



Farmscape Ecology Program

Activities & Ideas, Summer 2009

OUR GOAL:

The goal of the Farmscape Ecology Program is to assist and encourage a diversity of people in connecting with their local landscape. It is our belief that, by promoting this process, one helps create land users and an electorate that are more informed about their landscape and more empathetic to its long-term ecological health and to potential injustices in the relationship between sectors of the population and their environment. These are, in turn, key ingredients in the formation of a just land culture, i.e., a culture which values and consciously manages for both use and conservation in its landscape and which explicitly recognizes and promotes the equal access of all its members to the landscape.

OUR JUSTIFICATION:

This goal and rationale derive from certain basic program assumptions. Some of these are arguable, but our point is not that they unequivocally prove that our approach is uniquely adequate, only that they are sufficiently true to support our approach as one valid way to conscientize people about their surroundings. These assumptions include the following:

Assumptions about why individual conscientization to the landscape is important

- ***Change happens; given our location relatively close to New York City and New York's Capital District and our still largely rural landscape, radical landscape change in the foreseeable future seems likely.*** Change is not inherently bad, however the history of landscape change in much of the Northeast is one of piecemeal, unconsidered change driven not by an ecological understanding of the landscape nor by a deep empathy for societal needs but rather by disconnected profit- or fashion-driven decisions. Therefore, our program focuses on building a shared consciousness and respect for the ecology and sociology of our landscape so that change can be approached more holistically.
- ***In terms of long-term conservation and environmental justice in the County, more knowledge of the land and a wider sharing of such knowledge is a good thing.*** In other words, if we can stimulate and facilitate people to explore their environment, then there is a greater likelihood of a better ecological and social landscape in the future. Therefore, our program has the goals of trying to encourage people to learn about the County.
- ***Encouraging individuals to consider land use issues personally can avoid needless conflict and result in a more conscious political citizenry; the political arena is an important but polarizing forum for land use discussion;*** "We" vs. "them" political debates risk hindering the realization of shared landscape goals. Because of this, we try to focus our work at the level of on the individual citizen, rather than at the political level.

- ***A regulatory approach to land use, while necessary in certain situations, can breed resentment.*** An approach that attempts to increase the personal value that people associate with an ecologically health and local environmental justice has value. So, our program focus is not on promoting land use regulation, but on inspiring and facilitating people to think more deeply about land use and its repercussions.

Assumptions about approaches to individualized conscientization

- ***People can be stimulated to seek knowledge by both emotional (e.g., plain old access to the outdoors) and intellectual (e.g., enhanced access to information) means.*** So the program tries to provide both opportunities to appreciate the landscape and opportunities to learn about it.
- ***Facts disconnected from context are unappealing and hard to digest.*** Putting landscape information into the context of historical and ecological stories stimulates people to consider their own role in those stories. Thus, we focus substantial effort not just on collecting facts but on thinking about how to weave those facts into intriguing narratives.
- ***People are prone to connect with what is most familiar to them.*** If you can give them the feeling that your work is about their backyards, then it has added power for them. Hence, we work at the scale of the County – it’s small enough to be people’s backyard; it’s big enough to encompass ecological and social panoramas that make for appealing stories.
- ***Telling people what they should think regarding certain issues can be presumptuous and counter-productive.*** People feel more conviction about conclusions that they reach on their own, rather than ones that are dictated to them. Therefore, we try to be “information activists” rather than “issues activists”. (Admitting that there is an undeniable viewpoint reflected in the themes we choose to focus on and realizing that people will draw differing conclusions when presented with the same information.)
- ***Agriculture can be a suitable ‘meeting point’ for multiple perspectives on the landscape.*** In our county, farming incorporates aspects of land use, economic activity, food production, rural history, and conservation that are of interest to different groups of people. Thus, agriculture has been and continues to be one important theme of our work

