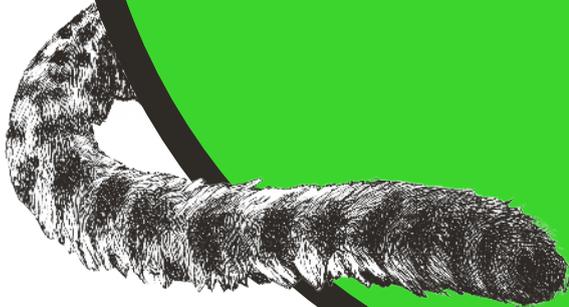


CHANGING OUR SPOTS



YOUNG SCIENTIST AWARD 2015

BY CAROLINE WOOD

Congratulations to this year's winners of the Young Scientists Award Session (YSAS): Zigmunds Orlovskis (John Innes Centre, UK) for the Plant Section and Dominique Roche (University of Neuchâtel, Switzerland) for the Animal Section.



Presenting his findings in Prague was a valuable experience for Zigmunds Orlovskis: 'The SEB meeting is a great platform to exchange ideas with scientists from different backgrounds and get feedback on your research,' he said. 'I enjoyed the huge diversity of topics, which allows you to think about your own research from a range of perspectives, find out about advances in technology and come up with novel research questions.'

Zigmunds' PhD project focuses on understanding the biological role of pathogen effector proteins in plant development and plant – insect interactions. Specifically, he has been investigating how proteins produced by phytoplasmas affect host development and whether this promotes dispersal of the parasites. 'Phytoplasmas are insect-vectored plant pathogens, which can induce dramatic changes in the host, including the generation of leaf-like flowers (phyllody),' he said. It had been hypothesised that these leaf-like flowers play a role in attracting leafhoppers which then transmit the bacteria to new plants but, surprisingly, Zigmunds found that this was not the case. 'Leafhoppers were still attracted to the plants even when the leaf-like flowers were removed, leaving me to believe that phytoplasmas attract insects to their host plant through modulating host defence pathways, rather than through altered morphology,' he explained.

For the time being, Zigmunds is happy to continue focusing on plant parasites. 'Numerous parasites alter host development and behaviour to benefit their dispersal and survival,' he said. 'I would like my future research to contribute to our understanding of the molecular mechanisms underpinning host – parasite interactions and to enhance our knowledge about the evolution of these complex systems.'

Our Animal Section YSAS winner, Dominique Roche, was equally pleased with his award: 'To me, winning any award at an SEB meeting is prestigious because much of the best science that I read about is done by SEB members,' said Dominique. 'In this sense, being awarded



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the YSAS award felt like a recognition that my work met the high quality standards that SEB researchers strive for.'

Dominique's research focuses on the link between behaviour and aerobic metabolism and whether this varies across environmental conditions. During the course of his studies on the charismatic Olive Flounder Fish (*Paralichthys olivaceus*), he was intrigued to discover that this species exhibits two distinct behavioural types – that of 'shy' or 'bold' fish. Even more curiously, these also show differences at the metabolic level, as Dominique explained: 'We found that shy individuals have a lower aerobic scope than bold individuals and this was consistent across different environments.' This may explain why these fish adopt different escape strategies when startled. 'Shy individuals adopt a "freeze – hide" response (akin to breath-holding),' he explained, 'whereas bold individuals adopt a "fight – flight" response and significantly increase their oxygen consumption rate.'

These results produced a highly engaging presentation and, although the standard of the session was high, Dominique's work stood out for addressing the large gaps in our understanding of how behaviour and physiology interact. Dominique shows no sign of slowing down, however, with the Annual Meeting giving him plenty of new ideas: 'Several people I spoke to after my talk suggested looking at how the endocrine system might interact with metabolism to influence behaviour and I am also interested in looking for genetic differences among behavioural types.'

Look for details about the YSAS competition for next year's SEB meeting in Brighton. Details appear on our website alongside our instructions for submitting abstracts. ■

Above
Dominique Roche with grouper
Photo credit:
Simon Gingins

Left
Zigmunds Orlovskis
Photo credit:
Andrew Davis

SEB+ POSITIVELY CHARGED!

BY CAROLINE WOOD

'It's goodbye from me and it's goodbye from EPA!'. This was the dramatic opening speech from Alun Anderson (acting chair of SEB's Education and Public Affairs, or 'EPA,' Section) to a very lively launch party-cum-retirement celebration held at the SEB Annual Meeting in Prague.

Since the establishment in 1998 of what was originally known as the Education Committee, SEB has long been committed to enhancing all areas of its members' careers, including activities outside of their main research. However, over the years, and even since its evolution to the Education & Public Affairs Section in 2008 under the presidency of Ian Johnston, the EPA Section has tended to be seen as an 'outside category,' rather than pivotal to the SEB's main activities in relation to its Plant, Animal and Cell Sections.

To address this, SEB is re-launching EPA, not only with the more dynamic name 'SEB+', but also to integrate its activities within and across the SEB sections. Meanwhile, the scope of the new SEB+ Section is being broadened to encompass four key areas: Teaching and Learning, Science Communication, Career Development and Equality and Diversity. This list is by no means exhaustive and SEB+ is actively welcoming members to suggest other important research-associated areas of interest, as well as letting SEB+ know whether they would like to become involved.

As Alun steps down as chairman, he hands over the reins to George Littlejohn (Exeter University), who is excited about the challenge of leading this exhilarating new chapter in the SEB: 'This re-branding is an excellent opportunity to become much more involved in what we are trying to do,' George said. 'By getting more membership involvement and building capacity we will be able to do more and really help to enhance the careers of our early career scientists and students.'

With some of the current EPA Section and a crowd of meeting delegates watching on, Alun gave a toast and the new SEB+ was officially launched. However, it was clear that this wasn't simply a case of re-launching the same

product in new packaging. Sarah Blackford, the head of EPA said, 'This is so much more than refreshing the logo – it's about taking seriously the extra work people do around their research – not only teaching and learning, but science communication, science policy and career development. We're just at the starting point now – we've got a strategy and now we're going to put it into action!'

Many SEB members at the launch party agreed that the new Section will offer greater potential to support researchers summed up by Zoe Self (Royal Veterinary College, UK): 'SEB+ is more encompassing than the EPA because it takes into account more than education and public affairs – as someone who does outreach and engagement work, it's nice to feel there is a space for me in there!' There was also a general feeling that the SEB's dedication to their members' wider interests and issues sets it apart from other learned societies: 'I'm a member of a lot of engineering and biology societies,' said David Taylor (Trinity College, Dublin), 'but with the SEB, I get the impression that something is always happening. I would give up my membership to most of the other societies before I gave up my membership to the SEB!'

Clearly, SEB+ will not be starting from scratch, rather it will build on the EPA's excellent record of achievement, including its recent successful Teaching and Learning symposia and sessions, a much-expanded programme of career development support and collaborative work with some of SEB's sister organisations such as science communication training and science policy. If you would like to get involved with SEB+ to develop its agenda or help build its support for the bioscience community further, contact Sarah Blackford (s.blackford@lancaster.ac.uk). We look forward to working with you. ■



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Above
Alun Anderson and
George Littlejohn