

Against the Corvus

Peter Freiherr von Danckelman

Abstract: This article focuses is on the venerable Corvus, a boarding-bridge that, according to Polybios, enabled the Romans to win the Battle of Mylae. This paper aims to show that the Corvus was, in fact, a piece of fiction invented by Polybios, that key technical difficulties would have prevented its usage as described by Polybios and that the device is in fact not necessary to explain the Roman victory of Mylae. The Corvus—or “Korax” as it is called in Greek—is described by Polybios in the first book of his histories (1.22). It consists of a long pole, projecting 24 feet (about 7.5 metres) from the Deck of the prow of a ship.¹ To this a sort of bridge or ladder was attached. The bridge was four roman feet wide and thirty-six feet long (about 11 m.), twenty-four feet (about 7.5 m) of which were fully usable as a passageway. The other twelve feet were slit in an oblong fashion to accommodate the holding-pole. On the opposing end, a pestel-like, curved iron spike was mounted to pierce the deck of an enemy vessel, allowing roman marines to board it.

Introduction

The device was pulled up the pole with pulleys, and dropped onto the Carthaginian deck when in reach, either over the prow or over the side.² The spike then prevented the enemy from backing water, while the bridge allowed for prow-to-prow boarding.³ To prevent accidents while crossing, the marines were protected by a knee high railing that began on the non-slotted part of the bridge.⁴ Wallinga, who has produced the most accepted reconstruction of the device to date, puts the weight at just above one metric

¹ Wallinga 1956, 21 rightfully states that, in order to have any kind of stability, the pole must have been fixed into the keel structure of the ships in question.

² Polyb. 1.22.8.

³ Lazenby 1996, 68–73; Wallinga 1956, 68.

⁴ Wallinga 1956, 23.

ton.⁵ The question of the inventor of the Corvus has never been solved, with some scholars arguing for the usage of Syracusan know-how, perhaps even supplied by Archimedes himself.⁶ The same goes for the question why (and at what time) the Corvus went out of use. No further mention is made of it after the battle of Ecnomus.⁷ No other authors mention the device, and the only other occurrence of the word Korax in naval context has been identified as denoting a grappling hook.⁸ Thiel argues that the Corvus was cumbersome and aided significantly to Roman storm losses, leading to its abolition.⁹ Casson presumes that Carthage found a successful counter against its use.¹⁰ Wallinga however argues that the Romans abandoned the Corvus after they copied a particularly sea-worthy and fast quinquereme captured off Lilybaeum, ditching both their old, heavy ships and the cumbersome Corvus in the process.¹¹ In contrast, Steinby downplays the importance of the Corvus while highlighting the tactical success and nautical skill the Roman navy displayed during the whole of the First Punic War.¹² Except for Steinby's observation about Roman Naval achievements, all of those learned theories can be done away with if one argues that the Corvus did not exist in the first place.

The Place of the Corvus within the Narrative of Polybios

It can be said that for Polybios, the Corvus serves a clear technical purpose. It is the main device that enables the Roman victory at Mylae, circumventing the problem that the Roman ships were “cheaply equipped and hard to move”,¹³ when “somebody” suggested that the Korax would remedy those faults. The narrative argument against the Corvus has been established convincingly by Sordi,¹⁴ whose arguments have been

⁵ Wallinga 1956, 21. In support of his reconstruction: Casson 1971, 146–148; Steinby 2007, 91; Steinby 2014; Morisson 1996, 45; Lazenby 1996, 68; Lazenby 2004, 239; Pitassi 2012, Rankov 2011, 154–156; Meijer 2014, 240–241; Goldworthy 2003, 105–106. Broadly, although without the restrictions on the usable angles: Hoyos 2015, 42. Manz 2017, 196–204, also gives differing reconstructions by other authors.

⁶ This was first argued for by Thiel 1954, 183. Wallinga 1956, 75–77 gives a more cautious approach and names Syracusan or Messenian shipwrights as the more likely candidates. Steinby 2007, 92 also argues for Syracusan input. Meijer 2014, 239 argues that the boarding bridge must have profited from some Italian experience with the Roman ships as well.

⁷ Polyb. 1.27.

⁸ The fact that the Corvus was not mentioned by any other author was well conceded by Thiel 1946, 435–437.

⁹ Thiel 1946, 444. Meijer 2014, 253 largely follows his argument.

¹⁰ Casson 1971, 121.

¹¹ Wallinga 1956, 89.

¹² Steinby 2007, 103–104.

¹³ Polyb. 1.22.3. “τῶν πλοίων φαύλων ταῖς κατασκευαῖς καὶ δυσκινήτων.”