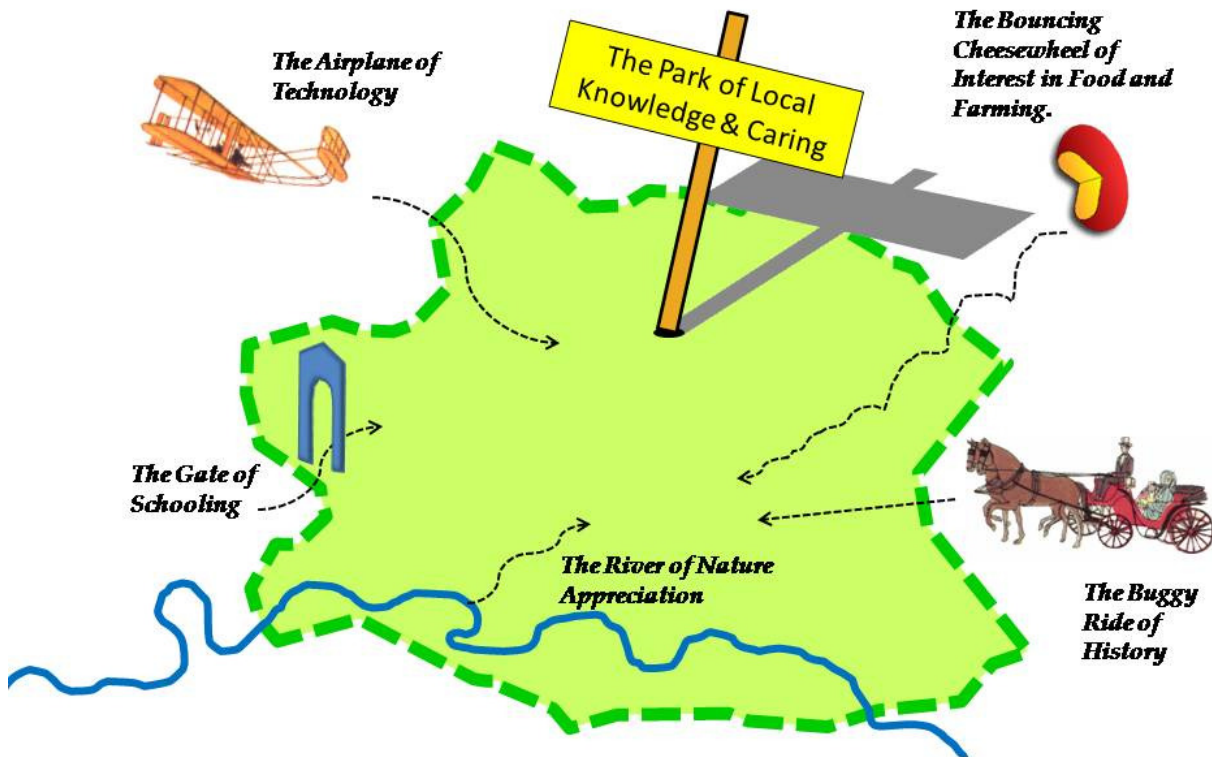
Assumptions about our audience

- ***Demographic changes within the County may be tending to promote the access and connection of certain sectors of society to the land while reducing the connection experienced by other sectors.*** Such imbalance may not, in the long run, be socially fair or beneficial to true conservation. Hence, the need to make our program as inclusive as possible.
- ***Encouraging a diversity of people to deepen their relationship with their landscape requires creating a diversity of ‘entry points’ to that landscape.*** Different social sectors come with differences in what aspects of the landscape are most meaningful to them and differences in how they most readily connect to information

about that landscape. Therefore, our program consciously tries to understand and work with these differences so as to strengthen relationships to the land.

WHAT WE ARE DOING:

We find the following diagram useful in envisioning what we are doing.



Our analogy here is to park design. One principal of park design is to create numerous entry points to the physical and thematic material of the park. This approach helps insure that the park has broad appeal. If we say that our program objective is to bring people into the mental space of local knowledge and caring, then how do we design multiple entry points to that 'park'? Basically, the research and outreach that we describe below can all be associated with informing and creating the various entry points.

Work with Farmers/Farmland/Agriculture: One of the original motivations for the Farmscape Ecology Program was to provide interested local farmers with more in-depth information about the ecology of their farms. Many of these farmers have an interest in those aspects of their land that are not immediately tied to production, but they do not have the time or perhaps background for exploring those dimensions of their farm. Our work with them has largely focused on annotated ecological maps of farms (e.g., for Roxbury Farm, http://www.roxburyfarm.com/pdf_documents/landscapestudy.pdf) in which we try to describe both ecological habitats and likely interactions with agricultural activity. This year we have only one active farm description in the works, but much of our activity is concentrating upon a related issue. The strength of our past on-farm work has been in describing how farmlands can be potentially important for native-species habitat (e.g., <http://www.hawthornevalleyfarm.org/fep/onfarmbio.html>). We have now begun to devote substantial time and effort to understanding what native (or at least wild) species provide to agriculture.

