

## Abstract:

In the 13th century, the Southwestern United States underwent extensive demographic shifts, migration, and social upheaval. From this context what archaeologists call the Salado ideology emerged in Southern Arizona and Southwestern New Mexico in the 14th century from the interactions of Kayenta migrants and those occupying the regions in which they settled. Although much of what is known of the Salado world is linked to ceramics, extensive paleoethnobotanical datasets exist from regions such as the Upper Gila, Mimbres Valley, and Tonto Basin. Through the comparison of paleoethnobotanical assemblages from geographically disparate Salado sites, I examine economic and subsistence differences between regions and explore the resulting patterns to identify factors contributing to interregional variability.

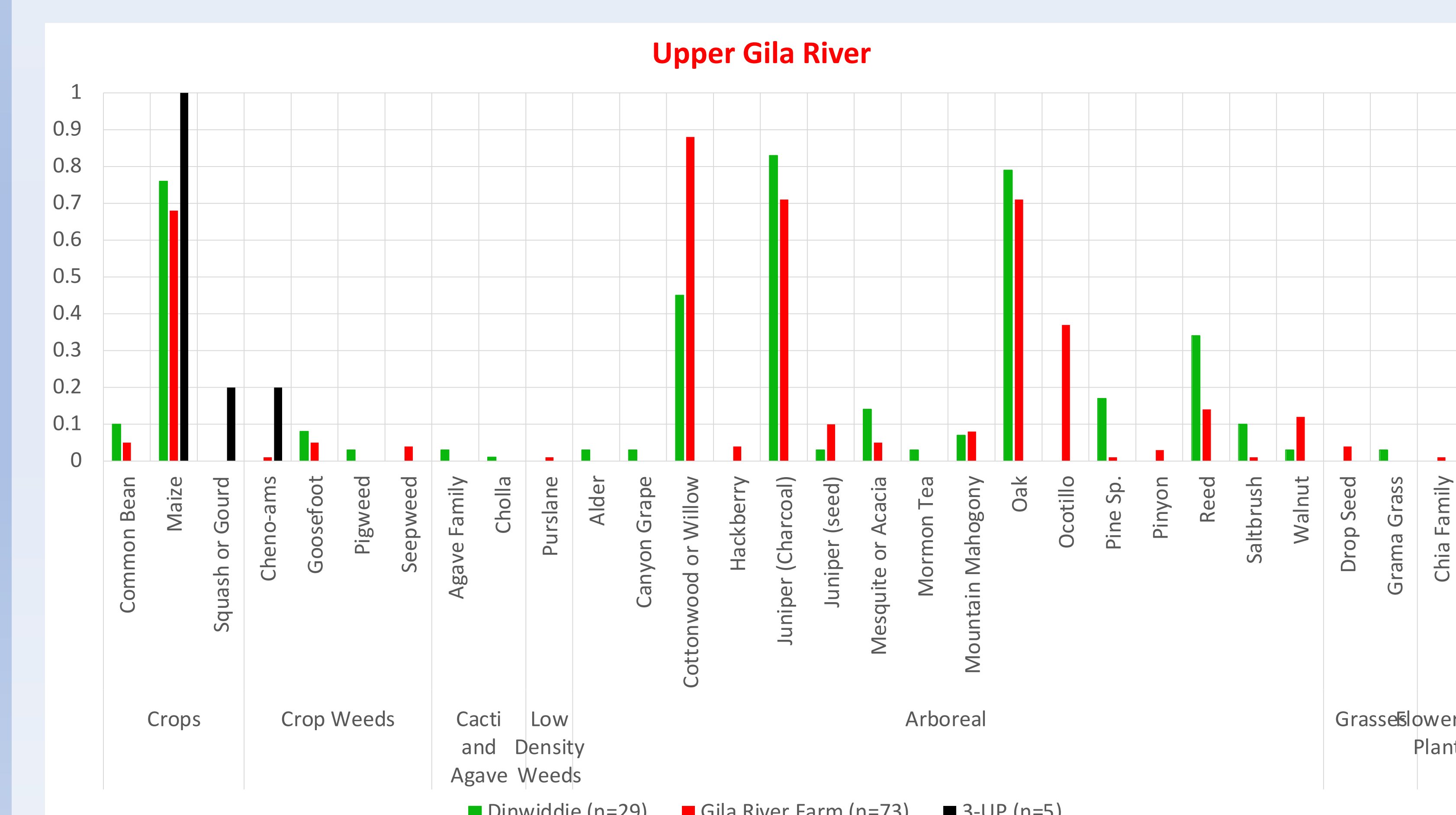
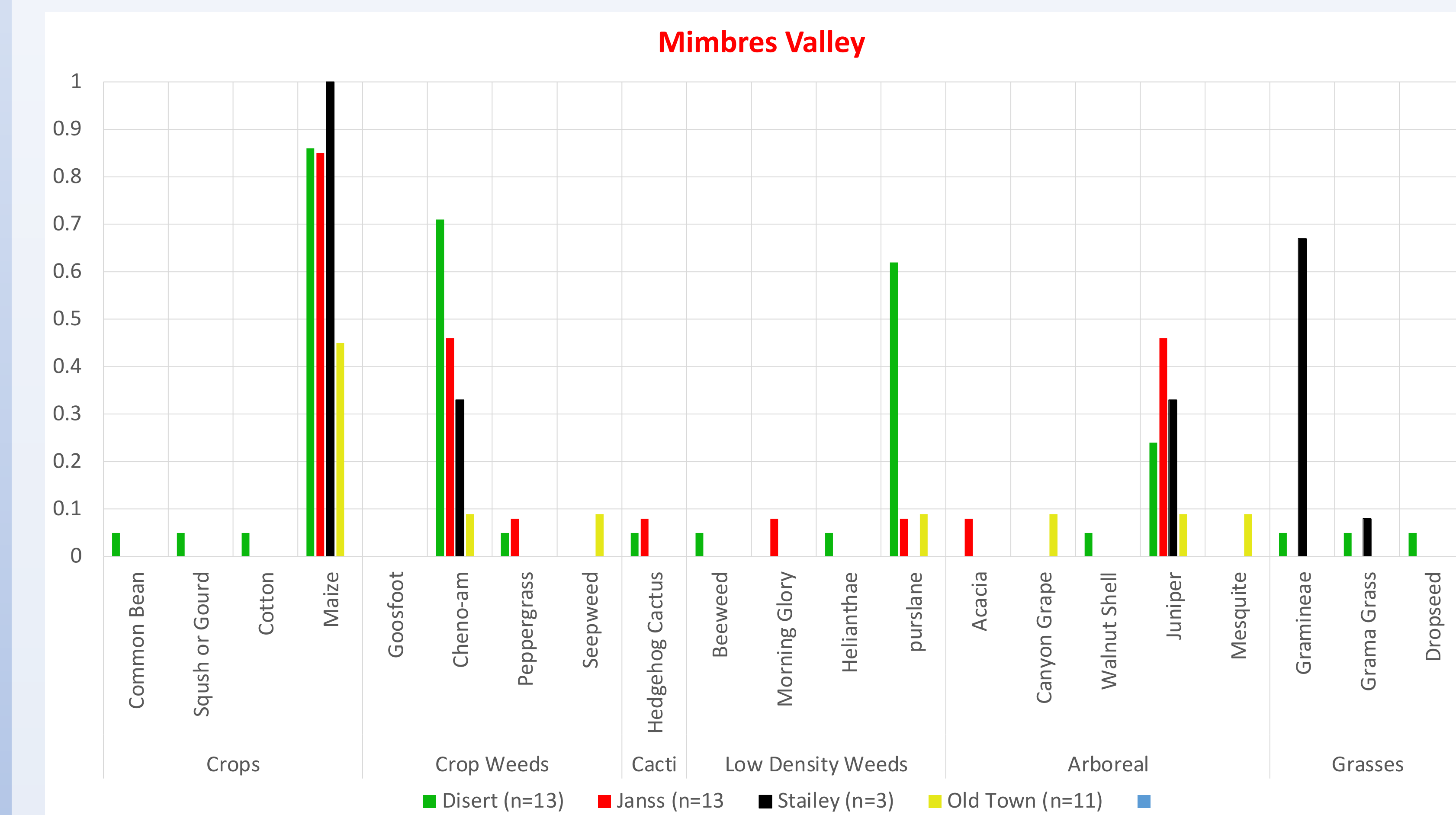
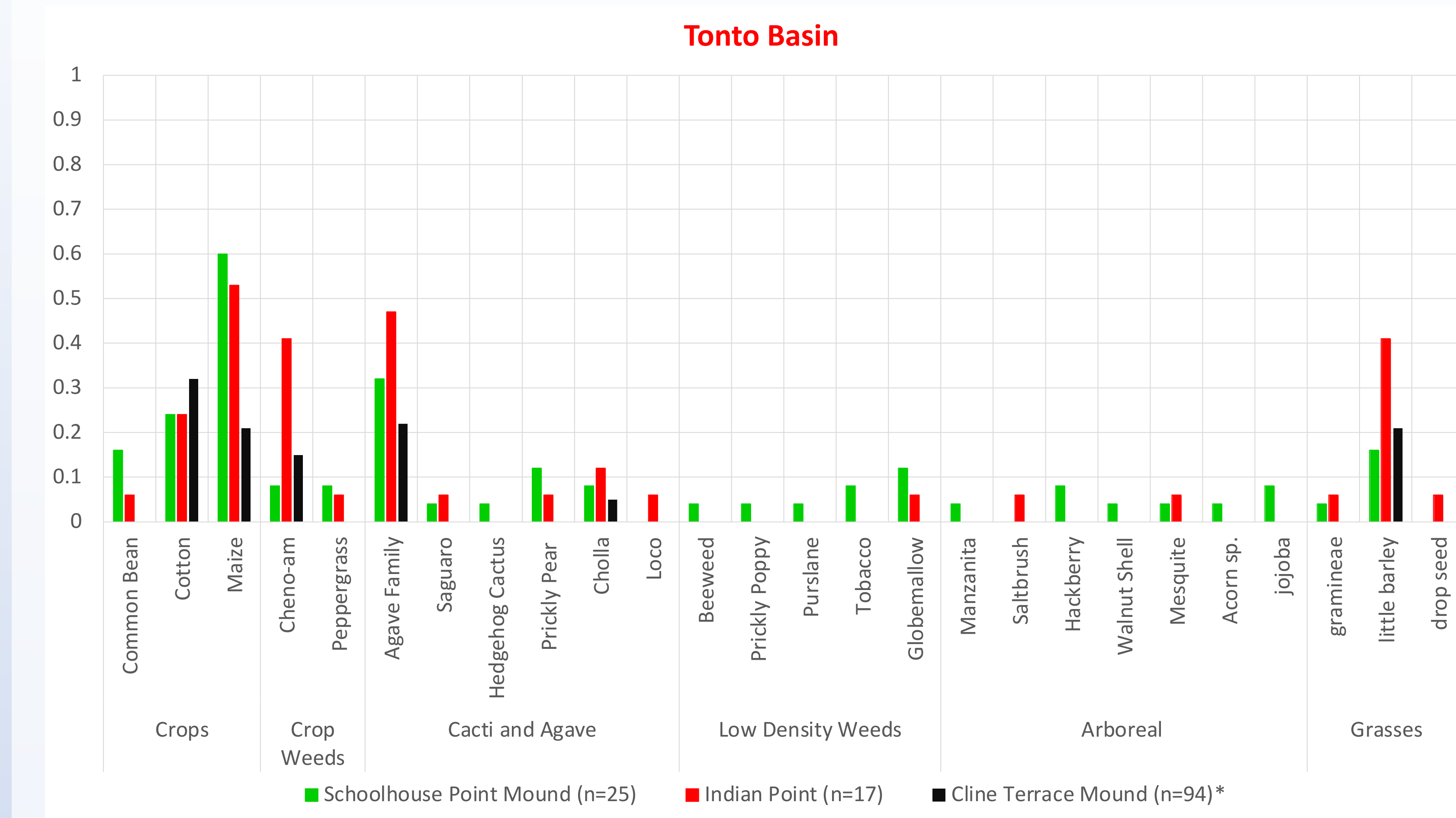
## Methods and Objectives:

