

Guns carried on East Indiamen, 1600–1800

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Identifying guns on an East Indiaman wreck is not necessarily as easy as it might at first appear. Such ships were normally carrying a variety of ordnance: guns for their own protection, guns for trade, guns to be used as gifts, and old guns being used as ballast.

Gifts

Guns were among the first items carried by the Company to obtain trading privileges. In 1618 they dealt with the King at Jacarta who desired two whole culverins as well as money in return for granting trading privileges (Sainsbury, 1870: 189). In 1617 the King of Acheen had demanded 'four pieces of ordnance in consideration of his allowing the English trade for two years' (Sainsbury, 1870: 45). In 1627 a list of suitable gifts for princes included 'small brass cannon on carriages' (Sainsbury, 1884: 374). The English Company was pitted against Dutch and Portuguese rivals. The rulers were clever enough to see this and play off the rivals against one other. The Company had to act very carefully, or this strategy could backfire. The delay or non-appearance of a gift could put the local factor in a bad position. The English made much, too, of the quality of their gifts. The factor in Japan wrote in 1617 that the Japanese secretary was very anxious to have five or six brass falcons or falconets from England, saying he would rather have one cast in England than ten of those cast in Japan (Sainsbury, 1870: 3).

Usually these guns were brass of the finest quality. The Pitt family of London made a brass gun of very large calibre for the King of Acheen, where, it survived at least to the last century (Foster, 1906: 63). Guns for the King of Bantam were provided by the Browne family and William Wightman. Bantam later sent copper coins which William Wightman used in casting guns for him (Sainsbury, 1938: 87). Occasionally

cast-iron guns were sent as a cheap alternative, although the Company might try to disguise this by extolling the virtues of their cast-iron guns.

These gifts could also be used as 'free samples'. A gift would be given to the Prince, with instructions that if he liked it, he could buy more from the local representative. In 1671 the Company was trying to break into the Dutch monopoly on trade with Ceylon. They instructed their factors at Madras to inform the King there 'how advantageous it would be to him to be furnished with arms and artillery to resist his enemies in return for his cinnamon and other commodities' (Fawcett, 1952: 54).

Trade guns

Once the Company had established themselves, trading began in earnest. Through the troubled 17th century, guns and ammunition were one of the main exports. A survey of possible trade to China in 1627 suggested 'There is no lack of ammunition for war according to their fashions, but English artillery being longer and of greater effect would be very acceptable' (Sainsbury, 1884: 374). In 1666 the Emperor's request for English gunfounders was countered by the Governor because 'the factors had for sale several large brass guns, besides mortars and grenadoes' (Foster, 1925: 166). In 1674 the *Falcon* arrived at Surat, but the only things brought out that had been sold were best coral and some iron guns and anchors (Fawcett, 1936: 239). Two years later the President 'asked the Company, till further notice, not to send out any more guns' (Fawcett, 1936: 268).

In the 1670s and 1680s between 100 and 200 tons were being exported annually. In 1693 about 800 pounds worth was exported. The majority of these were small (I.O.R., Home Misc, 36: 257). The English Government helped to encourage this trade by granting reductions

in the duty payable on iron guns exported (Sainsbury, 1932: 132). These guns were often supplied by London ironmongers such as Thomas Hunt and Nicholas Bradley and were made in Sussex. The supplier of the single largest number of guns was Thomas Westerne, a London ironmonger who also ran two furnaces in Sussex. He and his son Maximilian supplied iron guns, shot, shells and bar iron to the Company for over 40 years (I.O.R., L/AG1/6–10). By the end of the century Sussex iron masters, such as William Benge of Lamberhurst and Robert Baker of Hamsell, sent their guns directly to the Company.

In times of war the English and the Dutch had official agreements that they would not trade guns, munitions or war-like stores, but this was difficult to control. As the Company changed, moving its ambitions from the East Indies to the Indian continent, and from having fortified outposts of trade into organized settlements, the export appears to have virtually ceased as its own guns were being turned upon the Company.

