Fall 2004

Editing Textual and Extra-Textual Materials in Charles Darwin's Correspondence

Duncan M. Porter  
*Virginia Tech, duporter@vt.edu*

Alison M. Pearn  
*Darwin Correspondence Project, University of Cambridge*

Follow this and additional works at: [http://digitalcommons.unl.edu/docedit](http://digitalcommons.unl.edu/docedit)

Part of the Digital Humanities Commons, Other Arts and Humanities Commons, Reading and Language Commons, and the Technical and Professional Writing Commons
The Darwin Correspondence Project was founded in 1974 by Professor Frederick Burkhardt, President Emeritus of the American Council of Learned Societies, with the collaboration of Dr. Sydney Smith, Reader in Zoology in the University of Cambridge and Fellow of St. Catharine's College. The project's editors are producing the first definitive edition of the letters to and from Charles Darwin, arguably the most important scientist of the nineteenth century. To date, thirteen volumes have been published, covering the years up to 1865. Volume fourteen (1866) is in press. The history and description of the Project are given by Burkhardt and Porter.

When the Project began, only about twenty percent of the known letters had already been published, mostly in works edited by Darwin's son Francis, and many of these letters had been silently edited. Later recognition of this has led one historian of science to refer to them as giving readers the "Franciscan view of the Darwinian landscape". Darwin's granddaughter Nora Barlow published excerpts from his earlier letters and much, but not all, of the correspondence between Darwin and John Stevens Henslow, his

Cambridge mentor. Several hundred letters were published elsewhere.

Two advances in technology made the Project feasible. First, photocopiers enabled archivists to exchange and collect copies of archival materials. Consequently, there are now full sets of the known letters at Cambridge University Library, which holds the main Darwin Archive, and at Bennington, Vermont, in the archive maintained by Fred and Anne Burkhardt. Every effort is made to keep the files at Bennington and the American Philosophical Society in Philadelphia, which has the second largest collection of Darwin manuscript letters, up to date with copies of newfound letters. The second advance was the use of the computer as a word processor and text editor, which made it possible to transcribe letters once, store them electronically, and manipulate them.

The evolution of the Darwin Correspondence Project as an electronic resource is described by Pearn, and Weinberger discusses preservation of the editing and typesetting systems for the continued functioning of the Project as they have moved from server to server. This evolution has not always been smooth: “Over the last twenty years, largely as a result of hardware decommissioning beyond the Project’s control, the master files have migrated across five mainframe computers, and a number of different text-handling programs, two typesetting languages, and at least three plain text editors have been employed”. The master files have recently been moved again, to a Linux server maintained by the Project.

Textual Materials
The types of textual objects that constitute the raw materials for the Darwin Correspondence Project are original manuscript letters, photocopies of letters, handwritten or typed copies of letters, published letters, drafts of letters, memoranda, descriptions of letters known only from auction or sale catalogues, third-party letters, journals, notebooks, and specimen catalogues. Each will be discussed briefly. How we deal with these textual materials is

11Pearn, p. 81.
examined in depth in Burkhardt. There is also a "Note on Editorial Policy" in each volume, which is revised as new situations are encountered.

Original manuscript letters are the most common material with which we must deal. About ninety percent of the more than 14,500 known letters are of this type. The most difficult problems with these originals are usually reading the handwriting, establishing the date of the letter, and, if the letter was not sent to Darwin, identifying the recipient. The ability to read difficult nineteenth-century handwriting comes only with experience. Correspondents often did not date their letters, envelopes were rarely saved, and the recipient was often addressed only as "Dear Sir" or "Dear Madam." Light can often be shed by establishing relationships with other letters or contemporary events. To ensure accuracy, every transcript is checked word-for-word against the original or a facsimile four times before it is finally printed.

Photocopies of letters generally raise the same problems as original letters. In addition, ink bleeds from the other side of the page may be misread as part of the text, not all punctuation marks may be clear, and photocopies tend to be less legible than the originals. Digital scans, which are increasingly used, are much better than photocopying for our purposes. They are more likely to be in color, which can be significant, especially when colored crayons or pencils are used in annotations, and they are much clearer.

