

ORGANIZATION OF NEMATOLOGISTS OF TROPICAL AMERICA ONTA NEWSLETTER

http://www.ontaweb.org/

December 2021

## SEVENTH INTERNATIONAL CONGRESS OF NEMATOLOGY

## 1-6 MAY 2022 ANTIBES JUAN-LES-PINS-FRANCE

"Crossing borders: a world of nematode diversity and impact to discover"



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Fig. 1. Palais des Congrès (Juan-les-Pins, France)

## IFNS AND LOCAL ORGANIZERS UPDATE OF THE 7<sup>TH</sup> ICN

# International Federation of Nematology Societies



#### ICN 2022 Registration has Re-Opened!

The Seventh International Congress of Nematology will be held 1-6 May 2022 at the Palais des Congrès in Antibes Juan-Les-Pins (France). All previous arrangements that were made by registrants for the pandemic-delayed ICN 2020 have been maintained. Early-bird registration and abstract submission for new delegates was opened on 15 November 2021 and will continue through 28 February 2022.

• If you registered for ICN 2020, you need do nothing at this time. You will be contacted later this year to confirm/modify your registration/lodging details and you will have the opportunity to submit a new abstract.

• Registration substitutions (due to laboratory personnel changes, etc.) are permitted.

• Options for online viewing of sessions are being explored in the event conditions in some regions warrant their implementation.

• If you were an ICN 2020 bursary recipient, the award remains valid. You will be contacted soon to confirm your participation.

# • Depending on availability there may be opportunities for new students to compete for bursaries.

• The scientific program will be maintained as nearly as possible in its current form, but with revised dates. Authors will have the opportunity to change/revise their original abstracts and session organizers will have the ability to review and revise their agendas. We kindly ask authors not to contact us at this time as conference arrangements are being adjusted.

Registration for the Seventh International Congress of Nematology is currently 682 nematologists from 57 countries, including 100 student and early career scientist bursary recipients. The scientific program comprises 32 concurrent sessions with 288 oral presentations, 12 workshops, 12 keynote speakers, and poster sessions with more than 500 presentations. The mid-meeting excursions will provide outstanding opportunities to explore the splendid nature and the rich culture of the French Riviera. We look forward to welcoming you in Antibes in 2022, to celebrate gathering together again at a truly memorable scientific meeting.

Dr Pierre Abad 7<sup>th</sup> ICN Chair Ernesto San-Blas, Scientific Program Chair Larry Duncan, IFNS President

# **IFNS-ONTA COUNCILLORS UPDATE OF THE 7<sup>TH</sup> ICN**

# **International Federation of Nematology Societies**



#### **IFNS Councillors Virtual Meeting**

A virtual Zoom meeting was organized on 18-19 October by IFNS Officers. The meeting was attended by IFNS councillors to discuss several details of the 2022 upcoming congress. Important discussion items on the agenda were: 1) how to manage the student bursaries that were awarded in 2020, and 2) whether, and if so how to incorporate a virtual component to the congress. Regarding the issue of student bursaries the organizers will contact bursary winners to inform them that they must be registered by a date soon to be determined in order to retain the bursary. Those previously registered must confirm their intention to attend. However, several winners have independently informed Alpha Visa they will not attend the congress. In response, IFNS has arranged a 3MT competition in order to provide further opportunity to reassign unused bursaries.

IFNS President Larry Duncan informed councillors on 4 November 2021 that Local Organizers have met to discuss the ICN2022 issues raised at the IFNS Zoom councillors meeting that was held on October, and prepare to reinitiate the congress arrangements. The information is now available on the website and can be accessed at <u>https://www.alphavisa.com/icn/2020/index.php</u>

#### IFNS Three Minute Thesis (3MT®) Competition

Given the limited interaction opportunities for nematology graduate students in many parts of the world, an IFNS program was organized to provide an important outlet to communicate ongoing research activities. The competition format was considered ideal for students to preview their research pursuits prior to the ICN next year and an ICN 2022 bursary will be awarded to a winning student.

The objective of the IFNS 3MT® competition was to cultivate student academic and research communication skills, and to enhance overall awareness of nematodes and the science of nematology. The applicants were expected effectively to explain their research in three minutes, in a language appropriate to a non-specialist audience.

The first phase of IFNS virtual 3MT® competition was opened to all graduate students working in Nematology **on 02 August 2021 and registration close on 22 September 2021.** Twenty two videos presentations were ranked by 12 November by IFNS councillors to select the best 22 entries; nine contestants have advanced to a final round of judging. Three entries, each from 3 "regions" (Americas, Europe, All Others) were selected by separate judging panels of IFNS councillors. Students from Brazil, Chile, USA, Belgium, England, Ireland, Portugal, Kenya, Australia, India and South Africa took part. The finalists will be judged by a panel of six nematologists and three 'non-experts' from other areas of plant science. Three winners will be awarded ICN 2022 bursaries by mid-December. The nine finalist talks can be watched at IFNS 3-Minute Thesis Advances to Final Round! – International Federation of Nematology Societies | IFNS

On behalf of ONTA, we would like to use this opportunity to thank Eric Grenier for organizing rules and selection processes for the 3-Minute-Thesis<sup>™</sup> competition.

