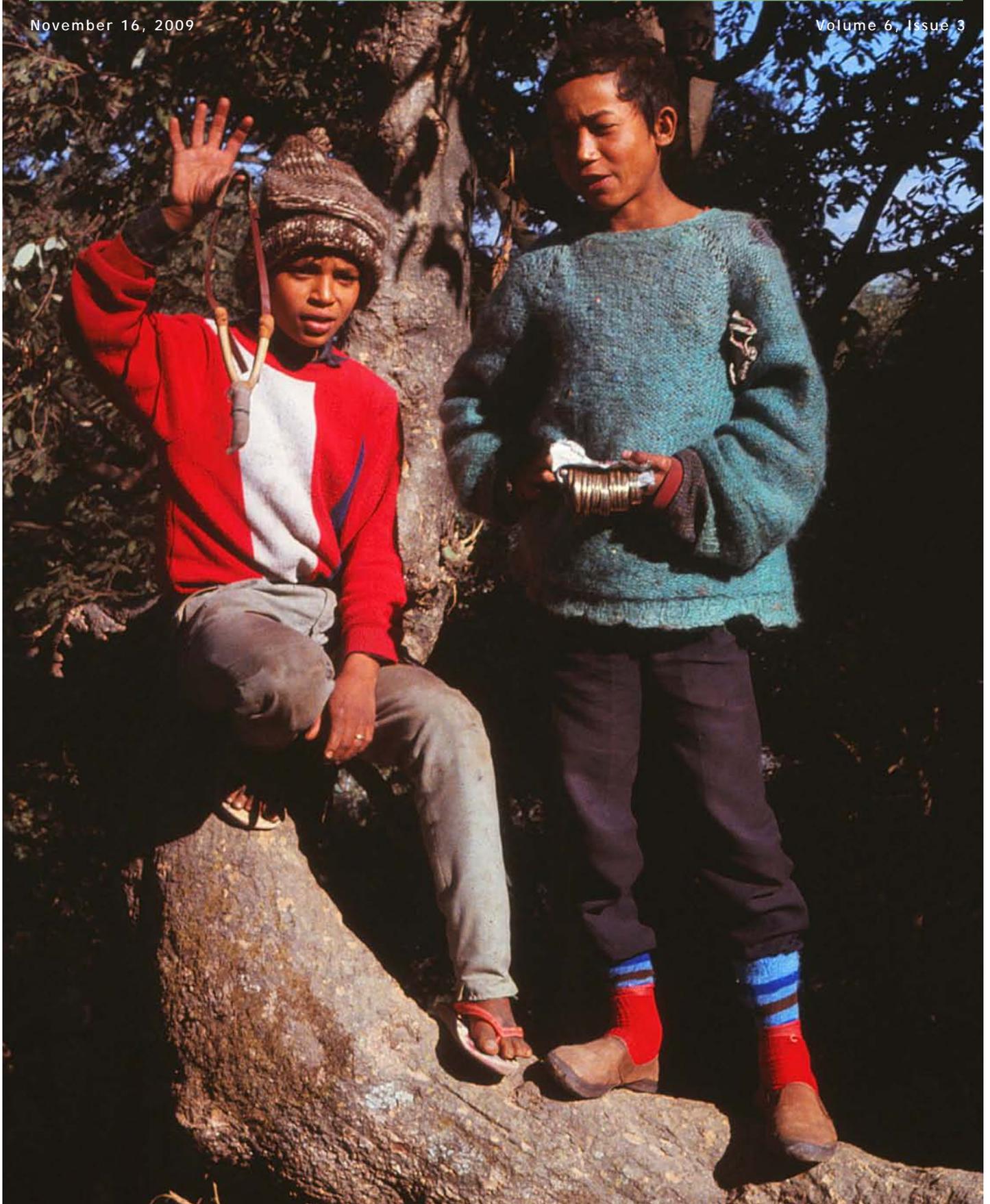


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Cover photograph: Two boys near the Monkey Temple, Kathmandu, Nepal. Inside cover photo (above left), Jaipur, India.

