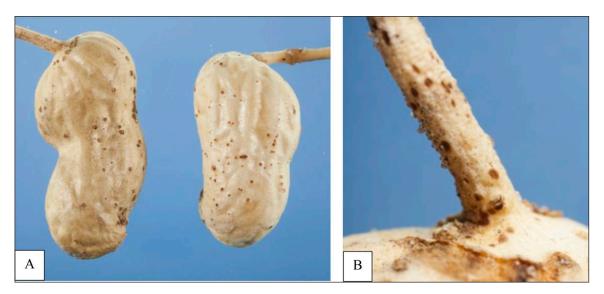
JOURNAL of NEMATOLOGY

The Official Journal of The Society of Nematologists

Volume 47, Number 2, June 2015



Symptoms induced by the sting nematode on peanut pod and peg of peanut cv. Tifguard found at 35 Farms in summer, 2012

Journal of Nematology 47(2):87–166 (2015) Hanover, Pennsylvania

JOURNAL OF NEMATOLOGY

THE OFFICIAL JOURNAL OF THE SOCIETY OF NEMATOLOGISTS

EDITORIAL BOARD

Editor-in-Chief

Nancy Kokalis-Burelle, 2014. USDA-ARS, Ft. Pierce, FL

Editors

Andreas Westphal, 2014. Julius Kühn-Institut, Münster, Germany

Zafar Handoo, 2014. USDA-ARS, Beltsville, MD

James LaMondia, 2014. The Connecticut Agricultural Experiment Station, Windsor, CT

David Shapiro-Ilan, 2014. USDA-ARS, Byron, GA

Inga Zasada, 2014. USDA-ARS, Corvallis, OR

William Crow, 2015. University of Florida, Gainesville, FL

Abigail Walter, 2015. Swedish University of Agricultural Sciences

Salliana Stetina, 2015. USDA-ARS, Stoneville, MS

Sergei Subbotin, 2015. California Department of Food and Agriculture, Sacramento, CA

Erik J. Ragsdale, 2016. Max Planck Institute, Tübingen, Germany

Axel Elling, 2016. Bayer CropScience, Morrisville, NC

Richard F. Davis, 2016. USDA-ARS, Tifton, GA

Andrea M. Skantar, 2017. USDA-ARS, Beltsville, MD

Christine Griffin, 2017. National University of Ireland, Maynooth, Co. Kildare, Ireland

Jyotsna Sharma, 2018. University of Texas at San Antonio, TX

Published by the Society of Nematologists

President: Stephen Thomas President Elect: Byron Adams Vice-President: Patricia Timper Secretary: Andrea Skantar

mper Executive Member: Horacio Lopez Nicora Executive Member: Paulo Vieira

Editor-in-Chief: Nancy Kokalis-Burelle

Executive Member: Nathan Schroeder

Treasurer: Senyu Chen Webpage/Newsletter Editor: Roxana Myers

Journal of Nematology (ISSN 0022-300X) is published quarterly by The Society of Nematologists. For other information, visit: http://www.nematologists.org

Mention of a pesticide, cultivar, or commercial or proprietary product does not constitute a recommendation or an endorsement of its use by editors, author(s), their institutions, or The Society of Nematologists. Authors are responsible for statements made in the Journal, whether of fact or opinion.

Printed by The Sheridan Press, 450 Fame Ave., Hanover, PA 17331.

Sustaining Associates of THE SOCIETY OF NEMATOLOGISTS

A&L Southern Agricultural Laboratories

David Sui (ddsui@al-southern.com) Pompano Beach, FL

Ajay North America, LLC

Mark Leafgreen (lefgrenm@bellsouth.net) Powder Springs, GA

Arvesta

Charles T. Schiller (cschiller@arvesta.com) Cary, NC

BASF Plant Science LLC

Volker Mittendorf (volker.mittendorf@basf.com) Research Triangle Park, NC

Bayer Crop Science

Lee S. Hall (lee.hall@bayercropscience.com) Research Triangle Park, NC

Divergence, Inc.

James P. McCarter (mccarter@divergence.com) St. Louis, MO

Dow Agro Sciences

James P. Mueller (jpmueller@dow.com) Brentwood, CA

DuPont Crop Protection

Michel A. Rivera (michel.a.rivera@usa.dupont.com) Newark, DE

Pasteuria BioSciences, LLC

Kelly Smith (ksmith@pasteuriabio.com) Alachua, FL

Pest Pros, Inc.

