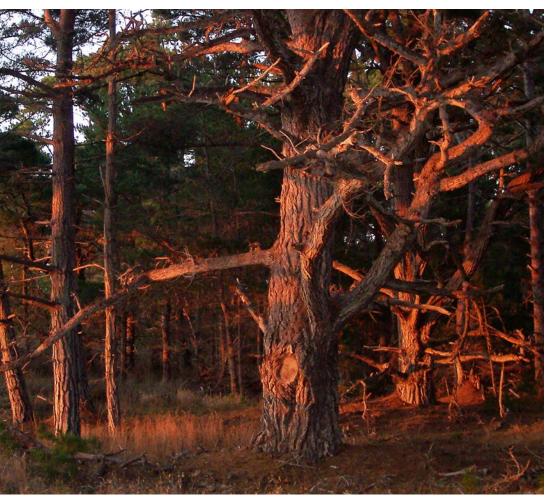




Our mission is to protect and nurture Point Lobos State Natural Reserve, to educate and inspire visitors to preserve its unique natural and cultural resources, and to strengthen the network of Carmel Area State Parks. **pointlobos.org** 



Sunset through Monterey pines. Photo by Chuck Bancroft.

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Front Cover: Ghost tree among the cypress. Photo by Chuck Bancroft.

Center Spread, pages 11-12. A view at Whalers Cove of the Monterey pine forest and hills. Photo by Dave Evans.



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# Spring brings a spirit of renewal to the Reserve

by Kathleen Lee

I often wonder what stories the trees within the Point Lobos State Natural Reserve could tell, the seasons they have weathered and what lessons we as visitors can draw from the trees. I love the cypress with their exposed roots perched on the face of rocks, thriving in the spray of the crashing waves and ever-present wind. The cypress trees inspire me to hold fast, hunker down and stretch to new heights, a lesson I believe many learned in the last year.

In this season, I am celebrating that spring is in the air. You can feel the changes and possibilities everywhere within the Reserve. From the emerging wildflowers, new harbor seal pups and the return of the MINT van, it feels as if the whole of the Reserve is awakening and embracing the spirit of the season.

The Point Lobos Foundation, too, is embracing changes brought about in response to the pandemic. Tracy Gillette Ricci worked with our talented docents and State Parks staff to present virtual member events that connected our members to the Reserve, drawing in guests from out of state and within Monterey County. Caitlin McMillen developed a new online store to sell Point Lobos merchandise to support our efforts within the Reserve. The Board of Directors has engaging meetings via Zoom.

The amazing docent community has been working hard to revamp how they provide interpretation to our guests, both in person and in digital formats. Please check out the School Outreach Committee's amazing work at the Point Lobos Interpreter channel on YouTube and view past member events on the foundation's YouTube channel.

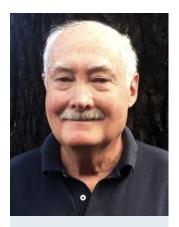
The MINT van is back out in the Reserve with modifications so that docents can safely interact with visitors. The new pups on the beaches of the Reserve offer opportunities to educate visitors on how to quietly observe the joys and challenges of new life upon our beaches.

The foundation, the docents and the State Parks staff are all in a stage of enormous growth and change. Ideas hatched out in the comfort of home, discussed over Zoom with a desire to keep telling the story of the Reserve, are now coming to fruition.

All of these efforts are made possible through the generous support of our members and granting organizations. Thank you for being our bedrock of support and providing the sustenance for all of these ideas and programs to grow. I hope you can enjoy the wonders of spring in Point Lobos State Natural Reserve!



Old Veteran. Photo by Chuck Bancroft.



Reg Henry, a docent, is editor of the Point Lobos Magazine.

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# Branching out to look closer at the trees

by Reg Henry

Docents who do shifts at the Information Station in normal times, or patrol the area when the hut is closed during COVID safety restrictions, often have to tell children not to climb the Monterey cypress tree there.

As nothing would spoil a family outing to the Reserve more than a kid falling out of a tree, docents have been instructed to keep this and other trees kid-free.

Sometimes the parents will be in the midst of setting up a picnic on a bench underneath the tree — another forbidden pleasure. Picnicking at the Reserve is allowed only in designated areas and, if people are in the parking lot, they must stay in their cars to eat their sandwiches.

These visitor infringements are usually in the category of honest mistakes. After all, it seems reasonable to have a picnic on a handy bench and who knew that little Johnny would scamper up a tree while his parents were busy fussing to unpack the food.

