Watershed Restoration Strategies

Borderlands Habitat Restoration Initiative

Reconnecting Wildlife, Land, and People in the Borderlands Region

borderlandsrestoration.org

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Photo by Gooch Goodwin

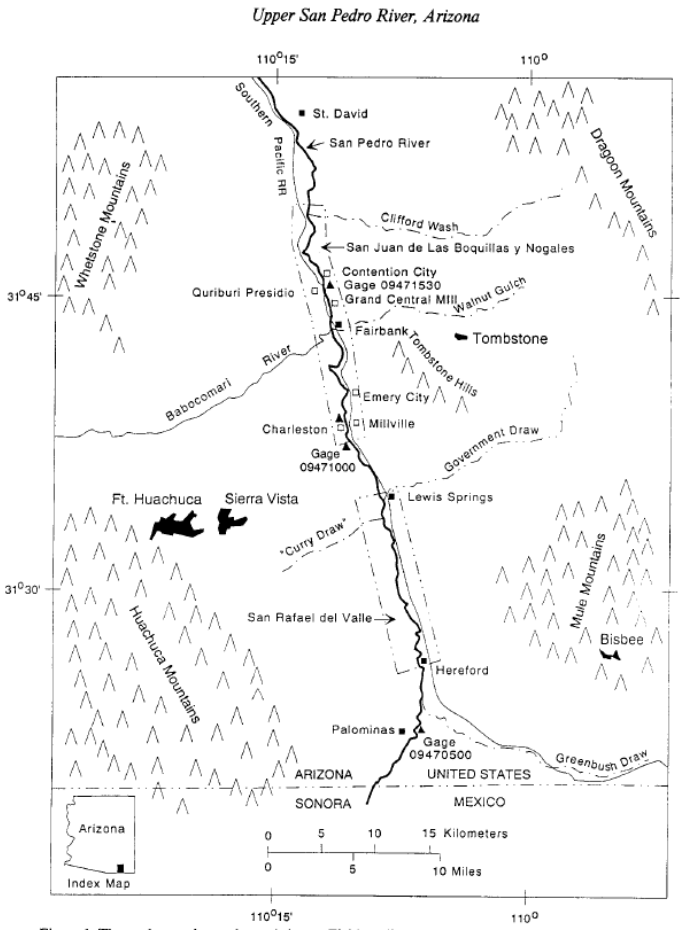
Upper San Pedro Basin Futures:

--Groundwater extraction may increase by more than 20% by 2100

--As a result, groundwater depletion and river/tributary baseflow declines may become significant

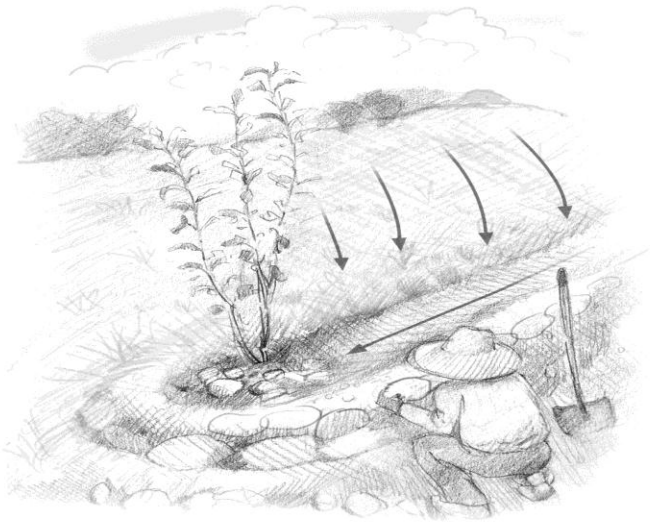
--Increasing near-stream recharge may be part of an effective solution, if our efforts are strategic and integrated (Lacher Hydro Consulting)

--Such efforts may also mitigate erosion, improve habitat, and maintain working landscapes that serve multiple interests…



Conserving & Restoring *Ecological Relationships* and *Ecosystem Services* are Ultimately the Ways to Resilience in the Face of Uncertainty and Change

- Water-purifying & runoff-slowing services
- Soil moisture-holding capacity
- Pollination services
- Cultural services (recreation, aesthetics)



Three Pillars of Restoration

Restore Ecological Processes:

