Narrative Section of a Successful Application

The attached document contains the grant narrative and selected portions of a previously funded grant application. It is not intended to serve as a model, but to give you a sense of how a successful application may be crafted. Every successful application is different, and each applicant is urged to prepare a proposal that reflects its unique project and aspirations. Prospective applicants should consult the Preservation and Access Programs application guidelines at http://www.neh.gov/grants/guidelines/HCRR.html for instructions. Applicants are also strongly encouraged to consult with the NEH Division of Preservation and Access Programs staff well before a grant deadline.

Note: The attachment only contains the grant narrative and selected portions, not the entire funded application. In addition, certain portions may have been redacted to protect the privacy interests of an individual and/or to protect confidential commercial and financial information and/or to protect copyrighted materials.

Project Title: Cataloging and Contextualizing the World's Largest Known Collection of Printed Works by Charles Darwin

Institution: American Philosophical Society

Project Director: Martin L. Levitt

Grant Program: Preservation and Access Humanities Collections and Reference Resources
SIGNIFICANCE OF THE PROJECT

Humanities Context and Scholarly Opportunities

In the history of human ideas, paradigm-shifting scientists have on occasion had a profound impact on humanistic thought. Individuals such as Copernicus, Newton, and Einstein, whose theories redefined the foundations of man’s relationship to the natural world, infused and inspired dialogue across the humanistic disciplines. But perhaps no scientist has had a greater impact, nor proven more controversial, than Charles Darwin. Though Darwin clearly understood that the mechanism he proposed for evolution—natural selection—would cause a great nexus of controversy, even he could not have foreseen the how broadly and enduringly his grand idea would provoke intellectual discourse. The implications of his theories have engaged humanists and social scientists of every stripe, inspired poets and philosophers, and sparked theological and political debate that will likely continue long past this anniversary year.

Darwinism is among the boldest and most transformative ideas to have emerged from the 19th century, and it remains a controversial and astonishing concept at the center of intellectual, cultural, and scientific history. The Valentine/Darwin Collection is a lens through which scholars—following the threads inherent in translations, forwards, images, etc.—will be able to analyze the spread of Darwin’s ideas as they were transmitted to both Western and Eastern cultures from the 19th century to the present. Darwinism is a core concept of biological science, but it is also at the heart of the humanities—as one of the most monumental ideas to have been subjected to the cross-examination and cross-currents of intellectual debate.

Most scholars would not dispute that Darwin’s ideas have to some degree permeated every branch and discipline of the academy. In the sciences, Darwin’s thinking has had a profound effect on biology and bio-chemistry, zoology, genetics, and paleontology, for example. His ideas were also co-opted and adapted by social engineers and other thinkers in the social and behavioral sciences, thus emerging in disciplines like cultural anthropology, sociology, theology, history, history of science, and psychology—not to mention pseudo-sciences such as eugenics.

The study of the transfer of seminal thinking, across cultures and through time, has been called the history of ideas, sociology of science, or the sociology of knowledge. The ideas of Robert K. Merton, a leading thinker in the sociology of science, have been instrumental in developing a modern literature in the transfer and reception of ideas, and by analogy a parallel literature in such subjects as the history of technology transfer. Several articles in Descended from Darwin: Insights into the History of Evolutionary Studies, 1900-1970 hint at the richness inherent in this line of inquiry generally, and for Darwin specifically. When it becomes accessible, the Valentine/Darwin Collection will be an unparalleled resource in helping scholars follow Darwin’s ideas as he revised them in response to criticism and new evidence, as they were introduced to new cultures in which they were challenged and/or incorporated into different traditions, and as they caused a fundamental questioning of the origins of humankind.
The Valentine/Darwin Collection consists of more than 4,500 volumes, all by Charles Darwin, and provides a copy of virtually every edition and variation of all of Darwin’s books and other publications in the following languages, in addition to British and American editions: Arabic, Chinese, Croat, Czech, Danish, Dutch, Finnish, French, German, Hebrew, Hungarian, Italian, Japanese, Lettish, Norwegian, Polish, Portuguese, Romanian, Russian, Serbian, Spanish, Swedish, and Turkish. (See Appendix A for an example of one of Dr. Valentine’s informal handlists—this one for foreign editions of *The Descent of Man.*) Images of the covers and title pages from Darwin’s works in many of these languages illustrate this proposal.

The Valentine/Darwin Collection contains most of the first published appearances of writings by Darwin, including many of his serial publications. Chief among the important items in this collection are the first printing, complete, of the *Narrative of the HMS Beagle*; the first serial publications of Darwin and Wallace’s *On the tendency of species to form varieties, and on the perpetuation of varieties and species by natural means of selection*; numerous editions, including the first four, of *On the origin of species by means of natural selection*; and a fine representative selection of scientific journals with articles by Darwin, beginning with ones early in his career. Dr. Valentine’s collection is so thorough, numbering many editions of Darwin’s works published in many countries throughout the world, and encompassing publication dates from 1838 through 2004, that the second edition of R.B. Freeman’s *The works of Charles Darwin: An annotated bibliographical handlist*, does not contain many of these editions. In fact, Freeman’s work, considered to be the classic and most comprehensive handlist for Darwin works, actually used the early and growing Valentine collection as a source. Dr. Valentine wrote in an email to APS librarians: “[Many years ago in Cambridge] …a bookseller (Korn) introduced me to Richard Freeman, who was then compiling his bibliographic handlist of Darwins…. Freeman borrowed my stack of 3X5 cards recording the Darwins I had, and I can tell that a number of my items were added to his list.”