IFNS Information was kindly provided by officers Larry Duncan (President), Ernesto San Blas (Vice-President), Andreas Westphal (Secretary), Eric Grenier (7<sup>th</sup> INC Local Organizers)

## FIRST IFNS VIRTUAL SYMPOSIUM

## **International Federation of Nematology Societies**



#### First IFNS Virtual Symposium

In response to the request made at the virtual IFNS meeting of September last year (2020) to provide activities during a time of travel and meeting restrictions, John Jones (IFNS elected Vice-President) organized a one-day virtual symposium. An invitation was sent to councillors and regular members of the different organizations and societies of IFNS. The symposium was held on 6 October 2021 and covered two exciting, current topics involving the symbiosis between entomopathogenic nematodes and bacteria. Helge Bode (Max Planck Institute for Terrestrial Microbiology, Germany) spoke about 'Natural products from *Photorhabdus* and *Xenorhabdus* and their role in nematode symbiosis and insect killing' and Adler Dillman (University of California, Riverside, USA) gave the presentation 'EPN venom contributed to killing the host and modulating host immunity' (Fig. 2). Experts were encouraged to look at and beyond their own research to highlight major opportunities/questions in their respective discipline. You can watch the IFNS symposium at IFNS Virtual Symposium



Fig. 2. First virtual IFNS meeting

#### FROM THE ONTA PRESIDENT



Fig. 3. Martín Augusto Delgado Junchaya

#### Dear ONTA Members,

I greet you all with affection, and wish that you and your families are in good health. On this occasion, I would like to share with you some news about important events that have occurred during the last six months and how they have affected ONTA's activities, in a time where we are facing a very unique situation, atypical and unprecedented during the existence of ONTA as Organization.

Above all, is the COVID-19 pandemic that has confined the entire world for almost two years, and more recently the threat posed by a new variant (Omicron) that, according to scientifically accredited reports, seems to be more contagious than previous variants.

We also faced during this period the irreparable loss, on October 18, of our dear friend, colleague and ONTA's Vice-President Fabio Chaverri Fonseca. A letter of condolences was sent to Ms Agnes Chaverri Fonseca, Fabio' sister, on behalf of EC (Executive Committee) and ONTA members. In view of this sad event, our colleague Dr Fahiem El-Borai Kora has already assumed the Vice-Presidency of ONTA with the approval of the Executive Committee, and according to ONTA's operations manual. Hence, we can reassure you that Dr El-Borai, the EC members and I will be working together to coordinate, as soon as possible, the next actions of an agenda that will allow us to continue ONTA's activities including the aim of being able to organize in 2023 the 52<sup>nd</sup> Meeting of ONTA, if the future allows either face-to-face, virtual or hybrid conditions.

I have no doubt that, despite limitations imposed by the pandemic, ongoing research in nematology and especially laboratory and greenhouse based work, has continued thanks to dedicated research groups and students. Such tremendous effort has already produced results, which deserve to be presented to a broader audience of nematologists at our Annual Meeting, especially those that are the product of undergraduate and postgraduate research projects and theses.

However. given the current circumstances associated with the dissemination of the Omicron variant, it seems prudent that we consider the possibility of organizing the 52<sup>nd</sup> Meeting of ONTA in virtual form, a situation that will be dutifully addressed at the next virtual meeting of our EC. We are also pleased to inform you that our Vicemaking President is the necessary arrangements to organize and coordinate this meeting

#### FROM THE ONTA PRESIDENT (cont.)

In this brief note, I would like to express my appreciation to all ONTA Executive Committee members, who, despite restrictions arising from the pandemic, have always shown the best disposition to continue promoting ONTA's institutional policy, keeping everyone's interest in keeping nematology alive in ONTA members and, especially in early career professionals, who want to embrace nematology as a career.

Finally, in this message to you, I would like to make a special mention of

appreciation to our colleagues Rosa H. Manzanilla-López and Deborah Neher for keeping informed our ONTA members via the ONTA Newsletter and email messages, respectively.

With my best wishes for you to have a nice Christmas season,

Martin Delgado Junchaya President of ONTA (Fig. 3)

#### FROM THE ONTA VICE-PRESIDENT



Fig. 4. Dr Fahiem El-Borai Kora

Dear ONTA members,

Unexpectedly, and with sorrow, we all received the sad news about the passing of our dear friend, colleague, and Vice-President Fabio Chaverri Fonseca a few weeks ago. My personal condolences go to the late Fabio Chaverri Fonseca's family and all ONTA members at this difficult time, and hope that together we will do what Fabio was planning to do for ONTA and honor his memory.

In such an unexpected situation, and according to ONTA's operation procedures, I was called to be ONTA's new Vice-President. It is an honor and pleasure to serve the Organization in this position, and to meet the expectations of **ONTA** EC and ONTA members worldwide. Soon I will see some of you at IFNS in France where we can plan together for the coming ONTA 2023 Annual Meeting, which we all are looking forward to, and be back together again.

We are ending the year of 2021 with all what we had experienced through the year, and as we are approaching the new year 2022, I wish you all and your families a very Merry Christmas and Happy New Year.

