Darwin's Earliest Letters

The Correspondence of Charles Darwin. Vol. 1, 1821–1836. FREDERICK BURKHARDT and SYDNEY SMITH, editors. DAVID KOHN and WILLIAM MONTGOMERY, associate editors. STEPHEN V. POCOCK, managing editor. Cambridge University Press, New York, 1985. xxxii, 702 pp., illus., + plates. $37.50.

A Calendar of the Correspondence of Charles Darwin, 1821–1882. FREDERICK BURKHARDT and SYDNEY SMITH, editors. DAVID KOHN and WILLIAM MONTGOMERY, associate editors. STEPHEN V. POCOCK, managing editor. Garland, New York, 1985. viii, 690 pp. $100. Garland Reference Library of the Humanities, vol. 369.

Since 1974 Frederick Burkhardt and Sydney Smith have been at work editing the correspondence of Charles Darwin. Assisted by David Kohn and William Montgomery, they have collected some 14,000 letters, including letters written to Darwin by his family, friends, and scientific correspondents. Their objective is to provide complete and authoritative texts of all the available Darwin letters. We now have the first volume of what is clearly going to be *the* definitive edition of the correspondence, one that does justice to the greatness and influence of the man.

The editors have brought superb scholarship, unrivaled thoroughness, and consummate care to the enterprise. The transcriptions meet the highest standards of modern textual editing. The original spelling (or misspelling), punctuation, and grammar have been preserved except for some minor alterations and corrections. (A section on manuscript alterations has been appended that records precisely and gives the editors' comments on their changes.) In notes following each letter the editors have provided not only information necessary to make the letter clear but also references to allow the reader to pursue its subject further. The work is a labor of love, for the editors have carried out their task in an unobtrusive, helpful, and totally dependable manner. Volume 1, containing some 338 letters dating from 1821 through 1836, betokens what all the volumes will have in common. Besides a brief introduction sketching the wider context, it contains a superlative index that not only allows the reader to find the relevant material quickly but also exhibits its connections to other subjects. The editors have also included a biographical register of all persons mentioned in the correspondence of the volume. (In volume 1 information is given on over 750 names.) This biographical register contains an index of letters to and from each correspondent. Finally, a bibliography lists all the books and articles referred to in either the correspondence or the editorial notes, as well as biographical sources.

The period covered by volume 1 includes Darwin's school days at Shrewsbury, his two years at Edinburgh University as a medical student, his undergraduate years at Cambridge, and the five years of the voyage of the *Beagle*. It concludes with the letters of the 27-year-old Charles following his return to England in the fall of 1836. All these events were listed by Charles in his "Journal," begun in 1838. The editors have included in an appendix their transcription of this "Journal" covering the period 1809–1836 and have added to it further relevant information.

Although some of the letters are familiar, having been printed in Francis Darwin's edition of the *Life and Letters* and *More Letters* and Nora Barlow's *Charles Darwin and the Voyage of the Beagle*, many are new. Among these are 39 letters to Charles's cousin William Darwin Fox, 11 to members of his family, and three from Robert FitzRoy, the captain of the *Beagle*. Almost all the letters *to* Darwin from this period appear in print for the first time. Taken together, they give us a much clearer impression of Darwin's precocity and unusual abilities. The letters that Erasmus, Charles's elder brother, wrote to the 13-year-old "Bobby" in the winter of 1822 concerning the chemistry laboratory Erasmus had set up in the hothouse in the garden of their house indicate that the young Charles was then carrying out sophisticated chemical experiments on the identification of rocks. Charles's enthusiasm for historical writings was already being cultivated when he was a student at Cambridge. While there he wrote his sister that he was avidly reading Southey and Gibbon.

The letters highlight Charles's "good naturedness" and reveal the deep affection he elicited from his family and friends. Although Charles's letters to Erasmus from Edinburgh and Cambridge have not been found, Erasmus's letters make it clear that the two of them were more than brothers: they were also good friends. One of the striking impressions from all the letters written to Charles—be they from the friends he made at Shrewsbury, Edinburgh, or Cambridge, from Erasmus, from his sisters, from William Darwin Fox, from members of the Owen family, or from John Henslow—is how much his correspondents liked him and how much they valued his friendship.

