

Mapping Enemy's Land: Russian Military- Topographic Intelligence on 19th Century European Turkey

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Abstract:

At the turn of the 18th and 19th century Russia was firmly settled on the Northern Black Sea and deeply entangled in the Eastern question. Ottoman possessed territories in Southeastern Europe were to become scene of the major land campaigns during the four wars between St. Petersburg and the Ottoman Porte, fought until the end of the century. This made studying and mapping of enemy's land important task for Russia's military topographers in the course of the century.

The following article examines the history of the Russian military topographic intelligence on European Turkey in the decades between early 19th century and the outbreak of the Russo-Turkish war of 1877-1878. During that period were completed some of the earliest accurate cartographical depictions of the Balkans, product of the Russia's efforts to provide its army with precise topographical maps of the theatre of war. Main attention in the article is given to the topographical surveys, conducted by Russian military topographers, in 1820-s and 30-s and in the years prior to the war of 1877-1878.

Keywords: Russian military-topographic intelligence, Russo-Turkish wars, maps of European Turkey, Russian cartography, Balkans and Russia

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Introduction¹

Information has always been a key aspect of military campaigning and the need of it increased during the centuries in a direct relation to the growing scale and complexity of war. Seventeenth and eighteenth centuries brought rapid developments in the field of warfare, changing the way wars were fought on a tactical and operational level as well as the logistics of an armed conflict². Geographical knowledge and accurate depictions of possible war theatres, distances and features of landscape, routes that could be used for moving troops, artillery and supply became more and more crucial for the military planning and conducting of a campaign³. Topographical maps turned into a key operational tool, topographic surveying and military mapmaking started to form important part of army staff's peace and wartime activity, special corps of military topographers and collections of topographic materials were formed⁴. Growing military needs served as a powerful incentive in transforming geography from a form of art to an accurate science and often led to the appearance of the first precise maps of areas and countries about which reliable knowledge was so far lacking.

In the 19th century the Ottoman provinces in Southeastern Europe became a scene of the major land campaigns during four Russo-Ottoman wars. Importance of the region as a main theatre of war in the conflicts between the Porte and the Russian empire meant that the tsarist army needed to be provided with reliable information about the geographical features of the country and with adequate topographic maps in order to aid its campaigning. Meanwhile this part of Europe was poorly known geographically and maps suitable for military usage were scarcely existent. Thus, exploring and

¹ This research is accomplished with the support of the Scientific Research Fund of the Ministry of Education and Culture of Bulgaria on project "DNТS/Russia, 02/17 (ДНТС/Русия, 02/17)"

² Jeremy Black, *Voennoto delo 1660-1975* (Sofia: Riva, 2010), 59-78.

³ Jeremy Black, "A Revolution in Military Cartography?," *The Journal of Military History* 1 (2009): 49-68.

⁴ Dennis Showalter, "Intelligence in the Eve of Transformation. Methodology, Organization and Application," in *The Intelligence Revolution. A Historical Perspective. Proceedings of the Thirteenth*

Military History Symposium. (Washington DC: U.S. Air Force Academy, Office of Air Force History, 1991), 17.; Valerij Gluškov, *Istoriya voennoj kartografii v Rosii. (XVIII – na XX в.)* (Moscow: IDĖL, 2007). E-book published without page numeration, available at: https://geoportal.rgo.ru/geoteka/glushkov2007_istoriya-voennoy-kartografii-v-rossii
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mapping the Balkan Peninsula turned into one of the major and systematically carried out tasks of the Russian Corps of Military Topographers during the century. Nowadays collections of the Russian Military History Archive in Moscow (*Rossiiskij Gosudarstvennyj Voенno-Istoričeskij Archiv - RGVIA*) testify about the activities of military-topographic intelligence on Ottoman territories, which resulted in completion of some of the earliest accurate topographic maps, depicting European Turkey and especially its central and eastern provinces. The following paper aims to examine Russia's activities on exploring and mapping Ottoman lands in Europe in the context of the military relations between the two empires during the 19th century as it focuses on the period prior to the Russo-Turkish war of 1877-1878.

Today we mostly associate intelligence with covert operations and espionage but in the examined period exploring land and preparing maps formed major part of the intelligence work of military staffs both in times of peace and war. Specialized topographic sections and corps were formed in European countries and played major role in the genesis of the modern general staffs⁵. In the definition of the term "military intelligence" /*voennaja razvedka*/ published in the Russian "Encyclopedia of Military and Naval Sciences" of 1893 "collecting maps and plans containing valuable military information" was pointed as one of the principal means of intelligence gathering⁶. As the year of institutional formation of the military cartography in Russia is considered 1797, when the Depot of Maps was founded in St. Petersburg, along with an engraving department, with the task of provide maps for the army's needs⁷. In 1812 this body was succeeded by the Military-Topographic Depot, later in 1822 was formed the Corps of Military Topographers⁸. These institutional developments along with the technical progress and higher level of preparation of the officers in the Corps laid the basis for more systematic and sophisticated topographic surveys, some of which were carried out on territories outside Russia.

⁵ Dallas Irvine, "The Origin of Capitall Staffs," *The Journal of Modern History* 2 (1938): 174-175.

⁶ *Ènciklopedija voennyh i morskikh nauk. Volume 4* (Saint Petersburg: Tipografija V. Bezobrazova, 1893), 243-244.

⁷ Gluškov, *Istorija voennoj kartografii*.

