Southeast Trees:
A Multi-Site Tree Planting and Evaluation Project in Southeast Los Angeles County
Part 6. Update to El Dorado East Regional Park

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Parts 1 and 2 of this series provided an introduction, rationale, and background to this multi-site, tree planting and evaluation project in southeast Los Angeles County and adjacent Orange County, including an illustrated and annotated list of the more than 125 plantings made at El Dorado East Regional Park in Long Beach beginning in late 2015 and continuing through 2019 (Hodel 2020a) and 82 plantings made at city parks in Lakewood and Cerritos in Los Angeles County and Seal Beach in adjacent Orange County in 2017 and continuing through 2020 (Hodel 2020b). Parts 3 and 4 (Hodel and Holguin 2020, Hodel et al. 2020) provided illustrated and annotated lists of tree plantings made in October, 2020 at Satellite Park, Cerritos (seven trees) and in November and December, 2020 at Palms Park, Lakewood (22 trees). Part 5 of this series (Hodel and Talarico (2021) provided an update to plantings made in December, 2020 in Seal Beach. Here we provide an update to El Dorado East Regional Park in Long Beach, including plantings made in February and March, 2021, most of which were replacements for newly planted trees that had died.

Summary of Tree Changes at El Dorado East Regional Park

By the fall of 2020, we had identified 10 trees from previous plantings that had died for various reasons (**Table 1**). Most of these trees were small, out of 1-gallon-size containers, and had been planted about a year earlier, in November, 2019. The site had experienced an irrigation malfunction during the summer of 2020 and many trees received less than adequate water, which for the small, newly planted trees was their death knell. Other suspected factors leading to death included ever-present gophers, too deep planting, typical winter cold, branch disease, and perhaps even excessive water. Nonetheless, the tree deaths provided an opportunity for planting additional species in February, 2021, utilizing the same exact sites as the dead trees, sometimes even reusing the same wire-mesh gopher barrier root basket (**Table 2**). At about the

same time, in March, 2021, we took the opportunity to plant five additional trees in new locations at the site (**Table 3**) and relocate two trees from previous plantings that had been unknowingly planted adjacent to sprinkler nozzles (**Table 4**).

TABLE 1. DEAD TREES.

Dead Trees: Botanical Name	**Accession Code Number**	**Possible Cause of Death**
Banksia seminuda	2019-11-ED105	Excessive water.
Castanospermum australe	2019-11-ED123	Cold; insufficient water.
Ceratopetalum gummifera	2019-11-ED88	Insufficient water.
Eucalyptus forrestiana	2019-11-ED116	Cold; insufficient water.
Ficus aurea	2019-11-ED120	Cold; insufficient water.
Ficus benghalensis	2016-10-ED50	Cold.
Ficus subpisocarpa	2016-10-ED48	Disease (branch dieback).
Lyonothamnus floribundus subsp. asplenifolius	2018-02-ED10	Gophers; too deep planting.
Sterculia quadrifida	2019-11-ED121	Cold; insufficient water
Trachycarpus wagnerianus	2018-12-ED80	Insufficient water.

TABLE 2. DEAD TREES AND THEIR REPLACEMNT TREES.

Replacement Trees: Botanical Name	**Accession Code Number**	**Dead Trees: Botanical Name**	**Accession Code Number**
Bucida buceras × 'Shady Lady'	2021-02-ED132	Ficus subpisocarpa	2016-10-ED48
Davidsonia pruriens*	2018-12-ED76	Lyonothamnus floribundus subsp. asplenifolius	2018-02-ED10
Ficus luschnathiana	2021-02-ED134	Ficus aurea	2019-11-ED120
Ficus microcarpa 'Green Mound'	2021-02-ED139	Eucalyptus forrestiana	2019-11-ED116
Ficus natalensis	2021-02-ED136	Castanospermum australe	2019-11-ED123
Ficus rubiginosa	2021-02-ED135	Ficus benghalensis	2016-10-ED50
Ficus sp.	2021-02-ED131	Ceratopetalum gummifera	2019-11-ED88
Melicytus dentatus	2021-02-ED133	Banksia seminuda	2019-11-ED105
Oncoba spinosa	2021-02-ED138	Trachycarpus wagnerianus	2018-12-ED80
Sterculia quadrifida	2021-03-ED144	Sterculia quadrifida	2019-11-ED121

* = relocated tree. See Table 4.

