

From Lepanto to Lemnos

The evolution in the employment of galleasses in the Venetian navy

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ABSTRACT – The Battle of Lepanto in 1571 saw for the first time the operational employment of a new type of Venetian combatant ship: the galleass. It was a specifically military evolution of the merchant galleys, already protagonists of the glorious season of the *mude*, the state convoys that from the end of the thirteenth century ensured the transport from the Levant of particularly valuable merchandise, such as spices and silk. After the great victory of Lepanto and for over a century, the galleasses became a symbol of Venetian naval power, propagandized by the Republic as key elements in naval operations. The reality was less bright. Having been mothballed for a few decades after Lepanto, the galleasses experienced a fluctuating employment between war against privateers and actual conflicts, offering their best performance in collaboration with sailing ships and galleys during the War of Candia (1645-1669). The aim of this essay is to analyze how galleasses were employed and identify their characteristics and limitations.

KEYWORDS: LEPANTO, LEMNOS, MEDITERRANEAN, VENETIAN NAVY, GALLEASSES

From merchant galleys to galleasses (via England and France?)

The main reason for the existence of the galleasses can be considered their powerful ordnance. Ordnance on ships had known an early employment in Venice, at least since the war of Chioggia (1378-81)². In the second half of

1 Abbreviations: ASVE =Archivio di Stato di Venezia (State Archive of Venice); BMC = Biblioteca del Museo Correr (Correr Museum Library); BNM = Biblioteca Nazionale Marciana (Marciana National Library); ms. = manuscript; disp. = dispatch; rel. = report; scr.= writing; s.d.= undated.

2 In 1378, four great galleys were loaded with «mangonels, bombards, and other war devices» [«mangani, bombarde, e altri istromenti da guerra»], although it is not clear whether they intended to use the bombards on board or disembark them for land operations. In 1379 Ve-

the 15th century, after the impressive successes achieved by the Ottomans in the first Venetian-Turkish war (1463-1479) thanks also to the employment of long caliber artillery on its ships, the Republic had started a policy of building large ships³. Which soon led to the idea of carrying heavy cannons. The Serenissima Republic followed in this a trend common to the other European maritime powers and focused on the construction of large ships armed with cannons of big calibers that were able not only to shoot the crews, as did the small caliber guns employed until then, but also to seriously damage hulls and equipment⁴. Venetians and Ottomans were at the forefront in the adoption of large ships with powerful artillery, but in the battle of Zonchio (modern Navarino, August 12, 1499) they proved to be still immature for an effective military employment⁵. The shortcomings of the ships cooled down the interest in the sailing vessels, not only of the Venetians and the Ottomans, but also of the other of Mediterranean powers, and turned them again towards the rowing vessels, which could exploit more effectively the heavy ordnance. The galleys thus enjoyed a resurgence for most of the 16th century, so much so that they also found a place in the seas of North Europe⁶.

netians and Genoese certainly clashed in the Apulian waters fighting «for quite a while with bombards, and crossbows» [«per buon pezzo con bombarde, e balestre»]. In the same year two cogs were «well equipped with artillery» [«ben fornite d'artiglieria»] and at least one cog «equipped with bombards and crossbowmen» [«fornita di bombarde e balestrieri»] were employed in Chioggia, while in the attack on Zara in 1380 the Venetian galley army «shot many artillery projectiles and bolts» [«tirò di molte artiglierie e verettoni»]. Daniele CHINAZZI, *Cronaca della guerra di Chioggia*, Milano, Daelli e C., 1864, pp. 37-38, 43, 46, 133. About the employment of the artillery and the naval operations in the War of Chioggia, see Simone LOMBARDO, *Galee, bombarde e guerre di simboli. Innovazioni negli assedi anfibi di Chioggia tra genovesi e veneziani (1379-1380)*, in «Nuova Antologia Militare», 2 (2021), 5, pp. 3-39; Antonio MUSARRA, *Il Grifo e il Leone. Genova e Venezia in lotta per il Mediterraneo*, Bari, Laterza, 2020, pp. 255-264.

- 3 Frederic C. LANE, *Venetian Ships and Shipbuilders of the Renaissance*, Baltimore, John Hopkins, 1934, pp. 48 e 50.
- 4 See Jan GLETE, *Warfare at Sea. Maritime Conflicts and the Transformation of Europe*, London-New York, Routledge, 2000, p. 138. We consider heavy cannons here those with shots heavier than 12 English pounds.
- 5 See Marin SANUDO, I Diari, II, Venezia, F. Visentini, 1879, pp. 568-70, 1244, 1290-1292; Frederic C. LANE, *Le operazioni navali e l'organizzazione della flotta, 1499-1502*, in ID., *Venetian Ships*, pp. 260-262; John F. GUILMARTIN, *Gunpowder and Galleys. Changing Technology and Mediterranean Warfare at Sea in the Sixteenth Century*, London-New York, Cambridge University Press, 1974, pp. 86-88; GLETE, cit., pp. 93-95.
- 6 About the close relationship between galleys and heavy guns, see GUILMARTIN, *Gunpowder and Galleys*, cit., pp. 156-175, 295-303; GLETE, cit., pp. 27-28. About the squadrons of gal-

Galleys were excellent firing platforms for artillery, but could only carry one true heavy gun, the center-line gun⁷. Because of this limitation, the idea came up of designing a type of oar-propelled vessel capable of carrying more heavy pieces, in a number close to that of the sailing vessel of the time. It should be remembered that the very high numbers that are often stated for the artillery of the ships of the late 1400s and first half of the 1500s refer to all pieces on board, without distinction between heavy and light cannons. One example is the English *Sovereign*, which in 1509 carried 69 pieces, only 14 of which could be considered heavy. Carrying even a dozen large-caliber cannons could represent not only a considerable step forward compared to a galley, but also a viable alternative to sailing warships and their operational limitations⁸.

Traditionally, the galleass is considered an original Venetian product, derived from the merchant great galleys employed in the *mude*, the public convoys organized since the end of the thirteenth century to transport spices and other luxury goods from the Levant⁹. However, even before the middle of the 16th century, large rowing vessels similar to the galleasses had been built in England and France. During the reign of Henry VIII, a number of galleasses entered service, including in 1515 an 800-ton Great Galley, and in 1545 the 450-ton *Great Mistress*. A couple of other galleasses, of French construction, were captured by the Scots¹⁰. Many of these vessels were converted into sailing warships, and it is not clear to what extent they were originally conceived with the idea of using a rowing deck for heavy cannons, as would later be the case with the Venetian galle-

leys employed in the northern seas by Spain, France, England, Scotland, and Denmark, see Nicolas A. M. RODGER, *The Safeguard of the Sea. A Naval History of Britain 660-1649*, New York, W.W. Norton & Company, 1999 [London 1997], pp. 166-167, 170-172, 183-187, 208-212, 289-293; GLETE, cit., pp. 139-143.

- 7 On the ordnance of the Mediterranean galleys, see GUILMARTIN, *Gunpowder and Galleys*, cit., pp. 166-173. In fact, some Spanish galleys added to the centerline gun two other cannons that could be considered heavy, but this was the ultimate limit for a galley.
- 8 Angus KONSTAM, *Tudor Warships, 1, Henry VIII's Navy*, Oxford, Osprey, 2008, p. 32. The volume lacks a critical apparatus, but the author, formerly Curator of Weapons at the Royal Armouries of the Tower of London, is a reliable source.
- 9 In 1593 Marcantonio Pisani, *Governatore della Milizia da Mar* (the magistracy that dealt with maritime conscription), stated that all the galleasses stored in the Arsenal had been «manufactured as merchant vessels when six, eight and ten of them were sent to Syria, Alexandria, Aigues Mortes, Flanders and other places» [«fabbricate per mercanzia al tempo che se ne mandavano sei, otto e dieci in Siria, Alessandria, Acque Morte, Fiandra e altri luoghi»]. ASVE, *Materie Miste Notabili*, busta 31, scr. Marcantonio Pisani 3.3.1593, c. 35r.
- 10 KONSTAM, *Tudor Warships*, 1, pp. 17-18, 28-30.

asses, or for other purposes, such as to build larger rowing vessels for better use in Atlantic waters¹¹. In any case, it should be remembered that there were certainly exchanges between Venetian and English shipyards - in 1562 the Venetian Agostino Levello was the best paid master builder at Deptford, more than the later famous Peter Pett and Matthew Baker¹² - so it is also possible that the idea of transforming merchant galleys into galleasses was suggested to the Venetians by previous foreign experiences.

The most certain and direct origin of the first Venetian galleasses goes back to the 1560s, with a conception started perhaps already in 1560¹³ or with greater certainty in 1564 and concretized starting from 1567 following the fears aroused by the Ottoman attack to Malta in 1565¹⁴. The war of Cyprus (1570-73) gave the final impetus and in the 1570 campaign the Republic lined up 12 galleasses¹⁵, which joined the 110 galleys prepared for the occasion¹⁶. It is not clear what the transformation of the great galleys into galleasses consisted of¹⁷; it certainly involved the upper work, with the erection of two castles at bow and at stern to position the ordnance, and most likely also involved modifications to the careen, or at least to the connecting elements between the latter and the upper work, to support the weight of the new weapons¹⁸. What is certain, however, is that most of

11 Tom GLASGOW, «Oared Vessels in the Elizabethan Navy», *Mariner's Mirror*, LII (1966), p. 376 (371-377), argues that English galleasses had no relation to Mediterranean galleasses, but refers to the ships in Anthony's Roll of the 1540s, which had been rebuilt as warships.

12 RODGER, cit., p. 232.

13 Pietro TURATO, *Le galeazze di Lepanto: tra tradizione e innovazione*, tesi di laurea triennale, Università degli Studi di Padova, Dipartimento di Scienze Storiche, Geografiche e dell'Antichità, Anno Accademico 2020-21, p. 6.

14 Marco MORIN, «Le galeazze a Lepanto», in *Oltre Lepanto. Dallo scontro di ieri all'intesa di oggi*, Pergine Valsugana (TN), Vox Populi, 2012, p. 110 (103-124).

15 In 1570 there were 12 galleasses in service and not 11 as stated by Antonio LAZZARINI (*Boschi, legnami, costruzioni navali. L'Arsenale di Venezia fra XVI e XVIII secolo*, Roma, Viella, 2021, p. 28), who seems to omit the flagship galleass. See ASV, Senato Mar, filza 46, 14.11.1570, all. s.d.

16 On the mobilization of 1570, see Guido CANDIANI, *Dalla galea alla nave di linea: le trasformazioni della marina veneziana (1572-1699)*, Novi Ligure, Città del Silenzio, 2012, pp. 193-196.

17 The term galleass was already in use as a synonym for a great galley, so that it was used even by foreign sovereigns. See ASVE, *Archivio proprio ambasciatori in Francia*, busta 1, disp. Giovanni Antonio Venier e Giovanni Pisani n. 23, 29.4.1531, c. 31v, concerning a meeting with Francis I.

