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Surgeon John White: Australia's first surgeon-general

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Surgeon John White RN, the principal surgeon in the 'First Fleet' which sailed from England to establish the Colony of New South Wales in 1788, became the new colony's first surgeon-general. He had to deal with scurvy among the settlers and an unknown epidemic among the local Aborigines, which Short, himself a former Australian surgeon-general, proposes be called 'severe acquired pustular disease'.

Key words: John White; Australia; First Fleet 1787-88; surgeon-general; scurvy; severe acquired pustular disease.

Following the victory of the rebellious forces in his American colonies, King George III addressed the British parliament on 23 January 1787 outlining a plan to transport a number of convicts overseas owing to the crowded state of the gaols and prison-hulks in England. The king and his chief minister, William Pitt the Younger, determined that the convicts would contribute to the enlarging empire by establishing a viable settlement at Botany Bay, on the east coast of New Holland, that might later become a successful naval base and participate in expanding British trade in the South Seas (Blainey 2000: 447-8; Frost 2011: 25-6).

The First Fleet

The fleet, or more correctly a squadron or perhaps a convoy, consisted of 11 ships which departed from Spithead on 13 May 1787. The escort vessels included a sixth-rate frigate of 612 tons burthen, HMS *Sirius*, crewed by 160 and commanded by Post-Captain Arthur Phillip RN, commodore to the fleet, and supported by a highly experienced second post-captain, John Hunter. The smaller craft, HMS *Supply*, commanded by Lieutenant Henry Ball RN, carried a crew of 50. Six convict transporters and three store ships completed the fleet which arrived intact at Botany Bay progressively from 18 to 20 January 1788, some eight months from embarkation. A reconnaissance party reported Port Jackson to be a superior site for settlement and the convoy subsequently anchored at Sydney Cove on 26 January 1788.

The fleet carried approximately 1500 souls, including 759 convicts of both sexes and 16 children belonging to the convicts, together with 21 officers of Marines and 192 other ranks mustered in four companies (White 1962). Nine surgeons sailed with the fleet. Surgeon George Worgan was posted to the *Sirius* assisted by Thomas Jamison as surgeon's first mate

with another mate Mr Lowes. Surgeon Callan served in the *Supply*. Surgeon-General White sailed in the transport *Charlotte* conveying 88 males and 20 female convicts. Dennis Consider sailed with the *Scarborough*, William Balmain aboard the *Alexander* and Thomas Arndell in the *Friendship*. Aboard the *Lady Penrhyn*, Arthur Bowes served the ship's company whilst the convicts were cared for by a volunteer surgeon, John Altree. The other vessels of the fleet carried no surgeons (White 1962: 7-8). All six convict transporters had been built within three years of sailing. In part this fact belies the long-held myth that the preparation and provisioning of the fleet was a slipshod affair.

Surgeon John White

White was born in 1756 in Mullaghduin, County Fermanagh, Ireland. Diligent search has failed to disclose a portrait of White. White died on 20 February 1832 and was buried at St. Mary's, Broadwater, in the coastal town of Worthing in Sussex.

John White entered the Royal Navy on 26 June 1778 after a cursory *viva voce* examination by the Court of Examiners of the Company of Barber-Surgeons, at Surgeon's Hall, London, where he was considered qualified to serve as a third surgeon's mate. Since surgeons were at a premium in the rapidly expanding Royal Navy during the American War of Independence (1775 to 1783), White was immediately posted to a ship. He joined HMS *Wasp*, an un-rated 16-gun sloop, perhaps on 26 June 1778. After several ship postings he was promoted to surgeon on 9 October 1780. He then saw 3 years' service in the West Indies and in British India. In 1786, after 8 years' sea duty, he was the surgeon in HMS *Irresistible*, a third-rate, 74-gun ship-of-the-line commanded by the influential and prominent post-captain Sir Andrew Snape Hamond, RN.