All photos by Richard W. Halsey unless indicated otherwise.

The Chaparralian is the quarterly journal of the California Chaparral Institute, a non-profit organization that is dedicated to the preservation of native shrubland ecosystems and promoting an appreciation for the natural environment through science and education. To join the Institute and receive The Chaparralian, please fill out and mail in the slip below or join on our website. We welcome unsolicited submissions to The Chaparralian. Please send to rwh@californiachaparral.org or via post to the address below. You can find us on the web at www.californiachaparral.org

Editor and Publisher.....Richard W. Halsey

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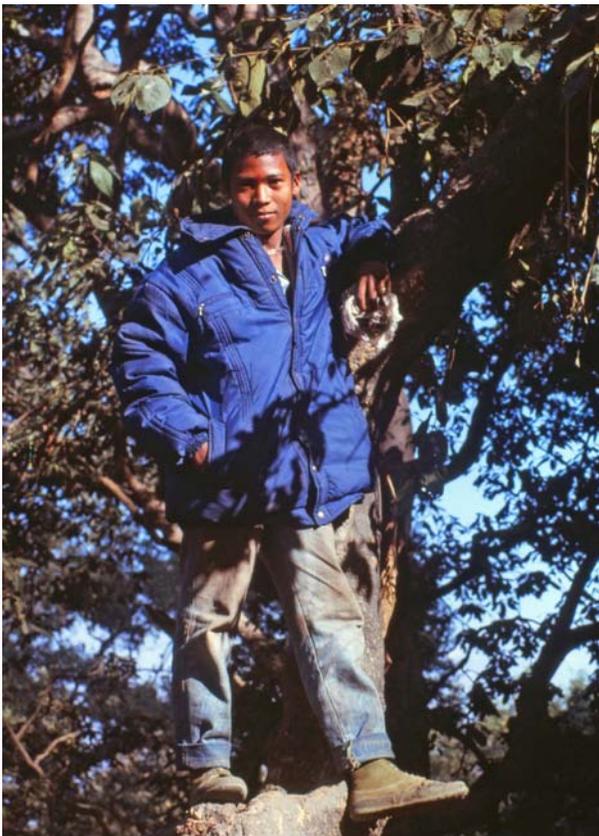
NASCENT THOUGHTS

Few things are as universal as kids loving to learn.

The three boys were hanging out on the broken stone steps of the ancient temple near Kathmandu when I showed up. I had ditched the official tour and had gone off on my own.

We stood around for a while and talked. The youngest boy played with a sling shot and another twirled a bundle of thin metal bracelets he had made to sell to tourists. Both wore several layers of bright clothing - thread bare in spots, but sturdy enough to defend against the cold. The oldest boy said he was 18, which surprised me. He looked a lot younger, but then this entire country continually surprised.

Earlier, while walking through the central part of the town, I kept passing up rows of shops and street vendors to touch intricate carvings embedded in the wooden frames of ancient buildings that lined the street. The building's



My 18-year old friend. His two pals are on the front cover.

walls were like brooding dragons, hunched over as if ready to swallow up the unsuspecting pedestrians below. A great empire once existed here where artisans made even the most utilitarian structure a thing of beauty. Hindu Gods, abstract designs, and wild animals stared back at me from every surface. Such care and detail carries on today in the hand-crafted marble boxes and colorful clothing being sold on the street.

"You should keep your pack in front of you. It's safer," the older boy warned. "Would you like to see what's below the temple?"

I adjusted my small satchel and followed my young guides as they bounced down a stone path to an arched opening guarded by an old man. He was sitting on a wooden chair, motionless and blind. Eye disease was one of the most noticeable maladies in Nepal. There were many others, but the eyes are so personal, so reflective - windows into much more than an individual's soul.

The boys whispered to the old man and he waved us on. I said thanks as I walked by. I think I caught a nod.

