

northern affluent of the Mkomasi. On the Ruvu side he descried between this river and the Kibaia Mountains in the Masai Plain, a lake basin, Lake Kiniarok, which appeared to be of considerable proportions. From the southern end of the Paré Mountains the traveller following the right bank of the Pangani at some distance, proceeded to Useguha and to Mgera in North Nguru; on the way he was attacked by the Wasegna. From Mgera he marched to Panghai and Kilwa, thus connecting his surveys with those of Last,\* and then returned through Useguha by another route. Dr. Baumann intends, after having explored the country nearer the coast, to embody his surveys in a map, which will be an important addition to the cartography of the northern part of German East Africa.

**Results of MM. Grum-Grijmailo's Explorations in the Eastern Tian Shan.**—The brothers Grum-Grijmailo have reported in detail to the Imperial Geographical Society of Russia the results of the first portion of their journey in the Eastern Tian Shan.† It appears that our maps of the northern slopes of the Tian Shan range are full of errors. The Kiityka Pass has no existence; the Mengete Pass conducts from the basin of the Kash into that of the Shusta, whence the route turns, not to the north, but to the south-east, joins the route coming from the winter pass of Ulan-ussu, and then leads to the pass of the Keldyn, and finally to the Jullus or Sullus. To the north of this route rises the magnificent knot of mountains called Doess-meghene-ora, the discovery of which by the expedition was announced in the last number of the 'Proceedings.' In this mountain mass, with the ranges branching off from it, lie the head-waters of the rivers Khorgos, Ulan-ussu, Shusta (which is an immense stream, known as the Manas in its middle course), Shindsha-cho, Jullus, Kash, and other smaller streams. A grand prospect over the six peaks of Doess-meghene-ora was obtained from a summit of the Manas range; the peaks are not visible from the valleys of the Kash and Jullus, being hidden by the Keldyn range. The altitude of Doess-meghene-ora is now stated to be over 19,700 feet (6000 metres) instead of 21,500 feet as previously announced. The masses of snow clothing its summits are very great, but the glaciers are not of importance, on account of the precipitous nature of the sides of the main mountain mass and of its offshoots. Along the route from Atschal to Urumtsi the Tian Shan forms an inaccessible wall, which is crowned with an almost unbroken line of snow. The base of the northern slope of the range, which in the meridian of Dshin-cho-shicho is inconsiderable, increases further east, and in the meridian of Manas reaches its greatest extent, just at the point where the mountain system of Doess-meghene-ora develops. The expedition visited some

\* See 'Proceedings,' 1882, p. 148 and map.

† 'R.G.S. Proc., 1890,' p. 616.

coal-mines. Incrustations and sulphur crystals were visible everywhere in the valleys. Nearly all the rivers of the Tian Shan bring down gold, which is obtained from the river-deposits, but not from other strata or from quartz veins. The Tian Shan is uncommonly rich in vertebrate animals, but much poorer than the Pamir in birds and insects, in consequence of the want of variety in the flora. Eight points were fixed by astronomical observations.

**The Exploration of Lake Toba (Sumatra).**—It is announced that the well-known Italian zoologist, E. Modigliani, author of the 'Viaggio a Nias,' commenced in July last a journey to Sumatra, for the purpose of exploring the vicinity of Lake Toba, the topography of which is still so little known.

**On the Teaching of Geography in Russia.**—In a paper on this subject read at the Leeds meeting of the British Association, Dr. Hugh Robert Mill states:—The teaching of geography in Russian schools is in accordance with an official syllabus enforced by Government. During a recent visit to Russia the author procured copies of the chief class-books, a summary of the contents of which formed the substance of the paper. A set of three books by K. Smirnoff embodies the general part of the syllabus. The first is a general summary of mathematical, physical, and political geography for lower schools, in which physical geography is treated as a description of the configuration and climates of the earth, thus avoiding the tendency to discourse on general physiography under this name. A series of original and remarkably ingenious diagrams illustrates the letterpress. In one the relative sizes of lakes is shown by giving on one sheet, drawn to the same scale, all the inland waters from the Caspian Sea to the Lake of Constance, grouped under their respective continents. Another serves to show the double relation of climate to altitude and latitude in the northern hemisphere. The second book pertains to the gymnasial course, and treats of the geography of 'Asia, Africa, America, and Australia, considered physically, ethnographically, and politically'; while the third treats of extra-Russian Europe in the same way, commencing at the Balkan Peninsula and working north-westwards to the British Islands. Both these are volumes of about 150 pages, with numerous statistical diagrams showing the relative areas and populations of countries in a graphic form. There are maps in black and white of the continents and chief countries, and these are usually in pairs—a physical and political. They are clearly cut, uncrowded, and names as a rule are replaced by contractions, to which there is a complete index opposite each map. This series, while unattractive and designed from a standpoint very remote from that of Western Europe, appears to be systematic and complete. The last subject in the higher school course is the geography of the Russian empire, a textbook on which, by E. A. Lebedeff,