

BOYCE THOMPSON ARBORETUM
37615 U.S. Highway 60
Superior
Pinal County
Arizona

HALS AZ-7
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WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN LANDSCAPES SURVEY
National Park Service
U.S. Department of the Interior
1849 C Street NW
Washington, DC 20240-0001

HISTORIC AMERICAN LANDSCAPES SURVEY

BOYCE THOMPSON ARBORETUM

HALS NO. AZ-7

- Location:** 37615 U.S. Highway 60, Superior, Pinal County, Arizona
Boyce Thompson Arboretum is located in Superior, Arizona, approximately one hour east of Phoenix. The boundary of the Arboretum runs roughly along Highway 60 on the north and is bounded by Picket Post Mountain on the south. The eastern boundary abuts the former mining town of Old Pinal City. The western boundary runs north-south at a spot near the west end of the US Highway 60 bridge across Queen Creek.
Lat: 33.280128 Long: -111.158958 (Administration Building, Google Earth, Simple Cylindrical Projection, WGS84)
- Significance:** The Boyce Thompson Arboretum is significant as the first botanical institution in the United States dedicated to the study and development of arid land plants (Crider 1930). The initial focus of the Arboretum was to further the productive capacity of arid land plants for human sustenance and for animal forage in order to improve economic conditions and alleviate hunger in desert regions throughout the world. Experimentation with plants that could be used to control soil erosion in areas heavily grazed by cattle made it possible for Franklin J. Crider, first Director of the Arboretum, to develop the U.S. Soil Erosion Service, which later became the U.S. Soil Conservation Service. The Arboretum property is also significant for having several unexcavated, uncompromised prehistoric archaeological sites.
- Description:** Boyce Thompson Arboretum is a 320-acre living classroom, dedicated to the study of arid and semi-arid plants. An important part of the mission of Boyce Thompson Arboretum is to instill in people an appreciation of plants through the fostering of educational, recreational, research, and conservation opportunities associated with arid-land plants. The Arboretum brings together plants from the Earth's many and varied deserts and dry lands and displays them alongside unspoiled examples of the native Sonoran Desert vegetation. The Arboretum is owned by the Boyce Thompson Southwestern Arboretum Corporation.
- Today the Arboretum is organized in groups of natural plant communities, including the Sonoran Desert Exhibit, the Chihuahuan Desert Exhibit, the South American Desert Exhibit, the Australian Desert Exhibit and the Queen Creek Riparian Area. The Arboretum also features educational and ornamental gardens such as the Children's Horticultural Garden, the Taylor Family Desert Legume Garden, the Wing Memorial Herb Garden, Heritage Rose Garden, a Hummingbird and Butterfly Garden, a Demonstration Garden of Low-Water Demanding Plants, and a Cactus and Succulent Garden featuring over 800 species of cacti and succulents.

An extensive trail system connects the individual garden spaces, enabling visitors to explore some of the rugged cliffs within the Upper Sonoran Natural Area. The High Trail crosses a north-facing slope through native vegetation of the Arizona Upland subdivision of the Sonoran Desert. From this vantage point, one looks down on a panoramic view of Queen Creek and the canyon area. The Main Trail, dwarfed by sheer canyon walls, follows Queen Creek and emerges from the riparian or stream community to a shaded, fragrant area of plants from other arid lands. The Arboretum's dense grove of broadleaf trees, conifers and tropical-looking palms create a striking contrast to the surrounding desert scrub. Old World pistachio, olive, common myrtle, pomegranate, bamboo-like *Arundo*, and date palms line the pathway.

Ayer Lake, a man-made oasis built in 1925 to store water for irrigating the Arboretum's gardens, is home to waterfowl, waders, shorebirds and local wildlife. Two endangered species of desert fish, the Gila topminnow and desert pupfish, were introduced into the lake by Arizona Game and Fish Department.

The Arboretum also features a collection of historic buildings. The Smith Building, Crider House, Gibson House and North House are on the National Register of Historic Places. The Smith Building, constructed in 1925 of locally quarried stone, was once the original administration building, laboratory and visitors center until the present Visitors Center was built. A greenhouse is attached to each side. One greenhouse highlights cacti from around the world, while the other showcases succulent plants in other plant families. The Crider and Gibson Houses were built in 1924, and the North House was built in 1929.

