

## SPEAKER PROFILES

### David Westervelt

**QBA invited David to be the Guest Speaker at the 2016 Conference and to deliver the 2016 Tony Knight Address.**

**David Westervelt of Umatilla, Florida** started beekeeping at the age of 6 and continued his interest during his 10 year career in the armed forces where he worked with bees in Germany, Austria, Spain, France, Costa Rica, & Peru.



Upon retiring from the armed forces, Westervelt started a commercial apiary and started working as a local bee inspector for the Florida Department of Agriculture and Consumer Services first as a Bee Inspector then as an Environmental Specialist I and Researcher. He is now a Chief Apiary Inspector.

*David & Ursula Westervelt*

Westervelt has received several awards for research work on honey bees from the United State Department Agriculture, Florida Department of Agriculture and Consumer Services, Apiary Inspectors of America, Florida State Beekeepers Association, National Honey Producers, American Beekeeper Association and the Davis Productivity award.

Read the full article, “A Conversation with Florida’s David Westervelt” in the American magazine “Bee Culture” at <http://www.beeculture.com/a-conversation-with-floridas-david-westervelt/>

### Dr Lori Lach

Dr Lori Lach’s introduction to ecology and conservation came as a study abroad experience in Queensland's rainforests, after which she found her plans for medical school paled in comparison to an environmentally-oriented career.



Lori earned a Masters in Public Health degree in Environmental Health at the University of California-Berkeley and consulted for a non-profit environmental organization for three years. She interned at a field study school in Kenya for a year, then travelled around the world before settling down to earn her Ph.D. at Cornell University. While there, she became interested in biological invasions as a conservation issue, particularly invasions by easily overlooked creatures.

Upon completing her Ph.D., she went to Mauritius on an NSF fellowship to research ant invasions in a restoration context. An ARC-Discovery grant on biological invasions and conservation in an urban context brought her to Western Australia in 2005. She started at JCU in 2013, in the shadow of the rainforest where she obtained her ecological start.

Lori is interested in how human-induced environmental changes affect interactions among species, particularly those between plants and insects.

## Dr Mark K Greco



In 1999, Mark was completing a research assignment for his Bachelors of Science, when he was asked to select a topic for an upcoming thesis. *Tetragonula carbonaria* struck him as an interesting subject and a good place to start. It turned out to be the beginning of a life-long passion and new career that would take him all over the world to research other bees and insects.

Originally a Medical Radiation Scientist, Mark was the first to coin the phrase, Diagnostic Radioentomology (DR), and further develop innovative methods for studying insects and their behaviour using non-invasive imaging. He currently lectures, publishes and presents information on DR at institutions such as the Museum of Natural History, London, Universities and associations throughout Europe and the UK. In 2008, while at the Swiss Bee Research Institute, he received the inaugural [Dr Eva Crane Memorial Award](#) from the International Bee Research Association for 'Best original research paper'. The award described DR as an emerging non-invasive technique for behavioural, evolutionary and classical biologists who need to study animals without harming them. Previously, in 2006, he was awarded the F.G. Swain prize for outstanding oral presentations at the UWS Innovations Conference.

DR is now being adopted by other researchers at European synchrotron facilities and Macro/Micro CT scanners to non-invasively study morphology, physiology and behaviour of insects and has recently been hailed as the "Gold Standard" for honeybee monitoring (Delaplane et al. 2013). Mark has recently collaborated with BBC4 on 'Metamorphosis', BBC1's 'The One Show' and with Sir David Attenborough's 2013 series, 'Micro Monsters', which looked at arthropod anatomy and behaviour. He is currently a post-doctoral researcher at the University of Bath Bee Unit (UBBU), researching honeybee health in the UK.

Mark is a fellow of the Royal Entomological Society, a member of the Australian Entomological Society and councillor for the Entomological Society of NSW. He has been involved in the management and application of Australian stingless bees and European Honeybees (*Apis mellifera*) since 1991, and is the author of the book, *Imaging Techniques for Improved Bee Management*.

## Prof Ben Oldroyd



Ben joined the University of Sydney in 1995 and teaches genetics in all years. Previously he worked at LaTrobe University (1992-1995), the USDA bee lab in Baton Rouge (1989-1992) and the Victorian Department of Agriculture (1985-1989).

Ben is primarily interested in behavioural genetics and the evolution of social behaviour. Almost all of his research has been on honey bees, including the South African Cape bee, the Asian honeybees and the Australian native stingless bees, *Tetragonula* and *Austroplebia*.

He started out as a quantitative geneticist, working on practical problems of bee breeding and then became involved with the population genetics of Africanized bees in central America.

For the last 20 years Ben has been working on the mechanisms by which social cohesion is maintained in bee colonies. In particular, he has bred a unique strain of bees in which workers lay eggs with high frequency. These 'anarchistic' bees provide a superb resource for investigating the mechanisms by which worker sterility is maintained in normal colonies. Comparing the behaviour and genetics of normal and anarchistic bees assists in uncovering the fundamental properties of social insects with the ultimate goal of isolating and characterising the genes that control worker sterility in social insects.

### Dr Peter Brooks



### Research project on medicinal Australian *Leptospermum* honey

Dr Brooks and Simon Williams from the University of the Sunshine Coast (Qld) are part of a project that is looking for more sources of medicinal Australian *Leptospermum* honey (aka jelly bush, or Australian manuka). Samples of *Leptospermum* honeys from around Australia are being tested for antimicrobial activity and the relationship between the activity and the plant source are being investigated.

### Simon Williams



Manuka (*Leptospermum scoparium*) honey from New Zealand is world famous, and it is sold at a much higher price than other honeys. However, although Australia is home to the largest diversity of *Leptospermum* plants in the world (we have more than 80 species compared to New Zealand which has only *L. scoparium*), most of our honeys do not enjoy the high prices of their New Zealand equivalents.

It is already known that a handful of Australian *Leptospermum* honeys have similar levels of antibacterial activity to New Zealand manuka, but most of the other 80+ Australian varieties have not been tested. More sources of active honey are being sought to understand more about the medicinal properties of these Australian honeys. This will help the Australian beekeeping industry by increasing the amount and value of medicinal Australian honey.

Dr Brooks has extensive research experience in analytical, environmental and organic chemistry.

Simon Williams, PhD student, is conducting the field research on Australian *Leptospermum* trees as part of a chemistry doctorate with the Sunshine Coast University. These trees are found in every state but their level of potential antimicrobial activity varies. The source and the flower are being sampled to determine the activity in the trees.

### Dr John Roberts



Dr John Roberts of CSIRO, ACT works on pests and diseases of honeybees.

He leads the bee pathology research at CSIRO with projects focused on improving the biosecurity and health of Australia's managed and wild honeybees.

Recent research has included genetic studies of an emerging Varroa mite pest, exploring viruses associated with Varroa mites, establishing the pest and disease status of an invasive Asian honeybee population in northern Australia, and upgrading the knowledge of pathogens of Australian honeybees.