

INTRODUCTION: WHY VICTORIAN NATURAL HISTORY?

By Barbara T. Gates

VICTORIANS WERE IN LOVE WITH natural history. David Allen describes their passion as a series of crazes – over geology, over shells, and over ferns, as in pteridomania (mania over ferns) – to cite just a very few examples. Lynn Merrill, on the other hand, delineates a more comprehensive, cultural romance, one extending over many years. Whatever we choose to call this love, we are still in the process of discovering just how deep and lasting it was. Like many love affairs, it was marked at first by a blush enthusiasm and fascination with otherness. This was followed by curiosity and a rage to risk self in the quest to know more about the other – and sometimes, as a result, by ridiculous missteps. Think of George Eliot and George Henry Lewes sloshing around at the seashore, ill-equipped but determined to find out enough to write about what they were trying to capture and study. Or recall Mary Kingsley out in Africa in a canoe propelled by several Congolese, tumbling out of the boat but saving her trusted copy of Albert Günther's 1880 *Introduction to the Study of Fishes*, tenacious in her desire to bring back labeled specimens to the British Museum of Natural history. Earlier, in a similarly resolute quest to record birdlife, John and Elizabeth Gould globe-trotted to the extent that they put Elizabeth's life and their growing family at risk. And people like explorer/naturalist Thomas Bowdich died of fever for their fervor over natural history, in Bowdich's case as he worked to detail facts about specimens in Porto Santo, off the coast of West Africa. Bowdich left a wife to fend for herself and their family via her own study of natural history, and one result was Sara Bowdich Lee's beautifully illustrated *Fresh-Water Fishes of Great Britain* (1828). The romance with nature certainly cut across class and gender barriers. Stonecutter Hugh Miller could lose himself as easily in geological pursuits as could Charles Darwin or Sir Charles Lyell and Marianne North's passion for plants may well have matched or exceeded that of Kew's famous botanist, Sir Joseph Hooker.

Romance, passion and love are, I believe, the right words here, and not just fanciful exaggerations. Merrill's book, *The Romance of Victorian Natural History*, deliberately draws its romantic title from those of Victorian books themselves: Louisa Anne Meredith's 1836 *The Romance of Nature; or the Flower Seasons Illustrated* and Philip Henry Gosse's *The Romance of Natural History* (1860), to name just two. Chalk blackboard sketch-artist and well-known popularizer of natural history, John G. Wood, found in nature's creatures "a wondrous beauty" that "astonishes and delights the eye, and fills the heart with awe and adoration" (*Common Objects of the Microscope* iv). If this is not love at first sight, it is

surely heartfelt. And Wood's readers and listeners must have been in accord with his ardor. His *Common Objects of the Country* sold 100,000 copies in one week. By way of contrast, Samuel Smiles's celebrated *Self-Help* (1859) sold only 20,000 copies in one year (Merrill 10). In Victorian Britain, adoration like Wood's most often came to the beholder through the sense of sight. Wood drew pictures of natural objects on his boards to awaken the sense of sight in his viewer/listeners. Late in the century, Eliza Brightwen, writing her own version of a Who's Who instead of submitting to the request for an official entry, jotted down her "academical distinctions," suggesting that "Dame Nature does not bestow outward and visible honours, but she gives keen eyes, sharpened wit and ever-increasing pleasure" (xxx-xxxii). The keen eyes of Victorian seers were essential in disentangling nature's bank, as Joseph Krasner noted so convincingly in his 1992 book, *The Entangled Eye*, and Bernard Lightman has more recently shown in his essay on "The Visual Theology of Victorian Popularizers of Science." A reliance on observation rather than on theory was in fact one of the things that set natural history apart from much of the science practiced in universities. The aesthetic of particularity that we have become accustomed to examining in the work of John Ruskin, the Pre-Raphaelites, and Gerard Manley Hopkins was trained through the Victorian fascination with scrutinizing nature. It was a legacy from romanticism funneled through the lens of Victorian natural historians, who looked with the naked eye, the hand lens, the microscope, and the telescope until they had their fill.

