

MAKING BIGGER PICTURES

**Connecting Collections
with Contemporary Culture**

David Bryant | Loraine Washburn, PhD
Rancho Santa Ana Botanic Garden

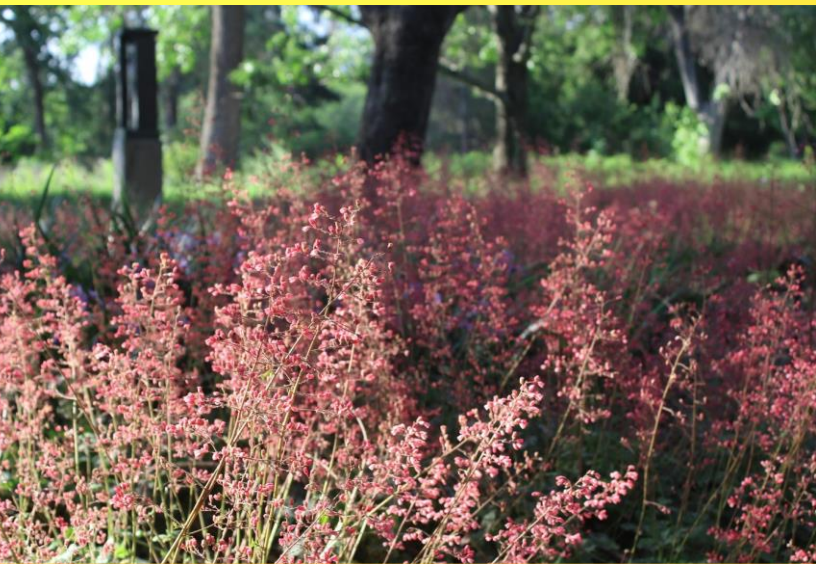


Who we are:

Rancho Santa Ana Botanic Garden is the largest garden dedicated to the research, conservation, perpetuation and public display of California native plants.



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California is a biodiversity hotspot - our mission is to keep it that way.

- California has more than 5000 native plant species - more than any other state
- $\frac{1}{3}$ of these are only found in California
- $> \frac{1}{3}$ are rare/ threatened
- Southern California plants face many threats, including habitat loss and degradation, invasives, increased fire frequency and climate change



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We know we're relevant.

How do we convince an
ever-evolving public?



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“Audiences nationwide are breaking down cultural norms and redefining them... Now culture can mean Caravaggio, Coachella, Tannhäuser, or taco trucks.”



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Maggie Hartnick
Managing Director of LaPlaca Cohen Marketing Firm

WHY ORIGINAL EXHIBITIONS?



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ORIGINAL EXHIBITIONS

- **Attract** new audiences
- **Provide** fresh perspectives for returning guests
- **Boost** attendance
- **Provide** incentives for membership
- **Energize** the heartbeat of the Garden
- **Keep** the Garden's mission relevant



OUR (FUN) CHALLENGES



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OUR (FUN) CHALLENGES

Particular Focus

Garden dedicated entirely to California native plants

Limited palette.

Audience Diversity

Attract and speak to broad demographic.

Geography

Location, Location, Location.



OUR (FUN) CHALLENGES



OUR APPROACH



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OUR APPROACH

The Exhibition as a Bridge

1. Siting the Bridge
2. Drawing up the blueprint
3. Construction



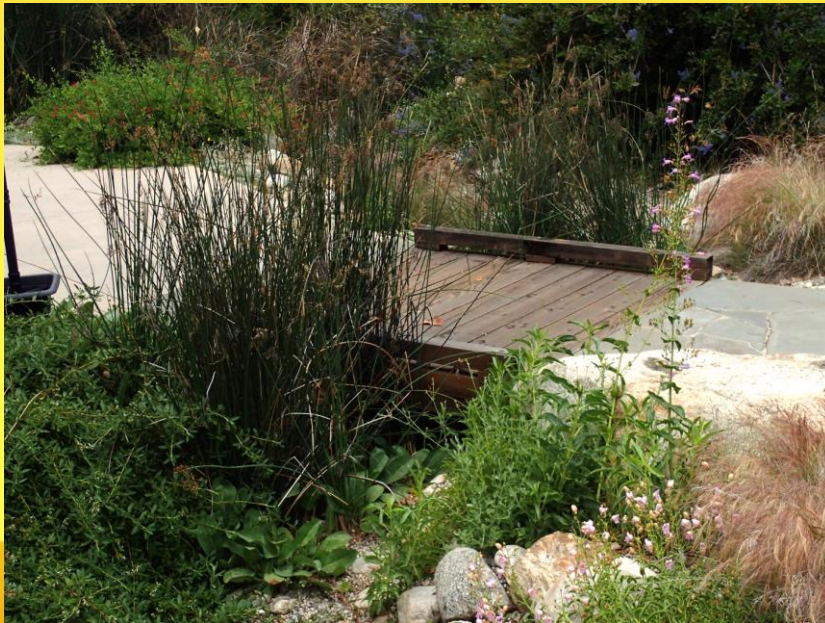
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OUR APPROACH

The Exhibition as a Bridge

4. Opening the Bridge

5. Evaluate the bridge



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LOCALLY GROWN

A FUTURE FOR
NATIVE FOODS





CONCEPTION

- Trendiness of Locally Grown Food
- Showcasing a Farmer's Market of the Future
- Capturing the flavor of California



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LOCALLY
GROWN
A Future for Native Foods

WHY?