¹⁴ Sordi 1967.



enhanced by Schulz¹⁵ and Sommer.¹⁶ The main argument of the “narratological refusal” of the Corvus is this: Polybios carefully creates the narrative of Romans who were total newcomers at sea. He then uses the Corvus to explain to his readers how such novices were able to beat the Carthaginians, whose naval prowess would have stood unrivalled for generations.¹⁷ The topos of the totally landlubberish Roman approach to the sea has been convincingly disproven by Steinby. For her, the Corvus was at best a useful tool, but not the war-winning wonder-weapon.¹⁸ From that position it’s a small step to realise that Polybios could just as well have invented the Corvus to solve a problem in his own narration: If the Romans were such landlubbers, how could they win against the Carthaginians, who had clashed with Greek fleets for generations already?¹⁹ The narratological argument against the Corvus is strong, and it is the one explanation that explains why only Polybios mentions the device: It is only necessary for the advancement of his own maritime “rags to riches” narrative. Other historians, who were not interested in a nautical rags-to-riches-narrative, did not need it for that purpose, so they never bothered to include it.²⁰

The Technical Argument against the Corvus

The technical argument against the Corvus has already been formulated by Tarn nearly a hundred years ago.²¹ His main argument is that the Corvus would have made the roman ships incredibly top-heavy, to the point that they would have turned turtle when the device was moved.²² While Wallinga²³ has successfully argued for a lighter (around one metric ton) version of the Corvus than was assumed by Tarn or Thiel in their older arguments,²⁴ the key element remains: The Corvus is a heavy object that would have been mounted up high.²⁵ Wallinga and Steinby argue that the mass of the “new” reconstruction would have been insufficient to hamper the stability of a large vessel such as a quinquereme.²⁶ While it is indeed possible that a large vessel could have carried the Corvus, the incredible danger of using it in anything but the calmest

¹⁵ Schulz 2005, 159.

¹⁶ Sommer 2021, 102–103.

¹⁷ Polyb. 1.20–23. Cf. Sordi 1967; Sommer 2021; Schulz 2005.

¹⁸ Steinby 2007.

¹⁹ Sordi 1967; Sommer 2021; Schulz 2005.

²⁰ For this period, Cassius Dio’s account has only survived in an abridged version of Zonar. 8.11, describing a sort of grappling hook. Diodor 23, 10 mentions not device whatsoever.

²¹ Tarn 1930, 146–149.

²² Tarn 1930.

²³ Wallinga 1956.

²⁴ Tarn 1930; Thiel 1946.

²⁵ Unlike masts and rigging which were removed and preferably left ashore for battle, the Corvus would have to be carried in this position for battle.

²⁶ Wallinga 1956, 78; Steinby 2007, 91.



see-state has been readily pointed out by Wallinga himself.²⁷ The problem lies not so much in the risk of a ship capsizing outright, but rather how the Corvus would impact its performance. Every heavy object that is hoisted up high raises the metric centre of gravity of a ship. Since the heavy iron pestle of the Corvus was to be hoisted 36 feet above the deck of a roman ship, its weight would have had a disproportionate impact on the stability of the vessel.²⁸ Thucydides is very clear in his advice that, even in the smooth waters of the Syracusan Grand Harbour, the addition of moving deck-troops hampered the manoeuvrability of triremes.²⁹ Even if one assumes that the roman quinqueremes were much more stable platforms than Athenian or Syracusan triremes from the Syracusan expedition, the weight of the device and its distribution still comes into play. Since there is no reconstruction of a roman quinquereme in existence, any calculations can only be based on educated guesses, but there is a “next best thing”: The trireme *Olympias*.³⁰ Sea trials with that ship showed that weight distribution of an ancient oared warship must be carefully balanced, lest it’s performance be crippled. During sea trials with the trireme *Olympias* it was discovered that even the addition of just ten people waiting (at deck height) in the toilet que at the prow of the *Olympias* already negatively impacted the performance of the rowers in the bow.³¹ To offset the introduction of more than a ton of weight at the bow, the ballast at the stern of the ship would have to be increased accordingly—a difficult manoeuvre since the hosting and lowering of the Corvus would require a change in ballast weight or location if optimal battle trim was to be achieved. This would have added even more weight to the ship, reducing it’s speed while only partially offsetting the problem of the bow sitting deeper in the water.³² Additional ballast would, however, not be sufficient to cancel the negative impact of a Corvus being moved away from the centre line. This problem is made worse through the fact that this movement would have to take place at a moment when the ship was under battle conditions, moving at high speed and relying on its manoeuvrability to survive. Regardless, Polybios does not provide any indication that additional ballast was used.

To make matters even worse, the bow of a ship is the worst place to hoist a large, heavy object. This general observation is even more evident for galleys designed for prow-on-prow-ramming engagements, since on such vessels the prow would take

²⁷ Wallinga 1956, 90.

²⁸ For this reason, de Santis 2016, 71–72; 78–80 argues that the roman vessels were designed with the Corvus in mind, scrapping the “field modification” idea presented by Polybios.

²⁹ According to Thuc. 7.62.2 Nicias claims in his speech that adding large amounts of marines would hamper the manoeuvrability of the Athenian ships and was therefore only permissible in the confined waters of the Syracusan grand harbour. He further mentions that even marine missile troops were trained to fight from a sitting position to lower the centre of gravity as far as possible.

