

MARTHA CARLSON

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Martha Carlson is the Forest Watch coordinator. She assists teachers and their students in monitoring white pines. She performs spectral measures and other analyses of white pine samples in the Forest Watch laboratory. She prepares Forest Watch materials and communicates with teachers and schools.

Carlson is also a PhD students in the Natural Resources and Earth Systems Science program at UNH. She is studying the sugar maple (*Acer saccharum*) and its response to environmental stressors including climate change. Carlson's thesis includes work to develop a new branch of Forest Watch in which students and teachers will help to monitor sugar maple health. Two schools, Moharimet Elementary in Madbury and Josiah Bartlett Middle School in Bartlett, are piloting activities with Carlson in 2011.

Other current work includes:

- Microscopy of leaves to study the cellular damage caused by an atmospheric pollutant.
- Collaboration with Elizabeth Brady, Dr. W. Shortle, Dr. S. Tomellini and Dr. Rock in a chemistry study of phenolics in sugar maple sap as possible signal of stress incurred in previous growing season.

EDUCATION

- 2009 M.S. University of New Hampshire, Natural Resources
- 1968 B.A. Mt. Holyoke College, English Composition

PROFESSIONAL EXPERIENCE

Carlson was founder and head of Sandwich Community School, a college preparatory high school serving rural day students in north-central New Hampshire. She and her team of founding teachers developed a unique place-based, inquiry-driven program. The school was one of the first schools to join Forest Watch.

Carlson has been a writer, photographer, editor as well as a teacher and head of school. She has extensive experience in land conservation. She and her husband Rudy live on a tree farm

in Sandwich, NH, where they make maple syrup, grow white pines and raise organic vegetables.

SELECTED PUBLICATIONS

Draft writing, Rock, B.N., M. Carlson, R. Talbot. 2011? *Defoliation of sugar maples by peroxyacetyl nitrate (PAN) in May 2010.*

Draft writing, Rock, B.N., M. Carlson, C. Diessner. 2011? *Reviving the Lost Art of Microtechnique in the Natural Resources Classroom.*

Carlson, M., B.N. Rock, R. Talbot. 2010. *Were Sugar Maples in Campton, NH, Defoliated by PAN?* Poster for annual meeting, North American Maple Syrup Council, Stratford, Ontario. November 2010.

Carlson, M. 2010 *Maple Syrup's Changing Colors.* Forest Notes, Spring 2010, No. 263. Concord, NH.

Carlson, M. 2009. *An Assessment of Stress in Acer saccharum as A Possible Response to Climate Change.* Masters degree thesis. University of New Hampshire, Durham.

Carlson, M. 2009. Sagas of A Vinland Timber Scout, self-published novel.

Carlson, M. et al. 1988. Evaluation Report of The Community School: First Accreditation Study for the New England Association of Schools and Colleges. Commission on Independent Schools, Bedford, MA.

Town of Sandwich, NH. By Carlson, M., J. Fair, et al. 1988. *Federal Appeal of U.S. Forest Service Proposal to Build A Road to Flat Mountain Pond.*

Baldwin, H. 1987. Monadnock Guide, Revised and edited by M. Carlson. Society for the Protection of New Hampshire Forests, Concord, NH.

Raver, M. (Carlson), M. 1977. *Sick Cows, Human Fears in Md. County: An Examination of Fluoride Emissions from An Aluminum Smelting Plant.* The Washington Post, Outlook Section, Sunday, August 7, 1977.