-hydrology/water and stream flow; reduce erosion

-re-set fire regimes, including wildfire mitigation activities

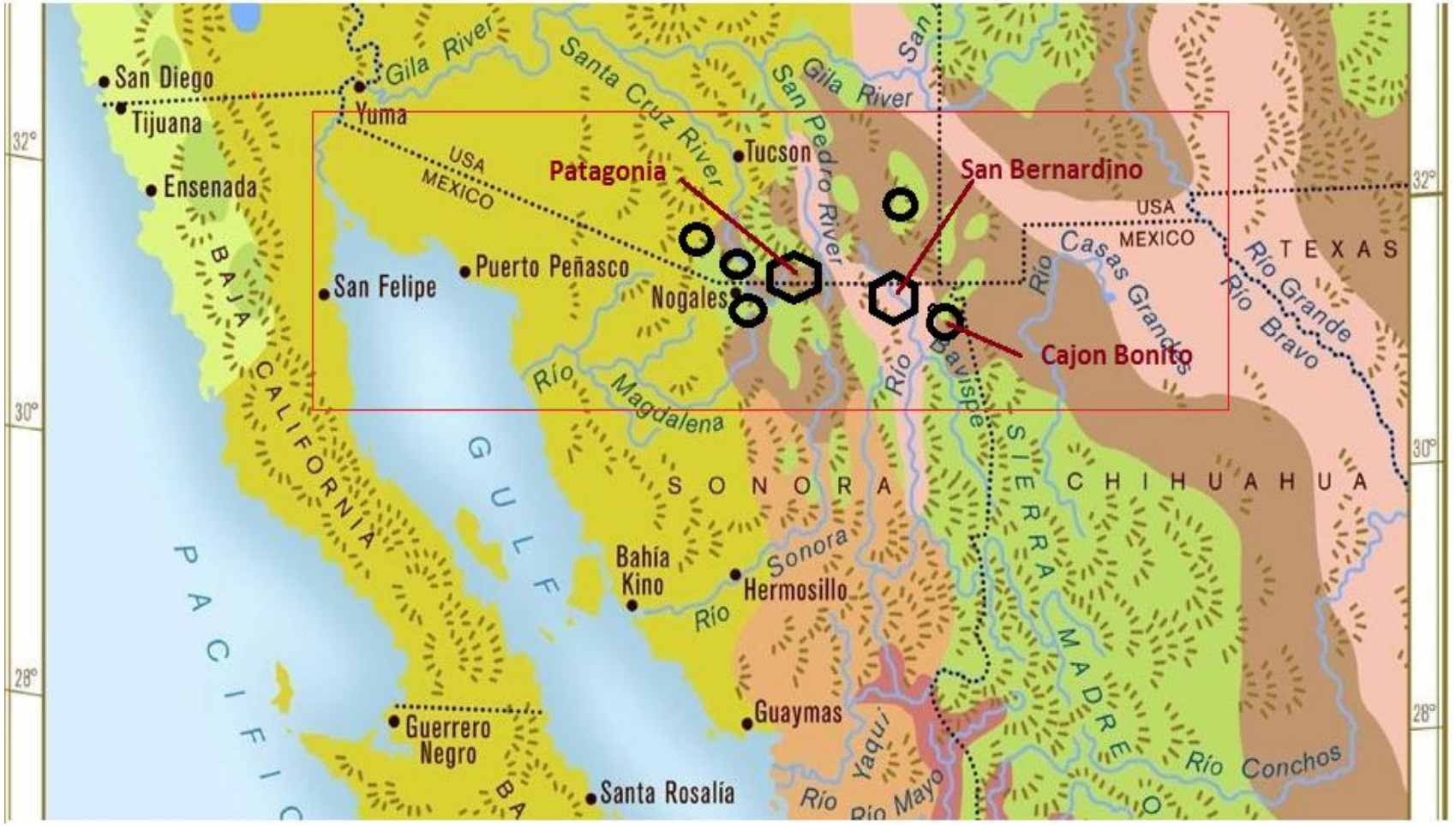
Identify Gaps and Restore the Vegetation Food Chain:

-focus on nectar and fruit-producing species at the base of the food chain—the missing links that support resident and migratory pollinators and their reproductive success rates

Reconnect People and Wildlife

-involve local citizens in restoring ecosystem services in their own communities; create jobs within a "restoration economy"

