

Big Guns in New Zealand

John Osborne

HER MAJESTY'S ship *Osprey* a 12 gun sloop (rigged as a brig) 101 ft 5 inches long, 31 ft 10 inches beam was constructed under the supervision of Mr R Blake, Master Shipwright in the Naval Dockyard, Portsmouth.

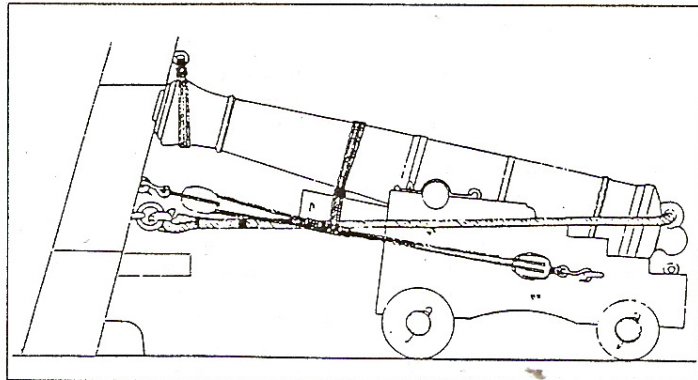
Designed to accommodate a complement of 130 men including 20 Marines, she was commissioned on 7 September 1844. Commander Fredrick Patten was appointed as Captain.

A sloop was a small warship used for general purposes, especially for police work in foreign stations. A brig was a two masted, square rigged vessel with additional fore and aft sail on gaff and boom to main sail.

In September 1845 the Royal Navy had in commission 31 steam warships and 82 sailing warships which included seven 12 gun sloops. At that time (Pax Britannica) the British policy was to deploy large warships in home and Mediterranean waters and small warships in distant parts.

Background of British Naval Gunnery, up to the mid 19th century.

From earliest times, a ladle was used to measure, then place loose powder down the barrel. This was superseded in the early 18th century by a pre-weighed, paper wrapped, powder charge; the shot and hemp wadding was muzzle loaded and rammed down the barrel, on top of the powder. The paper cartridge was spiked through the vent hole, then the flash pan and vent primed from a powder horn. A slow match held in a linstock was used to ignite, on the order to fire.



A sea service truck gun "housed" — from a contemporary gunner's notebook. In action in the 1830s, there were nine commands: Prime, point, elevate, ready, fire, stop the vent, sponge, load, run out.

Before reloading, the barrel was wormed to remove lodged and burning remnants of the paper cartridge, then wet sponged to douse any remaining embers.

This practice was used by Captain Cook's gun crews on board the 10 gun barque HMN *Endeavour* on the voyage of discovery including New Zealand between August 1768 and July 1771. Six of their guns were jettisoned overboard when the *Endeavour* ran aground on the Great Barrier Reef off Queensland.

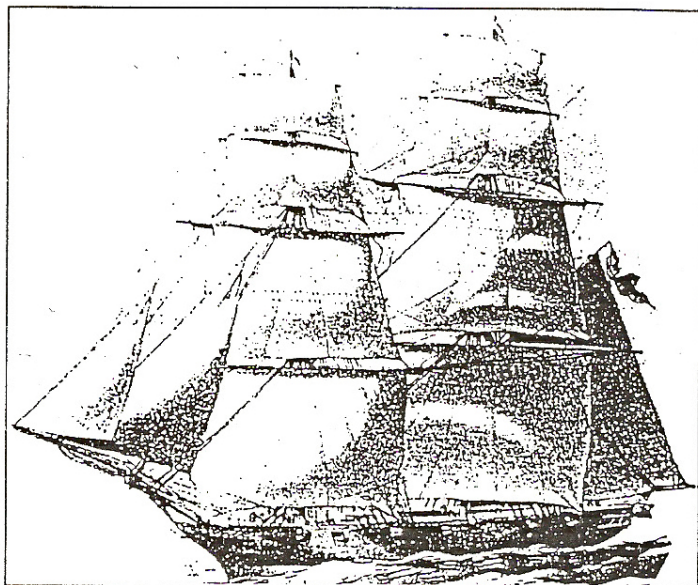
By the mid 18th century the British excelled in the refinement of iron. Gun barrels were cast solid and bored out, making them stronger and more accurate than the previous 'cored' casting technique.