When this sort of daily double occurs — kid up tree, family noshing below tree — docents must be tactful in reminding visitors about the rules. After all, docents are there to enhance the visitor experience, not to do impressions of old-fashioned school principals in sterner times.

But the rules are the rules and they are in place for good reason. Docents must kindly explain that if picnicking is allowed everywhere, animals can feast on discarded leftovers. Why, fat squirrels could possibly fall out of trees and hit unsuspecting visitors, no doubt a bad experience for both parties.

When it comes to tree climbing, I always tell the kids: "Sorry, guys, no climbing is allowed. The birds have complained." Actually, this isn't so far from the truth. A proprietary scrub jay frequents that tree and it would say that if it could.

At least children show more interest in the trees than their parents tend to do. To kids, they think they shall never see, something more lovely than a climbable tree.

The desire to help older visitors better appreciate trees explains the focus of this edition of the magazine. We don't want anybody to climb trees, just have their curiosity reach for the sky. The forests of Point Lobos are extraordinary, as writers Trudy Reeves and Matthew Allen make clear

In other pieces, Katherine Spitz tells the story of the Scottish botanist David Douglas who left his mark in this area by documenting the plants that bear his name, such as the Douglas iris. And former Ranger Chuck Bancroft explains how the agents of decomposition do Nature's recycling work. And most of this happens in the shadows of the trees.

They say it's possible to miss the forest for the trees. I hope you enjoy this attempt to make that impossible next time you come to Point Lobos.



Trudy Reeves is a retired real estate attorney turned nature advocate, with a specialty in trees and native forests. She has called the Monterey Peninsula home since 1990, and is now a proud Point Lobos Docent, California Naturalist and nature writer. She can be reached at trudyreeves@gmail.com

# A tale of two forests

# The Monterey pine and cypress stands are rare sights to savor

by Trudy Reeves

On any warm sunny day at Point Lobos, hundreds of visitors pour into the Reserve in their cars and on foot. The vast majority pass through the forests only as the quickest route to the ocean. Little do they know that they are in the presence of rare native trees protected by the natural reserve status of Point Lobos.

As visitors stream down their shaded pathways, these trees and their intricate forest ecosystems above and below ground tell a vital part of the story of what makes Point Lobos such a special place.

Point Lobos State Natural Reserve is home to two conifer forests. Both are exceptionally rare native stands. Both grow well in the shallow soils of the Reserve and both are dependent on fog during dry summer months. Both are remnants of historically widespread forests and represent a tiny fraction of their former range. Both have male and female cones on a single tree. Both have serotinous female cones that release their seeds in heat or fire. There are also significant differences between these two forests.

# Monterey pine (Pinus radiata)

Native Monterey pines are considered a rare and threatened tree. Monterey pines

are cultivated and hybridized in lumber plantations all over the world, favored for their straight, rapid growth. The current range of truly native forests is limited to the Central Coast of California and two islands off the coast of Mexico.

What we see in the Reserve are trees that are either straight and tall, that when mature may reach the height of a 10-story building, or trees that have developed very thick trunks with branches spreading in a wide skirt from ground-level up and are much shorter than their skyscraper relatives. These contrasts can be clearly seen from Granite Point Trail to the east between Carmelo Meadow and Coal Chute trails.

Female cones of Monterey pines are on average about the size of a pear and can grow in circles around branches. Male pollen cones are much smaller and appear on the tips of new branches. Needles, about 5 inches long, grow in clusters of three held together at the base by a thin, papery sheath. Their healthy color is medium to dark green. A mature tree's greyish brown bark has deep furrows wide enough to hide a sleeping bat.

Monterey pines have shallow root systems that access a thin layer of nutrientpoor soil. They depend upon networks of



Female pine cones. Photo by Tom Clifton.



Male pollen cones. Photo by Don McDougall.

underground fungi, called mycorrhizae, to access otherwise inaccessible nutrients, water and the collective resources of their forest community. They also form strong root bonds with neighboring trees, making the individual trees less vulnerable to windfall. Despite this adaptation, in the extreme winter wind events in 2018 and 2019, over 100 of our largest trees were uprooted as their top-heavy canopies acted as sails.

Monterey pines are short-lived trees with an average lifespan of about 80 years, although some live over 120 years. These trees grow rapidly through their short life cycle, depending upon access to light, water, nutrients and other variables. Reproduction is also robust. Within the Reserve, Monterey pine coverage has more than doubled since the mid-1930s to its current 225 acres. In some areas of the Reserve, new seedlings and healthy saplings are growing well among the older trees.

