

first, and then the sand of the desert begins to encroach. Throughout an area of many square miles around Dandan-Uilik, half, more or less, of the dead vegetation is not covered by sand at all, or at most only by dunes from two to five feet high. Such dunes, accumulating slowly as they must, could not possibly kill vigorous tamarisks, and much less large poplars. On the borders of the zone of vegetation, where ground-water is comparatively near the surface, I saw literally scores of places where the advance of sand had been checked by plants, and dunes had accumulated to a height of fifteen feet or more. In such cases, the vegetation was interfered with somewhat, but the stronger plants, including even the reeds, had responded to the exigency, and had lengthened their stems so as to keep above the drifts. Where the sand had passed by, new vegetation had sprung up in the hollows to replace the weak plants which had been killed. If, as at Dandan-Uilik, the vegetation of a region is all dead, and especially if it has died where there is not sand enough to injure it greatly, it is safe to say that the encroachment of sand has nothing to do with the matter. It is an effect rather than a cause. The true explanation of the dead vegetation and of the peculiar location of the ruins of Dandan-Uilik and Rawak seems to be that the water supply has been diminished by a change of climate.

After our trying experience in the desert, we rested a day, October 1, under the poplars beside the Keriya River. The air was of so perfect a temperature that one did not feel too cool in the shade or too warm in the sun. From our camp we looked out between two massive poplars at