

small oasis of Hua-hai-tzu or Ying-p'an in the centre of the basin. at Camp 186.

Corrections. A. 5. Add name *Wan-folsia* in red against symbols of cave temples

Astronomically observed latitudes.

1906-08. Ch'iao-tzu, Camp 184 (large temple within S.W. corner of circumvallation; A. 5)	40° 19' 40"
Ch'ih-chin-sê, Camp 237 (rest-house near ruined temple on left river-bank; D. 5)	40° 5' 34"
1913-15. Shih-êrh-tun, Camp 125 (in hamlet S. of stream; C. 5)	40° 28' 18"
Lo-t'ò-ching, Camp 208 (near spring; D. 3)	41° 10' 29"
Tsagan-gulu, Camp 211 (near spring; B. 2)	41° 47' 31"
Ming-shui, Camp 213 (at well, close to ruined enclosure; A. 1)	42° 2' 6"

NOTES ON SHEET No. 41 (CH'ANG-MA)

The sheet shows the mountain area surveyed from the foot hills of the Western Nan-shan to the high snowy range dividing the upper Su-lo-ho valley and the headwaters of the T'a-shih river from the plateaus drained by the sources of the Tang-ho or Tun-huang river. All the work here shown was done in 1907. The plane-table traverses have been adjusted on the positions accepted for An-hsi and Su-chou; for the correction to which the longitude of the former place is probably subject, see Notes on Sheet No. 38. Observed latitudes are available for three points in this sheet.

For a brief description of the ground seen between the headwaters of the T'a-shih river (A. 1) and the T'u-ta-fan pass (D. 1), see *Desert Cathay*, ii. pp. 262 sqq.; for that of the ranges on either side of the upper Su-lo-ho course falling within the S.E. corner of the sheet, cf. *ibid.* ii. pp. 320 sq.

Within the mountain area comprised in this sheet may be sought the division between the Western and Central Nan-shan. But along which line this division could conveniently be placed does not appear clearly from the topographical facts observed by me. Except for one important distinction, that of climatic conditions, the division might be treated as merely conventional; for the grouping into several parallel ranges which is characteristic of the Central Nan-shan has its close counterpart also in the western portion of the mountain system.

Whereas, however, all these ranges in the west, almost up to the snow-covered slopes of the southernmost and highest, are extremely arid, a distinct change to the moister climate of the Central Nan-shan

was observed by me in the valley leading up to the T'u-ta-fan pass (D. 1). From there to the east ample vegetation, found even in the valleys of the outermost range and at comparatively low altitudes, affords evidence of a far more abundant rain- and snow-fall.

No such signs of increased humidity were observed by me on crossing the Su-lo-ho valley near Ch'ang-ma (B.1). In the oasis of Ch'ang-ma, lying more than 7,000 feet above the sea, cultivation depends wholly on irrigation from subsoil drainage, caught where it comes to the surface at the foot of the huge gravel glacis descending from the high snowy range to the south. Further east, however, conditions seem less arid; for there surface drainage from the outer ranges is available for the small patches of cultivation found on the plateau (D.1) between the Nan-shan foothills and the chain south of the Hua-hai-tzu basin.

The climatic difference just mentioned is clearly reflected also in the snow line level which our observations made in July-August, 1907, indicated. In the high range south of Ch'ang-ma it seemed to lie at an elevation represented by an approximate contour line of 17,250 feet, whereas further east, in the ranges sighted from the T'u-ta-fan (D. 1) and on our way to the Su-lo-ho headwaters, the snow-line descended distinctly lower and has been shown accordingly at a level approximately corresponding to 16,000 feet.

As already noted, the disposal into successive parallel ranges which is peculiar to the Central Nan-shan continues also into this sheet. But owing to the absence of well-marked longitudinal valleys between them, and partly also in consequence of the