

geological origin and usually found in ancient lacustrine basins, a different symbol has been used.<sup>5</sup>

Sandy tracts supporting desert vegetation of some kind have been distinguished from bare drift-sand by the use of a light yellow tint. The character of the vegetation found in such tracts has been marked by separate symbols representing its principal forms, *viz.* reeds or low scrub, wild poplars (by far the most frequent tree growth), and tamarisks. Where the long-continued presence of tamarisk growth has led to the formation of regular 'tamarisk-cones' *i.e.* high hillocks built up by prolonged accumulation of sand around the roots, etc., of tamarisk bushes, this characteristic feature of the ground has also been marked by a special symbol. Wherever these forms of desert vegetation were found dead, throughout or for the most part, the respective symbols have been shown in black, instead of in green, the colour used for living vegetation.

The same symbols have been used also to mark patches of vegetation on otherwise bare desert ground of detritus, gravel or clay, and to indicate grazing in mountain tracts barren elsewhere.<sup>6</sup> In mountains, however, like the central Nan-shan where a moister climate allows vegetation to grow practically everywhere on the slopes up to the snow-line, only conifer forest or particularly rich grazing in the valleys has been specially shown.

It is obvious that the limits between bare drift-sand areas and sandy tracts with vegetation are often difficult to determine even approximately. The same applies also to the limits between the latter and gravel or clay desert with scrub. Wherever such limits could be clearly observed they have been marked by fine dotted lines.

The same device has been used with particular care for the purpose of indicating the limits of cultivated ground (shown green throughout) where observed at the time of survey. Special interest attaches to this record of the extent of cultivated ground in view of the comparatively frequent and rapid changes to which cultivation throughout Chinese Turkistān is subject owing to peculiar physical and economic conditions. In this respect a comparison of the cultivation limits in particular cases as recorded in the new maps with those shown by the surveys of the first or second journey will prove distinctly instructive.<sup>7</sup>

Such changes become necessarily far more striking where they can be observed over a considerable distance of time, and for this the Tārīm basin, especially in its southern portion, offers plenty of typical evidence. The ancient sites now found in utterly waterless wastes of the Taklamakān and Lop deserts, and the even more numerous remains of abandoned settlements and other ruins traced in the sandy tracts adjoining still extant oases, all bear witness to such changes of the cultivated areas within the historical period. The use of distinctive red colour for the various symbols indicating ancient remains as well as for the local names relating to them makes it easy to gauge the extent of those changes by a glance at the map.

### SECTION III.—SYMBOLS AND LOCAL NAMES

Among the symbols and other cartographic entries in the map, most of those relating to works of man conform to the system adopted by the Survey of India and do not stand in

<sup>5</sup> For Yārdangs and Mesas, cf. above pp. 30, 47, 53; for ground showing them in typical formations see *e.g.* Sheet No. 32. A-D. 3.

<sup>6</sup> The insertion of these vegetation symbols on such ground has not been systematically made throughout (see *e.g.* Sheets 37, 40), descriptive entries having often been used instead.

<sup>7</sup> Compare, *e.g.*, the cultivated areas of the oases from Gūma to Khotan in the map of 1900-01 with those shown in Sheet No. 9. A. 1, B-D. 2; or those from Chīra to Keriya in Sheets Nos. 27. D. 4; 32. A-C. 1 of the 1906-08 maps with Sheet No. 14. B, C. 2, 3, D. 3; or Charchan in Sheet No. 46. C. 4 of 1906-08 with Sheet No. 22. C, D. 4.