

Roger Earl Latham

Continental Conservation · P.O. Box 57, Rose Valley, Pennsylvania 19086-0057
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PROFESSIONAL EXPERIENCE

Ecologist/Conservation Biologist

Continental Conservation, Rose Valley, Pennsylvania (2000-present):

Engaged in applied research and conservation planning as a consultant for The Nature Conservancy, National Park Service, Natural Lands Trust, Pennsylvania Department of Conservation and Natural Resources, and other agencies and organizations involved in wildland restoration and management.

Assistant Professor

Department of Biology, Swarthmore College (1996-2000):

Conducted research in restoration ecology and alternative persistent states in plant communities; taught courses and seminars in ecology and related subjects; supervised student research.

Post-doctoral Researcher

Department of Geology, University of Pennsylvania (1992-96):

Directed an experimental research program on the ecology, biogeochemistry and conservation biology of fire-maintained shrubland ecosystems marked by exceptional clusters of rare species.

Stewardship Ecologist

Pennsylvania Field Office, The Nature Conservancy (1990-92):

Developed preserve design, biological monitoring, restoration, and protection strategies for globally rare species and exemplary occurrences of natural communities.

Director, Science and Stewardship

Pennsylvania Field Office, The Nature Conservancy (1988-90):

Planned, budgeted and implemented management of a regional nature preserve system; supervised assistants, interns, preserve stewards and volunteers.

Botanist/Field Investigator

Pennsylvania Flora Project, Morris Arboretum, University of Pennsylvania (1982-83):

Located and documented populations of approximately 200 species of rare plants across eastern Pennsylvania as part of the multi-agency Pennsylvania Natural Diversity Inventory.

Naturalist/Environmental Planner

Fahringer McCarty Grey, Inc., Pittsburgh (1973-80):

Collaborated in developing conservation management plans for large landholdings of state and federal government agencies and conservation organizations in five states.

EDUCATION

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| Ph.D. in Biology | University of Pennsylvania (1990)
Thesis: Co-Occurring Tree Species Change Rank in Seedling Performance with Small-Scale Resource Variation (Advisor: Dr. Brenda B. Casper) |
| B.A. in Biology | Swarthmore College (1983) |
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PROFESSIONAL CERTIFICATION

Certified as Senior Ecologist, Ecological Society of America (1995)

PROFESSIONAL AND CIVIC SERVICE ACTIVITIES

Advisory Committee, Wild Resource Conservation Program, Pennsylvania Department of Conservation and Natural Resources (2007-2009)
 Planning Commission, Borough of Rose Valley, Pennsylvania (2007-present)
 Steering Committee, Pennsylvania Biological Survey (2005-ongoing)
 Stewardship Advisory Committee, Natural Lands Trust, Media, Pennsylvania (2005-ongoing)
 Deer Management Forum, Audubon Pennsylvania and Pennsylvania Habitat Alliance (2001-2005)
 Natural Areas Committee, Tyler Arboretum, Media, Pennsylvania (2000-ongoing)

AWARDS

Science Award, The Nature Conservancy of Pennsylvania (1999)

PROFESSIONAL SOCIETIES

American Institute of Biological Sciences	Sigma Xi
Ecological Society of America	Society for Conservation Biology
Natural Areas Association	Society for Ecological Restoration

EDITORIAL WORK**Journal Editor**

Editor of *Bartonia: Journal of the Philadelphia Botanical Club* (1999-2007)

Peer reviewer for professional journals, organizations and agencies

<i>American Journal of Botany</i>	<i>Journal of the Torrey Botanical Society</i>	<i>Oecologia</i>
<i>American Midland Naturalist</i>	<i>Journal of Vegetation Science</i>	Pennsylvania Wild Resource Conservation Program
<i>American Naturalist</i>	<i>Mitteilungen der Eidgenössischen Forschungsanstalt für Wald, Schnee und Landschaft</i>	<i>Plant Ecology</i>
<i>Annals of Botany</i>	National Science Foundation	<i>Restoration Ecology</i>
<i>Australian Journal of Ecology</i>	New Hampshire Agricultural Experiment Station	U.S. E.P.A. National Health and Environmental Effects Laboratory
<i>Ecography</i>		
<i>Ecology</i>		
<i>Forest Ecology and Management</i>		
<i>Journal of Applied Ecology</i>	<i>Northeastern Naturalist</i>	

INVITED SYMPOSIUM PRESENTATIONS

“Paleo- and Present-Day Ecology of Fire-Maintained Ecosystems in Pennsylvania,” Fire in Pennsylvania Conference (2008), State College.

