INTRODUCTION

Alameda Plaza, located in the center of Santa Barbara, is one of the city’s oldest public spaces. The park spans two city blocks, creating East Alameda Plaza and West Alameda Plaza, offering a botanical setting and some of Santa Barbara’s largest and rarest trees. The Plazas are a popular location for large community events, including Summer Solstice and the Earth Day Festival as well as smaller private events such as weddings and birthdays. East and West Alameda Plazas would not be the arboretum they are today without the conscious planting efforts of past generations. The horticultural legacy of East and West Alameda Plazas began with the first Parks Superintendent, Dr. Doremus, whose intent was to create a park showcasing tree specimens from around the world. His vision still stands in the form of the 82 tree varieties present in the Plazas today. An understanding of the vision for the park, history of tree plantings and the current composition of trees in East and West Alameda Plazas will help to maintain and enhance this horticultural legacy.

METHODS

The libraries at the Santa Barbara Historical Society, the Santa Barbara Botanic Garden and the University of California, Santa Barbara were visited to obtain historical information about East and West Alameda Plazas. In order to ensure all information concerning East and West Alameda Plazas was gleaned, any document or resource referencing the Parks and Recreation Department was reviewed. All historical accounts of Dr. Doremus were also referenced because of his prolific work in East and West Alameda Plazas. The resources from the Santa Barbara Historical Society mainly revealed park history information while the resources at the Santa Barbara Botanic Gardens contained historic species composition of the Plazas. The Pearl Chase files, located in the special collections section of the UCSB library, contained newspaper clippings. Most of the information gleaned from the newspaper clippings concerned major tree removals or other construction projects within the Plazas.

Hard copy files located at the Parks and Recreation Department were also referenced to create a clearer picture of the history of East and West Alameda Plazas. Of the resources examined, the Parks Commission Meeting Minutes revealed information about major tree removals from the Plazas. Aerial images of East and West Alameda Plazas through the years were found in the Public Works archives. These images were compared to determine how canopy coverage has changed over time.

The City’s tree inventory database was consulted to create a list of current species in East and West Alameda Plazas. Including street trees in this inventory allowed the list to be more effectively compared to historical tree inventories that often included specimens that are currently designated as street trees. The City’s tree inventory database was also utilized to get a better understanding of the size composition of the Plazas’ current tree population (Figure 2.). The Trees of Santa Barbara books, held in the Santa Barbara Botanic Garden Library, were used

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1 Designated as a public space on the first city maps in 1855
2 Arbor Access Inventory
to create historical tree inventories. Versions from the 1940, 1948, 1976, and 2007 were referenced. The tree inventories through time were cross-referenced to determine the change in species density and diversity in the Plazas over the years. Because of changes in species classifications and alteration of botanical names over the years, an attempt was made to reconcile all differences in naming. The most common or up to date classifications are used even if the species is referred to as something else in the actual text referenced.

Two site visits to East and West Alameda Plazas were conducted on May 12th, 2015 and June 23rd, 2015. The purpose of the first site visit was to confirm which trees are currently in the Plazas. This site visit was also helpful in confirming the prolific nature of palm species present in the Plazas. The second site visit was taken in the company of the City Arborist to verify certain trees as original plantings.

Throughout the report, scientific names in blue denote a species that is currently represented in the Plazas, although not necessarily an original planting, while scientific names in red denote a species that is no longer represented in the Plazas.