Dr Fahiem EL-Borai Kora ONTA's Vice-President (Fig. 4)

Director of International Outreach for the "Strawberry Breeding and Genetics" program Gulf Coast Research and Education Center 14625 CR 672 Wimauma, FL 33598 Office: 1813.419.6612 Mobile: 1863.513.8095 Email: Fahiem@ufl.edu

## MINUTES EXECUTIVE COMMITTEE ZOOM MEETING

#### 7 December 2021

Host: Fahiem El-Borai Kora, ONTA Vice President

Attendees: Fahiem El-Borai Kora (Vice-President), Renato Inserra (Treasurer), Julia Meredith (Interim Secretary), Inga Zasada (Editor Nematropica), Rosa Manzanilla-Lopez (Newsletter Editor; Nominations Committee), Deb Neher (Listserv)

Faheim introduced himself to the EC for those persons that did not know him personally and gave information about his areas of research and expertise. Deb thanked Fahiem on behalf of the EC and ONTA for assuming the responsibilities of Vice President under the present circumstances and short notice. Fahiem pledged to work diligently for the organization and lead ONTA successfully.

The vacancies of Vice President and Secretary were discussed. It was decided that the Nominations Committee will seek potential candidates and will ask for suggestions and nominations from the membership in January 2022. Elections would be carried out in February, giving ONTA a new slate of officers by the time ICN takes place in May 2022. Rosa and other members of the Nominations Committee will contact potential candidates and make the general call for nominations from the membership.

Concerning funding for ONTA and ONTA Foundation, Fahiem and Johan Desaeger (Sustaining Member Committee) will meet to work on strategies and contacts to procure funds and sustaining memberships.

Concerning ICN in France, May 2022, many ONTA members will not attend because of health concerns and lack of funding. Rosa reported that students have already competed for bursaries. The Federation organized these seminars in October. It is not known how much money could be available to help ONTA members that are students or early career professionals. Fahiem is to contact Larry Duncan to know what funds might be available to cover registrations or other expenses.

Ideas and proposals for an ONTA meeting in 2023 will be discussed in France. Fahiem thinks he could get good support for a meeting in Egypt, and other members will be contacted to know about support that might be available in those other countries in south and central America such as Chile.

Inga Zasada mentioned that ONTA is welcome to join SON for its meeting in Anchorage, Alaska, 26-29 September 2022, but there will be the usual travel restrictions and difficulty for non-USA citizens to obtain visas.

The idea of a virtual meeting or symposium for ONTA had been discussed by Martin Delgado (President) and Fabio Cheverri (Vice President). This matter will be revisited after the meeting in France. The cost of hosting a digital meeting, logistics, mechanisms, support and feasibility will be considered.

Julia Meredith Interim Secretary

#### FROM NEMATROPICA EDITORS-IN CHIEF

## Update from *Nematropica* Inga Zasada and Louise-Marie Dandurand (Editors-in-Chief) Cathy Howard (Operations Manager)

The first issue of *Nematropica* in 2021 (Vol. 51 No. 1) included a first report of *Meloidogyne enterolobii* in Florida and a research paper on how to manage nematodes with rotation crops. Vol. 2 for 2021 is still in progress, so keep checking for new papers to read. 2021 was a slow year for *Nematropica* with only 26 submissions. This is the journal for ONTA – let's make it better together. Consider submitting your next manuscript to *Nematropica*. Don't forget, *Nematropica* accepts all types of manuscript:

- Full research papers
- First reports
- Reviews
- Research reports

**Have an idea for a review article?** Let us know – we are happy to work with you.

We continue to pursue the goal of assigning a Digital Object Identifier (DOI) to *Nematropica* manuscripts. DOI enables every published article to cite properly, and thus provides an accurate number of citations and also increases the visibility of the published work. This will directly affect the impact factor of the author and journal as well. We would like to recruit more reviewers from Central and South America. **If you are interested in being a reviewer for** *Nematropica* **let us know** (**nematropica@gmail.com**).

We thank our Associate Editors for their hard work – Danny Humphreys, Tristan Watson, Johan Desaeger, Lesley Schumaker, Marcelo Oliveira, and Travis Faske.

Happy Holidays.



Fig. 5. Root-knot nematode damage - Courtesy of Nematropica

#### FROM THE NEWSLETTER EDITOR



Fig. 6. Rosa H. Manzanilla-López and Fabio Chaverri Fonseca in Quito, Ecuador (ONTA 2010)

#### Dear ONTA members,

We are very pleased to be in contact with you again through the ONTA Newsletter. We also hope that you are all fine and are coping well in view of the new worldwide threat to health posed by Omicron, COVID-19's new variant.

We will share with you in this issue news of the different activities organized by IFNS officers who have also been very active to inform and receive feedback from councillors of the different societies that are members of the Federation, as well as to analyse plans to meet at the 7<sup>th</sup> International Congress of Nematology (1-6 May 2022) at the Palais des Congrès in Antibes Juan-Les-Pins (France). It has been acknowledged by most colleagues that face-to-face interaction is much missed and hope that world COVID-19 vaccination will allow us to hold face-to-face large events like the 7<sup>th</sup> INC. However, IFNS officers and the ICN Local Arrangements Chair will continue to inform us of any further development about the Congress.

