that we are co-hosting a symposium at this year's joint AGM (Australian Entomological Society and the Entomological Society of New Zealand) in Melbourne this November. We did this in 2014 in Canberra and presented a great symposium. More importantly it was a very good member get-together. So thinking caps on all who might be able to attend!

You no doubt know that Ronny is standing for Global Secretary-General when the new global committee is elected during ICE this year. Ronny has been a terrific treasurer for APRS under most trying circumstance. Our committee and I would like to wish her well in this election. Now is also a good time to thank Barbara in her capacity as Global President for all the effort she has made for APRS over her term. She steps down from this role at ICE but fortunately remains on the Global Executive as Past President, and our APRS Secretary-General.

We would always like to hear from members if they become aware of larger issues affecting biocontrol where IOBC APRS might play a role.

I would again like to thank our hard working committee and particularly Barbara and Ronny who have done so much to keep us functional.

With very best wishes,

Bill Palmer

IOBC Activities at ICE Orlando 2016



26 Sep 9.15– 11.45am	IOBC Symposium: Zoophytophagous arthropods in biological control
26 Sep 1.30-4.30pm	IOBC Symposium: Status and prospects for biological control in the 21st century
26 Sep 6-8pm	IOBC Global General Assembly—all members welcome
27 Sep 9.15—11.45am	IOBC Symposium: Opportunities and challenges for biological control of disease vectors
27 Sep 9.15-am 12.30pm	IOBC Symposium: Biological control under climate change
27 Sep 8-9.30pm	Social mixer co-hosted by NRS and IOBC Global—all members welcome

Please check the final conference schedule for any changes

Treasurer's Corner

Following a successful mite Working Group meeting in China, it is pleasing to see our membership from this part of the world growing in strength.

We now have 88 registered members (although a few are yet to pay their 2016 membership fees...), from the following countries, in alphabetic order: Australia, China, India, Indonesia, Japan, Malaysia, New Zealand, Oman, Pakistan, and Vietnam.

We are pleased to maintain membership fees low on a global scale. The vast majority of the fees we collect go towards hosting and maintaining our website. We have not yet been able to accumulate funds to support scholarships, grants or awards of any kind. To reach this stage we would need to see our membership grow substantially, or our fees go up. I would much rather see our numbers go up and fees remain affordable, yet go further. If you have colleagues who have not yet joined and could be interested, please introduce them to IOBC-APRS!

Ronny Groenteman



Check out our new Facebook page...

 IOBC APRS

Barbara

Home

Find Friends

Barbara Barratt

Edit Profile

Your posts

FAVOURITES

Welcome

News Feed

Messages

Events

APPS

Live Video

RECENT ACTIVITY

 **Rae Kwong**
8 July at 20:12 · Langwarrin, VIC, Australia

<https://www.facebook.com/agriculturevictoria/posts/847624995371386>



Weevil war on water weed | Media releases | Media centre | About us | Agriculture Victoria
Weevils have been enlisted by Agriculture Victoria's Biosciences Research branch to wage a war against one of the state's most tenacious weeds.
GO.VIC.GOV.AU

International Organisation for Biological Control (IOBC)
Asia & Pacific Regional Section (APRS)
IOBC APRS
Closed group

Joined ▾ Share Notifications ...

DESCRIPTION
IOBC-APRS is one of six Regional Sections of the International Organisation for Biological Control.

Members of IOBC-APRS are scientists and students working in biological control from research institutes, universities and commercial organisations from Asia and Australasia. We encourage collaboration in promoting feasible and environmentally safe methods of insect pest, weed and pathogen control.

Membership in IOBC gives individuals and organisations the opportunity to participate in biological control activities beyond their specific jobs and workplaces, to step outside their bureaucracies, and to contribute to the promotion of biological control worldwide.

IOBC-APRS fosters research and practical application, organises meetings, symposia, offers information about biological methods of control and integrated pest management.