³⁰ Polyb. 1.20 tells us that the Romans built twenty triremes for their first fleet.

³¹ Taylor 2012, 52.

³² For comparison, see the calculations of Coates 2012, 182–183 about the impact of additional bilge water to the height and weight of the trireme *Olympias*.



most of the shock of an impact.³³ Also, additional weight on the prow and the stern of a vessel would increase the stress on the middle section of any such vessel in question.³⁴ If the roman ships were “cheaply fitted out and sluggish constructed” as Polybios claims,³⁵ the Corvus would have made them, much worse fighting platforms. Any difficulties the Romans had with the speed and agility of their ships would have been exacerbated by the Corvus. Even in calm sea states it would have made the ship heavier, less stable and harder to turn and accelerate. In other words: The Corvus actually multiplied the flaws of the design described by Polybios. It could have benefited boarding actions—but it would have made it harder to get into position for any such action in the first place.

The Problem of Deploying the Corvus against the Enemy.

As described by Polybios and reconstructed by Wallinga, the reach of the Corvus is around twenty-four roman feet from the pole to the pestle.³⁶ The necessity to mount the pole on the center line would mean that some of the “off-ship-reach” of the weapon must be sacrificed. Since a quinquereme was roughly 5.1 m broad at the waterline (with a hull length of 45 m)³⁷, the usable reach of the Corvus beyond the ship would have to be reduced by at least 2.5 m, depending on the angle in question. This would provide the Corvus with an off-ship-reach of 4.6 m. It is therefore impossible to use the Corvus against any vessel that attempts a ramming action against the stern or the midship of a quinquereme. Even if an attack on the prow is imagined as Wallinga does,³⁸ and as has been successfully demonstrated by Murray to have been a common tactic in 4th–1st centuries BC naval warfare,³⁹ one has to take the relevant speed into account: A Carthaginian quinquereme at ramming speed would reach a speed of 7–8 knots, if not more.⁴⁰ If Polybios assertion of clumsiness is accepted the Roman quinquereme would have been a bit slower, but a collision speed of 14 knots seems reasonable. This means that for a prow-on-prow ramming run,⁴¹ the complete usable

³³ For prow-on-prow-ramming mechanics: Murray 2012, 31–68.

³⁴ For comparison, Coates 2012, 183 calculates that the movement of nine men in Olympias, weighing 1.17 tons (nearly identical to the Corvus) already led to a vertical movement force of 2.93 tons.

³⁵ Polyb. 1.22.2–3.

³⁶ Polyb. 1.22; Wallinga 1956, 23–24.

³⁷ Length: Sommer 2021, 102. Breadth: Morisson 1996, 287.

³⁸ Wallinga 1956, 59.

³⁹ Murray 2012.

⁴⁰ Sleeswyk 2012, 109–111 calculates with a ramming speed of 10 knots. Morisson 1996, 345 calculates a top cruising speed 8.6 knots for a roman quinquereme. Rankov 2012, 145–151 calculates the same to be a bit lower, with a 7-knot average—again for cruising, not for ramming. Whitehead 2012, 160 assumes 7–8 knots to be an acceptable cruising speed for a trireme. Oldfield 2012, 219–221 calculates his models with a ramming speed of between 8 and 9.75 knots.

⁴¹ Polyb. 1.22.9 states prow-on-prow ramming-scenarios as the primary field of use for the Corvus.



length of the Corvus was crossed by both ships in less than one second. Polybios states nothing about a changed approach of the Romans to individual ships manoeuvring or fleet formation, or any exercises that would have been necessary to implement such a change within the Roman fleet. Chances are slim that any changes to manoeuvre procedures could have been implemented successfully, given that the Corvus only exacerbates the already clumsy state of the Roman ships. This has profound consequences for a prow-on prow action: The Romans would have to rely on such an engagement, since lessened manoeuvrability would render them vulnerable to attacks in a Diekplous- or Periplous-style engagement and the limited reach of the Corvus means that it's only usable if the Roman bow is placed within ramming distance of a Carthaginian vessel. Even if that was achieved, timing would be difficult. If the Corvus was deployed too early, it would have been shattered by the forces of the two ships. Thus, in a prow-on-prow collision, the Corvus could not be deployed until the collision had already taken place, leaving only a tiny time frame between the approach, the collision itself and the recoil afterwards. This problem is further enhanced by the distances in play: As calculated above, the "off-ship reach" of the Corvus would have been limited by its position on the deck of the roman vessel. If deployed over the prow, the considerable length of the Roman and the Carthaginian ram bow would have to be reckoned with. Since both would have extended to around 2 metres beyond their respective prow,⁴² and considering that there must have been room in front of the Corvus to facilitate nautical work at the bow, it seems doubtful that the Corvus could have reached anything but the furthest fringes of a Carthaginian prow, if at all. At best, timing the release of the Corvus would thus have been very difficult. If the ships passed each other either by design or by mishap, the Corvus would "only" have to cover the distance occupied by the deployed oars of both ships. The "target" would be much larger, though, since at combined ramming speed a Carthaginian vessel would take around 6–7 seconds to pass the roman ships (45 m of ship length and a passing speed of 7 m per second). While hitting the target would be easier, the forces in play are still impressive. The pestle of the Corvus would have to be both heavy and sturdy enough to pierce the deck of the Carthaginian vessel. Once the deck is pierced, the force of both warships moving in opposite directions at full speed would come to rest on the Corvus. Normally, such forces were meant to be absorbed by the carefully cast and elaborately fastened bronze ramming bow, which would have spread the forces over the whole, strengthened prow of a vessel.⁴³ It seems highly unlikely that an improvised gangplank based on some kind of ladder⁴⁴ could have been sturdy enough to take such forces—