- Popularity of previous RSABG events and exhibits focused on food.
- Everybody loves food.
- Flourish of press on native plants in food and foraging.



LOCALLY GROWN
A Future for Native Foods

PLANT SELECTION

- Meet the exhibition theme
- Plants need to survive in containers in the duration of the exhibit
- Ideally plants that visitors can grow themselves
- Available in our Garden Production Nursery or through an outside vendor

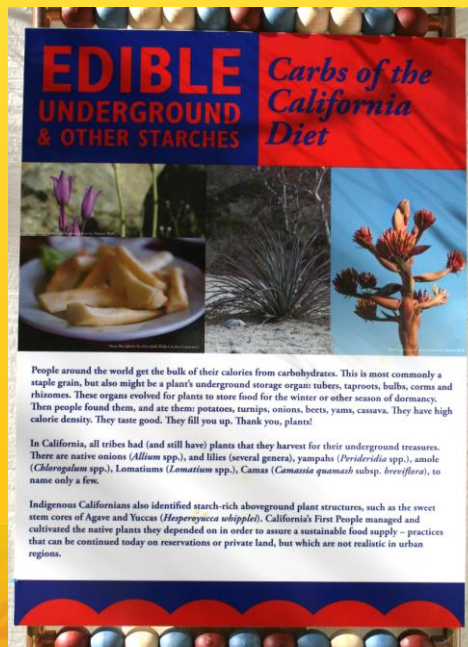




DESIGN

Graphics

- Farmer's markets as guide
- Americana colors
- Fruit and other roadside vendor graphics
- Wooden materials





DESIGN

Layout

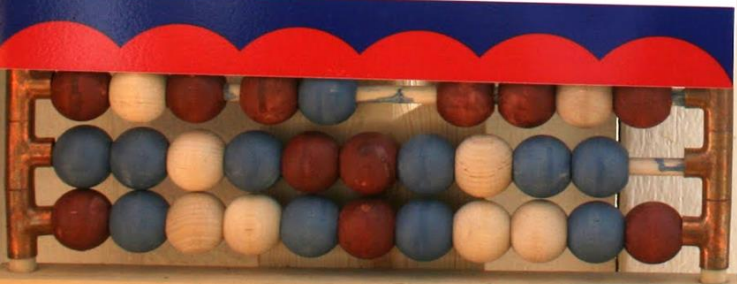
- Arranged by food groups with diverse visual schematics
 - Bar (beverages)
 - Fruit
 - Vegetables
 - Roots & Tubers
 - Herbs & Spices





Complex aromas and flavors enrich our lives, whether used in food or in drink. There's an excitement that wine enthusiasts know from the pleasure of sipping a prize vintage; a similar pleasure can be found at this California native plant bar. As we imbibe a complex beer, gin, or herbal tea, the taste may evoke images of landscape and place or spark a long-lost memory. The recent growth in local microbreweries and distillers of spirits that incorporate California native plants represents this thirst for evocative local flavors and scents.

The plants of California have always been used and infused, juiced, fermented, or distilled to make teas, ciders and beverages that are tasty and healthy. Today, we can make tasty brews from local species grown in our gardens. Try quenching your thirst with lemonade from Lemonade berry (*Rhus integrifolia*), manzanita cider (*Arctostaphylos* spp.), grape juice from native grapes (*Vitis californica* or *V. girdiana*), toyon cider (*Heteromeles arbutifolia*), or fermented beverages infused with a rich palette of flavors from the wilds. Ailments also can be treated with medicinal teas from many native plants.



INTERPRETATION

Research

- Ethnobotanical uses of CA native plants
- Edibility <--> Deliciousness
- Potential toxicity
- Are restaurants / breweries using these plants?
- Conservation Concerns



Sage Shortbread
32 servings

CALIFORNIA NATIVE FOODS

Ingredients

- 3 cups white whole wheat flour, sifted
- 1 cup powdered sugar
- 1 teaspoon sea salt
- 2 tablespoons chopped fresh sage (such as *Salvia clevelandii* 'Winifred Gilman')
- 2 lemons, zested
- 1 cup extra virgin olive oil

Instructions

- Preheat the oven to 325° F.
- In a medium-sized bowl, whisk together the flour, powdered sugar, salt, sage and lemon zest. Pour in the olive oil and stir until it is incorporated.
- Transfer the dough to a greased 9 X 9 inch baking dish and press into an even layer. Prick the surface of the dough all over with a fork.
- Bake for about 45 min until the surface feels firm to the touch and is lightly golden around the edges.
- Remove from the oven and let the pan cool for 20 minutes. Then, using a very sharp knife, slice shortbread into squares or rectangles.
- Let the cookies cool before removing them from the pan using a small spatula.

CALIFORNIA SAGEBRUSH
Artemisia californica

HABIT: shrub 4-5' tall & wide, leaves finely divided, aromatic when crushed; flowers inconspicuous

CARE: full sun, good drainage, drought tolerant once est.

TRY: California IPA with California Sage

Check our nursery for this plant!
Inventory does vary.



