

The Life of Mary Anning, Fossil Collector of Lyme Regis: a Contemporary Biographical Memoir by George Roberts



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Abstract: Despite the modern celebrity of the fossil collector Mary Anning (1799–1847) of Lyme Regis and her frequent use as an icon in scientific education and popularization, there are few accounts of her life by her contemporaries. We report here a previously unpublished anonymous manuscript memoir of Anning's life, in the Special Collections of the University of Bristol Library. Evidence from textual analysis and handwriting corroborates its attribution to George Roberts (bap. 1804–60) of Lyme Regis, schoolmaster and historian. He wrote it at some time during 1837–47, perhaps 1839–47, by adapting a passage in his 1834 history of Lyme Regis. It was apparently intended for a new book, but was altered into an obituary after Anning's death. Evidence is presented that Roberts wrote the obituary of Anning in the *Athenæum*, which was widely republished in newspapers. Henry De la Beche (1796–1855) published another obituary in the *Proceedings of the Geological Society*. Roberts helped him to obtain information from Anning's family, but did not use this new information in his manuscript. Benjamin J.M. Donne (1831–1928), a former pupil of Roberts, painted the Society's portrait of Anning. A claim that it was commissioned by a group, mostly Fellows of the Society, remains unconfirmed.

Received 12 April 2022; revised 13 October 2022; accepted 23 October 2022

Mary Anning the younger (1799–1847), fossil collector and dealer of Lyme Regis, was held in affection by many within the geological community. This is demonstrated by the publication of her obituary by Henry De la Beche (1796–1855) in this journal (*De la Beche 1848*). Fellowship of the Geological Society then excluded women *de jure* and, in practice, also most of the male population. An obituary was therefore an exceptional honour for someone who was not a Fellow. But despite what is sometimes claimed, Anning was not unique in this – for instance, William Smith (1769–1839), civil engineer and pioneering stratigrapher, had been commemorated some years before (*Buckland 1842*, pp. 248–254).

This regard continues today. At the time of writing (October 2022), for instance, the Society's website includes an online exhibition: Mary Anning and the Geological Society (Library and Information Services, <https://www.geolsoc.org.uk/MaryAnning>). A temporary exhibition is also planned at the Society's base at Burlington House, London; this reminds us that the Society's former museum included specimens acquired from Anning (Caroline Lam, pers. comm. 2022). The Society also holds a portrait of Anning, which has been reproduced widely and has recently been conserved (*Fig. 1*).

Anning's life has found wider community interest. She has become something of a symbol of Lyme Regis, as exemplified by her prominence in the displays of Lyme Regis Museum. In 2022, a statue of Anning was placed on the shore at Lyme Regis by the locally based Mary Anning Rocks campaign (*Fig. 2*; *Hide 2022*). Simultaneously, a temporary exhibition in the Lyme Regis Museum included the Society's portrait on loan. The Mary Anning Rocks campaign illustrates how Anning is, both in this town and more generally beyond Lyme Regis, a figurehead for efforts to encourage young people, especially girls, to take an interest in geology (*Kulling 2017*; *Müller 2018*; *Lawrence 2020*; *Spini et al. 2021*; *Hide 2022*). She has been the subject of numerous recent

biographies and fictional accounts, in print and on film, all aimed at the wider public (e.g. *Goodhue 2004*; *Pierce 2006*; *Chevalier 2009*; *Kulling 2017*; *Sharpe 2020*; *Lee 2021*).

It might therefore come as a surprise that there are rather few contemporary accounts of Anning's life. One strategy to make the best use of this evidence has been to identify the authorship of any accounts that are anonymous to help assess their value as historical documents (e.g. *Taylor and Torrens 2014a, b*). One such anonymous source is a manuscript memoir in the Special Collections of the University of Bristol Library (SCUBL DM1186/5/1). *Torrens (1995, p. 269)* described this memoir as the 'most complete of many tributes' to the newly deceased Anning and attributed it to the Lyme Regis schoolmaster George Roberts (bap. 1804–1860). In this paper, we outline Roberts's involvement with the local geology and present the first published transcript of the Bristol manuscript, with evidence to confirm Roberts's authorship. We assess the two main published obituaries, one also ascribed to Roberts and one to De la Beche. We also comment on further links with the Geological Society and its Fellows through the Anning portrait.

Sources and repositories

We searched available newspaper and periodical databases for possible textual matches (British Newspaper Archive, ProQuest British Periodicals and Gale British Library Newspapers; coverage provided up to March 2022). Archival material is in: AC-NMW, Department of Natural Sciences, Amgueddfa Cymru – National Museum Wales, Cathays Park, Cardiff CF10 3NP; GSL, Geological Society, London, Burlington House, Piccadilly, London W1J 0BG; LYMPH, Lyme Regis Museum, Bridge Street, Lyme Regis, Dorset DT7 3QA; SCUBL, Special Collections, University of Bristol Library, Tyndall Avenue, Bristol BS8 1TJ.



