

ACKERMAN NATIVE PLANT NURSERY: SEED CONSERVATION

By Peter Dixon

AVALON, CA, 24 JANUARY 2014 - The Catalina Island Conservancy's Ackerman Native Plant Nursery's numbers tell a big piece of the Island's horticultural story. Here are housed 2,320 seed-collection records, 243 native plant species and 472 rare or endangered species. Stored are 240 million seeds!

Seed conservation is a critical first step to preserving biodiversity on Catalina Island. The varied landscapes of Catalina and the Channel Islands occur within one of the world's biodiversity hotspots, known to botanists as the California floristic province.

Through time the islands have become a refuge for many species, including ancient Pleistocene relics, such as the Catalina ironwood, which can be seen thriving in the Wrigley Memorial & Botanic Garden. While all the California Islands benefit from environmental protection, many species are extremely vulnerable to extirpation due to a legacy of non-native herbivore introductions, invasive species and a changing climate.

The Seed Conservation Program at the Ackerman nursery is dedicated to keeping the most vulnerable species and plant populations. Criteria for collection of rare plant seeds is guided by federal and state lists for plant endangerment as well as the California Rare Plant Rank maintained by the California Native Plant Society.

Also, plants that are rare on Catalina but more common elsewhere are maintained ex-situ, meaning off-site. They are made accessible to researchers who often discover unique physiology or genetics within the isolated Island populations.

Any seed itself is a biological miracle, and a power-packed package of life. Many plants' seeds, particularly those inhabiting arid climates, are adapted to lay dormant for generations until conditions are just right for germination - and survival. Anecdotes of really old seeds - recovered in Victorian desk drawers or Egyptian Tombs or some such antique repository - that germinate and grow are abundant in botany lore.

But not all plants produce seeds, and not all seeds can be stored. The acorn of the Island oak and Island scrub oak are examples of a recalcitrant seeds, meaning they do not conform to normal dormancy patterns of orthodox seeds. Acorns only last a few months at most in the environment before they dry up, rot or are eaten. For this group of plants, the Conservancy team steps in to maintain living collections at either the Ackerman nursery in Middle Ranch or Wrigley Memorial & Botanic Garden in Avalon Canyon.

To learn more and take part in seed conservation and restoration efforts on Catalina Island, visit the Ackerman Native Plant Nursery and the Wrigley Memorial & Botanic Garden online at www.catalinaconservancy.org. Regular volunteer opportunities occur at the nursery on Thursday mornings. Call (310) 510-2595, extension 112.

About the author: Peter Dixon is the Supervisor at the Catalina Island Conservancy's Ackerman Native Plant Nursery. He lives in Middle Ranch with his wife and daughter.



A Real Handful - California sagebrush seeds represent one of 243 species of Catalina Island native plant seeds in the Ackerman Native Plant Nursery. Photo by Peter Dixon



For Future Sowing - Rebecca Cano, the Conservancy's horticulture technician, inspects a bag of California sagebrush seeds at the Ackerman Native Plant Nursery. Photo by Peter Dixon