of silt is thinner than elsewhere and has often been broken through by erosion. Accordingly at these points the water finds a ready exit and bubbles upward because it is under pressure. It is, however, possible that the deposits of which the hills are the remnants may belong to an earlier time than that mentioned above. This point and others had to be left unsettled on account of the short time allowed for the writer's journey and of the peculiarly unfavorable conditions of unseasonable rain and mud experienced at Shor Kul.

Let us now turn to the more direct evidence of the double rise of the lake. During the first expansion, when the lake reached its maximum size, the water seems to have stood about 350 feet above the present level. On the north side of the plain, a little below this height, there is a sudden transition from coarse, angular gravel to the finest silt without a trace of pebbles. The gravel is subaerial waste of the normal type for an arid mountain region, and is now being slowly pushed forward over the silt. The silt could hardly have been deposited anywhere except in a lake, for under almost any conditions of climate some gravel would be included in a deposit so close to the base of the mountains, unless it was laid down a little offshore in standing water. At the west end of the plain, southwest of Kirk Bulak, there is at the same 350-foot level a small bench and cliff, cut for about half a mile in the silty gravel which there cloaks the mountain flanks. At the opposite end, near Pchan, a large compound fan of gravel has cloaked the lake silts smoothly as high as 130 feet above the present lake level; but at an elevation nearly 400 feet from the water the gravel has a different form. At the lower level the gravel cloak is spread smoothly and the streams wander across it in numerous shallow and ever-changing channels. Above a height of 400 feet the gravel is well dissected, and each stream has a single, definite terraced valley.

On the south side of the lake the plain rises more rapidly and the old lacustrine deposits are considerably dissected, perhaps because of a slight warping. Nevertheless there are the same lacustrine silts and subaerial gravels as on the north side, and the silts end at about the same height, that is, a little over 350 feet above the lake. Elsewhere old lake silts are found up to a height of 200 or 300 feet above the water, where they begin to be covered with gravel. It seems quite clear that the lake once stood 300 or 400 feet higher than to-day.

At a place called Dungsugot,* on the south side of the plain, 4 or 5 miles from the western end of the lake, there is good evidence of a second rise of the lake separated from the first rise by a period when the water retreated nearly or quite to the present level. Here the older lake deposit is considerably dissected (fig. 148), probably because the slope of its surface is much steeper than elsewhere. The valleys carved in the deposits show three terraces which extend out to the fronts of the spurs, and even around them, from valley to valley. The spurs are flat-topped and for the most part are made of lacustrine silt. On the top, however, is a layer of gravel only a few inches thick at first, but gradually increasing in

*There is a spring at Dungsugot where a camp could be made from which the terraces and lake deposits could be minutely studied. Fodder for horses would probably have to be brought from one of the villages 6 or 8 miles away.