The Power of Pollination
Spring is one of my favorite times in the garden, but not for reasons you might think. Sure, the flowers are beautiful, but for me every spring is a reminder that nature knows what to do. The birds and bugs visit, the flowers bloom (in the tulip’s case, with our help) and the baby ducks are born. No matter what is going on in the world, nature continues to thrive. And Descanso continues to thrive too.

It was so much fun seeing some of you at the holiday events. We reinvented Carved this year and you told us that you loved it. We can’t wait to make it even better this year. Enchanted Forest of Light was also back. I loved standing at the entrance to the event, watching families and couples enjoying their evening. We are so proud that Enchanted has become a holiday tradition for so many of you.

What does 2022 have in store? For the outside world, I cannot say, but at Descanso we have some exciting things ahead.

I can’t wait for Your (Un)natural Garden to start. It is unlike anything we have ever done before. Artist Adam Schwerner is going to take over the garden with his exuberant and unexpected works of art. Your (Un)natural Garden will span the paths, the Boddy House and the Sturt Haaga Gallery imploring visitors to be part of the art. The exhibition will be up from April through January, 2023, so there will be plenty of time to explore and appreciate it.

I am also excited about what we have planned this spring and summer. We’ll be working with a variety of partners to bring a range of programs to the gardens. From POP (Pacific Opera Project), to nighttime programs, to wellness classes, to music and activities for the whole family, our programming will offer a diversity of ways to connect to and enjoy the gardens.

Thanks to all of you, our members, who have supported us this past year.
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Plants, Pollinators and Prehistoric Partnerships

by Autumn Ayers and Diana Nightingale, Horticulturists

When we think of plants, we often think of flowers and seeds, but these archetypal plant parts did not always exist. When the first plants appeared on land around 470 million years ago they relied on spores to reproduce. The first plants to evolve seeds were gymnosperms, cone-bearing plants like conifers and cycads, while angiosperms, which create flowers and produce fruits, evolved later and dominate the plant world today. The secret to angiosperms’ success lies in the partnerships they have forged with animals who help pollinate their flowers in exchange for a sweet and nutritious meal.
Before plants evolved to rely on animal pollinators, they used the wind. Oaks and redwoods, the largest and oldest plants in our garden, are wind-pollinated species. Due to the imprecise nature of wind pollination, these plants have to release copious amounts of pollen to ensure that at least some of it lands on the right part of a receptive plant. The development of plant-pollinator relationships has proved a better strategy and has helped to give rise to the incredible plant diversity we see today.

For a long time, scientists believed that plant-pollinator relationships did not form until the rise of the flowering plants. But recent evidence has revealed that insects who are now thought to have evolved around 479 million years ago and diversified alongside the evolution of land plants were forming these relationships far earlier. Cycads evolved around 350 million years ago and were among the first seed-bearing plants.

One of the earliest plant-pollinator relationships to form was the one between beetles and cycads. Cycad plants have separate male and female plants and have formed strong mutualistic relationships with beetles and thrips for pollination. Depending on the species, the pollinators take shelter and mate inside the male cones, sometimes also consuming portions of the cone. As they move around, the pollen collects on their bodies and when they later swarm the female cones, they transfer thousands of pollen grains. Today, for conservation purposes, enthusiastic horticulturists are cycad pollinators too!

Plant reproduction was revolutionized when flowers developed around 150 million years ago. Flower parts include stamens that produce pollen and pistils which hold the ovules. A pistil receives the pollen which then moves down the stalk (style) to the ovule which matures into a seed. One advantage of flowers is the increased ability to attract other species to aid in pollination.

Facing Page: Bees gather pollen and nectar for their survival and they also serve as pollinators.
Above: Cycad plants rely on beetles to pollinate, while redwoods need wind.
Over many millennia, flowers and pollinators have co-evolved in ways that benefit the survival of all involved. Along with producing flowers, producing seeds turned out to have a number of advantages as it allowed individual plants to combine their genetic material and produce healthier offspring. Although some plants produce flowers that have both stamens and pistils and are capable of self-pollination, this can lead to a weaker plant population. Botanists believe this is the reason why numerous plants, including camellias, have evolved to encourage cross-pollination. When camellias self-pollinate, their seeds rarely mature. Therefore, it is essential that a pollinator comes by bearing pollen from another plant. Camellias have many winged pollinators, including wasps, bees, flies, and birds. During the cooler months when most camellias flower, insect pollinators may be hard to find. This is where birds such as sunbirds, the Japanese white-eye, and brown-eared bulbul, play integral roles as pollinators, and in return, the camellias provide a sweet treat during a season when flowers are scarce.