The result is a corpus rich in scholarly possibilities in the history of ideas. Using Darwin’s most famous book, *On the Origin of Species*, as an illustration, it is well known that it went through six editions in Darwin’s life alone. Each edition was edited by Darwin himself, often in response to peer criticism and sometimes for the purpose of clarification. For example, the third edition was published in 1861 with a number of sentences rewritten or added, and with an introductory appendix, *An Historical Sketch of the Recent Progress of Opinion on the Origin of Species*. Famously, the fifth edition, published on February 10, 1869, incorporated more changes and for the first time included the phrase “survival of the fittest,” which had been coined by the philosopher Herbert Spencer in his *Principles of Biology* (1864). In 1871 George Jackson Mivart’s *On the Genesis of Species* argued against natural selection as the mechanism of evolution. Darwin was affronted, and made extensive revisions to *Origin*, using the word “evolution” for the first time and adding a new chapter VII to refute Mivart. The sixth edition was released by Darwin’s publisher, John Murray, on February 19, 1872 with “On” dropped from the title. Interestingly, Darwin had learned of working men in Lancashire chipping in together to buy the fifth edition and wanted it made...
more affordable, and related this to Murray; the result was that the price was decreased and the sixth edition published cheaply. Darwin was well pleased by the increased sales.¹

Dr. Valentine notes in an informal commentary on the collection that:

“...the US books published in [Darwin’s] lifetime are understudied. The first three US printings of the Origin, in 1860, are exactly like the first edition but are re-set in smaller type and thus fewer pages. The US fourth printing, still with an 1860 date, is well-known to contain additional matter from Darwin. I’ve been going through this US fourth, comparing the text with British editions (for which Peckham’s Variorum edition is invaluable), and what do you know, Darwin has inserted stuff that is first present in the British second (published earlier), but some of which is missing from the British second, some of which crops up in the British third, but some of which never crops up again. Also the deletes have a similar pattern. And there are many changes to the second and third British editions that are not found in this US printing, which is kind of like a second-and-a-half British edition, but with complications. Damned if he wasn’t sort of cutting and pasting as he went along. He must have had manuscript copy, and/or possibly marked-up proofs, that he consulted when revising for the next Murray edition, and from which he borrowed new sentences or new wordings as he mulled over the text. Of course he was used to that, as he had had to ‘abstract’ the Origin from his big book, and he was certainly a very sophisticated author by that time.”

Some scholarship of bibliography for Origin can be found in Morse Peckham’s The Origin of Species by Charles Darwin: A Variorum Text, which gives a tantalizing set of statistics for early editions of Origin and hints at one kind of scholarship that Darwin inspires: “Of the 3,878 sentences in the first edition, nearly 3,000, or about 75%, were re-written from one to five times each. Over 1,500 sentences were added, and of the original sentences plus these, over 325 were dropped. Of the original and added sentences, there are nearly 7,500 variations of all kinds. In terms of net added sentences, the sixth [British] edition is nearly a third as long again as the first.”²

Of equal interest is the transfer of ideas across cultures. In her magisterial treatment of Darwin, Charles Darwin: The Power of Place (2002), Janet Browne, Aramont Professor of the History of Science at Harvard University, devotes some considerable space to reflecting on the difficulty of translating Darwin cross-culturally. She writes: “Few scientific concepts of the 19th century were to experience such recasting, popularisation, negotiation, and consolidation as the work associated with the Origin of Species....In the process there was plenty of room for confusion....Metaphors rarely traveled well, omissions and additions to translations might affect the argument, and an unsupervised preface or addendum could undermine the results.”³ And later, “As a translated volume, Darwin’s Origin of Species was plainly dropping into a range of social contexts bursting with their own trends of thought, several of which already included evolutionary ideas. Spanish authors took up the Origin’s call in 1869 with a flurry of commentaries on the chemical origin of living beings. In Italy on the other hand, the intellectual elite already advocated secularism and evolutionary naturalism, to the point where [neurologist and anthropologist] Paolo Mantegazza suggested that science itself should become a religion.”⁴ Compare this to the reception of Darwin in France, where Thomas Henry Huxley [the English biologist known as “Darwin’s Bulldog”] characterized public reaction to Darwin as a “conspiracy of silence.” Browne notes

³ Browne, Ibid., p. 257.
⁴ Ibid., p. 261.
that “[French] Catholic opinion, although far less interested in biblical literalism than that of other churches, was for the most part opposed to proposals for the existence of godless, independent natural laws.”

These examples of differences in the reception of Darwinism hint at the unique nature of the Valentine/Darwin Collection, in which much can be said for the value of cumulation: the comprehensiveness of the collection will allow scholars, with the relevant books in hand, to compare and contrast the reception of Darwin as his ideas were introduced, and moreover, how they were interpreted by others in the context of contemporaneous events and cultures.

Even during his own lifetime, Darwin struggled with issues relating to the translation of his works. He distributed presentation copies of Origin in France and Germany, hoping that suitable applicants would come forward as translators. Darwin was at first pleased to have contracted with the elderly and distinguished German naturalist and geologist Heinrich Georg Bronn, but the resulting edition, published in 1860, was far more than Darwin bargained for. According to Browne, “Bonn’s translation included many philosophical asides and disquisitions on the first origin of life. Furthermore, he [Bonn] added a final chapter of his own, in which he drew attention to the religious difficulties in fully accepting Darwin’s views. Until Darwin could take purely inorganic matter and make a living creature, Bonn said, readers must consider descent with modification an unproven suggestion.”

After a second edition was published in Germany in 1862 based on the third English edition and Darwin’s suggested additions, Bonn died. Darwin corresponded closely with Julius Victor Carus, who edited and published a German translation more closely reflecting Darwin’s text.”

The international translators and publishers—intellectuals within their own cultures—struggled to contextualize Darwin, and saw in his works a means to further agendas that Darwin hardly endorsed. When Darwin’s attempts to find a translator in France fell through, a French publisher finally found a willing collaborator in Clémence Royer, a Frenchwoman living in Geneva. Browne notes the situation was even worse than that confronted by Darwin in Germany: “Royer went much further than Bonn in changing the substance of what Darwin said. When the [translated] book came out in 1862, Darwin complained that she turned the Origin of Species into a travesty of his views. Royer, unimpressed by Darwin’s protestations, replied that ‘One could say that this [Origin of Species] is the universal synthesis of economic laws, the social science par excellence, the code of living beings for all races and all times.’”

In 1864 translations of Origin were published in Dutch, Italian, and Russian. During Darwin’s lifetime it was published in Swedish in 1869, Danish in 1872, Polish in 1873, Hungarian in 1873-1874, Spanish in 1877, and Serbian in 1878; there were eleven translations in Darwin’s lifetime. Subsequently it has appeared in a further 18 languages.

