

***CURRICULUM VITAE* (updated March 2009)**

NAME: Greg Loeb (Name changed back to Loeb in September 06)

DEPARTMENT/UNIT: Entomology

TITLE: Professor

CAMPUS ADDRESS: Department of Entomology, NYSAES, Geneva

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BACKGROUND

EDUCATION

<u>Year</u>	<u>Degree</u>	<u>Institution</u>
1989	Ph.D.	University of California at Davis
1982	M.S.	San Diego State University
1977	B.A./B.S.	University of California at Davis

ACADEMIC RANKS

Professor:	July 2008
Associate Professor:	January 2001
Assistant Professor:	January 1995

PRIMARY DEPARTMENTAL/UNIT PROGRAM AREA

Research* -60%, Ecology and management of arthropod pests of small fruits and grapes.

Extension-30%, Grapes and small fruit.

Teaching* -10%, Co-instructor for Ent/PP 420, Grape Pest Management.

*In 2006 we added 10% responsibility in teaching and reduced research to 60% reflecting involvement with new undergraduate course.

AREAS OF EXPERTISE

Insect ecology, integrated pest management, biological control, agricultural entomology, small fruit crops, plant-insect interactions

PROFESSIONAL EXPERIENCE

<u>Year</u>	<u>Experience</u>
2008-current	Dept. Entomology, Cornell University, NYSAES
2001-2008	Associate Professor, Dept. Entomology, Cornell University, NYSAES
1995	Assistant Professor, Dept. Entomology, Cornell University, NYSAES
1993	Lecturer, University of California at Davis
1989-91, 1992-94	USDA Post-doctoral Research Associate, UC Davis
1991-92	NSF Post-Doctoral Fellow in Environmental Biology-Stanford University

HONORS AND AWARDS

USDA CSREES Organismal and Population Biology of Arthropods and Nematodes panel member in 2006 and 2007
USDA CSREES Northeast IPM Program – panel member, IPM Center Grants in 2004
USDA Viticultural Consortium West – panel member in 2003
American Society for Enology and Viticulture, best paper of the year published in American Journal of Enology and Viticulture in 1997 (co-author)
USDA CSREES Entomology/Nematology -panel member in 1997
NSF Postdoctoral Fellow, 1991-1992.

GRANT SUPPORT

Total funds awarded on grants that I am a PI or Co-PI and industry gifts from 1995 to 2008 is over three million. Grants where I am the lead PI total \$1.6 million. This includes funding from USDA NRI competitive grants , CSREES Crops at Risk grant, regional USDA NE IPM grants, and multiple awards through the USDA Viticulture-East special funding source.

PROFESSIONAL OVERVIEW AND OBJECTIVES

The overall objective of my research program is to develop an understanding of the principal forces that influence the population dynamics and community structure of arthropod herbivores in agricultural and natural ecosystems and use this information to devise and implement multi-tactic pest management programs for grape and small fruit crops that are effective and environmentally benign as possible. My more basic research has broadly focused on how plant traits and other environmental factors influence interactions between plants and their herbivores, and herbivores and natural enemies. With this as the overarching goal I have developed three major research foci. A majority of my effort has gone toward elucidating how leaf morphology influences interactions between natural enemy mites (predatory and mycophagous species) and parasites of grapes from a number of different perspectives (population dynamics, behavior, evolution, biological control, plant breeding and pest management) and at different scales (leaf, vine, and vineyard). A second project has focused on the influence of the landscape on pest and natural enemy movement, population dynamics, and pest management. A third and more recent research thrust is directed toward understanding the role of plant-produced and insect-produced volatiles in mediating plant/insect and insect/insect interactions. Its worth emphasizing that although I am addressing fairly basic questions for some of this research, I always keep in mind how the knowledge gained can be exploited for the

development or improvement of practical pest management tools. Moreover, it is clear to me that theory-driven research can contribute to the development of applied pest management solutions and that investigations into pest ecology and management can provide insights into development of theory. My more applied research program focuses on the ecology and integrated control of specific arthropod pests of grapes and small fruit crops. These tend to be more short-term in nature than my basic research and change as different pest problems come to my attention through my own observations as well as interactions with the industry and CCE educators. Current projects include 1) the ecology and management of the strawberry sap beetle, 2) role of soft scale insects and mealybugs in spreading leafroll disease in New York vineyards, 3) validating a temperature-driven phenology model for grape berry moth, 4) methods for controlling phylloxera on own-rooted *V. vinifera* grapes, 5) use of a trap crop to manage tarnished plant bug in strawberries, and 6) testing IPM compatible pesticides in grape and small fruit crops. My goal in extension is to translate and transfer results of applied research on pest biology and control to our grower clientele so that they will be better informed and better able to make sound pest management decisions.