Darwin's son Francis had copies made of a great many of his father's letters and used these in preparing his editions of Darwin's correspondence. Sometimes copies of the originals were sent to him, but usually he was sent original letters, which he gave to a copyist. Francis then checked and edited the copies. In this process he normalized spelling and punctuation, and omitted names and text that might offend Victorian sensibilities, or simply because he thought them superfluous. Often the omissions were made without ellipses to indicate that a change had been made. The originals were then returned to their owners. In some cases, only the copies are now extant.

Some of the letters known to the Project survive only as published in the biographies of Darwin's contemporaries. In some cases it is evident that they suffer from misreadings of Darwin's handwriting.

The Darwin Archive also includes a number of drafts of letters written by Darwin. They are more difficult to deal with than the final versions because of Darwin's propensity to be more in a hurry writing them and to introduce

---

many alterations to their texts. In many cases, the version sent has not been found, if it was sent at all.

Some letters are known only from descriptions in auction or sale catalogues. These do not usually provide the entire text but only excerpts or a summary. They often have mistakes in dates or transcriptions. The entire text or a facsimile is rarely printed.

Finally, third-party letters (letters not written by or to Darwin) may have been enclosed with a letter to Darwin, because one or the other of the senders wished Darwin to see information in it. Occasionally the decision is made to publish a third-party letter, which although it was not sent directly to Darwin is particularly helpful in understanding his own correspondence or in providing important biographical information about him.

Memoranda include lists of objects (books, species, etc.) or information sent to Darwin, often in response to queries by him. They may be signed by the sender, but are not in the form of letters.

Since the edition aims at being definitive, every effort is made to reproduce the letter texts faithfully, including Darwin's sometimes idiosyncratic spelling and punctuation, but we do not attempt an exact typographical reproduction of the layout. We have formalized the layout to the extent that, wherever and in whatever format they appear at the beginning of the letter, we always print the address of the correspondent and then the date on separate lines, flush right at the top of the typeset version. Any printed text, for example letterhead, is reproduced in italic, as is any manuscript text that has been underlined. Multiple underlining is rendered in the published version as boldface. If a correspondent has used different colored ink to make significant distinctions, we try to reproduce this using different typefaces and explain what we have done in a footnote.

We made an early editorial decision to adopt the so-called “clear text” method of transcription. This, so far as possible, keeps the published text free of brackets recording deletions, insertions, and other alterations in the places at which they occur. It presents the text as the writer intended it to be read. We do record changes such as deletions and insertions made by Darwin in the course of writing his own letters, however, as these can reveal his thought processes. These are gathered together at the end of each volume under “Manuscript notes and alterations” and are keyed to the letter by paragraph and line number. They can be extremely complex, especially where the text is taken from a letter draft. Any editorial amendments made in transcription, or parts written by an amanuensis, are also indicated. “This practice enables
the reader who wishes to do so to reconstruct the manuscript versions of Darwin's autograph letters while furnishing printed versions that are uninterrupted by editorial interpolations.\textsuperscript{13}

Darwin's journal, notebooks, and specimen catalogues kept on the Beagle voyage were important in footnoting letters in earlier volumes. His later yearly journal provides the basis for the chronology appendix in each volume. His later experimental notebooks have become increasingly important in dating and explicating subjects in his letters. Although he did not often give complete dates to his letters, his notebook entries usually are precisely dated. Many entries describe experiments or observations in a level of detail that is usually not present in the letters that mention them. We have been able to date many letters by correlating information in them with notebooks and notes that Darwin kept in portfolios devoted to particular research subjects.

\textbf{Extra-Textual Materials}

Editors must deal with various types of extra-textual materials, that is, objects that were either not part of the letter when it was originally sent (such as annotations) or that are not themselves straightforward text, including tables, formulas, enclosures, specimens, photographs, questionnaires, diplomas, lists, diagrams, drawings, and sketches.