This explosion of the Darwinian idea can be traced though time by the editions, translations and variants that followed. The prefaces, expurgations, edited elements, illustrations, and even the physical qualities,

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5 Ibid., p. 260.
6 Ibid., p. 141.
7 Ibid., p. 142.
8 Ibid., p. 142-43.
from weighty leather-bound tome to student paperback, may be mined for clues about how Darwin was presented in other cultures (including that of America), how his ideas were co-opted or interpreted by those with social agendas, and how the texts influenced (and were in fact influenced by) ideas that developed in reaction to Darwin. Scholars will be able to use the Valentine/Darwin Collection to explore such questions as: How was the reception of Darwinism influenced by the translator’s interpretation and/or agenda? How was Darwinism received in cultures with different religious traditions or political systems? How did the advent of Social Darwinism affect subsequent editions of Darwin’s work, and to what extent are deliberate agendas apparent?

The classic volume in the area of cross-cultural Darwinian dissemination is Thomas F. Glick’s *The Comparative Reception of Darwinism* (1974). Focusing essays on Darwin’s reception in the United States, Germany and France, with smaller sections on Spain, Mexico, the Islamic world, and elsewhere, this compilation of edited essays is a seminal attempt, supported by the American Council of Learned Societies and the University of Texas, to trace the implications of Darwinism across cultures and time. In a preface written for a subsequent edition (1988), Glick, who was chair of the history department at Boston University, wrote, “As a general rule, where biology was underdeveloped Darwinism was received in social, political, or philosophical contexts only….In the Islamic and Chinese receptions we encounter the most extreme examples of the assimilation of ‘Darwinism’ into non-Western philosophical systems thus far studied….“10 He concluded, “Reception studies over the past fifteen years have considerably broadened the comparative data base…. Certainly in the cases of England, France, and Italy we now have a clearer grasp of social and disciplinary variables. It is noteworthy that no-one has yet (to my knowledge) attempted a comparative study based on this material. Only by attempting such a study could one hope to refute our own [philosopher of biology] David Hull’s pessimistic conclusion that ‘no correlation seems to exist between the reception of Darwin’s theory around the world and the larger characteristics of these societies; at least, none has been demonstrated,’ an assertion that must be taken, at the least, as a token of the great complexity and rich variegation of the subject.”11 Glick’s observation is as true today as it was in 1988.

Glick’s volume is especially important in that it demonstrates both the potential for scholarship in the history of ideas in a collection like the one built by Dr. Valentine, and the intriguing prospect of understanding how Darwin’s theories have affected cultures around the world. An extremely new volume edited by Eve-Marie Engels and Charles Glick, *The Reception of Charles Darwin in Europe* (Continuum, 2009), expands on Glick’s original volume. Its 736 pages and host of international contributors, who examine the advent and cultural induction of Darwinism into the Netherlands, Finland, Ireland, and many of the smaller nations of Europe (in addition to the more powerful states), hint at the world interest inherent in this historiographical approach. American Ronald Numbers and New Zealander John Stenhouse have also contributed a well-received edited volume of essays to the field, *Disseminating Darwinism: The Role of Place, Race, Religion, and Gender* (Cambridge, 2001), the review of which, as it appeared in *Isis*, also speaks to the cross-cultural and interdisciplinary interest in this scholarship: “…this volume …lends a new, multicultural dimension to our understanding of Darwin’s reception….The reaction of African Americans is especially significant in that Darwin has sometimes been blamed for encouraging white racist thought….Sally Gregory Kohlstedt and Mark R. Jorgenson consider the views of women, who as infrequent participants in scientific life did not often address the issue of evolution. Nevertheless, feminists had to deal with Darwin’s patriarchal attitudes and beliefs; biological determinism, not evolution, represented the real problem. Thus, like Catholics, feminists rejected the

11 Ibid., pp. xxvii-xxviii.
philosophy underlying Darwinism….Anyone who has puzzled over the role of local culture in modifying the reception of scientific ideas will find [here] a gallery of exemplary comparative studies.” 12

As implied in the commentaries above, the potential for scholarly products emerging from the Valentine/Darwin Collection is enormous. The “evolution” of Darwin’s thinking during his lifetime is a study in itself—not only in successive British editions of his works but in American versions as well as in translations on the European continent. Several authors of letters of support for this proposal imagined some of the ways in which the collection might be mined. Keith Thomson notes that “in his own time, Darwin was beleaguered by what he knew to be bastardized (through inadvertence and even malice) versions of his work. The Valentine Collection affords a unique opportunity to trace out these changes and the influences that drove them….” Janet Browne imagines “study[ing] Darwinism as the first worldwide example of the current trend towards the globalization of science” as well as “research into the rise of scientific ‘celebrity.’” Michael Ruse cites the fact that “Theodosius Dobzhansky, one of the giants of 20th-century evolutionary biology, has left his papers with the APS….We know that Dobzhansky was turned to Darwinism by reading the Origin as a young man in Russia. Which edition was this?....Was there a preface to the Russian edition he read?...Does Dobzhansky discuss the Origin in his early writings and letters?” The combination of the Valentine/Darwin Collection and Dobzhansky’s papers at the APS, says Ruse, provides a unique research opportunity.

Browne summarizes, “It is hardly an overstatement to say that this accession will transform [Darwin] scholarship in North America, not only serving as a magnet for researchers in the field but also opening substantive new areas of investigation….The Valentine Collection, when set in the context of the Society’s other material in the history of evolutionary biology and genetics, will comprise the richest, most diverse, and largest such research collection in North America. To make these books available will take Darwin studies into a new era.”

**Relationship of Valentine/Darwin Collection to Collections at APS and Elsewhere**

**APS Manuscripts:** The APS Library has the second largest collection of Darwin manuscripts in the world. (The largest is at Cambridge University. Through a cooperative agreement, the APS has all of Cambridge’s Darwin manuscript holdings in facsimile, while Cambridge has all of the APS’s Darwin manuscript holdings in facsimile. Thus, scholars in Europe wishing access to the most complete set of original Darwin manuscripts go to Cambridge, while North American scholars come to APS.) See Appendix B for the introductory section of the finding aid for the Society’s Darwin manuscripts by P. Thomas Carroll, or see [http://www.amphilsoc.org/library/mole/d/darwin.xml](http://www.amphilsoc.org/library/mole/d/darwin.xml).

