ANICdotes

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Our first issue for 2017

David Yeates, Director

This issue highlights new staff, visitors, field work, communication, outreach activities and donations, and demonstrates that summer 2016/17 was a busy one in ANIC. Firstly, we welcome Dr Luisa Teasdale on a 3-year contract as a postdoctoral fellow, working with Andreas Zwick in our phylogenomics laboratory. Luisa will work with Andreas on ways of accelerating our genetic sample analysis pipeline using high-throughput sequencing.

Winter in the northern hemisphere is the season we can expect an influx of scientific visitors. Adam Ślipiński and Rolf Oberprieler have had many visitors on the beetle deck, and we highlight just some of them on pages 7 and 8. Bryan Lessard and I hosted Norm Woodley for a month-long visit in February to study our Stratiomyidae (soldier fly) fauna. Norm recently retired after a career as a senior scientist at the United States National Museum in Washington, and his visit to Australia was supported by a Fulbright Fellowship.

Bryan Lessard has also been incredibly active in the social media and outreach space, developing and manning a display for all the CSIRO collections at the International Science Festival in Brisbane in March. Bryan has also filmed a segment for Gardening Australia on pollinating insects and now has a regular radio gig with ABC radio Sydney 702. Our new wasp scientist, Juanita, has also been active in outreach, speaking to the students at Sydney's Cherrybrook Technology High School about her experience as a female scientist.

David Yeates

Spanish being her native tongue, Juanita Rodriguez was a very useful participant in ANIC's field trip to Chilean Patagonia in February/March. Bryan Lessard, Juanita and I teamed up with Brazilian collaborators Dalton Amorim, Vera Silva, Cecilia Waichert and Keith Bayless during the expedition. We also report on field work to less exotic locations such as Springbrook and the wheat belt of WA in this issue.

Lastly, we pay tribute to the many generous people who donate time and/or specimens to ANIC, maintaining, developing and enriching the collection. Our volunteers scheme has now been running for almost 20 years, and volunteers have, in aggregate, donated almost 100,000 hours of their time to us. Incredible statistics. John Landy, iconic Australian distance athlete, who rose to become Governor of Victoria, donated his moth collection to ANIC in November 2016. Meticulously curated, his extensive collection contains many specimens that significantly enhance the taxonomic and geographical coverage of ANIC. Thanks to John's donation, these specimens are available for future generations to study.

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BANNER: *Graphium macleayanus* image: Biodiversity Heritage Library.

WELCOME

Introduction to Luisa Teasdale

In January Luisa Teasdale joined ANIC as a postdoctoral fellow. She is working with Andreas Zwick on a project that aims to generate relatively small quantities of genetic data for very large sample numbers with next-generation sequencing. Such an approach would be of great value for collection genomics and taxonomy, where limited genetic data are needed for many thousands of specimens. Her position is funded for three years by a CSIRO OCE postdoctoral fellowship. Prior to this project Luisa completed her PhD on the systematics of land snails at the University of Melbourne and Museums Victoria. During her PhD she developed her bioinformatics skills through using transcriptomes to investigate the deep relationships within the clade Panpulmonata. She also implemented hybrid enrichment protocols to produce datasets of thousands of gene exons to investigate the Australian Rhytididae, a family of carnivorous land snails. Luisa brings both her love of invertebrates and bioinformatics to this project at ANIC.

ANIC goes to Chile

Bryan Lessard and Juanita Rodriguez

In January of this year, David Yeates, Juanita Rodriguez and Bryan Lessard journeyed to Chile to collect the distant relatives of the Australian insect fauna. The team first travelled to Parque Nacional Puyehue to meet with fellow Brazilian-based entomologists Keith Bayless, Vera Silva and Dalton de Souza Amorim to sample insects of the temperate rainforest. Parque Nacional Puyehue is located in the Chilean lakes and rivers district and spreads over two volcanoes: Volcán Puyehue and Volcán Casablanca. The highest soldier fly and spider wasp diversity was found in this region, and rare genera like *Chiromyza* (Stratiomyidae) and *Sphictostethus* (Pompilidae) — also found in Australia — were collected.

