

gap left in our surveys on either side of the middle Su-lo-ho course (C, D. 2,3), the exact connection between the clearly defined Nan-shan ranges eastwards (see Sheet No. 43) and those in this sheet is more difficult to trace. This question of morphological relationship must be left for future expert investigation. I may however record the impressions derived from what our surveys in the outer ranges and those of Roborovsky and Kozloff along and south of the Su-lo-ho suggest.

The latter surveys made it appear highly probable that the high snowy range in the south, called by Russian explorers after the great geologist, the late Professor Suess, has its continuation in the big range south of Ch'ang-ma (A,B.1,2) rising to peaks above 19,000 and 20,000 feet and crossed by the Ta-kung-ch'a pass. The next range northward, called after the Emperor Alexander III, may well be connected with the one which our route from the T'a-shih river showed as striking with an approximately west-east bearing from near Shih-pao-ch'êng (A.1); the conspicuous massif of the Erh-lung-shan

*Astronomically observed latitudes.*

1906-08. Shih-pao-ch'êng, Camp 188 (on right bank of river-bed, half a mile N. of ruined fort; A. 1)	...	...	...	39° 49' 3"
Ch'ang-ma-pao-tzu, Camp 193 (temple near west wall of central village; B. 1)	...	...	...	39° 51' 45"
Ch'ing-ts'ao-an-tzu, Camp 197 (near temple; D. 1)	...	...	...	39° 53' 35"

NOTES ON SHEET No. 42 (CHIN-T'A)

The area surveyed in this sheet during the spring and summer of 1914 comprises the south-eastern extremity of the Pei-shan, the eastern portion of the Hua-hai-tzu basin and a part of the wide trough in which the rivers of Kan-chou and Su-chou (Pei-ta-ho) unite to form the Etsin-gol. The positions accepted for An-hsi and Su-chou served for the adjustment of the plane-table work in the latter two sections, while the traverse through the Pei-shan was plotted upon the two terminal points of Barkul (No. 34. B.1) and Mao-mei (D. 4). For the latter place a latitude observation was available, the longitude value being derived from the mean of two independent traverses from Su-chou.

Historical and antiquarian interest is imparted to the ground in the south by the line of the ancient Chinese *Limes*, the remains of which I succeeded in tracing from

south of Ch'ang-ma (B.1) might be taken for a link in the chain. The To-lai-shan range may be traced in the succession of high peaks our sheet shows as running towards the 'Chu-chia-shan' just north-west of Ch'ang-ma, this chain itself having its continuation in the direction of the low but very distinct range south of T'a-shih and Ch'iao-tzu (No. 40.A.5). Finally it is tempting to recognize the western extremity of the Richt-hofen Range, the northernmost of all, in the range which stretches from the T'u-ta-fan pass (D.1) to the north-west, the Yao-mo-shan and Tung-yüeh-shan (C.1) being among its culminating points, and the Su-lo-ho debouchure below Ch'ang-ma (No. 40.B.5) breaking through it. If this assumption is justified the low hill-chain overlooking the lower Su-lo-ho valley from Wang-shan-tzu (No. 40.A.5) to Tun-huang might well prove the last western outlier of the same range.

*Addition.* A. 1. The name 'T'a-shih R.' should be shown in blue along the river-bed passing Shih-pao-ch'êng.

the Hua-hai-tzu basin to the point where it crossed the Etsin-gol below the northern end of Mao-mei cultivation. For a brief account of this border-line and the forbidding desert ground through which most of it was constructed, see *Geograph. Journal*, 1916, xlviii. pp. 195 sq. The ground at and beyond the oasis of Chin-t'a (B, C. 4) which I visited in 1907 on my first fruitless search for the *Limes* line in this direction, is described in *Serindia*, iii. p. 1134.

The south-eastern portion of the Pei-shan shown here completely shares the character of the utterly barren ranges and plateaus adjoining to the north-west and briefly described in the notes on Sheet No. 40. The fifth and southernmost of the Pei-shan ranges was crossed by our route south of the coal pits of Mou-wo (B. 3). In the eastern part of the Hua-hai-tzu