Charles and William Darwin Fox became close friends when they met at Cambridge in 1828. It was Fox who introduced Charles to entomology and to Henslow. Fox graduated from Cambridge the following year, and he and Charles wrote frequently to one another thereafter. This extensive correspondence is of great interest. It attests to Charles's impressive achievements as an entomologist even as an undergraduate. From these letters and those from J. M. Herbert, C. T. Whitley, and Charles's other friends the conclusion that there was something very special about Charles is unavoidable. All these friends were ready to do things for him much beyond the ordinary call of friendship. J. Herbert anonymously gave Charles a microscope as a gift, and several of Charles's friends went out to collect beetles for him! This impression is reinforced by the letters FitzRoy wrote Darwin when Darwin was making his inland trips while the *Beagle* was charting the coast of South America. FitzRoy's letters display genuine affection and concern for his "Philos"; they confirm Charles's characterization of him in the *Autobiography* as an "ardent friend to all under his sway." They also reveal a FitzRoy who could be easygoing, cheerful, and good-humored, qualities undoubtedly brought out by Charles.

The volume contains all the letters of that period from the Owens to Darwin. William Owen was a neighbor of the Darwins', and his estate, Woodhouse, was the locus and focus of two of the young Charles's great passions: hunting and William's daughter, "la belle Fanny." Although only Fanny's letters are extant, there is little doubt that Charles had been passionately in love with her. She had been the "housemaid" and Charles the "postilion" in the games they played whenever Charles visited Woodhouse. Though attracted by Fanny's charm, lightheartedness, wit, and frivolity, Charles must have sensed that marrying her would limit his future growth. There may have also been an incompatibility in the social standing of

the families. His decision to sail on the *Beagle* was a statement as to where his commitment lay. Within a month of Charles's departure Fanny became engaged to Robert M. Biddulph. His sisters' letters kept Charles informed of what was happening to Fanny. They reveal apprehension when informing him of Fanny's marriage and concern when recounting her difficulties after giving birth to a daughter. Fanny herself wrote to Charles on several occasions during the trip, and these letters have a wistful and nostalgic quality. Emotions had run deep.

The great bulk of the letters are from the period of the voyage of the *Beagle*. It is good to have all the *Beagle* correspondence together. One is struck by how little overlap there is among Charles's letters, even when he wrote them at the same time. Notable exceptions are his descriptions of the tropical vegetation, of his first encounter with the Fuegians in the spring of 1833, and of the sight of the ruins of Concepción after the great Chilean earthquake of 1835. He wrote to his sister Caroline in April 1833 that "an untamed savage is I really think one of the most extraordinary spectacles in the world.—the difference between a domesticated & wild animal is far more strikingly marked in man" (pp. 302–303). The shock of this encounter was also vividly conveyed to Henslow, to Fox ("A wild man is indeed a miserable animal, but one well worth seeing"; p. 316), and nine months later to Whitley ("I have seen nothing, which more completely astonished me, than the first sight of a Savage"; p. 397). From these letters and from the entry in his diary for that time it is clear that the Fuegians brought home to Darwin the continuity between humans and lower forms of life.

A touching aspect of the *Beagle* correspondence is the burgeoning of love and respect between father and son. One of the most poignant entries in the volume is the one letter Robert Waring Darwin sent his son during the voyage of the *Beagle* (p. 301). At Charles's suggestion Robert had bought a banana tree, which flourished "so as to promise to fill the hothouse." This six-foot-three, 300-pound man wrote the letter in his hothouse sitting under the banana tree thinking of his son "in similar shade." Charles "almost cried for pleasure" when he received his father's note. He deeply appreciated his father's attempts to empathize with him in the pleasure he obtained contemplating and communing with nature. Before this incident, Charles was always apprehensive and apologetic when he withdrew money

