

## The fortified fence around Rosetta, field study in the maps of the French Campaign 1798-1801

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### Abstract

This research includes the study of the Mamluk fortifications around Rosetta, which is the wall established by Sultan al-Ghuri. It extended from the northern corner of the city and then surrounded it from the north and the west to the Nile coast to the south. The Nile River was a natural boundary of the city in the east.

The fence begins north of the Nile River east of the white Qushlaq area where there was a fort at the site where it was erected at the beginning of the fence through the northern gate (Abul Reash Gate), the only remaining part of the fortifications that surrounded the city, The western wall of the wall, while the western fence was extending south from al-Manzali Fort to al-Nishan fort, and deviating to the south-east to al-Nini fort, where the south-west gate is the Alexandria Gate, which was located between the Nishan fort and al-Nini fort. Then it ends by al-Abbasy fort on the Nile, at the Abbasid Mosque in the south, on the northern border of the hills of Abu Mandur on the Nile coast.

The study described the walls of Rosetta and reached its architectural features through the study of the astronomical map of Rosetta, which was prepared by the French campaign. The researcher was able to draw up a plan for these forts and lay down their limited architectural details and the most important elements on the map.

**Keywords:** Rosetta, fortified fence, Sultan al-Ghuri, the white Qushlaq, Abul Reash gate, al-Manzali fort, al-Nishan fort, Alexandria Gate, al-Nenni fort, al-Abbasi fort.

### 1. Rosetta fortifications before the Mamluk period

The location of the city on the Mediterranean Sea and at the entrance of the River Nile (Fig. 1-2) has had a significant impact on the increased interest in its immunization, In the 19th century, King Merneptah built fortifications in Rosetta (1234-1224 BC)<sup>1</sup> to defend the country against the attacks of the pirates of the sea, which illustrates the danger to the western borders and Egyptian coasts<sup>2</sup>.

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<sup>1</sup>Darwish, Mahmoud Ahmed (December 2016). Preservation of the architectural heritage, (Sultan Qayet-Bey Castle in Rosetta - Egypt, as example), *International Journal of Innovation and Applied Studies (IJIAS)*, Volume 18, Issue 4, pp. 1239-1259. Darwish, Mahmoud Ahmed (2017). Encyclopedia of Rosetta (2017), Part 1: History and Military Assassinations, the Arab Nation Foundation for Cultural Investments of Libraries, Printing and Publishing, p. 226.

<sup>2</sup>Kadri, Ahmed (1985). Military Establishment in the Imperial Era, 1570-1087 BC, translated by Mokhtar Al-Suweifi and Mohammed Al-Azab Musa, Egyptian Antiquities Authority, Cairo, p. 225. Wilson, P. & Gregory, G. (2007). Saïs and its trading relations with the Eastern Mediterranean, in: Kousoulis, P. and Magliveras, K. (eds.), Moving across borders, foreign relations, religion and cultural interactions in the ancient Mediterranean, *Orientalia Lovaniensia Analecta* 159, fig. 2. Masoud, Abdel-Hamid: Symposium and Ithyphallic Figures from Saïs, Egypt, *GÖTTINGER MISZELLEN, Beiträge zur ägyptologischen Diskussion*, Heft 242, Göttingen 2014. p.48.



fig. 2. Location of Rosetta

When Alexander conquered Egypt (331 BC), Rhakotis was a strategic location rather than a small fishing village. Along its main coast there was an island called Pharos, and it was a fortified village that protected the northern corner. West of the Delta and had a fort corresponding to the fortress of Pharos<sup>9</sup>.

In the Pharaonic era, Rosetta was a fortified city that protected the Nile branch and was the center of the wheel-drive industry<sup>10</sup>.

Rosetta was a separate area from the rest of the Delta cities, since it was surrounded by lakes and waterways, and this role continued until the Arab conquest<sup>11</sup>.

After the opening of Amr ibn al-'Aas city of Alexandria, and the demolition of the walls of the shield<sup>12</sup>, was Rosetta of the cities held by the owner and called Qazman reconciliation with Amr ibn al-'Aas, and then entered the Islamic Army to Rosetta<sup>13</sup>.

All these reasons motivated the Arabs to understand the importance of the fortresses and towers, and then they studied the art of siege and the manufacture of heavy machinery, and so they began to learn new methods in the art of setting up forts and building fortresses<sup>14</sup>, and Rosetta was one of the important maritime centers<sup>15</sup>.

When the Byzantine threat increased in the Abbasid era, the caliphs came to restore the strongholds and fortresses<sup>16</sup>. Then the Abbasid Caliph Al-Mutawakil<sup>17</sup> (233-247 AH / 847-861) and Al-Anbassah ibn Ishaq ordered the construction of a series of Ribats<sup>18</sup> in 239 AH (853 AD)<sup>19</sup> in order to confront the Byzantine threat to the Egyptian exiles<sup>20</sup>.

<sup>9</sup> Darwish, Mahmoud Ahmed (2017). Encyclopedia of Rachid (2017), Part I: History and Military Assassinations, p. 2227.

Darwish, Mahmoud Ahmed (December 2016). Preservation of the architectural heritage, pp. 1239-1259.

<sup>10</sup> Champollion. *L'Égypte sous les Pharaons*, II, p.24. Budge, Wallis E. A. (1989). *The Rosetta stone*, Dover Publications (first published 1913). Bevan. *Egypt under the Ptolemaic dynasty*, pp.265ss. See: Julius (1978). A Brief Study of the City of Rasheed - Description of Egypt, 3, Zuhair Al-Shayeb, Cairo, p. 77. But, Idris (1972). Egypt from Alexander the Great until the Arab conquest, translation by Abdel Latif Ali, Cairo, p. 203. Tawfiq and Nasser, Sayed and Sayed Ahmed (1977). Landmarks of the History and Civilization of Egypt, Cairo, pp. 120- 119-120. Forster (1922). *Alexandria, a history and a guide*, Alex., p.189.