INTERPRETATION

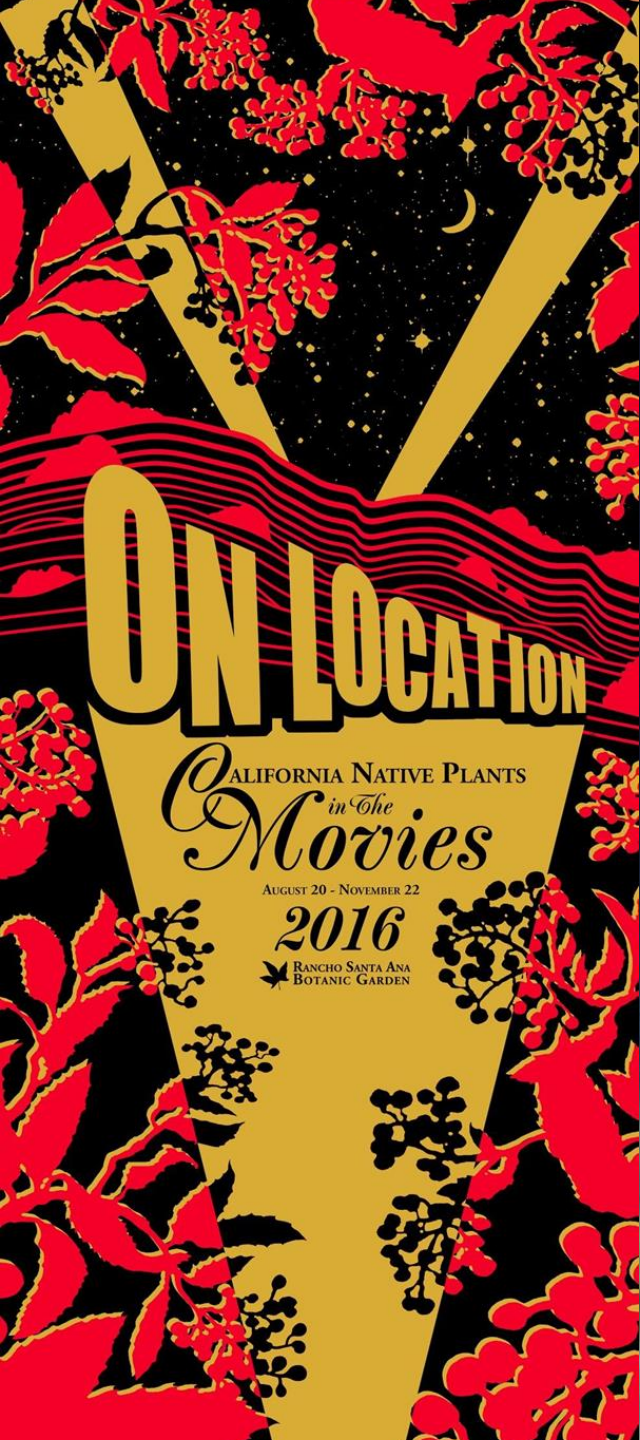
- Broad brush overview of each exhibit section
- Recipes
- Suggested dishes
- Availability in our Nursery

FRUITS *And for Dessert!*



Fruits evolved to satisfy the sweet tooth of animals (including *Homo sapiens*), to trick them into dispersing seeds away from Mama Plant. Yes, plants are parents, too. Here's the dilemma: how do you keep the kids home long enough to teach them all they need to know, and then get them out of the house when the time is right? For a plant, this means you need to hang on to your fruits while the seeds develop and mature, and then to get your offspring out of your own shadow. One solution: have a fruit that tastes bad, if not outright poisonous, until the seeds are mature — then turn into something that birds and mammals will seek out for lunch.