They did this throughout the whole of Victoria's reign and beyond, not just in what Lynn Barber called "The Heyday of Natural History, 1820–1870" or even in E. D. H. Johnson's "golden age" (vii) of natural history writing, which Johnson dates from 1770 to 1880. I think David Allen has it right in his 1996 essay on "Tastes and Crazes" where he describes the reign of natural history as corresponding to the enduring lust for ferns. Although this craze had its roots in the eighteenth century and on the Continent, its reign in Britain extended backwards at least to the very early nineteenth century and lasted well beyond Victoria's reign. We might also do well to recall that that great bastion of natural history, the British Museum of Natural History, was not built until the 1870s and 1880s, that it opened only in 1883, and had its huge successes decades after Barber's "heyday." One could further contend that despite the increased professionalization of science after the 1870s, relatively recent television programs like the nature series of David Attenborough and whole networks like the Animal Planet attest to a continued popularity of natural history, as does the increasing availability of Wardian cases in upscale floral shops and via the internet.

More specifically, then, just what distinguished or typified Victorian natural history? How might it be characterized other than by its ardor or the difficulty of its dating? Definitions are nearly as vexed as are those of "nature," the word whose elucidation so preoccupied C. S. Lewis in his *Studies of Words*. Clearly, as it is usually designated, Victorian natural history describes an overwhelming drive to collect, witness, and catalog nature that occurred during the reign of Queen Victoria, although, again, I would prefer to expand its date to encompass what we now call the long nineteenth century. Natural history offered fields open to amateur and professional alike, and those fields were populated by both throughout their history. It encompassed a fascination both with local nature and with the animals, vegetables, and minerals of the empire. And it certainly had an aesthetic as well as a scientific component; it was concerned both with leafy facts and the beauty of leaves. Desiring that his contemporaries acquire more genuine knowledge of natural history, Thomas Henry Huxley drew the following parallel: "To a person uninstructed in natural history, his country or

sea-side stroll is a walk through a gallery filled with fine art works, nine tenths of which have their faces turned to the wall” (“On the Educational Value of the Natural History Sciences” 3: 63). Huxley was also the man who defined natural history as applying to phenomena which are not “susceptible of mathematical or experimental treatment” (“On the Study of Biology” 3: 266) – although many amateur natural historians did plenty of experimenting and happily supplied Darwin with much of the data for his famous theories. Huxley’s definition limited natural history to “those phenomena of nature which now come under the general heads of physical geography, geology, mineralogy, the history of plants and the history of animals” (3: 266).

For other Victorians, though not for Huxley, natural history was also akin to religion, since natural history in part stemmed from natural theology – the belief that the discoveries of natural science were proof of the wisdom and power of a divine creation – and was at first indebted to William Paley’s 1802 book *Natural Theology*. Throughout the century, natural history continued to be a favorite pastime of clergymen and Evangelicals and a popular subject for the publications of the Society for Promoting Christian Knowledge. On the other hand, natural history became part of the Victorian rage for materialism and material possessions. One could collect birds or eggs or fish and show them off in the home. Cabinets of many sorts were developed expressly for the purpose and menageries were kept by the famous like Dante Gabriel Rossetti, who allowed his wombat to inhabit a lamp, and the less well known, who gathered animals and plants and placed them in simple cages and Wardian cases. One could also visit the many museums increasingly devoted to displaying collections and curiosities. Finally, I would like to re-emphasize that natural history was essentially egalitarian. No one was barred from its pursuit. Local clubs were formed by workingmen; women interpreted science for women and children; and a huge industry of cheap publications touting natural history arose by the 1840s, when more people could read and new methods of printing and reproducing illustrations for natural history texts became available. These publications, along with a myriad of public lectures, scientific demonstrations, atlases, and even science fiction, provided hosts of learners with insights into the worlds of natural history.

