

SEA LEVEL & SUMMITS  
IN THE HUDSON VALLEY

- Monitoring fishes in a Hudson River marsh
- A hike into history on Schumemunk



Photo: Erik Kiviat © 2008



# News from Hudsonia

Volume 22, Number 1

Summer 2008

# Help Hudsonia match an important challenge grant by September 30!

Dear Friends of Hudsonia,

**Please give me a minute of your time to explain how you can help Hudsonia.**

More and more, Hudsonia's work is changing the face of land use planning and conservation. We are doing this through focused research, education, and technical assistance projects as you can see in this issue of *News from Hudsonia*, by visiting [www.hudsonia.org](http://www.hudsonia.org), by participating in a field trip or workshop, or by consulting one of our habitat maps, project reports, or scientific papers.

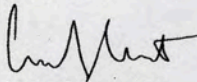
Our 2001 *Biodiversity Assessment Manual* and seven years of Biodiversity Assessment Training courses have reached most of the region's planning boards, conservation councils, land trusts, and other land use professionals. Hudsonia's goal-directed, least-toxic, and site-specific approach to managing invasive plants is attracting attention among disillusioned and frustrated practitioners. Our technical assistance projects bring science into the environmental review process, where it is often lacking. And we are about to premier our maps of Blanding's turtle habitats and train municipal agencies in techniques for turtle conservation in rapidly-developing landscapes. **In these ways Hudsonia is addressing environmental problems at the interface of science, planning, and on-the-ground conservation.**

Most of Hudsonia's funding comes from project grants and contracts which do not pay the full costs of our work. Recognizing that we need unrestricted funds to fill in the gaps, a member of our Board of Directors has offered a special challenge. **Donations received before the end of September will be matched 1:1, up to \$35,000 in match.** These funds will be used to support our environmental research and to help us develop and fund a plan for long term sustainability and financial health.

**I hope you will use the enclosed envelope to donate to Hudsonia in time to help us meet this generous challenge.**

*Where would your community and your landscape be without us?  
As always, we are very grateful for your continuing support.*

Thank you,



Erik Kiviatt, PhD  
Executive Director



GRANT & LYONS LLP

*Land Use, Environmental & Real Estate Law*

Including counseling municipal planning boards and ZBAs, SEQRA review, zoning matters, representing parties to land development, land use and zoning litigation, environmental permitting, pollution issues & litigation, conservation easements, wetlands matters & real estate.

Rhinebeck  
845.876.2800

New York City  
212.396.0991

Web site: [www.grantlyons.com](http://www.grantlyons.com)

## Andrew Sabin Family Foundation

PO Box 5026  
East Hampton, NY 11937

**631-329-0010**

# Your Name Here

to sponsor *News from Hudsonia*

call Kimberly: 845-758-0600  
or e-mail: [bail@bard.edu](mailto:bail@bard.edu)



Cover photo: Tivoli North Bay. Erik Kiviatt © 2008.  
(Cover photo of *News from Hudsonia* 21(2) 2007  
was of dwarf ginseng. Erik Kiviatt © 2007.)

Our business sponsors generously support *News from Hudsonia*. Publishing a sponsorship does not constitute an endorsement.



# News from Hudsonia

A journal of natural history and environmental issues

Telephone: (845) 758-0600

Facsimile: (845) 758-0607

Website: www.hudsonia.org

PO Box 5000

Annandale, NY 12504-5000

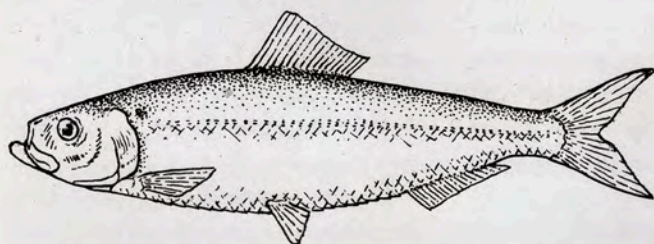
Volume 22, Number 1

Summer 2008

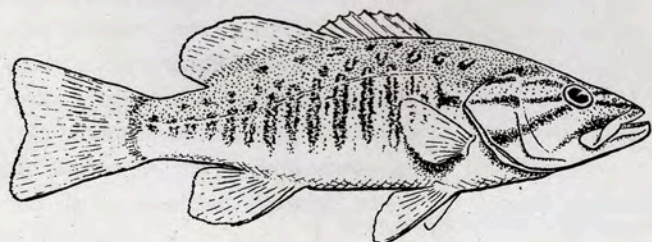
## REFLECTIONS ON SEINING IN THE TIVOLI BAYS

By Robert E. Schmidt\*

For the eighth year, I am carrying one end of my heavy Old Town canoe down the steep, slippery path to the Tivoli North Bay access point. My summer interns carry the other end—a changing cast of students mostly from Bard College at Simon's Rock, who are paid to help me with projects like this one. I often think a lighter canoe would make this all easier, but the stability and carrying capacity of this one is pleasant on the water. The vista at the canoe launch hasn't changed much. A narrow channel extends towards the mouth of Stony Creek to the right and the rest of the Bay to the left. Lining the far shore is a band of yellow pond-lily standing upright, backed by a thick stand of narrowleaf cattail.