HISTORICAL TREE MANAGEMENT

To create this collection of trees, Dr. Doremus began planting specimens cultivated in his West Alameda Plaza nursery. With the help of a part-time gardener, Dr. Doremus started this nursery “to give his acquisitions a chance to grow until conditions were right for them to be moved to their permanent location.”3 Many of these specimens came from seeds he collected during his travels. Dr. Doremus’ original intent for the Plazas can easily be seen in the variety of tree species planted shortly after his appointment as Parks Superintendent and the inception of the Park Commission, both occurring in 1902. One of the first trees planted was the Northern Rata (Metrosideros robusta) in 1905. Planted in East Alameda Plaza, this species is endemic to New Zealand. It was later removed in 1974 because of old age.4 Several young Montezuma Bald Cypresses (Taxodium mucronatum) and two Fern Pines (Podocarpus gracilior) were planted in the Plazas in 1908. The Fern Pines were propagated by Francesco Franceschi from seeds brought back from Kenya. A male specimen was planted in West Alameda Plaza while a female specimen was planted in East Alameda Plaza.5 (This species was known for 30 years in California as Podocarpus elongata.)6 The Montezuma Bald Cypress trees were propagated by Dr. Franceschi from seeds from the famous Council Tree in Mexico City.7 Although the planting date is unknown, a Schefflera actinophylla grew in Alameda Plaza until it was killed by frost in 1913. In 1914, a Brisbane Box tree (Lophostemon confertus) and a Black Acacia tree (Acacia melanoxylon) were planted, both coming from Australia.8 Three Redwood trees (Sequoia sempervirens) were planted by King Albert, Queen Elizabeth and Prince Leopold of Belgium on their visit to Santa Barbara in 1919.9 While many other trees were planted by Dr. Doremus and the first Park Commission, these records provide a snapshot of the historical precedent for planting worldly trees in the Plazas.

5 Van Rennselaers, Maunsell. Trees of Santa Barbara, 1940.
6 Van Rennselaers, Maunsell. Trees of Santa Barbara, 1948.
7 Van Rennselaers, Maunsell. Trees of Santa Barbara, 1948.
8 Parks Commission Minutes, December 1, 1914.
9 Historic Resources Inventory, Santa Barbara Historical Society, 1978.
Dr. Doremus’ horticultural tradition continued after the original planting of East and West Alameda Plazas. In 1921, Wild Sand Strawberry trees (Arbutus unedo) were planted along Micheltorena Street. In 1926, a Dragon tree (Dracaeno draco) was removed from the corner of Victoria and State Street (the old grounds of the Arlington Hotel) and replanted in West Alameda Plaza. This tree still stands in West Alameda Plaza and was named the National U.S. Champion Dragon Tree by Matt Ritter, a California Polytechnic State University professor, on February 14, 2014. In 1935, two rows of Queen Palms (Syagrus romanoffiana) were planted facing each other along Santa Barbara Street. These Queen Palms, which were cultivated in Dr. Doremus’ “nursery of [Queen Palms] in Alameda Plaza for this purpose”, replaced two rows of Fan Palms that had been planted in 1874. Through the development of the parkway, these trees are now part of the street tree inventory and are the designated street tree for this block.

Many other trees were planted in the early years of East and West Alameda Plazas but the planting dates are unknown. The following trees were planted in East and/or West Alameda Plaza before 1940. Research on historic tree plantings in the Plazas, review of the City’s data on trees in the Plazas, and a site visit indicate that most of the following trees were likely planted before 1925.

- East Alameda Plaza:
  - A Queensland Kauri tree (Agathis robusta) that was propagated from seeds produced by Peter Reidel in 1905.
  - An Australian Willow Myrtle (Agonis flexuosa) was planted overhanging Sola Street. There still exists a specimen overlooking Sola street but based on its small size it was planted later to replace the original planting.
  - At least one Mexican Blue Palm (Brahea armata). There is only one Mexican Blue Palm in the Plazas today but it is under 6 feet tall so it does not represent the original planting.
  - A notable Forest Gray Gum (Eucalyptus teretocornis) that was the tallest in the region at 122 feet in 1939. May be referred to as a Forest Red Gum or Eucalyptus umbellata.
  - A Holly Oak (Quercus ilex). One Holly Oak is recorded in the City’s tree inventory database as being located in East Alameda Plaza but during a site visit with the City arborist, this specimen was determined to be a Coast Live Oak (Quercus agrifolia). Either the Holly Oak was removed and a Coast Live Oak took its place or historically the tree has been misidentified.
  - A Colorado Blue Spruce (Picea pungens).

