

THE
*Mary
Bowerman*
TRAIL

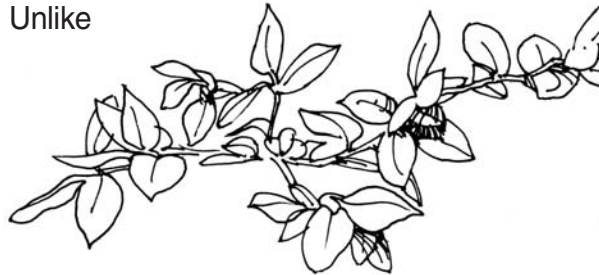
*Dedicated to botanist
Dr. Mary Leo Bowerman (1908-2005),
co-founder of Save Mount Diablo
and charter member of Mount Diablo
Interpretive Association.*

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*This easy trail offers spectacular views.
More than this, it is a journey through time.
You will discover how nature has created
and altered this peak that is part of our
landscape.*

STOP 1

The trail begins in a grove of scrubby oaks. There are two species present here. Most common is the interior live oak. Its leaves are flat and oblong rather than convex and roundish. The acorns of this oak take two years to ripen. The second oak found along the trail is the canyon or maul oak. The leaves can be identified by the color and texture of the undersides which may be light blue-green or golden, but never shiny. Unlike



the oaks lower down on the mountain and in the canyons, these are small and scrubby. Why do you suppose this is?

STOP 2

**LEAVES OF THREE—
LET IT BE!!!**

This is poison oak, a plant whose parts can give you a serious skin rash. The California Native Americans used the slender stems in their woven baskets. They also used the juice from the stems to cure ringworm and get rid of warts. Early settlers used baking powder to relieve the irritating itch.



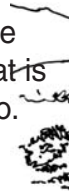
STOP 3

The rock along this part of the trail is greenstone. Greenstone is an altered submarine volcanic rock that was deposited on the ancient sea floor about 100 million years ago. Green color appears only on freshly broken surfaces. Weathering will eventually change the surface color to gray or brown. Notice the crumbly appearance of the greenstone and compare it with other kinds of rocks that you will soon come to on the trail.

STOP 4

The rocks on the right side of the trail here are graywacke, a sandstone sediment that is part of the uplift that created Mount Diablo.

It was formed from sediments on the ocean floor. Note the smooth fractures in the graywacke, unlike the crumbly greenstone at STOP 3. Now turn and look down the hill. The patch of bunch grasses immediately below the trail represents some of the few native grasses remaining on the mountain. Most of the grasses found today are exotic—introduced to California in the late 18th century with the arrival of the Spanish.

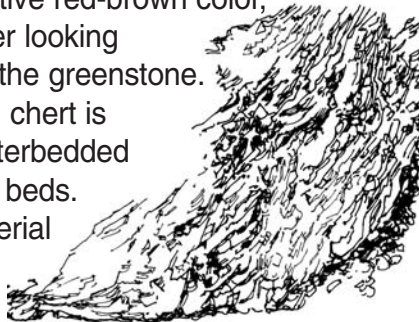


STOP 5

The rock on the uphill side of the trail is chert. It has a distinctive red-brown color, and a smoother looking structure than the greenstone.

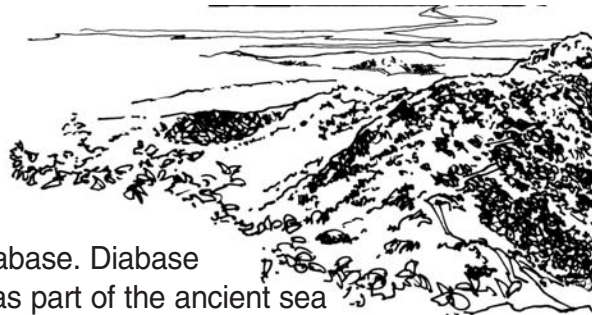
The red-brown chert is rhythmically interbedded with thin shale beds.

The white material here is quartz.

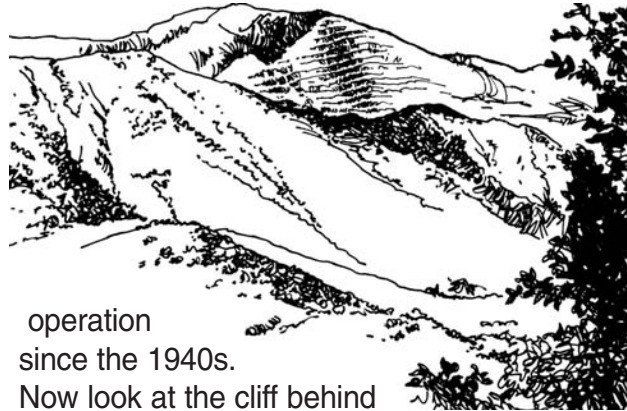


STOP 6

This is a good place to rest for a minute. The quarry that you see to the northwest is on Mt. Zion, and the rock that is being mined is