⁸ *Ibid.*

Setting the basis: Russia's initial acquaintance with the geography of European Turkey

Given the St. Petersburg's military-strategic plans in the Near East, geographical features of the ottoman European provinces started to present serious interest for Russia since 18th century. Way to acquire needed knowledge at first was by extracting information from manuscripts, travel notes, notes of pilgrims and merchants and also from existing simple geographical maps. Opportunity to become more acquaint with the ottoman possessed territories and conduct field work was presented by the military campaigns during which territories were explored, data was collected, and sketches drawn in order to expand the geographical knowledge about neighboring territories and to aid future military campaigns. This way in 1738 was published "Map of military action against the Turks and operations on Dnieper and Danube in 1736 and 1738", compiled on the basis of collection of ancient maps, available in the Senate and information gathered during the military action⁹.

The Russo-Ottoman war of 1768-1774 was the first time when tsarist army crossed Danube River and had a chance to gather first-hand knowledge about the geographic features of the territories that will become main theater of war between the two empires in the coming century. Field work and topographic surveys were conducted in parallel with the campaigns and as a result an atlas entitled „Theatre of war between the Russian Empire and the Ottoman Porte“ was completed soon after¹⁰. Another atlas depicting the Russo-Turkish war of 1787-1791 was printed near the end of the century¹¹.

Different type of product of the military-topographic intelligence, except general maps, were the so-called "routes" /*marshrutyj*/. They presented detailed written descriptions of routes between two points with distances and characteristics of the terrain, often accompanied by sketch-maps. Such descriptions were less technically demanding to create than topographic maps and the field work for them was possible to be done in peace times by single undercover officers. For

⁹ Sergej Fel', *Kartografija Rossii XVIII v.* (Moscow: Geoizdat, 1960), 178.

¹⁰ Konstantin Sališčev, *Osnovy kartovedenija. Čast istoričeskaja i kartografičeskie materialy* (Moscow: Geoizdat, 1948), 163.

¹¹ *Sovetskaja voennaja ěnciklopedija. Volime 1* (Moscow: Voenizdat, 1976), 315.

example in 1793 a Route between Silistra and Constantinople was completed by ober-quartermaster Lepp, attached at that time to the Russian embassy in the ottoman capital¹². Another "Description of the road from Constantinople to Ochakov" made by him was printed in St. Petersburg in 1821¹³.

Topographic surveys in Russia in that time were still made largely relying on estimation by sight and primitive instrumental methods and so the maps created had limited use for constantly growing military needs. Even more difficult was to organize field work abroad, which made written descriptions preferable and easily feasible form of military-topographic intelligence on the Ottoman Empire. With the beginning of the 19th century newly acquired knowledge about the Earth's shape, implementation of more sophisticated methods of surveying and mathematical calculations together with specialized training of officers from the Corps of Military Topographers made possible to create new and more accurate topographic maps¹⁴. Meanwhile after Russia settled firmly on Northern Black Sea it became clear that lands south of Danube in future will serve as a main battlefield between the two empires, so Southeastern Europe naturally moved more into the focus of Russian military intelligence. This set the scene for more methodical gathering of geographic information and mapping of European Turkey¹⁵.

During the Russo-Turkish war of 1806-1812 knowledge about topographic features of the lands south of Danube was widened which gave opportunity for the Depot of Maps to accumulate substantial material about enemy's lands. Shortly after the war a series of newly completed route descriptions appeared: „Military description of the road along Black sea coast from Bosphorus strait to the forts of Tulcea and Isaccea on Danube River“¹⁶; „Description of the route from Ochakov to Constantinople“¹⁷; „Military-topographic

¹² *Istoričeskij očerk dejatel'nosti Korpusa voennykh topografov 1822-1872* (Saint Petersburg, 1872), 27.

¹³ Rossijskij Gosudarstvennyj Voenno-Istoričeski Archiv (RGIVIA), Fond 450, Op. 1. Ed. 563.

¹⁴ Gluškov, *Istorija voennoj kartografii*.

¹⁵ Vitalij Šeremet, *Russkie I turki: razvitie sovmestnykh predstavlenij. in Rossija i Balkany. Iz istorii obštrstvenno-političeskich I kulturnyh sojazej (XVIII v. - 1878 g.)* eds. Irina Dostjan, Vladilen Vinogradov and Irina Makarova (Moscow: Institut Slavjanovedenija i Balkanistiki, 1995), 288.

¹⁶ Michail Alekseev, *Voennaja razvedka v Rossijskoj imperii* (Moscow: Veče, 2010), 96.

¹⁷ RGIVIA, Fond 450, Op. 1, Ed. 561.

description of the Black sea coast from Tulcea to Constantinople"¹⁸ were some of them. Obviously geographical data for those descriptions was collected by specially sent officers from General staff's quartermaster department, as it is often specified in the notes.

Detailed information about geography of the war theater, gathered during the campaigns of 1806-1812 we can find also in the work of Alexander Mihailovskii-Danilevskii along with a general small-scale map of territories between the Danube River and Stara Planina (Balkan) Mountain¹⁹. Marked on the map are major towns, roads and rivers south of Danube, in more detail relief is depicted in the area between Shumen and Varna, where battles were fought during the war. Increasingly scarce in detail are drawn territories to the west and especially around the town of Sofia. Even the main Balkan ridge is situated south of the present-day Bulgarian capital. The obvious lack of precise geographic knowledge about this part of the Ottoman Empire is not surprising given the fact that Russian army so far never penetrated these territories.

Beginning of systematic surveys: the Russo-Turkish war of 1828-1829

Powerful impulse for gathering and systematizing geographical data about European Turkey gave the Russo-Turkish war of 1828-1829. As early as 1824 a group of four Russian officers, headed by quartermaster's colonel Fëdor Berg, was sent in the ottoman capital. Their task was "...to study the Ottoman Empire in any aspects that could influence the course of military actions in case of unwanted but possible rupture of diplomatic relations"²⁰. The fact that Berg had special training in military topography suggests that the main field of work of the group was gathering information about the topography of the future war theatre, which the collections of RGVIA can clearly prove.

