Military orders already in the medieval phase of its activity gained a great influence in the Northern Europe. Mainly in the German Reich, Scandinavia and in the areas of contemporary Lithuania, Russia, Latvia and Estonia. However, The Order of St. John expanded their importance in the modern period. At that time the Order was considered as the main promoter of the modern naval art of war. Being a Knight of Malta was considered as a special ennoblement in the aristocratic circles.

Despite the large distance between Scandinavia and Malta, links between the political elites of countries of the Baltic Sea region and the Order of St. John were very strong. In the case of Denmark and Sweden often meant about religious fascinations, promoting and upholding Christian values through relationships with the legendary Order. Cultural aspirations, especially in the eighteenth century, certain aspects of the representative glamor associated with monumental absolute monarchy were important as well. But mainly in the seventeenth and eighteenth centuries we observe very utilitarian dimension of the relations between the Order and the Northern monarchies. The main subjects of the relationships are combined usually with military and economy. In the first case meant about to take advantage of the theoretical and practical achievements of Hospitaliers in the field of art of war at sea. Particularly it concerned the experience acquired during the battles in the Mediterranean mainly in the field of navigation, handling of vessels and tactics. We cannot also forget that the rulers of the northern countries were likewise very interested in transferring marine technology on the ground of the military art of the Baltic Sea countries. Probably the

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1 Especially Gustav III in the second half of the eighteenth century, impressed signs of the French or Russian absolute monarchy; A. Kersten, Historia Szwecji, Wrocław 1973, s. 230.

2 Looking at the mutual relationships through the correspondence we get just such an image, v. AOM F1200-F1457, the selection of correspondence with the rulers of Denmark, Sweden and Russia; v. J. Galea, A Catalogue of the Manuscript Volumes of the Archives of the Order of Saint John of Jerusalem preserved in the Royal Malta Library, Mdina 1977.
The best example of the transfer of knowledge and experience is the activity of an eighteenth-century creator of the naval military power of Sweden, Admiral Fredeik Henrik af Chapman³.

The Knights of Malta in Denmark

The Hospitallers came to Scandinavia as the preachers in the second half of the twelfth century. At the local courts they urged to participate in the crusades. Such a character had their first contacts with the Danish monarchy. Already in 1219 monks supported the rulers of Denmark in the expedition against the pagan Estonians. In this manner, they contributed to the extension of the Christian territory in Scandinavia⁴. It had to be a significant aid if the symbol of the Order became the inspiration for the Danish flag⁵. However, the benefits were bilateral. The Hospitallers received a number of estates and immunities. Based on these they began to create wealth, which quickly transformed into commanderies⁶. In 1266, after several years, they established in these lands the priory. In the historical literature it is presented under the name of Dacia priory⁷. The composition of these assets consisted of nine estates – commanderies. The priory included the area of the current Denmark, Norway and Sweden. In proper Denmark were six estates⁸, while in contemporary Norway Hospitallers had one commandery in Værne⁹.

The priory of Dacia was a part of German province of the Knights. However, despite significant ideological and economic impact on the Danish elites, the financial incomes of the Order the granges were small. The priory of Dacia among the Knights was regarded as impoverished. Therefore, compulsory payments for the Main Treasury of the Chapter were quite irregularly transferred to Rhodes Island¹⁰. Hence, in 1433 the General Chapter of the Order pondered transfer of the priory for the Teutonic Order in

