

Soda Springs

Toketee Falls Quadrangle
Douglas County
T 26 S, R 3 E, Sec. 17, SW Cor. NW $\frac{1}{4}$

These springs issue from the foot and flank of a steep rim which constitutes the eastern margin of a small cove located on the north side of the North Umpqua River. The springs are a scant half mile from the river but about 200 feet above river level as the cove is the enlarged valley of a small tributary creek left high by rapid down-cutting of the river. Approximate elevation in the spring area is 176 feet.

Access to the springs is by a forest service trail which leaves the main Toketee Falls-Glide road at the site of an overpass located about a quarter of a mile down river from the Soda Springs Dam. The trail was not placarded along the road at the time the springs were visited. This is probably due to loss of a marker during the course of recent road construction as the trail is clear and placarded in the usual manner with Forest Service trail signs, excepting for the take-off point.

The floor of the cove is covered by a thick accumulation of alluvium but outcrops of basalt are abundant on the surrounding hillsides. Tertiary volcanics constitute the prevailing country rock in the area at large.

A group of four related springs are observable in a two acre area located on the eastern margin of the cove. Two of these springs are clean cut springs issuing over well-defined travertine deposits. One of these is situated on the level of the little valley floor at the foot of the steep valley side. Its travertine is exposed in the form of a narrow, sloping, shelf-like accumulation extending parallel to the trend of the valley wall for a distance of 30 to 40 feet. The second travertine deposit is located on the hillside 150 to 200 feet above the cove floor and about 250 feet north of the aforementioned occurrence. It is above the trail leading eastward to Indian Caves. The travertine deposit here is mug-shaped, with near vertical sides and a flat top, the eastern margin of which merges with the steep hillside. Diameter at the base is 30-35 feet. Its height measured from top to base on the front side is about 30 feet.

The two remaining springs are less well defined and have lesser amounts of associated travertine. One is located on the hillside about on the elevation of the base of the mug-shaped mound but about 100 feet southward (towards the river) therefrom. The second is located at the foot of the hill directly below the mug and at about the same elevation as the travertine shelf spring. Both of these springs have the appearance of being sites of re-emergence of discharge water from the spring at the mug-shaped mound rather than primary springs on their own right.

The discharge from all springs is characterized by widespread seepage and numerous little drips and trickles at random places. However, the water from all springs has a soda taste and in all instances it yields the bright orange precipitate invariably present at most soda-spring sites elsewhere in the state. In addition, this distinctive coloration is evident in the portion of the channel of the creek which flows from the cove at the beginning of the trail by the overpass--- a distance of several hundred feet downstream from the nearest spring. The concentration of soda in the stream water at this point suggests that the creek may be fed by sub-alluvial seepage from a nearby soda spring source which does not have surface expression.

Bubbles of gas escape at a few places at each of the spring sites. Whether this gas is undissolved carbon dioxide, or some other gas, cannot be said, however, as the number of escape sites are so few and so weak that no gas sample was taken. The water is cool and averages approximately 55 F.

Although the rate of gas and water yield from these springs is too low, and the area of leakage is too restricted, to give the springs stature as a CO₂ prospect of commercial worth, enough soda water could undoubtedly be developed to service fountains for a roadside park. The cove could be made into a good sized camp ground. Its general setting is attractive and the mug-shaped travertine mound is unique and picturesque.

Report by: N. S. Wagner.

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