

Native to Greater LA Badge Cadettes



GIRL SCOUTS of GREATER LOS ANGELES

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Native to Greater LA Badge (Plants)- Cadettes

“When we tug at a single thing in nature, we find it attached to the rest of the world.”

— [John Muir](#)

Before the 405, the 101, the 5 or the 10, there were plants and animals. Before Hollywood, Los Angeles, Malibu, and Long Beach there were people that lived here for hundreds of years. There are unique plants and animals and people, native only to the region that we call home. Some have vanished in the mists of time, however if we listen to the stories told by the buzz of bees, the crashing of the sea and the voices in the wind, we might just be surprised to still find miracles native only to greater LA. Each level of Cadettes, Seniors and Ambassadors will learn about one of these elements; eventually tying it all together with the knowledge of Greater LA’s unique natural and cultural history.

For Cadettes- Southern California is unique in that there are 5 microclimates: beach, valley, mountain, high desert and low desert. These microclimates are distinctively different and yet sometimes within a matter of miles from each other. As you look through these local regions you will notice some of the unique plant treasures that are found only in these areas. At the basis of almost every food web are plants and they are the same primary producers that provide us with oxygen, food, shelter, and medicine. Some of these plants have incredible adaptations for their environment and are sometimes only found in one place because of these special adaptations. Equally, the animals and people also found indigenous to these regions have grown to become dependant on certain native species for life. Some plants are not native to these regions and have been introduced to Southern California from Europe, Australia and other places of the world. As people traveled into California from Spain and Mexico, Russia, or the Eastern US they brought with them new grazing animals like cattle, horses, sheep and pigs, and many new species of plants in order to feed the new livestock. Even today, we still introduce non native plants to California on a daily basis whether by accident like having seeds travel from one area to another in our hiking boots or camping gear, or on purpose like the plants we choose to use in our landscaping. This can be harmful in some cases when non native invasive species are introduced to an environment and they out compete native plants for vital resources or increase fire danger. In this badge you will discover native and invasive plants in 4 primary regions within the greater LA area, connect with these environments, and take action to protect and conserve the native plants of greater LA. You will complete at least one option for each of the 5 steps in order to achieve this badge.

1. **Beach or Desert plants.** Beach and Desert plants often have many similarities as both grow in an environment with very little fresh water and often windy, sandy, and harsh conditions. Identify and discuss the following 5 native and 5 non native plant species found in a Southern California Beach **or** Desert Environments and then continue to one of the activities that follows.

Beach Native Plants:

yellow sand verbena (*Abronia latifolia*)
 western yarrow (*Achillea millefolium californica*)
 saltbush (*Atriplex leucophylla*)
 pickleweed/saltwort (*Salicornia virginica*)
 spiny rush (*Juncus acutus leopoldii*)

Desert Native Plants:

Creosote Bush (*Larrea tridentata*)
 California Buckwheat (*Eriogonum fasciculatum polifolium*)
 Beavertail or Prickly Pear Cactus (*Opuntia basilaris*)
 Desert Mallow (Desert Mallow)
 Joshua Tree (*Yucca brevifolia*)

Beach Invasive Plants:

pampus grass (*Cortaderia jubata*)
 ice plant (*Carpobrotus edulis*)
 Giant reed (*Arundo donax*)
 Fountain Grass (*Pennisetum setaceum*)
 Castor Bean (*Richinus communis*)

Desert Invasive Plants:

Red Brome (*Bromus rubens*)
 Mediterranean Grasses (*Schismus spp*)
 Saharan Mustard (*Brassica tournefortii*)
 Salt Cedar (*tamarix spp.*)
 Pepperweed (*Lepidium latifolium*)

- a. Create a book where you draw/paint or photograph each native plant and list why it is better for its environment than non native invasive plants.
- b. Make a collage with pictures of native plants vs non native plants and point out key adaptations that you find cool and reasons why invasive non natives are bad. Post at your school, library or somewhere else in your city. (Make sure you obtain permission to post before you do!)
- c. Make a video where you identify the native and invasive plants from one of these areas and narrate 2 key adaptations for the natives and 2 reasons why invasive plants are bad for this environment. Get silly, get dramatic, use songs and costumes and all your Girl Scout skills! Post to YouTube with adult permission for extra fun!