The main volume of materials prepared in the eve of the war concerns the route network south of Danube and the topographic features of Constantinople area. Until the outbreak of the war main roads leading to the Ottoman capital and its vicinity were surveyed

¹⁸ RGVIA, Fond 450, Op. 1, Ed. 566.

¹⁹ Alexander Michajlovskij-Danilevskij, *Opisanie Tureckoj vojny v carstvovanie imperatora Aleksandra s 1806 do 1812 goda*. (Saint Petersburg: Tipografija Štaba otd. korpusa vnutrennej straži, 1843), Attached map.

²⁰ Alekseev, *Voennaja razvedka*, 99.

by the Russian officers²¹. As a result, a fairly detailed route map covering the territory between Danube River, Black Sea, northern Aegean Sea and nowadays Western Bulgaria was completed in 1827 clearly to be used in the course of the planned campaign²². Naturally main focus on that map is on roads leading from the area of lower Danube to Constantinople. A topographic map of the ottoman capital itself with its surroundings was engraved in 1828 on the basis of eye measurement surveys made in 1827²³.

Sent to the Russian diplomatic mission on Bosphorus was also first lieutenant Alexander Dugamel (in future a renowned Russian general) who did surveys of area and routes in the vicinity of Constantinople²⁴. On the base of work done by him in the eve of the war a number of maps of routes leading to the ottoman capital were engraved by the Military-Topographic Depot²⁵. A detailed 192 pages itinerary written in French and entitled "Collected descriptions of routes of European Turkey" was also prepared in 1828²⁶.

As a whole by the time of outbreak of war the Russian General staff managed to accumulate and process considerable amount of geographic material needed for the army's operations on the Balkans. Peacetime activity of Russia's topographic intelligence on ottoman territory for a first time was done in such a scale where a whole group of officers worked methodically to provide needed maps and descriptions of ottoman lands in Europe. Formally these officers were appointed as second rank officials of the Russian diplomatic mission in Constantinople but beyond any question intelligence gathering was the principal reason for their presence in the Ottoman Empire.

Nevertheless, work was done by peace which left the general picture of country's geography rather vague. The question of creating new and more precise general topographic map of European Turkey on the basis of existent ones and new surveys was also considered in St. Petersburg in the years prior to the war. Evidence for that is an undated manuscript kept in the Russian Archive of Military History entitled "Critical analysis of geographical maps of European

²¹ *Istoričeskij očerk dejatel'nosti*, 179

²² RGVIA, Fond 450, Op. 1, Ed. 846.

²³ RGVIA, Fond 450, Op. 1, Ed. 467.

²⁴ *Istoričeskij očerk dejatel'nosti*, 180.

²⁵ RGVIA, Fond 450, Op. 1, Ed. 836; 847.

²⁶ RGVIA, Fond 450, Op. 1, Ed. 852.

Turkey”²⁷. Basing on the information, containing in the document, it can be dated to the decade between 1818 and the Russo-Turkish war of 1828-29 and most probably its appearance is related to the preparation for the pressing war. As title suggests the text analyses existing maps of different provinces of European Turkey pointing their qualities and faults. Author is noting the substantial progress in exploring those territories made in the past couple of decades, thanks mainly to the work of French officers and geographers during the Napoleonic wars. Map of Morea by Barbié du Bocage (1810) and the Map of European Turkey along the right bank of Danube by general Vaudoncourt (1818), although not lacking some inaccuracies, are pointed as the most precise so far existing and valuable pieces of the puzzle needed to complete a general map of the Ottoman provinces in Europe²⁸. Overall conclusion is that western and southern periphery of European Turkey is already relatively well explored and mapped, but the interior and eastern parts remain largely geographically unknown. Listed among the lands most poorly known are Bulgaria*, Southern Serbia, Northern and Eastern Macedonia, Inner Rumelia as well as the Black sea coast between Mangalia and Bosphorus²⁹. In other words, complete mapping of European Turkey required further direct surveys of the land.

Scarcity of even rough geographical knowledge about some territories was noted even more explicitly by the head of the Corps of the Military Topographers gen. Fëdor Schubert. In the eve of the 1828-1829 war he wrote that so far Russia was lacking not only decent but also mediocre maps of Walachia, Moldavia and Bulgaria. Even more the so far accumulated material was often misleading, so surveys in future will have to be done from scratch like in a completely unknown land, added Schubert³⁰. Thus, mapping territories of Ottoman Empire became main task for the Corps of Military Topographers during the coming war against the Porte.

In the course of the conflict of 1828-1829 Russian army for a first time penetrated deep into the ottoman European domains, crossed

²⁷ RGVIA, Fond 450, Op. 1, Ed. 350.

²⁸ RGVIA, Fond 450, Op. 1, Ed. 350. L. 3.

* In the context of this work the term “Bulgaria” is used to designate lands between Danube River and Stara Planina Mountain. Not to be mistaken with present-day Bulgarian state. The term “Rumelia” designates territories to the south of Stara Planina.

²⁹ RGVIA, Fond 450, Op. 1, Ed. 350. L. 14-15.

³⁰ *Istoričeskij očerk dejatel'nosti*, 176.

Stara Planina Mountain and reached as far as Adrianople. Given the already noted situation gen. Schubert insisted that topographical surveys have to be based on systematical approach and to seek accuracy instead of pure volume³¹. Work of the Corps inside Russia was temporary limited to free resources, needed special instruments were provided. In the general instruction for the surveys in European Turkey, prepared by gen. Schubert, points situated mainly along the Danube and the Black Sea coast, geographical position of which had to be astronomically determined, were specified and divided into two groups depending on their priority. Admissible margins of error in the calculations were explicitly specified³². Group of officers from the General staff and military topographers under the command of gen. Ditmars was assigned to conduct the geodesic work³³. They were organized into two detachments of 8 officers and 24 topographers each. After crossing the Danube the first detachment had to conduct surveys along the Danube River and the other to follow the army south and survey the territories adjacent to the Black Sea coast³⁴. Charged to do the astronomical determinations were another two groups of 2 officers and 3 topographers each³⁵. Simultaneously topographical surveys were conducted by officers attached to the 2nd army's staff³⁶. Chosen for determination of geographical position was the astronomical method³⁷. Although lacking in accuracy compared to triangulations it was less time-demanding and easier to implement during wartime³⁸.

