

# MARGARET SKINNER, Research Professor and Extension Entomologist

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## Education:

University of Vermont	Ph.D.	1987 - 1993	Major: Entomology
University of Vermont	M.S.	1984 - 1987	Major: Entomology
Ohio Wesleyan University	B.A.	1968 - 1972	Major: Sociology
American Univ. of Beirut, Beirut, Lebanon		1971	Junior Year Abroad

## Work Experience:

For 35 years I have been an integral member of the Entomology Research Laboratory, which represents a team of scientists committed to developing effective biological control and IPM strategies for forest, greenhouse and vegetable insect pests. Insect pest problems are addressed with an interdisciplinary approach, using insights drawn from a diverse group of senior scientists, the assistance of specialized technicians, and graduate students. Emphasis is placed on practical aspects of research to solve 'real world' problems. Though focused on agricultural problems of Vermont and the Northeast region, our projects have national and international significance as well. Through our work we attempt to develop management options that are environmentally sound, economically viable and sustainable, and encourage their implementation through extension and education.

**1993 - present** Research Full Professor & Extension Entomologist (2009); Res. Assoc. Prof. & Ext. Entomologist (2001-2008), Research Assistant Professor & Extension Entomologist (1993-2001)

Conduct/ed research on biological control, entomopathogenic fungi and IPM of a wide array of arthropod pests in forests, vegetable crops and greenhouse ornamentals and cut flowers. Work has included lab, greenhouse and field trials with western flower thrips, silverleaf whiteflies and spider mites; biological control of Sunn Pest in West Asia and greenhouse pests in Lebanon and Colombia; lab and forest trials with winter ticks lecanium and elongate hemlock scale, thrips and hemlock woolly adelgid, Asian longhorned beetle, pear thrips, and fungal trials with brown marmorated stink bug and tarnished plant bug. Coordinate Tri-state IPM educational program for greenhouse growers and regional public awareness programs on the Asian longhorned beetle and hemlock woolly adelgid. Founded the **North American Center for Saffron Research and Development**, that supports research and outreach to growers throughout the US and Canada regarding this high value crop. Prepare >18 proposals per year in collaboration with other Lab team members to support our ongoing research, generating >\$300,000 annually. Provide administrative oversight for >25 externally funded research projects annually at the Entomology Research Lab and Saffron Center.

**2018 - present** Adjunct Faculty, Biology Dept., American University of Beirut, Beirut, Lebanon.

Conduct research on biological control and IPM of arthropod pests in greenhouse ornamentals and vegetables; carr 1 162.02 210.65 Tm0 g0 Gm28,( )11(s)9(u)11(p)11(o)11(r)7(t)6( )11(o)11(u)11(r)7( )11(o)11(n)11(g)

## Awards, Memberships and Certificates:

- Northern Tri-State New England Greenhouse Advisory Group, coordinator, 1996-present
- Innovation Marketplace Award for Sunn Pest Research from CGIAR (\$30,000 award), 2006
- Outstanding Research Team: Sunn Pest IPM: Int. Ctr for Agric. Res. in Dry Areas, 2005
- Outstanding Research Manuscript: Int. Ctr for Agric. Res. in Dry Areas, 2005
- VT Tree Steward Award for Leadership, VT Urban & Community Forestry Council, 2005
- Greenhouse and Ornamentals Commodity Work Group, co-leader. 2001-present
- Vermont Forest Pest Management Award for Service and Excellence, 1999
- National Science Advisory Committee for the Asian Longhorned Beetle, 1996-present