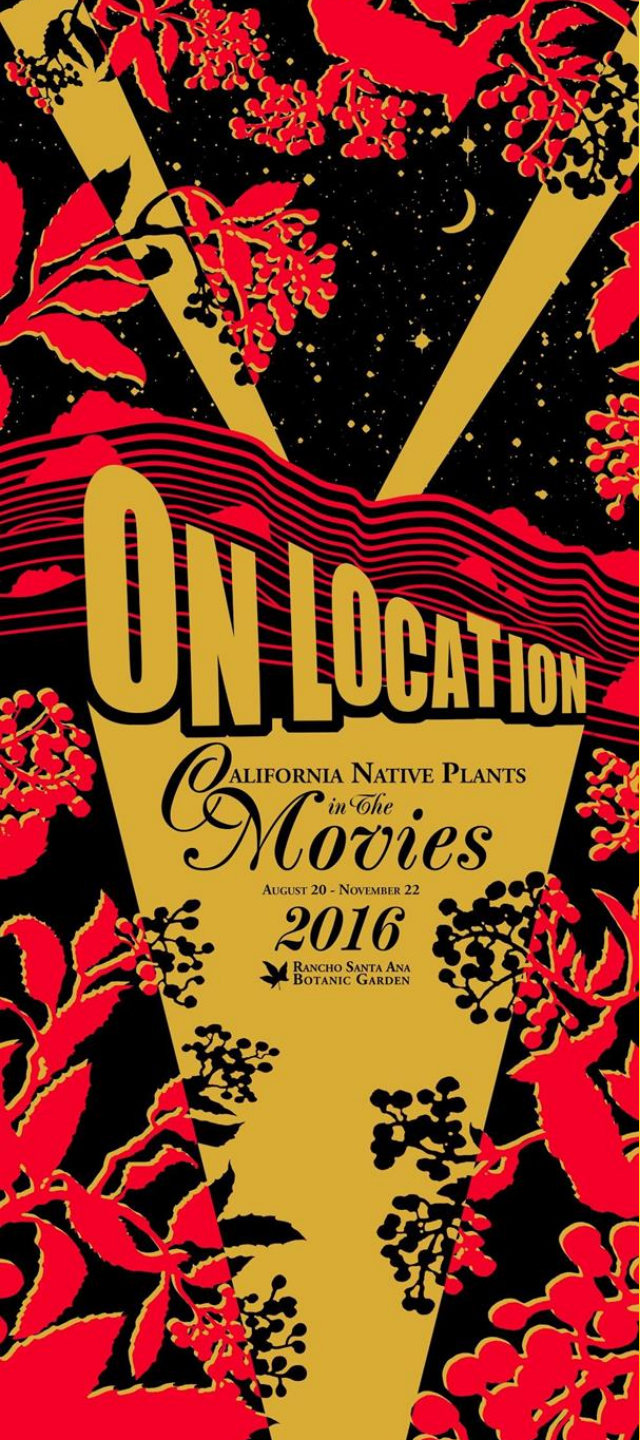




CONCEPTION

- *Heteromeles* & the Hollywood Myth
- Hollywood at our Doorstep
- Bringing California Native Plants out of the Background
- Revealing subliminal messaging of plants in the movies





WHY?

- Movies are an integral American pastime and far-reaching art form
- Examining Hollywood's environmental impact
- Collaboration with the Academy of Motion Picture Arts and Sciences
- Plants are local and specific, setting a mood in our lives as well as in the movies

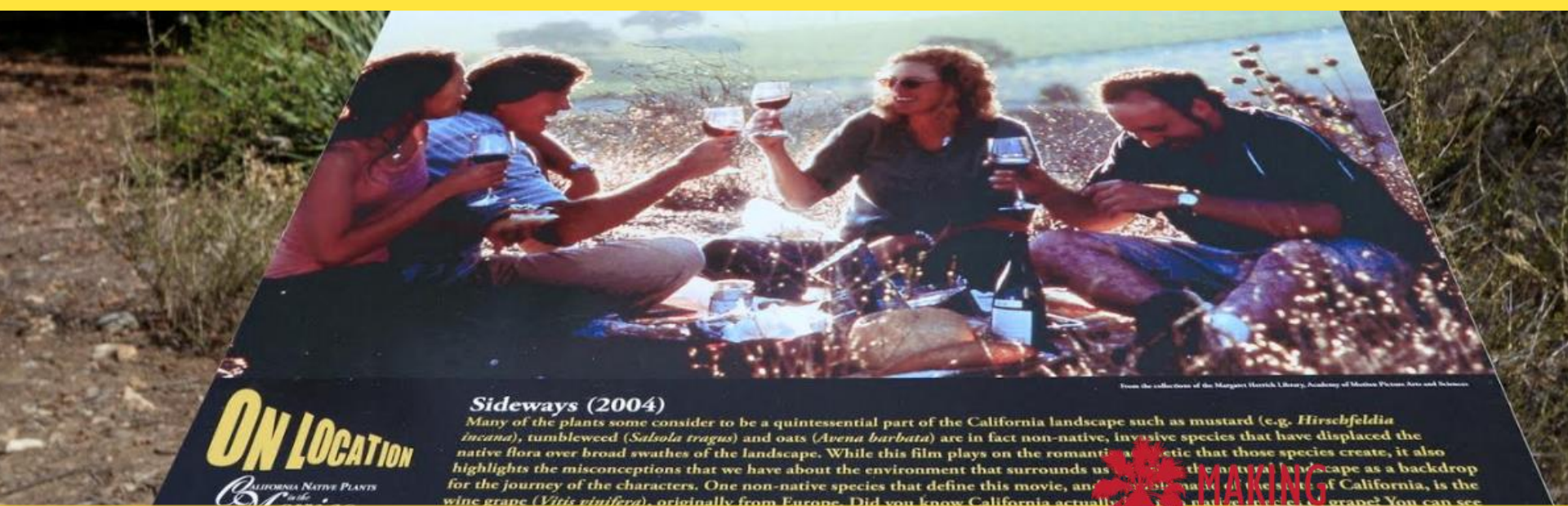




DESIGN

- Linked the Art Gallery and Outside Exhibit
- Animating plants and landscapes in the Garden





ON LOCATION
CALIFORNIA NATIVE PLANTS

Sideways (2004)

Many of the plants some consider to be a quintessential part of the California landscape such as mustard (e.g. *Hirschfeldia incana*), tumbleweed (*Salsola tragus*) and oats (*Avena barbata*) are in fact non-native, invasive species that have displaced the native flora over broad swathes of the landscape. While this film plays on the romantic aesthetic that those species create, it also highlights the misconceptions that we have about the environment that surrounds us. The natural landscape as a backdrop for the journey of the characters. One non-native species that define this movie, and is the staple of the state of California, is the wine grape (*Vitis vinifera*), originally from Europe. Did you know California actually has a native grape? You can see

From the collections of the Margaret Herrick Library, Academy of Motion Picture Arts and Sciences





California

With over 8,000 miles of coastline, California is a state of diverse landscapes and ecosystems. From the rugged mountains of the Sierra Nevada to the sun-drenched beaches of the Central Coast, the state offers a wide variety of natural beauty. The state's diverse geography and climate have led to the development of a rich and varied flora and fauna. The state's natural resources are a source of pride and a source of inspiration for many of its residents.

California's Natural Resources

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Three sets of red patterned panels, each with a white text box, arranged in a grid on the red wall.