Guns for the Company's forts and forces

From the earliest times the Company had to defend its warehouses with a rough stockade and a few guns hauled from the ships. In 1623 the Company engaged an Engineer to survey their defences (Sainsbury, 1878: 144). Following an attempt to fortify the island of Pulo Bessee they settled at Pulo la Gandie, where after several months they had four demi-culverins in place (Sainsbury, 1878: 365, 379). The next year they settled on Lagundy but the guns cast for their new fort were taken by the King (Sainsbury, 1884: 122). They bought the site of the future Fort St George at Madras and by 1644 they had 34 pieces of artillery mounted and in the 1660s heavy culverins were sent out (Sainsbury, 1912: 55, 1925: 99). In 1673, when the colony feared an attack by the Dutch, 'the fort had no defences seaward, except on the sea-front where are four bastions with about fifty 6- and 18-pounder guns'. Within the next 5 months '2 earth bastions were erected on the sea-front, intended for 2 batteries each of 10 guns of 8- and 12-pounders to protect the roadstead while they were lading ships' (Fawcett, 1936: 84–9).

The Company took charge of Bombay for the British Crown in the 1660s though they had some trouble forcing the Portuguese to accept

their authority. In 1668 it was decided to send 'the following ordnance (all of old metal, being the cheapest) . . . in the next ships to Bombay viz. two whole cannon or four demi-cannon, four whole and four demi-culverin, one carriage for each, with forty round of shot for each gun (Sainsbury, 1929: 135). In 1669 over 100 guns from whole culverins to saker cutts were shipped to reinforce the garrison at Bombay and replace the old Portuguese guns (I.O.R., B/29: 67).

All the settlements and factories in India and the East Indies had to be defended in this way and this was a big drain on the Company's resources. The Company owned St Helena, a useful staging post whose defence was given a low priority until it was captured by the Dutch in 1672. The Company had already sent out 30 great guns for its defence but they arrived too late. After its recapture, a garrison of 50 guns was set up (Sainsbury, 1932: *passim*).

Throughout the 18th century the Company continued to send out many iron and some brass guns to the forts which now needed to be garrisoned and these forces were the origin of the Company's army. As a result of colonial ambitions, the Company's army was no longer merely a defensive force and was later reinforced by British army regiments. Thus, light brass field pieces and howitzers were needed. These were supplied by London brassfounders such as Matthew Bagley, William Bowen, Richard Gilpin, Thomas English and the Raby and Kinman families. The Company usually bought the copper and tin directly from the mining companies and gave them to the founders, paying them for the casting only.

During the run up to the outbreak of the American Wars of Independence, the Company asked permission to export up to 1000 tons 'for the Use and Defence of their several Garrisons, Settlements and Forces at St Helena and in the East Indies', (I.O.R., E/1/217: 183–5).

Hardly a year went by without guns and ammunition being sent out. These were all manufactured in the British Isles. From 1718 to 1742 most of these iron, and a few brass, guns were supplied by William Harrison, whose company controlled a large number of furnaces in Sussex and Kent. In the 1740s and 1750s others, such as Ambrose and John Crowley of Ashburnham and Darvell in Sussex and Sone and Stevens of Sowley in Hampshire supplied the

guns. In the 1760s the Company were able to buy guns from manufacturers all over the country; from Robert Morgan of Carmarthen, John Wilkinson of Willey, Shropshire, and Bersham, Denbighshire, and the Carron Company of Scotland, as well as the last Sussex founders; Masters and Raby and Eade and Wilton^[1].

Guns for Indian vessels

The EIC also had ships built in India and guns for these had to be sent out from England. In 1635 the President at Surat reported a lack of small ordnance for junks and small vessels on the coast of Coromandel (Sainsbury, 1907: 93). Thirty years later they asked for a 'dozen pedreros or chamber pieces, with three or four chambers each for open boats, clearing of decks or any use close at hand' (Foster, 1927: 72). The Company tried on several occasions to make guns in India. They were not successful in establishing iron works but were able to produce light brass guns at Cossipore in the first half of the 19th century (Young, 1937).

Returned guns

Guns being brought back from India would normally only be of two sorts. A few Indian guns were brought back as trophies and souvenirs of the Indian campaigns. However a larger category was old cannon being returned from the forts for sale, usually to the Company's suppliers of iron shot.

Guns as ballast

Old guns could also be used as kentledge or ballast. As early as 1615 old iron guns were to be used as ballast (Sainsbury, 1862: 425). In 1669 the Company had to purchase old broken guns for ballast (Sainsbury, 1929: 199).