<sup>11</sup> Al-Kendi (1908). The Governors and the Judiciary, Reven Kast, Beirut, p. 96.

<sup>12</sup> Al-Shayal, Muhammad Jamal al-Din (1949). Alexandria, Topography of the City and its Evolution from Ancient Times to the Present, Historical Journal, 2, p. 240.

<sup>13</sup> Ibn Abd al-Hakam (1914-1920). Fattouh Egypt and its works, Cairo - Leiden, p. 85. Al-Nuwairi of Alexandria (1968-1976). Familiarity with the flags in the course of the judgments and the matters that were discussed at Alexandria. Dissemination and investigation of Dr. Aziz Suriel Attia, Hyderabad, p. 67. Amelineau. E. (1915). *La Conquête de l'Égypte par les Arabes*, Rev. Hist., pp.119-120. Al-Kendi, Governors and Judges, pp. 1212-190-191. Butler (1946). Open the Arabs to Egypt, translated by Mohammed Farid Abu Hadid, 1, 1, Cairo, p. 257.

<sup>14</sup> Zaki, Abdul Rahman (1958). Medieval Military Architecture between the Arabs and the Crusaders, the Historical Journal, 7, p. 116. Osman, Mohamed Abdel Sattar (1988). Islamic City, Knowledge World 28, Kuwait, pp. 147-148.

<sup>15</sup> Fahmi, Ali (1974). Islamic Civilization in the Eastern Mediterranean (7/10 m), History of the Egyptian Navy - Alexandria University, p. 344.

<sup>16</sup> Ramadan, Ahmed. History of the art of maritime fighting in the Mediterranean, Egyptian Antiquities Authority - Cairo, pp. 7-20-21.

<sup>17</sup> Maher, Suad (1966). Governorates of the United Arab Republic and its Remaining Effects, Cairo, p. 136.

<sup>18</sup> Al-Maqrizi (1854). Preaching and consideration of plans and effects, 1, Cairo, pp. 73-74.

<sup>19</sup> Nippuhr, Carsten. A Trip to and around the Arab Countries, 1, Journey to Egypt, translation and commentary by Mustafa Maher, pp. 18-18-185-186. Creswell (1952-1959). *Early Muslim Architecture*, 1-II, oxford, p.127.



The reason that led Al-Mutawakil to establish the Ribat of Rosetta and many of the ligaments on the Mediterranean coast was the invasion of the Byzantines to Damietta, ordered Al-Mutawakil to build bridges on the estuary of the Nile from Tennis to Alexandria<sup>21</sup>.

Ahmad Ibn Tulun<sup>22</sup> also took care of these gaps. The Islamic city was established near of the Rosetta Ribat during the reign of Ahmed Ibn Tulun in 256 AH (870 AD). The plan of Ahmad ibn Tulun was clear: defending the gaps and holding a truce with the Byzantine Emperor. So that the truce is not a trick followed by a surprise attack<sup>23</sup>.

As a result, the city of Rosetta was established as a war zone. Rabat was the nucleus of this emerging city in conditions of conflict. The war began to appear clearly in its planning, which was subject to different conditions. The first was the site of the city on the Nile, which is the first source of water. The emergence of the city reflected the importance of immunization to protect its existence and develop its urbanization<sup>24</sup>.

Rosetta was a military camp that met the requirements of light armies and a center for launching other conquests. The Muslims were keen to choose the location of the city to be in direct contact with the command center and away from the sea so as not to be in the range of enemy fleets, especially that Muslims did not have the naval force that enabling them to defend coastal cities<sup>25</sup>. This is in contrast to the city of Alexandria, which is located directly on the Mediterranean Sea and it was the reason for the exposure of many raids and invasions and occupation more than once, especially from the Fatimid era to the era of Muhammad Ali.

The Abbasids were only able to establish a bond of Rosetta, and it was not proven that they built walls around the city. They seem to have confined themselves to the natural borders of the city, which is far from the sea, separated by sand dunes that are difficult to walk and easy to control, the Conquerors.

In the Fatimid era, some threats began to threaten the Egyptian stooges after the state weakened in the days of the succession of al-Fayiz bi-Nasr Allah Issa and Minister *al-Šāliḥ Ṭalā'ī* ibn Ruzzik. In 555 AH (1190 AD), the Byzantines launched an attack on Rosetta with a fleet of sixty ships sent by Rogers II of Sicily. The pirates have wreaked havoc in Rosetta, Tunis and Alexandria<sup>26</sup>.

The city of Rosetta has been the focus of the Byzantines for more than five centuries, where the Crusader threat began after that, which continued throughout the Ayyubid and Mamluk ages. Salah al-Din saw fortified cities, fortified fortifications and high walls of the building. And fortifications in the protection of cities.

Therefore, he fortified the Egyptian ports and ports as well from 572 AH (1577 CE)<sup>27</sup> and ordered the establishment of forts throughout the country to prevent the Crusader danger

<sup>20</sup>Al-Bakri (1911). The westbound in the mention of African countries and Morocco, Paris, p. 6. Al-Taijani (1985). Journey of Taijani, Tunisia, p. 6. Ibn Zuhaira (1969). The great virtues in the beauties of Egypt and Cairo, the achievement of Mustafa El Sakka and Kamel El Mohandes, Cairo, p. 102. See: Clott Bey (1930). An Overview to Egypt, 1, Tarab Mohamed Masoud, Cairo, p. 422.