18 An analysis in TURATO, cit., pp. 12-13. There are texts that offer more or less fanciful reconstructions of the galleasses, without any reference to contemporary documents, at the current



La galleass Salamander, 1546 ca. (Anthony Roll of Henry VIII's Navy: Pepys Library 2991 and British Library Additional MS 22047 – Public domain)

the Venetian galleys had adopted the *scaloccio* rowing system, which provided one oar each bank with several oarsmen (four in the case of galleasses, although only three were actually employed at Lepanto) per oar¹⁹. The ordnance certainly ranged from 10 to 14 heavy guns for each galleass, to which 22 to 26 pieces of smaller calibers were added²⁰. The precise disposition of the ordnance is less

state of research very sparse or completely absent. Even the iconographic sources of the time do not provide certain support, being often the work of painters or illustrators not present at the time. It is curious to observe how authors trained in the rigor of archival sources can consider such texts scientifically valid. See LAZZARINI, cit., p. 30, note 45.

19 LAZZARINI, cit., p. 29. I thank Pietro Turato for pointing out this detail.

20 ASVE, *Secreta Notabili*, registro 18 bis, s.d., artiglierie fornite dall'Arsenale alle galeazze nel 1570, cit. in Walter PANCIERA, *Il governo delle artiglierie. Tecnologia bellica e istituzioni veneziane nel secondo Cinquecento*, Milano, Franco Angeli, 2005, pp. 220-221. It also seems

certain, even if it can be assumed that the heavy guns were placed fore and aft, with the main pieces, such as the 50-pdr. culverins, at bow.²¹ We remind that the culverins were longer (a 50-pdr. culverin was 24 caliber long, a cannon just 18) and more powerful than ordinary cannons of the same caliber, thus providing a longer useful range²².

A first discussion about the employment of galleasses, which already hinted at uncertainties about their functions, took place during the first campaign. When the Venetian and Italic-Spanish forces²³, sailed from Crete to help Cyprus, reached, in the third decade of September 1570, Kastellorizo, the easternmost of the Dodecanese islands, they learned of the fall of the capital of Cyprus, Nicosia. Charged with rescuing Famagusta, the main stronghold remaining in Venetian hands, one of the commanders, Sebastiano Venier, proposed to add 12 galleasses to the sailing ships planned for the expedition, which he considered too exposed to the risk of lack of wind. The *Capitano Generale da Mar* Girolamo Zane, supported by the other main commanders of the allied navy, was instead against the use of the galleasses, since he presumably deemed them even less agile than the galleys, and wanted a rescue squad made only of the latter. The diversity of opinions prevented a decision before the entire fleet was forced

that the Venetians had adopted for the galleasses pieces able to recoil much less than in the past, favoring their arrangement on board. See BMC, Mss. Cicogna, 3091, scr. Giovanni Garzoni, cit. in Walter PANCIERA, «Le artiglierie delle galere veneziane ai tempi di Lepanto», in Nicola LABANCA e Pier Paolo POGGI (Ed.), *Storie di armi*, Milano, Unicopli, 2009, pp. 180-181 (165-181).

- 21 The calibre of Venetian medium and heavy guns was expressed in *libbre sottili* (0,301 kg), so a gun of 50 *libbre* was equivalent to an English 32 pdr. Cfr. Marco MORIN, «La battaglia di Lepanto: alcuni aspetti della tecnologia navale veneziana», in Matteo SBALCHIERO (Ed.), *Meditando sull'evento di Lepanto, odierne interpretazioni e memorie*, Venezia, Corbo e Fiore, 2004, pp. 71-72 (69-77).
- 22 Not all scholars agree that an increase in piece length, beyond a certain average value, led to an increase in range. See John F. GUILMARTIN, «The Ballistics in the Black Powder Era», in Robert D. SMITH (Ed.), *British Naval Armaments*, London, Royal Armouries, 1989, pp. 73-98. What seems certain is that because the cannons were cast with the muzzle facing upwards, a longer length increased the density and strength of the metal in the rear; this allowed a larger powder charge to be used and thus to impart greater force to the projectile. GLETE, cit., p. 24.
- 23 The main component of Spanish naval forces in the Mediterranean was actually provided by the Italian domains of the monarchy and its allies on the Peninsula, particularly the Republic of Genoa. Phillip WILLIAMS, «War and Peace between the Catholic King and the Caliph: Holy War and Holier Peace in the Mediterranean, 1500-1700», in Guido CANDIANI e Luca LO BASSO (Ed.), *Mutazioni e permanenze nella storia navale del Mediterraneo*, Milano, Franco Angeli, 2010, pp. 13-38.

to return to Crete. The Senate asked then to help Famagusta with the galleasses only, deemed most suitable for navigation in the incipient winter season. Eventually aid was sent with several types of sailing ships, including, although it was already January, galleys, and no galleasses²⁴.

The pinnacle of glory for the galleasses came a few months later, at the Battle of Lepanto. On October 7, the fleet of the alliance had only six galleasses, but their presence was decisive for the outcome of the battle. This was mainly due to the aggressive, and in some ways reckless, Ottoman tactics, which allowed the galleasses to be employed in a defensive capacity to break up the advancing enemy formation. Their success was greatly facilitated by the incautious conduct of Kapudan Pasha Müezzinzâde, who, not very expert in maritime matters, decided to attack instead of waiting for the possible enemy initiative, as both his best commanders and the favorable general strategic situation advised him to do²⁵. Towed by two galleys each to about 600 meters in front of the line-up of the alliance and flanked «at a stone's throw» [«a un tiro di pietra»]²⁶, the galleasses, in particular the four of the left wing and of the center, were able to exhibit all their firepower, surprising and disrupting the advancing Ottoman formation²⁷. It must also be said that at least the two galleasses positioned at the left wing also showed some evolutionary ability, contributing to crush against the Greek mainland the Ottoman right wing²⁸.

The imprudence of the Ottoman moves at Lepanto was confirmed by the

24 ASVE, *PTM*, filza 729, disp. S. Venier 24.9.1570; lett.re G. Zane a S. Venier 29 e 30.9.1570; *Senato Secreta Deliberazioni*, registro 77, 21.10.1570, cc. 37r-37v; Paolo PARUTA, «Istorie Veneziane», in *Degl'istorici delle cose veneziane*, IV, Venezia, 1718, 2, p. 169.

25 See Niccolò CAPPONI, *Lepanto 1571. La Lega Santa contro l'Impero Ottomano*, Milano, Il Saggiatore, 2008 [London, 2006], pp. 212-214.

26 Diedo states that the distance of the galleasses from the rest of the formation was a third of a mile, about 600 meters. Id., *La battaglia di Lepanto*, pp. 23, 28. A document dated October 3rd, 1571 and related to the dispositions for the battle, established that the galleasses were towed a quarter of a mile forward (about 450 meters). ASVE, *Collegio, Secreta, Archivio Proprio Contarini*, registro 14, c. 166v, 3.10.1571, cit. in PANCIERA, *L'artiglieria delle galere veneziane*, cit., p. 166. Giovanni SAGREDO (*Memorie istoriche de monarchi ottomani*, Venezia, 1683, p. 580), speaks of half a mile (about 850 meters), but writes a century after the events.

27 On the role of the galleasses at Lepanto and on their ordnance, see MORIN, *La battaglia di Lepanto*, cit., pp. 69-77; John R. HALE, «Men and Weapons: the Fighting Potential of Sixteenth-Century Venetian Galleys», in Id., *Renaissance War Studies*, London, Hambledon Press, 1983, p. 314 (309-331); PANCIERA, *Il governo delle artiglierie*, cit., pp. 23-25, 219-223.

28 On the fight on this wing, see Guido CANDIANI, «La lucha en el cuerno izquierdo: Barbarigo y Querini contra Suluk Mehmed Pacha», in Àlex CLARAMUNT SOTO (Ed.), *La mar roja de sangre. Lepanto*, Madrid, Desperta Ferro Ediciones, 2021, pp. 207-230.

course of the following campaign, which laid bare the offensive limitations of the then renowned galleasses. After the usual conflicts between Spaniards and Venetians, the allied fleet finally sailed from Zakynthos on August 2, 1572 with six galleasses²⁹ - expressly requested by the Spaniards - together with 139 galleys and 22 sailing ships³⁰; the galleasses were seemingly thought to operate autonomously without towing by ships. The overall naval events of the 1572 campaign have been described in another work; here we will limit ourselves to an analysis of the employment of galleasses.

The first clash with the new Ottoman fleet, now led by the expert Uluç Ali, appointed as *Kapudan Pasha* after he had managed to save at least a small part of the fleet at Lepanto, took place on August 7 in the waters between Cape Malea, the tip of the easternmost of the three Peloponnesian tongues, and the island of Kythira. Uluç Ali decided to risk a confrontation because he was convinced that the cumbersome presence of galleasses (and ships) would allow him to join the battle or avoid it at his discretion, a prediction that facts would prove to be correct and that shows how well the Turks had assimilated the lesson of Lepanto³¹.

Uluç Ali kept his formation compact, retreating towards the Peloponnesian mainland; then, after noticing that being windward with the SE wind facilitated his choice of mode of action, he arranged his ships between Kythira and the island of Elafonisos, turning the bows to the enemy. The Turks had 160 galleys, well-armed and very agile, as well as 40 smaller rowing vessels; the coalition had fewer galleys, 140³², but six galleasses and 22 ships. When the wind turned in favor of the Venetian-Hispanic navy, Uluç Ali immediately began to retreat and the pursuit of the slow galleasses (and the equally slow sailing ships) continued for most of the day. As they reached the channel of Elafonisos, a dead calm convinced the *Kapudan* to break off again, while galleasses and sailing ships were forced to resort to towing. The contact did not go beyond an extensive exchange of gunfire at a distance, in which the Venetian artillery did not

29 BMC, Mss. Malvezzi 128, rel. Capitano Generale da Mar Giacomo Foscarini, cc. 133v-134r. Apparently there were only six galleasses in service, as opposed to nine in the autumn of 1571 (and twelve in 1570). ASVE, *Senato Mar*, filza 49, 26.10.1571, all. s.d.; filza 50, 5.1.1572.

30 Foscarini speaks generically of 180 rowing units, the historian Paruta provides data on galleys. Rel. Foscarini, cit., cc. 134v-136v; PARUTA, cit., pp. 309-311. According to the other official historian Andrea MOROSINI (*Delle Istorie veneziane*, in *Degli storici delle cose veneziane*, VI, Venezia, 1718, p. 531), 105 galleys and 18 ships were Venetian, 27 galleys were Spanish and 14 galleys (including two «*quinqueremi*») were papal.

31 PARUTA, cit., pp. 311-314.

32 Rel. Foscarini, cit., c. 139r.

have the possibility to dominate as at Lepanto. Towards evening, Uluç Ali retreated a third time, covered by a smokescreen created by blank cannon firing³³.

