

## FEATURES OF FORMATION AND FUNCTIONING FORTRESSES OF DNIESTER LINE OF DEFENSE

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*Received: May 19, 2017/Revised: June 04, 2017/Accepted: June 05, 2017*

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**Abstract.** The article analyses insufficiently explored period of fortress building on the Ukraine territory in the end of XVIII century and considers actually condition of the fortress. The authors draw a parallel between the economic development and status of the towns near the fortress and the processes of fortress area transformation.

**Key words:** François de Wollant, earth bastioned fortress, Dniester line of defense, Ovidiopol, Tiraspol, Odessa

### 1. Introduction

Today the fortresses of the Dniester line of defense are under investigation and stay in an unsatisfactory condition. They are not protected by current legislation. The project of the Dniester line was not realized completely, and the fortresses as the defense units were functioning during a short period of time. (Fig. 1). That is why the analysis of the features of their forming is very important for the determination of strategic and tactic fortification principles, realized on the territory of South Ukraine in the XVIII century [1].



**Fig. 1.** The situation with fortresses of the Dniester line in front of Turkish fortresses at the end of XVIII century

The fortresses of the Dniester line of defense and their military settlements were started to be built due to the expansion of the Russian Empire and the necessity to protect new southwestern borders. In 1791 there was concluded the Treaty of Jassy that put the end to Russian-Turkish war. In accordance with the terms and conditions that promoted the territory between Southern Buh and Dniester to be joined to Russia – so-called Ochakiv region or the Yedisan land (Yedisan Horde) which was protected by Crimean Khanate and then Turkey. There were involved the foreign well-qualified experts such as Richelieu, de Ribas, François de Wollant in the planning and administration over the new territories. The author of the new fortification projects was the experienced Dutch military engineer, architect, and urban planner general François de Wollant.