⁴² The Athlith ram, which Murray 2012, 59 ascribes to a quadrireme, had a length of about 2.2 m.

⁴³ Murray 2012, 31-68.

⁴⁴ Wallinga 1956, 20.



even more so since the connection of the Corvus to the pole would have necessitated an oblong hole in the middle of the gangplank,⁴⁵ weakening the construction even further.⁴⁶ It seems obvious that, for the Corvus to be deployed in any reasonable way, the movement of both ships relative to each other would have to be effectively zero.

The Prow Stem

Polybios argues that the Corvus could be deployed in all directions: Over the prow, or over the sides of the ship.⁴⁷ Wallinga has already identified certain obstacles to this assumption: The pole on which the Corvus was hoisted needed to be braced. The braces would in turn limit the deployment of the Corvus.⁴⁸ Further restrictions were caused by the means of hoisting the Corvus. While Wallinga still argues that the Corvus could be deployed in a 90-degree angle from the centre line of the vessel to either side,⁴⁹ there is a crucial oversight in his reconstruction. His models and reconstruction drawings—consequently adapted by most scholars of the Corvus⁵⁰—totally ignore the existence of the prow stem. This is an unfortunate oversight, since the prow stem—admittedly in various shapes and sizes—is a defining characteristic of polyrems in ancient iconography.⁵¹ Iconography from the Greek and Hellenistic era show ships with large prow stems.⁵² Unfortunately, there is no iconographic evidence left for roman warships of the early First Punic War. There is, however, a series of cast coins, dating from the end of the First Punic War. These coins have been dubbed the “prow series” since they display a warship’s prow section on the reverse. Every single example of the “prow series” features large prow stems.⁵³ If the length of the ramming prow below the prow stem is even remotely proportional, a Roman warship of the First Punic War must have featured a prow stem that was several metres high.⁵⁴ As shown by previously existing prow stems, such elaborate features can hardly have been a reaction to the Corvus. To the contrary: If the Corvus had been used for any lengthy period at all, one would suspect the foredecks of roman galleys to be as flush as possible, thus enabling the Corvus. Numismatic evidence from the end of the first century, however, reveals that the prow stem remained not only large, but also

⁴⁵ Wallinga 1956, 19–23.

⁴⁶ Wallinga 1956, 61 argues that there must have been a method to prevent the Corvus from being dragged along but does not give any more details.

⁴⁷ Polyb. 1.22. For its use in battle: Polyb. 1.23.

⁴⁸ Wallinga 1956, Plate 1.

⁴⁹ Wallinga 1956, 70.

⁵⁰ Casson 1971, 147; Lazenby 1996, 69; Meijer 2014, 240.

⁵¹ Morisson 1996, 203 provides numerous coins of Demetrios Poliorketes. Depicting warships with ornate prow stems and bow decorations.

⁵² See Fig. 1 and 2 in the Appendix.

⁵³ Morisson 1996, 200–205.

⁵⁴ Morisson 1996, 206; see Fig. 3 and 4 in the appendix.



connected to the deck via a high, sloping railing (Fig. 5).⁵⁵ The extent of this railing is best observed at a wall painting found in the house of the Vettii in Pompeii. Admittedly it is separated by the events of Mylae by more than three hundred years, but it clearly shows two galleys with large prow stems that cover the entire prow of the vessels and reach to a height far above the spear tips of the marines on deck (Fig. 6). Through this evidence we can surmise that the prow stems of roman oared warships depicted on earlier coins were not just thin, quickly dismantled posts, but large, elaborate structures. Pompeii's location at the bay of Naples also lends credibility to the authenticity of the warships depicted: Both the artist as well as his patron would have regularly seen the exercises of the roman fleet based in Misenum. The conclusion of this observation is striking: It is impossible that the Corvus could have been launched over such a structure.

The Corvus in Prow-on-Prow Ramming

It could of course be argued that the Romans dismantled their prow stems when they first installed the Corvus on board, and that Polybios omitted this fact for some reason. This seems unlikely, though. A prow stem on a galley that was designed to withstand prow-on-prow ramming must have been quite bulky, so disassembly would most likely have been a laborious task that would have impacted the structural integrity of the whole prow. The prow stem also served an important nautical function: Next to its ornate nature it helped the ships to cross the surf zone without taking on too much water over the bow. Cramped conditions meant that polyrems were often beached over night to afford rest to their crews and allow the hulls to dry and be repaired.⁵⁶ Crossing the surf zone must therefore have been an almost daily routine.

