

The latter, which drains more than half (two thousand square miles) the area of the park, enters at the southeast corner at an elevation of about seven thousand nine hundred feet, and flowing about northwest through Yellowstone lake and the Grand canyon, crosses the northern boundary at an altitude of five thousand three hundred feet. Yellowstone lake (seven thousand seven hundred and forty feet), the largest lake at great elevation in North America, has a length and breadth, respectively, of twenty and fifteen miles, a depth of three hundred feet, and an area of one hundred and fifty square miles. The shore line, indented by several large bays, is over one hundred miles.

The beautiful curves of the sandy beaches and crystal purity of its waters, make it an object of unusual interest. With the exception of the Yellowstone range, rising from its eastern shore, it is surrounded by a generally low, heavily timbered country. A few miles southwest, on the opposite slope of the continental divide, are the little gems of Heart, Lewis and Shoshone lakes, varying in length from three to six miles.

The Yellowstone river, from the southern boundary to the lake—fifteen miles—is a sluggish, tortuous stream, bordered by meadow and swamp two miles in width. The slopes down to the valley are bold and precipitous, the surrounding country being a high, volcanic plateau of over ten thousand feet altitude. The spurs of the Yellowstone range making down to the lake are heavily timbered, becoming less so toward the south. Pelican creek, draining the south end of Mirror lake plateau, enters the lake near the outlet. Meadows from a half to a mile in width, border the lower portion of its course. At the outlet of Yellowstone lake, on the west, abuts the heavily timbered plateau of the Elephant Back (eight thousand five hundred feet), which, running westward a few miles, splits into two parts, one merging into the continental divide, on the southwest, and the other, turning to the northward, forms a narrow divide between the Madison and Yellowstone, and broadening out, again divides, one branch sweeping around to the head of the Grand canyon, and the other, much broken by lateral and transverse drainage, continuing northward, nearly to the Mammoth hot springs. The low, semicircular depression thus formed on the west bank of the Yellowstone, is known as Hayden valley, and has formed a portion of the ancient Yellowstone lake. It is drained, mainly, by Alum creek.

At the head of the Grand canyon are the Upper and Lower, or Great, falls of the Yellow-

stone, half a mile apart. They are one hundred and eight and three hundred and nine feet in height. East of Alum creek is the region of Sour creek, broken by low, heavily-timbered ridges, extending to Mirror lake plateau, on the east. North of the Grand canyon is the crescent-shaped Mt. Washburne range, the opening toward the Yellowstone river, and drained by Tower creek. The interior slopes of this crater-like area, and the rhyolite plateau along Tower creek, are densely timbered, except near Antelope creek. Broad and Deep creeks, which have cut deep canyons in the plateau, enter the Yellowstone east of Mt. Washburne, and north of these are the slopes of Amethyst mountain and Specimen ridge. The East Fork, the main branch of the Yellowstone, joins it from the east, about twenty miles above where the Yellowstone crosses the northern boundary of the park, at its junction with the Gardiner river. This portion of the main river is called the Third canyon. It has little of the well-defined walls of the Grand canyon. On the east rise precipitous granite slopes, several thousand feet. On the west the country is much lower and has more of a plateau character, and about Black-tail Deer creek and on Mt. Evarts are large grass-covered areas, interspersed with groves of timber, and extending, in some cases, up the northern slopes of the Mt. Washburne amphitheatre. The East Fork, from its junction with the Yellowstone to Cache creek—about sixteen miles—runs through an open, grass-covered valley, from one to one and a half miles in width. Its main branches—Slough, Soda Butte, Cache, Calfee and Miller creeks—flow from the east, draining the Yellowstone range. On the west it receives numerous small drainages from Specimen ridge and the Mirror lake plateau. On both sides, as far as Cache creek, and above it for a few miles on the east, the adjacent slopes are only partially forest-covered. Above Cache creek the East Fork runs in a well-timbered canyon. The short streams from the Mirror lake plateau head in beautiful grassy parks, often of a hundred acres in extent. The valleys of the main stream and its principal tributaries—Slough and Soda Butte creeks—are low within the boundaries of the park, ranging in altitude from six thousand eight hundred to seven thousand five hundred feet, but the more immediate slopes in the northeastern portion rise precipitously to ragged and bare peaks and ridges, ten thousand to ten thousand eight hundred feet in altitude. North of Slough creek is an area of high, sparsely-timbered plateau. On the Gardiner river, four miles south of the northern