

**1999 Annual Progress Report**  
**Corridor Establishment For An Endangered South  
Florida Butterfly**

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Start Date: 1999  
Number of Years: 3  
Total Funding: \$55,000.00

**Objectives:**

- 1) Restore and improve habitats surrounding golf courses in the Florida Keys by reintroducing native adult butterfly nectar sources and larval host plants for the endangered Schaus Swallowtail butterfly.*
- 2) By creating significant enhancement or development of natural habitat suitable to maintain and nourish adult butterflies, to establish a viable corridor for adult movement and regular gene flow between all of the existing Schaus swallowtail butterfly colonies in the Keys.*
- 3) Meeting these goals will result in increased genetic vigor within the existing total population of this endangered species and facilitate the natural re-establishment of individual colonies in the unfortunate event of local extinction by human or natural catastrophe.*

The ultimate goal of this research project is to accomplish the successful reintroduction, growth and survival of native Schaus Swallowtail adult nectar and larval host plants on the grounds of golf course properties in the Florida Keys. Starting with the Cheeca Lodge and Sombbrero Country Club golf courses, these demonstration projects will represent a significant increased chance for the long-term viability of this endangered species. In particular, the enhancement of habitat on these golf courses previously unavailable to this endangered butterfly

will provide a clear corridor for adult movement and gene flow between native tropical hardwood hammock populations of the species to the north and south of each golf course.

During the initial year of this project, commencing with the contract finalization and signing by USGA in late summer 1999, we have negotiated with the U.S. Fish and Wildlife Service for a Safe Harbor Agreement with each golf course, in order to relieve the golf course of any responsibility for death or injury of an individual butterfly that may take up either transient or permanent residence in these newly designated habitat areas involved in the project. Since there are no native populations of this endangered species in either of the initial two golf courses at this time, the agreements simply state that any accidental loss would be "incidental take" loss and not injurious to the ultimate success or extirpation of the species. Hence there is no liability risk to the golf course from the project's activities focused on attracting these butterflies. These agreements require considerable legal negotiation, publication in the Federal Register allowing public comment, etc., and consume about four months of review time.

Additionally, we have already bought for Cheeca Lodge (which has completed their agreement) 150 firebud nectar sources and more than 300 pentas plants to start establishing nectar sources for the Schaus Swallowtail butterflies along the golf course greens. With Sombrero Country Club, the U.S. Fish and Wildlife Service Safe Harbor Agreement is completed, but the Club's attorney has apparently not cleared it yet for ratification. Meanwhile, we have placed an order for a large number of wild lime tree seedlings with a native plant nursery in central Florida we have previously worked with; these will be grown to minimum 12" size in plastic bags from seeds this winter. Then we will transplant these "liners" to 3-gallon pots here at Gainesville, and place them in our main culture facilities for rapid growth to young tree size, and then plan to plant these late in the second and third years of the project.

In the meantime, we have been preparing the text and photos for the public information displays that will be set up at each golf course. These displays will not only briefly summarize the biology of this large and conspicuous butterfly species but also describe some of the interesting environmental facts and reasons it is important to conserve endangered species (even butterflies), why this golf course is cooperating with the effort, and how the U.S. Fish and Wildlife Service and U.S. Golf Association are working to better the environment for wildlife through their Wildlife Links Program. Cheeca Lodge will receive their display materials for this golf course signage in approximately the next three weeks.

In the second year of the project (starting Spring 2000), we will continue the plantings and will also be monitoring the golf course areas for identification of transient Schaus Swallowtail adults or newly resident immature stages within the reintroduction sites. We expect to find greatly enhanced butterfly activity of a number of species besides the Schaus Swallowtail along the golf courses, adding course beautification and positive member acceptance as criteria for the ultimate acceptance and success of this novel conservation effort with USGA.