TABLE 3. NEW TREE PLANTINGS.

Botanical Name	Accession Code Number
Araucaria columnaris	2021-03-ED141
Cassia brewsteri	2021-03-ED140
Cycas revoluta	2021-03-ED142
Cycas revoluta	2021-03-ED143
Ficus rubiginosa	2021-02-ED137

TABLE 4. RELOCATED TREES.

Botanical Name	Accession Code Number	Old Coordinates	New Coordinates
Davidsonia pruriens*	2018-12-ED76	33.8222768N, 118.0884440W	33.8222373N, 118.088427W
Ficus urceolaris	2018-12-ED74	33.8223423N, 118.0886480W	33.822266N, 118.088613W

* = replaced dead *Lyonothamnus floribundus* subsp. *asplenifolius* 2018-02-ED10.

The Trees

Here we list, discuss, and illustrate the new and replacement trees. The relocated trees can be viewed in Hodel (2020a).

We planted new and replacement trees mostly out of 5-gallon-size containers in February and March, 2021 (**Fig. 1**). We always planted within wire-mesh gopher barrier root baskets and used unamended site soil that came out of the hole as the backfill. We carefully inspected root systems before planting and if necessary corrected circling or kinked roots. The trees had been grown without stakes and judiciously structurally pruned to develop a strong central leader in the nursery; however, we staked the trees after planting, but not so much for support as for protective obstructions against errant gang mowers. We mulched and irrigated the trees individually after planting, and then they are irrigated according to the regular schedule at the site. It was an unusually windy and dry fall and winter (rainy season) and now irrigation is the primary factor for tree establishment and growth.

The trees are listed alphabetically and followed on the same line by the latitude and longitude coordinates and an accession number that gives the year and month planted, and a two- letter code for location and a number that corresponds to that tree in a spreadsheet database. For

1. Co-authors Oriana Dominguez (left) and Eduard Magallon remove a dead tree and prepare the site for a replacement tree.

example, *2021-03-ED142* signifies that the tree was planted in 2021, March, at ED (El Dorado East Regional Park in Long Beach) and is entry 142 in the spreadsheet database for that park. The common names(s) of the tree (in UPPERCASE), if any, mostly taken from the internet, follow(s) on the next line. The source of the tree or propagative material and planting month and year are on the lines below the common name. Growth data by date, trunk diameter (at 30 cm above ground), and overall height is provided in table format. Because some of the trees were less than 4.5 feet tall (the standard height for measuring trunk diameter) when planted, we measured trunk diameter at 30 cm above the soil so all trees could be uniformly assessed. As the trees grow, we will transition to the standard trunk diameter at 4.5 feet.

A performance rating follows the growth table and considers several factors, including growth rate, pruning and training needs, pest and disease activity, and abiotic disorders like cold or heat damage, nutritional status, and perceived moisture effects. The rating is: 1 = dead or nearly so; 2 = poor; 3 = average; 5 = good; 5 = excellent. Completing the treatment is a section titled Notes, a narrative providing a general summary of the tree's history, appearance, performance, nomenclature, and/or miscellaneous information.

Araucaria columnaris 33.822462N, 118.086535W 2021-02-ED141 **Fig. 2.**
COOK PINE
Source: Donated seedling from a Los Angeles County Master Gardener who obtained the plant from Trader Joe's, Pasadena, CA.
Planted: February 2021.

Growth	Diam. (cm, 30 cm above ground)	Diam. (cm, standard height)	Ht. (m)
2/2021	1.4	---	1.35

Rating: 5.
Notes: This new plant was a moderate and steady grower in the nursery and needed no pruning to develop and maintain a central leader.

Bucida buceras × 'Shady Lady' 33.8224383N, 118.086211W 2021-02-ED132 **Fig. 3**
SHADY LADY BLACK OLIVE
Source: Cutting-grown plant from arborist Ken Greby, Yorba Linda, CA.
Planted: February 2021.

Growth	Diam. (cm, 30 cm above ground)	Diam. (cm, at standard height)	Ht. (m)
2/2021	1.3	0.3	1.65

Rating 3.
Notes: This plant, a replacement for the *Ficus subpisocarpa* that had died, was a slow but steady grower in the nursery that tended to suffer slightly during the winter. However, it needed no pruning to develop and maintain a strong central leader.