GROUP TYPE
Study group

Predatory Mites as Biological Control Agents

15-19 May 2016 Beijing

The 1st international workshop of IOBC-APRS (International Organisation of Biological Control, Asia and Pacific Regional Section) Predatory Mites as Biological Control Agents working group was successfully held in Beijing on 15-19 May 2016. This workshop was co-sponsored by IOBC, Institute of Plant Protection-Chinese Academy of Agricultural Sciences (IPP-CAAS), State Key Laboratory for Biology of Plant Diseases and Insect Pests, Chinese Society of Plant Protection, and Beijing Leafy Vegetables Innovation Team of Modern Agro-Industry Technology Research System.

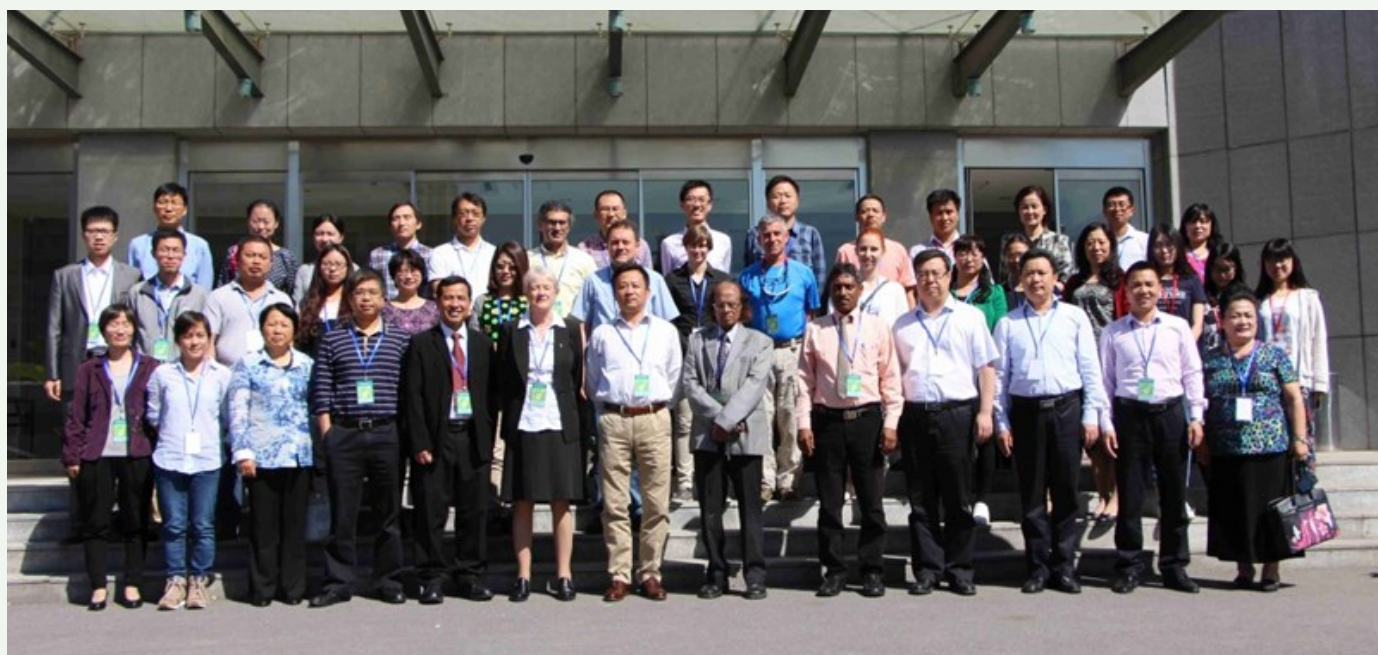
The IOBC-APRS Predatory Mites as Biological Control Agents working group was recently established in November 2014. The convenor of this working group is Dr. Xuenong Xu, Professor of IPP-CAAS.



The workshop was hosted by Dr. Xuenong Xu (left), and Dr. Yulin Gao (Vice President of IOBC-APRS) (right). More than 50 scientists and students from New Zealand, Japan, Turkey, Israel, India, Belgium, Poland, Canada, and China participated in this workshop. Other scientists from Vietnam, UK, Korea, and India contributed to the workshop through sending video presentation, poster, and abstracts.



The theme of the 1st workshop was “Resources to Industry: bridging the gap”, implying the interest and endeavor of the working group members in screening predatory mite resources and developing an industry with more commercial products against more target pests. The workshop especially focused on how to evaluate and utilize rich predatory mite resources in the Asia-Pacific region.