<sup>21</sup>Al-Maqrizi. Plans, 1, p. 214.

<sup>22</sup>Forster. *Alexandria*, pp.185-186.

<sup>23</sup>Mahmoud, Hassan Ahmed (1960). *Islamic Civilization of Egypt*, Cairo, pp. 89-90.

<sup>24</sup>Othman, Mohammed Abdul Sattar. *Islamic City*, p. 135.

<sup>25</sup>Othman, Mohammed Abdul Sattar. *Islamic City*, pp. 139-140.

<sup>26</sup>Al-Maqrizi, Plans, p. 214. Heyd, W. (1936). *Histoire du commerce du levant au moyen ages*, p.384.

<sup>27</sup>Ibn Wasel (1953). Mufarrij Al-Kroub in the news of Bani Ayoub, the investigation of Jamal al-Din al-Shayyal, Cairo, 2, p. 56. Abu Shama (1870). *Al-Rawdatain Book in the News of the Two States*, Cairo, 1, pp. 262-268. Al Maqrizi. *Behavior*, 1, p. 359.



from spreading in the Red Sea<sup>28</sup>.

In the year 600 AH (1203), a campaign was launched against Rosetta and Fowa, where they spent five days looting the city. This was the result of a military campaign by the Rosetta branch, although the war was concentrated on the northeastern front of the Delta<sup>29</sup>.

## 2. Fortifications of Rosetta in the Mamluk era

The Mamluk sultans were interested in the establishment of military installations and the means of controlling the enemy. One of the most important of these was the lighthouse, which was renovated by Al-Zaher Baybars in Rosetta to monitor the Frankish ships<sup>30</sup>.

Prince Salah al-Din ibn 'Aram (667-782 AH / 1365-1380AD) established a tower in Rosetta<sup>31</sup>, supervised by Fayrouz al-Rumi al-'Arami (Amir of the Rosetta Center). He also established the Great Mosque and the seat of the prince of the center in 775 AH (1373)<sup>32</sup>. Sultan Qaitbay built a fort<sup>33</sup> (Fig. 2). The sources mentioned that he visited the city of Rosetta in 884 AH (1429 AD) to uncover this fort, as well as the tower he established in Alexandria<sup>34</sup>.

According to sources, Eng. Muqbel al-Hassani supervised the construction of Rosetta fort. After the construction of Qaitbay fort in Rosetta, the Sultan ordered the construction of a series of iron (250) quintals prepared under the supervision of Prince Yashbek Al-dwadar. This series reached between the Tower of Megizal to the east and Qaitbay fort in the west<sup>35</sup>. Sultan al-Ghuri visited the city of Rosetta on the thirteenth of Dhu al-Qa'da 921 AH (1515 AD), where he ordered the construction of a wall on the seashore and towers to save the gaps (Fig. 4). The reason for this visit was poor relations between the Ottomans and the Mamluks. And that he was the conqueror of Alexandria or Damietta, and al-Gouri sent the builders and the stones,

When he returned from his trip, a large architectural scribe Khair Bey Al-Alai and appointed him the commander of the thousand to oversee the construction of these walls, and then left to carry out his mission and took completion until he returned to Cairo in 922 AH (1516)<sup>36</sup>.

In the Mamluk era, the city of Rosetta was built in the Mamluk period by the construction of a lantern, two towers and the walls around the city supported by the forts. The light is attributed to the era of al-Zaher Baybars 758 AH (1261 AD). The first fort dates back to Salaheddine ibn 'Aram (767-782 / 1365-1380) It was built by Sultan Qaitbay (872 AH) in 1472 AD under the supervision of Eng. Muqbel Al-Hasani. He established a series linking

<sup>28</sup>Al-Maqrizi (1956). Behavior for the knowledge of the kings, s 2/1, the investigation of Mohamed Mustafa Ziada, Cairo, pp. 72-73.

<sup>29</sup>Ibn al-Atheer (1851-1876). The Complete History, Leiden, 12, p. 198. Al-Dawadari (1971). The treasure of the role and collector of al-Ghurar, Cairo, 7, p. 155. Al Maqrizi. Behavior, 1, p. 163.

<sup>30</sup>Ibn Duqmaq (1893). Victory for the medium of the decade, Cairo, 5, p. 114. Al-Maqrizi. Behavior, 2, pp. 74-129.

<sup>31</sup>Al-Sakhawi. Bright Light, 6, p. 176.

<sup>32</sup>See: Darwish, Mahmoud Ahmed (1989). The City of Rasheed and its Wooden Antiques in the Ottoman Period, Manuscript of Master Thesis, Faculty of Archeology, Cairo University, p. 144.

<sup>33</sup>Darwish, Mahmoud Ahmed (2017). Encyclopedia of Rosetta (2017), I: History and Military Assassinations, p. 231.

Darwish, Mahmoud Ahmed (December 2016). Preservation of the architectural heritage, pp. 1239-1259.

<sup>34</sup>Ibn Iyas (1894). Bada'ie al-Zuhour in the Chronicles of the Ages, 2/2, 4-5, Cairo, 3, pp. 311-150-151.

<sup>35</sup>Al-Sakhaoui (1887). Illuminated Light in the Ninth Century, Cairo, 6, p. 209.

