

A & A GAME ENGINEERING PRODUCT SUPPORT

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- Clarifications – these are more general clarifications about game play in response to questions from players.
- Corrections and Amendments – these include corrections to errors in game data, typing errors, and mistakes in game play that have come to light. These may come in two alternatives:
 - applicable to the most recent edition.
 - applicable to previous editions. These items will all have been incorporated into the latest edition on sale.
- New Rules – These rules will have been developed in response to requests from players. They may also have been developed from House Rules (see below).
- House Rules and player suggestions. House rules that are tested and work well may be incorporated into the basic rules if the author(s) approve.

The content of the sheets follows the same order as the rules in the book and the first sheet shows a summary of these sections and indicates those that are affected by the current sheet.

IRON AND FIRE

HISTORICAL MONOGRAPH ON THE NAVAL ASPECTS OF EUROPEAN WARS IN THE MID 19TH CENTURY WITH PARTICULAR EMPHASIS ON THE LISSA CAMPAIGN

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THE LISSA CAMPAIGN

The naval campaign of Lissa lasted little more than a month, but held the fascination of the naval community across the world for many years. Ironclads were in their infancy; the Warrior had been at sea for less than 6 years and not more than 5 years had passed since the building of Ericson's Monitor. Both Italy and Austria had, nevertheless, acquired respectable squadrons of ironclad vessels and although many obsolete craft were also employed, the backbone of the fighting force on each side was composed of ships that were, at the time, absolutely modern. Several of them were good enough to have deserved a place in any first class naval power of the time, and had been designed by the most reputable constructors and built in famous French and British yards. The brief campaign included not only a pitched fleet action but also a certain amount of preliminary scouting and a series of attacks upon forts with an attempt at an amphibious landing. Apart from all this Lissa has the distinction of being the first battle between armoured fleets on the open seas.

Bismarck's Plan

During the 1860s Europe was wracked by several short wars which led to the unification of Germany and Italy. In 1864 Prussia went to war with Denmark over the provinces of Schleswig and Holstein. Prussia's navy was, at the time, decidedly inferior to the force that the Danes could put to sea. Realising that, in a coastal environment, command of the sea was vital, Bismarck enlisted the support of his Austrian allies, and a squadron under von Tegetthoff was despatched from the Adriatic to northern waters. The campaign was successful; Schleswig and Holstein came under joint Prussian and Austrian rule. However, this was just the start of Bismarck's plan. His intention was to unify the whole of Germany under Prussian rule, but an obstacle stood in his way - many German states were allied to the Austrian house of Habsburg. Bismarck saw that a war between the newly formed Kingdom of Italy and Austria over the province of Venetia (including the city of Venice) would, if success was on the side of the Italians, significantly reduce Austrian influence and would ease the way to Prussian domination and eventual unification. Bismarck allied Prussia with the Kingdom of Italy and went to work, causing friction between his new and former allies. The Italians were keen to help - Italy was a young kingdom and many of King Victor Emmanuel's subjects still saw themselves as Piedmontese, Sardinians or Neapolitans rather than Italians. An external threat or, better still a war to gain control of a region what was seen as culturally linked more with the new Italy than Austria would serve to unite the people and form a new sense of national identity. As relations between Italy and Austria reached a low point, Bismarck forced everyone's hand by formally annexing Holstein in June 1866, removing all Austrian influence there. Austria declared war on Prussia on June 17th, and Italy declared support for her Prussian allies by declaring war on Austria on the 20th.

The Rival Admirals

The commanders on both sides were notable personalities. Wilhelm von Tegetthoff, the son of an Austrian staff officer, was born in Marburg, Styria, on December 23rd 1827, and was educated at the Marburg Gymnasium and, from 1840, at the College for Naval Cadets at Venice. In 1845, at the age of 18, he entered the Austrian navy as a naval cadet in the brig *Montecuccoli* and later joined the corvette *Adria*. He obtained a commission in 1848 and was appointed to several ships during the blockade of Venice. In 1854, having reached the rank of Lieutenant, he was given command of the schooner *Elisabeth*, which cruised in the Levant, and, in 1855,

of the steamer *Taurus*, which was a guardship at the mouth of the Danube. In 1857 he accompanied the ornithologist Dr. Heuglin to the Red Sea and Gulf of Aden. During this time Tegetthoff was captured in Somaliland and was held for ransom. Whilst recuperating in Aden he heard of his promotion to *Corvetten-Capitan* and, on his return to Austria in 1858 he was given command of the screw corvette *Erzherzog Friedrich*. During the Franco Italian war with Austria he was assigned to the defence of the Venetian lagoons. He next became the adjutant to the commanding admiral, the Archduke Ferdinand Max (later to become Emperor Maximilian of Mexico), whom he accompanied on a visit to Brazil in the *Elisabeth*. In April 1860 he was made *Fregatten-Capitan* and appointed to the screw frigate *Radetsky* in the Levant. In 1861 he was given the screw frigate *Novara* and again sent to the Levant, this time as senior officer on station. In 1863 he took command of the *Schwarzenberg*, in which he visited the Suez Canal works, but was recalled and ordered to the North Sea, where he fought at the battle of Heligoland. Following this he was made Rear Admiral. After the War of the Duchies he worked at Vienna on the reorganisation of the navy, and also held command in the Mediterranean. Just prior to the outbreak of war with Italy he was due to take command of an expedition to Eastern Asia. Following the war he travelled extensively, bringing home the body of Emperor Maximilian in the *Novara*. From 1868 he served as the Chief of the Naval Section of the Austrian war Office. He died on April 7th 1871.

Von Tegetthoff's opponent at Lissa was, in comparison, over 60. Count Carlo Pellion di Persano was born at Vercelli in Piedmont in 1806. He entered the Sardinian Navy in 1824 and reached the rank of Captain in 1841, later distinguishing himself in the war of 1848-49 whilst in command of the *Daino*. In 1851 he took the *Governolo* to England carrying the Piedmontese exhibits for the Great Exhibition at the Crystal Palace. During the operations of 1859 he commanded the *Carlo Alberto*, and was made Rear Admiral. He co-operated with Garibaldi on the coast of Sicily, directing the naval attack on Ancona, and received the sword of Lamoriciera. For these services he was made a Vice Admiral. In 1862 he became Minister of Marine and, on retiring from politics, was made a full Admiral. Following the disastrous Lissa campaign he was court martialled but, on January 29th 1867, was acquitted on charged of cowardice and treason. However, on April 15th he was found guilty of negligence with respect to the action and was deprived of his rank, dismissed the service and ordered to pay the costs of the trial. He died on July 28th 1883.

Austrian Preliminaries

When the Italian declaration of war was made on the 20th, the Austrian fleet lay in the roadstead of Fasana, Pola. At this stage the fleet was not at full strength. Several ships, notably the armoured frigate *Habsburg*, the screw battleship *Kaiser*, the screw frigate *Novara*, the screw gunboat *Seehund*, the schooner *Kerka* and the paddle steamers *Santa Lucia* and *Vulcan* had not then joined the fleet due to a combination of maintenance and accidental damage. Great efforts on the part of the Austrian shipyards would see these vessels made ready for service during the following days.

Von Tegetthoff's fleet at this stage comprised the following vessels: *Prinz Eugen*, *Schwarzenberg*, *Drache*, *Donau*, *Kaiser Max*, *Adria*, *Salamander*, *Radetsky*, *Don Juan*, *Erzherog Friedrich*, *Erzherog Ferdinand Max*, *Hum*, *Elisabeth*, *Dalmat*, *Greif*, *Wal*, *Stadium*, *Velebich*, *Andreas Hofer*, *Reka*, *Triest*, *Streiter*, *Narenta*.