Many of you were informed in October 19 of the untimely departure of our Vice-President, MSc Fabio Chaverri Fonseca (Fig 6) who is much missed by friends and colleagues. We would like to share with you in this issue a semblance of Fabio as seen by colleagues and friends. Fabio had worked through the year in organizing ONTA's future activities behind scenes, just up to a couple of days before his departure. He had many plans for our Organization, and we hope that they can be continued, even though he is no longer among us.

Throughout 2021, digital, non faceto-face technologies have allowed us to continue with many of our day to day activities, as shown by the news and experiences shared by ONTA members with the readers of this issue of the Newsletter. Pat Donald shares with us some highlights of the **SON** Annual meeting that this year celebrated its 60<sup>th</sup> Annual meeting in Alabama, USA (**12-15 September 2021**).

We also give our warmest welcome to our new Vice-President Fahiem El-Borai Kora and thank our President Martín Delgado Junchaya for his leadership, supported by the Executive members of ONTA, to move the Organization forward after Fabio's departure.

We thank ONTA Newsletter contributors, and we would like to reassure you that all ONTA officers will keep working to maintain our Organization active and alive, and that we would like to hear from you wherever you are.

Merry Christmas season and happy 2022,

Rosa

#### **ONTA MEMBERS NEWS**

#### Society of Nematologists 60<sup>th</sup> Annual Meeting

SON met, primarily in-person, for their 60<sup>th</sup> annual meeting September 12-15, 2021 (Fig. 7). It was a meeting of firsts. It was the first time anyone can remember where the President, Vice-President and Past President were not in attendance. The President-elect did a very capable job of being chair of local arrangements, in charge of the meeting program and running the meeting. It was the first time SON has met in Alabama. It was the first time SON had a partially hybrid meeting with in-person and virtual posters. The Annual Business meeting also had zoom participation. It was the first time SON has had a type of treasure hunt where students vied for SON Tshirts by finding the answer to supplied questions. Two students, Michelle Soule and Prativa Chhetr, were able to find answers and post a picture of themselves with the person associated with all 10 answers. It was the longest student paper competition, at least in recent in recent history. Thirty-two graduate students competed in 15 and 3-minute competitions and the talks were outstanding.

Congratulations to J. Parr McQueen and Dong-gyu Kim for winning 1<sup>st</sup> and 2<sup>nd</sup> place, respectively, in the 15-minute graduate student paper presentations! Well done! We also congratulate the 3-minute graduate student paper presentation winners, Scott Anderson with 1<sup>st</sup> place and A. Kate Turner with 2<sup>nd</sup> place. Most of all, thank you to all the graduate student who participated in the event. Travel grants were awarded to 10 students.

Andrea Skantar, as President, led SON throughout this unprecedented year and became Past President. Kathy Lawrence became President. We welcome Axel Elling to the office of President elect, Inga Zasada to Vice-President, Cynthia Gleason as our new Secretary, and Board Member Liaison, Jason Bond. Cynthia and Jason are replacing Brent Sipes and Tesfa Mengistu, respectively. Thank you, Andrea, Brent and Tesfa for your service.

Kindly submitted by Pat Donald



Fig. 7. SON 60<sup>th</sup> Annual Meeting 12-15 September 2021

#### ONTA MEMBERS NEWS (cont.)

#### **Across the Atlantic**

Association of Applied Biologists - #UKPlantSciPresents Webinar Series: Can cover crops be used to lower populations of plant parasitic nematodes of field crops?

#### By Matthew Back, Harper Adams University, UK

The Association of Applied Biologists have been running a series of weekly webinars during the autumn on plant science related topics. On the 23<sup>rd</sup> November 2021, Matthew Back (Fig. 8) of Harper Adams University (HAU) gave a presentation on the use of cover cropping for suppressing plant-parasitic nematodes. The talk covered a number of different topics including biofumigation, trap cropping and the use of allelopathic plants. Data from various PhD projects, conducted at HAU, was used to highlight the potential of these crop protection options. The importance of understanding the factors associated with trap crop/biofumigant performance was a key message from the talk. A full recording of the presentation can be found here. [https://www.youtube.com/watch?v=NqQXyiu5ubg]



Fig. 8. From left to right: Dr Matthew Back (Harper Adams University), Indian mustard – a biofumigant and various solanaceous trap crop species used in the suppression of potato cyst nematodes(Globodera spp.)

#### **OBITUARIES**

Hedwig Hirschmann Triantaphyllou (1927-2021)



Fig. 9. Hedwig Hirschmann Triantaphyllou Image credit: jofnem-2021-097

Hedwig Hirschmann Triantaphyllou (Fig. 9) passed away on 22 September 2021. She completed in 1951 her Bachelor of Science and PhD at the University of Erlangen (Germany) where she continued as a postdoc. that time, she made important Since contributions on taxonomy, biology and community structure of free-living nematodes; her early anatomical observations on rhabditids and diplogastrids will lay in future the foundation of basic biology model systems such as Caenorhabditis and Pristionchus. Dr Hirschmann moved to the USA in 1954 and was hired at North Carolina State University (NCSU) where she advanced to full professor in 1967.