Picket Post House is perched on a rhyolite ledge above Queen Creek. The brick and stucco house was completed in 1923 as a vacation home for Colonel Thompson. Extensive renovation was done in 1929. It is currently closed to the public. Now listed on the National Register of Historic Places, the house is named for a mountain to the south that was part of a heliograph system covering the western United States. The heliographic signaling was done by soldiers encamped several miles away during attempts to quell Apache raids on settlers and miners.

The Clevenger House was built by a homesteader around 1914. It is surrounded by an herb garden with beds of native and southern European herb plantings. The planting beds are divided into specific use areas: culinary herbs, medicinals, cosmetics, insect repellants, etc.

The Arboretum is situated between 2,300 to 4,400 feet in elevation. Annual rainfall in the area is 17 inches with an equal bimodal distribution. Mean annual temperature is 69 degrees with a low of 25 degrees and a high of 112 degrees. The area lies between the upper and lower Sonoran vegetation zones. The area

surrounding the Arboretum is visually dominated by Picket Post Mountain (4,400'), Queen Creek and Arnett Canyons, both with intermittent streams.

History:

The Arboretum was developed in the mid 1920s and dedicated in 1929 as a museum of living plants, providing a laboratory for study of vegetation suitable for arid lands. The project grew out of the experience of Colonel William Boyce Thompson during a Red Cross mission to Russia in 1917 to further the political aims of the United States. Under the leadership of its first director, Franklin J. Crider, the institution opened to the public in the fall of 1924, although the formal dedication did not take place until April 6, 1929. Originally conceived as a specimen garden, over the years it followed ecology-inspired trends to become more focused on ecosystems. In 1965 a partnership was formed with the University of Arizona, strengthening the research capacity of the institution. In 1976 the partnership expanded yet again to include Arizona State Parks. A tripartite advisory committee was set up to determine the course the arboretum would take. Noted southwestern landscape architect and Professor Emeritus of the University of Arizona, Warren Jones played an active role in this revitalization. The new vision for the Arboretum continued to focus on public outreach as well as research.

Colonel Thompson, founder of the Arboretum, was born in Virginia City, Montana, on May 13, 1869, and grew up in Butte, Montana. After attending Philips Exeter Academy in New Hampshire, studying at the School of Mines and spending a year at Columbia University, he became very wealthy buying and trading stocks. He then began buying mines and set up Newmont Corporation to manage his holdings. The first of these was the small Shannon Mine near Morenci, Arizona. The second was a mine at Miami, Arizona, which he renamed "Inspiration". Newmont subsequently sold the Inspiration Mine to the Consolidated Copper Company. The third Arizona mine Thompson purchased was the Silver Queen, which renamed "Magma". The neighboring town of Superior grew up around this mine.

Thompson was commissioned with the military rank of Colonel when he accompanied a Red Cross expedition to Russia in the wake of the 1917 Revolution. Traveling through the arid reaches of Siberia on the way to St. Petersburg, he witnessed starvation and malnutrition yet was impressed by ingenious use of the scarce plant life. This first inspired him to found the Boyce Thompson Institute for Plant Research in Yonkers, New York, in 1924, and, a few months later, the Arboretum in Superior, Arizona. Here he built a second seasonal home, Picket Post, which is now on the National Register of Historic Places. His vision was to create an institution where plants from the deserts of the world could be collected, raised and studied. This was at a time when there was a strong interest in dry land plants in the United States. The Carnegie Institute for the study of desert vegetation at Tumamoc in Tucson, Arizona, opened in 1924. But while the Carnegie Institute focused on long term studies of

native plants, the Arboretum focused on the development of plants to improve the quality of human life.

As a child growing up in Butte, Montana, Colonel Thompson lived in the midst of devastation caused by the mining industry. Linking this to his experience of hunger in Russia, he began to focus on scientific means to solve the problems of a growing world population, overgrazing and soil erosion.

In 1922, he obtained the first of several Special Use Permits from the Forest Service to develop the area around Queen Creek just west of Superior, Arizona, for experimental agricultural purposes. In 1923, he built the first Picket Post house, a residence on top of a cliff overlooking what would become the central area of the Arboretum. In 1924, recognizing the need for a reliable water supply, an irrigation system was devised, and temporary plant sheds were installed on the ground, along with housing for the director and assistants. The oldest eucalyptus trees were planted in that year, and it is believed that one on the property today – “Mr. Big” – was among them. The same year, Franklin J. Crider, the Head of the Department of Horticulture at the University of Arizona, was hired as Director, a position he would hold until 1933. In 1925 housing for the Director and Assistant Director was built. Also in 1925, a location was chosen for a dam, and a pump was installed to draw water for the new reservoir from Queen Creek Canyon over the steep ridge lying between them. The resulting lake was later named for Charles F. Ayer, a legal advisor to Colonel Thompson. 500 plants were installed and the first permanent structures for plants were built. 1925 further saw the construction of the administration building, flanked by two Lord and Burnham greenhouses and alterations to the Clevenger house, the homesteader’s house which had been on the property before it was purchased by Thompson. Special Use Permits and the purchase of land increased the size of the Arboretum, a process that continued through 1928. In 1927, by a special act of the State Legislature, the Arboretum became the first nonprofit institution for scientific purposes in Arizona.

