

# An analysis of the backbone of the coastal defenses of the Maritime Department of Northern Spain in the eighteenth century. Illusory impregnability \*

## Análisis del corazón del sistema defensivo del Departamento Marítimo del Norte de España en el siglo XVIII. La debilidad inconsciente

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**Resumen:** La designación de Ferrol como sede del Departamento Marítimo del Norte en 1726 significó para esta pequeña población marinera de Galicia convertirse en el principal arsenal y astillero de la España peninsular. Para garantizar su seguridad, preocupación permanente de la Corona, se establece un sistema defensivo que determina el reconocimiento y estudio de las costas gallegas por ingenieros y marinos y la posterior construcción en las mismas de castillos y baterías, así como de edificios desde los que vigilar y realizar señales para transmitir todas las novedades a Ferrol. En las siguientes páginas diseccionamos la estructura defensiva para determinar su calidad, eficiencia y estado a lo largo de todo el siglo XVIII. Se evidencia una enorme distancia entre los planes que se elaboran y la realidad de los hechos. Ferrol, al igual que toda la costa de Galicia, estuvo a merced de los enemigos de España durante toda la centuria.

**Palabras clave:** Ferrol, España, defensa, costas, fortificaciones, siglo XVIII.

**Abstract:** The election of Ferrol as the headquarters of the Maritime Department of Northern Spain in 1726 converted this small fishing village in Galicia into mainland Spain's principal arsenal and shipyard. In order to guarantee its protection, a permanent concern for the Crown, engineers and seamen performed surveys and studies of the Galician coast with a view to establishing a system of coastal defenses. This was then followed by the construction of castles and batteries, in addition to

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watchtowers from which to monitor the coast and keep Ferrol informed of any developments by means of beacons. In the following pages, this system will be examined in order to determine its quality, efficiency, and state of repair during the eighteenth century, thus revealing the huge disparity between theory and practice. For, as with the rest of the Galician coast, Ferrol was continuously at the mercy of Spain's enemies throughout the century.

**Keywords:** Ferrol, Spain, defense, coast, battery, eighteenth century.

**Sumario:** Introduction. 1. Defending the Galician coast. 2. The defense of the arsenal at Ferrol. 3. The weakness of the defense system. 4. The quest for solutions. Conclusion.

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## INTRODUCTION

In the second decade of the eighteenth century, with the War of the Spanish Succession now over and Philip V of Bourbon on the throne, Spain set out to rebuild a fleet on par with the needs of its overseas empire, for since the beginning of the century it had depended of the French navy to defend the transatlantic trade routes. Thus, under the guidance of Quartermaster General and future Navy Secretary, José Patiño, the Royal Company of Midshipmen –for the military instruction of future officers– and the Navy Academy at Cadiz – for their professional and scientific training– were both created in 1717. Then, in 1726, Patiño decided to divide the Spanish coastline into three maritime departments, namely, those of the East, South and North, whose main bases were Cartagena, Cadiz and Ferrol, respectively. The latter controlled the waters between Bayonne (France) and Bayona (Vigo, Spain), the longest stretch of coastline in Spain and the first line of defense against the European naval powers. The defenses of these three departments were completed with the opening of new shipyards at La Carraca (Cadiz) in 1724, La Graña in the Ferrol estuary in 1726, which was then transferred to Ferrol in 1750, Cartagena also in 1726, and Havana (Cuba) the preceding year.

Ferrol's location was highly strategic and motivated by the need to protect the Spanish treasure fleets arriving from America and to control the route between the English Channel and the Strait of Gibraltar<sup>1</sup>. Although it was the English who were the Spaniards' historical foes, Barbary pirates and European privateers were a more perennial problem<sup>2</sup>. As of the second

<sup>1</sup> O'DONNELL Y DUQUE DE ESTRADA, Hugo, "Nacimiento y desarrollo de la Armada naval", in Serrano Martín, Eliseo (ed.), *Felipe V y su tiempo. Congreso internacional*, Zaragoza, Institución Fernando el Católico, 2004, vol. 1, pp. 683-700.

<sup>2</sup> SAAVEDRA VÁZQUEZ, María del Carmen, "Política naval, corsarios y armadas en la Galicia moderna", en *Minius: Revista do Departamento de Historia, Arte e Xeografía*, 21 (2013), 87-115.

decade, the revision of the Treaty of Utrecht by Philip V led to an English attack on Galicia, specifically Ribadeo, Vigo and Pontevedra. Galicia would be targeted by the English fleet yet again during the Seven Years' War and the conflict breaking out between the two nations at the end of the eighteenth century. Nonetheless, a monograph addressing these last conflicts and their impact on Galicia, beyond the upsurge in privateering, has yet to be produced<sup>3</sup>.

In what follows, an analysis will be performed on the defense system of the arsenal at Ferrol, which stretched way beyond its estuary, outlining the recommendations made by the engineers, the works carried out, the dithering over possible solutions, and the errors and lacunas that, versus the notion of its strength, made Ferrol much more vulnerable than Spain's enemies (England) could have possibly imagined.

## 1. DEFENDING THE GALICIAN COAST

The strategic importance of Galicia for international trade was unquestionable, which together with its important ports made it a very appealing target for the enemies of Spain<sup>4</sup>, hence the Crown's special concern for its defenses<sup>5</sup>. Whether these were real, efficient, or practical was another

<sup>3</sup> ALONSO ÁLVAREZ, Luis, *Comercio colonial y crisis del Antiguo Régimen en Galicia (1778-1818)*, Santiago de Compostela, Xunta de Galicia, 1986, p. 279. PhD thesis supervised by Carlos Martínez Shaw and defended at the University of Barcelona in 1984.

<sup>4</sup> SAAVEDRA VÁZQUEZ, María del Carmen, *Galicia en el camino de Flandes. Actividad militar, economía y sociedad en la España noratlántica, 1556-1648*, La Coruña, Ediciós do Castro, 1996, p. 383.

<sup>5</sup> VARELA CAMPOS, María de la Paz, *Castelos e fortalezas de Galicia. Castillos y fortalezas de Galicia*, Vigo, Edicións Nigra Trea, 1999, p. 158; GARRIDO RODRÍGUEZ, Jaime, *Fortalezas de la antigua provincia de Tuy*, Pontevedra, Diputación Provincial de Pontevedra, 2001, p. 253; LÓPEZ HERMIDA, José - VÁZQUEZ GARCÍA, Juan - MOLINA FRANCO, Lucas, *La costa inexpugnable. Las defensas de la Base Naval de Ferrol-Coruña desde el siglo XVII hasta nuestros días*, Valladolid, Quirón, 2002, p. 159; VÁZQUEZ GARCÍA, Juan - MOLINA FRANCO, Lucas, *Los cañones de La Coruña. Un recorrido histórico y turístico por las defensas costeras del norte de Galicia*, La Coruña, AF Editores, 2004, p. 143; BLANCO ROTEÁ, Rebeca - GARCÍA RODRÍGUEZ, Sonia, "Paisaje arquitecturado y arquitectura en el paisaje. La fortificación del territorio en época moderna en el Baixo Miño", en *Arqueoweb. Revista sobre Arqueología en Internet*, 7, 2 (September-December 2005). URL: <http://pendientedemigracion.ucm.es/info/arqueoweb/pdf/7-2/blanco.pdf>. Accessed May 1, 2020; VIGO TRASANCOS, Alfredo - MERA ÁLVAREZ, Irene, *Ferrol y las defensas del puerto de guerra del rey. La Edad Moderna: 1500-1800*, Ferrol, Autoridad Portuaria de Ferrol-San Cibrao, 2008, p. 298; NICOLÁS SÁNCHEZ, José L. de - CORREIA,

kettle of fish. For all the above reasons, the coast had been easy prey for Barbary pirates, to such an extent that a squadron was created by the Junta of the Kingdom of Galicia in 1622 to deal with the problem<sup>6</sup>.

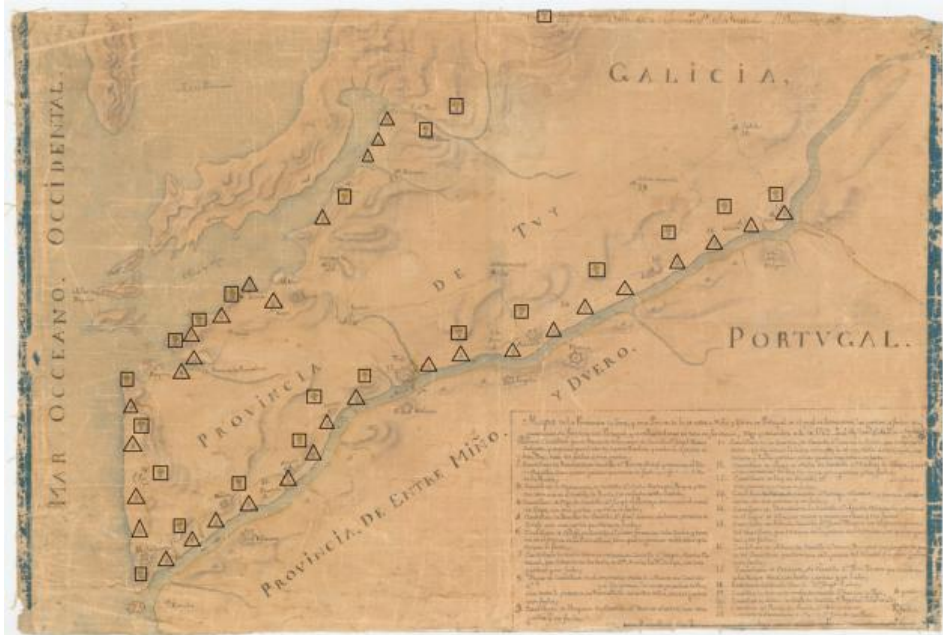


Figura 1. Mapa de la Provincia de Tuy, y una Porción de la de entre Miño y Duero en Portugal en el qual se demuestran las garitas y fachos que guarnecen su frontera con Portugal, y orillas del mar en toda su jurisdicción, Vigo, 20-IX-1762, 1 MS map col., mounted on cloth, 43x62.1 cm. The watchtowers (squares) and signal towers (triangles) can be seen on the right bank of the Minho and on the coast from its estuary to the north. Cartoteca Centro Geográfico del Ejército. España (hereinafter CCGEE), Ar.E-T.4-C.6-226.

Mariana - RODRÍGUEZ-VILLASANTE PRIETO, Juan Antonio, “Catalogación, Digitalización y Valorización de las fortalezas defensivas de la frontera Galicia-norte de Portugal”, en *Virtual Archaeology Review*, 1, 2 (May 2010), pp. 149-154. URL: <https://polipapers.upv.es/index.php/var/article/view/4718/4871>. Accessed May 15, 2020; GÓMEZ IPARRAGUIRRE, Jorge, “Las defensas del reino. Castillos, baterías, cuarteles y fortificaciones”, in Vigo Trasancos, Alfredo (dir.), *Galicia y el siglo XVIII. Planos y dibujos de arquitectura y urbanismo (1701-1800)*, A Coruña, Barrié de la Maza, 2011, pp. 41-50. Ángel San José Mediavilla’s PhD thesis has been the first to tackle this issue, focusing furthermore on the coast of the Maritime Department of Northern Spain, *Defensa, fortificaciones y Marina. La costa cántabra (1746-1814)* (Zaragoza, 2016). PhD thesis supervised by Enrique Solano Camón and defended at the University of Saragossa on February 5, 2016.