Today, as debates in contemporary popular culture still rage over the validity of Darwin’s theories, Victorian scholars continue to unearth the extent and significance of the Victorian fascination with the natural world that marked Darwin’s century and the turn to the next. At the moment, for example, I am gazing at two recent covers from prominent journals – one from *Victorian Studies* (47.2, 2005), showing scallop and brittle star illustrations from Philip Gosse’s *A Year at the Shore* (1865) and one from *Isis* (96.2, 2005), exhibiting an illustrated cover from Charles Knight’s *Pictorial Museum of Animated Nature with five Thousand Woodcuts*, depicting a swirl of animals – birds, monkeys, squirrels, elephants, lions and more – bordering a body of text. Scholars themselves seem to have developed their own romance with Victorian natural history books and illustrations, a romance that begins to rival those of their forebears. James Secord’s book on Chambers’s *Vestiges of Creation*, a Victorian best-seller, *Victorian Sensation* (2000) has received accolades of praise, and recent exhibitions of natural history and natural history artwork in England, Australia, and the United States reinforce the ardor over the ways that Victorians viewed nature.¹

As a journal, *Victorian Literature and Culture* is uniquely situated to shed new light on the subject of this particular volume. Decades ago, Lynn Merrill insightfully realized that “natural history writing . . . connects popular natural history – with its love of physical

objects – to Victorian literature, with its lexicon of particularity” (19). And the love of physical objects and facts about them is what in turn linked science to natural history writing. Victorian natural history was deeply involved with literacy and the literary, and Victorian science culture was literate to its core. Witness the graphic and graceful writing of a Darwin or a Lyell or a Huxley or the equivalent grace of a popularizer like Lyell’s secretary, Arabella Buckley, who rewrote the story of evolution for children and women and the working classes from the 1870s into the 1900s. Writers like Buckley prompt us to remember what happens every time a written text or idea is reinterpreted in writing: a different text appears, with new applications for new sets of readers. I use the word “literacy” as well as the word “literate” here to suggest that the growing audience for cheaper volumes and popular magazines that proliferated after 1840 and promoted natural history as wholesome and fascinating subject matter was made up of many people who were newly literate. The love for natural history certainly corresponded with the growth of readership in Victorian times. Much of what we know about Victorian natural history stems from writing and not from physical collections of various sorts or even from the amazing illustrations that were an adornment to much natural history writing. This said, I in no way wish to diminish the importance of those other media to the study of the history of natural history. More and more we are uncovering the significance of art and the arts of preservation to Victorian natural history, as several essays in this issue will indicate. But what Victorian natural history writing did, first and foremost, was to build and reinforce a powerful bridges: between science and art; between cognoscenti and the newly educated; between eager wordsmiths and booksellers and an equally eager public; between romanticism, with its expansive verbal tribute to nature, and Victorianism, with its adoration of concrete, detailed description.

This current volume of *Victorian Literature and Culture* sets out to join the contemporary discussion of Victorian natural history, to explore some of the whos, hows, and whys of the popular engagement with nature in nineteenth-century Britain. It is intended to become part of what might be called a cavalcade of Victorian natural history study, to use a term that Edward Wagenknecht adopted some fifty years ago when discussing the extensive procession of the English novel. It is not meant to be definitive but to add to our growing knowledge of Victorian natural history. The contents of the volume were dictated by the interests of its submitters and the editor’s wish to highlight new areas of interest. By the same token, some topics currently under careful scrutiny in the study of Victorian natural history, some of them reviewed above, are not being discussed here. There have already been excellent discussions of the importance of zoos, menageries, and expeditions to the Victorian fascination with wild things; the importance of periodicals in informing ordinary Victorians about the wonders of nature; and comprehensive discussions of class or particular professions, like the clergy, vis-à-vis natural history, to cite just a few important examples. Because these subjects have already been explored by others,² what we have instead is a collection of new research profiling a number of different topics, some closely inter-related, some more loosely tied, but all contributing to our growing sense of the depth and extent of the Victorian love of natural history.