diabase. Diabase was part of the ancient sea floor about 165 million years ago. It is used in roadbeds and in concrete pad house foundations. The quarry has been in



operation since the 1940s. Now look at the cliff behind you. Along the trail, you have become acquainted with chert and greenstone. These, with a little bit of shale, are present in this cliff. The shale is at the bottom right as you look toward the hill. It is gray on a fresh surface, brown on a weathered surface, and splits into thin chips. The trees are fewer here. There is a twisted gray pine up the hill. How do you suppose it got that way? There are California bay laurels here, too, that look more like shrubs than trees. The leaves of this tree are used as an herb in soups and stews.



STOP 7

We turn a corner here, moving from the north side of Mount Diablo to the east facing slope. It's drier here; the vegetation changes.



North Peak is directly in front of you, and there is a view of the Sacramento-San Joaquin River Delta (left of North Peak). Look especially at the hills to the southeast (right of North Peak). They are composed of layers of sediment that formed in an ancient sea on top of the chert, greenstone, and other rocks. They were pushed aside by the massive uplift when it emerged. Notice how the hills dip away to the north from the summit of the mountain.

STOP 8

The oak trees are behind us now, and we have entered a chaparral community. A fire swept through this area in 1977. Chaparral plants depend on fire; for them it is a means of rejuvenation. Some chaparral plants require the heat of fire for seed germination. Others sprout anew from the root crown after a fire.

Chaparral soils are poor in nutrients, and they do not soak up water like other soils. Therefore, because of the stresses of high temperatures and low soil moisture, chaparral plants show adaptations that reduce water loss.

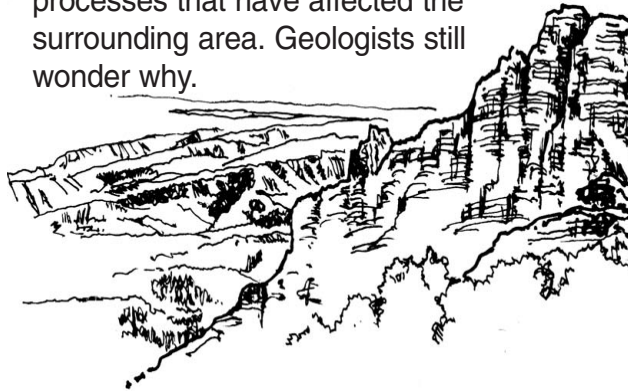
Small gray-colored or waxy leaves, often held vertically to the sun, keep water loss to a minimum. The plants are also evergreen, so the plants do not use extra nutrients to put out a new crop every year. If man did

not intervene, this area would burn naturally about every 15 to 30 years.

STOP 9

The great red-colored monolith on your left as you turn onto the south side of the mountain is called the Devil's Pulpit. From this area is a view of the Central Valley.

The Devil's Pulpit is made of chert that for some reason has resisted the erosional processes that have affected the surrounding area. Geologists still wonder why.



STOP 10

Here, on the sunny south side of the mountain, the plants are wild oats, foxtails, and other grasses. This is the third habitat to be explored along this trail. There was oak woodland along the north side, chaparral on the east, and now grassland.

Walking along this part of the trail, watch for the sagebrush lizard. This fellow is larger and has finer scales than the fence lizards you may have seen elsewhere, and has no orange under the arms. This is the only place on the mountain you will see it. As its name implies, he belongs in desert areas.

STOP 11

Notice the irregular polished surface on this rock that glints in the sun. Look closely and

you can see striations (sets of parallel lines) on the surface. These features were made when rocks broke and scraped past each other over millions of years. Rub your hands over the surface. If it feels smooth, the rock was moving in that direction. The opposite direction is rougher.

STOP 12

There are three new plants between here and the end of the trail. These plants occur only on this side of the mountain at the summit. The first plant is California's native juniper. This evergreen plant has flat scale-like leaves. Although seen as a shrub here, the *juniper* can reach small tree proportions where conditions for growth are more favorable.



STOP 13

The second is *yerba santa*, a weedy growth of stems two feet high or more with varnished leaves.



Native Americans drank a tea from the leaves to cure respiratory diseases. It was the Spanish though who named the plant: Yerba Santa means "holy or sacred herb."

STOP 14

The third is *chamise*, probably the most common shrub on Mount Diablo, especially in chaparral areas. It is a stiff-stemmed plant with tiny, needle-like leaves.

*Illustrations by Mike Nelson
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Now that you have completed your walk around the summit of Mount Diablo, think for a moment how it will look a month from now, or next season. How will it change? Perhaps you would like to return and see for yourself the many moods of the mountain.

Our Mission

The mission of the California Department of Parks and Recreation is to provide for the health, inspiration and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality outdoor recreation.

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