Among them is Darwin’s handwritten title page for *Origin*, sent to his colleague and mentor Charles Lyell to seek Lyell’s opinion on the proposed title, *Origin of Species and Varieties Through Natural Selection*.

The Papers of Charles Darwin at the APS represent approximately 15% of the surviving correspondence of the British evolutionary theorist. They consist chiefly of correspondence between Darwin and other

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scientists writing on subjects from natural selection and the theory of evolution to the controversy caused by *Origin*. The Society’s earliest accession of Darwin papers consisted of an extensive and important series of letters between Darwin and Charles Lyell; this series frames the development of their thought from the late 1830s into the 1870s. There is a wealth of other important correspondence in the collection with John Thomas Gulick, George John Romanes, and Philip Lutley Sclater, among others. Related manuscript collections are strong, and include the papers of Theodosius Dobzhansky, Sewell Wright, Conrad Zirkle, George Gaylord Simpson, Seymour S. Cohen, Raymond Pearl, L. C. Dunn, Ernst Mayr, the American Eugenics Society and the Eugenics Record Office, Charles B. Davenport, and Nobel Laureates Baruch S. Blumberg, Salvador Luria, Peyton Rous, and Barbara McClintock. APS collections are rich in natural history, genetics, Mendelian genetics, evolutionary biology, eugenics, developmental biology, bio-chemistry, population genetics, *Drosophila* research, and related sciences.

*APS Books*: The Valentine/Darwin Collection, in combination with existing works by Darwin among APS holdings, results in a complete collection of first editions of all 25 of Darwin’s books. The APS holds thousands of volumes that contextualize the Valentine/Darwin Collection. These include volumes about Darwin and Darwinism, and volumes written by Darwin’s predecessors, contemporaries, colleagues, detractors, supporters, and successors. Complementary collections are also available.

- For an annotated bibliography of printed materials in natural history for the period ending in 1770, see the comprehensive subject guide by Anita Guerrini, *Natural History and the New World*: [link](http://www.amphilsoc.org/library/guides/guerrini/index.htm#apscollections)

- Another subject guide, by Darwin H. Stapleton, offers *Accounts of European Science, Technology and Medicine, written by Americans abroad, 1735-1860*. See [link](http://www.amphilsoc.org/library/guides/staple/)

- Yet another subject guide is available on *American Scientific Exploration, 1803-1860* by William Stanton. See [link](http://www.amphilsoc.org/library/guides/Stanton/)

- For access to collections in genetics, a subject guide by Bentley Glass may be found here [link](http://www.amphilsoc.org/library/guides/glass/#Foreword)

- A simple search in the APS OPAC (printed materials only) reveals more than 6,000 hits on “Darwinism” alone, and the search could easily be extended by derivative searches as Mendelian genetics, evolutionary synthesis, eugenics, genetics, Social Darwinism, Lamarckism, Lysenkoism, paleobotany and paleontology, the fossil record, speciation, punctuated equilibrium, and evolutionary developmental biology—all of which are among APS collecting areas.
**Other Significant Darwin Collections:** In the United States and Canada, there are at least four other major collections of printed Darwin and Darwiniana.

- At the University of California, Santa Barbara, the Darwin/Evolution Collection is comprised of nearly 3,000 volumes, including first, signed, and limited editions of books by Charles Darwin and by others engaged in the debate on evolution and studies in related fields such as anthropology, botany, genetics, geology, heredity, natural history, population, and religion. There is also some accompanying manuscript material relating to Bernard Darwin, Charles Darwin, Francis Darwin, Julian Huxley, Thomas Henry Huxley, John Stuart Mill, Richard Owen, Herbert Spencer, and Marie Stopes.

- At the University of South Carolina, the C. Warren Irvin Jr. Collection, donated to Thomas Cooper Library in 1996, consists of Darwin’s own writings. The collection now houses a complete collection of the first editions of Darwin’s books. Alongside these are many of the subsequent editions, showing Darwin’s careful revision and updating of his scientific work, and a large selection of the books about Darwin’s life and work. Dr. Irvin himself had expanded from this core to acquire selected works by Darwin’s predecessors (his grandfather Erasmus Darwin, Malthus, and Lamarck) and by selected contemporaries (Lyell) and allies. A catalogue search reveals this collection to be roughly 400 volumes.

- The Huntington Library’s Warren Mohr Collection holds a number of volumes by and about Charles Darwin, including more than 1,000 different editions of Darwin’s works and some 500 supporting volumes by his contemporaries and followers.

- The University of Toronto, Thomas Fisher Rare Book Library, holds a collection of approximately 1,000 volumes (about half uncatalogued) that consists of the writings of Charles Darwin and others (Thomas Henry Huxley, Richard Owen, Ernst Haeckel, etc.).

- While Cambridge University (UK) does not have a named collection described online, a search of the author Charles Darwin in its “Universal Catalogue” returns 742 hits. However, Cambridge has the largest manuscript collection of Darwin’s papers, with APS second. As noted above, in an arrangement made more than 20 years ago, all of the manuscripts in the Cambridge Darwin papers are available in facsimile at the APS, and vice versa.

Finally, the Darwin papers have benefited from a major documentary editing project, which is online at [http://darwin-online.org.uk/](http://darwin-online.org.uk/) and also accessible in a letterpress multi-volume edition.