Fig. 1. The famous portrait of Mary Anning, with her dog Tray between an ammonite and ichthyosaur, and Golden Cap cliff in the background, after recent conservation. This pastel version was painted in 1850 by Benjamin J.M. Donne, a former pupil of George Roberts at Lyme Regis. Source: GSL/POR/1, copyright and reproduction courtesy of the Geological Society of London.

George Roberts

George Roberts operated a private school in Lyme Regis. He was also twice mayor of the borough and a fine local historian (Torrens 1995; Taylor and Torrens 2014a; Powell 2018; Sharpe 2020). He is not known to have been a significant fossil collector himself, but he was well aware of the local geology of Lyme Regis. He included it in his local histories and a visitor's guide to the town, encouraging visitors to search for fossils on the shore, and he also issued a short account and guide to the famous Bindon Landslip of 1839, just west of the town (Roberts 1823, 1834, 1840, undated).

No archives survive from Roberts's school, but fortunately Benjamin J.M. Donne (1831–1928) recalled his schooldays, presumably in the 1840s, in an evidently autobiographical introduction to his book of 1898, *Colloquy and Song* (Donne 1898, pp. 4–12). Roberts took his pupils on regular afternoon walks, sometimes to the beach, and commented on what objects of historical or other interest could be seen. The boys also had free time to roam the area. Some pupils took up fossil collecting, doubtless with Roberts's encouragement. Donne and a friend were two such boys:

Those were the days when the great saurians of the lias rose in mighty resurrection on a doubting world [...]; those terrible witnesses to eons of past time attracted notable visitors to Lyn [sic]. Then Conybeare, Buckland and Mary Anning were visible apostles of the geological propaganda.

Hugh and I were vigorous disciples, our geological hammers the signs manual [official signatures, i.e. passports] that helped us decipher pages inscribed beneath Jurassic seas, or as we called it then, 'jollygising.' [geologising]



Fig. 2. Mary Anning and her dog Tray, statue by Denise Dutton, placed near Church Cliffs, Lyme Regis, 2022, by the Mary Anning Rocks campaign. Source: image copyright and courtesy Heather Britton.

To discover an ammonite as big as a cartwheel, a saurian to eclipse the biggest whale, was the certain hope that beguiled our 'leisure hour,' and enshrined an interest in 'old bones,' that made the bucolic life of Virgil, the warlike deeds of Achilles, quite tame and shoddy.

[...] Who is the pedant that would rebuke our mingling Homer with our own 'far-sounding sea,' [...] or finding sermons in saurian reptiles that had wallowed and fattened in our pristine lagoons?

(Donne 1898, pp. 6–7, 10).

Donne's words remind the reader that that was a time when classics and mathematics dominated English private schools and universities, and Roberts could not neglect them, despite his liberal views on education 'sixty years' ahead of his time (Donne 1898, p. 10; Powell 2018). Of course, an excursion on the shore at Lyme Regis is a fine way to introduce one's pupils to geology. But it remains unclear whether Roberts also included geology in formal classroom teaching, possibly as part of 'Geography' or 'General Knowledge', which were among the subjects advertised as taught in his school (Anon 1841; Roberts 1844, end matter). However, it is highly suggestive that Roberts wrote the first elementary dictionary of geological terms, his starting point being the glossary in Charles Lyell's *Principles of Geology* (Lyell 1830–1833; Roberts 1839; Hoare 2009). Roberts evidently aimed the dictionary, in part, at 'young persons who are beginning to read and think of Geology', and dedicated it to his pupils, 'those gentlemen who have been under his care, this little work, an earnest of his desire to promote the spread of general knowledge' (Roberts 1839, pp. iii, v–vi). So perhaps he included some geology in his 'General Knowledge' lessons.

The book's heavy emphasis on etymology suggests that Roberts linked his (presumed) expositions of geology, whether in the field or classroom, with his pupils' prior understanding, in this case of Latin and Greek. Perhaps to avoid accusations of excessive

diversion from the generally accepted curriculum, he carefully emphasized that geology should not distract from the importance of learning these ‘dead languages, which are the key to the technical terms of all sciences’ (Roberts 1839, p. x). William Buckland (1784–1856), another noted researcher on Lyme Regis geology and a friend of Roberts, was a native of nearby Axminster (Taylor and Torrens 2014a). He was President of the Geological Society for 1824–26 and 1839–41. His Annual Address for 1840 made a point of noting that Roberts’s book, and a competitor which appeared the following year (Humble 1840), remedied the ‘want’ of such a dictionary, long needed for ‘young students’ (Buckland 1842, p. 247).

George Roberts’s unpublished memoir

Provenance and format

The undated memoir is in the collection of books and manuscripts in the history of geology made by Joan M. Eyles (1907–1986) and Victor A. Eyles (1895–1978) and donated by Joan Eyles to the University of Bristol Library. With the memoir is a letter of 5 December 1949 to Victor Eyles from Frederick J. North (1889–1968), from 1919 to 1959 Keeper of Geology at the National Museum of Wales, Cardiff, and, among other things, a historian of geology (Bassett 2001).