³ D.G. Harris, F.H. Chapman: the first naval architect and his work, Annapolis, Md. 1989, passim.
⁵ H. Henningsen, Dannebrog og flagføring til søs., Helsingør 1969, ss. 7–20.
⁶ This phenomenon was characteristic of the whole of Europe after the third crusade cf. S. Lipiec, Joannici w średniowiecznej Polsce, „Mówią Wieki” 2008, nr 1, ss. 42–46.
⁷ This name is purely coincidental with the Roman definition of modern-day Romania and stems from confusion to determine Danica, namely Denmark and Dacia - from Dacia, the Dacians; H.J.A. Sire, Kawalerowie maltańscy, Warszawa 2000, s. 306.
⁸ Ibid., s. 163.
⁹ T. Svandal, Hellige krigere: Johannitterne på Værne kloster, Rakkestad 2010, s. 45.
exchange for his commanderies in Sicily\textsuperscript{11}. However, the problems within the Order had no impact on the cultural influence of the Knights on the elites of the country. Some young Danish nobles took part in the life of the Order and willingly learned the art of war. They did it both, within the Kingdom, as well as taking part in the caravans, which were armed, naval patrols on the Mediterranean\textsuperscript{12}. However, in the years 1530-1580 the priory was temporarily liquidated because of the departure of some priors from the Roman religion (Reformation). Unfortunately, the end of the existence of the Order in Denmark came soon. Already in 1580 the properties of Hospitallers were completely liquidated and confiscated by the Crown. Part of commanderies had solved earlier e. g. Norwegian commandery in Værne in 1532\textsuperscript{13}.

\begin{figure}
\centering
\includegraphics[width=\textwidth]{photo1.png}
\caption{The parish church from the second half of the nineteenth century, which was under the supervision of the Knights in Rygge – Værne}
\label{fig:photo1}
\end{figure}

\textit{Photo 1} The parish church from the second half of the nineteenth century, which was under the supervision of the Knights in Rygge – Værne

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Political and economic influence of the Order in Denmark has been significantly reduced since the early sixteenth century. However, the merits of the Knights were widely known and respected among the chivalric elites. Even when the

\textsuperscript{11} A similar situation also occurs in the Bailiwick of Brandenburg. Under its jurisdiction were commanderies of the Polish lands. J. Baranowski, S. Kuczyński, M. Starnawska, Zakon Maltański w Polsce, Warszawa 2000, ss. 30–39.


\textsuperscript{13} P. Kurrild-Klitgaard, Johanniterridere i Danmark: riddere af Johanniterordenen („Balley Brandenburg”) og af Den Kgl. Preussiske Johanniterorden, bosiddende i eller med tilknytning til Danmark, „Personalhistorisk tidsskrift” 2013, nr 2, ss. 160–165.
priory of Dacia was completely seized and the position of the Prior became only the titular dignity.\(^{14}\)

**Knights Hospitallers in Sweden**

Like in Denmark, also in neighbouring Sweden countries Knights of Malta enjoyed an excellent reputation. Relationships of representatives of the Order with the Swedish knights has begun at the same time as with the Danish gentry. In the thirteenth century in Sweden, Hospitallers had two commanderies. The most important was that in Eskilstuna.\(^{15}\) Most of Swedish Knights did not derive from the knighthood, but from the bourgeoisie. In view of its state, they could not become professed knights. However, managers of Commandery were German or Dutch nationality. Then no one could accuse the Swedish Knight that associate the mob. However, under the influence of the German Reformation, in 1530, King Gustav Vasa has begun the process of transferring commandery of Eskilstuna for secular knights.\(^{16}\) Apart from the frers, who lived in Sweden, several Swedish knights still remained in the service of the Order. They learned sailing in the Mediterranean and took part in the caravans. In this manner they gained the war experience, especially for new ways of fighting, such as the use of the artillery at the sea.\(^{17}\)

The economic relationships between Sweden and the St. John Knights State also were very important. May be noted that the Swedish merchants supplied the iron and wood for the monks’ shipyards already in the beginning of the stay of the Order on Malta.\(^{18}\) These economic connections interfered neither distance nor religious or political turmoils. This is evidenced by examples of the material and epistolographic sources.\(^{19}\) We do not have a full list of materials and weapons, which were transported from Sweden to Malta. However, in the lists of armouries and in the books of the shipyards of Malta there are many annotations on purchases of copper, iron and wood for the construction of ships. They were bought in Scandinavia, even during the stay of

\(^{14}\) H.J.A. Sire, *Kawalerowie maltańscy*, op. cit., s. 323.

