

Robert A. Haack

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Educational Background

BS	University of Wisconsin	1974	Forest Science
BS	University of Wisconsin	1975	Science Education
MS	University of Wisconsin	1980	Entomology
PhD	University of Florida	1984	Entomology (major) Plant Pathology (minor)

Professional Experience

1988-Present	Project Leader & Research Entomologist, USDA Forest Service, E. Lansing, MI
1986-1988	Research Entomologist, USDA Forest Service, East Lansing, MI
1984-1986	Post-Doctoral Research Associate, Department of Entomology, Michigan State University, East Lansing, MI
1980-1984	Research Assistant, Department of Entomology and Nematology, University of Florida, Gainesville, FL
1978-1980	Research Assistant, Department of Entomology, University of Wisconsin, Madison, WI
1977-1978	CARE Regional Program Manager, Highlands Soil and Forest Conservation Program, Huehuetenango, Guatemala, Central America
1975-1977	US Peace Corps Volunteer, Forest Nursery and Reforestation Program, Guatemala, La Libertad, Central America

Selected recent ALB publications

- Haack RA, Law KR, Mastro VC, Ossenbruggen HS, Raimo BJ. 1997.** New York's battle with the Asian long-horned beetle. *Journal of Forestry* 95(12): 11-15.
- Haack RA, Poland TM, Gao RT. 2000.** The United States experience with the exotic cerambycid *Anoplophora glabripennis*: detection, quarantine, and control. *In* Proceedings: International conference on quarantine pests for the forestry sector and their effects on foreign trade, 27-28 June 2000, Concepcion, Chile. CORMA, Concepcion, Chile. 12 p.
- Poland TM, Haack RA, Haugen DA, Wilson IM. 2001.** Arborists – Be on the lookout for Asian longhorned beetles. *Arborist News* 2:55-58.

Other Recent Publications on Exotic Forest Insects

- Haack RA, Petrice TR, Poland TM. 2000.** *Tomicus piniperda* (Coleoptera: Scolytidae) survival in relation to burial depth of brood logs. *Journal of Economic Entomology* 93: 242-246
- Haack RA, Cavey JF. 2000.** Insects intercepted on solid wood packing materials at United States ports-of-entry: 1985-1998. *In* Proceedings: International conference on quarantine pests for the forestry sector and their effects on foreign trade, 27-28 June 2000, Concepcion, Chile. CORMA, Concepcion, Chile. 16 pp. (on a CD-ROM)
- Haack RA, Lawrence RK, Heaton GC. 2000.** Seasonal shoot-feeding by *Tomicus piniperda* (Coleoptera: Scolytidae) in Michigan. *Great Lakes Entomologist* 33: 1-8.
- Haack RA, Lawrence RK, Heaton GC. 2001.** *Tomicus piniperda* (Coleoptera: Scolytidae) shoot-feeding characteristics and overwintering behavior in Scotch pine Christmas trees. *Journal of Economic Entomology* 94:422-429.
- Haack RA; Poland TM. 2002.** Evolving management strategies for a recently discovered exotic forest pest: the pine shoot beetle, *Tomicus piniperda* (Coleoptera). *Biological Invasions* (in press).
- Haack RA. 2002.** Intercepted Scolytidae (Coleoptera) at United States ports-of-entry: 1985-2000. Integrated Pest Management Reviews. (In review)

THERESE M. POLAND

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Therese Poland is a Research Entomologist with the USDA Forest Service, North Central Research Station in East Lansing, MI. She received her Masters of Pest Management and Ph.D. degrees from Simon Fraser University in Burnaby, British Columbia where she studied pheromone- based management of pine and spruce bark beetles. She began her position with the Forest Service in 1997. Dr. Poland's current research is focused on the biology, management, and regulatory issues related to the Pine Shoot Beetle and the Asian Longhorned Beetle.

Educational Background

Ph.D.	1997	Simon Fraser University, Burnaby, B.C.	Biology (Forest Entomology)
M.P.M.	1993	Simon Fraser University, Burnaby, B.C.	Biology (Pest Management)
B.Sc.	1989	Simon Fraser University, Burnaby, B.C.	Biology (Ecology)

Professional Experience

1997-present	Research Entomologist, USDA Forest Service	E. Lansing, MI
1997	Research Associate, Phero-Tech, Inc.	Delta, B.C.
1993-1997	Graduate Research Assistant, Simon Fraser University	Burnaby, B.C.
1991-1992	Graduate Research Assistant, Simon Fraser University	Burnaby, B.C.
1991	Graduate Teaching Assistant, Simon Fraser University	Burnaby, B.C.
1986-1991	Research Assistant, T. D. Sterling and Associates, Ltd.	Vancouver, B.C.

