

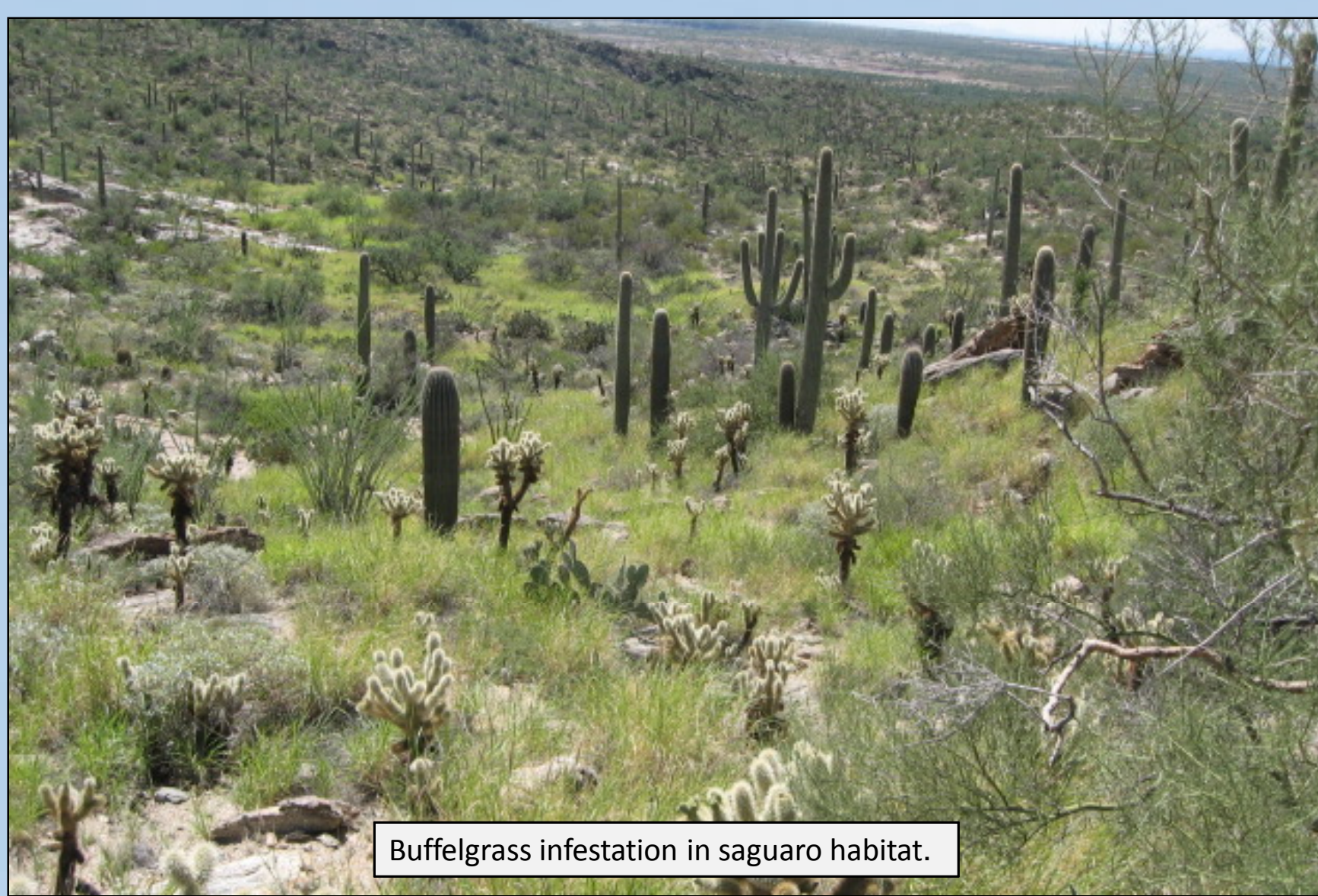


The 2010 Saguaro Census

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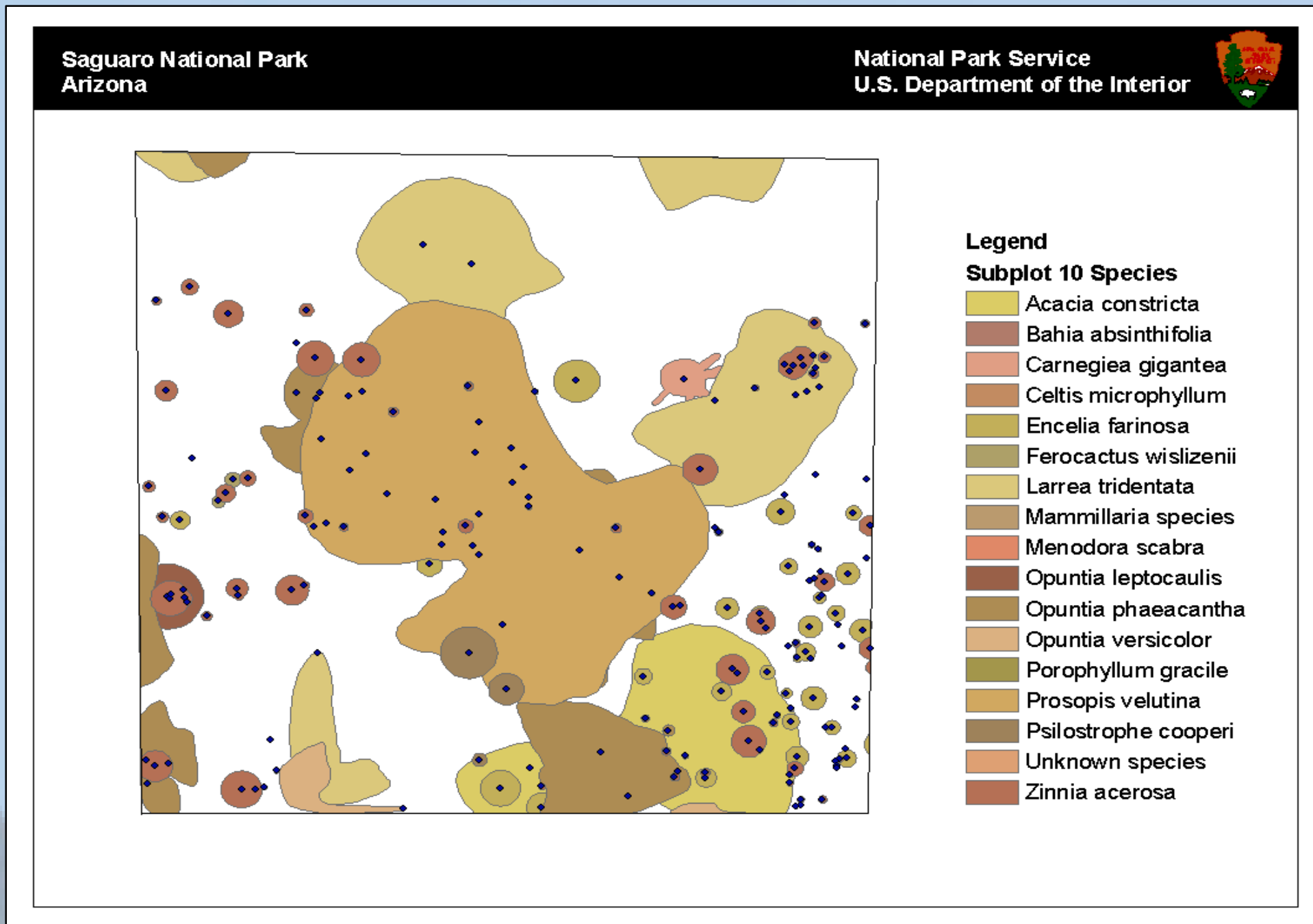
Saguaro Census Highlights

- The 2010 Saguaro Census began in September 2009. We estimate it will be completed by October 2010.
- Approximately 277 volunteer "Citizen Scientists" have contributed over 3,000 hours to the Census.
- The Census consists of 45 large (4 hectare) plots and 11 smaller (2 hectare) plots, located in both districts of the park.
- Saguaro distribution in the park varies; but on one 4 hectare plot we counted and measured more than 1,800 saguaros!
- On nearly all plots, we found an increased number of saguaros from 2000 to 2010.
- Comparison with 1990 data indicate an overall increase throughout the park during the past 20 years.
- Saguaro numbers increased in all habitats, with the greatest increase in rocky foothills and the Tucson Mountains.
