Nick Khadder

Continued from other side ...

7. Before you is a basalt flow, massive at left, rubbly to the right. The lower parts, coming into contact with cold land surfaces, harden early and are often jumbled by turbulence and drag. The rubbly part of the flow is filled with vesicles caused by gas pockets, which were later filled with chalcedony, opal, calcite, zeolites, and sometimes green celadonite.

8. This huge, reddish-brown block of lava fell from the cliffs to the upper right. The lava cooled and hardened while it was still moving, resulting in dramatic fragmentation, known as "autobrecciation" (self-broken).

9. See hard lava to the right and left, and soft, easily eroded tuff between, all tilted eastward almost to vertical. The lava to the left baked the top of the tuffs brick red. This lava looks as if it was probably 100-150 feet thick. These flows were not fluid, but contained enough silica to be more viscous. They probably moved at a slow walk, with glowing blocks of lava tumbling down a steep front and setting vegetation on fire.

10. The brick-red knobs in the foreground, and rugged outcrops of the same color on the skyline, are made of cinder that flew from Round Top and landed while still hot, so the pieces welded together.

11. The major valley to the north across Highway 24 is Siesta Valley. It coincides with the axis of the Siesta Syncline, a great fold that has lifted up thousands of feet of rocks on both sides. You are standing on the southwest limb of the fold, which includes all the rocks in Sibley.

How Many Volcanoes?

Besides Round Top, there are smaller ones outside the Preserve to the north and southeast. Another, of rhyodacitic composition, underlies the Lawrence Berkeley Laboratory and Little Grizzly Peak in Tilden Regional Park. About 9.8 million years ago it was erupting beside Round Top. Subsequently it was shifted about three and one-half miles northwest by movement along Wildcat Fault. That makes a total of four volcanoes.

The first park road sign, Oct. 1936. L-R: Board Directors August Vollmer and Dr. Aurelia Reinhardt with Elbert Vail, General Manager.

About This Preserve

This preserve is named to honor Robert Sibley, a founder and director of the East Bay Regional Park District, and president of the Board of Directors from 1948 until his death in 1958. The original 227-acre preserve was dedicated with Tilden Regional Park and Temescal Regional Recreation Area in October 1936, two years after the Park District's formation. Various parcels have been added to the preserve over the years, including a 250-acre parcel in 2010.

At the southern park boundary is 240-acre Huckleberry Botanic Regional Preserve. The Skyline National Recreation Trail, which connects Richmond-El Sobrante to Castro Valley, traverses both of these parks.

Ours to Explore, Enjoy and Protect

Please enjoy Regional Parks safely and help protect and preserve the parklands by following all park rules and regulations.

Safety

- Stay on trails. Shortcuts are dangerous and damage natural resources.
- Bring plenty of water to prevent dehydration.
- Be prepared for sudden changes in weather conditions.
- Keep parks clean. Pack out what you pack in.
- Inform someone where you are going and when you will return.
- Save our 24/7 Dispatch Center number on your mobile phone: Emergency 510-881-1121; Non-emergency 510-881-1833.

POLICE, FIRE, MEDICAL EMERGENCY 9-1-1
PARK POLICE (evenings/weekends) 510-881-1833
CAMPING RESERVATIONS ..... 1-888-327-2757, option 2
PARK OFFICE ..... 1-888-327-2757, option 3, ext. 4556

Rules

- Dogs must be leashed in parking lots, 200 feet from any trail or park entrance, in picnic areas, developed areas, where grazing animals are present, and as posted. Dogs must be under voice control at all times. Clean up after your pet: bag it, bin it.
- Bicycles are permitted on designated trails only. They stay to the right side of trail, ring or call out when passing.
- Bicyclists yield to pedestrians. Both yield to equestrians. State law requires that all bicyclists under age 18 wear a helmet. All bicyclists and equestrians are encouraged to wear helmets at all times.
- Horses have the right-of-way on trails.
- The following are prohibited:
  - Wading and/or swimming in undesignated areas
  - Consuming alcohol in non-designated areas/ parks
  - Feeding or approaching wildlife
  - Releasing animals into parklands
  - Causing damage to plants, geological or archaeological features
  - Graffiti
  - Smoking/vaping
  - Skateboarding
  - Drones

Visitors are responsible for knowing and complying with park rules (Ordinance 38). See ebparks.org/rules.

