



EBMUD WATERSHED.
Hiking permit required except when hiking on Skyline Trail/Bay Area Ridge Trail. Call (510) 287-0459

SIBLEY VOLCANIC REGIONAL PRESERVE
1.46 mi. from Fish Ranch Road to Tomas Cantadas and Tilden Reg. Park

DOGS MUST BE ON LEASH
from peak boundary to Sibley staging area on Skyline Bl.

IN ORDER TO REDUCE OR PREVENT THE RISK OF SERIOUS HEAD INJURY OR DEATH, STATE LAW REQUIRES THAT ALL BICYCLISTS UNDER AGE 18 WEAR AN APPROVED HELMET WHILE RIDING ON TRAILS AND ROADWAYS. THE DISTRICT ALSO STRONGLY RECOMMENDS THAT ALL EQUESTRIANS AND BICYCLISTS WEAR HELMETS AT ALL TIMES.

DOGS AND HORSES ARE NOT PERMITTED IN HUCKLEBERRY except passing through on the Skyline National Trail/Bay Area Ridge Trail.
BICYCLES ARE NOT PERMITTED IN HUCKLEBERRY PRESERVE.

LEGEND

- Hikers, Horses & Bicycles
- Hikers & Horses
- Skyline Trail/Bay Area Ridge Trail—Hikers & Horses
- Hikers Only
- Mileage Between Points
- Paved Road
- Parking
- Restrooms
- Visitor Center
- Drinking Water
- Information
- 4 Self-Guided Tour Stops
- Gate, No Vehicle Access

0 1/4 1/2 Mile

Contour interval 20 feet in Claremont Canyon, Redwood, and Sibley triangle west of Thormdale Dr.
Contour interval 10 feet elsewhere.

North

A SELF-GUIDED TOUR OF ROUND TOP VOLCANOES

By Stephen W. Edwards
Director, Regional Parks Botanic Garden

Robert Sibley Volcanic Regional Preserve features a complex volcanic center that was the source, 10 million years ago, of most of the lavas that underlie the ridges from Inspiration Point in Tilden Regional Park to Moraga. Round Top, one of the highest peaks in the Berkeley Hills, consists of lavas, breccias (unsorted mixtures of fine and coarse volcanic debris) and tuffs (lithified volcanic ash – ash that has become stone) that once filled a volcano.

Though Round Top was once the infilling of a great crater, it stands out today because it was originally surrounded by “incompetent” (easily eroded) sedimentary rocks of the Orinda Formation, which have eroded away. During the past 10 million years the Berkeley Hills were uplifted on a gigantic scale because of strains on the Hayward and Moraga fault systems. This uplift folded the rock formations, and the Round Top vent complex was tilted on its side.

Hence, folding and erosion have exposed a cross section of a volcano, right down to its roots, providing an unsurpassed outdoor laboratory for the study of volcanism in the Central Coast Ranges.

The blocks of stone scattered everywhere around the flanks of Round Top are basalt lava (a hard, dense, dark volcanic rock). Lava from the vent has been dated at UC Berkeley by the potassium-argon radioisotopic dating method. The oldest is 10.2 million years old.

A great diversity of volcanic phenomena is preserved for study at Sibley. Basaltic dikes (feeders of the vents), tuff-breccias (ash containing a jumble of blocks and chunks of lava), lava flows, red-baked cinder piles, air-fall tuffs, and the major vent itself can all be seen first-hand in the course of an easy hike. Numbered posts, which correspond to the numbered descriptions below, have been placed at some of the most interesting outcrops.

1 To visit this site, walk up the paved road to the EBMUD water tank. A dark basalt dike, an important feeder of lava to the crater, cuts through a sequence of tuff-breccias (grayish brown) and pebbly

mudstones (light gray), all inside and near the bottom of the crater. The mudstones indicate ponding of water; the tuff-breccias are the remains of landslides and blockfalls into the pit from the surrounding walls.

2 This pit was made by quarry operations in which huge amounts of massive basalt lava were removed. The result is a tremendous boon to geology, for the pit exposes the interior of the Round Top volcano. You are standing on bedded tuff-breccias, which filled much of the crater, settling at times into a small lake. Studies of exposures north and south suggest the crater was a little wider than the present quarry pit. The steep wall across the pit consists of lava that capped the crater after it was filled. Eventually the Round Top vent buried itself in basalt flows. From this point, note the view of Mt. Diablo, which, though it contains some submarine volcanic rocks, never was a volcano.

3 This roadcut exposes Orinda Formation river gravels, sands, and mudstones. The red (when moist) streaks and layers in these river beds were caused by oxidation of iron in the sediments. Such varicolored “redbeds” are explored worldwide for the fossils of plants and animals they contain. Elsewhere in the Preserve, bands of more intense red are found at the tops and bottoms of lava flows. In such cases iron was oxidized and reddened by baking and steam action; these bands are called “bake zones.” A related process occurs when a brushfire reddens rocks and soil. To see Post 4, walk about 100 feet past Post 3, then bear to the right.

4 Before you is a wall with basalt on the left and Orinda mudstones on the right. The bedding in the mudstones

Continued on reverse