Three days later the pattern was repeated in the waters off Cape Matapan. Galleasses and ships were placed again on the front of the allied array, aided by a weak favorable wind. Then, as on August 7, the wind ceased abruptly. The Turks pushed forward their wings, where they had placed their best and fastest galleys, attempting to outflank the allied fleet and attack it from behind; the alliance replied by folding their own ends in turn into a mirrored concave crescent. The new *Capitano Generale da Mar* Giacomo Foscarini would have liked to avoid towing the galleasses, as he had already done with the ships, and to attack the enemy center with the galleys only, but the allies did not want to fight without the galleasses: the fame gained at Lepanto seemed to charm the Italian-Spanish more than the Venetians. The clash continued with another prolonged artillery duel at a distance, carried out mainly by the galleasses, which were kept at the front of the fleet with great difficulty. Eventually a NW wind put an end to any remaining chance of the alliance of advancing with galleasses and sailing ships before darkness arrived³⁴.

As on August 7, also on the 10, the slowness of the galleasses (and sailing ships) had prevented the Venetian-Hispanics from acting offensively against an elusive adversary. Foscarini stated how a fleet with many large vessels, «and [other ships] obliged to them», was at a disadvantage in front of one «expeditious, free and without the impediment of towing»³⁵. The *Capitano Generale* threw a direct jab at the galleasses, «even if well known» [«se ben famosissime»] after Lepanto. Their success was due to the fact that they were not yet known to the Turks, who «inconsiderately and barbarously came to give them the breast, [and the galleasses] will not have in the future the effects, which they had then, and it is believed by the world that they are going to have».³⁶ Uluç Ali had well understood their limitations and had devised a tactic to outflank the enemy fleet which was almost impossible to respond to, since it was very difficult to bring the galleasses (and the sailing ships) from the front to the rear of the fleet in time without putting it in serious disorder, «since it is not their duty to be moved from their place before the enemy fleet is seen to have turned and passed.

33 Rel. Foscarini, cit., cc. 138v-140v; PARUTA, cit., pp. 316-319.

34 Rel. Foscarini, cit., cc. 142r-150v.

35 «et a quelli obbligata»...«spedita, libera e che non abbia impedimenti di rimorchi».

36 «inconsideratamente et barbaramente vennero a darli in petto, [e le galeazze] non faranno per l'avvenir quelli effetti, che fecero allora, et è creduto dal mondo che siano per fare».

Which if we did early, and stripped the front line of those vessels before they had turned, it might occur that the enemy realizing this might come to strike on that side which had been stripped of defense; if we moved later, we would not be in time to move the great vessels before the enemy attacked».³⁷ Keeping them behind the fleet would have been of no help, as it would have demoralized their own forces and galvanized those of the enemy. The *Capitano Generale* considered the galleasses useless even in the unlikely event that the fleet of the coalition outnumbered the Ottoman one, since, coming to battle, the enemy would have withdrawn without problems in case they wanted to tow them, towing which moreover would have exhausted the crews of the best galleys. Rather than galleasses, it was certainly better to have more «elected» [«elette»] galleys, a consideration that Foscarini derived from the experience of Lepanto, because that day had made «forever wise the enemies» [«per sempre avveduti gl'inimici»]³⁸. Even the Venetian official historian Paolo Paruta pointed out the limitations of galleasses (and ships) that emerged in the 1572 campaign: «these successes ... taught a true and useful lesson to the navy; revealing that the *armata grossa* [sailing warships and galleasses], as it brings with its strength a lot of safety, so it can cause a lot of inconvenience and of serious damage, since those who employ it are always forced to depend on the fortune of the sea and on the will of the enemy»³⁹; it was for this reason that Uluç Ali, «experienced in the matters of the navy» [«invecchiato negli essercitii del mare»], had not brought with him the mahons⁴⁰, reinforcing instead with their crews his own thin galleys.⁴¹ Even Francesco Duodo, who had commanded the galleasses at Lepanto, writing twenty years later, admitted that, although they were «very useful» [«utilissime»] in combat, they had a «downside, since it was up to the one with

37 «non essendo dovere che si facciano muovere dal loro luogo prima che non si abbia visto girata e passata l'Armata nemica. Il che se si facesse prima e si spogliasse la fronte di quei vascelli prima che essa avesse piegato, potrebbe occorrere che, avvedendosi di ciò il nemico, venisse a colpire da quella parte che si fosse spogliata di quella difesa; se ci si muovesse dopo, non si farebbe in tempo a condurre i vascelli grossi prima che il nemico attaccasse».

38 Rel. Foscarini, cit., cc. 151v-154v.

39 «questi successi... poterono prestare un vero e utile ammaestramento nella milizia di mare; facendo conoscere che l'Armata grossa, come apporta per la fortezza sua molta sicurtà, così può esser cagione di molto incommodo e di grave danno, convenendo, chi ha da usarla, dipendere sempre dalla fortuna del mare e dalla volontà del nemico».

40 These ships were very large and particularly slow, they looked like galleasses, but without oars. Pantero PANTERA, *L'armata navale*, Roma 1614, p. 42. Later the mahons apparently become a true Ottoman version of the galleasses.

41 PARUTA, cit., pp. 320-325.

the greater number of galleys and no galleasses to join or avoid combat»⁴².

In September, the allied forces left their sailing ships in Corfu to try to surprise the enemy fleet divided between Navarino and Modone, but the galleasses slowed the advance again, allowing Uluç Ali to take shelter under the fortress of Modone. After a skirmish on September 17, the allied fleet kept the Ottoman fleet uselessly pinned down for about a month, and when supplies began to run low it had to retreat. Uluç Ali was thus free to return to Istanbul, while, after the refusal of Philip II to winter the fleet in the Levant, the Italic-Spanish forces also returned to their bases, ending a particularly inglorious campaign⁴³. The following March - after a successful winter expedition of six galleasses and 26 galleys to free Cattaro (modern Kotor) from the Turkish siege⁴⁴ - the *Serenissima* signed a separate peace agreement with the Sublime Porte, putting an end to three years of war and starting a long period of grievances and disputes with the Habsburgs.

Oblivion and rebirth

After the end of the war of Cyprus, the galleasses were put in mothballs in the Arsenal of Venice and remained there for several decades, except for some used in the previous employment of merchant galleys⁴⁵. Although their fame, fed by the memory of Lepanto, was allowed to grow - so much so that both Tuscany and Spain decided to equip themselves with galleasses and some ships participated in the expedition of the Invincible Armada of 1588-89 - the *Serenissima* did not find their use suitable for the ordinary tasks of the navy. Interest in the galleasses was resumed in Venice only at the end of the 1580s, when the possibility was discussed of rigging two of them to protect the merchant shipping in the waters of Crete⁴⁶. Interest increased in the early 1590s, when an investigation was conducted that exposed the problems associated with their rowing. The investigation, which hints at the construction of new galleasses⁴⁷ in the Arsenal

42 «controindicazione, perché starà a quello che avrà un maggior numero di galee e sarà senza galeazze accettare o rifiutare il combattimento». ASVE, *Materie Miste Notabili*, busta 31, scr. Francesco Duodo 9.2.1593, c. 27v.

43 PARUTA, cit., pp. 329-344.

44 Ivi, pp. 346-347.

45 See LAZZARINI, *Boschi*, p. 28.

46 ARCHIVIO DI STATO DI FIRENZE, *Mediceo del Principato*, n. 3084, c. 131v, cit. in Alberto TENENTI, *Venezia e i corsari, 1580-1615*, Bari, Laterza, 1961, p. 174.

47 ASVE, *Materie miste notabili*, busta 31, 3.5.1592, c. 1r. This anonymous writing proposed to introduce a second oar per bank, adopting a kind of mixed *sensile-scaloccio* system, with re-

and which also involved Galileo Galilei⁴⁸. Must have led to structural modifications, since from then it was no longer necessary to tow the galleasses as had happened at Lepanto⁴⁹. In addition, there was a significant increase in the number of oarsmen, which rose to 300, with six men per bank, in the regular galleasses and, at least in some cases, to 322 on the flagship galleass⁵⁰.

At the beginning of the 17th century, the improved nautical capabilities led to the revival of the galleasses on an operational level, in the context of the anti-privateer strategy that the Venetian navy was forced to undertake in order to face the dual threat of Barbary corsairs and “Nordic” corsairs (primarily English and Dutch). In the summer of 1601, not without lively discussions, it was decreed that two galleasses would be employed in this role, and at the end of the same year a *Capitano delle Galeazze* was appointed to operate in the waters between Corfu and Crete, the most exposed to the threat of the corsairs⁵¹. It was hoped that the size and fame of the galleasses would guarantee an effective fight against the corsairs, but, despite the modifications, even in these tasks the mobility of the large vessels proved to be not to be adequate for the task and the successes achieved were limited. In one of these, however, the heavy guns of the two galleasses, and in particular their culverins, led to the capture of many Breton corsairs in the waters of Kythira⁵². Doubts about their employ-

spectively 4 and 3 oarsmen for the two oars. Ib. c. 1v. At that time there were eleven galleasses stored in the Arsenal and two sailing as market galleys on the new route to Split. Ib., scr. Governatore della Milizia da Mar Nicolò Longo 16.3.1593, c. 41r.

48 PANCIERA, *Le artiglierie*, p. 179.

49 TENENTI, cit., p. 175.

50 See ASVE, *Senato Mar*, registro 66, c.145r, 15.1.1607; registro 67, 22.3.1607, c. 32v; registro 74, 21.7.1616, c. 105r; filza 219, 28.9.1618, all. s.d. These numbers often remained theoretical. In 1665 for example, the six galleasses in the Armada had between 247 and 264 oarsmen each. ASVE, *PTM*, filza 1382, disp. Capitano delle Galeazze Leonardo Moro n. 10, 31.12.1665, all. s.d.

51 ASVE, *Senato Mar*, registro 61, cc. 63r e 79r, 14.7 e 9.8.1601; *Senato Deliberazioni Rettori*, registro 94, cc. 184r e v, 13.12.1601. According to a report of 1602, there were eight galleasses in the Arsenal, two of which were new, presumably those later put into service, and six used, probably still veterans of Lepanto. ASVE, *Collegio Relazioni*, busta 57, rel. Provveditore alle 100 galee Giovanbattista Contarini, 13.3.1602, cit. in LAZZARINI, cit., p. 21.

52 Galleasses mounted cannons in wrought iron capable of withstanding a greater charge of gunpowder. ASVE, *Collegio Relazioni*, busta 73, n. 6, rel. Capitano delle Galeazze Girolamo Contarini 19.1.1604. Contarini pointed out the agility of his two vessels, if well crewed, but also admitted that «some vessels [galleasses] already built are very slow» [«alcuni delli vasselli [galeazze] già costruiti sono assai grevi»]. He also stressed that the galleasses had to be «held in high regard for defense» [«tenute ben in conto per la difesa»], forming «always

ment in anti-corsair function, and also the cost of their maintenance, did not prevent the galleasses from increasing to four during the mobilization of the Interdict of 1606⁵³.

