



Policy for Introduction of Rescued Plants and Seeds at Recipient Sites

Adapted from the Florida Native Plant Society's CPR Policy

The preservation and perpetuation of the unique genetic diversity within and among Florida's native plant populations and plant communities is our highest priority. Activities that endanger this genetic diversity are in direct conflict with the society's goal of preservation of native plant species in their natural habitats.

Background

Genetic diversity enables our plants and natural communities to adapt and survive. Because of its unique biogeography and natural history, Florida is home to many native plant species that are locally adapted and genetically distinct (Frankham et al. 2009). Further, some species are adapted to specific microhabitats within a plant community (Hartnett and Richardson 1989; Menges et al. 1999; Richardson et al. 2014). Florida plant species and communities have adapted to extreme shifts in weather (temperature, moisture, and hurricanes), climate, sea level change, and fire. Additionally, many species within Florida's plant communities evolved on isolated islands during interglacial periods leading to a high degree of endemism. In the year 2014, there were 29 federally-listed endemic plant species in the Florida scrub community alone.

Genetic diversity within a species' population is vital to its long-term survival. Diversity is important not only with regard to adaptation over time (Caballero and Garcia-Dorado 2013) but to plant mating systems as well. Small populations (generally less than 100 plants) are at greater risk of extinction and more likely to suffer from inbreeding depression and a build-up of deleterious mutations (Lynch et al. 1995).

Threats to genetic diversity within and among populations include:

- Habitat fragmentation (reduction in population sizes, loss of unique genetic adaptations)
- Exotic species invasion (**includes Florida native species introduced outside their natural, historical range or natural community**)
- Hybridization and loss of indigenous species and/or populations
- Outbreeding depression – can occur when individuals of the same plant species, but from different populations are mated. Most likely to occur between populations that are widely separated (i.e. no historic exchange of genes), are from different environments, or have fixed chromosomal differences (Frankham et al. 2011)
- Fire suppression

Projects of the Florida Native Plant Society (FNPS) to rescue and introduce will take a precautionary approach when locating a recipient site and work to ensure that rescued plant populations will be of benefit its existing plant populations and vice versa.

General guidelines for choosing appropriate recipient sites:

1. Chose recipient sites as close to the rescue location as possible (within 10-20 miles is optimum).
2. Make sure to match the plant community (e.g. sandhill rescue site to sandhill recipient site).
3. Soil type, elevation, hydrology should all be a close match.
4. Compare plant species lists from both the rescue and recipient locations. Determine whether the species composition matches or whether there are species that will hybridize. An example from central Florida is *Lupinus cumulicola* and *Lupinus diffusus*. While populations of these species can occur within 20 miles of each other, their ranges and occurrences are distinct and mixing of these species must be avoided. In these hybridization situations, multiple recipient sites will need to be chosen.

References

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