Abundant a few years ago, blueback herring (*Alosa aestivalis*), above, is now an unusual find in Tivoli North Bay, while young smallmouth bass (*Micropterus dolomieu*), below, is among the most common. Kathleen A. Schmidt © 1996



The Tivoli bays are freshwater tidal marshes on the east shore of the Hudson River. As part of a monitoring program funded by the Hudson River National Estuarine Research Reserve, I have made five of these seining trips per summer for the last seven years. Each year we seine for fishes at four established stations. The idea is to watch for changes that may be occurring over as many years as possible. And changes have occurred. When I started this project back in 2001, blueback herring was one of the most abundant species in the Bay. Now, it's somewhat of a surprise to catch them, and instead I see young largemouth and smallmouth bass—species I never saw in the Bay seven years ago. The blueback herring population may be reflecting a general coastwide decline; but it may also be occupying different areas of the Hudson River due to zebra mussel activity. (Zebra mussel—an invasive Eurasian species—appeared in the Hudson River in the early 1990s, and has since dramatically altered the Hudson River food web.)

As we paddle between stations, the wildlife of the marsh appears and disappears. Marsh wrens make a constant chorus. I look for heads of turtles sticking out of the water; they look like sticks—the head

Continued on page 2

### CONTENTS

Reflections on Seining in the Tivoli Bays . . . . .	p. 1
What's Going on in 2008? . . . . .	p. 3
Stonewalls and Fireflies: Spring and Summer on Schunnemunk Mountain. . . . .	p. 4

\* Bob Schmidt, Professor of Biology at Bard College at Simon's Rock, is Associate Director and a co-founder of Hudsonia.

is often the only part you get to see. Both snapping and painted turtles are common, but one summer there was a map turtle consistently sitting on a certain snag. Sometimes we see the local beaver or the pair of osprey that hung around the marsh for a year. We surprised a least bittern on one of these trips.

Although I pretty much know what kinds of fishes to expect, having pulled the seines in the same places many times, I never know for sure what we'll catch, so the work never gets old. Some years we catch a few essentially marine fishes (the Bay is 99 miles north of the southern tip of Manhattan) like menhaden or Atlantic needlefish, perhaps due to high population densities in the lower river. In other years we may see freshwater species such as the comely shiner or the redfin pickerel we took in tidal water in 2007. These occurrences, although rare, speak to the diversity of life in the Hudson estuary and the inherent unpredictability of estuarine ecosystems.

We have to be careful exiting the canoe at one of our stations. The steep bank on the erosional side of the channel has Lake Albany clay underlying a thin coat of silt. If we're not cautious, we will slowly slide down the slope into several feet of water. Here we pull our net across the channel, where the water is often up to our necks. We watch the tide and sample here at its lowest ebb, but tide height varies daily (our own height doesn't) and can be substantially affected by prevailing winds. We land the seine on the depositional shore which has soft sediments several feet deep. At the end of the trip we are always wet and variously muddy depending on how sampling has gone.

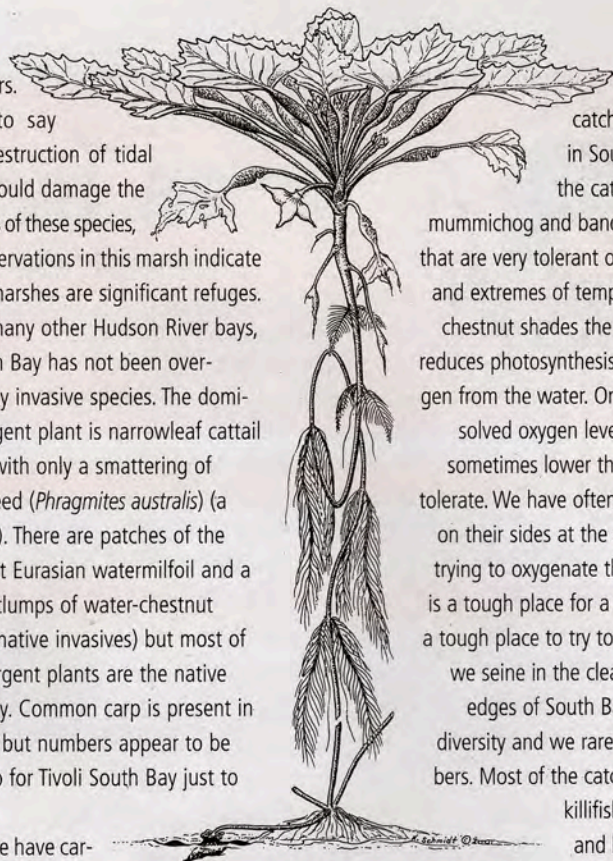
Our largest net is only 20 feet long and we don't catch many large fish. We occasionally get a carp of several pounds which inevitably sprays us with water and mud. We sometimes catch snapping turtles which, though lively, are easier to handle than carp. Most of our catch is young fishes, reflecting the nursery function of tidal marshes in general. The young of many species spend time in these shallow, rich waters where they find refuge from predators. We see young largemouth and smallmouth basses, white perch, striped bass, American shad, and the river herrings. In some years, we catch large numbers of spottail shiner young, sunfishes, and tessellated darters.

It's hard to say whether destruction of tidal marshes would damage the populations of these species, but my observations in this marsh indicate that tidal marshes are significant refuges.

Unlike many other Hudson River bays, Tivoli North Bay has not been overwhelmed by invasive species. The dominant emergent plant is narrowleaf cattail (a native) with only a smattering of common reed (*Phragmites australis*) (a non-native). There are patches of the submergent Eurasian watermilfoil and a few small clumps of water-chestnut (both non-native invasives) but most of the submergent plants are the native water-celery. Common carp is present in the marsh, but numbers appear to be low. Not so for Tivoli South Bay just to the south.

