

# **Cogs, Sails and Longbows: Implications of Naval Tactics and Technology in the Hundred Years War**

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## Introduction

The Hundred Years War has been a point of study for many historians over the years. Battles between French knights and English longbow men were the epitome of this chivalric period and thus draw the lion's share of the attention. In doing so another aspect of the Hundred Years War is overlooked, the struggle between the naval forces of France and England. This is not an easy topic to study with sources from the period being few and far between. What sources that do exist usually focus little attention upon naval combat. Furthermore, secondary source information is limited as well since few historians have chosen to write on this subject. The task is not impossible and through a careful study of the sources one can begin to draw a series of important conclusions about naval combat during this period. This paper will make great use of the writings of Jean Froissart. Born in 1337, he was considered the historian of the Hundred Years War. In his Chronicles, Froissart gives the war's naval engagements some attention. Although he did not witness these events personally, his descriptions are much more complete than those of his contemporaries, such as Robert of Avesbury, Jan de Klerk, and Jean de Hocsem.<sup>1</sup>

There were several naval engagements during the Hundred Years War. The three that will be looked at in this work are the battle of Sluys in 1340, the battle of Les Espagnols-Sur-Mer in 1350, and the capture of a French fleet from La Rochelle. The battle of Sluys is the best known of these, but it can be argued that subsequent engagements are of equal or greater importance. Many historians have downplayed these events. They claim that because of the limited capabilities of the ships there was little strategy involved in these engagements. Instead, they argue that the ships just came together close to land and grappled with each other, storming

the ships of the others fleet with their soldiers. As a result these battles were considered nothing more than land battles on ships.

Simply put, this perception is flawed. When one looks at these battles a far different picture is painted. These were not just land battles on ships, but instead were a brand new form of conflict in which strategy and sailing ability would be just as important as strength in arms.

### **Cog Ships and Galleys**

Before any discussion on battles and tactics can take place, one must first look at the equipment being used. The Middle Ages was an interesting time in the history of naval development as galleys, ships propelled with large banks of oars, were still challenging sail ships for supremacy of the high seas. Galleys had many advantages. Fast and maneuverable, the ships did not have to worry about calms or head winds because of their oars. Designed to ram and grapple with their opponents, these ships had been used for over a thousand years. The French war fleets relied heavily on galleys imported from the Mediterranean.<sup>2</sup>

Galleys had their limitations and were beginning to fall out of favor. Generally, because they were so low in the water they did not handle well in rough seas. In addition, these ships needed large crews to man the banks of oars, which limited their cargo capacity. With the boom



in seaborne commerce during the Middle Ages large cargo carriers were needed. Sailing vessels filled this need, and the most dominant type during the Fourteenth Century was the cog. An example of a cog can be seen in the picture to the left.<sup>3</sup> The nature of their design meant that relatively small crews could

handle them, and with their high gunwales and 2:1 length to breadth ratio they could carry large amounts of cargo. Many of these ships displaced one hundred tons or more in size.<sup>4</sup> The larger a ship was the more water it displaced, and thus the more cargo it could carry. A one hundred ton ship during this period was quite large. Steering on these ships was accomplished by a pintle-and-gudgeon rudder, which replaced less efficient steering oars. Usually, these ships had one mast rigged with a square sail.<sup>5</sup> Unfortunately, their square sail meant that these ships could not tack into the wind. To tack was to sail almost directly into a headwind. A ship that relied totally on square sails was incapable of this maneuver, and thus had to sail with the wind. In terms of ship design cogs would be an evolutionary dead end; however, elements of their design like the stern rudder and square sails would be adopted by Mediterranean shipbuilders and incorporated into the designs that would travel to India and the New World.