The dark quietly engulfed us in waves as we walked deeper into the tunnel. I'd never noticed the light disappearing like that before.

The walls were lined with human skulls, hundreds of them. The boys didn't know who they were, but assured me their original owners had been dead a long time.

As we dropped deeper underground, the light vanished completely. The skulls continued on into the dark. "We stop here," the oldest boy said, abruptly turning us around and guiding us back to the light.

I stopped at the entrance and said thanks again to the old man. The boys giggled.

We walked around the outskirts of the temple for a while, talking about Nepal, talking about my life in America. We finally stopped under several large trees and sat on some gnarled roots that had pushed themselves up to the surface. Monkeys chattered with each other on the limbs above us.

"I'm a teacher," I said.

The boys' eyes widened and they began to ask lots of questions. "What are schools like in America? What are students like? How much did it cost to go to school in America?"

"It's free," I replied.

"It's free?" the oldest boy asked in amazement.

"Well, yeah. Everyone contributes by paying taxes, but even if you can't, you can still go to school for free."

All three boys became quite excited about the notion of a free education and peppered me with endless questions. In Nepal, they said, school was expensive, so they couldn't go. Their families couldn't afford it. I asked them how they had learned to speak English so well.

"We talk to a lot of Americans."

It was getting late and I knew I was going to get in trouble for holding everyone up on the tour - again. So I said good-bye to my three friends and headed back to the heated bus that would take me back to the hotel. The meal was quite elaborate that night. I didn't eat much.

It's been a long time since my trip to Nepal, but I've never forgotten what I found there. I often remember the three boys when I get upset for some reason or another. I think about

their smiles, their fascination with learning new things, and the colorful pair of socks one of them wore that day. I remember the socks especially. In fact, I thought about them this afternoon while sorting the laundry in our living room. We have so many socks.

There's always something to get upset about: the loss of natural habitat, hateful propaganda flooding the airwaves, and unfortunate behaviors that frequent times when people become scared. It often seems so overwhelming. That's when we need to remember the children.

Children have a way of cutting through our egos and telling the truth, no matter where they are. They remind us about what is important and why we should care about each other, the life around us, and the earth we share. And they remind us how rewarding it is to open our hearts and learn new things.

Children offer our best hope in bringing the world together to protect the remarkable diversity of life that still exists on this remarkable planet we call home.





Photos: Pg. 4 Agra, India. Above left, Kathmandu, Nepal. Above, Royal Chitwan National Park, Nepal. Below, Kathmandu, Nepal.



The Chaparral Habitat

For Young Chaparralians



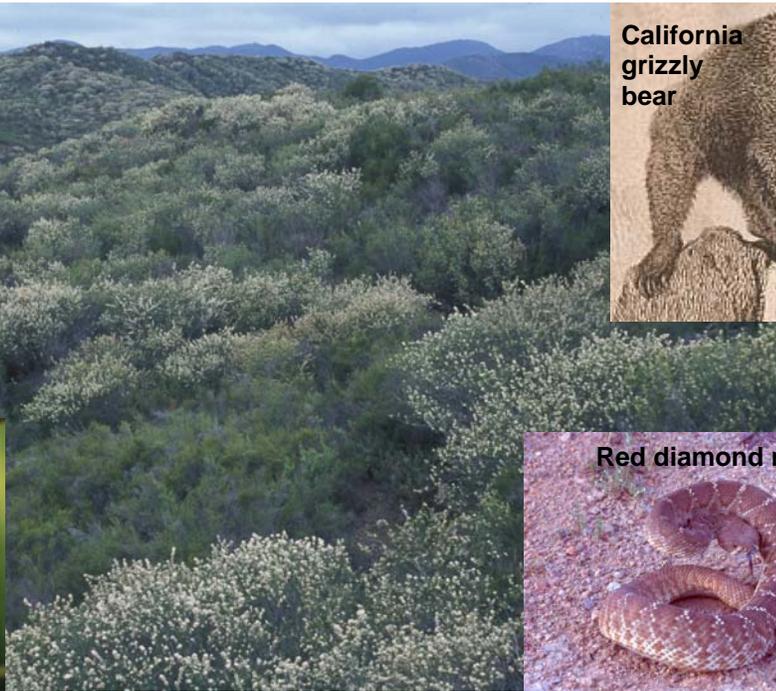
Wrentit



California grizzly bear



Ceanothus silk moth (K. Wolfe)



