

Metolius Springs, Like Nile, Discovered

By CHARLES STEERS
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Thousands of tourists visit Metolius Springs — the bubbling source of the Metolius River — every year.

Most folk merely wonder about the mysterious source of the Central Oregon springs, but a diehard core of the inquisitive has gone further over the years. Investigation even has taken the form of dumping dye in the snows of surrounding peaks and watching for tell-tale stains in the springs.

But all to no avail.

Now comes an official version of how the fully-fledged river emerges near the base of Black Butte.

N.V. Peterson, geologist with the Oregon Department of Geology and Mineral Industries, and E. A. Groh, a private Portland geologist, tell the story in an article in the March edition of *The Ore Bin*, published monthly by

the Department of Geology and Mineral Industries.

SOURCE of the springs, they say, is Black Butte Swamp, on the south side of the Santiam Highway, directly across the highway from the base of Black Butte. This butte, a volcanic cone from prehistoric times, looms 6,436 feet above sea level and more than 3,000 feet above the springs.

Oregon Geographic Names by McArthur says of the Metolius River: "It flows from the north base of Black Butte, full bodied, and icy cold, and after winding northward through beautiful pine forests, swings around the north end of Green Ridge through a canyon of great depth and majestic grandeur, joining the Deschutes just north of the mouth of Crooked River."

THE ARTICLE in *The Ore Bin*, describes the source of

the river: "The Metolius Springs rise from two groups of orifices about 200 yards apart at the northern base of Black Butte. The water bubbles out of bouldery valley fill at a chilly temperature of 48 degrees Fahrenheit, and the two flows join within a short distance to make up the headwaters of the Metolius River.

"Total flow from the springs consistently measures from 45,000 to 50,000 gallons per minute the year around. In its 35-mile course northward and eastward to the Deschutes River, the Metolius gains an additional 600,000 gallons of water per minute from springs and tributary streams that drain the east flank of the Cascades."

IF YOU LOOK at a map of the area and imagine for a moment that Black Butte is not there, you get the picture

of how the locale looked eons ago. Geologists say that activity in the earth's crust and block faulting caused formation of the valley, raising Green Ridge as a block to eastern drainage. Once this drainage was blocked, surface water was diverted and an ancestral Metolius River began to flow northward, draining the area to the south.

At about the same time, volcanic activity started in the High Cascades. "After the lava from these shield volcanoes and their satellite vents had coalesced to form the broad, elevated platform of the High Cascades, some of the crowning peaks began to build by more violent volcanic eruptions," the article says.

BY THE TIME the fault movement had stopped and Green Ridge had been built to its maximum height, volcanism again began, this time in the Metolius Springs area. When it stopped, Black Butte had attained its present height.

Geologists say dating of the rocks in the butte put the time of its formation at about 500,000 years ago.

With Black Butte covering the bed of the river, the water began percolating through the sands and gravels of the ancient riverbed and emerged as the springs we know today.

Black Butte Swamp acts

as a sump, or container, for the water from the extensive drainage area to the southwest and, since it is 300 feet higher than the springs, tends to keep a constant hydraulic head on water from the springs.

MORE WATER flows into the swamp than comes out at the springs, but the excess flows out through Indian Ford Creek, which flows east and south past the town of Sisters.

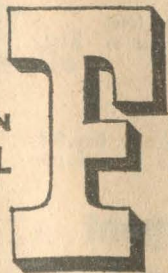
Incidentally, Metolius is an Indian word.

According to Oregon Geographic Names, "The first mention of Metolius is in the Pacific Railroad Surveys Reports, Vol. 6, where the name is given as Mptolyas. The army officers who compiled these reports visited the valley of the Deschutes in 1855 and heard the name from Indians.

"OTHER EARLY FORMS were Metoluis and Matoes, but modern use has standardized it as Metolius. Warm Springs Indians say the word means white fish, but indicated that it means a light colored salmon rather than a white fish."

So, the next time you stand in the pleasant mountain pasture and gaze at the sparkling, full-blown river issuing from the ground, you know where it comes from — it's only following its old riverbed, despite the intrusion of Black Butte.

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