REPRESENTATIVE ACADEMIC RESPONSIBILITIES

CURRENT ADMINISTRATIVE RESPONSIBILITIES

NYSIPM Operating Committee. Chair of Fruit IPM working group
Enology & Viticulture Steering Committee for Research, Chair

RESEARCH RESPONSIBILITIES

- **Current Postdoctoral Associates**
Dong Cha
- **Past Postdoctoral Associates**
Dr. Rebecca Loughner, 2007-2008
Dr. Andrew Norton, 1996-2000
Dr. Marc Rhainds, 2000-2002
- **Other Current Research Professionals Supervised**
Steve Hesler, Research Support Specialist, Entomology (NYSAES), Cornell University

TEACHING AND ADVISING RESPONSIBILITIES

- **Courses Taught**
Entomology 707, Diseases and pests of NY crops. Two units, with multiple instructors.
Entomology/Plant Pathology 420, Grape Pest Management. New three unit lecture and lab with three instructors.
Horticulture 444, Viticulture. guest lecture on IPM
Horticulture 442, Small Fruits. guest lecture/lab on pest management

EXTENSION RESPONSIBILITIES

Extension Goals

As the grape and small fruit entomologist, 30% of my time is committed to extension activities. My primary goal in extension is to translate and transfer results of applied research on pest biology and control to growers, pest control advisers, extension educators, and industry representatives in NY and surrounding states so that they will be better informed and better able to make sound pest management decisions or recommendations. Moreover, I also strive to communicate to the wider public about insect biology, agriculture, and environmental stewardship. Educating growers and pest control advisers as to the proper and effective use of pesticides is an important aspect of my responsibilities. In addition, however, it is important to include information other approaches to pest management such as the use of predators and parasites, cultural techniques and host plant resistance. It is essential that I understand and convey the importance of integrating pest management information for arthropods with the management of other pests and other related horticultural issues since this reflects the reality for growers.

• Extension/Outreach Activities –2008

Geneva, NY. 4 December 2008. Update (about 10 minutes) on small fruit entomology research. Meeting (4 hours in length) with board of directors of the NY Berry Growers' Association. Approx. 10 growers present.

Ithaca, NY. 11 November 2008. Host finding in the grape berry moth. 20 min. talk as part of the Cornell in-service extension meeting grape session. Approximately 30 researchers, extension educators, and graduate students in attendance.

Geneva, NY. 5 November 2008. Understanding & managing arthropod pests of berry crops. This was part of a web cast presentation live to 6 CCE educators who participated over the web from their offices. It was hosted by Laura McDermet and included periodic evaluation questions. I gave a power point presentation and answered questions over a chat line. The presentation/talk lasted about 70 minutes.

Fredonia, NY. 26 August 2008. Retrospective on entomological research at the Vineyard Laboratory in Fredonia, NY. Half-hour talk to approximately 30 growers and industry representatives.

Geneva, NY. 20 June 2008. Update on grape pests for the Hudson Valley. Hour-long question and answer session with grape growers in the Hudson Valley via computer linkup from Geneva, NY. Approximately 10 growers in attendance.

Geneva, NY. 15 May 2008. Spring update for grape arthropod pests. Hour question and answer session with grape growers in the Hudson Valley via video conferencing from Geneva, NY. Approximately 10 growers in attendance.

Canandaigua, NY. 9 April 2008. The target – insects. 30 minute presentation at the 1st North American Conference on Precision Fruit Spraying. Audience approximately 30, comprised of academics, extension educators and industry.

Fredonia, NY. 27 March 2008. Phylloxera & insects important in wine grapes. 30 minute presentation at Lake Erie Regional Grape Program Growers' Conference special session on wine grapes. Audience approximately 70 growers, industry representatives and extension educators.

Fredonia, NY. 26 March 2008. Update on grape berry moth research. 30 minute presentation at Lake Erie Regional Grape Program Growers' Conference. Audience approximately 120 growers, industry representatives and extension educators.

Geneva, NY. 25 March 2008. Small fruit entomology: research update. 30 minute presentation as part of Berry Pest Management Workshop held in Geneva and simultaneously video-linked to three distant sites in upstate NY (Clinton county, Oneida county, and Chautauqua county). Audience 39 in Geneva, 10 in Clinton, 10 in Oneida, and 17 in Chautauqua.

Geneva, NY. 25 March 2008. Berry arthropod management overview. 30 minute presentation as part of Berry Pest Management Workshop held in Geneva and simultaneously video-linked to three distant sites in upstate NY (Clinton county, Oneida county, and Chautauqua county). Audience 39 in Geneva, 10 in Clinton, 10 in Oneida, and 17 in Chautauqua.

Waterloo, NY. 14 March 2008. Possible pest management and physiology impacts of global climate change on NY vineyards. 30 minute panel discussion on pest management impacts involving 5 minute overview and then discussion and questions at the 58th Annual Finger Lakes Grape Grower's Conference. Audience approximately 250 growers, industry reps, and extension educators.

Waterloo, NY. 15 March 2008. Managing insect pests in 2008. 30 minute talk at the 58th Annual Finger Lakes Grape Grower's Conference. Audience approximately 250 growers, industry reps, and extension educators.

