

of the lake, is another rather conspicuous and isolated group of mountains, of which Saddle Mountain is the culminating point.

The east side of the lake is in general rather closely bordered by mountains, which do not show any striking peculiarities, and if at a greater distance inland they rise to peaks like some of those of the opposite side, these were concealed by the lower ranges fronting on the lake. One considerable brook enters the lake on the south side of Thumb Bay, and at six miles from the lower end of the lake a small river named the Koos-ka-nax flows in. This name, meaning 'long point,' is descriptive of the delta-flat which has been formed by the stream. The flat, in the form of a low terrace, has considerable dimensions between the shore and the bases of the mountains. It appears to bear some fairly good timber, and though the soil where seen was rather sandy, may afford room eventually for a few farms. Another stream of comparatively small size, flowing in a mile and a half south of the last, is known as the Na-kusp. It comes from a low and rather wide valley which is reported to be used by the Indians as a pass to Slocan Lake.

Streams on  
East side.

The southern end of the Upper Arrow Lake is narrowed in toward its outlet by the actual encroachment of the bordering mountains on the hollow which it occupies, and not merely by the accumulation of detrital materials. The homogeneous structural valley occupied by the lake to the north, here appears to become subdivided and is continued or replaced by several less regular and relatively unimportant valleys, of which that of the Na-kusp is one. These run off among mountains of some height, and, at no great distance from the end of the lake, must begin to drain toward Slocan Lake; the discharge of the Upper Arrow Lake taking place to the westward, at right angles to the general trend of the lake.

Southern end  
of lake.

The beaches along the Upper Arrow Lake are in general narrow and rocky, and its shores are frequently for some miles continuously formed of solid rock. Some fine sandy and gravelly beaches are, however, to be found, and one need seldom be at a loss for a convenient and attractive camping place. The depth of the lake is evidently great, but the time at my disposal did not warrant much enquiry on this point. Of two soundings made at selected localities, one, twelve miles from the lower end of the lake and rather over half a mile off the east shore, showed 490 feet; in the other, one mile south of Thumb Bay and half a mile distant from the same shore, no bottom was found at 720 feet. At the north end of the lake a rather extensive shoal has been formed at the mouth of the Columbia River. The dimensions of this shoal are indicated by the presence of numerous snags, consisting of trees which have been under-

Character of  
shores and  
depth.