On April 6, 1929, the Arboretum was dedicated in a ceremony that included speeches by Homer Shantz, President of the University of Arizona, as well as staff from the Carnegie Desert Laboratory at Tumamoc (Tucson, Arizona) and the US Department of Agriculture. At this time the collection consisted of over 3000 plants. Unfortunately, Colonel Thompson died in 1930, leaving the Institution with minimal financial support as a result of the stock market collapse in October 1929 in which the Arboretum lost two-thirds of the value of its assets.

Crider and Thompson chose planting areas based on questions they had about the plants: how they adapted to sun or shade, to dry cultivation or to the advantage of the small amount of additional moisture provided along Queen Creek. The landscape was not designed with an eye to beauty or to geographic association, but rather to utility and function.

Beginning as an effort to find groundcovers that could survive on the cattle-damaged hillsides and hold the soil in place long enough to allow other species to become established, the Arboretum became home to a revegetation project. From 1933 to 1935 the Superior Spur Camp of the Civilian Conservation Corps provided twenty young men to help with erosion control in that part of Arizona, and also to help with landscape plantings in the area. At this time, Arboretum holdings included over 40,000 plants, among them 26 types of trees and 50 types of shrubs.

With the departure of Professor Crider, Assistant Director Fredrick Gibson took over management of the Arboretum. Despite the lack of financial resources, the Arboretum continued to acquire new plants from seeds or cuttings exchanged within the United States and internationally. After experiencing a series of assistant directors who either did not stay long or did not work out, Gibson hired Bill Benson in 1948. Benson assisted Gibson with the maintenance of grasses being tested for erosion control, and, in return, Gibson permitted Benson to plant trees, shrubs and flowers – and even a lilac bush – where he wished. One of these – a Chinese pistachio (*Pistacia chinensis*) – was sited by Benson where the tree could easily be seen from the highway. Visitors inquiring about the tree were encouraged to invest in landscaping requiring a minimal use of water.

Gibson died in 1953, and Mrs. Gibson and Benson directed the Arboretum as a team until Joe E. Thompson, Jr. (a nephew of Colonel Thompson) was hired in 1955. Thompson, Jr., had a degree in horticulture from the University of Arizona but left all of the gardening and much else to Benson. Benson moved into Mesa late in 1960 but was paid a monthly stipend by the Board of Directors to return regularly to the Arboretum to propagate plants, oversee the gardening, and to answer Thompson's Arboretum correspondence.

In 1964 the University of Arizona became a co-administrator of the Arboretum, but a hoped-for grant from the National Science Foundation did not materialize, and little changed until 1974, when the Arizona State Parks became part of the administrative group. A Tripartite Advisory Committee, consisting of two horticulture or scientific staff from the University, two administrators from Arizona State Parks and two Board Members (or designates) from the Arboretum, was formed.

The Committee decided on a future course of grouping plants according to area of origin, a major shift in landscape design indicated by mid-century ecological studies. One large group of Eucalyptus trees had withstood water rationing through thirty years of intermittent drought, and this became the nucleus of the Australia Desert Exhibit. Plants from the Chihuahuan Desert were placed along the new Chihuahuan Trail, and new Sonoran Trail highlighted native plants. While continuing to embrace research, the Arboretum now increased its efforts

towards education, developing more interpretive displays. During the 1980s, a new visitor center was built, and, under the direction of Warren Jones (Professor Emeritus of Landscape Architecture at the University of Arizona) a Demonstration Garden influenced by the design principles of Chinese gardens was laid out. In 1984 Bill Feldman, PhD, became Managing Director. Dr. Feldman felt that the geographical exhibits should also feature typical structures from their area of origin, and thus typical structures from Argentina and Australia were added to these areas of the Arboretum. Dr. Feldman retired in 2005.