The first real military operations of the Venetian navy after the war of Cyprus took place in 1617, when the frictions with the Habsburgs also extended to the maritime front. The previous year the so-called War of Gradisca had broken out between the Serenissima and the Habsburg archducal branch of Graz and the Archduke Ferdinand (the future Emperor Ferdinand II), under pressure from the Venetians, asked the Viceroy of Naples, the Duke of Osuna, to carry out a diversionary naval action in the lower Adriatic⁵⁴. This was followed in 1617 by a naval campaign in the Adriatic⁵⁵, in which the galleasses, increased to six⁵⁶ for the occasion, had the opportunity, for the first time after 1572, to be employed again in real war operations.

After achieving an initial success in July, the Italic-Spanish fleet made a new incursion into the Adriatic in November. On November 19, the Venetian guards positioned on the heights spotted it off Santa Croce, in the territory of the Republic of Ragusa, a strategic anchorage for the control of the Adriatic⁵⁷. The *Capitano Generale* Lorenzo Venier had the ships of the line towed out of the harbor while, thanks to the improvements introduced, the five galleasses in service moved on their own⁵⁸. Once at sea, the Venetian fleet was faced by 15 sailing ships, because the Italian-Hispanics had not brought galleys with them, probably considered unsuitable for the season. If the exit of the galleasses from the harbor occurred without towing, an excessively weak wind forced the galleys to tow both them and the sailing ships throughout the day, without however managing to make contact with the enemy, the same thing as had occurred

side and shoulder of each armata sottile» [«sempre sponda e spalla ad ogn'armata sottile»].

53 ASVE, *Collegio Relazioni*, b. 73, n. 7, rel. Capitano delle Galeazze Lorenzo Venier, 13.6.1608.

54 Osuna, already viceroy in Sicily, had strengthened the naval forces of the two vice-kingdoms, increasing especially the sailing components. On his naval policy, see Cesáreo FERNÁNDEZ DURO, *El gran duque de Osuna y su marina. Jornadas contra turcos y venecianos (1602-1624)*, Sevilla, Renacimiento, 2006 [Madrid 1885].

55 On these operations, see CANDIANI, *Dalla galea alla nave di linea*, pp. 52-55.

56 ASVE, *PTM*, filza 925, disp. Provveditore Generale da Mar Giovanni Giacomo Zane 16.7.1617

57 BMC, Mss. Cicogna 3282/II, *Lettera di ragguaglio di quello che è successo tra le due armate in mare dalli 19 fino li 22 novembre 1617*, 27.11.1617, c. 13.

58 One galleass had been disarmed to distribute the rowers to the galleys. ASVE, *PTM*, filza 926, disp. Provveditore Generale da Mar Lorenzo Venier 25.10.1617.

in 1572. Towing at least allowed to gain the windward and, around midnight, it seemed that, at the light of the moon, galleasses and sailing ships could attack: a sudden calm, however, allowed only some galleys to get within cannon range and the action petered out quickly.

The pursuit continued in the direction of Dalmatia, until on the morning of the 20, the two squadrons stalled one in front of the other. Osuna had given orders to fight in spite of the numerical inferiority, so the Italian-Hispanics did not escape the clash. It is possible that they considered their ships superior, which seem to have been real war galleons and not armed merchantmen like many Venetian ones⁵⁹, while they were not particularly afraid of galleasses. Their calculations turned out to be only partially correct, because although the Venetians preferred to keep their fire at a certain distance, they inflicted considerable damage⁶⁰. It seems that the Venetian artillery was undoubtedly superior to the Italian-Spanish one: in particular, a cannon shot from a galleass, presumably fired from one of the large bow culverins, hit the stern of the Duke of Osuna's galleon near the wheelhouse, penetrating almost until the powder magazine and almost blew up the ship⁶¹. However, none of the galleasses, and very few ships of the line, pushed the action to its fullest; it is not clear whether this was due to the usual difficulties in moving forward or to the excessive fear of the commanders, as Venier claimed with rancor. At the arrival of the night the Italian-Hispanics fled from sight and only the fastest galleys were able to chase them towards the Apulian coast, while cannonading them. The next day the sea became rough, forcing the *Capitano Generale* to let the galleys go back and board a sailing ship, but eventually even ships and galleasses lost contact with the enemy⁶².

Although Venier took issue with the cowardice of many of his compatriots and the lack of loyalty of foreign captains, the action of November 1617 confirmed the difficulties of getting galleys, galleasses and sailing ships to operate

59 We remind, however, that at the time the distinction between warships and merchant ships was rather blurred, especially if the latter were ships intended to operate in seas plagued by corsairs such as the Mediterranean.

60 Only a few more enterprising galleys approached, striking «wonderfully» [*«meravigliosamente»*] the opposing ships. During the action, one of them fired (certainly on with the large center-line gun) eighteen shots, almost all of them being «significant hits» [*«botta notevole»*]. *Lettera di ragguaglio*, cit., c. 14.

61 ASVE, *PTM*, filza 926, disp. Provveditore Generale da Mar Lorenzo Venier 7.12.1617, all. costituito 4.12.1617.

62 ASVE, *PTM*, filza 926, disp. Provveditore Generale da Mar Lorenzo Venier 23.11.1617; *Lettera di ragguaglio*, cit., cc. 13-15.

together. Once again it had been impossible to effectively bring the major ships, including the galleasses⁶³, to the front line with an enemy that employed wait-and-see tactics⁶⁴. Even when the absence of wind should have favored them, the galleasses were no longer ready: the following year, in an action to intercept two Dutch ships that were trading illegally (from the Venetian point of view) with Goro, the new *Capitano Generale da Mar* Pietro Barbarigo - having left the galleasses behind - was forced to continue the action with the galleys alone, despite the calm [«bonacevole»] weather that slowed down the sailing ships and favored the rowing ones⁶⁵. The defensive character of the galleasses was reaffirmed in 1619 by Lorenzo Venier, once more *Capitano Generale da Mar*, in a dispatch-report in which he underlined how their powerful ordnance could make «opportune resistance» [«opportuna resistenza»] to the enemy warships, backing up the thin galleys⁶⁶.

Successes against the English and in the war of Candia

The clash of November 20-21, 1617 was the only one of any importance in the war between Venice and the Duke of Osuna. For almost thirty years more, the Serenissima was not engaged in significant naval operations. However, two galleasses intended as escort of merchant ships on the routes of the Levant had the opportunity to distinguish themselves in June 1628 in the fight with a semi-private English squadron led by Sir Kenelm Digby in a privateering expedition in the Mediterranean. The two galleasses were in the port of Alessandretta (modern Iskenderun) to escort as many Venetian merchantmen when, on June 21, they were attacked by four English ships. In weather characterized by repeated and prolonged calm, the galleasses successfully defended their merchant ships, effectively standing up to the opponents, surprised by their firepower, and confirming their defensive value. After four hours, and perhaps 700 shots on each side, the clash was resolved in an armistice of which four French merchant ships in the harbor, captured by the English, had to pay the price⁶⁷.

63 A few years earlier, the *Capitano delle Galeazze* Lorenzo Venier had written that they could «attack, turn, retreat» [«assalire, girar, far ritirata»], but he was referring to situations of calm sea. ASVE, *Collegio Relazioni*, b. 73, n. 7, rel. *Capitano delle Galeazze Lorenzo Venier*, 13.6.1608.

64 ASVE, *PTM*, filza 926, disp. L. Venier 23.11.1617.

65 ASVE, *PTM*, filza 1080, disp. *Capitano Generale da Mar Pietro Barbarigo* n. 52, 22.7.1618.

66 ASVE, *PTM*, filza 1082, disp. *Capitano Generale da Mar Lorenzo Venier* n. 22, 23.7.1619.

67 *Calendar of State Papers, Venetian*, 21, pp. 136-139, 507-509; Vittorio GABRIELI (Ed.), *Sir*

The ordnance carried on the two galleasses apparently impressed the English. Based on a 1624 report, each galleasses had 34 pieces, comprising 22 cannons and 12 pierriers. More precisely, there were 8 culverins (2 of 50, 2 of 30 and 4 of 14), as many *cannons* (2 of 30 and 6 of 20) and 6 *falcons* of 6, in addition to 10 pierriers of 6 and 2 of 3. Ultimately, there were twelve heavy pieces, about the same as at Lepanto, and the spearhead remained the culverins of 50.⁶⁸ According to other (undated) documents the disposition of the ordnance was as follows: at the bow 6 cannons (2 culverins of 50 surmounted by 2 culverins of 14 and 2 cannons of 6) and 4 pierriers; at midship, 8 cannons (2 *cannons* of 30 and 6 of 20) and 8 pierriers; at stern 8 cannons (2 culverins of 30, flanked or surmounted by 2 culverins of 14 and 4 *cannons* of 6). All six forward guns and four of the eight aft cannons apparently fired toward their respective directions, while the other twelve fired from the sides⁶⁹. The major English warships also had cannons of similar caliber to those of the galleasses⁷⁰. But these large ships were only able to operate near their home harbors. The “Nordic” ships that operated in the Mediterranean were, instead, armed merchantmen that, although powerful, carried pieces of smaller calibers, usually not exceeding 12-pdr. This was also due to the fact that they almost always had iron cannons, which were cheaper but weighed more than bronze cannons of the same caliber; iron cannons were also more subject to heating and had to be cooled more often, slowing down the speed of fire in a battle.

Two galleasses were also involved in the double clash (July 3 and August 7, 1638) of Valona, when the *Provveditore d'Armata* Antonio Capello captured, together with 28 galleys, 16 corsair galiots which had taken refuge in the port. Although the galleasses had only a support role, in the first of the two fights one of them was hit at least twice, losing one of its masts⁷¹.

Kenelm Digby. Viaggio piratesco nel Mediterraneo, 1627-1629, Milano, Longanesi, 1972, pp. 91-92, 174-184.

68 For comparison, a galley had 16 guns, only 4 of which were cannons (one of 50, 2 falcons of 6 and one of 3) and 12 pierriers (3 of 6 and 10 of 3). ASVE, *Collegio Relazioni*, b. 57, n. 3, rel. Savio agli Ordini Matteo Zorzi, 25.6.1624

69 BMC, Mss. Gradenigo 163/I, c. 258r; Mss. Cicogna 3091.

70 For example, in 1622 the *Prince Royal* had 2 32-pdr. cannons and 2 24-pdr. cannons, see Frank Fox, *Great Ships. The Battlefleet of King Charles II*, London, HarperCollins, 1980, p. 32.

71 *Relazione della vittoria riportata alla Valona dalle Armi Venete dirette dall'ecc.mo Provveditore d'Armata Antonio Capello li 7 agosto 1638*, in BIBLIOTECA UNIVERSITARIA DI PADOVA, Ms. 161/3, Giacomo NANI, *Memorie per servire alla Storia Militare Marittima della Repubblica di Venezia*, cc. 294v-295v.