<sup>6</sup> ARTAZA MONTERO, Manuel María de, “La Junta del Reino y la Escuadra Galicia (1ª parte)”, en *Revista de historia naval*, LIV (1996), pp. 7-34; “La Junta del Reino (2ª parte)”, en *Revista de historia naval*, LV (1996), pp. 21-46.

In the eighteenth century, after the ascension to the throne of the Bourbon dynasty and the election of Ferrol as the headquarters of the Maritime Department of Northern Spain in 1726, a development marking the turning point for the municipality which then became responsible for a territory stretching from the border with France in the Bay of Biscay to the Portuguese frontier in the estuary of the River Minho, the threats faced by Galicia multiplied. Albeit a point that has not been stressed, the region's safety depended first and foremost on a system that was devised to convey information along the entire Galician coast and the frontier with Portugal (fig. 1), without which the military defenses would have had to perform their task in the dark<sup>7</sup>.

The region of mainland Spain with the longest coastline (931 miles), 18 estuaries, and numerous ports and anchorages, only had artillery emplacements on its eastern (Ribadeo Castle) and southern (La Guardia) reaches, besides a flimsy network of defenses on the frontier with Portugal, which were in a very poor state of repair throughout the eighteenth century. In practice, only Ferrol and Corunna received any attention<sup>8</sup>, for to the north of the former there was a solitary battery at Cedeira, while to the south of the latter only the Camariñas and Corcubión estuaries were defended by two modern batteries apiece, one on each bank, which had been built as late as in the 1740s, their works being paralyzed on a number of occasions<sup>9</sup>. The rest of the coast as far as Portugal had no other protection against enemy squadrons than that afforded by a sort of castle with a battery at Muros (of great strategic importance due to its proximity to Santiago de Compostela)<sup>10</sup>,

<sup>7</sup> Vid. GARCÍA HURTADO, Manuel-Reyes, "La defensa de la frontera acuática de Galicia en el siglo XVIII y principios del XIX: líneas maestras y problemas", in Melón Jiménez, Miguel Ángel - Rodríguez Cancho, Miguel - Testón Núñez, Isabel - Sánchez Rubio, María Rocío (eds.), *Dinámica de las fronteras en periodo de conflicto. El imperio Español (1640-1815)*, Cáceres, Universidad de Extremadura, 2019, pp. 229-252.

<sup>8</sup> With respect to Corunna, many plans introducing successive changes in the projects were drawn up, which only succeeded in increasing the cost of the works. LLOBET, Francisco, *Descripcion de las Plazas y Puestos fortificados del Reyno de Galicia, de sus costas y fronteras, consistencia y estado de sus Defensas, con noticia de las obras Proyectadas, y de las aprovadas*, Ferrol, October 5, 1756, ff. 12 v.-13 r. Archivo General Militar de Madrid [AGMM], Colección General de Documentos [CGD], 3-1-6-8.

<sup>9</sup> That the defenses were not repaired or new ones built due to the lack of engineers was not unusual. GIRAUD, Carlos Agustín, *Relación del caudal que se necesita para proseguir las obras empezadas en este reino*, Corunna, December 8, 1779. Archivo General de Simancas [AGS], Secretaría de Guerra [SG], leg. 3.675.

<sup>10</sup> What was even more serious was the fact that Padrón, a bare four leagues (13.6 miles) away from Santiago, was completely exposed. HERMOSILLA, Miguel, *Relacion Topografica de*

a fort in the Marín estuary, and a pair of batteries in the Vigo estuary, which had proven to be ineffectual time and again throughout the century.

Ferrol, Northern Spain's military and naval hub, lacked a defense network beyond that of its own estuary. Communication, if not the capacity to intercept, repel, pursue, or harry enemy shipping, therefore played a vital role. Thus, an attempt was made to palliate the chronic lack of military defenses. Evidently, this measure did not have the intended effect. For instance, the situation of Corunna (the headquarters of the Captaincy General) was so helpless that, at the beginning of the nineteenth century, it was generally believed that it would not be capable of holding out for more than 48 or 72 hours, all being over once the enemy had managed to disembark its artillery<sup>11</sup>.

The civilian population of Corunna, Vigo, and Tuy had ignored military orders banning the building of dwellings close to the walls<sup>12</sup>, thus weakening them, as well as preventing the use of artillery. Furthermore, the absence of barracks meant that the troops had to be billeted in rented accommodation where living conditions were precarious to say the least<sup>13</sup>. We believe that the neglect of the Vigo estuary's defenses, against the better judgement of some engineers<sup>14</sup>, had serious consequences for the control of the coastal waters and the richest area of Galicia, bordering moreover on Portugal. To our mind, it had been a mistake to roll back the line of defense to the interior of the estuary, since this did not prevent enemy fleets anchoring a short distance away from the coast<sup>15</sup> (fig. 2), staying there for as long as they liked, launching raids, etc., while this might have been avoided if batteries had been deployed at its mouth

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*las Plazas, y Puestos Fortificados del Reyno de Galicia*, Corunna, February 21, 1801, pp. 139-140. AGMM, CGD, 3-1-6-15. That said, having a battery could be more of a liability for the population than doing without, especially when the powder was stored in a haphazard fashion. AGUIRRE, Domingo de, *Sobre lo conveniente a la defensa del Departamento del Ferrol*, Corunna, July 22, 1797, f. 18 r. AGMM, CGD, 3-1-9-15.

<sup>11</sup> HERMOSILLA, *op. cit.*, p. 93.

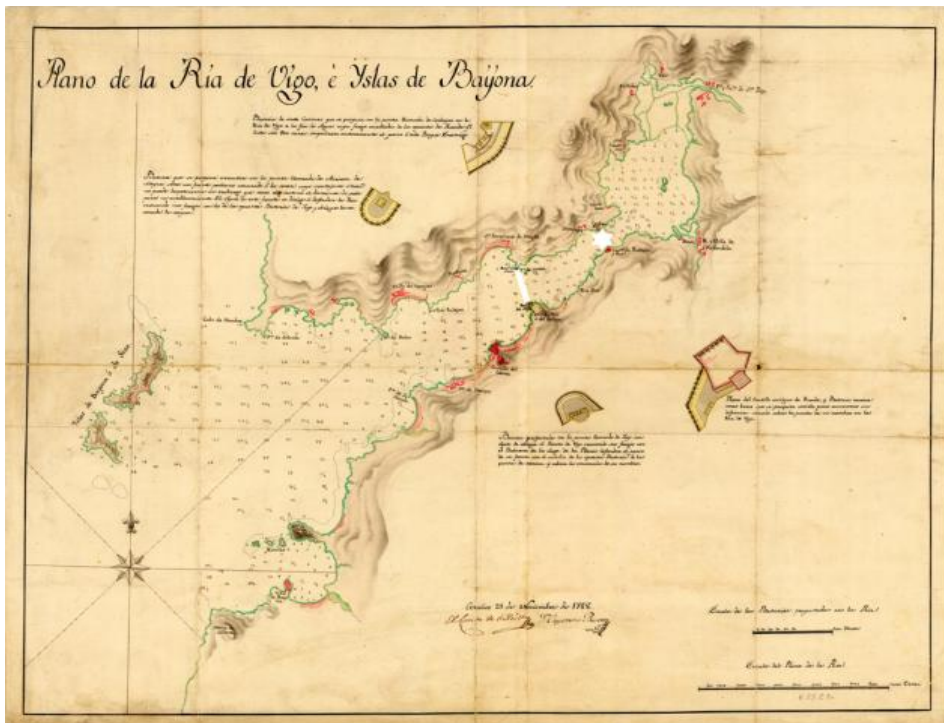
<sup>12</sup> *Ibidem*, pp. 257 and 259-60.

<sup>13</sup> LLOBET, *op. cit.*, f. 31 r.

<sup>14</sup> Letter sent by Pedro Martín Cermeño, Captain General of Galicia, to Miguel de Múzquiz, Secretary of the Exchequer and War, dated in Corunna, December 9, 1780. AGS, SG, leg. 3.387.

<sup>15</sup> Nonetheless, to justify the vagueness and subsequent deficiencies in the design of the defenses it should be noted that the engineers stressed that there were many possible landing places, so even if batteries had been deployed along the estuary, the enemy would still have been able to disembark troops and advance on Redondela where, unopposed by any artillery, it would have been easy to capture all the ships seeking refuge there.

and on the Cíes Islands, since this would have made it possible to triangulate fire on the roads where enemy ships usually took on water or anchored (fig. 3). Moreover, the English attack in 1702, when its fleet had sailed beyond Rande, where the estuary widens again, and reaching the port of Redondela had sunk the squadron sheltering there, would have been unthinkable<sup>16</sup>. Though not much was learnt from that lesson, at least as regards the improvement of its defenses, for the English returned in 1719, captured Vigo, and destroyed its castles<sup>17</sup>. This exceedingly delicate state of affairs was a long-standing problem, since it would otherwise be impossible to understand why at the end of the seventeenth century the Marquis of Villafiel had been bottled up in the estuary with his fleet by a French squadron bent on setting fire to it<sup>18</sup>.



<sup>16</sup> KAMEN, Henry, "The Destruction of the Spanish Silver Fleet at Vigo in 1702", en *Bulletin of the Institute of Historical Research*, XXXIX (1966), pp. 165-173.

<sup>17</sup> In his memories about his travels through Spain and Portugal in 1774, William Dalrymple noted that the damage was still visible. GARCÍA MERCADAL, José, *Viajes de extranjeros por España y Portugal*, Madrid, Aguilar, 1952, vol. 3, pp. 694 and ff.

<sup>18</sup> LLOBET, *op. cit.*, f. 28 r.

Figura 2. Plano de la Ría de Vigo, e Yslas de Bayona Coruña 21 de Noviembre de 1788, 1 MS map, mounted on cloth, 57x70.4 cm. CCGEE Ar.E-T.4-C.6-231. Key: star, the Corbeiro and Rande batteries facing each other across the water; rectangle, the Arroas and Teis batteries. As can be seen, the estuary as a whole was practically unprotected.