Seeds of the Monterey pines are released more easily in warm air temperatures than those of the Monterey cypress. If you walk through the forest on a hot sunny day, you can hear the cones popping as they release their seeds. The winged seeds glide to the forest floor to germinate, ideally in exposed soil, but occasionally thriving in duff.

The greatest current threat to our Monterey pines is pitch canker. Especially in drought years, stressed trees become more susceptible to fungal infections, such as pitch canker (Fusarium circinatum) distributed by wood-boring beetles that girdle parts of the tree and cut off its resources. You will see evidence of pitch canker as drooping new-growth tips, rust-colored needles and weeping sap, some of it tinted blue by the infecting fungus. Some Monterey pines have shown resistance to pitch canker and others seem to build up immunity after surviving infection.

# Monterey cypress (Hesperocyparis macrocarpa)

Although extensively cultivated, the native Monterey cypress is a rare tree indeed. Point Lobos is home to one of only two remaining native stands in the world. The other is across Carmel Bay in Pebble Beach. Monterey cypresses live in several places within the Reserve, some planted and some mixed in with the Monterey pines. An isolated native stand grows on the northwest peninsula of the Reserve on 15 acres known as the Allan Memorial Grove, a gift from the Allan family to California State Parks.

Monterey cypresses are much longer-lived trees than Monterey pines, living up to 400 years and reproducing less frequently to maintain the forest. Like the pines, each tree contains both male and female cones. But unlike the pines, their cones require more intense heat to open and release their seeds, favoring fire over warm air temperatures. Even so, recent counts show that approximately a quarter of the living trees in the Grove are seedlings and saplings.



Female cypress cones flanked by male cones. Photo by Jerry Loomis.

Female cypress cones are about the size of a ping pong ball or smaller. Seeds are tiny and do not have wings adapted for wind distribution like the pines. They germinate best in sunny spots in exposed sandy soil.

Many of the cliffside Monterey cypresses appear to be growing directly out of the rocks. With much deeper root systems than the pines, they can reach between boulders to grasp scarce nutrients.

The exposed cypress canopy, sheared and flattened by strong ocean winds, spreads like a thin green blanket over the forest. Except where there are breaks in the canopy, the shaded forest floor accommodates far fewer native plant and animal species than the Monterey pine forest.





Trentepohlia. Photo by Dave Evans.

Invasive plants, including Panic veldt grass and Oxalis with its clover-like leaves and yellow flowers, have taken over much of the Cypress Grove understory. Occasionally pulling these invasives makes room for native plants and cypress germination, but more needs to be done on a continuing schedule and broader scale to keep up with the invaders.

Monterey cypresses can also be distinguished from Monterey pines by their less-furrowed gray bark and darker green foliage resembling thick, lacey fans. A counterclockwise walk along the Cypress Grove loop reveals the old gray trunks of ancient trees on the east side, some still retaining their rich green canopies. Bare branches are covered in close-knit bunches and long drapes of various species of lichen.

As the trail leads to Pinnacle Point, a red-orange, mossy-looking substance grows on trees and rocks. This rare green alga, Trentepohlia, makes its own orange carotene and grows only in very clean air infused with fog and sea mist. On the west side of the loop, charred fire survivors give way to sun-drenched areas of newer trees and sun-loving native plants like *Ceanothus* and Douglas iris.

Across Cypress Cove from the Grove, the Reserve's most famous Monterey cypress, Old Veteran, still stands. Although this old tree recently lost nearly half its trunk and limbs, its vibrant green foliage, mature cones and deeply tangled roots gripping the rocks display an excellent example of how Monterey cypresses can survive in this rocky headland environment.

# Hope in the forests

The native Monterey pine and Monterey cypress forests at Point Lobos State Natural Reserve are rare and endangered resources. But they are still alive and growing. California State Parks and the Point Lobos Foundation continue to work together to preserve, protect and maintain these significant ecosystems for you and for generations to come. As you walk along the forest trails, you will see examples of restoration efforts in the forest communities.

Take a few moments to stop, appreciate and connect with these incredible trees. Smell the forest. Think about what is right in front of you, above your head and beneath your feet. These trees offer hope and inspiration. Will you be there to receive their gifts?

# The connected forest

Mycorrhizae, complex underground networks of fungi connecting the forest trees and other rooted plants, distribute nutrients and water in exchange for products of photosynthesis. Among the Monterey pines with their shallow root systems, this intricate mesh forms just inches below the soil surface and extends deep into the ground. We see the fruits of the fungi as mushrooms. Every connected tree and other plant in this fungal web plays a role in the forest community.

