

long ago was a salt steppe, in which the erosion has made its conquest along certain lines. He believes that the Tengri-nor belongs to the same category as the Koko-nor, or that it becomes more and more filled and is losing in salinity.

The most remarkable form of intermediate (Übergangs-) regions between central and peripheric areas, Richthofen finds in Tibet. But he complains of the scanty knowledge of the country, and finds the results of the Pundits of MONTGOMERIE insufficient.<sup>1</sup> However, he goes too far when he concludes that the four lakes N. E. of Tengri-nor, which were represented on maps even in 1877, in quite a recent time should have got an outlet through the Nak-chu or Khara-ussu, for most of these lakes have in later years been proved not to exist. And in the same way his hypothesis regarding the Koko-nor and Tengri-nor cannot be correct.

A great portion of those regions in Eastern Tibet which send their rivers to the sea, are, according to Richthofen, well developed löss-regions. He compares the Brahmaputra basin with the Upper Hwang-ho, where one self-contained basin after another has been captured by the drainage and transformed into peripheric country with outlet. He thinks that this change has taken place simultaneously with the last epoch of upheaval of the Himalaya, and that the high ranges of Tibet took part in the same upheaval, which also caused the glaciers to grow bigger and the rivers to become more abundant in water. As compared with this fact, every supposition would be hypothetical. What ever the causes may have been which brought the rivers to increase in such a high degree, it may be presumed that, as soon as the outlet to the sea was restored, even a small precipitation was sufficient to keep it running and open.

Richthofen explains the formation of Panggong-tso in a quite different way than the explorers who had been at the lake. He quotes SHAW who, like all other travellers, regards the high terraces at Drugub as formed by the slow drying up of the lake. But he reminds us of the phantastical in this view which is so strongly contradicted by the existence of the low threshold to the Shayok. After having considered the different descriptions, of which that by GODWIN-AUSTEN is the best, he concludes that the Panggong basin at an earlier epoch was a self-contained steppe-basin which became filled in a subaërial way — at its edges to an altitude of several thousand feet. Later on the basin got an outlet which cut itself down to considerable depth. At the same time the masses of deposits were pierced and dug out by radial gorges. Thus the former salt lake became fresh, and fresh-water molluscs could live in it. Finally the outlet again was cut off, the lake dwindled, and became salt as

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<sup>1</sup> The descriptions provided by them are not sufficient to give us a clear idea of the configuration of the ground. Their astronomical and hypsometrical observations, and their route-surveys are, on the other hand, valuable. Op. cit., p. 129.