\(^{15}\) I. Collijn, *Ett nekrologium från Johanniterkloster i Eskilstuna*, „Nordisk tidskrift för bok- och biblioteksväsen” 1929, t. 16.

\(^{16}\) H.J.A. Sire, *Kawalerowie maltańscy*, op. cit., s. 308.


\(^{19}\) We have a wide cross-section of correspondence of the Order of Malta to other countries, including Sweden, part of microfilmed T. Vann, *Inventory of the Archives of the Order of Malta Microfilmed by HMML*, Collegeville 2015, t.3.
the Knights of St. John on Rhodes\textsuperscript{20}. Especially the Swedish export of metals intensified in the eighteenth century. Even now a few copies of the artillery pieces with inscriptions are kept in the collection of the National Maritime Museum in Malta. The inscriptions clearly indicate that Sweden was a place where they had been cast\textsuperscript{21}. The existence of the strong trade and political contacts also confirmed examples of the official correspondence produced by a period of three centuries of the modern period. From an economic point of view, the most interesting are undoubtedly letters of King Frederick to the Grand Master Pinto\textsuperscript{22}.

Beside the economic relations, personal fascinations of the Order of the Swedish power elite were an important factor in common relations. Despite the curtailment of activity of the Knights, King Gustav still had high esteem for them. The King was especially delighted in the maritime activity of the Order. He particularly loved galleys. Always used them when he had to travel by the sea. He also recommended it to his guard and all the civil servants\textsuperscript{23}. He saw also the utilitarian importance of this type of vessel. Thus, in the mid-sixteenth century, the Swedish fleet was equipped in several rowing ships modelled on the ships of the Knights. The Armada of galleys served as a permanent patrol service among the islands protecting access to Stockholm\textsuperscript{24}.

Major contribution to the development of the Swedish maritime art of war merited Maltese. Large-scale program was carried out with copies of plans of the Hospitaller's ships made in 1629 in the pages of Architectura Navalis by Joseph Fruttenbach\textsuperscript{25}. Its aim was to build royal fleet, it was accomplished in the thirties of the seventeenth. The composition of its fleet finally came to 42 units, including vessels of over 1,500 tons, and 30 galleys\textsuperscript{26}. These works continued Charles XI. However, several

\textsuperscript{20} Research in this area are at an early stage R.C. Anderson, \textit{Naval wars in the Baltic, 1522-1850}, London 1969, ss. 94–96.
\textsuperscript{22} Archive of Malta (AOM), F1205-F1205 Lettres de Cour écrites L’Eminentissime Grand Maître Pinto depuis 1741 jusqu’en 1748; AOM F1233-F1237, Pinto Lettres … ; AOM, F270, Liber Conciliorum Stan; T. Vann, \textit{Inventory of the Archives of the Order of Malta Microfilmed by HMML}, op. cit., t.3, ss. 125–135.
\textsuperscript{23} J. Glete, \textit{Warfare at sea, 1500-1650 maritime conflicts and the transformation of Europe}, London; New York 2000, s. 245.
\textsuperscript{24} R.C. Anderson, \textit{Oared fighting ships, from classical times to the coming of steam}, op. cit., ss. 177–178.
\textsuperscript{26} J. Glete, \textit{Hur stor var Kronan?}: något om stora örlogsskepp i Europa under 1600-talets senare hälft., „Forum navale“ 1999, s. 282.
errors were committed in this ambitious program. Ships were too large and too expensive to maintain. Probably the best example was tremendous, "Kronan" which had to be the pride of the fleet, but sank after three years\(^{27}\).