Improvement to gun powder allowed a decrease in barrel length. From the late 18th century cannon barrel proportions were altered for strength, becoming thicker at the breech and lighter in the chase, without adding extra weight. A breeching loop was cast in above the cascabel.

The gun barrel was mounted on an elm (hard tough wood) carriage with wrought iron fittings on trucks (free moving wooden wheels). When fired the violent recoil was controlled by its breeching rope and tackle.

In the late 18th century the carriage was heightened to permit greater gun elevation and accommodate the larger barrel breech diameter.

In 1778 Captain Charles Douglas, at his own expense adapted common musket flintlocks, goose quill tubes to hold the priming



HMS *Osprey* from a lithograph by Day & Sons (Alexander Turnbull Library).

mixture, and flannel cartridge bags (doing away with the need for worming) to the guns on his ship HMS *Duke* at Plymouth. His ambition was to improve British naval gunnery efficiency, by increasing rapidity of fire, speed of pointing, greater angles, instantaneous ignition and safety. His well trained gun crews could load, aim and fire their guns broadside every 60 seconds.

A new pattern of quickly detachable brass flintlock, fitted with Kentish black flint-stone, designed by Douglas was adopted for general use in 1790. An improved double flinted lock was introduced in 1818.

In 1831 the Royal Navy adopted the percussion lock system of ignition to replace the flint-lock. The goose quill priming tube (renamed detonator) was modified to contain a small amount of fulminate mixture attached to the side at the top of the quill. When struck by the hammer the fulminate exploded, igniting the priming powder contained in the quill; down the vent to fire the main charge.

HMS *Osprey*'s guns were equipped with the percussion system.

British gunnery tactics, up to the mid 19th century

Probably the most efficient gunnery frigate in the sailing era was HMS *Shannon* under Captain Philip Broke. He believed instead of the age old practice of all guns firing broadside on command, that each gun captain should independently fire when he was sure the target (introduced by Captain Broke at his own expense) of his gun were on the target. This gave greater accuracy and rate of fire, every 40 or so seconds. This was 20 seconds faster than that achieved by the Nelsonic fleet gunnery in 1805. On the first of June 1813, off Boston during the British/American war Captain Broke aboard HMS *Shannon* engaged with the American frigate *Chesapeake* under Captain Lawrence.

The two evenly matched warships carried each side on their main decks fourteen long 18 pounder guns; the *Chesapeake* ten 32 pounder carronades and one long 18 pounder each side on the top deck; the *Shannon* eight 32 pounder carronades, one long 9 pounder special dismantling gun and one 12 pounder carronade each side on the top deck.

Captain Lawrence manoeuvred the *Chesapeake* for a close broadside. Captain Broke ordered his gun crews to double load, grape shot over round shot and to fire at the *Chesapeake*'s second gun port, main deck, as she ranged alongside.

The destruction and loss of life per minute in that one to one sea battle was unequalled in the muzzle-loading cannon era. During the six minute cannonade, the *Shannon*'s gun fire hit the *Chesapeake* with 362 shot including grape, killing or wounding 120 Americans including

Captain Lawrence and most of his officers. The *Shannon* took 158 hits in return killing or wounding 65 British.

Captain Broke led the British boarding party. The battle was over eleven minutes after the first gun had fired. *Shannon's* gunnery efficiency and tactics had been the decisive factor in her supremacy.

In 1825 Colonel Munroe, Royal Artillery proposed the 32 pounder become the main broadside gun.

Based on gunnery practice introduced by Captain Douglas and Captain Broke, the first official gunnery instructions for the Royal Navy came out in 1817. This was followed in 1830 by the establishment of HMS *Excellent* under Captain Thomas Hastings as a gunnery training ship in Portsmouth Harbour, with the official introduction of gun sights in 1832. HMS *Osprey's* gun crews had the benefit of this training.