The volume’s opening essay, Susan Bruxvoort Lipscomb’s piece on the Victorian editors of Gilbert White’s *Natural History of Selborne*, points to the continuum of British natural history. White’s book went through nearly two hundred editions and translations between its first publication in 1789 and 1970. If the roots of the British Museum of Natural History lay in Sir Hans Sloane’s collection in Montague House in the 1750s, a collection that was later

moved to South Kensington, the roots of Victorian nature writing lay in White's book. The book was massively popular in Victorian times, for unlike Chambers' *Vestiges*, it appealed to the religious as well as the doubters of the day. It was not White's science so much as his situation that intrigued Victorian readers. White stood for something that was passing; his writing fed nostalgia for a tranquil British countryside, a linkage of meaning and reverence with close observation of the days and months of nature's year. It was akin to the walks and strolls taken by so many observant Victorians and to the books that developed in the nineteenth century and described what might be learned by such local observation – books like Margaret Plues's *Rambles in Search of Ferns* (1861). Lipscomb probes the rationales of various Victorian editors of White from the 1830s to the century's end, revealing that editions of White's work can be viewed as a kind of barometer of Victorian preoccupations with natural history. Early in Victoria's reign, White was valued for his natural theology, in mid-century, for his powers of observation. By the 1890s, *The Natural History of Selborne* was admired primarily as a literary text. White's book thus served many of the Victorian interests I have outlined in the paragraphs above.

Birds, both wild and domesticated, belonged to those interests and were magnets for Victorian naturalists. They were studied, represented, classified, caged, raised and protected. And they were watched and listened to by many. Eliza Cook's 1869 *Poetical Works* thanked her readers for their response to her earlier poems because this reassured her "of many genial ears and hearts being open to the whistle of the woodland robin" and "to the paean of the cloud-piercing skylark" (preface). In the late 1800s, Gerard Manley Hopkins was praising the skylark for similar qualities in his 1877 "The Sea and the Skylark." Throughout the century, diverse writers also told their contemporaries how to raise birds, how to recognize the dangers of potential extinction of rare birds from America and the empire, and how to identify and know the birds around them. In our volume, Jonathan Smith relates birds to Victorian culture in his "Gender, Royalty, and Sexuality in John Gould's *Birds of Australia*." Gould's is perhaps the best-known name among Victorian catalogers of avians. The working-class son of a gardener, Gould eventually came to the London Zoological Society, where he served as a taxidermist and got to know intimately the animals shipped to the zoo for study and preservation. Before undertaking the study of Australian birds, he produced a large-format book featuring a hundred newly discovered birds from Asia. All of his books served as nineteenth-century guides, but because of size and cost, they had to be consulted in libraries or in collections of the well-to-do. There is, for example, a much-thumbed copy of the *Birds of Australia* in Melbourne's State Library of Victoria. In the volumes depicting Australian birds and in others of his volumes, Gould's plates are stunningly rendered by the best bird illustrators of his day, including his wife, Elizabeth Coxen Gould, Edward Lear, Henry Constantine Richter, William Hart, and Joseph Wolf.

Reading Victorian culture through the scrim of its ornithological representations, Smith looks at Gould's Australian text from a fresh point of view, tying the bird illustrations to representations of Victoria and Albert and, more generally, to domesticity in Victorian culture. The queen was of course often linked honorifically to the natural world. Numerous species from around the globe were named for her, such as the famous *Victoria regia*, or water platter from South America, which Anne B. Shteir discusses later in this volume. In the Goulds' poses of the pairs of birds of Australia, illustrated by Elizabeth Coxen Gould, Smith finds shades of Victoria and her consort – regal and adorned but nevertheless coupled and familial. This is particularly true of the most ornate and spectacular of Australian species,

the lyre bird and the bower birds. The nearly inaccessible continent and its fauna therefore parallel the nearly inaccessible queen and consort, but, as Smith demonstrates, both can be represented to viewers as accessible after all – by picturing their domestic lives.