- West Alameda Plaza:

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10 Parks Commission Minutes, September 15, 1921.
11 De Forest, Elizabeth. The Santa Barbara Gardner: Vol. 1 No. 8 pg 8., 1926. (In the Parks Commission Meeting Minutes, May 3, 1926, a large palm is noted as being removed from Arlington Hotel and replanted in Alameda Plaza in 1926)
12 Baldwin, Randy. “Quest to Find the Biggest Dragon Trees (Dracaena draco), in Santa Barbara, California” http://www.smgrowers.com/info/Dracaena_dracoSantaBarbara.asp
15 Van Rennselaers, Maunsell. Trees of Santa Barbara, 1940.
Two Bangalay trees (*Eucalyptus botryoides*) with one measuring over 100 feet tall in 1940, making it the largest of its kind in California at the time. According to a recent site visit, the only Bangalay trees in the Plazas are located in East Alameda Plaza. They are large enough to be original plantings so it is likely they were falsely recorded as being located in West Alameda Plaza. An unknown number of Canary Island Pines (*Pinus canariensis*).

- A Soapbark tree (*Quillaja saponaria*).
- An Aleppo Pine (*Pinus halepensis*) that was 100 feet in 1974.

### East and West Alameda Plaza

- An unknown number of Victorian Box trees (*Pittosporum undulatum*) with one specimen in East Alameda Plaza measuring over 60 feet tall in 1940.

The following trees were planted in East and/or West Alameda Plaza between 1940 and 1974. The diversity of tree species shows that Dr. Doremus’ legacy was continued long after his direct influence over the park.

### East Alameda Plaza:

- An unknown number of Green Dracaena trees (*Cordyline australis*).
- An unknown number of Loquat trees (*Eriobotrya japonica*).
- One Southern Magnolia (*Magnolia grandiflora*).
- One Snowy Fleece tree (*Melaleuca genistifolia*).
- One Irish Yew tree (*Taxus baccata*).
- An unknown number of Abyssinian Banana trees (*Ensete ventricosum*).
- One Tawhiwhi (*Pittosporum tenuifolium*).

### West Alameda Plaza:

- At least one Deodar Cedar (*Cedrus deodara*).
- An unknown number of Rustyleaf Fig trees (*Ficus rubiginosa ‘australis’*).
- A Nut Pine (*Pinus edulis*).
- An unknown number of Paradise Palms (*Howea forsteriana*).
- Several clumps of Senegal Date Palms (*Phoenix reclinata*).
- An unknown number of Windmill Palms (*Trachycarpus fortunei*).
- An unknown number of *Pittosporum eriocarpum* were planted on the Anacapa Street side.
- A White Ironwood tree (*Vepris undulata*) was planted to the north of the center of the plaza.
- An unknown number of European Fan Palms (*Chamaerops humilis*).

### East and West Alameda Plaza:

- An unknown number of Moreton Bay Fig trees (*Ficus macrophylla*).
- An unknown number of Chilean White Palms (*Jubea chilensis*).
- An unknown number of Canary Date Palms (*Phoenix canariensis*).

Records indicate that the removal of trees in East and West Alameda Plazas focused on removing old specimens that posed a potential hazard to the public. For example, in 1939 a

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18 Currently the only Irish Yew tree in Arbor Access inventory
“fine large Koa (*Acacia koa*) died” and was removed.\(^{19}\) Similarly, in 1942, a Monterey Cypress (*Cupressus macrocarpa*) and Monterey Pine (*Pinus radiata*) were removed because both trees were “dead and dangerous.”\(^{20}\) In 1951, twelve large Monterey Cypress (*Cupressus macrocarpa*) and Monterey Pine (*Pinus radiata*) trees were removed presumably for health or safety concerns. These trees represented individuals from both East and West Alameda Plazas. In 2015, a Southern Magnolia (*Magnolia grandiflora*) was removed from West Alameda Plaza because of old age. This tree likely represented an original planting. Two other Southern Magnolia trees exist in the Plazas, one of which is an original planting.

