

counted by tens of thousands, varying from the size of a tarn to that of the great Laurentian lakes above mentioned. A good example of this is found in Scotland in the Red Lochan at Tulloch.¹

(f) *Sand drifted into dunes.*—It is a well-known fact that sand may travel across a country for several miles in the direction of the prevailing winds. When these sand-dunes obstruct a valley a lake may be formed; a good example of such a lake is found in Moses Lake in the State of Washington. The sand-dunes may also fill up or submerge river-valleys and lakes—for instance, in the Sahara, where the Shotts are vast lakes filled with sand and water near the point of saturation. Indeed, in the afternoon, owing to evaporation, the surface is covered with salt crystals. In the morning these have all deliquesced, and the surface looks like an ordinary lake.

(g) *Alluvial matter deposited by lateral streams.*—If the current of a main river be not powerful enough to sweep away detrital matter brought down by a lateral stream, a dam is formed, causing a lake. These lakes are frequently met with in the narrow valleys of the Highlands of Scotland.

(h) *Flows of lava.*—Lakes of this kind are met with in volcanic regions. The marshes round the edges of the Snake River lava-sheets seem to be lakes of this sort verging on extinction. In Auvergne, a small basin, the Lac d'Aidat, is enclosed by lava from the extinct Puy de la Vache, and the Lac de Chambon was formed by the eruption of volcanic cones in its valley. The Sea of Tiberias seems to be held back by a lava-stream that entered the valley of the Jordan from the east. Lake Assal, at the head of the Gulf of Aden, is shut in by a bed of lava.

3. Organic Basins.—In the vast tundras that skirt the Arctic Ocean in both the Old and the New World, a great number of frozen ponds and lakes are met with, surrounded by banks of vegetation. Snow-banks are generally accumulated every season at the same spots. During summer the growth of the tundra vegetation is very rapid, and the snow-drifts that last longest are surrounded by luxuriant vegetation. When such accumulations of snow finally melt, the vegetation on the place they occupied is much less than along their borders. Year after year such places become more and more depressed, comparatively to the general surface, where vegetable growth is more abundant, and thus give origin to lakes. The obstructions formed by the “sudd” of the Upper Nile region, and by the “beaver dams” of the North American rivers, may be considered as giving rise to lakes of organic origin.

It is well known that in coral-reef regions small bays are cut off from the ocean by the growth of corals, rain and river waters accumulate behind these barriers, fresh-water basins being thus

¹ See vol. ii. part i. p. 375.