Ceanothus chaparral in bloom



Red diamond rattlesnake

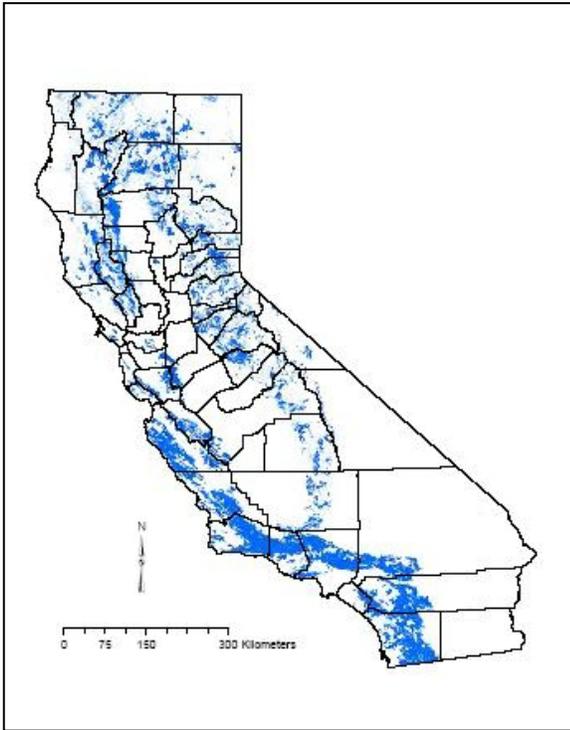
Life in the Shrublands

You may be surprised to discover that the most common habitat in California is the chaparral. It is made up of beautiful, woody shrubs like manzanita and mountain lilac, is home to the California condor, bobcats and cougars, and has a wonderful assortment of song birds, reptiles and insects. It was also where the California grizzly bear once roamed.

Chaparral forms a dense cover of shrubs over many hills and mountains along the coast and on the slopes of inland valleys. It can

be found all the way from southern Oregon to Baja California in Mexico. The chaparral shrub cover is often so solid that hills look like they are covered with green velvet. Every once and a while you'll see a few trees like big-cone Douglas fir punching through the chaparral in canyons, but for the most part, trees are very rare.

Chaparral shrubs are quite tough. They can survive long periods without rain and can even recover from fire as long as the flames do not come too often. Rain in the chaparral almost always falls in late autumn and winter, rarely in the summer. This



Chaparral habitat in blue. Map from J.E. Keeley and F.W. Davis. 2007.

is unusual because most habitats in the world receive a lot of rain during the summer months.

Living with Heat and Fire

This special combination of hot, dry summers and mild, wet winters is called a Mediterranean-type climate. There are only five places on earth that have it: California, central Chile in South America, parts of southern Australia, South Africa, and the lands around the Mediterranean Sea. To survive this type of climate, many chaparral shrubs have small, tough leaves with waxy coatings to prevent water

loss. Nearly all chaparral shrubs are evergreen, meaning they keep most of their leaves all year. However, in the dry months of summer and autumn, some chaparral shrubs, like mountain lilac, drop nearly half their leaves. Less leaves means less water will be lost through evaporation. The leaves on other shrubs, like black sage, curl up and look dead. In fact, many plants in the chaparral look dead in the dry season, but they are actually just dormant to conserve their moisture. Their stems are still green inside.

By mid-winter, after the first few rain storms have soaked the ground, chaparral plants will begin to sprout new leaves. As early as December, shrubs like manzanita will start blooming. Imagine, flowers in the winter! But this is how the chaparral has adapted to the Mediterranean-type climate in which it thrives.