The next location was chosen to sample the insect biodiversity of the Valdivian temperate forest in Lago Yelcho. The journey included a drive on more than 100 km of dirt road along the lake shores with spectacular views of the various volcanoes of the region. After this drive, the journey continued for five hours by ferry along the astounding Patagonian coast. Lago Yelcho is surrounded by forests and high mountains with overhanging glaciers, and boasts a unique insect fauna. The majority of the spider wasps collected were probably nesting in the sand, as they were found on the lake shore.

The crew then visited the capital of the southernmost region in Chile and the largest city south of the 46th parallel south, Punta Arenas. Here we met with Pompilidae specialist Cecilia Waichert from Brazil. With a subpolar oceanic climate, Punta Arenas has an average maximum temperature of 14°C in the summer. Most of the collecting took place near Torres del Paine National Park, which is the most visited national park in Chile. Once in the park, ranger Gonzalo Cisternas welcomed us with a traditional herbal tea called Mate and offered us advice on good collecting sites.

Next it was time to thaw out by travelling to the dry desert of Parque Nacional La Campana, one and a half hours north of Santiago, on a mission to collect the newly described fly family Evocoidae. This family is monotypic and only known from the valleys of Palmas de Ocoa, from which it derives its name. After setting an impressive number of malaise traps, the team was successful in collecting the curious fly and will have its transcriptome sequenced to confirm its placement within the Diptera. All in all it was a fantastic and productive collecting trip as the team greatly increased the representation of the Chilean insect fauna in the ANIC, which will no doubt be vital in the ongoing systematic revisions of the austral insects.

top left: a specimen from the new family Evocoidae, bottom left: Malaise trap, right: *Echinopsis* sp. cactus at Parque Nacional de la Campana

Field Trip to Western Australia

Juanita Rodriguez

Last October, Alan Landford, Xuankun Li, James Lumbers, You Ning Su, David Yeates, and I spent ten days collecting in Western Australia. As an Australian biodiversity hotspot, south western WA is an essential sampling point to understand the Australian insect fauna. Spring is a wonderful time for insect collecting in WA as it is the peak of the flowering season, and many of our insect groups feed on flower nectar. We had the opportunity of visiting sites in two biodiversity hotspots, the Central and Eastern Avon Wheatbelt and the Fitzgerald River-Ravensthorpe.

We arrived in Perth, and the next day drove about 260 km northeast to beautiful Dalwallinu. Located in the Transitional Rainfall Zone and the edge of the Arid Zone, the town is strategically situated in the Avon Wheatbelt hotspot, where many of WA's threatened species are found. The area is particularly rich in plant endemics such as *Grevillea* and *Hakea* as well as species of *Eucalyptus, Acacia*, and *Eriostemon*. A high invertebrate diversity has been recorded for this hotspot too.

Dalwallinu is famous for its outstanding flower diversity, attracting thousands of visitors every spring to the famous Wildflower Way, which extends north to Mullewa. Despite the replacement of native vegetation with vast wheat fields, the Dalwallinu area is surrounded by numerous nature reserves, of which we visited Nugadong, Jibberding, Buntine and Pinjarrega. After six days of collecting in the area, we drove southeast to the Fitzgerald River-Ravensthorpe biodiversity hotspot.

As we drove south, the landscape gradually changed from the flat arid lands to the peaks of the Ravensthorpe Ranges. We stopped in Ravensthorpe for two nights to sample the nearby natural areas. In the Fitzgerald River National Park we had the chance to collect in the pristine bushland and the sand

Wheat contrasting with native bushland at Buntine Rock

Stirling Range National Park

Left to right: Juanita, David, Xuankun, Alan and James

plains along the coastal region, which are home to various endangered bird species. We also explored some smaller nature reserves such as Lake King and Lake Grace.

We finally drove southwest to our last stop, crossing the steep slopes of the Stirling Range and heading to Mt. Barker. Our first site was Porongurup National Park, famous for the Karri forests, which are dominated by Karri (*Eucalyptus diversicolor*), which can grow to more than 80 m high. We also sampled in the Stirling Range National Park, where our collecting sites included shrubland at low altitude and mallee-heathland vegetation at higher altitudes. One of Mt. Barker's unique attractions is the *Banksia* farm, an arboretum of all known *Banksia* species, which has become an important tourist destination in the area. On our last day, we drove from Mt. Barker to Perth to catch our flight back home.