The memoir’s provenance is unknown. No related letter from Eyles that might throw light on the matter could be found in an initial, but inconclusive, search of North’s only partly sorted archive in Amgueddfa Cymru – National Museum of Wales (C. Howells, pers. comm., 2 February 2022). All that can be said for now is that an examination of Roberts’s other material in Lyme Regis Museum, and of how it was acquired, suggests that his manuscripts and books were somehow dispersed onto the market during the first half of the twentieth century (R. Bull, pers. comm., 9 February 2022). Perhaps this dispersal included the Bristol manuscript.

The memoir is written on four sides of two folded foolscap sheets, with the writing on single sides only (Fig. 3). The two folded sheets show traces of a pin that held them together. The text is evidently complete, as only the upper part of the final page is used. The memoir is in the form of a manuscript ready to be sent to an editor or printer, but it shows no obvious editorial annotations or mark-ups to confirm any such use. We cannot determine from the physical evidence whether it was meant to be part of a longer manuscript.

Transcript

The original text, apparently written in one session, is here transcribed in roman font, including a few alterations apparently made at this time. Some text was later added in a different ink, transcribed here in bold font. Underlining, struck-through text and minor errors of grammar and punctuation are transcribed unchanged. Our editorial interpolations are in italic text in square parentheses.

[*text begins*]

A Brief Memoir of Miss Mary Anning the celebrated Fossilist.

~~Anning, Mary, a living worthy~~ [**Miss Mary Anning** *inserted*] whose name often appears in many works, [*illegible word, possibly but, overwritten with though*] in only one, from which this Notice is extracted, is there any thing connected with her early life and history. In the Hist of Lyme Regis 8.vo after mentioning the first resort of sea side visitors, ~~and~~ the lives they led, and the principal objects of their rambles, shells pebbles and sea weed, it goes on to state that Richard Anning was one of the first sellers of such articles. He was by trade a carpenter and on holydays went on the beach, and not unfrequently made a

holyday [to the great anger and ridicule of his wife *inserted*] to go with a ~~Mr South~~ [Mr Crookshanks *inserted*]. If he found any thing worth purchasing, it was usually exposed in front of his shop, near the prison, on a little table. Though the first seller yet [*that is, Anning*] Mr Crookshanks was the first collector of curiosities at Lyme. He had resigned his business in London in order to pursue fossiling, [for a consideration *transposed from after* ‘London’] which being defrauded of he jumped from a height into the sea in 1802. The fragments of fossils then found were considered to be and named, bones of crocodiles’ backs and jaws, ladies’ fingers, John Dories, salmon, turbots &c

[*new page begins*] Richard [Anning *inserted*] had a daughter named Mary who was taken by her nurse Aug 19–1800, to a field where some itinerant equestrians were to perform. A passing [*illegible word overwritten with cloud*] about five PM discharged a heavy shower, which drove the assembled crowds to the shelter of ~~linhays~~ adjoining linhays &c while the imprudent nurse ran under a lofty elm. After a deafening clap of thunder a group [of three persons, and an Infant *inserted*] was seeing lying motionless ~~under a tree~~ on the ground. All were dead but the infant which upon being put into warm water revived. Mary Anning was born a dull child but after the accident ~~became~~ [grew up *inserted*] lively and intelligent a circumstance which would have [been *inserted*] conclusive with the superstitious in other days as to the manifest interposition of favouring Providence. Richard Anning ~~fell~~ [died *inserted*] a victim of consumption in 1810 after having fallen over the highest cliff between Lyme and Charmouth at night.

After her father’s death Mary Anning went down one day to look for curiosities, the circumstances of the family not being good. She found an ammonite called by corruption, a cornemonius. Her age was then about ten years. [*new page begins*] Something occurred as she was returning which decided at once her future destinies. A lady in the street, seeing the fossil in her hand offered her half a crown for it, which she accepted, and from that moment fully determined to go down ‘upon beach’ again. She did as she had resolved and in four months after, in the year 1811 saw among the ledges at low water the projecting bone of some animal. This crocodile (so it was considered) was traced as it lay by her and dug out by men she hired. H. H. Henley Esq purchased this for £23 and presented it to Bullock’s Museum.

In 1814, sir Everard Home published an account of some bones found at Lyme. He was quite at a loss respecting the species of animal to which the bones had belonged. The Lyme reptile was called a crocodile In 1816 some more fragments having been sent Sir Everard Home inclined to the belief that the creature was a fish. In 1818 Prof. Buckland shewed Sir Everard whom he was assisting the bones which resemble those of a lizard, which caused him to give up the idea of the animal having been a fish. Mr König named it Ichthyosaurus which has been retained and Sir Everard’s term Proteosaurus abandoned. [*new page begins*] But to continue any detail of these doubts and labours up to the finding an ~~perfect~~ entire skeleton would be tedious [here *inserted*] Geologists will ever look back to these as heroic times. The progressive discovery of the structure of the Ichthyosaurus occupied ten years – Miss Mary Anning fed the impulse given to the comparative anatomists which she had at first ~~created~~ excited. De Saussure, Deluc and others had like some of our great geologists done wonders for geology, but the formation of the earth, as characterized by organic remains, was as yet unknown. This was the period when our country woman began to and went on discovering.