## Author or Co-author of over 100 Refereed Publications (2014-Present)

- Parker, B.L., **M. Skinner** & C.F. Sullivan. **2019**. A Managers Guide to Integrated Pest Management for Vegetable Production in Greenhouses. In press.
- Parker, B.L., **M. Skinner** & C.F. Sullivan. **2019**. A Managers Guide to Integrated Pest Management for Vegetable Production in Greenhouses. Arabic translation. In press.
- Parker, B.L., **M. Skinner** & **C.F. Sullivan**. **2019**. A Managers Guide to Integrated Pest Management for Vegetable Production in Greenhouses. Farsi translation. In press.
- Daher, S., Y. Abou Jawdeh, M. Haider, A. Abou Haidar, B. Parker, **M. Skinner** & I. P. Saoud. **2019**. Integrating Agriculture with Aquaculture and Biological Pest Management- Does it Work? World Aquaculture, December: 58-61.
- Trissi, A.N., M. El-Bouhssini, **M. Skinner** & B.L. Parker. **2019**. Sublethal effect of *Beauveria bassiana* on feeding and fecundity of the sunn pest, *Eurygaster integriceps* Puton (Hemiptera: Scutelleridae). Bulletin OEPP/EPPO 8 pp.
- Skinner, M.**, B.L. Parker & C.F. Sullivan. **2019**. Chapter 31. Integrated Pest Management in Greenhouse and Other Protected Cultivation Systems. In: Current and Future Developments in IPM; Eds: M. Kogan & L. Higley, Burleigh Dodds Science Publ. Cambridge, UK.
- Skinner, M.**, J. Rubin, J. Gorres & B.L. Parker. **2018**. Do invasive worms threaten Northeast Maple Forests? Maple Syrup Digest. Vol. 57.
- Davari, A., **M. Skinner**, B.L. Parker. **2018**. Cell fusion to improve efficacy and thermotolerance of the entomopathogenic fungus *Beauveria bassiana*. Appl. Microbiol. 125(5): 1482-1493.
- Skinner, M.**, S. Gouli, A. Davari & B.L. Parker. **2018**. Insect-killing Fungi and Marigolds team up to Guard your Ornamentals from Western Flower Thrips. Amer. Floral Endowment Newsletter. <http://endowment.org/botrytis-thrips/>
- Lee, S.J., J.S. Yu, **M. Skinner**, B.L. Parker & J.S. Kim. **2016**. Screen bag formulations (SBF) of entomopathogenic *Beauveria* and *Metarhizium* conidia from granular substrates to control *Riptortus pedestris*. J. Asia-Pacific Ent. 19: 887-892. DOI: 10.1016/j.aspen.2016.08.005.
- Parker, B.L., **M. Skinner**, C. Frank Sullivan & C.A. Smith. **2016**. Greenhouse Manager's Guide to Integrated Pest Management in Northern New England – Revised and Expanded. Entomology Research Laboratory, University of Vermont, Burlington, VT. 111 pp. I-book and E-book will soon be available at: <http://www.uvm.edu/~entlab/>
- Parker, B.L., **M. Skinner**, S. Gouli, V. Gouli & J.S. Kim. **2015**. Virulence of BotaniGard to second instar brown marmorated stink bug, *Halyomorpha halys* (Stal) (Heteroptera: Pentatomidae). Insects 6: 319-324. Doi:10.3390/insects6020319
- Lee, S.J., J.S. Yu, B.L. Parker, **M. Skinner**, Y.H. Je & J.S. Kim. **2015**. Production of cecropin A in *Tenebrio molitor* (Coleoptera: Tenebrionidae) by transformed *Beauveria bassiana*. J. Industrial Microbiology & Biotechnology. 42:151-156.
- Parker, B.L., **M. Skinner**, S. Gouli, J.S. Kim & V.V. Gouli. **2015**. Persistence of pear thrips-active fungal strains of *Beauveria bassiana* and *Metarhizium anisopliae* in Vermont sugar maple forest soil. Biocontrol Science & Tech. 25: 768-788. <http://dx.doi.org/10.1080/09583157.2015.1016895>.
- Lee, S.J., J.S. Yu, Y-S Nai, B.L. Parker, **M. Skinner** & J.S. Kim. **2015**. *Beauveria bassiana* sensu lato granuales for management of brown planthopper, *Nilaparvata lugens* in rice. Biocontrol 60: 263-270.
- Chen, M.-S., S. Wheeler, H. Davis, R.J. Whitworth, A. Knutson, K.L. Giles & **M. Skinner**. **2014**. Molecular markers for identification of Hessian fly males caught on sticky pheromone traps. J. Econ.

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Entomol. 107: 110-117.

Kim, J.S., S.J. Lee, M. Skissini, B.L. Parker, B.F. Oll & H.J. Lee. 2014. Relationship between endospore viability and insecticidal potency of *Bacillus thuringiensis* subsp. Aizawai NTO423. Biological Control 58 (5): 607-614.

Parker, B.L., M. Skissini & M. El Bouhssini. 2014. Entomopathogenic Fungi for IPM: A Mq0.00nBT/F1 11.04 Tf1 0 0 1

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