“Paleo- and Present-Day Ecology of Native Grasslands and Meadows in Pennsylvania,” New Directions in the American Landscape Symposium (2008), Connecticut College and Villanova University.

“Native grasslands and meadows in Pennsylvania: their history and current condition,” Bowman’s Hill Wildflower Preserve’s Land Ethics Symposium (2007); plenary address, Eastern Native Grass Symposium (2006); Pennsylvania Grasslands Workshop, Kings Gap (2005).

“Shrubland Longevity and Rare Plant Species in the Northeast,” Early-Successional Forests and Shrubland Habitats in the Northeastern United States: Critical Habitats Dependent on Disturbance, University of New Hampshire, Durham (2002)

“Using G.I.S. as a Bridge from ‘Pure’ Science to Designing, Protecting, Restoring and Managing the Southern Pocono Bioserve,” plenary address, Society for Conservation Biology Delaware Valley Chapter Annual Meeting, West Chester, PA (1998)

- “Fire Ecology and the Art and Science of Biological Restoration,” Ecology and Conservation in the Philadelphia Region, Villanova University and Natural Lands Trust, Villanova, PA (1995)
- “G.I.S. Applications in Biological Hypothesis Testing and Biodiversity Conservation Planning,” An Open Seminar on Geographic Information Systems, University of Pennsylvania, Philadelphia (1995)
- “A Case Study in Conservation Biology: Understanding Process and Function in a High-Priority Ecosystem,” Organization, Management and Acquisition of Data to Measure Protection of the Environment [training seminar presented to scientists and engineers from Tyumen Oblast, Russia], Institute for Environmental Studies, University of Pennsylvania, Philadelphia (1994)
- “Research in Ecology and Conservation Biology in Pennsylvania’s Serpentine Barrens and Glacial Till Barrens,” Annual Joint Field Meeting, Botanical Society of America, Philadelphia Botanical Club, and Torrey Botanical Club, Millersville, PA (1993)
- “The Serpentine Barrens of Temperate Eastern North America: Critical Issues in the Management of Rare Species and Communities,” Rare Plants of Pennsylvania and Adjacent States, Morris Arboretum, Philadelphia (1991)

TEACHING, MENTORING

Courses taught or co-taught (1996-99, Swarthmore College)

Biodiversity Seminar, Ecology, Organismal and Population Biology, Paleobiology Seminar, Senior Evolution Seminar, Senior Honors Study

Graduate thesis advising/collaboration

Anne W. Wibiralske, Ph.D., Geology. 2002. Comparison of nutrient capital between shrubland and forest and between Illinoian and Wisconsinan tills on the Pocono Plateau, Pennsylvania. University of Pennsylvania, Philadelphia.

Keith R. Maurice, M.S., Geography. 2000. Landscape factors influencing vegetation persistence and transition rates in mesic till barrens, Pocono Plateau. West Chester University, West Chester, Pennsylvania.

Catherine Rees, M.S., Environmental Studies. 1997. Fire and *Pinus rigida* rock outcrop communities of the northern Shawangunk Mountains. Bard College, Annandale-on-Hudson, New York.

Karen Borza Arabas, Ph.D., Geography. 1996. Fire and vegetation dynamics in the eastern serpentine barrens. Pennsylvania State University, University Park.

John E. Thompson, M.S., Geology. 1995. Interrelationships among vegetation dynamics, fire, surficial geology, and topography of the southern Pocono Plateau, Monroe County, Pennsylvania. University of Pennsylvania, Philadelphia.

Colin A. MacLachlan, M.L.A. 1994. Nottingham County Park: the restoration and management of a temperate eastern serpentine barrens. University of Georgia, Athens.

SELECTED PUBLICATIONS

Peer-reviewed volume

Latham, R. E., J. Beyea, M. Benner, C. A. Dunn, M. A. Fajvan, R. Freed, S. B. Horsley A. F. Rhoads and B. P. Shissler. 2005. *Managing White-tailed Deer in Forest Habitat from an Ecosystem Perspective: Pennsylvania Case Study*. Audubon Pennsylvania and the Pennsylvania Habitat Alliance, Harrisburg. 340 pp. (pa.audubon.org/deer_report.html)

Peer-reviewed journal articles and book chapters

Latham, R. E., D. Zercher, P. McElhenny, P. Mooreside and B. Ferster. 2007. Habitat restoration and management for the eastern regal fritillary, *Speyeria idalia idalia* (Drury), at a military installation in Pennsylvania. *Ecological Restoration* **25**: 103-111.