A total of 32 abstracts were received for this workshop. During the three-day workshop, scientists and students exchanged ideas on the current situation and recent advances of predatory mite research. Dr. Barbara Barratt presented some general information about IOBC Global and the Asia Pacific Regional Section, and encouraged more scientists and students to join IOBC. Dr. Dewen Qiu (Vice Direct, IPP-CAAS) provided a brief introduction to IPP-CAAS and showed strong intention for more international communications and cooperation in the future. Dr. Xuenong Xu provided a



thorough review of predatory mite research and applications in China in past 50 years, with emphasis on the rapid development of this field in last ten years.

Other presentations focused on topics including predatory mite resource surveys and evaluation, morphological and ultra-structure, host plant-prey-predatory mite interactions, tritrophic interactions between prey, predatory mites and - entomopathogenic fungus, hunting behavior, field evaluation and applications, mass production and other aspects. These very

impressive presentations prompted considerable exchange of ideas and discussions.

Four young scientists were presented with awards for excellence in a young scientist presentation competition. They were, from left to right below: Dr. Yaying Li (Southwest University, China), Dr. Magdalena Felska (Wrocław University of Environmental and Life Sciences), Ms. Nathalie Brenard (University of Antwerp, Belgium), and Dr. Jiale Lv (IPP-CAAS, China).



Participants were also treated to an excursion to the Noah Organic Farm, Pinggu District, Beijing to see examples of commercial application of predatory mites and other natural enemies in greenhouse vegetables.

At the end of the workshop, members of the working group reached the decision to hold the workshop once every two years. India won the ballot for hosting the 2nd workshop in 2018. Watch this space!



First Announcement

<http://www.isbca-2017.org/>



INTERNATIONAL SYMPOSIUM ON BIOLOGICAL CONTROL OF ARTHROPODS LANGKAWI September 11-15, 2017

The goal of these symposia is to create a forum where biological control researchers and practitioners can meet to exchange information and discuss up-to-date issues relating to biological control. This includes the various approaches to biological control, e.g. conservation, augmentation, and importation of natural enemy species for the control of arthropod targets. It also encompasses various transversal issues, including the uptake of biological control and socio-economic impact. There will also be one or two sessions designed to enhance inter-disciplinary collaboration.

The aim of the meeting is also to stimulate ideas by presenting new information. Therefore, all presentations should present original project data rather than overviews, summaries, or well-known material. The scientific outputs from post graduate students and post docs are particularly welcome.

Proposals for scientific sessions, themes and session organizers will be received and selected by the scientific committee. The selection of presentations will be the responsibility of the session organizers in collaboration with the scientific committee. Submissions not accepted as oral presentations due to time restrictions will still be considered as poster presentations.

This brief note intends to provide you with the date and location of the meeting for your forward planning purposes. More detailed information (relating to the submission of talks and posters, registration, webpage, booking hotels, etc.) will follow in the coming weeks.

We are looking forward to arranging a stimulating conference and hope that you will be able to participate. In case you have questions please don't hesitate to contact the ISBCA Symposium Secretary (info@isbca-2017.org). Please refer to the webpage for further information in the coming weeks: www.isbca-2017.org

With kind regards,

Dr Ulli Kuhlmann
CABI
Chair Scientific Programme Committee
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Dr Wai-Hong Loke
CABI Malaysia
Chair Local Organizing Committee
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Dear Colleagues,

The 5th International Symposium on Biological Control of Arthropods will take place in Langkawi, Malaysia, September 11-15, 2017.

Please reserve this time period in your agenda!

History and Mission of this Symposium

This conference continues the series of international symposia on the biological control of arthropods held every four years. Dr Roy Van Driesche was the founder of the symposia and held the first meeting in Hawaii in January 2002. The second meeting took place in Davos, Switzerland, in September 2005, the third in Christchurch, New Zealand, in February 2009 and the latest one was held in Pucón, Chile, in March 2013. The upcoming 5th symposium will follow the proven format and framework of the previous four symposia as they have all been very successful and highly appreciated by the participants.



