

CURRICULUM VITA

ROBERT S. CAPERS
Plant Collections Manager
George Safford Torrey Herbarium (CONN)
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Employment history

2007-present

Plant Collections Manager, George Safford Torrey Herbarium, University of Connecticut, Storrs CT
Responsible for management of active herbarium; collecting and mounting plants; arranging specimen loans; instructing undergraduate and graduate students in databasing and specimen-imaging procedures; maintenance of specimens, database and Web server; research on plant distributions and species' ecological affinities; coordination of regional node-building activities.

2006-2007

Visiting assistant professor, Oklahoma State University, Stillwater OK

Courses taught included graduate and undergraduate Community Ecology, General Ecology, Science and Society.

2004-2006

Post-doctoral scientist, Connecticut Agricultural Experiment Station, New Haven CT

Conducting aquatic plant research in Connecticut lakes. More than 100 water bodies were surveyed. Multivariate statistics are being used to analyze the distribution of aquatic plants and to characterize aquatic plant communities and their variation in space and time. The data also are being used to answer questions about the determinants of dominance and the affinities of invasive species.

2003-04

Assistant professor, Biology Department, Eastern Connecticut State University, Willimantic CT

Courses taught included General Ecology, Population Biology/Genetics, Process of Science in Society.

2003

Adjunct professor, Department of Ecology and Evolutionary Biology, University of Connecticut, Storrs.
General Ecology. A lab course for majors and non-majors.

1971-1995

Editor and writer for The Hartford Courant, Hartford, Connecticut, and other daily newspapers. As a writer, specialized in analytical and interpretive coverage of science, environmental news, education, medicine and social services. As an editor, directed a staff of 10-12 writers covering statewide and national issues and daily news events.

Education

Ph.D., Botany, 2003, University of Connecticut. Dissertation: Dynamics of the submerged plant community in a freshwater tidal marsh.

M.S., Botany, 1999, University of Connecticut. Thesis: A study of community structure and change in a community of submerged angiosperms, Whalebone Cove, Hadlyme, Connecticut.

B.A., English, 1971, Colby College.

Research

2008-present

Investigations of the structure and dynamics of alpine/subalpine plant communities on mountains in New Hampshire and Maine, exploring in particular the effects of warming, changes in precipitation regime, nitrogen deposition, acid rain and interactions among these conditions.

2009-present

Long-term monitoring of *Glossostigma cleistanthum* in Mansfield Hollow Reservoir, one of seven locations where this invasive aquatic plant occurs in Connecticut.

2003-present

Ongoing research on the structure and dynamics of aquatic plant communities in Connecticut lakes and the forces most responsible for community structure, including environmental variables, dispersal, human disturbance and historical events.

1996-present

Continuing research on the structure and dynamics of submerged plant communities in freshwater tidal wetlands. The work includes monitoring of species richness, change in the relative abundance of species, development and testing of models predicting presence and abundance of species in particular chemical and physical conditions.

2001-2010

Research on community structure and dynamics in secondary tropical forests of Costa Rica. I have done extensive field work on this project in Costa Rica and am involved now in analyses of six years of data on growth and survival of approximately 300 species of woody seedlings. This work is being done as part of a long-term (and recently refunded) secondary forest regeneration project led by Dr. Robin Chazdon of the University of Connecticut.

2001-2010

Research on the ecology, developmental morphology and reproductive biology of two invasive *Vincetoxicum* species. This research involves both greenhouse and field populations of *V. nigrum* and *V. rossicum* and has included attempts to hybridize the species, comparisons of seedset between outcrossed and inbred plants of both species, and a comparison of leaf and shoot allometry in the species.

Publications

Capers, R.S., and N. Slack. 2016. A baseline study of alpine snowbed and rill communities on Mount Washington, N.H. *Rhodora* 118:345–381.

Capers, R.S., and D. W. Taylor. 2014. Slow recovery in a Mount Washington, New Hampshire, alpine plant community four years after disturbance. *Rhodora* 116:1–24.

Capers, R.S., K.D. Kimball, K.P. McFarland, M.T. Jones, A.H. Lloyd, J.S. Munroe, G. Fortin, C. Matrick, J. Goren, D.D. Sperduto and R. Paradis. 2013. Establishing alpine research priorities in northeastern North America. *Northeastern Naturalist* 20:559-577.

