

## Frigates of the Napoleonic Wars

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**Author:** Robert Gardiner

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This important new study demonstrates the growing maturity of naval history, for while at first sight it might appear to be aimed at a specialist audience, it skilfully uses a mastery of the specific to enhance our understanding of the general. There has long been a tendency to write the history of ships, individually and collectively, in a way that at the very least implies that the artefact is central, while the human input is peripheral - confusing what is quantifiable with what is important. By contrast this exemplary study, quite the best of its type to appear, situates the frigate in the strategic context of the long war with France, and the shorter, if more alarming War of 1812. Gardiner demonstrates how the design process worked, what factors influenced the key decision-makers, and how experience at sea fed back into the process to create the most effective ships. The ships are assessed using a skilful combination of evidence drawn from the construction drawings, sailing reports and other contemporary evidence. The ships that emerge from this book are intimately linked to their designers, builders and crew. The impact of the individual is everywhere apparent.

Robert Gardiner's two previous books and a number of important articles had already established him as the leading authority on the design and development of the British eighteenth century frigate. This book rounds off an outstanding contribution to naval history, integrating the study of the ship with the broad themes that provide the context. Because the Royal Navy based its strategy on the maintenance of an effective naval and commercial blockade its ships had to be at sea for long periods, in all weathers. Consequently the preferred British frigate designs were tough, durable craft. Their hulls were heavier than equivalent French ships, had greater stowage and tended to be less fine at the extremities. Gardiner shows how the main lines of British frigate policy had been settled by Lord Spencer's Admiralty board in the 1790s, which ordered a marked increase in dimensions. Despite a brief reversion to smaller and older designs by Earl St. Vincent and Lord Barham between 1803 and 1805 it was three designs settled under Spencer's regime that were reproduced in large numbers from 1805 to the mid 1820s. These well-balanced and effective ships, in the hands of skilled officers and crew, were more than equal to any foreign ship of similar rate.

The range of roles in which frigates were employed is examined in the final chapter, and emphasised in an excellent table showing the distribution of ships at intervals throughout the war from 1794 to 1813. These duties included fleet service, conducting strategic and tactical reconnaissance, inshore blockade patrols and combat roles ranging from joining the line of battle to leading coastal bombardments and amphibious

operations. Trade protection, convoying, cruising at strategic locations and the sustained pressure of inshore work that were such a feature of the naval war after Trafalgar also exercised the frigate. To meet these demands the ships improved, by design and modification, while the officers and men became more professional, while the best officers tended to reach the prime commands, a reflection of the professionalism of the Admiralty, and a system that rewarded skill, daring, initiative as well as a modicum of well merited good fortune. The best frigate captains of the age, Henry Blackwood, William Parker, Thomas Cochrane, William Hoste and Philip Broke made the best of their ships, but the ships were sufficiently well designed and built that less stellar officers had no trouble executing their duty to the satisfaction of the nation and the navy. As Gardiner concludes, if the ships were good, the men were better.

The old canard that French ships were superior, because they were better 'designed' is given a final and comprehensive refutation. French ships were designed for very different roles, where speed in ideal conditions was valued above seaworthiness, structural strength and the ability to carry the stores and water for sustained cruising. Occasionally a French prize proved useful, if only to show that larger ships had some advantages, but they were costly to maintain, short-lived and although French designs influenced the design of the *Leda* class the best British frigates of the period, the *Lively* class were of entirely domestic design. Gardiner demonstrates that when built to the same size British designs met British requirements better than any French equivalent. French designers were better versed in the theory of ship design, but theory was of limited utility when applied to wooden ships driven by sail. The greater sea-going experience available to British designers enabled them to produce better ships.

In drawing the policy background Gardiner stresses the cost of the long wars, the great drain this imposed on key resources, especially seamen, shipyards and timber, and the sustained pursuit of economy in their use. To make more efficient use of scarce seamen the answer was simply to reduce the size and skill levels of the crew, to the extent that American frigates of equal size went to war in 1812 with one quarter more men on board, and a far higher proportion of skilled hands. Such small crews made it well-nigh impossible for British captains to handle their ship under sail and fight the guns at the same time, restricting their tactical options. Against the increasingly inexperienced harbour-confined French ships the resulting rush to engage at close quarters, where superior rate of fire ensured success, was acceptable, but against much larger American ships with more powerful guns and more skilful commanders it proved fatal. However, in the only even match of the War of 1812 HMS *Shannon* required just eleven minutes to capture the similar USS *Chesapeake*, in the finest single ship action ever fought. In those eleven minutes *Shannon's* brilliant captain, Philip Broke laid the foundations of modern naval service. To get the best out of his ship, and its weapons, he had trained his men aim to hit the target, and carry out their duty in silence. Such demands could only be met by long service volunteer ratings, and the gunnery training system he inspired was in place by 1830, ultimately creating the new profession of naval rating.

