

Conservation of Native Pollinators on Golf Courses

Xerces Society

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Start Date: 1997

Number of Years: 3

Total Funding: \$136,500

Objectives:

The aim of the project is to foster and increase insect pollinator populations including native bees, wasps, moths, flies, and butterflies to offset the effects of habitat fragmentation, and to augment the species composition of native plants in the out-of-play areas to produce continuous flowering throughout the growing season.

Native pollinators are in decline. Without them most flowering plants would not reproduce, eliminating roughly one third annual agricultural production in the US, and compromising the regeneration of natural plant communities. Golf courses, with their countrywide distribution and extensive out play areas have great potential to contribute significantly to healthy populations of native pollinators. Native bees are the single most important group of pollinator insects, and it was needs of these that the project addressed. Understanding pollinators on golf courses and identifying the most appropriate techniques for conserving them where the goals of this project.

The Xerces Society is an active member of the Pollinator Conservation Consortium, and proposed this project as part of the nationwide Forgotten Pollinators Campaign. The Society, in partnership with the USDA Bee Biology and Systematics Lab in Logan, Utah, began the project in July, 1997, working on three golf courses in NE Oregon and SE Washington to enrich the habitat in out play areas and create nesting sites for native pollinator insects. For each golf course there is a local reference site that has natural vegetation to provide a comparison.

Project activities focused on four areas: insect and plant surveys, habitat enrichment, creation of nesting sites and public education. The surveys covered plant communities, soils and pollinator species. In addition, research was done to identify the likely historical plant communities for each site. Species surveys using a passive technique of water filled bowls identified a wide range of species, but for most species very few individuals were trapped. Due to the low numbers, USDA scientists decided not to sample in the third field season to avoid depopulating.

The habitat enhancement plan was to enrich the plant communities by adding native plants, and to create nesting sites. A list of native, pollinator attracting plants was prepared. Obtaining native plant materials from this list proved to be a difficult task, and delayed progress of the project. Planting was done in spring, 1999, on two courses. Nesting blocks were erected on all three golf courses and the three reference sites, and were surveyed monthly to record nesting use and activity by pollinators.

Educational materials from this project include interpretive leaflets on pollinators on golf courses, information about creating bee nesting sites, and brief guidelines for course superintendents on pollinator conservation. The project was also featured on Living on Earth, broadcast on National Public Radio in 1998 and again in 1999. David Schwartz,

special writer for the Smithsonian Magazine, wrote an article (tentatively entitled Birds do it, bees do it, even nectar feeding bats do it...) that included this project, expected to be published in the spring 2000 issue of that magazine