

Etheldred Benett (1776–1845): The Lady was a Geologist

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Our efforts to build a geoscience culture of inclusion have sparked renewed interest in the women in the early history of geology, such as Mary Anning (1799–1847). Not allowed in professional societies, these women found unique ways to contribute. Some participated as wives and collaborators alongside their professional geologist husbands. Still others collected fossils or illustrated geology texts. Unfortunately, many women geologists remain hidden from history. Etheldred Benett (1776–1845) is one of them. Not only was she an early geological participant who preceded Mary Anning, but she may be the first woman to name fossil taxa, construct a stratigraphic column, and publish a fossil monograph.

A PRIVILEGED UPBRINGING AND EARLY INTEREST IN GEOLOGY

Etheldred Benett, the namesake of her paternal grandmother, was born in Wiltshire, England, in 1776, the daughter of Thomas Benett of Pythouse, a country gentleman whose family had profited as clothiers and in farming (Moody, 2005). Etheldred grew up in a privileged household and likely was privately educated.

Her older brother, John, became heir to the estate in 1797 following the death of their father, and in 1801, he married Lucy Lambert. He renovated and expanded Pythouse for his own family, and Etheldred and her sister Anna Maria moved to the Norton Bavant manor house, where Etheldred, who never married, resided throughout her life. As ladies of independent wealth, the sisters could follow their interests. In her correspondence¹, Etheldred commented on her servants and her numerous travels that included extended stays in London and along England's southern coast.

Lucy Lambert Benett's half-brother, the renowned botanist Alymer Bourke Lambert (1761–1842), may have inspired and cultivated Etheldred's interest in fossils (Burek, 2001). By early 1810, Etheldred was sending fossil specimens to naturalist James Sowerby (1757–1822), author of *The Mineral Conchology of Great Britain* (1812–[1846]). Sowerby referenced Benett several times in the first volume, such as her observations on collecting conditions, and her extraordinary, rare, and “uncommonly perfect” fossil specimens (p. 141). Sowerby also characterized her as an “indefatigable collector ... whose desire [was] to assist science and give information” (p. 222). The specimen *Trochus Benettiae* (p. 224), named in her honor, provides further evidence of Benett's participation and esteem in the geological community. Benett's fossil specimens were useful in several volumes of *The Mineral Conchology* (i.e., 2–5, 7), the latter volumes published by Sowerby's sons after he had passed.

In July 1813, Gideon Mantell (1790–1852) wrote to Etheldred Benett, “under the kind recommendation of Mr. Lambert,” to



Oil portrait of Etheldred Benett as a young woman. (Photograph by Renee M. Clary; used with the kind permission of Sir Henry Rumbold.)

request Benett's observations of the fossils around Norton house, since he thought them analogous to those in his area of Lewes. Their correspondence continued steadily for 30 years and included not only fossil discussions and sketches, but also displayed a familiarity and friendship with inclusion of current politics and their personal health issues. Mantell repeatedly asked Benett to produce a comparison of Wiltshire and Sussex fossils for him, which she procrastinated and eventually declined to do. Benett appeared confident in her skills and challenged some of Mantell's fossil interpretations. Upon learning of her death, Mantell sorrowfully noted the passing “of my much valued correspondent and excellent woman” in a 29 January 1845 journal entry.

STRATIGRAPHICAL SKILLS AND CHICKSGROVE QUARRY

Benett had good working knowledge of stratigraphical principles. She was familiar with William Smith's (1769–1839) work, though she seemed skeptical of some of it. In 1817, she wrote to Mantell that, with regards to Smith's *Stratigraphical System*, “If any Geological friends form a good opinion of it, I shall buy it, but not else, as I do not like his other work!” Benett also noted in her 1831 book that “The Chalk Marl, which is so local as to have been altogether unnoticed by Mr. Wm. Smith, is exceedingly well defined at Norton Bavant, at Bishopstrow, and at Stourton” (p. iii). Her detailed observations contradicted what Smith had previously reported.

¹The Hugh S. Torrens Archive in the History of Science Collections at University of Oklahoma includes copies of Benett's extensive correspondence, as well as sketches, books, and notes assembled by Torrens during his multi-year research on her. Unless otherwise specified, all quotes originate from letters and notes in the University of Oklahoma Hugh S. Torrens Archive. The original Mantell documents are housed in the Alexander Turnbull Library, Wellington, New Zealand, while Woodward correspondence is archived in Norwich Castle Museum, England. My research in the History of Science Collections at the University of Oklahoma was supported by an Andrew W. Mellon Travel Fellowship.



