

Curriculum vitae

Sigrun N. Gadwa, MS, PWS
Ecologist/Botanist/Wetland Scientist

EDUCATION: M.S., Plant Ecology, University of Connecticut, Storrs, CT, 1997.

B.A., Biology, Brown University, Providence, R.I., 1975.

Continuing Education

16 credit hours in Soil Science and Geology, 1993 – 2001
University of Connecticut, Storrs

Five Plant Pathology courses, Cook College, Rutgers University, New Brunswick, N. J. 1978 - 1979

Graduate Phycology course. Pan American U. Brownsville, Texas, 1982
Arboriculture course, Quinnipiac College, Hamden, CT, 1984

CT DEEP training workshop Series: Rapid Bioassessment
Techniques, & Stream Ecology Workshops. Bethany.1996 & 7.
Marking, Measuring & Planning Turtle Surveys. H. Gruner, CT Science
Museum, workshop for QRWA Turtle Crossing Program. 1998.
Riparian Buffer Function, Performance & Limitations. Urban Riparian
Buffers Conference & Technical Training Session. April 1999.
Sedimentation and Erosion Control Review Session. USDA Natural
Resource Conservation Service and CPESC (Certified Professionals
in Erosion Control), Concord, NH, September, 2001.

Freshwater Mussel Workshop. New Hampshire Department of
Environmental Conservation. August 2004.

Moss Identification & Ecology,1-week course; Eagle Hill Institute. 2019

CERTIFICATIONS:

Registered Soil Scientist,
Society of Soil Scientists of Southern New England
Certified Professional Wetland Scientist
Society of Wetland Scientists
Organic land care professional. NOFA (NE Organic Farming Assoc)

EXPERIENCE:

As a plant ecologist Ms. Gadwa inventories, assesses, photographs, and monitors ecological communities, often in support of open space acquisition initiatives. She plans & guides control programs for invasive plants, and searches for listed plant and turtle populations and assesses their habitat. Botanical specialties include vascular plant identification and winter botany. She is experienced with third party reviews of development projects, assessments of functions & values, delineation of wetland and watercourse jurisdictional boundaries (CT and U.S. Army Corps of Engineers), planning wetland mitigation and restoration, vernal pools studies, water quality testing and data analysis, and in-stream bio-assessments.

Curriculum vitae: (continued)

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EMPLOYMENT HISTORY:

1999 to present **Carya Ecological Services, LLC, Principal**
Ecological and wetland assessments, botany & habitat inventories, Vegetation planning. CTDEEP surveys for rare plants and turtles.

Recent **Carya** clients include the Berlin Land Trust, Hamden Land Conservation Trust, Avalonia Land Conservancy, East Lyme Land Trust, Brookfield North, LLC, Black & Veatch for the Town of West Haven, Mumford Cove Association, Town of Colebrook, SCS-Bethmour Rd., and private landowners.

1999 to present **Carya Ecological Services, LLC, Principal, subcontractor to Rema Ecological Services, LLC**, Vernon, CT, an environmental science collaborative; Ecological fieldwork, planning, and reporting.

2015 to 2022 **Post University, Waterbury Campus**
Adjunct Professor of Botany & Ecology.

2013 to 2018 **K & W Construction**, Southbury, CT, *subcontractor*
Erosion & Sediment Control Inspections, Turbidity testing for CT DEEP

2014 to 2019 **South Central CT Regional Water Authority**, New Haven, CT
Responsible for long term vegetation monitoring each fall, and reporting for compliance with CT DEEP Wellfield Diversion Permit.

2001 to 2004 **CT DEEP Wildlife Division, subcontractor**
Vegetation and wetland inventories & mapping of large Wildlife Management Areas (WMAs).

2003 to May 2016 **Ships' Hole Farm Partnership**, Smithtown, Long Island, NY
Responsible for vegetation management & invasive control; growing seed of native species on family farm, advised turtle monitors.