On June 20th von Tegetthoff ordered the *Stadium* to reconnoitre the

Italian coast from Ancona to Bari. She returned three days later, having seen nothing to indicate the concentration of the Italian fleet. Von Tegetthoff, who flew his flag in the *Erzherzog Ferdinand Max*, telegraphed Archduke Albrecht requesting to know whether the fleet might assume the offensive, or at least mount a reconnaissance of the Italian coast in force. A reply was not received until the 29th, but this told von Tegetthoff that the fleet was free to conduct whatever actions he saw fit, as long as operations did not extend South past the island of Lissa, and as long as Venice was adequately defended.

On receiving the reply from the Archduke, von Tegetthoff sailed with the *Erzherzog Ferdinand Max*, *Prinz Eugen*, *Kaiser Max*, *Don Juan*, *Drache*, *Salamander*, *Schwarzenberg*, *Hum*, *Streiter*, *Reka*, *Velebich*, *Elisabeth* and *Stadium*. By daybreak on the 27th they lay off the Italian port of Ancona. At about 03:00 the *Elisabeth*, which had been scouting ahead, spotted the Italian despatch vessel *Esploratore*. Assisted by the *Velebich* and *Reka* the *Elisabeth* chased the Italian vessel inshore. The rest of the squadron cleared for action and remained off the port until 07:30. Within the roadstead could be seen the Italian fleet, most of which had arrived from Taranto two days previously. From his flagship von Tegetthoff could make out eleven ironclads, four frigates and two despatch vessels, with smoke rising from the funnels of other unseen vessels deeper within the harbour - more than a match on paper for his squadron. However, the Italians had been taken completely by surprise. Persano ordered his ships to sea, but few were capable of raising steam, and several were undergoing replacement of their armament. In the event, only two ironclads were made ready but none ventured out of the harbour, despite the Austrians remaining in the vicinity for some time. Thus the first encounter between the Italian and Austrian fleets was a moral victory for the Austrians, although no blood was shed. von Tegetthoff recognised that an attack on the Italian fleet at anchor would probably be ineffective at best, at worst downright dangerous, and at 08:00 he withdrew his ships, the wooden vessels leading off and the ironclads bringing up the rear and covering the withdrawal. By sunset they were safely back at Fasana where the *Habsburg*, which had arrived during the day, met them.

From that time on all ships in port were kept at a state of heightened readiness; steam in half their boilers was as there were rumours of a planned Italian attack upon Venice. On the 28th towards sundown, Fort Brioni signalled that an ironclad, flying a tricolour flag, was in sight fifteen miles off. The *Kaiser Max* and *Don Juan* were ordered to proceed to sea to intercept the intruder which they soon recognised as the British central-battery armoured sloop *Enterprise*, Commander Charles John Rowley, which was on her way from Ancona to Trieste. On the 29th the *Prinz Eugen* sailed to Venice, and on the 30th returned convoying a collier. On the same day a telegram, despatched by Field-Marshal-Lieutenant Baron Philipovic, Statthalter of Dalmatia arrived for von Tegetthoff. It said the Italian fleet was still at anchor in the roadstead of Ancona and that it had been reinforced by the arrival of four frigates; it was probable, Philipovic said, the Italians would presently take offensive action.

On July 4th the Austrian fleet was reinforced by the *Novara*, which, having been seriously damaged by fire at Pola on May 3rd, had been refitted in an incredibly short time in Tonello's yard at Trieste, and subsequently armed and manned at Pola. Exercises at sea followed, but there was still no sign of the Italian fleet.

On the 9th von Tegetthoff summoned his captains on board the flagship to report on the sea worthiness and general state of their vessels. At the same time, and on the two following days, fires were drawn and the machinery and boilers of all the vessels were thoroughly cleaned. This, though a wise precaution, might have put

the Austrian fleet at serious risk, had the Italians been ready to put to sea. However, von Tegetthoff thought this was a risk worth taking, having formed a fair assessment of the character of his Italian counterpart.

To the surprise of the Austrians, the Italians still did not seem ready to put to sea. It was not until July 10th (as the arrival of the paddle-steamer *Vulcan* brought up the Austrian fleet to its intended strength), that news reached Pola that about twenty hostile vessels were in sight twenty-five miles off the island of Lissa, and that an Italian squadron of sixteen vessels was off Isla Grossa. Von Tegetthoff chose not put to sea in force owing to the orders relative to his machinery and boilers. Instead he preferred to see the Italians commit themselves to some useless, inconclusive and possibly damaging venture, and so making themselves more vulnerable to attack under conditions favourable to the Austrians.

On the 12th and 13th of July the Government of Dalmatia sent four battalions from Sebenico, Lissa, Castelnuevo and Cattaro to Trieste. These troops were carried by the *Fiume*, *Venezia*, *Egitto*, *Santa Lucia* and *Vulkan*. The Italians made no attempt to intercept these troop movements, nor the movement of the Hohenlohe Infantry regiment from Cattaro to Zara between the 14th and the 17th. This displayed a failing in their scouting arrangements. Although the Italian fleet had enough cruisers to stop or at least to report all such movements, but the concentration of the Italian ships at Ancona and an unwillingness of the part of Persano to send out his cruisers means that they were not observed at all.

On the 14th the British sloop *Enterprise* was sighted off Fasana and on the 15th the *Drache*, which was off the harbour entrance observed the French armour-clad *Provence*, bound for Venice. It seemed as if the prospect of an action at sea was becoming remote. French mediation, considering the transfer of Venice to Italy, had begun. The presence of a French battleship which, according to a signal received in the fleet on the 11th, could be regarded as the precursor to the arrival of a French squadron, seemed to indicate that the negotiations were moving to a conclusion. Von Tegetthoff was concerned that the rumours of the surrender of Venice and of the withdrawal of the Austrian Southern Army might have a serious effect on his men, eight hundred of whom came from Venice, and he requested the Minister of Marine that, in case of the actual surrender of Venice, the Venetian seamen would be sent ashore. The official response was "Venice not yet given up; task of the squadron unchanged". This despatch, published as a Fleet Order, did much to raise morale of the Austrian seamen. As this was happening there came from the South Word that the Italians and at last made a movement of some kind.

On July 15th the following telegram from Lissa reached the fleet at Fasana: "A man-of-war, under British colours, came in sight from the NW, reconnoitred the island and has drawn off to the SE"; and on the 17th two additional despatches, timed 08.30 and 09.20, were received. The first ran: "Nine ships-of-war, without colours are about twenty miles off, and are approaching the island from the North. The second: "Ten war-steamers, fifteen miles off and under French colours, are approaching from the direction already signalled."

Von Tegetthoff copied these despatches to the Ministry of War at Vienna, and to Field-Marshal-Lieutenant Baron Maroicic at Gorz, adding: "Think, therefore, should not go to the SE, since this may be a demonstration of Italian ships to entice the squadron away from here. Beg, nevertheless, for intimation of views as to how squadron should act in face of such news. *Salamander* makes much water, and is obliged to go to Pola." Von Tegetthoff believed that the Italians intended to attack some part of the coast or islands, was concerned that this was a ruse and feared that the Italians planned to draw out the fleet, then attack Pola during his absence.

At about 2 pm. other despatches came in from Lissa. One, sent off at 10.10 am, read: "Ships already signalled manoeuvring N.W , colours down. Am preparing for action." A second, despatched at 11.45 am, read: "Ships already signalled approaching Lissa, distant ten miles." A third, despatched at 12.20 p.m., was: "Comisa attacked by twelve ships, Sardinian colours."