Also, the nautical work on the foredeck required some kind of railing to prevent accidents, as well as shelter against enemy missile fire. Note that Polybios argues that knee-high railings would have been a necessity to protect the marines using the Corvus against incoming missiles.⁵⁷ Only protecting one's marines while they board an enemy vessel via a small gangway and doing away with any kind of railing or prow stem would have been a very curious decision indeed. Even if the Roman crews did away with railings and prow stems temporarily, the problem of Carthaginian prow stems would still be eminent. In a prow-on-prow engagement, even a Carthaginian prow stem of moderate size would be enough to seriously hamper the deployment of the Corvus. First of all, it would prevent the pestle from penetrating the deck, making all

⁵⁵ *RRC* 350 A. The evidence is even clearer in a Denarius from 107–108 BC, *RRC* 307/1.

⁵⁶ Coates 2012, 182.

⁵⁷ Polyb. 1.22.



countermeasures much more efficient: The Carthaginians could simply have pushed the Corvus to the side if it had not been embedded in the deck.⁵⁸

Secondly it would change the angle of rest of the Corvus: As per the numismatical evidence, a prow stem would have been several metres high. If hit by the Corvus, the pestle-end of the boarding bridge would have ended up several metres above the “pole end” of the bridge. Instead of walking over a smooth, level gangway, the marines would have to climb upwards. Even if the Romans would have successfully aimed to hit the sloping railing to the left or the right of the prow stem itself, the problem would just have gotten worse: The slope would have had a glancing effect on the Corvus. Either the device would have glanced off entirely, or it would have ended up in a tilted position. Since Polybios argues that the marines would carry large shields for their protection,⁵⁹ they would have additional problems balancing themselves. Even the slightest swale in the water would render a passage over a tilting, inclined boarding bridge a surefire way to kill one’s marines and spare the Carthaginians the effort.⁶⁰

Thus, in a prow-on-prow engagement, the Corvus would not have any advantage over normal grappling hooks whatsoever, to the contrary: Grappling hooks could be thrown in numbers, and then an enemy ship could be towed using them. There is no possibility to “haul in” the Corvus, since it is both heavy and would still be attached to the pole. Thus, the usability of the Corvus in prow-on-prow engagements seems either totally impossible (due to Roman railings and prow stems) or wholly impractical (due to Carthaginian railings and prow stems).

The Corvus in Broadside-to-Broadside-Engagements

This would leave the Corvus as a tool for broadside- to broadside-boarding. For this, it is no necessity, as Polybios himself claims that boarding was possible without it.⁶¹ Here the main function of the Corvus would have been one of pinning the enemy in place. For this, grappling hooks would do the trick just fine. Also, the positioning of the Corvus would be highly dubious: Why pierce the foredeck and construct a

⁵⁸ Given that Polybios claims that the Corvus would come down with enough force to penetrate the deck planking of a Carthaginian Vessel, those forces would have to be absorbed by the Corvus (and the Carthaginian prow stem) even if no penetration can occur. Any bouncing or glancing of the Corvus would render an incidental hooking-effect much less likely than with simple grappling hooks.

⁵⁹ Polyb. 1.22.

⁶⁰ Wallinga 1956, 89–90 readily acknowledges the great dangers of using this device—with no additional incline or tilt—in anything but the calmest of sea states.

⁶¹ Polyb. 1.22.



permanent pole at great cost of weight and trim, when one could just as well use the existing arrangement for hoisting a main mast midships?

If placed midships, the Corvus would still not defend more than a tenth of the ship's length, but it would be much easier to manipulate, store and hoist. A position amidships or aft would also be far more practical, if the main function of the device was to deter Carthaginian ramming attacks, since those were the prime targets for such manoeuvres. Even in such a position, the Corvus would still have been of limited use. Given its limited reach, it still could not have prevented a ramming attack. Since the Carthaginian prow-stem-problem would still be in place, it is unlikely that the Corvus could even have pierced the foredeck of a Carthaginian vessel performing such an attack. Grappling hooks, on the other side, could at least have hampered any Carthaginian efforts to back water after a strike. Grappling hooks would be much easier to use, produce and store. Weighing much less than a Corvus, grappling hooks could be deployed in large numbers from multiple angles through multiple people from all parts of the Roman deck. They would not need any dedicated crew. Unlike the Corvus, the lines of multiple grappling hooks thrown from multiple locations could even be used to haul the Carthaginian ship into a position that would open it up for a boarding attack by the Romans.

Offensive Usage of the Corvus?