- ❖ Compare macrobotanical ubiquities of Salado Phase sites in three disparate regions
- ❖ Sort plant ubiquities into the categories: crops, crop weeds, cacti and agave, low density weeds, arboreal, and grasses as per Diehl's (2006; 2020: 74; Huntley et al. 2020) methodology
- ❖ Highlight notable trends both within and between geographic regions
- ❖ Present the environmental context of each site
- ❖ Discern between environmental, social, and statistical causes of major trends and outliers of plant economies
- ❖ Discern to what Salado plant diets are uniform across space

## Study Area:

- ❖ Mimbres Valley Sites: Disert, Janss, Stailey (Minnis 1986), and Old Town (unpublished, obtained through personal communication with Dr. Darrell Creel and Dr. Mike Diehl)
- ❖ Tonto Basin Sites: Schoolhouse Point Mound, Indian Point and Cline Terrace Mound\* (Dering 1986; Landauer 1986; Dering 1997; Oliver 1997; Jacobs 1997)
- \*Cline Terrace data is limited to only the taxa presented, data for the remainder of the assemblage is unavailable
- ❖ Upper Gila River Sites: 3-Up (Diehl 2020; Huntley et al 2020), Gila River Farm, Dinwiddie (data unpublished, obtained through personal communications with Dr. Mike Diehl)

## Macrobotanical Ubiquities:

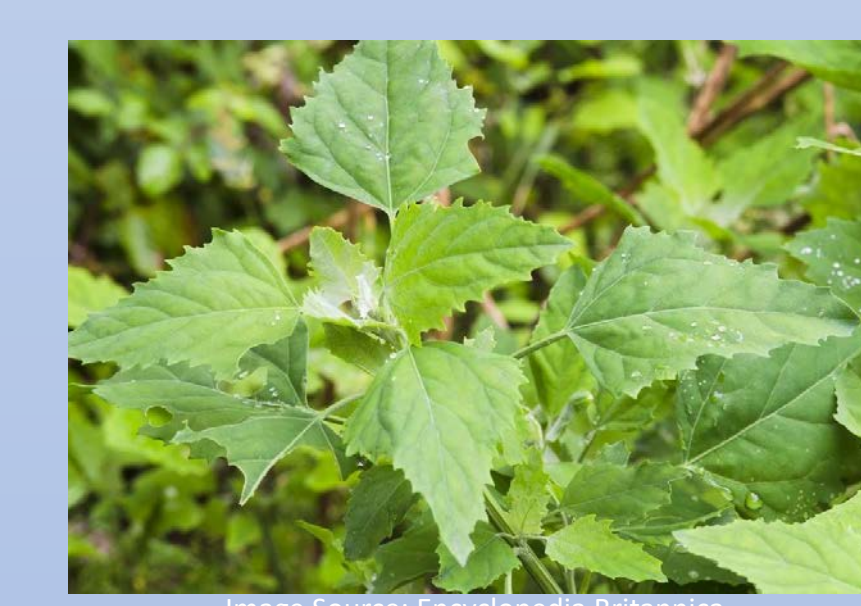


## Notable Trends:

- Tonto Basin**
- ❖ Cotton agriculture present in all three sites
  - ❖ Lower reliance on maize in comparison to the Mimbres Valley and Upper Gila
  - ❖ High little barley ubiquity
  - ❖ Greater breadth and ubiquity of cacti and agave in comparison to the Mimbres Valley and Upper Gila
  - ❖ Low emphasis on arboreal resources
  - ❖ Some regional variability, particularly in low density weed ubiquities
  - ❖ Overall regional patterns hold