Ships armaments

The Company was primarily concerned with trade and profit and this applied to guns as well. Every space a gun took up reduced the space available for cargo; every gun needed an affective gun crew and they, too, used up space, food and wages.

Various factors determined the actual armament of an East Indiaman, such as the capability of the ship, the nature of the trade, and the perceived threat or fear of attack. The earliest ships

were basically warships and had to be heavily armed. The Company had to overawe local rulers and trade in the teeth of opposition from Dutch and Portuguese competitors, defend themselves against pirates or enemies, and finally, in the event of an unsuccessful voyage, be able to turn pirate themselves.

The Company's first ship was bought complete with its guns from the Earl of Cumberland, the *Sea Dragon* or *Mare Scourge* of 1600. Its armament was two demi-cannons, 16 culverins, 12 demi-culverins and eight sakers (Stevens, 1886: 43). For these early voyages the guns the Company required were cast-iron large and medium-sized muzzle-loading guns. It was decided in 1617 for instance that the valuable brass guns be brought home from the Indies as iron was as serviceable (Sainsbury, 1870: 85). However wrought-iron guns and breechloaders were also used. Wrought-iron murderers, used primarily in pinnaces, were made for the Company by their anchorsmiths at Deptford (Sainsbury, 1884: 64). Bases were also used; in 1614 Captain Dowston wanted a new pinnacle to be armed with bases rather than murderers as they 'Offend further off' (I.O.R., B5: 9).

In 1617 the Company was worried about the massive weight of the ordnance on their ships. In the next decade the *Whale* was thought to have been lost because she was 'over laden in her upper works, carrying 40 pieces of ordnance, whereof 4 brass cannon of 4000 lb weight a piece ...' (Sainsbury, 1878: 389). Various attempts were made to reduce this. The amount of ammunition per gun was reduced from 50 to 35 or 40. Two years later, in 1619, it was suggested '34 peccis were sufficient for the greatest ships' (I.O.R., B/6: 335).

The Company began exploring other methods. One possibility was using the lighter brass guns. In 1626 it was proposed that the ships be strengthened with better ordnance, 'either brass or light iron, much lighter and yet as serviceable as the other, some whereof were to be seen at Tower Wharf' (Sainsbury, 1884: 366). These last may be a reference to John Browne's guns which earlier had had offered to the Company in July 1621, (Sainsbury, 1870: 438)^[2]. As late as 1634 the Company was investigating pieces of forged iron 'now much in use and more serviceable than cast ordnance weighing not above 500 lbs and doing as good execution with less powder' (Sainsbury,

1892: 522). In 1647 a sale of old goods included murderers and chambers (Sainsbury, 1912: 206).

After this attempted reduction the number of guns gradually began to rise, although the ships were often half the size of the earlier giants. In 1626 the armament of the *New Years Gift* was set at 36 guns (Sainsbury, 1884: 355). In 1627 a new pinnace was issued with 14 minions instead of 12 and two brass sakers (Sainsbury, 1884: 384, 423). By 1628 the largest ships were armed with 40 guns and a survey showed that the Company had 273 serviceable guns on its wharves (Sainsbury, 1892: 37). In 1630 the largest ship, the *Mary*, had 42 guns. In 1631 the new pinnace was armed with four iron minions and four brass falcons and falconets (Sainsbury, 1892: 111).

In these early days the Company obtained their guns in a variety of ways. Some were bought second hand from other adventurers. They also borrowed guns from other trading companies, such as the Bermuda and Virginia companies. In 1608 they were loaned guns from the Tower (I.O.R., B/3: 76). They also bought guns direct from Thomas Browne in 1609 for the new ships, the *Trades Increase* and the *Peppercorn* (I.O.R., B/3: 126). In 1624 Mr Turvill, the Company's preferred gunfounder, promised to deliver 30 culverins and demi-culverins within 6 months (I.O.R., B/7: 11). They could also hire guns for a specific period or buy them 'off the peg' at the general gun market at Tower Hill. Lastly they bought ships complete with their armament. For example in 1619 the *Unity* of 280 tons with 20 pieces of ordnance was bought for £1600 (Sainsbury, 1870: 317). However this last was not always an effective way of obtaining guns as they might be defective (Sainsbury, 1909: 311).

