



Minutes of the Diseases of Beneficial Invertebrates

Business Meeting 31st July 2019



Item 1. Opening, welcome and approval of the Agenda

Mark Freeman (MF; Chair) opened the meeting and asked for approval of the Division Beneficial Invertebrates Business Meeting Agenda (approved by all present). The minutes from the 2018 Gold Coast meeting posted on the SIP Division Beneficial Invertebrates pages were approved.

MF welcomed Nicole Atherley as the new Student Representative who had deferred her post from 2018 to take this up in 2019 to allow overlap between student reps. MF thanked Ronny van Aerle for his hard work for the Division as he steps down from the position of Member-at-Large. MF noted that this leaves an officer post vacant.

The current officers list was presented as below:

Position	Name	Period
Chair	Mark Freeman	2018-2020
Chair Elect	Grant Stentiford	2018-2020
Secretary/Treasurer	Helen Hesketh	2018-2020
Member-at-Large	Kelly Bateman	2018-2020
Member-at-Large	Ronny van Aerle	2017-2019
Past Chair	Helen Hesketh	2018-2020
Past Secretary/Treasurer	Kelly Bateman	2018-2020
Student Representative	Tom Gillard	2018-2020
Student Representative*	Nicole Atherley	2019-2021

Item 2. Division Student Travel Awards

There were 5 applications of a very high standard and DBI will support 2 students. DBI are delighted that the Mauro Martignoni Student Travel Award was given to Gabriela Maciel Vergara from University of Copenhagen.

- Mariela presented her talk at the meeting entitled "A bacterial insect pathogen as a threat to cricket farming in East Africa".

The Division made 2 Student travel awards, each for \$850 USD to:

- Wafa Al-Arimi from The Centre for Environment, Fisheries and Aquaculture Science (Cefas) & Biosciences, University of Exeter, UK. Wafa presented her talk at the meeting entitled "Comparative genomics analysis of White Spot Syndrome Virus (WSSV) isolates from different geographical regions."
- Rebecca Millard from Biosciences, University of Exeter & UK Centre for Environment, Fisheries and Aquaculture Science (Cefas): Rebeca presented her talk at the meeting entitled "Understanding the molecular basis of susceptibility to white spot syndrome virus infection in shrimp *Penaeus vannamei*."

Item 3. Division Membership & Finances

Membership

Regular membership dipped slightly in 2018, whilst students remained a significant part of the Division membership (about a third). Several regular DBI members were unable to attend the meeting in Queensland and this may be reflected in the lower membership numbers. Regular membership remains at \$10USD and student membership is free. Current membership is steady; we would not expect a significant increase due to the Valencia meeting being a joint meeting with IOBC as there is no equivalent group aligned to DBI. Members are asked to remind students that membership to this division is free and to encourage students to apply for the travel awards. Last year we had no suitable applicants and so funds were diverted to cover invited speaker awards.

	2014/2015 Vancouver	2015/2016 Tours	2016/2017 San Diego	2017/18 Gold Coast	2018/19 Valencia
Regular Members	26	35	40	28	34
Students	18	17	12	17	18
Total	44	52	52	45	52

Finances

The balance in the DBI's account at the close of FY 2018 was \$2996.46. In addition to this, SIP Council agreed to provide \$3000 to support student travel awards and invited speaker awards for the meeting in Valencia for 2019. Although the Division advertised 2 student travel awards at \$850 each for the 2018 meeting, there were no eligible candidates. Therefore, DBI spent the General Fund transfer of \$1500 in 2018 on invited speakers and provided additional funds of \$500 for a Symposium speaker. For 2019 the Division will provide 2 student awards of \$850 each and support 2 invited symposium speakers through payment of early bird member registration and the balance for T&S to total of \$1000 each.

START BALANCE 2018	\$2996.46
Allocated for Gold Coast 2018 meeting from Council	\$2250.00*
Balance for spend at SIP 2018	\$5246.46
No Student travel award (no eligible applications)	\$ -
Symposium invited speaker Awards (x2 WSSV cross-divisional with viruses @\$750)	\$1500.00
An additional speaker will be funded for \$500 from Virus Division	\$ -
Symposium invited speaker Award (x1 Bee Health @\$500)	\$500.00
Returned monies to General Fund	\$250.00
Division Balance after SIP 2018	\$2996.46
Division Dues	\$380.00
Interest	\$9.16
Transfer from General Fund to Division for SIP 2019	\$3000.00
Total available for SIP 2019	\$6385.62
Student travel awards (x2 @\$850 each)	\$1700.00
Symposium invited speaker Awards (x2 DBI 'One Health' Symposium @\$1000 each)	\$2000.00
Division Balance at SIP 2019	\$2685.62

***From Council Meeting:** noted at the SIP Council meeting that the Division should have received \$2250 rather than \$1500 for the 2018 Meeting and this will be credited to give final balance of \$2685.62 for the Division at end of SIP 2019.