This leaves only a very limited role for the Corvus: It is too short to prevent a Carthaginian ramming attack. If employed against the prow stem of a Carthaginian Vessel, it would—at best—perform like a heavy and poorly constructed grappling hook. Given the size and prevalence of prow stems, the suitability of the Corvus as a boarding bridge must be questioned altogether. The “optimal use” for the Corvus would be when a Roman vessel rams a Carthaginian vessel amidships. Since the relative velocity of both ships to each other would have been effectively zero once the Roman ram was imbedded into the side of the Carthaginian vessel, the Corvus would have been sturdy enough to take the forces in play. In this case, one still must assume that the Romans got rid of their own prow stem and were able to use the Corvus in this direction. This scenario, however, would at least open the possibility for the Corvus to finally both pierce the enemy's deck, pin the ship in place and act as the focal point of an attack. There are, however, multiple problems to this scenario. The first is that Polybios does not describe the use of the Corvus in this manner.⁶² In his description, the Corvus is a purely defensive weapon that allows the Romans to counter Carthaginian ramming tactics, not an aid to Roman ram-and-board-efforts. Secondly, the Corvus is not

⁶² Polyb. 1.22–23.



necessary for such a scenario. If one's ramming prow is safely imbedded in the flank of the enemy ship, there is no big gap of water for the Corvus to cross. Boarding could proceed in the same "traditional" manner that had been used since the heyday of the trireme. To the contrary, the Corvus could turn into a hinderance, for the Corvus would prevent the attacking roman ship from retreating, leaving the ships tethered together. Being physically connected to a quite possibly sinking ship and then boarding said ship with one's marines exposes the roman ship to the dangers of being dragged down to the bottom by its victim or being counter-rammed by Carthaginian vessels. More importantly, such a deployment would necessitate to turn Polybios's argument on its head: The Corvus would no longer be a tool of defence but would commit the Romans to going on the offensive. Polybios tells us very clearly, however, that the Carthaginians were to be regarded as both faster and more agile, aiming for ramming runs of their own.⁶³ Since the Corvus would have hampered both speed and manoeuvrability of the roman vessels, it would have burdened every Roman attempt at high-speed ram-and-board-tactics. Thus, the Corvus might have provided some benefit once the Roman Ship had rammed a Carthaginian ship – but its impact on the manoeuvrability would have made it much harder to actually achieve such a strike.

Summary: Arguments against the Corvus:

The Corvus serves a clear role in the maritime rags-to-riches narrative of Polybios.⁶⁴ Its deployment, however, is inconsistent with available iconographic evidence of 4th century BC to 1st century AD warships. The prow stems of both Carthaginian and Roman vessels would have greatly inhibited the use of the Corvus in prow-on-prow ramming actions. For side-to-side boarding-actions, the Corvus would not have served a purpose that could not have been achieved more easily and effectively via the deployment of grappling hooks. It's only use could have been a boarding action after a Roman ship had scored a ram strike against the side of a Carthaginian vessel – the opposite of the use described by Polybios.

Mylae without the Corvus

If one dismisses the Corvus as a narratological tool of Polybios, an important aspect remains: How, then, did the Romans win the Battle of Mylae? Parts of the question have already been answered by Steinby's work about the early Roman Republican Navy. Contrary to what Polybios wants us to believe, the Romans were not landlubberish beginners, but had a well-trained, disciplined and both technically and

⁶³ Polyb. 1.22.

⁶⁴ For the narrative: Sordi 1967, 260–268. Steinby 2007, while not discarding the Corvus, is arguing for a much more professional and capable Roman Navy than Polybios wants us to believe.



tactically astute navy at their disposal.⁶⁵ A reconstruction of the Battle of Mylae can thus be gained if one discards every bit of “Corvus-lore” that Polybios snuck into the material provided to him by his sources. It is, however, necessary to briefly examine not only the battle itself, but the whole naval campaign as described by Polybios.

Prelude: The Actions prior to Mylae

The first Roman naval campaign of the First Punic War begins with the Roman fleet sailing south from its training grounds to reach the Strait of Messina.⁶⁶ There, a vanguard of seventeen vessels under Gn. Cornelius Scipio is detached. Scipio decides to take Lipara, but is deserted by his crews and surrenders himself and his vessels to a Carthaginian squadron of slightly greater force.⁶⁷ Following this success, the Carthaginian admiral Hannibal tries to engage the Roman main force with just fifty of his ships off the “Cape of Italy.” Superiority in numbers, a solid formation and discipline carry the day for the Romans, who capture most of the Carthaginian ships.⁶⁸ It remains unclear who commanded the Roman ships in this action, since Polybios is adamant that the second Consul, Duilius, only took command of the Roman fleet after the action at the Cape of Italy.⁶⁹ The “action of Cape of Italy” was no small engagement by any measures: A force of fifty Carthaginian ships must have carried around fifteen thousand rowers, not counting marines and sailors.⁷⁰ If Polybios got confused and Duilius was indeed present at the battle of the Cape of Italy, this could very well be the battle mentioned in the famous inscription on the Columna Rostata.⁷¹

The Battle of Mylae

Previous to the battle of Mylae, the Carthaginians would thus have gained 17 ships at Lipara, but lost at least 25 ships at the Cape of Italy. Thus begins the “Mylae campaign”.