<http://www.aesconferences.com.au/>

IOBC-APRS will be co-convening a symposium at this conference (see Symposium 6 below). So please visit the website for more information, and think about presenting a paper or poster. The venue for the conference is the Rydges on Swanston.

The time-line is shown below.

Symposium suggestions opens 14 December 2015

Symposium suggestions due by 31 March 2016

Call for Abstracts opens – 25 April 2016

On-line registration – 12 May 2016

Deadline for receipt of Abstracts 3 October 2016

Notification of acceptance of abstracts – 24 October 2016

Early registration ends 31 October 2016



Symposia

1. Invertebrate conservation and invasive species.

Dr Gary Taylor, Dr Isabel Valenzuela and Dr Bernie Dominiak

2. Ecosystem services in a changing environment.

Professor Geoff Gurr

3. Social insects: challenges economic opportunities and behavioural insights

Dr Nathan Lo

4. The role of phytochemistry in insect nutrition.

Dr Martin Steinbauer, Dr Clare L. Casteel, Professor Rosy Mary dos Santos Isaias, Professor Juha-Pekka Salminen

5. Taxonomy, systematics and the importance of reference collections

Mr John Marris, Dr Mali Malipatil, Dr Mark Blacket and Dr Vratislav Ricardo Bejsak-Collaredo-Mansfeld

6. Biological control for Agriculture and the Environment

Dr Bill Palmer and Dr Luke Barrett



Other news



Congratulations to **Gonzalo Avila** who has recently successfully defended his PhD on “Retrospective and behavioural studies to improve host specificity testing of parasitoids introduced as biological control agents”. He was working with the parasitoid *Cotesia urabae* introduced to control the gum-leaf skeletoniser, *Uraba lugens* at the University of Auckland. Gonzalo has now been appointed as a scientist with Plant and Food Research in Auckland,



Australia back in business in weed biocontrol

Some **very good news for Biocontrol in Australia** was announced 14 April 2016. Australia now has nearly \$20M of projects working together across agencies on weed biological control. Targeted weed species are: giant rat's tail grass, prickly acacia, mother-of-millions, fleabane, sowthistle, silverleaf nightshade, African box-thorn, ox-eye daisy, cabomba, and sagittaria. This signals a renaissance of the field in Australia! Keep watching our 'Job Opportunities' on the APRS website. We have listed some new positions already, and there may be more to come.



Join us at the International Congress of Entomology in Orlando, Florida, USA taking place September 25-30, 2016. There will be four IOBC-sponsored symposia, plus a host of additional talks related to biological control and IPM.

See the full list of all symposia here:

<http://ice2016orlando.org/scientific-program/symposia/>

Registration information is here:

<http://ice2016orlando.org/registration/>

Global Biocontrol & Biostimulants Congress 2016

September 12-13 Philadelphia, PA

The Global Biocontrol & Biostimulants Congress will be held on September 12-13, 2016 in Philadelphia, Pennsylvania. For more information: <http://bit.ly/28VAyqW>. The event will be co-located with the 4th Plant Genomics Congress USA.



Contents lists available at ScienceDirect

Journal of Asia-Pacific Entomology

journal homepage: www.elsevier.com/locate/jape



Growth, nutritional indices and digestive enzymes of *Hyposidra infixaria* Walker (Lepidoptera: Geometridae) on artificial and natural (tea) diets



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ARTICLE INFO

Article history:

Received 23 July 2015

Accepted 25 December 2015

Available online 31 December 2015

Keywords:

Hyposidra infixaria
Life-cycle parameters
Nutritional indices
Digestive enzymes
Artificial diet

ABSTRACT

In Darjeeling Terai-Dooars, looper stage of *Hyposidra infixaria* is often causing heavy damage to tea crop as key pest. Therefore for conducting experiment related to its control, rearing on artificial diet becomes an imperative. *H. infixaria* showed better survival on modified artificial diet of its congener *H. talaca* than on tea-leaves used as natural diet. Shorter life-cycle, superior developmental traits, higher fecundity and better food utilization capability indicated suitability of the artificial diet. Activity of midgut amylase, protease and lipase of loopers provided suitable hint for formulating balanced artificial diet that supported its normal growth and development. This first attempt of rearing of the pest species (*H. infixaria*) through three consecutive generations on artificial diet could be useful in mass production of disease-free specimen for the purpose of research and development activity related to tea plant protection and industrial-level production of bioagents.