Another co-evolutionary relationship is the one between yuccas and yucca moths. These tiny, nocturnal creamy-white moths make a surprising contrast to the large, aromatic, nodding flowers of their plant partners. A yucca species will often only partner with one or two moth species. After emerging in spring and mating, a female moth visits a flower where she collects a small ball of its sticky pollen which she holds beneath her head. She flies with her bundle to a flower on another yucca, inserts a single egg next to each ovule before climbing up to deposit pollen on each stigma to ensure fertilization. While the fertilized ovules develop into seeds, the moth’s eggs hatch, and the larvae eat only one of the ovules. When the larvae have matured, they drop down to the soil where they bury down for diapause (dormancy) before reawakening and metamorphosing. These two species are truly co-dependent as the larvae need the seeds as a food source while the yucca does not have any other equivalent pollinators. While you won’t observe the nocturnal moths, you can find several yuccas growing in the California and Rose gardens.
Moths aren’t the only night-active pollinators; bats are key contributors as well. In addition to their ecological importance, bats are economically important for their role in the pollination of tropical fruits. Although most Southern California bats are primarily insectivores, some do pollinate cactus and agave plants. The appropriately named Mexican long-tongued bats have very long tongues they use to lap up nectar found in the flowers of columnar cacti and agave. In areas where their preferred nectar sources are scarce, you might spot them stealing sips of sugar water from hummingbird feeders.

The cutest pollinator in Australia is neither an insect nor a mammal, but rather a marsupial. In their native land, Banksia plants rely on the tiny honey possums and pygmy possums to transfer pollen between flowers. In return, the plants produce nectar deep in the flowers, which the possums use their distinctive long snouts and bristled tongues to reach. While feeding, they brush past the male and female parts of the flower, picking up and depositing pollen as they move from plant to plant.

But as Banksia woodlands increasingly become the sites of human development and intense wildfires, honey possums are losing access to this essential food source. They are considered protected fauna in Western Australia, and conservation efforts are focused on protecting the flora on which they rely. Although you won’t find their tiny partners at Descanso, you can find Banksia plants growing near the Ancient Forest and by Mulberry Pond.

Many scientists believe pollinators are on the decline due to habitat destruction, a changing climate, and invasive species, to name just a few reasons. Therefore, if we wish to preserve the remarkable diversity of plants we love and depend on, we need to do so with their pollinators in mind. Ex-situ conservation at botanic gardens like ours endeavors to preserve the genetic diversity of a species, but efforts should be made in these plants’ native habitats to preserve their pollinators too. Scientists will continue to observe novel pollinator-plant interactions as changing environmental pressures drive new, fascinating evolutionary relationships.
The gardens are buzzing with activity in the spring, as pollinators look for nectar and pollen. When a pollinator lands on the flower to sip some nectar, pollen sticks to its legs and body. When it visits the next flower some of the pollen rubs off as it picks up new pollen, creating cross-pollination. There are many pollinators from butterflies to ants to even some fruit bats.

Special Activity for Kids

I Spy a Pollinator

by Vanessa Pierce, Education Programs Coordinator
We are celebrating pollinators and native plants at our Spring Celebration on March 26. Explore our pollinator gardens and take a sneak peek at our new nursery opening this year. Learn about native milkweed and other native plants we are growing and their relationship to pollinators. We will have special presentations and activities with partners from Natural History Museum Los Angeles, Arroyos & Foothills Conservancy, Latino Outdoors, Kidspace, California Native Plant Society, and more.

**Can you spy any pollinators at Descanso or at home?**

I spy something fluttering and crawling around milkweed. It’s a monarch

Monarch butterflies are often seen around milkweed. Milkweed is their host plant meaning they lay their eggs on the underside of the milkweed leaves. Caterpillars eat the milkweed leaves and eventually form their chrysalis on the plant as well.

I spy something black, yellow, and blue. It’s an anise swallowtail

Anise swallowtail butterflies can be spotted on fennel (or anise) plants, which are their host plant. These butterflies are seen all over the West coast from LA to the Puget Sound.