Methodical execution of the planned program began in the summer of 1828 and continued well after the war's end. Officers and topographers were left under the direction of gen. Kiselöv, a Russian plenipotentiary president of the divans in Wallachia and Moldavia, and continued work until 1833³⁹. For the four-and-a-half-year period

³¹ *Ibid.*, 176.

³² *Ibid.*, 150-151.

³³ *Ibid.*, 180.

³⁴ *Ibid.*, 178.

³⁵ *Ibid.*, 152-153.

³⁶ *Ibid.*, 179.

³⁷ *Ibid.*, 150

³⁸ Henry Gannet, *Manual of Topographic Methods* (Washington DC: Government Printing Office, 1906), 12.

³⁹ Pavel Gejsman, *Stoletie voennogo ministerstva. Istoričeskij očerk vznikovenija i razvitija v Rossii General'nogo Štaba v 1825-1902 gg. Volume 2* (Saint Petersburg: Tipografija postavčikov dvora Ego Imperatorskogo Veličestva Tovarišestva M. O. Vol'f, 1910), 71-72.

about 200 000 square *versts** of land were surveyed⁴⁰ and geographical position of 72 points in Walachia, Moldavia, along the Danube and south of Stara Planina Mountain was determined⁴¹. Along with geographical features of terrain meticulously explored were all other objects of military importance as forts, bays, river crossings, etc. In the process detailed written descriptions of topographic and also social-economic characteristics of the country were compiled⁴².

Without a doubt the work done by Russian topographers formed a qualitative leap in exploring the topography of European Turkey and formed the basis for more precise mapping of its territory. Results began to appear in the form of topographic maps and written descriptions in the following years.

Among the series of cartographic material produced in the late 1820's and in the 1830's attention deserves the general map of the eastern part of European Turkey in 10-*verst* (1/420 000) scale completed in the staff of the 2nd army in 1828 prior to the campaign south of Stara Planina mountain⁴³. It covers territory roughly enclosed between Hermannstadt (present-day Sibiu) – Thessaloniki line on the west, Black sea on the east, Wallachia and Moldavia on the north and Black Sea straits and Chalkidiki peninsula on the south. Depicted are towns and villages, rivers, route network and relief. Attached is also a list of distances (given in *verst* instead of hours of travel as earlier) between towns in eastern and northeastern part of European Turkey. Immediately evident is that in most detail are drawn territories of Danube Principalities, the whole western Black Sea coast and mainland to about 100-150 kilometers from the coastal line. The General picture of the territories south of Danube and especially south of Stara Planina mountain is obviously achieved by putting together different route descriptions which left large blank spots of territories situated between the main road arteries. West and south-west are apparently scarce in detail which is due to the fact that those territories were far from the war theatre in all previous Russo-ottoman wars.. In 1830's completed were also maps of Wallachia, Moldavia and Babadag area in 1/84000 (2-*verst*) scale along with

* *Verst* - an old Russian unit of length. 1 *verst* equals 1.0668 kilometers.

⁴⁰ *Ibid.*, 72.

⁴¹ *Istoričeskij očerk dejatel'nosti*, 584.

⁴² Aleksej Postnikov, *Razvitie krupnomaštabnoj kartografii v Rossii* (Moscow: Nauka, 1989), 34.

⁴³ RGVIA, Fond 450, Op. 1, Ed. 851.

some 400 route descriptions⁴⁴. A naval map of western Black Sea coast, based on the observations made by admiral Greig's fleet during the war, was engraved in 1835⁴⁵. A really detailed 1/12 000 scale map of Constantinople and its surroundings, depicting topography and city structure of the ottoman capital was completed also in 1835⁴⁶.

Historical record of the work of the Corps of Military Topographers printed in 1872 mentions about the existence of other two maps of Eastern Bulgaria and Rumelia in 1/84 000 scale engraved in late 1840's and early 1850's⁴⁷. In 1868 when the question of creating new general map of European Turkey was raised again in St. Petersburg, we found a map of Eastern and Western Bulgaria in 1/84 000 scale listed among the starting material for the work⁴⁸. Such map or maps were not found present in the collections of the Russian State Archive of Military History in Moscow nowadays and the mentioned source says that in some point lithographic stamps for them were scraped away along with others and only limited number of printed copies was preserved⁴⁹. Judging the quality of those maps without having visual idea of them is of course not possible but the very fact that stamps were not preserved gives a reason to think that they were not of high quality.

All in all the Russo-Ottoman war of 1828-1829 could be defined as a beginning of a new period in topographical surveying of European Turkey from the Russian Corps of Military Topographers and in mapping the region as a whole. Field work done in the war years and after that gave Russia enough material to process for the next couple of decades. Nevertheless, large blank spots remained. In detail was surveyed mainly the north-east corner of the Balkan Peninsula, territories along Danube and Black Sea coast and to some extent area near the ottoman capital. Still far too insufficient remained materials concerning territories to the south-west, but for that time, given the Russian naval strength in Black Sea and the followed period of peace with the Porte, these lands seemed an unlikely war theater in near future. Only in the second half of the century they will become

⁴⁴ Gejsman, *Stoletie voennogo ministerstva*, 71.

⁴⁵ RGVA, Fond 450, Op. 1, Ed. 278.

⁴⁶ RGVA, Fond 450, Op. 1, Ed. 473.

