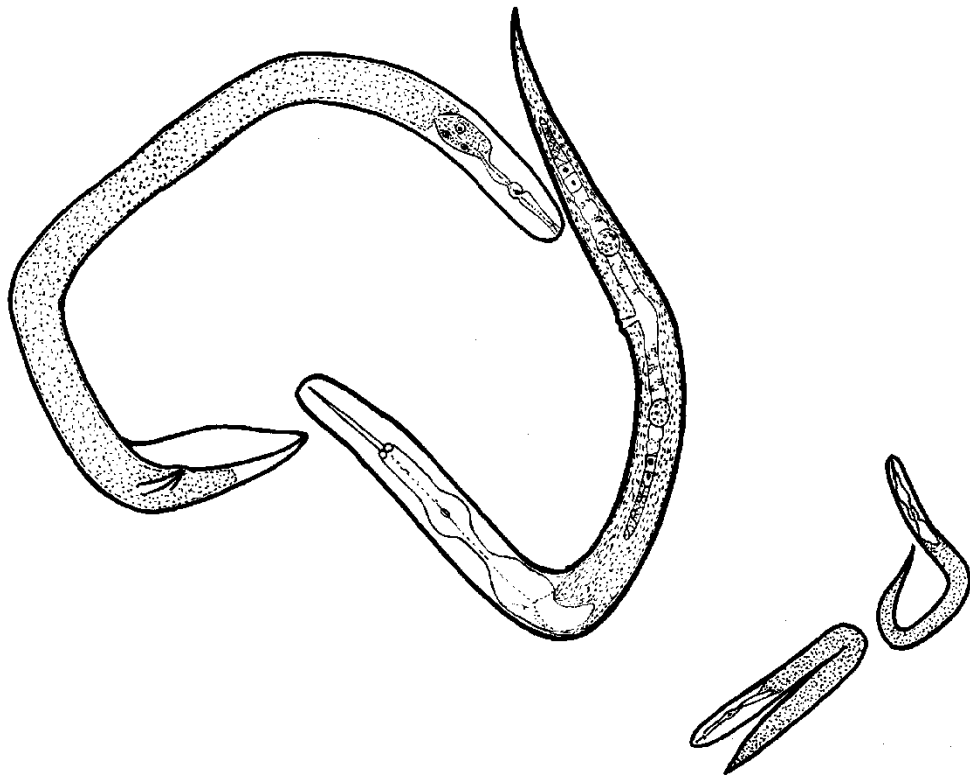


AUSTRALASIAN NEMATODOLOGY NEWSLETTER



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From the Editor

Articles on regional news, recent publications, announcements of new research projects, colleagues, visitors, students etc., research reports, conference or workshop reports, abstracts of recently submitted/accepted PhD theses, conference or workshop announcements and photos are welcome for publication in the AAN Newsletter. Contributions will be accepted at any time throughout the year so please forward articles and reports to me as they occur, with the deadline for the next issue in December 2024.

Thank you for the contributions to this issue. I look forward to receiving your contributions for future issues and keeping you up to date with the regional news of our AAN members.

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Association News

FROM THE PRESIDENT

I write this report just back from leave and preparing to go to the Australasian Soilborne Disease Symposium in northern NSW. By the time you read this it may be very late to register, but if you can still make it, there is a whole day nematology symposium on Root-Knot Nematodes which should be supported to make sure there are many more just like it.

I think there are two main benefits from these meetings. One is that good attendance shows other scientists and funders the level of interest and hence significance of nematology. This translates into support for the discipline as a whole, that is for all of our research. The other benefit is direct for the participants in terms of learning useful stuff from what others are doing, discussing and getting feedback or generating ideas, and making contacts for sharing specimens or equipment or pictures or techniques. All the feedback I received from the nematology meeting held last year in conjunction with the APPS conference was positive, and the range of people attending very impressive. So let's keep up the level of interest!