**HISTORY, SCOPE, AND DURATION**

**History:** The proposed project results from the decision of Dr. James W. Valentine, one of the 20th century’s most distinguished American paleobiologists, to contribute his vast Darwin collection to the APS Library. His goal was to place the collection in a repository where it would have appropriate context, where it would be kept intact as a collection, and where it would be accessible to scholars. The APS Library was pleased to accept the collection on these terms.
The Valentine/Darwin Collection is, in effect, a manifestation of Dr. Valentine’s career and lifework. Dr. Valentine, now 83, is Faculty Curator Emeritus at the University of California Museum of Paleontology and Professor Emeritus of Integrative Biology at the University of California, Berkeley. In the early years of his training, he became interested in paleontology and how the fossil record could be used as evidence in formulating hypotheses about evolutionary processes. He saw that paleontology—when combined with data from other fields such as genetic, zoology, botany, and other life sciences—would make important contributions to evolutionary history. Dr. Valentine’s interests led to his study of the Cambrian Explosion (when the remains of animals with the body plans of many living Phyla first appeared during the 9-10 million year period beginning around 530 million years ago). He was one of the first paleontologists to use molecular data to investigate the origin of major Metazoan body plans.

During 13 years at U.C. Davis, Dr. Valentine worked with colleagues such as biologist and philosopher Francisco J. Ayala, and noted geneticist and evolutionary biologist Theodosius Dobzhansky, a central figure in the field of evolutionary biology for his work in shaping the unifying modern evolutionary synthesis. Papers by Dr. Valentine and his colleague, geologist Eldridge M. Moores, became famous as some of the foundation documents in the plate tectonics revolution and helped establish the U.C. Davis geology department as a leader in the field. From 1974 to 1975, Dr. Valentine served as president of the Paleontological Society, where he established the Journal of Paleontology, providing a new forum where paleobiology papers would be seen by both biologists and paleontologists—thereby contributing greatly to the growth of the discipline. In 1997, he left U.C. Davis for U.C. Santa Barbara, where he worked until joining the faculty at Berkeley in 1990.

Dr. Valentine is the author of Evolutionary Paleoecology of the Marine Biosphere, a seminal 1973 work in which he used his hierarchical approach to integrate studies on the environmental and climatic factors that have regulated biotic diversity. Other books by Dr. Valentine include: Evolving: The Theory And Processes Of Organic Evolution with Ayala (1979); Evolution with Ayala, Dobzhansky, and G. Ledyard Stebbins (1977); and On the Origin of Phyla (2004), which has been critically acclaimed for the way in which Dr. Valentine “synthesizes and applies the vast treasury of theory and research collected in the century and a half since Darwin’s time.” He was awarded the prestigious Paleontology Society Medal in 1996. In 2004, he received the Lapworth Medal from the Palaeontological Association in recognition of his outstanding research contributions to the field.

**Preliminary Planning:** The staff of the APS Cataloguing Department completed a small cataloguing project (about 500 volumes) in order to sample and survey the Valentine/Darwin Collection. They discovered that approximately 50% of the collection’s titles do not appear in OCLC; and a large number of titles found in online utilities had rudimentary records. Clearly, this is an indicator that the Valentine/Darwin Collection is comprised of many relatively uncommon editions and variations of Darwin’s works. It is also a reflection of the many atypical cataloguing languages represented in the collection that have likely received more cursory treatment by largely English and Western language-speaking cataloguers.

In addition, the Society’s Book Conservator made an initial survey of the collection and determined that it consists of approximately 15% paperbacks, 65% cloth-covered books, and 20% leather bindings. About 10% of the cloth-covered books are in good standing condition and can go on the shelf as is. The rest will need an appropriate enclosure or, for very rare volumes, a clamshell box (3%).

**Intended Products:** The proposed two-year project will have three products: a catalogue of the Valentine/Darwin Collection that will be accessible worldwide through the APS Library OPAC; the conservation and preservation of the collection; and a cluster of online essays by leading Darwin scholars (see below) that will contextualize the collection as a resource within the framework of intellectual and cultural history.
Financial Support: Total project costs will be $305,360. The Society requests $146,321 (slightly less than 50% of project costs) from the NEH. The balance will come from a combination of cost-sharing and from anticipated third party support. The Richard Lounsbery Foundation of Washington, DC has already indicated an interest in providing partial support for this project and has invited the APS to submit a proposal for its late October board meeting. The APS will keep the NEH informed of the progress of its proposal to the Lounsbery Foundation.

METHODOLOGY AND STANDARDS

Cataloguing: Based on the pilot cataloguing project and preliminary survey noted above, Head Cataloguer and Bibliographer Marian Christ determined that the Valentine/Darwin Collection Project Cataloguer will need to spend from 15 minutes to one hour per record, since original or “complicated” copy cataloguing, requiring considerable revision, will be involved for many titles. Complicated copy cataloguing is necessary when an existing record has a core of usable information, but requires modifications involving nearly as much time and effort as original cataloguing. An estimated 70% of the collection will need original or complicated copy cataloguing. The Project Cataloguer will, with careful research, and using Anglo-American Cataloging Rules, 2d edition (AACR2) and Descriptive Cataloging of Rare Materials (Books), DCRM (B) standards, provide as many access points as possible to uniquely identify each title. This process will include the creation of an item record accessible through searches for volume editors, commentators, translators, and compilers of biographical essays and introductions. And, as is standard in all APS Library printed material cataloguing, the Project Cataloguer will describe any manuscript notes, inscriptions or markings, and any book stamps or bookplates.

The first three months of this two-year project will include hiring and training the Project Cataloguer; surveying the collection and establishing guidelines for cataloguing the items, beginning to catalogue the collection (starting with the British editions), and consulting with the Conservation Department on the condition and preservation needs of the collection. The British editions should be completed at the six-month mark. The foreign editions, which will be the most complex, will take about 14 months. The final four months will be devoted to the American editions.

Conservation: After the books are accessioned and given call numbers, they will be routed to the Conservation Department for assessment of condition. Preventive care will include placing fragile items into protective enclosures. The collection varies in condition and style of bindings. Each book’s condition, cover material, and value will dictate the production of appropriate enclosures. All materials used will be of the highest quality and approved for conservation use.
Books routed for self-closing wrappers will have their spines scanned and call numbers placed on the spine using Photoshop. Spines will be printed on an archival inkjet printer using a natural cotton rag acid free paper with no brighteners. For books routed for a polyethylene dust jacket (see below), the call number will be generated on an archival foil-backed sticky label and placed on the outside of the jacket.