Four-months later, with Hamond's warm recommendation in a letter dated 16 October 1786 to the Under-Secretary to the Home Department (today, the permanent head), Evan Nepean, writing "I shall consider myself bound to Government for his good behaviour", White was appointed surgeon-general of

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the Botany Bay Expedition (Britton 1892: 25). The precise wording of White's commission as the principal surgeon, dated 24 October 1786, was "to be Surgeon to the settlement within our territory called New South Wales", signed by Lord Sydney, since 1782, Secretary of State (Britton 1892: 27).

In receipt of a sizeable salary of 10 shillings a day, the same rate paid to the judge-advocate, and to the other two civilian appointees, the chaplain and the surveyor-general, White travelled in March 1787 to Plymouth to oversee the early health status of his convict charges (White 1962: 47). In the provision of medical care at sea White was supported by three naval assistant surgeons, Thomas Arndell, William Balmain and Dennis Considin. They were assisted by Thomas Jamison, first mate, and Mr Lowes, surgeon's mate, from HMS *Sirius* and by a convict surgeon, later in 1790 to be Australia's first emancipist, John Irving. Within a fortnight of arrival at Port Jackson, White's staff was reduced with the posting of Jamison to accompany Lieutenant Phillip Gidley King to Norfolk Island on 14 February 1788. King was later to be the third commissioned governor of the colony from 1800 to 1808, succeeding Governor John Hunter RN.

White's *Journal of a Voyage to New South Wales* published in 1790 to great acclaim, contained convict mortality data for the journey between England and Rio de Janeiro, from 13 May to 1 September 1787, during which 16 convicts died at sea. Contained in an appendix, White tabulated further data for the period from December 1787 (mistakenly recorded as 1786) through to July 1788. In this period the deaths are recorded of one marine and 45 convicts on the passage, with the deaths of three marines and 39 convicts after landing. These modest mortality figures associated with long sea travel during the late 18th century contrast markedly with the arrival of the Second Fleet in June 1790 and attest to White's very creditable overall medical supervision.²

In his journal, White described himself as the "Surgeon-General to the Settlement", but in two letters written in July 1788 to Governor Phillip and Lord Sydney concerning the urgent need to procure necessities, including blankets and sheets for the hospital, White signed himself simply as "Surgeon" (Britton 1892: 142, 175). In a letter written in December 1790, White outlined the suffering and struggling endured by the colonists. This was published in the *London Public Advertiser* "from Mr John White, Surgeon-General at Botany Bay" (Britton 1892: 332). A

1955 paper asserted that White was referred to as the "Principal Surgeon to the Settlement of Port Jackson" (Ford 1955: 5). If we accept White's own interpretation of what his position was in the young colony, then White was Australia's first surgeon-general, holding his commission from October 1786 to December 1794. The Australian military appointed the next surgeon-general during the Second Anglo-Boer War when Colonel W. D. C. Williams, principal medical officer of the New South Wales Military Forces, was appointed surgeon-general in 1899 (Pearce 2002: 38).

By December 1792, the strain of command, his increasing poor impression of the colony and his increasing health problems led White to apply to his benefactor, Sir Andrew Snape Hamond RN, for leave in England. This was granted and he left the colony in December 1794 some two years after Arthur Phillip and three years after Watkin Tench had quit the colony. After leaving New South Wales, White served in various ships and naval bases until he retired in 1820. Most unusually, White was superannuated on a half-pay pension of £91.5s per annum, perhaps as a tribute to his long service and outstanding abilities (White 1962: 31).

White's diary covered a 20-month period, from March 1787 to mid-November 1788. It is enhanced by the inclusion of 65 full quarto-page plates of paintings and sketches which were copies of the specimens and sketches he sent to his London publisher who had them prepared by three skilled naturalists in London.

