

**THE THREE WILLIAMS —
HUNTER, HEWSON AND CRUIKSHANK:
Their Unique Contributions to Our Knowledge of the Lymphatics**

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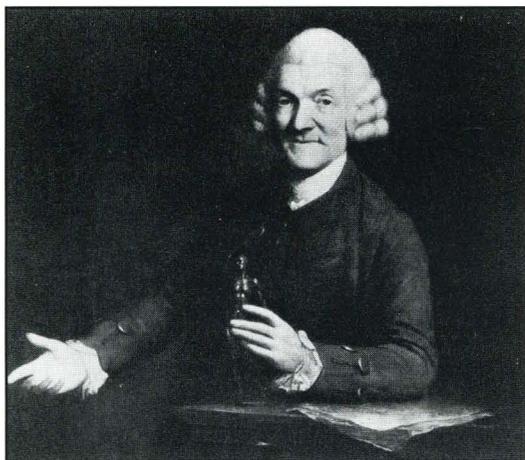


Fig. 1. William Hunter (1718-1783).

Starting about 1740, “a vigorous experimental approach struggled with the dogmatic systems of the earlier part of the century,” (1) and it was in this era that the “three Williams” arrived on the London scene. William Hunter, the outspoken curmudgeon (he called himself “forthright”), with the help of William Hewson and William Cruikshank, his brilliant assistants, impressively defined the importance of the lymphatic system. They had help from John Hunter, William’s brother and brilliant student, who has since been honored by many as the father of surgery. The painting of William Hunter by Chamberlin (*Fig. 1*) that hangs in the Royal Academy of

Arts in London (2) does not make him look particularly appealing, and he apparently was not. A small man, he was jealous, difficult, high-strung and arrogant. He and his assistants undoubtedly overdid their enthusiasm for the “absorbents,” as they often termed the lymphatics, because they considered them to be the *only* absorbing vessels of the body (3).

William Hunter established the famous Great Windmill Street anatomic theatre, the site of which is now the St. James Tavern (*Fig. 2*). Time changes geography, but we know that it was at this site that he housed his superb anatomical museum, which now resides at the University of Glasgow. And it was from this platform that in his outspoken manner he came close to a correct definition of the role of the lymphatics. He and his colleagues were not just talk; they did careful anatomical investigations of the lymphatics in man, other mammals, amphibians and fish.

It was a time when Benjamin Franklin was living in London. A friend to both William Hunter and Hewson, he moderated a conflict between them, and subsequently Hewson dedicated his fine book to Franklin (*Fig. 3*). William Cruikshank was a friend to Dr. Samuel Johnson, this great English scholar calling Cruikshank “a sweet-blooded man.” When Johnson’s congestive heart failure did not respond to the squill treatment given by Brocklesby and Heberden, they called

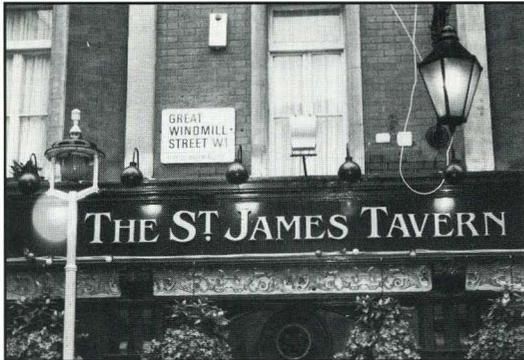


Fig. 2. The site of the Great Windmill Street anatomical theatre of William Hunter, now the site of a tavern.