A unique bookplate has been designed especially for the Valentine/Darwin Collection. All books will be plated, stamped, or embossed with APS initials, and the call number handwritten on the bookplate. All volumes will have a bookplate affixed to the inside front cover.

Considering the scope of this project (4,500 volumes), preventive care will be key to promoting the longevity of the material while ensuring that the books are stored safely. APS conservators recommend the purchase of a CoLibri book covering machine ($1,699), a device that will speed and facilitate the process of creating, as necessary, polyethylene book covers: http://www.archivalsuppliers.com/prodinfo.asp?number=094-COLIBR&variation=094-2654

The CoLibri system envelops the entire book with a dust jacket without any adhesive. The process consolidates the entire book covering operation into a single process. The 100% polyethylene covers protect all edges yet can be removed or replaced without damaging the endsheet of the book, the book cover, or the dust jacket. The book cover is completely encapsulated and protected, and no additives or coatings are used. With this system, which can be used for 65% of the volumes, an estimated 17-20 books can be processed in a day.

Other necessary supplies (itemized in the budget and described in budget notes) will include: Cialux book cloth, Jade 403 polyvinyl acetate adhesive, Davey Red Label binders’ board, square foil backed archival labels, multi-use board, library board/folder stock, Epson ink, and polyethylene book covers (compatible with the CoLibri machine).

The Valentine/Darwin Collection will be housed in two locations. The rarest volumes will be placed in the Society’s new Rare Book Vault, constructed in Library Hall during the Society’s recent Capital Campaign thanks to a grant from the Pew Charitable Trusts. The balance of the volumes will be stored in the Library annex in Benjamin Franklin Hall, where all printed materials except for rare items are stored in specially outfitted stacks. Both locations are temperature and humidity controlled (monitored daily by the Conservation Department) and both are protected by inert gas fire suppression.

**Comparable Project/Anticipated Form of the Project:** A recent example of a comparable cataloguing and conservation project—the Benjamin Vaughan Library—is included as Appendix C. The personal library of Benjamin Vaughan—a close associate of Benjamin Franklin—was supposedly the largest in...
New England at the end of the 18th century with the exception of Harvard’s, and contains volumes reflecting the varied interests of that great Whig intellectual, including the expected classics from Linnaeus to Locke and Voltaire, but also less well known works on dissenting religion, important medical treatises, and works on agriculture, education, and the mind. It is a splendid example of early American bibliographical collecting, and a valuable collection both for its research and intrinsic value. The collection consists of 1,020 titles in 1,468 volumes. Both Marian Christ and Denise Carbone oversaw the completion of this project between 2005 and 2008, with support from the Vaughan Homestead Foundation. Appendix C describes in detail how the cataloguing and conservation of the Valentine/Darwin Collection will benefit from the experience of processing the Vaughan Library, and how it differs from that project. Appendix C also includes sample cataloguing entries for the Valentine/Darwin Collection (anticipated form of the project).

**Contextualizing Essays:** The web page that introduces the Valentine/Darwin Collection catalogue will include links to five contextualizing essays. In addition to Dr. Valentine, four leading Darwin scholars have already agreed to write essays for the site:

- **Dr. Janet Browne**, Aramont Professor the of the History of Science, Harvard University
- **Dr. Michael Ruse**, Lucyle T. Werkmeister Professor of Philosophy and Director of the History and Philosophy of Science Program, Florida State University
- **Dr. Keith Thomson**, Emeritus Professor of History, Oxford University, and Dean Emeritus of the Graduate School, Yale University
- **Dr. John van Wyhe**, Founder and Director of The Complete Work of Charles Darwin Online, and a Bye-Fellow of Christ’s College, University of Cambridge

When the project is well underway (at the beginning of project year #2), each of these scholars will be invited to spend a day at the APS to meet with the Librarian and to review the collection and other APS Darwin holdings in anticipation of writing his or her essay. Soon thereafter, they will also participate in a conference call to coordinate their topics. Precise topics will not be determined until that time, but a particular goal will be to encourage and attract scholarly use of the collection by suggesting lacunae in our understanding of the introduction of Darwinism to various cultures as well as its interpretation over time, and its adoption—and adaptation—as a lynchpin for a wide variety of social programs and political philosophies. See Appendix D for short biographies of these scholars and their letters of support for this project, including their willingness to write an essay for the web site. Travel and related expenses (room and board) for their site visits are included in the budget. Each scholar will also receive a stipend of $2,000 in consideration of their production of an essay.

As scholarly work based on the collection emerges, the Society will make every effort to include links to, or pdf’s of, relevant articles and publications in order to continue to stimulate interest in the potential and depth of the collection.

**Accessibility and Sustainability:** The technological framework for this project is straightforward, and sustainability is assured not only through adherence to best practices and standards but also as the result of significant infrastructure and facilities improvements.

The APS currently uses Infovision’s Amlib as its ILS. While not as widely deployed as larger systems such as Endeavor’s Voyager, Amlib provides fully functional cataloguing and is Z39.50 compliant. Every record from the Valentine/Darwin Collection will be encoded in MARC and will be uploaded to OCLC as well as the APS local OPAC, which is web-accessible: [http://opac.amphilsoc.org/amlibweb/webquery.dll?v20=1&v22=2B](http://opac.amphilsoc.org/amlibweb/webquery.dll?v20=1&v22=2B). The Amlib database runs on an MS SQL instance that is backed up locally to tape and disk (in Library Hall) and remotely to disk (in nearby
Benjamin Franklin Hall). All backups are run nightly. The APS incorporates a combination of backup technologies by using Symantec’s Backup Exec to manage the tape and remote disk functions and Paragon’s Drive Backup for local disk backup. APS servers have a three- to four-year life cycle before full replacement.

The current plan for presenting the contextualizing essays is to publish them to the Library’s website in HTML. Graphics included in these essays will be drawn from the materials digitized and ingested into ContentDM, to which each image will link. Nevertheless, each essay will be XML-encoded using TEI standards to allow for future deployment of these essays in a more robust format. Currently, the Library is using XTF to publish subject based guides to manuscript collections. The Darwin project may set the framework for a similar deployment of guides to printed materials.