There is a strong ecological and historical basis for stating that native species can play an important role in sustainable agriculture. Nineteenth century pest-control works include ample reference to the use of native insect and avian predators, and these ideas were subsequently incorporated into techniques of IPM (Integrated Pest Management) and organic farming. Most closely related to our own work is the consideration of how on-farm habitat management might not only influence the distribution of native species which are of conservation interest but also of those wild species which influence agricultural production. We believe that being able to present farmers with these complimentary views of their landscape (i.e., what their land provides for native species and what native species provide for them) is important for giving a fuller picture of their farms that is respectful not only of conservation concerns but of production needs.

To date, our only work on this theme has involved assessing the distribution and importance of native bees on several farms in the County (<http://www.hawthornevalleyfarm.org/fep/bees.html>). Native bees can complement or even replace the pollination service provided by the European Honey Bee. Over 400 species of native bees exist in New York State, and understanding their resource needs can provide important documentation of the beneficial links between semi-wild and cultivated habitats. As background for intended future work on the interaction of habitat management and on-farm pests and beneficial, this year we have been conducting intensive insect surveys in and around the vegetable gardens of Hawthorne Valley Farm. Our primary objective is to create dynamic maps of pest and beneficial abundances across the various management units in the cropped land and its surroundings. Based on these techniques and this baseline information we intend to study experimental ways of 'accentuating the positive' by using habitat management to encourage beneficial animals. We also hope that this knowledge will give us a better understanding of the roles that existing habitats on a particular farm might play in the agro-ecosystem.

In keeping with our programmatic emphasis on participatory research as a way of helping people to learn, we are working with students and interns to explore these questions. Much of our bee work was the result of Martin Holdrege's efforts during his high-school career, while a trio of interns, Margaret Ball, Meryl Corsun and Rebecca Kranz, are currently helping with various aspects of the on-farm invertebrate mapping.

Two other agricultural projects this year relate to specific questions posed by farmers. One of these involves trying to understand how to assess the sustainability of grassland use. In the Northeast, where rainfall has usually been adequate but soils are sometimes thin, grasslands can be an important component of sustainable farming. Not only do they provide the immediate basis for grass-fed beef and dairy, but also the manure resulting from that activity is an important form of nutrient redistribution on or between farms. The consequences of heavy overgrazing or excessive cropping can be immediately evident to observant farmers, however there are likely more subtle trends in the long-term evolution of soil nutrients and grassland production that are not so evident to farmers. For example, one can imagine that, at least theoretically, haying a field once per year might be sustainable in so far as it does not result in a net depletion of soil nutrients because the nutrients removed with the crop are replaced by plant/microbe mediated fixation from the atmosphere and extraction from soil minerals. But is such sustainability still conceivable if one hays twice per year or even, as is now common with the advent of bale-age, three times in a year? What intensity of grazing is sustainable in the long term with minimal external inputs? Farmers need ways of assessing these effects. Our focus this year is on a set of relatively simple measures that, while requiring minimal lab technology, might be able to detect some of these more subtle effects. We are comparing three pairs of fields at Hawthorne Valley to see if we can pick up a signal in the soils which reflects their differing uses.

Our other agriculturally-related investigation also relates to grassland agriculture. The common recent practice in dairy herds is to separate calves from their mothers within three or four days of birth and then feed them milk derivatives or replacers until weaning. The reason for this is, in part, that letting calves nurse is thought to result in the calves' consumption of valuable commercial milk production. However, certain grazing specialists now believe that raising calves with their mothers may result in better calf health and improved grazing behavior (because calves can learn from

the grazing experiences of their mothers) that may more than compensate for any consumption of potentially-marketable milk. One of our current projects, funded by the USDA's SARE program and conducted in collaboration with Darrell Emmick of NRCS, is to evaluate the grazing behavior, condition and subsequent milk production of two sets of Hawthorne Valley Farm calves, one raised with their mothers and one raised on the bottle. We are conducting extensive grazing observations and hope to match these with assessments of parasite load and of milk production as these heifers enter the milk herd.

