A Purpose Built Chinese Warship

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Upon initial inspection, the Peabody Museum artifact labeled only as “War Boat” provides an interesting test for eye. Although this ship model dates to 1840, it looks nothing like the 100-gun flagships and high-tech steamers being constructed by the Royal Navy and American Navy around the same time. The most unique features of the Chinese War Boat are the two-masted ship’s sails, which are positively unlike any sails I have seen before. These incredibly tall Chinese lugsails (also known as Chinese junk rigs) are made from woven wicker and have large timbers called battens running across their entire width. The battens provide strength to the sails, and make help make the sails easy to navigate in difficult and changing winds. These straw sails are coupled with straw shields running along the port and starboard sides and a straw canopy at the stern. The shields are perhaps the best example on the ship of the fact that the ship was designed for close quarter combat against contemporary Chinese vessels, and the ship was antiquated and outgunned when thrown into battle against Western flotillas. Although ships like this one were used in combat against the Royal Navy during the Opium War (1839-1842), this ship is an example of adaptive ship construction designed for close quarter combat against ships of a similar build.

This warship is designed to navigate the difficult trade winds and currents of coastal China and to overcome its enemies with overwhelming force in hand-to-hand and close-quarter combat. The ship has a medium draft and a deep keel (however it is uncertain whether the keel is actually a design feature or merely a feature of the model so that the model can better fit into its stand). This medium draft would allow the ship to navigate inland waterways while remaining
relatively sturdy in the open ocean. While the model features unique diamond shaped holes in the keel and the rudder, they are likely a decorative addition to the model and not part of the ship’s actual function. While the model makes it difficult to discern many of the interior design features of the ship, it is clear that the ship is designed with interior bulkheads that make the ship more unsinkable. However, it is the large square deck that is most telling of the type of combat this ship is designed for. The war boat is designed to fit as many sailors on the deck as possible in order to storm and take an enemy ship as well as launch projectiles from the deck of the ship against enemy vessels.

In addition to the tall lugsails, the ship also is equipped with oars, which allow the ship to be powered by manpower in addition to the wind. Both the sails’ construction and the presence of oars indicates that this ship is built to be adept in close quarter combat in changing winds and difficult currents. The ship’s armaments however are perhaps the most fascinating part of the ship, as they are an intriguing combination of edged weapons with more modern firepower technology. The ship’s armaments include tridents, spears, swords, and a combination of matchlock and breech loading weapons (Figure 1). These weapons are only effective in close quarters and likely would have required boarding an enemy ship at close quarters to be effective. The two breech loading cannon on the ship (one of which is shown in Figure 2) are loosely latched to the rail, likely making them impossible to aim and virtually ineffective. This design feature helps best demonstrate how antiquated the ship construction was as although the ship was built in 1840 cannons seem to be an afterthought. Compared with concurrent Royal Navy ships of the time that fixated their designs on cannon to the point where they featured three cannon decks for firing, this war junk is hopelessly outmatched.

This 1840 Chinese War Junk is an example of adaptive ship design, as it was built
specifically for the difficult winds and close quarter combat of coastal China. However, during
the Opium War ships like this were forced into combat with technologically sophisticated
steamers and flagships of the Royal Navy. When the junks were forced out of the role they had
been built to achieve and into this long-range combat, they were thoroughly outmatched and
decimated by the technologically superior British fleet. Yet while the Chinese Junks might have
proven no match for the British vessels in blue and brown water battle, they were nevertheless
well constructed vessels that were highly effective in the strong winds and currents of coastal
China and were able to retain most features of their design from the Song Dynasty Forward.

References:

Headrick, Daniel R., “The Tools of Imperialism: Technology and the Expansion of European Colonial Empires in
the Nineteenth Century”. The Journal of Modern History 51.2 (1979): 231–263.
(Figure 1 above shows some of the interesting edged weaponry found on the model)
(Figure 2 above shows one of the vessel’s two breech-loading cannon)