

The relatively large population which the Annals assign to Shan-shan or Lou-lan—1,570 families, nearly one-half of those in Yü-t'ien or Khotan (3,300), and close on seven times as many as those in Chü-mo or Charchan (230)—deserves all the more attention in view of what we are told of the nature of the soil and the resources of the territory. 'The land is sandy and salt, and there are few cultivated fields. The country relies on the neighbouring kingdoms for cereals and agricultural products. It produces jade, abundance of rushes, the tamarix, the *Elaeococca vernicifera*, and white grass. The people remove with their flocks and herds for pasturage where they can find sufficiency of water and herbage. They have asses, horses, and many camels. They can fabricate military weapons the same as the people of Jo Ch'iang 婁羌.'

People and products of Shan-shan.

In this description we find the chief characteristic features of the Lop region reproduced with considerable accuracy: the great extent of drift-sand areas, the wide belts of salt-impregnated soil along the terminal river-beds and lagoons where vegetation is mainly restricted to reeds and tamarisk scrub, and the narrow limits of the ground where irrigation is possible. We see clearly that, then as now, agricultural possibilities must have been greatly restricted by the difficulties in utilizing for irrigation the ever-shifting channels in which the abundant, but rather saline, waters of the Tārīm and its last affluents lose themselves over this deltaic ground of drift-sand and marsh-land.<sup>8</sup> In view of this explicit statement we are the more justified in assuming that the main sites of permanent occupation during ancient times must be looked for in the same few localities where present conditions still permit of agricultural settlements, though within limits probably much reduced through the progress of desiccation.

Description of physical features.

The account of the Annals throws into prominence the essential fact that a considerable proportion of the population must then, as at the present day, have been wholly dependent on pastoral pursuits, whether in the riverine belts or in the mountains to the south. It is this existence of opportunities for the life of the herdsman and fisherman which probably attracted here, in the course of the eighteenth century, the modern Loplik population, consisting, according to a reliable account, of Kirghiz and Kalmak immigrants, and undoubtedly of true nomad stock.<sup>9</sup> At the same time, the considerable population given for ground possessed of such scanty resources may safely be recognized as a sign that the territory included in Shan-shan was extensive. It seems well to lay stress on this point; otherwise a doubt might be felt as to whether the 'Lou-lan Site' could have been comprised in the Shan-shan 'kingdom', while its capital lay as far south as Mīrān.

Population of ancient Lop region.

From our examination of the records by which we can trace back the history of the Lop tract from modern and mediaeval times to the early centuries of our era, it has, I think, become clear that during the whole of this long period the chief permanent settlements of the territory were situated to the south of the line represented by the present terminal marshes of the Tārīm and Charchan River, and that they owed their existence to the streams which alone could assure cultivation at the foot of the great mountain glacis. It remains for us to ascertain whether the conditions were also the same during the earliest epoch so far accessible, that to which the data furnished by the records of the Former Han dynasty relate. Special care is needed in examining this question, because protracted discussions as to great changes which have been assumed in the bed of Lop-nōr, and also certain inferences first suggested by Dr. Hedin's discovery of the Lou-lan Site ruins, have tended

Position of chief Lop settlements.

<sup>8</sup> As regards the difficulties which have dogged the recent efforts of the Chinese administration to establish agricultural settlements at Tikkenlik, Doral, and other points on the Tārīm, near what may be considered the northern extremity of the present inhabited Lop tract, cf. the instructive account of Huntington, *Pulse of Asia*, pp. 265 sqq.

<sup>9</sup> See the interesting and still very useful data recorded in Forsyth, *Yarkand Mission Report*, pp. 51 sq. The resemblance between the Loplik dialect and the Turkī spoken by the Kirghiz in the mountains to the north-west struck several of my Yarkand and Kāshgar followers.