When we have carried our canoe down the path that borders the Saw Kill, the vista of South Bay couldn't be more different from that of North Bay. You can see completely across the Bay to the low profile of the Amtrak rail bed that separates the bay from the main channel of the Hudson River. If you look out over South Bay in the spring, you will see an unbroken expanse of water peppered with ducks and geese. But during seining season, the water surface is solid green with water-chestnut—virtually the only large plant visible—and its presence has had a significant effect on all the bay's inhabitants. Other European invasive species flock to the water-chestnut and, in early summer, you can watch large carp and goldfish spawning among the plants.

The fun of propelling a canoe across Tivoli South Bay is inversely proportional to the water-chestnut density. Some channels in South Bay are relatively stable and are maintained by the flow from the Saw Kill and the counterflow of the incoming tides. Water-chestnut gets only a poor foothold in these channels, but as the plant increases in density over the summer, the channels are covered by water-chestnut encroaching from the sides. Our efforts to reach our farthest seining station are often thwarted in August.



Water-chestnut (*Trapa natans*) covers Tivoli South Bay each summer. Kathleen A. Schmidt © 1992

We generally catch many fewer fishes in South Bay and usually the catch is dominated by mummichog and banded killifish, species that are very tolerant of low oxygen levels and extremes of temperature. The water-chestnut shades the bottom of the Bay, reduces photosynthesis, and takes up oxygen from the water. One result is that dissolved oxygen levels in South Bay are sometimes lower than many fishes will tolerate. We have often seen crayfish lying on their sides at the surface presumably trying to oxygenate their gills. South Bay is a tough place for a fish to live. It's also a tough place to try to catch fishes. When we seine in the clear areas around the edges of South Bay, we find low fish diversity and we rarely catch large numbers. Most of the catch is the two native killifishes—mummichogs and banded killifish. We see these species in North Bay also, but in much lower numbers.

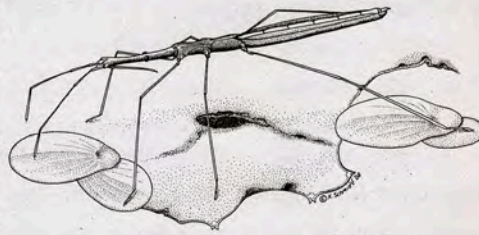
In the early 1990s we tried out a "pop net" contraption to sample fishes from the water-chestnut beds. We sink a square frame with a weighted bottom and floating top held together with netting. Clamps hold the top and bottom together and we place the apparatus on the bottom at low tide. At high tide, we release the clamps and the top "pops" to the surface isolating an area of the water-chestnut and trapping fishes within. We can then pull the water-chestnut out of the net and dip up the fishes. The usual fish are carp and goldfish (they do spawn there after all) and the native four-spine stickleback.

Since I am standing up to my chest in water-chestnut while working the pop net, I get an unaccustomed view of the animal community that lives among the floating plants. One of my favorite insects in the water-chestnut is the water-measurer (Hydrometridae), a tiny elongate hair-thin insect that you can see walking across the surface. It seems improbable that there is room for organs in a creature so skinny. A large variety of other surface dwellers meets one's eye—water striders (Gerridae), waterlily leaf beetles (*Galerucella nymphaeae*), an unknown

species of surface bug (Veliidae), a brick-red lady bug (*Coleomegilla maculata*) with large black spots. Occasionally we catch a predaceous diving bug (Belostomatidae), sometimes a male carrying eggs that the female glued to his back. Once I caught a tiny aquatic wasp (Scelionidae) that oars its way through the water with its wings and lays its eggs on the eggs of water striders (fatal to the water strider eggs). This is the first and, thus far, only one I have seen.

I like this kind of project because I've found that data collected over many years using consistent methods can tremendously aid our detection and understanding of longterm trends and variability in ecosystems, of functional relationships, and of responses to ecosystem change. Long-term data can lead to insights that

are less available from the "snap-shots" provided by short-term sampling. But most of all I like this project because every day that we're out on the Bays is an adventure. I will be out there—stop if you see me, and find out what's new. ■



The water-measurer (Hydrometridae), ca 8 mm (0.3 in) long, is often found on the floating leaves of water-chestnut, where it preys on other invertebrates. Kathleen A. Schmidt © 2008

## WHAT'S GOING ON IN 2008?

An expanded and energetic technical staff is carrying out the diverse projects filling Hudsonia's docket this year, including rare species surveys, fish surveys, general biological assessments, habitat mapping, biodiversity education, reviews and critiques of development proposals, invasive plant ecological studies, Blanding's turtle research, and urban ecology research.

We have now completed townwide **maps of ecologically significant habitats** for seven Dutchess County towns, and are working on three more towns in 2008. The habitat maps have been used by town agencies to help revise comprehensive plans, open space plans, and zoning ordinances, and have been incorporated into routine review procedures for new land use proposals that come before the towns. The maps have also been used by the Dutchess Land Conservancy to help landowners incorporate biodiversity concerns into the design of conservation easements, and by developers to design projects that avoid damaging the most sensitive habitats. We are looking for funding to expand the habitat mapping program to other towns and other counties.

In this seventh year of Hudsonia's **Biodiversity Education** program, community leaders in the towns of **Berne** and **Knox (Albany County)**,

**Hyde Park (Dutchess County)**, and **New Paltz** and **Lloyd**, and the **Village of New Paltz (Ulster County)** are engaged in the ten-month course in identification and protection of biodiversity resources. In May we held the three-day Biodiversity Assessment Short Course for 16 participants representing planning boards, conservation advisory councils, land trusts, and other agencies and organizations from **Columbia, Dutchess, Orange, Putnam, and Ulster counties**. Over 280 community representatives from 10 counties have taken our long or short courses in biodiversity assessment since 2001, and have learned ways to more effectively incorporate biodiversity conservation into their work in their own communities.