Dreyer, G., C. Jones, R. Capers, P. Sweeney, N. Barrett, P. Sharp, C. Ultee, L. Brown, S. Saulys, E. Corrigan, J. Barrett and N. Murray. 2013. Native and Naturalized Vascular Plants of Connecticut Checklist. Connecticut Botanical Society, New Haven.

- Les, D.H. and R.S. Capers. In press. *Glossostigma* treatment. Flora of North America. Vol. 17.
- Capers, R.S., and A.D. Stone. 2011. After 33 years, trees more frequent and shrubs more abundant in Northeast U.S. alpine community. Arctic, Antarctic and Alpine Research 43: 495–502.
- Capers, R.S. 2011. Thoreau specimens discovered in UConn herbarium. Newsletter of the Connecticut Botanical Society 38: 1-8.
- Capers, R.S. 2011. Alpine ecosystems workshop brings scientists together. The Alpine Steward, newsletter of the Waterman Fund 10:14.
- Chazdon, R.L., B. Finegan, R.S. Capers, B. Salgado-Negret, F. Casanoves, V. Boukili, and N. Norden. 2010. Composition and dynamics of functional groups of trees during tropical forest succession in Northeastern Costa Rica. Biotropica 42:31–40.
- Capers, R.S., R. Selsky, and G.J. Bugbee. 2010. The relative importance of local conditions and regional processes in structuring aquatic plant communities. Freshwater Biology. 55:952–966.
- Capers, R.S., and D.H. Les. 2010. Web site promotes plant data as a novel educational resource. Connecticut Journal of Science Education 47: 35–38.
- Capers, R.S., R. Selsky, G.J. Bugbee and J. White. 2009. Species richness of native and invasive aquatic plants responds to abiotic environmental variables, human activity. Botany 87:306-314.
- Capers, R. S. 2008. Review of Flora of the Northeast: A Manual of the Vascular Flora of New England and Adjacent New York, D.W. Magee and H.E. Ahles, University of Massachusetts Press, Amherst. Plant Science Bulletin 54: 172–173.
- Capers, R. S. 2008. *Glossostigma cleistanthum* text and photographs. Maine Field Guide to Invasive Aquatic Plants. Maine Center for Invasive Aquatic Plants.
- Capers, R.S., R. Selsky, G.J. Bugbee and J. White. 2007. Aquatic plant community invasibility and scale-dependent patterns in native and invasive species richness. Ecology 88:3135-3143.
- Les, D. H., R. S. Capers, and N. P. Tippery. 2006. Introduction of *Glossostigma* (Phrymaceae) to North America: a taxonomic and ecological overview. American Journal of Botany 93:927–939.
- Capers, R.S., and D. H. Les. 2005. Plant community structure in a freshwater tidal wetland. Rhodora 107:386–407.
- Capers, R.S., R.L. Chazdon, A. Redondo B. and B. Vilchez A. 2005. Successional dynamics of woody seedling communities in wet tropical secondary forests. Journal of Ecology 93:1071-1084.
- Capers, R.S., G.J. Bugbee, R. Selsky and J.C. White. 2005. A guide to the invasive aquatic plants of Connecticut. Bulletin No. 997, Connecticut Agricultural Experiment Station, New Haven. 26 pp.
- Capers, R.S., R. Selsky, G.J. Bugbee and J. White. 2005. Aquatic plants among most destructive invasives. Frontiers of Plant Science 55:7-9.

Capers, R.S., and R.L. Chazdon. 2004. Rapid assessment of understory light availability in a wet tropical forest. *Agricultural and Forest Meteorology* 123:177-185.

Capers, R.S. 2003. Macrophyte colonization in a freshwater tidal wetland (Lyme, CT, USA) *Aquatic Botany* 77:325-338.

Capers, R.S. 2003. Six years of submerged plant community dynamics in a freshwater tidal wetland. *Freshwater Biology* 48:1640-1651.

Capers, R.S., and D.H. Les. 2001. An unusual population of *Podostemum ceratophyllum* (Podostemaceae) in a tidal Connecticut river. *Rhodora* 103:219-223.