Guns of HMS Osprey (From ships log and *Treatise on Naval Gunnery*)

Ten 25cwt 32 pounder (known as broadside) iron guns. Barrel length 6 feet, calibre 6.3". These guns were "bored up" from 18 pounder guns of Sir Thomas Blomfield's pattern.

Boring up (in this case from 5.18" to 6.3") was introduced into British service in 1830, enlarging the bore of a gun to the next or second higher calibre with a reduction in windage. This made the guns more efficient, more accurate and gave better penetration from 400 yards out. But some guns were unsafe when double shotted, and there was reduction in muzzle velocity with corresponding change in trajectory.

There were two 22cwt 18 pounder (known as chaser) iron guns. Barrel length 7'6", calibre 5.18". "Bored up" from 9 pounder guns of Sir Thomas Blomfield's pattern.

One 6.5 cwt 12 pounder. Brass howitzer for ships-boat and field service. Barrel length 3'9.2" calibre 4.58" General Miller's pattern was carried on the forecastle.

Ammunition and Ranges (From tests conducted on HMS *Excellent* 1845; barrel elevations by spirit level).

For 32 Pounder: 25cwt, 6' barrel broadside guns.
Solid Shot: Diameter 6.177" windage .123" propellant powder charge 4lbs, barrel elevation 7°, maximum range 1730 yards.

Grape Shot: Powder Charge 2lbs 8oz Extreme range 820 yards.
Double Shotted: Two solid shot diameter 6.177" windage 0.123" propellant powder charge 2 pounds, barrel elevation 2½°, range 500 yards.

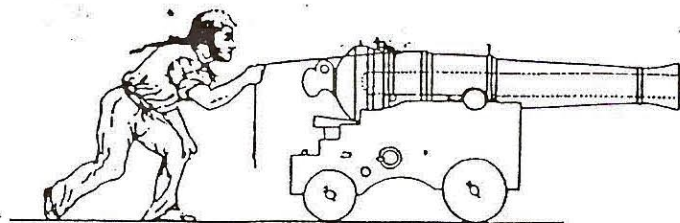
Two Grape Shot: Powder charge 2lbs 8oz, barrel elevation 2°, shot scatter, range 190-960 yards, spread 70 yards.

Double shotted was the age old practice of loading two shot instead of one. Used in close combat up to 500 yards).

For 18 Pounder: 22cwt chaser guns.
Solid Shot diameter 5.11", windage 0.07" propellant powder charge 3lbs, barrel elevation 7°, maximum range 1840 yards.

Double Shotted, two solid shot, diameter 5.11", windage 0.07" propellant powder charge 2lbs, barrel elevation 2½°, range 500 yards.

For 12 Pounder: 6.5 cwt (Brass Howitzer).
Shrapnel shell diameter 4.514" windage 0.066". Total weight 10lbs 13.25oz, containing 63 balls weight of each ball 2oz, bursting powder



Under training on a simulator C 1830, a Gun Captain waits on the roll of the ship for the sights to line up with the target before pulling the flintlock or percussion lanyard to fire. (From contemporary Gunnery Instructions).

charge 4.5oz, fuse length 0.9", propellant powder charge 1lb 4oz, barrel elevation 6°, maximum range 1200 yards.

The shrapnel shell was officially known then as "spherical case shot" but in June 1852 was renamed in honour of its inventor, Henry Shrapnell. It was also used in the 4.5" (12 pounder) Coehorn Mortars deployed in New Zealand by land forces from July 1845.

Service of HMS Osprey

After satisfactory sea trials HMS *Osprey's* first duties were with the Penang Squadron in the East Indies deployed to locate and destroy pirate ships and shore bases.

Whilst in Singapore on 25 July 1845 Captain Patten was ordered to sail HMS *Osprey* to war-threatened Northern New Zealand following a request from Governor Robert FitzRoy.