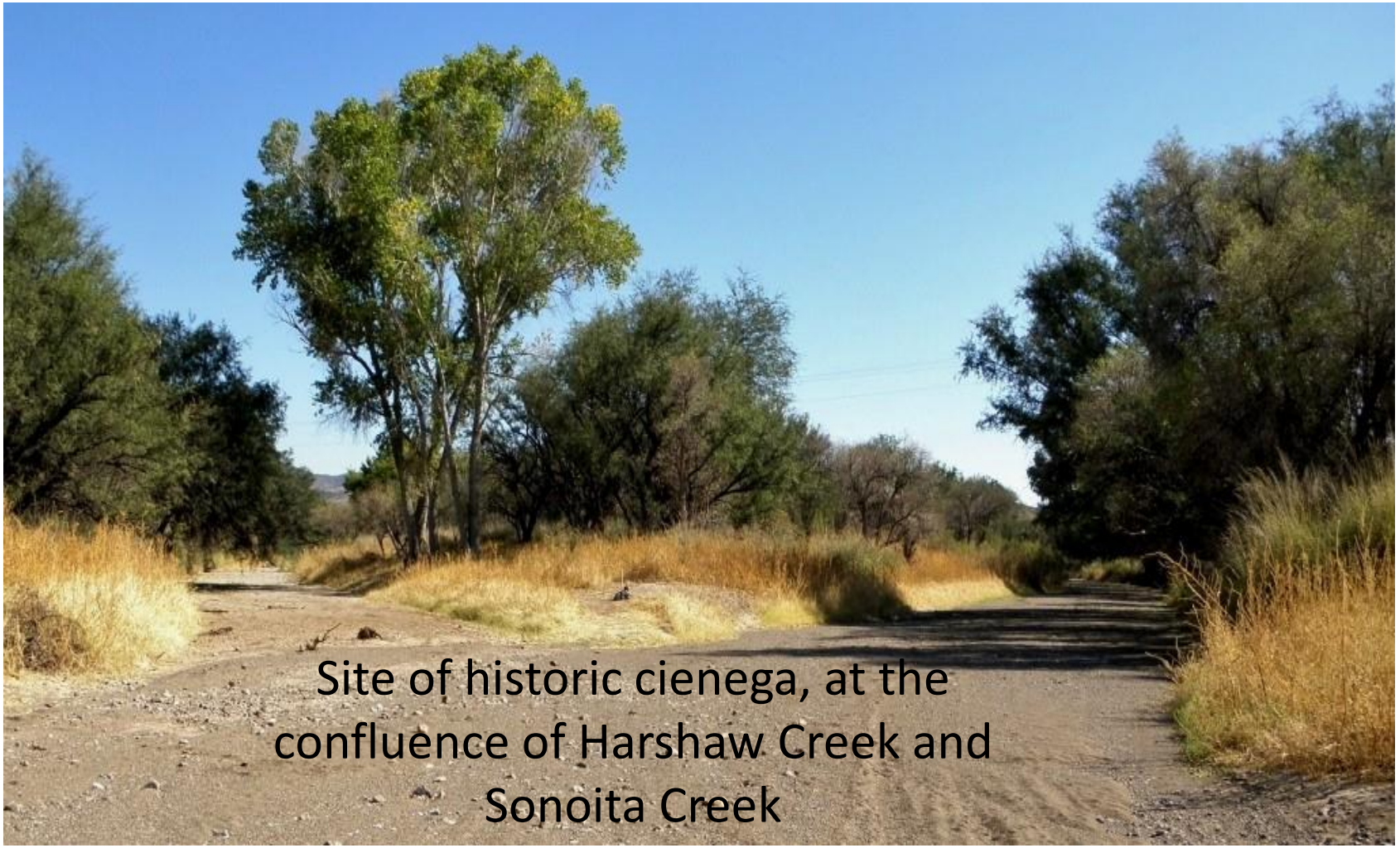
Borderlands Habitat Restoration Initiative's Geographic Scope



Integrated Restoration Techniques

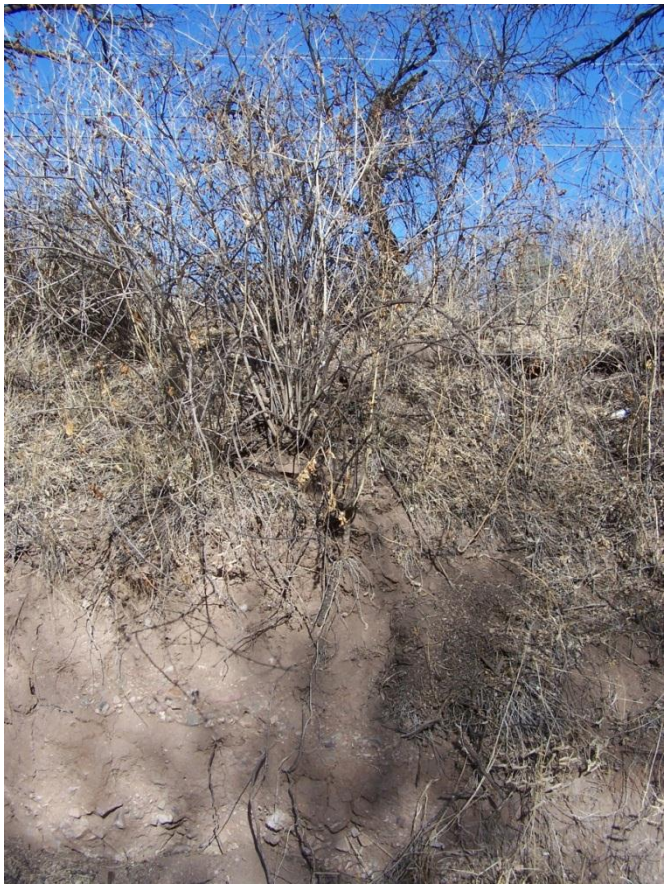
- Water harvesting
- Erosion control
- Fire management and planning
- Re-vegetation with native plants
- Exotic species control
- Removal of invasive shrubs
- Wildlife enhancement
- Sales of native plants for restoration projects
- Collaboration with landowners/agencies to protect land, support livelihoods at a landscape scale