All pages, graphics, or covers that are scanned for this project will be ingested into the Library’s ContentDM system. Each digital object will be described using Dublin Core and will include references to the URI of the bibliographic record for the item from which the digital object was drawn. Textual items will be presented in ContentDM in pdf format and graphics will be presented as jpegs. Archival tiffs of all digitized items will be maintained in the Library’s 3 TB (terabyte) NAS. The ContentDM server is backed up in the same fashion as the Amlib server. The NAS is mirrored to a remote server and backed up to tape locally.

Recognizing that a modern research library requires a strong technological infrastructure to accommodate current and future computing and storage needs, the Society has made improved digital capabilities a priority.

First, in April 2008, the Library completed a major, $6.1 million renovation of its facilities, providing state-of-the-art security and fire protection, a new conservation laboratory, and improved work spaces for cataloguing services and manuscripts processing. (See Appendix E for a Philadelphia Inquirer article about the re-opening of the Library following the final stage of renovations.) Moreover, the Society committed a significant percentage of the budget from these renovations to providing the necessary “cyber-infrastructure” for Library facilities. A new server room features nearly three times the capacity of the previous server area. To accommodate future growth, it contains multiple floor mounted racks to hold all equipment and communications cabling. It supplies ample power that is backed up by both rack-mounted uninterruptible power supplies and the APS generator. The climate is controlled by a dedicated refrigeration unit that keeps the room at optimum temperature, and the equipment is protected by inert-gas fire suppression. This room is locked at all times and accessible only to IT staff.

The server room is the backbone of the new “Digital Suite,” which also includes a digital projects room. The digital projects room is equipped with high-end workstations, oversized scanners, analog-to-digital audio equipment, and other resources for digitizing Library holdings, processing digital acquisitions, and managing digital assets.

In addition to providing dedicated physical space for its computing operations, the APS has also improved server capacity. The APS currently uses six production servers to handle the various computing processes. To accommodate the ever-increasing amount of stored data, the Library has installed a 3 TB storage server. This server holds all APS digital objects and collection materials in uncompressed, non-
proprietary, archival-appropriate formats. As noted above, the Library incorporates redundant backup systems.

Finally, the future of the Society’s digital needs has received a major boost and vote of confidence through the offer of an NEH Challenge Grant of $500,000 to create a new “Endowment for Library Technology.” Income from this endowment (which is expected to have a principal of $2.5 million by January 2011) will be used to anticipate changes in the digital environment and prepare for the future management of digital assets. Fundraising for the challenge is ahead of schedule with $1.4 million raised to date toward the $2 million requirement. This endowment will give the Library great agility in responding to evolving technologies and the changing needs of the Society’s collections, programming, and outreach, especially through its website.

**WORK PLAN** (See Appendix F for a detailed timeline.)

*Months 1-3*
Hire and train Project Cataloguer and Project Conservation Technician.
In-depth survey of collection for cataloguing and conservation priorities.
Establish guidelines for cataloguing and begin with British editions.

*Ongoing throughout project*
Conservation of 4500 volumes.

*By end of Month 6*
Complete cataloguing of all British editions.

*Month 7, 13, 19, 24*
Upload batched MARC records to OCLC

*Between Months 12-15*
Scholars/essayists visit APS to review collection.

*Months 16-20*
Scholars produce essays.

*Months 21-23*
Links and metadata embedded in essays.
Essays uploaded.

*By end of Month 20*
Complete cataloguing of all foreign editions.

*By end of Month 24*
Complete cataloguing of all American editions.
Conclude conservation activities.

*Month 24*
Write final project report.
Online catalogue goes live.
Dissemination activities.
See Appendix H for resumes of relevant staff and for qualifications of project staff to be hired.

**Martin L. Levitt (Project Director)** is the Society’s **Librarian**, appointed in 2003 after working at the APS Library for nearly 18 years (except for 1991-92, when he was a Fulbright scholar in the United Kingdom). He holds BA, MA, and MSLS degrees from Florida State University, an MA from Florida Atlantic University, and a Ph.D. from Temple University. He has supervised major renovation projects in the Library, including the recent project to modernize facilities in Library Hall and the attendant rearrangement of the collections. Dr. Levitt is a member of the faculty in the Department of History at Temple University, where he is a Professor in the Graduate Public History Track. He is an officer and a member of the Board of Directors of the Philadelphia Area Center for History of Science (PACHS), President of the Academy of Certified Archivists, and a member of the Executive Board of the Philadelphia Area Consortium of Special Collections Libraries (PACSL). For this project: Dr. Levitt will oversee the entire project, monitoring staff productivity and acting as the final authority for any questions that may arise during the course of the project. He will facilitate and organize the production of the contextualizing essays. This project will require approximately 5% of Dr. Levitt’s time over the two project years.

**Marian Christ** serves as **Assistant Librarian and Head Cataloguer/Bibliographer**. She received her MLS from Drexel University and BA from Beaver College (now Arcadia University). Ms. Christ participates in planning and decision making for the Library. She supervises Library technical assistants in all technical processes operations; oversees the spending of trust and endowment funds allocated to purchase new acquisitions; and supervises special projects. Ms. Christ’s cataloguing and acquisitions responsibilities include all printed materials (monographs, journals, articles in journals, pamphlets, broadsides, newspapers, reprint collections and maps); all records are added to the OPAC (Online Public Access Catalogue). She catalogues retroactively (updating and completing already catalogued material) and consults with the technical assistants on renewing journal subscriptions, claiming journals, and cataloguing journals. She oversees all staff requests to purchase items for the Library, the receipt of exchanges and gifts, and all correspondence with regard to current and new exchanges. For this project: Ms. Christ will train and supervise the Project Cataloguer, manage the project records, interface with conservation and technical personnel, and provide quality control for all of the cataloguing. This project will require approximately 20% of Ms. Christ’s time over the two project years.