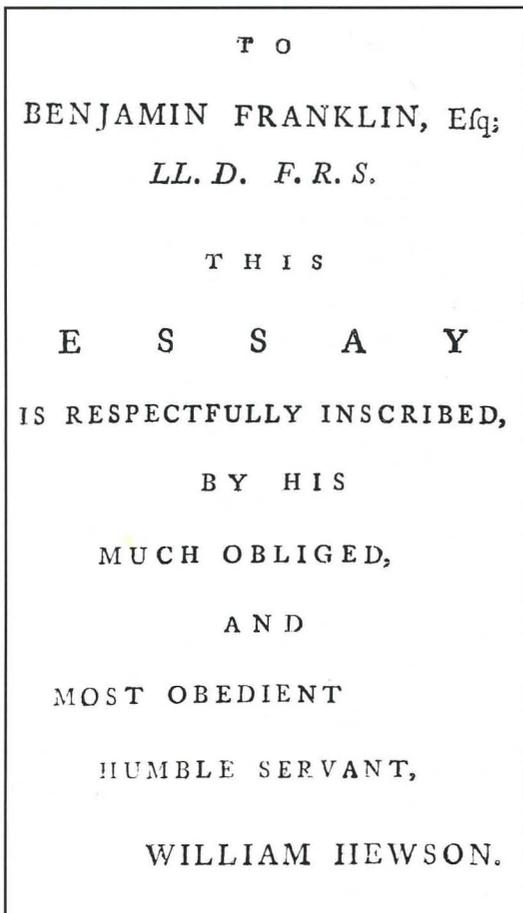


Fig. 3. The dedication of William Hewson's book, published in 1774, to Benjamin Franklin.

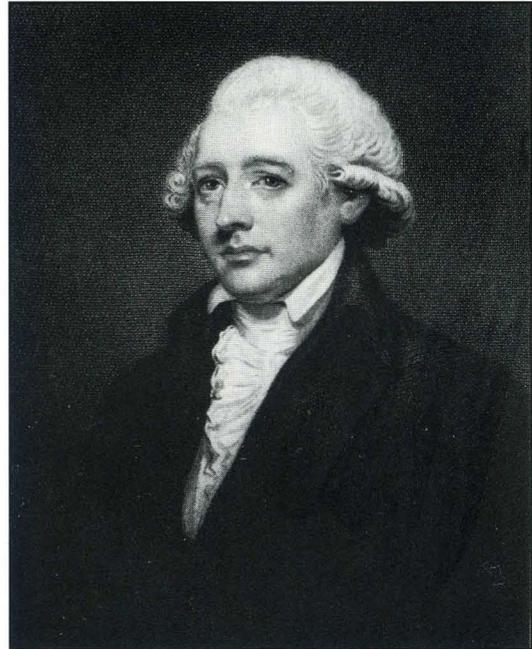


Fig. 4. William Cruikshank (1745-1800).

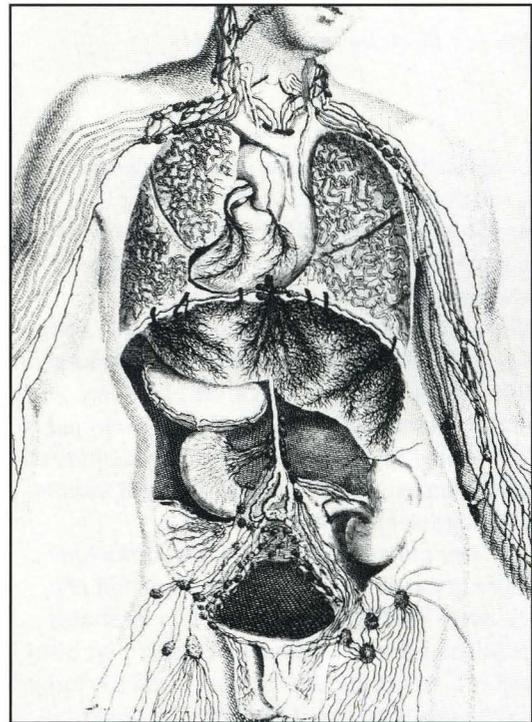


Fig. 5. A composite figure of the lymphatics of the human body from William Cruikshank's book published in 1786.



Fig. 6. William Hewson (1739-1774).