Etheldred Benett's collection included arrangements of small fossils, and she may have been among the first to sieve for microfossils. (Academy of Natural Sciences at Drexel University; photograph by Renee M. Clary.)

In 1815, Benett determined the stratigraphy of Upper Chicks Grove Quarry and sent the section to the Geological Society, London. She sent a corrected section the next year. In 1816, Sowerby reproduced her section in *The Mineral Conchology* (volume 2, p. 58–59), but he did so without Benett's knowledge—and without crediting her (Torrens, 1994). Benett's opinion of Sowerby's actions is clear in an 1816 letter to Mantell, "You have doubtless seen my section of Chicks Grove Quarry as Mr. Sowerby has publish'd it; which he did without my knowledge and without my seeing his observations on it, some of which I think is erroneous, and I am much vex'd that it should have been so publish'd; I shall therefore take an opportunity of sending you a copy of my own section as I otherwise intended doing."

AN EXTRAORDINARY COLLECTION OF FOSSILS

Etheldred Benett amassed a large collection of fossils. Though she personally collected some, she also purchased fossils from numerous individuals who resided in multiple locations. At least one of her collectors was a woman. In 1819, she confirmed, in a letter to Mantell, that she was buying in bulk, "I am obliged to buy masses to get those which I want. I have purchased more than a thousand specimens since my return from London." Benett examined, labeled, arranged, and sometimes sketched her fossils, and dispersed duplicates to her geological friends and professional societies—both in England and beyond. She also loaned her personal specimens to notable geologists, including Sowerby, Mantell, Greenough, and Murchison, who used them in their own publications. Upon Benett's death, Dr. Thomas Bellerby Wilson (1807–1865) purchased most of her collection and donated it to the Academy of Natural Sciences in Philadelphia, Pennsylvania, USA. There, some of Benett's carefully arranged fossil assemblages hint that she may have been one of the first people to sieve for microfossils (Torrens, 2004).

In March 1818, Benett informed Mantell that she had undertaken to write the *Geology of Wiltshire*. She eventually published the monograph in 1831, illustrated with E.D. Smith's lithographs. Benett's book documented her excellent taxonomic knowledge.

She identified and named new species based on their external morphology (Spamer et al., 1989), after three scientific gentlemen whom she contacted failed to do so (Benett, 1831, p. iii). However, Benett also mentioned that her catalogue had been approved by Greenough and "will run no risk of being despised in the Geological World" (Benett, 1831, p. iii). Even after its publication, Benett continued to annotate the copies in her possession as new specimens and data became available.

RECOGNIZING ETHELDRED BENETT'S LEGACY

Benett referred to herself as a geologist on more than one occasion. In 1818, when Mantell considered abandoning a book project, she wrote to him that "we Geologists cannot give our consent" to his withholding the book. In 1821, she suggested that Mantell's specimens "deserve to be inspected by a better informed Geologist than myself." Alexander von Humboldt even sent a bust of himself to Benett in 1830 in appreciation of her scientific skills.

However, Benett was frustrated by her gender limitations. When she sent fossils to the Museum of St. Petersburg, Russia's Czar Alexander I conferred upon her the Honorary Doctor of Civil Law to Dominum Etheldredus Benett—presuming Benett was a male. She personally delivered her monograph to the British Museum, and later received a letter of thanks mailed to "Etheldred Benett, Esq^{re}." Benett wrote to Samuel Woodward (1790–1838), "It is provoking that no one will believe that a Lady could write such a trifling thing."

Benett's specimens and knowledge were sought by male geologists, but women were not allowed to join and participate in professional scientific societies during her lifetime. Mantell's obituary of Benett acknowledged that geologists' fossil understanding was indebted to her, and Woodward (1907, p. 118) later referenced her "most distinguished of early *women-workers in geology*." However, Etheldred Benett should now be given her due. We should recognize her role as a *geologist*, and perhaps the first woman to name fossil species, construct a stratigraphic column, and publish a geological monograph.

FURTHER READING

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