The hubs of these fungal networks are called "Mother Trees" by some scientists. These Mother Trees are usually some of the largest and oldest trees in the forest. While they cooperate with and supply essential resources to the more vulnerable in their community, they can also control the fate of their neighbors. They recognize their kin and sometimes favor them in distribution of resources. Research has shown that as these Mother Trees die, they give up their stored nutrients to their tree community through the mycorrhizal network.

As you walk through the forest, try to spot the grand old Mother Trees surrounded by younger trees and imagine the communication that is going on just beneath your feet.

If you want to learn more, the documentary film "Intelligent Trees" provides a clear explanation of mycorrhizae. Also, "Finding the Mother Tree," a newly released book by preeminent forest ecologist, Suzanne Simard, tells the story of her life and groundbreaking research into tree communication and cooperation.

Monterey pine "Mother Tree" on Granite Point Trail. Photo by Tom Clifton.



Monterey cypress. Photo by Chuck Bancroft.



Matthew Allen is the Senior Environmental Scientist for California State Parks, Monterey District. He manages the Natural Resources Program and has been with State Parks for the past 12 years. His degrees are in natural resources and environmental management, and he holds several certifications in various fields including soils, water resources, wildland firefighting and Emergency Medical Technician. Matthew loves nature and being immersed in the outdoors both in and out of work.

# A healthy forest takes work

# Removing the deadwood helps the pines grow by Matthew Allen

Point Lobos State Natural Reserve contains approximately 224.5 acres of Monterey pine (*Pinus radiata*) forest. Wildfire has been excluded from this forest for at least 90 years, which has resulted in high average stand densities and a large accumulation of downed woody debris.

This large amount of debris can be referred to as fire fuels because it increases the chance of large-scale fire. In addition, the high stand density combined with invasive species cover has reduced the overall understory vegetation diversity.

The Monterey pine forest is an outstanding but threatened natural resource that California State Parks desires to protect for future generations. Therefore, management strategies are currently being implemented to benefit the health of the forest.

We know that Monterey pine is a fire-adapted species due to the early seed production, rapid growth rate and short life span averaging 60 to 80 years. The seedlings do not grow well in the shade and they require a flush of nutrients to prosper. In fact, these characteristics point to adaptation to large stand-replacing fires. This makes sense as the historic natural fire return interval in this area would have been long. Some estimates are up to 100 years or more. This is because we typically only get lightning strikes during the wet season.

Due to many factors, large stand-replacing fires would no longer be acceptable here. But the good thing is that although the trees are fire-adapted, they are not fire-dependent. We can employ strategies that allow light to reach the forest

floor and provide sufficient clearance so that seeds can root into the soil and encourage pine regeneration.

Managing understory fuels is one of the first strategies being implemented. Because the fuels pose an unacceptable fire risk, they are being cut and piled for burning and/or being chipped and removed. Stand -thinning is another technique that is being applied.

The overabundance of small trees and saplings creates competition for resources, reduces growth and increases the fire hazard. These trees will be removed by hand to reduce excess competition. Emphasis is placed on weak, overcrowded and dead saplings less than 6 inches diameter. Trees infected with pitch canker or beetles are also removed. The result is a well-spaced stand of healthy trees.

We will also create small canopy gaps where necessary. This is meant to mimic smaller natural disturbances that leave gaps in the canopy, such as windfall, storm damage or fire. These gaps allow seedlings to become established as sunlight can now reach the forest floor. This technique also aids in creating a mixed-age stand that is characteristic of a well-established, functioning forest.

Lastly, the removal of invasive species is being accomplished through both manual removal and herbicide spraying to increase native plant diversity. Species such as French broom (Genista monspessulana), English ivy (Hedera helix), Cape ivy (Delairea odorata), Jubata grass (Cortaderia jubata), coastal burnweed (Senecio minimus), cutleaved fireweed (Senecio glomeratus), and

a variety of thistles including bull thistle (*Cirsium vulgare*), Italian thistle (*Carduus pycnocephalus*), and sow thistle (*Sonchus spp.*) are being targeted for removal.

Our plan is to continue this work over the next several years with a goal of treating the entire stand and perpetuating a healthy forest that benefits the natural ecosystem.





Blue splashes of paint mark deadwood to be hauled away. Photos by Dave Evans.



Katherine Spitz, a Point Lobos Docent, is a licensed landscape architect and architect. Most of her career was spent in Los Angeles, where she founded her firm, Katherine Spitz Associates.