- Increases in saguaro numbers were smaller in the "Cactus Forest", near the Loop Road in the Rincon Mountains.
- Staff and volunteers have counted and measured over 16,000 saguaros total.
- The final report will include an estimate of the Park's saguaro population and a distribution map.



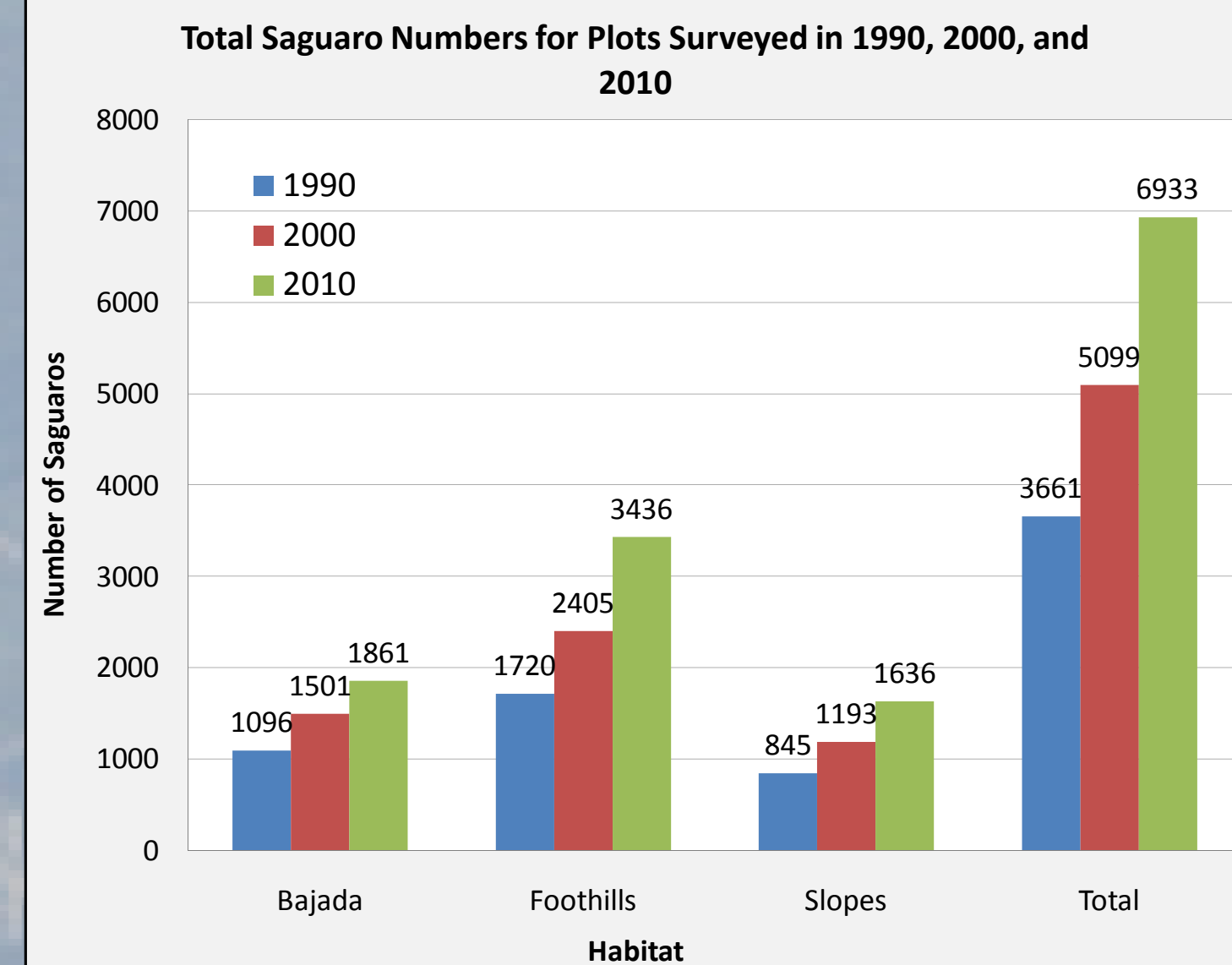
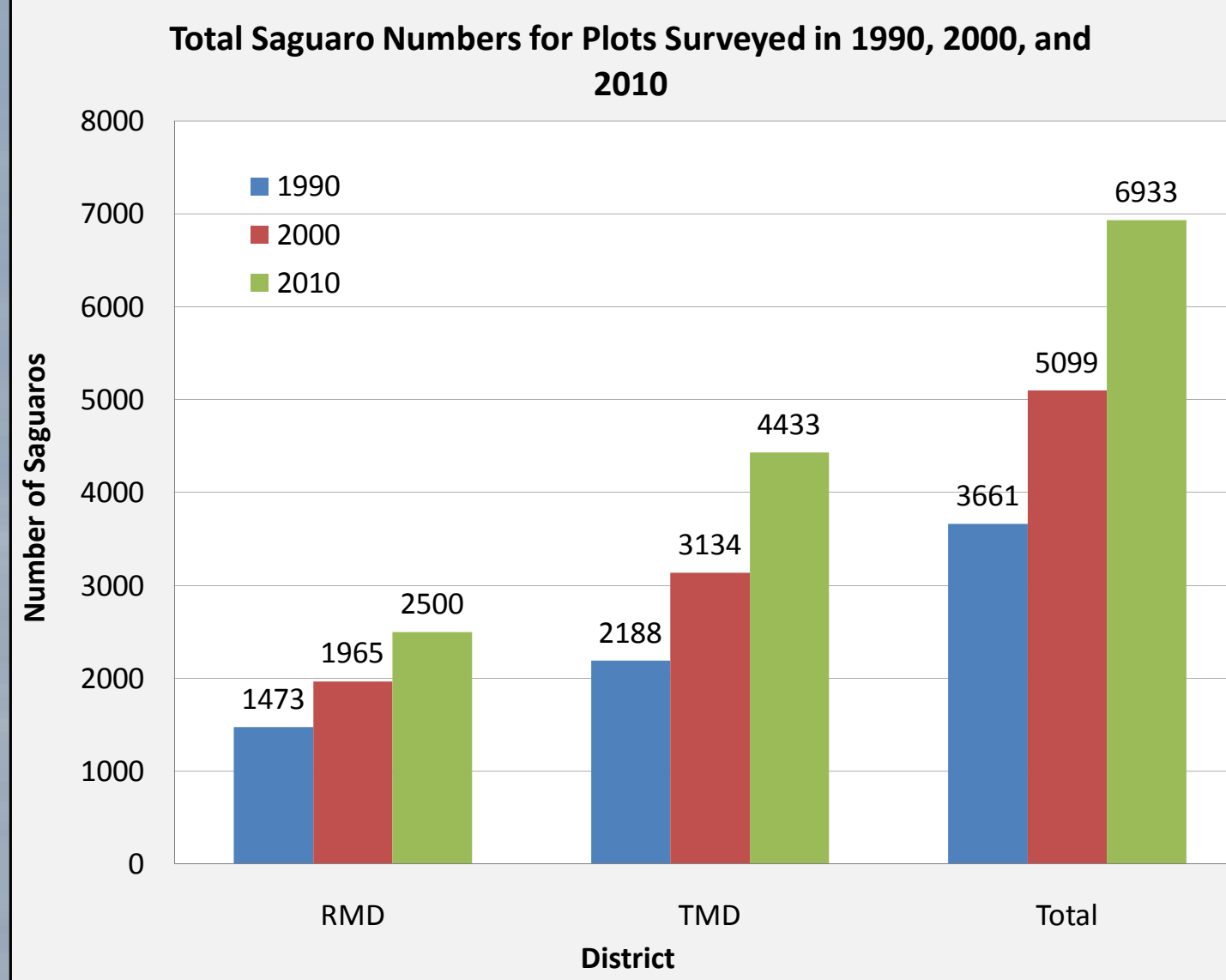