Kingston, NY. 28 February 2008. Management of strawberry pests. 30 minute talk as part of the Hudson Valley Berry School. Audience approximately 45 growers, industry reps, and extension educators.

Kingston, NY. 28 February 2008. Management of blueberry pests. 20 minute talk as part of the Hudson Valley Berry School. Audience approximately 40 growers, industry reps, and extension educators.

Riverhead, NY. 11 January 2008. Overview of grape entomology program at Cornell. 20 minute talk as part of the viticulture program at the Long Island Agricultural Forum. Audience approximately 35 growers and industry representatives.

Riverhead, NY. 11 January 2008. Grape berry moth biology and management. 45 minute talk as part of the viticulture program at the Long Island Agricultural Forum. Audience approximately 35 growers and industry representatives.

Riverhead, NY. 11 January 2008. Emerging arthropod pest issues. 30 minute talk as part of the viticulture program at the Long Island Agricultural Forum. Audience approximately 35 growers and industry representatives.

GRADUATE FIELD MEMBERSHIPS

Entomology

GRADUATE MAJORS

- **Total Completed**
Rebecca Loughner, Ph.D. (2007)
Amy Roda, Ph.D. (2000)- co-advised with Jan Nyrop

GRADUATE MINORS

- **Current**
Richard Allen (Ecology & Evolutionary Biology), Spring 07
- **Total Completed**
Lora Crampton (Entomology), Spring 07
Megan Kennelly (Plant Pathology), Spring 2005
Heather Melidossian (Plant Pathology), Spring 2005
Kelley Tilmon, June 2001

OTHER CURRENT PROFESSIONAL ACTIVITIES

PROFESSIONAL SOCIETIES

Entomological Society of America (ESA)-member
Co-chair of program committee, ESA Eastern Branch, Harrisburg, PA, 20-22 March 2005.
Chair of program committee, ESA Eastern Branch, Charlottesville, Virginia, 12-14 March 2006.

PROFESSIONAL HONORARIES

Sigma Xi

EDITORIAL BOARDS

None, but review manuscripts for J. Economic Entomology, Environmental Entomology, Ecology, Experimental and Applied Acarology, Entomologia Experimentalis et Applicata, Oecologia, Biological Control, Oikos, J. Insect Behavior, Canadian Entomologist, Forest and Agricultural Entomology, Functional Ecology.
Reviewer for National Research Council report, California Agricultural Research Priorities: Pierce's Disease, Spring 2004.

COMMITTEE ASSIGNMENTS

Cornell IPM Operating Committee
Chair, Fruit IPM Committee
Chair, Entology & Viticulture Steering Committee for Research
Grape Crop Germplasm Committee of the National Plant Germplasm System.

Member of NYSAES Station Faculty Advisory Committee
Member NYSAES Vineyard Lab Committee
Member NYSAES Field Research Committee
Search committee for tree fruit/berry plant pathologist position

CURRENT PROFESSIONAL CONTRIBUTIONS

RECENT INVITED PRESENTATIONS

2008. Invited speaker as part of symposium entitled “Metamorphosis of vineyard pest management” organized by R. Isaacs and D. Hammond. Tri-trophic effects of leaf trichomes on grapes. 2008 Annual Meeting of Entomological Society of America in Reno, Nevada.
2008. Invited speaker as part of Annual Project Directors Meeting of the USDA NRI Arthropod and Nematode Biology and Management program. Host plant discovery by herbivorous arthropods using plant volatile signals. Reno, Nevada.
2008. Invited seminar. Department of Entomology, Cornell University, NYSAES, Geneva, NY. Tri-trophic interactions and biological control of grape pests.
2008. Invited speaker in symposium titled “The food quality protection act: the fruit industry view” as part of the Annual meeting of the Eastern Branch Entomological Society of America, Syracuse, NY. Title of presentation, “Changes and lack of changes in grape pest management in response to FQPA.”
2007. Invited seminar, Department of Entomology, Rutgers University. Tri-trophic interactions and biological control of grape pests.
2007. Invited speaker as part of the Gordon Research Conference on Floral & Vegetative Volatiles, Les Diablerets, Switzerland. Defining grape volatiles used for host location as a basis for assessing phenology and management of grape berry moth.

RESEARCH PANELS

- California Dept. Food and Agriculture Pierce’s Disease Research Scientific Advisory Panel, as of January 2007.
- USDA NRI panel, Organismal and Population Biology of Arthropods and Nematodes, March 2007, Washington D.C.
- USDA NRI panel, Organismal and Population Biology of Arthropods and Nematodes, April 2006, Washington D.C.
- USDA Northeastern IPM Center, Integrated pest management partnership grants; Panel to evaluate proposals, Atlanta, GA in March 2004
- USDA Viticultural Consortium-Western Region; Panel to evaluate research proposals, March 2003.
- USDA NRI panel, Entomology and Nematodes, April 1997, Washington D.C.