- Gustafson, D. J. and R. E. Latham. 2005. Is the serpentine aster, *Symphyotrichum depauperatum* (Fern.) Neesom, a valid species and actually endemic to eastern serpentine barrens? *Biodiversity and Conservation* **14**: 1445-1452.
- Wibiralske, A. W., R. E. Latham and A. Johnson. 2004. A biogeochemical analysis of the Pocono till barrens and adjacent hardwood forest underlain by Wisconsinan and Illinoian till in northeastern Pennsylvania. *Canadian Journal of Forest Research* **34**: 1819-1832.
- Maurice, K. R., J. M. Welch, C. P. Brown and R. E. Latham. 2004. Mesic till barrens in retreat: topography, fire and forest contagion effects. *Landscape Ecology* **19**: 603-620.
- Latham, R. E. 2003. Shrubland longevity and rare plant species in the northeastern USA. *Forest Ecology and Management* **185**: 21-39.
- Gustafson, D. J., G. Romano, R. E. Latham and J. Morton. 2003. Amplified fragment length polymorphism analysis of genetic relationships among the serpentine barrens endemic *Cerastium velutinum* Rafinesque var. *villosissimum* Pennell (Caryophyllaceae) and closely related *Cerastium* species. *Journal of the Torrey Botanical Society* **130**: 218-223.
- Eberhardt, R. W. and R. E. Latham. 2000. Relationships among vegetation, surficial geology and soil water content at the Pocono mesic till barrens. *Journal of the Torrey Botanical Society* **127**: 115-124.
- Castelli, J. P., J. Sullivan, B. B. Casper and R. E. Latham. 1999. Early understory succession following catastrophic wind damage in a deciduous forest. *Canadian Journal of Forest Research* **29**: 1-6.
- Petraitis, P. S. and R. E. Latham. 1999. The importance of scale in testing the origins of alternative community states in ecosystems. *Ecology* **80**: 429-442.
- Ricklefs, R. E., R. E. Latham and H. Qian. 1999. Global patterns of tree species richness in moist forests: distinguishing ecological influences and historical contingency. *Oikos* **86**: 369-373.
- Latham, R. E., J. E. Thompson, S. A. Riley and A. W. Wibiralske. 1996. The Pocono till barrens: shrub savanna persisting on soils favoring forest. *Bulletin of the Torrey Botanical Club* **123**: 330-349.
- Ricklefs, R. E., M. T. Kalin-Arroyo, R. E. Latham, T. M. Lewinsohn, D. J. Lodge, N. I. Platnick and D. Wright. 1995. The distribution of biodiversity. Pages 139-173 in V. H. Heywood (ed.), *Global Biodiversity Assessment*, Cambridge University Press for United Nations Environmental Programme.
- Latham, R. E. and R. E. Ricklefs. 1993. Continental comparisons of temperate-zone tree species diversity. Pages 294-314 in R. E. Ricklefs and D. Schluter (eds.), *Species Diversity in Ecological Communities: Historical and Geographical Perspectives*, University of Chicago Press.
- Latham, R. E. and R. E. Ricklefs. 1993. Global patterns of tree species richness in moist forests: energy-diversity theory does not account for variation in species richness. *Oikos* **67**: 325-333.
- Ricklefs, R. E. and R. E. Latham. 1993. Global patterns of diversity in mangrove floras. Pages 215-229 in R. E. Ricklefs and D. Schluter (eds.), *Species Diversity in Ecological Communities: Historical and Geographical Perspectives*, University of Chicago Press.
- Latham, R. E. 1992. Co-occurring tree species change rank in seedling performance with resources varied experimentally. *Ecology* **73**: 2129-2144.
- Ricklefs, R. E. and R. E. Latham. 1992. Intercontinental correlation of geographical ranges suggests stasis in ecological traits of relict genera of temperate perennial herbs. *American Naturalist* **139**: 1305-1321.
- Petraitis, P. S., R. E. Latham and R. A. Niesenbaum. 1989. The maintenance of species diversity by disturbance. *Quarterly Review of Biology* **64**: 393-418.

