

BRITISH DOCTORS AND THE STUDY OF THE MEDICAL AND NATURAL HISTORY OF MALTA IN THE NINETEENTH CENTURY.

Dr. PAUL CASSAR M.D., B.Sc., D.P.M., F.R.Hist.S.

The Royal University of Malta.

The earliest British medical men to come to Malta were the army and naval surgeons who accompanied the soldiers sent to aid the Maltese when they rose against the Napoleonic troops who held the Island in 1798-1800. It is not unlikely, however, that naval surgeons had been to Malta many years previously; in fact squadrons of the British fleet had been calling at Malta as early as 1675 while they were engaged in crushing the corsairs of Tripoli.

Several service doctors who left their mark on British medicine and surgery in the 19th century had forged a link with Malta. William Pargeter (1760-1810), who was both a physician and a chaplain, saw service in Malta in 1801. His name is associated with one of the early British books on psychiatry (1). Dr. James Barry, who in spite of his male name is believed to have been a woman, spent four-and-a-half years of an adventurous life in the Island as Principal Medical Officer of the garrison between 1846 and 1851 (2). Dr. Thomas Spencer Wells, of forceps fame, began his career at the Bighi Naval Hospital and left Malta in 1847 after a stay of six years (3). Surgeon Joseph Sampson Gamgee treated the Crimean War wounded brought to the Island during that conflict (4). Sir David Bruce discovered the causative germ of Undulant Fever in the human spleen in Malta in 1886 and his contemporary Dr. M.L. Hughes helped to differentiate this disease, clinically, from other fevers while he was stationed in the Island.

Less familiar are the names of other British doctors who did not rise so high in the medical ladder of fame but who, in the midst of their ordinary labours in the Island, took interest to make and record observations on the medical and natural history of Malta. It is the aim of this paper to focus attention on this small band of men who, at a time when little was yet known, stimulated interest and opened new vistas in the disciplines mentioned above.

- (1) Leigh, D — *The Historical Development of British Psychiatry*, Vol. I, Oxford, 1961, p. 62.
- (2) "Il Mediterraneo" of 25th November 1846, p. 16.
Muir's Malta Almanack for 1852.
- (3) "The Malta Times" of 12th October 1847, p. 3.
- (4) Bailey, H. & Bishop, W. J. — *Notable Names in Medicine and Surgery*, London, 1959, p. 106.

Dr. JOHN HENNEN.

Dr. John Hennen (1779-1828) was born in Ireland. On obtaining his medical qualification at the Edinburgh College of Surgeons in 1798, he joined the army as assistant-surgeon. He was sent to the Mediterranean and served throughout the Peninsular War and at Waterloo. After graduating M.D. Edinburgh in 1819, he was appointed Principal Medical Officer in the Mediterranean residing at Malta and Corfu (5).

In the early decades of the 19th century the study of so-called medical topography was very much in vogue. In fact it was held that next to the study of symptomatology and therapeutics none other was more important than the investigation of the effects of climate and other features of the external environment upon health. Dr. John Hennen's first visit to Malta was in 1801. When he again returned to the Island in 1821, he was Head of the Medical Military Department of the Mediterranean. Some years previous to this appointment, he had already shown a great interest in medical topography chiefly in relation to the stationing of troops and hospital planning. He was one of the editors of the "Edinburgh Medical and Surgical Journal", in the sixty-seventh number of which he had published a paper on medical topography. It is, therefore, not to be wondered at that as soon as he came to the Mediterranean he circulated a questionnaire to the medical officers attached to the British Forces in Gibraltar, Corfu, the Ionian Islands and Malta with a view of acquainting himself with the health and social conditions of the inhabitants and troops in the stations under his charge. He spent three-and-a-half years in Malta. He was then transferred to Corfu from where, after a stay of nine months, he was posted to Gibraltar in 1826. He died at this station on the 3rd November during the epidemic that raged in that year, probably due to yellow fever.