<sup>36</sup>Al-Maqrizi. Plans, 1, p. 74. Ibn Eyas. Bada'ie al-Zuhour, 5, p. 114. Al-Zaheri (1894). Butter of the Mamluks and the Identification of Roads and Routes, published by Paul Roiss, Paris, p. 108. Ibn al-Jai'an (1898). The Sunni masterpiece with the names of the Egyptian countries, published by Mortz, Cairo, p. 138.



this fortress with the tower of Mughizal under the supervision of Prince Yashbak Al-Dawadar.

The Sultan al-Ghuri built the walls around the city in 916 AH (1516) under the supervision of Khair Baq Al-Ala'i, the chief architect. The sources mentioned these fortifications without specifying their confirmed locations. Therefore, there was a great confusion in the selection, so that no one could reach the place of the lighthouse or the fort of Salaheddine ibn 'Arram especially before.

The city's cemeteries were in the north and south of the Mamluk period until the period of the construction of the walls, and it continued until the modern era. When the walls were built in al-Ghuri era, they were irregular in their paths. It was also

### 3. Fortifications of Rosetta in the Ottoman and Muhammad Ali era

The Ottomans did not care about the establishment of the fortifications in Rosetta. Documentation throughout the ages only mentioned Qaitbay fort<sup>37</sup>, which was named after the siege of Rosetta<sup>38</sup>, the thaghr (port) siege<sup>39</sup>, the fortress of thaghr (port)<sup>40</sup>, and the old siege<sup>41</sup>.

According to the sources, Sultan Selim issued an order in 1517 to transfer the mountains of rubble that threatened Cairo and the rest of Egypt to be buried under it. He ordered the transfer of these wastes by land and river to the estuaries of the Nile<sup>42</sup>.

The walls were built around mosques and shrines. The Abul Reash mausoleum was built next to the north gate<sup>43</sup>, and the mosque of Al-Manzali, the mosque of al-Nenni, and the Abassi mosque were erected next to the walls of the walls. The buildings also bypassed these walls, which became monumental elements<sup>44</sup>, and many parts of Qaitbay fortress were destroyed, and abandoned the fortress of Salah al-Din ibn 'Arram until it was destroyed<sup>45</sup>.

In the year (1672-1673 AD) when the traveler Vansleb visited the fortress, he said that 74 of them were guns, of which seven were unusually large, and consisted of 184 men of the Ansaris, led by the Aga, who slept at night in the fort and won their day in Rosetta<sup>46</sup>. The soldiers used to go down at night and carry out tasks calculated and encroach on the people and the theft of their money, and spread panic among them<sup>47</sup>.

It is clear from the statements of historians what reached the conditions of infidels of Rosetta in the Ottoman era of neglect, and spread buildings around the walls and the fort,

<sup>37</sup>Court of Rasheed. Document on the 18th of Rabee II 978 AH (1570 AD), Record 5, Article 118, p. 29.

<sup>38</sup>Court of Rasheed. Document in 2 Safar 990 AH (1582 AD), Record 12, Article 160, p. 45.

<sup>39</sup>Court of Rasheed. Document on 15 Jumada II 1047 AH (1637), record 54.

<sup>40</sup>Document of the cessation of Haj Hussein bin Attia Shuni Razzaz 10 Rajab 1187 AH (1773), line 262.

<sup>41</sup>Court of Rasheed. Ahmed Ahmed Agha al-Dazdar's Waqf document dated August 11, 1861 (1851).

<sup>42</sup>Gratian Lobier (1978), A Study on the City of Alexandria, Description of Egypt, 3, Zuhair Al-Shayeb, Cairo, p. 318.

<sup>43</sup>Darwish, Mahmoud Ahmed (2017). Encyclopedia of Rachid (2017), Part 1: History and Military Assassinations, p.559, Darwish, Mahmoud Ahmad (2017). Encyclopedia of Rachid (2017), Part II: Urban Heritage, the Arab Nation Foundation for Publishing and Distribution, pp. 413-414.

<sup>44</sup>Darwish, Mahmoud Ahmed (November 2018). Social pluralism and civil peace in Rosetta – Egypt, (16<sup>th</sup>-18<sup>th</sup> century), *International Journal of Academic Multidisciplinary Research (IJAMR)*, Vol. 2 Issue 11, pp.79-87.

<sup>45</sup>Darwish, Mahmoud Ahmed (January 2019). The Manifestations of the Planning and Urbanization of Rosetta – Egypt, (16<sup>th</sup>:18<sup>th</sup> Century), *International Journal of Academic Multidisciplinary Research (IJAMR)*, Vol. 3 Issue 1, pp. 31-42.

<sup>46</sup>Vansleb. *Nouvelle Relation dun Voyage fait en Egypt en 1612 et 1613*, p115.

<sup>47</sup>Sayed, Sayed Mohammed (1997). Egypt in the Ottoman Era in the 16th Century, A Documentary Study in Administrative, Judicial, Financial and Military Systems, Madbouli Library, Cairo, p. 206.



which confirms the lack of military importance. It was not changed until the beginning of the era of Mohammed Ali, and did not mention the sources of the war monuments Rosetta only the towers that were built on the road between Rosetta and Alexandria<sup>48</sup>.

In the era of Muhammad Ali, he began to pay attention to the fortification of the forts and walls that existed before the failure of the English campaign on Alexandria and Rosetta<sup>49</sup>, Mohammed took great care of the walls of Rosetta and the tyrants, and ordered the strengthening of its defensive force<sup>50</sup>, especially the two tabs on the Nile, The Eastern and Fort replaced the al-Sharkha (light artillery company placed in front of the army to attack the enemy) in the northeast. He put six cannons in the Abbasid fort, three cannons in Al-Manzali Fort, one cannon in the Fort shop of the company (the company).