Journal manuscripts in preparation/review

- Latham, R. E., J. E. Thompson, A. Sugden-Newbery and P. Stoll. Spatial analysis of vegetation change in a mesic shrubland: effects of geomorphology, fire history and forest proximity. (To be submitted to *Landscape Ecology*)
- Latham, R. E. Restoration of eastern serpentine grasslands. (To be submitted to *Natural Areas Journal*)
- Latham, R. E. and J. F. Thorne. Disturbance, succession, and restoration in eastern North American serpentine grasslands. (To be submitted to *Conservation Biology*)

Latham, R. E., E. Dubinsky and S. R. McCandless. The interdependence of soil depth, soil chemistry and vegetation type in eastern temperate serpentine barrens. (To be submitted to *Journal of the Torrey Botanical Society*)

Book manuscript in preparation

Latham, R. E., A. F. Rhoads, G. G. Whitney and M. D. Abrams. *Keystone Forests, Wetlands, Grasslands and Barrens: the Ecosystems of Pennsylvania* (working title).

Other publications

Latham, R. and J. F. Thorne. 2007. Keystone grasslands: restoration and reclamation of native grasslands, meadows, and savannas in Pennsylvania state parks and state game lands. For the Wild Resource Conservation Program, Pennsylvania Department of Conservation and Natural Resources, Harrisburg. 100 pp.

Latham, R. and A. F. Rhoads. 2006. The historical flora of Wykers Island in the Delaware River, Bucks County, Pennsylvania, from the 1884 to 1887 botanical notes of John and Harvey Ruth. *Bartonia* **63**: 29-47.

Latham, R. 2006. Smart Conservation's™ plant community module: a tool for rapid quality-assessment of natural communities by non-experts. Pages 139-146 in R. B. McKinstry, Jr., C. M. Ripp and E. Lisy (eds.), *Biodiversity Conservation Handbook: State, Local and Private Protection of Biological Diversity*, Environmental Law Institute, Washington, D.C.

Moyer, B., B. Shissler and R. Latham. 2006. Deer, communities and quality of life. Ecosystem Management Project, State College, PA. 8 pp. (www.ecosysmp.com/publication.html)

Latham, R. E. 2004. [Book review of] *Measuring Biological Diversity*, by Anne E. Magurran. *Journal of Vegetation Science* **15**: 854-856.

Latham, R. E., D. B. Steckel, H. M. Harper and D. C. Rosencrance. 2003. *Conservation and Stewardship Plan for the Crum Woods of Swarthmore College*. Report for Swarthmore College, Swarthmore, Pennsylvania by Natural Lands Trust, Media, Pennsylvania and Continental Conservation, Rose Valley, Pennsylvania. 149 pp. + 19 maps. (www.swarthmore.edu/NatSci/crumwoods/NLTRReportSections.html)

Latham, R. E. 2002. Inventory of the current state of scientific knowledge on biodiversity in Pennsylvania. Pennsylvania Biodiversity Partnership, Pittsburgh. 70 pp.

Latham, R. 2000. Friendly fire: foresters learn from natural burn [editorial]. *Patriot-News*, Harrisburg, Pennsylvania.

Latham, R. 2000. Fighting fire with fire saves forest: good management techniques can help to prevent the kind of blazes now charring the West [editorial]. *Sunday News*, Lancaster, Pennsylvania.

Latham, R. 2000. Good forest management will curb catastrophic fires [editorial]. *Pocono Record*, Stroudsburg, Pennsylvania.

Latham, R. E. 2000. The Crum Woods in peril: toward reversing the decline of an irreplaceable resource for learning, research, recreation and reflection [white paper]. 18 pp. + map. Swarthmore College, Pennsylvania. (www.swarthmore.edu/NatSci/Biology/bio_professors/latham/crumwoods.html)

Latham, R. 1999. [Book review of] Ed Ayres '63, *God's Last Offer: Negotiating for a Sustainable Future*. *Swarthmore College Bulletin* **97**(2): 48.

Latham, R. E. 1993. The serpentine barrens of temperate eastern North America: critical issues in the management of rare species and communities. *Bartonia* **57** Suppl.: 61-74 (*Proceedings of the Symposium on Rare Plants of Pennsylvania and Adjacent States*, 28 March 1991, Philadelphia).