Von Tegetthoff still did not believe that this was the main Italian assault. He sent a telegram to the officer commanding at Lissa, asking as to the nature of the hostilities. Soon afterwards he received the short answer: "Harbour of Lissa attacked" (12.40 p.m.), and "Hot artillery action at Lissa, without damage, 13.15 p.m.". Further despatches, received during the afternoon, gave a description of the progress of the engagement. At 11 p.m. the Commander-in-Chief of the Southern Army replied to von Tegetthoff's repeated enquiries as to what portion of the coast was, in the circumstances, to be most carefully guarded, and as to what was to be done to that end. The answer was "Do not venture on any division of the squadron, and frustrate as far as possible every attack on the coasts of Istria and Trieste." On the morning of the 19th news arrived that the fighting at Lissa had been renewed and that the whole Italian fleet was there. It was now obvious that no Italian operations could be mounted against any other part of the coast, and that possibly the only opportunity to engage the entire Italian fleet was now at hand. The *Vulcan* was ordered to tow all lighters and barges to Pola, and, with the *Santa Lucia* and *Triest*, to place herself at the disposal of the port authorities. The *Stadium* took up position under Fort Brioni to await telegrams that were expected at 2 p.m., and to carry them to the fleet. With his preparations complete, Von Tegetthoff sailed the fleet for the island of Lissa the next morning.

Italian Preliminaries

This explains the prelude to the Austrian presence at Lissa, but how did the Italians come to be there, and why had they been so inactive in the meantime? Persano received orders on June 8th warning him that, when hostilities broke out he was "to sweep the enemy from the Adriatic, and to attack and blockade them wherever he should find them." On June 20th he received a telegram from Agostino Depretis, Minister of Marine, informing him of the declaration of war, and ordering him to proceed to Ancona with the ships (including nine ironclads) which were then at Taranto.

Persano left Taranto on June 22nd with nineteen ships, but, as his slowest ship was not capable of a speed of more than five knots, the fleet did not reach Ancona until the 25th. Later that day a request was made to the Ministry of Marine requesting telescopes, fast despatch boats, as many Armstrong guns as possible, and more ironclads. The requests were acknowledged, although no more ironclads were deemed necessary - Persano already had three more than the entire Austrian Navy could field. For the next two days the Italians set about preparing their ships for war. New guns arrived at Ancona and were hurriedly retrofitted to the ironclads.

On June 27th the Austrian squadron was spotted approaching Ancona by the despatch vessel *Esploratore*. Persano ordered his ships to sea, but by the time steam was raised and the first Italian warship was ready to sail, the Austrians had already withdrawn. At a conference held later on board the *Principe di Carignano* with Rear-Admiral Vacca d'Amico, Chief of the General Staff, Persano declared that he had not attacked the Austrian fleet because three of his ironclads, the *Re d'Italia*, *Re di Portogallo* and *Ancona*, would not have been able to participate. Even without them, however, his force would have been vastly superior to von Tegetthoff's. His apparent inaction undermined morale amongst the fleet, and affected the confidence of his officers in himself and themselves. Moreover, to say that the *Re d'Italia* and *Re di Portogallo* could not

have participated was not exactly true. He also implied that his orders assigned to him more important operations, that he had orders not to risk the fleet, and that he could see no advantage to be gained from pursuing the Austrians. His actions on the 27th made it clear that Persano had misrepresented his instructions, but it is certain that the poor fortunes of the Italian army to the North had demoralised him (two Italian armies had suffered humiliating defeats in recent days).

On June 28th the fleet was reinforced by the screw frigate *Vittorio Emmanuelle*, the screw corvette *San Giovanni*, and the paddle despatch-boat *Sirena*. However, Persano kept the fleet remained at anchor at Ancona for another ten days whilst ships were prepared for war. Again, inactivity lowered morale and reduced the fleet's confidence in Persano's ability to command.

On July 5th France began diplomatic action to resolve the war. A swift victory was needed to improve Italy's position at the negotiating table. The *Carlo Alberto*, *Principe Umberto* and *Governolo* were despatched from Naples to Ancona. Meanwhile, urgent efforts were made to complete the ironclad *Affondatore*, recently arrived from her builders in England and now fitting out in Naples. Persano was ordered to sea, but argued that re-arming needed to be completed, that he should await the arrival of the *Affondatore*, and was unwilling to act without a specific objective. Having received Persano's evasive message, the Minister of Marine, on the same day, telegraphed: "Let the fleet put to sea tonight, and do you await at sea those ships which are still engaged in getting their guns on board. Despatch is necessary."

Persano had his orders but still the fleet did not leave its anchorage. In a telegram of July 6th he asked "I beg you to state definitely whether I am to attack the enemy should he be protected by fortresses. It would be better if the *Affondatore* were here; yet I will proceed without her. You know the situation, and will therefore be able to say whether an action will be sufficient, or whether a definite result is required." Persano's orders were repeated but still he took no action.

Fresh orders arrived from the minister:

- a Persano was to seek the enemy, attack him in accordance with the instructions of June 8th, and press the action to the utmost in order to secure a decisive result.
- b Should the enemy's fleet remain in Pola, or should it take refuge there, Persano should blockade Pola with an adequate force, but remain out of gunshot of Pola and of the works protecting the roads of Fasana.
- c The main object of the naval operation was, before all other things, to obtain command of the Adriatic, by freeing that sea from the Austrian fleet. Should Persano encounter that fleet, he was to follow it, attack it and beat it, or at least drive it into port, and there block it up in such a way as would prevent it from issuing forth again.

At last, on the 8th, Persano gave the order to sail but, instead of seeking out the Austrians he took the fleet on a cruise out of sight of land, arrived off the Gulf of Quarnero at 9 a.m. next day, returning via Isola Grossa and Lissa (which was passed within about twenty-five miles). Seamanship exercises were carried out but the guns, in particular the new weapons were not tested. More importantly the Austrians were unaware of the Italian "cruise". The fleet returned to Ancona early in the morning of July 13th, and lapsed into its former inactivity, despite orders from Minister of Marine, who issued two despatches requiring Persano to refuel in the shortest possible time, to go to sea again, and to carry out his instructions.

Persano's inactivity prompted Depretis to travel to Ancona, in order

to goad Persano to begin hostilities or, if he was still unwilling, to relieve of his command. The Minister arrived on the morning of July 15th, summoned d'Amico, the chief of the general staff of the fleet, and asked him whether he believed that a sudden assault on Lissa would be successful. D'Amico stated that, as the conclusion of a truce seemed to be imminent, neither Venice nor Pola could be effectively attacked but that if a demonstration of Italian naval power was needed no place was more suitable than Lissa. Rear-Admiral Vacca, who was present, agreed. The proposal to assault Lissa was put to Persano who agreed, requesting only that a landing force of four to five thousand men should be placed at his disposal. Surprisingly the Austrian response to such a move was not considered - von Tegetthoff's refusal to attack Ancona during his earlier "visit" suggested to the Italians an unwillingness to fight. As the attack on Lissa was planned, a despatch from King Victor Emmanuel arrived, ordering no further delays. The landing force was strengthened by fifteen hundred men and arrangements were made to send reinforcements of one battalion of marine infantry, two companies of engineers, and fifteen hundred chasseurs under the command of General Fentana. Persano, now extremely confident, agreed to sail on the following afternoon for the attack upon Lissa.