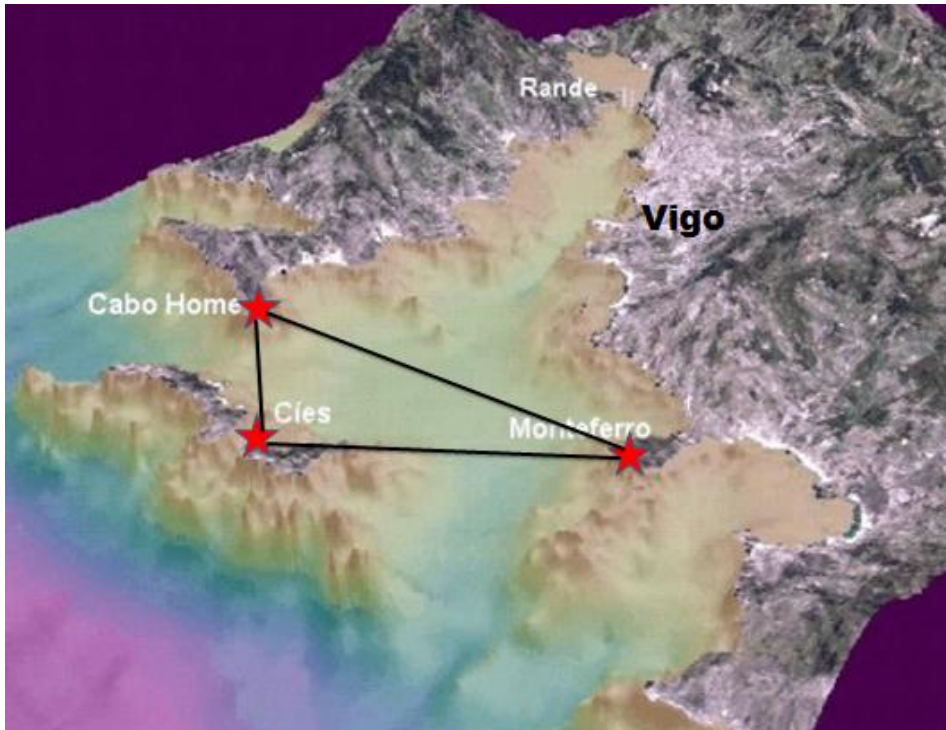


Figura 3. Map of the Vigo estuary and the planned defenses that would have protected it against raids and given it full control of its waters. The stars indicate the deployment of the batteries. The area that they enclose corresponds to where enemy ships usually anchored. The screenshot is available at: <http://unamiradaalariadevigo.blogspot.com.es/2008/02/ra-en-3d.html>. Accessed May 13, 2020.

Then again, this scheme could have been sustained by building an arsenal on the Cíes Islands (fig. 4) facing the estuary mouth, whose waters would have provided a deep-water dock that Ferrol lacked and for the possibility of entering and leaving it without having to depend, as in Ferrol, on the direction of the wind, or contend with the dangers of its mouth. However, the aim of the engineers was not to equip the Vigo estuary with impregnable defenses, for they believed that this was inviable<sup>19</sup>. On the other hand, when the threat

<sup>19</sup> Ibidem, f. 29 v.



of war with England prompted measures to be taken both here and on the Galician seaboard as a whole, these were never adopted with an eye to the mid-term, so when the danger had passed everything continued as before, even if some improvements had been made, which was not normally the case.

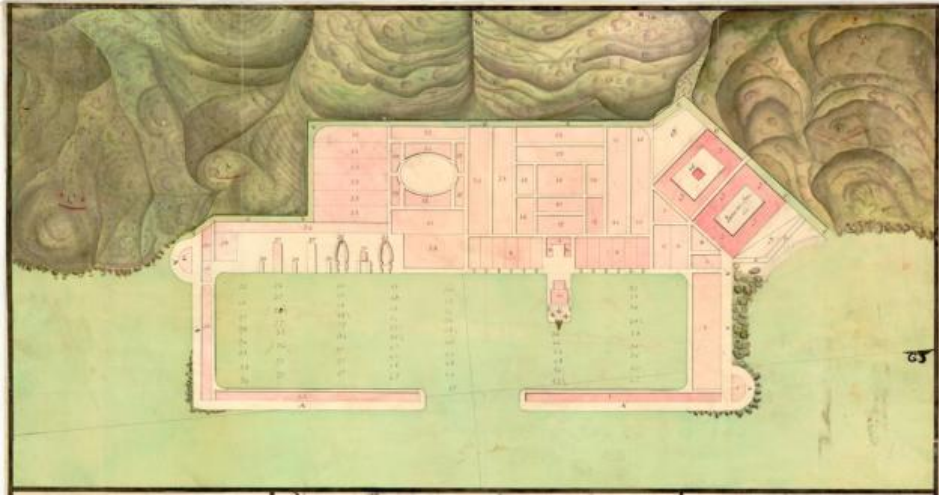


Figura 4. *Plano de un Arsenal de Marina Proyectado en las Yslas de Bayona [Cíes] en el Puerto de Vigo*, Vigo, 3 January 1810, 1 MS plan col., mounted on cloth, 54,7x55.3 cm. CCGEE, Ar.E-T.4-C.6-238.

## 2. THE DEFENSE OF THE ARSENAL AT FERROL

Ferrol was the nerve center of Galicia's defense network (fig. 5). Its strength resided in the size and safety of its estuary which could accommodate an enormous fleet, and its weakness, in its narrow mouth which was difficult to navigate, since westerlies or south-westerlies were required to enter it and easterlies or north-easterlies to leave it.

Work started in the Ferrol estuary in the tidal inlet at Cariño<sup>20</sup> in 1739, given the fear that the English might try to disembark there or blockade it. Consequently, a series of batteries were built in coves and on points –Canelas, with three cannons; Viñas, with 17 cannons; Cariño, which was regarded as the most vulnerable landing place, with six cannons; Restribor, with 11 cannons; and facing this, a battery on the point of Segaña, capable of

<sup>20</sup> RODRÍGUEZ-VILLASANTE PRIETO, Juan Antonio, "En la Ensenada de Cariño (Ferrol): la arquitectura de los castillos-baterías como parte de un paisaje", en *Abrente*, XI-XII (1979-1980), pp. 121-140.

deploying 16 barbette guns (i.e. without merlons or battlements to protect the gunners)— thus allowing them to catch any enemy ships entering the inlet in crossfire. Nonetheless, as the rough coastal terrain could not prevent a landing if conditions were right, the gorges of all these constructions could be stormed with ease. Furthermore, the construction of these defenses was not without its problems.



Figura 5. SILVA, Francisco Casiano de, *España dividida por sus reynos, y otras partes de la plvma de don F. C. de S. E.*, 1704, map of the Kingdom of Galicia. Fundación Lázaro Galdiano (Madrid), 15.319.

As the rocks uncovered in the excavations to build the batteries on the points of Viñas and Restribor and the Cariño sandbank are composed of fine, friable sand, the conclusion of the works has been delayed somewhat, as it has been necessary to line the trenches with stone ... due to the sturdiness and methodical way in which these defenses have been built, little damage could be done to them by any ship so inclined<sup>21</sup>.

<sup>21</sup> Letter sent by the Count of Itre (Leopoldo Adriano José de Riffart), Captain General of Galicia, to the Duke of Montemar (José Carrillo de Albornoz), Secretary of War, dated in Corunna, July 22, 1739. AGS, SG, leg. 3.680.

More than a century later, the state of these batteries was still a matter of concern<sup>22</sup>. Three batteries, which because of their shape and structure were called castles, had been built at the estuary mouth. “Many surveys and soundings and much drafting and dispatching of individual maps and plans to the court”<sup>23</sup> were required to obtain permission to enlarge them, as corresponded to the importance of the arsenal that they were meant to protect. On the south bank, there was San Martín Castle, whose walls were low and insubstantial, though the most serious problem was that of the 11 cannons that it could deploy only two were trained on the mouth. So, in 1755 the head engineer Miguel Marín sent an improvement plan to Madrid. Nothing worthwhile was achieved, for the description made of the castle in 1793 still evinced its calamitous state<sup>24</sup>.

The sixteenth-century castle of San Felipe was located on the north bank. It was decided to enlarge it after the construction of the arsenal, equipping it with a 70-gun battery at sea level, and another 24-gun battery above, plus the eight cannons of the original castle (at the end of the eighteenth century, it was remarked that its batteries could deploy 151 cannons). Work was carried on this emplacement with the aim of converting it into a stronghold featuring all the technical advances of the time<sup>25</sup>, so much so that it was held that it was practically impregnable. Nonetheless, it was mostly criticized for the fact that the proximity of the batteries would prevent the lower one from being used, due to the danger of ricocheting shot or falling rubble injuring the gunners. However, this objection was countered by claiming that it could fire on enemy ships sailing at a great distance, while these would only be able to discharge a broadside at the precise moment when they passed between the castles of San Felipe and San Martín, at which juncture they would already be so damaged by both cannon and rifle fire that they might not even be able to fire one shot. Even so, some engineers questioned the suitability of its emplacement<sup>26</sup>.

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<sup>22</sup> GAVER, Fernando de, *Relación circunstanciada del estado de las Fortificaciones de la Plaza del Ferrol, de los Castillos y Baterias que defienden la entrada de su Ria*, Corunna, February 15, 1793, ff. 7 v.-8 r. AGMM, CGD, 3-1-9-17.

<sup>23</sup> VERGEL, Juan, *Relacion de las Plazas, y Puestos fortificados que se comprenden en este reyno* [Galicia], Corunna, April 8, 1744, f. 1 v. AGMM, CGD, 3-1-6-3.

<sup>24</sup> GAVER, *op. cit.*, f. 8r.

<sup>25</sup> RODRÍGUEZ-VILLASANTE PRIETO, Juan Antonio, *El castillo de San Felipe en Ferrol. Navegando entre castillos*, La Coruña, Diputación Provincial de la Coruña, 2013, p. 230.

<sup>26</sup> Report dispatched by the engineer Carlos Desnaux to the Duke of Montemar, dated in Corunna, October 21, 1739. AGS, SG, leg. 3.680.

La Palma Castle<sup>27</sup>, facing San Felipe across the estuary, had also undergone improvements and was equipped with 35 cannons (including five barbette guns). In 1756, it was pointed out that it lacked a moat (also water) and that many of its guns were dominated by the heights behind them, making it impossible to repel a land attack. Worse still was the fact that the buildings of its inner ward had been erected against its front and back walls, which meant that “water filters into them continually, a problem that cannot be remedied without demolishing several sections of its walls”<sup>28</sup>.

Inside the estuary, on the same bank as San Felipe Castle, there was another battery on the point of Vispón<sup>29</sup> (capable of deploying 20 cannons, but in a very sad state of repair by the end of the eighteenth century, because the navy, considering it of little use, had not bothered to repair it). At the beginning of 1740, its powder store with a 3000-hundredweight capacity was a matter of some controversy, for its emplacement (on the path leading from San Felipe to La Graña and facing La Palma) could have led to a catastrophe in the event of a fire. In 1741, it was noted that it was “so badly built, with wood, branches and earth [due to the fact that it had been hastily erected for fear of an English invasion], that it is no longer in service”<sup>30</sup>.

It should be borne in mind that up until 1747 the arsenal in the Ferrol estuary had been located at La Graña. It was then that, because it was claimed that La Graña did not meet the requirements for the future arsenal, all eyes turned to Ferrol and new plans were drawn up for a complex with room for 60 ships of the line, slipways enabling work to be carried out simultaneously on four ships, dry docks, and other buildings. According to the engineers, the advantages and merits of this new design, as regards both the safety of the ships in its dock and the savings to be made from the maintenance of its facilities, justified the investment required to build it on reclaimed land<sup>31</sup>.