Capers, R.S. 2000. A comparison of two sampling techniques in the study of submerged macrophyte richness and abundance. *Aquatic Botany* 68:87-92.

Les, D.H., and R.S. Capers. 1999. *Limnobium spongia* (Hydrocharitaceae) discovered in New England. *Rhodora* 101:419-423.

Capers, R.S. 1998. Photographs of aquatic plants. *World Conservation*. 29:5-6.

Publications for the general public

Urban, M. and R.S. Capers. Time to lead on climate change. *Hartford Courant*. Nov. 30, 2012.

http://articles.courant.com/2012-11-30/news/hc-op-urban-capers-us-must-lead-in-climate-change--20121130_1_climate-change-climate-scientists-climate-cliff

Capers, R.S. As climate changes, so does what grows atop Maine mountain. *Portland Press Herald*, Feb. 21, 2012. (syndicated by maineenvironews.com and thedailyclimate.org)

Capers, R.S. and D.H. Les. 2010. Web site promotes plant data as novel educational resource. *Connecticut Journal of Science Education* 47:35-38.

Capers, R.S. 2006. First the truth, then the reconciliation: Many nations have bravely faced their nightmares. What's wrong with the U.S.? *Global Dialogue* 8. Available at: <http://www.worlddialogue.org/content.php?id=390>

Capers, R.S. 2004. It's rockets, not science: Why would NASA dump its successful space telescope to pursue an ill-conceived Mars mission? *The Hartford Courant*. Feb. 8.

Capers, R.S. 2003. Northern Blights: What an ancient Roman settlement reveals about the threat to Alaska's North Slope. *The Hartford Courant*. May 11.

Capers, R.S. 1998. You can't look it up: An outdated white world at Milner School. In: *Telling Stories, Taking Risks*, Klement, A.M., and C.B. Matalene, eds. Wadsworth Publishing Co., Belmont, Calif.

Capers, R.S. and E. Lipton. 1995. Hubble error: Time, money and millionths of an inch. In: Anton, T., and R. McCourts, eds., *The New Science Journalism*. Ballantine Books, New York.

Capers, R.S. 1994. NASA Post-Hubble: Too little, too late? *Academy of Management Executive* 8:68-72.

Capers, R.S., and E. Lipton. 1993. The Hubble error. *Academy of Management Executive* 3:41-57.

Conference presentations and posters

Capers, R.S., and D.W. Taylor. April 2013. Slow recovery of an alpine plant community four years after a major disturbance. Invited talk at annual Northeast Natural History Conference, Springfield, Massachusetts.

Capers, R.S. November 2011. Alpine research priorities. Talk presented at biennial meeting of Waterman Fund's Alpine Stewardship Workshop, Stowe, Vermont.

Capers, R.S. and A.D. Stone. April 2011. Trees, shrubs increasing in subalpine area of Avery Peak. Talk presented during NSF-supported workshop organized for researchers (biologists, meteorologists, ecosystem scientists and others) working in alpine areas of the Northeast United States, Bretton Woods, N.H.

Chazdon, R.L., B. Finegan, R.S. Capers, B. Salgado-Negret, F. Casanoves, V. Boukili, and N. Norden. Functional Group Composition of Trees During Tropical Forest Succession in Northeastern Costa Rica. August 2009. International Association for Ecology annual congress, Brisbane.

Capers, R.S. Causes and consequences of invasive aquatic plants in Connecticut lakes. October 2006. Zoology Department, Oklahoma State University, Stillwater, Oklahoma.

Capers, R.S. Causes and consequences of invasive aquatic plants in Connecticut lakes. September 2006. Botany Department, Oklahoma State University, Stillwater, Oklahoma.

Capers, R.S. The Hubble Telescope Fiasco, 15 Years Later. Oklahoma Academy of Science fall meeting, September 2006, Boiling Springs State Park, Woodward, Oklahoma.

Les, D.H., R.S. Capers, and N. Tippery. 2006. *Glossostigma* (Phrymaceae) in North America: Taxonomic and invasive potential. Botany 2006, annual conference of the Botanical Society of America, Chico, California.