In the summer and autumn heat, chaparral can catch fire because it is so dry. These fires, especially if strong winds blow, can burn thousands of acres. In Southern California, strong Santa Ana winds from the desert are responsible for spreading the largest fires. Such large fires are natural and the chaparral can recover as long as there are not too many. In the past, before humans

came to California, the chaparral burned probably once every 50 to 100 years. Now, with so many fires caused by people, some areas covered by chaparral are burning every ten years or less. This is not enough time for the chaparral to recover. When this happens, the chaparral habitat is destroyed and is usually replaced by non-native weeds and grasses.

If given enough time, however, chaparral plants can respond to fire in special ways. Some shrubs send up tiny green shoots from their root burls a few days after the fire is out. Within a month or two these re-sprouting shrubs decorate the burned



Re-sprouting chamise shrubs

landscape with little green bundles of leaves.

Other shrubs are completely burned up in the fire, but live on through the thousands of seeds they have produced over the years.



Ceanothus seedlings

These seeds can hide in the soil for a century or more. They only become seedlings after their seeds have been cracked open by heat or are exposed to chemicals found in smoke and charred wood. Some shrubs can both re-sprout and produce seedlings after a fire.

There are also many annual wildflowers that appear after a fire. The seeds of these plants were produced after the last blaze and remain dormant until fire awakens them. This is why the first spring after a fire, burned chaparral hillsides are often covered with thousands of beautiful wildflowers such as orange poppies, white snapdragons, and purple lupines. Sometimes these wildflowers will return a second year, but will then disappear until after the next blaze.



Wildflowers after a fire

Within a few years after a fire, re-sprouting plants and shrub seedlings start to take over. In 15-20 years, the chaparral is able to cloak the land with its green, soft velvet cover again.

Plant Life in the Chaparral

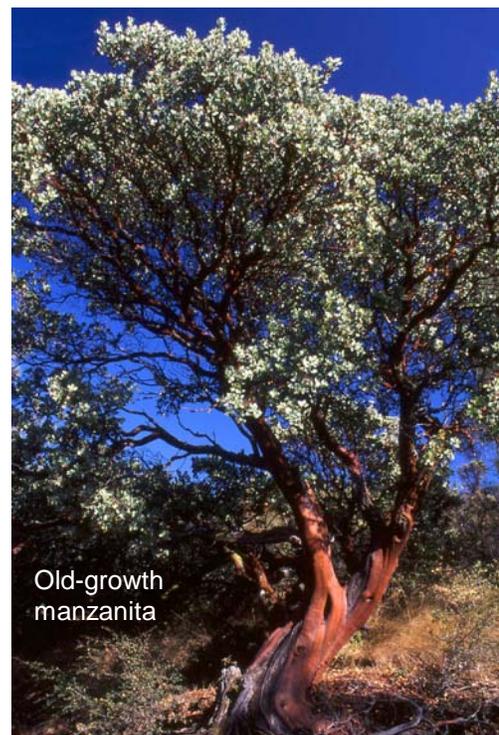
The most common shrub in the chaparral is chamise. It has tiny leaves that help the plant keep its moisture. In the summer, its creamy white blossoms turn golden brown, coloring the hillsides with a rich cinnamon glow. Mountain lilac, or ceanothus, is another common chaparral shrub. In the spring, these shrubs decorate mountains and hills with beautiful white and purple flowers.

The name "chaparral" comes from Spanish word *chaparro*, which describes areas in Spain covered by scrub oak, another common chaparral shrub. Scrub oak is like a short oak tree with very small acorns.

Manzanita, with its smooth red bark and flat, oval leaves, is a shrub

most people recognize in the chaparral. Its urn-shaped flowers are an important source of nectar for hummingbirds and insects. Old-growth chaparral, over a century in age, can form a canopy more than twenty feet high with huge manzanitas having stems the size of a person's waist.