In the early period the Company had various ways of using their old ordnance. Some were used as ballast; some were sold off. Others were reused, by reboring the muzzles or touch holes. It seems that in the 1620s there was no facility for doing this near London and the guns had to be sent to the Netherlands but, from the 1630s and 1640s, this service was undertaken by Philip White, blacksmith.

Each time a ship returned from a voyage its ordnance was offloaded at Deptford where annual checks were carried out. Each voyage the number of guns issued to a ship could change. For example it was decided in 1633 that the

Palsgrave should carry only 40 guns instead of 42 as the upper decks were too weak to take the weight (Sainsbury, 1892: 356–7). The *Mary* was given 42 guns in 1630. By October 1635 it was down to 34 and in December this was reduced to 32. By March the Captain complained and asked for 40, and as the Company was worried about interlopers, they agreed to 36 guns (Sainsbury, 1907: *passim*). In 1640 two small iron drakes are ordered for the *Mary*. In 1642 her ordnance was lent to the King's party in the Civil War. By 1642 she was again carrying 32 guns. In this period there is a new interest in lighter or small guns (Sainsbury, 1909: *passim*).

From the 1660s the Company began chartering ships for each voyage from their owners who now assumed responsibility for the armaments. The Company had suffered badly during the Civil War when its store of ordnance had been the focus of interest of both Parliament and the King and this had been expensive for the Company. The *London*, still owned by the Company, had many of her guns missing (Sainsbury, 1925: 216).

The trend continued downwards in sizes of guns. The 1672/3 Indian fleet consisted of ships armed with 26 to 36 guns (I.O.R., B/26: 105–7). In 1675 the owners of the *Eagle* asked 'it being now a time of peace they may be obliged to carry only 30 guns'. Other owners backed them up and it was decided that all three-decked ships should carry 36 guns and two-decked ships 30 guns (Sainsbury, 1935: *passim*). Within a few years the numbers of guns were reduced. It was decided first to reduce the armament on 500-ton ships to 24 guns and to reduce the two-deckers proportionally. The Dutch wars caused these to be increased again to 36 and 24 guns. In the last decade of the 17th century the tonnages of ships began rising above 500 tons and these were armed with 40, 50 or even 60 guns (I.O.R., L/MAR/C/4/26A: 175).

The first half of the 18th century again showed a reduction. Tonnages were all below a notional 500 tons. The largest ships had 36 guns, but most carried 30 (Chatterton, 1914: 149). During this period East Indiamen changed from warships that traded to armed merchant ships. In times of war the fleets would be protected by the Royal Navy. From 1755 the design of ships changed to allow 9-pounders, instead of 12-pounders on the gun deck. Twenty 9- or 12-pounders on the gun

deck, six 6-, 4- or 3-pounders on the quarter deck (I.O.R., L/MAR/1/36: 33) was the usual armament for Indiamen till the end of the century. Not only were they now carrying about half the number of guns as the ships of 100 years before, but the guns themselves were much smaller (12-, 9-, 6-, 4- and 3-pounder guns). In the previous century, culverins and demi-culverins were the most common guns carried, equivalent to 18- and 12-pounders.

The owners continually agitated for cheaper options. These included reducing the number of guns, substituting smaller guns, using non-Woolwich proofed guns (Woolwich proof, introduced in the 1750s had to be paid for) I.O.R., L/MAR/36. However the increased activity of the French ships and pirates and a number of spectacular losses of ships led to the introduction of more heavily armed ships (Chatterton, 1914: 302).

Who supplied the guns to the shipowners? This is a difficult question but there are some records of the proofs carried out by the Board of Ordnance on behalf of the EIC and some payments for these appear in their own accounts. When the Company owned their ordnance in the 17th century they had it proofed at Deptford and they continued to proof the guns they had bought for the forts and forces. In 1753 they insisted that the ships armaments also had to be proofed at Woolwich and those failing had to be replaced with proofed guns (I.O.R., L/MAR/1/36: 27).

In the 1770s the EIC Accounts included payments for proofing, probably again for the ships. These include Theodosia Crowley, mother of the Crowleys mentioned earlier, Eade and Wilton, and John Wiggin, agent for the Carron Company of Falkirk, Scotland, one of whose EIC guns had burst in proof in 1771 (I.O.R., L/MAR/1/5/20: 142). Ten years later these three suppliers were still providing guns. However a large number of suppliers appear in the records.

