THE AMUDARYA EXPEDITION OF 1874: GOALS, COURSE AND RESULTS

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Abstract

Hydrographic and hydrological observation on the territory of modern Uzbekistan, in particular, the study of the Amu Darya began in the 19th century. The paper considers the Amu Darya expedition, which organized by the Russian Empire in 1874. The author reveals the objectives of expedition, describes the progress of this study, and also highlights its main results. It was shown that the task of this expedition was to resolve the "Amu Darya issue", that is, to search for a waterway from the Caspian Sea to the Amu Darya along one of the old river beds, called the Uzboy. Since the organization of such a waterway would solve many of the economic and military-strategic tasks of the empire in the conquered region.

Key words and phrases:

Amu Darya, Aral Sea, Caspian Sea, Uzboy, Sarykamysh, N.Stoletov, N.Zubov, reconnaissance, survey, hydrography of Central Asia, expedition.

During its aggression against Central Asia Russian empire was interested in establishing a comfortable way of communication with the regions to be occupied in the future. Therefore, among the Russian establishment, it was important to know why Amu Darya changed its ancient bed Ouzboy that was directed to the Caspian. Authorities wanted to change the directions of the flow into the Caspian again and by this the "Amu Darya problem" was created to determine the prospects for the creation of the water road between Russia and Central Asia. Although the initial efforts to find a solution to the Amu-Darya problem began in the middle of the 19th century, Russians were limited because of the fact that the dry beds were located in the territory of the Khiva Khanate, which had not yet been transformed into vassals. But after occupation the part of khanate in 1873, the political circles of Russia had had such an opportunity.

In the end of 1873, after the results of the Urundarya expedition to Khiva, A.Gluhovskiy and another researcher at Khiva's military expedition, M. Bogdanov reported on their research, the debate on the Amu-Darya problem was resolved in Geography Society. A commission was set up to address them and discuss issues related to studying the Aral-Caspian plain and sending them to the expedition. Secretary of the Society I.Venyukov assigned the following tasks to the future expedition: 1) Determination of the Amu-Darya water level and its suitability for navigation, and measuring in all the rivers. 2) Determination of irrigation water volume in the Khorezm oasis. 3) Topographical, geological, natural-historical study of the dry stratum of the Amu-Darya River, and complete the leveling survey of Uzboy nearby Igda well which is near 450 meters from ancient Urgench. 4) Investigation of the drainage of the water bodies and the spread of sand. 5) Collection of detailed information on the natural and cultural production of Khorezm oasis. 6) Gather information about the best land routes to the Caspian Sea by Khiva. 7) Studying the nomadic

population of the Aral Sea region, the number of livestock in them, relationship between them and to Khiva khanate. 8) Gather as much meteorological information as possible. The area covered by the expedition was defined as the Amu-Darya basin, the territory of Russia and the Khiva Khanate, Uzboy and Yangidarya. Then the Deputy Chairman P. Semyonov contacted to the Governor of Turkestan Konstantin Petrovich fon Kaufman and ask him to carry out the expedition. The Governor-General responded positively but said that the research could be carried out only in the territory of the Russian Empire due to the situation in Khiva Khanate. This inevitably deprived the expedition of the opportunity to study the dry beds of Amu Darya. However, on February 9, 1874, the emperor permitted to organize an expedition to Amu Darya. 20,000 rubles were allocated for its expenses [3, pp.798-799]. The expedition was supposed to include 100 Cossacks and 25 soldiers. It was also owned by one of the steam ships of the Aral Sea.

Colonel Nikolay Stoletov was appointed as the chief of the expedition. He actively participated in the events in Turkestan and he founded the city of Krasnovodsk in 1869. The expedition consisted of five sections: geodethic-topography (head N.G.Stoletov), hydrography (head N.N.Zubov), meteorology (head F.B.Dorandt), natural history (leader N.A.Severtsov), ethnography and statistics (head N.G.Stoletov). As it was evident, N. Stoletov headed the Geodesy-topography, Ethnography and Statistics groups of the expedition. A special group headed by A. A. Tillo performs the task of leveling between the Aral Sea and Caspian seas. As members of the expedition, the chief of the British royal service, the engineer Herbert Vood and Prince Rizoquli Mirzo, the representative of the ruling dynasty of Iran, participated in the expedition. In general, the expedition was attended by more than 20 experts and prominent Russian scientists.