**Denise Carbone** serves as the Society’s **Book Conservator**. She received her MFA from the University of the Arts (Philadelphia) and BA in Liberal Arts/Printmaking from Glassboro State College of New Jersey. As a senior manager she is responsible for conservation and preservation of the Society’s book collections including the documentation and preparation of condition reports and treatment proposals, restoration of books and manuscripts, and preparation of materials for exhibition. Ms. Carbone oversees the full spectrum of book conservation activities in the Society’s Conservation Lab: encapsulation of deteriorating documents; dry cleaning; washing and deacidifying paper; rebacking, repair, and rebinding of worn books; as well as construction of self-closing wrappers, multiple-part folders, and clamshell boxes. She is a master lecturer on book and book binding methods at the University of the Arts. She has conducted a myriad of professional workshops for the past 16 years and her work has been featured in regional, national, and international exhibitions. For this project: Ms. Carbone will evaluate each volume and determine its conservation needs. She will personally conserve the rarest volumes. She will train, supervise, and monitor the work of the Project Bench Technician. This project will require approximately 20% of Ms. Carbone’s time over two years.
Richard Shrake, Assistant Librarian for Technology and Security since 2005, is in charge of all technology applications in the Library. From 1996 to 2000, Mr. Shrake served as a consulting technician for Teleco Systems in Wisconsin where he designed, installed, and maintained computer networks for manufacturing, educational, and government clients. During this time he developed sound knowledge of various networking topologies, including wireless, and assisted several organizations in the transition from Netware to Microsoft networking software. Thereafter, Mr. Shrake was the Librarian for Adult Services and Technology at Ilsley Public Library in Middlebury, Vermont. In this capacity, he was responsible for the planning and deployment of all technology at his library as well as for integration with Middlebury College and the State Library of Vermont. At the APS, Mr. Shrake has worked on data conversion projects and has installed and configured ContentDM and the Archivists Toolkit. He has also overseen technological aspects of several grant-funded projects including, most recently, the creation of an audio digital archive for fragile recordings of extinct Native American languages. For this project: Mr. Shrake will be responsible for integrating the essays and accompanying graphics into the APS website; providing links between the catalogue records, essays, and graphics; and uploading the catalogue records from the Library’s local catalogue (Amlib) to OCLC WorldCat. This project will require approximately 5% of Mr. Shrake’s time during the second project year (concentrated in the final six months).

Project Cataloguer (full-time, 2 years)
This individual will have the following qualifications: MLS (ALA) required. Previous cataloguing experience at a professional level (excellent working knowledge of cataloguing principles and procedures including AACR2, LCSH, MARC tagging and bibliographical utilities including OCLC) required; library work experience in an academic or research library environment preferred. Working bibliographical knowledge of two or more foreign languages desired, as are excellent oral and written communications skills and the ability to work well as part of a team. The job description is found under Methodology and Standards—Cataloguing.

Conservation Bench Technician (60% time, 2 years)
This individual will have the following qualifications: BA required. One year of book conservation experience, including knowledge of basic conservation principles. Proficiency using conservation equipment and tools. Should have ability and judgment to work independently with some supervision and as part of a team of conservators. Good communication skills, attention to detail, and familiarity with MAC-OS and Adobe Creative Suite 3-4. The job description is found under Methodology and Standards—Conservation.

Advisory Board: The Society’s Committee on Library, chaired by Jeremy Sabloff, President, Santa Fe Institute, and Williams Director Emeritus, University of Pennsylvania Museum of Archaeology and Anthropology, is a group of representative APS members who are charged with overseeing all Library affairs, including serving in an advisory capacity for all grant-funded projects. See Appendix G for a list of committee members.

Essayists: The five authors of the contextualizing essays will serve as informal advisors to the project, particularly in determining the appropriate complementary material for their essays.
DISSEMINATION

The APS is in a unique position to disseminate information about the Valentine/Darwin Collection. The Library, for example, has published the *Mendel Newsletter* since the 1970’s. The *Mendel Newsletter* is an annual publication that promotes awareness of archival and research resources for the history of genetics and allied sciences in all repositories (not just APS). The last ten years of the *Mendel Newsletter* are online and may be accessed on the APS website [http://www.amphilsoc.org/library/mendel/](http://www.amphilsoc.org/library/mendel/). Edited by Dr. Michael Dietrich of Dartmouth College, the editorial Board includes a distinguished group of historians of science. The publication is targeted to scholars who will find the availability of the Valentine/Darwin Collection of great interest, and who will often be in a position to pass this information along to colleagues, graduate students, and other interested parties.

Additionally, the APS will announce the cataloguing and availability of the collection to the history of science community through postings to professional letters and publications of organizations such as the History of Science Society, the Society for the History of Technology, and the Society for the History of Natural History, as well as to more general lists available through H-Net, such as History of Science, Medicine and Technology; Intellectual History; and World History. Announcements will also be made through the Philadelphia Center for History of Science (PACHS), a consortium of twelve regional libraries, museums, and university departments that collaborate on programs and linkages of collections. PACHS was founded by the APS and is housed on the Society’s premises. See [www.pachs.net](http://www.pachs.net) for further information.

The contextualizing essays will also be carefully embedded with metadata that will enable browsers, spiders, and other robotic web crawlers to find the site using simple web search tools. The essays will be linked to the APS OPAC ([http://opac.amphilsoc.org/amlilib/webquery.dll?v20=1&v22=2B](http://opac.amphilsoc.org/amlilib/webquery.dll?v20=1&v22=2B)) and other Darwin resources such as *The Darwin Correspondence Project* ([http://www.darwinproject.ac.uk/](http://www.darwinproject.ac.uk/)) and *The Complete Work of Charles Darwin Online* ([http://darwin-online.org.uk/](http://darwin-online.org.uk/)).

Researchers who work on site at the APS will be able to access volumes from the Valentine/Darwin Collection directly. For scholars who cannot come to Philadelphia, the Society provides reprography for a modest fee. The Library also awards approximately 20 Library Resident Research Fellowships annually, enabling scholars to spend a month on site to conduct research. Once the Valentine/Darwin Collection is available, the Library may initially set aside several of these grants to encourage use of the collection and to give it visibility in scholarly circles.

Additional Appendices (not cited in text):

Appendix I: Bibliography
Appendix J: Budget notes