

## South Fork Boise River and Smith Prairie

Regrouping site is at the Pilot Travel Center in Mountain Home at Exit 95.

Turn left upon leaving the Pilot Travel Center, taking Hwy 20 northeast about 8 miles to the entrance of the radio tower hill.

**Stop 1.** View from top of hill shows transition from Snake River Plain (south) to volcanic highlands of the Mount Bennett Hills (north). Hill is composed of rhyolite typical of the Danskin Mountains to the north. The age of these rocks is likely 10 to 12 Ma (millions of years ago), making them Miocene like most of the other rhyolites in this region.

Return to Hwy 20 and turn left, driving about 12 miles to the Anderson Ranch Dam turnoff. Along Hwy 20 are road cuts and outcrops of rhyolite, some with well-developed vitrophyres (volcanic glass). Bennett Mountain (7,438 ft) is the high peak with radio towers to the southeast (right side of road).

Set trip odometer to zero at Anderson Ranch Dam road (FS 134) intersection with Hwy 20.

**Stop 2** (odo 1.5). By this point one has moved into the Atlanta lobe of the Idaho batholith granitic bedrock. These plutons were likely intruded between 90 Ma and 70 Ma, making them Cretaceous. The King Mine dumps are to the west (left of road). Daly Consolidated Mining Company developed this mine in the 1930s, and this shaft connects to a drainage tunnel 900 feet below along the South Fork Boise River.

**Stop 3** (odo 2.9). Walk left to canyon rim to see canyon-filling basalts (Basalt of Anderson Ranch) and large old landslide on opposite wall of canyon. View to the right shows excavations in disintegrated granite where materials were taken for Anderson Ranch Dam construction.

**Stop 4** (odo 3.7). Pull-out on left side where one can get a good view of the dam and spillway. Road cut is composed of finer-grained granitic cut by numerous coarser-grained pegmatite veins and andesitic to basaltic dikes.

**Stop 5** (odo 5.0). At dam spillway with campsite. A toilet is available if needed. Note the difference in materials between the right abutment (across dam) and the left abutment (where we are currently).

Drive across Anderson Ranch Dam and turn left onto FS 121.

**Stop 6** (odo 6.0). This location is at the bottom of dam, in large pull-out on left. Walk behind gate and along road to get better view of spillway and exposed bedrock.

**Stop 7** (odo 8.2). Lunch stop in Reclamation Village, where workmen and their families lived during construction of the Anderson Ranch Dam. Construction began in 1941 and was delayed considerably by the Second World War. Japanese-Americans interned at the Minidoka War Relocation Center near Twin Falls were used during WWII labor shortages.

**Stop 8** (odo 12.3). A stop at the large road cut at so-called Indian Point, where the House Mountain metamorphic complex is represented. Rocks here include gneiss and other high-grade metamorphic rocks, as well as granitic intrusions. These metamorphic rocks are pieces of the existing sedimentary units (maybe Paleozoic age?) which were intruded by the Idaho batholith.

**Stop 9** (odo 18.7). Another stop to view the House Mountain metamorphic rocks and associated granitic intrusives. Note the basaltic dikes intruded into these rocks.

**Stop 10** (odo 25.0). The Steamboat Volcano, which is a subtle landscape feature here, is the source of the Steamboat Rock Basalt and later flows that filled the South Fork Boise River drainage starting about 1.8 Ma. The Basalt of Anderson Ranch, view previously, is slightly younger than the 1.8 Ma Steamboat Rock Basalt.

**Stop 11** (odo 26.8). Road crosses a collapsed lava tube within the Smith Prairie basalt flows. Aerial tracing of this feature suggests it extends for many miles on both sides of the road.

Continue north on FS 121 until it joins with FS 128 near the hamlet of Prairie. Turn left onto FS 128 and follow it until the junction with FS 117 and FS 189 (Upper Blacks Creek Road).

**Stop 12** (odo 29.9). The Y store rest break. Restroom and snacks are available.

Return to FS 189 (Upper Blacks Creek Road), which follows the South Fork Boise River for several miles before heading down into the Snake River Plain.

**Stop 13** (odo 34.1). Viewpoint along Blacks Creek Road where one can examine the basalt flows that have filled the South Fork Boise River. The upper flow is the Steamboat Rock Basalt, and the lower flow is the Smith Prairie Basalt, which is dated at about 250,000 years old. The river has cut through both of these units, leaving obvious terraces, and is back into the underlying granitic bedrock. Note the local ancient evidence of landslides on the canyon walls.

**Stop 14** (odo 37.4). Sharp turn in road, where granitic bedrock is exposed on the north side of South Fork Boise River. Basalt flows are visible directly above and downstream of this location.

**Stop 15** (odo 41.6). Excellent overview of the upper portion of the Arrowrock Reservoir, where the two basalt flows are visible. During the 1.5 Ma interval between the eruption of these two units, the Boise River had eroded completely through the Steamboat Rock Basalt and well into the underlying granitic before the Smith Prairie Basalt once again partially filled the river valley and the process started again.

Continue along Blacks Creek Road, which joins Interstate 84 at Exit 64 southeast of Boise. Bonneville Point is along this route, which can be an optional stop for those interested.