Katherine holds a Bachelor of Arts degree from the University of California, Santa Barbara, and a Master of Architecture degree from the University of California, Los Angeles. She currently serves as a board member on the Del Monte Forest Property Owners Board of Directors, as well as on the American Institute of Architects' Monterey Bay Board of Directors, and is a naturalist on the Pebble Beach Open Space Advisory Committee. She was appointed by Gov. Jerry Brown to the Landscape Committee for the California Architects Board, where she served for three years.

She dreams of a fully restored Point Lobos and, to that end, works as a natural resources volunteer for State Parks, Monterey District. You can find her most Monday mornings removing invasive weeds from different parts of the Reserve.

# The man who named paradise

Scottish botanist David Douglas lives on in Point Lobos plants | by Katherine Spitz

I feel an emotional connection to David Douglas, the 19th century Scottish botanist and explorer.

Late in 2019, I put a few native iris seeds in a flat, just for the fun of it. For three full months I neurotically stared at the bare soil in that flat, until finally one day, a tiny blade emerged. Slowly, about 39 more blades started to poke hesitantly through the soil.



David Douglas Wickimedia Commons

then moved from their dirt flat into plugs, then into 4 inch pots at seven months, and finally into 1 gallon containers, which took nearly the entire year of COVID lockdown.

On New Year's Eve 2020, I planted the irises into the native soil under cypresses. To my great surprise, they adjusted quickly to being left on their own. They actually started to *thrive*!

Over the course of the year, I mused about the life of David Douglas, imagining that perhaps the explorer who collected the iris (*Iris Douglasiana*) way back in 1825 might have felt the same way about the plants that I did.

(Continued on page 13)

Those plants were so needy! They needed to be admired daily. Their moisture levels needed to be assessed regularly. They needed to be taken to babysitters when I went out of town, and picked up when I got back. They needed to be painstakingly divided when they were 4 months old, and



Iris seedlings. Photo by Katherine Spitz.







Iris douglasiana. Photo by Dave Evans.

I think I was right. Douglas' commitment and passion for the natural world were unparalleled. Being a "plant hunter" in the early 1800s was dangerous, physically grueling, virtually unpaid and relentlessly lonely work, but Douglas went beyond the norm. He was extraordinary.

The man who bestowed names on thousands of our plants was so fearless and so dedicated that he repeatedly risked his life in the course of identifying, collecting and preserving plants. Ultimately it probably cost him his life.

So who was David Douglas? Unlike many of the botanists of his time, Douglas was not born into the wealthy class. It was his consuming interest in botany and his willingness to work hard that propelled him from an apprenticeship gardening job on a Scottish estate to a position in the University of Glasgow's Botanic Gardens. While he was there, both his life and the course of botanical history changed. He met William Hooker. (Reader, does Arctostaphylos hookeri ring a bell — common name "Hooker's manzanita?" It grows all over our peninsula.)

William Hooker was a wealthy botanist who was teaching at the university at the time (1823). Hooker took a liking to Douglas, and having heard that the Royal Horticultural Society was looking for a plant hunter to send to the untamed American continent, suggested him. Douglas was then 24 years old, but clearly ambitious, persistent and intrepid.

On this trip starting in 1824, Douglas really came into his own. Under the sponsorship of the Hudson Bay Fur

Trading Company, he spent over 10 rough months at sea before reaching the Pacific Northwest, which would be his base for four years.

He worked amazingly hard, exploring and naming new flora. He traveled by canoe, on horse or on foot, always with his white Scottie dog, Billy. He often neglected to eat and drink, and from early on, his eyes caused him trouble. Snow blindness and later the bright sun of Alta California exacerbated the condition.

The weather was cold and wet – the unrelenting rain ruined many of the plant specimens. He carried precious little clothing. There was a terrible fever one year that killed nearly everyone at the Hudson Bay camp. The ship he had hoped to sail home in was wrecked along the rocky coast before he got to it. He drank boiling water with grass (he ran out of tea) and became known as the "grass man." He was so hungry he was forced to eat the berries he had collected to send to England.

But in spite of the hardships, Douglas never gave up. In that first trip to the northwest he traversed 7,032 miles and collected 7,000 plant specimens to send back to England. There are over 220 plants that he first identified on that trip alone. So many of those plants are the plants that constitute the backbone of our floristic region; it is almost as though he single-handedly named this paradise.

He returned to London in 1828, and was greeted as a celebrity. But English society was not ready to accept a poor, albeit brilliant, botanist as an equal.

