

CHAPTER XLV.

ZUGMAYER. — STEIN, AND OTHERS.

In 1906 the German Zoologist Dr. ERICH ZUGMAYER undertook a journey through Central Asia, one third of which crosses Western Tibet.¹ He traversed the Kwen-lun from Polu; his highest camp was at 5,950 m. and his highest point reached at 6,300. From the difficult pass Kisil-davan, 5,180 m., he came down to a plain, stretching west and east. On this plain were three small lakes: Sagüs-kul, Atchik-kul, and Ullug-kul. About 100 m. above these lakes he saw what looked like a black line. On closer examination, however, he found that the basin of Sagüs-kul was an »Einsturzgraben«, which also could explain the comparatively low altitude of 4,650 m.

The region south of the lakes is covered by extensive andesitic lava layers, which have their origin in several craters situated in front of the southern snowy range and stretch their apophyses between the Sagüs-kul and Atchik-kul. At the eastern end of Atchik-kul there are also two well preserved craters, and a third one 3 km. farther S. E. They form the boundaries of the sunken part to the south and east. The Ullug-kul is separated by a lava threshold from the Atchik-kul and some 150 m. above the same. The Ullug-kul sends its outflow towards the Keriya-darya, although water flows only at highwater seasons. Thus the lake is fresh. The two other lakes also had fresh-water, in spite of there being no outflow. But he found, curiously enough, that the water at 4½ m. depth and less, was very salt, which proved that the fresh-water only formed a one meter thick layer on the top of the salt-water. Zugmayer thinks this layer of fresh-water is only formed during the season of the melting of the snow. Under such conditions it seems, however, difficult to account for the existence of a fresh-water fauna, crustaceans. And it does not seem likely that in such a windy land the water should not get mixed through and through in a very short time. Zugmayer is of the opinion that the whole basin once was occupied by *one* great lake which drained to the Keriya-darya; the desiccation of this lake depends on general climatic changes.

¹ *Bericht über eine Reise in Westtibet. Petermanns Mitteilungen.* 55. Band. 1909, p. 145 et seq.