California's Natural Resources

Timeline of California's natural resources:

- 1997: The Los Angeles Zoo
- 2000: The Los Angeles Zoo
- 2010: The Los Angeles Zoo
- 2016: The Los Angeles Zoo

Car (2006)

From both a technical and cinematic perspective, a vehicle designed for the streets, and not the road, is a challenge. This reality is evident in the visual storytelling of the film. The car's design is a blend of form and function, and it is a testament to the ingenuity of the designers. The car's design is a blend of form and function, and it is a testament to the ingenuity of the designers.

RECREATION

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DESIGN

Style Guide

The exhibition space was painted like a Golden Age Hollywood theater, including golden pillars and red velvet benches.





INTERPRETATION

Collaboration

- Academy of Motion Picture Arts & Sciences
- Film industry professionals and scholars
- Botanists, Botanizing the Movies





INTERPRETATION

Exhibit Elements

- Chronology
- Interactivity
- Movie Scripts
- Plant Tropes
- Dramatic Roles of CA Native Plants



GAME OF HORNS



GAME OF HORNS



CONCEPTION

Synthesis of Diverse Sources of Inspiration

- New Scanning Electron Microscope
- Popular interest in dangerous plants
- Trendiness of Cacti and Succulents
- Personal Inspiration from Samurai Sword Exhibition at the MET



WHY?

- *Game of Thrones*: Cultural Phenomenon
- Oddly fun to talk about pain caused by plants
- Cacti and succulents have garnered quite a following in recent years and this was a great way to showcase them.
- (And by the way, this was easy to maintain)





Joshua Tree

Yucca brevifolia

Fighter of Giants?

The Joshua Tree stands over the Mojave with stout branches lined with legions of hardened leaf tips. The edges of the leaves are armed with tiny saw-like spines that punish insects' mouths or mammals' tongues going in for a bite. These spiky weapons evolved to deter long extinct Pleistocene mammals, such as giant armadillos, primitive camels, and the ancestors of modern horses.

Cassette in the Sky

The eerie and alluring Joshua Tree, with its distinct shape, is the icon of the Mojave. With its branches so high in the air, what does it have to fear? Perhaps as a fully grown plant, not much. But young plants are low to the ground, and need to defend themselves until they get out of the reach of hungry herbivores.

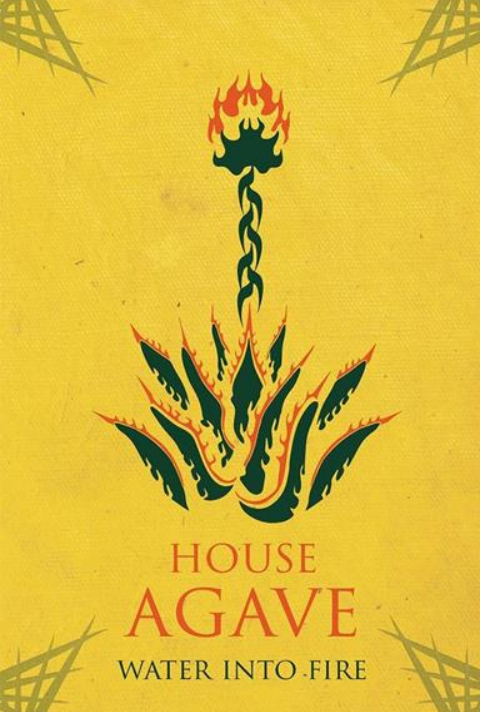
DESIGN

Layout

- Major and Minor Plant Houses
- The Armory: types, aspects and uses of plant weaponry
- Hall of Pain: testimonials of painful plant encounters
- Aesthetic Components

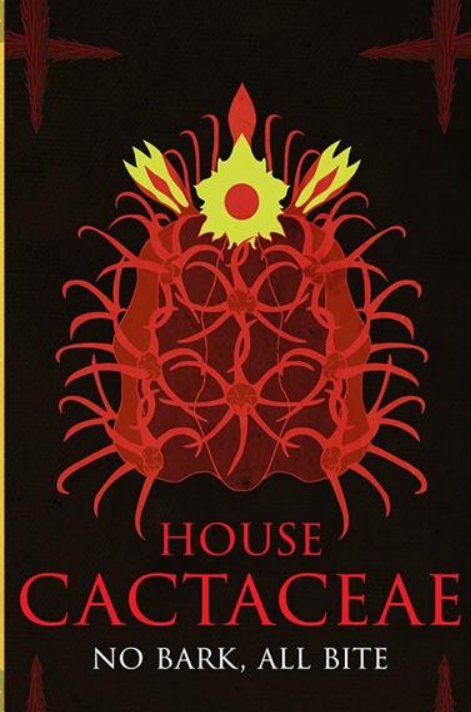


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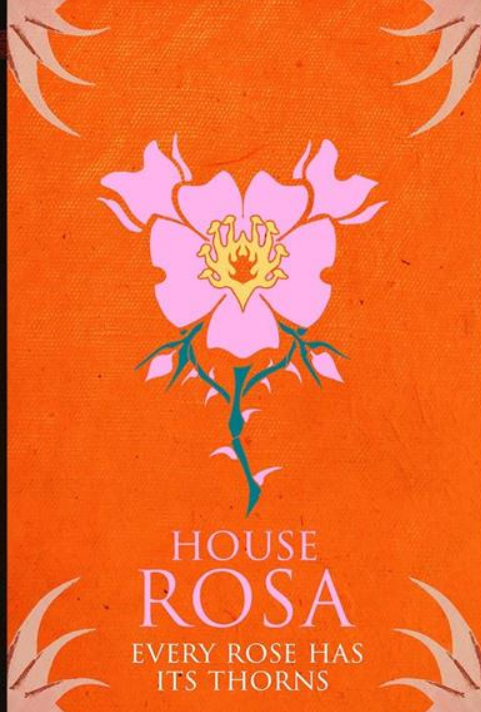
HOUSE
AGAVE