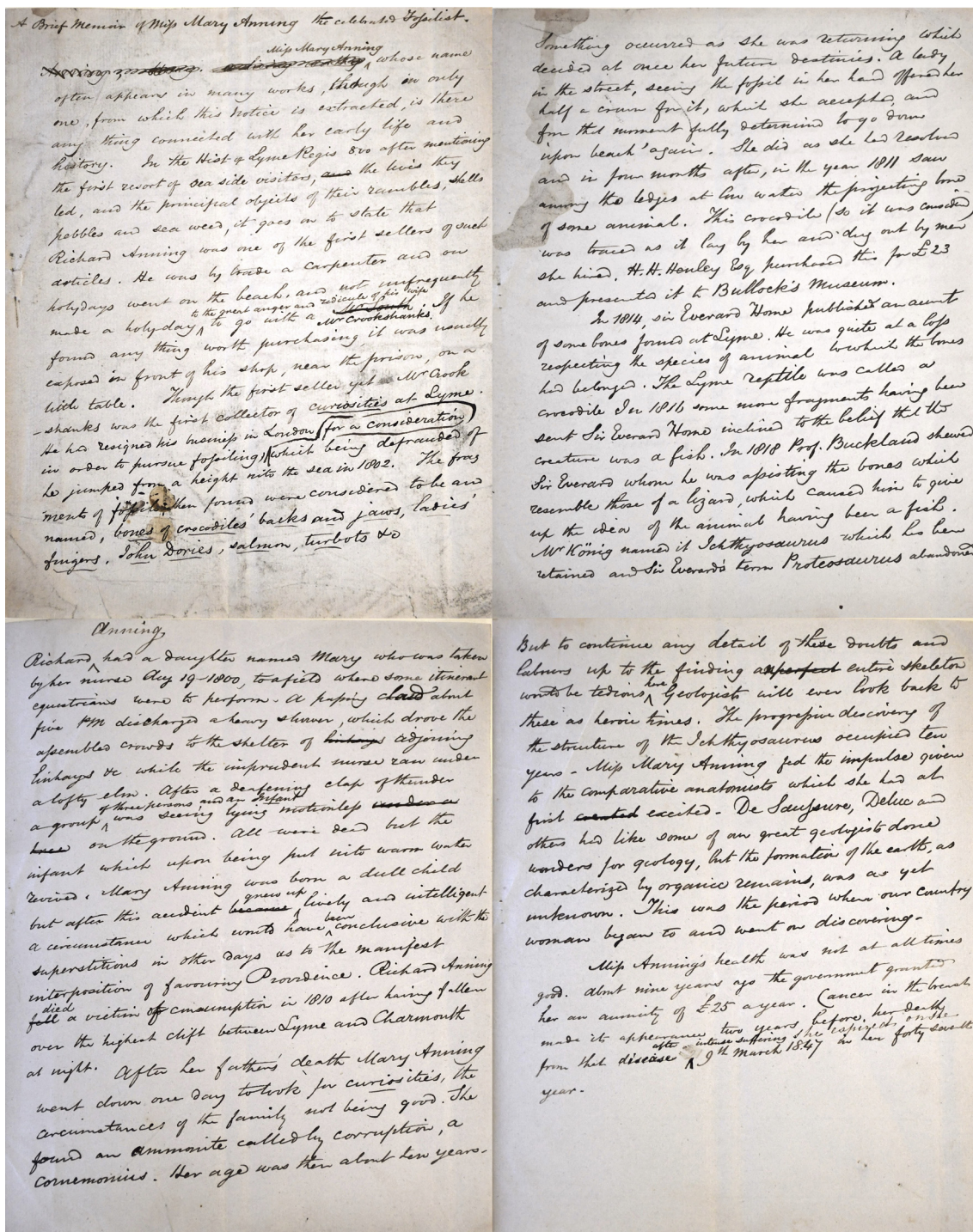


Fig. 3. The anonymous manuscript memoir on Mary Anning, written some time from 1837–47, and later altered in 1847 after Anning's death. SCUBL DM1186/5/1. Composite image of four pages. Source: copyright and courtesy Special Collections of the University of Bristol Library.

Miss Anning's health was not at all times good. About nine years ago the government granted her an annuity of £25 a year. Cancer in the breast made its appearance two years before her death from that disease [after intense suffering she expired on the inserted] [21 deleted] 9th March 1847 in her fortyseventh year. [text ends]

Dating

Most of the manuscript is in uniform handwriting, and evidently written at a single point some time during 1837–47, from the '1837'

watermark on one page, presumably the year of manufacture of the paper, and the reference to Anning as 'living'. The original manuscript already shows occasional alterations and redrafting, such as the insertion of 'to the great anger and ridicule'.