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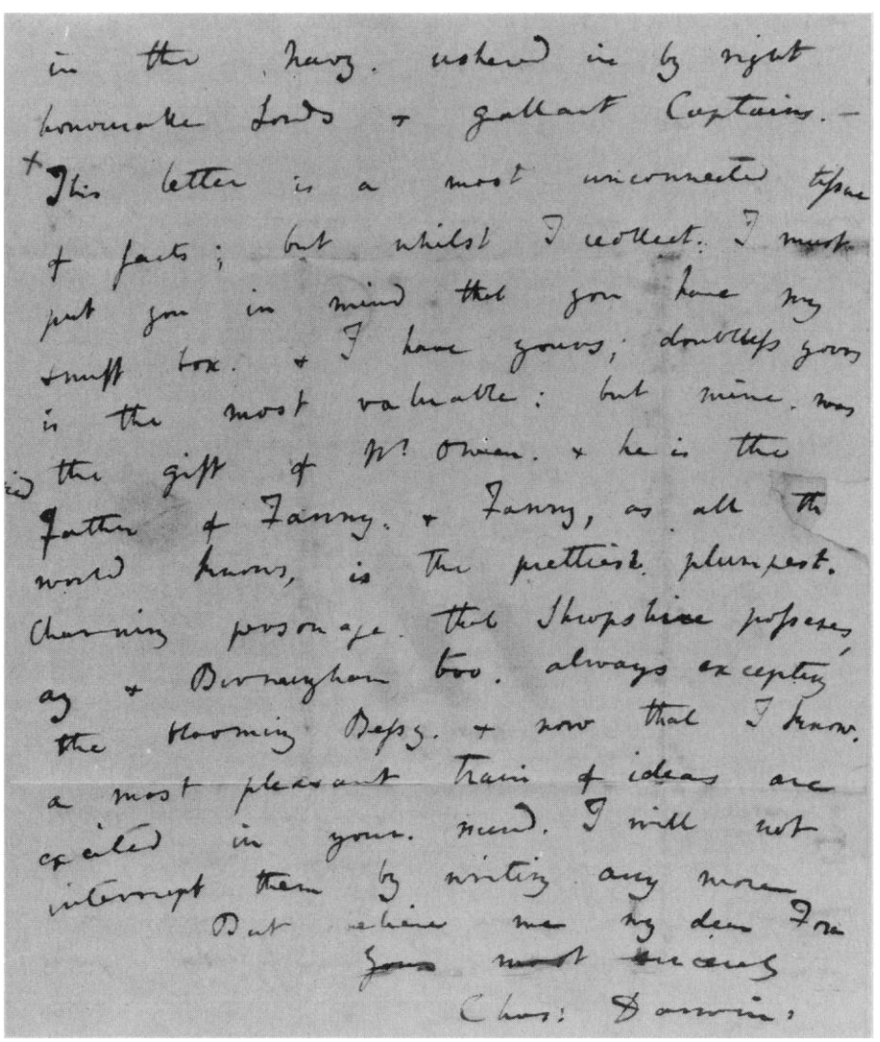
from his father's account. Thereafter there is a mischievous quality to his expressions of gratitude when he took money. On one occasion, he wrote home, "my Father will believe, that I *will* not draw money in crossing the Pacific, because I *can* not.—I verily believe I could spend money in the very moon" (pp. 447–448).

The letters from the *Beagle* convey the pleasure Charles experienced when geologizing: "There is nothing like geology; the pleasure of the first days partridge shooting or first days hunting cannot be compared to finding a fine group of fossil bones, which tell their story of former times with almost a living tongue" (p. 391). Second to geology was "the pleasure of working with the Microscope" (p. 316). The letters record his phenomenal energies, his powers of concentration, the impressive amount of work he was able to carry out. Although self-doubt at times plagues him during the first half of the voyage ("I am nothing more than a lions provider; I do not feel at all sure, that they wi⟨ll⟩ not growl & finally destroy me"; p. 320), the letters also reveal his pride and competitiveness ("The consciousness, that no European had ever trod much of this ground, added to the delight of these rambles" [on the southern tip of Tierra del Fuego]; p. 319). They also chronicle Charles's growing self-confidence ("I have the great satisfaction to find my powers of examining & describing [living creatures] have increased at a great pace"; p. 304), particularly after Sedgwick had presented an account of his geological researches in South America to the Geological Society in November 1835 and Henslow had informed his father of his important accomplishments and of the bright prospects before him. Charles's letters also disclose that he held on to his plans of becoming "a country clergyman" until the last leg of the voyage. Weariness and an acute longing to see England again are the salient features of the letters after the Galapagos visit. The letters written at the end of 1836, after his return, reveal his frantic efforts to dispose of his collections, to get started on writing up his *Journal of Researches*, to reacquaint himself with his family, and to visit his friends and former teachers.