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Historians: June 7, 2012

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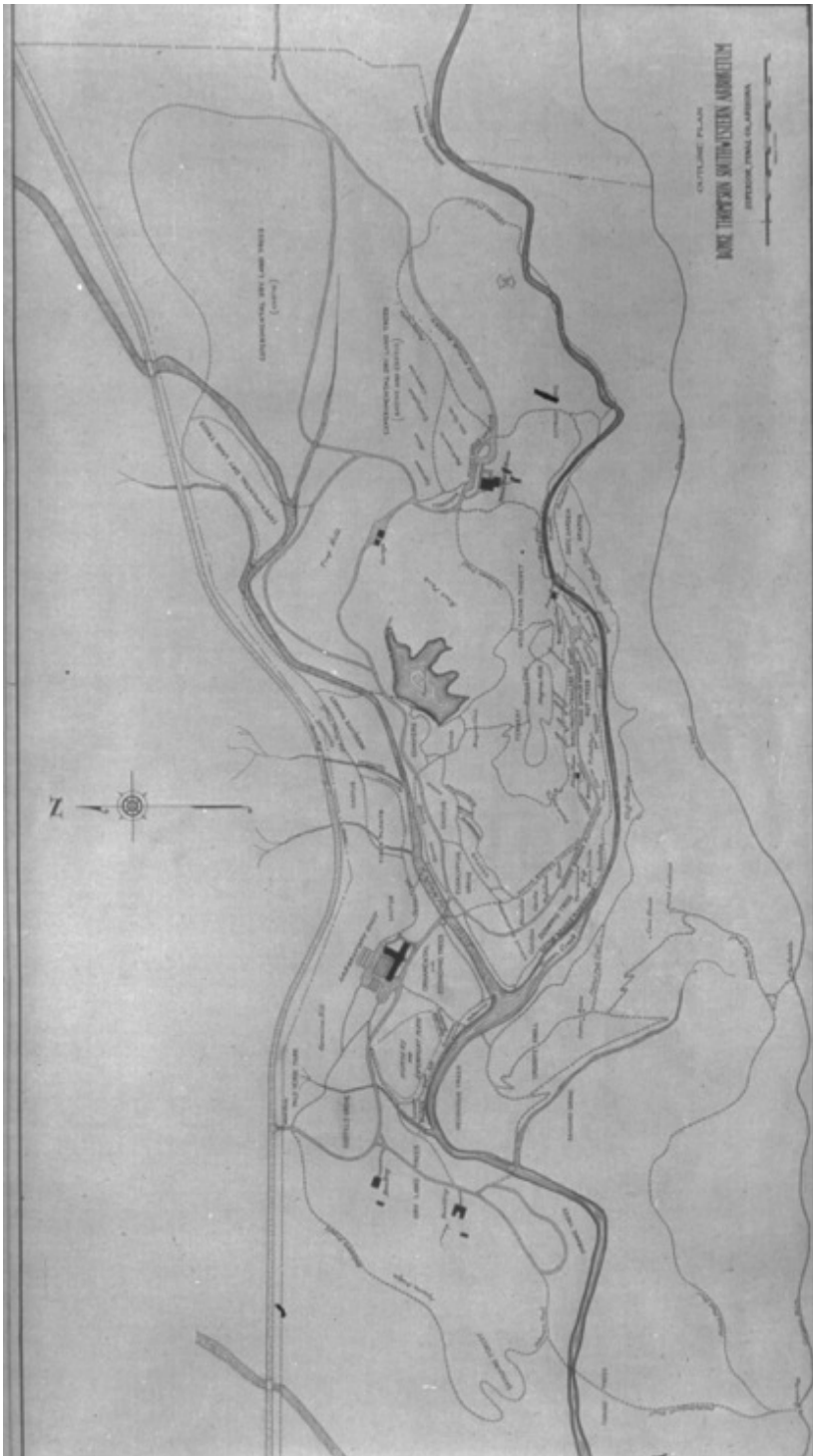
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Location of Boyce Thompson
Southwestern Arboretum
(Helen Erickson, May 25, 2012).



Boyce Thompson Southwestern Arboretum Map ca. 1928
(Courtesy of Boyce Thompson Southwestern Arboretum
Archives).