The document was further modified in a different ink, in a second session (Fig. 3; in bold in the transcript). These new changes deleted reference to Anning as still living, and added a new title and a final paragraph on her finances, health and death. The new text refers to the government grant to help support Anning that was made in 1836 at the behest of a group of Fellows of the Geological Society, including Lyell, Buckland and Roderick Murchison (1792–1871) (Anon 1836; Sharpe 2020, pp. 129, 214). The grant was supposedly

'about nine years ago', giving a date of writing of about 1845, which cannot be correct as the changes must post-date Anning's death on 9 March 1847. In fact, Roberts is known to have misdated the grant to 'about 1838' (manuscript annotation in his own interleaved copy of Roberts 1834; LYMPH 2012/17, opposite p. 290; transcribed by Lang 1960, p. 90). Taken together, the internal evidence points to the modifications being made about 1847, soon after Anning's death.

Content

North suggested to Eyles that the memoir of Anning was 'obviously written soon after her death, and equally obviously based largely' on the second edition of Roberts's history of Lyme Regis. As the memoir's timing and the internal reference 'Hist of Lyme Regis 8vo' suggest, the bulk of the text ('Richard Anning was one of the first [...] occupied ten years') is indeed closely related to Roberts's book *History and Antiquities of the Borough of Lyme Regis and Charmouth*, in its 1834 edition (Roberts 1834, pp. 286–290), but not the earlier version of 1823, which has a different and much shorter account of Anning (Roberts 1823). The text of the manuscript appears to be taken from the 1834 book, with some deletion and paraphrasing and the addition of comments by someone evidently knowledgeable about Anning and Lyme Regis (e.g. Crookshanks 'defrauded'; equestrians of 1800 'itinerant';

Anning's intelligence after the lightning strike a 'circumstance [...] Providence'). The sentence 'Mr König named it Ichthyosaurus [...] Proteosaurus abandoned' is a significant change to Roberts (1834, p. 289), who had given Ure as the author of the genus name *Ichthyosaurus*. A final assessment in the penultimate paragraph, on how geologists would look back on those times as heroic for palaeontology ('Geologists will ever [...] discovering'), replaces an unfortunately ambiguous allusion to the siege of Troy and Anning as 'a Helen to the geologists' (Roberts 1834, p. 290).

Attribution and discussion

Torrens (1995, p. 269), followed by Goodhue (2004, p. 192) and Sharpe (2020, pp. 220–221), ascribed the manuscript to Roberts himself, and we agree. The similarity of content is not, of course, sufficient for this conclusion. Someone else could have copied from Roberts's book, as North suggested (other examples in Taylor and Torrens 2014a, b). However, although not qualified document examiners, we find that the form of the lettering in the manuscript is acceptably similar to Roberts's distinctive handwriting in a draft letter of about the same date (Fig. 4). It is also close to the slightly more hurried script in notes on portraits of Anning, datable to 1842–49 (Fig. 5), in Roberts's own interleaved copy of his *History* (1834; LYMPH 2012/17, opposite p. 284; transcribed by Lang 1960, p. 90).

ouvrage.
 Je ne puis pas vous cacher le regret que je
 fessons de ne pouvoir pas accepter votre invitation
 pour visiter la maison où je n'aurois pas manqué
 d'avoir beaucoup appris sur les antiquités et sur
 la conformation et les fossiles du voisinage. Ce
 plaisir ne m'est pas accordé: je n'en suis pas
 moins sensible de l'honneur d'avoir reçu
 une invitation de M de Gerville! L'année passée
 j'ai été à Westminster Abbey pour y faire des
 questions à M^r Buckland touchant la santé de
 son cher père votre confrère Dr Buckland Doyen
 de l'abbaye de Westminster. Il n'est plus chez
 lui. On l'a confié à un médecin qui seoit
 tout à fait perdu. L'esprit. La
 santé est fort bonne. Il pourra bien vivre
 à un âge avancé. Le géologue Dr Buckland
 on peut dire vraiment n'existe plus. Comme
 vous Monsieur Dr Buckland aimoit l'étude de
 l'antiquité.

Fig. 4. George Roberts's distinctive handwriting in a draft of a letter to the French palaeontologist Charles de Gerville (1769–1853), dated 29 May 1852, discussing, among other things, William Buckland's dementia (Taylor and Torrens 2014a, pp. 314, 320). LYMPH 1979/19-3. Source: image courtesy of Lyme Regis Museum.

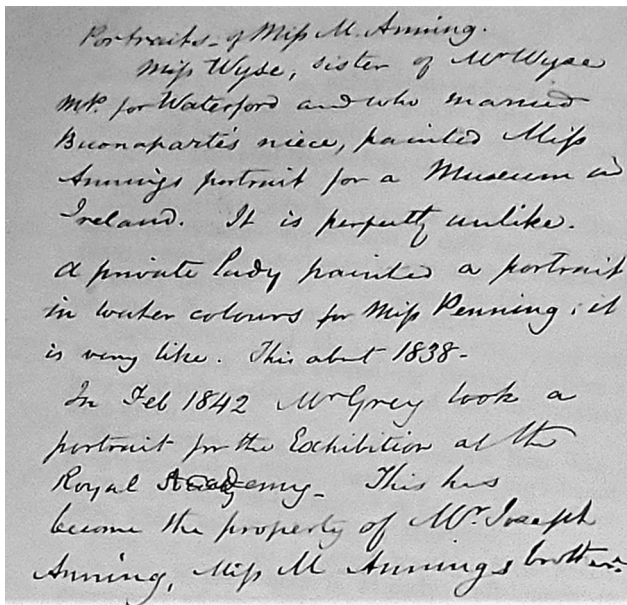


Fig. 5. Notes concerning portraits of Anning, opposite p. 284 in Roberts's own interleaved and annotated copy of Roberts (1834) (LYMPH 2012/17). This writing is partly datable to 1842–49 by the reference to Anning's brother Joseph (1796–1849) owning a painting made in 1842, and the failure to mention Donne's painting of 1850. Source: image courtesy of Lyme Regis Museum.