⁴⁷ *Istoričeskij očerk dejatel'nosti*, 462.

⁴⁸ *Ibid.*, 584.

⁴⁹ *Ibid.*, 462.

an object of through topographical surveys done by Russian military topographers.

In 1830-s and 40-s due to the technical progress, elaboration of methods and overall accumulation of experience and knowledge Russian cartography experienced a distinct upward trend. The period of peace gave opportunity for the Corps of Military topography to concentrate its efforts on profound surveying and mapping of the vast territory of Russia. The number of personnel of the Corps was constantly growing and in mid-50-s reached a peak for the whole period until October revolution⁵⁰. For a period, mapping of ottoman territories wasn't a priority of the Russian geography.

A new Russo-Ottoman war that later grew into a Crimean war broke out in 1853. This time Russian army didn't undertake major land offensives in European Turkey, so it had no direct possibility to conduct large scale surveys in previously unexplored territories. During the military campaigns topographic work was focused mainly on the neighboring Asian provinces of Ottoman Empire⁵¹. Nevertheless, RGVIA keeps a series of maps completed in 1853-1855 which's appearance will have to be related to that conflict. Except couple of small-scale maps printed in 1853-54⁵² a general "Detailed map of European and Asian Turkey" in 1/2 600 000 scale was completed in 1855 by lieutenant-colonel Tutikov from the Corps of Military Topographers⁵³. This is in fact the earliest detailed road map of Ottoman Empire engraved in Russia where postal, paved and earth roads as well as trails are depicted by different graphics. Comparing it to the already mentioned 10-verst map of 1828 we see that here towns in present-day Western Bulgaria are presented much more densely no matter the smaller scale.

⁵⁰ Gluškov, *Istorija voennoj kartografii*.

⁵¹ Mark Kudvjavcev, *O voenno-topografičeskoj službe I topogeodezičeskom obezpečeníj vojsk* (Moscow: RIO VTS, 1980), 54.

⁵² RGVIA, Fond 450, Op. 1, Ed. 318, 305/1.

⁵³ RGVIA, Fond 450, Op. 1, Ed. 321.

Post-Crimean years: Russia's military strategy against the Porte and the completion of a new military-topographic map of European Turkey

Consequences of the Crimean defeat marked the beginning of a difficult period in Russia's eastern policy. The period of „concentrating of Russia“ as Chancellor Gorchakov called it didn't mean the strategic interests of St. Petersburg in the Near East were forgotten. The new political and military situation conditioned by the Paris peace treaty meant a possible future Russo-Turkish war will be fought in very difficult circumstances. Initial strategic plans of a hypothetical future campaign against the Porte were laid down in the mid 1860-s. In 1866 general Obruchev presented to the Emperor Alexander II a report that analyzed the conditions and traced out the necessary strategy of Russia in a at the time unwanted but possible war with the Ottoman Empire. Given the absence of naval fleet in Black Sea, wrote Obruchev, army can achieve success only by decisive land offensive to the ottoman capital and the troops will have to make their way through the lands to the west of the main war theatre in the campaign of 1828-1829. Special attention was given to the necessity of careful preparation which has to include through exploration of the possible war theatre, its geographic and topographic features and providing the army with adequate topographic maps⁵⁴.

Meanwhile in the course of military reforms in Russia the military-topographic branch of the army's staff was reorganized. In 1865 a Military-Topographic Department was formed within the structure of the newly founded full-time body ahead of the army called Main Staff /*Glavnyj Štab*/. In 1866 new instructions concerning the Corps of Military Topographers were approved according to which the Corps from then on became subordinate to the chief of the Main Staff and its work was now restricted only to executing tasks of military importance and not to domestic mapmaking⁵⁵.

One of the first major tasks of the reformed Corps was to prepare new and more precise topographic map of European Turkey. The question was first discussed in the Consultative Committee of the Main Staff in the end of 1866, a resolution of the minister of war for preparing such a map followed in January 1867. The map should be in 10-*verst* scale, specified the resolution, and to cover the territory

⁵⁴ RGVIA, Fond 846, Op. 16, Ed. 7622, L. 64-64 ob.

⁵⁵ Gluškov, *Istorija voennoj kartografii*.

between Northern Moldavia on the north, 40th parallel on the south, Danube delta on the east and the Austrian border on river Una on the west⁵⁶.

Work on the first sheets of the map started right away but soon it became clear that the existing material is far too insufficient to achieve the needed result. With the absence of points with reliably determined geographical position, to situate on the map even the major towns in present-day Western Bulgaria like Sofia or Vratsa with accuracy under 20-30 *versts* proved impossible⁵⁷. Only possible solution in this situation were instrumental surveys and astronomical determinations conducted by officers from the Corps of Military Topographers. But how this could be organized in time of peace with the Porte?

A possible solution was proposed by the Russian ambassador to the Porte Nikolai Ignatiev and discussed in his correspondence with the minister of war⁵⁸. Ignatiev suggested to organize a wide-scale expedition in European Turkey under the pretext of measuring the arc of the meridian from the town of Izmail to the isle of Candia or in other words to continue the Struve Geodetic Arc⁵⁹. In this more seemly form a proposition was made to the Porte which agreed to allow a group of Russian geodesists and astronomers on its territory to complete the work. St. Petersburg had to provide all the funding and present the results of the expedition to the Ottoman government⁶⁰. The whole undertaking was given the form of a joint initiative, but the main role of the Ottoman officers was to keep an eye on their Russian colleagues⁶¹.

The decision of the Porte to allow the mission may seem awkward. It is hard to believe that Ottoman authorities were unaware of the fact that Russian geodesists and astronomers were nothing more than intelligence officers doing preparation work for a possible war. In a report of his trip in European Turkey Georgy

⁵⁶ *Istoričeskij očerk dejatel'nosti*, 583-584.