This was the favored habitat of the now extinct California grizzly bear. These giant mammals made tunnels through the dense chaparral, placing their big paws in the same spots generation after generation. A few of these trails may still exist, hidden under the shrub canopy for you to discover.



Old-growth manzanita



Baby cougar. Photo by Deborah Knapp.

Wildlife in the Chaparral

The most common bird in the chaparral is the wrentit, a small gray songbird with a long tail. Its call has the rhythm of a bouncing ping-pong ball and is often the first chaparral sound you hear in the morning, and the last one at dusk. A pair of wrentits can live up to ten years and nest in the same small territory their entire lives.

Other birds you may see include the gray and blue scrub jay, family groups of California quail, and roadrunners running about looking for a meal. If you are lucky, you may even see a California condor soar overhead. The chaparral provides one of the last habitats for this extremely rare bird.

Since the grizzly bear became extinct, the largest predators in the chaparral now are cougars, bobcats, coyotes, and gray foxes.

Snakes, like the red diamond rattlesnake and the gopher snake, also play an important role in the chaparral's food web. Western fence lizards and horned lizards hunt for the smallest prey.

Woodrats are common in the chaparral, but you will probably see their nests before you ever see them running along the stems of shrubs. Their nests are made of large piles of sticks and leaves. These nests are also home to many other animals including mice, lizards, and insects.



A woodrat and her nest. Photo by Scott Tremor.

Pocket gophers are also common in the chaparral, digging their tunnels and raising small mounds of dirt in the rocky soil.

People and the Chaparral

California Indians used many of the natural resources found in the chaparral. For example, they ground manzanita berries into a meal to make mush or cakes. Manzanita leaves were steeped in water to make a tea to treat several illnesses. In caves deep in the mountains, California Indians drew images inspired by many chaparral animals such as grizzly bears, lizards, and insects.

Chaparral is often one of the easiest habitats to find near your home where you can experience an undisturbed native plant community. Although it is almost impossible to



Chumash Indian cave paintings

walk through, you can usually find a trail or road nearby that allows you to explore its hidden secrets.

Chaparral provides not only an important habitat for all the animals and plants we share the earth with, but also gives us a beautiful place to enjoy nature. Chaparral is one of California's most important natural treasures.



