

Preface

CHARLES ROBERT DARWIN, the fifth child (of six) and second son of Dr. Robert Darwin and his wife Susannah (formerly Wedgwood) of Shrewsbury (pronounced Shrowsberry), a town in the English Midlands next to the Welsh border, was born on 12 February 1809 (the same day as Abraham Lincoln across the Atlantic) (Fig. Preface.1). He was sent to one of England's famous public (in reality private) schools and then at a young age was directed north, to Edinburgh, the capital of Scotland, to study medicine. After two years he realized that medicine was not for him, and so he moved south to Cambridge, to work for a degree and prepare for the life of a clergyman in the Church of England. He graduated in 1831.

Through connections he had made as a student, Darwin was offered the chance to join the British warship HMS *Beagle*, as it set off for South America to map the coastline (Plate I). The voyage took five years, eventually going all the way around the world, returning to England in 1836. By this time, all thoughts of a clerical life had vanished, and Darwin, supported by family money, settled into full-time work as a scientist. He became an evolutionist shortly after the *Beagle* voyage and discovered the mechanism for which he is famous, natural selection, in 1838. He married his first cousin Emma Wedgwood early in 1839 (Fig. Preface.2), and by that time, starting to show the signs of a still-unknown illness that plagued him for the rest of his life, he settled into the role of a somewhat reclusive invalid. The couple moved to a house in Kent and in all had ten children, seven of whom lived to maturity.

Darwin did not publish for twenty years, and then did so only because a young naturalist, Alfred Russel Wallace, sent him an essay containing virtually the same ideas that he had discovered in the late 1830s. Rapidly Darwin wrote up his theory, and *On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life* appeared late in 1859 (Plate II). The work caused great controversy and was attacked by many, including leading churchmen (notably Samuel Wilberforce, bishop of Oxford), and defended by many others, including leading scientists (notably Thomas Henry Huxley, morphologist, paleontologist, college teacher and administrator, and general man of letters). Twelve years after *Origin*, in 1871, Darwin followed with a work on our own species, *The Descent of Man and Selection in Relation to Sex*. He died at home, his heart exhausted, in April



FIGURE PREFACE.1. Charles Darwin at about age six with his younger sister at about age four. From H. E. Litchfield, *Emma Darwin, Wife of Charles Darwin: A Century of Family Letters* (Cambridge: privately printed by Cambridge University Press, 1904)

1882. By general acclaim he was buried in Westminster Abbey, where he lies today, next to the great Isaac Newton.

Darwin is famous. Darwin is controversial. In England to this day his memory is cherished, and his name honored. His face, nearly covered by his full beard, is on the back of the ten-pound note, a successor to that other great Victorian, Charles Dickens. Elsewhere also the name of Darwin is held in high esteem. Yet in many parts of America, and increasingly in other areas of the world, he is taken to be the apotheosis of all that is wrong with modern society: parents and teachers, church leaders and politicians, do all that they can to exclude him from the classroom. The Darwinian Revolution ranks up there in the history of science with the Copernican Revolution. No one today doubts that the Earth goes around the sun. Many today doubt that we humans are modified monkeys.

This is an encyclopedia about Darwin and his influence, written by a team of experts, drawn from the ranks of practicing scientists as well as from those on the side of the humanities. We are united in the conviction that Charles Darwin and his work were and are very important – in science and in many other fields of human activity and inquiry, including philosophy, theology, linguistics, and literature. If we do not infect you with our enthusiasm and leave you sharing our conviction, we have failed in our task. What we are not trying to do is convince you that Darwin was always right. He was not. Nor, conversely, are we trying to show you that Darwin



FIGURE PREFACE.2. An etching of the partner picture of Emma Wedgwood, by George Richmond, painted to mark her marriage to Charles Darwin. From H. E. Litchfield, *Emma Darwin, Wife of Charles Darwin: A Century of Family Letters* (Cambridge: privately printed by Cambridge University Press, 1904)

was basically wrong. He was not. And we are certainly not trying to show that, right or wrong, overall Darwin's influence is either malicious or overrated. This is not true, although we agree fully that things are far more complex than simple good or ill. Finally, thank goodness, we are not trying to show that everything is known and that everyone agrees. You will see in these pages that often we differ among ourselves about some very important points. This is a good part of what makes it all so exciting. Charles Darwin was one of the towering figures in Western civilization, and his legacy is with us still today. We want to share with you our knowledge and our thrill at great ideas. Some monkeys! Some modification!

The volume is intended to be entire unto itself, but you might want to flesh out your reading by turning to some original sources. The *Origin of Species* is a remarkably readable book for a classic. All references in this volume, unless it is explicitly stated otherwise, are to the first edition, and this is the one that you should read. (You can tell if you have the first edition because the work does not contain the alternative name for natural selection, "survival of the fittest," added to some of the later editions.) There is a facsimile (paperback) edition, with a short introduction by the eminent, twentieth-century evolutionist Ernst Mayr, published by Harvard University Press. All of Darwin's published material is now online (*The Complete Work of Charles Darwin Online*, <http://darwin-online.org.uk/>).

Thanks to immense labors by John van Wyhe, it is a wonderful resource with much supplementary material, including reviews and the like. It includes the invaluable bibliography *Darwin: A Reader's Guide*, by Michael T. Ghiselin.

For almost three decades now a dedicated team of researchers has been producing the definitive edition of Darwin's voluminous correspondence. In this *Encyclopedia*, published letters are referred to by volume and page, and also identify the sender and recipient. Thus: Darwin 1985-, 14:423, letter to M. E. Boole, 14 December 1866. There is much work still to be done. It is possible to access online almost all of the letters thus far edited, with synopses of

letters yet to be edited and published. Consult the "Darwin Correspondence Project," <http://www.darwinproject.ac.uk/>. Unpublished letters, part of the Correspondence Project, are referred to by catalog number: DCP, 9105, letter to G. H. Darwin, 21 October [1873]. The notebooks in which Darwin worked out his ideas about evolution were transcribed, edited, and published in 1987 by a team headed by Paul Barrett. References are to this edition, with name and page of the particular notebook. Thus: Barrett et al. 1987, D2. Unpublished manuscripts in the Darwin Archives at the University Library, Cambridge, are referenced by catalog number. Thus: CUL DAR 210.8: 42.