On arrival in September 1845 (after a record passage) Captain Patten was for a short time the senior Naval Officer in New Zealand. His orders were to show the flag in Hokianga and enforce a blockade of the Northland coast.

Blockading including stopping foreign whalers from smuggling arms and ammunition into New Zealand. Major gun exercises were held at Whangaroa Harbour and Hokianga Harbour.

On the evening of 10 March 1846, it was getting dark in squally conditions and poor visibility. Thinking they were off and returning to Hokianga Harbour she fired a two shot signal to summon the pilot. When he did not come the HMS *Osprey* stood off the rocky shore for the night. The land features, as seen from the sea, are remarkably alike at the entrance to Herekino, some miles to the north of Hokianga Harbour on the sub tropical far north west coast of New Zealand.

By mid afternoon the following day 11 March 1846 on about half water on a rising tide without the aid of a pilot, in varying weather conditions, but after consultation with other officers, Captain Patten ordered the HMS *Osprey* be sailed across the bar and into the harbour.

Between two and three miles offshore the *Osprey* touched ground. She was then driven by a squall and pounding surf inshore, the hull hitting ground time and time again. With four feet of water in the hold, Captain Patten ordered the masts be cut down and all the ship's guns thrown overboard. The 12 pounder brass boat gun on the forecastle and one of the 32 pounders remained on board.

The hull took a terrible pounding but stayed intact as the surf drove it ashore on the hard sand off Herekino. At low tide, arms and dry powder were taken ashore in case of trouble with the Maoris. The 12 pounder brass Howitzer was landed and set up on a nearby sand hillock near the flagstaff and encampment. The 32 pounder iron gun was, with the aid of oxen and drivers brought in from Kaitaia, dragged to the stockpile of salvaged goods awaiting evacuation.

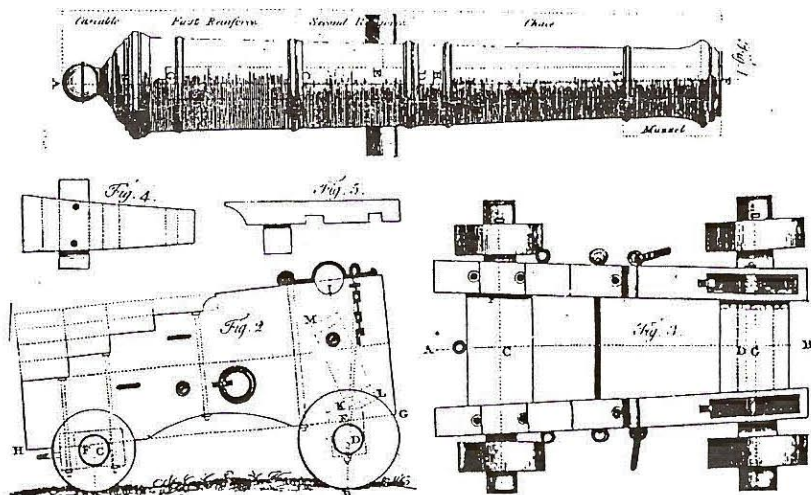
Back in England on board HMS *St Vincent* on 28 December 1846 a court martial was held in which Captain Patten, the officers and crew were tried for the loss of HMS *Osprey*.

The Court accepted Patten's statement that he was not aware until after the wreck of the remarkably similarity between Herekino and Hokianga. They were all finally acquitted and highly commended for their conduct at the wreck and afterwards.

To my knowledge HMS *Osprey's* nine 32 pounder and two 18 pounder iron guns still lie on the sea floor in the shallow but turbulent waters off the Herekino Harbour entrance.

Beautiful brig rigged sloops similar to HMS *Osprey* armed with cast iron smooth bore truck-mounted carriage guns firing spherical projectiles were phased out from the early 1860s. They were replaced by steam-assisted sloops armed with wrought iron rifled guns firing cylindrical projectiles achieving range, accuracy and penetrating power unheard of before.

Drawings of cannon and its carriage from a gunnery notebook c1750s



Researched by John Osborne