⁵⁷ *Ibid.*, 585.

⁵⁸ RGVIA, Fond 402, Op. 3, Ed. 80, L. 1.

⁵⁹ The Struve Geodetic Arc is a chain of survey triangulations established in the period 1816-1855 stretching from Hammerfest in Norway to the Black Sea, through ten countries and over 2,820 km, which yielded the first accurate measurement of a meridian

⁶⁰ Nikolaj Starodymov, "Otvažnyj razvedčik Nikolaj Artamonov zadolgo do vojny sformoroval razvedyvatel'nuju set' v Turcii," *Voенno-istoričeskij sbornik* 10 (2001): 47.

⁶¹ RGVIA, Fond 450, Op. 1, Ed. 82, L. 4.

Bobrikov, one of the expedition members, wrote that grand vizier opposed to the attempts of the French ambassador to describe the expedition as a prelude to a coming military offensive with the argument that in 1829 Russian army found a way to Adrianople even without accurate maps and except that St. Petersburg kindly agreed to present the results of the planned calculations to the Porte⁶². We can suppose that the influence of gen. Ignatiev among the ottoman officials also played its role. As a matter of fact this wasn't the first time when Russian topographers did surveys on ottoman land with the allowance of the Porte. In 1834 staff-colonel Vorončenko was sent to Asian Turkey for gathering military-geographic and statistical data⁶³. His "Military Description of Asia Minor", completed in 1837 was the first extensive work of this kind⁶⁴.

That's how in September 1867 in Constantinople arrived an expedition prepared by the Main Staff of the Russian army which's task was officially formulated as measuring the arc of the meridian from the town of Izmail to the Isle of Candia. Head of the expedition was capt. Kartaci and among the other participants were capt. Nikolai Artamonov, capt. Georgy Bobrikov, first lieutenant Skalon and capt. Bykov from the Corps of Military Topographers. After about a month spent in ottoman capital in waiting for an official sultan's permission Russian officers set by sea and rail to the town of Ruse* chosen for a starting point of the expedition⁶⁵.

Once arrived in Ruse officers decided that since the lands of interest are poorly explored geographically "for getting a better notion about the geographic position of mountain ridges, roads and towns" most useful will be to make as many astronomical determinations as possible. To cover more territory expedition split into two groups led by captain Kartaci and captain Artamonov⁶⁶. During the next two months the group led by captain Kartaci made two trips - one from Ruse through Tarnovo, Gabrovo, Karlovo, Tatar Pazardzhik and Plovdiv to Stara Zagora and the other - from Varna through Burgas to Adrianople. Meanwhile Artamonov and his men

⁶² RGVIA, Fond 450, Op. 1, Ed. 82, L. 2-3.

⁶³ Valerij Gluškov, *Nikolaj Dmitrievič Artamonov – voennyj geodesist i kartograf* (Moscow: Nauka, 2007), 23-24.

⁶⁴ RGVIA, Fond 450, Op. 1, Ed. 283.

* Used in this article is the modern-day name of the town

⁶⁵ RGVIA, Fond 450, Op. 1, Ed. 82, L. 6.

⁶⁶ *Zapiski voenno-topografičeskogo otdel Glavnogo Štaba. Volume 32* (Saint Petersburg: Voennaja Tipografija, 1871), 6.

travelled from Ruse to Sofia passing through Svishtov, Pleven, Lovetch and Troyan then returned to Ruse to set again on the route Ruse-Shumen-Sliven-Adrianople⁶⁷.

Pretty indicative for the purposes of the expedition is which regions are traveled over by the Russian officers. These are mainly the lands of today's Central Northern Bulgaria, Central and Western Stara Planina Mountain and the sub-Balkan region. Visited were towns as Ruse, Svishtov, Pleven, Lovech, Tarnovo, Shipka, Klisura, Kazanlak, Troyan, Karnare, Zlatitsa and others. These territories not only were poorly known geographical but also match exactly with the hypothetical theater of war in a future campaign on the Balkans. Understandably Russians pay special attention to Central Stara Planina, from where according to the initial plans troops will have to make their way into Thracian plane and towards the Ottoman capital. Key for this plan is having good knowledge of the mountain passes. In 1868 in St. Petersburg was published a "Military-statistical collection for year 1868", large part of which was devoted to the Ottoman Empire and included detailed description of all the mountain passes in Stara Planina and their suitability for heavy transportation. Conclusion is that the notion of the mountain's impassability is due more to legends than real geographic factors and pointed as most convenient is the Shipka pass⁶⁸.

As a result of the 1867 military-topographic expedition the astronomical geographic position of 35 towns and villages was determined, surveyed was the main Stara Planina Mountain ridge, many inaccuracies in older maps were corrected. Collected data formed the mathematical basis for the new 10-*verst* topographic map of European Turkey⁶⁹. Not to be underestimated is also the fact that Russian officers had the opportunity to get first-hand idea about the features of the future theatre of war. Later Nikolai Artamonov, one of the members of the expedition, headed the intelligence section in the staff of the Russian Danube army during the war of 1877-1878 and the experience gain in 1867 without a doubt helped for the effective carrying out of his duty.

⁶⁷ *Ibid.*, 42.

⁶⁸ *Voенно-статистический сборник на 1868 год* (Saint Petersburg: Voennaja Tipografija, 1868), 292.

⁶⁹ *Istoričeskij očerk dejatel'nosti*, 493.

