

carry off waters that excavate a course through the alluvium to neighboring depressions and thus make a more permanent lake.

Salton Lake, in the southeastern corner of California, 130 miles long by 40 in greatest breadth, resulted, in July, 1891, from the overflow of the Colorado River on the west side below Yuma. The alluvial region either side of the river between Yuma and the head of the California Gulf, 50 miles distant, had been gradually built up by river depositions, until a large depression, Coahuila valley, now 300 feet below the sea where deepest, had been separated from the head of the gulf and left as a nearly dry desert basin. The flooded waters, pressing westward along the westward course of New River, succeeded in passing the low summit level, and then quickly excavated a way to the depression and filled it. Owing to the hot and extremely dry climate, evaporation will sooner or later make it an empty lake-basin, as it was essentially before. The river at Yuma is about 150 feet above the gulf. Nearly 100 miles north of the Salton Lake is Death Valley, 225 feet below the sea, also situated in the line of the California Gulf.

W. P. Blake traveled over the desert in 1853 (*Geol. Recon. Cal.*, 4to, 1858), and describes it as having, in general, a barren, clayey surface, with some saline springs along the margin and elsewhere. On the rocks of the shore, there was a thick horizontal belt of whitish calcareous tufa about 15 feet (where examined) above the level of the desert, indicating a former water level, and proving that the desert was the dry basin of a former lake. He found that the Indians had a tradition of the existence of a great lake filled with fish; of its slowly drying up, and of a sudden return of the waters, when many were drowned. The recent event is evidently not the only one of the kind in the region.

Other lake-basins have been made by glacier-damming (page 238), and possibly, as above stated, by glacier-excavation. Still others of small size are a result of underminings, especially through removals of clay-beds by pressure; others have come from a damming against the sea by beach-made deposits (page 224), converting inlets into sea-border basins.

The large lakes of the world, after the Caspian, are the Great Lakes of North America, Lake Baikal in Asia, and Lake Victoria in east Central Africa. The map, Fig. 185, gives the positions of the American Great Lakes, and the line of greatest depth, the deepest point in each, and also the limits of the several drainage areas. Lake Superior has an area of 31,200 square miles; Huron, of 23,800 square miles; Michigan, of 22,450; Erie, of 9960; Ontario, of 7240. The heights of the water above mean sea level are: Lake Superior, 601·8'; Huron and Michigan, 581·3'; Erie, 572·9'; Ontario, 246·6'. The section, Fig. 186, shows their depths, and the extension below the sea level. (Schermerhorn, *Amer. Jour. Sci.*, 1887.) Lake Champlain is 402' deep, 300' of it below the sea level.

The heights of some other American lakes are as follows: Winnipeg, 630'; Lake of the Woods, 1640'; Great Salt Lake, 4218'; Yellowstone Lake, 7788'; Shoshone Lake, 7870'; Great Bear Lake, 5931'.

The Caspian has an area of 170,000 square miles, a depth of 500', and descends 90' below the sea level. Lake Baikal in Siberia (really among the high Altai Mountains and near Central Asia) is 397 miles long, 54 miles in maximum width, and has a depth in some parts of over 300 fathoms, nearly 500' of which is below the sea level. The great African Lake, Victoria, has an area of about 27,000 square miles, and is 3300 feet above the sea level. The Assat Lake lies in a depression east of Abyssinia, 600' below the level of the Red Sea, and is salt.

Rivers tend to obliterate the lakes along them in two ways: by the deposition of detritus in their still waters and along their borders, and by erosion