Also so willingly built galleys were too large. Despite the fact that they used polished plans of the Maltese, galleys were built in excess of its size over sense. Some of the galleys, in violation of any projects, were enlarged to a length of 90 and 100 meters and had 30 oars on one side. They were brought even by seven rowers sitting on the same bench. So great, unstable, unwieldy and expensive units could not be proved in the midst of difficult-to-navigate the skerry coast of Sweden, shallow waters of the Gulf of Bothnia, and the small islands of the Northern Baltic Sea. Soon Swedish commanders were painfully convinced of the uselessness of this type of vessel in wartime conditions\(^{28}\). The Swedes needed warships to confront with the increasing activity of Russian. In 1712, there were 12 war galleys in the harbour and in 1719 their number increased to 30 ships. The construction of vessels remained almost unchanged, but still it happened that the units were too large. The Maltese plans were used in boatbuilding also in the second half of the eighteenth century\(^{29}\).

Lively political and commercial correspondence was carried out between the Order and the rulers of Sweden. Often mutually exchanged correspondence, such as letters of congratulations for the next great masters of the elections for the position. However, majority of the letters related to practical matters. One of the most interesting epistolographic collections are letters of King Frederick to the Grand Master Pinto de Fonseca. Their main theme concerns the aid in the construction of a squadron of galleys in Sweden. An example of such letters is a letter of 13\(^{th}\) February 1749, in which the ruler asks the Knights for help for his envoy, named Schijlman, who will examine the construction and utilization "des Galères" in Malta\(^{30}\). In another letter, the monarch asks for help for the Swedish navy lieutenant who chooses Malta to perfect his profession of the officer\(^{31}\). At that time, the Swedish Minister of War, Baron Anders Johan de Hopken asks his friend, Maltese Chevalier de Polastraon, about the latest plans

\(^{27}\) Currently, the myth of the vessel possessed the minds of many historians and explorers. Everything about the ship and its underwater archeology: Regalskeppet Kronan, http://www.regalskeppetkronan.se/ [29 March 2016 r.].

\(^{28}\) R.C. Anderson, Naval wars in the Baltic, 1522-1850, op. cit., ss. 29–46.

\(^{29}\) Ibid., ss. 104–115; L.O. Berg, Development of the Swedish archipelago fleet in the 18th century, construction[,] technology and weaponry [w:] The war of King Gustavus III and naval battles of Ruotsinsalmi: VIII International Baltic Seminar 5–7 July 1990, Kotka 1993.

\(^{30}\) AOM F1204, f. 234.

\(^{31}\) AOM F1204, f. 232.
of galleys and about the possibility of the arrival from Malta instructors to train the crews of Swedish galleys\textsuperscript{32}. Renewed Swedish-Maltese contacts took on also less practical aspect. Many Swedish notables gladly visited the headquarters of the Order of Malta, in particular, to study in Maltese maritime school (since 1742). We have plenty of information about such students from Northern Europe. Probably one of the most distinguished was the brother of the Count Hessenstein in 1751\textsuperscript{33}.

Active Swedish-Maltese relations cannot be a surprise, because the Maltese fleet for several hundred years of its activity in the Mediterranean established very good reputation throughout Europe. Also from the seventeenth century the service there was considered as an excellent school for naval officers. To the extent, that in 1742 the maritime school was opened in Malta. Especially important was the opportunity to gain the combat experience ships during the battles with Muslim pirates\textsuperscript{34}. The Swedish Navy used galleys throughout the seventeenth and eighteenth century. The last, very important manifestation of the Swedish rulers’ sympathy to the Order of St. John’s was the intention to donate the possession of the Order the island of Gotland in 1806. Lucky for Sweden, this idea was not fulfilled.

