

PLUGGED IN

FUN FOR KIDS

A COOPERATIVE PROJECT OF THE SANTA BARBARA NEWS-PRESS AND THE EDUCATORS' ROUNDTABLE, PUBLISHED MONTHLY TO PROMOTE LEARNING AMONG YOUNG READERS IN NATURAL SCIENCE, HISTORY, TECHNOLOGY, AND ART

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This Month's Theme: Forests

We all know that a forest is a place where tall trees grow together in one place. But did you know that there is another kind of forest growing in the ocean? Read to find out more!



Kelp Forests

How Are Kelp Forests Used... by animals?
The kelp forest provides a habitat for many animals. Some animals hide among the blades and holdfasts of kelp, especially when they are young. Others eat the kelp and still others, like sea otters, come to the kelp forests to hunt!

...by humans in the past?
The Chumash Indians relied on the kelp forests for food and material for tools. They gathered abalone and other shellfish and caught fish, seals and otters for food. Abalone shells were used as bowls and carved into fishhooks and beads. Chumash living on the Channel Islands made anchum, or bead money, out of the shells from the Olivella snail.

...by humans right now?
Do you brush your teeth? If so, you have put kelp in your mouth! Substances that are used in the making of toothpaste, Jell-O, shampoo, and ice cream are extracted from kelp. Kelp forests also provide us with food and fun. Our fisheries harvest the fish, lobsters and sea urchins that live in the kelp forests and the kelp forests are great for diving, snorkeling, and kayaking.



Sea lions find food and shelter in kelp forests.



Many animals call kelp forests home. These sea urchins eat kelp while this black-and-yellow rockfish hunts for prey.

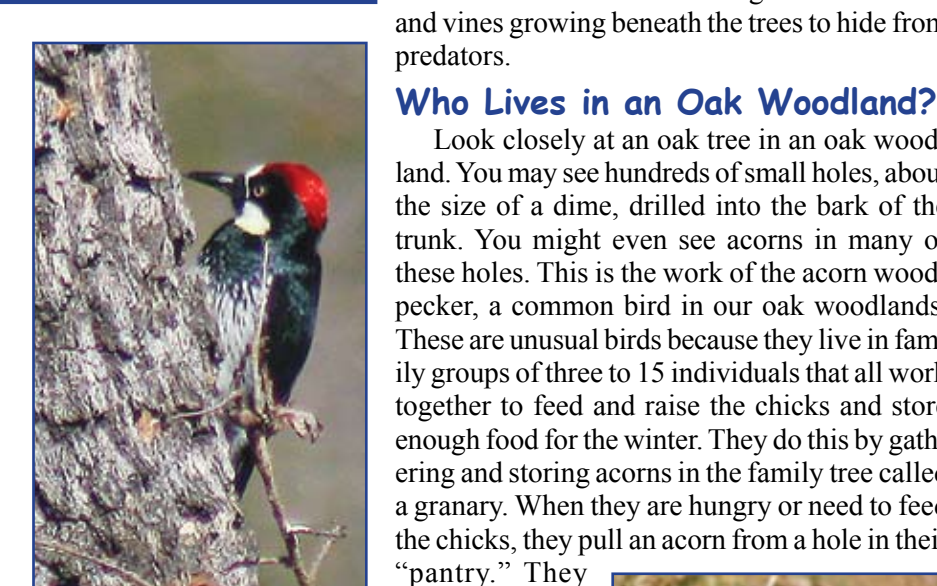


Oak Forests

Oak Woodlands And Forests
Both oak woodlands and oak forests are found in Santa Barbara County. In the valleys you will see stands of the beautiful valley oak (*Quercus lobata*), while on the mountain slopes coast live oaks (*Quercus agrifolia*) grow close together, providing food and shelter for a huge number of living species. In fact the oak woodland habitat has more biodiversity than any other major terrestrial (land) habitat in California. It is home to at least 4000 kind of insects, 2000 different birds, 60 kinds of amphibians and reptiles, and 100 different mammals.

It's All About Food and Shelter
One oak tree can produce many pounds of acorns each year. That's a lot of food for creatures living in and around oaks. Oak woodlands also provide shelter and protection. Birds nest and hide in the leaves and branches in the tree-tops. Many birds, insects, and squirrels shelter and make their homes in the crowns and trunks of oak trees. And large mammals like mule deer can vanish into the thick undergrowth of bushes and vines growing beneath the trees to hide from predators.

Who Lives in an Oak Woodland?
Look closely at an oak tree in an oak woodland. You may see hundreds of small holes, about the size of a dime, drilled into the bark of the trunk. You might even see acorns in many of these holes. This is the work of the acorn woodpecker, a common bird in our oak woodlands. These are unusual birds because they live in family groups of three to 15 individuals that all work together to feed and raise the chicks and store enough food for the winter. They do this by gathering and storing acorns in the family tree called a granary. When they are hungry or need to feed the chicks, they pull an acorn from a hole in their "pantry." They use these holes every year after year to store food.



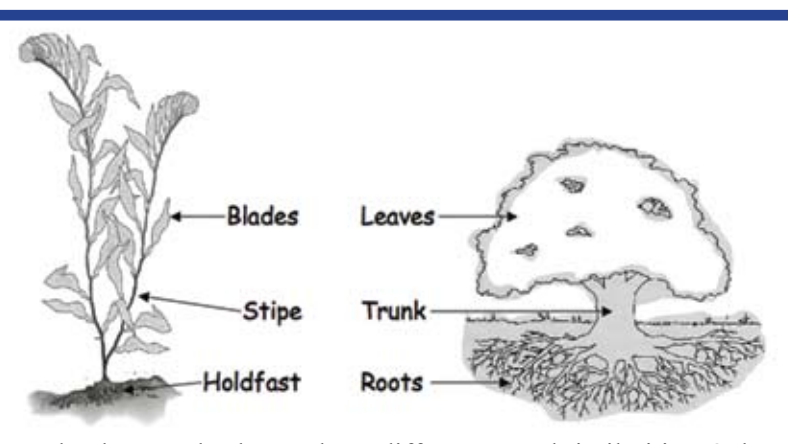
Acorn woodpecker drills holes in tree bark.



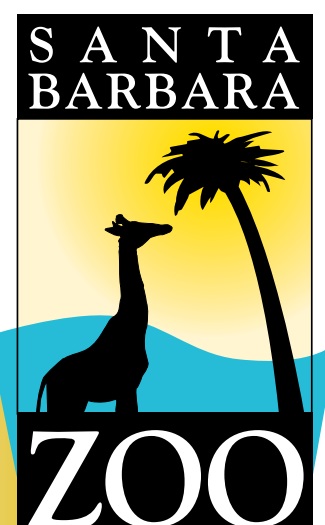
Scrub jays collect and eat acorns. They bury many acorns in the ground for future use. These birds help in regeneration of oaks as some of the hidden acorns germinate and grow into new trees.



Mule deer browse on many plants. They often eat the leaves of oaks. In fall, they can be seen feeding on acorns.



Kelp plants and oak trees have differences and similarities. Oaks grow on land and are plants, while seaweeds like the giant kelp grow in the ocean and are classified as algae. Oaks and kelp have some similar structures although these have different names. Kelp has a holdfast that anchors it to the ocean floor while an oak tree is anchored by its roots. Both use sunlight energy to make food through the process of photosynthesis. The trunk of the oak supports its branches and leaves while the stipe of the kelp supports its blades. Since kelp seems to grow like trees in the ocean, people talk about "kelp forests."



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