⁶⁵ Steinby 2007.

⁶⁶ Polyb. 1.21.2–5.

⁶⁷ Polyb. 1.21.5–8.

⁶⁸ Polyb. 1.21.10–11. Noting that the Corvus was not mentioned during the battle off the Cape of Italy, De Santis 2016, 79–80 argues that Polybios confused two different accounts of the same battle and thus created the battle of the Cape off Italy out of a Carthaginian report about the battle of Mylae. This seems unlikely to be the case. While this theory cannot be discounted entirely, there is a much simpler solution: Polybios did not confuse the battles, but rather he needed a battle in which his Corvus brought victory. From this point of view, Polybios might have invented the whole “battle of Mylae” narration.

⁶⁹ Polyb. 1.22.1. The commander at the Cape of Italy could then have been a legate of Scipio. An even more intriguing possibility would be a commander from one of the cities of Magna Graecia. Such a “foreign” commander might explain both why Polybios does not mention the name (it having been redacted in Roman sources) and it would reveal how the Romans got the know-how for large fleet actions.

⁷⁰ For the complement of a quinquereme: Sommer 2021, 102.

⁷¹ *ILLRP* 319= *ILS* 65; For a detailed discussion of the description and its difficulties: Kondratieff 2004. For a discussion of the description in context with Zonaras and Polybios: Bleckmann 2002, 125–131.



Actions starts with the Carthaginians “raiding” the Chora of Mylae in force, carrying 130 Ships with them.⁷² Duilius interrupts this raid, taking advantage of the fact that the Carthaginians were still busy on land. The situation for both fleets could not have been more different: On the one hand were the Romans, already in battle formation, ready to bear down on the beached Carthaginians. The Carthaginians however were still busy raiding the chora. Presumably, most of their ships were either at anchor or had been hauled up the beach. Destroying agricultural land during a raid is hard work,⁷³ so it is likely that most Carthaginian crews were engaged in this activity when the Romans were sighted. Consequently, the main of the Carthaginian fleet was in no shape to fight. Precisely how Duilius managed to get “the drop” on the Carthaginians is unclear, but that he did so gets clear from the Carthaginian action.⁷⁴

Only a guard squadron under Hannibal, comprising his flagship (a Seven captured decades earlier) and 29 other ships, could be mobilized to engage the Romans.⁷⁵ This force now threw itself against the Romans. Polybios tries to explain this by the Carthaginian contempt for roman naval skills, but this seems highly unlikely, given the fact that Romans had proven their ability to defeat a numerically inferior force at the Cape of Italy. The fact that Hannibal’s vanguard does not attack in formation is best explained by the circumstances: With the ships launching from the beach as soon as their crews returned, there was no time to take a formation. Rather, the ships had to be fed piecemeal into the Roman formation to delay their advance upon the beaches, where the main of the Carthaginian fleet was still in disarray.⁷⁶

It is thus no wonder that, disorganized and severely outnumbered, the Carthaginian vanguard was quickly wiped out. The strength of the Roman fleet at Mylae is generally held to have been at around the strength of the Carthaginian fleet.⁷⁷ With the Carthaginian vanguard of 30 ships throwing itself head on against a force that had at least four times the numbers, one really does not need a “wonder-weapon” like the Corvus to explain its defeat! Hannibal himself escaped from the mayhem using

⁷² Polyb. 1.23.2–3.

⁷³ Keegan 1997, 354–355.

⁷⁴ Sommer 2021, 104 argues that the main reason for the Carthaginian defeat was the hasty deployment done by Hannibal.

⁷⁵ Polyb. 1.23.3–4.

⁷⁶ Had the Romans reached the beaches where the Carthaginian main was still ashore, they could have towed the ships away or burned them at leisure. Thucydides writes about several instances where beached ships were towed away by the victors: Thuc. 1.90.5–6; 4.14.1; 7.74.2. Thuc. 1.49.5 recounts how the tents of a beaten fleet are burned. For a piecemeal engagement of the Carthaginian fleet: de Santis 2016, 77.

⁷⁷ Casson 1971, 147 argues for 140 roman ships; Goldworthy 2003, 107 argues for at least 103 plus allies and captured roman ships. Lazenby 1996, 70 argues for equal numerical strength in hull numbers; Steinby 2007, 92 puts the Romans at a slight disadvantage with 120 hulls. De Santis 2016, 77 argues for a slight Carthaginian advantage in overall numbers.



a small tender.⁷⁸ This is a further indication that the battle was fought near the shore and as a delaying action, since otherwise such a tender should have fallen prey to Roman prows. Having lost the flagship and the vanguard in the first few instances of the battle, further Carthaginian attacks were aimed at the flanks of the Roman fleet, leading to some more Carthaginian casualties.⁷⁹ The turning manoeuvres that Polybios ascribes to the *Corvus* during this stage of the battle might just be a manoeuvre akin to the venerable “*Kyklos*”, a ring-like formation that offered protection against a faster, more agile opponent. Centuries before, the Themistocles had used such a formation at Artemision, also capturing thirty ships.⁸⁰ The Carthaginian casualties during the “flanking action” at Mylae were not in vain, though, as the action on the flank bought the Carthaginians time, allowing the main of the Carthaginian fleet to escape. Carthaginian losses were high – around fifty ships, thirty of which were captured.⁸¹ This left eighty ships to fight another day.