Professor Hirschmann unravelled difficult problems of species diagnosis and interspecific variability and her work helped to elucidate details of reproductive biology, life history, embryogenesis and post embryogenesis of plant-parasitic Tylenchida. Her work with her husband (Anastasios Tryantaphyllou) on cytogenetics formed the basis for evolution and speciation hypothesis among plant-parasitic nematodes.

Her contribution and participation on the International Meloidogyne Project (IMP 1975-1985) were of great importance and she trained many scientists from 70 participating developing countries. Professor Hirschmann's research and education programs had profound impact on nematology and plant pathology for which she was acknowledged and distinguished by several scientific societies including the American Phytopathological Society (Ruth Allen Award, 1993) and Society of Nematologists (Fellow of the Society of Nematologists, 1981). Together with her husband she created in 1999 endowments in support of NCSU graduate students in programs in Plant Pathology and Genetics.\*

#### References

Baldwin, J.G. and Eisenback, J.D. (2021). In memoriam. Hedwig Hirschmann Triantaphyllou. *Journal of Nematology* e2021-97, vol. 53. DOI:10.21307/jofnem-2021-097 \*Text abbreviated from Baldwin and Eisenback (2021).

#### **OBITUARIES**

José Fabio Chaverri Fonseca (1963-2021) Vice-President of ONTA



Fig. 10. José Fabio Chaverri Fonseca

With a heavy heart, we must report that our colleague, friend and Vice-President of ONTA (2019-2021), passed away in the Hospital of the City of Heredia in the morning of October 18. Friends, colleagues and family were deeply moved by his anticipated departure, we paid our respects to him in the Chapel of the National Magisterium and his funeral services were held on October 20 in the Catholic church "La Inmaculada Concepción" in the city of Heredia, Costa Rica.

José Fabio (Fig. 10) was born in and loved his city of Heredia, and was a fan and member of the soccer team "Club Sport Herediano", which won the Costa Rican soccer major league 28 times. He obtained his bachelor's degree in Agronomic Engineering with an emphasis in plant technology in 1988 and in 1991 he completed his master's program in Agricultural Sciences and Natural Resources from the University of Costa Rica. He began his research work at the Organization of Tropical Studies (OET), later in May 1993 he was hired by the National University of Costa Rica (UNA), developing his academic activity and research at the School of Environmental Sciences (EDECA)

and in the Regional Institute for Studies on Toxic Substances (IRET). During his academic life he taught courses on Forest Pest and Disease Management, Plant Pathology, Environmental Crisis and Agroecology in the undergraduate and graduate programs offered by the National University. He participated in many research and extension projects at national and international level in the area of crop protection, whose main objective was the development sustainable agricultural of systems and the implementation of alternatives the use of pesticides with to high environmental and human impact.

Since 2004, he has been a faithful collaborator of the Nematology laboratory of the School of Agrarian Sciences (ECA), which allowed him to approach and participate in the annual meetings of ONTA. He was an active member of the 2006 ONTA Local Committee and coordinated the organization of the 51<sup>st</sup> Annual Meeting 2019 in Costa Rica (Fig. 11). Through his academic career at the University he occupied several high-level administrative positions:

1. Deputy Director of the School of Environmental Sciences (EDECA)

2. Member of the University Council (2009-2014)

3. President of the Assembly of Representatives (2016-2018)

4. Director of the Regional Institute for Studies on Toxic Substances (IRET)

5. Vice-Dean of the Faculty of Earth and Sea Sciences in office at the time of his death

The University community is deeply saddened by Fabio's unexpected departure, a loss of a very special human being and an excellent academic who made great contributions to the National University. José Fabio was a noble person of heart, composure and cautious. Always ready to provide support and seek solutions to any situation.

#### **OBITUARIES** (cont.)

His charisma, smile and good spirits permeated the University Community. We have mourned Fabio's departure, which has left a huge void. He is no longer with us physically but he will continue being remembered by colleagues and friends who had the great honor of meeting him. His brothers Agnes and Luis Diego Chaverri Fonseca are deeply grateful for all the expressions of love and support received.

Alejandro Esquivel (Fig. 12)

ONTA Honors and Awards Committee and ONTA President (2015-2016)



Fig. 11. Fabio (second from left to right) local arrangements committee and Starbucks staff. ONTA Annual meeting in Costa Rica (2019)



Fig. 12. Alejandro Esquivel, SON-ONTA join Annual Meeting in Montreal, Canada (2016)

#### Fabio Chaverri Fonseca by Nahum Marbán-Mendoza

All ONTA members who had the opportunity meet and treat Fabio in various to circumstances, recognized that he combined many virtues such as responsibility, kindness, loyalty, commitment, sense of duty, generosity, together with his personal sympathy and sense of humor (Fig. 13). I had great empathy for him since we met in his native Costa Rica at CATIE in Turrialba, when he told me about his ongoing development projects; like a good 'tico', aimed at the sustainability of agricultural systems and water basins. This happened in the early 90s and it came as no surprise to me that by the middle of that same decade he was appointed as coordinator of the program to search for alternatives to the agricultural use of the

fumigant methyl bromide (MB) as part of the Montreal Protocol.