The cog also had some natural advantages when it came to war as well. Being higher out of the water they could rain missals down upon the decks of lower ships, like galleys. This advantage was magnified when cogs were fitted with towering castles and fighting tops. Ships castles were very much as their names implied. Mounted on the fore and aft of a ship, they acted as towers from which men could fight. A fighting top was affixed to the top of the mast and served the same purpose as the fore and aft castles. All of these aspects would also be adopted into later ship designs.<sup>6</sup>

The vast majority of ships that were used in combat at this time were really merchant ships. From 1337 to 1360 ninety-eight percent of the ships of the English fleets were privately owned. This is not surprising given the fact that these sailors and ships had the most naval experience. Even before the Hundred Years War merchants frequently pirated one another. This resulted in the development of merchant convoys.<sup>7</sup> In times of war, these merchant ships might

be modified with fore and aft castles and fighting tops, although this was not always done. The other two percent of ships were designated as “king’s ships” and were specially built for use in war with permanently fixed castles and tops.<sup>8</sup>

### **The Battle of Sluys**

*It was indeed a bloody and murderous battle. Sea fights are always fiercer than fights on land, because retreat and flight are impossible. –Froissart, Chronicles<sup>9</sup>*

The battle of Sluys in 1340 is the most famous of the naval battles of the Hundred Years War. The importance of this battle on the rest of the conflict was immense as the destruction of the French fleet at Sluys paved the way for the subsequent English invasion of France. This battle was no simple affair. Froissart says that when the English came upon the French fleet they were “...so great a number of ships that their masts seemed to be like a great wood...” and that they outnumbered the English four to one.<sup>10</sup> Even though it is hard to estimate the exact number of ships used by both sides, it is safe to assume that both sides had large fleets and that the English ships were outnumbered.

The French had expected the English fleet and had anchored their fleet at Sluys. It was there that the English engaged them in battle. In general, the battle of Sluys was fought in a more traditional style as the English fleet attacked the French close to shore where they grappled with them ship-to-ship. However, this description is far too simple for it fails to show that English had an understanding of naval tactics. Many view naval tactics as being some abstract concept; however, these tactics have a very real impact on the soldiers that carry them out. Sluys is an example of how a numerical disadvantage can be overcome with proper tactics. Their development and use is an example of the maturation of naval warfare. An example of naval

tactics can be seen in following Froissart passage, “when the King and his marshals had set in order his divisions he drew up the sails, and came with a quarter wind, to have the vantage of the sun. And at the last they turned a little, to get the wind as they wished it...”.<sup>11</sup> Although this is only one passage it is of great importance. The English had not needed to shift their course to engage the French fleet; however, by doing so they were able to not only place the sun behind their ships but also gain a favorable wind. With the sun at their back, the English fleet were less visible to the Spanish. With a more favorable wind the English fleet was able to maneuver with greater ease. Some historians have doubted that the English actually completed this maneuver. Even if they didn’t, the fact that Froissart mentions a maneuver of this sort is important for it shows that someone at this time had a grasp of complicated naval tactics.

Another point of contention was the tactics of the French. Some historians believed that the French had moored their ships together in a block. This was a common naval tactic, one that the Flemish had previously used against the French. The English engaged the French in the Zwyn estuary along the Flemish coast, a confined area rampant with sandbanks. Furthermore, it is believed that the battle began after noon, a time at which the tide was falling in that area.<sup>12</sup> Given the conditions of a falling tide and lack of room to maneuver, one can doubt the French ability to moor their ships together like this.<sup>13</sup>

Of the three engagements that will be looked at, the Battle of Sluys was most traditional in terms of how it was fought. Although the English might have performed some maneuvers they engaged a stationary French fleet. How this battle played out is worth some consideration. Froissart writes:

Then the King set all his ships in order, the greatest before, well furnished with archers: and ever between two ships of archers he had one ship with men of arms: and then he made another division of the fleet to lie aloof with archers, to support ever them that were most weary...<sup>14</sup>

This passage is quite telling. In 1340, the concept of naval artillery was in its infancy. With few, if any, cannons the ability to afflict damage to a ship from afar was limited. On the other hand, missile technology was well established and the two principle forms of utilized at Sluys were longbows and crossbows. In many ways, the Battle of Sluys can be seen as the first victory of the English longbow over their crossbow armed French counterparts.<sup>15</sup> The English tactical arrangement of three ships that Froissart detailed, with two cogs of longbow men supporting a cog of foot soldiers, worked well for the English. From the cog's castles and fighting tops the English archers rained down arrows upon exposed French galleys. Once the number of soldiers on the French ship had been reduced the soldiers from the third English ship could then be boarded.<sup>16</sup> The longbows played the role of long-range artillery, and were much more efficient than their crossbow counterparts. With them the English ships were able to bring destruction at a distance and then close with the enemy when they chose.