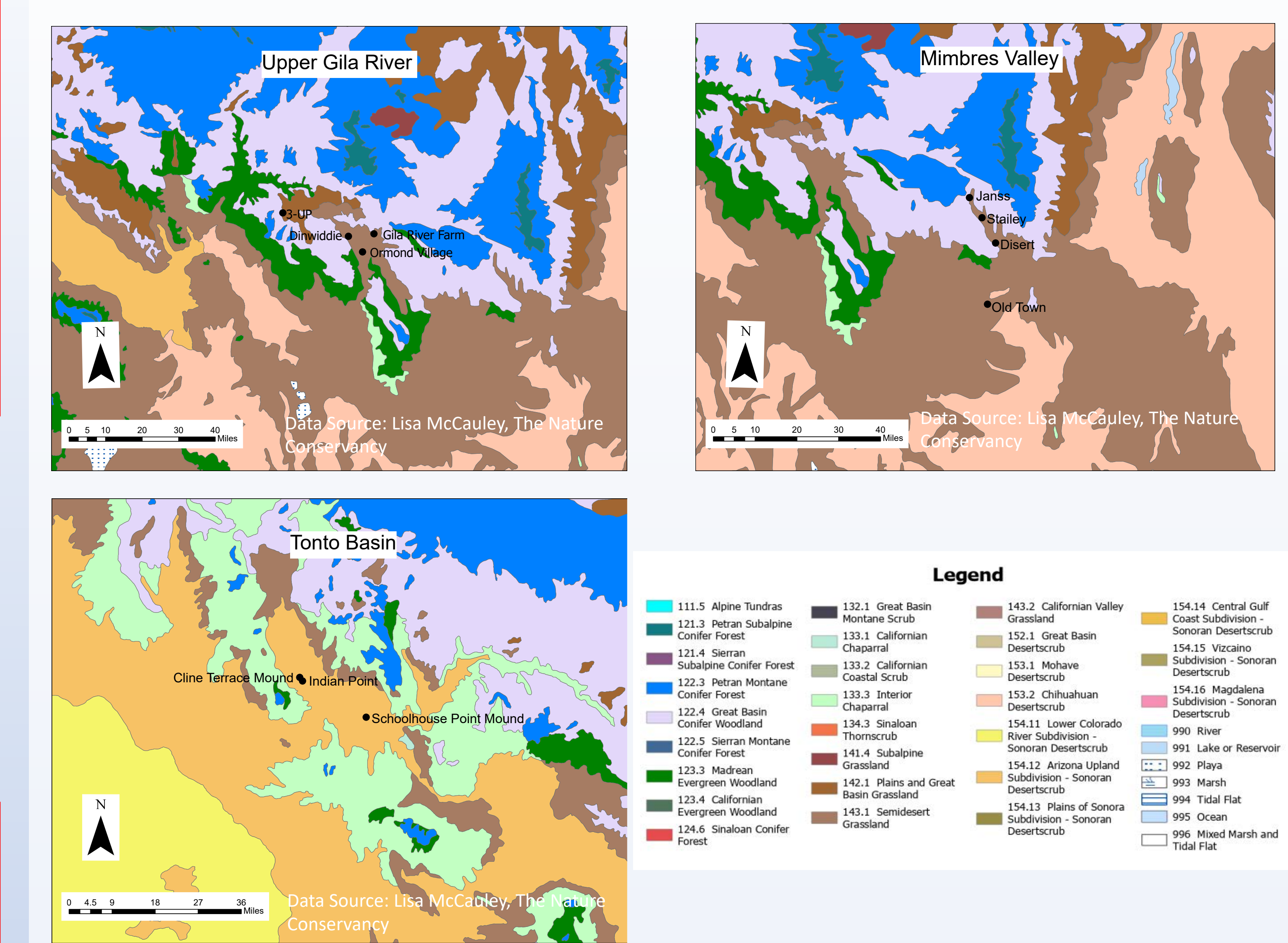
- Mimbres Valley**
- ❖ Relatively high ubiquity of cheno-ams
  - ❖ Purslane present in three out of four sites, particularly ubiquitous at the Disert site
  - ❖ Moderate variability in site ubiquities
  - ❖ Some patterns, such as the presence of purslane and high percentages of juniper, hold throughout datasets.
  - ❖ High maize ubiquities, excluding Old Town
  - ❖ Goosefoot with a ubiquity of 27% at Oldtown (potentially due to sample size)
  - ❖ Less emphasis on beans outside of the Disert site (note: beans not known for their preservative qualities)



- Upper Gila River**
- ❖ Plant economies centered around maize and arboreal resources
  - ❖ notably, cottonwood, oak, reed, and ocotillo appear in much greater ubiquity than in the Mimbres Valley and Tonto Basin
  - ❖ Outliers at 3-Up
  - ❖ 20% ubiquity of cheno-am and squash/gourd
  - ❖ Likely due to low sample size
  - ❖ No cotton present