I spy something large and buzzing. It’s a valley carpenter bee

Valley carpenter bees enjoy feeding on passion flowers and other large blooms. The females are most commonly seen with their large black bodies, while the males are golden, smaller and solitary.

I spy something fast and green. It’s an Allen’s hummingbird

Allen’s hummingbirds sip nectar from Cape honeysuckle, Indian paintbrush, sage, eucalyptus, and manzanita. The males have bright orange-red throats and their backs are a mix of green and brown. Their habitat range is expanding from Channel Islands to the LA basin.
Superheroes of the Bird World

by David Bare,
Director of Horticulture

Southern California hosts seven species of hummingbirds, and of these the Anna’s and the Allen’s are the most commonly seen at Descanso. They are a constant enchantment when working in the garden whether bathing in the walnut size basin of a fountain or ferociously defending their favorite plants from just about any size intruder. Hummingbirds are inherently curious creatures and not above zipping in to see if your red-handled pruners might warrant further investigation as a potential nectar source.

Hummingbirds are the superheroes of the bird world. A hummingbird averages an amazing one to two thousand flower visits a day in its attempt to eat twice its weight in flower nectar and insects. Hummingbirds can fly upside down and backwards and hover in midair. They can go from 25 miles per hour to a dead stop in a span of four inches. While they are doing this their wings are beating 50 to 200 times per second. The constantly in motion hummingbird is fueled by nectar and insects. At night, as temperatures cool the bird enters a state of torpor, where its body temperature drops from a daytime high of 100 to 104°F to below 60°F. An active hummingbird can have a heartbeat rate of 500 times a minute but during torpor it will slow to less than 50. By vibrating its wings, the bird can restore body heat and be off to do it all again.

The eastern ruby-throated hummingbird performs a legendary migration feat, annually making a 500-mile trip over the Gulf of Mexico each spring and autumn with no margin for error. Once they get started it’s water all the way. In Central and South America, the center of hummingbird diversity, hummingbird names match their superhero antics. There, you will find sparkling-tailed woodstars, violet sabrewing, purple-crowned fairies, and long-billed starthroats. The iridescent plumage would put any spandex-caped costume to shame.
In the form-follows-function world of plant pollination, a hummingbird’s needle-like beak and its associated long, lapping tongue is eminently suited to sipping funnel form flowers. That beak reaches into the depths of tubular flowers for their hidden nectar reward and the feathery forehead emerges, pollen dusted, to transfer to the next flower.

Hummingbirds hang around our gardens all year round, so if you are planting with them in mind be sure to provide flowers throughout the year. Native currants and gooseberries are excellent hummingbird attractants because they bloom so early in the season. Golden currants *Ribes aureum* var. *gracillimum* and chaparral currants *Ribes malvaceum* are native adapted, early flowering shrubs that give you the bonus of attracting fruit-eating birds after the hummingbirds have pollinated the flowers.

If there is a quintessential hummingbird plant, it is the sage in all its forms. There are many excellent native choices, even one named hummingbird sage, *Salvia spathacea*. It grows one to three feet tall and wide and readily forms colonies through its spreading rhizomes. The rosy lilac flowers are formed in whorls around a thick, non-branching spike. Leaves are long, thick and textural and have a unique scent that is half fruity and half sage. A Southern California native, it is adapted to dry and part-shade conditions.

You could fill your whole garden with different sages, but one I would not do without is friendship sage. I have discussed this plant here before as prized territory for hummers. Its deep jewel-toned purple flowers adorn a plant that is easily six feet tall and six feet wide. This reliable plant will provide for many visitors throughout the summer.

Turn back to another California native for the fall garden. *Epilobium californica* or California fuschia is the go-to autumn nectar source. Throughout the dry summer this plant goes unnoticed and suddenly pops scarlet-orange funnel-form flowers at summer’s end that are a hummingbird’s delight. ’Bert’s Bluff’ is the most common selection and grows to about three feet. This is a beautiful plant by any standard with fine silvery leaves.

