Scurvy: *How a surgeon, a mariner, and a gentleman solved the greatest medical mystery of the age of sail*

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**Book Review**

Though scurvy — caused by a dietary deficiency in vitamin C — had been recognized and puzzled over since the time of the Greeks, it had failed to capture the scientific minds of Europe until the Age of Discovery, when mighty sailcraft and their crews, braving the oceans to seek out new lands, returned decimated by the disease. More sailors lost their lives to scurvy during the 15th to 17th century than to war, storms, shipwreck, or other diseases combined. Sailors were often at sea for months without seeing shore and, even when in port, officers of naval ships were so keen to prevent desertion of impressed sailors that crews were typically confined to ships anchored offshore while they were re provisioned with hardtack and salted meat. Wrote a mariner voyaging with Magellan in 1519, “they ate biscuit and when there was no more of that they ate the crumbs, which were full of maggots and smelled strongly of mouse urine . . . Mice could be sold for half a ducat a piece, and still many who would have paid could not get them.” On that three-year voyage, a crew of 250 was whittled to a mere 18 men. This foul diet led to disease, as William Clowes, a naval surgeon, writing in 1596, recorded it: “Their gums were rotten […]

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Scurvy
How a surgeon, a mariner, and a gentleman solved the greatest medical mystery of the age of sail

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ough scurvy — caused by a dietary deficiency in vitamin C — had been recognized and puzzled over since the time of the Greeks, it had failed to capture the scientific minds of Europe until the Age of Discovery, when mighty sailcraft and their crews, braving the oceans to seek out new lands, returned decimated by the disease. More sailors lost their lives to scurvy during the 15th to 17th century than to war, storms, shipwreck, or other diseases combined.

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Cures for scurvy had been advanced for ages, with ill-founded theories of humoral imbalance or putrefaction their only basis. The European Enlightenment — an intellectual movement that idealized progress, from seawater to laxatives.

Despite clear evidence, Lind’s recommendations were largely ignored during his lifetime because of prevailing theories and theorists — while pretentious and misguided scientific debate raged on in the Royal Society, scurvy was killing tens of thousands of mariners.

Though James Cook, sailing around the world three times in the years preceding the American Revolution, finally kept scurvy at bay through insistence on impeccable hygiene among his crew and on obtaining fresh produce for meals, as well as through broad use of antiscorbutics including citrus juice, politics forced him to champion Pringle’s wort of malt in public. It was Gilbert Blane who rediscovered Lind’s experiment and advocated the use of citrus fruits after Pringle’s death.

Bown’s book can be taken as a parable, the story of humble empiricism triumphant over the arrogant posturings of medical theory. James Lind, the story’s tragic hero, possessed the classic hubristic impulse to couch his remarkable discovery in a wild and unsubstantiated theory, one so complex and esoteric that Bown can barely bring himself to describe it — “Lind’s theory of the cause of scurvy is as preposterous and hare-brained as any of the theories he so eloquently criticized.”

Blane, now heralded as the father of naval medicine, wrote of citrus fruits in the 1780s, “upon what their superior efficacy depends, and in what manner they produce their effect, I am at a loss to determine, never having been able to satisfy my mind with any theory concerning the nature and cure of this disease, nor hardly indeed of any other.” It would be 150 years before vitamin C would be isolated and characterized. By then, thanks to the keen eyes and clear thought of a few men, the disease had been nearly eradicated from the developed world.