WATER INTO FIRE



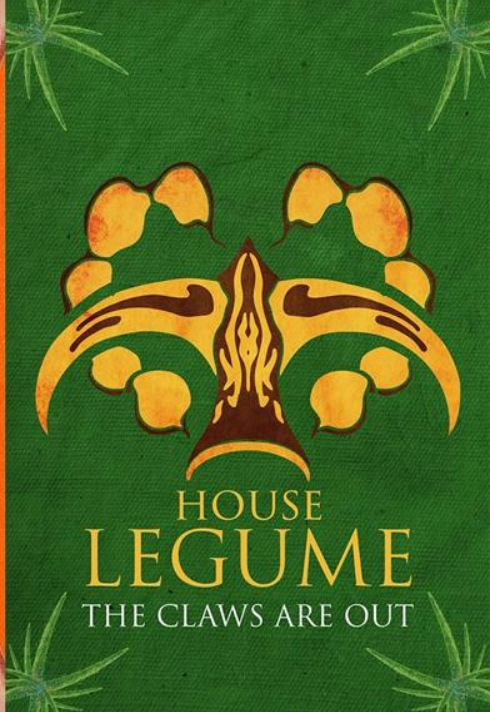
HOUSE
CACTACEAE

NO BARK, ALL BITE



HOUSE
ROSA

EVERY ROSE HAS
ITS THORNS



HOUSE
LEGUME

THE CLAWS ARE OUT





Desert Peach

Prunus andersonii

A Hard Life

In the Desert Peach, it is the growing tip of the branch, the source of new life, that the hardens over time into a woody stem.

Desert Peach is found on the arid east side of the Sierra Nevada, and in the Great Basin Desert in California. White-tailed antelope squirrels climb these plants to gather the fruit, and they and other animals bury the fruits in food stores, scatter the seeds, and even plant the seeds. The Desert Peach takes its name from the fact that the hardening of the branch is one of the necessary life processes. The Desert Peach takes its name from the fact that the hardening of the branch is one of the necessary life processes.



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DESIGN

Materials

- Gabions
- Crushed landscape glass
- Tapestries
- Painted containers
- Spiked signage
- Banners for signs





INTERPRETATION

Research

- Plant defenses
- Evolutionary backstory of plant weaponry
- SEM revelations



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Joshua Tree

Yucca brevifolia

Fighter of Giants?

The Joshua Tree stands over the Mojave with stout branches lined with legions of hardened leaf tips. The edges of the leaves are armed with tiny saw-like spines that punish insects' mouths or mammals' tongues going in for a bite. These spiky weapons evolved to deter long extinct Pleistocene mammals, such as giant armadillos, primitive camels, and the ancestors of modern horses.

Castle in the Sky The eerie and alluring Joshua Tree, with its distinct shape, is the icon of the Mojave. With its branches so high in the air, what does it have to fear? Perhaps as a fully grown plant, not much. But young plants are low to the ground, and need to defend themselves until they get out of the reach of hungry herbivores.

INTERPRETATION

- Setting the Voice
- Making Science Fun
- Developing a mythology for each of the Houses
- Making each species special
- Collaboration and review/editing

INTERPRETATION



- Minor Houses
- The Hall of Pain
- The Armory
 - Stealth Attack
 - Biological Warfare
 - Accessories to Murder



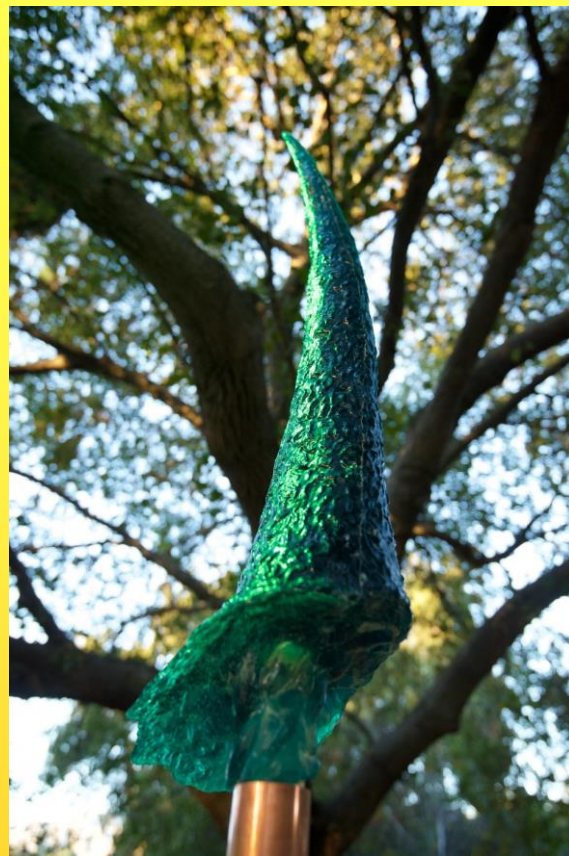
DESIGN

The Grove of Thorns

- Showcase plant weaponry at massive scales
- Tie in to the aesthetics of Game of Thrones
- Funded by Kickstarter
- Integration of SEM imagery, 3D printing and Glass Casting