On July 16th the Italian fleet left Ancona. The fleet consisted of the eleven ironclads, *Re d'Italia*, *Re di Portogallo*, *Principe Carignano*, *Maria Pia*, *Castelfidardo*, *Ancona*, *San Martino*, *Formidabile*, *Terribile*, *Palestro* and *Varese*, the four screw frigates *Maria Adelaide*, *Gaeta*, *Duca di Genova*, and *Vittorio*, the three corvettes *Guscardo* and *Ettore* (paddle) and *San Giovanni* (screw) the two armed do despatch vessels *Messaggiere* and *Esploratore*; the two hired despatch vessels *Flavio Gioia* and *Stella d'Italia*; the hospital ship *Washington*; and the store ship *Indipendenza*. Later in the day the three screw gunboats *Montebello*, *Vinzaglio* and *Confianza*, and the unarmed despatch vessel *Giglio*, also joined the fleet. The screw frigate *Garibaldi*, which had remained behind to attend to her machinery, caught up with the fleet on the 18th, and the long awaited ram *Affondatore* reinforced Admiral Persano on

the 19th.

Lissa And Its Defences

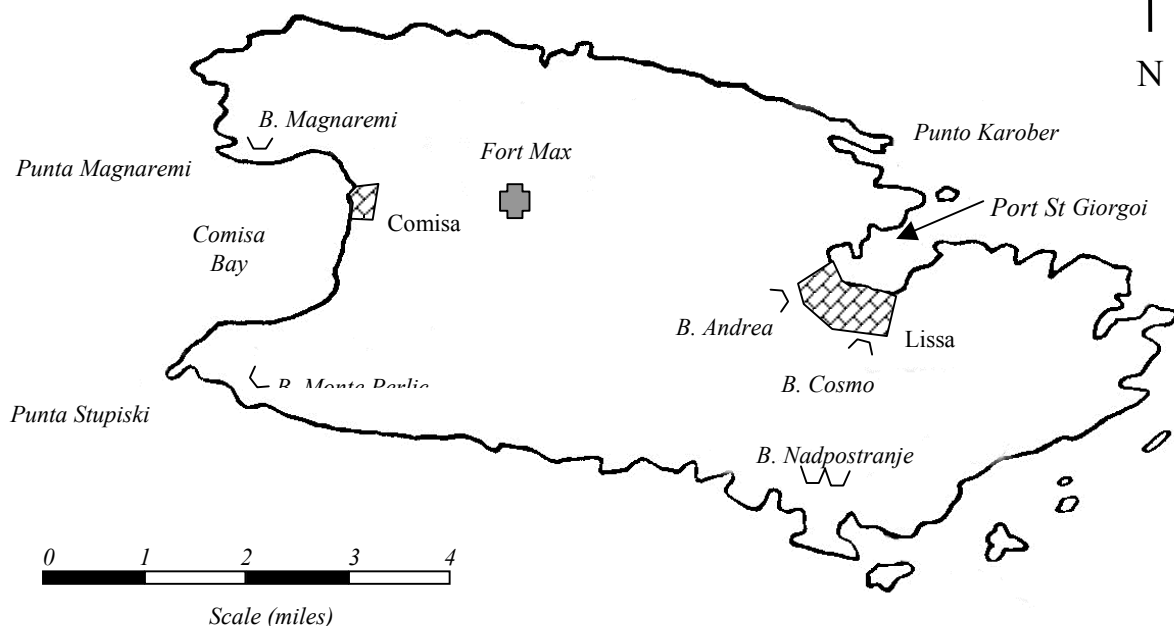
Lissa is a mountainous island, forty miles from the Dalmatian mainland. Between Lissa and the mainland lie the islands of Lesina and Brazza. It is about eleven miles long from east to west, and six miles wide from north to south. The western extremity splits into two promontories, between which lies the Bay of Comisa, with the town of Comisa at its head. Near the north-east tip, at the head of Port St. Giorgio, lies the main town of Lissa. At the south-east corner of the island is Porto Manego. The coastline is rocky and, in many cases, made up of high cliffs. Some of the interior peaks have an elevation of nearly 2,000 feet.

The island was occupied and fortified by the British during the Napoleonic wars. When it was restored to Austrian rule the fortifications were repaired and improved. Port St. Giorgio, which is about one and a half miles long and half a mile broad, runs inland in a westerly direction. The north side of the approach was protected by Fort Georg and the smaller Battery Mamula, Robertson Tower, Battery Zupparina, and Bentinck Tower, all of which stood on a small promontory jutting out between Port St. Giorgio and Porte Karober. On the south side, at the narrowest part of the entrance, stood Battery Schmid, with Wellington Tower above and behind it. At the head of the harbour was Battery Madonna. All the works, apart from Wellington Tower, which had fallen into decay, were in good order, though they were not modern, and had been constructed really to cope with wooden ships. In addition to these defences, upon the highest point of the head between Port St. Giorgio and Comisa, stood Fort Max.

Just before the outbreak of the war Bentinck Tower and its outlying defences were strengthened. Wellington Tower was repaired. A new battery, Battery Magnaremi, was erected on the north side of the mouth of the Bay of Comisa. A battery was erected on Monte Perlic on the South side of the bay. Two new batteries were completed on the Vrani Kamic to dominate the North West corner of the island, and Battery Nadpostranje was built above Porte

The Island of Lissa and its Defences

see separate map for details of Port St. Giorgio and its forts.



Manego. Finally, above and behind Battery Madonna, at a height of about 800 feet, seven emplacements were built and armed on the hills of Andrea and Cosmo. The island was linked by of telegraph with Lesina and Brazza, and could also communicate with those islands by means of semaphores, placed on the peaks.

The armament of the various forts and batteries was as follows:

Fort	Armament
Fort Georg	2x 60pdr mortar, 6x 48pdr SB, 1x 30pdr mortar, 4x 24pdr rifle, 4x 18pdr SB
Battery Mamula	1x 30pdr mortar, 4x 30pdr howitzer, 2x 24pdr rifle
Robertson Tower	1x 12pdr rifle
Battery Zupparina	4x 24pdr rifle
Bentinck Tower	2x 30pdr howitzer, 1x 12pdr rifle, 1x 12pdr SB
Battery Schmid	2x 48pdr SB, 2x 24pdr rifle
Wellington Tower	2x 60pdr mortar, 2x 30pdr mortar, 1x 10pdr howitzer, 1x 7pdr field howitzer
Battery Madonna	4x 30pdr shell gun, 4x 24pdr rifle,
Fort Max	2x 24pdr SB, 2x 7pdr shell gun
Battery Magnaremi	4x 24pdr rifle, 4x 12pdr rifle,
Battery Nadpostranje	4x 12pdr rifle
Monte Perlic	2x 6pdr
Battery Cosmo	2x 18pdr SB, 2x 6pdr
Battery Andrea	2x 18pdr SB, 2x 6pdr

The garrison of the island, after the transfer on the 12th and 13th of July of the 4th Jellacic Battalion to Triest, consisted of 1200 Marine Infantry in 5 companies, nearly 600 Coast Artillery gunners in 2 companies, 27 engineers and 44 others. The garrison was under the command of Colonel Baron Urs de Margina, who also had at his disposal the unarmed steamer *Egitlio*.

The Attack On Lissa

As the fleet was without a decent chart of the island and its defences the *Messaggiere* was sent ahead to undertake a reconnaissance. On the 17th, at sunset she rejoined the fleet, having cruised round the island under British colours. Captain d'Amico had returned with a reasonably accurate chart of the defences on shore. He estimated a garrison of some 2,500 men.