<sup>27</sup> BLANCO ROTEÁ, Rebeca, *El castillo de La Palma (Mugardos, A Coruña). Un enclave defensivo en la Ría de Ferrol*, Santiago de Compostela, Consejo Superior de Investigaciones Científicas, 2008, p. 119. URL: <http://digital.csic.es/bitstream/10261/63513/1/TAPA%2040.pdf>. Accessed May 13, 2020.

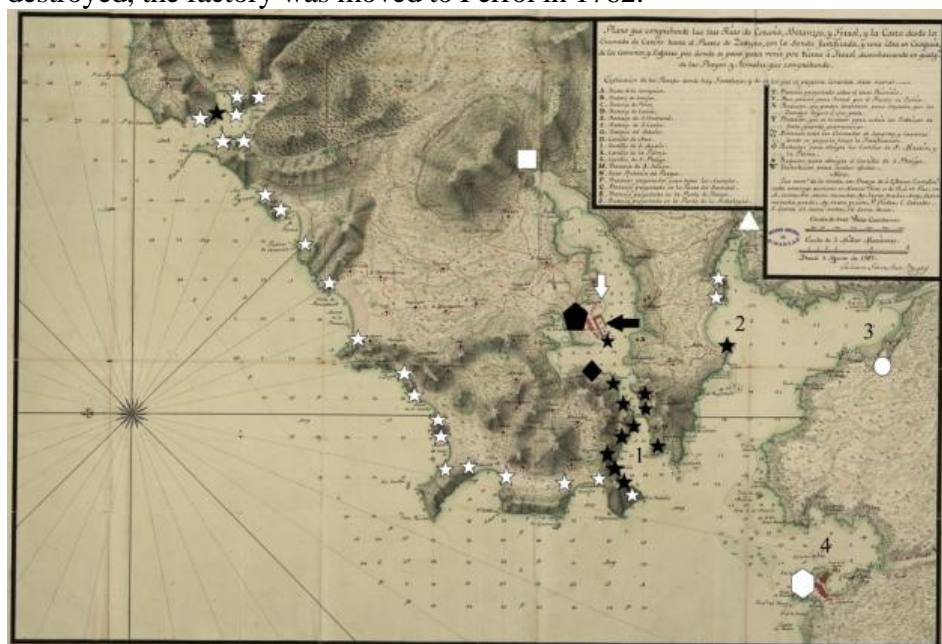
<sup>28</sup> GAVER, *op. cit.*, f. 8v.

<sup>29</sup> RODRÍGUEZ-VILLASANTE PRIETO, Juan Antonio, “El patrimonio histórico-artístico del “Vispón” (Ferrol)”, en *Abrente*, XXIX (1997), pp. 143-170.

<sup>30</sup> VERGEL, *op. cit.*, f. 2 v.

<sup>31</sup> LLOBET, *op. cit.*, ff. 9v.-10r. This would be questioned two decades later. Vid. GARCIA HURTADO, Manuel-Reyes, “Ce que cache l’eau: la darse de l’arsenal espagnol de Ferrol dans la seconde moitié du XVIII<sup>e</sup> siècle”, en *The Northern Mariner/Le marin du nord*, XXVII (July 2017), pp. 245-265.

Between Ferrol and Corunna, no attention was initially paid to the Ares and Betanzos estuaries to the south, from where it was possible to spot a landing and immediately proceed to Pontedeume to block the only bridge between Ferrol and the headquarters of the Captaincy General, or to head for the heights dominating all the defenses of Ferrol and the arsenal itself. Work started on a battery in 1739, but it remained unfinished. That same year, the engineer Carlos Desnaux drew up plans for two batteries to protect the Ares estuary<sup>32</sup>, for it was just as important as that of Ferrol, since if the former were lost, the latter would easily fall. Finally, in 1762, batteries were built at Ares, Seselle, and Redes, although they could not accommodate large garrisons, their guns could not be used without difficulty and, what was even more disheartening, they were unable to “attack or flank the beaches on their right or left, where it is possible to land”<sup>33</sup>. The defenses of Sada, at the mouth of the Betanzos estuary, were also neglected, despite the fact that it was where the rigging and canvas factory (occupying an area of 430,556 square feet) supplying the arsenal was located. Due to the risk of it being attacked and destroyed, the factory was moved to Ferrol in 1762.



<sup>32</sup> On the back can be read, “Galicia, 30 de diciembre de 1739”. AGS, Mapas, Planos y Dibujos [MPD], 26, 98. On the fortifications in this estuary, RODRÍGUEZ-VILLASANTE PRIETO, Juan Antonio, “Los Castillos de Ares”, *Abrente*, XXIII-XIV (1991-1992), pp. 197-221.

<sup>33</sup> HERMOSILLA, *op. cit.*, p. 70.

**Figura 6.** *Plano que comprehende las tres Rías de La Coruña, Betanzos, y Ferrol, y la Costa desde la Ensenada de Cariño hasta el Puerto de Zedeyra, Ferrol, August 1, 1767, 1 MS plan col., 48x69 cm. AGS, MPD, 14, 82.* Key: white stars, planned battery emplacements; black stars, existing batteries and castles; strategic land positions included the Jubia bridge (white square) and the bridge over the River Eume (white triangle), since their control was vital for keeping the lines of communication open and for sending troops and supplies to Ferrol; black pentagon, Ferrol; black diamond, La Graña, where the arsenal had been initially located; white arrow, the shipyard; black arrow, the arsenal and dockyard; white hexagon, Corunna; white circle, Sada; 1, the Ferrol estuary; 2, the Ares estuary; 3, the Betanzos estuary; and 4, the Corunna estuary.

From the study and analysis of the cartography, correspondence, and documents housed in civil and military archives, the first conclusion that can be drawn is that there was a huge difference between theory (a clear case of wishful thinking, since there would always be a dearth of human and material resources) and practice. In 1767, when the arsenal at Ferrol was fully operational, plans were drawn up for the deployment of batteries on all the sandbanks and points (fig. 6). Had they been implemented, Ferrol would have been defended by a wall of fire.

However, by 1780<sup>34</sup> nothing had changed. Beyond the tidal inlet at Segaña and the Ferrol estuary there was only one battery at Cedeira (the most northerly black star on the map) and another at Ares (the black star to the east). In other words, of all the areas that were fundamental to the protection of the arsenal, only the most obvious was defended, namely, the Ferrol estuary, even though the enemy would never have entered it for it was practically inaccessible even to Spanish ships. The others were just ignored, with the engineers focusing on the excavation of trenches and the construction of redoubts from which to protect the batteries and castles of the Ferrol and Ares estuaries from flanking manoeuvres and, in the event of a landing, to prevent the enemy from reaching the heights and firing its guns on the estuary and arsenal defenses. Besides this measure, provisional batteries were deployed on the most vulnerable beaches. But this passive approach signified that the arsenal's first line of defense was also its last. Since there were many places where the enemy could disembark, this was tantamount to putting all the eggs in one basket. Moreover, only temporary solutions were envisaged, rather than enhancing or increasing the capacity of the existing defenses, some of

<sup>34</sup> *Plano que comprehende las tres Rías de la Coruña, Betanzos y Ferrol, y la Costa desde la ensenada de Cariño hasta el Puerto de Zedeira, (1780), 1 MS plan col., 47x65 cm. AGS, MPD, 28, 21.*

which were in a deplorable state of repair. In short, it was kind of defense of the defenses, the former just as weak as the latter (fig. 7).

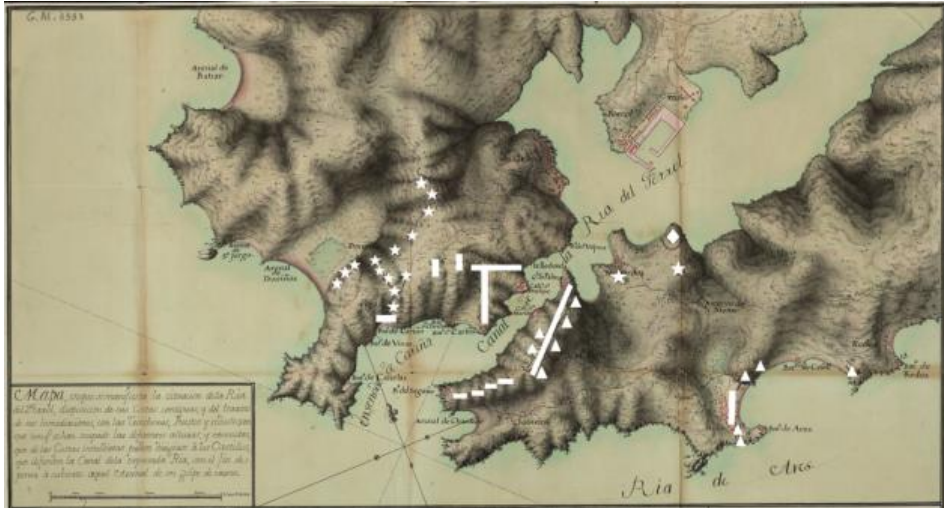


Figura 7. Mapa en que se manifiesta la cituacion de la Ría del Ferrol, disposicion de sus costas antiguas, y del terreno de sus inmediaciones, con las Trincheras, Puestos y reductos, Corunna, 2 February 1771, 1 MS plan col., 41x53 cm. AGS, MPD, 17, 75. Key: triangles, the provisional batteries; rectangles, the trenches; stars, the redoubts; and diamond, the fortified rallying point for the troops withdrawing from Ares.

### 3. THE WEAKNESS OF THE DEFENSE SYSTEM

The Kingdom of Galicia was the Spanish mainland region with the largest number of ports. On the one hand, its strategic value was enormous due to fact that it included Cape Finisterre, one of the most important in Spain and Europe for the role that it played in the Atlantic routes from America to the Old Continent and those linking Northern Europe to the south and the Mediterranean. In addition to rough conditions, dangerous storms, and a rocky coastline (shipwrecks being frequent), there were many estuaries, anchorages, and ports in which ships could find shelter.

It was not until 1739, with the outbreak of war with England, that the Crown realized that it was vital to protect the tidal inlet at Cariño (a sheltered, sizeable, deep-water anchorage) on the north bank of the mouth of the Ferrol estuary, since that was where the fleet gathered to set sail and to return to port. Besides being a possible landing point, if it were to fall into enemy hands, Ferrol would be effectively blockaded. The five batteries (Canelas, Viñas,

Cariño, San Cristóbal, and Segaña) built in 1739 to ward off this fear had to be rebuilt in 1756, 1761, and 1779, and at critical moments protected by large contingents of troops, insofar as they were never more than six-foot parapets made of stone and mud. This was hardly a cost-effective solution for, besides being pointless and expensive, the troops defending them had to be fed and accommodated. Nor were the castles defending the estuary mouth any better.

This continued to be the case until 1779 when the engineer Agustín Giraud decried the situation and the fact that only the San Carlos battery was capable of offering any resistance. In light of this, he suggested a change of tack.

To my mind, it is essential that this entrance be fortified with stable, strong and durable constructions which can be defended by their own garrisons by land and sea, without further assistance, thus preventing them from being taken other than by a conventional siege<sup>35</sup>.