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Gotland’s gift for Hospitallers proposed by the Swedish King Gustav IV was supposed to be a form of gratitude to the tsar of Russia for accolade him on the knight of Malta. Tsar Paul was then the Grand Master of the Order of Malta\textsuperscript{35}. But in spite of this symbolic gesture, Russia’s relations with Malta and Maltese were very limited at the end of the seventeenth century. Only the Maltese maritime technical thought was sometimes the inspiration for the builders of the Russian lightweight rowing galleys called scampavei\textsuperscript{36}. In the middle of the eighteenth century Russian fleet consisted of more than 500 units including nearly 100 paddleboats\textsuperscript{37}. With such strength of ships, Russia had become the new first player on the Baltic Sea. Undoubtedly, the development of the Russian naval art of war supported by Julius Litte. Italian Knight of Malta, shipbuilder invited to Russia by Tsar Paul to develop the navy. Paul Romanov,

\textsuperscript{32} AOM, F1248, f. 87.
\textsuperscript{33} J. Grima, Notes on Eighteenth – Century Naval Contacts between the Order of St John and Sweden, \textit{op. cit.}, s. 91.
\textsuperscript{34} T.W. Lange, \textit{Zakon św. Jana Jerozolimskiego jako organizacja wojskowa, op. cit.}, s. 29.
\textsuperscript{35} D. Seward, \textit{Mnisi wojny: krótka historia zakonów rycerskich}, Poznań 2005, s. 254.
\textsuperscript{36} В. Дуров, \textit{Ордена Российской империи}, Litres 2015, s. 177.
who was the benefactor and the Grand Master of the Order, and Litte were great admirers of the Order. It is mainly their military, engineering and political activities that made the Order famous among the elites of Russia\(^\text{38}\). Thus, at the end of the eighteenth century in all northern countries Hospitallers were well known and respected for their contribution to the development of the maritime art of war.

![Photo 2 Battle of Granhamn (Alands Islands) from 1720. The Russian Galley (scampavei) attacks Swedish units
Ferdinand Victor Perrot (1808–1841) (The Bridgeman Art Library, Object 364926) [Public domain], via Wikimedia Commons](image)

**Naval art of war of Knights on the Baltic Sea**

The eighteenth century is a time of the most active Baltic-Maltese relationships. It is also the period of the Great Northern War and several other confrontations in the Baltic Sea. Naval art of war, especially the boatbuilding, played the decisive role in these struggles. So the question is, why in northern Europe attention was still paid to such archaic manner of warfare, which was to use the rowing galleys. This was the time of outstanding development of the art of ship building and sailing across the seas and oceans of the world\(^\text{39}\). It is true that Knights Hospitallers through the centuries perfected their art of sailing and fighting in the galleys, but since the mid-sixteenth century, more and more victories pertained only sailing ships. They were large and relatively safe, armed with modern artillery rather than the ancient rams and the


\(^{39}\) Maritime history is a very broad discipline v. *Bibliography of World Maritime History*, http://lincolnpaine.com/bibliography-of-world-maritime-history/ [30 March 2016 r.].
short-range catapults. Why such large amounts of the rowing boats appeared in the waters of Sweden, Denmark and Finland? How could they play such a great role?

Much earlier, galleys were used in the Baltic Sea. They did not play, however, a large, independent meaning. They performed the auxiliary role as a transport vessels for civilians, for the transportation of the troops, sometimes for the supply. However, they were not used as the primary strike force in a naval battle. In Denmark and Sweden, galleys were built in twofold purposes. Firstly, as a beautiful and well-appointed ships which satisfy a sense of magnitude of the absolute monarchy (following the example of French King Louis XIV). They created several of them. The second, more important issue, however, was the low cost and the time of their production, and their efficiency in navigating on the shallow coastal skiers waters. This second aspect mainly concerned the Swedish navy. In Russia, several galleys for representative purposes were also built. Utilitarian aspect, however, was the most important in both enemy countries

The rowing ship can be quickly built, it is simple to use and does not require arduous crew training. At the same time the daily maintenance not caused too many costs. But more important reason than operational considerations was the possibility of a very efficient combat use in those geographical conditions which prevailed in the Baltic Sea. The climate of the middle and northern Baltic Sea is unfavourable for outdoor rowing ships. However, it is compensated by the appropriately useful in the battle coastline's shape of southern Sweden and Finland. Particularly in the so-called. Aland Sea (Baltic Sea Region North) we are dealing with the skier coast. This, in turn, is characterized by a very large number of islands, islets, solitary rocks and shoals. Direct area of Stockholm and Åland, and the approaches to the Finnish Turku (Åbo), to the Gulf of Finland, abound in the bays. A shallow and narrow waters were too dangerous for deeply immersed and a little manoeuvrable sailing ships. However, were perfectly suitable for the galleys, which had a shallow immersed, and in addition could effectively avoid many barriers. These conditions resemble archipelagos of the eastern part of the Mediterranean, among which the knights of the Order of St. John of