Item 4. Meetings Reports

Gold Coast Meeting 2018

SIP 2018 held on the Gold Coast in Australia, 12th – 16th August 2018. There were 258 participants and 24 companions in attendance, the week being split into 8 divisional and cross divisional symposia.

DBI contributed the following:

- Divisional symposium was organised by Helen Hesketh and Elke Genersch on “Health Issues of Bee and Non-bee Pollinators”. This involved 5 presentations and included one of the invited speakers:
 - John Roberts – Viral landscape of *Varroa*-free Australian honey bees
 - Laura Brettell – The role of deformed wing virus (DWV) in *Varroa* tolerant honey bee populations and its spread beyond bees into the wider insect community
 - Diao Chunsheng – A natural product inhibited the replication and expression of Israeli acute paralysis virus
 - Diao Qingyun – Enhancement of chronic bee paralysis virus levels in honeybees acutely exposed to imidacloprid: a Chinese case study
 - John Roberts – Evidence of deformed wing virus (DWV)-free honey bee population in the Pacific region.
- A cross-divisional symposium with the Virus Division was organised by Kelly Bateman and Just Vlak on “White Spot Syndrome Virus – Emergence and Control”. This involved 4 presentations and included three of the invited speakers:
 - Jie Huang – Overview of WSSV and its emergence
 - Peter Mohr – White spot disease outbreak in farmed prawns in Queensland, Australia in 2016
 - Ornchuma Itsathitphaisarn – Potential future therapies for WSSV
 - Kelly Bateman – Wild type relative of the most important viral pathogen in global aquaculture
- There were two contributed paper sessions, one shared with Microsporidia and the second shared with Viruses. There were 11 presentations and 9 posters.

SIP Early Career Award

In 2018, DBI were proud to announce that the Early Career Award was awarded to Kelly Bateman. This was in recognition of the significant contributions Kelly has made in the emerging field of crustacean virus taxonomy and the pivotal role she has in improving our understanding of the impact of emerging pathogens in the global aquaculture industry. Kelly also provides considerable support to the SIP through her numerous officer roles for DBI and in her role on the editorial board of the Journal Invertebrate Pathology. Monique van Oers presented the award.



Valencia, Spain, SIP 2019

The 2019 meeting was held in Valencia, Spain, 28th July – 1st August 2019. The meeting was shared between SIP and the International Organisation for Biological and Integrated Control (IOBC). This involved a shared programme and organisation of events.

At SIP 2019, DBI contributed the following symposia:

A Divisional symposium for DBI organised by Helen Hesketh & Grant Stentiford titled “Emerging Diseases in Invertebrates as One Health Sentinels” and will have 4 invited speakers:

- Stentiford, G.D. - Invertebrate health as a sentinel of global ‘One Health’
- Behringer D.C. - Crustaceans as Models for Understanding the Unique Application of One Health to a Changing Sea
- Bailes, E.J. - Exploring the transmission of diseases between pollinators at flowers
- Edginton, S. - The contribution of extension services to the monitoring of crop pests and to the uptake of augmentative biocontrols in selected low to lower-middle income countries

A cross Divisional symposium with Microsporidia organised by Mark Freeman and Yulia Sokolova titled “Microsporidia and microsporidia-like Cryptomycota infecting micro-eukaryotes and metazoan parasites” and will have 5 invited speakers:

- Freeman, M. - Hyperparasitic Microsporidians of Myxosporeans
- Sokolova, Y., Overstreet, R., Heard, R. - Hyperparasitic microsporidia in trematode hosts: two new species of Unikaryon that infect microphallids from crabs inhabiting Florida coasts
- Larsson, J. I. R. - Cytology and Development of Metchnikovellideans and Related Organisms
- Nasonova E.; Paskerova G.; Frolova E.; Galindo L.; Torruella G.; Moreira D.; López-García, P.; Smirnov A. - Early evolution of Microsporidia: lessons from molecular phylogeny, phylogenomics and genomics of metchnikovellids
- Corsaro, D., Walochnik, J., Wylezich, C, Hauröder, B., Müller, K.-D.5., Sokolova, Y., Michel, R. - Intranuclear parasites of free-living amoebae: The Rozellomycota and the origins of the Microsporidia

