

MARISOL QUINTANILLA TORNEL

Entomology and Nematology Lab
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EDUCATION**Ph.D., Entomology and Nematology, May 2009**

Dissertation Title: Acoustical and Nematode Community Structure Methodologies for Ecosystem Characterization.

Advisor: Dr. George Bird at Michigan State University (MSU)

M.S., Department of Entomology, December 2004

Research Title: Effect of Rotation Crops, Soil Storage Temperature and Incubation Period on N-Mineralization and Nematodes.

Advisor: Dr. George Bird at Michigan State University

Graduate Student, Department of Horticulture, 2001-2002

Research Title: Effect of Rotation Crops, Soil Storage Temperature and Incubation Period on N-Mineralization and Nematodes.

Advisor: Dr. S. Snapp at Michigan State University

Bachelors in Agriculture, 2001

Andrews University, Berrien Springs, Michigan

Agriculture Engineering Student, 1996-1999

Universidad Adventista de Chile, Chillan, Chile

Human Health Student, 1994-1995

Hartland College, Rapidan, Virginia

AWARDS

- **Dr. Eugenia McDaniel Teaching Award, MSU Entomology (2005)**
- **C. W. Mott Doctoral Fellowship, MSU (2004-2007)**
- **Undergraduate International Scholarship, Andrews University (2001)**

TEACHING EXPERIENCE

2008-Fall: Graduate Teaching Assistant for ENT 205 (Pests, Society and Environment), Michigan State University.

- Assisted in grading homework and exams of 120 students
- Delivered some selected lectures for the course

2005-Spring: Graduate Teaching Instructor ISB 201L (Insects, Globalization, and Sustainability Laboratory), Michigan State University.

- Participated in curriculum design and developed learning outcomes for 96 diverse undergraduates
- Taught three section
- Instructor for lectures and laboratories

2005-Fall: Graduate Teaching Instructor ISB 208L (Applications in Biological Science Laboratory), Michigan State University.

- Developed learning outcomes for 96 diverse undergraduates
- Taught three sections
- Instructor for lectures and laboratories

2004-Spring: Graduate Teaching Instructor ISB 208L, Michigan State University.

- Developed learning outcomes for 96 diverse undergraduates
- Taught three sections
- Instructor for lectures and laboratories

2003-Fall: Graduate Teaching Assistant for ENT 205 (Pests, Society and Environment), Michigan State University.

- Assisted in grading homework and exams of 120 students
- Delivered two lectures for the course

1995-1996 Instructor in Ouachita's Hill's Academy, Amity, Arkansas, High School

- Instructed approximately 30 students in Chemistry and Algebra

MANAGEMENT AND WORK EXPERIENCE

- 2009 Plant protection program leader, entomologist and nematologist for Northern Marianas College Cooperative Research Extension and Education Service (NMC-CREES or NMC-NIFA).
- 2002 Chilean Summer: Supervisor harvesting/storage/packaging/quality control at table grape and pear growing and exporting operation. This operation is owned by my family.

- 1992-1994: During my high school years, in a boarding academy, I did door to door literature sales after school, and sometimes worked in the school's vegetable and fruit production systems.

