## Geology of the Bashore Ridge Loop and the Dutton Hollow Loop Trails

## **Trail Description**

This description starts with the Bashore Ridge Loop portion of the trail. This sinuous trail stays on top of the ridge and in the Boone Formation for the majority of the loop. Therefore, only pieces of chert will be seen on the trail until you get close to the lake.

**Stop 1:** In order to see rock exposures, be sure to take the trail off of the nose of the ridge down to the lake level. Once at the lake you will see the contact of the cherty portion of the Boone and the basal chert free member called the St. Joe Limestone. Also notice the natural fractures in the limestone, called joints. They are present in the rock at regular intervals along the shoreline creating an angular weathering profile.

Return to the start of the Bashore Ridge Loop and walk the Dutton Hollow Loop in a clockwise direction to get to Stop 2.

Stop 2: A small sinkhole is present along the trail at this location. Sinkholes are common in the Boone Formation.

**Stop 3:** You have walked lower in elevation to the top of the St. Joe Limestone. It fairly consistently crops out at this elevation in this area. However, if you walk downstream along Blackburn Creek you will cross the Blackburn Creek Fault which takes the St. Joe Limestone subsurface at this elevation on the north side of the drainage near Beaver Lake. The fault trace is not exposed in the creek, however, the fact that the rock formations do not match up on both sides of the creek is evidence of its existence.



Stop 1. Angular weathering produced from natural joint pattern in the limestone.

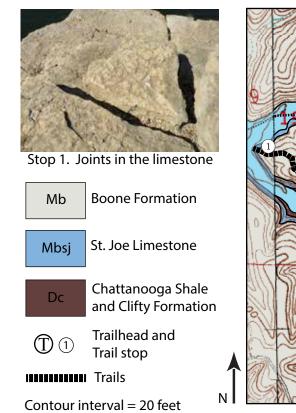




Stop 1. Contact (red line) of cherty Boone Formation and basal St. Joe Limestone Member.



Stop 3. St. Joe Limestone along Blackburn Creek.



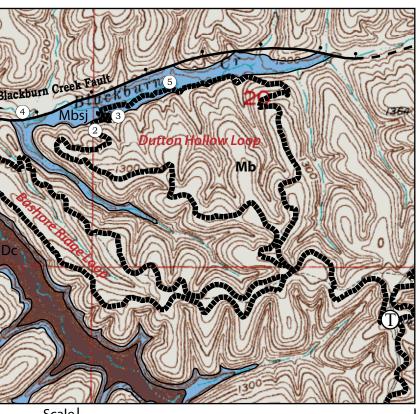
Stop 4: At this location you have crossed the Blackburn Creek Fault and are now standing north of it. Look north across the the drainage or walk to the outcrops there. The rock exposed on the north side of the lake is the Boone Formation and contains a large amount of chert unlike the limestone seen at Stop 3. Walk back upstream in the drainage to the main trail and continue east to Stop 5.

Stop 5: The St. Joe Limestone continues to crop out at this location from Stop 3. It is also present across the drainage here since the fault is present north of the creek at this location. You should continue to see limestone until you travel higher in elevation and south to finish the Dutton Hollow Loop.



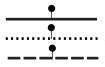
Stop 4. St. Joe Limestone on the south side of Beaver Lake and the south side of the Blackburn Creek Fault.

## SPS-04 Trail Map 5



Scale

1 mile



Normal fault - ball and bar on where concealed. Dashed downthrown side. Dotted where inferred.



Stop 4. Looking upstream in Blackburn Creek. The Boone is on the left side of the picture while limestone fragments are present on the right side with the Blackburn Fault trending through the drainage.

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