Darwin was one of the scientists who greatly admired Gould's representations, and Gould was the friend who helped Darwin catalogue his birds of the Galapagos. Darwin was also a fancier of domestic fowl, as Karen Sayer asks us to remember in her "'Let Nature Be Your Teacher': W. B. Tegetmeier's Distinctive Ornithological Studies." If Smith deals with birds and domesticity, Sayer discusses birds and domestication, a prime topic for Victorian naturalists. One particularly pressing interest of Victorian biology was, for example, the origin of domestic fowl, originally believed to come from the Indian subcontinent. It was an interest shared by agriculturists and the public at large. Charles Knight, founder of the popular *Penny Magazine*, was careful to include information about jungle fowl from India in his "Farmer's Library," a reference series popular with the common reader (Fyfe 251–56). Domestication and the evidences it could provide for his study of origins of species was central to Darwin's studies as well. At one time Darwin kept ninety pigeons, working to breed them, observe their variations, and establish that they might have come from a common wild ancestor, the rock dove. As James Secord says, Darwin "hoped to show his readers that wild nature could be seen with the practiced eye of a pigeon fancier ("Nature's Fancy" 164).

Instrumental in training that eye was Darwin's acquaintance, William B. Tegetmeier, who taught Darwin about poultry of many types and helped him become a pigeon fancier. Tegetmeier, who seemed always in need of money, could not afford simply to be a fancier – though there were fanciers belonging to the East End of London in Spitalfields as well as to the wealthier West End. He was best known as a journalist. Darwin worried that Tegetmeier relinquished too much time to editing and devoted not enough to poultry study, but Sayer presents this journalist/breeder to us through his popular ornithological writing, through which he successfully linked vocation to avocation. Tegetmeier's range as a writer on the subject of poultry was extensive and made him available to a wide audience, from scientists like Darwin and to the very different readers of the *Boy's Own Paper*. As Sayer shows us, Tegetmeier also participated in the movement to promote humane and limited collecting, as of nests and eggs. In this he was a man of his time. Think of Charlotte Brontë's Agnes Grey, scolding the children who have stolen young birds which Agnes kills rather than watch being teased and tortured. Or, later in the century, recall the women who worked so hard to establish the Society for the Protection of Birds beginning in 1889, enlisting famous writers like W. H. Hudson and eventually the queen herself in their attempts to save egrets from extinction. Sayer labels Tegetmeier a "practical naturalist," one who bridges the worlds of natural history and its practical applications in agriculture and horticulture. Like Smith, she also asks us to look closely at illustrations, in this case in Tegetmeier's *Poultry Book*, where we find something quite different from royal domesticity. Instead, here is nostalgia for country life on the farm, perhaps akin to the nostalgia for an earlier time that Lipscomb sees in the renewable Victorian interest in Gilbert White's journals.

Poultry fancying involved looking at nature close at hand, just as did the keeping of fish in aquaria, or birds in cages, or ferns under glass, or plants in kitchen or estate gardens. In many ways, plants were easier to manage than were animals, and their story, display, and preservation are subjects of the next set of papers in this volume. A number of factors fed the Victorian love of plants. To begin with, garden styles changed from the picturesque interest of the eighteenth century to what has come to be called the "gardenesque," a style