2. **Inland valley and chaparral plants.** A large portion of Southern California and Los Angeles County falls into the valley microclimate. This climate area is well known for its fluctuating winds either a cooler sea breeze from the ocean or a hot and dry wind from the desert commonly referred to as the Santa Ana's. There are also more extreme temperatures in this region with freezing and frost conditions in the winter and scorching hot days in the summer. These areas are also prone to brushfires and land/mud slides. Research the 6 native and invasive plants local to this area in the following activities.

Inland Valley/ Chaparral Native Plants

California Sagebrush (*Artemisia californica*)
 California Mugwort (*Artemisia douglasiana*)
 Coast Live Oak (*Quercus agrifolia*)
 White Sage (*Salvia apiana*)
 California Buckeye (*Aesculus californica*)
 Yucca (*Yucca whipplei parishii*)

Invasive Plants

Fennel (*Foeniculum vulgare*)
 Eucalyptus (*Eucalyptus spp*)
 Russian Thistle or Tumbleweed (*Salsola australis*)
 Poison Hemlock (*Conium maculatum*)
 Artichoke Thistle (*Cynara cardunculus*)
 Wild Oats (*Avena spp*)

- a. Ethnobotany is the study of how humans use plants. People have used plants for thousands of years for food, tools, medicine, clothes, and religious uses. The plants native to Southern California listed above all have important uses to the indigenous people that once lived in this area. Look up how these plants were used by Native Americans. Then discuss how plants are used in your life today. Use a plant material to make something artistic, something edible, and research a common medicine to see if it is plant based (if it isn't find one that is!).

*For extra fun- Acorns were a staple food for many California Native Americans. Coincidentally acorns are used similarly in other places around the world, one specifically being Korea! See if you can locate some acorn flour and cook a recipe! (Please use adult supervision and permission, if you have any allergy concerns, do not do this activity!)

- b. The plants in Southern California chaparral environments are crucial for protecting against wildfire. Fire Ecology is the study of how fire influences and effects an environment. Do some research on Southern California's fire ecology. Most native plants have adapted to fire in this environment and can protect or avoid against wildfire but with the introduction of non native species, some of the native plants are less able to escape brushfire destruction. When you research the plants listed above pay particular attention to how they are affected by fire (especially invasive plants). Do you have any of these plants in your yard, school or city? After you finish your research learn with an adult who knows how, to properly make and maintain a fire and don't forget the marshmallows!

*For Extra fun- contact your local fire department and see if you can take a tour of the fire station and ask questions about fire ecology!

- c. If you haven't realized California is kind of dry... Do some research on the average rainfall in your city and where your water comes from. Look up information on the California Aqueduct and find out where LA's water comes from. When you consider how many people live in Southern California and how much water we all need, it is almost overwhelming when you see how much we really have. Just like us people, the plants in our area need water too! Examine the plants in your home, school, or city and decide whether these plants are good to have in your area or bad and why? Then dream up a redesign for your yard, school, or city using California Native plants. Do some research on California Native Plant gardens and see how incredible and beneficial they can be!

*For Extra Fun- visit a nursery that carries California Native Plants and plant one (or more) in your area!

3. **Mountain Trees and Plants.** There are 4 mountain ranges in Los Angeles county the Santa Monica Mountains, San Gabriel Mountains, Santa Susana and Verdugo Mountains. For this exercise we will also include the San Bernardino and San Jacinto Mountains for the GSGLA camps located in those areas. The Santa Monica, Santa Susana and Verdugo Mountains are all generally low lying mountain ranges with mostly a chaparral environment. However the higher points in the San Gabriel, San

Bernardino and San Jacinto mountains have a much different environment. Through the 3 activities you can choose from you will learn about either trees, wild flowers, or aquatic lake or riparian plants.

- a. LA's mountain trees are as diverse as LA itself. There are a few trees however that have important values to the culture of LA and the people that have lived here for many thousands of years. In the lower elevations, Oak Trees are one of the most common tree to Los Angeles Mountain Ranges. In this article from KCET learn about the history of the Oak Tree and how it had an impact on the culture of Los Angeles.

http://www.kcet.org/updaily/socal_focus/history/la-as-subject/the-oak-trees-of-southern-california-a-brief-history.html

After reading the article and learning about the importance of oak trees, try to locate an oak tree in your city or neighboring area or visit with your troop or family to the site of a historic oak in Los Angeles. Afterwards, pay tribute to the life of this tree by either painting or photographing a picture of it, writing it a poem or story or having a party for it with your friends or family.