An associated happening which was in one sense pleasing but in another sense not-so-good was that there were two applications for Olga Goss Nematology support grants. That there are two nematology students worthy and interested to apply for the grants was very encouraging for the future of nematology. Not so good was that with interest rates low for the past couple of years, there was a limited pool of money to award. In the end, only one award was made—the first time I think that we have not awarded an applicant—but the applicant who was unsuccessful for the Olga Goss Award was awarded an APPS bursary instead, so did receive some support. We thank APPS for supporting nematology, and a very worthy student. Make sure to say “hello” to Avalon and Henry if you are at APPS.

Of course, a PhD is not the only avenue to get into nematology. Although anyone reading this is probably beyond the stage, there are also avenues for technical staff coming into plant pathology to train in nematology by visiting and training directly at the labs of experienced nematologists. The Subcommittee for Plant Health Diagnostics and Subcommittee for Plant Health Surveillance run such schemes.

Finally, the venue for the next international congress will be decided soon. In the first draft of this message I wrote: “Bidding societies and cities should be finalized soon, and voting will open...”. Then, after sending the draft, the bids arrived!

There are two cities bidding: Puerto Varas in Chile (hosted by ONTA, Organization of Nematologists of Tropical America); and Xi'an, China (hosted by the Chinese Society of Nematologists). There are glossy multi-page brochures prepared by, and expounding the virtues of, each bidding city and organization which I am happy to share if anyone wants to see them. In amongst all the bumph, as I see it, the important considerations are shown in a table below.

I have contacts in DFAT who is familiar with the local situation in Chile, with whom I am verifying the situation regarding personal safety there, and another regarding Xi'an.

The site for the congress will be decided on a simple (secret) ballot of member societies of IFNS. As a member of the International Federation of Nematology Societies, AAN has one vote among the 24 or so total votes cast by the other nematology societies. The largest societies (SON and ESN) get two votes each. The voting period is short and due 19 August 2024, so any comments please be quick. In the absence of any comments, I intend to vote on the basis of proximity and hence cost for Australian attendees, safety of delegates, and general desirability of the locality (temperature, rainfall etc.). Always happy to add to that list if people feel things should be added.

Quick comparison of 8ICN bidding cities and organizations

Criterion	Puerto Varas (Chile)	Xi'an (China)
Timing (2028)	Late September	August
Temperature (degrees C)	6-13	22-32
Av. Precipitation (mm)	114	106
Visa (Australian passport)	Required	Not required (July 2024-December 2025 only)
Airfare cost	\$2500-3300	\$800-\$2600
Air transport duration	18-21 hours	14-20 hours
Conference cost(US\$)	600	500
Hotel approximate cost per night (AUD)	200	100
Meals and other costs	\$20	\$10
Time difference	-14 h	-2h
Delegate safety	*	*
Conference venue		
Organizing committee	Ernesto San Blas	Deliang Peng
Opportunities for associated travel	Mainly natural, Patagonia, Andes mountains	Cultural (Terra Cotta Warriors), local waterfalls

Whichever city hosts the congress, we expect that partial sponsorship from the Olga Goss Nematology Fund will be available.

Mike Hodda

FROM THE TREASURERS

Membership fees for the AAN (Australasian Association of Nematologists) are \$25 including GST. Membership fees are due annually 1st July through to 30th June and covers newsletter articles and information regarding nematology opportunities including specialised workshops and eligibility for bursary applications for students and early career researchers.

If you are outstanding with your fees you will be contacted shortly for the previous year.

You can no longer pay through the APPS web site when registering your membership, all now come through the AAN bank account. We have had support for many years with APPS but they are no longer able to assist with this service due to logistics.

ONLY Payment Method

ANZ

Account Name: Australasian Association of Nematologists

BSB: 012-950

Account # 5180-07506

Please include your name in the reference field so that your payment can be identified.

Looking forward to your continued support and the camaraderie the Nematology group brings.