Galeazza dell' Armada Spagnola. Particolare di: Scuola inglese, XVI secolo,
Navi inglesi e navi dell' Armada spagnola in combattimento (1588)
National Maritime Museum, Greenwich, London – Public domain

The great war resumed in 1645, with the reopening of the centuries-old conflicts with the Ottoman Empire. In June of that year, an Ottoman fleet landed a strong contingent of troops on the island of Crete, starting the conquest of the island⁷². There followed, until 1669, twenty-five years of fighting, some fifteen of which were characterized mainly by naval campaigns. While the Ottomans were trying to supply their troops engaged in the conquest of the various strongholds of the island and especially the capital, Candia, the Venetians were striving to

⁷² The fleet seems to have consisted of two mahons, 81 galleys and 19 Turkish, Barbary and Dutch/English chartered ships, as well as about three hundred merchant vessels of various kinds. Joseph DE HAMMER, *Storia dell'Impero Ottomano*, X, Venezia, Antonelli, 1833, pp. 119, 140.

cut their lines of communication and isolate Crete from the sea.

The first years of the conflict saw a limited number of clashes that, on the Venetian side, involved only the sailing warships, whose squadrons were again formed essentially by foreign chartered armed merchantmen. Between 1646 and 1651, the ships made it possible to organize a continuous blockade of the Dardanelles⁷³, which was aimed not only at cutting off the Ottoman army's main line of communication to Crete, but also at interrupting food supplies and trade to Istanbul. This caused a serious political crisis in 1648, resulting in the deposition and murder of Sultan Ibrahim I. In order to break the naval siege, the Sublime Porte launched an important plan of construction of sailing warships and in June 1651 the renewed Ottoman fleet departed from the Dardanelles, left temporarily unguarded by the Venetians for problems with captains and crews of foreign merchant ships, and reached Chios. From there, it left at the end of the month for Crete with 55 ships (but less than 30 were actually warships), six mahons and 53 galleys⁷⁴, with the aim of supplying the island possibly without fighting. The Venetians, having partly overcome the crisis with the foreign armed merchantmen, moved from the waters of Chania to intercept the enemy with 27 ships, 23 galleys and the six galleasses in service.

After some skirmishes that involved only parts of the two fleets, on July 10 they sighted each other in the channel between Paros and Naxos. The two admirals arranged their formations according to the classic scheme of battle between rowing vessels: a center and two wings, mixing in each group sailing ships, galleasses/mahons and galleys. While some Venetian ships still had to be towed, the galleasses confirmed that they had been freed from this constraint and achieved some autonomy. In fact, while the *Capitano Generale* was busy aligning the fleet, two of the three galleasses on the left wing (including that of the impetuous Lazzaro Mocenigo, the future *Capitano Generale da Mar*) moved forward to attack some Turkish galleys that were boarding water. Before Mocenigo could call them back, the *Kapudan Pasha* broke away from his center with six mahons and several galleys, quickly rowing close to the two enemy galleasses. The last ones, immediately supported by the third galleasse commanded by the not yet famous Francesco Morosini, rotated the bows towards the new

73 On the blockade, see Guido CANDIANI, «Stratégie et diplomatie vénitiennes, navires angle-hollandais: le blocus des Dardanelles, 1646-1659», *Revue d'Histoire Maritime*, 9 (2008), pp. 251-282.

74 ASVE, *Dispacci Ambasciatori Costantinopoli*, filza 134, post scriptum 18.7.1651, c. 107r; disp. 4.7.1651, c. 115v.

danger and, after firing a salvo with the powerful cannons and then one with the musketry, engaged battle. The battle was particularly hard around the galleass of Lazzaro Mocenigo, which was attacked at the stern by the flagship galley of the *Kapudan Pasha*, flanked by two mahons and some galleys. The crew of the *Kapudan* was mowed down by both artillery, which employed chained projectiles (normally intended for equipment) and grapeshots, and also a large quantity of hand grenades. The involvement of the other two galleasses convinced the Turks to retreat, towing the unfortunate flagship galley, whose stern was almost destroyed, and abandoning one of the mahons, which was captured.

While the three galleasses fought their battle on the left, the main confrontation was resolved on the right, where the *Capitano Generale*, seeing that the Turks had weakened their center, moved most of his ships, including a galleass. Once more, the ships had to be towed, but the fatigue of the crews convinced him to cease towing and continue with the rowing vessels only. The first target of the Venetians were the Turkish galleys, which were forced to cease towing their own ships, leaving them at the mercy of the Venetians. At the end of a hard and prolonged fighting, sixteen Turkish ships were captured, burned or sunk, along with a mahon, while the Ottomans did not lose any of the galleys, some of which managed to escape and even tow five ships that were left behind and that had not participated in the fight. During the fight a Turkish ship, attacked by the galleass that followed the *Capitano Generale*, preferred to blow itself up rather than surrender, bringing with it not only many of the Venetian soldiers who had boarded it, but also a great number of rowers who had followed them to plunder it; the explosion also damaged the bow of the galleass, killing many of the cannon crewmembers that were concentrated there⁷⁵.

The battle, the first of the war of Candia fought between the two fleets in full, ended with a great Venetian victory and represented the first clear success resulting from the cooperation between galleys, galleasses and sailing ships. With regard to the galleasses, they had demonstrated a greater ability to act autonomously, finally freeing themselves from towing and succeeding in following the *Capitano Generale* in his maneuver on the right with the thin galleys. It is difficult to say whether this was the result of further structural changes or of better

75 On the battle, see ASVE, *PTM*, filza 936, disp. A. Mocenigo n. 215, 15.7.1651 e all.ti; filza 1328, disp. Capitano delle Navi Luca Francesco Barbaro 13.7.1651; BNM, *Miscellanea* 166, Parte veneta, *Guerre col turco 1617 al 1667*, n. 10, *Lettera di ragguaglio della vittoria navale conseguita dall'Armata della Serenissima Republica di Venetia sotto il comando del Procurator Capitan General da Mar Mocenigo contro Turchi nell'Arcipelago*, Venezia 22.8.1651.

training of the crews: the battle took place after six years of war and the units of the Venetian navy, including the galleasses, could be considered veterans, unlike those who had fought at Lepanto or against the Duke of Osuna. On the contrary, the Ottomans, who created practically from nothing their own fleet of sailing warships, had undoubtedly paid for their inexperience.

The victory of Paros confirmed finally the regained naval supremacy of the Serenissima in the Aegean, but did not succeed in expelling the Turks from Crete. In the previous years the Ottomans had taken possession of almost all the island and were able to keep it thanks to the proximity of the Peloponnese coast, which allowed them to send supplies in small batches. This did not allow to resume a large-scale offensive against the last Venetian strongholds, and in particular the capital Candia, however it supported the Ottomans on the island, because of the weakness of the land forces of the Serenissima.⁷⁶ Between 1652 and 1657, the Ottomans attempted to fully re-establish their communications with Crete, striving to somehow overcome the blockade, at that time only in the summer, by the forces of the Serenissima. This provoked a series of battles in front of the Straits that followed more or less the same pattern, with the Venetians positioned at the mouth of the Dardanelles and the Ottomans trying to break the opponent's line-up to gain the open sea. The disposition of the fleets and the course of the battles were conditioned by the particular nature of the channel, which not only limited the movement of naval units, but was also characterized by a strong current. The latter in some points could exceed five knots and was directed from the Sea of Marmara towards the Mediterranean, thus favoring the exit of the Ottomans and forcing instead the units of the Serenissima to difficult anchorages to avoid being dragged out to sea.

The first clash occurred in 1654. The Venetians reached the Dardanelles by the third decade of April with 16 sailing ships, supported by two galleasses and eight galleys⁷⁷. At dawn on May 16, the Turks showed up with 40 galleys, six mahons and 30 ships⁷⁸, while the 22 *beylers* and 14 other Barbary ships await-

76 To the continuous military and economic blockade of the preceding years, difficult to maintain also for the not always good relationships with the captains of the chartered armed merchant ships, the Venetians had substituted a seasonal military blockade to prevent the exit of the Ottoman fleet in the most propitious season.

77 In any case, seven Barbarian ships had already managed to join the bulk of the Ottoman fleet in the Straits. ASVE, *PTM*, filza 1328, disp. Capitano delle Navi Giuseppe Dolfin 29.4.1654.

78 It is difficult to say how many of the ships were actually warships and how many were simple transport ships.

ed them on the other side of the Straits and behind the Venetians⁷⁹. The Venetian deployment was made of two galleasses in the center of the channel, together with two sailing ships and under the direct command of the Venetian *Capitano delle Navi* Giuseppe Dolfin. Again, the galleys were intended to tow the sailing ships, but not the galleasses, which were self-propelled. The clash immediately involved the sailing ships, also because the Ottomans advanced initially with their ships. The Venetian ships suffered from the local superiority of the Turks, because Dolfin's choice of arranging the ships through the whole channel to cover the entire escape route forced the various Venetian contingents to fight in isolation and to be put out of action one by one. While on the sides the Venetian units abandoned their positions and retreated, the two galleasses remained isolated in the center with Dolfin's flagship, the Dutch *Groot Sint Joris* with 52 cannons⁸⁰. However, after having resisted for some time, the galleasses decided to cut their moorings and, being «heavy machines and difficult to handle in the vigor of the waters» [*«macchine di peso e difficili da maneggiare nella vigoria delle acque»*], they were dragged by the current out of the Straits, leaving the *Sint Joris* alone. This left the flagship alone, which, after resisting for hours, managed with much effort and severe damage to exit of the channel. Dolfin - to whose initial arrangement was to be attributed the main responsibility of the defeat, the only important one suffered on the sea by the Venetians during the war of Candia - blamed, in addition to the cowardice of the captains of the chartered ships, the two galleasses, which were unable to keep their positions. In fact, once their moorings were cut, they were swept away by the current, with their rowing system unable to prevent them from being pulled towards the exit of the Straits⁸¹. Technical improvements and crews could not get rid of the underlying limitations of the heavy ships.

The following year the pattern of 1654 was repeated, but this time the Venetian fleet at the Dardanelles was under the command of Lazzaro Mocenigo, already a major player in the battle of Paros in 1651 and appointed *Capitano delle Navi* in place of Dolfin. Mocenigo commanded 27 sailing ships, four galleasses

79 The beylers were galleys armed by the beys who held of the Ottoman maritime *timars* in the Aegean. The Barbarians often provided military aid to the sultan in his military campaigns by sending the sailing warships they had begun to adopt in the early seventeenth century.

80 The ship had been chartered again the year before. ASVE, *Senato Mar*, registro 115, 8.3.1653, cc. 50r-v; filza 488, 4.11.1656.