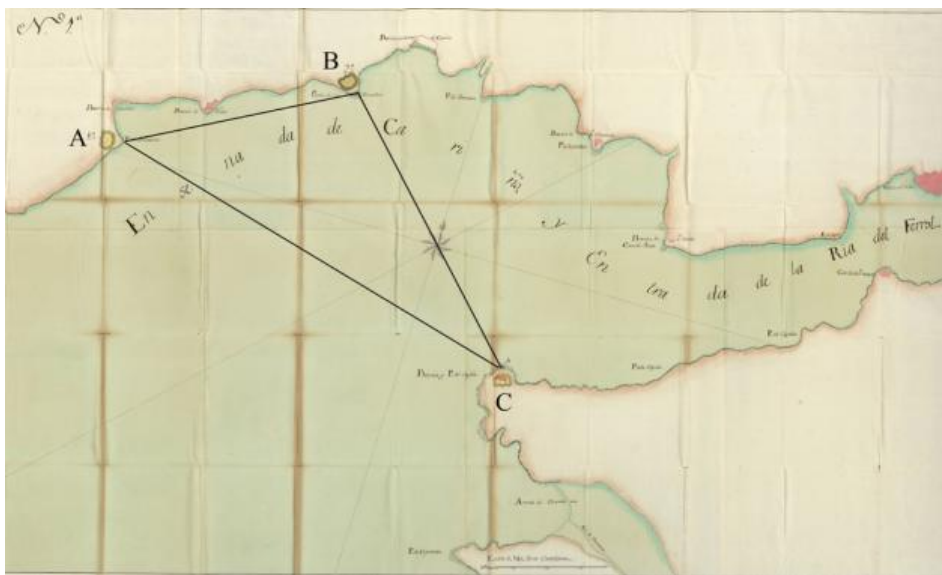


Figura 8. *Plano de la entrada de la Ría del Ferrol o ensenada de Cariño*, Corunna, December 8, 1779, 1 MS plan col., 69x129 cm. AGS, MPD, 30, 39. Key: A, the Lombartero battery; B, the Almallos battery; and C, the Segaña battery. The lines on the map show how the guns of the three batteries covered all the tidal inlet at Cariño, where ships anchored before entering the Ferrol estuary.

<sup>35</sup> Letter sent by Carlos Giraud to Pedro Martín Cermeño, dated in Corunna, December 10, 1779. AGS, SG, leg. 3.675.



He proposed replacing the batteries on the points of Lombartero, Almallos, and Segaña (fig. 8) with three identical ones with the aforementioned specifications to ward off sea and land attacks and thus guarantee the control of the tidal inlet.

The first plan for repelling enemy ships attempting to sail up the Ferrol estuary is also dated 1739 (fig. 9). It involved placing all the ships of the squadron in a line stretching from the point of Vispón to La Graña, as close as possible to the shore, in order to cover the arsenal (located at La Graña at the time) and deploying land batteries at intervals using the ships' landward guns.

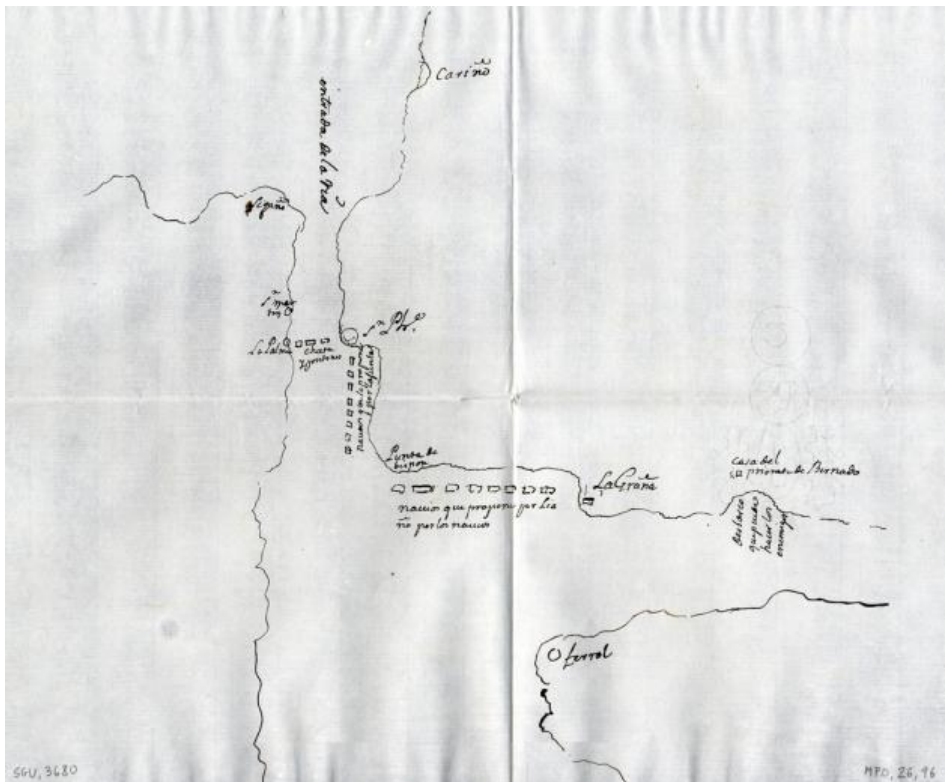


Figura 9. Rasguño de la ría de El Ferrol en el que se indica la ubicación de las fortificaciones y los navíos para su defensa, (1739), 1 MS plan col., 30x42 cm. AGS, MPD, 26, 96<sup>36</sup>.

<sup>36</sup> Plano y Perfil, 1 MS drawing col., 17x30 cm. AGS, MPD, 25, 58.

For his part, the Count of Itre, Captain General of Galicia, held that it would be more convenient to deploy a flat vessel longitudinally to block the estuary mouth, between the castles of San Felipe and La Palma, in order that it might fire on any ship attempting to enter, while protecting it with a breakwater in the shape of a galley's ram, thus forcing the enemy to make for the shore, namely, towards one of the two castles and the rocks. Others believed it would be better to deploy eight ships with open water to starboard beyond San Felipe Castle and another eight with open water to port beyond the point of Vispón<sup>37</sup> (fig. 9). Whereas the engineer Diego de Bordick suggested that the ships should be deployed in order that they might turn at anchor to fire alternate broadsides, besides placing two cables across the estuary mouth using linked spars to keep them afloat. It was held that this was the best solution, for English and French ships were known to have rammed their way through chains. As a matter of fact, the Count of Itre had already proposed this simpler idea to Montemar in a letter dated in Corunna, June 17, 1739<sup>38</sup>, although the Royal Board of Fortifications then wrote to the duke implying that Itre's anxiety was but a figment of his imagination<sup>39</sup>.

At any rate, it can be observed that, early on, there was the naïve belief that it was not worth paying too much attention to the defenses of the Ferrol estuary, since its location was its best protection. "Your grace is well aware of such inconsistent ideas as those proposed by some general officers which only serve to distress the court when there is no reason for this, given how well sheltered that place is"<sup>40</sup>.

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<sup>37</sup> Letter sent by the Royal Board of Fortifications to the Duke of Montemar, dated in Madrid, August 9, 1739. AGS, SG, leg. 3.680.

<sup>38</sup> AGS, SG, leg. 3.680; *Plano y perfil de una cadena proyectada para el puerto de Ferrol por el Ing[enie]ro Ordinario D[on] Joseph de Crane y Gnoucy* (1739). AGS, MPD, 25, 58. Another idea was to block the estuary mouth with floating islands or pyramids and to place a chain across the channel (fig. 10).

<sup>39</sup> Letter sent by the Royal Board of Fortifications to the Duke of Montemar, dated June 22, 1739. AGS, SG, leg. 3.680.

<sup>40</sup> Letter sent by the Royal Board of Fortifications to the Duke of Montemar, dated June 22, 1739. AGS, SG, leg. 3.680.

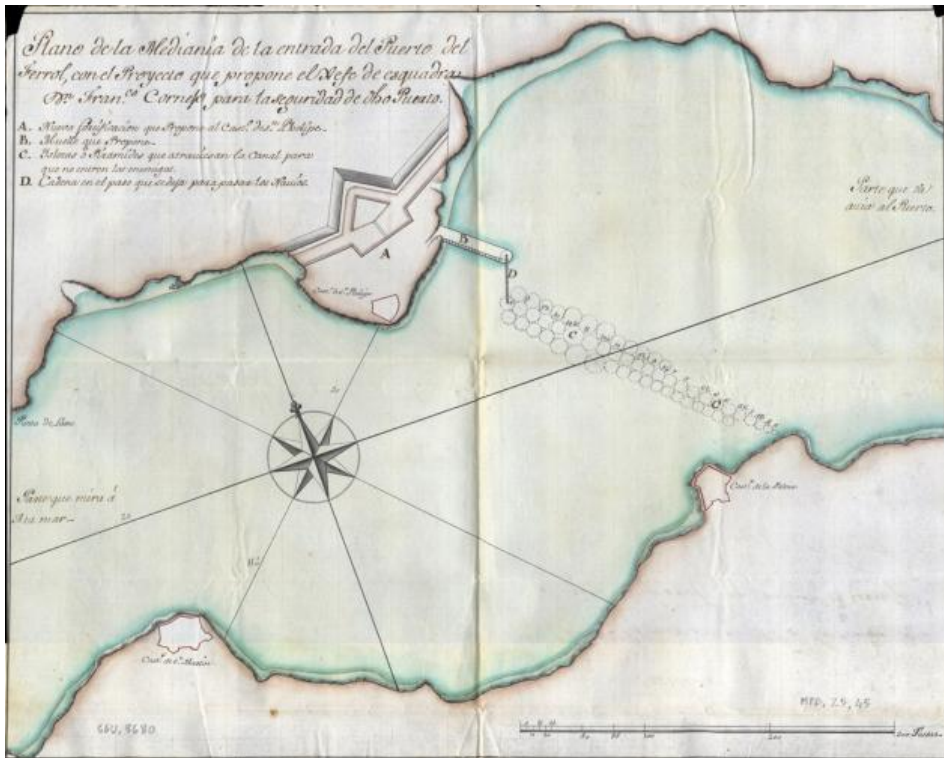


Figura 10. Plano de la Medianía de la entrada del Puerto del Ferrol, con el Proyecto que propone el Xefe de escuadra D[o]n Fran[cis]co Cornejo para la seguridad de d[ic]ho Puerto, (1739), 1 MS plan col., 33x41 cm. AGS, MPD, 25, 45.