Ship-owners' papers are very rare, but one batch for the period 1780–90 has survived. These are not very illuminating for the ordnance specialist. The earliest, for the *Sullivan*, are particularly confusing. The owners acquired 25 guns second-hand from the ship *Lord Holland*, 20 12-pounders, five 3-pounders and 25 gun carriages in the same sizes; they bought a sixth 3-pounder from Jukes and Coulson. The owners

then acquired bits for carriages for 3-, 6- and 9-pounders and gun stores (from Mangles) for 12- and 3-pounders, and ammunition for 12- and 6-pounders (I.O.R., Euro. MS D1051/1). The *Princess Amelia* had 20 9-pounders and six 4-pounder guns which came from the *Nassau*. The ammunition and carriages do appear to all match in this case. On the *Hindustan's* first voyage in 1790 she had 30 guns: 24 12- and six 6-pounders, all also taken from other ships (I.O.R., Euro. MS D1050/517).

In the 17th century the guns were usually large calibre guns, cannons, culverins, demi-culverins, sakers and minions made of cast iron. The 18th century guns are lighter: 12-, 9-, 6-, 4-, and 3-pounders. The heaviest guns are of short length, usually 7 ft, the others could be of 4.5 to 6 ft. Later, in 1799, the Company allowed the owners to carry carronades (I.O.R., L/MAR/1/36, 9 January 1799). They were adopted in many ships in the early 19th century (Chatterton, 1914).

What sort of markings would they bear? The earliest guns noted to date were the iron guns ordered from Thomas Browne for the *Trades Increase* and the *Peppercorn* in 1609. They were to have the Company's arms upon them (I.O.R., B/3: 135). In 1625 they decided that the demi-culverins for their new fort at Lagundy should have the King's arms upon them. In 1753 the Board of Ordnance asked that 'the storekeeper at Woolwich Pay Robert Davidson £1 1s 0½d for cutting Crowns and P and refused marks' (WO 47/41/127: 129). This is the well-known crowned P seen on cast-iron British guns the World over. These marks were placed on the barrel. It was not usual for an iron founder to put any marks on 17th-century guns, unless they came from Sweden. However 18th-century iron guns usually bore a single, double, or triple letter on the trunnion face and brass guns the name of the founder and a date, usually near the baseline of the gun (Brown, 1988; 1989).

A captain might be granted permission to strike his supernumary guns and carry them as kentledge. Unless there was trouble expected, the guns might be stowed and the gun ports caulked up. One captain was unable to get at his guns without moving several tons of pepper (Sainsbury, 1935: 17). Normally, however, captains and the court preferred no goods be carried on the gundeck which could render the guns useless. In the late 18th century the East Indiamen

could not usually man all the guns aboard particularly during the French Wars and all passengers and troops were trained weekly in manning the guns. The East India Company lost many ships in this period. William Hickey, returning to England in 1808 on the *Eden Castle*, remembered 'Our great guns were now regularly exercised twice a week, though I fear had it been our fate to depend upon the hostile use of them for safety we should have cut but a wretched figure' (Spencer, 1925: 433).

It was not always clear at the time into which of these categories the guns might fall. The EIC constantly forbade the Masters of the ships to dispose of their ships armaments abroad as a sort of invisible export with such monotony that it must have been a regular occurrence. As late as

1768 Captain Richardson of the *Pigot* was fined for disposing of his Quarter Deck guns (I.O.R., L/MAR/1/36: 21 September 1768). Guns sent out for sale to India were often seized by the factors and placed on the new fortifications.

Nor might the number of guns found tally with the numbers expected. Some guns might be jettisoned in bad weather, while others might be salvaged after shipwreck. Even before a ship left port, guns could be left behind at the last minute because of a bulky or heavy cargo.

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Notes

- [1] For details of many of the founders and their marks mentioned here and below see Brown, 1988 and Brown, 1989.
[2] The Browne guns of 1626 were probably those he supplied to the Navy Board which 'survived double proofing, though lighter than their bronze equivalents' (Cipolla, 1965: 65).

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