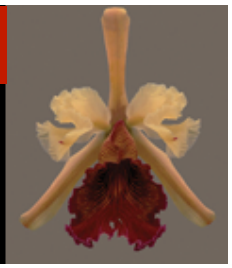

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Orchid conservation in the Americas lessons learned in Florida

The loss of habitats high in orchid diversity, as well as the restoration and conservation of historical orchid habitats has demonstrated the need for researchers to develop appropriate conservation techniques focused on the Orchidaceae. Traditionally, orchid conservation has taken many forms from simple plant survey and monitoring to seed germination followed by plant reintroduction. Few of these more traditional conservation efforts have taken into account an integrated picture of the orchids, their pollinators and reproduction, their mycobionts, their propagation, and their population genetic diversity. Florida is home to approximately 120 orchid species, nearly all of which are considered endangered, threatened, or commercially-exploited. Native orchid habitats throughout Florida are under severe pressure from expanding housing developments and land conversion for agricultural purposes. In 2002 the Plant Restoration, Conservation, and Propagation Biotechnology Program at the University of Florida established a partnership with the Florida Panther National Wildlife Refuge aimed at conserving south Florida's native orchids through the implementation of integrated conservation efforts on the species level. Through the use of field observations of both plants and pollinators, isolation and characterization of mycobionts, symbiotic and asymbiotic seed germination, and the study of population genetic diversity by amplified fragment length polymorphism (AFLP), this partnership has been able to demonstrate the applicability of integrated orchid conservation methods in Florida. However, the application of these conservation methods extend well beyond Florida, throughout the Americas, and worldwide. The successes, failures, and tribulations of identifying and addressing integrated orchid conservation needs in Florida will be discussed. A case study on the integrated conservation of an endemic Florida terrestrial orchid, *Spiranthes floridana* (Wherry) Cory *emend.* P.M. Brown, will be used to elucidate these methods.