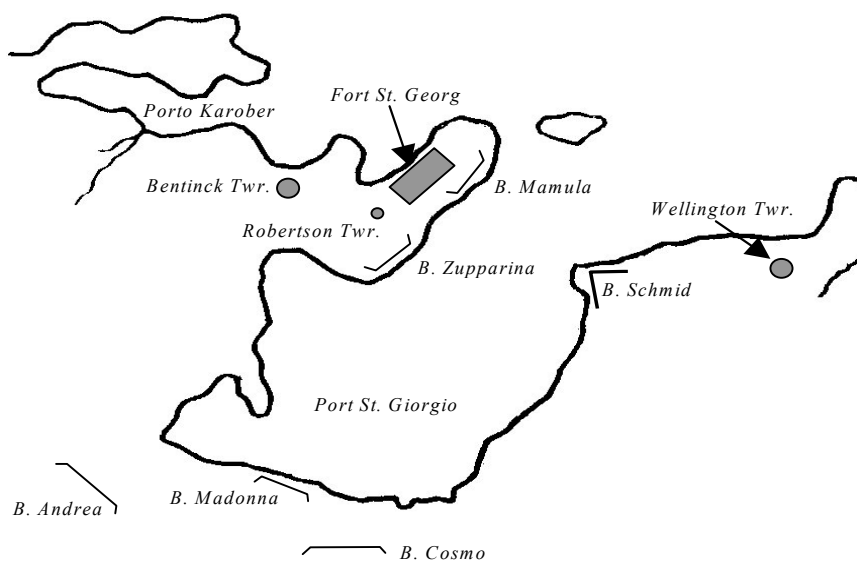
Persano realised that a landing at Comisa would be extremely risky unless the defences were suitably dealt with beforehand. He ordered Rear-Admiral Vacca, with the three ironclads *Principe Carignano*, *Castelfidardo*, and *Ancona*, and the paddle corvette *Guiscardo* (between them mounting 82 guns), to attack the batteries in the Bay of Comisa, to distract the garrison, and, by damaging or destroying the batteries, to allow the expeditionary force to land there in case a landing should not be made elsewhere. Meanwhile, Vice-Admiral Albini, with the four screw frigates *Maria Adelaide*, *Gaeta*, *Duca di Genova*, and *Vittorio Emanuele*, and the screw corvette *San Giovanni* (mounting in all 206 guns), was to silence Battery Nadpostranje, which protected Porte Manego and

then disembark a landing force under Captain di Monalo. The remainder of the fleet, under the personal command of Persano, was to attack the works of Port St. Giorgio from the front. The four ships *Re di Portogallo*, *Maria Pia*, *Terribile*, and *Varese*, under Captain Bibotti, as senior officer, were assigned to engage the defences on the south and east side of the harbour mouth while the rest, under Persano, were to deal with the defences on the north and west side. The gunboat flotilla under Commander Sandri was to proceed to Lesina, where they would find and cut the submarine telegraph cable, and destroy all vessels and other means of communication with the mainland.

The *Esploratore* was to cruise between Punta Planca on the mainland and the island of St. Andrea, and the *Stella d'Italia* between St. Andrea and the island of Pelagosa, and to signal the approach of hostile ships. The *Indipendenza* and *Washington* were to lie off the island of Busi, about five miles to the south-west of the island of Lissa, and to await orders. Persano wished all vessels to be in place by daybreak on the 18th, but, for various reasons, it was not until between 10 and 11 a.m. that the vessels began to reach their stations.

The fleet was reinforced by the *Garibaldi*, which had joined on the morning of the 18th and was assigned to Albini's division. Then the fleet approached the island. The defending garrison had been warned by the *Messaggiere*'s reconnaissance on the 17th and were maintaining a good look-out. The telegraph station on Monte Hum was able, soon after sunrise, to signal that nine men-of-war had been spotted twenty miles off the coast and, flying no colours, were steering a north easterly course towards Lissa. More ships were sighted, until twenty two were in sight. At 9 a.m. they were visible from Battery Magnaremi, near Comisa, and at 11 a.m. Ribotti's four ironclads, coming from the south west approached within gunshot. Battery Magnaremi opened fire, and all the ships immediately hoisted Italian colours. The four ironclads took station to the north west of the battery and opened fire on its right flank, which contained the magazine. The battery returned fire with the three rifled 24-pounders positioned on that flank. To strengthen the fire the commanding officer ordered the guns from the left flank to be run across and fought over the top of the magazine. The Italians, surprised by the increased fire, altered position. At the same Albini's wooden ships appeared, took station in front and on the left

Defences around Port St. Giorgio and the town of Lissa



flank, of the battery, and engaged. Soon afterwards Rear Admiral Vacca's ships also joined in the action.

The defenders of Battery Magnaremi were, for a short time, attacked by fourteen ships but never slackened their fire. The Italians had great difficulties to contend with, for the battery was not only small, but also 500 feet above sea level. At first their fire did not reach the height; later they overshot it. Only two shots struck the scarp of the battery.

After the arrival of Vacca's division, which led the action at Comisa, Albini and Ribotti drew their ships and steered along the southern shore of the island, the Albini for Porto Manego, Ribotti for St Giorgio. Persano, with his ships, proceeded to St. Giorgio via the northern side of the island. At 11 a.m. Ribotti's division, in column of line ahead, passed Manego, and when Battery Nadpostranje fired a blank charge, the three leading vessels altered course to starboard, and made a wide bend which took them out of gunshot. The fourth vessel drew nearer, and two rounds were fired, but no hits were scored. A little later Vice-Admiral Albini's wooden ships appeared off Porto Manego and took station opposite Battery Nadpostranje. The *Maria Adelaide* and *Vittorio Emanuele* moved within range and opened fire with their heaviest guns, but failed to reach the battery, which lay about 500 feet above the sea. Battery Nadpostranje replied with 28 rounds, which killed two and wounded three men on board the *Maria Adelaide*.

In the meantime the first of Persano's ironclads approached within range of Fort Georg at about 11 a.m, passing the fort without replying, despite being under fire themselves. Eventually the ironclads took up position around the fort and began a furious action, which Ribotti's division, coming in from the east and taking position opposite Wellington Tower and Battery Schmid, soon joined. Both the ironclads and the fort maintained a constant fire upon each other. Aware of the small size of the guns on shore, the Italians often ventured within 1,500 yards of the defences. The flagship *Re d'Italia* eventually placed herself within 500 yards of Battery Schmid, which, only 40 feet above sea level, was particularly vulnerable, and, at about 2 p.m., the battery's magazine blew up, burying forty men in its ruins. It was the Italian flagship that, by a fortunate shot, had caused this damage, and cheers from the ships greeted her success. Soon after the explosion in Battery Schmid several small magazines blew up in Fort Georg and Batteries Mamula and Zupparina. Wellington Tower was particularly troublesome, and Admiral Persano ordered the *Maria Pia*, *San Martino*, and *Formidabile* to draw nearer and to destroy it, enter the port. Meanwhile, the paddle corvette *Guiscardo* arrived from Comisa with a message from Vacca saying that, owing to the elevation of the Austrian batteries there, he was unable to bombard them, and was thus on his way to Porto Manego, where he intended to support Vice-Admiral Albini.

As the day drew to a close the Italians had suffered 7 dead and 41 wounded. Operations were suspended, and later that evening Persano rebuked his subordinates, Vacca and Albini, for what he saw as their poor showing at Comisa and Port Manego. Persano decided that, although his assault on the Lissa defences had been partially successful, the bombardment would need to be repeated next day.