81 BMC, Mss. Malvezzi 128, *Rellatione del viaggio dell'Armata ottomana dell'anno 1655 con la battaglia dei Castelli e altre cose notabili*, c. 117r. On the battle, see also ASVE, *PTM*, filza 1328, disp. G. Dolfin 27.5.1654.

and six galleys, which he arranged differently from his predecessor to avoid the confusion and mistakes that had led to Dolfin's defeat. Instead of dividing the ships into three separate squadrons at the center and towards the two banks of the channel, he chose to keep them grouped towards the center in four successive lines, so that they could more easily direct the action especially at the critical moment in which - having let the Ottomans move, diverted by the blockade of Venetian units towards one or the other bank - they had to cut the moorings and move themselves to the back of the enemy, exploiting the favorable current. While the ships occupied the center, galleasses and galleys were not intermingled with the sailing ships, as Dolfin did, but were positioned on the right, forming an autonomous squadron near the Asian shore, where the current was weaker and where Turkish ships were less likely to advance⁸².

Revived by the success of the year before, the Ottomans exited the Straits on the morning of June 21, 1655, confident of forcing their way through⁸³. Their 30 ships advanced to the front line occupying the entire channel. They were followed by eight mahons and 60 galleys, which had the task of assaulting the similar units of the Venetian right, taking advantage of the great numerical superiority, while the Ottoman sailing ships tried to keep at bay the Venetian ones, stronger but not more numerous. This time things did not go as the Turks hoped. Instead of cutting their moorings and losing cohesion, the Venetian ships remained stationary at anchor awaiting Mocenigo's orders, who was in the forefront on the public (state) ship *San Marco*⁸⁴. While close to the European coast the Ottoman ships suffered a hard lesson from the Venetian ones; on the opposite side of the channel also the Turkish rowing vessels, in spite of their large numerical superiority, were first blocked and then pushed back by the artillery fire of the galleasses: the unfortunate crews of three galleys, ended up out of control in the middle of the Venetian units, were massacred by *angels* and chained

82 BMC, Mss. Malvezzi 128, *Relatione del viaggio dell'Armata ottomana dell'anno 1655 con la battaglia dei Castelli e altre cose notabili*, c. 110v. A diagram of the Venetian formation in Roger C. ANDERSON, *Naval Wars in the Levant. 1559-1853*, Liverpool University Press 1952, p. 154.

83 Battista NANI, *Istoria della Repubblica Veneta, in Degli Istorici delle cose Veneziane*, IX, Venezia 1720, p. 346.

84 The *San Marco*, one of the Ottoman ships captured at the Battle of Paro in 1651, had been refitted and returned to service by the Republic as a state ship rather than a chartered vessel. Together with two other sultanas captured in the same battle, it constituted the first nucleus of public ships of the Serenissima. CANDIANI, *I vascelli della Serenissima*, pp. 35-45.

balls⁸⁵. Until that time, things had gone according to Mocenigo's plans, who gave the fateful order to cut the moorings. However, a sudden drop of the wind ruined the timeliness of the maneuver. Despite the intervention of the galleys to tow the ships, they lost cohesion and three of them found themselves isolated towards the mouth of the channel. Mocenigo succeeded in rescuing two of them, but the third one was lost, while a part of the Ottoman ships managed to get out of the Dardanelles. The Turkish rowing vessels, which in turn moved close to the European coast, were also able to slip out of the channel⁸⁶.

The battle ended with a clear Venetian victory, while the Turks lost in one way or another at least nine ships⁸⁷. However, the escape of the rowing vessels gave the Ottomans a chance to bring some relief to Crete. The Venetian sailing ships proved more than adequate to block the Ottoman ones, but not to completely block the rowing vessels, a problem that would have repeated in the following years, allowing the Turkish forces to remain in Crete, although without being able to complete the conquest. Moreover, the presence outside the Dardanelles of the *beylers*, which could remain in the Aegean without having to return to Istanbul every winter and therefore did not suffer the effects of the Venetian blockade, gave the Ottomans a certain flexibility and allowed them to mitigate the consequences of a possible defeat.

The year 1656 saw an intensification of the collaboration between sailing and rowing vessels. Probably considering that both the defeat of 1654 and the incomplete victory of 1655 were due to the scarcity of rowing vessels in support of sailing ones, the new *Capitano Generale* Lorenzo Marcello (another of the protagonists of the victory of Paros) led for the first time to the Dardanelles the entire fleet, with 28 ships, seven galleasses and 31 galleys (seven of which were Maltese). Inspired by Mocenigo, Marcello grouped the ships towards the center of the channel, but in an even more compact wedge formation than that adopted the previous year⁸⁸. Five galleasses were in the center with the sailing ships, while the other two galleasses and all the galleys were in the rear as a mo-

85 The *angels* (*anzoli*) were formed by a cannon ball cut in half and joined by a chain or a bar; like the chained balls, they were normally used to demolish the equipment of the opposing ships.

86 On the battle, see ASVE, *PTM*, filza 1328, disp. L. Mocenigo n. 21, 24.6.1655 e all.; n. 23, 3.7.1655 e all.; Girolamo BRUSONI, *Historia dell'ultima guerra tra veneziani e turchi*, Bologna 1674, I, pp. 277-279; Andrea VALIER, *Historia della Guerra di Candia*, Venezia 1679, p. 357; ANDERSON, cit., pp. 154-155.

87 NANI, cit., p. 347, states that the Turks lost in one way or another fourteen ships.

88 See the diagram in ANDERSON, cit., p. 160.

bile reserve⁸⁹. The whole Venetian formation tended to move towards the European coast, where the current was stronger and where the Turks used to try to get out. In response, the Turkish ships attempted to surprise the enemy by passing close to the coast of Asia, which had never been attempted before. However, the coastline was much more sinuous there and the north wind and the current pushed them into an inlet close to Kephez Point, preventing them from moving on. The Ottoman fleet had practically bottled itself up and when the wind turned in favor of the Venetians, its fate appeared doomed. Once more the Ottoman galleys abandoned the ships to their destiny, but a part was anyway blocked by the arrival of the Venetian ships, pushed by the favorable wind. The coup de grâce was given by the arrival, around 4 PM, of the five galleasses of the fleet: anchored in the middle of the sultanas, they slaughtered their crews with a continuous fire of cannons and musketry. Despite the loss of *Capitano Generale* Marcello, who fell while boarding a sultana, the success of June 26, completed on the 27 with the capture of the Ottoman ships that had run ashore, was the most resounding naval victory since Lepanto. The Turks lost all their 28 sailing ships, five mahons and at least 45 galleys, a total of 78 out of the 94 ships deployed. Istanbul fell into panic and the Sultan Muhammad IV fled the city and he was persuaded to return only with difficulty. The serious political-military crisis brought Mehmed Köprülü to power, initiating the dynasty of Albanian Grand Viziers that would resurrect the fortunes of the Empire in the following decades⁹⁰.

The victory of 1656 can be considered the summit of success not only for the collaboration between sailing and rowing vessels, but also for the employment of galleasses after Lepanto. The anvil represented by the ships and the hammer constituted by the rowing vessels, foremost galleasses, had shattered the Ottoman fleet. The good coordination of the Venetians, with the action of blockade of the ships, the intervention of the galleys and the final blow given by the galleasses, prevented the Ottoman galleys to partially escape the defeat as had occurred in the previous battles. However, it must be said that, as at Lepanto, the Ottoman fleet had been put in an extremely difficult situation by a poor tactical maneuver.

89 BNM, Ms. it., cl. VII, 580 (8956), *Relatione della battaglia navale seguita nel canale de Dardanelli fra le Armate Veneta et Ottomana il dì 26 giugno 1656*, c. 354v.

90 On the battle, in which the Turks admitted the loss of five thousand men, see ASVE, *PTM*, filza 1222, disp. Provveditore d'Armata Barbaro Badoer n. 4, 30.6.1656 and attachments; filza 1328, lett. L. Mocenigo 1.8.1656; *Relatione...* 26.6.1656, cit., cc. 354v-356v; VALIER, *Historia*, pp. 379-380, 382; BRUSONI, cit., I, pp. 298-301; ANDERSON, *Naval Wars*, pp. 159-161.

The great success achieved at the Dardanelles and the death of Marcello led to the appointment of Lazzaro Mocenigo as supreme commander. He had to face in 1657 a strategic situation different from that of the previous years, because the Turks, enraged by the disaster of the previous year, decided to concentrate tentatively their forces outside the Dardanelles before the arrival of the enemy. In March, the new Grand Vizier Köprülü succeeded in having a squadron of 32 galleys sail from Istanbul to Chios⁹¹. The galleys were to be reached there by both the beylers and the Barbarian ships, called to rescue the sailing component of the Ottoman fleet. With a squadron of only rowing vessels (six galleasses and 19 galleys), Mocenigo succeeded in intercepting 14 Algerian ships in the waters of the island on May 3, taking advantage of the lack of wind and shooting at the masts to slow them down further. The big cannons of the galleasses struck terror among the Algerians, paralyzing their crews, and eventually nine ships run aground and were lost⁹².

In the meantime, the *Capitano delle Navi* Marco Bembo had positioned at the Dardanelles with 20 ships to block the rest of the Ottoman fleet, which was being painstakingly built in Istanbul. At a later stage, Bembo was joined by the rowing vessels, but the need to board water drove away most of the galleys, which were unable to return because of the headwind. When, on July 17, the Ottomans showed up to force their way out, the *Capitano delle Navi* had seven galleasses but only four galleys, so the battle that followed led, as on other occasions in the past, to an incomplete victory. The Turks tried again to force the passage towards the European coast, advancing with the ships - 18 sultanas - always in the lead, followed by two mahons and 30 galleys, while another eight mahons had to engage the bulk of the Venetian fleet, anchored near the Asian coast perhaps to facilitate the return of the galleys⁹³. The eight mahons initially managed to hold off the seven galleasses and some Venetian ships, but then the superiority of the Venetian artillery got the upper hand and six mahons ended up sunk or captured. On this occasion it seems that a galleass was «saved» by an improvement introduced a few years earlier by Francesco Morosini, who, in order to prevent boarding, had two «wings or bridges of rope» [«ali o ponti di corda»] erected on the sides, which in his opinion were too «easy to climb» [«faci-

91 ANDERSON, cit., p. 162.

92 ASVE, *PTM*, filza 1098, dispacci Capitano Generale da Mar Lazzaro Mocenigo, n. 16, 5.5.1657 and attachments.

93 Bembo had four galleys left, but he only needed them to board water.

li da superare»], to prevent the boarding of attackers⁹⁴. However, the sacrifice of the mahons allowed thirteen sultanas, one mahon and at least six galleys to pass close to the European coast and reach Mytilene. Another five sultanas were not so lucky and were lost, while the galleys had to retreat and anchor under the protection of the batteries positioned along the Asian coast. Undoubtedly, had the rest of the Venetian fleet been present, the victory would have been as total as in 1656, although Bembo emphasized that the Turks fought with a determination - and a sense of position - never shown in the past, probably under the new impetus of Köprülü⁹⁵. The *Capitano Generale* Mocenigo arrived at the Dardanelles with another 28 galleys only at the end of the action. Two days later, on July 19, he died when his galley blew up while attempting to attack the remaining 22 galleys of the Turks that were still anchored under the protection of the coastal batteries. The demoralization caused by his death was aggravated a few weeks later by that of Barbaro Badoer, who had assumed the temporary command, and led to the abandonment of Tenedos and then Lemnos, returning to the Turks full possession of the outlet of the Dardanelles⁹⁶.