Fabio summoned the best technicians and professionals from Costa Rica and other countries to carry out various actions such as workshops, conferences, congress, commercial demonstrations of alternatives in crops, development of non-chemical tactics and transition chemicals to replace MB in various crops. Almost immediately he was nominated and accepted within the Montreal Protocol to join the Technical Committee chapter to search for MB alternatives (MBTOC). In this where other committee, renowned nematologists also took part, we coexisted professionally for almost 8 years to develop various actions on research, technology transfer. training, review and

#### **OBITUARIES** (cont.)

analysis of projects to suggest them to the signatory countries of the Montreal Protocol.

Fabio was always a distinguished member, compliant in the various tasks that were entrusted to him by the important unit of the TEAP (Technology and Economic Assessment Panel). This panel evaluated the technical and economic actions, not only for the MB, but also for other chemicals used in refrigeration that destroy the ozone layer, e.g. fire fighting foams, paint dispensers, perfumes, etc. What was done by Fabio and other 36 colleagues contributed to almost eliminate the use of MB in industrialized and developing countries. The numerous experiences that Fabio developed in Costa Rica in crops such as melon and tomato, among other vegetables, to evaluate tactics to combat pests of the soil,

enriched the constant discussions that arose within the MBTOC and that later on helped to make pertinent recommendations to MB users.

Great companion and friend. supportive in the worst crises, honest and hardworking. loyal to ONTA under anv circumstances, but unfortunately the current COVID-19 pandemic unexpectedly took him away from us in the early morning of October 18 of this year in his native Costa Rica. He left us at the height of his personal development and when ONTA required its best members to reactivate its activities. For many of us who had the joy of knowing and treating him for many years, his death left us with a great void and it will take time to overcome the grief. Rest in peace my dear Fabio, we will always remember ONTA. you at



Fig. 13. Fabio (second in left row) and Costa Rica ONTA colleagues in Arequipa (2018)

#### Fabio Chaverri Fonseca by Martha Orozco

I deeply thank the friends of ONTA for this space to express a few words remembering our friend Fabio Chaverri Fonseca. In 2006 I started working at the Regional Institute for Toxic Substances Studies (IRET), and precisely the first activity in which I collaborated was the organization of the



Fig. 14. Nahum Marbán-Mendoza and Fabio (third on left row)

ONTA Meeting of that year. The local organizing committee was integrated by a small group of people, and led by Alejandro Esquivel and Fabio Chaverri. We all worked with great love and enthusiasm. In the end, the ONTA meeting was unforgettable. I was lucky to meet Don Fabio and have him as a partner,

## **OBITUARIES** (cont.)

boss and friend. In all his facets, he was always a warm, loving person, and no matter how complicated or difficult the outlook was, he always remained calm, transmitting confidence and tranquillity with the smile that characterized him, to say ... everything will be fine!



Fig. 15. Fabio working with UNA's community

I will never forget "the morning coffee" where several colleagues from the IRET met to take a break from our work. When possible, Don Fabio would join in, and the conversations about the ONTA friends and other friends were recurrent, in a special way he spoke to us about Don Nahum Marbán, whom he always remembered for the gastronomic tours in Mexico, always planning to return to Mexico at some point to enjoy culinary delicacies in the company of his dear friend.



Fig.17. Martha Orozco Aceves



16. Fabio and UNA's colleagues barbecue

Don Fabio always put body, soul and heart into everything he did, with a great vocation for service (Figs 15, 16). The National University as an institution was strengthened by his work, but more importantly, he "touched" all the people we share with him. That great affection that the entire UNA felt for him was reflected on the day of his departure, never in the years that I have worked in said institution have I seen such a wave of messages of affection towards Don Fabio on the institutional mail network. I have never seen such delegations of civil servants come to offer their message of solidarity to the IRET.

I end by expressing that Don Fabio's departure has left a great void; however, I hope to meet again, in the meantime you will be sorely missed.

Martha Orozco Aceves (Fig. 17) Coordinadora de la Maestría en Agricultura Ecológica Universidad Nacional de Costa Rica

#### **OBITUARIES**

# Reinhold Mankau (1928-2021)

Dear colleagues and friends,

With deep sadness I inform you that Professor Emeritus Reinhold Mankau passed away on 5 December 2021. Known by his family, friends, and colleagues as Ron, he was a faculty member at the University of California Riverside for 33 years. He belonged to the first generation of scientists that gave the UCR Department of Nematology its stellar worldwide reputation. Ron knew his nematode-destroying fungi like no other, and was a pioneer in researching nematode-suppressive soils. He was the first to identify *Bacillus penetrans* (now *Pasteuria penetrans*) as a promising biocontrol agent of the devastating plant-pathogenic root-knot nematodes. Ron was humble and personable and remained involved with the Nematology Department until shortly before his death.

Ron is survived by Saroj, a California State University Emeritus Professor in Biology, and his wife of 67 years. Together, they visited more than 100 countries, influencing countless people all over the world. Ron will be greatly missed.