Cassia brewsteri 33.822635N, 118.086158W 2021-02-ED140 **Fig. 4**
BREWSTER'S CASSIA
Source: Seed-grown from The Huntington Library, Art Galleries, and Botanical Gardens, San Marino, CA.
Planted: February 2021.

Growth	Diam. (cm, 30 cm above ground)	Diam. (cm, standard height)	Ht. (m)
2/2021	0.7	---	1.35

Rating: 4.
Notes: This handsome plant has been a moderate grower in the nursery and needed little structural pruning to attain a strong central leader.

Cycas revoluta 33.822333N, 118.087674W 2021-03-ED142 **Fig. 5**
SAGO PALM
Source: Plant, Hodel residence, Lakewood, CA, originally an offshoot from a large plant from Richard W. Palmer, Whittier, CA.
Planted: March 2021.

2. *Araucaria columnaris*.

3. *Bucida buceras* 'Shady Lady'.

4. *Cassia brewsteri*.

5. *Cycas revoluta* (2012-03-ED142).

Growth	Diam. (cm) caudex	Ht. (m) caudex
3/2021	18.0	0.18

Rating: 5.
Notes: This plant was a slow but steady grower in the nursery. We planted it in the group planting of the other members of this species.

Cycas revoluta 33.822301N, 118.087691W 2021-03-ED143 **Fig. 6**
SAGO PALM
Source: Plant, Hodel residence, Lakewood, CA, originally an offshoot from a large plant from Richard W. Palmer, Whittier, CA.
Planted: March 2021.

Growth	Diam. (cm) caudex	Ht. (m) caudex
3/2021	16.0	0.15

Rating: 5.
Notes: This plant was a slow but steady grower in the nursery. We planted it in the group planting of the other members of this species.

Ficus luschnathiana 33.8229678N, 118.086765W 2021-02-ED134 **Fig. 7**
Source: Cutting-grown from a remnant root sucker in the nursery of the Los Angeles County Arboretum and Botanic Garden, Arcadia, CA.
Planted: February 2021.

Growth	Diam. (cm, at 30 cm above ground)	Diam. (cm, at standard height)	Ht. (m)
2/2021	2.5	1.4	2.15

Rating: 5.
Notes: Also known as *Ficus monckii* and a replacement for the *Ficus aurea* that had died, this handsome South American native was a fast and steady grower in the nursery with no need for structural pruning and training to develop and maintain a strong central leader. It has handsome dark green leaves and striking reddish new growth.

Ficus microcarpa 'Green Mound' 33.8230041N, 118.086115W 2021-02-ED139 **Fig. 8**
GREEN MOUND FIG
Source: Purchased plant, Kartuz Greenhouse, Vista, CA.
Planted: February 2021.

Growth	Diam. (cm, 30 cm above ground)	Ht. (m)
2/2021	2.5	1.02

Rating: 5.
Notes: This plant, a replacement for the *Eucalyptus forrestiana* that had died, was a slow but steady grower in the nursery with few problems but, because it has a tendency for lateral growth, it needs judicious structural pruning and training to establish and maintain a central leader.

6. *Cycas revoluta* (2021-03-ED143).

7. *Ficus luschnathiana*.

8. *Ficus microcarpa* 'Green Mound'

9. *Ficus natalensis*.

Ficus natalensis 33.8228465N, 118.087110W 2021-02-ED136 **Fig. 9**
NATAL FIG
Source: Purchased plant, Leon Massoth, Xotx Tropico Nursery, Los Angeles, CA.
Planted: February 2021.

Growth	Diam. (cm, 30 cm above ground)	Ht. (m)
2/2021	1.7	1.40

Rating: 4.
Notes: This African fig, a replacement for the *Castanospermum australe* that had died, was an upright but moderate grower in the nursery and needed little structural pruning to establish and maintain a central leader.

Ficus rubiginosa 33.8225596N, 118.086550W 2021-02-ED135 **Fig. 10**
RUSTY-LEAF FIG, PORT JACKSON FIG
Source: Seed-grown, exact source unknown, CA.
Planted: February 2021.