Research Experience

Therese Poland's primary research interests and experience involve the chemical ecology and management of scolytid bark beetles and woodboring insects.

Selected Publications

- Haack, R.A.; Poland, T.M. 2002. Evolving management strategies for a recently discovered exotic forest pest: the pine shoot beetle, *Tomicus piniperda* (Coleoptera). *Biological Invasions* (in press).
- Poland, T.M.; Haack, R.A.; Petrice, T.R. Timing of *Tomicus piniperda* (Coleoptera: Scolytidae) Initial Spring Flight and Fall Shoot Departure Along a North-South Gradient. Submitted to *Environmental Entomology*
- Petrice, T.R., Haack R.A., and Poland T.M. 2002. *Tomicus piniperda* (Coleoptera: Scolytidae) selection of overwintering sites during the period of fall shoot departure. *Journal of Entomological Science* 37(1): 48-59.
- Poland, T.M., Haack, R.A., Haugen, D.A., and Wilson, I.M. 2001. Arborists – Be on the lookout for Asian longhorned beetles. *Arborist News* 2:55-58.
- Poland, T.M. and Haack, R.A. 2000. *Tomicus piniperda* (Coleoptera: Scolytidae): Is shoot-feeding required for reproductive maturation. *The Great Lakes Entomologist*. 33: 9-15.
- Poland, T.M., Haack, R.A., Petrice, T.R., Sadof, C.S., and Onstad, D.W. 2000. Dispersal of *Tomicus piniperda* (Coleoptera: Scolytidae) from operational and simulated millyards. *The Canadian Entomologist* 132: 853-856.
- Haack, R.A., Poland, T.M., Petrice, T.R., and Gennrich, M.A. 2000. Range expansion of *Tomicus piniperda* since 1992 and notes on other new exotics. *Newsletter of the Michigan Entomological Society* 45(3&4):9-10.
- Haack, R.A., Poland, T.M. and Gao, R.T. 2000. The United States experience with the exotic cerambycid *Anoplophora glabripennis*: Detection, quarantine, and control. In: *Quarantine pests, risks for the forestry sector and their effects on foreign trade*. Proceedings on CD-ROM of Silvotecna 14, 27-28 June 2000, Concepcion, Chile, CORMA, Concepcion, Chile. 12pp.
- Poland, T.M., and Haack, R.A. 1999. Pine shoot beetle, *Tomicus piniperda* (Coleoptera: Scolytidae), responses to green leaf volatiles. *Journal of Applied Entomology* 124: 63-69.
- Haack, R.A., Petrice, T.R., and Poland, T.M. 1999. *Tomicus piniperda* (Coleoptera: Scolytidae) emergence in relation to burial depth of brood logs. *Journal of Economic Entomology* 93: 342-346
- Poland, T.M., Haack, R.A., and Petrice, T.R. 1998. Chicago joins New York in battle with the Asian longhorned beetle. *Newsletter of the Michigan Entomological Society* 43(4):15-17.
- Poland, T.M., Borden, J.H. Stock, A.J., and Chong, L.J. 1998. Green leaf volatiles disrupt attraction of the spruce beetle, *Dendroctonus rufipennis*, and the western pine beetle, *Dendroctonus brevicomis* (Coleoptera: Scolytidae). *Journal of the Entomological Society of British Columbia* 95:17-24.
- Poland, T.M., and Haack, R.A. 1998. Genetic perspectives on the ecology and management of *Tomicus piniperda* in North America. in Proceedings of the 2nd Bark Beetle Genetics Workshop, Madison, WI, 17-18 July. 2pp.
- Haack, R.A., Poland, T.M., Wu, J., and Ye, H. 1998. *Tomicus piniperda* genetics: Important research needs. in Proceedings of the 2nd Bark Beetle Genetics Workshop, Madison, WI, 17-18 July. 2pp.
- Haack, R.A., Poland, T.M., and Heilmann, W.E. 1998. Using historical temperature records to adjust the federal quarantine of the pine shoot beetle. pp. 319-322 in Proceedings of the 13th Conference on Biometeorology and Aerobiology, Albuquerque, NM, 2-6 November. American Meteorological Society, Boston, MA.
- Poland, T.M., and Borden, J.H. 1998. Semiochemical-induced competition between the spruce beetle *Dendroctonus rufipennis* Kirby, and two secondary species, *Ips tridens* Mannerheim and *Dryocoetes affaber* Mannerheim (Coleoptera: Scolytidae). *Journal of Economic Entomology* 91:1142-1149.
- Poland, T.M., and Borden, J.H. 1998. Competitive exclusion of the spruce beetle, *Dendroctonus rufipennis* Kirby, induced by pheromones of *Ips tridens* Mannerheim and *Dryocoetes affaber* Mannerheim (Coleoptera: Scolytidae). *Journal of Economic Entomology* 91: 1150-1161.
- Poland, T.M. and Borden, J.H. 1998. Disruption of secondary attraction of the spruce beetle, *Dendroctonus rufipennis*, by pheromones of two sympatric species (Coleoptera: Scolytidae). *Journal of Chemical Ecology* 24: 151-166
- Poland, T.M. and Borden, J.H. 1997. Responses of a bark beetle predator, *Thanasimus undatulus* (Coleoptera: Cleridae) to pheromones of the spruce beetle and two sympatric bark beetle species (Coleoptera: Scolytidae). *Journal of the Entomological Society of British Columbia*. 94:35-41.
- Poland, T.M. and Borden, J.H. 1994. Attack Dynamics of *Ips pini* (Say) and *Pityogenes knechteli* (Swaine) in Windthrown Lodgepole Pine Trees. *Journal of Applied Entomology*. 117: 434-443.
- Poland, T.M. and Borden, J.H. 1994. Semiochemical-Based Communication in Interspecific Interactions Between *Ips pini* (Say) and *Pityogenes knechteli* (Swaine) (Coleoptera: Scolytidae). *The Canadian Entomologist*. 126(2):269-276.
- Lertzman, K., Evans, B., Morehouse, B., Davis, H., and Poland, T. 1994. Two Views of Ecological Issues in Forestry. *Northwest Science* 68:65-68.