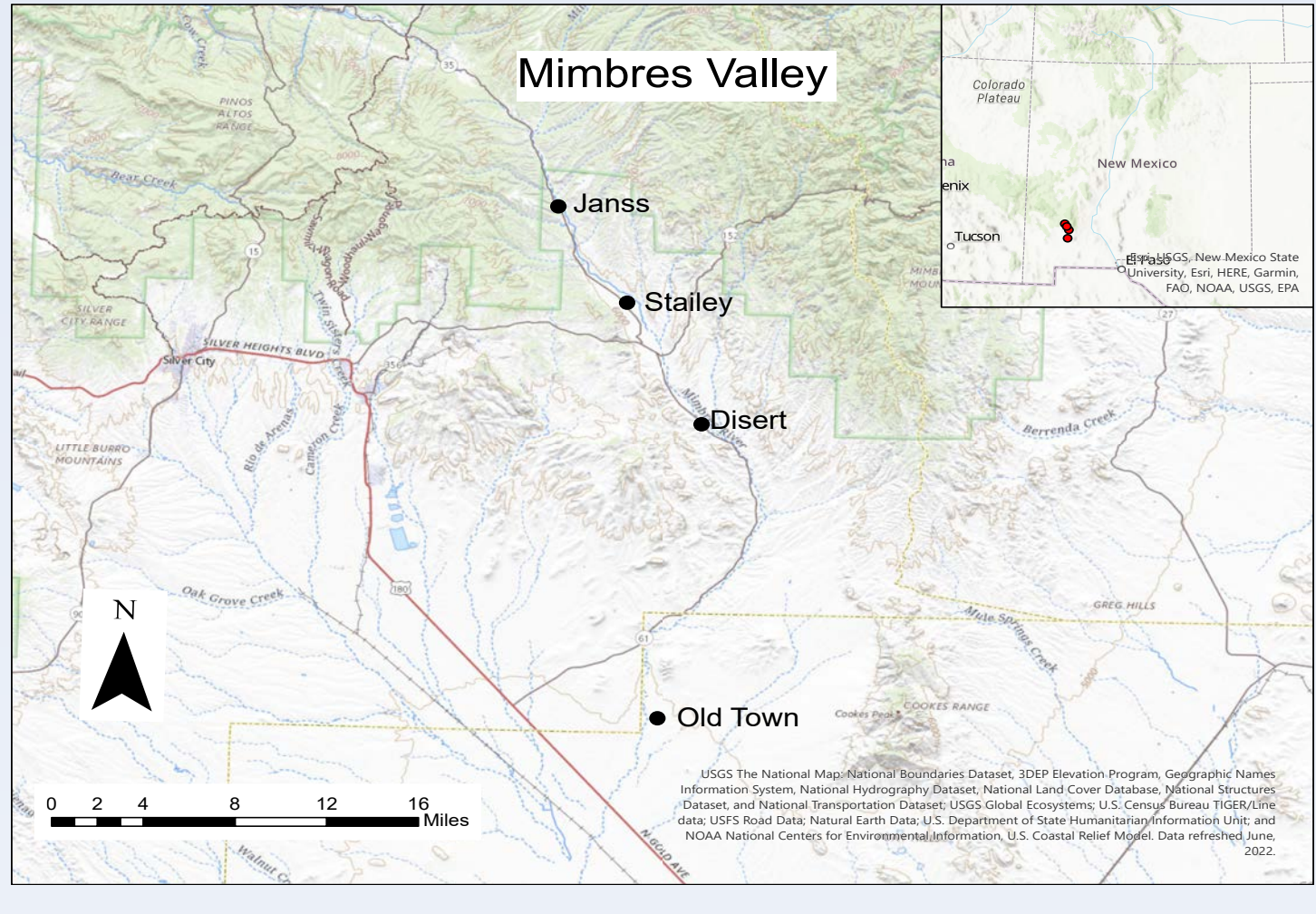
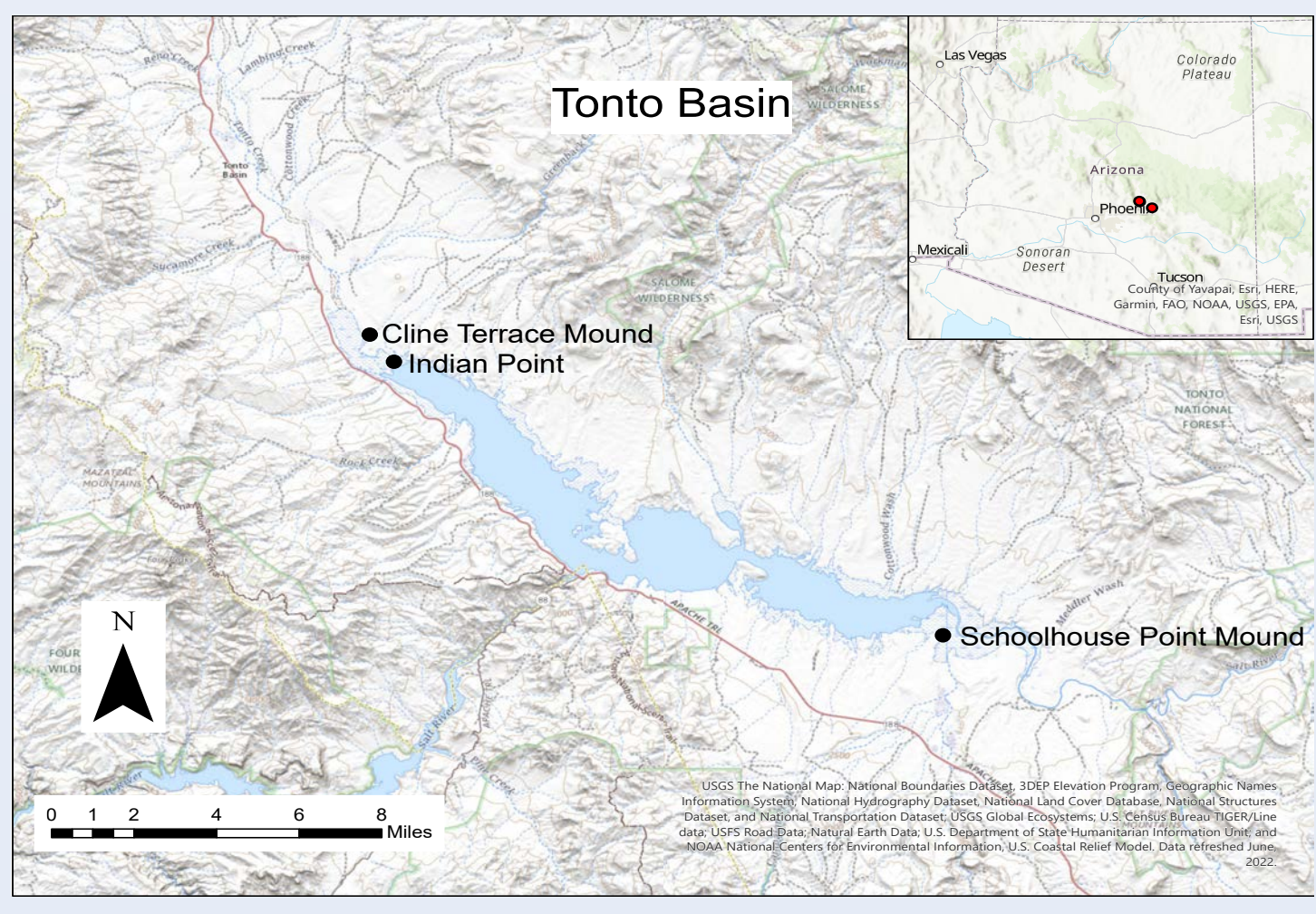