1995 to 2000 **Quinnipiac River Watershed Association Meriden, CT**
Executive Director/Staff Scientist
Led botany hikes and a volunteer monitoring program, including stream bio-assessments, turbidity testing, and bird/turtle surveys; site plan reviews of projects impacting the watershed; wrote testimony, grants, publicity, and educational materials; liaison with officials. Chair of Habitat Work Group of the **Watershed Partnership**, which identified and documented Quinnipiac watershed habitats in need of protection or restoration until 2003.

Curriculum vitae: *(continued)*

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EMPLOYMENT HISTORY: *(continued)*

Coordinator for **QRWA Turtle Crossing** monitoring program for Eastern box & wood turtles, which continued until 2018. Instructed citizens on preparing detailed accurate record forms for the Natural Diversity Database. Outreach on turtle behavior through the seasons, habitat usage, & conservation needs. > 50 records.

1991 to 1995	De Leuw-Cather, Inc. , East Hartford, CT <u>Environmental Planner/Field Ecologist</u> Field data collection, analysis, and report preparation, mostly for highway projects; specialties included listed plant searches, assessment of wetland functions, mitigation design, & wetland delineation (ACOE method).
1987 to 1991	Univ. of Connecticut Department of Civil Engineering , Storrs, CT <u>Wetlands Researcher</u> Part of an interdisciplinary team, studying man-made replication wetlands and natural reference wetlands. Took part in research design; collected vegetation, soils, & hydrologic data; literature searches; data analysis. Research used for wetlands mitigation-related manual for the Connecticut Department of Transportation and for master's thesis.
1974 to 1975	Brown University , Providence, RI <u>Teaching Assistant, Plant Systematics</u>
1968 to 1975	Long Island Nature Conservancy , <u>Stewardship Volunteer</u> Nature trail development & maintenance, botanical inventories, wrote preserve descriptions & self-guided nature trail brochures.
	Carya E.S. clients have included Berlin Land Trust, Avalonia Land

PROFESSIONAL AFFILIATIONS:

Connecticut Botanical Soc. (Board Member, Chair of Ecology & Conservation Committee)
Connecticut Invasive Plant Working Group (CIPWG)
Connecticut Association of Wetland Scientists
Society of Soil Scientists of Southern New England
Connecticut Ornithological Society
Connecticut Entomological Society
Ecological Society of America
Native Plant Trust (PCV - Plant Conservation Volunteer Program)

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PUBLICATIONS:

Lefor, M.W. Barklay, J.S. Cooke, R.S. Craig, S.N. Gadwa, T.S. Murray, April 1990. *Annotated Bibliography for Wetland Mitigation*.

August 1990. *Patterns of Herb Layer Species Association*. In Lefor, M.W. et al *Wetland Mitigation: Interim Report* No. CT-RD-JHR-90-8, The Transportation Institute, Storrs, Conn. 97 pp.

1994. *Forests*. In Chesanow et al. *Trails*. The Cheshire Land Trust and the Cheshire Environment Commission, Cheshire, CT 96 pp.

May 1995. *Wetland Mitigation: Botany*. Volume 1 of 6. Lefor, M.W. and S.N. Gadwa. Report No. JR95-241. Dept. Civil Engineering, Joint Highway Research Council, Transportation Institute, Storrs, Conn. 259 pp.

December 1997. *Plant Colonization Processes and Patterns along Shorelines of Man-made Mitigation Basins in Relation to Reproductive and Life History Traits*. MS Thesis. Dept. Ecology & Evolutionary Biology. Univ. of Connecticut, Storrs, CT. 181 pp.

River Resources Education Series, Quinnipiac River Watershed Association, Meriden, CT. May 1995 *New Haven Oysters*; June 1996 *What Good are Streamside Woods?* August 1996 *Taking a Close Look at Streamside Woods*; June 1997 *Foraging in the Quinnipiac Estuary*; March 1998 *Stream Biosurveys* (G.T. Logan & S. Gadwa) ; September 2000 *Muddy Waters*.