J. Ole Becker Professor of Cooperative Extension in Nematology and Nematologist Department of Nematology University of California Riverside, CA 92521

We also would like to mention that Ron (Fig. 18) was a very distinguished and appreciated ONTA member. A citation of special recognition was presented to Ron Mankau in 2015 at the XLVII ONTA Annual Meeting (Varadero, Cuba) for his long standing contribution and support of ONTA since the inception of the Organization.



Fig. 18. Julia Meredith and Ron Mankau during the award ceremony (Varadero, Cuba)

# **ONTA GALLERY**



*Fig. 19. From left to right: Maria Mendes, Rosa H. Manzanilla-López, Don Dickson and Janete Brito,* 60<sup>th</sup> SON meeting Oregon, USA (2011)



Fig. 20. Mayra Rodriguez and Nematology Lab staff CENSA, Cuba (2014)

#### **NEW BOOKS**

REYES PEÑA-SANTIAGO. Morphology and bionomics of dorylaims (Nematoda: Dorylaimida). Nematology Monographs and Perspectives 13. (Series editors: David J. Hunt and Roland N. Perry.) Leiden, The Netherlands, Brill, 2020, 278 pp. ISBN: 978-90-04-43999-3. Price: €116; US\$140.

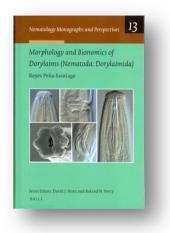


Fig. 21. Dorylaims new book

Dorylaimida, generally referred to simply as dorylaims, are maybe the most diverse and widespread group of free-living nematodes, represented by more than 3300 valid species. They are an object of interest for people dealing both with faunistic surveys and with the ecology of soil and freshwater environments, dorylaims being very common in such habitats where they make a large contribution to nematode biomass and are considered to be good bioindicators of environmental quality. Some taxa of Dorylaimida are plant parasites and are well studied all over the world. For these reasons, the literature concerning dorylaims is very abundant, covering many different branches and is scattered in an impressive number of publications, mostly concerning specific groups of this taxon. The most recent, important monographs on the whole group are those by Jairajpuri & Ahmad (1992) and by Andrássy (2009), which mainly deal with the taxonomic aspects. The present book, whose author, Reyes Peña-Santiago, has dedicated most of his scientific and academic activity to the study and teaching of dorylaims, is the first to provide an in-depth study of the morphological and biological aspects of the taxon.

Dorylaims, which constitute а monophyletic taxon, are characterised by some autapomorphic characters, namely the stoma armed with a protrusible structure, the pharynx divided in two parts, the presence of a prerectum, one pair of precloacal genital papillae, and the absence of caudal glands. Still, this basic pattern has undergone considerable morphological variation which, during adaptive radiation in the course of their evolution, has resulted in many different patterns in a very complex and intricate way. Though the most recent works on the taxonomy of dorylaims try to throw some light on the true phylogenetic relationships between taxa with the aid of molecular analysis, the data available are still very few and therefore the knowledge and correct interpretation of the detailed morphology of the various body traits is still fundamental in the study and comprehension of the phylogeny and the taxonomy of this very rich and complex group of nematodes.

The book (Fig. 20) is divided into 14 chapters. The first chapter (Concept) provides a synthesis of the taxon: main diagnostic characters, biology, diversity and distribution. The succeeding nine chapters, which constitute the bulk of the book, deal in a detailed way with the main aspects and structures of the body, namely: General aspect (size, shape, habitus, color); Body wall and pseudocoel (cuticle, body pores, epidermis and lateral chords, somatic musculature, pseudocoel and its components); Lip region and amphids (lip region shape: profile, anterior margin, differentiation; lips and tapering, their papillae: general pattern, lips, papillae, oral aperture, oral field; amphids: basic structure, position, aperture, fovea); Stoma and feeding

apparatus (cheilostom, guiding ring, guiding mural tooth, axial sheath. odontostyle, odontophore, musculature); Digestive tract (pharynx general morphology, sectors, ultrastructure, anterior section, enlargement, basal expansion and pharyngeal glands, basic pharyngo-intestinal patterns, junction. intestine, prerectum, rectum); Female genital system (General concept and terminology, ovary, oviduct, sphincter, uterus, vagina, vulva, malformations or abnormalities); Male genital system (General concept, testes, genital spicules, lateral guiding tract. pieces. gubernaculum, genital and other papillae, specialised musculature, associated glands); Nervous system and receptors (central nervous system, nerves, cephalic nervous system, pharyngeal nervous system, rectosympathetic nervous system, and sensory structures such as chemoreceptors and mechanoreceptors); and Caudal region (general concept, tail shape, tail sexual dimorphism, postembryonic changes in tail shape, functional and evolutionary aspects). The text of each of these chapters is accompanied by fine illustrations, both line drawings and LM and SEM photographs, which are useful to enhance understanding of the descriptions.