The following morning Italian fleet was joined by the ironclad *Affondatore*, along with the screw frigates *Principe Umberto* and *Carlo Alberto* and paddle steamer *Governolo*. Persano was distracted by the arrival of these vessels and did not order the bombardment to restart until afternoon. Persano ordered *Formidabile* to enter the port sides the batteries. That ship along with the newly arrived *Affondatore* attacked the Mamula, Zupparina and Robertson batteries. Battery Madonna engaged the *Formidabile* causing heavy damage to the upperworks of the

ironclad, whose own shots could penetrate 20 foot thick walls of the battery. Vacca entered the port with *Principe de Carignano*, *Castelfidardo* and *Ancona*, but all three ships came under heavy fire, in particular the *Ancona*, and were withdrawn. Despite the heavy fire directed at her the armour of the *Formidabile* was not penetrated. Meanwhile Albini had been ordered to make a landing at Karober but this was not pressed home due to poor conditions at the proposed landing side. On the other side of the island Vacca engage the batteries at Comisa but was repulsed.

That evening Persano drew his ships away from the island and gathered at appointed about 8 miles to the south west. A shortage of coal almost prompted a suspension of operations and a return to resupply at Ancona, at the arrival of the paddle transport *Piedmonte*, carrying additional marines, encouraged Persano to stay an attempt the renewed landing the next day. The next morning Italian operations against the island were about to restart with the *Esploratore* appeared from north flying the signal, "Suspicious ships in sight".

The Battle of Lissa

The indication of the approach of von Tegetthoff's fleet, Persano set about gathering his own vessels together. His ships were scattered around the island in preparation for the day's assault and would take some time to recall. Persano ordered Albini to suspend the landing operations and to form up along with the rest of the wooden astern of the ironclads. Persano formed his ironclads in a line, crossing the head of the Austrian advance. His ships were formed into three groups. The leading group comprised *Principe di Carignano*, *Castelfidardo* and *Ancona*. The second group comprised *Re de Italia*, *Palestro*, *San Martino* and *Affondatore*, to which Persano had shifted his flag. *Re de Portogallo* and *Maria Pia* made up the third group, with *Varese* trailing just behind. Meanwhile, *Formidabile* detached and was heading to Ancona to repair the damage she had sustained during operations the previous day, whilst *Terribile* took up station with the wooden ships and took no significant part in the battle.

Von Tegetthoff approached Lissa in a triple "V" formation. The ironclads were positioned in the leading V, the wooden ships and gunboats making up two additional "Vs" behind them. The two fleets sighted each other at 10:00 when the Austrian ships emerged from the mist to see the Italian fleet gathering to the north of the island.

The action itself rapidly degenerated into a confused melee, made all the more confusing by the heavy palls of smoke from the gun discharges which hung over the action. The *Affondatore* broke through the Austrian line and tried twice to ram the Kaiser, but without success. Later the *Kaiser* and *Re di Portogallo* engaged each other closely; Kaiser leaving her figurehead on the deck of the *Re di Portogallo* following a collision. Elsewhere, the *Re d'Italia* found herself in serious trouble. Still believed to be the Italian flagship, she was the prime target for the Austrian ironclads. One shot hit and disabled her steering gear, leaving her unable to manoeuvre. This enabled the *Erzherog Ferdinand Max* to deliver a perfect ramming attack. The Austrian ship hit her target amidships, leaving a gaping hole in the *Re d'Italia*, which rapidly heeled over and sank.

The Italian fleet was then beset by a series of minor collisions. *Ancona* collided with the *Varese* whilst trying to assist the *Re di Portogallo*. The impact caused minor damage to both ships, dislodging some armour on the *Varese*. Another collision took place between the *Maria Pia* and *San Martino* whilst the *Maria Pia* was trying to intercept and ram two Austrian ironclads. Another Italian ship was in serious trouble; the *Palestro* was hit by shellfire from the *Drache* which started a fire on board. Von Tegetthoff

ordered the *Erzherog Kaiser Max* to intercept *Palestro*, but the burning Italian ship escaped, covered by the *Indipendenza* and the *Affondatore*. Persano reformed his fleet and attempted to rejoin the action but was discouraged on finding that three of his ironclads were effectively out of action or had been sunk; *Re d'Italia* had gone down, *Palestro* was fully engaged in fighting her fire whilst *San Martino* had been heavily damaged by gunfire and was unable to continue. With his ironclad force severely depleted, and with little support offered from Albini's wooden ships, Persano was forced to withdraw. Von Tegetthoff, pleased with his successes so far, drew his ships away and gathered the fleet at Port St. Georg, then headed North for Fasana, which was reached that evening. This was not the last event of the day - *Palestro* lost her fight with the fires on board; at 14:30 the flames reached the magazine, which exploded, destroying the ship. Persano kept his fleet in the waters around Lissa for some hours before his demoralised state and a lack of coal forced to return to Ancona.

There was no further naval activity until the French diplomatic effort brought about an end to hostilities. Despite some setbacks on land, notably the defeat of the Italian army at Custoza and their extraordinary defeat at sea, the support of their Prussian allies saw the Italians emerge victorious, taking control of Venezia in the negotiated peace. Von Tegetthoff's success over Persano did little, if anything, to affect the outcome of the war and the negotiations. Instead, the Prussian victory over the Austrian army at Koniggratz (or Sadowa as the battle is also known) on July 3rd sealed the fate of Austria. While the naval battle of Lissa was important from a morale standpoint, the course of the war was decided on land. In the aftermath of Koniggratz, a formal armistice with Prussia was declared on July 26th with the formal treaty signed in August. The armistice with the Italians was signed on August 12th and ratified on October 3rd, although fighting had ceased by the end of July.

However, as the only open ocean engagement between ironclad fleets to date, the battle of Lissa was to have a great effect on the future development of warship tactics and design. The sinking of the *Re d'Italia* by the *Erzherog Ferdinand Max* was seen as an event of great significance. Future tactics and design would be dominated by the ram for many years to come, despite the fact that, of several ramming attempts made during the action, the only successful attempt had been against a vessel which were barely able to move.

Turkish involvement in the Lissa Campaign

The seven week war is usually seen as a purely Italian and Austrian event. Whilst this is generally true other countries were involved to greater or lesser extent. To the north, Prussia occupied the state of Holstein, an action which precipitated the war as Austria was allied with the smaller German state; Austria declared war on Prussia in support of her ally, Italy in turn declaring war on Austria ostensibly in support of her Prussian ally.

The Turkish involvement is less well-known. Despite having been sworn enemies of the Austrian Habsburg dynasty for 500 years, Turkish naval and army units were deployed to support the southern regions of the Austrian Empire against threats from Italy, Serbia and Romania. Whilst relations between Turkey and Austria were generally poor, the Turkish government saw their relationship as stable. The war with Italy was seen as a destabilising influence which could lead to increase Greek, Serbian and Romanian military activity. Already, rebellion broken out on the island of Crete, and although the Greek government had agreed not intervene on part of the rebels, the threat of such assistance remained and was believed more likely if the moderating influence of the Austrians was diminished. In addition the Turks suspected Italian involvement in the Cretan uprising.

Turkish forces mobilised in support of Austria in May 1866. On May 28th the Austrian consul in Mostar was informed as a Turkish naval squadron was entering the Adriatic to protect the coast surrounding Dubrovnik, and to cover the transport of supplies from Turkey to Klek and Antivari. The Turkish squadron was built up at the port of Klek between the end of May and the middle of June, and comprised the screw corvette *Mansure*, the battleships *Kossovo* and *Peyk-I-Zafer* (similar in nature to the Austrian Kaiser), the frigate *Hudavandigar* (flagship of Vice Admiral Ethem Pasha), the corvette *Sinop* and the gunboat *Beyrut*. The squadron was entitled the "Rumeli Filo", or European Fleet, and was task with protecting the coastline, preventing gun running operations and preventing Italian landings on Turkish territory.