Work on Overlooked Aspects of our Natural Landscape: Another major component of our summer's effort is continuing our work on floodplain forests. Past work has helped emphasize the ecological importance of loosely-managed farm ponds vs. closely manicured lawn ponds. That work (see <http://www.hawthornevalleyfarm.org/fep/ponds.html>) helped people look at their ponds from a new perspective; while ponds are conspicuous, their ecological role has been less so. We believe that floodplain forests are another habitat which deserve closer attention. Floodplain forests occur along river bottoms where regular inundation of woods occurs during high water. The physical disturbance and periodic inundation mean that the plants and animals which live in these forests are sometimes relatively specialized and occur in few other places on the landscape. Regular inundation also means that floods periodically enrich the soils, and so floodplains have long been favored for agriculture, a tie-in to our on-farm work. At the same time, the flooding and exuberant shoreline growth also results in a somewhat trashy, brushy appearance that is uninviting to some. We have been mapping and exploring floodplain forests in Columbia County in order both to better understand common on-farm habitats (even if partially uncultivated, many farms include floodplain forests that may have historically been used as woodlots or even woodland pasture) and to help people better appreciate this unique yet frequently overlooked part of their landscape. Last year's work involved describing 15 relatively pristine floodplain forest sites in the County; this year, we are including five more impacted sites in Columbia County and, in collaboration with Hudsonia, exploring sites with a range of impact levels in Dutchess County. One intern and a pair of volunteers are helping Claudia, our botanical staff member, with this study. We are also working to share last year's floodplain work through reports, articles and presentations (see document links from home page. www.hawthornevalleyfarm.org/fep).

Related to this work of ecological exploration is the Columbia County Participatory Natural History Surveys (see <http://www.hawthornevalleyfarm.org/fep/FEP%20Know%20Your%20Place%20Project%20Natural%20History%20Survey.doc> for more detail), a component of our Know Your Place Project (see below). In conjunction with the RoJan Town Park, we have initiated a club of sorts in which citizens come together for workshop-like outings to search for particular groups of organisms. This year, we have three focal groups: plants, mammals, and butterflies. Naturalist and tracker Mike Pewtherer is helping us by leading the mammal group. During our first three gatherings, we averaged around 15 participants and feel encouraged by the apparent interest and dedication of those who have joined us. We are hoping that this invitation to group exploration of the County's special places serves to improve overall ecological knowledge of the County and to lay the groundwork for something resembling a county-wide natural history society. Aside from the fieldwork, we are creating web resources that will serve to encourage this exploration (e.g., <http://www.hawthornevalleyfarm.org/fep/KYPPbutterflies.html>).

Work with the Cultural Landscape: In sharing our natural history knowledge with the public, we have realized the importance of including a cultural perspective and putting natural history in a cultural history context. Anna Duhon, an social anthropologist who is the newest member of our staff (she started in June), and Graham Hawks, a geographer who is joining on sabbatical from the Peconic Land Trust, are designing ways of looking and sharing the cultural landscape. We are calling our formal efforts to stimulate and inform public knowledge of the County's landscape the "Know Your Place Project", or KYPP. This is an explicit attempt to create those multiple entry points to the landscape by establishing various interfaces between our work and the public. Anna's initial work has been that of web site design and trying to understand how we can make our web presence most informative and appealing to county residents.

Graham is 'testing the waters' for an oral history project meant to describe the County's agricultural history through personal stories.

We have already been building components of KYPP by creating a draft, multi-theme atlas of the County and by providing public access to historical aerial photographs of the County (see <http://www.hawthornevalleyfarm.org/fep/landscape.html> for both). The latter is the on-going project of a volunteer home schooler who has been helping to digitize and georeference the related images.

WHERE WE GO FROM HERE:

There is a large component of programmatic exploration this summer: our exploration of agroecology and our developing socio/cultural activities are both new lines for us. This autumn and winter will be a time to assess the results of this work. Is it practical and useful for us to develop our agroecology work further? Does it look like an oral history project will fly? What will be the best outreach strategy for KYPP? The Farmscape Ecology Program has only recently reached a point when we can think at the multi-year time scale. This breathing space is allowing us to explore lines of activity that are new to us but that we feel follow naturally, even necessarily, from our past work. This is exciting for us, because we believe it lets us strengthen our program mission of fostering and informing connection. We are happy to have the opportunity to test-drive some promising ways of following that mission. As would be expected after any such trial run, we will need a period of introspection before specifying the next step. At the same time however, our core program work of ecological landscape description and sharing forms a line of continuity. The results of this summer should add detail and color to our work in floodplains, and are stimulating us to propose future work with historic farm woodlots; our writing and sharing continues, we have at least a trio of public presentations scheduled with land owners, local politicians, and the general public; a publisher is awaiting our revised book manuscript (see <http://www.hawthornevalleyfarm.org/fep/People%20and%20Nature%20in%20Columbia%20County,%20NY%20-%20Mar%202009.pdf> for draft) in October; and we are scheduled to present and then publish a paper on Columbia County landscape history at a Hudson River Quadricentennial Ecological History conference in November. We believe that this is a productive mix of the established and the new that will allow us to continue providing ecological insights to residents of the County, while also exploring additional ways of gathering and sharing landscape information.