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Glenn O. Allgood is a Senior Researcher at Oak Ridge National Laboratory. He has over 36 years experience in technology application and R&D that covers private industry, the military, academia, and government R&D. He has over 130 articles, papers, and publications in areas such as finite element modeling, human factors, advance control, wireless systems, and complex systems. He belongs to several professional societies and has over 10 patents and invention disclosures. His current research interests are human and machine cognition, economics, anticipatory control theory, application of intelligent agents in discovery, acoustical signature classification and identification, and the study of emergent behavior in complex systems. Glenn is an Adjunct Professor at the University of Tennessee in the Mechanical, Aerospace, and Engineering Science Department. He served 6 years in the military during the Vietnam and is a native of Atlanta, Georgia.

Glenn has degrees in math, electrical engineering, engineering science and mechanics, and operation research and is a senior member in ISA and IEEE societies and has served as Vice Presidents, Presidents, and Technical Chairs in each. He is currently VP of ISA and President Elect of the East Tennessee Appalachian Science and Engineering Fair.

VITA

Cyrus M. Smith

Cyrus earned his Bachelor's and Master's Degree in Nuclear Engineering from the University of Tennessee in 1973 and 1975 respectively. His Master's Degree work consisted of developing a signal analysis algorithm for nuclear reactors based upon a Fast Fourier Transform (FFT). After joining the staff of the Instrumentation and Controls Division of the Oak Ridge National Laboratory in 1975, Cyrus continued working on the development of signal analysis algorithms and diagnostics for nuclear reactors and rotating machinery. During the late 1970's and early 1980's, Cyrus developed diagnostics for the Nuclear Regulatory Commission (NRC) and the nuclear industry based upon the correlation of neutron noise with mechanical vibrations from nuclear reactors. In the late 1980's, Cyrus began working with the Navy on signal processing of sonar signals. This work culminated with Oak Ridge's development and integration of the signal processing equipment and algorithms onboard the USNS Haynes for submarine acoustic trials as part of the Navy's Acoustic Measurement Facilities Improvement Program (AMFIP). This system was recently used to measure and verify the radiated noise levels for the SEAWOLF class of submarines.

Recently, Cyrus has been involved in acoustics based diagnostics for the steel and forging industry as well as the aluminum die casting industry. He has used acoustics to develop diagnostics for forging presses and to identify and locate vibrations which cause unwanted acoustic noise in the forging environment. For the die casting industry, he has developed vibration based diagnostics that assist in the real time determination of part quality. He has experience with acoustic signal acquisition and processing for both source location and diagnostic development.

An off-spring of his industrial vibration work has lead to the development of an acoustic based insect detection and identification device. It is anticipated that the deployment of this device will mitigate the negative environmental effects associated with the invasion of the United States by the Asian Longhorn Beetle, a non-native species of beetle which devastates native American hard wood trees that was inadvertently imported into the United States from China in shipping crates.

Outside of the Oak Ridge National Laboratory, Cyrus has supported SSC Service Solutions, a full service janitorial and maintenance company, through his vibration monitoring company, Cy-Tech. This company supplies vibration monitoring and predictive maintenance services to small and medium sized industrial plants in the East Tennessee region.