Whilst the Turks were not ordered to take direct action against Italians it is possible that a poor Austrian showing during the campaign could have led to a more direct Turkish involvement. For those wishing to explore the possibilities of Turkish involvement of the side of the Austrians the stats for the Turkish vessels forming the European fleet have been included in this supplement. An optional use the Turks could be as an added headache for the Austrians; instead of assisting in the defence of Austrian waters the Turks could have been engaged in a covert mission to expand Turkish influence in the southern reaches of the Adriatic. In this case the Turkish fleet would support the Italians, although probably with their own agenda to meet.

OTHER 19TH CENTURY EUROPEAN WARS

The Second Schleswig War 1864

The Second Schleswig War, also known as the Prusso-Danish War, was a stepping stone towards Bismarck's vision of a unified Germany. It was one of his greatest gambles since operations against the coastal state of Denmark would surely be contested to a significant degree at sea. As well as direct action against Denmark, Prussia faced the spectre of having her ports and those of her allies subject to blockade. Although her army was the equal of any on the continent, the Prussian Navy of the era was no match against the Danish navy. When the order to mobilise came on December 8th 1863, some ships were in the Adriatic whilst other vessels were still under construction at Stralsund and Danzig. To make matters worse, a shortage of trained seamen meant paying off sailing vessels to man the steam ships. Nonetheless, by February 1864 the German flotilla under Captain Kuhn in the flagship *Lorelei* was considered ready for sea duty. The steam ships ready for action were the corvettes *Arcona*, *Gazelle* and *Nymphe*, the frigate *Barbarossa*, yacht *Grille*, and 21 gunboats. In addition there were the sailing ships *Gefion*, *Thetis*, *Musquito* and *Rover*, three schooners and 40 armed sloops. The fleet massed at Swinemunde.

The Danish fleet was not surprisingly the first into action. On February 1st 1864, the Danish steam corvette *Thor* and ironclad *Esbern Snare* engaged Prussian troops without great effect and received minor damage in the process. On February 18th the new ironclad *Rolf Krake* engaged a Prussian pontoon bridge, defended by a number of field batteries, at Hollnis. Once again, little damage was done to either the ship or the forces on shore.

On 5th March 1864 the Danes, led by Rear Admiral Van Dookum, had begun to enforce a blockade of the Pomeranian coast. The first clash between the rival fleets occurred on March 17th at Jasmund, off the island of Rugen. The Prussian squadron was commanded by *Kapitain zur See* Jackmann and comprised the screw corvettes *Arcona* and *Nymphe*, paddler *Lorelei* and five gunboats. The Danish force comprised the screw frigate *Sjaelland*, screw corvettes *Heimdal* and *Thor* and the wooden screw ship of the line *Skjold*, with the old screw frigate *Tordenskjold* joining the Danes at 2 p.m.. Errors on both sides led to the Prussians extricating themselves from a tricky situation. The *Arcona* and *Nymphe* made for Swinemunde, hotly pursued by the Danes led by *Sjaelland* and *Skjold*, the latter only able to fire her light bow chasers for fear of losing ground. The Prussian gunboats and *Lorelei* made off towards safer shallow waters of the Rugensche Boden. The last shot fired by the Danes came at 5 p.m., ending the fighting although they had pursued the Prussians until they were only eleven miles from Swinemunde. Damage was surprisingly light; worst hit for the Prussians were the *Arcona* and *Nymphe* with heavy damage and 13 dead and wounded; more substantial damage had been caused to the Danish *Sjaelland* with 22 dead and wounded. Whilst inconclusive, the battle of Jasmund showed that the Prussian fleet could defend its Baltic coasts.

In the North Sea the situation was very different. Captain Klatt's squadron returning from the Aegean, consisting of the paddler *Preussischer Adler* and gunboats *Blitz* and *Basilisk*, were forced to seek shelter in the Dutch port of Den Helder under threat of a superior Danish force led by Captain Suenson. Earlier Prussian demands for assistance led to the Austrians sending a squadron to the North Sea to lift the blockade of the Weser and Elbe rivers. On March 2nd Commodore von Tegetthoff (to become famous as the victor at Lissa in 1866) left the Adriatic for the North Sea. His leading squadron comprised the screw frigates *Schwarzenberg*, *Radetsky*, the gunboat *Seehund*; the corvette *Dandolo* was to have

accompanied them but suffered a mechanical breakdown and was left behind. A second Austrian squadron under Admiral Baron von Wullerstorft-Urbair was to have joined von Tegetthoff at Lisbon, but the success of the Danish blockade prompted von Tegetthoff to press on. After coaling off the South Downs of England (during which the *Seehund* ran aground and was left to catch up), the Austrians rendezvoused with Klatt's Prussian squadron and set course for Cuxhaven. On May 9th, to the east of the British island of Helgoland, his ships run into Suenson's Danish North Sea squadron, comprising the steam frigates *Niels Juel*, *Jylland*, and the steam corvette *Heimdal*. At approximately 1 p.m. the fleets clashed, the Danes in an arc formation, Tegetthoff in line ahead. *Schwarzenberg* opened the action suffering an early gun hit whilst the Danish *Jylland* bore the brunt of the return fire. Tegetthoff tried to cut off the Danes from Helgoland and to close with their ships, whilst Suenson manoeuvred to bring both fleets on a broadside bearing at short range whilst steaming on parallel lines. The Danish concentration of fire on the *Schwarzenberg* set fire to a sail locker dangerously close to a powder magazine. By 4 p.m. her foresail was aflame, spreading fire to the mast. Crew losses had reduced her broadsides so she headed west northwest towards the neutral waters of Helgoland, covered by the *Radetsky*. The Danes pursued until the *Jylland's* rudder was hit, Tegetthoff reaching neutral waters 4:30 p.m.

Austrian casualties were 32 dead and 69 wounded on *Schwarzenberg* and 5 dead and 24 wounded on the *Radetsky*. The Danes had 2 dead and 23 wounded on the *Niels Juel*, 12 dead and 29 wounded on the *Jylland* and two wounded on the *Heimdal*. The good performance of the Danish gunnery was aided by the fact that 25% of their guns were rifled as opposed only 10% for the Austrians and Prussians. During the night the combined squadron finally reached Cuxhaven. Helgoland was nonetheless Tegetthoff's day, for, whilst the lucky hits on *Jylland's* rudder prevented further punishment, the blockade was lifted and Prussians reinforced. The same day Tegetthoff was promoted to Rear Admiral by Emperor Franz Joseph I for his excellent performance.

Meanwhile, in the Baltic, Jackmann (now a Rear Admiral) had not been idle, despite the arrival of the large Danish ironclad *Dannebrog*. He sortied on April 9th, sighting 4 Danish warships that refused action. Whilst at sea on the 14th, *Prinz Adalbert von Preussen* with the armed yacht *Grille* and several gunboats engaged the Danish *Skjold* and *Sjaelland* west of Rugen. Another skirmish occurred on April 24th between Prussian gunboats under Kuhn and the *Tordenskjold* with little result. On April 30th the *Skjold* arrived off Danzig and attempted to lure the open newly commissioned steam frigate *Vineta* into action. Attempts by the Prussian ship to lure the Danes under the coastal defence batteries failed and both vessels withdrew. Once again, the Danes refused battle against Jackmann on May 6th. Finally, action was joined on May 12th when the Prussians attempted to seize the Danish armed steamer *Freya*. A game of cat and mouse with the superior *Dannebrog* and *Sjaelland* ensued, the Prussians returning to Swinemunde empty handed but not defeated. An armistice was signed on May 12th which lasted until June 26th. One further small skirmish occurred on July 2nd. The war in the Baltic was now over and Prussian fleet could take pride in their aggressive conduct against a superior force.