that was ushered in with the reign of Victoria when landscaper John Claudius Loudon and his wife Jane came into influence in the 1830s. Instead of large lawns with features like ha-has and temples, plant materials that provided color and beds that emphasized shape and the display of plants were favored. Throughout the nineteenth century, plant hunters were hard at work throughout the empire, bringing home new specimens, some of which could be planted in the new gardens and others of which needed protection. The 1840s in particular saw a burgeoning of interest in plants, especially in the beauty of flowering plants and in the rareness of specimens. The Royal Botanical Gardens at Kew became a center of horticulture under the guidance of the Hookers, first Sir William and later Sir Joseph. Joseph Paxton invented the glass house in 1841 at Chatsworth, and soon the Palm House and the Temperate House were built at Kew. At the same time lawn mowers were invented, and in 1845 the glass tax was abolished, the latter enabling conservatories in more homes and public places. By the end of the century, many Victorians realized that plants and the land were in need of preservation as well as cultivation and classification, and Octavia Hill, Canon Hardwicke Rawnsley, and Sir Robert Hunter founded the National Trust in 1895.

Elizabeth Campbell's essay, "Don't Say It with Nightshades" opens our set of essays on plants and plant culture, offering both an overview of plants in Victorian culture – as objects of desire, as décor, as providing a language of flowers, as the province of women – and a close look at one "edgy" plant, "belladonna." (The plant is "edgy" both because it grows in wilder places, along the peripheries or edges of cultivation, and because it is poisonous.) Campbell adeptly reads Victorian culture through attitudes toward nightshade, suggesting that this plant can tell us much about the fears and avoidances of Victorians and the potential for medicinal use that were associated with the plant in the nineteenth century. She spells us a story of one plant's journey from exclusion from the language of flowers to a latter-day reinstatement in romantic botanical discourse. In her essay, nightshade becomes a telling touchstone for Victorian interests and anxieties. Grace Kehler, on the other hand, ushers us into the world of the cultivated Victorian garden in "Gertrude Jekyll and the Late-Victorian Garden Book: Representing Nature-Culture Relations" and returns us more directly to the realm of nature writing. Jekyll gardened avidly and wrote extensively about horticulture. Having surrendered her first love, painting, because of a serious eye problem, she turned to the use of masses of color in the more capacious area of the garden. In discussing Jekyll, Kehler reminds us that all nature writing removes us from nature at the same time that it tries to wed us to it. As language-users, human beings attempt to define the nature of nature but inevitably fail in fully integrating the human and natural worlds through words. Moreover, the garden, tailored as it is, does not give full access to an ever-elusive, evasive, non-human natural. Kehler's essay also probes the difficult position of a woman garden-writer like Jekyll, who lived the paradoxes of hoping to control nature while fully respecting it and who wanted to follow a ladylike pursuit but was an entrepreneur and promoter of herself as well as of her way of gardening.

In this volume of *Victorian Literature and Culture*, plants bring class issues to the fore. Jekyll was well off, what Kehler calls "a privileged Westerner," a person with a private estate and gardeners to help work it. Yet at the same time she was a driven, hard-working woman, in some ways a typical bourgeois – another of the many paradoxes that intrigues Kehler. Physician Nathaniel Ward, subject of Margaret Darby's "Unnatural History: Ward's Glass Cases," was also well-to-do. But Ward chose to work among the poor in the Docklands area and invented his famous Wardian cases in hopes of providing seamen with fresh plants while

on ocean voyages and the impoverished with a means of growing greenery in places where plants were difficult to grow. (As John Claudius Loudon, the renowned landscape designer, would realize, the cases also provided safe travel for plant specimens returned to England from the outposts of Empire.) Ward's desire to ameliorate human misery points to a common concern among Victorians who were concerned both with plants and with the working poor. To cite just two examples other than Ward, Elizabeth Twining in *What Can Window-Gardens Do for Our Health?* promoted window plants as sources of oxygen and cheerfulness for the working person. She advised opening windows early in the morning when fumes from coal were lowest, both for the sake of people and their window plants. After that, people were to close up the house and let the plants do their work. And Octavia Hill's sister, Miranda, began the Kyrle Society, whose aim was to beautify parks and add floral touches to areas around working-class homes. Like Twining, Ward was concerned about health issues, including his own. Living in Welleclose Square in Whitechapel, near to his patients, he suffered the same foul air as they did and felt a need for nearby greenery that was protected from the pollution around him. The development of the Wardian case stemmed from this need.

