Thomas Willis 1621 - 1675: His Life and Work


This work was first published in 1991 by the Royal Society of Medicine in its series Eponymists in Medicine and this new impression appearing 18 years later is a fitting tribute to this outstanding biography of a remarkable, but forgotten, man. Dr Trevor Hughes considers each period of Willis’ eventful life to present the reader with a comprehensive picture of an astute clinician who lived in a time of great change and discovery to which he contributed significantly. He also belonged to a circle of very gifted men whose legacy to medicine and science has endured for more than three centuries. Thomas Willis was born in Oxford in 1621, at the commencement of the struggle between King and Parliament. He experienced the Civil War as it manifested in Oxford, lived through the Commonwealth and Protectorate from 1649 to 1660 and saw the restoration of Charles the Second. The latter event was a turning point in Willis’s fortune as a Royalist.

In these troubled times in Oxford, Willis attended medical school but was not a student of Harvey, who in 1628 had published his work on the movement of the heart and the circulation of the blood, probably the most significant medical publication of all time. Harvey’s influence and books were alive in Oxford and Willis must have absorbed some of this in his student days, brief as they were. This is mentioned because Willis has been called ‘the Harvey of the nervous system’.

Willis was particularly interested in the anatomy of the nervous system, the field in which he made his most significant contributions, and it would be difficult to overrate his contributions to the understanding of the structure and function of the nervous system. His Cerebri Anatome not only demonstrated neuroanatomical structures but also provided a nomenclature which included the concept of neurology.

A fascinating chapter in this biography deals with people with whom Willis had had close contact: friends, teachers, colleagues and pupils. Of the friends Robert Boyle, Richard Lower, John Locke may be singled out but Christopher Wren, who drew some of the pictures for the Cerebri Anatome, deserves special mention.

This thoroughly researched and most readable book about a remarkable doctor and scientist who has almost been forgotten, should be read by anyone with an interest in medical history, and the history of science, particularly of 16th century England.
Mosquito Net. A Story of the Pioneers of Tropical Medicine


Cyril Fox has done us a favour by writing this gem of a book. The main actor is the mosquito that is the vector of several diseases of man, the most important of which are malaria and yellow fever. From antiquity these scourges have had major impacts on human lives and economies. Dr Fox introduces the great names in tropical medicine who made major discoveries that would benefit mankind enormously. He shares their triumphs and the difficult circumstances in which they worked, but does not spare their weaknesses and jealousies.

In 1880 Alphonse Laveran, a French army surgeon, observed the malaria Plasmodium in the first stage of sexual reproduction; in 1894 Patrick Manson shared thoughts with Ronald Ross that the mosquito is malaria host and vector; in 1897 Ronald Ross demonstrated the mosquito’s role in malaria transmission and the life cycle of Plasmodium; and in 1898 Giovanni Grassi discovered that the female Anopheles is the carrier of malaria and demonstrated human transmission via mosquito bite. Ross received the Nobel Prize in 1902 but had unseemly conflicts with his earlier mentors, Manson and Grassi.

Heroes in unravelling the mysteries of the cause of yellow fever include Dr Carlos Finlay (1833 - 1915) – a Cuban doctor of French and Scottish descent who was the first, in 1881, to theorise that a mosquito was a carrier of the organism causing yellow fever. Dr Walter Reed (1851 - 1902) was a US army physician who in 1900 led the team that confirmed the theory that yellow fever is transmitted by mosquitoes. This gave impetus to the new fields of epidemiology and biomedicine and allowed the resumption and completion of work on the Panama Canal (1904 - 1914) by the USA. Three colleagues in Cuba allowed themselves to be bitten by mosquitoes: one died, another survived but remained sickly and died early, and the third survived. Their proof was nevertheless not considered final and experiments continued with volunteers – considered to be the first informed consent studies.

William C Gorgas was a US physician and later surgeon general of the army from 1914 to 1918. In 1898, after the end of the Spanish American War, Gorgas was appointed chief sanitary officer in Havana, working to eradicate yellow fever and malaria. Gorgas capitalised on the momentous work of Major Walter Reed. He implemented far-reaching sanitary programmes including the draining of ponds and swamps, fumigation, mosquito netting, and public water systems that permitted the construction of the Panama Canal. Gorgas received an honorary knighthood from King George V. He died on 3 July 1920 and was given a special funeral in St Paul’s Cathedral.

Impressed about what Gorgas had achieved in the Panama Canal he was invited to advise on the high death rates from disease on the South African gold mines. He visited South Africa in 1913 and issued a damning report. The gold mines and South Africa benefited by his suggestion of appointing Dr Alexander Orenstein, who had worked with him in the Suez Canal.

Note: Orenstein subsequently, like Gorgas, achieved high military rank as surgeon general of the South African medical services in World War II and had a major impact on occupational health, nursing education and many other aspects of health services in South Africa.

The book is a good read and a useful reference for the people and events involved in these discoveries.

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