The remaining chapters are devoted to the main aspects of the biology of the group: Feeding habits and feeding behaviour. Although being considered mainly as predatory or omnivorous, dorylaimids appear to have a wider spectrum of feeding habits. In this chapter there is a compilation of predatory species and their corresponding prey, with an indication of the type of study carried out and the associated references, together with a compilation of all the other feeding sources of nematodes; Reproduction these and development. All the aspects related to sexual reproduction and embryonic and postembryonic development are treated. An overview of the life cycles and life span of numerous species is furnished; Ecology and biogeography. This chapter deals with many aspects of the role of dorylaimids in soil and freshwater communities. Different parameters,

such as species richness and abundance. biomass, vertical distribution and habitat, are considered. An overview of the main aspects of their distribution in the world is also given; and in the last chapter, Diversity, in addition to an historical outline running from the origins of the group up to the most recent integrated analysis, morphological and molecular aspects, an approach to the construction of a taxonomy based on phylogeny, and an updated inventory of dorylaimid taxa are also provided. The order includes 18 families, 363 nominal (290 valid) genera, and 3410 nominal (3029 valid, 245 synonymous, 136 incertae sedis or *inquirendae*) species. An outline classification of subordinal, family, subfamily and generic rank taxa, based on updated compilation from the available literature, is presented. Each chapter of the book is supplemented by a list of pertinent references.

In summary, this book, due to the richness and the high quality of information supplied, is a fundamental tool and a valuable resource both for students and for scientists involved with the study of this very important group of nematodes.

#### References

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Review courtesy of Nematology

#### **NEW BOOK**

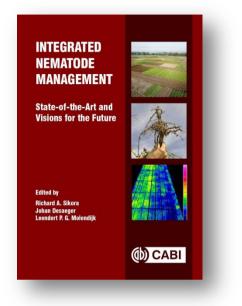


Fig. 22. Integrated Nematode Management new book

Dear Colleagues and Friends,

I want to announce that the book "Integrated Nematode Management: state-of-the-art and visions for the future" (Fig. 21) is now officially available, gratis, in open-access format on the CABI website. The book can be downloaded for direct viewing on your computer or smart phone or both or saved as a PDF for future use.

Please forward this link to anyone you know who might be interested in what we feel is an important handbook on applied plant pathology and nematology. The link to the e-Book is available on the CABI website at: https://www.cabi.org/bookshop/book/9781789 247541/

The editors put together the 500 pages of science in 65 chapters with over 250+ figures in the 12 month window we set. Good collaborators.

I look forward to any comments you have and hope the vast majority are positive! Of course nothing is perfect.

All the best over the holiday season whether Thanksgiving, Christmas, New Years or other special occasion.

Sincerely yours,

Richard Sikora

## **ONTA AGENDA**

#### Plan on attending the 2022 SON Annual Meeting in Anchorage, Alaska

The 61<sup>st</sup> meeting of SON will be held in Anchorage, Alaska Sept 26-29, 2022 (Fig. 22). Here are a few highlights to look forward to:

- The meeting will be held in the Marriott Downtown Anchorage (820 W 7th Ave). Room rates will be \$149 for a double queen/king and we have negotiated this rates for days before and after the meeting. The venue is ideal for visiting downtown businesses, restaurants and bars.
- If you are interested in visiting the Great State of Alaska it is recommended that you come before the meeting to make the most of the weather and sites being open. We will be in Alaska on the back end of the tourist season.
- Plan on 3 days of scientific content including student competitions, symposia, poster session, several receptions and closing banquet.
- Half day tours will be offered to either visit Portage Glacier or the Matanuska Valley, the heart of Alaska agriculture.



Fig. 23. Mark on your 2022 calendar the SON meeting at Anchorage, Alaska (USA)



Get busy! ONTA Foundation, Inc. status is clear and high. Open your wings and take a flight!

Dear ONTA member,

ONTA Foundation is ready for a campaign to request donations and expand its contributor base in a big way. ONTA Foundation can receive funds through several means: 1) checks made out to the ONTA Foundation and mailed to Janete Brito (Fig. 23); 2) credit card, same information required as for membership payment; 3) wire transfer. Janete Brito and Renato Inserra have full codes for wiring if requested.

Please give generously to support the activities and projects of the ONTA Foundation.



Fig. 24. Janete Brito

#### ONTA ACTIVE MEMBERSHIP UPDATING

Dear ONTA Member,

A list of active members with their e-mail addresses and countries has been posted on the ONTA website (http://www.ontaweb.org/ontamembership-directory/). Please verify your membership status on the posted list. Contact Julia Meredith (jmeredith@cox.net) if your membership status is not updated (Fig. 24).

Thanks,

Julia Meredith ONTA Acting Secretary



Fig. 25. Julia Meredith

#### **ONTA NEWSLETTER INVITATION**

#### Dear ONTA member,

Do you have a passion for nematodes and nematology? Would you like to share nematology news and pictures with our ONTA members? If so, welcome aboard!

We would like to extend to you a warm invitation to send or share information for our next ONTA Newsletter issue.

Please contact us. We are looking forward to hearing from you and to learn about your local nematology events and news.

Thanks,



Fig. 26 Rosa H. Manzanilla-López

Rosa

#### ACKNOWLEDGEMENTS

The editor would like to thank all ONTA Newsletter contributors for sending and sharing information and images through the year of 2021. Special thanks to our colleague MSc Walter Peraza for designing the ONTA Christmas card this year.

Rosa H. Manzanilla-López ONTA Newsletter Editor

## HAPPY CHRISTMAS SEASON



Fig. 27. Christmas card Courtesy of Walter Peraza (National University of Costa Rica)

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