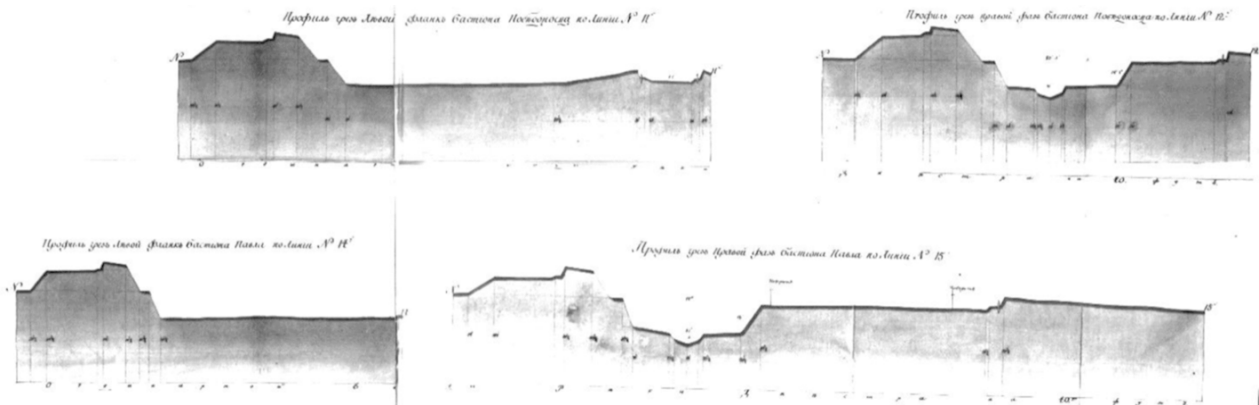
## **2. Basic Theory Part**

### **Planning features**

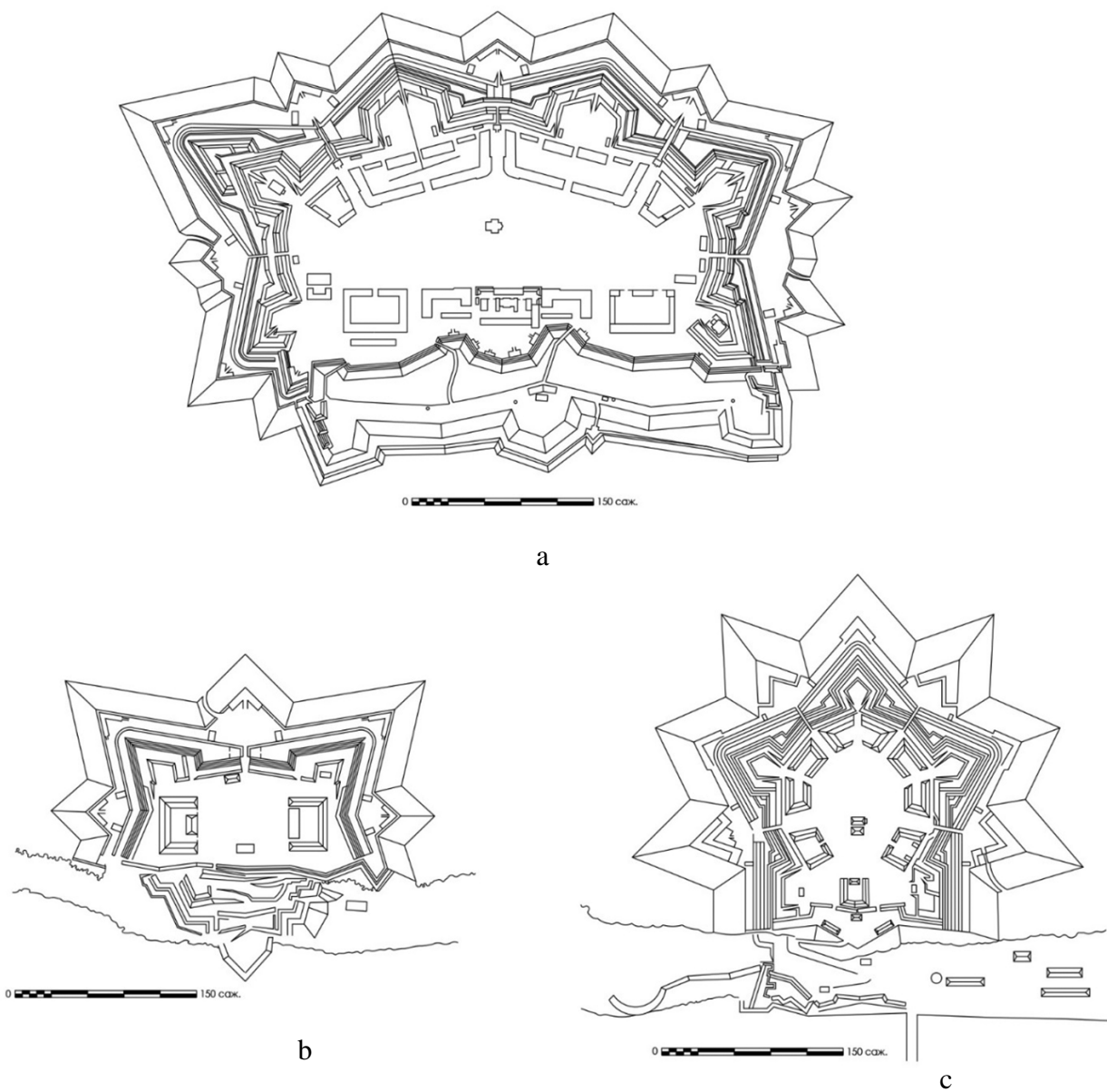
The Dniester line was characterized by a small amount of near-border fortresses and a short period of their active military functioning. In 1815, after joining Bessarabia the borders of Russian Empire moved to the West. It was followed by loss of fortresses strategic meaning. The European military paradigm at the end of XVIII beginning of XIX centuries, which was accepted by Russian Empire, determined the main role for earth bastioned fortresses. They were less appropriate for the development of artillery at that time. “Stone wear” was sometimes used for strengthening the earth profiles of the mounds, in the context of Ovidiopol fortress. As exemplified by Tiraspol fortress there were used a stone strengthening of escarp. There were fewer fortresses belonging to the Dniester defense line than those belonging to Dnieper line. However, there was observed the increase of their fire power. It was manifested by the growth of the fortresses area, which allowed placing more numerous garrisons in the territory with the complicated profiling of mounds and sketches of the defensive complex. The earlier fortresses in Southern and Eastern Ukraine, constructed at the time of the Russian Empire had a radial symmetry, whereas the fortresses of Dniester defense line were projected on the bases of the central-axis symmetry principle. Fortresses looked like polygons, and the polylines of curtain walls created several bastioned fortresses. The fortress profiles consisted of glacis which was situated before the fosse, mounds of the ramparts with the escarps, counterscarps, parapets, ramps and gates. There were ravelins between the bastions situated on the lower level, under the bastions and strengthened a fire power of the fortress. It was made in order to give the guards on bastions the opportunity to bring down fire over the ravelins occupied by the enemy. On the corners of the ravelins there were equipped the bridgeheads for the collection military forces for counter sallies.