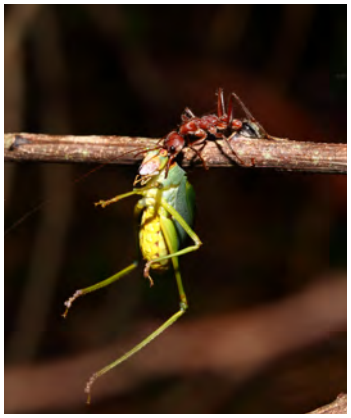
Beetle hunting in Springbrook, QLD

Mengjie Jin, Zhenhua Liu and Yu-lingzi Zhou

At the beginning of this year, we spent some fantastic time in the rainforests in Springbrook National Park, at the border of QLD and NSW. Five of us from ANIC, Adam Ślipiński, Tom Weir, Yu-lingzi Zhou, Zhenhua Liu and Mengjie Jin, head off on the 5th January, and we on the plateau met with Geoff Monteith (Research Associate at the Queensland Museum) and Duane McKenna (University of Memphis, USA).

It was the first time for us to do some really serious collecting in Australia, also, the first time to be in a rainforest in this part of the World. All sorts of techniques have been used during the whole trip, in order to find beetles from various habitats, like leaf litter sifting, spraying, pitfall traps and so on. Pyrethrum spray for example was used to target small insects living under the bark or hiding on the trees. It really amazed us how diverse the beetles could be on one single tree. We could easily find 20 different Coleoptera families from one tree! We even collected families we had never seen before like Propalticidae, Laemophloeidae, Eucinetidae, Salpingidae and many others. Light traps were running every night, aiming at nocturnal beetles. However we did not have much luck with it, as it was always windy and drizzling in the evening. We probably got the biggest catch using Berlese funnels, to extract every living creature inhabiting leaf litter and soil. We also learned how to set traps for dung beetles from Geoff, and gained some experience on brushing moss from sticks and setting pheromone traps for longhorn beetles. We feel that we all enormously increased our knowledge of fieldwork and beetle collecting which will stay with us as a professional asset forever!

We have not wasted a single minute and in any spare time we were sorting our trophies. We had some really good time sitting together and looking at all the different families of beetles caught. We did enjoy this time in the team; we had



Left: Mengjie, Zhenhua, Tom, Lingzi, Adam, Duane, Kathy Ebert and Geoff, Top: An ant of the genus *Myrmecia* tackling a grasshopper of the genus *Osphyllum* four or five times its own size!

the chance to learn traditional knowledge from Adam, Tom and Geoff, thus refining our taxonomic skills, and also to hear some “molecular stories” from Duane, for example on how to prepare DNA material in the field. During the 10-day training, we learnt how to identify an unfamiliar beetle, and we got a better general knowledge of many Coleoptera families: what are the key characters to look at, and how these characters could have possibly evolved.

We were so deeply impressed by Tom’s dedicated sorting, never giving up any tiny little beetles under the microscope; we then realised that this is exactly where the richness of the ANIC collection comes from. During our indoor sorting, Adam was always very patient, answering all kinds of questions we had for him. We even had the chance to celebrate Geoff’s 75th birthday during the trip; every night Geoff was the last person to go to sleep, so immersed in sorting and learning more and always so passionate about beetles and collecting in the field. We were so impressed by the amount of knowledge these men had of Australian natural history. They could not only tell us the name of every beetle we caught or other insects, but also plants or even fungi. It seems as if there was nothing they didn’t know in the forest! This was so inspirational to us and encouraged us to work harder for our current projects and beyond.

We all came back to Canberra not only having enjoyed the time with a wonderful team in such a nice place, but also having had an experience which inspired us and left one of the best memories of our time in Australia.

John Landy's moth collection donated to ANIC

Ted Edwards and Marianne Horak

In November last year, Marianne and Ted took delivery of John Landy's moth collection at his home in Castlemaine, Victoria. We are most grateful for this generous and wonderful gift.

John Landy grew up in Melbourne and was educated at Malvern Memorial Grammar School and Geelong Grammar School and then at the University of Melbourne, where he graduated in Agricultural Science in 1954.