PUBLICATIONS

- Quintanilla Tornel, M. 2009. Acoustical and nematode community assessment for ecosystem characterization. Ph.D. dissertation, Michigan State University.
- Quintanilla Tornel, M., G. Bird and S. Gage. 2008. Impact of Microwaves and Water on Acoustical Signatures of a Compost. Accepted, submitted to Compost Science and Utilization Journal.
- Quintanilla Tornel, M., S. Gage, and G.W. Bird. 2009. Temporal dynamics of acoustical signatures associated with alternative management and natural ecosystems. Submitted to Journal of Environmental Entomology. In review.
- Quintanilla Tornel, M. and G. W. Bird. 2009. Nematode community structure of soil from alternative management and natural ecosystems. In review.
- Quintanilla Tornel, M., A.J.M. Smucker, S. Gage, G. Bird, and E. J. Park. 2008. Impact of Tillage on the Acoustical Signatures during Rapid Hydration of Air Dried Soil Aggregates. In review.
- Smucker, A., E. Park, M. Quintanilla, S. Gage, and G. Bird. 2006. Acoustical Profile Identification of Soil Hydration and Stability, Abstract No. 27812, ASA-CSSA-SSSA Annual meetings, Indianapolis, Indiana, November 12-16, 2006.
- Quintanilla, M., A.J.M. Smucker, S. Gage, G. Bird. 2006. Acoustical properties of soil aggregates and compost associated with alternative management and natural ecosystems, KBS-LTER All Scientist Meeting, East Lansing, Michigan, May 9, 2006.
- Quintanilla, M., G. Bird, and S. Gage. 2006. Temporal dynamics of acoustical signatures associated with alternative management and natural ecosystems, KBS-LTER All Scientist Meeting, East Lansing, Michigan, May 9, 2006.
- Quintanilla, M., A. Smucker, S. Gage and G. Bird. 2005. Role of Acoustical Signature Monitoring in Ecosystem Assessment. Proceedings of the Annual Meeting of the Society of Nematologists. Fort Lauderdale, Florida, July 9-13, 2005.

- Quintanilla, M., S. Snapp, G. Bird, J. Smith. 2004. Effect of Rotation Crops, Soil Storage Temperature & Incubation Period on N-Mineralization and Nematodes. *J. Nematol.* 36 (3): 343.
- Jost, M.S., J. Biernbaum, G. Bird, C. Bates, R. Bounds, S. Hollosy, M. Quintanilla, J. Smith, A. Walter. 2004. Impact of substrates and pulsing agents on reproduction of bacterial-feeding nematodes. *J. Nematology* 36 (3): 325-326.

EXTENSION-OUTREACH PRESENTATIONS

- Quintanilla, Marisol and Arnold Route. 2009. Commercial agriculture pesticide safety and education program workshop. Rota, Northern Mariana Islands
- Quintanilla, Marisol and Arnold Route. 2009. Structural pesticide safety and education program workshop. Tinian, Northern Mariana Islands.
- Quintanilla, Marisol A. 2009. Forest Acoustics. Mysteries of the Forest Revealed. Agriculture and Natural Resources Week. Michigan State University. Invited Oral Presentation.
- Quintanilla, Marisol A. 2009. Nematode Community Structure of Natural and Alternative Management Systems at the MSU, Kellogg Biological Station/Long Term Ecological Research Site. Michigan 2nd Organic Research Reporting Session. Agriculture and Natural Resources Week. Michigan State University. Oral Presentation.
- Quintanilla, Marisol A. 2009. Impact of Tillage and Carbon on Acoustics and Water-Stability of Soil. Michigan 2nd Organic Research Reporting Session. Agriculture and Natural Resources Week. Michigan State University. Oral Presentation.
- Quintanilla, Marisol A. 2009. Ecological Integrity and Living Soil. Michigan State University, NSC 491 Sustainability for a Shrinking Planet. Invited Oral Presentation.
- Quintanilla Tornel, Marisol A. 2008. *Temporal dynamics of acoustical signatures associated with alternative management and natural ecosystems*. Entomological Society of America Annual Meeting, Reno, Nevada. Oral presentation.
- Quintanilla, Marisol. 2008. *Impact of Management on Soil Biology and Ecosystem Acoustics*. Central Service Area-Plant and Soil Science Workshop for the Natural Resources Conservation Service (USDA). June 3, 2008. Invited Oral Presentation.

- Quintanilla, M. 2007. *Soil Biology*. Biosystems Annual Client Workshop. April 12, 2007. Invited Oral Presentation.
- Quintanilla, M. 2007. *Soil Quality Management*. Herbruck Farms, Inc. Grower Workshop. March 30, 2007. Invited Oral Presentation.