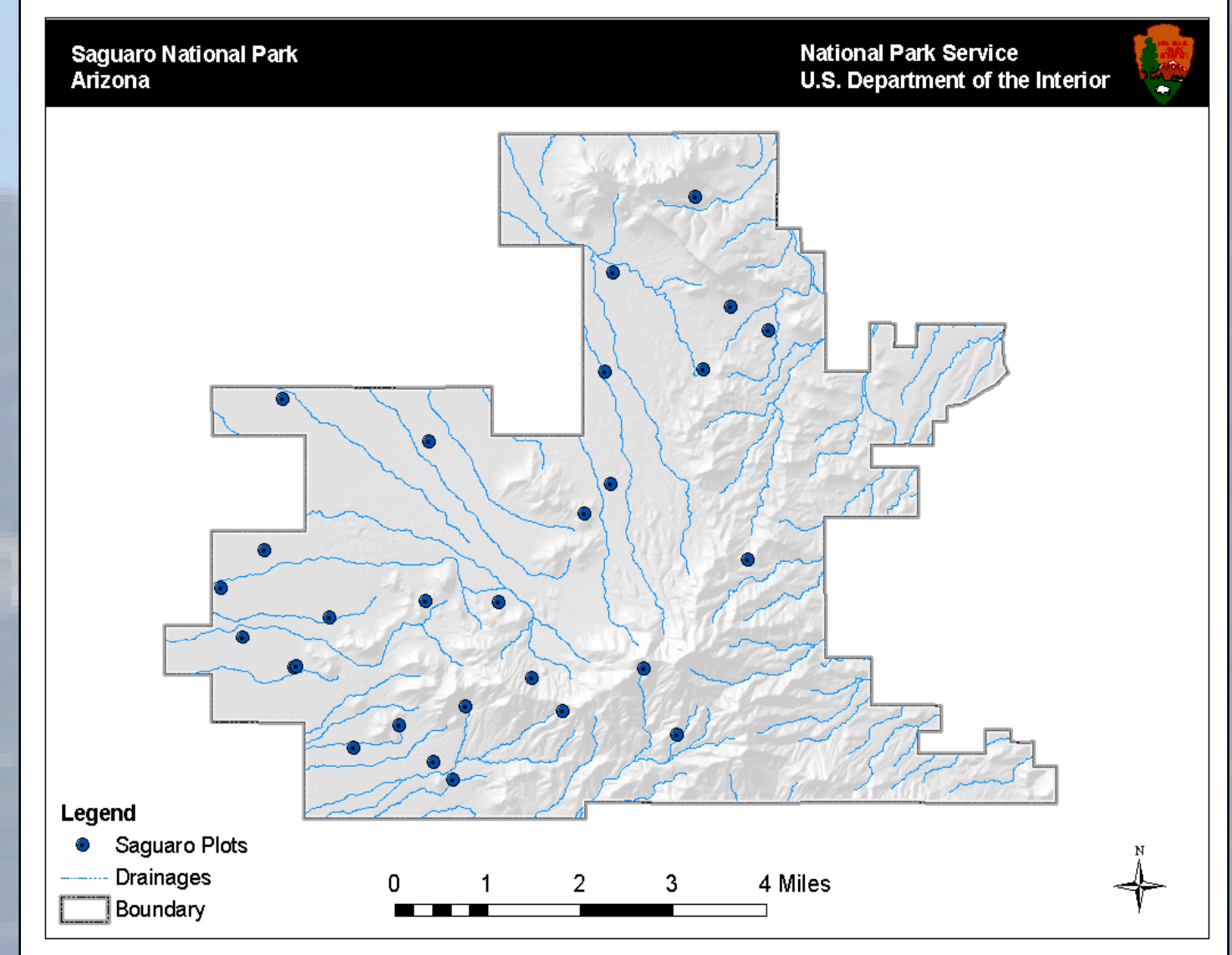
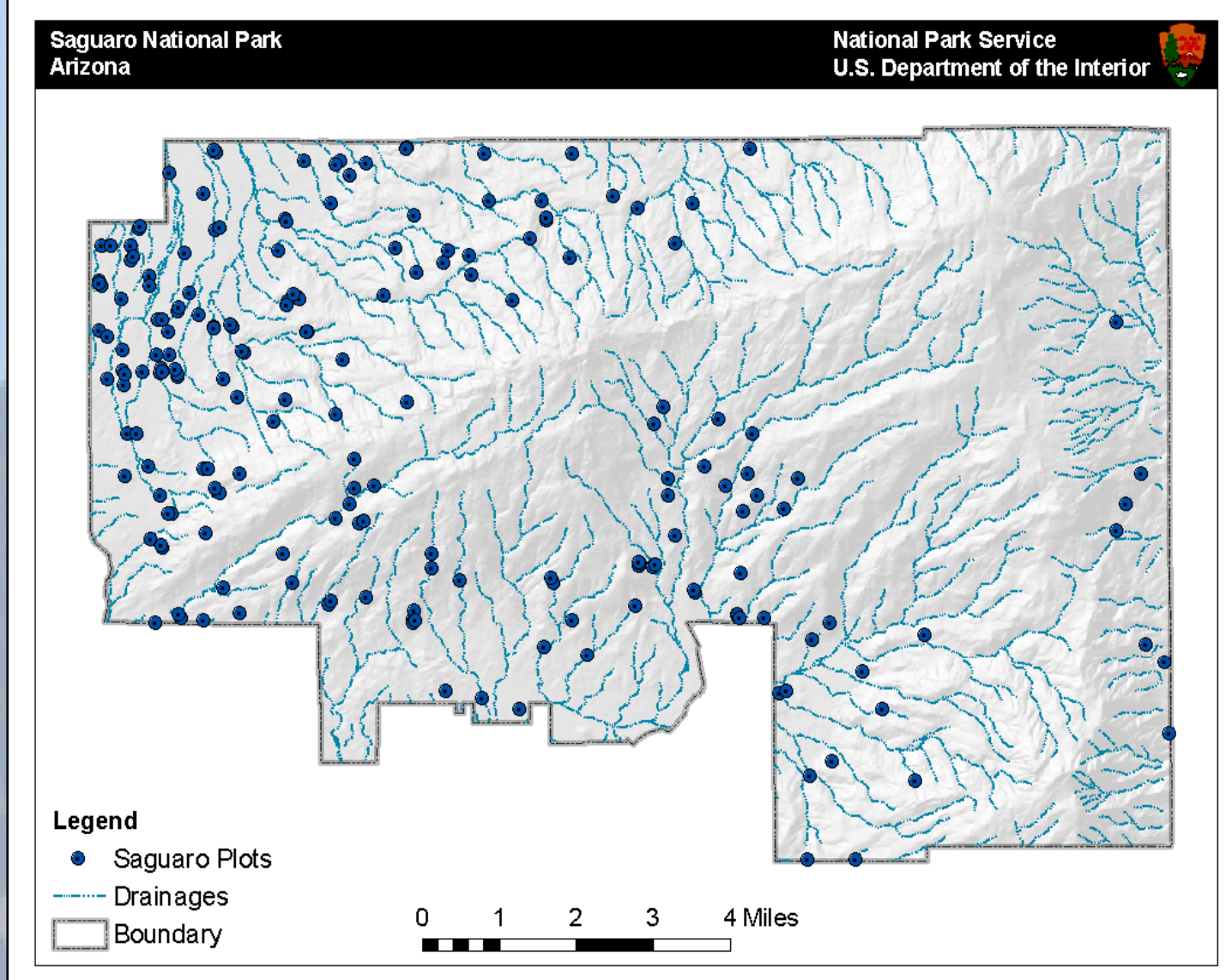
Vegetation Surveys

Within each saguaro census plot is a smaller subplot (10m x 10m). In 1990, these subplots were centered on a randomly selected saguaro. Perennial vegetation is mapped using survey and GPS equipment to enable examination of characteristics of and changes in the vegetation community over time.



