IDAHO MUSEUM OF MINING AND GEOLOGY

Field Trip Road Log

May 18, 2013; Lake Idaho Fossils
Leader: Clyde Stroup
Note: odometers vary, mileages are approximate. Also, GPS values vary over time, but the listed points will get you within visual range of the features described.

Drive to Bruneau by route of personal choice (I-84 to Exit 90 through Mountain Home to Highway 51 to Bruneau; I-84 to Exit 74 at Simco Road to Highway 167 to Highway 78 at Grand View to Bruneau).

Caution: Be aware of weather before undertaking this trip – gravel roads may be passable after rain, but dirt roads and tracks turn to “gumbo” when wet and it is easy to get stuck until they dry out, even with 4-wheel drive!

To Stop 1: At Bruneau, take Hot Springs Road (paved) approximately 7.6 miles to Sugar Valley Road (good gravel road, no sign), turn Right. Drive approximately 0.6 miles to Blackstone-Grasmere Road (gravel) (no sign), turn Left and drive approximately 2.6 miles and park at Stop 1 (GPS N42.76294; W115.75636). Walk about 100 yards down a dirt path to the beginning of the reef, which extends for about 300 yards along the path. The reef consists of limestone formed by fresh water algae that grew in shallow waters of ancient Lake Idaho approximately 7 million years ago. As the lake level rose, new layers of cylindrical vase-shaped algal colonies were deposited. This algal reef is within the Chalk Hills Formation, deposited in the Miocene. In places there are stream channels (see photo) that contain fossiliferous limestone comprised of multitudes of small snails. Below the limestone reef is floodplain mudstone.

The reef can be seen across the valley to the south and west of this outcrop and the whole formation covers about 80 square kilometers (30.8 square miles). Walking on top of the reef formation, the circular “vase” tops can be made out. Google “Miocene lacustrine algal reefs” to find more information about this unique feature.

To Stop 2: Return to Sugar Valley Road and turn Left; drive approximately 2.1 miles and go straight at the intersection of Hot Creek Road (no sign) (GPS N42.80069; W115.77197) on a dirt road. Drive approximately 1.3 miles and turn left on a two-track dirt road (GPS N42.78992; W115.79826). Note: to get to Stop 2 beyond this point, a high-clearance vehicle is recommended; 4-wheel drive is not necessary. Drive about 0.3 miles - low clearance vehicles can be parked here – or drive another 0.5 miles to a vague two track road on the Left (GPS N42.77264: W115.79107); follow this track about 0.4 miles and park where convenient (GPS N42.77207; W115.78302). This is an ancient beach on Lake Idaho (Horse Hill Beach) and
multiple fish bone and mollusk fossils can be found here along with some petrified wood. Look in the dark-colored rocks along the top of the cliffs; some fossils can also be found uphill towards the ridges. Down the cliffs, an unconformity between the lower Chalk Hills Formation and the upper Glenns Ferry Formation is marked by a dark line (see photo). It is estimated that one million years of deposition is missing in the unconformity!

**To Stop 3:** Return to the intersection of Sugar Valley and Hot Creek Roads (no signs, but this is where you went straight to get to Stop 2) and turn Left. Follow the gravel Hot Creek Road for about 7.8 miles to the intersection with Highway 51/78, turn Left and then almost immediately stay Left to take Highway 51 south. Follow Highway 51 for about 10.1 miles to just past Mile Post 60 to a dirt track road on the left (GPS N42.75427; W115.90396). **Note – to get to Stop 3, a high-clearance vehicle is advised; all-wheel or 4-wheel drive is desirable, but not absolutely necessary.** Drive through the gate (be sure to close it – it is very tight and you need to use the third pole as a lever) and follow the track 0.5 miles to a turn-around for the Bruneau Woodpile (GPS N 42.75752; W115.89519). There are a couple of short, soft uphill pitches that need to be crossed with speed and momentum to prevent wheel spinning and digging. Look around the parking spot and on the hill sides for petrified wood, fish fossils and interesting spherical concretions similar to “Moqui Balls.” True Moqui Balls form in sandstone; the concretions found here are formed in volcanic tuff that can be seen in the ridges (and that you crossed in the soft spots in the track). Return to Highway 51 (remember to close the gate) and proceed back to Boise as desired.
May 18, 2013 Field Trip Photos

Viewing the Algal Reef (Stop 1)

Fossiliferous Limestone in an Ancient Channel (Stop 1)
Looking Down From Stop 2 – Unconformity is the Dark Line

Leader Clyde Stroup Demonstrating the Unconformity (Stop 2)