Darwin often annotated letters he received, either to highlight points that aided his research or to indicate points to raise in his answers. Such annotations, including information on the medium employed, are recorded after the letter text. The editors have to exercise judgment in this task. For example, where Darwin has marked a passage by scoring in the margin, they have to decide exactly what part of the text he meant to draw attention to (see page 140).

Tables are not as easy to deal with as they may appear to be. Typesetting even apparently straightforward tables requires complex coding. The typesetting software we use (\TeX) is very sophisticated, and was originally developed for mathematicians who needed to lay out formulas. Although formulas are rare—Darwin was no mathematician—there is still plenty of specialized layout to deal with. Tables are reproduced as close to the original format as possible, given typesetting constraints. Special fonts are needed for non-standard character sets, including Greek letters, mathematical symbols,

Part of a letter from the American entomologist Benjamin Dann Walsh, with sketches of different modes of coitus in insects. CUL DAR 181: 10; reproduced by permission of the Syndics of Cambridge University Library. See The Correspondence of Charles Darwin, vol. 13, pp. 399–408.

A page from a letter written by the naturalist Fritz Müller, showing annotations and scoring by Darwin in red crayon, blue crayon, and ink. CUL DAR 76: B33v; reproduced by permission of the Syndics of Cambridge University Library. See The Correspondence of Charles Darwin, vol. 14, pp. 265–69.
and symbols such as male and female, that often appear in the letters (see page 140).

Enclosures to letters are transcribed following the printed letter text. Usually they give specific information to Darwin; sometimes they are third-party letters, in which case they are transcribed with the same layout and conventions used in the main body of the correspondence; occasionally they are sketches or diagrams.

Specimens of plant or animal parts were occasionally enclosed in letters to or from Darwin. They have been described in footnotes in the published volumes, but not illustrated. However, we have some letters coming up in which the correspondent has glued specimens to the letters as if they were diagrams. We are experimenting with cleaning up digital images and reproducing them as black-and-white pictures in the running text, just as if they were sketches. If that does not work, we probably will have to include the images as plates.

Darwin and his correspondents often exchanged photographs. Some of these have been used as plates to illustrate our volumes. Darwin refers in several letters to having a collection of cartes de visite sent to him, but it has not been found in the Darwin Archive.

The many diplomas Darwin received from learned societies, both British and foreign, are treated as enclosures or given in an appendix, depending upon how they were received. Lists of those to whom Darwin had his books or offprints sent also are presented in appendixes.

Darwin's correspondence, particularly the incoming letters, is frequently illustrated by hand-drawn or even painted illustrations. These range from quick pencil sketches dashed off hurriedly, to bold ink drawings, diagrams in varying degrees of detail, or even elaborate watercolors. The paper they are drawn on varies in color and can be mottled with age or damp, and the drawings themselves may be faint. The quality of illustrations in the volumes has occasionally been criticized, but for the most part this is due to the quality of the originals.

The editors' job is to reproduce illustrations as faithfully as possible in their published versions, within the constraints imposed by printing with black ink on white paper. As with editing the letter texts, we have to ensure that no information is lost in this process, and to exercise judgment in enhancing the originals where that will help the reader. So, all associated manuscript captions are removed and replaced with typeset text for the sake of legibility, and where a correspondent has used color to make distinctions
between lines in a graph, for example, we may substitute dashed or dotted lines or textured shading. Although every attempt is made to position the published illustrations in the same relationship to the text as the originals, it is sometimes necessary to reduce the size of a diagram or reposition it for typesetting reasons. All alterations are recorded in footnotes.

The way in which the reproduction of illustrations has been handled by the Project has changed with changing technology. For the first ten volumes, the originals were photographed and the photos were traced by hand. The tracings were inked over and photocopied and the photocopies were cut and pasted onto the camera-ready copy. Any text associated with the illustration had either to be set in the appropriate locations on the original page, or also cut and pasted onto the camera-ready copy. This was time consuming and insecure—the often tiny scraps of pasted paper occasionally became detached—and involved some inevitable loss of definition and detail. It was extremely difficult to reproduce faithfully variations in weight and thickness of the lines or degrees of shading.