A page of a letter written by Darwin to his cousin W. D. Fox, 24 December 1828. Darwin's "practice in the early letters of sprinkling his sentences with points," exemplified in this reproduction, presented problems of interpretation for the editors of the *Correspondence*. Rather than punctuation marks, some of the points may simply have been " 'pen rests' marking places where Darwin paused to take thought." [Reproduced in *The Correspondence of Charles Darwin*, vol. 1, courtesy of the Masters and Fellows of Christ's College, Cambridge]

The editors have provided new and useful information about Darwin's *Beagle* voyage in several appendixes. Appendix 2 gives a full list of Darwin's records during his travels: his field notebooks, personal diary, notes of zoological and geological observation, and specimen catalogues. Appendix 3 gives a record of the persons on board the *Beagle*. Appendix 4 is particularly valuable: it gives a record of the large (and most impressive) collection of books kept in the poop cabin of the *Beagle*. A fifth appendix gives a transcription of Darwin's early notes on coral reef formation.

In many of his hurriedly written letters, the young Darwin did not display a particularly graceful style (in contrast to his *Journal of Researches*, which he began writing on the *Beagle*), though at times he does wax poetic, particularly when describing scenery and conveying mood. Yet all his letters engage the reader. They are forthright, sincere, sensitive, intense, overbrimming with energy, full of keen observations of people and places. They vividly convey Darwin's passionate involvement in his work, his exhilaration in making geological, zoological, and botanical discoveries, the deep satisfaction he obtained from his communion with nature, and his "feelings of excessive pleasure, . . . as soon as one *partly understands* the nature of a country" (p. 353). The letters from his sisters and friends offer a rich panorama of the life of the English gentry: the visiting, the balls, the aspirations fathers have for their sons and daughters, the books they read, the concerts and plays they attend. Small details in them give insights into the times, concerning for example the spread of the cholera epidemic through England in 1832, the impact of the first railroads, the politics at Oxford and Cambridge, and the efficiency of the mail. These same letters also kept Darwin informed of political developments at home and comment on a variety of issues: slavery, reform, corn laws, the Church, to name but a few.

Volume 1 will thus be of great interest

to anyone interested in early Victorian England. It will be invaluable to Darwin scholars. More generally, anyone interested in understanding the development and growth of an outstanding human being will find rich rewards in it. The appearance of this first volume of the *Correspondence* is a major publishing event. We look forward eagerly to the publication of the subsequent volumes.

A glimpse of what is to be expected in those volumes can be obtained from another impressive work by the editors. Appearing simultaneously with volume 1 is a 690-page *Calendar of the Correspondence of Charles Darwin, 1821–1882*, which summarizes 13,925 items including autograph letters by Charles Darwin (CD), copies of letters by him made by Francis Darwin for *The Life and Letters of Charles Darwin* and *More Letters of Charles Darwin*, letters by CD published in magazines such as the *Gardener's Chronicle* and *Nature*, drafts of letters, third-party letters in which Darwin is a central concern, memoranda, letters listed in sales catalogues of auction houses, and, finally, empty covers and envelopes. Each entry gives the name of the correspondent, the address, the date, and a summary of the content. If the letter has been published, a bibliographical reference has been added; also recorded is the location of the original or copy. Three very useful appendixes contain, respectively, bibliographical information on Darwin's books, pamphlets, transcripts of manuscripts, and collections of letters and papers; a bibliography of works containing printed Darwin correspondence; and a bibliographical register and index of all the correspondents. A 43-page index (in small print with three columns to a page!) allows the reader easily to find materials that appear in the calendar summaries.