Jerusalem took on the combat practice and experience\textsuperscript{43}. Mostly Swedes enjoyed with their experience. Already during the reign of Gustav in the mid-sixteenth century they expanded their rowing fleet to the large size\textsuperscript{44}. It was served as a regular patrol among the islands of shielding access to Stockholm. Despite the lively personal\textsuperscript{45} trade and political contacts, which the Swedes kept with the Knights of Malta in the seventeenth and eighteenth century\textsuperscript{46}, they did not derive from the Order's teachings as much as the Russians, who after all were newcomers on these waters. That is why the tsarist rowing fleet scored spectacular victories over the ships of the Three Crowns, as in the famous battle of Hanko\textsuperscript{47}. Just there, small galleys and crews of Tsar Peter I clearly demonstrated their superiority in the use of the rowing galleys tactics.

We must note, however, that in the eighteenth century, so much the Swedes trusted galleys, that it is their rowing fleet guarded the entrance to Stockholm\textsuperscript{48}. The approach to the city is not the easiest from the nautical point of view. It is rich in numerous of islands, skerries, shallows. On the one hand, it is difficult to navigate, but on the other it is a perfect place for conducting the naval combat in close quarters while maintaining their high maneuverability. For this purpose, however, galleys are particularly suitable, in such an environment that would predominate over the sailing boats. Especially that the approach to the port of Stockholm is located on the west. This, in turn, must mean struggling with winds just from the Scandinavian Peninsula\textsuperscript{49}. Giving the watchdog service of the capital of the kingdom to small rowing-sailing units –, which could cooperate in the framework of the "swarms of ships" intensified their strength. In this way, the flotilla could successfully repel repeated attacks of the enemy's larger sailing vessels, probably the Russians. Under such conditions,

\textsuperscript{43} F. Braudel, Morze Śródziemne i świat śródziemnomorski w epoce Filipa II, op. cit., t.1, ss. 110–172.
\textsuperscript{44} J. Glete, Warfare at sea, 1500-1650 maritime conflicts and the transformation of Europe, op. cit., s. 282; J. Grima, Notes on Eighteenth – Century Naval Contacts between the Order of St John and Sweden, op. cit., s. 92.
\textsuperscript{45} Among the Knights of Malta were a lot of Swedish knights, who took part in the sea caravans and taught at the Faculty of Navigation, which was built in 1742 in Malta E. Potkowski, Rycerze w habitach, op. cit., s. 270.
\textsuperscript{46} Swedish rulers often turned to the Order of St. John for assistance in the training of crews, and to deliver plans to build new vessels. This is reflected lively correspondence between the parties. R.C. Anderson, Naval wars in the Baltic, 1522-1850, op. cit., s. 177.
\textsuperscript{47} J. Glete, Warfare at sea, 1500-1650 maritime conflicts and the transformation of Europe, op. cit., ss. 38–45.
\textsuperscript{48} L.O. Berg, Development of the Swedish archipelago fleet in the 18th century, construction[,] technology and weaponry, op. cit., passim.
\textsuperscript{49} K. Rokiciński, Geograficzna i hydrometeorologiczna charakterystyka Morza Bałtyckiego jako obszaru prowadzenia działań asymetrycznych, op. cit., passim.
inexorably their units had to lose the nautical and combat ability. The idea of the use of potentially weak and outdated units under favorable nautical and geographical conditions against more perfect rowing-sailing units must deserve for appreciation. This is an important and really big contribution of the St. John Order sailing experience and technology in the development of the Swedish naval art of war.