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- Spiked Fridays



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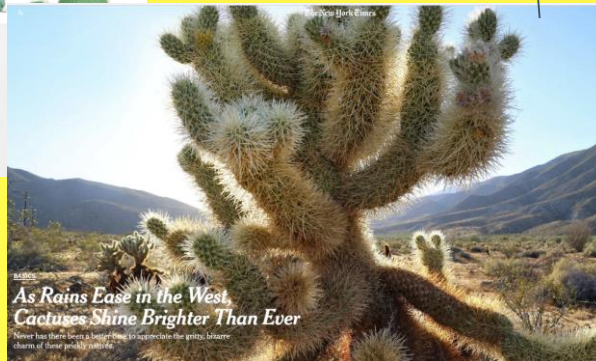
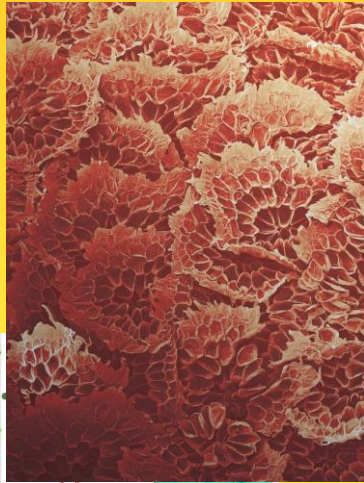
**So what are the best practices
we have learned from putting
together these original exhibits?**



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Generating Ideas

Spinning all of that straw into some type of precious metal



Media Sources We Use

Buzzsumo

Google Alerts



The New York Times

INLANDEMPIRE
MAGAZINE

Los Angeles Times

Functional Ecology 

Functional Ecology 2016, 30, 181–187 doi: 10.1111/1365-2435.12495

REVIEW

Tougher and thornier: general patterns in the induction of physical defence traits

Kasey E. Barton*

Department of Botany, University of Hawai'i at Mānoa, 3190 Maile Way, Room 101, Honolulu, Hawai'i 96822, USA

Available online at www.sciencedirect.com

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Perspectives in Plant Ecology, Evolution and Systematics ■■■■ ■■■■ ■■■■

www.elsevier.de/ppes

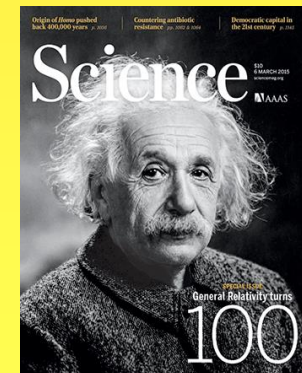
Plant structural traits and their role in anti-herbivore defence

Mick E. Hanley^{a,b,*}, Byron B. Lamont^b, Meredith M. Fairbanks^b, Christine M. Rafferty^b

^aSchool of Biological Science, University of Plymouth, Drake's Circus, Plymouth PL4 8AA, UK
^bCentre for Ecosystem Diversity and Dynamics, Department of Environmental Biology, Curtin University of Technology, G.P.O. Box U1987, Perth, WA 6845, Australia

TRENDING

- Kirby Misperton, North Yorkshire:** Councillors Approve Fracking Tests After 5-Year Pause in UK
- Solar Impulse 2:** Solar-Powered Plane on Journey Around the World Lands in Dayton, Ohio
- Dartford Crossing:** Problem With Tunnel's Safety System Causes Major Traffic Delays in Kent
- Paris Hilton:** Socialite Reportedly Has Wardrobe Malfunction in London
- World Turtle Day:** May 23 Marks Annual Observance to Raise Awareness for Turtles

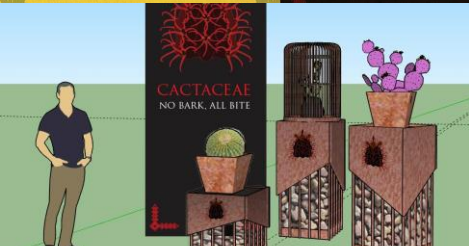
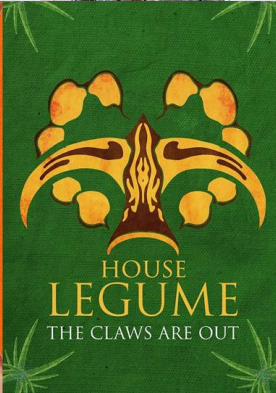
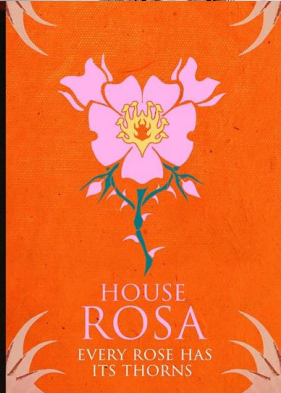
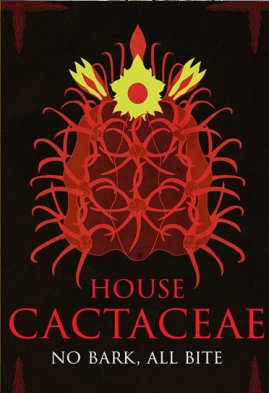
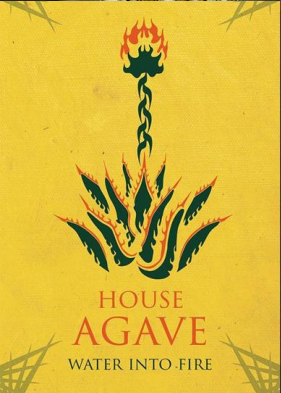


Knowing the Cultural Landscape

Visiting (both physically and digitally) other botanical gardens and cultural institutions.