In addition to the role tactics and weapons played in the English victory, one cannot discount the role of the Flemish as well. Once the battle began the Flemish people poured out of the city and into their boats to assist the English fleet. In addition, they also attacked any French sailors that managed to escape their ships and make it to shore. How big of a part the Flemish played in the victory has been a subject of debate. What is clear is that the Flemish played a role in the battle.<sup>17</sup>

A variety of things were responsible for the English victory at Sluys. Some of these factors were the quality of the English sailors and commanders, the inherent advantages of their ships and weapons, and the intervention of the Flemish. Of greater importance than who won or lost is the methods and technologies they used. Even though outnumbered, cog ships that had been designed for trade won a decisive victory over galleys designed for war. English longbows

had given the English fleet a standoff capability in combat. They decimated the crews of the French ships from afar and chose when they boarded an enemy vessel. Even though Sluys was primarily an older style grapple and board battle, these new tactics and weapons were beginning to have an impact.

### **The Battle of Les Espagnols-Sur-Mer**

*A fierce battle began between them, the English archers shooting and the Spanish defending themselves lustily... –Froissart, Chronicles<sup>18</sup>*

Modern historians overlook the importance of Les Espagnols-Sur-Mer, also known as the battle off Winchelsea.<sup>19</sup> Taking place in 1350, Les Espagnols-Sur-Mer was an engagement between an English squadron and a merchant fleet of France's ally, Spain. A sideshow, really, that is often overshadowed by Sluys. The importance of Les Espagnols-Sur-Mer does not lie in its impact on the Hundred Years War. Instead, its importance lies with how the battle was conducted. Les Espagnols-Sur-Mer was far from being a land battle fought at sea.

The Spanish merchant fleet had been forewarned that the English were going to attack them and had made necessary preparations while docked at Sluys. Froissart lists many of these in the following passage, "...they furnished themselves right plentifully, and their ships of war and others...with all kinds of arms and of good artillery, and retained all manner of people, soldiers, archers, and crossbows, such as were willing to take their pay...".<sup>20</sup> Froissart describes the Spanish armaments in another passage as well:

"They came into the town of Sluys...and there they had them so heavily furnished with all kinds of artillery, that it was marvel to think on; and also with great bars of iron forged and all ready for throwing, and for sinking ships by casting rocks and stones with number".<sup>21</sup>



Going into battle the Spanish seemed to have all the advantages. Froissart described their ships as being larger and more numerous than the English vessels. Froissart estimated that the Spanish sailors and soldiers outnumbered the English ten to one.<sup>22</sup> The English again appeared to be going up against a larger and superior fleet.

The Spanish fleet also entered the battle with the advantage of the wind. Froissart argues that with the wind the Spanish could have avoided combat if they had wished, but either because of pride or arrogance they chose to engage the English fleet.<sup>23</sup> The English, on the other hand, had no such advantage. Froissart says that they drew their ships up into close formation with which to meet the Spanish.<sup>24</sup> If true, this tactic is not surprising. With a lee wind blowing into their faces and a superior enemy fleet bearing down on them such a formation would have allowed the English to keep their defense as organized as possible. One can speculate that the Spanish fleet, in effect, broke their formation on the English block like a wave breaking on a rock. Once the Spanish formation was broken and their ships scattered, its numerical advantage was reduced and the English fleet could then engage the enemy ships piecemeal.

Of equal importance is how the two sides engaged each other. Unlike Sluys, neither was at anchor or near the shore. As the battles name implies, they were at sea and under full sail. With the limited maneuvering capabilities of these ships the difficulty in bringing together two large fleets cannot be underestimated. In addition, it seems that both sides were using sailing ships. The English ships were cogs. The Spanish ships were undoubtedly some kind of sailing ship as well. This conclusion can be drawn for several reasons. Froissart mentions that the Spanish ships were taller than even the English ships, which is usually a characteristic of sailing ships. In addition, he places great importance on the Spanish having the wind, which would not have been a concern if they had been galleys because of their reliance on oars.

This height advantage, if Froissart is to be believed, was a major factor in favor of the Spanish. Part of the English success at Sluys had been because of the height advantage they had over the French galleys. Froissart details how the Spanish used this advantage in the following passage, "...the Spaniards were in these great ships, higher and greater than the English ships, and had thereby great advantage in shooting and in throwing and casting great bars of iron, with which they gave the Englishmen much trouble".<sup>25</sup> The Spanish dropped these iron bars, as well as large stones, from their top castles in hopes that they would pierce the bottom of the English ships. If a sufficient number of holes were made below a ship's water line the ship might sink. In addition, with their height advantage it would have been easier for them to repel English boarding attempts. It was literally an uphill battle for the English.

