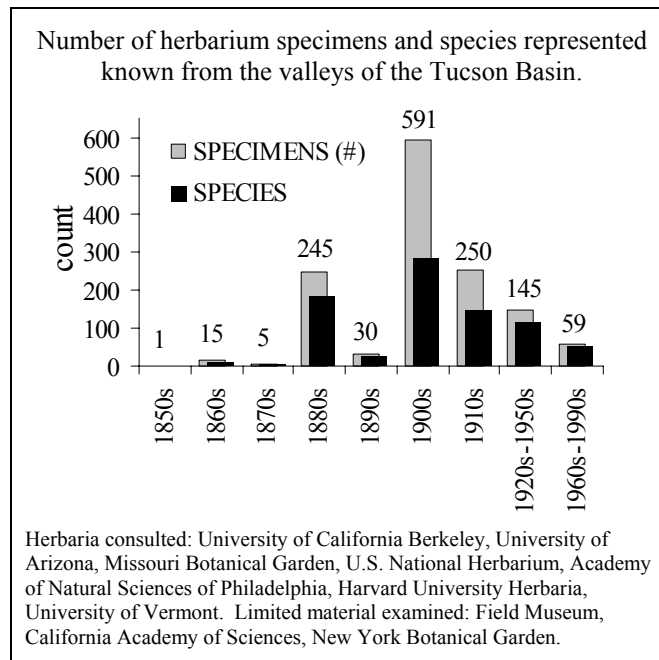


State of Riparian Floristic Knowledge in the Tucson Basin

Kathryn Mauz, UA (kmauz@u.arizona.edu)

Since summer 2001, at the invitation of Phil Rosen, I have been involved in documenting the plant species at West Branch of the Santa Cruz between Silverlake Road and the 44th Street alignment. Simultaneously, and largely separately, I have been conducting my dissertation research into the riparian plant biodiversity of the Santa Cruz and Rillito bottomlands in the Tucson Basin for the time frame 1855-1920. I have considered the Basin reaches between San Xavier Mission and short of Rillito, and below Tanque Verde Ranch. The work has involved systematic searching of collections at several herbaria and an extensive review of historic literature.



Some considerations for historic floristic data (i.e. the limits to our knowledge):

- Documentation of species presence has varied over time, and floristic activity has generally diminished.
- Species absence is difficult to establish at any point in time using historic data.
- Distributions of species within the Basin are known at a coarse spatial scale for any point in time.
- Relative abundances of species within the Basin are not well known at any time.
- Community composition at (almost) any location within the Basin is not well known at (almost) any time.
- Temporal aggregation integrates interannual variability in factors influencing plant growth (e.g., rainfall), as well as variability in plant collection. It also embodies a palimpsest of landscape processes (e.g., disturbance) that may, in themselves, influence plant species presence and absence.
- Analysis of floristic change is hindered by limited documentation of species presence over time. Analysis of difference between historic and modern floristic composition is hindered by limited documentation of the modern flora.
- Modern analogs for species' ecology and community composition in wetland and riparian ecosystems elsewhere provide some basis for interpretation of historical floristic data. Few comprehensive (temporally and taxonomically) floristic studies exist for riparian and wetland ecosystems in our region.

Floristic documentation in the Santa Cruz and Rillito Valleys in the Tucson Basin.

Field Area	Time Frame	Taxa	Citation
'Santa Cruz Valley' at Tucson	1901-1909	186 ^a	Thornber 1909
Lower Tanque Verde Creek and lower Rillito Creek	1938	144 ^b	Willis 1939
West Branch Santa Cruz River	2001	152	Mauz 2001, 2002 (updated online)
	2001-2005	228	
Agua Caliente Park and La Cebadilla parcel	2001	79	SWCA 2002
Historic riparian flora of the Tucson Basin	1855-1920	385	Mauz 2006

^a collections exist but were not cited; ^b plot-based, without vouchers; other studies with some or all species vouchered

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