

similar fringe of dead wood. At the date mentioned the water stood lower than the roots of the trees which had been killed.

The above are only a few selected instances, in which the circumstances seem to be quite unexceptionable, and such as to render the character of the evidence met with clear. All the lakes and pools above mentioned have no outflow, and must be distinguished from numerous cases of lakes in which the natural outlet has been interfered with by beaver-dams, accumulations of drift-wood, or otherwise.

Stump Lake, situated about thirty miles south of Kamloops, seems capable of affording some further evidence on the general question of climatic changes. This lake and its features are somewhat fully referred to in my report of work done in 1877,¹ and the main facts need therefore here alone be noted. The lake is about five miles in length, with a breadth of from half a mile to a mile, and is therefore larger than any of the lakes or ponds above referred to. It occupies the bottom of one of the characteristic wide valleys by which this part of the Interior Plateau is traversed, with a height of about 2,450 feet above sea level, and discharges at the present time by a small stream which reaches the north end of Nicola Lake. Its supply of water is derived in part from the immediately bordering slopes of the valley, but chiefly from two small brooks, which enter its northern end from the plateau to the eastward. The name of the lake, which appears on maps at least as long ago as 1859,²

¹ Report of Progress, Geol. Surv. Can., 1877-78, p. 29 B.

² Little information can unfortunately be gathered from the older maps of the region. An examination of some of these has afforded the following results:

1840. Map accompanying "Northwest Coast of North America," R. Grenhow. Nothing definitely recognizable as Stump Lake. 1844. Map in U.S. Exploring Expedition volumes. Shows a lake which may be intended for Stump Lake, discharging to Nicola Lake. 1844. Not shown on DuRoi du Mortier's map. 1846. Apparently indicated on map accompanying "L'Oregon" by M. Felix; streams connect what may be Stump Lake both with the Thompson to the north and Nicola Lake to the south, but the indications are very uncertain. 1850. Not recognizable on Arrowsmith's map of this date, but in this, as in the foregoing maps, the scale is too small and the geographical data for the region in question too inaccurate, to enable any definite conclusions to be drawn. 1859. Commander R. C. Mayne, R.N., in an account of a journey made by him in this year describes "Stump Lake or Lake Hamea as it is called by the Indians" (Journ. Royal Geog. Soc., vol. xxxi., p. 215) giving the dimensions as 6 miles long by 1 to 1½ wide: a fairly correct approximation to its present size. 1861. Shown under its present name, and with outflow to Nicola Lake, on map facing page 243 Journ. Royal Geog. Soc., vol. xxxiii. 1862. Mayne on map accompanying his "Four Years in British Columbia," shows the lake as in the last-quoted map. Apparently shown, but not named, on map in "Vancouver Island and British Columbia" by A. Rattray; outflow to Nicola Lake. Shown under name of Chicot Lake, with outflow to Nicola Lake, on map by Arrowsmith accompanying "British Columbia and Vancouver Island" by D. G. P. Macdonald. 1864. Shown, without name, but with outflow to Nicola Lake, on map accompanying paper by Lieut. H. S. Palmer. Journ. Royal Geog. Soc., vol. xxxiv. 1865. Shown under name Stump Lake, but without outlet, on map in "Vancouver Island and British Columbia" by M. Macle. 1868. Shown, as in last case, on map accompanying paper by A. Waddington. Journ. Royal Geog. Soc., vol. xxxviii.