The entries are usually no more than three or four lines long yet are full of information. At times, for particularly important letters, a phrase or sentence is quoted. For example, the entry (471) for one of the letters Emma wrote to Charles before they were married includes her statement that there are things which "if true are likely to be above our comprehension" and that "there is danger in giving up revelation." Similarly, entry 569, for the letter Darwin wrote FitzRoy in May of 1840, records, "[CD] looks back on the *Beagle* voyage as 'far the *most fortunate circumstance in my life*.' CD has married and has a 'little animalcule of a son.' " Entry 859 informs us that Darwin wrote Fox that he was both "flattered and unflattered" at being rumored to be the author of *Vestiges of the Natural History of Creation*. Entry 3430 summarizes a letter Hooker wrote to Darwin two years after the publication of the *Origin*: "Wrote a 'frightful screed' about aristocracy being a necessary consequence of natural selection, and then burnt it."

Besides giving a list of the letters and a résumé of their content—an invaluable resource to the scholar since copies of the letters can then be obtained from either the Cambridge University Library or the American Philosophical Society in Philadelphia until such time as they appear in the *Correspondence*—what the *Calendar* does, because one is not overwhelmed by details, is to give an overview of the correspondence.

The *Calendar* makes clear that the correspondence is principally the scientific correspondence of an outstanding scientist. The entries reveal the careful preparation that went into each of Darwin's papers and books and the extensive network of informants he used. Incidentally, the *Calendar* readily allows one to estimate the magnitude of the networks of correspondents involved in Darwin's various enterprises. Thus, for the period 1847 to 1854 I counted over 150 entries summarizing letters to and from some 30 correspondents from all over the world referring to Darwin's barnacle work. There are over 1440 entries representing the Darwin-Hooker correspondence, a correspondence that surely ranks as one of the greatest of scientific exchanges. Similarly, the *Calendar* allows one to uncover easily many interesting facts. For example, there are some 2500 entries for the period from October 1821 to November 1859 and some 6000 from 1860 to 1872. For the last 10 years of Darwin's life there are over 5000 entries, with Darwin writing (on the average) at least one letter a day during that period. The *Calendar* gives further support to Gruber's model of creativity. Darwin was the paradigm of that model: the person whose impressive effectiveness and "singular outcomes" are generated by the continual reorganization of the manifold possibilities in the pluralistic tasks that he is always working on. Even the summaries of the letters make clear how the interrelation, the intershuffling of the pluralistic activities and the transference of problems, insights, and solutions from one task to another generated new tasks and inquiries. These letters also corroborate Frank Manuel's view that geniuses are those who "in their capacity to synthesize overwhelm."

The principal beneficiaries of the *Calendar* will undoubtedly be historians of science. Anyone interested in Darwin's scientific work and the genesis of his views will be overwhelmed by what he or she will find to be waiting in the *Correspondence*. For the person interested in biographical materials, the *Calendar* indicates which letters to look to for information on Darwin's financial dealings, which to look to for insight into his relationship with his family, and so on.

The *Calendar* contains so many entries and so many that are of great interest that I clearly cannot attempt to do justice to them. The magnitude of the effort in preparing them can only be appreciated by reading the *Calendar* (or merely skimming it). It records a herculean task by devoted editors. We again are deeply in their debt.

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Nobel Prizes: The Inaugural Era

The Beginnings of the Nobel Institution. The Science Prizes, 1901–1915. ELISABETH CRAWFORD. Cambridge University Press, New York, and Editions de la Maison des Sciences de l'Homme, Paris, 1984. x, 281 pp., illus., + plates. $34.50.

Decided in secret yet invested with instant fame and fortune, the conferral of a Nobel prize serves as the highest recognition and reward by a scientist's peers and as a focus of public fascination with science. The early history of these unique science prizes, their founding, establishment, conferral, and reception in the fields of physics and chemistry through the outbreak of World War I, is the subject of Elisabeth Crawford's pioneering study.

Although there have been sociological and statistical studies of the Nobel science prizes, no comprehensive history of the prizes was possible until 1974. In that year the Nobel Foundation and associated institutions began a policy of opening their archives for historical research on materials at least 50 years old. Crawford, a Swedish historian now working in Paris, was one of the first outside scholars admitted. She now offers the first book-length, archivally based study of the history of the prizes. The results of her