Any of these plants would make a fine addition to the garden, but they will hardly compare to their avian visitors.
Artist Adam Schwerner asks visitors to please touch the art. His exhibition Your (Un)natural Garden, premiering this spring, is an experience like nothing at Descanso before. Installations at The Sturt Haaga Gallery, Boddy House, and throughout the landscape will intrigue visitors’ senses and invite participation. Archways and artworks, created with recycled materials, will lead to the art gallery and house. Once there, explore rooms that will surprise you — from hundreds of bells playing to feather boas hanging from the ceiling. Here, the artist tells us about the creation of Your (Un)natural Garden.

What should visitors expect from Your (Un)natural Garden? I do not want to tell visitors what they should do or experience in the exhibition. It’s for the visitor to decide. It will make me most happy when guests have their own unique reactions to the work. Visitors will see what they did not expect, and I hope that this will surprise them and that it will be energizing for them.

During the years of planning for this exhibition, I have been aiming to create a series of interventions that encourage visitors to touch/walk through/sit on/move around/play with the various elements of the exhibition. This is not a show that tells you: “Get over here and engage!”

Tell us about a few of the specific areas that you are most looking forward to. I am very much looking forward to hearing the “music” that will be produced in “All the Bells.” This installation is an interrogation of the relationship I had with my parents and the one they had with one another after their divorce. I guess it does not matter how old one gets, one’s parents have an indelible impact. In my case, my father and mother hated being in the same room and, in this installation, there are elements of each of them. In a way I am forcing them to get along in a way I never could when they were alive. I don’t think anyone who enters this gallery will know any of this. It’s just going to be a great experience hearing and ringing a hundred bells.

I have been making the pieces for “Agora (after Abokonowicz)” in my home studio for the last few years. I had been thinking about wanting to create a neutral place for conversation given the political and racial tensions in our country and, when COVID struck, imagined that the installation of sculptural chairs could provide a place, finally, for us to be together and socialize after so much time apart. The “furniture” I have created, often, includes art historical references to some of my favorite artists (Rauschenberg,Twombly, Tanguy, Brancusi, Giacometti, Tingley, Bourgeois, Gates, Chicago, Barlow, Golub) and is intended to be sat
on/played with and includes a large table with 12 chairs that will be made available to groups for public meetings.

**Why did you choose to work with/at Descanso Gardens?** I am a botanical garden nerd. I worked at the New York Botanical Garden for 12 years and have been a member of the American Public Gardens Association throughout my career. It is at the NYBG that I began bringing my artistic instincts to my work. Descanso Gardens, like all botanical gardens, is a place that is filled with beauty and opportunity. Descanso is managed by a group of curious, engaged, thoughtful and supportive staff and I could not have found better partners to work with on this exhibition.

**Are there any specific plants or areas at Descanso that inspire you?** I’d say that it is the majestic Quercus agrifolia (oak) trees that are the most defining characteristic of the Gardens. For me, they represent a connection for all of us to a time before we inhabited this area. They provide a connection to the past that calms me.

**Where are you from and how does that affect your work?** I am a New Yorker. My parents were both artists. My mother was a playwright, sculptress, singer, tap dancer, painter and performance artist. My father was a poet and performance artist. Living in New York (Staten Island and Manhattan) surrounded by all that my parents and their friends created was very impactful. Further, my mother started bringing my brother and I to New York's museums and galleries in our youth. These experiences have given me permission to think outside the lines.

**Who are your biggest artistic influences?** As to current artists, I love the work of Phyllida Barlow, Sarah Sze and Theaster Gates. Cy Twombly, Robert Rauschenberg, Louise Bourgeois, Constantin Brancusi, Louise Nevelson, Joseph Cornell, and Isamu Noguchi are a few of the earlier artists that I have great fondness for.

**What is your favorite medium?** I like to use material that has a history. For this exhibition I have sourced the majority of the material from a recycling company called Tierra Verde Industries in Irvine. They have been remarkable and I am thankful for them. It accepts a wide variety of debris and we have used scrap wood, electrical wire, aluminum ladders, kitchenware, tables, chairs, bicycles, computer parts and more, sourced there. I like finding objects that have a history; that have had a life and show the scars of the use they have had.

Color is also very important to me. I very much connect the colors I use to the people, the places and the experiences in my life.

**Where do you find inspiration?** I use my art-making as a way to navigate through my life. It’s while I garden or make things that I get clarity around my life. So, my process is certainly inspired by my life experiences. My parents and their ways of engaging with the world through their art making certainly provides inspiration as does the work of many artists.