To the lack of fortifications, or their neglect, on the Galician coast and the border with Portugal<sup>41</sup> should be added that the Kingdom of Galicia, both on its frontiers and in its interior, lacked highways worthy of the name. On the one hand, this hindered its defense, since it made it impossible, or at the very least difficult, to move troops and artillery, but on the other, was a huge advantage, for it hampered the movements of any enemy force intending to

<sup>41</sup> On the Rías Bajas, MOLINA FRANCO, Lucas - VÁZQUEZ GARCÍA, Juan, “Las defensas costeras de las Rías Bajas de Galicia”, en *Ares Enyalius. Revista de historia y actualidad militar*, XXXIII (2013), pp. 24-35; MARÍN, Miguel, *Relacion General de las Plazas, Castillos y Puestos Fortificados del Reino de Galicia*, June 1754, f. 16 v. AGMM, CGD, 3-1-6-6. Concerning the border with Portugal, HERMOSILLA, *op. cit.*, p. 207; MARÍN, *op. cit.*, f. 21 v. The austerity measures were not limited to the Portuguese frontier. The same policy was implemented in the case of such important batteries as those at Corcubión and Camariñas; letter sent by the Count of Ire to the Duke of Montemar, dated in Corunna, January 6, 1740. AGS, SG, leg. 3.678. Vergel, *op. cit.*, f. 8 v.

launch anything more than a raid<sup>42</sup>. As a matter of fact, the engineers figured out how to turn the region's lack of decent highways to its own advantage: by making gun carriages with the same axel width as Galician carts. This made it impossible for the enemy to transport its artillery pieces inland, or even manage to get them off the landing beaches, where it was generally held that the wheels of their gun carriages would sink into the sand anyway.

Even though Galicia's highways were deficient to say the least, it could always fall back on its sea routes. In order to verify the state of its ports, according to the documents that have come down to us, commissions were created to inspect them<sup>43</sup>. Thus, in addition to a vast number of excellent drawings, plans, and elevations of defense structures, there are plentiful maps of the coasts and ports from the frontier with Portugal to the French border. Furthermore, naval legislation envisaged an annual inspection, so this was not an off-the-cuff idea. After the initiative had been approved by the Crown on January 6, 1779<sup>44</sup>, José Díaz de San Vicente, Commander General of the Navy Department of Ferrol, issued a passport to the royal navy pilot assigning him the task of collaborating with any governor, mayor, or justice of the peace who might require his services, while stressing that "any difficulty or failing in this respect will result in royal displeasure". The pilot's job was to visit all the anchorages from Ferrol to the Portuguese border, using existing plans with a view to rectifying and completing them<sup>45</sup>.

Over and above all matters relating to building works, the other factors that should be taken into consideration to assess the defense capabilities of a region include the number of men-at-arms, cannons, powder, cartridges, shot, etc. In the case of Galicia, thanks to the War of the Pyrenees (1793-1795) there is a marvelous document that enables us to reconstruct the situation as

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<sup>42</sup> As to the problems when organizing the region's defenses, in the 1797 defense plan for Ferrol, "due to the situation and nature of the terrain" it is requested that the carts and baggage trains used to transport artillery pieces and flour supplies be taken inside the stronghold as soon and as quickly as possible. *Junta verificada de Real Orden para tratar de la defensa del Ferrol*, Ferrol, August 31, 1797, f. 7r.-v. AGMM, CGD, 3-1-9-16.

<sup>43</sup> The first inspection of which we have news was undertaken by Bernard Renau d'Elizagaray in 1702. About his work in Corunna, RODRÍGUEZ-VILLASANTE PRIETO, Juan Antonio, *Historia y tipología arquitectónica de las defensas de Galicia. Funcionalidad, forma y ejecución del diseño clasicista*, Sada, Edición do Castro, 1984, pp. 97-101; SORALUCE BLOND, José Ramón, *Castillos y fortificaciones de Galicia. La arquitectura militar de los siglos XVI-XVIII*, La Coruña, Fundación Pedro Barrié de la Maza, 1985, pp. 51-54.

<sup>44</sup> AGS, Secretaría de Marina [SM], leg. 384.

<sup>45</sup> Official letter sent to José Díaz de San Vicente, dated in El Pardo, January 16, 1779. AGS, SM, leg. 384.

regards all these elements by correlating them with the figures that were considered essential for the proper functioning of each one of the coastal strongholds, castles, and batteries<sup>46</sup>. Accordingly, instead of the 134 24-inch, 130 16-inch, and 29 12-inch cannons deemed necessary, there was a shortfall of 38.9%; in lieu of 35 12-inch and four 9-inch mortars, there was only one 12-inch mortar; and 56.42% of the guns and 90% of the mortars lacked carriages. As regards shot and powder, 1364 11-inch bombs and 576 eight-inch royal grenades (fired by mortar), both with a six-line diameter<sup>47</sup>, were required, representing a shortfall of 81.5%; the provision of gunshot of all calibers needed to be increased by 59.3%; there was not one tin canister to be found, making it necessary to procure 6845; grapeshot supplies needed to be increased by 93.2%; and, lastly, there was only 5802 hundredweight of gunpowder available, when Galicia required an extra 4747.

With respect to manpower requirements, it was estimated that the peacetime garrison should number 3784 infantrymen and 698 artillerymen, this being increased in times of war to 13,834 infantrymen, 504 dragoons, and 1602 artillerymen, with 6160 servants waiting on them. Therefore, it was necessary to multiply the number of troops by five, thus evincing that Galicia was not up to the challenge of defending its coastline.

The situation of the arsenal at Ferrol, the nerve center, was especially worrying, for our estimates point to a shortfall of 46.8% in ordnance. Furthermore, 12 cannons and 5226 men were required to defend the routes and bridges connecting Ferrol to the rest of Galicia. And even this was insufficient because it was also necessary to protect the sandbanks (at Ares, Doniños, San Jorge, Cobas, and Frouxeira), which would require an additional 40 24- and 16-inch cannons, together with gunners, servants, shot, powder, and stores. The castles and batteries in the Ferrol estuary were hardly in a better state of repair (Table 1).

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<sup>46</sup> *Relación de la tropa que es indispensable, para guarnecer las plazas, fuertes y baterías de la costa del mar de Galicia, con el número de cañones, pólvora y cartuchos que para ello son necesarios*, Corunna, April 13, 1793, 13 hs. Biblioteca Nacional de España, MS. 18.633/96.

<sup>47</sup> It was believed that this was the minimum diameter that the head of a grenade should have so as to be optimum. AUBERT DE LA CHESNAYE DES BOIS, François-Alexandre, *Diccionario militar*, trans. Raimundo Sanz, Barcelona, imprenta de Juan Piferrer, 1749, pp. 195-196.

Table 1.  
Shortfall in ordnance at the castles and batteries in the Ferrol estuary

Castle/battery	Cannons, mortars, and gun carriages	Shot	Powder
San Felipe Castle	69.6%	70.6%	29.8%
San Martín Castle	35.7%	72.8%	67.7%
San Carlos battery	100%	25%	25%
San Cristóbal battery	100%	100%	100%
Cariño battery	24.3%	64.5%	100%
Viñas battery	25%	56.1%	100%
Canelas battery	50%	61.9%	100%
Segaño battery	40.7%	63.2%	100%

Source: elaborated by the author.

In other words, the Spanish monarchy's principal arsenal was as vulnerable as the Havana arsenal and shipyard when, in 1762, the English had seized them. If the enemy had been so inclined, nothing could have prevented Ferrol from suffering a similar fate. Notwithstanding the technological, material, and financial investments made in its estuary during the second half of the eighteenth century, the Crown unjustifiably did not pay it the attention that its strategic and productive value warranted; a situation of real vulnerability that was extensible to the rest of the coast. Moreover, if all the aforementioned figures imply an alarming lack of resources in all aspects, it should be noted that they do not included the rifle cartridges and bullets of the troops, on which we have not been able to find any reliable data. This was yet another example of the fiasco of the acclaimed reformist policy of the Bourbons, reflected in plans that on many occasions never got past the drawing board. Only luck or the indifference of Spain's enemies ensured that the loss of Gibraltar remained the exception rather than the rule.

#### 4. THE QUEST FOR SOLUTIONS

What we should ask ourselves is whether the distressing situation of the arsenal at Ferrol by the end of the eighteenth century was a fairly recent or long-standing problem, which also begs the question of whether during the years running up to the French invasion the engineers' petitions were answered or generally ignored.

The first orders focusing exclusively on the defenses of the arsenal at Ferrol of which we have news are dated April 22, 1767, when it had been practically completed and was already operational. The head engineer Pedro

Torbe was sent from Madrid with detailed instructions to protect the arsenal, paying special attention to preventing a landing in its vicinity and, in such an event, the enemy from reaching the dockyard and destroying it, as well as securing the estuary mouth. To this end, he was entrusted with the task of preparing a large plan (specifying the lie of the land, with longitudinal and cross-sectional profiles of the proposed batteries) that made it possible to determine how to design its defenses, where to deploy the batteries, the routes of entry that could be used by the enemy, and how to hamper its movements<sup>48</sup>. Thanks to several reports drafted by military engineers in the last decade of the eighteenth century and the first of the nineteenth century, we know what works were performed and their utility.

In 1793, the engineer Fernando de Gaver noted, as others would do afterwards, that the walls of Ferrol were extremely weak and that there was no guarantee that they would remain standing<sup>49</sup>, thus offering scant protection against an artillery barrage. There were seven redoubts at varying distances, some dominated by the heights, others whose merlons were cracked, whose banquettes were broken, or whose façades were crumbling down to their foundations, and there were even some whose embrasures were so low that the enemy could fire into them from outside, the durability of those built with the same slate as the walls being more than questionable.

Besides these limitations, since there were houses, vegetable gardens, and paths close to the walls, the enemy could advance on Ferrol practically undetected. The main battery, known as that of the Parque, which could deploy 130 cannons, was difficult to use since, having been built entirely on a breakwater (land reclaimed from the estuary), its esplanade had crumbled. Furthermore, the barracks at Ferrol could not accommodate more than 882 men, so the rest had to sleep in stables and, at best, in the guardhouses at the city gates. Although given the state of the buildings (“the rooves and frames of the majority of the aforesaid buildings are rotten and on the point of total ruin”<sup>50</sup>), most of the soldiers preferred the stables. In short, with its decrepit walls, further undermined by the action of the tides, Ferrol was an “open” city<sup>51</sup>.

The notion that Ferrol could not be defended against an attack reaching its gates was behind the policy of building redoubts and batteries and digging

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<sup>48</sup> *Instruccion dada al Ingeniero Director don Pedro Torbe, para precaver el Arsenal del Ferrol de un golpe de mano*, Madrid, April 22, 1767, 3 f. AGMM, CGD, 3-1-9-5.

<sup>49</sup> GAVER, *op. cit.*, f. 1v.

<sup>50</sup> *Ibidem*, f. 3v.

<sup>51</sup> *Ibidem*, f. 4r.

trenches in its vicinity, all of which formed a fundamental part of the defense plan of 1770. But by 1793, practically nothing of this remained, even though it was believed that, until batteries were deployed on the beaches and sandbanks, it was the only viable solution to defend the stronghold, besides building forts capable of garrisoning between 600 and 700 men on the heights dominating it. On the contrary, Spain's main European Arsenal would remain at the mercy of its enemies.

None of the batteries or castles on the coast or in the Ferrol estuary can prevent this [an attack on Ferrol], both for their aforementioned weaknesses and poor state of repair and for the ease with which they can be taken from the rear from the heights dominating them. This confirms the need to defend and fight for the country with a standing army commensurate with that of the enemy, taking advantage of the lie of the land, without which everything else will be ineffectual, and it could be rightly held that the arsenal and shipyard at Ferrol have been abandoned lock, stock, and barrel<sup>52</sup>.