In examining the design history of this critical warship class a great deal of attention is necessarily given to contemporary naval policy, an area where this book makes a major contribution. While strategic choices had a major influence on procurement decisions, so did the need to spread the burden of construction across as wide a base as possible, bringing into use smaller regional shipyards to reinforce the efforts of the Royal Dockyards and the great Thameside yards that had hitherto built the bulk of Royal Navy warships. Construction also spread to India, to widen the timber resource base, and provide new ships suitable for service in the Eastern arc of Empire. This distribution helped to maintain the fleet at the necessary level, but nothing was so effective in this respect as the capture of enemy ships. Between 1803 and 1813 the Royal Navy captured over 50 large frigates, more than 1/3 of the total acquirement of this period, and an even larger proportion of those available before 1810. Slightly less than 100 new ships were ordered in this period,

although not all were completed before the war ended. Some new ships were deliberately built slowly in the Royal Dockyards, from prime English oak, to ensure longevity, while others were quickly assembled from fir and other inferior timbers in commercial shipyards to meet the emergency of the moment. Nowhere was this more apparent than in the response to the shocking loss of three frigates to the Americans in 1812. Such was the capacity of British shipbuilding that one yard at Blackwall could turn out ten frigates in 1813, including six very large ships to three new designs. These new designs demonstrated that the Royal Navy was perfectly capable of building frigates of a more powerful type, but until 1812 had seen no requirement for such costly units, which sacrificed flexibility and ubiquity for individual power. Even after 1812 the standard class of ships continued to be built in large numbers, down to the late 1820s, because a global maritime empire based on the secure movement of commerce could not afford to build, man or deploy an entire fleet of American style super-frigates. The same lesson would be repeated in succeeding generations, most notably in the inter-war debate on Washington Treaty cruisers.

This policy imperative was reflected in the response to new technology. From 1803 the ship designers strove to find ever more economic ways of using timber, substituting smaller pieces, or iron wherever possible. These efforts were centrally directed, and the successful innovators were well rewarded, notably by financial grants and Royal Society Copley medals. This process culminated in the fundamental reform of ship structure by the Surveyor Sir Robert Seppings, and while this work was vital for the post war enlargement of warships, and the introduction of steam engines, it was actually driven by the need to economise on timber without sacrificing structural strength. This process, which has never been given such a lucid and persuasive treatment, will be of particular interest to historians of technology. Nor was this the only area where the industrial and technical developments of the age affected the frigate. Richard Trevithick pioneered iron water tanks in 1808, replacing the old cumbersome, leaky and unhygienic wooden barrels. Once the manufacturing process had been mastered Henry Maudslay the water tank revolutionised living conditions, by improving the time water could be kept, and the amount that could be stowed, removing the old, foul shingle ballast used to bed down the barrels, and saving money. By 1814 the Navy had over 3,500 large iron water tanks in use. Together with cast iron ballast these tanks allowed ship stowage to be shifted more easily, with a marked impact on sailing qualities.

This is a large and handsomely produced illustrated volume, one which might lead the careless observer to conclude that it was fit only for the 'coffee table'. Nothing could be further from the truth; the illustrations are essential, given the subject and the quality of the treatment. The basic sources for this study are archival, not just the wealth of written evidence but also the almost complete collection of original construction drawings and in service profiles which detail every aspect of the design, construction of the British ships, along with their modification, and that of the captured foreign vessels. Large numbers of these drawings, held by the National Maritime Museum, are reproduced. Often water-stained, heavily amended and modified they provide a vital contact with the design process. They record the working practices by which practical men met pressing problems at a time of national emergency. The drawings are complemented by carefully chosen contemporary images, and both sources are integrated into, and used to expand on the text: as such they make an essential contribution to the overall success of the book. The other contemporary sources are the two surviving British sailing frigates, HMS *Trincomalee* at Hartlepool and HMS *Unicorn* at Dundee. These remarkable ships, still afloat despite being close on two hundred years old, can now be seen in context.

Historians of the Napoleonic wars, of naval policy, of technology and ship design are all in Robert Gardiner's debt. This is a work of particular importance.

The author is pleased to accept the review and will not be commenting further due to outstanding commitments.

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