The bolt-mounted pistols were made, this type of cannon hit many types of ballistics, such as cartridges filled with lead rollers, or explosive or incendiary danna. These guns were characterized by firing, maneuverability and assembly, at the end of the 18th century, the defense industry was organized, and the bases and assets were built for it. The caliber of the cannon, for example, was determined by the diameter of the pipe. It was determined by the weight of the projectile. The base was the ratio of the Extruded diameter and the diameter of the pipe is 7:29<sup>51</sup>.

In the era of Muhammad Ali and Ishmael, two types of guns were used: one was made in Egypt, and the other was Armstrong, which was imported by Ismail from England. The difference between the two types is clear. The English guns are swollen and the rear of the house is the oval. Large size to accommodate large quantities of gunpowder sufficient to increase the momentum of missiles, and found a large number of Egyptian and English guns forts of the coast and different caliber, each cannon consists of these guns in two parts: the first pipe and the second is the base on four wheels going On the iron bars, and the cannon was equipped with means of lifting and lowering the pipe and control the direction, as well as the crane of the missiles that carry the lift of iron and stone missiles to put the pipe, and the operation of the gun is put the gunpowder inside the house of fire through the opening at the top, and put the shell from the front.

In 20 Rabee' I 1247 AH (1831 AD), Muhammad Ali ordered the governor of Rosetta to build a Quarantine in Rosetta port with the knowledge of Ahmed Effendi, the architect of the buildings of Alexandria, and the construction outside the city (outside the city, According to the drawing presented by Engineer Stirzen<sup>52</sup>.

#### 4. The walls and gates of the city of Rosetta

The researcher found an astronomical map of the city of Rosetta dating back to the 19th century. It is based on maps of the French campaign. The map contains the walls that were built around the city in the Mamluk period. It was renovated in the era of Muhammad Ali<sup>53</sup> (Fig. 3).

<sup>48</sup>Sonnini C. S. (1800). *Travels in upper and lower Egypt*, London, pp.135-136.

<sup>49</sup>Darwish, Mahmoud Ahmed (January 2019). The failed colonial campaign of the British army on Rosetta of Egypt in 1907 according to the English documents, pp. 103-133. Darwish, Mahmoud Ahmed (November 2016). The Role of Rosetta fortifications against the English Expedition on Egypt, pp. 192:219.

<sup>50</sup>Al-Rafi'i, Abdul Rahman (1951). History of the National Movement and the Development of the Regime in Egypt, 2, Mohamed Ali, Cairo, p. 412.

<sup>51</sup>Maher, So'ad. Maritime in Islamic Egypt, p. 238.

<sup>52</sup>Sami, Amin. Nile Calendar, 1, pp. 283-390.

<sup>53</sup>Al-Jabrati (1825). The wonders of antiquities in the translations and news - History of algebra, the Arab statement committee, 4, pp. 47-61. Al-Rafi'i. History of the National Movement, 1, Cairo, p. 34.

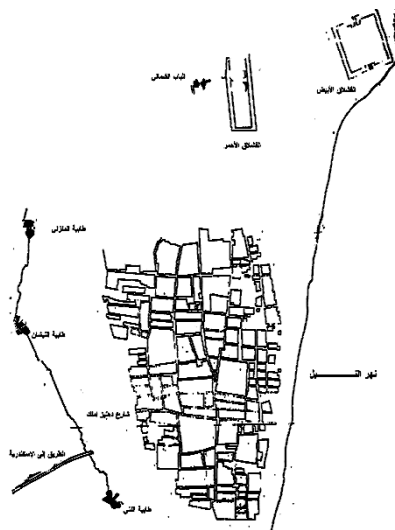


fig. 3. The walls of the city of Rosetta in the Mamluk period

The walls extended from the Nile to the east at the white Qushlaq area and then extended westward to Al-Manzali Fort in the northwestern corner of the wall. The northern wall (Abul Reash gate) is the only remaining part of the fortifications that surrounded the city.

The northern fence was a length of one thousand three hundred and fifty meters, from the Nile coast to the Fort home. It is certain that there was a Fort at the site where the white Qushlaq was built at the beginning of the wall, like the Abbasid Fort on the eastern end of the Southwest Wall and on the Nile.

The western wall extends south from Al-Manzali Fort to Al-Nishan fort, and runs south-east until the Abbasid dynasty ends on the Nile River. It is located in the middle between the Abbasid and Al-Nishan (Tobjia).

The distance between Al-Manzali fort to Al-Nishan fort is two hundred and fifty meters, and the distance between al-Nenni Fort and al-Abbasi Fort is six hundred and fifty meters. Thus, the length of the walls of Rosetta from Fort, which was replaced by the white Qushlaq to al-Abbasi Fort through my home and al-Nishan fort and al-Nenni fort is two thousand and seven hundred meters, and these walls were equipped with the northern doors, the door of the father of the feathers and the south-west door is the door of Alexandria, The Nile River was a natural boundary of the city and the length of the beach between al-Abbasi fort and the North Eastern fort is about one thousand and nine hundred meters.

The northern rib of the southwestern and western sides is one thousand three hundred and fifty meters each, the city was its walls, representing a triangular base on the shore of the Nile River with a length of one thousand and nine hundred meters and a length of one thousand and three hundred and fifty meters. Also, the north wall had a door at a distance of six hundred and five And seventy meters from Al-Manzali Fort, and on the middle of the western wall and the south west another door at a distance of six hundred and seventy-five meters of Al-Manzali fort also, which confirms the coordination in the planning of the two gates and gates, and increased interest in the Western Wall and the Southwest because it is the source of land hazards, while less Qaytbay fort in the north and Abu Mandur fort in the south plays the defensive role of the sea, whether from the Mediterranean or the Nile River.