Capers, R.S. and D.H. Les. 2005. *Glossostigma*: A new invasive in North America. Northeast Aquatic Plant Management Society, Providence, RI.

Bugbee, G., R. Capers, R. Selsky and J. White. 2005. An assessment of 10 years of treating variable milfoil in a Connecticut lake. Northeast Aquatic Plant Management Society, Providence, RI.

Bugbee, G., R. Capers, R. Selsky and J. White. 2005. The Connecticut Agricultural Experiment Station's Invasive Aquatic Plant Survey Program. Northeast Invasive Species Summit, Framingham, Mass.

Chazdon R.L., and R.S. Capers. 2005. Successional dynamics of woody seedling communities in wet tropical secondary forests. Association of Tropical Biology and Conservation annual meeting. Uberlândia, Brazil.

Capers, R.S. 2004. Reproduction in invasive *Vincetoxicum* species. Northeast Ecology and Evolution Conference, Storrs, Conn.

Capers, R.S. 2001. Intercommunity variation in submerged plant dynamics. EPA Graduate Fellows Conference, Silver Spring, Md.

Capers, R.S. 2000. Submerged aquatic plant community dynamics. EPA Graduate Fellows Conference, Washington, D.C.

Capers, R.S. 1999. A comparison of sampling techniques in the study of submersed macrophytes. International Botanical Congress, St. Louis, Mo.

Grants, Fellowships

2016, Grant from Waterman Fund to support removal of dandelions from snowbeds on Mount Washington. With Nancy Slack, Allison Bell, Kate Storms. \$1,200.

2015, NSF grant to support 3-year effort to improve ability of STEM grad students to communicate about science with the general public and to develop metrics to assess the success of this and other communication-training programs for science graduate students. \$500,000. Co-PI.

2011, NSF grant to support 3-day workshop on alpine research in the Northeast United States. \$20,000.

2011, NSF Research Experience for Undergraduates, \$6,390 supplement to BRC grant, Co-PI.

2010, NSF Research Experience for Undergraduates, \$6,390 supplement to BRC grant, Co-PI.

2009, National Science Foundation Biological Research Collections program, Co-PI, Completing a virtual herbarium at the University of Connecticut, \$430,000.

2009, NSF Research Experience for Undergraduates, \$5,015 supplement to BRC grant, Co-PI.

2009, Center for Environmental Sciences and Engineering graduate student research assistantship, with Jeffrey Osleeb, Geography Department, providing support for a graduate student to establish a GIS as part of continuing research of aquatic plant community structure in Connecticut lakes.

2002, Grant from Ronald E. Bamford Endowment of the Department of Ecology and Evolutionary Biology, University of Connecticut.

1999-2002, U.S. EPA Science To Achieve Results Fellowship.

1996, 1998, 1999, 2000, Grants from The Nature Conservancy for continuing investigations of community structure and change in a submerged aquatic plant communities on the lower Connecticut River.

1997, Grant from Silvio E. Conte National Fish and Wildlife Refuge to study an aquatic plant community.

Other professional activities

Member of steering committee of Consortium of Northeastern Herbaria, coordinating digitization among herbaria in northeastern United States and eastern Canada.

Member of Connecticut Task Force for New England Plant Conservation Program, conducting surveys of regionally rare species.

Member of the Plants Advisory Committee that assists the Connecticut Department of Environmental Protection and Energy in revising the state's list of Endangered, Threatened, and Special Concern species.

Associate editor of *Rhodora*.

Reviewing papers for the *Journal of Ecology*, *American Journal of Botany*, *Biological Invasions*, *Ecological Applications*, *Hydrobiologia*, *Journal of Vegetation Science*, *Aquatic Botany*, *Oecologia*, *Environmental Monitoring and Assessment*, *Northeast Naturalist*, *Freshwater Biology*, *Canadian Journal of Fisheries and Aquatic Sciences*, *Annales de Limnologie*.

Reviewing endangered species conservation plans for the New England Wild Flower Society.

Providing workshops on collecting and mounting procedures for students in Master Gardeners program.

Membership

Ecological Society of America

Botanical Society of America

New England Botanical Club

Association for Tropical Biology and Conservation

Organization for Tropical Studies

Connecticut Botanical Society

Society for the Preservation of Natural History Collections