From the age of 10, encouraged by his mother, he displayed an interest in butterflies, which developed into a passion that he has maintained throughout his life. In this he was mentored by Ras Wilson on butterflies and Llew Gooding on moths. He eventually built up a magnificent butterfly collection, which has been donated to the Australian Museum, Sydney. John collected moths as opportunity offered, especially while he was teaching at Timbertop. He took up moth collecting seriously when he bought a weekend-cum-holiday cottage with a large garden at Fryerstown near Castlemaine in 1996. Altogether his moth collection comprises 77 store boxes made by John, containing beautifully set and labelled specimens. Some highlights of the collection are a glorious series of a startlingly beautiful undescribed geometrine with grass green forewings replete with silver lightning zig-zags; some very odd specimens of a species of *Trictena* (Hepialidae), particularly apposite as we are currently editing an Australian hepialine monograph; and specimens of *Chrysolarentia tristis,* an unusual day-flying larentiine geometrid from the semi-arid zone west of Urana, NSW. There is also an unusual species of *Amata* (Erebidae) from Cooktown.

The collection from Fryerstown is of particular interest because from 1852-1854 Thomas Oxley collected moth specimens from the Mt Alexander Goldfields, which on his return to London he gave to Edward Newman to describe. Newman described 30

John Landy showing Ted a box from his wonderful collection

species from this collection. The holotypes of some are extant today in the NHM but others are missing. John's collection, made in the area of the Mt Alexander Goldfields, will greatly aid in identifying those species whose types are missing. Already the traditional identification of *Zeuzera duponcheli* (Cossidae) must be questioned.

John's association with ANIC started when he was invited to become a member of the ANIC Fund Board by Ebbe Nielsen in 1991 and did not cease when the Board was disbanded ten years later, but he continued attending many of the Lepidoptera Unit's "Moth Weekends".

For 21 years he worked for Imperial Chemical Industries in agricultural research and for the last 11 was the Research and Development Manager for the Biological Group. He has also been an active partner in a farm in the upper Murray Valley.

He has had an enduring interest in the conservation of flora and fauna and has held a number of positions related to conservation in particular he was a Foundation Member of the Land Conservation Council, and during his time on the Council the area of national parks in Victoria expanded from 200,000 to over one million hectares.

John has published two books on his natural history observations, "Close to Nature" in 1985, which won the C. J. Dennis Award, and "A Coastal Diary" in 1993.

We cannot end this thank-you without some mention of John's other achievements, but in deference to John's well-known modesty and desire for privacy it will be brief. Today it is hard for us to realise the public interest in breaking physical barriers that existed 70 years ago. First there came the "sound barrier" (1947), then climbing Mt. Everest (1953) and lastly the 4-minute mile. John's close approach to the "miracle mile" in the early 1950s invigorated Australian athletics. He broke the 4 minute mile in Turku, Finland, on 21 June 1954, the very day on which Roger Bannister, the first person to run the mile in less than 4 minutes, had his record ratified (3:59.4). John ran it in 3 minutes 57.9 seconds but it was rounded up to 3 minutes 58 seconds. This time remained the world record until it was broken by Derek Ibbotson and then by Herb Elliott, another Australian, who ran 3:54.5 in 1958. To John the mile was an amazing incident while getting on with life. He beat the mile, not so much the other runners. The legendary event in Australian sportsmanship came with the 1500 m race in the Australian National Championships in 1956, when Ron Clarke stumbled and fell just in front of Landy, who stopped to check that Clarke was OK and then went on to win the race.

John collected butterflies throughout his athletics career and later and it gave him great joy. He has been reported as saying that finding *Jalmenus ictinus* (Lycaenidae) at Tallarook was as good as running a mile in 4:02.

With such a background and with his prominent activities in agriculture, conservation and public speaking, John crowned his career by becoming the 26th Governor of Victoria on 1 January 2001. He retired on 7 April 2006. After this, he took on the Chairmanship of the Victorian Bushfire Appeal Fund in 2009. With world records, medals, honours, and honorary degrees too numerous to list, we salute a great Australian.

More information may be obtained by googling "John Landy" and "Governors of Victoria" and through Wikipedia. There is also a suite of books that comment on John's sporting career. Perhaps the most informative is: Bascomb, N. (2004). *The Perfect Mile*. Houghton Mifflin Company, Boston.

We thank John, his wife Lynne, and their children, Matthew and Alison, for this marvellous gift.