For this show, I found much inspiration in the Gardens, the galleries, the historic home and the staff of the Garden as well as my partners in the show's production; Pink Sparrow, JustDesign, and Art Mafia.

**What motivates you to create?** I have to. If I don’t, I am not happy. Creating is a way for me to find equilibrium and joy. Thank you, Descanso Gardens, for giving me a way to find joy.

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**Your (Un)natural Garden**  
April 16, 2022 – Jan. 8, 2023  
Free with admission  
descansogardens.org/unnaturalgarden
What’s New in the California Garden

by Layla Valenzuela, California Garden Horticulturist

A walk in the California Garden is always worth it. With careful tending, the garden is maturing and has a fantastic display of California botanicals. This spring three more special projects will take place in this area.

The first will be an iris collection, which will be installed around the pathways behind El Portal. Matilija Nursery in Moorpark, which is dedicated to native plants, breeds native irises and has some really beautiful varieties. There will be about 10-15 new varieties this season and more will be added in the future.

The California Garden will also include a wildflower field. This may seem easy, but Descanso has not had great success with wildflowers in the past. It gets a good amount of poppies, but not much else. The seeds either do not germinate, get out-competed by weeds, or are eaten by deer. The plan is to tackle this problem in three ways. Horticulturist Frank Obregon will be starting many wildflower seedlings in the nursery to be transplanted directly into the ground. I will also be planting some perennial low-growing flowering plants to fill in the space and will be planting a handful straight from seed. There will also be fences to help deter the deer. They will be our biggest obstacle! This wildflower field area will be right above the Redwood Rest and will, of course, have a walkway through it for selfies.

The third addition to the California Garden will be the *Dudleya* display. Believe it or not, there are only a handful of native succulents - *Dudleya*, *Sedum*, *Opuntia*, and some agaves. This project is something I’ve always wanted to add to the garden. In the past, I would plant a handful of Dudleya along this wall only for them to slowly disappear. Dudleya are a trendy plant right now and unfortunately are getting stolen from natural areas. The state just passed a bill on protecting them a few weeks ago so that is a step forward. The garden has a few ways we hope to protect the plants. We hope visitors will see the importance of these plants and to safeguard them the garden will also use technology. Some of the plants will actually be microchipped.

Take a walk up to the California Garden to enjoy what’s new.
Every year Enchanted Forest of Light kicks off with an opening “preview party” – every year, that is, except for 2020. After taking a year off from both Enchanted and its preview party due to the pandemic, Descanso brought both events back in 2021.

“We felt like it was the right time,” said Juliann Rooke, Executive Director. “The people of Los Angeles were ready to get out of the house and attend events like Enchanted again.”

On November 20, 2021, the doors opened to the Enchanted Preview Party at 6pm. Guests were greeted by a string quartet from the California School of the Arts San Gabriel Valley (CSArts-SGV) as well as a “living lighted vine” – an ethereal creature that appeared to have emerged from somewhere deep in the garden.

Upon entry, party sponsors and their guests enjoyed upscale street food – with favorites like sliders, street tacos, a mashed potato bar, chicken and waffles, and churros rounding out the menu. Partygoers sipped on margaritas from the margarita bar as they wandered through the mile-long Enchanted experience. Throughout the experience, guests stopped to watch special performances from CSArts-SGV students, took selfies with the Living Lighted Vines, and lounged on the lawn as DJ Matthew Rubino from The Flashdance spun vinyl among the lighted HYBYCOZO sculptures.

“We were thrilled to be able to host an event like this again,” said Rooke, “Not only do we raise much needed funding from events like this, but we give our donors an opportunity to experience the Gardens in a really fun and unique way. There’s nothing quite like being at Descanso after hours.”

To find out more about event sponsorships in 2022 and other support opportunities, please contact the Development Office at (818) 952-4391 or development@descansogardens.org

Save the Dates
Your (Un)natural Garden
Opening After-Hours Party | May 14, 2022
Evening Gala | September 24, 2022
Enchanted Forest of Light
Preview Party | November 19, 2022
Watch your inbox in spring 2022 for information on these event sponsorship opportunities

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Operas comes to Descanso

Pacific Opera Project will be bringing its take on “Into the Woods” to the garden in July. Ticketing information coming soon to descansogardens.org!