

Observations on the Changes of the Air and the Concomitant Epidemical Diseases in the Island of Barbadoes, 1752–1758

William Hillary

Edited and annotated by J Edward Hitson and Henry S Fraser

This is an annotated version of William Hillary's classic, "Observations on the Changes of the Air and the Concomitant Epidemical Diseases in the Island of Barbadoes, 1752–1758". The book is written by a man who is intent on establishing a connection between weather conditions and disease from information he has collected. He further sets out to relieve the practice of medicine of conjecture which dominated the writings of authors of that era, by a scientific appraisal of facts. Hillary was well suited for the task. His apprenticeship with Benjamin Bartlett at Bradford provided him with a sound working knowledge of drugs. Furthermore, respect for the use of the scientific method in medicine had been inculcated in him by Professor Herman Boerhaave when he studied at Leyden University, a leading centre of medical education in the 18th century.

On his return to England, he established a practice in Ripon, where he carefully observed changes in the weather pattern and their relationship to epidemic diseases. He transferred to Bath, but because of certain unpopular views in practice, he was forced to seek employment elsewhere. Jamaica was considered, but because he was a Quaker, Barbadoes seemed a better option. Had he not gone there, he would never have seen a case of tropical sprue, which had not been described on the island before. Hillary was a thoughtful and accomplished writer and his writings included dissertations on small pox, the use of water in disordered conditions of the stomach and bowel, and also on medical education. But it is his clear description of tropical sprue that demands the reader's attention.

There is much conjecture as to who provided the first description of the disease. It has been erroneously stated that Vincent Ketelaer described both tropical and non-tropical sprue in his book, *De Aphthis Nostratibus*. The error arises because it was not appreciated that the Dutch word sprouw as Ketelaer used it meant thrush, the common monilial infection of the mouth. Ketelaer expressly stated that his aphthae were not the same as those of Hypocrates. That thrush was one kind of aphthae is confirmed by the entry under that term in the Medical Lexicon of S Blancardius which describes "the whiteness as if the whole mouth had been sprinkled with white flour". In English, sprue continued with some authors to mean oral thrush until the later part of the 19th century.

It was in fact Hillary who provided the first clear description of tropical sprue contained in this book two

centuries ago. He emphasized the cardinal features of the disease, its chronic nature, the tendencies to relapses and remissions, the distressing glossitis depriving the patient of nourishment and its progression with wasting, anaemia and death. Since then, tropical sprue in the West Indies has been thoroughly documented in Cuba, Puerto Rico and Haiti.

The book, initially, introduces the reader to the weather patterns in Barbadoes and their presumed influence on disease. It goes on to provide detailed descriptions of and treatment modalities for the common diseases which he encountered in the region. The author provides vivid accounts of yellow fever, the dry gripes and abdominal colic of lead poisoning and an analysis of the different types of dysentery. Opisthotonus and tetany he finds puzzling as he is unable to comprehend how a disease of such violence could arise from a simple puncture wound.

Contained in this book is a long footnote which may be the first scientific account of a tsunami: "...the sea suddenly flowed and rose more than two feet higher than it does in the highest spring tides and in three minutes time it ebbed so as to be much lower than the usual lowest ebb, and then it flowed again as it did before". This happened on November 1, 1755 at Bridgetown. Two months later Hillary heard news of the earthquake in Lisbon that had happened the same day.

Hillary has an easy to read style which is direct and forthright. The clarity of his presentation makes the reading enjoyable. In it, Hillary's passionate and well constructed opinions are clearly stated with evidence to support them. For these reasons alone, the book should be of considerable interest to medical historians and students of tropical medicine. He may not have drawn all the correct conclusions from his observations but the level of his inquiry supports the use of the scientific method.

A good test of any book is whether it is a good holiday read and if completing it is a duty or a pleasure. Having read it this summer, I can truly say it is an excellent read.

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