Chaparral covered mountain

Photos and text by Richard W. Halsey

Poetry of a Kindred Spirit

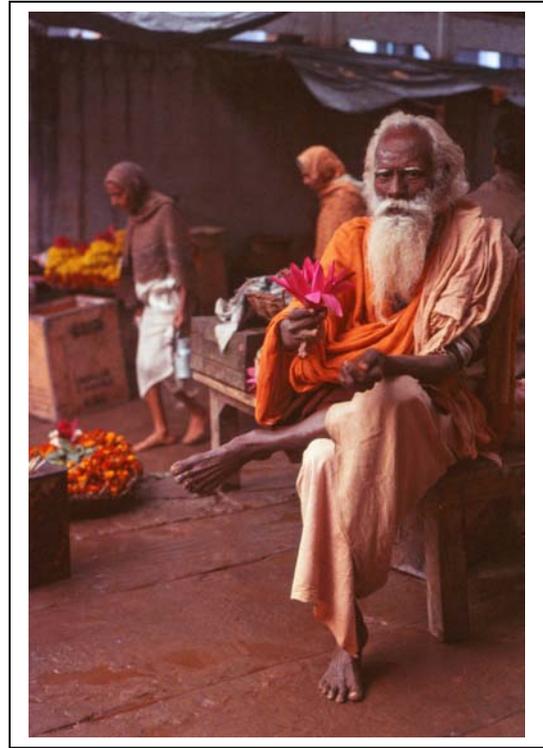
Nancy Jordan

Just Standing

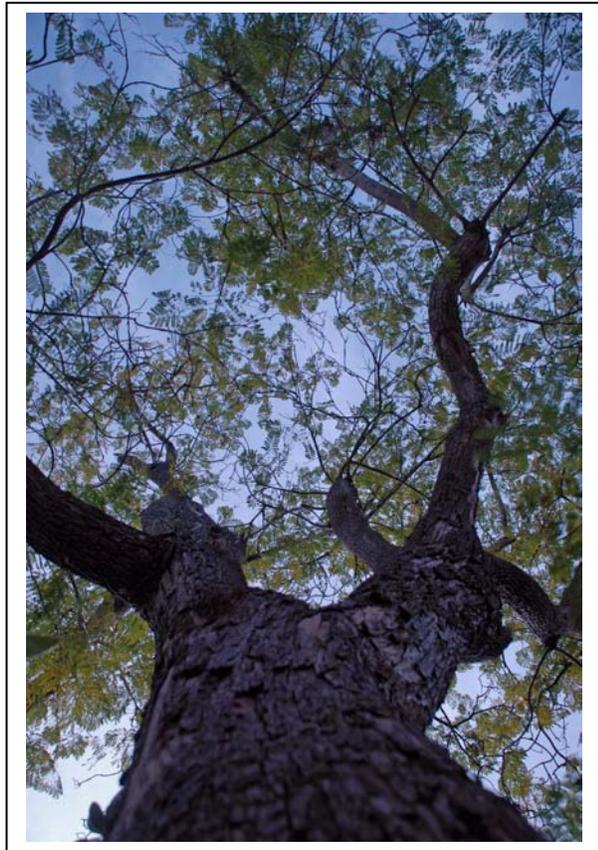
Her Western psyche
Notices and admires
Efforts of all kinds -
Struggling, striving, reaching,
Toiling, trying, teaching.
Explosions of directed energy
Nuclear and atomic.

Bathed in the beauty
Of a California winter
She remembers
A covey
Of orange-robed monks
In Phnom Penh,
Standing motionless
In a pool of silence
Outside a restaurant kitchen.

They did not wait, expect, or want.
They simply were.
Totally in the moment.
Those who noticed
Asked themselves,
Could being present count among
The greatest of all human
achievements?



Varanasi, India



Jacaranda Trees

Maybe what's required
Is to lie on the earth
Beneath the trees;
To experience the blossoms
Raining down
Without a sound
Upon my face and body -
Prolific purple profusions
Propelled
By some inner
Premonition
To let it go.

Perhaps from that perspective
Facets, previously unrecognized
Would manifest,
And draw me closer
To coining or creating
Letters, words, sounds,
Some medium capable of conveying
The magnificence,
The mind blowing,
Soul stirring,
Magnificence,
Of jacarandas in bloom.



The Walking Toothbrush

Tussock Moth Caterpillar
Drab Dad and Maimed Mom have Colorful Offspring

By Bill Howell

With a wingspan of slightly more than an inch, tussock moths (*Orgyia*) fly in the chaparral when the moon is out, or not. They are related to the infamous gypsy moth introduced into New England from Europe around 1870, whose ravenous larvae, more than a century later, still cause grief to forest trees and ornamentals in the northeastern U.S. Even as gypsy cousins, the tussocks cause no mischief and go unnoticed by most folks -- except for the larval stage. The caterpillar of this nondescript Lepidoptera is spectacular.



Four tufts of gray and black hair extend from a body more than an inch long with red and yellow spots and dabs of brown, white, blue and orange. This bizarre and beautiful rainbow worm resembles a brightly decorated toothbrush. For less than a month, the bristly “dental device” munches on oak, wild buckwheat and certain other species until the colorful caterpillar spins a cottony cocoon of silk and hair under an obscure niche or nook.

Anxious to find a partner, night flying male moths with feathery antennae, are able to locate females from surprising distances -- miles. Tussock adults are without feeding mouthparts, so their motivation to perpetuate the species is accelerated. Even though her wings are stunted and she resembles a miniature frozen turkey, he may mate with her even before she emerges from her cocoon!
What a guy.