John Landy and Marianne

THRIPS

Donations to the collection

Neurothrips magnafemoralis

The ANIC collection of slide-mounted thrips has two primary functions, to record the diversity of Thysanoptera found in Australia, and to provide an information service to the quarantine and economic entomologists of this continent. In the 1960s only about 200 species of this order of insects were recorded from Australia, but this total is now over 900, with ANIC holding holotypes of more than 550 of these new species. This upsurge in taxonomic activity over the past 25 years has had an additional effect, in that many thrips workers around the world have come to recognize ANIC as one of the major Thysanoptera collections. As a result, thrips taxonomists in various countries in Southeast Asia and South America have increasingly deposited representatives of their fauna in Canberra. This not only facilitates broader systematic studies on thrips, but it also provides reference specimens for species that are likely to be intercepted by quarantine on imported plant material.

Hearing, seeing, speaking weevils

Rolf Oberprieler & Debbie Jennings

Several scientists visited the ANIC to work on weevils over the last few months.

The *Gonipterus* crew: f.l.t.r. André Garcia, Natalia de Souza, Michelle Schröder and Rolf

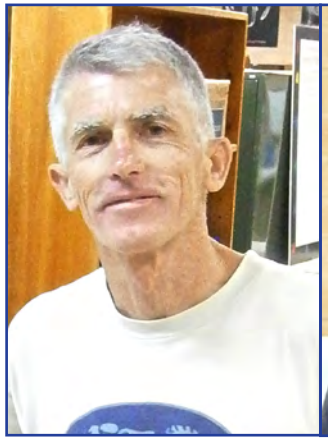
In December 2016, two key members of the international *1K Weevils Project* visited the ANIC. This N.S.F.-funded project, short for "1000 Curculionidae Phylogeny & Evolution", is run by Prof. Duane McKenna at the University of Memphis in the U.S.A. but has a broad collaboration in the global weevil community, foremost in Australia and Argentina. Its main aims are to reconstruct the phylogeny and evolutionary diversification of the huge family Curculionidae and resolve its classification into subfamilies and tribes. The postdoctoral fellow heading the morphological phylogenetic analysis of the project, Dave Clarke, visited the ANIC in December to work with Rolf on the taxon sample and character set. They also studied a series of 100 million-year-old weevil fossils preserved in Burmese amber. These specimens represent a unique, extinct lineage of weevils that does not fit into any extant family and thus casts new light on the diversity of weevils over time and on the evolution of key characters, such as geniculate (elbowed) antennae. Dave also joined the annual fossil-hunting expedition to the Talbragar Fish Bed near Gulgong, during which we managed to find two more but even older (151 million years) weevil fossils. Duane McKenna joined this weevil research in the ANIC in December, working mainly with Rolf and Dave on the taxon sample for the larger molecular analysis of the 1K Weevils Project, which is well underway to spanning sequences from more than 1000 weevil genera throughout the world. Duane visited Australia again in January 2017 to join Adam Ślipiński, Tom Weir and three Chinese students on a collecting trip to the Springbrook National Park in southern Queensland.

In February 2017, three students worked in the Zimmerman Laboratory to learn about the identification of *Gonipterus* weevils, which are major defoliators of eucalypt plantations throughout the world. André Garcia, a Ph.D. student at the University of Lisbon in Portugal, studies the biological control of several Australian eucalypt pests in Portugal. He collected *Gonipterus* weevils in Tasmania last year and in the ANIC set about identifying them, which is only possible by studying the male genitalia. Rolf showed him how to dissect the weevils and recognise the different species by their genitalia, and André managed to identify over 200 of his specimens.

André was joined by Michelle Schröder and Natalia Medeiros de Souza, both studying at the Forestry Industries Research Centre of the University of the Sunshine Coast. Michelle is a postdoctoral researcher at the Forestry & Agricultural Biotechnology Institute in South Africa, where she works on improving the biological control of the *Gonipterus* species that defoliates eucalypts in that country. She extended her studies in Australia with a DFAT Australia Award and also collected *Gonipterus* weevils here, which she identified to species during her visit in the weevil lab. Natalia, who only recently arrived in Australia from Brazil, studies the tritrophic relationships between plants, weevils and parasitoids, with the aim of devising control strategies to improve the management of *Gonipterus platensis* in her home country. In the ANIC she learnt how to distinguish this species from a similar one introduced to Brazil and Argentina. All three students departed with the knowledge and skills to dissect weevil genitalia and identify the cryptic species of the *Gonipterus scutellatus* complex.

Dave Clarke fossilising at Talbragar

Visitors in Coleoptera



Familiar face, new role. Kim Pullen has returned as an Honorary Fellow.