The Importance of Design



Crafting Language to meet the Zeitgeist



**SOUP'S ON! Á TABLE! MANGIAMO!
BUEN PROVECHO! COME AND GET IT!**

In all languages, in all cultures, throughout human history, friends and families have gathered at the table to enjoy life over food and beverage. Food sustains us and is our celebration. *And plants are the foundation of our feasting.*

Once upon a time, all of our food plants were wild - weedy bit players in the epic of evolution. But as people came on the scene, they soon figured out how to make plants better for themselves. Some of our plants have been domesticated for millennia (wheat, rice, corn, millet), and others have only been "tamed" in the last couple of centuries (blueberries, kiwifruits). We are now at a threshold of potential for the domestication, expanded cultivation, and promotion of California native plants.



SAGES

We have a lot of local diversity when it comes to sages (e.g. *Salvia leucanthera*, *S. apiana*, *S. quadrata*, *S. douglasii*). Sages are relatively easy to grow, so plant a few and experiment with your favorite teas. The leaves can be dried, rolled, or added fresh to dishes. Many are very pungent and should be used in a light seasoning. You can bake it into shortbread or scones. Try sprinkling some freshly-chopped native sage in with a hearty pasta dish tonight!

**RECIPE:
SAGE SHORTBREAD**

Ingredients:

- 1 cup whole wheat whole flour, sifted
- 1/2 cup butter, softened
- 1/2 cup sugar
- 1 egg, beaten
- 1/2 tsp salt
- 1/2 cup fresh sage, finely chopped

Preheat oven to 350°F. In a medium-sized bowl, whisk together the flour, butter, sugar, and salt until well combined. Add the egg and mix until the dough comes together. Add the sage and mix until well combined. Roll out the dough on a floured surface and cut into rounds. Bake for 10-12 minutes. This recipe is very easy to adapt and you can use any herb you like. Experiment with other herbs and see how they taste!



Coast Cholla
Cylindropuntia

"That She Blows!"

The barbed sheathed spines of *Cylindropuntia* cling onto fur or skin like Velcro, but with quite a deal more pain. Like whaling harpoons of old, these spines penetrate and stay locked on for great distances, while causing great discomfort.

An Ocean Lover

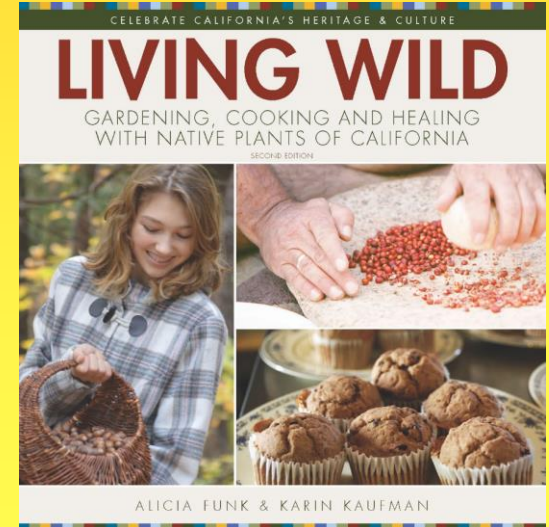
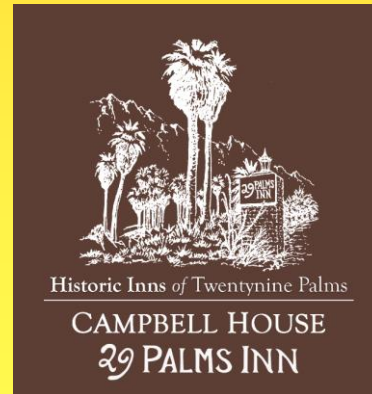
The Coast Cholla is relatively tall among chollas. This plant is always within thirty miles of the beach, often with ocean-view real estate. Plants can spread when a wish its spines, and is "planted" when an animal's fur covers the fruits and serve as a seed dispersal mechanism, hitchhiking a ride to new territory.

Collaboration & Partnership



ACADEMY
OF MOTION PICTURE
ARTS AND SCIENCES

CLAREMONT
MUSEUM OF ART



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Measuring Results

- Claremont Graduate University - Evaluation Program
- Evaluating impacts on attendance
- Documenting press and media about the exhibition



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The screenshot shows a news article from the San Gabriel Valley Tribune. The article is titled "RSABG explores deep roots of native plants in movie industry" and is dated August 20, 2018. The text discusses a new exhibit at the Rancho Santa Ana Botanic Garden, which explores the intersection of botany and cinema. It mentions that the exhibit includes a timeline, a film, and a map, and highlights the presence of California native plants in movies. The article also notes that the exhibit is a collaboration between the Rancho Santa Ana Botanic Garden and the Rancho Santa Ana Botanic Garden Society (RSABG).





RANCHO SANTA ANA
BOTANIC GARDEN

California's Native Garden

Thank you!

**Connecting Collections
with Contemporary Culture**

David Bryant | Loraine Washburn, PhD
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