Moreover, certain other annotations to Roberts's interleaved copy closely parallel, in content, some of the Bristol manuscript memoir's changes to the 1834 text (opposite pp. 286, 289, 290; Lang 1960, p. 90). There is the common error noted here in dating the 1836 government grant to about 1838. The interleaved copy also refers to Home's name *Proteosaurus* and its supersession, and the correct ascription of *Ichthyosaurus* to König (LYMPH 2012/17, p. 289). The date of these annotations in the interleaved copy is uncertain, by the nature of such documents. The '1841' written on the title page is presumably the date of binding. Some information was plainly to hand before then, such as that on *Proteosaurus*, mentioned as an obsolete name of Home's in the 1839 dictionary (Roberts 1839, pp. 141–142). However, the remarks on paintings clearly post-date 1841 at least in part (Fig. 5).

From the original commencement 'Anning, Mary, a living worthy ...', we conclude that the Bristol memoir was initially written to serve as an entry in an alphabetical compilation of short biographies, or some other array of topics. The corresponding text in the 1834 *History* indeed occurs in the chapter entitled 'Biographical sketches of the worthies of Lyme'. Roberts's annotations in his interleaved copy of the *History* suggest that he was perhaps gathering changes for use in a new edition, although no such revision was ever published (LYMPH 2012/17, John Fowles, undated, label on copy). However, the internal reference to the *History* suggests that the Bristol manuscript was intended for some new book, because a new edition of the *History* would not need to refer to itself. Also, the memoir generally did not attempt to deal with the details of Anning's finds, which had been published in a separate and more specifically geological part of the 1834 book. This suggests that the planned work was not focused on the Lyme Regis area and its geology. Perhaps it was what became *Social History of the Southern Counties* (Roberts 1856). If so, the memoir was not used, at least in that form. The relevant section in *Social History*, on the growing popularity of seaside resorts and recreations such as geology, says very little about Anning, and fails to correct the error about South, but does contain the trope of the heroic era ('The time of heroic geology

abounded with great men, as did that of the Argonauts', Roberts 1856, p. 557).

We therefore identify Roberts as author of the Bristol manuscript, both in terms of the document itself and the intellectual content. It stems from his original account of Anning in his *History* of 1834, and was originally written for publication in some other book, but was quickly adapted to serve as an obituary.

The Bristol text offers rather little new content over the 1834 book. However, there are new details of Anning's last years, and a brief retrospective assessment of her role in helping to elucidate 'the formation of the earth, as characterized by organic remains, [which] was as yet unknown'. Evidently Roberts meant the development of stratigraphical palaeontology and the sequence of living things, at a somewhat later stage than the original establishment of geology as a science.

The working out of the stratigraphical column and sequence of fossils through rock successions, initiated notably by William Smith, and the diversity and nature of ancient life, continued to be active fields of research into the 1830s and beyond. This work was led by established figures such as Murchison, Buckland and Adam Sedgwick (1785–1873), with the support of collectors such as Anning herself. The results were widely published in scholarly journals and promoted through essay reports in monthly magazines and at meetings of the British Association for the Advancement of Science (e.g. Morrell and Thackray 1981; Rudwick 1985, 2005, 2008).

Much of the public's fascination with this new science came from the fossils, key in dating the rocks it is true, but, more importantly, because they were often fascinating and beautiful objects, such as the marine reptiles Anning and others were collecting. Furthermore, many fossils, such as trilobites or ammonites, could be collected by any amateur with a little knowledge of the local geology. These fossil finds contributed to then-current debates about the progression of life through time, and even the tensions then perceived by some between science and the Bible (Rudwick 2005, 2008).

In this discussion, interestingly, Roberts refers to the 'heroic times' of geology. The context in which Roberts uses the comparison, as a sort of second age in the development of the science, suggests that it stems from the Annual Address of the President of the Geological Society in 1839 by the polymath William Whewell (1794–1866):

The great geological theorizers of the past belong to the *Fabulous Period* of the science; but I consider the eminent men by whom I am surrounded as the *Heroic Age* of Geology. They have slain its monsters and cleared its wildernesses [...].

(Whewell 1839a, p. 96)

This would constrain the writing of the memoir to 1839–47.