Protected sides of boulders and undersides of tree trunks are often cocoon strewn tussock towns of fluffy shelters awaiting the call of spring. On your hikes in the chaparral, look for this gaudy walking toothbrush and remember, the dingy dad was a mouthless flying machine and the rotund mother was a flightless fuzz ball. Sometimes when the young don't resemble the parents, nature knows best.

Since her wing stubs cannot lift her obese egg filled body, she cannot flutter off and deposit eggs here and there, so mother moth meekly pops tiny spheres all over the cocoon from which she just emerged. The clutch will hatch before next summer. The dispersal problem of this egg-laying factory doesn't seem to limit their distribution which also includes habitats other than chaparral. Tussocks can be found all along the Pacific coast with other species covering the rest of California and additional areas of the U.S. and southern Canada.



UNFOLDINGS

Nothing is as real as a dream. The world can change around you, but your dream will not. Responsibilities need not erase it. Duties need not obscure it. Because the dream is within you, no one can take it away.

- Tom Clancy

Having the world's best idea will do you no good unless you act on it. People who want milk shouldn't sit on a stool in the middle of a field in hopes that a cow will back up to them.

- Curtis Grant

If you never change your mind, why have one?

- Edward De Bono

The outward freedom that we shall attain will only be in exact proportion to the inward freedom to which we may have grown at a given moment. And if this is a correct view of freedom, our chief energy must be concentrated on achieving reform from within.

- Gandhi

In teaching others, we teach ourselves.

- Proverb

"And what are you now, Siddhartha?"

"I do not know; I know as little as you. I am on the way. I was a rich man, but I am no longer and what I will be tomorrow I do not know."

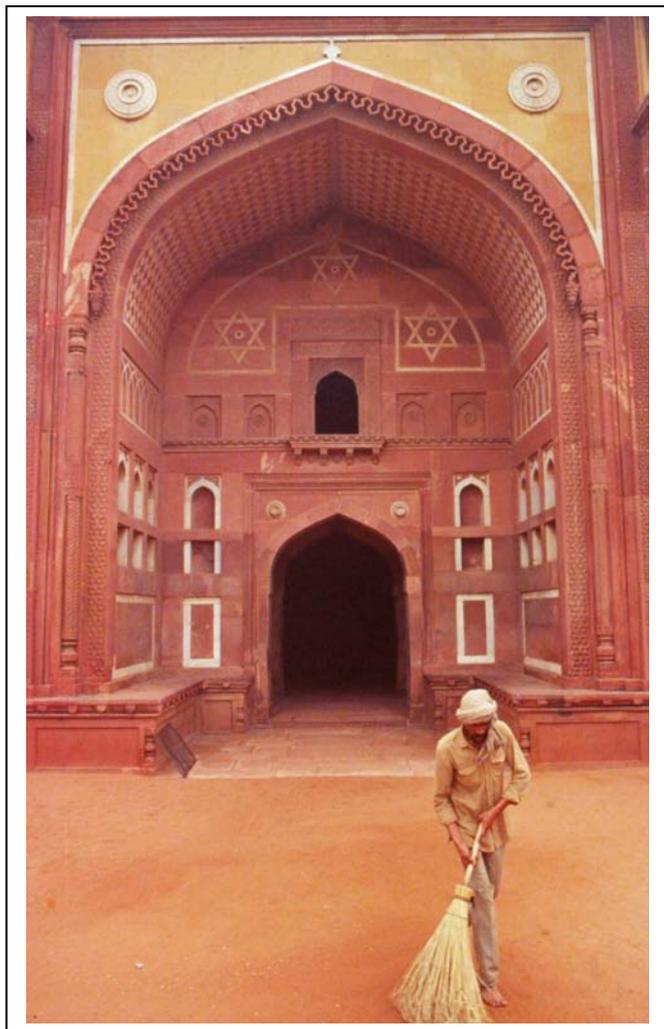
-Herman Hess

In the beginner's mind there are many possibilities, but in the expert's there are few.

-Shunryu Suzuki

This, too, shall pass.

- William Shakespeare



Agra, India