RESEARCH EXPERIENCE

- **2009- Plant protection leader, Entomologist and Nematologist** in the Northern Mariana Islands, Northern Marianas College Cooperative Research Extension and Education Service.
- **2006-2009 Graduate Research Assistant**, Entomology Department, Nematology Program, MSU
- **2001-2002 Graduate Research Assistant**, Department of Horticulture, MSU

RESEARCH GRANT PROPOSAL DEVELOPMENT EXPERIENCE

- Title: "Nematological studies in specialty crops in the commonwealth of the northern mariana islands"
Grant type: HATCH
Responsibility: Principal investigator
Amount awarded: \$119,155
- Title: "Travel grant for CSREES Grantsmanship Workshop"
Amount awarded: \$ 2,800
- Title: "Agroacoustical Identification of Soil Water, Belowground Faunal and Microbial Modifications of Plant Disease and Aboveground Biophysics"
Grant type: GREEN (Fundamental Research)
Team Member: Dr. Alvin Smucker, Dr. George Bird, Dr. Stuart Gage, Dr. Eun Jin Park and Marisol Quintanilla
Responsibility: Provided leadership for writing and coordination among the team members.
Amount Requested: \$104,975
- Title: "Acoustical Signature Monitoring of Soil and Environmental Quality Assessment"
Grant type: EPA EMAP Regional Environmental Monitoring and Assessment Program Research Projects

Team Member: Dr. Alvin Smucker, Dr. George Bird, Dr. Stuart Gage, Dr. Eun Jin Park and Marisol Quintanilla
Responsibility: Provided leadership for writing and coordination among the team members.
Amount Requested: \$278,901

- Title: “Acoustical Signature Assessment for Land Policy Decision-Making; With Special Reference to Sustainable Agriculture and Soil Quality”
Grant type: Land Policy Program, Graduate Research Scholars Grant
Team Member: Dr. George Bird, Dr. Stuart Gage, Dr. Alvin Smucker, Dr. Eun Jin Park and Marisol Quintanilla
Responsibility: Provided leadership for writing and coordination among the team members.
Amount Requested: \$49,661

PROFESSIONAL SOCIETY MEMBERSHIPS

- Society of Nematologists, 2003-2009
- Entomological Society of America, 2008-2009
- Organization of Nematologists of Tropical America, 2005-2008
- American Phytopathological Society, 2007-2008
- Soil Science Society of America, 2008-2009
- American Society of Agronomy, 2008-2009
- Crop Science Society of America, 2008-2009

PROFESSIONAL MEETINGS

- 2008 Entomological Society of America Annual Meeting, Reno, Nevada.
- 2007: Society of Nematology and American Phytopathological Society meetings, San Diego, California.
- 2006: KBS-LTER All Scientist Meeting, East Lansing, Michigan.
- 2006: Long Term Ecological Research (LTER) All Scientist Meeting, Estes Park, Colorado.
- 2005: Land Policy Meetings in Lansing, Michigan.

- 2004: Annual Meeting of the Society of Nematologists, Estes Park, Colorado.
- 1997 summer: Practical training and meetings on removing Africanized bees' nests in human populated areas in Matto Grosso, Brazil, and harvesting bee products and learned basic bee biology.

LANGUAGE EXPERTISE

- Fluent in English, Spanish and Portuguese
- Rudimentary in Serbo-Croatian
- Basic Italian reading skill

VOLUNTEER WORK

- 2009: Assisted in people overcome alcohol addiction in Saipan, Mariana Islands
- 2009: Volunteered in giving health lectures in the community in Saipan, Mariana Islands
- 2009: Lectured 1st and 2nd graders on my career for career days in Tanapag Elementary School, Saipan, Mariana Islands.
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- 2001-2008: Occasionally translate for non-English speaking people in the Lansing, Michigan community
- 2009: Michigan State University Plant biology greenhouses maintenance
- 2008: Visited and helped orphans in orphanage in Bosnia
- 1999: Costa Rica, teaching children and served as a translator for a medical team
- 1997 summer: Volunteered to help remove Africanized bees' nests in human populated areas in Matto Grosso, Brazil
- 1994 summer: Ecuador, I worked as a translator for medical doctors