The technique of combat

However, the world of shoals islands and lonely rocks is only one of the types of battlefields of the Baltic Sea where the advantages of sailing-rowing boats were being used. The second type of the field of battle was the open sea, where from the beginning of the seventeenth century, the new types of ships appeared. Fleets began to replacing the old galleys or small galleons on the sailing ships. These have high sides and could result in a struggle with the cannons. Great the sailing ships were carrying on its decks a few dozen guns, whose volleys were very dangerous for opponents. This concerned only the fight of equal units\(^50\).

The situation was different when it came to the battle of the sailboat with galley or several galleys. Their decks were too small to carry so many guns, and also decks were not enough big for people to paddle and wage an artillery fire. They adjusted the way of fighting of galleys to new types of ships. In the clash with a large sailing vessel, which had a significant firepower of their guns, tried as soon as possible to get near its high sides in order to prevent the destruction from the cannon volleys\(^51\). This tactic was particularly effective when the rowing ship emerged suddenly from some island or peninsula and successful maneuver came close to the sailing ship. Typically, a gunshot of his immotile passed high above the flat decks of galleys and not inflict much damage. Rigging and masts were rarely destroyed or broken. After a successful approach to the enemy, sailing ship was fired from the board guns, which stood on the bow of the ship and fired from the firearms. Then the infantry was breaking into the deck and occurred the furious hand-to-hand fighting. Galleys rarely attacked the high seas sailing larger units due to the high and short Baltic wave, which overflowed the low sides of the rowing ship and threatened to submerge the unit. An attempt was


\(^{51}\) R.C. Anderson, *Oared fighting ships, from classical times to the coming of steam*, op. cit., ss. 180–182.
also to strike of the entire fleet of galleys, which encircled the opponent's ships and captured it in the combat\textsuperscript{52}.

The Baltic combat tactics of galleys were greatly modified in relation to the solutions of the Knights of Malta. Hardly ever were the tactics of ramming of the enemy used. The board artillery was frequently used and often attacked in several small, but cooperating groups. Usually, however, they used the gifts of the skerries coastline. Therefore, galleys rarely operated in the open waters of the Baltic Sea\textsuperscript{53}.

**Construction of the Baltic galleys**

The eighteenth-century galley was a slim unit with low sides (1 - 1.5 above the water line). Its immersion was not more than two meters. The displacement no more than 200 tones. The length of the hull ranged from 50 to 55 meters and a width of 5 to 6 meters. The classically built ship, provided by the patterns of the Knights of Malta, the ratio of the width to length was as 1 to 6, and in some cases even as 1 to 9\textsuperscript{54}. The combat, properly built Baltic galley is not much different from the Mediterranean constructions. Usually, however, it belonged to these shorter and narrower, while its immersion fluctuated even around 1 meter. Due to its smaller size it was more efficient in fighting next to the skier coastline\textsuperscript{55}.

Since the beginning of the sixteenth century, a special platform for the artillery - "rambade" was placed on the bow of the galley, where several guns were attached. There were typically 3 to 7 pieces. One of them was located in the middle. It generally had larger caliber than the others. The efficacy of guns was from 500 to 800 meters. Precisely such a maximum distance was overcomed by galley during a direct attack. This distance translated into two minutes of approaching to the boarding from the deck of galley. This was also the average time of a cannon shot. Unfortunately, it was not possible to re-prime the guns. At the peak, which shielded them, they placed an additional squad of soldiers who guarded the long firearms at the time of approaching to the opponent\textsuperscript{56}.