The results of his researches on medical topography were edited and published by his son in 1830. Besides describing the climatic, geographical and social conditions of the inhabitants, he deals at length, in his "Sketches of the Medical Topography of the Mediterranean", with the diseases that affected humans, animals and plants; the planning of hospitals; transport and the welfare of hospital employees. Hennen found the shores of the Mediterranean "no longer the seat of science, the chosen residence of demigods and the fruitful nursery of sages and heroes but. . . the residence of squalid misery and sordid ignorance; immersed in the noisome vapour of untrodden marshes and fanned by no zephyrs but those which scatter disease and death from their wings". Of his story of disease and death in the Mediterranean, Malta occupies a great deal of his book but, happily, the Island acquits itself well for when he was asked to suggest a place for the establishment of a convalescent station for the troops he had no hesitation in recommending Malta "which combined exemption from marsh, salubrity of situation, sufficiency of barrack and hospital accommodation, abundance of the necessaries of life and facility of access" (6).

(5) Dictionary of National Biography, London, 1891, Vol. XXV, p. 424.

(6) Hennen, J. — Sketches of the Medical Topography of the Mediterranean, London, 1830, pp. 237-547.

Dr. JOHN DAVY.

Dr. John Davy (1790-1868) was the younger brother of Sir Humphrey Davy the discoverer of the safety lamp. He studied medicine at Edinburgh taking his M.D. in 1814. He entered the army as a surgeon, reaching the rank of Inspector General of Army Hospitals in his later years. He published many papers on anatomy, physiology, pathology and quarantine. He died on the 24th January 1868 (7).

He was on the army medical staff in the Mediterranean for a period of eleven years (1824-35), seven years of which he spent in Malta. He again visited the Island towards the end of November 1840 while on his way to Constantinople to advise on the organisation of the medical corps of the Turkish army (8).

He numbered some distinguished visitors to Malta among his patients. When Sir Walter Scott reached the Island in November 1831, he was an invalid as a result of an apoplectic stroke which he had at Abbotsford in April of the same year. While he was in Malta it was feared that another stroke was impending as, one day, he appeared confused and was unable to form a letter in answer to a note from the admiral. Sir John Davy was called instantly. He found Scott with a flushed face, heavy eyes and great difficulty in speaking. He ordered the application of leeches to the patient's head and the Scottish minstrel felt so much better the following morning that he drove into the countryside — not with Dr. Davy but in the company of Mrs. Davy for "like most men when they are ill or unhappy, he preferred having woman-kind about him". Dr. Davy did accompany Scott on one occasion when the poet went to see Strait Street in Valletta where he was told that the young Knights of St. John used to fight their duels (9).

Two years later, Dr. Davy had occasion to treat another famous visitor to Malta. This was the Rev. J.H. Newman (later Cardinal) who had caught a very bad cold while undergoing quarantine at the Lazzaretto in January 1833. Dr. Davy recommended fifty drops of antimonial wine three times daily — a remedy which the patient found to be "wonderfully efficacious" (10).

Davy was an intimate friend of the Rt. Hon. Sir John Hookham Frere who had settled in Malta and who endeavoured to arouse the curiosity of naturalists and paleontologists in the fauna, plant life and fossils of the Maltese Islands. Davy kept up a correspondence with Frere on the natural history and geology of Malta even after his departure from the Island. He also took a keen interest in the agriculture and meteorology of Malta on which he wrote extensively in his "Notes and Observations on the Ionian Islands and Malta", published in London in 1842. He was full of admiration for the skill and patient industry exerted by the Maltese peasants in the cultivation of their fields and he was no less impressed by the vast number of underground tanks

(7) Dictionary of National Biography, London, 1888, Vol. XIV, p. 196.

(8) "Il Portafoglio Maltese" of 23rd November 1840, p. 1120.

(9) Lockhart, J. G. — Memoirs of the Life of Sir Walter Scott, Paris, 1842, Vol. IV p. 298.

(10) Mozley, A — Letters and Correspondence of John Henry Newman, London, 1891, Vol. I, p. 341.

for the storage of rain water from roofs and roads in the towns and villages — a feature which he describes as being “one of the wonders of the Island”.