Thus, the battle of Mylae is not an example of a singular use of a “wonder-weapon”, but rather of a combination of stout military principles: The Romans got the element of surprise, which led the Carthaginians to engage piecemeal and out of formation. Against such a disorganized enemy, the Romans could bring overwhelming local superiority to bear, crushing much smaller Carthaginian formations whenever those dared to engage.

Conclusion: Why was the *Corvus* invented?

If the Battle of Mylae is reconstructed without the *Corvus*, the main merit for the victory must be accorded to the consul, Duilius. It was his decision to use the opportunity to attack the Carthaginians while they were busy raiding, and later he kept his ships in solid, secure formations rather than calling for a general chase and melee, keeping Roman losses to an absolute minimum. Polybios, on the other hand, praises neither the commander nor the discipline and bravery of his subordinates, but rather the *Corvus*. He does so to keep his narrative of Roman inexperience at sea intact, but he also has a secondary motivation. C. Duilius was a plebeian, who suddenly had not only won the first major sea battle a Roman consul had engaged in, but one of the largest military victories in the history of the Republic. This must have been a stark contrast to the fate of Gn. Cornelius Scipio, who had surrendered his ships and himself to the Carthaginians. Within the climate of intense social rivalry for glory and

⁷⁸ Polyb. 1.23.7.

⁷⁹ Polyb. 1.23.8–9.

⁸⁰ Hdt. 8.11.1.

⁸¹ Polyb. 1.23.10. The number of captured vessels can be taken from the Victory Inscription: *ILLRP* 319.



command that defined the Roman aristocracy,⁸² the contrast between the success of Duilius and the loss of Dignitas for Scipio could not have been starker. It is no secret that Polybios leans heavily on the pro-Scipiones-side of things, since he worked in such a pro-Scipio environment.⁸³ It's well possible that Polybios took every opportunity to diminish the greatest success that had ever been gained by a political rival in the face of grave, Scipiones misfortune. In this light, the "desertion" of the roman crews at Lipara can be read as a mere excuse that Polybios invented or exaggerated to honey-coat the disaster of his patron's family. The success of Duilius, however, was not so easily dismissed, since it had been celebrated via a triumph and the erection of the Columna Rostrata. Since he could not deny or downplay the victory, Polybios did the next best thing: He combined his overall narrative of Roman disdain for the sea with a device that takes all the credit away from Duilius. Neither Diodor nor Cassius Dio were encumbered by Polybios peculiar position, so they never needed the Corvus. Thus, it is highly likely that Polybios invented this machine, perhaps taking inspiration from siege equipment he encountered during his own military career.

In his anti-Duilius, pro-Corvus narration, however, Polybios has been very successful: Even modern scholars tend to ascribe Roman victories at sea during the First Punic War more to the Corvus than to the skill or courage of the Roman commanders.⁸⁴

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⁸² For the role of accumulated social prestige in roman aristocracy: Flaig 2003, 32–68.

⁸³ For the pro-scipionic tendencies in Polybios's account of the first Punic war: Bleckmann 2002, 131–139.

⁸⁴ Lazenby 2004, 239.



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Figures



Fig. 1: AR Stater, Lycia, Phaselis. 4th century BC. Obverse: Front part of a ship (*prora*) with figure walking on the deck to the right. <https://www.nomisma.museum.uni-wuerzburg.de/object?id=ID314>.



Fig. 2: Tetradrachm, Demetrios I, 294-293 BC. Obverse: Nike standing on the prow of a ship (*prora*), facing left, playing a *salpinx* (a trumpet-like wind instrument), holding a ship's standard (*stylis*) in her left hand; a circle of pearls. <https://www.nomisma.museum.uni-wuerzburg.de/object?id=ID493>.



Fig. 3: As, Roman Republic, RRC 56,2, 211 B.C. Reverse: Ship's bow (*prora*), right.
<https://muenzkatalog.hhu-hosting.de/object?id=ID6336>.



Fig. 4: As, Roman Republic RRC 35/1, 225-217 BC. Reverse: Ship's bow (*prora*), right.
<https://numid.uni-mainz.de/object?id=ID536>



Fig. 5: As, Roman Republic, RRC 350 A,3c., c. 86 BC. Reverse: Ship's bow (*prora*), left. <https://www.ikmk.uni-tuebingen.de/object?id=ID1035>.



Fig. 6 Mural painting, House of the Vettii VI.15.1 Pompeii. October 2024. North wall of exedra with detail of the naval scene. Photo courtesy of Klaus Heese. https://pompeiiinpictures.com/pompeiiinpictures/R6/6%2015%2001%20exedra%20one_files/image052.jpg.