The advent of digital imaging software has allowed us to improve on this process. For the last three volumes, photographs of the original illustrations have been scanned by Project staff and the scans have been cleaned up for publication. This can still be a lengthy process, as the background color, including any blemishes on the paper, has to be removed without losing any of the details of the illustration, requiring constant checking against the original. However, the finished product retains more of the character of the original. In particular, it retains variations in the thickness of lines, and can even accommodate different shades—albeit of gray. Associated text is deleted from the scan and replaced with typeset text that is incorporated in the electronic file. For technical reasons these files have up to now been printed separately from the main electronic file for the volume and the two sets of film have been superimposed by the printers, but starting with volume fourteen, they will be fully incorporated.

One further change is being introduced for volume fourteen. The Project is now able to commission digital scans of original illustrations from the Photography Department of Cambridge University Library, eliminating the need for photographs and enabling us to work with higher resolution images.

Occasionally this technique is inadequate for reproducing a particular image, because of its size or complexity, or both. In that case we may resort

to photographing the image and simply reproducing it as a plate (see Moggeridge watercolors of orchids in vol. 12),\textsuperscript{15} or we may have to both reproduce an image \textit{and} transcribe the text. The most complex example is the very large family tree of birds sent to Darwin by William Charles Linnaeus Martin between 1859 and 1861 (see page 144). In this case text and layout are so interdependent that no single means of reproduction could convey all the information. The original is more than 60 cm long, so that it was impossible to reproduce it on the page and retain legibility. But a hierarchical transcript of the text alone would not convey the full impact of the diagram, so both were included. The image was reproduced within the body of the volume, rather than as an inserted plate, so that it could be printed as close to the transcript as possible, and a scheme was devised for transcribing the text that we hope allows readers to trace the relationships.

Editing the \textit{Correspondence} continues to present new challenges. Darwin used printed questionnaires to obtain information on a number of subjects from his correspondents. So far, we have only had to deal with his "Questions about the breeding of animals" of 1839,\textsuperscript{16} to which there are only two known direct responses: one is fairly straightforward, as the correspondent included the numbers of the original questions; but the other was written directly onto the questionnaire. In that case, we transcribed only the responses and keyed them to the questionnaire by including the question numbers as editorial insertions. The text of the questions themselves was transcribed, without any attempt at reproducing their layout, in an appendix.

However, we are now dealing with a very exciting period in Darwin's life, as correspondents all over the world began to respond to the various versions, both handwritten and printed, of his questionnaires for \textit{The Expression of the Emotions in Man and Animals}.\textsuperscript{17} In this case, an appendix containing the questions would not be straightforward, because Darwin modified the questions over time. There are also far more responses; some are partial, and respondents often did not repeat the questions. Some of the replies are written on the questionnaires. Making this intelligible to our readers while remaining faithful to the original material will make for an interesting time in our lives too.

\textsuperscript{17}Darwin, C. 1872. \textit{The Expression of the Emotions in Man and Animals.} London: John Murray.
Acknowledgments

Samantha Evans ably copyedited the manuscript, Frederick Burkhardt and Sarah Porter made helpful comments on it, and Susannah Porter kindly aided in obtaining library materials. The Darwin Correspondence Project is funded by grants from the National Science Foundation, National Endowment for the Humanities, Andrew W. Mellon Foundation, and Alfred P. Sloan Foundation in the US, and the Wellcome Trust, British Academy, British Ecological Society, Natural Environment Research Council, and Royal Society in the UK.

A portion of "An Imaginary Indication of Modern Families & Genera according to self-opinionated Ornithologists" enclosed with a letter from William Charles Linnaeus Martin. CUL DAR 17:1 56/15; reproduced by permission of the Syndics of Cambridge University Library. See The Correspondence of Charles Darwin, vol. 13, pp. 399–408.