\textsuperscript{55} L.O. Berg, *Skärgårdsflottans fartyg*, op. cit., ss. 52–53.
In the middle of the hull from the stern of the ship’s bow, on both sides were placed from 24 to 30 benches for the rowers, who were sitting next to each other, back to the direction of navigation. Together they pulled for wooden or metal pads attached to the trunk of oars. Gripping the oars for the handle was impossible, because it had a thick of a male thigh. The greatest effect can be achieved when one side accounted for 20-26 oars. Each of them weighed about 250 kg and was handled by four people. In all of Baltic fleets oarsmen were only infantrymen, whose main task was not just rowing, but also attending a battle. After coming closer to the enemy ship and tackling with it, they left their oars and took part in battle onboard. It was a significant difference in relation to the fighting in southern Europe. Oarsmen were usually slaves who were not freed during the boarding.

The most of maneuvers were usually carried out at paddlesteamer. This way of moving boats provide a significant speed, but the rough sea caused the unit to be laterally unstable and easy to overturn. Cruising speed obtained by the rowing was about 4 knots while the attack could increase up to 7-8 knots (15 km / h). Oars were the basis of the galleys drive. However, in favorable circumstances, also they sailed, but

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57 J. Glete, *The Oared Warship*, op. cit., ss. 98–100.
only at the calm sea, weak currents and a slight breeze. But then the galley was a combat ineffective. The crew could have a good rest\textsuperscript{61}.

The secret of the longevity of galleys, as a warship, was based on the independence from the wind. Its great advantage was speed and manoeuvrability, whereby the brilliant combat tactics were possible. This ship, due to extreme efforts of the rowers, but also by the great harmony of the crew and commanding, was able to overtake the enemy for a short distance, turn around even in a spot and suddenly move to attack. No sailing ship had such possibility. The galley additionally could do it on a small, shallow waters, with totally windless weather. The ability to navigate through the shallows was the biggest advantage of the galleys. Its main drawback was the low range and low sea prowess, as well as displacement. Because of its small tonnage and instability at the strong side wave only in exceptional circumstances, decided to sail on the open water. It seems, therefore, that it was the perfect ship to carry fighting in the conditions of the skierry, fjord and archipelagic coastlines. Always in such conditions better all sailboats. Unfortunately, the use of it in open water conditions led to its elimination. Regardless of its flaws through the wise use; it was the invincible weapon for Swedes to defend their coast.

**Conclusion**

Twilight of galleys, as warships, practically began in 1768, when Gustav III became King of Sweden. The young ruler decided to take advantage of the fact that Russia got involved in an exhaustive war with Turkey. In July 1788 the Swedish army moved towards St. Petersburg. But soon was stopped. They signed a truce, but one year later the Swedes attacked once again. The Russians quickly took the initiative\textsuperscript{62}, but fortunately Swedish sailors definitively smashed the Russian armada in the Second Battle of Svensksund (1790)\textsuperscript{63}. Already mentioned Knight of Malta Julius Litta played a huge role in it\textsuperscript{64}. It was the largest naval battle in the history of Scandinavia. Thus ended the last act of the struggle for hegemony in the Baltic Sea. Simultaneously the last naval struggle, in which a significant contribution had rowing boats built according to the Maltese instructions. In the near future, galleys ceased to play any role. Thus, after two thousand years, the last chord of the war galleys died away war.

\textsuperscript{61} J.H. Pryor, *Geography, technology, and war*, op. cit., s. 42.
The career of the Order of Malta in Scandinavia and Russia was coming to the end. The Order at the end of the eighteenth century loses Malta for Napoleon. Its European properties are secularized, seized and sold. For a long time many of the Knights passed on a Protestant and disassociated goods Hospitallers from the matrix. That happened just in Scandinavia. The great journey of the Maltese to Russia and attempts to reactivate its power there at the side of the tsars had failed. At the end of the eighteenth century, it passed both, the power and the fashion for being a Knight. The Order had to seek new forms of activity. These were born only in the next century. The great and excellent technology of the naval combat did not survive. The relationship of the Nordic countries with the same Malta had stopped completely at the end of the eighteenth century. Nobody wanted to be Hospitallers. A centuries-long cooperation Swedes, Danes, Russians with the Order was ended. Probably, however, without the aid of the Order, Swedes and Russians would never construct such a great navies. Today we admire their remains and myths.