In our ongoing **ecological studies and analysis of restoration efforts** in the **Hackensack Meadowlands of New Jersey**, we continue to find surprising complexity and unusual habitats and species in these highly altered urban environments. Erik Kiviat and Kristi MacDonald-Beyers are writing a book on Meadowlands biodiversity and habitat management for Rutgers University Press. The Meadowlands are similar to the most-altered Hudson River tidal marshes such as Hudson

Continued on page 6

# Hudsonia Ltd.

## Board of Directors

Philippa Dunne, Chair  
 Charles Canham, Vice Chair  
 Robert Cranston, Treasurer  
 William Maple, Assistant Treasurer  
 Mark Lindeman, Secretary  
 Lynn Christenson  
 Ann Gabler  
 Peter Groffman  
 Samantha Kappagoda  
 David Mordecai  
 Will Nixon  
 Jane Sokolow

## Advisory Board

Robert Boyle  
 James Challey  
 Joan Ehrenfeld  
 Elizabeth Farnsworth  
 Richard Feldman  
 The Hon. Maurice Hinchey  
 Felicia Keesing  
 Jane Meigs  
 Jonathan Meigs  
 The Hon. Marcus J. Molinaro  
 Frederick Osborn III  
 C. Lavett Smith  
 Laura Tessier  
 René VanSchaack

## Staff

**EXECUTIVE DIRECTOR** Erik Kiviat  
**ASSOCIATE DIRECTOR** Robert E. Schmidt  
**DIRECTOR, BIODIVERSITY RESOURCES CENTER** Gretchen Stevens  
**ASSISTANT DIRECTOR, CONSERVATION ECOLOGY** Tanessa Hartwig  
**BIODIVERSITY MAPPING COORDINATOR** Kristen Bell  
**BIOLOGISTS** Spider Barbour  
 Jaime Hazard  
 Cathy McGlynn  
 Nava Tabak  
**BIODIVERSITY EDUCATOR** Andrew Meyer  
**RESEARCH ASSISTANT** Aryn Wilder  
**BIODIVERSITY EDUCATION INTERN** Jamie Deppen  
**TECHNICIAN** Carlena Johnson  
**ILLUSTRATOR** Kathleen A. Schmidt  
**ADMINISTRATOR** Kimberly Bail  
**ADMINISTRATIVE ASSISTANT** Linda Spiciarich  
**ASSISTANTS** Christie Ferguson  
 Mark Landes  
 Aminy Ostfeld  
 Regina Vaicekonyte

## News from Hudsonia Credits

**PRODUCTION** Kimberly Bail  
**EDITING** Gretchen Stevens  
**DESIGN & LAYOUT** Natalie Kelly  
**ILLUSTRATIONS** Kathleen A. Schmidt  
**PHOTOGRAPHS** Erik Kiviat  
 Andrew Meyer

Hudsonia is an institute for research, education, and technical assistance in the environmental sciences. We conduct pure and applied research in the natural sciences, offer technical assistance to public and private agencies and individuals, and produce educational publications on natural history and conservation topics. Hudsonia is a 501(c)(3) tax exempt, non-advocacy, not-for-profit, public interest organization. Contributions to Hudsonia are fully tax deductible, and are used solely in support of our nonprofit work.

the two northern arms of Schunnemunk Ridge. The vegetation highlights a microvariation in soil pH: black gum and highbush blueberry in the acidic swamp, and calcicoles (calcium-associated plants) such as basswood in the surrounding upland forest.

When we hiked around Schunnemunk on a mild mid-March day we felt the potential energy of spring. With only small patches of ice left on some northwest facing slopes, and the soil spongy from the recent thaw, wildflowers and other understory forbs were slowly making their way toward the surface. We were a bit early for that great leap forward, however, finding only evergreen forbs such as partridgeberry, trailing arbutus, spotted wintergreen, Christmas fern, common polypody, and marginal woodfern.

We knew that in the next few weeks the white flowers of shadbush would temporally mirror the spawning run of its namesake—that famous but now-scarce Hudson River delicacy, the American shad—and April would bring flowering dogwood sprinkling the sub-canopy with white stars brightly contrasting with the remnants of last fall's dusty yellow witch-hazel flowers. Then the flowers of purple trillium, pink lady's slipper, Canada mayflower, wood-anemone, and violets would soon speckle the understory.

Several rare spring-flowering plants have been found on Schunnemunk, including green rock-cress (*Arabis missouriensis*, NYS Threatened) and spring avens (*Geum vernum*, NYS Endangered). Three-toothed cinquefoil, a common boreal plant, makes a rare temperate cameo here near the 41st parallel; it has disjunct populations down the Appalachians all the way into Georgia.<sup>2</sup> Schunnemunk is also home to one of the few known occurrences of Virginia snakeroot (*Aristolochia serpentaria*, NYS Endangered) in New York State.<sup>1</sup> Hudsonia biologist Spider Barbour has discovered several of these populations in recent years.

On our return trip in early July, we felt a little like we'd shown up late to the party. All the trees had leafed out, the mountain-laurel flowers had long since turned brown and fallen, and the bird calls had died down to only the occasional sparrow alarm call. Luckily, the spring celebration left dessert; hordes of blueberries, deerberries, and huckleberries were ripe for the devouring. And, although we missed the brilliant flashes of color that spring wildflowers bring to the forest understory, the fluorescent green siren calls of thousands of fireflies imparted enchantment to the forest and prolonged our descent late into dusk.