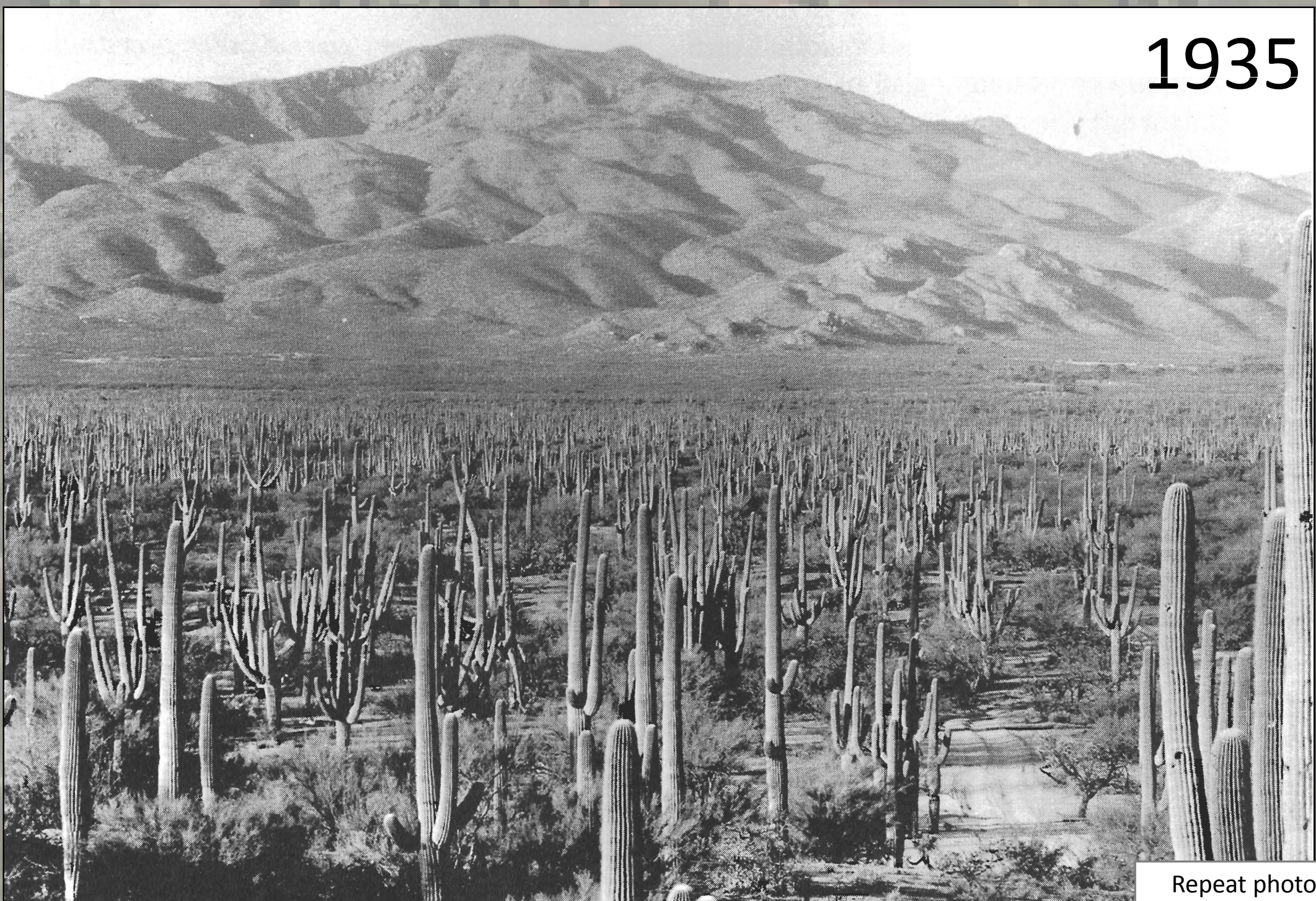
The Saguaro Census

Saguaros (*Carnegiea gigantea*), the iconic cacti of the American Southwest and Saguaro National Park, have been monitored at the park since 1941. Since saguaro distribution is influenced by temperature regimes and is limited by winter freeze events, the species is believed to be a strong indicator of changing climate conditions. Long-term monitoring of saguaros and their ecosystem can therefore provide insight into the magnitude of climate change on a decadal scale. This poster presents the preliminary 2010 Saguaro Census results. This long-term monitoring project, conducted every 10 years, provides data on the population structure, distribution, and abundance of saguaros in the Tucson Mountain and Rincon Mountain districts of the park. Preliminary results from 2010 indicate that the saguaro population is continuing to grow in both districts, with dramatic increases in some areas. Despite these trends, the future of the saguaro is uncertain. Climate change, urbanization, changing wildfire regimes, and invasive grass infestations are some of the greatest challenges this species faces.



Acknowledgements

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Repeat photos courtesy of Ray Turner

Saguaros and Buffelgrass

Buffelgrass poses an alarming threat to the Park's saguaro population, and its habitat. This aggressively invasive species threatens saguaros by creating such dense patches that saguaro seedlings can't establish. Furthermore, the contiguous fuel created by fire-loving buffelgrass facilitates wildfire, which the Sonoran desert, unlike buffelgrass, is not adapted to. Thus, a cycle is begun that favors buffelgrass over the native plants. The Park is currently managing this plant with an aggressive control program, including of treatment involving environmentally-friendly herbicides and hand-pulling.