To read Darby's Ward after Kehler's Jekyll provides a further study in contrasts. Unlike Jekyll, Ward felt that a gardener's power over nature was at best only submission and not control. This may indicate differences in gender and in the timeframe in which each wrote – Ward in the 1840s and Jekyll at the turn to the next century – but it also suggests a different view of class. Ward was disappointed that his cases became the darlings of the bourgeoisie and disappointed that working-class men were more likely to become floriculturists than growers of salad greens. He did not especially like flower fanciers. Jekyll, on the other hand, was pleased to supplement her income with monies from sales of her plants and her skills, both offered from her estate at Munstead Wood. They were proof of her expertise in the garden.

If Darby finds Wardian cases to be “unnatural” in that they seem to run counter to nature's usual way of growing things plain air, Ann B. Shteir's essay, “‘Fac-Similes of Nature’: Victorian Wax Flower Modelling,” deals with the wholly artificial. Wax-flower modeling became a Victorian craze of its own. Like garden writing, wax flowers represented nature refashioned by human nature. If humans could hybridize or select flowers and grow them, they could not create flowers from scratch. They could, however, create wax models of flowers. Shteir describes those who did just that, from the Mintorn brothers, who both modeled and sold the secrets of modeling (selling their special wax, writing manuals like the *Handbook for Modelling Wax Flowers*), to the many genteel women who took up the practice as hobbyists and writers, to the people who used wax flowers as botanical teaching aids. Her fascinating account extends to the flower models on display at the Great Exhibition of 1851, some of which were as large as six feet tall.

Wax-flower modeling of course transports us from the realm of the book and its illustrations into the realms of Victorian objects and collections. Victorians loved the material, and collections of all sorts graced their homes and studies. Not just Wardian cases, but many types of cabinets were produced to hold prized items of natural history. Round glass cases held stuffed birds; aquaria held creatures of the rivers and sea; tiny vessels for the lapel held tiny glass flowers; jars held pickled specimens; boxes held butterfly collections; shelves were built and either left open, so that people could handle the items that lined them, or enclosed, to help preserve specimens or keep curious, potentially dangerous hands off. Because museums were becoming the great repositories of natural history and their displays helped democratize

natural collecting, their means of display were copied by home collectors. Lynn Merrill suggests that by the mid-nineteenth century, “cabinet” by and large meant natural history cabinet (108) and that a cabinet in fact was “a small-scale museum, a collection of curios, a personal archive” (107).

If one were going to preserve some of the more delicate specimens of those collections, one might desire some knowledge of taxidermy, and authors, ever eager to find new topics in natural history, made the art of taxidermy available to the individual collector. Sara Bowdich Lee, who as you will recall at one time needed to preserve and catalog a collection gathered by herself and her husband in West Africa, studied in French museums and read French texts to enable her to preserve natural history specimens. She also visited Charles Waterton, the naturalist who brought curare to England from South America and who invented new methods of taxidermy, and she took down his instructions for preparing specimens. Having to earn a living after the death of her husband, she made this advice available to the general public in her *Taxidermy; or, The Art of Collecting, Preparing and Mounting Objects of Natural History*. Taxidermy itself certainly yielded some peculiar specimens, as those who visited the Victoria and Albert Museum in 2001 for the centennial of Victoria’s death may recall. The exhibition at the V and A featured a small family of stuffed kittens, anthropomorphically arranged for a wedding and dressed in doll-sized clothes, a freakish sight for most twenty-first-century visitors. But as Michelle Henning suggests in her “Anthropomorphic Taxidermy and the Death of Nature: The Curious Art of Hermann Plouquet, Walter Potter, and Charles Waterton,” tableaux and dioramas of natural objects and scenes became a part of the Victorian landscape, and animals were arranged according to their presumed place not just in nature but in art, with tableaux representing both the natural world and the world of story. Aesop, Goethe, and other famous writers furnished the impetus for arrangements, and like wax flowers, stuffed birds and animals were to become inhabitants of the Great Exhibition. There, in anthropomorphosed vignettes, animal nature was transformed into human nature. Even satire was played out via stuffed creatures in displays like Waterton’s still extant “John Bull and the National Debt.” In turn, the taxidermists themselves were satirized for their craft. Think of Charles Dickens’s Mr. Venus in *Our Mutual Friend*, surrounded by his specimens and his partially articulated skeletons like the one of a Frenchman.

