

Abandoned
hamlet east
of Shui-i.

Another outlying hamlet, situated about two miles to the east of Shui-i, had passed out of occupation in quite recent years. But it deserves mention because its fate illustrates the destructive effect which occasional great floods may have upon cultivation at an oasis situated like Nan-hu, quite apart from other risks due to desiccation and loss of population. The dry river-bed previously mentioned, which skirts the eastern edge of the basin containing the oasis, has cut itself, a short distance to the north of the present Tun-huang road, deep into the soft alluvial soil and becomes a cañon-like Yār. Springs that rise in its gradually deepening bottom gather into a small stream, and the water from this had, probably by means of a barrage, been utilized for a small colony which existed, until about fourteen years before my visit, at a point of the Nan-hu basin about three miles north of the main area of cultivation. But a big flood, said to have occurred in August, 1893, had swept away irrigation channels and homesteads, and buried the fields under coarse sand. On visiting the place, I could still clearly see the effects of this catastrophe in the ruins of the three or four farms that occupied the once cultivated depression, and in their uprooted arbours. Any trees that the flood had left standing were either dead or dying, and were gradually being cut down for timber. The bed of the irrigating stream had been scooped out into a steep-walled narrow Yār, with its bottom some twenty feet below the old level. The stream itself carried about twenty cubic feet of water per second, and this volume showed the probable source of the irrigation which once supplied the abandoned modern settlements subsequently met with from six to nine miles north-west of Shui-i (Map No. 78. A. 4).

Depopulation
through
Tungan
inroads.

I may follow up this brief survey of the physical aspects of the Nan-hu oasis with a few general remarks about the conditions affecting its present cultivation. They must necessarily be brief, as the time for personal observation was limited and the difficulties about securing correct local information great. Pleasant as was the impression created by the large, comfortable homesteads of the main oasis, scattered among groves of fine elms and ashes, by the well-tilled fields which extended around them, and by the neat irrigation channels with rows of big trees along them, the effects of the depopulation left behind by the Tungan inroads could be observed on every side. According to the information I received, that devastating tornado had first swept across Nan-hu in the year 1866. Scarcely a man, woman, or child was said to have escaped. Those who had taken their places after the imperial authority was re-established were still enjoying the ease which resulted from under-population, both as regards arable land and available water.

Oasis
resembles
Domoko.

But it was obvious that, comfortable as such conditions might be for individuals—and most of the farmers seemed thriving in spite of their marked *insouciance*—they could neither assure adequate use of the irrigation available nor provide a sufficient reserve of labour to cope with the risks which sudden floods, such as the one above mentioned, would involve for the water-supply of an oasis so peculiarly situated as Nan-hu. By its total dependence on springs issuing at the foot of a huge gravel glaciis and liable to considerable shifts in level, Nan-hu very curiously recalled the observations I had made at the Domoko oasis as regards the physical causes of the repeated changes in position and extent which the cultivated area has undergone there, as proved both by remains and local tradition.⁵ It would need a careful survey of the barren gravel slopes to the south to determine to what extent, if any, the changing level at which the water-supply, i. e. the *kara-su*, of Nan-hu comes to light is also influenced, as probably is the case at Domoko, by lateral deflexions of the flood-bed, or 'Sai' to use the Turkī term, that feeds it subterraneously.

These peculiar physical conditions affecting the water-supply, and thus the cultivation, of

⁵ Cf. above, pp. 203 sqq.; also *Ancient Khotan*, i. pp. 458 sqq. For a curious coincidence in date of one of the

shifts recorded in the case of 'Old Domoko', see below, pp. 626 sq.