Similar to the incomplete records of tree plantings in East and West Alameda Plazas, detailed records do not exist for all trees that have been removed. It is known, however, that the following trees were removed from East and West Alameda Plazas between 1940 and 1974.\(^{21,22}\) The rationale behind the removals is unknown. However, City ordinances establish criteria under which tree removals are likely to occur and so it can be assumed that in addition to safety, trees were most likely removed due to disease or death.

- **East Alameda Plaza:**
  - A Port Orford-Cedar (*Chamaecyparis lawsoniana*).
  - A Rose-Apple Jambos (*Syzygiun jambos*) was removed from just south of the center of East Alameda Plaza.
  - A large California Incense Cedar (*Libocedrus deccurrens*).
  - A Pink Flame tree (*Brachychiton discolor*) was removed from East Alameda.

- **West Alameda Plaza:**
  - A small Queensland Nut (*Macadamia ternifolia*).
  - A Lombardy poplar (*Populus nigra italic*) that was across from 116 E Sola Street.
  - An unknown number of Catalina cherry trees (*Prunus lyonii*).

Over the last four decades (from 1974), the planting and management of trees in East and West Alameda Plazas has remained consistent with prior management objectives. A Queensland Kauri Pine was planted in 1987 in East Alameda Plaza.\(^{24}\) This tree, which originates from New Zealand, still stands today and represents a continuation of Dr. Doremus’ horticultural legacy. In 1993, three shade trees were planted at the time the Kids World playground was constructed. This planting was not likely motivated by a desire to carry on the horticultural legacy of East and West Alameda Plazas. Rather, these trees were likely planted to create a more pleasant atmosphere around the playground. The importance of tree diversity was still upheld during this time period since no trees were removed during construction. A few years later, around 2000, former City Arborist Dan Condon planted three African Mahogany trees and a Kentucky Coffee tree, continuing the legacy of creating a park focused around tree diversity. All four of these trees still stand today.

\(^{19}\) NewPress article: “TIMBERRRRR!”, 1949.
\(^{21}\) Park Commission Meeting Minutes, May 18, 1942.
\(^{22}\) Van Rennselaers, Maunsell. *Trees of Santa Barbara*, 1940.
TREES IN THE PLAZA TODAY

The tree plantings and removals in the years following Dr. Doremus’ time as Parks Superintendent suggest that the original intent of East and West Alameda Plazas has remained fairly constant over the years. East and West Alameda Plazas still boast a diverse array of trees, even though species diversity has declined. The Plazas experienced a net loss of thirty tree varieties since the 1970’s. (There were 112 tree varieties in the 1970’s compared to only 82 tree varieties today.\textsuperscript{25}) East and West Alameda Plazas also have many tree varieties that are either very rare to Santa Barbara’s urban forest, occurring 5 or fewer times, or only present in the Plazas. Of the 211 tree varieties that occur 5 times or less in Santa Barbara’s public spaces, 19 of these are represented in East and West Alameda Plazas. Six of those 19 varieties occur only in the Plazas. For example, the Irish Yew tree (\textit{Taxus baccata}) located in East Alameda Plaza is the only specimen of its kind in Santa Barbara. It was also verified by the City Arborist as being an original planting. Understanding the frequency of tree varieties inside East and West Alameda Plazas in relation to their occurrence elsewhere in Santa Barbara will help to maintain species diversity not only inside the Plazas but also in the larger context of Santa Barbara’s urban forest.

Although species diversity has decreased over the past four decades, the total number of trees in East and West Alameda Plazas has increased from 300 trees to 399 trees (including street trees). As depicted through image 1 and image 2 below, total canopy cover has remained relatively constant between 1938 and today. The large, old trees present in the 2012 aerial image most likely are also represented in the 1938 aerial image, with the increase in the number of trees during this time period either being concentrated within the designated circles and/or represented by small specimens that do not drastically alter canopy cover.