What's the Problem, Anyway?



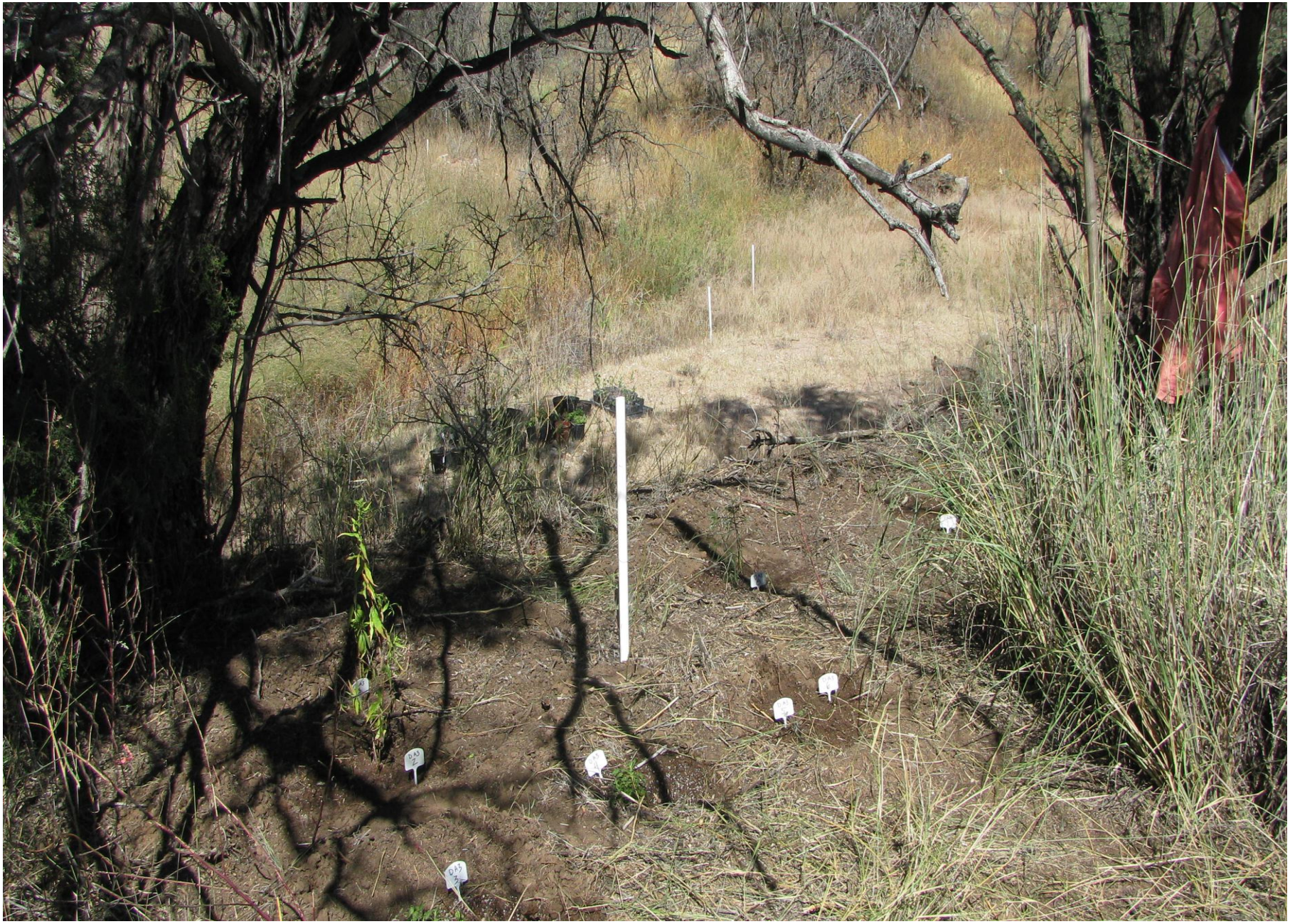
Site of historic cienega, at the confluence of Harshaw Creek and Sonoita Creek