He conducted a number of experiments and made various studies on the climate of Malta, the most notable being those on the south-east wind, the denervating effects of which on body and mind had been noted many years previously. He rightly attributed its relaxing effects on the body and its dispiriting results on mental activity to its humidity and the consequent interference with evaporation from the body. Another subject of enquiry which he pursued was whether the bright moonlight of Malta had any heating, chemical or magnetising powers. The belief was then current in some Mediterranean countries that moonlight had a delterious effect upon health but Davy's experiments failed to support this contention. Indeed he ascribed the alleged ill-effects on health to malaria which he found to be more frequent in those who slept exposed to the night air.

By malaria was then understood “an agent in the atmosphere” which caused various types of fevers. The agent was identified by some with the carburetted hydrogen generated by the decay of vegetable matter in water; others believed that malaria was due to water vapour and other natural agents. Davy discarded all these speculations and frankly admitted that while exposure to night air was associated with malarial fever, the cause of the illness was “enveloped in profound mystery”. The malaria-cycle and the part which the mosquito (that bites at night) plays in it was only proved in 1897.

In a study of the smallpox epidemic that raged in Malta in 1830-31, he found that many of the victims were infants and he brought forward this high incidence among babies as a strong argument in favour of early vaccination. In fact this epidemic convinced him that vaccination gave adequate protection against smallpox and that, even when it did not prevent infection, it mitigated the severity of the illness considerably. The beneficial results of vaccination were amply demonstrated by the comparative exemption from the epidemic of the vaccinated troops then in Malta. Thus Davy was able to show that, while among civilians one in every twelve was attacked, the proportion among the military was one in one hundred eighty-eight.

As regards the services provided by the civil government, Davy thought that they compared very favourably with those of other Mediterranean countries. Thanks to his suggestion, a dispensary was instituted in Valletta for the out-patient treatment of the needy poor and in a few years time more than four thousand persons a year were being cared for. That is how the present dispensary system, prevailing in practically every town and village of the Maltese Islands, originated.

There were two institutions which called forth Davy's criticism — the Foundling Hospital and the Quarantine System. In his opinion the Foundling Hospital afforded a cloak “to licentiousness and the deadening of moral principle and natural affection”. He also disapproved of it because of the very high mortality among the infants of the Hospital due, most probably, to dietetic errors. Goats' milk, for instance, was given to these babies until wet nurses were procured; and as these were not always easy to find, one nurse was obliged to suckle two babies at times.

He was in favour of the mitigation of the quarantine laws but he was cautious not to advocate any alteration in the existing regulations before a searching enquiry into the whole subject had been carried out. What he wished to see established was a restrictive system which, while protecting the public health, caused as little vexation to individuals and as little loss of time and interruption of commercial intercourse as possible. He envisaged that other measures, besides quarantine, would eventually be discovered to root out plague and that the time would come when its existence would be merely a matter of history "as in the instance of leprosy which at one time was as much the terror of Europe" (11). Subsequent medical progress has justified Davy's prophesies.

Dr. ANDREW LEITH ADAMS.

Besides being an Army Surgeon (1848-1873), Dr. A. L. Adams was a well known naturalist. He eventually became professor of zoology at the Royal College of Science of Dublin in 1873 and of Natural History at Cork in 1878 where he remained until his death in 1882 (12). He came to Malta in June 1860. The Island, as he saw it in summer, gave him a very bad impression. It looked "bare, weather-beaten, rocky and sterile to a degree, no woods and scarcely a tree to be seen anywhere — all surface verdure burnt up by a semi-tropical sun and the dreaded scirocco" (13). He soon discovered, however, that this initial assessment had deceived him as regards the Island's possibilities for the naturalist. Indeed he admitted that to the naturalist there were few islands more suitable for research than the Maltese Islands owing to the bareness of the rocks and to their richness in fossil remains which are easily extracted on account of the softness of the rocks in which they are embedded; so much so that during his six years in Malta he managed to collect a vast number of animal remains including many hitherto undescribed species and to dig up various fissures and caves where he found vestiges of hundreds of elephants and hippopotami besides those of an extinct dormouse and of aquatic birds. He discovered the Mnaidra Gap in November 1863 and other fissures in subsequent years. His delight at the discovery of the vast accumulation of the remains of elephants and rodents in the Mnaidra Gap was unbounded. "I don't think", he says, "the intense excitement I had previously been worked into when hunting ibex, bears and the like in the craggy steps of the Himalaya was greater than the delightful sensations experienced when we found ourselves fairly in the midst of the animal remains of this wonderful graveyard". No less a reaction of pleasurable emotion seized him on another occasion when he suddenly discovered an elephant's molar tooth, for which he had searched for years, in a piece of conglomerate in the study of a friend. "I don't know", he says, "if my friend was cognizant of the fact but I do verily believe if he had there and then asked me to