Randy Van Haren (pestpros@uniontel.net) Plainfeld, WI

Syngenta Crop Protection, Inc.

David Long (david.long@syngenta.com) Greensboro, NC

Sustaining associate members help support The Society of Nematologists (SON) through their financial assistance, knowledge, expertise, and professional involvement in the science of nematology. For information about these companies or if you would like to become a sustaining associate member, contact a member of the Executive Board, or the SON Business Office (societyofnematologist@gmail.com).

Annual membership in the Society of Nematologists is \$60 US for regular members, \$30 for students, and \$500 for Sustaining Associates. Payment must be with a check in US currency drawn on a US bank or by Visa or MasterCard. A fee of \$9.95 will be added to all transactions. The Nematology Newsletter is included in the membership dues for regular and student members. Institutional Subscription rates are \$140/yr in the United States and \$160 outside the US. This and other information can be found at the Society's website: http://www.nematologists.org.

BACK ISSUES OF JOURNAL OF NEMATOLOGY

Vols. 21–34 (1989–2002). Price per issue includes postage and handling. Members: \$10.00; Nonmembers: \$40.00. Please indicate volumes desired and send check, money order, or credit card (VISA or MasterCard) account number and expiration date to the Society of Nematologists, Inc., 108 West Burwell Avenue, Loundonville, OH 44842

CONTENTS JOURNAL OF NEMATOLOGY

Vol. 47, No. 2 June 2015

Contributed Papers

Emerging Pathogens

Belonolaimus longicaudatus: An Emerging Pathogen of Peanut in Florida. Kanan Kutsuwa, D. W. Dickson, J. A. Brito, A. Jeyaprakash, and A. Drew	87
A First Report of <i>Anguina pacificae</i> in Ireland. Thomas R. Fleming, Aaron G. Maule, Trevor Martin, Margaret Hainon-McDowell, Kate Entwistle, Michael A. McClure, and Colin C. Fleming	97
Entomopathogenic Nematodes	
Diplogasteroides asiaticus n. sp. is Associated with Monochamus alternatus in Japan. Natsumi Kanzaki, Gavin C. Woodruff, Mitsuteru Akiba, and Noritoshi Maehara	105
Biochemistry of Anhydrobiosis in <i>Beddingia siricidicola</i> , a Biological Control Agent of <i>Sirex noctilio</i> . MICHAEL J. LACEY AND ROBIN A. BEDDING	116
Management	
Efficacy of Four Nematicides Against the Reproduction and Development of Pinewood Nematode, Bursaphelenchus xylophilus. Zhenzhen Bi, Yanting Gong, Xiaojuan Huang, Hongshi Yu, Liqun Bai, and Jiafu Hu	126
Resistance	
Mi-I-Mediated Nematode Resistance in Tomatoes is Broken by Short-Term Heat Stress but Recovers Over Time. Luciana Marques de Carvalhoa, Nicole D. Benda, Martha M. Vaughan, Ana R. Cabrera, Kaddie Hung, Thomas Cox, Zaid Abdo, L. Hartwell Allen, and Peter E. A. Teal	133
Impact of Grapevine (<i>Vitis vinifera</i>) Varieties on Reproduction of the Northern Root-Knot Nematode (<i>Meloidogyne hapla</i>). Amanda D. Howland, Patricia A. Skinkis, John H. Wilson, Ekaterini Riga, John N. Pinkerton, R. Paul Schreiner, and Inga A. Zasada	141
Taxonomy	
Further Studies on Soil Nematode Fauna in North Western Iran with the Description of One New Species. Majid Pedram, Ebrahim Pourjam, Mohammad Reza Atighi, and Yousef Panahandeh	148
Description of <i>Sclerorhabditis miniata</i> n. sp. and First Description of Male of <i>Diploscapter coronatus</i> Cobb, 1913 (Nematoda: Rhabditidae). Ali Asghar Shah and Shavish Vaid	153
Molecular Biology	
Sequence and Spatiotemporal Expression Analysis of CLE-motif Containing Genes from the Reniform Nematode (<i>Rotylenchulus reniformis</i> Linford & Oliveira). Martin J. Wubben, Lily Gavilano, Thomas J. Baum, and Eric L. Davis	159