White is memorialised in the naming of a species of seahorse which still colonises Sydney Harbour, *Hippocampus whitei*. White's life in the colony is commemorated in the Municipality of Leichhardt where, in recognition of his good works, White was given two land grants in 1793. White's Creek, which survives as a canal, ran through the larger grant situated now between the present Petersham Railway Station and Parramatta Road (Macpherson 1928: 124). Both grants of land fronted a cove, the present-day White Bay, and two properties were linked by a track, now White Street in the suburb of Lilyfield (White 1962: 27-8).³

Scurvy and Sickness

In 1788, White established a temporary tented hospital area on the western side of Sydney Cove on a site now occupied by the police station at George Street North (Ford 1955: 5). Cases of scurvy and camp dysentery mounted daily. The search for an effective antiscorbutic was urgent.⁴ Gardens were planted early

²On arrival at Port Jackson in July 1790, the Second Fleet landed nearly 500 seriously sick convicts and sustained 261 deaths at sea from a total of 930 convicts embarked, all males, with 50 more dying within 2 weeks of arrival. Tench recorded 273 persons dying in passage from 1038 people embarked and landed 486 sick on arrival of whom 124 died in the colonial hospital (Tench 1961: 172-3). The grossly overcrowded conditions imposed by avaricious contractors had led to general supervisory neglect resulting in the widespread outbreak of scurvy, dysentery and probably by the 18th century disease known as 'ship fever', presumed to be epidemic louse-borne typhus fever.

³White Bay is flanked by the suburb of Balmain that was named after William Balmain who succeeded White as the principal surgeon in 1795. In 1800, Balmain received a grant of 550 acres in the area of the present Balmain from Governor John Hunter RN.

⁴Humans are unable to synthesise vitamin C and the body stores relatively little. Fruits and vegetables are the primary source of vitamin C. Good natural sources of vitamin C include citrus fruits, rosehips, green vegetables especially broccoli, tomatoes, potatoes, raw liver and kidneys. Boiling of any green leaf vegetable, however, readily depletes both the contained vitamin C and folic acid.

but with poor results. Game and fish in the summer months were hard to catch.

White fortunately found a natural scurvy preventative growing in abundance on the shores of Port Jackson, viz. the climbing plant, Native Sarsaparilla (*Smilax glycyphylla*), also called Sweet Tea,⁵ the green berries [which tasted like a sour gooseberry] of which provide as much vitamin C as tomatoes and potatoes. The leaves of the Cabbage Tree (*Cordyline australis*), Native Parsley (*Trachymene incise*), Wild or New Zealand Spinach (*Tetragonia tetragonioides*), Native 'Dwarf' Celery (*Apium annuum*), and Native Watercress (*Nasturtium officinale*), which were rich in vitamins A, C and E, were also gathered (Low 1987-8: 294-5).

The sour-tasting leaves of Creeping Oxalis (*Oxalis corniculata*) also contained vitamin C but if taken in excess could produce toxic oxalosis. The small green berries of Native Currant Bush (*Leptomeria acida*), with an intensely acid and astringent taste, are also vitamin C-rich but, like the native sarsaparilla berries, they are only procurable in small quantities. A cupful a day of either berry was needed to prevent scurvy and up to four cups a day to cure it (Davey *et al.* 1947: 10).⁶

White did not find scurvy grass (*Cochlearia spp.*) in Australia, which was well known to sailors in England and elsewhere in the Northern Hemisphere⁷ as a cure of the so-called land scurvy (as opposed to the sea scurvy). Nor did he find the North American Spruce Pine (*Pinus glabra*) whose pine needles and young shoots are vitamin C-rich.

White reported the continuing medical challenge of scurvy in a lengthy letter dated July 1788 to Lord Sydney: "... the troops and convicts who on landing were tainted with the scurvy and its continuance from the salt meat provisions on which they are obliged to live" (Britton 1892: 175). Scurvy continued to haunt and slowly cripple the productivity of the colonial settlers, causing continuing reductions in the size and composition of the various work gangs.

Severe Acquired Pustular Disease

Descriptions appeared in the diaries of White, Tench and David Collins (deputy judge advocate) of a calamity that befell the local Aborigines in April 1789. These peoples were members of the *Eora* groups populating the coastal aspects of Sydney, the *Cadigal* people owners of the present Sydney CBD and areas south of Port Jackson, the *Dharug*, *Kuringgai* and *Dharawal* language groups in and around the north of the harbour, and the *Wangal* peoples stretching west along

the Parramatta River to Rose Hill. Tench recorded "finding bodies of the Indians in the coves and inlets of Port Jackson with pustules thickly spread on the bodies" (Tench 1961: 146). In June 1789 he further reported that: "Natives were found on the banks of the Hawkesbury River at Richmond-hill labouring under the small-pox" (Tench 1961: 153).