(11) Davy, J. — Notes and Observations on the Ionian Islands and Malta, London, 1842, Vol. I, pp. 7, 168, 395-5; and Vol. II, pp. 244-50, 294-296 & 368-92.

(12) Dictionary of National Biography, London, 1885, Vol. I, p. 94.

(13) Adams, A. L. — Notes of a Naturalist in the Nile Valley and Malta, Edinburgh, 1870, p. 76.

stand on my head, I would have at once essayed the undignified position: as it was I have some recollection of an attempt at an Irish jig" (14).

At the beginning of the second half of the century, arboriculture was engaging the attention of nature-lovers in Malta. The Maltese physician, Dr. Nicola Zammit, was advocating the planting of olive and of orange trees along the country roads in the hope of transforming the arid aspect of the countryside (15). Adams lent his support to this venture. He favoured the planting of trees not only in the villages but also in the towns to counteract the heat and glare of the Maltese summer and to attract the moisture of the clouds that pass over the Island.

His observations about the medical state of Malta are few but he made a very pertinent remark about the diffusion of cholera which was then the greatest menace to the public health. In his time the transmission of what we now know to be infective diseases was still a matter of controversy and speculation. The view was still held that cholera was propagated by means of the atmosphere. Dr. Adams opposed this view and, maintaining that the cholera of 1865 had been introduced into Malta by visitors from the east, he showed that he was many years ahead of his time in his epidemiological ideas. He shares the honour with his Maltese contemporary Dr. A. Ghio who insisted that the excretions of affected individuals were the means of the propagation of the disease (16).

He was a founder-member and Vice President of the Society of Archeology History and Natural Sciences of Malta formed on the 8th January 1865 under the Presidency of the Officer Administering the Government. He delivered the Inaugural Lecture in which he surveyed the origin and progress of the study of archeology, zoology, botany, geology and paleontology of the Maltese islands (17). That his interest in this Society and in Malta did not flag after he left the Island is shown by the fact that he was still sending memoirs to the Society on the fossil remains of Malta in 1868 (18).

Dr. HUGH FALCONER.

Dr. H. Falconer (1808 — 1865) graduated M.D. Edinburgh in 1829. Soon after, he was nominated Assistant Surgeon with the East India Company in Bengal. In 1847 he was appointed Professor of Botany at the Calcutta Medical College. After retiring from the Indian service he returned to England in 1855 but a few years later he was compelled, because of ill-health, to spend some time in Southern Europe (1858 — 1861) (19). It was during this period that he did pioneering work in Maltese paleontology. He established the existence of a dwarf elephant in prehistoric times — the *Elephant melitensis* — from an examination in 1860 of its remains discovered in a cave at Zebbug village.

(14) Adams, A. L. — op., cit., pp. 88, 183 & 205.

(15) "L'Arte" of 22nd August 1864, p. 2.

(16) Adams, A. L. — op., cit., p. 115.

Ghio, A — The Cholera in Malta and Gozo in the year 1865, Malta, 1867, p. 19.

(17) Transactions of the Society of Archeology, History and Natural Sciences of Malta, Malta, 1866, p. vii.

(18) "The Malta Times" of 30th January 1868, p. 2.

(19) Dictionary of National Biography, London, 1889, Vol. XVIII, p. 158.

