

RESTORATION

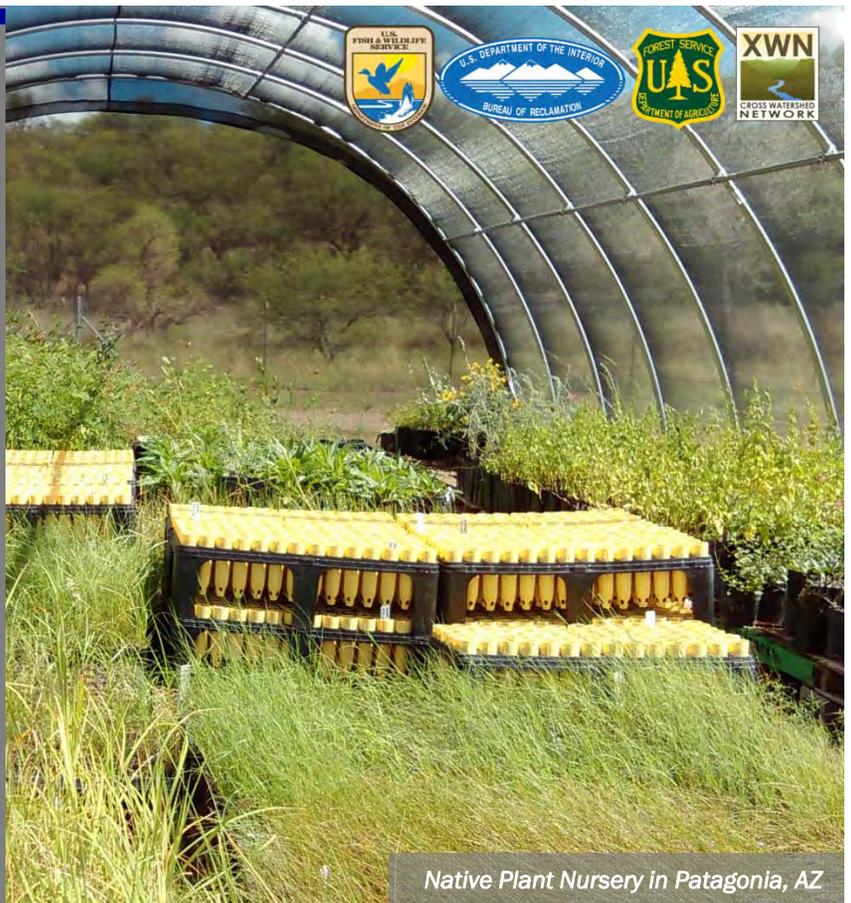
Madrean Archipelago Plant Propagation Initiative: Implementing the National Seed Strategy on a Regional Scale



The Madrean Archipelago, also known as the Sky Islands, is a binational ecoregion known for its high levels of biodiversity. In Arizona, the ecoregion consists of land managed by multiple government agencies and private landowners. The Madrean Archipelago Plant Propagation (MAPP) Initiative is a regional plant materials partnership headed by the non-governmental organizations Borderlands Restoration (BR) and Gila Watershed Partnership (GWP). The primary purpose of the MAPP Initiative is to coordinate seed collection, curation, and production of plant materials with on-the-ground restoration in the Madrean Archipelago.



Project Location



Native Plant Nursery in Patagonia, AZ

KEY ISSUES ADDRESSED

The Sky Island region has been severely impacted by changes to fire regimes and land use patterns, which have led to widespread habitat degradation. Numerous restoration projects are underway, but they are often limited by availability of locally adapted native plant materials. Many projects rely on seed purchased from commercial growers in other states or regions. There is growing recognition of the need for regionally sourced plant materials to boost the resiliency of restoration efforts. MAPP seeks to increase availability of locally adapted native plant materials for use in regional restoration efforts.

PROJECT GOALS

- Support ongoing collection of regionally adapted seeds for a range of target species
- Increase the supply of seed and container stock for plants native to the Madrean Archipelago and adjoining regions
- Nurture collaboration and expand networks to avoid duplication of efforts and redundancy across the Southwest

GROWING CAPACITY

The program now includes production of over 100,000 plants per year and a regional seed center with over 550 collections of seed from wild lands.



A Monarch Butterfly on a Native Thistle

PROJECT HIGHLIGHTS

Seed Collection: Coordinated regional seed collection began in 2011 with support from the Seeds of Success program, and has grown in scope every year.

Seed Cleaning and Curation Facility: The MAPP “Seed Lab” provides a center for instruction, study, and research, and consists of seed cleaning machines provided on loan from partners, refrigerated seed storage, and an adjacent office. Today, the Seed Lab holds the most extensive seed collection of species native to the Madrean Archipelago.

Greenhouses and Container Stock: Both GWP and BR operate native plant nurseries, each with several greenhouses for producing container stock of a large selection of native trees, shrubs, grasses, and flowers.

Restoration: MAPP Initiative partners have expanded the use of regionally sourced plant materials in on-the-ground restoration. For example, the Upper Gila Riparian Restoration Project includes revegetation of the Gila River floodplain using plant materials from GWP’s native plant nursery.

Collaborators and Funding Partners

- See online for full list of collaborators and funding partners

Case study support provided by the US Fish and Wildlife Service, US Bureau of Reclamation, US Forest Service, and Cross Watershed Network. Updated August 2018. Photos courtesy of MAPP Initiative

LESSONS LEARNED

Involving a diversity of partners and at multiple scales is critical for stabilizing funding. In addition to providing restoration-quality plant materials to federal agencies, non-governmental organizations, and private landowners, BR augments larger restoration contracts with the sale of ornamental native plants to the public.

For some species, it can take several years before a plant is ready to be installed at a restoration site. This timeline is not always compatible with partner planning and funding cycles. Maintaining an inventory of wild-collected seed from species commonly used in restoration can give producers a head start when requests come in.

The lack of predictability for federal and publicly funded restoration projects is a challenge. Sometimes plants are grown out but never used or paid for. To reduce risk to plant material providers, deposits should be collected on ordered plants, and partners should agree on a timeline for plant material production and delivery.

NEXT STEPS

- Develop partnerships to conduct rigorous examinations of seed transfer zones
- Engage partners in monitoring the success of seed and seedling establishment
- Build capacity for seed production fields to scale up native seed availability

PROJECT RESOURCES

For more information on this project, contact Francesca Claverie: afclaver@gmail.com

For additional project resources and case studies, visit the Collaborative Conservation and Adaptation Strategy Toolbox: WWW.DESERTLCC.ORG/RESOURCE/CCAST



Loading Plants for a National Park Service Restoration Project