Roberts was an educated man of letters, active in literature and history, quite apart from the needs of his teaching, and had already demonstrated an interest in geology sufficient to compile his dictionary. He might have read Whewell's metaphor in a borrowed copy of the *Proceedings*, or as reported in a general intellectual periodical, such as the *Philosophical Magazine* (Whewell 1839b), or in a newspaper such as the literature-oriented *Atlas* (Anon 1839). Whewell's address was also quoted by John Pye Smith (1774–1851) in his book *On the Relation between the Holy Scriptures and some Parts of Geological Science* (Pye Smith 1843, p. 324 footnote). Pye Smith was a respected Independent (or Congregationalist) minister and geologist, and a noted advocate of the acceptance of the evidence from geology, as in this book aimed at the general reader (Helmstadter 2004). It would not be surprising to find Roberts reading Pye Smith's book, which was successful

enough to be in its fifth UK edition by 1852. It may be significant that in 1839 Pye Smith had come to Lyme Regis to assist in the installation of a new minister at the Independent Chapel, better known today to some Geological Society members as the Dinosaurland Fossil Museum (Taylor 2021).

The published obituary by George Roberts

A much shorter and anonymous obituary of Anning, a single paragraph long, was published in the *Athenæum* in March 1847:

A correspondent has forwarded to us the following particulars relating to a provincial votary of science whose name will, we suspect, be new to many of our readers, notwithstanding the notoriety claimed for it by the writer: – ‘Died at Lyme Regis, aged 47, Mary Anning; of European fame as a discoverer of fossils – more particularly those of the Ichthyosaurus, Plesiosaurus, Pterodactyle and many fish in the blue lias of that locality. Born a dull infant, she was taken by her nurse while yet in arms to an exhibition of equestrian performances in a field. A sudden shower caused this woman and many others to seek for shelter beneath a tree – where they were struck dead by a flash of lightning. Some one took the infant Mary Anning from among the group of dead – and put her into warm water; upon which she revived, – and was ever after a lively girl. The history of Lyme Regis contains many interesting particulars respecting Miss Mary Anning’s history and researches. The great Ichthyosaurus now at the British Museum was sold *in situ* to Mr. Hawkins by Miss Anning.’

(Anon 1847a)

Sharpe (2020, p. 145) is almost certainly correct in attributing this *Athenæum* obituary to Roberts. Roberts is known to have been an occasional correspondent of the *Athenæum* (Roberts 1855). The obituary is plainly based ultimately on the *History* (Roberts 1834). The material is competently summarized and partly reorganized, rather than being mechanically précised. A degree of further knowledge is indicated by a newly added reference to Anning’s ‘European fame’. This almost certainly stems from her self-description as ‘well known throughout the whole of Europe’, recorded in an account of the King of Saxony’s tour in Great Britain just then published in English (Carus 1846, p. 197; Sharpe 2020, pp. 140–142). However, the obituary is so heavily abstracted that one cannot tell whether it was based on the Bristol manuscript or the *History* (Roberts 1834). The helpful reference to the ‘history of Lyme Regis’ could be taken from the manuscript, but could just as well be Roberts’s encouraging reference to his own book. A lapse over ‘many’ supposedly being struck dead by the lightning flash of 1800, rather than the original ‘three’, may simply be the kind of error that creeps in during textual pruning.

The *Athenæum* obituary was reprinted in more than 20 newspapers in Great Britain and Ireland, and almost certainly rather more in reality, as the coverage of newspapers in online databases is currently incomplete. Most newspaper appearances were clearly copied from the *Athenæum*, either directly or by way of other newspapers, as was then common practice. The *Gardeners’ Chronicle* version shows minor changes, including the assertion that Anning ‘ever after showed the effects of the lightning in the blackened appearance of her countenance’ (Anon 1847c). This is probably an unkind allusion to her tanned and wind-blown complexion after so many days out on the beach. It does not sound like a comment by Roberts and its source is unclear, though it may be significant that one of the editors of that journal was the botanist and palaeobotanist John Lindley (1799–1865). Roberts is also known to have sent reports on Lyme Regis matters to local

newspapers (Taylor 2020). But the prevailing practice of anonymity makes it hard to assess Roberts’s journalistic activities and it cannot be said whether, for instance, the obituary in the *Dorset County Chronicle* came directly from him (Anon 1847b).

The Geological Society obituary by De la Beche

At the Annual Meeting of the Geological Society of London on 18 February 1848, Henry De la Beche gave an address that included an obituary of Anning:

