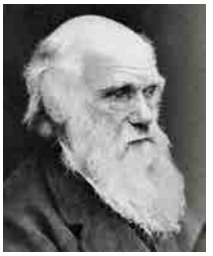
Darwin Online

https://darwin-online.org.uk/EditorialIntroductions/van-Wyhe_The_Complete_Library_of_Charles_Darwin.html (including a reconstruction of Charles Darwin's personal library: https://darwin-online.org.uk/Complete_Library_of_Charles_Darwin.html)
John van Wyhe



For more than 20 years, The Complete Work of Charles Darwin Online (https://darwin-online.org.uk/) by John van Wyhe has been the most detailed, accurate, and reliable go-to source for anything pertaining to Charles Darwin. Everything is there: articles, biography, bibliography, books, diaries, letters, manuscripts, illustrations (about 100,000), photographs (starting in 1865 taken of Darwin annually or every other year except for 1875-1877), and even a collection of postage stamps (about 60 countries and regions from Albania to Yakutia) as well as playing cards.

The Darwin Online numbers are staggering: The site contains 240,000 searchable text pages, 127,800 pages of images, 118,800 scans of writings, 29 languages, 7500 PDFs, 50,000 illustrations in books, a 7,000 records Darwin bibliography and 78,000 manuscript records. In addition to being the only place in the world with all of Darwin's publications, it contains his handwritten manuscripts from over 80 institutions and collections. It also contains a very large number of items relevant to him, like 1700 reviews of his works, the entire reconstructed library aboard the Beagle and much more. Indeed, it may well be the most comprehensive scholarly website regarding any historical individual.

Altogether this is a site extraordinarily rich in content, overflowing with details and excellent in layout, management, clarity, and organization, all of which are updated often. It is easily the most informative site I have ever visited and used.

Access to the site is free and easy. No registration, no log-in name, and no password are needed. All one needs do is click and enjoy. An astonishing number of visitors have done just that: 900 million visits since 2006, according to the title page of the site.

It is possible to think that Dr. van Wyhe would rest on his laurels after such a monumental achievement. He did/does not. Recently he added to the site a complete reconstruction of Darwin's library.

Charles Darwin owned "a vast personal library" (https://darwin-online.org.uk/EditorialIntroductions/vanWyhe_The_Complete_Library_of_Charles_Darwin.html). After his death, some parts of the library were preserved. Other parts were scattered or lost. As a result, Darwin's library was often referred to as containing 1480 books because only that many were known to survive in Darwin's home (Down House) and Cambridge University. It is now clear that this was only 15% of the actual number of items in Darwin's library.

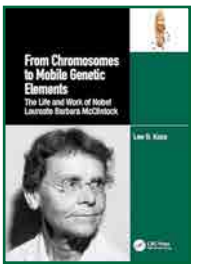
Dr. van Wyhe's reconstruction of Darwin's library required nearly 20 years. It lists 7400 titles and a total of 13,000 volumes. They are recorded in a 500-page catalog. There are over 12,000 links, which make possible nearly effortless downloading of many rare and hard-to-find books, articles, and other writings as well as paintings, photographs, and drawings. New links are being added constantly. But this is not all.

Darwin read many more writings than he owned. He "extended" the scope and size of his library by using the libraries of the Linnean, Geological and Geographical Societies, and the Atheneum Club. What he read is of interest to students of Darwin and his work because it influenced his thinking and writing. Dr. van Wyhe "extended" the reconstitution of Darwin's library by listing the libraries he used and by providing links to their catalogs. This makes the reconstitution of Darwin's library a very powerful research tool. I used it to better understand and explain a little-known letter Darwin wrote to J. D. Hooker in 1863. That is why I decided to write this review.

Dr. John van Wyhe (b. 1971) is a British historian of science at the National University of Singapore. His main interests are Charles Darwin, Alfred Russel Wallace, and evolution. I met him at the World Orchid Conference in Singapore in 2011. He gave an excellent lecture about Darwin's work with orchids.

—Joseph Arditti, Professor of Biology Emeritus, University of California, Irvine

From Chromosomes to Mobile Genetic Elements: The Life and Work of Nobel Laureate Barbara McClintock



Lee B. Kass
2024.
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265 pp.; CRC Press, Boca Raton, FL

In this thoroughly documented study, Kass provides a detailed biography of Barbara McClintock that not only explains her position at the forefront of cytogenetics, but also clarifies the considerable mythology that has developed around her. For instance, both Comfort (2001) and Keller (1983) note in their biographies of McClintock that her original given name was Eleanor, but the family called her Barbara. Keller leaves it at that. Comfort notes that Barbara's father officially changed her name on 18 June 1943 to obtain a passport. Kass clarifies that the notarized affidavit of name change was dated 27 May 1943, and was probably for a passport renewal. These minor discrepancies illustrate one of the strengths of Kass' research, which is evident throughout the book. Both Keller and Comfort base their works on oral interviews with McClintock and others, after the fact. Kass uses these traditional sources to search for and find documentary evidence to support, elaborate on, or correct every part of the story. This example, from Chapter 1, also fulfills one of Kass' objectives for the book: to document McClintock's family life and early schooling prior to college.

The next five chapters provide the back story of the development of genetics and breeding at Cornell University, and particularly the Emerson school of maize genetics, to which McClintock became a critical contributor. She was not the loner genius of some mythologies, but an active collaborator within a stelar group of fellow students, researchers, and mentors responsible for the Golden Age of Corn Genetics and the foundation of the Maize Genetics Cooperative. In addition to published manuscripts, reports, meeting programs, and interviews, throughout the book Kass draws on correspondence between all of the involved parties, including: Rollins Emerson, Lester Sharp, Marcus Rhoades, George Beadle, Charles Burham, Harriett Creighton, and many others to provide the historical context in which McClintock worked.

If you hear McClintock's name, you probably immediately think of transposable elements (transposons, jumping genes) for which she won the Nobel Prize. But arguably just as important was her earlier identification of the 10 chromosomes of maize and her demonstration of translocation of chromosomes through crossing over during meiosis. Although Morgan proposed the theory of crossing over for *Drosophila* chromosomes in 1911, it remained for McClintock to provide proof for the proposed mechanism. In 1929 she was able to identify the 10 chromosomes based on their relative lengths, arm ratios, and the position of dark-staining knobs. A mutation stock, provided by Burnham, had a terminal knob on chromosome 9 and resulted in 50% sterility when selfed. In 1930 McClintock showed this was associated with a segmental interchange between chromosomes 8 and 9 and the following year she and Henry H. Hill identified a linkage group of 3 genes, *C* (colored aleurone), *sh* (shrunken endosperm), and *wx* (waxy starch), also located on chromosome 9. These provided the tools for McClintock to design a set of experiments that