Meanwhile, in the North Sea, the Austrian squadron of Admiral von Wullerstorft-Urbair had reached Den Helder. This force consisted of the ironclads *Don Juan de Austria*, ship of the line *Kaiser*, steam corvette *Erzherzog Frederica*, paddler *Kaiserin*

Second Schleswig War 1864: Fleet Strengths

Danish Ironclads

Dannebrog, Peder Skram, Rolf Krake, Esbern Snare, Absalon

Danish Wooden Steamers

Skjold, Niels Juel, Sjaelland, Jylland, Tordenskjold, Thor, Heimdal, Dagmar, Fylla, Diana, 8 paddle gunboats

Danish Sailing Warships

Waldemar, Frederik VI, Thetis, Rota, Havfruen, Bellona, Galathea, Valkyrien, Najaden, Saga

Prussian Wooden Steamers

Arcona, Gazelle, Vineta, Nymphe, Augusta, Barbarossa, Lorelei, Grille, Crocodill, Fuchs, Hay, Scorpion, Spenber, Ayane, Pfeil, Natter, Schwalbe, Salamander, Wespe, Tiger, Wolf, Jager, Chamaleon, Comet, Cyclop, Preussicher Adler, Blitz, Basilisk

Prussian Wooden Sailing Warships

Gefion, Thetis, Hela, Niobe, Musquito, Rover

Austrian Squadron (Teggethoff)

Schwarzenberg, Radetsky, Seehund

Austrian Squadron (Wullersdorf-Urbair)

Kaiser, Novarra, Don Juan de Austria, Erzherog Friedrich, Wal, Kaiserin Elisabeth

Elisabeth, and gunboats *Wal* and *Seehund*. This squadron sailed on June 29th towards Cuxhaven, arriving the following day. The Danish West Coast islands of Syllt, Romo and Fohr were important bases for the Danish navy in its attempt to blockade German North Sea ports. The defence of these islands was entrusted to Lieutenant Otto Christian Hammer who served in this area in the First Schleswig War and had learned the how to fight in the tidal flats. The Danish Tidal Flats Squadron consisted of a mobile and efficient force of gun yawls and light vessels. Against this force the combined allied North Sea fleet advanced, covering a large inshore flotilla of barges packed with Prussian troops. The Danes fought stubbornly but were forced back. Hammer requested support from the main Danish fleet but none came; following the armistice Suenson's North Sea squadron had been sent to Norway out of harm's way. Thus, the Prussian gunboats *Blitz* and *Basilisk* were able to cover the landings of the Austrian 9th Jager Regiment during their capture of the island of Syllt. The next day they took Romo and on July 16th Fohr. Exhausted and outgunned, Hammer's remaining vessels were captured by the Prussian gunboats on July 19th.

Similarly to the east the *Rolf Krake* failed in its attempts to halt the Prussian invasion fleet of 160 flat bottomed boats carrying 26 battalions invading Alsen on June 29th. The ironclad was at anchor in a nearby fjord when, at 2a.m., the Prussians began their assault. By 3 a.m. she was in action, commencing firing at 1200 a.m. Prussian rifled batteries hit the ironclad 12 times, at the same time some boats were struck. The ironclad's guns proved unsuitable for task in which they now found themselves, the 60 pounder smoothbores being too large and too slow combined with the large turning radius of the vessel and her need to turn each time in a long arc to renew the attack. Furthermore, the Danes did not want to expose the ship to possible destruction by mines. The Prussians stormed ashore, the landing being a decisive defeat for the Danes. This, combined of the loss of the West Coast islands, led to a second armistice being declared on July 20th. On October 30th Denmark ceded the duchies of Schleswig, Holstein and Lauenberg jointly to Prussia and Austria.

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The Franco Prussian War

As we have seen from the earlier sections the Franco Prussian War was the culmination of Bismarck's elaborate plan to bring about the unification of Germany. The war is generally remembered for its monumental land actions that introduced modern warfare to the shores of Europe. It is not generally regarded as a naval war. Whilst it is true that only one naval action was fought (and that was conducted in the Caribbean!) the potential for a naval campaign on the coasts of the North Sea and the Baltic was definitely there, and only failed to be realised due to a lack of French warships capable of carrying the battle to the German coastline, resolve and the reticence of the Danes to become involved.

At the outbreak of the war the Prussian navy was only a quarter the size of her French opponent. The Prussians were faced with two options. They could either sit out the naval side of the war defending Prussia's coastline, or they could engage in "cruiser warfare" against French commerce abroad, the effectiveness of which had been demonstrated by the during the American Civil War. However, cool heads prevailed. Cruiser warfare against the French may have dented French trade but the fledgling Prussian mercantile marine would have been swept from the seas. The risk of involving neutrals in a mercantile campaign (by which the Prussians meant the British) was also considered too great to risk, so the *Norddeutschesbundesmarine* settled down to defend the coasts of the Baltic and the North Sea.

The French almost managed to eliminate the most powerful ships in the Prussian order of battle at the outset of the war. The ironclads *König Wilhelm*, *Friedrich Karl*, *Kronprinz* and the smaller *Prinz Adalbert* (originally built for the Confederate States Navy) passed through the English Channel to exercise in the North Atlantic. The French planned to cut off and destroy this force, but the Prussian intelligence service in London caught wind of the plan. A warning was sent from the ambassador in London to the Prussian squadron who eluded their pursuers and returned to Wilhelmshaven. In the event the French squadron sent to hunt down the Prussians did not sail until 8 days after their quarry had reached home, but the potential for an action in the Channel was there.

The French navy's response to the outbreak of war was to actively patrol the North Sea and to enforce a blockade of the Prussian coastlines on the North Sea and the Baltic. This was particularly effective and essentially closed down Prussian overseas trade (although the vast majority of the ships themselves survived and were thus able to re-establish themselves once hostilities ceased). However, the French blockade could only prevent shipping from passing. The design of the French ships had been driven by the anticipation of a blue water war against Britain. As a result her ships were large and of deep draught - they were unsuitable for operations close inshore. A number of ironclad batteries, developed from those used in the Crimea, were available but these lacked manoeuvrability. Hence the French would have been limited in their ability to fight in the approaches to the Prussian coast, restricted in the main to operating in the deep water channels that were well defended by shore batteries.

There did, however, exist another possibility for bringing the war to the Prussian coastline. If the French didn't have the ships to go close inshore, then perhaps someone else did? The French government hoped to bring the Danes into the war and to open up a "second front". The transportation of a French expedition to Denmark could almost be guaranteed, given the strength of the French navy in the Channel and the North Sea, so plans were drawn up to ship an army of 30,000 men. Popular feeling in Denmark would probably have supported the Danish entry to the war, being seen as retaliation for the defeat inflicted earlier - indeed a French

squadron making a port visit to Copenhagen was cheered by the population. However, the chance for action passed and Denmark remained neutral.

So it was that the Franco Prussian war, despite several intriguing possibilities, completely failed to see any significant naval action. Only two actions worthy of note took place. The first was an "*Alabama vs. Kearsarge*" style action between the French *Bouvet* and the Prussian *Meteor* off Havana. Both ships were fairly evenly matched but the battle ended inconclusively when the *Bouvet* entered Spanish territorial waters. The second a brief foray by the Prussian corvette *Nymphe* against the French blockading squadron at Putzig bay. The little *Nymphe*, undetected closed on the French ironclad *Thetis* and fired two broadsides before heading for home and safety. Neither ship was significantly damaged.