Ovidiopol fortress had one gate situated on the central axis of the fortress which connected fortress with the town. Tiraspol fortress had two gates – Bratslav Gate in the West and Kherson gate in the East (it provided the connection with the city). The connection of Odesa fortress was achieved via the gate located in southern-west part of the complex. All of three fortresses had one wide retrenchment side which was in front of the pond. Ovidiopol fortress is bordered by the Dniester firth, Odessa fortress – to the Black Sea and Tiraspol fortress was situated not far from the Dniester towards which the Southern retrenchment was directed. These retrenchments were strengthened along both sides by bastions and demi-bastions. They had the wide bridgehead and two-storied terracing. These retrenchments were also placed to the enemy fortresses (or sea) therefore they were carefully improved being the most vulnerable parts of the fortress as well as the look-out points. The improvement of these sides determined to refuse from typical star-shaped fortress used before and led to the projecting the new fortification configurations.

There were the military buildings situated inside the fortress. They fulfilled the function of the citadel. Military barracks were placed in a way to create the half-closed trapezoidal (Odesa, Tiraspol) and rectangular (Ovidiopol) quarters. The buildings in Odesa fortress were set in the off-standard way. Here the quarters form a central fortified circle-like nuclear which is inscribed in a star-like pentagonal contour of the fortifications. In Tiraspol the pairs of commissariat quarters, military barracks for soldiers and two-storied subaltern officer wings at the corners were situated in symmetric way (Fig. 2, 3, 4, 5).



**Fig. 2.** The bastion profiles of Tiraspol fortress (drawing, XVIII century. Collection of Tiraspol United Museum)



**Fig. 3.** Tiraspol (a), Ovidiopol (b) and Odessa (c) fortresses in one scale. Drawings by Litvinchuk I.

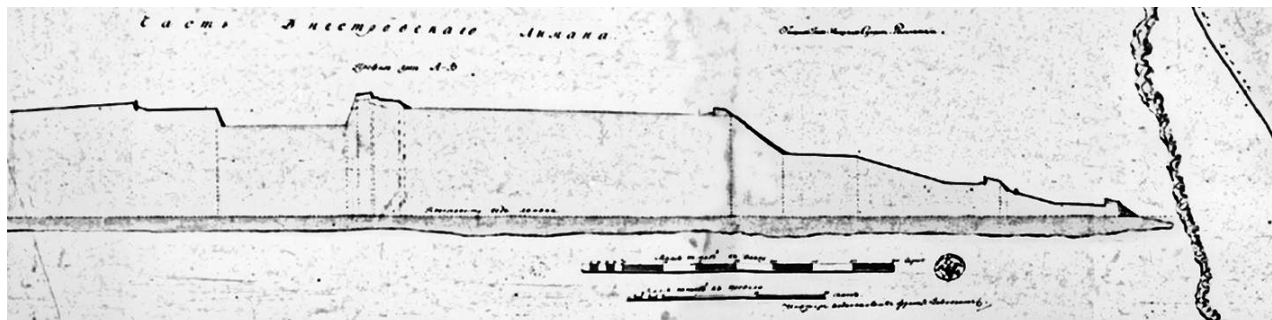


Fig. 4. Transverse profile of Ovidiopol fortress (drawing, XVIII century. From Julia Frolova collection)



Fig. 5. Profiles of Odessa fortress (drawing, XVIII century. From Julia Frolova collection)