The width of the city wall (3.50 m) was certainly topped by a corridor determined by two





walls to facilitate the firing from above. The outer wall of the wall was equipped with arrow slits and machicolations, and until 1884 there were only remnants of the northern fence, and the area connected with the northern door length of sixty meters. The construction of the red Qushlaq, which was built east of the northern gate, led to the demolition of the wall, as was the case in the construction of white Qushlaq in the north-eastern fort.

The western part of the fence between Al-Manzali fort and al-Nishan fort was not straight, as in the whole wall, because it was winding. This was due to the sand dunes surrounding the city, which ruled the construction of this wall. Another possibility is that the building process The angles facilitate the protection of the city in contrast to the straight walls to increase the number of arrow slits and machicolations, and each side opposite protects the rib based, and more suited to the conditions of the city and easier to defend, which is why the construction of semi-circular towers on the walls of cities and fortresses so that shooters see the attackers if What If there are no towers or opposite sides, the enemy can not be exposed in the event of attacking these walls. We notice that the fence extends for a certain distance, and then returns again to its right. This process is repeated at irregular intervals.

The gateway to Alexandria is located in the southwestern part and at a distance of one hundred and twenty meters from al-Nenni fort, it led to the square where the Al-'Orabi Mosque, the fence between Al-Manzali fort and al-Nishan fort remains, as well as the wall between al-Nishan fort and al-Nenni fort until (1884), and the fence between al-Nenni fort and al-Abbasi fort was demolished by the guns of the English campaign in 1807, as was the case in the city<sup>54</sup>.

Thus, the walls of the city were two thousand and seven hundred meters long and had only two gates in the north and southwest, and the second door led to the road leading to Alexandria. So it was called the door of Alexandria, as in the case of Bab Rosetta in the walls of Alexandria in the eastern side, and this section opens to the field leading to the greater street, the most important streets of the city.

Of course, the five canopies were not large enough, but were the places for soldiers to guard the walls, each of which was a stateless building with a battery that looked out on the outside, the climb to the fort's roles is done by a ladder.

The researcher has been able to develop a plan for these topics through the astronomical map and develop its limited architectural details, and the most important elements on the map with its outer limits only.

#### **1. 4. The North Eastern fort**

Which was located on the eastern end of the northern wall, was replaced by white Qushlaq, which was special for the establishment of soldiers and is located outside the field of training on the road leading to the Boughaz and Qaitbay fort, and was named in the era of Muhammad Ali in the name of Fort, In front of the army to attack the enemy).

#### **2. 4. Abul Reash Gate**

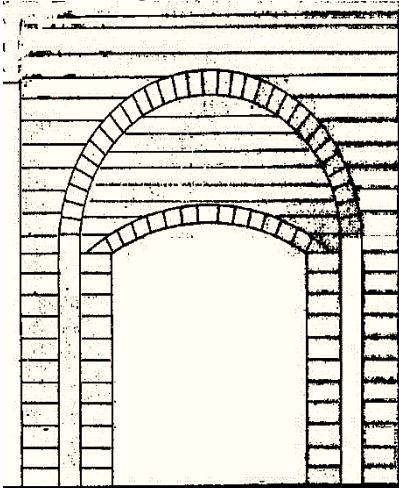
The remaining elements of the fences, gates and towers around the city are in the Abul Reash Gate (figs. 4-5-6 pls. 1:8), which lies between the north-eastern Fort and the Fort, which retained its architectural features.

<sup>54</sup>Darwish, Mahmoud Ahmed (January 2019). The failed colonial campaign of the British army on Rosetta of Egypt in 1907 according to the English documents, pp. 103-133. Darwish, Mahmoud Ahmed (November 2016).The Role of Rosetta fortifications against the English Expedition on Egypt, pp. 192:219.

This gate, currently located at the end of the railway road in the north of the city, was built with stones of various sizes. It is surrounded by a stone pavement that extends along the wall and its width (0.80 m), a part of this pavement, which remains, is (5.90 m) east of the gate, and (7.20 m) in the west.



*Pl. 1. The gate from outside*



*fig. 4. The external façade of Abul Reash Gate (on the registration center)*



*pl. 2. Inputs to place the latch that closes the wooden door of the gate inside*



*pl. 3. Details of the vault mounted on arches and the vaulted niche to sit the guard on the right side of the gate*



*pl. 4. Details of the vault mounted on arches and the vaulted niche to sit the guard on the left side of the gate*



*pl. 5. The vault mounted on arches of the gate*



*pl. 6. The mausoleums and Abul Reash Mosque beside the Gate*

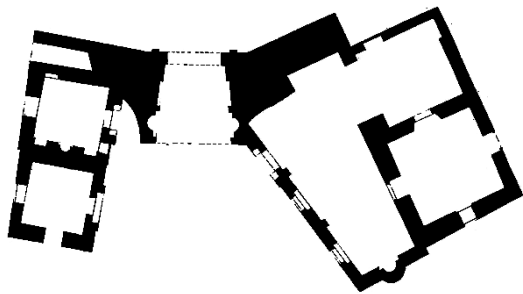


*pl. 7. Abul Reash Mosque and the mausoleum in the east of the gate*

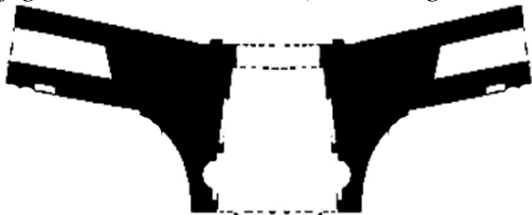


*pl. 8. The mausoleums of Sheikh Hamam and Sheikh Abdel-'Al in the west of the gate*