In 1797, Domingo de Aguirre, Commander of the Engineers Corps of Galicia, drafted a comprehensive report on the defenses of the Department of Ferrol<sup>53</sup>, where he had been sent on April 11 with the exclusive task of planning and undertaking the necessary work in accordance with the defense plan approved on November 1, 1796 (based on that of 1770). Despite the fact that the Count of Colomera expressed the opinion that the English "cannot and should not believe that they can harry our coasts ... and much less attempt to launch official expeditions to attack strongholds and ports on our mainland"<sup>54</sup>, in order calm the Governor of Ferrol, he nonetheless recommended that artillery commanders and engineers be sent to the city to reconnoiter those coasts.

First of all, Aguirre performed an in-depth study of how things stood. He reported that the batteries deployed in the Ares estuary –in his opinion the

<sup>52</sup> *Ibidem*, f. 11 r.

<sup>53</sup> AGUIRRE, *op. cit.*

<sup>54</sup> Letter sent by Martín Antonio Álvarez de Sotomayor y Soto-Flores, Count of Colomera, Viceroy of Navarre, to Manuel Godoy y Álvarez de Faria, Prince of the Peace, dated in Madrid, October 26, 1796. AGMM, CGD, 3-1-9-16. It was a very erroneous analysis. A few months later, from June 22-25, 1797, Admiral Nelson attacked Santa Cruz de Tenerife. In 1770, as Field Marshal and Inspector General of the Militias, Álvarez de Sotomayor was in charge of the stronghold of Ferrol. Anticipating an English invasion, he was commissioned to fortify the Galician ports in a convenient fashion. Therefore, he was familiar with Galicia and its defenses.



most appropriate place for an enemy landing— had many shortcomings: they were slate and mud constructions; the local fishermen had built paths leading down from them to the sea; they could not fire on ships or landing parties approaching or passing under them due to their very high emplacements; and the wooden flooring had been replaced with bedding which, apart from being onerous for the Crown, meant that the embrasures were now too high to be of any use. As to the coves and beaches located above the right bank of the Ferrol estuary, Aguirre expressed an opinion that would be called into question only three years later, in the wake of the most critical point in Ferrol's history. For he even ventured that the Ferrol Expedition, launched by the English on August 25, 1800, would be impossible<sup>55</sup>.

The conclusion of Aguirre's lengthy and detailed report, which is evidently the product of an inspection in situ, was that it was impossible to land to the north of the Ares and Ferrol estuaries, either due to the crags and causeways, because the sand would hinder the transport of cannons, or owing to the terrible state of the winding paths leading from the beaches to Ferrol. The engineer held that it was only possible for the enemy to disembark there during a fortnight in summer, hence it would be easier and cheaper to rely on lookouts<sup>56</sup>.

Nevertheless, the Ares estuary caught Aguirre's full attention because he believed that it was an ideal place for a landing, as well as being the most vulnerable point. He criticized the batteries deployed on the Ferrol estuary's right bank, in the strategic inlet at Cariño. In the Canelas battery, he noted the sad state of the gun carriages, the impossibility of crossing its fire with the Segaña battery (on the opposite bank), the use of stone and mud in its construction and its low height, and the fact that it was easily penetrable from all sides. As to the Viñas battery, he even recommended its elimination:

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<sup>55</sup> AGUIRRE, *op. cit.*, ff. 6 v.-7 v. The same ideas in f. 22 r.-v. On the Ferrol Expedition of 1800, GONZÁLEZ-LLANOS GALVACHE, Santiago, *El ataque inglés a Ferrol en agosto de 1800*, Ferrol, Embora, 2000, p. 263.

<sup>56</sup> This approach did not prevail during the whole century. In an official letter that he sent to Jerónimo Manuel Caballero, Secretary of War, in 1790, Field Marshal Juan Caballero y Arigorri, the director and commander of military academies and fortifications, judged that rather than attempting to enter the Ferrol estuary, it was more plausible that the enemy would try to land on the coast between Doniños and Cedeira, and thus proposed deploying batteries on all the beaches, with one at each end. Besides preventing any landing, they would also protect commercial shipping from privateers. A flying column of 4000 men would be required to control the batteries and the area. Aware of the (financial) difficulties of improving the defenses of Ferrol, he decided to transfer the key role to the coastal belt (less investment and greater control of the area). AGMM, CGD, 3-1-9-16, ff. 44 v.-45 r.

It would be more appropriate to have its cannons removed because, given the circumstances, it risks tarnishing its public reputation in the country's gazettes, in which it might be said that the enemy has spiked or disabled a gun battery at the mouth of the Ferrol estuary, for they would gain the upper hand very easily and swiftly<sup>57</sup>.

Regarding the Cariño battery, Aguirre reckoned that, due its low height and the fact that it was open at the back and at the sides, it should be overhauled, as had already been recommended on December 10, 1775 (once again it can be seen how the reports were not acted upon). Moving on to the San Cristóbal and San Carlos batteries, he observed that the former had such a shallow and narrow moat that it was easy to enter, as were the cannon embrasures, in addition to always being full of water, thus posing a health hazard to the troops and rendering the munitions useless<sup>58</sup>, while the main problem of the latter was that "its vaults drip leaving the spare powder very damp, and when it rains, there are many leaks throughout the battery for it is poorly built with lime and pebbledash making it practically uninhabitable"<sup>59</sup>.

Lastly, he pointed out that it was possible to reach the Segaña battery, at the mouth of the estuary, using the paths leading up from the shore and gain entry through its embrasures, and that the mortar battery made with brushwood would be more useful elsewhere.

Aguirre, turning a critical eye on the castles, pointed out that the heights dominated the back and the sides of San Felipe Castle (the area's main fort located in the throat of the estuary), there was a gully close by where more than 500 men could hide, and the garrison's water supply coming from a ravine could easily be cut. Moreover, the governor's house at the castle lacked ventilation and was extremely damp<sup>60</sup>. The main drawback of La Palma Castle, located on the right bank facing that of San Felipe, was in his view the continual filtering of rainwater, which made living conditions difficult. And with regard to San Martín Castle, an old fortification, he was of the mind that it was more of a liability than an asset, recommending its demolition, rather than pouring more money into it, as other engineers had previously suggested.

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<sup>57</sup> AGUIRRE, *op. cit.*, f. 11 r.

<sup>58</sup> HERMOSILLA, *op. cit.*, pp. 48-49. This was the sad state of repair in which what had been considered the best battery in the inlet at Cariño was to be found in 1801.

<sup>59</sup> AGUIRRE, *op. cit.*, f. 12 r.

<sup>60</sup> Domingo de Aguirre, Corunna, October 13, 1797. AGS, SG, leg. 5.883.

Concerning Ferrol, Aguirre judged that its protection was guaranteed by the belt of fortifications surrounding it, both in its estuary and in the vicinity. Because of the length of its walls (3000 yards), its complete fortification would involve a huge outlay, as would that of the heights dominating it. So, reaching a compromise, he settled for ad hoc repair works on the walls, parapets, and ramparts that had been breached or were cracked. His harshest criticism was for the use that the locals had put the defenses, converting the ramparts into kitchen gardens and the storehouses into pigeon lofts, henhouses, and places for playing boules<sup>61</sup>. But perhaps most strikingly, he claimed that the castles overlooking the estuary mouth –that is, San Felipe, La Palma, and San Martín– were worthless, insofar as if they opened fire on any ship trying to enter within, they would indeed sink it, but this would block the channel and consequently the estuary, remarking that “it seems to me that the principle that should be firmly established is that the batteries of the three castles should never be used to sink enemy ships attempting to pass under them”<sup>62</sup>.

Aguirre also declared that the money invested in these three castles would have been better spent on other things, for example the San Carlos battery, for its guns would have the same lethal effect but without paralyzing traffic in the estuary. If the enemy had got wind of the mock role assigned to these formidable castles, they would not have given credit to the news.

The key to Ferrol’s protection lay in having sufficient troops on hand to prevent it from being attacked from the heights, with flying battalions to protect the rear of the batteries in the estuaries and infantrymen deployed on the summits. Once again, Aguirre cast doubt on the previous plans: “The excessive cost of building such an extensive system of trenches, batteries, and redoubts, as those with which I have become familiar... has been in vain”<sup>63</sup>.

On August 31, 1797, a month after receiving Aguirre’s report, a meeting of the Junta was convened at the headquarters of the Captaincy General at Ferrol to study and agree on a new defense plan<sup>64</sup>, at which priority was given to his appraisals. Thus, the troops garrisoned at the Cedeira battery received the order to abandon their positions and, leaving behind a detachment, to protect other more vulnerable places such as the Jubia bridge, San Felipe Castle, and the Viñas and Canelas batteries. Also in line with Aguirre’s

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<sup>61</sup> AGUIRRE, *op. cit.*, f. 15 v.

<sup>62</sup> *Ibidem*, f. 16 v.

<sup>63</sup> *Ibidem*, f. 23 r.

<sup>64</sup> *Junta verificada*, Corunna, September 6, 1797, 8 f. AGMM, CGD, 3-1-9-16.

opinion, it was recommended that four gunboats be deployed in the Ares estuary, along with two old vessels converted into floating batteries and light artillery. But the most noteworthy conclusion was that the number of soldiers and cannons at Ferrol was way under their strength on paper. In this regard, the batteries and castles in the Ferrol estuary were garrisoned by a mere 920 men, plus 42 gunners and 108 servants, and deployed 162 cannons and two mortars. For instance, La Palma had nine cannons, instead of the 55 that it was capable of deploying; San Felipe 32, instead of the 136 for which it had been built; and the Parque battery at Ferrol 62 cannons and two mortars, when it could deploy 135. The situation of the troops was just as delicate. For instance, the Captain General could muster 660 men belonging to the Asturias and Princesa battalions to defend the forts in the estuary and Ferrol, clarifying that 228 lacked uniforms and weapons, before adding that there were only 130 sailors, but that their deployment was contingent on whether or not they were needed to man the gunboats. This dire situation meant that 1196 arsenal and dockyard workers had to be employed at the Parque battery and those in the estuary.

At the meeting, it was also decided to make use of navy cannons and munition (as well as rifles, pistols, cutlasses, and hatchets) in the defense of Ferrol. Similarly, a detailed and exhaustive distribution of men and equipment was performed, although this did not prevent the secretary from indicating in the minutes that “the Junta ... acknowledges and confesses that all the areas have been so perfunctorily covered that it will not be easy for them to resist even a raid or lightening attack by the enemy”<sup>65</sup>.

The military authorities at Ferrol, going even further, gave their troops freedom of action, which just goes to show how overwhelmed they were by the task<sup>66</sup>.

After the plan had been approved by the king, it was stressed to Navy Secretary Juan de Lángara that the existing batteries should be maintained, instead of building new ones, thus rejecting Aguirre’s recommendation. This should be understood as more of a cost-saving measure than a real analysis of military requirements, since the powers that be in Madrid also wanted to know the exact amount of flour that had to be procured and to whom it would be destined and for how long, in order that it should be “reasonably established”. While in reply to the request for a flying hospital, it was specified that camp

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<sup>65</sup> *Junta verificada*, Ferrol, August 31, 1797, f. 6 r.-v.