Boyce Thompson Arboretum State Park

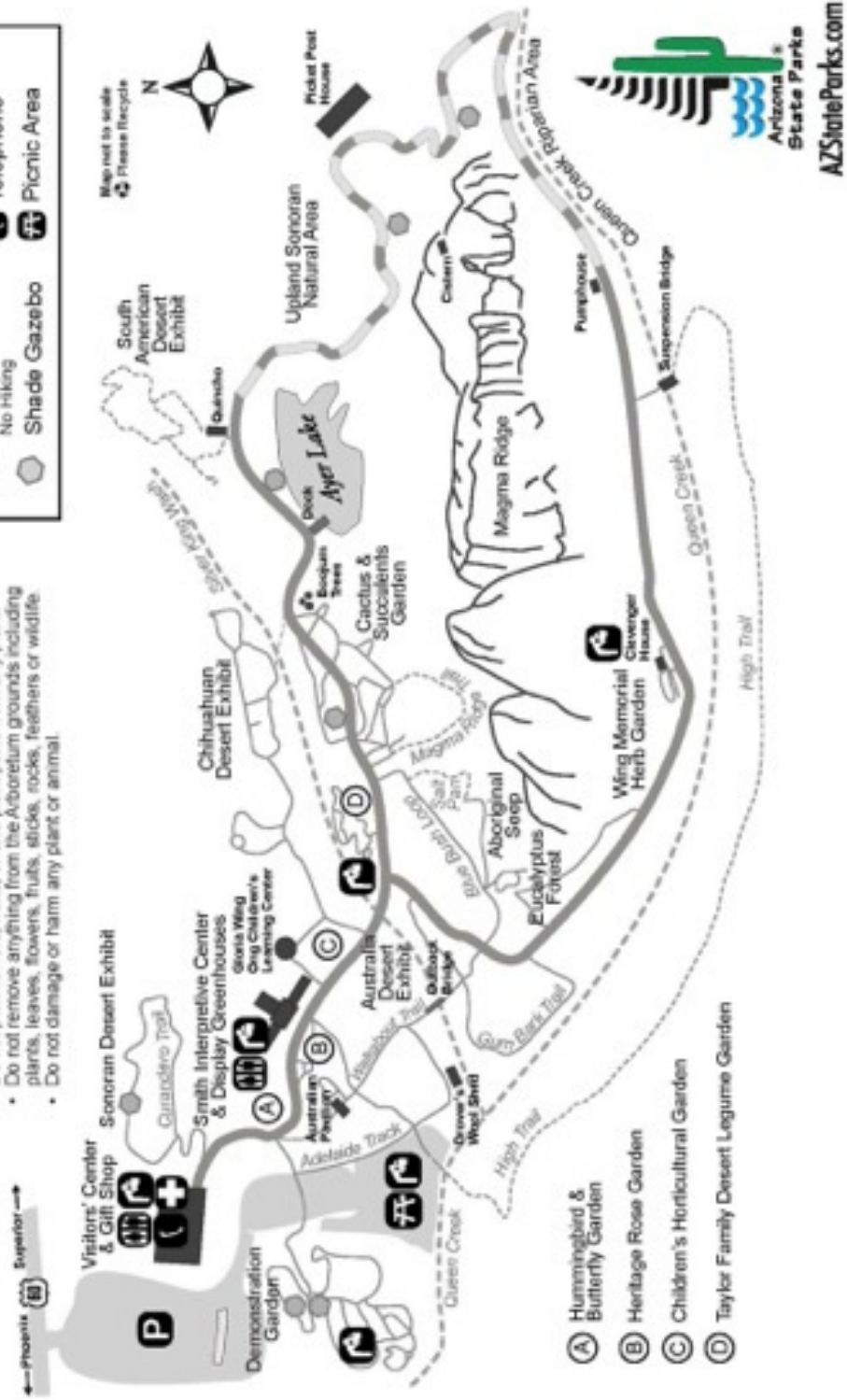
37615 U.S. Hwy 60
 Superior, AZ 85173
 (520) 689-2811