Schunnemunk Mountain is one of many notable places in the region for studying the natural world and the human influence on the landscape. Several organizations are responsible for preserving this history on Schunnemunk. The Nature Conservancy owns about 150 acres of the northwestern slopes. In the late 1990s, the Open Space Institute purchased 2,700 acres which were then bought by the State of New York in 2001. The eight mile ridge is now protected as Schunnemunk Mountain State

Park. The Long Path travels the ridgeline as it makes its way more than 300 miles from the George Washington Bridge in Fort Lee, New Jersey, to John Boyd Thacher State Park in Albany County, New York.

We reached the modest pinnacle at the eastern, upturned lip of this 2,000-mile-wide sedimentary layer to discover a 100-mile view. With the vista stretching away from us, we realized that, in the midst of finding evidence of our cultural history in the forest, we'd overlooked many other time signatures. Where the ridge reaches its highest point of 1,664 ft, the view through the sparse oak-heath vegetation covers a broad temporal span: the rock that makes up the Hudson Highlands (some of the oldest rock in the state at >500 million years); the fossilized Gilboa forest of progymnosperms and lycopods (Devonian, ~400 million years) embedded in the Catskill rocks; the location of a Lenni-Lenape settlement of barkhouses pre-

### *Rare plants on Schunnemunk include green rock-cress, spring avens, and Virginia snakeroot.*

sent when the Dutch started exploring the Hudson River Valley; and the outdoor four-story sculptures created by Alexander Calder and Mark di Suvero in the late 20<sup>th</sup> century at the Storm King Art Center—from this vantage point looking only slightly larger than jacks. Encompassing geologic eras, modern art, and the ephemeral spring wildflowers and ripe summer blueberries, Schunnemunk Mountain expanded our time perspective well beyond the few hours of our afternoon hike.

Ours were recreational excursions, but the habitats on Schunnemunk Mountain are the kinds of landscape features that Hudsonia studies throughout the Hudson Valley and beyond. We are interested in common habitats, as well as places of uncommon biological complexity, richness, and beauty such as those at Schunnemunk. From the limestone ledges of the Helderbergs, the heath barrens and fens of eastern Dutchess County, the immense forests of the Hudson Highlands and Catskills, to the little-studied habitats of the Hackensack Meadowlands, we seek to understand the ecology of natural systems, and equip others with the best science-based information for conservation planning and action. ■

#### REFERENCES CITED

1. Lamont, E.E. & S. M. Young. 2004. Noteworthy plants reported from the Torrey Range 2002 and 2003. *Torrey Botanical Society* 131: 394-402.
2. Mitchell, R.S. 2002. A perfect day on Schunnemunk. *New York Flora Association Newsletter* 13(2):1-3.
3. New York State Thruway Authority/ Canal Corporation. 2006. 2006 annual report. <http://www.nysthruway.gov/about/ar2006.pdf>, accessed July 2008.
4. Roberts, D.C. 1996. *Geology - eastern North America*. Peterson Field Guides, Houghton-Mifflin, New York. 402 p.

South Bay, Haverstraw Marshes, and Kingston Point. Areas such as these offer insights into how to prevent more widespread ecological damage in urbanizing regions, as well as how to identify, protect, and restore such neglected but biologically important urban landscapes throughout the U.S.

This is the 13th year of research at the **Blanding's turtle habitat restoration** site in southern Dutchess, where we continue to radio-track the turtles and monitor their habitat use. We have identified and protected nine more turtle nests this year, and expect the hatchlings to start emerging in late August, as usual. Since 1996 when we started monitoring the turtles and their habitats and protecting the turtle nests each spring, over 800 hatchlings have emerged from nests at the research site, and have made it safely into nearby wetlands. We are delighted that juveniles born in the 1990s have begun to appear in our live traps in May. Each year brings new and surprising discoveries about Blanding's turtle behavior and use of the landscape—discoveries that we can often translate directly into recommendations for more effective conservation measures for the Blanding's turtle (a Threatened species) in New York, and in the other states and Canadian provinces where it occurs.

In other Blanding's turtle news, we are completing the map of known and potential **Blanding's turtle habitats throughout six towns** in southern Dutchess County. Later this year we will be presenting the map to town agencies and the public, and working with planning boards and conservation advisory councils to help them understand aspects of Blanding's turtle ecology and habitat use relevant to land use planning and the location and design of new development sites. The habitat information in the map and report will provide a good foundation for a county-wide Blanding's turtle conservation plan. We are seeking funding to develop such a plan as soon as the mapping project is completed.

Our studies of invasive plant ecology and management continued this year with observations on common reed stands in New York, New Jersey, and California. Studies of reed and its management outside the Northeast has given us new insight into the complex ecological web of this species. We continue research on animals and plants that take advantage of resources offered by invasive species, such as the insects and mosses associated with purple loosestrife, and birds nesting in Japanese knotweed stands. Far from frivolous, these natural history data lead to smarter prioritization of stands for management and selection of techniques that will better achieve management goals. Hudsonia offers a professional workshop on reed management.

In 2008, as in most years, we've been carrying out a great variety of technical assistance projects for individuals, conservation NGOs, public agencies, and businesses. For example:

- continuing studies of **reptiles, amphibians, and rare plants** at a reservoir in Westchester County,
- **bog turtle surveys** in western Connecticut,
- **Blanding's turtle habitat assessments** at several proposed development sites (Dutchess County),
- a **natural history survey** of a children's camp in Rhinebeck, to aid in development of an environmental education program,

- **fish surveys** at the Saw Mill River in Yonkers (Westchester County),
- **surveys for reptiles, amphibians, mammals, birds and rare plants** at Hudson South Bay (Columbia County),
- a study to delineate a proposed **Critical Environmental Area** in the Town of Pawling (Dutchess County),
- studies of **Japanese knotweed ecology** on the Batavia Kill (Greene County),
- **review of biological impacts of proposed developments** (Dutchess and Rockland counties), and
- **biological surveys** on park sites in the Town of Cortlandt (Westchester County), and at Denning's Point (Dutchess County), to help inform development plans for public use.