On May 12\textsuperscript{th}, 2015, a site visit to East and West Alameda Plazas helped to corroborate the findings noted above. Many of the trees in East and West Alameda Plazas appear to be of similar age because of their mature stature, supporting the assumption that most of the trees in the park are between 90 and 105 years of age.\textsuperscript{26}

The site visit also concluded that 42\% of the trees in West Alameda Plaza and 54\% of the trees in East Alameda Plaza are palm species. These trees represent 21 different palm species, and a quarter (25\%) of all tree varieties in East and West Alameda Plazas. A majority of the young trees in both East and West Alameda Plazas are palm species as well. As the trees aged 90 to 105 years begin to die off, the maturing palm species could begin to dominate the skyline.

A separate site visit was conducted on June 23\textsuperscript{rd}, 2015 with the company of the City Arborist. Previously identified trees were inspected to determine the likelihood that they represent original plantings. In addition to the trees listed below, the City Arborist noted that several Canary Island Palms (\textit{Phoenix canariensis}) and Senegal Palms (\textit{Phoenix reclinata}) were tall enough and had a large enough DBH to be original plantings.

- East Alameda Plaza:
  - One Queensland Kauri (\textit{Agathis robusta}).
  - Two Southern Mahogany trees (\textit{Eucalyptus botryoides}).
  - One Forest Red Gum tree (\textit{Eucalyptus teretocornis}).
  - One White Feather Honeymyrtle tree (\textit{Melaleuca decora}).
  - One Irish Yew tree (\textit{Taxus baccata}).

\textsuperscript{25} A current tree inventory list from Arbor Access was compared to inventories from the early 1970’s.

\textsuperscript{26} The Alameda Plazas Self-Guided Tree Tour pamphlet, 2002.
There are currently four Moreton Bay Fig trees (*Ficus macrophylla*) but only one is an original planting.

- One Southern Magnolia tree (*Magnolia grandiflora*).

### West Alameda Plaza:

- One Dragon tree (*Dracaeno draco*).
- There are currently seven Canary Island Pines (*Pinus canariensis*). Six have been identified as being tall enough to be original plantings and the seventh was likely planted at a later date.
- One Soapbark tree (*Quillaja saponaria*).
- There are currently four Redwood trees (*Sequoia sempervirens*). Three have been identified as probable original plantings and likely represent the Redwood trees that King Albert planted.
- One Bottle tree (*Brachychiton populneus*).

### East and West Alameda Plazas:

- There are currently three Victorian Box trees (*Pittosporum undulatum*) and all three are large enough to be original plantings. The specimen in East Alameda Plaza represents the specimen measured in 1940 but is currently dead and needs to be removed.
- The Fern Pine (*Podocarpus gracilior*) in West Alameda Plaza is definitely an original planting while the specimen in East Alameda Plaza is large enough to be an original planting.
- There are currently six Montezuma Bald Cypress trees (*Taxodium mucronatum*). One is definitely an original planting, three are possibly original plantings, and two are not original plantings.
- Two Chilean Wine Palms (*Jubaea chilensis*).

Based on the results of the site visit with the City Arborist, there are at most 40 trees in East and West Alameda Plazas that represent original plantings. The only urgent health concern is the Victorian Box tree (*Pittosporum undulatum*) in East Alameda Plaza that is dead and needs to be removed. No other visible stresses affect the original plantings but it is likely most of them will reach the end of their life in the next 10-30 years.

**FUTURE MANAGEMENT & KEY CONSIDERATIONS**

A key objective of the 2014 Santa Barbara Urban Forest Management Plan is to “maintain and protect historic and culturally significant trees.” Key considerations to the successful implementation of this objective include maintaining the species diversity, age diversity and horticultural heritage of East and West Alameda Plazas. As previously noted, species diversity has decreased from 112 tree varieties in the 1970’s to 82 tree varieties today. Although East and West Alameda Plazas still represent one of Santa Barbara’s most horticulturally diverse parks, it is important to note this downward trend. A lack of commercial cultivation of, and thus access to, certain tree species complicates the issue of regaining lost tree species. As outlined in the Santa Barbara Urban Forest Management Plan, “maintaining high species diversity can provide increased protection against disease, pest and environmental stresses.”