The battle swayed back and forth between the two sides, although many modern historians doubt the battle was as close as Froissart portrays it.<sup>26</sup> Despite apparently being outnumbered, Froissart says that the English captured several Spanish ships.<sup>27</sup> Despite their disadvantages the English maintained their aggressiveness throughout the battle. Lacking a height advantage they were unable to stand off with their longbows. The English did not fight a grapple-and-board battle because they knew no other way. Instead they chose to fight in this manner.

The fact that *Les Espagnols-Sur-Mer* had no significant impact on the outcome of the Hundred Years War is not what is important. What is important is that two large fleets came together on the high seas and fought a pitched battle with one another. It is no easy accomplishment to lay a ship along side another while under sail, and then conduct a boarding operation under hostile fire. To do so shows a grasp of ship handling and strategy that few historians acknowledge. What is even more amazing is that the English won the battle. The

Spanish outnumbered the English, had larger ships, and the advantage of the wind. The victory must be accredited to the sailors and soldiers of the English ships. In this sense the battle of Les Espagnols-Sur-Mer was tactically more important than the battle of Sluys, and its historical importance should be recognized.

### **The Capture of a Fleet From La Rochelle**

*Thus on the sea there was a hard battle, and ships broken and sunken on both sides... –Froissart, Chronicles<sup>28</sup>*

Froissart writes about a third naval engagement during the Hundred Years War; however, this engagement is representative of an entire type of naval warfare that had become common. This was commerce raiding. Commerce raiding, or pirating, had been going on long before the Hundred Years War. As mentioned earlier, convoying was developed to counter its effects. The capture or destruction enemy merchant ships was just as valuable as destroying their warships. In fact, in a time when the majority of warships were impressed merchant ships, the line between the two was often blurred. For example, the Spanish fleet at Les Espagnols-Sur-Mer had been a merchant fleet, although it had been heavily armed. The Flemish fleet that Froissart mentions in his writings left out of La Rochelle laden with wine, and proved to be a tempting target for the English.

However, the capture of this Flemish fleet is important for other reasons. For instance, Froissart mentions the presence of cannons on one Flemish ship in the following passage:

They [the English] rushed in among the Flemings' ships and them of La Rochelle; yet the Flemings and crossbows defended themselves right valiantly, for their patron Sir John de Bucq did ever support them: he was in a great strong ship, wherein he had three guns shooting so great stones, that wheresoever as they lighted they did great damage.<sup>29</sup>

It is doubtful that their presence had much of an impact, because of their limited numbers. Their capabilities at the time can also be debated.. Their presence is significant historically, though. Cannons were becoming more common on ships and eventually became the dominant naval weapon. In addition to these early cannons, more traditional weapons were also used; such as crossbows, long bows, and iron bars hurled from top castles to create holes in, or hull, the enemy ships.<sup>30</sup>

Both sides used a mixture of ships in terms of size and type. According to Froissart, in addition to their cog ships the English used some galleys filled with archers in this battle, but these galleys were ineffective because the archers were unable to hit the Flemings hiding behind the bulkheads.<sup>31</sup> Some of the Flemish ships used their smaller size to their advantage by moving into shallower water along the French coast where the larger English ships could not follow.

It was not a static battle, rather a running engagement that lasted several days during which many Flemish ships were captured. Eventually, what was left of the Flemish fleet found relative safety in Sluys where the English blockaded them for a period of time. If the English did not capture the remaining Flemish ships in Sluys, they at least wanted to destroy them. An attempt was made to do so by using older captured vessels as “fire ships”. A fire ship was just that, a ship packed with flammable material and then set on fire. The ship was then allowed to drift into a mass of enemy vessels in hopes of setting some of them on fire. In this instance the tactic failed to damage any of the Flemish ships.<sup>32</sup>

This expedition proved to be quite profitable for the English. Froissart makes the claim that they captured nine thousand tons of wine, a profit of two hundred thousand francs. He also says, “...wine was the dearer all the year after in Flanders, Holland and Brabant, and the better cheap in England...”.<sup>33</sup>

Although the engagement was of minor importance, it represents elements that are of great historical value. For instance, the concepts of commerce raiding, convoys, and blockades are themes that continue to permeate naval strategy today. The continued ineffectiveness of galleys as warships in northern waters is another important theme. Sail ships with their height and size were clearly demonstrating their advantages. Finally, the presence of cannons is of vast importance. Although they may have had a limited impact on this battle, the influence they would have in the future is immeasurable.