Mengjie Jin has returned for three years to do a PhD on the subfamily Prioninae of Cerambycidae.

Zhenhua Liu has returned for two years to do a PhD. He is currently working on Melyridae.

Lauren Ashman is a new PhD student, working on the genus *Rhytiphora* (Cerambycidae).

Yali Li is a Visiting Scientist from Sun Yat Sen Universtiy, here for two months to work on Burmese Amber and Chinese beetle fossils.

Nicole Gunter, from the Cleveland Museum of Natural History in, in Cleveland, Ohio worked with Tom Weir on Scarabaeinae.

Professor Pang, from Sun Yat Sen University, visited to work on the next Coccinellidae book.

Ming Bai, from the Institute of Zoology at the Chinese Academy of Science, bought with him many beetle fossils preserved in amber.

Rafal Ruta, from the Department of Biodiversity & Evolutionary Taxonomy at Wroclaw University, visited to examine Australian Scirtidae.

Duane McKenna, from the University of Memphis, visited the ANIC to work with Rolf and Dave Clarke on the *1K Weevils Project.*

John Lawrence worked on Vol 2 of *Australian Beetles* and explored connections between fossil beetles and extant species.

Far right, Professor Jean-Pierre Lumaret, from the Center d'Ecologie, University Montpellier, came on a visit to study dung beetles.

Also visitng were Professor Vivian Sandoval from Universidade Federal do Tocantins, Brazil, checking Australian Ciidae, and Chris Moeseneder examining Cetoniinae for vol 2 of *Australian Beetles.*

Volunteers BBQ

Federica Turco

On the 29th of March the ANIC people and some of their friends got out of the buildings to enjoy a barbeque on a surprisingly sunny and dry afternoon at the Village Green on Black Mountain. The occasion was our annual celebration of the cheerful and substantial contribution that our volunteers make to the curation of our collection as well as to some of our research and digitisation outputs.

We had the outstanding number of 53 people attending the event: 16 volunteers, 8 honorary fellows and visiting scientists, 11 students and visitors and 18 NRCA staff, including ANIC Director David Yeates and NRCA Director Andrew Young. We all enjoyed a lovely warm lunch break in the shade of the vines, sharing some food and raising a glass together.

ANIC volunteer Tom Van Gerwen, who established the volunteer program and directly managed it for a long time, gave a comprehensive and touching speech, highlighting everyone's undertakings and achievements for the year. David Yeates presented Cecilia Melano and Peter Macnicol with their certificates for, respectively, 5 and 15 years of work in ANIC. Congratulation to them again for this achievement!

The ANIC Volunteer scheme has now entered its 20th year of life and it currently comprises 21 volunteers, whose skills range from specimen preparation to digitisation, supporting ANIC staff in everyday curation and special projects. Four of our volunteers, currently working on the digitisation of the bee collection, will soon move to a new volunteers scheme, called NRCA Digital under the supervision of Simon Checksfield and Nicole Fisher, and will be more broadly involved in the digitisation of NRCA collections. At the same time though, new applications are flowing in to ANIC, including students interested in the curation of the insect collection. So, the ANIC Volunteers group is more than ever alive and well and we are all looking forward to a special celebration next year for its 20th anniversary.

Finally I would like to thank the ANIC curatorial team that, once again, made this happen!

ANIC staff and volunteers enjoying a lovely BBQ in the Village Green

Cecilia Melano receiving her certificate from David

Peter Macnicol receiving his certificate from David

Dr Woodley visits ANIC

One week after returning from Chile, Bryan Lessard was visited by Norman Woodley to work with him in the ANIC on a revision of the generic concepts of the Australian soldier flies. Norm is the world authority on soldier flies and recently retired from the Smithsonian Institution in Washington DC. He was also the recipient of a Fulbright Fellowship that allowed him to travel to the ANIC. The Australian soldier flies have not been studied for one hundred years, however, new material has accumulated in state museums and been left unsorted. In three weeks, Norm and Bryan discovered over 100 new species from Australia, including a handful of new genera and a new record for one subfamily. The two dipterists also managed to squeeze in a fieldtrip to the Daintree Rainforest in far north Queensland to discover one more new species! Norm has since returned to the US but the two will continue to work together to revise the Australian soldier flies and aim to describe all 100+ new species!