Katherine Linsell and Sue Pederick (Joint Treasurers AAN)

Conference Report

35TH SYMPOSIUM OF THE EUROPEAN SOCIETY OF NEMATOLOGISTS

Akshita Jain, PhD student (Agriculture Victoria Research and La Trobe University)

I attended the 35th Symposium of the European Society of Nematologists from 15th to 19th April 2024. The conference was held at the Palace of Congresses and Exhibitions of Cordoba, Spain. It was a 30-hour long journey to the southern part of Spain from Melbourne where Cordoba is located. The location was historic and famous around the world for its Great Mosque. The old town is also a World Heritage site, full of little streets and flower courtyards.

The Symposium was attended by more than 300 participants from different parts of the world. It comprised of 8 plenary sessions, 162 oral presentation, 14 short oral presentations and 2 poster sessions of 80 posters each. What made it more special was that I was the only person in attendance from Australia (I felt like a representative for the country). Scientific sessions included topics based on Nematology Research and applications around the world. The presentations were focused on the following briefs:

- Nematode Taxonomy, Systematics and Diagnosis
- Nematode Phylogeny, Phylogeography and Phylogenomic
- Biodiversity, Distribution and Ecology of PPN, EPN, and free-living
- Plant-nematode interactions and host response
- Nematode omics, metabolism and physiology
- Marine and Freshwater nematodes / Animal parasites
- Entomopathogenic nematodes
- Management of plant-parasitic nematodes
- Nematodes as bioindicators and nematode community assemblies
- Nematode effectors and parasitism genes
- Nematode interactions with other organisms: Complex diseases and Biocontrol
- New nematicidal products: Botanicals and Agrochemicals
- Cultural management of PPN: Cover crops, organic amendments, ASD
- Role of soil microbiome in nematode suppression
- Quarantine Nematodes: Diagnostics and management.

One of the most exciting plenary talk was titled “Going Bananas” – delivering nematicide through banana fibre paper. The Symposium days were packed with some really interesting talks as well as poster sessions where we got to interact with other researchers. I elected to go on a tour of a wine cellar which was offered as part of the Symposium tour. It was an amazing evening spent with other wine connoisseurs. We also got the opportunity to taste some of the wines they produced. I also presented a chapter from my thesis as a 15-minute oral presentation titled “Exploring genomic insights into the draft genomes of *Heterodera* species” in the Nematode taxonomy, Systematics and Diagnosis session. Despite it being the last session of the day before the fancy Gala Dinner organised by the Spanish nematologists, the talk was very well received, and some great feedback was offered by other researchers. I was a recipient of the student travel bursaries from the European Society of Nematologists and the Australasian Association of Nematologists (Olga Goss Student Bursary) which covered some of the expenses at the conference for which I am eternally grateful.

Attending conferences and meeting like-minded people is one my favourite perks of doing a PhD. Overall, the Symposium was a truly an enthralling experience, a great opportunity to network with nematologists from across the world as well as experience the Spanish culture in the old historic town of Cordoba. I definitely met some really amazing people doing all things nematodes!



Group photo of participants of the 35th Symposium of the European Society of Nematologists, Cordoba, Spain.



Above: Akshita presenting a chapter from her thesis as an oral presentation at the Symposium. Source: Akshita Jain



Right: Akshita with Dr. Sergei Subbotin, a pioneer in cyst nematology research from University of California. Source: Akshita Jain

Abstract

EUROPE AS A SECONDARY DISTRIBUTION HUB IN THE WORLDWIDE INVASION OF THE POTATO CYST NEMATODE *GLOBODERA ROSTOCHIENSIS*.