In all Hudsonia projects we adhere strictly to a policy of non-advocacy—that is, we neither support nor oppose development projects or land use proposals. We conduct independent scientific studies, and provide the resulting information impartially to decision makers, citizens, and scientists. All our projects contribute to the education of the public on environmental matters, and also generate scientific data which are used in a variety of ongoing studies of, for example, the distribution and conservation of rare plants and animals, the ecology of streams and wetlands, and the environmental relationships of human populations. Our work provides the scientific underpinning for the conservation actions of many other agencies and organizations in the Hudson Valley and elsewhere in the Northeast.

Hudsonia's work is supported by diverse public and private sources—foundations, nonprofit organizations, citizens' groups, businesses, and government agencies—and, very importantly, by individual donations from our members and friends. If our mission and our work seem important to you, please send a donation. We are pleased to receive contributions of cash or securities, and to discuss potential donations of library materials, equipment, specimens, or other property. ■



Members of the Hyde Park Planning Board and Conservation Advisory Council conducting a field assessment with Hudsonia staff. Andrew Meyer © 2008

## HUDSONIA 2008 STUDENT PRIZE

Each year we bestow the Hudsonia Prize on a Bard College undergraduate or graduate student who shows special promise in the field of environmental studies. **Evan Goldman** is the 2008 recipient. For his Bard Senior Project, he used Hudsonia's long-term Blanding's data to develop a population model for the Blanding's turtle in Dutchess County.

## SPECIAL THANKS

- Jean Churchill, Elaine Colandrea, Cavin Leeman, and Mara Ranville for donations of office furniture & equipment
- Drayton Grant for legal advice
- All the landowners in the towns of Beekman, Hyde Park, and Pine Plains who have given us walking access to their property for our habitat mapping projects

## Operation Habitat

### The Philip and Amanda Duff Dunne Fund

We regularly receive inquiries from people who want to support our efforts to identify and protect the habitats of rare and endangered species.

In response to these inquiries, and to honor her parents and their enthusiasm for protection of imperiled wildlife, Hudsonia Board Chair Philippa Dunne has established **Operation Habitat**, a designated fund within Hudsonia to support our conservation science work.

Please visit our website to make your tax-deductible contribution to Operation Habitat.

[www.hudsonia.org](http://www.hudsonia.org)

## DONORS OF GOODS AND SERVICES

### DONORS OF FIELD AND LABORATORY ASSISTANCE

Heidi Bock	Mark Landes
Joe Bridges	Carol Meyer
Patrick Carroll	Sam Olyha
Kathryn Casey	Stacey Olyha
Adrienne DeMarre	Kevin Pollack
Jamie Deppen	Maribel Pregnall
Michael Hickey	Shannon Rauch
Martin Holdrege	Jessica Schlanger
Jansen Kantor	Cindy Simpson
Steve Kwon	Doreen Tignanelli

### DONORS OF TAXONOMIC SERVICES

Richard Harris, New York Botanical Garden  
Ken Karol, New York Botanical Garden

### DONORS OF BOOKS AND JOURNALS

Lin Fagan  
International Association of Marine Science Libraries and Information Centers (IAMSILIC) member libraries  
Barry Koffler

### DONORS OF OTHER GOODS AND SERVICES

Peter Bowers/ PDQ Printing  
Jaime Hazard  
Tim Jacobs/ Benetech Business Machines  
Barbara and Karl Meyer  
Dan Spinelli/ All Rent  
Jason Tesauro  
Sean Thompson/ Thompson Technology

## HUDSONIA RECEIVES 2008 WINNAKEE AWARD

Hudsonia was honored to receive, in July, the Winnakee Land Trust's 2008 Good Land Award for our "long-standing commitment to environmental research, education, training, and technical assistance to protect the natural heritage of the Hudson Valley." The Winnakee Land Trust, established in 1989, works with property owners, local governments, and residents to protect the natural and cultural resources of northern Dutchess County.

## WISH LIST

Photocopier  
Digital camera  
"Rite in the Rain" paper, 8.5x11  
Fax machine  
Library shelving or bookshelves  
Desks  
Office chairs  
File cabinets  
Area rugs  
Conference table  
Natural history and field science books and journals (inquire first, please)

## HUDSONIA'S TECHNICAL ASSISTANCE PROGRAM

Hudsonia routinely conducts biodiversity assessments and provides other technical assistance on a fee basis to municipalities, consulting firms, NGOs, and individuals on the bog turtle and Blanding's turtle, other rare animals and plants, wetland ecology, stream ecology, and invasive plants. Contact Erik Kiviat at 845-758-7273 or [kiviat@bard.edu](mailto:kiviat@bard.edu) to make arrangements for these services.

## HUDSONIA T-SHIRTS FOR SALE

Short- and long-sleeved shirts in white or beige with small Hudsonia logo on the front, large green and yellow Blanding's turtle on the back. Limited quantities available—get them while they last! For adults S, M, L, XL (\$13 and \$18 for short and long sleeves, respectively) and children S, M, L (\$10, short sleeves only). Price includes tax; shipping \$2 extra per shirt. Contact Linda Spiciarich at 845-758-0600 or [spiciari@bard.edu](mailto:spiciari@bard.edu). Credit



card payments accepted.

