Beatrix Farrand Pollinator Garden

A Proposal to the Beatrix Farrand Society Board of Directors
Presented by Scott Koniecko and Lois Berg Stack, 1 August 2015

Introduction

In recent months, several BFS Board members have expressed an interest in expanding the outreach efforts at Garland Farm. One suggestion has been to develop a project that connects the high-profile topic of pollinators, Beatrix Farrand's teaching philosophy, and Garland Farm. This proposal describes such a project, in the form of a pollinator garden to educate children.

A full-scale planted garden would require careful long range planning, paid workers and a significant longterm budget. This is not feasible at this time, but a small-scale pollinator garden could produce positive impacts soon, and also serve as a pilot project to assess the desirability of additional efforts.

Proposed Pollinator Garden Project

We propose the following general steps for developing a pollinator garden project:

1. Recruit entomologists and plant biologists with expertise in pollinators (particularly bees) and pollinator support plants, to inventory assets in the meadow below the Terrace Garden. This space already contains many plants that serve as resources to bees and other pollinators. Many farmers encourage such "bee pasture" as a sustainable resource, rather than incurring the cost of purchasing, planting and maintaining a more deliberately designed garden.
2. Consult with local teachers to learn how the pollinator garden might support their compliance with the Maine Learning Results and Common Core Standards. Maine's current learning standards, implemented in the 2013-14 school year, emphasize "more complex content and concepts and the development of needed real-world skills like problem-solving, collaboration, critical thinking and communication – imperative for Maine students to succeed and our state to thrive." (Maine Learning Results website 2015). This suggests a strong role for a resource like the proposed pollinator garden. However, school budgets are very limited, and we should determine if teachers are receptive to field trips.
3. Mow paths through the meadow, in collaboration/consultation with the BFS Landscape and Garden Committee. Paths could be maintained with weekly mowing during the season.
4. Install signage along the path so that school groups and other visitors to Garland Farm could use the facility independently.
5. Promote the facility to local teachers and others associated with children's groups (4H, summer camps, etc). Establish a scheduling process for teachers to reserve the facility.
6. Determine what success would look like, and develop a way to assess the impact of the garden.

Checklist of Questions

Positive results are the product of careful process. The following questions are intended as a starting point for discussion of this project:

1. Does this project fit within the mission of the Beatrix Farrand Society?
2. Does the Board of Directors approve the concept and scope of the project?
3. Does this project fit with the goals of the BFS Landscape and Garden Committee? Should this project be part of the Committee's effort, or separate from it?
4. Who will serve on a committee to guide development and implementation of the project? Potential collaborators might include school personnel, local volunteers, members of the BFS Board and of the BFS Landscape and Garden Committee, parents, subject matter experts, and representatives of other MDI groups interested in addressing the pollinator issue.
5. How will we determine if the garden offers resources that would link to school curricula, and be useful to teachers? Are there other groups that might use the garden, especially in summer when pollinators are at peak activity but school is not in session?
6. Are subject matter experts available to contribute to the project?
7. Who will oversee the project and manage ongoing activities, including mowing paths, managing visitors/users, evaluating the project?
8. How will we know if the project is successful?
9. How much money is required for initial development and for ongoing maintenance?

Possible Future Additions to the Pollinator Garden Project

With feedback from the initial effort, additional components could be added. Examples include:

1. Link features of the garden with specific learning goals in the Maine Learning Results, and distribute this list to teachers in the area. These learning goals might relate to science, math, history, social science, language, performing arts, and health. The steps for this would be (1) review education standards and make a list of the standards that the garden could address; (2) make a list of garden projects, and match each project with expected student outcomes in the standards; and (3) implement those activities that could help students achieve each standard.
2. Recruit a student intern who could develop an in-depth pollinator project with BFS funding.
3. Collaborate with UMaine and COA faculty to develop a graduate student project that might develop aspects of this project, and conduct research on garden-based project learning.
4. Develop and upload a "lesson plan" about pollinators to the BFS website, and also link it to the Maine Ag in the Classroom website (see below). This would extend the project to schools throughout the state, and raise awareness of BFS and Garland Farm.

Rationale for a Beatrix Farrand Pollinator Garden

Beatrix Farrand expressed her hope to educate gardeners and others about horticulture and related fields. She predicted a time after her death when "the directors of the corporation … will replace the present dwelling house with another building in which there will be a large room where garden clubs may meet, small flower shows be held, and lectures given on subjects allied to horticulture" (Farrand 1946). She added, "A training in appreciation of natural beauty and

interest in bird and plant life seems desirable as a contribution to every community and each state." It's hard to think of learning about plants without including bees and other pollinators, which are so important in plant reproduction.

At Garland Farm, some of Farrand's educational dreams have already become reality. The Terrace Garden and other parts of the landscape, library, symposia, exhibitions and lecture series all serve to educate adults interested in plants and landscape design.

This proposal for a new educational project targets children, the world's future gardeners, but it's not only about gardening. Gardens, including pollinator gardens, can support learning about many disciplines, including science, math, reading, environmental studies, geography, nutrition, health, and visual and performing arts. Educating children about gardens, food, natural areas and pollinators creates opportunities for children to discover fresh food, make healthy food choices, develop a connection with the natural world, appreciate the importance of food systems and natural areas, and become educated citizens with the knowledge base to make informed voting decisions on issues that impact both society and the environment.

A growing body of research supports the use of gardens as teaching tools. Researchers have reported that participation in children's gardening programs can:

1. Improve self-esteem and attitudes toward school (Sheffield 1992);
2. Improve social skills and behavior (DeMarco et al. 1999);
3. Improve environmental attitudes particularly in young students (Skelly and Zajicek 1998);
4. Increase group cohesion (Bunn 1986);
5. Improve interpersonal relationships (Campbell et al. 1997; Waliczek and Zajicek 1999);
6. Increase interest in eating fruits and vegetables, and improve attitudes about fruits and vegetables (Pothukuchi 2004);
7. Increase science achievement scores (Klemmer et al. 2005; Smith and Motsenbocker 2005);
8. Increase self-esteem, help develop a sense of ownership and responsibility, help foster family relationships and increase parental involvement (Alexander and Hendren 1998);
9. Develop positive values about trees as adults (Lohr and Pearson-Mims 2005); and
10. Improve life skills, including working with groups and self-understanding (Robinson and Zajicek 2005).

Websites for further information related to this project

http://www.agclassroom.org/me/

This website for Maine Ag in the Classroom presents many "lesson plans" and resources related to agriculture, including bees.

http://teachmefoodandfarms.org/

This website relates school grade levels and subject areas to the Maine Learning Results (http://www.maine.gov/education/lres/pei/index.html#mlr2007), which incorporates some aspects of the Common Core Standards (http://www.corestandards.org/).

http://www.maine.gov/doe/proficiency/standards/maine-learning-results.html
Maine Learning Results: academic standards that provide a set of clear expectations as to what students should know as they progress through each K-12 grade level.

http://www.nextgenscience.org/next-generation-science-standards
This website presents the future of learning objectives for science … it's always good to have an eye on the future!

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