Cruikshank to drain the marked edema. Cruikshank was apparently cautious in making his skin incisions, and Johnson is purported to have cried, “Deeper, deeper; I want length of life, and you are afraid of giving me pain, which I do not value.” After Cruikshank left, Johnson plunged a scissor into the incisions on the calves of his legs and lost considerable blood. So Cruikshank had to be recalled to dress the wounds. But Johnson died the next day, not saved by squill, edema drainage or bleeding.

The portrait of Cruikshank shows him more attractive than his erstwhile chief (Fig. 4). After William Hunter died, Cruikshank published the work done by Hunter and himself (4). In the preface he bemoaned the loss of his mentor’s skill and fortune. He wrote,

“In the present publication we have many reasons to regret the loss of Dr.

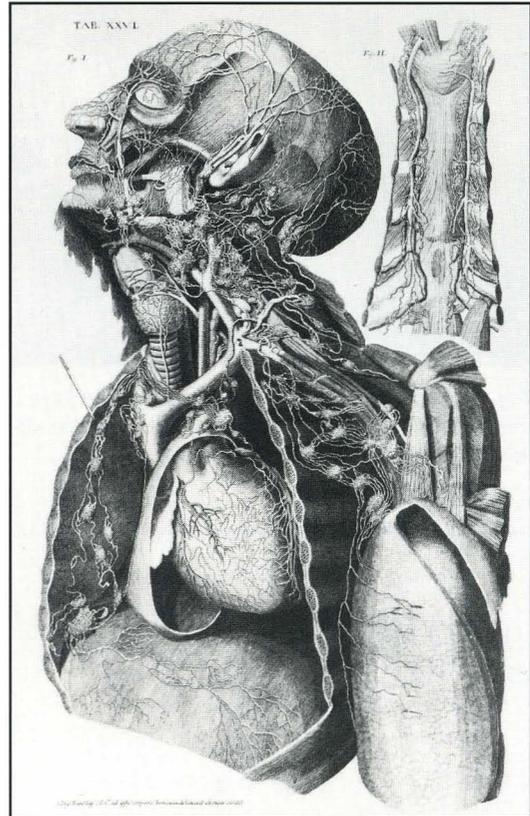


Fig. 7. The cardiac, mediastinal, upper arm and head and neck lymphatics as shown in Mascagni’s book published in 1787.

Hunter. It has so happened, that we shall be able to derive no advantage to it from his fortune, which has been otherwise disposed of. The work, from this circumstance cannot appear at present with the number of plates it would have done, had he lived to publish it himself...”

Cruikshank’s complaint was undoubtedly valid; William Hunter would have done much better if he had lived to publish the book. The composite illustration that William Cruikshank used in the book, published in 1786, was primitive and rather shameful (Fig. 5). William Hewson (Fig. 6), who unfortunately died as a young man after sustaining a cut while doing an autopsy, did much better in

his book published in 1774 (5). But the most striking comparison must be made to the composite illustration in Mascagni's magnificent publication (6) which appeared one year after Cruikshank's volume, in 1787 (Fig. 7). Indeed, Mascagni's illustration does put Cruikshank's effort to shame, though we should not demean Cruikshank as a scholar, investigator and teacher.

The recognition of the importance of the lymphatic system was succinctly stated by Hewson in his book:

"The lymphatic vessels are small pelucid tubes that have now been discovered in most parts of the human body; the fluid they contain is generally as colourless as water, a circumstance which procured them first the name DUCTUS AQUOSI, and afterwards that of VASA LYMPHATICA. The course of the lymph, like that of the chyle, is from the extreme parts of the body towards the centre, and the lymphatic vessels commonly lie close to the large blood vessels."

From the time of Harvey, who questioned the importance of the lymphatics and who had no idea of how the blood entered the tissues, the concept of a microcirculation had been undefined. Malpighi and Leeuwenhoek had a

concept of graded vessels. Haller and others began to think of a capillary system. By the mid-1770s the Hunters, Hewson and Cruikshank had a good concept of graded vessels and the roles of the lymphatics. It was a remarkable time in the history of mankind, a world in scientific and cultural ferment between the times of the American revolution and the Declaration of Independence in 1776 and the French revolution in 1789.

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