Logan, G.T. & S.N. Gadwa. *Quinnipiac River Watershed Assoc. Stream Study*. Water Quality in the Quinnipiac River. Proceedings of a Symposium on the Impact of Nonpoint Source Pollution in the Quinnipiac River Watershed, pp. 66-70.

October 2000. *A Report on the Water Quality of the Quinnipiac River*. M. Tyrell, C. Cappannari, D. Galt, S. Gadwa, L. MacMillan, R. Walters. Report to the Steering Committee of the Quinnipiac River Watershed Partnership. Q.R.W.P. Water Quality Workgroup, New Haven, CT. 19 pp.

Winter 2003. *Management of Invasive Plants: On-Site Open Space Management*. The Habitat 15(2):3-4 Connecticut Association of Conservation and Inland Wetland Commissions, Inc.

Spring 2003. *Management of Invasive Plants: Protecting Open Space and Wetlands, Tools for Land Use Boards and Town Staff*. The Habitat 15(3):4-5. Connecticut Association of Conservation and Inland Wetland Commissions, Inc.

July 2003. Interpreting Quinnipiac Songbird Surveys: Effects of Landscape Setting on Avian Community Composition. *The Connecticut Warbler*. 23(3): 81-114.

Curriculum vitae: (continued)

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PUBLICATIONS, cont. :

June 2004. *Connecticut Turtles of Special Concern*. Quinnipiac River Watershed Association. 4 page pamphlet. (illustrations by Tony Ianello)

Fall 2005. S. N. Gadwa. *Preliminary Assessment of the Habitat & Historic Resources in North Cheshire, West of Route 10 & Recommended Protection Measures*. Cheshire Land Trust & Quinnipiac Watershed Partnership.

October 2011 S. N. Gadwa & G.T. Logan. *The Scientific Basis for Wetland & Watercourse Buffer Zones*. 23 pp. White Paper. Rema Ecological Services, LLC.

Spring 2014. Sigrun N. Gadwa. *The Invasive Threat to Connecticut's Upland Critical Habitats*. 3pp. Connecticut Botanical Society Newsletter 41: 1.

Spring 2020. Sigrun N. Gadwa. *Gabbro Habitats in Southeastern Connecticut*. Connecticut Botanical Society Newsletter 47: 1.

Fall 2020. Connecticut Botanical Society Ecology and Conservation Committee. *Recommendations for Electrical Utility Right-of-Way Vegetation Management*. See also website: www.caryaecological.com

WORKSHOPS & CONFERENCES

SA Mid-Atlantic Chapter Symposium, Blacksburg Virginia
Lessons for Mitigation Design from Shoreline Seedling Colonization (*selected*).
Patterns April 12-14. 2012. (*Poster presentation based on MS thesis*)

New England Invasive Plant Summit, Framingham Massachusetts: Wetlands permitting – a potentially powerful tool to control invasive plants. September 19-20. 2003. (*Poster Presentation*).

Environmentally Sensitive Development along the Ten Mile River. Riverside Landscaping Conference. June 1998. Rivers Alliance of CT. (*Guest Lecturer*)

Water Quality in the Quinnipiac River: A Symposium on the Impact of Non-Point Source Pollution in the Quinnipiac River Watershed. Nov. 1998. (*Presenter*)

October, 2014. Documenting and Conserving Eastern Box Turtles in Central Connecticut: 19 years of Citizen Monitoring. Berlin Land Trust and Nature Center. Evening Membership Program. (*Guest Lecturer*)

2011 to 2119. For CT Botanical Society, have led 1-3 guided botany field trips and/or field botany workshops each year.

October 2016 Sigrun Gadwa, MS & Todd Mervosch, PHD. Connecticut Invasive Plant Working Group (CIPWG) Symposium, UConn College of Agriculture, Health, & Natural Resources. *Artemisia vulgaris (Mugwort): Overlooked Infiltrator of Meadow Habitats*. (*Poster Presentation*).