Undeterred, in 1830 he sought a posting back to America, this time to California. It was here on the Central Coast that he started exploring the landscapes between Santa Barbara and San Francisco. The heat and aridity of the dry season surprised him. And he was shocked that spring only lasted one month, bemoaning that such a short season provided him little time to collect enough samples.

It was the beginning of the end. Leaving California and heading north to explore Russia, his canoe was destroyed in the rapids on the Fraser River. Douglas nearly died; he didn't. Luckily, neither did Billy. However, he lost virtually everything he had collected in California: the journals, the seeds, the plants, the cones, everything!

He was sick, discouraged and nearly blind (by then, he had a glass eye). He headed to Hawaii to recuperate en route to Europe, but tragedy awaited.

While climbing Mauna Kea in Hawaii, he was either lured into a bull trap by an ex-convict who was robbing him, or his eyesight was so bad that he fell into it. He was gored to death by the trapped bull, while Billy waited above, guarding his master's coat and telescope. David Douglas' life was over at age 34. We will never know what actually happened.

But why does he matter to us here at Point Lobos? Because now his plants and flowers are in bloom, just as they might have been when he first saw them. I have only listed a few ( see sidebar to the right.)

His plant collections changed gardens for all time and economies as well. Douglas fir and Monterey pines are the most used lumber trees in the world. He discovered so many pines he wrote that some "will begin to think I manufacture them!" Among other pines he discovered were sugar pine, Coulter pine, Sitka spruce, ponderosa pine, lodgepole pine and the redwoods. He named plants after friends who were fellow scientists or doctors.

Most important to me, he named the irises I planted last year: the beautiful quiet *Iris douglasiana* the Douglas iris, the iris of the Pacific Coast. My irises. I am happy to say they are thriving in my garden, and I am grateful to David Douglas for bringing them to our attention.

Credits: "Lindsay, Ann; Seeds of Blood and Beauty, Scottish Plant Explorers" Birlinn Limited, 2008; David Douglas' journals, reprinted by Scholar Select; Vassar Quarterly, Volume XLIII, Number 4, 1 March 1958; and www.findingdaviddouglas.org.

# PLANTS DESCRIBED BY DAVID DOUGLAS

Globe lily and large-flowered star tulip (Calochortus species) — Mound Meadow, Weston Beach

**Monkey flower** (*Mimulus species*) — Everywhere

Coyote brush and marsh baccharis (Baccharis species) — Carmelo Meadow

California poppies (Eschscholzia californica)

— Bird Island Trail

Douglas nightshade (Solanum douglasiana) — Everywhere

**Seaside daisy** (*Erigeron glaucus*) — Everywhere

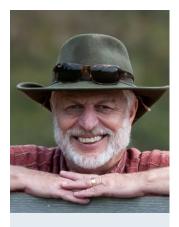
**Sagewort** (Artemesia douglasiana) — Sand Hill

**Lizard tail** (Eriophyllum) — Everywhere

Blue-eyed grass (Sisyrhincium species)
— along road at Mound Meadow



Iris douglasiana. Photo by Don McDougall.



Chuck Bancroft spent 31 years of his 35-year career as a State Parks Ranger at Point Lobos. In retirement, he still does programs and nature walks for members of the Point Lobos Foundation.

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# Turkey vultures and fungi, agents of decomposition

Creatures and plants big and small help the environment process materials

by Chuck Bancroft

To quote lyrics from a song by the British rock group The Animals: "I'm just a soul whose intentions are good, Oh Lord, please don't let me be misunderstood."

Vultures have a long history of being misunderstood. Some folks think that the vulture is an un-handsome, wobbly flying creature that feeds on carrion and doesn't contribute to the well-being of the environment. I take exception to this thinking and agree with the words of Robinson Jeffers in his poem "Vulture."

".... But how beautiful he looked, gliding down

On those great sails; how beautiful he looked, veering

away in the sea-light over the precipice."

Turkey vultures are widespread over open country, woods, deserts and foothills. They are most common over open or semi-open country, especially within a few miles of rocky or wooded areas providing secure nesting sites. They generally avoid densely forested regions but regularly forage over small offshore islands.

During my college days, I heard a quote: "If there is no means for decomposition, there will soon be no need for one." Many creatures big and small help the environment process materials. Decomposition is the process by which bacteria and fungi break dead organisms into their simple compounds. Plants can absorb and use these compounds again, completing the cycle. Decomposing bacteria and fungi are described as saprophytic because of the way they break down dead organic matter.



Turkey Vulture. All photos by Chuck Bancroft.



Cauliflower mushroom, Sparassis radicata.