The 1867 expedition brought much data needed for mapping European Turkey but nevertheless work on the map was going slowly⁷⁰. In 1869 in Constantinople once again arrived Nikolai Artamonov, by that time already enlisted in the Corps of the Military Topographers⁷¹. His official mission was to present to the Porte the list of astronomical determinations made in 1867 and also to further verify the geographical position of some points⁷². This time the Russian officer spent almost eight months in Ottoman Empire as for that time traveled the route Constantinople-Adrianople-Plovdiv-Sofia-Svishtov. Visited were also a number of towns in nowadays Western Bulgaria as Berkovitsa, Slivnitsa, Chiprovtsi, etc.⁷³. This clearly characterizes Artamonov's mission as a continuation of the 1867 expedition with the purpose to gather missing data about the territories to the west. The fact that namely Artamonov was assigned with the job is due to his appointment as an editor of the 10-verst map of European Turkey. During his mission he managed to determine the geographical position of 37 more points and also did surveys for the mapping of Constantinople and its surroundings in $\frac{1}{2}$ versts (1:21 000) scale⁷⁴.

In the beginning of the 1870-s the work on the new general topographic map of European Turkey went in full scale. Intelligence gathering continued in parallel by using all possible means. In May 1871 the minister of war wrote to the ambassador in Constantinople Nikolai Ignatiev the following letter: „During the work on the 10-verst map of European Turkey a need arose to fill some blank spots with topographical data that could be collected only on field. For that we see necessary to send on a mission under your direct command staff-captain Bykov from the Corps of the Military Topographers to conduct the work [...] In case of your approval he will be sent immediately in Constantinople from where will have to travel at first to Ruse and Silistra, since that region is less known for us.”⁷⁵

Ignatiev gave his approval underlining that all the work should be done in very discrete fashion due to the high suspiciousness of

⁷⁰ *Istoričeskij očerk dejatel'nosti*, 587.

⁷¹ Gluškov, *Nikolaj Dmitrievič Artamonov*, 28.

⁷² Starodymov, „*Otvažnij razvedčik Nikolaj Artamonov*”, 49.

⁷³ *Zapiski voenno-topografičeskogo otdela*, 89-135.

⁷⁴ Gluškov, *Istorija voennoj kartografii*.

⁷⁵ RGVIA, Fond 401, Op. 2, Ed. 85 (1871 g.), L. 1.

Ottoman authorities⁷⁶. Unfortunately, the archives don't keep a record about the actual conduction of the mission so we cannot speak about the results of it. More likely to assume is that it didn't take place at all. Nevertheless, the cited document gives us an idea about the work going on in St. Petersburg and about the provinces of European Turkey presenting main interest.

In 1873 Georgy Bobrikov was sent on a "private trip" to Turkey as a "retired officer" with the task to gather military-statistical and topographic information about Bulgaria⁷⁷. Despite local authorities' suspiciousness he reported that during his month-long trip managed to travel over, together with the dragoman of the Russian consulate in Ruse, the vicinity of Ruse, Tulchea and Razgrad⁷⁸. A year later on a mission in Ottoman Empire was sent the famous geographer and explorer and also officer from the general staff Mihail Venjukov. In his memoirs he points out as a purpose of his trip "collecting data about military important objects"⁷⁹. From the Main Staff he was given maps and plans of the territory near Danube River which probably needed verifications and further field checks. These and other similar examples characterize the first half of 1870-s as an especially active period of the Russian military-topographic intelligence on European Turkey, result of the ongoing work on completion of the 10-*verst* map. Other sources of topographic material except field surveys were also sought constantly.

With the task to search and provide every possible material that could be useful for the completion of the 10-*verst* map was entrusted the Russian military agent in Constantinople Alexander Zelëni. In July 1871 he wrote to the minister of war that with the indifference of the Ottoman government to the topography of their own country useful for the Main staff could only be surveys made by European specialists. In connection with this he reported of his newly established contacts with an employee of the Austro-Hungarian company doing research for the construction of railways in Rumelia. This man offered the Russian agent 25 detailed route descriptions and maps of the supposed rail routes which Zeleni defined as „... pretty rich topographic material for adding to our existing maps of European

⁷⁶ RGVIA, Fond 401, Op. 2, Ed. 85 (1871 g.), L. 2.

⁷⁷ RGVIA, Fond 401, Op. 2/926, Ed. 48 (1873 g.), L. 3.

⁷⁸ RGVIA, Fond 401, Op. 2/926, Ed. 48 (1873 g.), L. 14.

⁷⁹ Michail Venjukov, *Iz vospomonanii*. Volume 2 (Amsterdam, 1895), 191.

Turkey" ⁸⁰. From St. Petersburg answered that all except 7 of these descriptions were already delivered by the military agent in Vienna but those 7 present an interest and Zelëni was given the task to provide them. During the next months they were sent one by one to St. Petersburg to be copied before being returned back to the company's office in Constantinople⁸¹.

In 1874 Zelëni managed to get copies of topographic maps of European and Asian Turkey made by European specialists commissioned by the Porte. These materials were appreciated by the Russian Main staff as exceptionally valuable and providing knowledge about poorly explored and in the same time really important from military point of view countries⁸².

All the gathered material and first of all work done by topographers on field in 1867 and 1869 made possible to finish the new 10-verst topographic map of European Turkey in 1876, right on time before the outbreak of a war against the Porte. Printed on 17 sheets and edited by col. Nikolai Artamonov this map was superseding everything Russia done until then on mapping Ottoman lands. Relief, towns and villages, roads (paved, unpaved), mountain roads and trails, rivers, altitude above sea level, administrative and state borders were depicted in detail as well as military infrastructure – strongholds, forts, redoubts, blockhouses, etc.⁸³ The map of Artamonov, as it became known, was a major „weapon" used by the Danube army staff during the operations on the Balkans in 1877 and in the beginning of 1878.