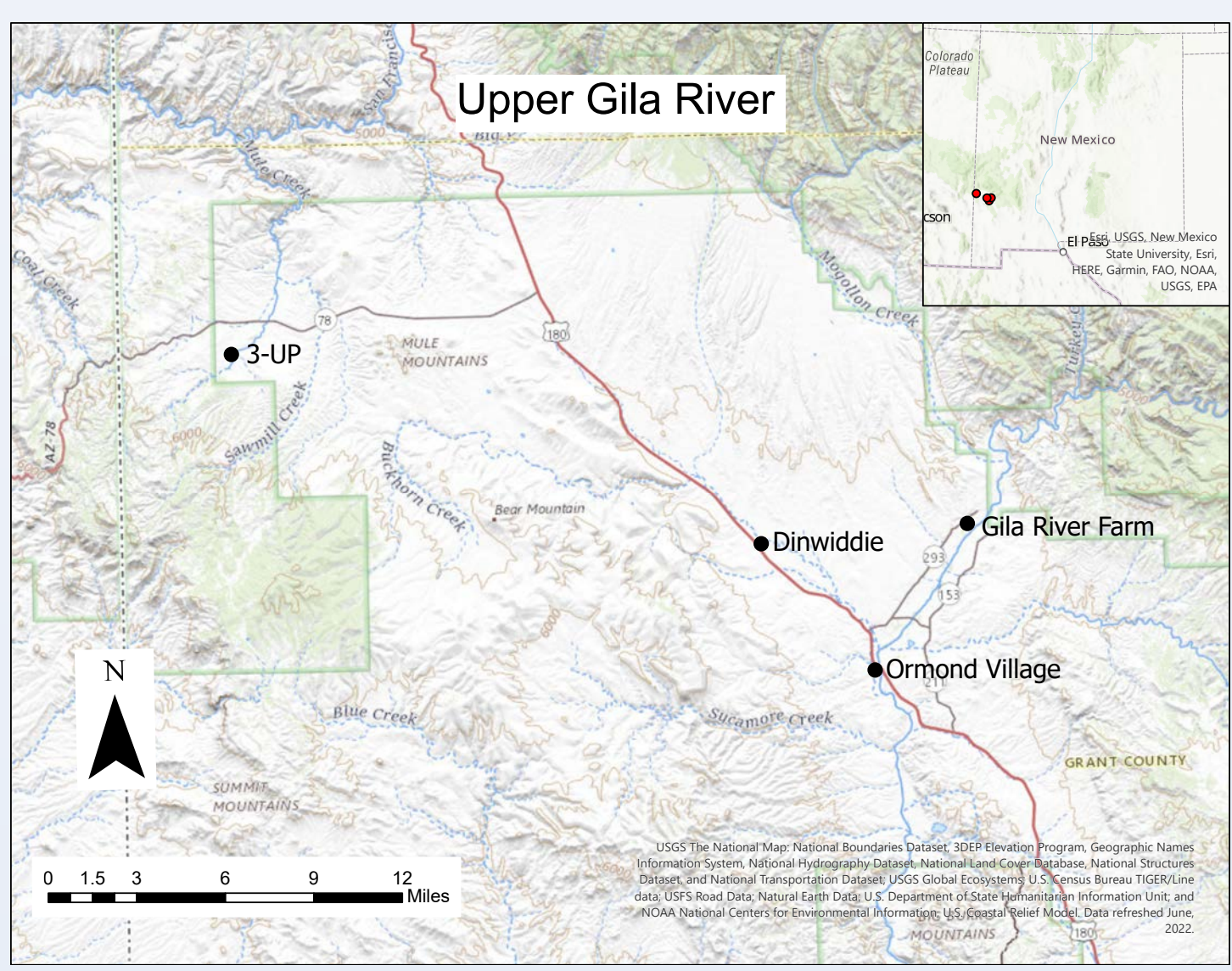
## Regional Environments:



- ❖ **Tonto Basin:** All sites are located within the Arizona Upland Subdivision of the Sonoran Desert. Nearby biotic communities include Interior Chaparral, Semidesert Grassland, and Petran Montane Conifer Forest.
- ❖ **Mimbres Valley:** All sites are located within the Semidesert Grassland biome. Nearby biotic communities include Great Basin Conifer Woodland, Madraan Evergreen Woodland, Petran Montane Conifer Forest, Petran Subalpine Conifer Forest, and Chihuahuan Desert Scrub.
- ❖ **Upper Gila River:** Dinwiddie, Gila River Farm, and Ormond Village are all within the Semidesert Grassland biome. 3-Up is located within the Plains and Great Basin Grassland Biome. Nearby biotic communities include Great Basin Conifer Woodland, Madraan Evergreen Woodland, Petran Montane Conifer Forest.

## Discussion and Conclusions:

- ❖ Generally, Salado diets vary from region to region
  - ❖ Regions typically possess shared plant use patterns
- ❖ High gramineae ubiquity at Stailey is likely caused by inadequate sample size
- ❖ Tonto Basin plant assemblage trends appear to be best explained by regional biotic communities. As Tonto Basin sites are all within the Sonoran Desert, it follows that use of arboreal products would be comparatively low, while cacti and agave usage would increase due to accessibility
- ❖ The presence and levels of ubiquity of little barley, cheno-ams, cacti, and agave in conjunction with relatively low maize ubiquities in the Tonto Basin suggest higher levels of crop failure in the Tonto Basin, leading Salado groups to pursue other, often lower quality, plant foods as a buffer against food insecurity (Minnis 1991)
  - ❖ That said, cacti and agave are particularly nutritious and productive food sources (Diehl and Waters 2006: 73-76) suggesting that these products were sought out as regular dietary items in the Salado Tonto Basin, rather than consumed as mitigation to crop scarcity
- ❖ While Tonto Basin macrobotanical data suggests ecological causes for dietary trends, differences between Upper Gila River and Mimbres Valley sites may be socially driven
  - ❖ Despite occupying and having access to similar biotic regions, cheno-ams and purslane ubiquities are substantial throughout the Mimbres Valley sites and comparatively low, if not absent, in the Upper Gila
  - ❖ Diehl (2020: 77) proposes that regional ethnic backgrounds may be discerned through historic food preferences in comparison to Salado phase food preference. While this data set does not include earlier macrobotanical assemblages, this is one possible explanation for the differences described above



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