Communicating our Science

Bryan Lessard and Juanita Rodriguez

On the 6th of March, Juanita Rodriguez was invited to give a talk at the Women's Day assembly in Sydney's Cherrybrook Technology High School. More than 1200 students from years 7 to 12 attended the event and listened to Juanita talk about her research and her experiences as a woman scientist. The students then invited Juanita to morning tea, with homemade pastries, drinks and a questions session.

Bryan represented the ANIC at the STEMX Academy's 5-day residential professional learning program at CSIRO Discovery. It was a fantastic experience coaching primary school teachers in the skills of scientific enquiry, which they will take back to their classrooms. Bryan also filmed a segment for Gardening Australia, which features the collections of pollinating flies in the ANIC, and the plants they pollinate in the Australian

Juanita at Cherrybrook Technology High School after speaking about her experience as a woman scientist.

Last summer, Bryan Lessard and David Yeates wrote a Conversation article on the summer abundance of flies, which was quickly picked up by radio, newspapers (including the Australian Financial Review) and ABC News 24 which filmed an interview from inside the ANIC. Bryan also won the speaker prize of The Council of Heads of Australian Entomological Collection at the Australian Entomological Society's AGM in Melbourne for his outstanding presentation showcasing collections-based research. In the week of the 9th of January, National Herbarium scheduled to air in April. Bryan also speaks about Australian biodiversity and his discoveries in the ANIC every second Wednesday on the program Evenings with Chris Bath, ABC Radio 702 Sydney. He continues to post behind-the-scenes photos of the ANIC on his Twitter (@BrytheFlyGuy), Facebook (@BrytheFlyGuy) and Instagram (@bry_the_fly_guy) accounts. Bryan's TEDx talk featuring his entomological research at the ANIC was also uploaded on YouTube (www.youtube.com/watch?v=HUrv57P0VAg).

World Science Festival

with Bryan Lessard and Andrea Wild

In March, Bryan Lessard and Andrea Wild (CSIRO) brought the research collections from the ANIC and the five other CSIRO National Collections in Canberra to the World Science Festival in Brisbane for the whirlwind Street Science! event. The CSIRO's Natural History Hub showcased highlights from these collections, including dynamic displays of insects, fish, plants, tree seeds and bird specimens. The kids n attendance also enjoyed our collections craft and take-home activities, and could meet Bry the Fly Guy in person and see some of his living stick insects. This was a fantastic opportunity to demonstrate the importance of our research collections to over 80,000 people who attended the World Science Festival on the weekend. Bryan even managed to record a live interview with ABC Radio, film a segment with Totally Wild TV to explain the importance of the ANIC's research, and meet Dr Karl to invite him to see the collection the next time he's in Canberra.

Bryan speaking to the happy crowd at the World Science Festival Brisbane

Recent publications

Arab, D.A., Namyatova, A., Evans, T.A., Cameron, S.L., **Yeates, D.K.**, Ho, S.Y.W. & Lo, N. (2017) Parallel evolution of mound-building and grass-feeding in Australian nasute termites. *Biology Letters*, 13, 20160665. dx.doi.org/10.1098/rsbl.2016.0665

Castilho, R.C., Silva, E.S., de Moraes, G.J. & **Halliday, B.** (2016) Catalogue of the mite family Ologamasidae Ryke (Acari: Mesostigmata). *Zootaxa*, 4197 (1), 1–147.

Che, L.H., Zhang, S.Q., Li, Y., Liang, D., Pang, H., **Ślipiński, A.**, & Zhang, P. (2017) Genome-wide survey of nuclear protein-coding markers for beetle phylogenetics and their application in resolving both deep and shallow-level divergences. *Molecular Ecology Resources*, dx.doi.org/10.1111/1755-0998.12664

Deng, **C.S., Ślipiński**, A., Ren, D. & Pang, H. (2017) The oldest dermestid beetle from the Middle Jurassic of China (Coleoptera: Dermestidae). *Annales Zoologici*, 67 (1), 109–112.

Edwards, T. (2016) A chronological bibliography and digest of information about *Zelotypia stacyi* Scott, 1869, the bent-wing ghost moth, (Hepialidae). *Victorian Entomologist*, 46 (5), 96–99, 108–110.

Edwards, T. (2016) Foreword. In: Bond, S., Holliday, S. & Stein, J. *A Field Guide to Butterflies in the Australian Capital Territory*. National Parks Association, Canberra. Pp. 229.

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