Archives also keeps interesting information of one more Russian operation aimed on providing the army with the most precise possible maps of European Turkey. On October 26, 1876 the Chief of Staff of the Russian Army gen. Fëdor Gejden received from the former Chief of the Corps of the Military Topographers, gen. Ivan Blamberg, at that time in Vienna a letter of intriguing information. Blamberg reported his acquaintance in Vienna with Felix Kanitz, the famous traveler, ethnographer, geographer and expert on Southeast Europe, who showed him his unpublished orographic, hydrographic and topographic maps of the Balkan Peninsula, proposing that these

⁸⁰ RGVIA, Fond 450, Op. 1, Ed. 89, L. 21-22.

⁸¹ RGVIA, Fond 450, Op. 1, Ed. 89, L. 33-34.

⁸² RGVIA, Fond 450, Op. 1, Ed. 93, L. 74.

⁸³ RGVIA, Fond 450, Op. 1, Ed. 341.

works be purchased by Russia for the need of the coming war. "I was delighted with these maps, and I allow myself to express my opinion that their acquisition by our government would be a real find in the current circumstances", added Blamberg in his note, including samples and illustrations from the maps in question⁸⁴. The announcement was clearly taken with interest in St. Petersburg because in a rapid letter of reply the Chief of Staff thanked for the information provided and reported that the military agent in Vienna, Fëdor Feldman, would be commissioned to investigate the matter and contact Kanitz⁸⁵.

The materials proposed by Kanitz included 1) an oro-hydrographic map of Bulgaria in a 7-*verst* scale, covering the area from the Danube to the southern slopes of the Balkan Mountains and from the Black Sea to Zaječar and Aleksinac; 2) an administrative-ethnographic map of Bulgaria, indicating the boundaries of the *sancaks* and *nahiyas* and the composition of the population by nationality and religion in each point and 3) an alphabetical index of all the populated places in the Danube Bulgaria. The ethnographic works of Kanitz in three volumes were added to all that. The conclusion made in St. Petersburg was that the oro-hydrographic map could also serve as a military road map and that it had a definite advantage over the newly completed 10-*verst* map both in terms of scale and the number of the populated sites that were about 30 % more than those in the Russian map. The price determined by Kanitz for all of this was 20 000 credit roubles – a significant amount for the time. Nevertheless, the Military Scientific Committee was confident that the materials offered would bring a certain benefit in view of the approaching war and they should proceed with their purchase and that the Russian military agent in Vienna would be entrusted with the conclusion of the "deal"⁸⁶.

Military agent Feldman, comparing the newly engraved 10-*verst* map to the map of Kanitz concluded that the later is more detailed, it implements mathematical calculations made by Russian topographers but is also enriched with lots of data collected personally by the Hungarian explorer. His overall conclusion was that "The ethnographic map can be extremely useful in organizing civilian rule

⁸⁴ RGVA, Fond 864, Op. 16, Ed. 7632, L. 1.

⁸⁵ RGVA, Fond 846, Op. 16, Ed. 7632, L. 16.

⁸⁶ RGVA, Fond 846, Op. 16, Ed. 7632, L. 17 – 19

in Bulgaria, and the oro-hydrographic map can greatly benefit the Danube Army"⁸⁷.

Finally, after some negotiation, on 5 January 1877, Feldman and Felix Kanitz signed a contract (preserved today), according to which the latter committed himself, against 20 000 roubles (2000 roubles in advance), to supply 1000 copies of his oro-hydrographic map to the Russian side, with the printing costs included in the specified amount⁸⁸. On April 10, 1877, only two days before the declaration of war, Feldman informed the minister of war that Kanitz had completed his part of the deal and handed over 1,000 copies of his map, with 900 of them immediately sent to the Danube Army headquarters by the military agent, and the rest together with the ethnographic map to the Headquarters in St. Petersburg. Attached to the report was the receipt for 20 000 roubles that Kanitz had received⁸⁹. In the Headquarters were satisfied with the materials they had purchased: "Given the speed with which the deal negotiated with Kanitz was carried out, our army was secured in time with the most reliable map of Bulgaria," says a letter from the minister of war to the Emperor from September 1877⁹⁰.

Conclusion

Activity and extent of Russian military-topographic intelligence on European Turkey from early 19th century to the outbreak of the Russo-Turkish war of 1877-1878 followed the dynamics of military-political relations between St. Petersburg and the Sublime Porte and the geography of conflicts between the two Powers. Surveying and mapping of European domains of the sultan by Russian military topographers started from the north-eastern corner of the Balkan Peninsula and developed west and south, in accordance with the military needs and available resources. Twice during the examined period, the tsarist army had to operate in territories, where it never set foot before. These consequently marked the periods of greater activity

⁸⁷ RGVIA, Fond 846, Op. 16, Ed. 7632, L. 31

⁸⁸ RGVIA, Fond 846, Op. 16, Ed. 7632, L. 33

⁸⁹ RGVIA, Fond 846, Op. 16, Ed. 7632, L. 41

⁹⁰ RGVIA, Fond 846, Op. 16, Ed. 7632, L. 47

of topographic intelligence in the form of field surveys and following completion of maps. By the time of the 1828-1829 war the Russian Corps of Military Topographers had enough human and scientific resource to conduct topographic surveys of parts of European Turkey. This also marked the beginning of precise surveying and mapping of Northern and Eastern Balkans on the basis of contemporary knowledge and methodology. Preparation for a hypothetical war with the Ottoman Empire in the 1860-s and 70-s once again moved the focus of Russia's military-topographic intelligence on the Balkans, as this time surveyed were also territories in the interior of European Turkey. Stimulated by current military needs, actions of exploring and mapping the region were nevertheless carried out continuously and persistently during in the decades between 1820-s and 1870-s and could be examined as a reflection of the alterations and in the same time consistency in Russia's eastern policy and military strategy. Results of the work done by Russian topographers, in the form of maps and written descriptions, nowadays can also serve as source for researchers interested in different aspects of natural, ethnic, social and economic history of the region.

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