*News from Hudsonia* is printed on 100% recycled paper, using 100% soy ink.



# HUDSONIA MEMBERS, 2008

Hudsonia gratefully acknowledges the individuals, businesses, organizations, and foundations that have, through their gifts, expressed a commitment to the advancement of environmental science, education, and conservation.

## BENEFACTORS (\$5000+)

Ms Samantha Kappagoda &  
Dr David K A Mordecai  
Lawson Valentine Foundation  
Allan Palmer Shope &  
Julie Flicker Shope

## STEWARDS (\$2500-\$4999)

Joan K Davidson /  
The J M Kaplan Fund  
The Easter Foundation  
John Heist &  
Michael Neumann  
Mary & Bill Lunt  
Shawangunk Charitable Fund  
Don & Jeanne Stanton  
Michael Trimble & Paula Wolf \*  
Vanguard Charitable  
Endowment Program

## PATRONS (\$500-\$2499)

Helen & Roger Alcaly  
Berkshire Taconic  
Community Foundation  
Gayle & Jesse Bontecou  
Charles & Judy Canham  
William R &  
Marjorie T Coleman  
Mr & Mrs Gonzalo  
de las Heras  
Jean & Gordon Douglas  
Elizabeth Ely &  
Jonathan Greenburg  
Cece & Richard Fabbro  
Grant & Lyons LLP  
Drayton Grant &  
Wayne Baden  
Hallingby Family Foundation  
Belinda & Stephen Kaye  
Kaye Family Charitable Fund  
Illiana Kerckerinck  
van Meeteren  
Will Nixon  
Ellen & Eric Petersen  
Mr & Mrs Charles Pierce

Robert & Encarnita Quinlan  
F Peter Rose  
Marian H Rose  
Schwab Charitable Fund  
Jane E S Sokolow  
Carolyn Summers  
Doris Walker  
Peter Warny

## SUSTAINERS (\$100-\$499)

Steve Adams /  
Adams Fairacre Farms  
Helena Andreyko  
Anonymous  
Dr Rudolf G Arndt  
Didi & David Barrett  
Alison Beall  
Claire & Len Behr  
Barry Benepe  
Timothy Bontecou  
Louise M Bozorth *in memory  
of Squire N Bozorth*  
Mr & Mrs William B Brannan  
Joe Bridges  
Suzanne Broidrick  
Sheila & Joe Buff  
Mary G Burns &  
Vince Clephas *in honor of  
Esther Kiviat*  
John Burroughs Natural  
Historical Society  
James Challey &  
Janet M Gray  
Carol Christensen &  
Karl Drake  
Lynn Christenson &  
Alan Tousignant  
Spero Z Chumas  
Walter & Ursula Cliff  
Courtney Collins *in memory  
of Keith H Swartley*  
Emily Collins  
John Connor Jr  
Heather Croner  
Sally Daly

Walt & Jane Daniels \*  
Wm J Dederick  
Rosalind Dickinson &  
Kent Babcock  
Gary DiMauro & Kathryn  
Windley  
Dobbs Ferry Animal Hospital  
Eric J Evans  
Mr & Mrs William Evarts Jr  
Linda & Ed Faber  
Leslie Farhangi & John Tuke  
Fidelity Charitable Gift Fund  
Field Day Foundation  
Gloria & Bob Fox  
Albert Francke  
Douglas Fraser  
Wendy Fried  
N Richard &  
Monique Gershon  
Jim Glomb  
Arthur Glowka  
Sibyl R Golden  
Jan & Lester Greenberg  
Fayal Greene *in honor of  
Erik Kiviat*  
James J & Lenny M Grefig  
Jack & Sue Grumet  
Dan & Ann Guenther  
Joan Dye Gussow  
Betty & Ira Hedges  
The Hotchkiss School  
Margaret C Howe  
Kenneth & Mei Be Hunkins  
Dee Ann Ipp  
Jewish Communal Fund  
Felicia Keesing &  
Richard S Ostfeld  
Ruth Ketay & René Schnetzler  
Hopeton & Dick Kimball  
Jean L Klaiss  
James Klosty  
Robert & Sidney Knisel  
*in memory of Tom Kline*  
William & Susan Koff

Andrew Labruzzo &  
Laura Haight  
Mr & Mrs Edwin Deane  
Leonard  
Eric Lind  
Dwayne Linville &  
Dúsan Týnek \*  
Judith R MacDonald  
Robert L Mahar  
Bill & Barb Maple  
Harvey Marek  
Marilyn Marinaccio  
Libby McClintock  
Jonathan & Jane Meigs  
Mr & Mrs James Metz  
Deborah Meyer DeWan  
*in memory of  
Dee Cotherman*  
Drs George & Cathy Michael  
Millbrook Garden Club  
Bert & Carol Nelson  
*in honor of the marriage  
of their daughter Rebecca  
to Brian Bauer*  
Beverly Nostro  
Robert & Rachele Ottens  
Allan R Page  
Eve Propp  
Frederic Putnam  
Dr Sylvia D &  
Henry B Roberts Jr  
Peter Rostenberg, MD  
Howard Rothstein /  
Saugerties Animal Hospital  
Matthew D Rudikoff  
Associates Inc  
Carolyn Scott  
Bryant White Seaman II &  
Rebecca Martin Seaman  
Elizabeth J S &  
Stephen Q Shafer  
Mr & Mrs C Sidamon-Eristoff  
Susan Sie  
C Lavett Smith