The vulture is a part of the process of decomposition. The vulture seeks carrion by soaring over open or partly wooded country, watching the ground and watching the actions of other scavengers. It can also locate some carrion by odor. Unlike most birds, the vulture has a well-developed sense of smell.

Although fresh carrion is the largest part of its diet, it occasionally feeds on decaying vegetable matter, live insects or live fish in drying-up ponds. Its habit of feeding helps break down the larger carrion specimens into easily decomposed matter for bacteria and fungi to finish the process.

Now let's gets some facts understood. The bare red head is thought to be gross but is a self-defense mechanism. Having no feathers on the head means less tissue or blood gets stuck to the bird's head while it's feeding. By defecating on their legs after feeding, vultures use the strong acids from the digestive system to kill bacteria. After eating, vultures may also sit in the sun and let the UV rays kill any bacteria on their head or elsewhere.

When discussing decomposition, I think about one of my favorite decomposers: fungi. The main body of fungi is

Jumbo gym, Gymnopilus ventricosus.

a network of white cottony spiderweb-like growth called *mycellium*. It is the first part of the fungi to grow. Usually found on the forest floor among dry leaves and forest litter, it breaks down dead organic matter and returns vital nutrients to the soil. The fruiting body that we can eat is the mushroom or fungal body we see above ground.

Without fungi, nutrients would not cycle through an ecosystem, thus causing the breakdown of the entire food chain that makes it possible for members of the other kingdoms to be supplied with nutrients and to live.

Found among the pines in Point Lobos are several species that are really hard to miss. The fungi can take on many visual forms and are quite beautiful and unique in all forms.

Sparassis radicata is commonly known as the cauliflower mushroom. The flattened wavy mass of branching sections is white to pale yellow depending on age. It is believed that this fungus is parasitic on pines. Affected trees will host this fungus annually. The fungus can sometimes seem like a bushel basket.

Gymnopilus ventricosus commonly known as Jumbo gym is found on our pines. This mass of yellowish-orange clustered fruiting can be found in early fall to mid-winter at the base of trees and on stumps. Great cascades of the cap that can be 10 to 12 inches across can entice people to collect them but DON'T — they can be poisonous (and, remember, nothing can be collected at the Reserve).

Amanita muscaria or the Fly agaric is the most recognizable fungus in the Reserve. Fruitings occur in early winter and can be spectacular in large numbers or rings brightening the pine forest. It is toxic when raw. This delightful fungus is well-known from fairytale books we read as children and are even used as Christmas ornaments.

If you find mushrooms when exploring the woodlands, always have a really knowledgeable someone identify what you have. Never eat anything you cannot identify perfectly. If in doubt, throw it out!



Fly agaric, Amanita muscaria.



# Notes from the Docent Log

Compiled by Beth Kurzava

While [my wife] Donita and I were at Point Lobos today we saw multiple gray whales spouting as they migrated south. I thought they were running late (seasonally) and mentioned this to another docent, who was also there enjoying nature's spectacle. Returning home, I looked at my Docent News postings and realized I had posted an article two years ago to the day with the title "Hundreds of Gray Whales." The point being is that gray whales know better than I when it is time to head south.

**Robert Grace**, 01/21/2021



Encountering young *Homo sapiens* artists while nature journaling... I came upon this 2nd and 5th grader, each drawing an egret in their nature journal with accurate observations and written descriptions. Their parents stood by and gave them all the time they needed. It was very refreshing to encounter a family like this, and it gave me hope in parenting and in the next generation. Perhaps these two students are a couple of "docents in the making."

Gary Dillon, 03/07/2021



The harbor seal affectionately referred to as Rosie (for her rare reddish coat) bottles alongside her newborn pup in Whalers Cove.

**Don Blohowiak**, 03/26/2021

pigeon Guillemots return to Bird Island — seen here through a spotting scope with the aid of an iPhone adapter.

Karen Wagner, 03/28/2021





was walking north on South Shore Trail, just past the Piney Woods ocean parking lot. At the top of the stairs was a group of four visitors, stopped on the trail looking down into the cove and the rocks beyond. Oh boy! I thought — a geology interpretation opportunity. Let me dredge up all my stories about concretions, conglomerate, Salina Terrane...

When I stopped to engage the group, one of the men pointed into the cove and said, "There is a piece of granite down there that seems out of place." Before I could talk about the Whalers Cove quarry, he went on to say, "I'm from Rocklin and we have lots of granite quarries. See those marks on the top? That's where they pounded steel rods in and cleaved off a block."