There were also two contributed paper sessions, each of which had 8 presentations and was titled:

- Important Diseases of Beneficial Invertebrates: from cockles to crickets
- Diseases of managed and wild bees

2020 Meeting SIP – 53rd Annual Meeting, August 2nd to 6th, Mérida, Mexico

The 2020 meeting will be held in Mérida, Mexico. Mérida is the capital city of the Mexican state of Yucatán. The city has twice been selected as the ‘American Capital of Culture’ and presents a great venue for the 2020 meeting. The conference venue will be the International Congress Centre of Yucatán. There are numerous hotels nearby with a range of prices from quadruple rooms at \$65USD per night up to \$140USD pppn at higher end hotels.

The mixer on Sunday will be held in the Mezzanine of the Convention Center. The excursion will be to one of the new seven wonders of the world, the Mayan Pyramid Chichen Itz with a likely stop at one of the waterholes at Cenote Ik Kill (details to be confirmed)

Fees will be presented in due course as they are currently being negotiated and revised.

Item 5. Report from SIP Council Meeting

MF presented an overview of the most important information from the SIP Council Meeting held on Sunday 28th July 2019.

- Council agreed that student travel awards should be harmonised across the Divisions as recently, Divisions had given varying levels of support. It was agreed that the student awards will be held at \$750 each going forward and that at least one student award should be made from the General Council Transfer made to Divisions for each meeting. It was suggested that to reduce costs of transfer of budgets between currencies/accounts, that Divisions should encourage the student to use the money for early bird registration if possible.
- There was a mistake made in 2018 in that Divisions should have been given \$2250 toward travel awards and not \$1500 so Council will retrospectively award \$2250 to each division for their balances from 2018. As DBI made awards of \$2000 for the Gold Coast meeting, \$250 will be returned to Council.
- The Council agreed a total of \$2250 for each Division to use for travel awards for the 2020 meeting in Mexico.
- There was a general discussion around reducing the environmental impact of SIP conferences through reductions in travel and Council have agreed that a sub-committee of the Meetings Committee will explore options for live streaming of key parts of the meeting (e.g. Plenary session) and remote joining. Meeting organisers will be encouraged to produce on-line versions of conference proceedings and to not produce printed versions as well as reduce additional merchandise.

Item 6. Election of New Officers

The Chair had requested nominations prior to the 2018 meeting for the post of Member-at-Large. Helen Hesketh nominated Annette Bruun Jensen, seconded by Kelly Bateman. Nominations were voted for and the Division welcomed Annette Bruun Jensen to the committee to serve as Member-at-Large 2019-2021.

Item 7. Business items for discussion

Plans for 2020 Meeting

Ideas for travel awards and possible symposia and workshops were discussed. The Symposia agreed for the 2020 meeting are:

- Divisional Symposium suggested by Kelly Bateman
Symposium organisers: Kelly Bateman (Cefas) and January Cano (Mahidol University)
 - *Shrimp and other Crustacean diseases*
- DBI received a suggestion from the Virus Division for a cross-divisional symposium
Symposium organiser: Bryony Bonning (viruses), DBI organiser t.b.c.
 - *Viruses of Pollinators*

Item 8. AOB

There followed a discussion around the 'Mission' and general remit of the Division. A suggestion was that the Division should better represent significant issues surrounding the impact of pathogens on beneficial invertebrate health as opposed to the wider focus of the Society in general on the control of invertebrates using microbials. Members discussed and agreed that the title of the Division remains

relevant but that this needs be fully represented on the website for e.g., as the acronym 'DBI' does not give any indication of the focus of the Division. This leads to confusion, as it is not always recognised that the Division covers a wide range of terrestrial and aquatic invertebrates (including, but not limited to crustaceans, molluscs, insects and arachnids). It was agreed that HH will ask the SIP Secretary to update the website to reflect the full Division name where possible on drop-down menus to give better presence.

Helen Hesketh moved to close the meeting and Annette Bruun Jensen seconded.

Minutes respectfully submitted:

Helen Hesketh
28th August 2019