Smallpox acquired by any member of the First Fleet whilst in Cape Town would have died out among passengers and crews during the voyage to Botany Bay. Any such outbreak would have been scrupulously recorded in the surgeons' sick lists – no such entries were recorded by any ship's surgeon. No case of smallpox was landed with the First Fleet. Whilst the surgeons brought variolous matter (smallpox containing cell debris) to Port Jackson, no record exists of a programme of variolation of the convicts or marines at any time before the disease in the Aborigines in April 1789. This excludes the possibility of an Aborigine becoming accidentally contaminated with smallpox viral material. In the period April to June 1789 there were no cases of a similar disease amongst the white convicts, marines or their families.

On 25 January 1788, the navigator La Pérouse, with two ships, made landfall at Botany Bay and remained for six weeks. If the French had introduced smallpox, Arthur Phillip's administration would have been aware of the crisis well before April 1789, some 14 months later. That smallpox could have been introduced by Malay fishermen via the northern coastline and spread throughout the length of the land is also spurious. The distance is extreme. Another unsubstantiated theory, that smallpox-contaminated clothing containing the very hardy smallpox virus could have been given to the local Aborigines accidentally, is an allusion to a case of deliberate smallpox transmission to the Delaware Indians investing Fort Pitt, Pennsylvania, in 1763. Apart from two return trips to Norfolk Island undertaken by HMS *Supply* in 1788, no other ship entered Sydney Harbour prior to April 1789⁸.

Children belonging to both convicts and marines were landed with the First Fleet. The specific cause of death of the few children who died after arrival is unrecorded by White. Very rarely, childhood chickenpox (*varicella*) may occur without an evident tell-tale rash. Less commonly, childhood chickenpox may occur with trivial body pustulation incorrectly suggesting insect bites. Adult chickenpox is a far more virulent and symptomatic disease than that seen in a child and is associated with a significant mortality, mainly from lung and brain involvement. Professor John Carmody has proposed that the Aborigines suffered a chickenpox epidemic (personal communication).

During the 1789 outbreak, the number of local Aborigines was at least halved [a number of "one in

⁵Brewing of the leaves to make tea [which had a sweet liquorice taste accompanied with bitterness] destroyed the small amount of vitamin C present in the leaves.

⁶Other Australian native plants that are very high in vitamin C include: Kakadu Plum or Murunga (*Terminalia ferdinandiana*) found in northern Australia; and Wild Lime or Desert Lime (*Citrus glauca*) grown in semi-arid regions of eastern Australia (Low 1989; Sommano *et al.* 2011: 59).

⁷In Europe, it is widely distributed in temperate and arctic areas, coastal regions and on cliff tops and around salt marshes.

⁸HMS *Sirius* also transported provisions from Cape Town to the colony but did not return until 2 May 1789.

two” is recorded by Arthur Phillip], leading to a widespread exodus from the Port Jackson area, with further adverse cultural consequences. Contemporary records of the exact cause of this severe epidemic do not exist, so the chickenpox theory is entirely speculative. Accordingly, in the interim, I propose that it be referred to as “severe acquired pustular disease”.

Conclusion

The history of the settlement during the first seven years of the colony of New South Wales was tumultuous and characterised by struggle and want. It was threatened with collapse had the drought not broken, if supplies had not been brought from Cape Town by HMS *Sirius* in 1789-90 and from Batavia by HMS *Supply* in company with a hired Dutch ship in 1790, and had the farms not prospered that were established at Rose Hill in 1788 and Richmond Hill in 1791. The provision of medical services was also sorely tested by the dumping of great numbers of sick and dying convicts arriving with the Second and Third Fleets. That this did not overwhelm the colony's health service is in no small way due to the diligence of White's leadership and administration together with the uncritical devotion of his surgeons and nurses.

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