This reminded me of a video that shows how the piece of granite holding the plaque outside of Whalers Cabin was made. An even older technique was used where pieces of wood were pounded into cracks, the wood was



wet down, and the slowly expanding wood made the crack larger until a block of granite finally fell away.

Of course, I couldn't help myself, and as our conversation lagged, I pointed across the way and said, "See those cool round concretions over there?"

**Chris Wagner**, 03/12/2021



At Point Lobos, when the weather is grand and visitors are keen to get out, the proverbial early bird is most likely to catch the worm. On a stunning late March Sunday morning I, too, was up and out. I took the trail north from Whalers Cove to Moss Cove. To my own embarrassment, I realized that this was the first time in years I had walked this lovely trail. As a new "twitcher," I no longer need to remind myself constantly to look upwards. And sure enough, perched on the top of an extremely tall pine was this fellow, working on some seriously ruffled feathers. Aha! The mythical herons' nest the serious birders had referred to must be very close. I found it with my binoculars. Grab your binoculars and take this trail next time; you can find the nest too, no doubt with chicks occupying it by now.

# Jacolyn Harmer, 04/02/21

have had many delightful conversations with visitors almost every time I have been to the Reserve recently. It is like old times when almost every visitor was a tree hugger instead of someone reacting to five stars on Yelp. I hope that has been your experience too.

**Stan Dryden**, 04/02/2021

# MONTEREY COUNTY GIVES!

# Joining Together for Big Ideas

Support for Point Lobos remained steadfast in a year marked by uncertainty. The Point Lobos Foundation is deeply grateful for all who recognize the importance of maintaining continuity at Point Lobos State Natural

Reserve and lent their support through the 2020 Monterey County Gives Campaign. Donors from eight states and 49 cities helped us to raise \$65,701. Donations are vital to provide personal protective equipment necessary to ensure the safety of visitors, staff, and volunteers and to continue education programs, our dynamic docent interpretive programs, species preservation and protection, essential trail maintenance and improvements.

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Danielle Bragg



# Do you have a question about Point Lobos?

Visit our virtual bulletin board and "Ask a volunteer Docent" your question. You will get a response within a few days.



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www.padlet.com/pointlobos1/bookmarks

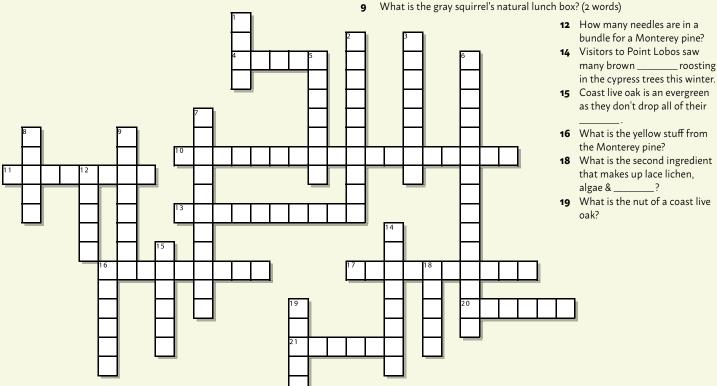
# Puzzle: Trees & Other Things by Ann Pendleton

- Trees make two of these a year; 1 in spring & 1 in summer.
- What rat is found in the forest in Point Lobos? (2 words) 10
- Trentepohlia is orange because of \_ 11

Answers at pointlobos.org/crossword

- What is the official state lichen? (2 words) 13
- The \_\_\_\_\_\_falcon can sometimes be seen on a snag at Bird Island. 16
- What is the wettest forest in Point Lobos? (2 words) 17
- What are the separate parts of a pine cone called?
- What type of gas do trees create as a waste product?

- What do trees and dogs have in common?
- What is the only named tree in Point Lobos? (2 words)
- is one type of forest decomposers found in Point Lobos.
- Monterey pines have a very \_\_\_\_\_root system.
- Which tree is only found naturally in Point Lobos and Pebble Beach? (2 words)
- A rhizomatous plant named by Scottish botanist, first described in Monterey, CA. (2 words)
- are beneficial to bird and animal life. Dead trees called \_



# Acknowledgments

# Memorials, tributes and grants October 16, 2020 - April 15, 2021

### **BIRTHDAYS**

For the birthday of Anastasia Tsibulsky Abel Woldetensaye

For the birthday of Don McDougall Ryan McDougall

For the birthday of Glenda Selle Grace Chryssomallis

For the birthday of Karin Stratton

Douglas Wagner

For the birthday of Sarah Birkhaeuser

Dan and Margaret Birkhaeuser

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Clifton and Diane Kirkpatrick

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