

25.56 m., average depth 0.34 m., average velocity 0.50 m. and volume 4.37 cub. m. a second. Thus the river carried 8.26 cub. m. a second.

A little north of the crossing point is a broad, open valley called Na-marding, with a brook going to the Tage-tsangpo. Anak and Lingur are small valleys in the neighbourhood. Some strange terraces are seen round Na-marding with perfectly flat surfaces; they cannot possibly have anything to do with the lake, as they are more than 200 meters over its present surface.

The road from Na-marding to Tokchen crosses a series of rolling hills sloping down to the lake, and several ravines between them. Quarzite, sandstone and conglomerate predominate, but only once is sandstone found *in situ* dipping 21° N. 75° W. The gravel is often wind-worn; no erratic blocks could be seen. A little quite secondary pass, Karpo-la, is 4,888 m. (16,032 feet) high. From these hills the road goes finally steeply down to the valley of Samo-tsangpo, which, to judge from Ryder's map, gets most of its water from the mountains south of Surnge-la. Tokchen, on the *tasam*, is not always situated at the same place. When I passed in 1908 the tents of Tokchen were pitched some 3 miles higher up in the valley. On July 25th the Samo-tsangpo carried only 0.73 cub. m. a second with a breadth of 11.5 m. On July 23rd, the following year, it carried 4.89 cub. m., with a breadth of 21.9 m. But in 1908 the rain was much more abundant than in 1907.

Just south of the point where Samo-tsangpo enters the lake the breadth of the almost horizontal shore plain may be 200 or 300 m. This plain becomes more and more narrow to the south, but widens out very considerably to the north. South of the river the plain is bounded to the east by a wall of gravel, and inside of it is a belt of »vegetation hills» or low earth-cones, bound by roots, in sand.

A little north of the mouth of Samo-tsangpo is a comparatively great lagoon, surrounded by swamps and excellent grass. Between the lake and the lagoon is a narrow neck with a wall of gravel, some 3 m. high. The lagoon and its swamps are fed by the rivulets coming down from the valleys Pachen and Pachung, both originating from the southern slopes of the Transhimalaya, west of Surnge-la.

The Pachen leaves its rocky valley at a height of 4,696 m. (15,402 feet). The mountains consist of phyllite and sandstone dipping 24° N. 80° E. On August 19th, 1907, the Pachen carried 1.98 cub. m., but a mile below the mouth of the valley only about half as much, which was on account of the water disappearing in the gravelly ground and reappearing again round the lagoon as springs.

A few miles (5.3 km.) farther west the Pachung leaves its valley, which in every respect is very like its Pachen neighbour. The same day the Pachung carried 2.36 cub. m. After having left the rocky valleys, the two rivulets cross the scree of gravel and sand at the foot of the mountains, which slowly go over into undulating ground, steppe, and »vegetation cones». Finally they enter the lagoon, which also receives a small brook of 0.5 cub. m., called Lungnak, from another lagoon situated a little to the west of the first. The eastern lagoon thus received