*If you want to do research and celebrate a different kind of mountain tree native to the Los Angeles area, that is fine as well. Just remember to make sure it is a California Native tree!

- b. Plan a hike with your troop or family in the Los Angeles area. You can go to the Angeles National Forest, Santa Monica Mountains, San Gabriel Mountains or anywhere in the San Bernardino or San Jacinto Mountain areas. Do some research on the wildflowers in the area of your hike and the seasons that they can be found in. Then pick 10 wildflowers and create a scavenger hunt or bingo board to see how many of these native flowers you can find while on your mountain hike! *Remember to help protect these special flowers by not picking them and leaving them unharmed for others to enjoy.
- c. Although Southern California is pretty dry, we still have a few areas in our mountains with natural water sources. Some are widely known like Big Bear Lake and Lake Arrowhead, others are seasonal and only fill or flow for part of the year. In either case, these natural sources of water have very specific plants adapted to live only in those areas. Just like other areas, non-native plants can have devastating effects on our water environments too. Some non-native invasive water plants can obstruct the flow of waterways, causing bodies of water to dry up faster or reducing water flow to other areas. Sometimes overgrowth can cause the **Eutrophication** of lakes reducing the amount of oxygen in the water to a critical point where fish and other aquatic life dies off. Other species of non native invasive plants like Tamarisk or *Arundo donax* (Giant Reed) can increase fire dangers along waterways.

Do some research and learn about the characteristics needed for a healthy fresh water environment. Create a diorama of a lake environment with information on native plants and warnings for the dangers that affect these environments. Include information on 5 native plants found near Big Bear Lake and 2 invasive plants. You can do this as a troop or individually.

4. Get Outside! Take the knowledge you have gained about these native plants and go see them yourself!

a. Visit beach or desert plants. Go for a walk or hike, plan a picnic, or spend some time taking in what the park has to offer. Try these locations to plan your outing:

Los Angeles Beach Locations:

Malibu Creek State Park
Malibu Lagoon State Park
Dockweiler State Park
SEA lab in Redondo Beach
Palos Verdes Land Conservancy
Ballona wetlands
Los Cerritos Wetlands
Cabrillo Marine Aquarium

Los Angeles Desert Locations:

Antelope Valley California Poppy Reserve
Arthur B. Ripley Desert Woodland State Park
Saddleback Butte State Park
Red Rock Canyon State Park,

b. Visit a chaparral environment. Go for a walk or hike, plan a picnic, or spend some time taking in what the park has to offer. Try these locations to plan your outing:

Los Angeles Chaparral Locations:

Malibu Creek State Park
Leo Carrillo State Park
The Santa Monica Mountains National Recreation Area
Theodore Payne Foundation
Baldwin Hills Scenic Overlook
Palos Verdes Land Conservancy

*Check with your city to see if there are any other parks nearby with native plant vegetation.

c. Visit a mountain environment. Go for a walk or hike, plan a picnic, or spend some time taking in what the park has to offer. Try these locations to plan your outing:

Los Angeles Mountain Locations:

GSGLA Camp Osito Rancho or surrounding Big Bear area
GSGLA Camp Lakota or surrounding Frazier Park area
Angeles National Forest in San Gabriel Mountains
Santa Monica Mountains National Recreation Area
San Jacinto Mountains

5. Save a plant! Get involved in your community and council. Pick a place to make a difference and get down in the dirt. *Be sure to pick a different place to visit than in step #4 to really make your knowledge and experience well rounded.

- a. Get involved in a dune restoration project! Refer to the list in 4a to find a location to get involved with in Los Angeles to repair local wetlands or desert environments with native dune plants. Help remove non native invasive species and plant natives. Think about where you live. Are there any places in your community that could use some native plant restoration? Get your troop, family, school, or town involved to repair an area and plant some native vegetation.
- b. Get involved in a chaparral restoration project. Refer to the list in 4b to find a location to get involved with in Los Angeles to repair local chaparral environments with native plants. Help remove non native invasive species and plant natives. Think about where you live. Are there any places in your community that could use some native plant restoration? Get your troop, family, school, or town involved to repair an area and plant some native vegetation.
- c. Get involved with a mountain native plant restoration project. Refer to the list in 4c to find a location to get involved with in Los Angeles to repair local chaparral environments with native plants. Help remove non native invasive species and plant natives. Think about where you live. Are there any places in your community that could use some native plant restoration? Get your troop, family, school, or town involved to repair an area and plant some native vegetation.