The Battle of the Dardanelles in 1657 was the last major naval battle of the War of Candia. The new *Capitano Generale da Mar* became Francesco Morosini who replaced the naval strategy of the blockade of the Dardanelles, that had led directly or indirectly to all the battles of the previous decade, with an essentially amphibious one, with a series of raids against the coasts of the Ottoman Empire, often for plundering. In addition to the amphibious operations, but often subordinate to them, the Venetian fleet tried, without much success, to prevent the help that the Turks sent to Crete from all sides, engaging itself above all to close the access to Chania, sometimes pushing east to intercept the important merchant traffic between Alexandria and Istanbul, the so-called Caravan of Alexandria⁹⁷. While accompanying the galleys, the galleasses were able to capture

94 ASVE, *Collegio Relazioni*, busta 75, n. 2, rel. Capitano Generale da Mar Francesco Morosini 28.12.1661.

95 On the battle of July 17, 1657, see ASVE, *PTM*, filza 1328, disp. Capitano delle Navi Marco Bembo n. 26, 22.7.1657. BNM, Ms. it., cl. VII, 580 (8956), *Relatione del fatto seguito contro l'Armata Turchesca il giorno di 17 luglio 1657 a Dardanelli con la morte del Cap.no Generale Veneto*, c. 350v; BRUSONI, *Historia*, II, p. 10; VALIER, *Historia*, cit., p. 415; ANDERSON, cit., pp. 164-166.

96 BRUSONI, *Historia*, II, p. 22; VALIER, *Historia*, pp. 420-421; NANI MOCENIGO, *Storia della marina veneziana*, cit., pp. 197-205; ANDERSON, cit., pp. 166-167.

97 See Daniel PANZAC, *La carovane marittime. Marins européens et marchands ottomans en Méditerranée (1680-1830)*, Paris, CNRS, 2004, pp. 9-25.

in 1662 a part of the Caravan in the waters of Leros⁹⁸.

Despite their successes during the War of Candia, the galleasses continued to be strongly criticized. In 1661 Francesco Morosini, after his time in command as general, gave an unflattering judgment, especially concerning their gigantism: many were deceived «by supposing that the largest ships are the best ones, while it is certain that their extraordinary size makes them difficult to steer, since there is no doubt that they require a greater number of oarsmen, that it is more difficult to sail against the wind, that they are slower in sailing, and that they are more adversely affected on the iron [i.e. at anchor]; these are disadvantages of great importance in navigation, and also from such disproportionate bodies one does not know how to get benefit, since they do not withstand the sea, nor carry more cannons than those previously built». Morosini asked to go back to building smaller galleasses, «with the old form, that is, that of the smallest ones in the Arsenal»⁹⁹. Usually in the field of shipbuilding it is easier to preserve good features by enlarging rather than reducing, but it would seem that with the galleasses they had gone too far. A few years later, the *Capitano Generale da Mar* Andrea Corner reiterated the point, stating that he would have preferred to leave them in the harbor and use only the galleys¹⁰⁰.

98 BRUSONI, *Historia*, II, pp. 110-112.

99 «con il supporre che le più grandi siano le migliori ancora, e pure è certo che la loro straordinaria grandezza difficoltà il navigarle, non vi essendo dubbio che ricercano maggior numero de remiganti, che più difficilmente si naviga contra vento, che riescono più tarde alla vela, e che più tormento ricevono sopra del ferro [cioè all'ancora]; questi sono pregiudicij nella navigazione di rilevanza ben grande, e pure da corpi così sproportionati non si sa ricavar beneficio, non resistendo al mare, né portando cannone maggiore di quelle, che prima si fabbricavano»... «sopra la forma vecchia, cioè sopra le più piccole che si trovino nell'Arsenale». Morosini also asked for a modification of the rudder, bringing it «*alla navarola*», i.e. straight and not «*lunato*» (moon shaped), and to lighten the bow castle, presumably to improve the capability of sailing into the wind. ASVE, *Collegio Relazioni*, b. 75, n. 2, rel. Capitano Generale da Mar Francesco Morosini 28.12.1661. An enlargement of the size of the galleasses was reported as early as 1631. BIBLIOTECHE CIVICHE TORINESI, Ms. 1784, Stefano de Zuanne de Michiel, Architettura navale, c. 19r, cit. in Lazzarini, p. 55.

100 ASVE, *Collegio Relazioni*, b. 75, rel. Capitano Generale da Mar Andrea Corner ...1667. Years later, Corner himself would state both «the carnage they wrought upon their enemies in the clashes of the past war» [«la stragge che hanno fatto de' nemici negli incontri della passata guerra»] and the high esteem in which they were held «by the nations of the world» [«appresso le nazioni del mondo»], agreeing that «their reputation should be preserved for the great glory it gives to the Serenissima homeland» [«che se ne mantenga la riputatione, che ridonda a somma gloria della Serenissima Patria»], although «it should not be attempted with too much confidence, because the damage would be irreparable» [«non si deve cimentarla con troppa confidenza, perché ne sarebbe irreparabile il danno»]. Corner was actually asking to

The decline in the two wars of Morea (1684-1718)

In the following years the war focused on the defense of the stronghold of Candia and naval operations tended to be increasingly subordinate to land ones, so that the rowing vessels, including galleasses, were partially decommissioned to strengthen the land defenses. The war finally ended in 1669 with the surrender of Candia and the cession of Crete to the Ottoman Empire.

The peace however did not last long and the military confrontation resumed in 1684, following the failed Turkish attack on Vienna and the Serenissima joining the Austrian-Polish alliance against the Sublime Porte. In many ways, the navy with which the Republic entered the new conflict was different from the one that had fought in the War of Candia. During the fifteen years of peace, the Venetian fleet had begun a profound transformation, which took shape in 1675 with the approval of an important program of construction of sailing warships¹⁰¹. Having abandoned the policy of chartering armed merchant ships for reasons both of cost and of naval evolution¹⁰², the Serenissima had embarked on the construction of its own squadron of warships, also adopting the new tactic of the line of battle that had gained prominence in the Anglo-Dutch wars in the previous decades. The new tactics had a particularly negative effect on the cooperation between sailing and rowing vessels, making it impossible in practice. Moreover, at a strategic level, the evolution of the sailing ship, increasingly agile and capable of sailing into the wind, made the integration of sailing and rowing squadrons increasingly difficult.

As during the War of Candia, in the initial phases of the first Morean war (1684-1699) there were no significant naval clashes, also because the Ottoman fleet, weakened during the period of peace, tried to avoid confrontation as much as possible. Between 1686 and 1690 there were three battles of some importance, but the Venetians employed only sailing ships and not rowing ones. This was due to the decision to make the two components of the fleet operate in different theaters, thus resuming the divide created in the final stages of the war of Candia. It was not by chance that Francesco Morosini was again appointed *Cap-*

demobilize the two galleasses then in service, but because they were too few and could have suffered in some unfortunate clash a loss of the prestige that had to be preserved. ASVE, *Collegio Relazioni*, b. 75, rel. Provveditore Generale da Mar Andrea Corner, 14.3.1680.

101 On this evolution and on the naval events of the two Morean wars, see CANDIANI, *I vascelli della Serenissima*, pp. 115-129.

102 The difference between true warships and armed merchantmen had become more and more pronounced, especially after the introduction of line-of-battle tactics.

itano *Generale da Mar*, since he employed the rowing vessels in a series of successful amphibious campaigns in the Peloponnese.

Morosini returned to Venice in 1689, after being elected Doge the previous year, and in 1691 the joint operations of the *armata grossa* (sailing ships) and the *armata sottile* (galleyes and galleasses) were resumed. In the past the major problems were created by the slow and clumsy sailing ships, now it was the rowing vessels, and above all the galleasses, that showed their inferiority in navigation, particularly when sailing into the wind in rough sea. The warship had in fact continued its slow but continuous technological evolution, while the galleass seemed to have reached the peak of its unspectacular maturity and appeared increasingly slow and cumbersome compared to other types of ships of the fleet.

The naval turning point in the war occurred in 1694, when the Venetians decided to launch a second offensive with their entire fleet. To lure the Ottoman fleet into the open sea and destroy it once and for all¹⁰³, the commanders of the Serenissima chose to attack the island of Chios, the most important stronghold for the control of the maritime routes of the Empire. The reaction of the Sublime Porte was not long in coming and between 1695 and 1698 the two fleets faced each other nine times, turning the Aegean into the epicenter of the naval warfare of the time. The first two of these battles were fought for direct control of the island of Chios and the Ottomans prevailed and reoccupied the island, abandoned by the enemy. From the point of view of the collaboration between sailing and rowing vessels, the two clashes reaffirmed the tactical impossibility of a common action, which was already clear on the strategic level. In the new line of battle there was no room not only for the fragile galleyes, but also for the cumbersome galleasses with their weak armament on the sides.

In the first battle, which took place on February 9, 1695, north of the Spaladori (modern Paklinski) Islands, located in the middle of the channel separating Chios from the Anatolian mainland, rowing and sailing ships fought clearly separate actions, with the former in the vanguard of the two fleets and the latter in the rear. The Turks advanced with 16 sultanas to face the 21 Venetian ships, while another four sultanas had to engage the five galleasses;¹⁰⁴ the 24 galleyes that followed in the second line had the task of facing the 20 equal class galleyes of the Serenissima. In the battle - which cost the life of the *Capitano delle Na-*

103 The main targets were the new warships that the Ottomans were putting into service and which threatened to end the Venetian naval supremacy gained during the War of Candia.

104 The Turks had discontinued the mahons and the task of countering the galleasses fell to the ships.



Particolare di *La battaglia di Lepanto, 1571* (National Maritime Museum, Greenwich, London – Public domain). Sono raffigurate cinque delle sei galee veneziane che presero parte alla battaglia, riconoscibili per la stazza, per il castello di prora circolare e i tre alberi



vi Priuli, who led the fleet of the *Serenissima* and who was able to employ only a small part of his ships - the galleasses had mixed results, having to be rescued from the four sultanas that had attacked them, but then contributing to repel the assault of the Ottoman galleys: in particular two galleasses halted the attack conducted against their own flagship galley, forcing the Turks to retreat after losing probably two galleys. In any case, it was getting clear that the galleasses were not able to face the new ships of the line deployed by the Ottomans. In a second battle, fought ten days later (February 19, 1695) in the same waters, the sea was too rough for the use of the rowing vessels and the two fleets deployed only the sailing ships. The battle ended in a deadlock, but the Venetians, too far from their bases to repair the damage incurred, decided to abandon Chios¹⁰⁵.