<sup>66</sup> *Ibidem*, ff. 7 v.-8 r.

chaplains and surgeons be used “to avoid the cost of employing others”<sup>67</sup>. Unlike in previous official letters, there were no express orders to prevent any landing attempt or differences of opinion among the commanders<sup>68</sup>.

After the English landing in 1800, which to our mind was not an all-out attack, but a skirmish like others in which the squadron had been involved before reaching Spain, which served to certify in situ the truth of all those reports warning about the vulnerability of the defenses of the arsenal at Ferrol, one could almost be forgiven for thinking that the message had been understood and that steps would be taken to remedy the situation. However, this would not be the case.

In 1804, the engineer Antonio Samper studied Ferrol’s defenses<sup>69</sup> and the conclusion that he reached was not encouraging, noting in the first paragraph of his report that they were “feeble and contemptable”. Ferrol’s arsenal and shipyard, he observed, were flawed from the start, inasmuch as the idea had been to find an ideal location for them, but without bearing in mind that they also required defenses, and in this respect nature had denied Ferrol all the advantages that it had bestowed on it as a naval base. It was anticipated that the castles and forts in its estuary, as well as those in the adjacent ones, would provide protection, but these depended in turn on the Spanish troops dominating the heights to repel or retain the enemy. Samper suggested that launches be deployed in the Ferrol estuary to ferry reinforcements to the point where the enemy troops had landed.

Therefore, rather than putting the accent on military fortifications, troops were now the backbone of the defense system. This approach can be found in a document questioning those who entrusted the protection of Galicia to the crossfire of the beach batteries, since nothing could be done in the face of a proper landing –at most, they would just about manage to keep the privateers at bay. The purpose of this document was to put an end to the debate and, therefore, the Captain General was ordered to comply with the plan of 1797<sup>70</sup>.

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<sup>67</sup> Letter sent by Felipe de Paz, Lieutenant Colonel of the Engineers Corps and Director of Works for Santiago, Orense, and Tuy, to Francisco Sabatini, Lieutenant General of the Engineers Corps and Commander of the Corps of Engineers, dated in Corunna, November 4, 1797. AGMM, CGD, 3-1-9-16.

<sup>68</sup> Letter sent by the Count of Colomera to Francisco Sabatini, dated in Madrid, March 26, 1797. AGMM, CGD, 3-1-9-16.

<sup>69</sup> SAMPER, Antonio, *Sobre la defensa del Ferrol*, Ferrol, December 28, 1804, 3 f. AGMM, CGD, 3-1-9-20.

<sup>70</sup> Official letter of September 5, 1798. AGS, SG, leg. 5.883.

Along these same lines, a meeting was held in Ferrol on December 23, 1804, attended by Diego Contador (Governor of Ferrol), Antonio Escaño (the squadron commander), José de Montes Salazar (a brigadier and artillery commander), and Juan Bautista Meric (a colonel and commander of the corps of engineers). During the meeting, it was determined that the defense of Ferrol and the coastline required 7000 infantrymen, 2000 light infantrymen, three cavalry squadrons, and two mounted artillery companies. But this was not the only complication. Given Galicia's very wet climate, the cost of accommodating the men in tents would be high and the damp camp conditions would take a toll on their health<sup>71</sup>. Moreover, the main dilemma was the huge difference between the number of troops required and those available. Thus, 4608 infantrymen (65,8%), 2000 light infantrymen (100%), cavalry squadrons, artillery companies, servants and 132 gunners (42.3%) were required to cover this shortfall. And only for the land defenses, for Antonio Escaño also calculated the number of boats and men essential for the arsenal's sea defenses: 1900 seamen, 686 infantrymen, and 168 gunners<sup>72</sup> to crew and man the guns of 11 armed launches, 19 gunships, six mortar vessels, four bomb vessels, 24 boats, and 12 dinghies. In light of the opinion of Escaño and after consulting with Brigadier Cayetano Valdés, the acting commander of the *flotilles a l'espagnole* (as the French called them), Navy Secretary Domingo Pérez de Grandallana indicated that these should number 36 armed launches or gunboats and at least 24 auxiliary boats or vessels of each kind.<sup>73</sup> The lack of men and equipment had gone from bad to worse.

Even though the enemy was unaware of the state of the defenses and the lack of men and artillery, it did indeed have plenty of first-hand information on the characteristics of the coast and the best places to disembark. This the English proved with their landing in 1800, since the beach of San Jorge was only one league (3.5 miles) away from Ferrol. In 1804, they had even more information at their disposal. "They are completely familiar with all the outposts and anchorages of that estuary [Ares], which they have been sounding and reconnoitering very much at ease for more than a year that they have been sailing along the coast"<sup>74</sup>.

<sup>71</sup> CAGMM, CGD, 3-1-9-20, f. 3 r.-v.

<sup>72</sup> Report drafted by Antonio Escaño, dated in Ferrol, December 19, 1804. AGMM, CGD, 3-1-9-20, f. 9 r.

<sup>73</sup> Real Academia de la Historia [RAH], 11/8.306 (32).

<sup>74</sup> MERIC, Juan Bautista, *Parecer del coronel de ingenieros don Juan Bautista Meric sobre la defensa de la Plaza del Ferrol*, Ferrol, December 28, 1804, f. 1 v. AGMM, CGD, 3-1-9-20. This had really been the case, to the extent that in an official letter to Félix de Tejada,

For his part, the engineer Meric came up with a way of repelling a landing on the right (the beach of San Jorge) and on the left (the Ares estuary). By our reckoning, the fact that he chose the place where the English had disembarked in 1800 proves that they had not been repelled, otherwise he would have recommended the same course of action. In 1800, the English had not been driven out, and much less defeated, but had simply withdrawn.

## CONCLUSION

During the Modern Age, the Spanish crown was incapable of protecting its mainland coasts due to their length and because its fleet was occupied by the American sea traffic. Hence the concern over sea defenses which, when all was said and done, could not prevent Spain's enemies from intervening whenever and wherever they liked to take on water, to launch raids, to wreak destruction and, if they had been so inclined, to conquer territories, as England had done throughout the eighteenth century<sup>75</sup> (i.e. Gibraltar and Menorca). For Spain, the possession of a global empire did not lead to more secure frontiers<sup>76</sup>, and the evidence shows that the design and construction of Ferrol's defenses by no means ruled out the possibility of it being attacked or destroyed. Ferrol's strength was not to be found in its batteries and castles, but in the indifference or the policy of attrition of the enemies of Spain, since they thus managed to shackle Spanish ships, men, and resources to a region

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Captain General of the Department of Ferrol, dated in San Lorenzo, December 19, 1804, dealing with the permanent English presence in the Ares estuary, Grandallana stated, "The English will be driven out of our roads and away from the coast as befits the dignity of the navy." RAH, 11/8.306 (32). But the situation continued. See the correspondence from December 1804 to December 1805 in which the Captain General of Ferrol informed Manuel Godoy about the ships that the lookouts on Mount Ventoso and the coast of Corunna had spotted sailing down the coast or anchoring in some of the estuaries above that of Ares. RAH, 11/8.309 (1 a 13).

<sup>75</sup> The fear of a repeat performance of Gibraltar in the Cantabrian sea was ever-present throughout the century, the main candidates being, according to the Spaniards, Gijón and Corunna. *A Sketch of Gixon in Austuria a Province in Spain*, (1781), 1 MS plan col., 64x49 cm. AGS, MPD, 28, 19; AGS, SG, leg. 3.387.

<sup>76</sup> Neither in the Atlantic nor in the Mediterranean. In the latter, the defenses built to counter the threat of piracy would shape the typology and location of its cities. FERRER MARSAL, Juan, "El problema de la piratería y su relación con la ordenación del territorio y las obras públicas costeras", in Sánchez Fernández, Ana (coord.), *II Congreso Internacional de Estudios Históricos. El Mediterráneo: un mar de piratas y corsarios*, Santa Pola, Ayuntamiento de Santa Pola, 2002, p. 67.

that, despite all the technical and financial efforts, was never in a position to repel a concerted assault by an enemy landing force.

To fortify the Galician coast in 1801 would have required 5.2 million reales<sup>77</sup>, equivalent to the cost of building two ships of the line, a paltry sum when taking into account that 73 ships were launched at the Ferrol shipyard during the eighteenth century, to wit, 34% of all the ships that the Crown built, 43 of which were ships of the line<sup>78</sup>. Given that England was regarded as Spain's enemy for much of the century, and that it was generally held that it was only possible to inflict damage on the country by sea, ruling out such an investment only helped to encourage the Galicians to become privateers, for which purpose it was essential to protect anchorages and ports with batteries, such as those at Camariñas and Corcubión (the latter being the most accomplished and modern versions capable of crossing their fire), that could deploy between 15 and 20 cannons mounted on carriages with the same axle width as Galician carts, thus allowing them to be transported along the region's highways. With a view to manning these guns, it was recommended that men serving in the *caudillatos*<sup>79</sup> be sent to the provincial capitals, one or two Sundays a month, to be trained in their use. In this way, they were given something useful to do, for they were considered to be an insubordinate and undisciplined rabble.

In short, the burden of defending Ferrol – and Galicia – shifted from fortifications to men, first soldiers and then sailors, the latter being fishermen rather than seamen of the royal navy. But nor was this measure ultimately implemented. Ferrol was doubtless the most vulnerable, and at the same time most impregnable, stronghold of the Spanish Empire. Though not because of its natural qualities or fortifications, but because the drawn out “cold war” had

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<sup>77</sup> HERMOSILLA, *op. cit.*, pp. 261-77.

<sup>78</sup> MARTÍNEZ GUANTER, Antonio Luis, *Construcciones navales Españolas 1700-1796*. URL: <http://foro.todoavante.es/viewtopic.php?f=45&t=3310&start=0>. Accessed June 1, 2020.

<sup>79</sup> In 1705, a kind of local urban militia was created to protect the villages and hamlets without garrisons, located on the coast of the Kingdom of Galicia and in a coastal strip two leagues (6.9 miles) deep, against the affronts and raids of enemy forces and pirates. Each group was formed by men belonging to the same village, armed each in his own way, without coming under military jurisdiction or any other kind for that matter, other than that of a number of local headmen or leaders (*caudillo* in Spanish) in the event that they were called to muster, hence their name *caudillatos* of Galicia. The number of men theoretically serving in these militias (19,940 on the coast and 22,381 in the interior) was unrealistic. FERNÁNDEZ VILLAMIL, Enrique, “Caudillatos de la provincia de Tuy”, en *El Museo de Pontevedra*, VI (1951), pp. 83-96.



a very negative impact on Spain, at little cost to its enemies, for the country always lived in constant fear of an invasion and, consequently, had to face escalating costs, an expenditure that nevertheless did not guarantee the protection of the Maritime Department of Northern Spain or its nerve center. This permanent state of apprehension and uncertainty was perhaps more damaging in the long term than a hypothetical invasion.

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