Magali Esquibet¹, James M. Mwangi^{2,3}, Sebastian Kiewnick³, Xiaohong Wang⁴, Benjamin Mimee⁵, Nurul Dwi Handayani^{6,11}, Wim Bert⁶, Johannes Helder⁷, John Wainier⁸, Itaru Sakata⁹, Nathan Garcia¹⁰, Eric Grenier¹ & Josselin Montarry¹

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⁷Laboratory of Nematology, Wageningen University, Wageningen, The Netherlands

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¹⁰Nematology Unit, Plant Health Laboratory, ANSES, 35653, Le Rheu, France

¹¹Indonesian Agricultural Quarantine Agency, Ministry of Agriculture, E Building 5th Floor, Jl. Harsono RM, 3 Ragunan, Jakarta, 12550, Indonesia

The potato cyst nematode *Globodera rostochiensis* originates from the Andean Mountain region in South America and has unintentionally been introduced to all inhabited continents. Several studies have examined the population genetic structure of this pest in various countries by using microsatellite markers. However, merging microsatellite data produced from different laboratories is challenging and can introduce uncertainty when interpreting the results. To overcome this challenge and to explore invasion routes of this pest, we have genotyped 22 *G. rostochiensis* populations from all continents. Within populations, the highest genetic diversity was observed in the South American populations, the European populations showed an intermediate level of genetic diversity, and the remaining populations were the less diverse. This confirmed pre-existing knowledge such as a first introduction event from South America to Europe, but the less diverse populations could originate either from South America or from Europe. At the continental scale, STRUCTURE genetic clustering output indicated that North America and Asia have experienced at least two introduction events. Comparing different evolutionary scenarios, the Approximate Bayesian Computation analysis showed that Europe served as a secondary distribution centre for the invasion of *G. rostochiensis* into all other continents (North America, Africa, Asia and Oceania).

Read the full article in *Scientific Reports* 14,13915. <https://doi.org/10.1038/s41598-024-64617-0>



Australasian Soilborne Diseases Symposium 2024

Peppers Salt Resort & Spa, Kingscliff NSW
26th - 30th August, 2024



ASDS-APPS.com

ASDS Nematology Workshop

What you need to know about Root-Knot Nematodes

Date: Tuesday 27th August 2024, 8.30am -3.30pm

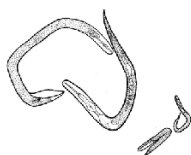
Keynote speaker: **Dr. Johan Desaeger**, Associate Professor of Entomology and Nematology, University of Florida

Root-Knot nematodes (RKN, *Meloidogyne* spp.) with their wide host ranges and ability to alter plant physiology are amongst the most destructive of soilborne pathogens in agricultural farming systems across the globe, including Australasia, where endemic species have recently been joined by the invasive Guava Root-Knot Nematode (GRKN, *Meloidogyne enterolobii*), as threats to the profitability and sustainability of our farming systems. This workshop brings together local expertise in RKN with visiting expert Dr Johan Desaeger from the USA where GRKN is currently causing serious issues. The workshop will combine seminar presentations with hands-on morphological identification sessions to give participants an up-to-date awareness of the latest research and information for detecting, identifying and dealing with these destructive pests.



RKN infested tomato roots, Carnarvon WA. Truyen Vo. DPIRD.

Contacts: Uffe Nielsen (Western Sydney University) u.nielsen@westernsydney.edu.au
Sarah Collins (DPIRD, WA) Sarah.Collins@dpird.wa.gov.au



**Australasian
Association of
Nematologists**

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Innovation**

Nematology Conferences

THE 63RD ANNUAL MEETING OF THE SOCIETY OF NEMATOLOGISTS



Date: 4-9th August 2024

Venue: Park City, Utah, USA

Website: <https://nematologists.org/SON2024>

12TH AUSTRALASIAN SOILBORNE DISEASES SYMPOSIUM



Date: 26-29th August 2024

Venue: Peppers Salt Resort & Spa, Kingscliff, NSW, Australia

Website: <https://www.asds-apps.com/>

ADVANCES IN NEMATOLOGY 2024



Date: 5 December 2024

Venue: online and at The Linnean Society, London

Website: <https://web.cvent.com/event/6b23c987-80a5-4f34-a9ee-3ccd41a6e61f/summary>