The expedition's hydrographic department was led by lieutenant-colonel Nikolay Nikolayevich Zubov. Captain-lieutenant Bryukhov, podporuchik Shevashov, engineer H. Wood also worked in the department. N. Zubov took part in the military campaign to Khiva in 1873 and organized the crossing from the Amu-Darya River. During the Amu-Darya expedition, he entered the Amu-Darya River through the Yangisuv River, and set up regular boat trips to Petro-Aleksandrovsk [2, p.60].

The members of the expedition investigated 431 versts in the Amu-Darya delta, 252 versts from Nukus to Tuyamuyin on the border of Bukhara Emirate and 600 versts along the dry riverbed of Yangidarya. A total area of 3000 square versts was examined. Ulkan-Darya, Kuvonch-Yorma, Davkor lakes, and Yangisuv, which form the central part of the Amu-Darya delta, had been studied, determining the water velocity and soil properties. The use of river water was at its lowest level near Tuyamuyin - 120,000 / sec and the highest figure is 160,000 cubic feet. The surveys showed that due to the depth of the river, the absence of underwater rocks and the fact that the majority of the coast is available to mooring of boats, navigation of strong high-speed ships across the Amu-Darya to Nukus could not cause problems [3, p.803]. As a result of levelling, the peculiarities of the relief were determined. The level of the Aral Sea coast, according to A. A. Tillo, indicated that 245 feet i.e 74.67 meters above the Caspian Sea. It could have made it easier for the Amu-Darya to flow the Caspian Sea. As a result of astronomical observations, the geographical location of 11 points: Kazalinsk, Nukus, Petro-Aleksandrovsk, Chimbay, Khiva, Khodzheyli, Kungrad, Kushkhonatog, Akkala, Qilichkala and Irgiz were determined and magnetic observations in 176 points executed. Meteorological and hydrological stations were set up in Nukus, Petro-Aleksandrovsk and Pitnak under leadership of Ferdinand Dorant, the head of the expedition meteorology group, and from October 1, 1874 to October 14, 1875 at the Nukus station measurement work was constantly carried out [3, p.804]. During the year, observations were made on such indicators as air temperature, freezing and ice-frost during winter. Observations allowed some of the features of the Aral Sea climate and the hydrological regime of the Amu-Darya and the Aral Sea.

F.Dorant carried out a comparative analysis of the sediments in the Amu-Darya with the world's largest rivers, such as Mississippi, Raine, Dunay, Visla, Trent, Umber, Nile and Gang [1]. According to N.N.Zubov's research, the amount of water consumed per year for irrigation of Khorezm oasis

varied from 77,432 cubic feet to 84,729 cubic feet [4, p.320]. During the observations, the amount of water evaporating from the Aral sea surface, taking into account water of rainfall, was higher than in the Amu-Darya and Syr-Darya rivers. This indicated a gradual decline in the sea level. N.Zubov, F.Dorandt and N.Severtsov concluded that the Aral Sea level was declining. As a proof, N.Severtsov pointed out that the sea bank was becoming like a terrace shape [5].

The Amu Darya expedition was not allowed to cross the Khiva Khanate, but the middle part of the Amu-darya valley, located between the Caspian Sea and the Khiva khanate, remained unexplored. As a result of the expedition, the delta of the Amu was examined in detail, with the exception of the part between Taldyk and Ulkandarya. Shooting was made on 3000 square versts A 431 verst line in the Amu delta has been leveled. The branches of the delta, the system of lakes that make up the center of the delta, Ulkun Darya, Kuvansh-Jarma, the group of Daukar lakes and Yany Suv were investigated. In all these waters, the speed of the flow was determined, the properties of the soil were investigated. The amount of substances that the waters of the Amu Darya constantly carried into the delta were determined. Hydrographic studies have shown that sailing from Nukus up the Amu Darya with a strong steamer does not present any difficulties.

Thus, although the Amudarya expedition of 1874 did not achieve its main goal, which was to study the dry channel of the Uzboy, in the course of the research carried out by the members of the expedition, extensive materials were collected on topography, hydrography, meteorology, geology, flora, fauna, ethnography of the Amudarya delta, environs of the Aral Sea, the lower reaches of the Syr Darya.

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