#### Existence of fortresses after their cancellation

The territories of the Dniester line fortresses occupied the large areas, that is why, after the loss of the military value the question of their appliance had arisen. First of all this problem was solved with Odesa fortress as it was the smallest and the weakest one. The fortress was canceled in 1811 and its territory was given to the port quarantine. In the second half of XIX century the revetments were leveled and on their territory there was organized a city park. The only bastion of St. Andrew was saved. In 1891 the column in honor of the emperor Alexander II was erected. This bastion together with the monument survived to this very day (Fig. 6). In the Soviet days the Dynamo stadium was built in the site of the fortress [2, p. 28] [3].



Fig. 6. Actual view of St Andriy bastion with Alexander II monument, Odessa [6]

After the cancellation in 1835, Tiraspol fortress continued fulfilling its military function as long as there was a place of a military post. Then Tiraspol was recognized as one of the most convenient places for a military

unit housing. At the end of XIX century, the 15 artillery brigades, the 8<sup>th</sup> Astrakhan Dragoon and 56<sup>th</sup> Zhytomyr infantry regiment were located in Tiraspol. In the Soviet period, the fortress was used by NKVD-MDB- KGB and only at the end of 19 60-s its territory was decided to be relinquished for the development of the residential district. As the result, a significant part of the fortress was destroyed. However, in the construction site of the new micro-district a lot of the relics of fortress planning could still be found. For example, Nakhimov street superimposes on the contour of fossein the west, and Rayevskiy lane bypasses St. Peter's bastion. In 1980-s St.Volodymyr's and St.Peter's bastions, south curtain walls and retrenchment which was then build-up by summer cottages remained undestroyed. At that point in time, there was raised the question regarding entering the fortress to the state register of cultural heritage. The museum of the Tiraspol history is housed in the premises of the powder magazine (Fig. 7). [4, p. 149–158].

In Ovidiopol there was no need to keep a big military garrison as in Tiraspol because Ovidiopol was not a strategically important town and so, there were several projects on how to organize the territory of the fortress. One of the ideas lied in giving the fortress to Roman Catholic consistory. However, none of the projects was realized. The area of this fortress is not used even today. Its fortifications were saved, however, all the buildings inside the complex were demolished (Fig. 8). [5, p. 110] So, we can state that the economic development of the city affected the functional adaptation of fortresses belonging to the Dniester defensive line.



**Fig. 7.** Actual condition of St. Volodymyr bastion and powder magazine inside, Tiraspol. Author's photo



**Fig. 8.** Actual look of Ovidiopol fortress ruins. View from Google Earth [7]

### 3. Conclusion

As a result of our analysis of historical drawings we can claim that the fortresses of the Dniester defense line were projected and built according to valid military technologies at the end of XVIII century, and pursuant to the expansion of politics of Russian Empire. The general stages of fortress forming and function permit to see that the state of preservation of complexes depends on their geographical situation in the defense system of the Dniester Line, the space features of the territory and economic development of the town as well.

We think that further research of this subject should be connected with the comparison between the Dniester defense line and Ukrainian and the Dnieper defense line of XVIII century. Besides, the comparison should include the defense lines in Austrian and Ottoman Empires which had been built at that time.

We can propose to create the public recreation spaces in the territory of the fortresses and include it in the tourist business for having investment. It will give the opportunity to care for the territories of fortresses. Technically, the methods of protection of this cultural heritage should include: the consolidation of the earth shafts, restoration of profile configuration, archeological baring and museumification of remained buildings of the fortresses, tracing the outlines of unsaved buildings.

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## ОСОБЛИВОСТІ ФОРМУВАННЯ ФОРТЕЦЬ ДНІСТЕРСЬКОЇ ЛІНІЇ

*Анотація.* В статті аналізовано недостатньо вивчений період розбудови фортифікації на території України в кінці XVIII століття та оглядає їхній сучасний стан. Автори проводять паралелі між економічним розвитком і статусом міст при фортецях та трансформацією фортечного простору.

*Ключові слова:* фортеця, Франц де Волан, земляна бастионна фортеця, Дністерська лінія оборони, Овідіополь, Тирасполь, Одеса.