This discovery was communicated to the British Association at Cambridge in 1862.

He devoted a good deal of attention to the odontography of recent and fossil elephants and by his investigation he showed that through an examination of the dentition alone one was able to classify fossil remains into genera and species without the aid of other portions of the skeleton. Considering his vast experience, Dr. Falconer communicated very little to the world beyond his "Paleontological Memoirs and Notes" (London, 1868). He died on the 31st January 1865.

After his death, a still more diminutive species of *Elephas melitensis* was described and named *E. Falconieri* in his honour (20).

Dr. W.B. CARPENTER.

Dr. William Benjamin Carpenter entered as a medical student at University College, London, and subsequently went to the Edinburgh Medical School to do research work on physiology. He was eventually appointed Lecturer in Physiology at the London Hospital which post he relinquished in 1865 on becoming Registrar of the University of London.

When the steam sloop "Porcupine" was sent by Her Majesty's Government on a scientific excursion to the Mediterranean, Dr. Carpenter was placed in charge of the expedition. The "Porcupine" entered the Grand Harbour of Valletta on the 10th September 1870. In a brief stay of ten days, Dr. Carpenter formed a great friendship with the Maltese naturalist Dr. Gavino Gulia to whom he gave specimens of marine animals collected during the voyage and from whom he received great help while collecting rare Maltese plants (21).

He did a great service to Maltese students of natural history by a critical exposition of the views of British naturalists on Darwin's "Origin of the Species" — a theory that had met with a hostile reception in Malta. Dr. Carpenter, in a short but very lucid paper "On Darwinism in England" (22), showed how Darwin's theory was to British naturalists the inauguration of a new era in biological science though even before Darwin's publication several British naturalists had been disposed to admit the idea of genetic continuity. Where some of them found themselves in disagreement with Darwin was about the theory of Natural Selection as an explanation of the modification responsible for the diversified succession of animal and vegetable forms known to us. While, therefore, they were prepared to accept the general doctrine of continuity as a useful working hypothesis, they were still ignorant of the causes responsible for the variations of development.

Dr. Carpenter was one of the renowned physiologists of his time. His "Principles of General and Comparative Physiology" has been acclaimed as the "first English book which contained adequate conceptions of a science of biology". It was the textbook of physiology in the course of medicine at the University of Malta in the last quarter of the century (23).

(20) Adams, A. L — op. cit., pp. 216-23.

(21) "The Malta Times" of 14th September 1870, p. 3 & of 21st September 1870, p. 2.

(22) "Il Barth" of 5th September 1871, p. 38 & of 28th December 1871, p. 73.

(23) "Il Barth" of 23rd December 1861, p. 72.

Dr. Carpenter died on the 19th November 1885 from burns received accidentally by the upsetting of a makeshift spirit-lamp (24).

Dr. J. DENIS MACDONALD.

There is no doubt that the opposition to Darwin's theory in Malta was dictated more by religious than scientific reasons. An attempt to show that the authority of religion was not going to be sullied by Darwin's hypothesis was made by Dr. J. Denis Macdonald, Staff Surgeon of H.M.S. Lord Warden. In a paper published in the Maltese journal "Il Barth" of the 23rd January 1872, he tried to demonstrate that the scripture and the idea of evolution were not mutually exclusive and that Darwin's doctrine did not rule out the operation of a Divine hand in creation and the existence of a future life after death. It is very doubtful how far Carpenter and Macdonald succeeded in modifying the attitude of Maltese naturalists towards Darwin's theory judging from a few scattered remarks in subsequent issues of "Il Barth" (25).

Dr. (later Sir) J. Denis Macdonald (1826-1908) was educated at King's College, London. On joining the navy in 1849 he was posted to the surveying ship, H.M.S. Herald, in the Pacific. This gave him the opportunity of doing brilliant work with the microscope on deposits brought up from the sea and earning the F.R.S. in 1859.