Growth	Diam. (cm, 30 cm above ground)	Diam. (cm, at standard height)	Ht. (m)
2/2021	2.3	0.8	1.95

Rating: 5.
Notes: This plant, a replacement for the *Ficus benghalensis* that had died, grew fast and vigorously in the nursery and needed little structural pruning to develop and maintain a strong central leader. It might be the cultivar 'El Toro'.

Ficus rubiginosa 33.8225596N, 118.086550W 2021-02-ED137 **Fig. 11**
RUSTY-LEAF FIG, PORT JACKSON FIG
Source: Seed-grown, exact source unknown, CA.
Planted: February 2021.

Growth	Diam. (cm, 30 cm above ground)	Diam. (cm, at standard height)	Ht. (m)
2/2021	3.8	0.9	1.70

Rating: 5.
Notes: A new planting, this plant grew fast and vigorously in the nursery and needed little structural pruning to develop and maintain a strong central leader. It might be the cultivar 'El Toro'.

Ficus sp. 33.8219274N, 118.088139W 2021-02-ED131 **Fig. 12**
FIG
Source: Jim Sherman Nursery, Vista, CA.
Planted: February 2021.

10. *Ficus rubiginosa* (2021-02-ED135).

11. *Ficus rubiginosa* (2021-02-ED137).

12. *Ficus* sp.

13. *Melicytus dentatus*.

Growth	Diam. (cm, 30 cm above ground)	Diam. (cm, standard height)	Ht. (m)
2/2021	2.0	0.8	1.65

Rating: 5.

Notes: This unidentified but handsome fig, a replacement for the *Ceratopetalum gummifera*, was a strong, upright grower in the nursery and needed little structural pruning to establish and maintain a central leader.

Melicytus dentatus 33.8224904N, 118.086108W 2021-02-ED133 **Fig. 13**

TREE VIOLET

Source: Purchased plant, The Huntington Library, Art Galleries, and Botanical Gardens, San Marino, CA.

Planted: February 2021.

Growth	Diam. (cm, 30 cm above ground)	Ht. (m)
2/2021	1.0	1.32

Rating: 5.

Notes: This Australian native, a replacement for the *Banksia seminuda* that had died, was a strong, upright grower in the nursery and needed little if any structural pruning to establish and maintain a central leader. It is sometimes called *Hymenanthera dentata*.

Oncoba spinosa 33.8221676N, 118.0881030W 2021-02-ED138 **Fig. 14**

FRIED EGG TREE

Source: Purchased plant, Ed Green, San Juan Capistrano, CA.

Planted: February 2021

Growth	Diam. (cm, at 30 cm above ground)	Diam. (cm, at standard height)	Ht. (m)
2/2021	1.5	0.7	1.85

Rating: 4.

Notes: This uncommon and unusual, spiny plant, a replacement for a *Trachycarpus wagnerianus* (2018-12-ED80) that had died, was a moderate grower in the nursery needing no pruning to establish and maintain a central leader.

Sterculia quadrifida 33.822907N, 118.086952W 2021-03-ED144 **Fig. 15**

PEANUT TREE

Source: Kathy Musial, The Huntington Library, Art Galleries, and Botanical Gardens, San Marino, CA.

Planted: March 2021.

Growth	Diam. (cm, at 30 cm above ground)	Ht. (m)
3/2021	0.5	0.56

14. *Oncoba spinosa*.

15. *Sterculia quadrifida*.

Rating: 3.
Notes: This small plant, grown in a tree pot and a replacement for the *Sterculia quadrifida* that had died, has a deep, well developed root system. Hopefully, it will establish well during this summer's growing season.

Acknowledgements

We sincerely thank Cris Falco of West Coast Arborists, Inc. for mapping the trees; Hodel's wife Marianne for helping to measure the trees and her support and encouragement; and Kathy Musial, Ken Greby, and Leon Massoth for providing plants that Hodel grew on and planted at El Dorado.

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Publication Date: 1 April 2021.

PalmArbor: *http://ucanr.edu/sites/HodelPalmsTrees/PalmArbor/*

ISSN 2690-3245

Editor-In-Chief: Donald R. Hodel
Hodel Palms and Trees: *http://ucanr.edu/sites/HodelPalmsTrees/*