We are more likely to associate Dickens with vivid depictions of human nature, such a Mr. Venus, than with natural history. Yet as Adelene Buckland adroitly shows us in “‘The Poetry of Science’: Charles Dickens, Geology and Visual and Material Culture in Victorian England,” if we do, we are guilty of a serious oversight. Buckland takes us back to one of the primary branches of natural history as enunciated by Huxley – geology – as she probes Dickens’s work and relates it to science and to the diorama and other favored Victorian means of display – the panorama, the cyclorama, and the spectacle. Dickens, it appears, was not only a frequenter of London’s streets but of its shows, particularly those that included dramatic simulations of earthquakes and volcanic eruptions. Deftly, Buckland traces the various influences of geology on Dickens’s work, reminding us that Dickens was a close friend of Richard Owen, with whom he swapped texts. Catastrophism, a preoccupation of Owen, therefore became a favorite idea of the earlier Dickens. Dickens also adopted modes of writing favored by Victorian geologists like Sir Charles Lyell, displaying a dioramic written style that in Lyell takes the reader down into the bowels of the earth and the depths of the sea. This style, I would add, remained useful in popular scientific texts like Arabella Buckley’s books, written from the late 1870s through 1890s, but Dickens more or less discarded it

after the Darwinian revolution set in. His *Our Mutual Friend* (1861) was published after the release of the *Origin of Species* in 1859 and after the close of the Great Exhibition and the panoramas and dioramas which were so popular in the 1840s and 1850s. By the 1860s, Dickens seems to have felt that the post-catastrophist world offered no chance for rebirth following catastrophes, no hope for a phoenix-like resurrection, hence the darker, more entropic view of life presented in *Our Mutual Friend*. With Buckland's essay, this volume also ends, re-entering the realm of the visual that so marked Victorian texts and adding the genre of the novel to the list of lesser-explored forms discussed in this issue: the journal, the handbook or how-to book, the garden guide, and the illustrated, authoritative ornithological text. Of course Buckland's essay on Dickens and his novels also sends us to a subject more frequently explored in literary study, fiction and its authors, demonstrating the value of a journal such as this, devoted as it is both to literature in all its forms and to the many cultures, including the scientific, that these represent.

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NOTES

1. For just a few instances drawn from recent shows seen by this editor: "Joseph Wolf: Capturing the Moment" at the Jerwood Gallery of the Museum of Natural History in London, August-September, 2001; "John Gould's *Birds of Australia*" at the Australian Embassy in Washington, D. C., March 4-April 14, 2004; "Ocean Flowers: Impressions from Nature" at the Drawing Center in New York City, March 24-May 22, 2004; "Picturing Natural History" at the Pierpont Morgan Museum in New York City, 2004; "Natural History in America, 1730-1860," at the American Philosophical Society in Philadelphia, 2004; and "Nature's Art Revealed" at the Royal Botanical Gardens in Melbourne, Australia, 2004.
2. See, for example, Nigel Rothfels, *Representing Animals and Savages and Beasts: The Birth of the Modern Zoo*; Samuel Alberti, "Objects and the Museum"; Geoffrey Cantor and Sally Shuttleworth, eds., *Science Serialized: Representation of the Sciences in Nineteenth-Century Periodicals*; and Eileen Fyfe, *Science and Salvation: Evangelical Popular Science Publishing in Victorian Britain*.

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