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28 Comparison of 1970’s inventory to Arbor Access.
changes.” Secondary benefits of species diversity include “nearly year-round color, fragrance and texture due to varied growing seasons, and educational opportunities in the areas of species preservation, ecology, biodiversity, and cultural uses of trees.”

Improving the age diversity of trees in East and West Alameda Plazas can be achieved in conjunction with maintaining species diversity while creating added benefits as well. While varied tree age reduces the possibility that all trees in the stand begin to die off at the same time, having a “healthy mixture of young, medium and older trees also provides a more complex habitat for wildlife and can support a greater number of species.”

Dr. Doremus is credited with planting many of the mature trees currently in East and West Alameda Plazas, which leads to the assumption that these trees were planted between 1910 and 1925. Because many of the trees in East and West Alameda Plazas are of similar age, losing a number of trees within a short period of time becomes a concern. Since urban forest management objectives prioritize maintaining species and age diversity within City parks, especially historical sites such as Alameda Plaza, it will be important to focus on planting young tree species that are not currently present in the Plazas or whose presence in the Plazas is threatened.

RECOMMENDATIONS

A number of options exist that will help to maintain the historical intent of the Plazas, their diverse tree population and their unique aesthetic nature that makes them a popular location for community and private events alike. It is recommended that planting efforts be focused around increasing species diversity to help counteract both the decline in tree varieties since the 1970’s and the inevitable die-off of many of the older trees within the next 10-30 years or more as they reach the end of their life-cycle. The increase in species diversity can come from either a re-introduction of lost species, an increase in the number of specimens of current species, or an addition of entirely new species. If the motivation for planting new trees is to replace older specimens that are reaching the end of their life cycle, planting them in the vicinity of the older trees would be logical. Otherwise, alternate planting locations can be determined.

Another option for the protection of rare trees in East and West Alameda Plazas is to consider recommending certain specimens for historic designation. Multiple specimens would fit the criteria based on their “identification with a person or persons who significantly contributed to the culture and development of the City” and/or their “character, interest or value as a significant part of the heritage of the City.” Historic recommendation of trees in East and West Alameda Plazas should only be pursued after considering the benefits of doing so, such as allowing for an educational opportunity and elevating the status of the resources in City parks. The list of potential specimens to nominate for historical designation can come from the trees enumerated on pages 6 and 7 of this report.

In order to counteract the lack of commercial cultivation of certain tree species, working with local nurseries to propagate commercially unavailable rare species is outlined in the Santa Barbara Urban Forest Management Plan as a potential solution. To this aim the development of the following is recommended:

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31 The Alameda Plazas Self-Guided Tree Tour pamphlet, 2002.
• Develop a tree planting plan that identifies possible planting locations in consideration of park uses (e.g. maintaining open space for recreation) and maintenance.
• A prioritized list of tree species historically present in the Plazas that are no longer commercially available. As discussions with local nurseries move forward, this list will serve as a focal point for future species propagation.
• A list of potentially viable new species (never before present in the Plazas) created with the assistance of the City Arborist, among others. This list should identify species currently being cultivated by local nurseries that would do well in the Plazas’ environment as well as remain consistent with the types of exotic species historically introduced into the Plazas. Taking into consideration a species’ country of origin may be a strategy for achieving consistency.
• A plan to further encourage education and outreach in the Plazas to inform the public about park and tree history.
• A database that prioritizes maintaining the historical records of tree plantings and removals in East and West Alameda Plazas and Santa Barbara’s entire urban forest as a whole.
• A plan to assist historic trees threatened by the drought. This may require the designation (or the recommendation for designation) of historic trees within the Plazas.

It is recommended that the current use of the Plazas as a location for large community events and small private events be kept in mind during all future management decisions.

Figure 1.

![Size Composition of Trees in East and West Alameda Plazas (2015)](image)

Figure 1. illustrates the size composition of trees in East and West Alameda Plazas
Image 1. 1938 aerial image of East and West Alameda Park

Image 2. 2012 aerial image of East and West Alameda Park