SIR WILLIAM BATE HARDY Kt MA FRS (1875-79)

He was born on 6 April 1864 at Erdington, Warwickshire and then went to Gonville and Caius College, Cambridge, where he got his BA in 1888, was the Shuttleworth Scholar in1889, became a Drosier Fellow in 1892 and an MA.

He went on to become a renowned biologist and physiologist . He was elected a Fellow of the Royal Society in 1902. His citation (see photo) for election to the Royal Society reads as follows :-

"Fellow of Gonville and Caius College, Cambridge. Demonstrator of Physiology. Author of the following papers: - 'On some Points in the Histology and Development 'Myriothela phrygia'' (Quart Journ Micros Sci); 'On some Histological Features and Physiological Properties of the Post-OEsophageal Nerve Cord of the Crustacea' (Trans Roy Soc, 1894); 'On the Reaction of certain Cell-Granules with Methylene-Blue' (Proc Camb Phil Soc, 1891); 'On the Blood-Corpuscles of the Crustacea, together with a suggestion as to the Origin of the Crustacean Fibrinferment' (Journ of Physiology, 1892); 'On the Characters and Behaviour of the Wandering Cells of the Frog, especially in relation to Micro-Organisms,' with A A Kanthack (Trans Roy Soc, 1894); 'On the Changes in the Number and Character of the Wandering Cells of the Frogs induced by the presence of Urari, or of 'Bacillus Anthracis',' with Lim Boon Keng (Journ of Physiology, 1893); 'On the Structure and Functions of the Alimentary Canal of 'Daphnia', with W McDougall (Proc Camb Phil Soc, 1893); 'The Morphology and Distribution of the Wandering Cells of the Mammalia,' with A A Kanthack (Journ Physiology, 1894); 'Note on the Oxidising Powers of Different Regions of the Creater of the Bacteria Cells of Lipte and Air (with B 5 D'Aray (ibid)





Spectrum in relation to the Bactericidal Action of Light and Air,' with R F D'Arcy (ibid); 'The Wandering Cells of the Alimentary Canal,' with F F Wesbrook (ibid, 1895); 'Further Observations upon the Action of the Oxyphil and Hyaline Cells of Frog's Lymph upon Bacilli' (ibid, 1898); 'On the Structure of Cell Protoplasm' (ibid, 1899); 'On the Coagulation of Proteid by Electricity' (ibid).

He went on to become Vice President of The Royal Society in 1914/15 and Secretary from 1915-19

The Royal Society archives include the following interesting exchange of letters between Sir William and a Frederick Orpen Bower :-

23 October 1921 - Letter to Frederick Orpen Bower from Sir William Bate Hardy marked "private"

In the letter he states that, as secretary of the Royal Society, he has been consulted by the treasury to recommend a successor to Sir David Prain as director of the Royal Botanic Gardens at Kew. He asks Bower for his advice, saying that the obvious choice would be Sir Arthur William Hill but that he is **"hardly man enough for such a responsible position"** and that he did not want to recommend Sir Frederick William Keeble as he was too much of a firebrand. He asks if Bower knows of anyone from the dependencies or the United States. A note in Bower's hand lists the names [Henry Horatio] Dixon, [Sir Arthur William] Hill and [Robert Harold] Compton.

26 October 1921 - Letter to Sir William Bate Hardy from Frederick Orpen Bower

Bower outlines his opinion about possible candidates for the post of director of the Royal Botanic Gardens at Kew. He lists the qualities he believes the candidates for the post should have and these include power of command, social standing and manners, scientific achievement, experience of managing a botanical garden, good general education, ability to speak several languages and experience of travelling. He believes that Henry Horatio Dixon would be the best candidate as his scientific achievements "speak for themselves", he is of the right age, has successfully managed the botanical gardens of Trinity College Dublin and he has successfully managed the botanical department at Trinity producing many fine botanists. His second choice would be the current assistant director, Sir Arthur William Hill. He states that he is a conscientious man but not really forceful and that is



knowledge of Kew and its staff would be invaluable. His third suggestion is Robert Harold Compton, though he suggests him with uncertainty as although he is a man of real ability, he does not think it would be a popular appointment and he "believes there was some "pacifism" on his part during the war and that he was not militant". He does not think that John Christopher Willis would be a suitable candidate because he made a "howling mess of Paradeniya" and because he is a difficult man to work with. Bower believes Sir Frederick William Keeble to be a clever man but a "farceur" as regards his science and dismisses Sir John Bretland Farmer because of the state of his health. He also dismisses Hardy's suggestion that an American candidate might be sought as this would be a **deadly insult to British botany**. He also suggests William Henry Lang as a philosopher and "the best scientific head of them all". Bower states that he has an impressive manner, is forcible, capable in business and a good administrator but states that managing on such a large scale may not appeal to him. He also considers Sir Arthur George Tansley but states that he is a "dreamy philosopher" with a "singular esteem of his own opinions". He also asks if Hardy would consider Albert Charles Seward as director for a short while as his age may disqualify him.

He was knighted in the New Years Honours of 1925.

His most famous claim to fame is as the first person to suggest the word "Hormone"!

As mentioned above, the Royal Society website has some fascinating archives available on-line at http://www.royalsoc.ac.uk/DServe/dserve.exe?dsqIni=Dserve.ini&dsqApp=Archive&dsqCmd=show.tcl&dsqDb=Persons&dsqPos=3&dsqSearch=(Surname='hardy') including some letters from various Fellows to Sir William on a proposal for Charles Darwin's house to be bought and presented to the nation. I noticed that one respondent (Ernest William Macbride) stated that "British scientists are not wealthy enough to contribute to the idea."!!

He died on 23 January 1934 and is buried at Caius College Chapel, Cambridge.

The WILLIAM BATE HARDY Prize was founded in his memory. It is awarded once in three years 'for the best original memoir, investigation or discovery by a member of the University of Cambridge in connection with Biological Science that may have been published during the three years immediately preceding'.

There is also a Sir William Hardy Building at Cambridge (see picture), which is the home of the *Quaternary Palaeoenvironments Group*



I am indebted to **Neville Marsh (S53-61)** for the following additional information on the background to the phrase "hormone" :-

I am most interested in your note of William Hardy and the coining of the term "hormone". Every student of physiology "knows" that the great Ernest Starling first used this word publicly (on 20 June 1905 at his Croonian Lecture at the Royal College of Physicians) but I have dug around and found that one of my former colleagues John Henderson at St George's Hospital, has written a biography of Starling and a history of hormones. It seems that Hardy, who was a Fellow of Gonville and Caius, invited Starling to dinner (no date is ascribed to this event) together with W T Vesey, a classicist. Hardy and Starling decided that they needed a word to describe a chemical transmitter in the blood and turned to Vesey who produced the Greek verb for "arouse", namely "ormao". Starling jotted this down in his notebook and the word "hormone" first appeared in the Croonian lecture in 1905! I never knew Starling but made good friends with Henry Barcroft, a famous physiologist at Tommy's who worked with Starling on his "law of the heart" known to every medic and physiologist.

