

Sutton G. James Lind aboard Salisbury

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Scurvy at sea was a side effect of the ability to measure longitude. Once ships' positions could be accurately fixed, they could sail for months out of sight of land, and dietary deficiencies became common.

James Lind was a Royal Navy surgeon when he studied treatments for scurvy "on board the *Salisbury* at sea" in 1747. We can reconstruct his voyage from the ship's original papers, held in the National Archives in Kew, England.

Salisbury was a 50 gun ship-of-war, built at East Cowes, Isle of Wight and launched on 29 Jan 1746*. Her first captain was Sir George Edgcumbe (1721-1795), MP for Fowey and later Admiral Viscount Mount-Edgcumbe. His portrait was painted circa 1748 by Sir Joshua Reynolds "with a wydah bird", and the *Salisbury* appears in the background.

Lind had joined the Navy in 1739, serving around Iberia, Africa and the Mediterranean, and *Salisbury* would be his last ship. Although she was newly launched, he was not her first surgeon: Alexander Hart had come and gone within days. Lind was assisted by a surgeon's mate (William Woolaston till 1747, then Cornelius Murray), and by his servant Robert Goding. Goding paid five shillings for "Dead Men's Cloaths", a charitable fund for widows and dependants of seamen.

Salisbury entered active service in April 1746. Britain was embroiled in the 1740-1748 "War of Austrian Succession", siding with Austria, the Netherlands and Scandinavia against France and Spain, and *Salisbury's* task was to patrol home waters. She undertook four patrols in 1746 and one early in 1747. The next was the setting for Lind's experiment.

Sat 7 March 1747 [Portsmouth]: . . . Rec'd 6 side fresh Beef, 170 Baggs of Bread, one Puncheon Pork, 3 Barrels Rasons, 3 Barrels & 1 Hogshead Rice, 15 Firkins Butter, 33 Cheeses and some Boatswain's and Carpenters Stores.

Tue 10 March: . . . Rec'd 4 side fresh Beef, 40 Butts Beer, 30 Puncheons Water.

The rice is a surprising provision. It was not just a luxury for the officers, being part of the regular diet of Lind's patients. The ship would also carry minor provisions not recorded in the log, or purchased privately by the crew from the bum-boats plying the harbour. Green vegetables, according to Lind, were plentiful in port; but at that time of year their Vitamin C content would be low.

Fri 13 March: Rec'd 50 Butts of Beer, Returned Empty Butts.

Beer was a staple, and Lind remarked that scurvy would manifest when the beer ran out. But this shows the pitfall with non-experimental observations: beer would run out late in a voyage about the time that other dietary problems occurred.

Salisbury sailed on 29 March and was soon in action:

Mon 30 March: Weigh'd and came to sail in company as before. AM gave Chase to the Westward, fired three shott at the Chase.

Tue 31 March: The Chase hoisted French Colours and struck to us. A French Privateer from Bologne, called the Frap de Borde, about 45 Tuns, took out 54 Prisoners, sent 10 of our men aboard her . . . Departed this life John Carnaby.

Carnaby was one of six men on this voyage whose deaths are described thus; most were early on, so they are unlikely to reflect scurvy. Another two men drowned.

The entire crew shared in the value of captured vessels. So if Lind was counting his savings and wondering whether he could afford to leave the Navy and set up in practice, it may well have been at this point that his decision was made.

The crew brought their prize into Plymouth, topped up on food provisions, then returned to sea. A further bonus came on 11 April, with the capture of another small French ship.

For the next three weeks *Salisbury* patrolled the Bay of Biscay, encountering only neutral or friendly vessels. On 5 May they sighted a large French convoy and made for it; but it retreated into the River Loire. Lind and his assistants were not called upon to treat the casualties of a sea battle.

Salisbury was still in that area on 20 May when Lind's experiment began, eight weeks after leaving port. He picked twelve men for a six-way comparison of cider, elixir of vitriol, vinegar, sea water, oranges and lemons, and a purgative mixture. A tenth of the crew by now had scurvy, so he had 30 or 40 individuals to choose from. Yet the roll call shows at most one or two as sick during this entire voyage on which six men "departed this life". This suggests a culture of official denial of sickness at sea, one of many possible reasons, perhaps, why Lind's work was neglected.

On 25 May *Salisbury* suffered minor damage chasing a ship that was unwilling to stop. It turned out to be an English privateer and had to be let pass; a Guernsey privateer was similarly uncooperative on 8 June.

By the end of May, the two men assigned to citrus fruit were almost recovered. One returned to duty; the second helped nurse the others.

Thur 4 June: Condemned after survey 130 pds of Cheese and 90 pds of Butter . . .

This bodes ill: if the cheese had to be thrown overboard, then what of the beef or pork? Even if edible, the rations were running low: "Rec'd from the Shoreham Seven Baggs Bread." So *Salisbury* headed home, anchoring off Plymouth on 17 June. Thus ended the voyage, the experiment, and Lind's shipboard service.

Salisbury continued to make similar patrols until the war ended in 1748. She was then a guard ship at Plymouth, till 1754 when she escorted a convoy to the East Indies. She served around India until decommissioned in Bombay in 1761.

A fuller account of Lind's voyage appears in the Journal of the Royal Society of Medicine

Note

* Britain remained on the Julian Calendar till Sept 1752, so the ship's launch was recorded as "29 Jan 1745 / 46." For clarity, all such dates have been rendered into current Gregorian style.