Plant-Hydrology Decoupling

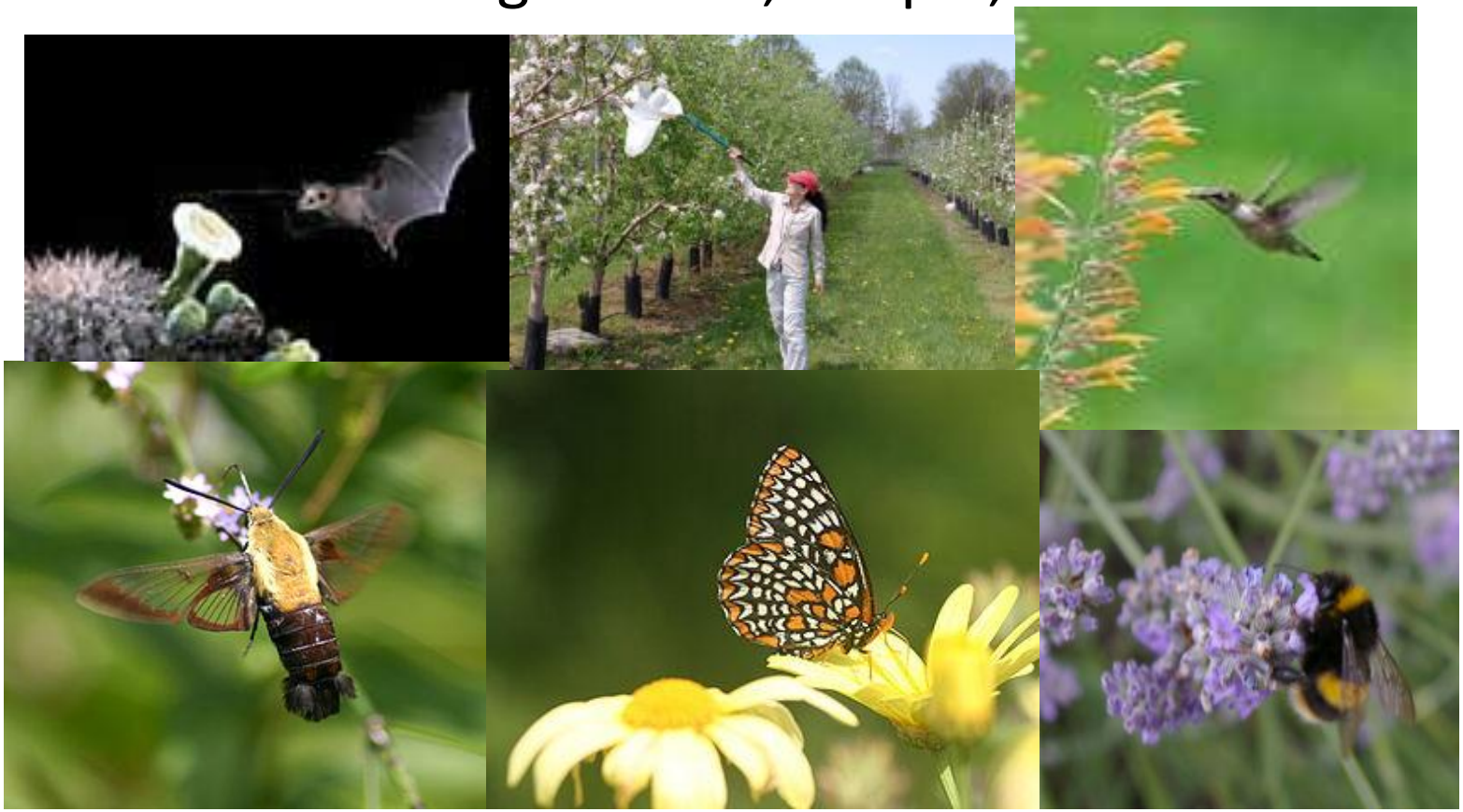


Relationships Lost: Severe stream erosion has disconnected many plant populations from the stream bed. Populations may persist, but do not function to provide nectar and fruit to wildlife.

Slow the water, retain sediment, allow recovery



Borderlands Habitat Restoration Initiative: Reconnecting Wildlife, People, and Plants



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