*fig.5. Abul Reash Gate (on the registration center)*



*fig. 6. Abul Reash Gate without the Mosque and the mausoleums*

The width of the stone mass of the gate is 5.05 m and the height is currently 5.65 m. This area was constructed with stones ( $0.45 \times 0.22$ ,  $0.35 \times 0.24$  and  $0.30 \times 0.18$ ) and the stone pillars (25 rows) (0.15 m) and the center of the gate block is the entrance (2.80 m) and the height (3.35 m). It is headed by a motor with irregular stones in its shapes and sizes from the stones used in the construction. And this contract is increased by (1.30 m), another prominent contract of the facade (0.10 m) width (0.30 m), a semi-circular arch based on two columns integrated in the wall, each with a cylindrical body, the crown and the base that takes the necrotic shape.

The height of the top of the contract is (4.85 m) and the men of the contract are from the bottom at a base of width (0.30 m) and length (0.55 m) and rise from the pavement by (0.6 m). The two pillars of the gate are (0.40 m) in the west and (0.35 m) in the east.

At the entrance of the gate, we find that its depth is 0.65 m where it can then expand by (0.15 m) in each side to reach (3.10 m) and then reach 0.80 m, on each side length (1.20 m) to reach the width of the entrance afterwards to (3.40 m), and then the two side's length (1.20 m) inward. The first section of the entrance is (0.80 m) and the contract height is (4.40 m). The contract starts at (3.60 m) above the ground. The second section is the contract width (1.20 m) and the presentation of the third contract (1.20 m). On both sides of the third section of the entrance are two entrances with a pointed contract in the shape of the mihrab, each with a height of 0.79 m, a depth of (0.33 m) and a height of (1.50 m). Each of them is crowned with a width of (0.15 m).

The width of the gate in this section is (4.65 m) while the total depth is (4.45 m). The thickness of the gate block is between the inner and outer facades. The width of the gate from the inside is (5.35 m) and there are two sides on each side (0.35 m). The inner section of the gate was erected in the mud bricks. The two sides on which the wooden door is based are also covered with mortar. It is noted that there are three positions on the end of the gate for the shackles, which were placed with wooden blocks to close the gate, which was closed at night and at the time of siege, and the two entrances to the side of the entrance were reserved for gate guards. The fence is connected to the gate and was erected in the mud bricks. The remaining part of the wall is currently (4.75 m) high.

It is noted that this gate has been removed from the presence of any towers on it as it was not the main gate of the city, and it is likely that the fence has been renovated, had been



demolished in a previous period, and is very likely to be the tomb of Abul Reash back to the period of construction of the fence Where the wall was erected adjacent to the northern wall of the shrine, and caused the closure of the window was in this area, but the model of the mausoleum proves that it dates back to the Ottoman era, due to the renewal that passed, as is the case in the Citadel adjacent to the tomb of Sayed Mohamed Al-Abbasi died in the seventh century AH (13 AD), and it is possible to expand these shrines and turn them into a massage D was the result of the city's absence from the Ottoman Empire.

### 3. 4. Al-Manzali Fort

It is located in the northwestern corner of the city, which is the smallest area of the other tugs (fig. 7). It is supervised by the four sides of the first west. It is eighteen meters long and has four arrow slits, the south is three arrow slits and the third is north-west and has four arrow slits.the fourth rib is south-west and has five arrow slits and a length of nineteen meters. This is connected to the wall in the north and south through the entrance leading to the corridor of the fence, which was also equipped with arrow slits and machicolations.

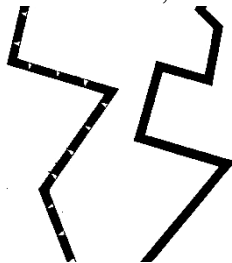


fig.7. Al-Manzali Fort

### 4. 4. Al-Nishan fort

It consisted of irregularly built ribs (fig. 8) is connected to the wall in the north and south. The side to which the wall is connected along the north is sixteen meters long, with three arrow slits. It then deviates to the west for a distance of eight meters and has two arrow slits, It is equipped with three arrow slits, where the tower is a half circular that is provided with five arrow slits and is connected by the wall of the façade, which extends south to a distance of twelve meters, with three arrow slits and then deviates to the east for a distance of twelve meters and three arrow slits.

It then connects to the wall at a distance of sixteen meters to the southeast and has four arrow slits. On the inside is the ladder, which consists of fifteen degrees high each (0.25 m) and the width of the ladder (2.50 m) is located in the north.