Please help us protect the Arboretum

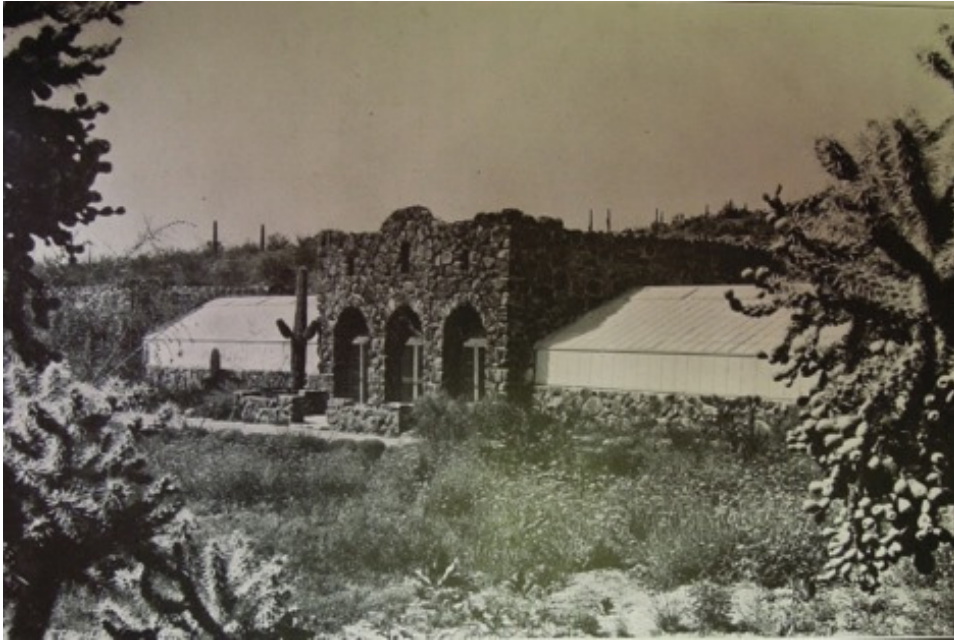
- Stay on designated trails at all times.
- All pets must be on a leash. Pet owners are responsible for cleanup. Please do your part to preserve this privilege.
- Children must be closely supervised by an adult at all times.
- Smoking is strictly prohibited except in the Main Parking Lot.
- Do not pick flowers, fruits, or any plant parts from any plant.
- Do not remove anything from the Arboretum grounds including plants, leaves, flowers, fruits, sticks, rocks, feathers or wildlife.
- Do not damage or harm any plant or animal.

Legend

	Main Loop Trail		Restroom
	Steep Trail		Drinking Water
	Not Accessible		First Aid Station
	Difficult Trail		Telephone
	River/Wash		Picnic Area
	No Hiking		
	Shade Gazebo		



Boyce Thompson Arboretum State Park Map 2012 (Courtesy of Boyce Thompson Southwestern Arboretum Archives).



Smith Building soon after completion in 1925, Looking northwest
(Courtesy of Boyce Thompson Southwestern Arboretum Archives).



Cactus House 1926 (Courtesy of Boyce Thompson Southwestern
Arboretum Archives).



Arboretum Overview, perhaps 1920s or 1930s (Courtesy of Boyce Thompson Southwestern Arboretum Archives).



View of the Pumphouse, probably shortly after 1925, looking southwest (Courtesy of Boyce Thompson Southwestern Arboretum Archives).



Clevenger fields, probably in the early 1920s, looking east (Courtesy of Boyce Thompson Southwestern Arboretum Archives).



Picket Post House Construction, 1920s (Courtesy of Boyce Thompson Southwestern Arboretum Archives).



Cactus Garden, 1920s, looking southwest (Courtesy of Boyce Thompson Southwestern Arboretum Archives).



Reservoir 1925, looking west (Courtesy of Boyce Thompson Southwestern Arboretum Archives).



West Gate Entrance, 1944, looking south (Courtesy of Boyce Thompson Southwestern Arboretum Archives).



Ayer Lake, looking west (Helen Erickson, April 1, 2012).



Boojim Tree (Allison Kennedy, April 1, 2012).



Cactus Garden (Gina Chorover, April 1, 2012).



Clevenger House (Helen Erickson, April 1, 2012).



Chihuahuan Desert Trail (Allison Kennedy, April 1, 2012).



Entrance, looking south (Helen Erickson, April 1, 2012).



Smith House and Greenhouse, looking northwest (Helen Erickson, April 1, 2012).



Greenhouse, looking east, (Gina Chorover, April 1, 2012).



Herb Garden at Clevenger House, looking west (Allison Kennedy, April 1, 2012).



Main Trail, looking east (Allison Kennedy, April 1, 2012).



“Mr. Big”, looking south (Helen Erickson, April 1, 2012).



Palm Forest, looking north (Helen Erickson, April 1, 2012).



Queen Creek and Picket Post House, looking east
(Allison Kennedy, April 1, 2012).



Demonstration Garden, looking west (Allison Kennedy, April 1, 2012).



Demonstration Garden, looking west (Allison Kennedy, April 1, 2012).