Sibley Volcanic Regional Preserve

Sibley Staging Area
6800 Skyline Blvd., Oakland, CA 94611

East Bay Regional Park District
2950 Peralta Oaks Court, Oakland, CA 94605
1-888-EBPARKS or 1-888-327-2757 *(TRS 711)*
ebparks.org

Cover photo: Nick Khadder

Sibley Volcanic Regional Preserve

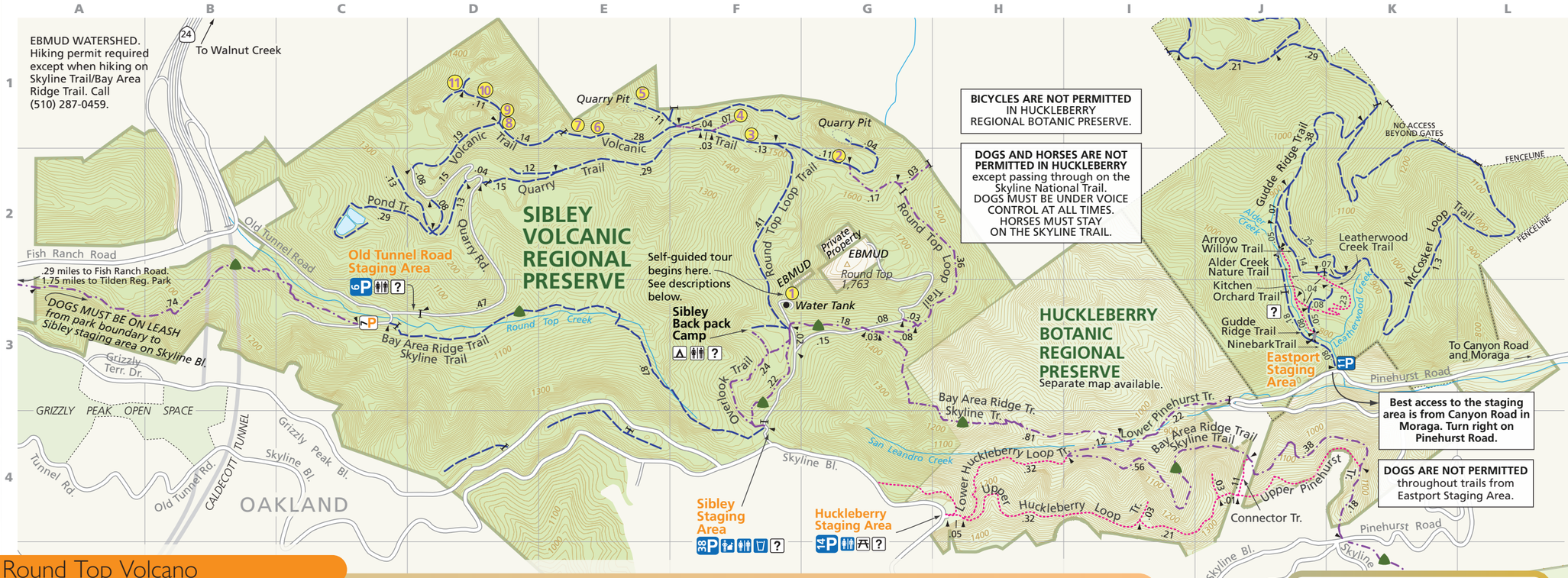
OAKLAND, ORINDA

East Bay Regional Park District

Sibley Volcanic Regional Preserve

Year Opened: 1936 **Acres:** 928

Highlights: Hiking, biking, horseback riding, self-guided interpretive tour, backpack camp, panoramic views.



A Self-Guided Tour of Round Top Volcano

This 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 stands out today because it was originally surrounded by sedimentary rocks of the Orinda Formation, which have eroded away. Over the years, folding and erosion have exposed a cross-section of a volcano.

Lava from the vent has been dated as old as 10.2 million years. Round Top's 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 in an easy hike. The numbered descriptions (right) correspond to stops along the trail.

1. Walk up the paved road to the EBMUD water tank to see a dark basalt dike, a feeder of lava to the crater, that cuts through a sequence of tuffbreccias (grayish brown) and pebbly mudstones (light gray), inside and near the crater bottom.

2. This pit was made by quarry operations in which massive basalt lava was removed. 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. 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.

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" sometimes contain fossils of plants and animals. Elsewhere in the preserve, bands of more intense red are found at the tops and bottoms of lava flows, where iron was oxidized and reddened by baking and steam action; these bands are called "bake zones."

4. Before you is a wall with basalt on the left and Orinda mudstones on the right. The bedding in the mudstones gives the appearance of drag-folding resulting from relative uplift of the lava occurring during the past 10 million years. Alternatively, the disruption of the mudstones may have occurred earlier, at the time of volcanic activity. This site was close to, or was in, the wall of the volcano, and would have been subject to slumping, sliding, and plowing.

5. Massive basalt was removed from this major quarry pit. The north wall shows a set of thick lava flows tilted on edge, nearly vertical. The well-defined layers near the top of the face are jointing-units resulting from shrinkage caused by cooling. They are analogous to the basalt pillars of Devil's Postpile in the southern Sierra.

6. This is a sequence of basaltic tuffs (ash) lying on top of a dark lava (far left), all tilted steeply to the east. The base of the tuffs was baked red, probably because the lava below was still hot and steaming when the ash landed. At the top of the sequence there is another lava flow (far right, to the right of the post) that baked the underlying tuffs red.

Continued on other side ...