### **Conclusion**

Naval warfare during the Hundred Years War was more than just “land battles at sea”. Froissart’s writings shows that tactics and strategy was not only present, but also were becoming more developed. Complicated formations and maneuvers were being used. In away, sailing ships necessitated this. Their reliance on the wind placed greater importance on maneuvering and ship handling. In addition, new technologies were instrumental were proving pivotal. Cog ships with their high castles and tops revolutionized how naval battles were fought and were responsible for the direction of naval development for the years that followed. The English long bow, in effect, became the first long range naval artillery, and was responsible for much of the English success by giving their ships a standoff capability. There is no denying that the ultimate goal in these battles was to grapple and board the enemy ship; however, grapple and board continued to be the dominant strategy until effective naval guns made it easier to sink an enemy’s ship than to board it. Historians must realize that real tactics and strategies were being used in these battles, many of which like complicated naval formations and standoff weapons are still in use today.

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- <sup>1</sup> DeVries, Kelly, "God, Leadership, Flemings, and Archery." *American Neptune* 55 (1995): page 233.
- <sup>2</sup> Timothy J. Runyan, "Ships and Fleets in Anglo-French Warfare, 1337-1360." *American Neptune* 46 (1986).
- <sup>3</sup> Bbc.co.uk, "Articles", Replica of an Ancient Ship", 7 July 2004,  
<[http://www.bbc.co.uk/guernsey/content/articles/2004/07/27/cog\\_ship\\_feature.shtml](http://www.bbc.co.uk/guernsey/content/articles/2004/07/27/cog_ship_feature.shtml)> (April 21, 2005).
- <sup>4</sup> Runyan, 4.
- <sup>5</sup> John F. Guilmartin, Caravels and Carracks: Gunpowder and the Changing Face of Warfare at Sea, 1300-1650, (Cassall 2002).
- <sup>6</sup> Runyan, 5.
- <sup>7</sup> Runyan, 1.
- <sup>8</sup> Runyan, 4-5.
- <sup>9</sup> Jean Froissart, Chronicles, ed. Geoffery Brereton, (New York: New York, Penguin Books, 1979), 64.
- <sup>10</sup> Henry Newbolt, Stories from Froissart, (New York: New York, The MacMillan Company, 1899), 3-4, 6.
- <sup>11</sup> Newbolt, 4.
- <sup>12</sup> A Letter written by Edward III states that the English entered the channel "well after Nones", which would put it between the hours of 12 and 2 pm. Susan Rose, Medieval Naval Warfare 1000-1500, (New York: New York, Routledge, 2002), 65.
- <sup>13</sup> Susan Rose, Medieval Naval Warfare 1000-1500, (New York: New York, Routledge, 2002), 65.
- <sup>14</sup> Newbolt, 4.
- <sup>15</sup> DeVries, 224.
- <sup>16</sup> "DeVries, 225.
- <sup>17</sup> DeVries, 227, 230-232.
- <sup>18</sup> Froissart, 116.
- <sup>19</sup> Froissart, 113.
- <sup>20</sup> Newbolt, 65.
- <sup>21</sup> Newbolt, 68.
- <sup>22</sup> Newbolt, 68.
- <sup>23</sup> Newbolt 70.
- <sup>24</sup> Newbolt, 70.
- <sup>25</sup> Newbolt, 72.
- <sup>26</sup> Rose, 66.

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<sup>27</sup> Froissart says that fourteen Spanish ships are captured from a fleet of forty ships; however, one should be wary of these numbers. Newbolt, 75.

<sup>28</sup> Newbolt, 311-312.

<sup>29</sup> Newbolt, 311.

<sup>30</sup> Newbolt, 311-312.

<sup>31</sup> Newbolt, 311.

<sup>32</sup> Newbolt, 312-314.

<sup>33</sup> Newbolt, 314.