

Up to this time I had done practically no reading in connection with the subject and was ignorant of the amount of thought and effort that during forty years had been devoted to Central Asia. The Russian General Staff had covered an immense area with good topographic surveys, and the Imperial Geological Survey had already mapped the geology in considerable detail. And I found that the so-called "Aryan problem" was no longer the simple hypothesis of the school of Max Müller and Lassen; it had become a hotbed of controversy in which, as a result of speculative activity, from the original linguistic seed had arisen a surprising variety of forms, into the analysis of which entered linguistic, anthropological, historical, and geographical considerations without number.

In St. Petersburg my plans were facilitated in the most generous manner by individual men of science, by the Imperial Academy of Sciences and the Geological Survey, by the ministers of War and Agriculture, and by Prince Hilkof, Minister of Ways and Communications. So thoroughly was this aid planned and executed that throughout our travels and work in 1903 and 1904 the different members of the expeditions met uniformly with the most open hospitality and the most cordial assistance.

The reconnaissance expedition of 1903 consisted of Professor Davis, with Mr. Ellsworth Huntington as his assistant, my son Raphael Welles Pumpelly, and myself. We remained together through Southern Turkestan, as far as Tashkent; separating there, Mr. Davis and Mr. Huntington, at first together and later separately, took in the regions of Issikul, and the Western Tian Shan Mountains from Kashgar to Lake Balkash, while my son and I examined the country from the Syr-darya to the heights of the Pamir. During the following winter Mr. Huntington made observations in Sistan on the Persian-Afghan frontier and in northeastern Persia. In the various reconnaissances there was accumulated a great amount of information bearing directly on the objective points of the investigation and forming the subject-matter of the volume published in 1905.* In their respective areas Messrs. Davis, Huntington, and R. W. Pumpelly established independently positive proofs of at least three distinct glacial and interglacial epochs of the glacial period and obtained abundant evidence of the deep-reaching reaction of these upon the topography of the mountains and plains.

We were also able to appreciate highly the work of the Russian geologists—to mention only Tschernyscheff, Karpinski, Muschketof, Bogdanovitch, Andrusof, and Nikitin in the pre-quaternal geology of Turkestan. Both this and the careful work of Andrusof and Sjögren on the east and west shores of the Caspian, and of Konshin in delineating phases of the expansions of the Aralo-Caspian—the accuracy of which we were able to

*Explorations in Turkestan, with an account of Eastern Persia and Sistan. Expedition of 1903 under the direction of Raphael Pumpelly. Carnegie Institution of Washington, Publication No. 26, 1905.