When he came to Malta in 1871, microscopy was still in its infancy. In the following year there was a controversy as to whether one could, by means of the microscope, determine with certainty whether blood corpuscles in dried spots or stains were human or not (26). Macdonald's reputation for microscopical zoology induced Dr. Gavino Gulia, the editor of "Il Barth", to invite him to carry out, by way of experiment, an examination of various dried stains of human and of animal blood. The investigation was carried out but Macdonald had to admit that in the state of knowledge of his time it was impossible for him to distinguish dried human blood from that of animals. He thought that desiccation and keeping brought about alterations in the characters of the blood and prevented its certain recognition.

Macdonald left the Island in 1872 on being appointed to the Chair of Hygiene at the Medical School of Netley. In 1880 he was promoted Inspector General of Hospitals and Fleets. He died in February 1908 (27).

Dr. J.F. SUTHIE.

In the same year that Macdonald sailed from Malta, another British doctor who was also a naturalist came over. He was Dr. J.F. Suthie who soon became a great friend of Dr. Gavino Gulia. He collected an extensive number of Maltese plants and discovered various species that had escaped the attention of other botanists before him. His stay in the Island was very short for in 1874 he was appointed Curator of the Botanical Museum of Edinburgh and left Malta in the same year. Dr. Gulia thus spoke of him:— "He

(24) Dictionary of National Biography, London, 1887, Vol. IX, p. 166.

(25) "Il Barth" of 2nd May 1873, p. 285.

(26) "Il Barth" of 9th March 1872, p. 109.

(27) "British Medical Journal", Vol. I, 1908, p. 482.

has rendered a great service to our flora and it is not without just cause that we include him among the most outstanding investigators of our botany" (28).

Dr. F.F. SANKEY.

It seems appropriate to bring to an end this short survey with a mention of Dr. F.F. Sankey who put Malta on the map of medicine in two ways, viz., by directing the attention of physicians to the Island's assets as a winter residence for invalids from Britain; and by publishing in Malta what appears to be one of the earliest, if not the earliest, first-aid books to be printed.

The stay of Her Majesty the Queen Dowager Adelaide in Malta in the winter of 1838-39 brought Malta into the limelight as a health resort. Dr. Sankey considered that this publicity was well deserved as there was not to be "found in the south of Europe a more healthy spot than this Island". He did not, of course, claim that the Maltese climate possessed any curative virtues for those suffering from incurable diseases. In fact he thought it useless and cruel to send advanced tubercular patients "far from their homes and sympathizing friends to die among strangers in a foreign land". For those who were not gravely ill, however, Malta offered several advantages such as a voyage by sea when land travelling was too fatiguing, facility of conveyance from any part of Europe, novelty of scene and, above everything, a congenial climate where for some hours on every day of the year exercise in the open air could be taken in the form of rides and walks in the countryside or of boat-trips in the various sheltered harbours (29).

Sankey's "Familiar Instructions in Medicine and Surgery" was meant for the use of the merchant navy, travellers and all other persons who, in a medical or surgical emergency, found themselves away from professional aid. The manuscript was ready in 1842 but it subsequently got lost and Sankey had little inducement to re-write it until the opportunity of printing and publishing it in Malta presented itself in 1846.

In this little work he gives the clinical picture of the most common diseases and injuries of his time; advises how to deal with them and describes such operations as bleeding, application of blisters and leeches, putting on dressings and injecting. He also laid down certain maxims for those caring for the sick such as the following:— (a) One must not expect to find in an individual case all the signs and symptoms of disease as set down in books; (b) in the administration of medicines one must be prepared to be disappointed with their effects; and (c) drugs may be looked upon as poisons which do not always arrest disease and which may cause other complaints in addition to the ones they are given to cure (30).

It is remarkable that in spite of the medical progress achieved since the time of Dr. Sankey the principles he enunciated are still sound and applicable to-day.

(28) "Il Barth" of 14th October 1874, p. 467.

(29) Sankey, F.F — Malta Considered with Reference to its Eligibility as a Place of Residence for Invalids, Edinburgh, n. d., pp. 18, 19 & 20.

(30) Sankey, F. F — Familiar Instructions in Medicine and Surgery, Malta, 1846, pp. ii-iv.