In 1695 two other battles (September 15 and 18) took place in the waters south of Chios and in both the rowing vessels could not be employed due to the bad conditions of the sea, indeed the Venetian sailing ships had to strive so that the rowing vessels did not fall prey to the Ottoman vessels. The dangers encountered fueled the tension between the *Capitano Generale da Mar* Alessandro Molin, who, despite having the supreme command, in fact commanded only the rowing vessels, and the new *Capitano delle Navi* Bartolomeo Contarini. Molin would have liked to carry his own insignia on a ship, but the Senate, bound by tradition, did not allow it and he tried to find a role for himself and the *armata sottile* even in the new tactical context. On the contrary, Contarini wanted to act with the *armata grossa* in full freedom, without having to worry about the presence of galleys and galleasses¹⁰⁶.

The dangers inherent in this duality manifested themselves again in 1696, although Molin prudently chose to operate among the islands of the central Aegean, where rowing vessels could operate in more sheltered waters. At the end of July 26, some ships were sent to occupy in advance an anchorage on the island of Andros and there they awaited both the arrival of the Turks and that of their own rowing vessels, delayed by an amphibious offensive that Molin had launched against Boeotia but then was forced to suspend when the enemy fleet appeared. The Turks deployed only sailing ships, considered at the time the main element in their fleet, but for several weeks the two sailing squadrons maneuvered in the open sea off Andros, each of them trying, unsuccessfully, to attack with favorable wind conditions. Finally, on August 22, Molin arrived with the *armata sottile* (six galleasses and 34 galleys, 22 of which were Venetian

105 On the two clashes, see CANDIANI, *I vascelli della Serenissima*, pp. 299-306.

106 Ivi, pp. 309-314, 318-19.

and 12 Pontifical-Maltese), after several days of unsuccessful attempts to gain ground against the Meltemi. The *Capitano Generale* tried to take control of the entire fleet, increasing the tension with Contarini, who the day before had finally managed to position himself to the north of the Turks and thus obtain a strategic upwind position with respect to the predominant Meltemi. That day, however, there was no wind, so Molin took the opportunity to lead the operations. Not only did he order the galleys to tow the ships further north to ensure the upwind was maintained, but he also intervened in their formation, further irritating Contarini. The galleys, although targeted by the Turks, actually did their duty, towing the ships up to the head of the Ottoman formation, but the Turks managed to reduce the spaces between the ships of their line and forced the Venetians, not equally rapid in reducing the distances between their ships, to enable fire only for some of their own ships.

Although only a part of the Venetian line was actually engaged, after a few hours of fire the Turks began to falter. In the meantime, seeing that the rigid formalism of the line, where each ship had to keep the place she was assigned, prevented the ships of the Venetian center and tail from getting into action, Molin thought of throwing the rowing units into the fray. He first pushed the six galleasses forward against the opposing rear, but unexpectedly the fire of their large bow culverins was successfully countered by the stern guns of the sultanas, showing that the galleasses had also lost the advantage of the caliber of the ordnance, the main reason for remaining in service¹⁰⁷. They then attacked the galleys but, even though they stormed the sterns of the Sultanas from no more than a hundred meters away and missed their targets few times, their meager artillery proved incapable of seriously damaging the strong hulls of the Ottoman ships, much more powerful than those they had faced during the War of Candia. Regaining a modicum of cohesion, the Turks tacked and retreated, little disturbed by the attack of the *armata sottile*¹⁰⁸.

The clash sounded like a death knell for the galleasses and the *Capitano Generale* requested that at least two of the six ships on duty be disarmed¹⁰⁹.

¹⁰⁷ Based on later sources, it could be speculated that the bow artillery of the galleasses had been changed to two 30-pdr. culverins and two 20-pdr. culverins, as opposed to the previous two 50-pdr., two 14-pdr., and two 6-pdr. ones. See ASVE, *PTM*, filza 1386, disp. Capitano delle Galeazze Alvise 2° Foscari 30.1.1712.

¹⁰⁸ On the [first] battle of Andros, see ASVE, *PTM*, filza 1336, disp. B. Contarini n. 22, 25.8.1696; n. 24, 23.9.1696; filza 1131, disp. A. Molin n. 46, 2.9.1696 e all.ti; n. 53, 15.11.1696; filza 1337, disp. P. Duodo n. 10, 26.9.1696; ANDERSON, *Naval Wars*, pp. 223-225.

¹⁰⁹ ASVE, *PTM*, filza 1131, disp. A. Molin n. 53, 15.11.1696. A defence of galleasses by their

The galleasses also paid for the growing operational divide between rowing and sailing vessels. Conducted in 1697 to the Dardanelles, where the Venetians tried to repeat the military blockade made during the 1650s, they were involved in the maneuvers of July 5 and 6 in the waters of Tenedos, risking annihilation. The *Capitano delle Navi* Contarini wanted to act independently with the sailing ships, while the Captain General da Mar Molin tried to keep in his wake with the rowing vessels. The result was a kind of night chase that, in the increasingly rough sea, saw the six galleasses, unable to sufficiently sail into the wind, fall off more and more. Around midnight Molin had to ask Contarini to interpose with the ships to prevent three galleasses from ending up in the middle of the Sultanas. The maneuver succeeded, but the Venetian ships drifted more and more. The position of the *armata sottile* continued to deteriorate and at dawn on July 6 Contarini was forced to launch an attack to save the rowing vessels. There followed about ten hours of extreme melee, with the *armata sottile*, protected by the ships, which managed to gradually evade the clash, without however being able to make any contribution. Sailing and rowing vessels remained divided and only after a week managed to reunite in the island of Skyros, on the other side of the Aegean¹¹⁰.

After the clash, Molin took it out on the galleasses, which were permanently excluded from the battle formation. While Andros had marked the death knell for the galleasses, Lemnos was the last battle in which they were employed in combat. An attempt to revitalize them was by mounting a single cannon capable of firing explosive projectiles on each galleass in 1697¹¹¹. The *cannons of new invention*, as they were called, were however mounted also on the ships of the line, confirming that the galleasses had lost any primacy in the field of the artillery.

When the war ended, two galleasses were still in service, but when there was a new conflict with the Ottoman Empire (Second Morean War, 1714-18), they did not participate in any naval battle of the conflict¹¹². In 1715 the *Provvedi-*

Capitano Straordinario Giacomo Da Mosto in filza 1386, disp. 24.10.1696.

110 On the battle of Lemnos, see ASVE, *PTM*, filza 1336, disp. B. Contarini n. 39, 12.7.1697 e all. ti.; n. 41, 8.8.1697; filza 1332, disp. A. Molin n. 72, 13.7.1697 e all.ti; n. 74, 22.8.1697, all.ti costituiti 5 e 8.8.1697; filza 1337, disp. P. Duodo n. 19, 20.7.1697; ANDERSON, cit., p. 230.

111 Guido CANDIANI, «The race to the big calibres during the first war of Morea and Sigismondo Alberghetti's guns of new invention», in Carlo BELTRAME e Renato G. RIDELLA (Ed.), *Ships & Guns. The Sea ordnance in Venice and Europe between the 15th and the 17th centuries*, Oxford, Oxbow, 2011, pp. 25-26 (23-27).

112 An action is reported in the summer of 1716; in particular, one of the two galleasses employed

tore Generale da Mar Agostino Sagredo remarked that «the galleasses, after the Turks used only the sultanas, have been proven as having no longer that advantage, which they used to have in other times, indeed more of an embarrassment than of help to the *armata sottile*»¹¹³ and in 1717 the two galleasses of the navy were purposely left behind despite a momentary operational reunification of the *armata grossa* with the *armata sottile*, which employed only the galleys anyway¹¹⁴. As the *Provveditore d'Armata* Giorgio Grimani, who commanded a galleasse during the conflict, wrote a few years later, «now the galleasses have been replaced by the ships in the hottest engagements» [«ora le galeazze sono state sostituite dalle navi nei più caldi cimenti»], although their presence could still be useful to support the action of the galleys¹¹⁵.

The Second Morean War marked not only the last of the centuries-old conflicts with the Ottoman Empire, but also the end of the large-scale operations of the Venetian navy, which in the following decades was engaged in tasks of traffic protection and in some minor campaigns against the Barbarian regencies. Two galleasses remained in service until 1758 as a “training ground” for rowers and sailors in case their general employment was resumed, but were subsequently demobilized, while the fleet was fully characterized by the ships of the line¹¹⁶.

the two cannons of new invention at bow to utterly destroy with three well-aimed shots the stern of a sultana, taking advantage of the fact that the Ottoman team was constantly at sea between the Greek mainland and the island of Corfu to protect the supplies to their troops that were besieging the Venetian citadel. However, as soon as the sultanas turned their sides against them, the galleasses had to retreat. BNM, Ms. it., cl. VII, 385 (7148), *Relazione, o sia Trattato di quanto è successo tra l'Armi Venete e l'Ottomano l'anno 1716*, c. 6r.

113 ASVE, *Collegio Relazioni*, busta 76, rel. Provveditore Generale da Mar Agostino Sagredo 16.5.1715, c. 2v.

114 ASVE, *PTM*, filza 1138, disp. A. Pisani n. 86, 14.11.1717.

115 ASVE, *Collegio Relazioni*, b. 56, rel. Provveditore d'Armata Giorgio Grimani 28.11.1730.

116 The decommissioning of the two galleasses was ordered in 1755, but was actually accomplished three years later. Alberto Secco, *Navi del Settecento nei disegni della Biblioteca Universitaria di Padova*, Padova, Ministero per i Beni e le Attività Culturali, 2007, pp. 23, 34.

Conclusion

In conclusion, the relationship between ships and galleys was progressively modified by their respective technical and tactical evolutions, while the galleasses remained somewhat in the middle. Criticized since their appearance for their poor maneuverability, so much so that they were originally considered as vessels of the *armata grossa*, only partially improved later, the galleasses always had their reason for being in the strength of their artillery, much stronger than that of the galleys and of a caliber that the ships used in the Levant were initially neither able to withstand, nor to deal with. Integrated in the *armata sottile* to support their action, the galleasses had, like the other components of the fleet, their best moment during the War of Candia. However, when the new ships of the line started carrying a much larger number of equally heavy cannons and when they were adopted by the new Ottoman navy, their fate appeared sealed. By the end of the seventeenth century the galleasses had definitively left the battle squadron, although a couple of them remained in service essentially for administrative and prestige reasons. In some respects, it would seem that the Venetians fell victim to their own propaganda, making it difficult to give up a type of vessel that had perhaps been overly exalted in the past. Thus, if one really wanted to look for an anachronism in the navy of the Republic, it would be found not in the permanence of galleys, but in that of the galleasses, the celebrated pride of the lagoon shipbuilding industry. We must however observe - in confirmation of the relativity of the appraisals on the evolution of the naval technology - that in the years 1690s, just when the Venetian galleasses were in their final stage, there was a proposal in England to abandon the construction of the ships of the line in favor of that of the galleasses¹¹⁷.

117 Brian LAVERY, *The Ship of the Line*, I, London, Conway, 1984, p. 59.

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