Elizabeth Smith  
 Joseph Squillante &  
 Carol Capobianco  
*in honor of Everett Nack*  
 Brenda Sramek \*  
 Anthony B S &  
 Susan N Stevens  
 Ms Anne P Strain  
 David Strayer & Judy Bondus  
 Jean B Tate  
 Felicitas S Thorne  
 Stephen Tilly, Architect  
 Alison Van Keuren  
 Bethia Waterman  
 Dr Daniel C Wilhoft  
 Ross & Karen Williams \*  
 Anton Wilson  
 Mr & Mrs John Winkler  
 John & Mary Jean Winkler  
 Charitable Fund  
 Wise Family  
 John & Mary Young

**FRIENDS** (up to \$100)

Anonymous  
 Dr & Mrs Kenneth Appell  
 Dr Matthew A Asbornsen  
 John Ashbery  
 Bill Bakaitis  
 Anne Ballantine L.Ac  
 Liza Berdnik  
 Peter & Diana Bethke  
 Matthew Bialecki, AIA  
 Ray & Elizabeth Boedecker \*  
 Ronald & Jean Bourque  
 Samuel & Grace Bowman  
 Ida & Norman Brier  
 Alice Bunnell  
 John Cannon  
 Joel & Beverly Canter  
 Mary R Cardenas *in memory*  
*of Omar O Cardenas*  
 Drew & Linda Casertano  
 Scott Chase &  
 Jeanne Valentine-Chase  
 Sherret Chase  
 Clough's Bookshop

David Clouser & Associates  
 Norene & Dick Coller \*  
 Kenny Colski  
 Walter C & Linda K Cook  
 Betsy Corrigan  
 Merle Cosgrove  
 Roy & Linda Deitchman  
 Barbara Dibeler  
 Nathaniel Donson  
 Peter Dunne  
 Joanna Dupee  
 Frank X Dwyer  
 J C Ebaugh  
 Lin & Jack Fagan  
 Richard S Feldman *in honor of*  
*Mike Tannenbaum, Dean,*  
*Marist College School of*  
*Science*  
 Mary G & Angelo Ferraro  
 Fidelity Charitable Gift Fund  
 Meghan Fitzpatrick  
 Georgene Gardner  
 Gloria & Barry Garfinkel  
 Jane Geisler  
 Annatje Gilbert  
 Mallory N Gilbert  
 Jim & Diane Goetz  
 Robert A Greene  
 Bill & Donna Griffith  
 Edward J Haas  
 Margot Harley  
 Kenneth E Harris &  
 Sarah J Harris  
 Wayne Haskell  
 Robert Henshaw  
 Joan & Donald Hobson  
 Dr Maung S Htoo  
 Alice D Jones  
 Mida & Robert Kaelin  
 Mary Jane Kaplan  
 Paul Kellar  
 William Kenny  
 Sandra Kissam  
 Richard Kopyscianski &  
 Joanne Meyer  
 Diana Krautter &  
 John Gebhards

Rudolph E Lapar  
 Dr & Mrs Cavin P Leeman  
 Kathleen A Lomatoski  
 David Lund  
 Norma & Allan Mastandrea  
 Maeve Maurer  
 Thomas F McMahon Jr /  
 K-Mac Construction Corp  
 Rosalind Michahelles  
 Avahlee Mitchell  
 David F Mitchell  
 David Montgomery  
 Betty Moreau  
 Jill Moscovitz  
 Mr & Mrs G A Mudge  
 Linda Murphy /  
 The Bird's Nest B&B  
 Dr Michael S Murphy /  
 Valley Veterinary Hospital  
 Richard & Gale Nord  
 Skip North  
 North Country Ecological  
 Services Inc  
 Pam Otis  
 John, Miranda & Halley Parry  
*in memory of Philip &*  
*Amanda Dunne*  
 Cynthia Philip  
 Maryanne Pitts  
 Steven Plotnick  
 Allan S Puplis  
 Sue Righi *in honor of*  
*Woody Woodruff &*  
*Suzie Horowitz*  
 Robert Rockman *in memory*  
*of William & Annys Wilson*  
 Michael Rohatyn  
 Thomas P Ronan  
 Steve Rosenberg  
 Sheila Sanders  
 Ron & Barbara Schade  
 Mr & Mrs J David Schmidt  
 Viola P Schoch  
 Deborah A Shaffer  
 Norman Shapiro  
 Herbert L Shultz  
 Dr Brian Simonofsky

Michele Slung  
 George A Smith  
 Robert Lee Smith  
 Ann Songayllo  
 Selden J Spencer  
 Nortrud Spero  
 Alan Spivack &  
 Joan Monastero  
 Billy Steinberg  
 David Straus  
 Mildred Sturcken  
 Tara & Edward Sullivan  
 Paul Sutera  
 Laura Tessier  
 The Three Arts Book Shop  
 Mary Alice Tocke  
 Amy Toth  
 Michael F Tronolone  
 Kimberly Uyehara  
 Art Van De Lay  
 Donald Vernon  
 Alvin Wanzer  
 Ginny & Otis Waterman  
 David Weiss  
 Alan Weissman *in memory of*  
*Phil Weissman*  
 Anita Wiener  
 Maria C Wirth  
 Don Wise  
 Woodstock Animal Hospital  
 Mary E Yeck

**DONORS TO BLANDING'S  
 TURTLE RESEARCH**

John Burroughs Natural  
 History Society  
 Peter Dunne  
 Beverly Nostro  
 John, Miranda, & Halley Parry

**MATCHING GIFTS**

IBM  
 Ford Foundation

\*With employer matching gift.

**Have you renewed your Hudsonia membership for 2008?  
 Please use the enclosed envelope to send your membership donation today.**