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Entomologia Experimentalis et Applicata



DOI: 10.1111/eea.12393

Olfactory cues used in host-habitat location and host location by the parasitoid *Cotesia urabae*

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Accepted: 7 October 2015

Key words: search behaviour, role of olfaction, olfactometer, infochemicals, kairomone, endoparasitoid, Hymenoptera, Braconidae

Abstract

There is a growing body of evidence that many hymenopteran parasitoids make use of olfaction as the primary mechanism to detect and locate hosts. In this study, a series of bioassays was conducted to investigate the orientation behaviour of the gum leaf skeletonizer larval parasitoid *Cotesia urabae* Austin & Allen (Hymenoptera: Braconidae) in both Y-tube and four-arm olfactometers. In a Y-tube olfactometer, male *C. urabae* were attracted only to virgin conspecific females. Host-plant leaves, damaged leaves, host larvae, and host larvae feeding on leaves were highly attractive to female *C. urabae*, whereas host frass and conspecific males were not. The multiple-comparison bioassay conducted in a four-arm olfactometer clearly indicates that *C. urabae* females were significantly more attracted to the host *Uraba lugens* Walker (Lepidoptera: Nolidae) larvae feeding on *Eucalyptus fastigata* H. Deane & Maiden (Myrtaceae) leaves than to any other of the odour sources tested. The results of this study show that *C. urabae* individuals responded to chemical cues specific to the host plant and target host insect, and support hypotheses that unreliable cues are not utilized for host location by specific natural enemies.

Journal of Asia-Pacific Entomology

journal homepage: www.elsevier.com/locate/jape

Diets structure of a common lizard *Eremias argus* and their effects on grasshoppers: Implications for a potential biological agent



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ARTICLE INFO

Article history:

Received 9 February 2015

Revised 7 August 2015

Accepted 23 December 2015

Available online 31 December 2015

Keywords:

Eremias argus

Grasshopper

Functional response

Intraspecific interference

Biological control

ABSTRACT

Outbreaks of grasshoppers (Orthoptera: Acrididae) often cause serious ecological damage. Recently, there has been interest in using natural enemies of grasshopper for their biological control. This study examined the biology and predation on grasshoppers by *Eremias argus*, a common lizard in Inner Mongolia. Its developmental duration and life history are consistent with adaptation to grasshopper phenology. The diet structure of *E. argus* included grasshoppers, beetles, ants, leafhoppers, moths, bees and spiders. A positive correlation between *E. argus* population numbers and grasshopper population numbers was highly significant. We built models describing the functional response and intraspecific competition for *E. argus* adults. The functional feeding response of *E. argus* on grasshopper was classed as Holling type III. The maximum number of grasshoppers consumed by female and male adults were 11.2 and 7.0 individuals per day, respectively. Predatory ability was strongest in female adults, with the second and third instars of *Oedaleus asiaticus* preferred. The predation ratios (E) of *E. argus* on grasshoppers declined with increasing lizard density, especially for female adult *E. argus*. *E. argus* could play an important role in grasshopper control and maintaining a population of *E. argus* in the grassland ecosystem could effectively control low-density grasshopper populations on grassland. Suggestions on how *E. argus* could fit into an IPM programme for biological control of grasshopper are discussed.

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Contents lists available at [ScienceDirect](http://www.sciencedirect.com)

Biological Control

journal homepage: www.elsevier.com/locate/ybcon



Assessment of a stenophagous weevil, *Osphilia tenuipes* (Coleoptera: Curculionidae), as a potential biological control agent for weedy *Bryophyllum* spp. (Crassulaceae) in Australia



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HIGHLIGHTS

- *Bryophyllum delagoense* is a target for biological control in Australia.
- The host range of the weevil *Osphilia tenuipes* confined to the Crassulaceae.
- It oviposits in *Kalanchoe blossfeldiana* in the presence of *B. delagoense*.
- Much of Australia is climatically suitable for *B. delagoense* and *O. tenuipes*.
- The insect will be assessed for release under Australia's Biological Control Act.

GRAPHICAL ABSTRACT