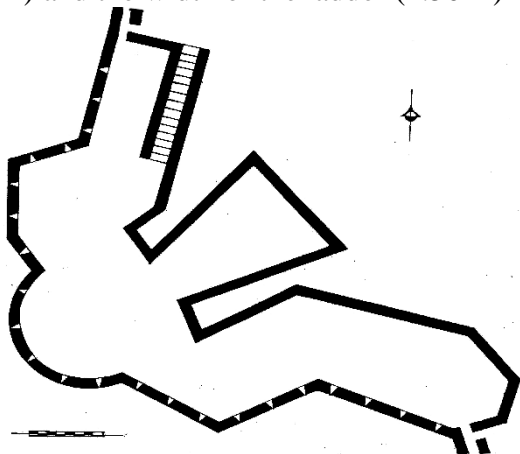
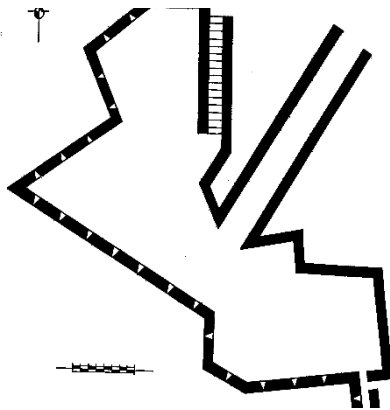


fig.8. Al-Nishan fort

#### 5. 4. Al-Ninni fort

It is located northwest of the Nini Mosque and is irregular in shape (fig. 9). It was built on an elevated area with irregular borders. It is connected to the wall in the north-west and south-east. It is provided with nineteen arrow slits. With two arrow slits, then swerves to the south for a distance of nine meters. It also has two arrow slits. It also extends back to the south-west for sixteen meters, with three arrow slits, and then deviates to the south-east for 30 meters with seven arrow slits, To the south for a distance of six meters and one arrow slit, and extends south-east for a distance of six meters One arrow and one arrow slit, then east to eighteen meters and three arrow slits to meet the fence. The multi-angles of the fort helped to increase its defensive strength and could be supplied with the largest number of arrow slits and machicolations. The ladder leading to the floors of the fort is located in the northeastern corner. It was composed of fifteen degrees, each of which was (0.25 m) high.



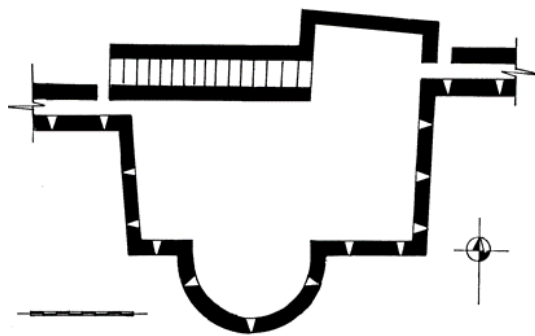
*fig.9. Al-Ninni fort*

#### 6. 4. Al-Abbasifort

The southern wall has a length of (11.0 m), it has a semi-circular tower that looks outward and is located 8 meters from the southeast corner and 4 meters from the south side (fig. 10). The height of the tower was 10 meters, and the climb was the highest of the fort by means of a ladder consisting of a single heart. The number of degrees was fifteen degrees, with a height of 0.25 m. Compared with the stairs of Qaitbay fort, the height of the first floor of the tower (3.75 m).

There is no doubt that the tower and the fort were equipped with the arrow slits and machicolations for the defense of the city, and the number of operators in each of the roles Eleven, three of them in the east and two in the west, six in the south, including three with a half-round tower and two on the left, and one on his right, the upper floor was also equipped with machicolations that were likely to be the same number of arrow slits.

The ladder leads to a rectangular area in the north-eastern corner of the upper floor, this floor includes a circle topped by circular rivets, and the wall is connected to the fort in the east and west. The entrance is accessed through an entrance from the Fort and another at the end of the wall, this corridor is width (1.20 m), and the wall was also equipped with arrow slits and machicolations.



*fig.10. Al-Abbasi fort*

### Conclusion

- It has been proven that the walls of Rosetta, which was established by al-Ghuri has been built length of two thousand and seven hundred meters and extends from the north-east to the south-west and then to the south-east, and it was five forts, and the walls were equipped with the arrow slits and machicolations were winding in the paths, and had the first entrance in the north Abul Reash gate and the second in the south-west is the door of Alexandria and leads to the road that leads to the city of Alexandria and corresponds to the door of Rosetta in the eastern wall of this city, and the area of the city was nine square kilometers and form an equilateral triangle along the eastern side, which represents the Nile coast (1900 m).
- In terms of general planning, we can say that there is a great similarity between the walls of the city of Rosetta and the layout of the walls of Jeddah, the walls of Rosetta went irregularly because of the sand dunes that surround the city, extending north from the Nile to Al-Manzali Fort and then south-east to the Nile again south the city.
- The architect was interested in the southwestern wall more than the northern wall, while there are two forts on the northern wall, there are four forts in the south-west side, while the two sides are equidistant with a length of 1350 m. Each side of the ribs has a gate, the first in the north is the northern gate and the second gate is the first gate of Alexandria The road to Alexandria.
- The width of the walls (3.50 m), topped by a passageway, was also provided with the arrow slits and machicolations. The layout of the walls was characterized by winding and many angles, as we found in the walls of the Andalusian cities. This facilitates the defense of the city better than the straight walls. Where the arrow slits and machicolations were increase in the walls of Rosetta, and angles help to protect all parts of the fence to be pierced by the enemy.
- The walls were provided with six tents, which serve as places for the soldiers guarding the walls, each of which is a structure with irregular ribs and a ladder from one heart. Each tower has rooms for soldiers and a workshop. The construction of stone forts and fences continued, and the two sides of the fence were built with stone, while the walls of the wall were subsequently walled and the walls and towers were supplied with arrow slits and machicolations.
- These walls have remained the gate of Abul-Reash, which consists of an entrance surrounded by two structural blocks,
- The entrance leads to an open vestibule that opens into the city, and we find a similarity between this entrance and the entrance to 'Aqaba fort, as well as the entrance to Nekhil fort in Sinai Peninsula.

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