I cannot close this notice of our losses by death without adverting to that of one, who though not placed among even the easier classes of society, but who had to earn her daily bread by her labour, yet contributed by her talents and untiring researches in no small degree to our knowledge of the great Enalio-saurians, and other forms of organic life entombed in the vicinity of Lyme Regis. MARY ANNING was the daughter of Richard Anning, a cabinet-maker of that town, and was born in May, 1799. While yet a child in arms (19th August, 1800), she narrowly escaped death, when with her nurse taking shelter beneath a tree during a thunderstorm, which had scattered a crowd collected in a field to witness some feats of horsemanship to be performed by a party travelling through the country. Two women, with the nurse, were killed by the lightning, which struck the tree beneath which they considered themselves safe; but the child, Mary Anning, was by careful treatment revived, and found not to have sustained bodily injury. From her father, who appears to have been the first to collect and sell fossils in that neighbourhood, she learnt to search for and obtain them. Her future life was dedicated to this pursuit, by which she gained her livelihood; and there are those among us in this room who know well how to appreciate the skill she employed, (from her knowledge of the various works as they appeared on the subject,) in developing the remains of the many fine skeletons of Ichthyosauri and Plesiosauri, which without her care would never have been presented to comparative anatomists in the uninjured form so desirable for their examination. The talents and good conduct of Mary Anning made her many friends; she received a small sum of money for her services, at the intercession of a member of this Society with Lord Melbourne, when that nobleman was premier. This, with some additional aid, was expended upon an annuity, and with it, the kind assistance of friends at Lyme Regis, and some little aid derived from the sale of fossils, when her health permitted her to obtain them, she bore with fortitude the progress of a cancer on her breast, until she finally sunk beneath its ravages on the 9th of March, 1847.

(De la Beche 1848, xxiv–xxv)

This is an interesting and generally well-informed obituary – for instance, in its clear analysis of Anning’s technical abilities as a field collector, an excavator and a preparator back in the workshop.

North wondered to Eyles, in his letter cited earlier in this paper, whether the Bristol memoir was written by ‘some local person’ to help De la Beche prepare this obituary. This seems unlikely. We consider that Roberts wrote his memoir for publication himself. Moreover, De la Beche knew Anning well. He was a former Lyme Regis resident, having moved there at the age of 16 in 1812 when already interested in fossils (Sharpe 2013, 2020, pp. 42–45). It is not clear when De la Beche got to know Roberts, but Lyme Regis was a small town, especially in the quiet winter season. De la Beche subscribed to the earlier version of Roberts’s *History* (Roberts 1823, p. [1]). He also commented on the draft geological content of the 1834 revision, providing a local geological map for the frontispiece, and he was still resident in Lyme Regis when the book was

published, or at least when he subscribed before publication for three copies (Roberts 1834, p. xii and end matter).

Roberts did ask the Anning family to help De la Beche (Sharpe 2020, pp. 145–146, 221). The resulting letter to De la Beche was carefully written out by Mary Anning's 12-year-old nephew Charles in July 1847, presumably on the instructions of his father Joseph, Anning's brother (AC-NMW 84.20G.D.11, transcribed by Lang 1959). Unsurprisingly, the letter focused on events before De la Beche's arrival in Lyme Regis. It gave a well-meant, if in the circumstances redundant, extract from Roberts's *History* (Roberts 1834) dealing with the lightning strike, and, more usefully, an account of the famous ichthyosaur find of 1811–12, showing that, contrary to Roberts's account, Joseph discovered and collected the ichthyosaur's head and his sister extracted the rest of the specimen a year later (Roberts 1834, pp. 287–288; Torrens 1995; Taylor and Bull 2015; Sharpe 2020). Perhaps Joseph had not wanted to detract from his sister Mary's public image during her life, but now took the opportunity to set the record straight (Tom Sharpe, pers. comm. 2022).

Charles Anning also sent De la Beche an account of the lightning incident by John Haskings, the widower of Elizabeth Haskings, Anning's nurse killed in the strike (also AC-NMW 84.20G.D.11, transcribed by Lang 1959). It is in a different and unknown hand and purportedly written in 1821, but probably a later copy, as the original would have been kept by whomsoever had it written. But we cannot tell who commissioned the original statement in 1821.

If De la Beche's obituary owes anything to the *History* (Roberts 1834), this seems to be the lightning story. This was probably at one remove, by way of Charles Anning's letter, as suggested by the description of Richard Anning as a 'cabinet-maker', rather than Roberts's 'carpenter' (also used in the memoir). Roberts and De la Beche do not seem to have cross-checked their drafts. Roberts did note in the interleaved copy of his *History* that De la Beche 'comm^d' – probably short for 'communicated' – information concerning Home and the name *Proteosaurus*, and presumably De la Beche also prompted the Ure to König change (LYMPH 2012/17, p. 289). But this new material was incorporated into the original draft of the Bristol memoir manuscript, and some of it (as noted earlier) also in the 1839 dictionary. So, it cannot represent a cross-check at the time of composition of the obituaries. Indeed, Roberts's failure to correct his memoir about Joseph finding the ichthyosaur suggests that he did not see Anning's letter to De la Beche before he completed his own document.

The Geological Society's portrait of Anning

The painting provides a further connection between Roberts and the Society, for its artist was the Benjamin Donne mentioned earlier, who had recently been one of Roberts's last pupils at Lyme Regis (Wanklyn 1927, pp. xviii, 233, 1928; Sharpe 2020, pp. 144–145, 224). Donne signed it with his name and dated it 1850, which is, of course, after Anning's death. In fact, the pastel is in part a copy, although not a slavish one, of an earlier portrait in oils by one Grey or Gray (now in the Natural History Museum, London). Curiously, the painting secured Donne himself a brief obituary, under the misspelling of 'Don', in the Society's *Proceedings* (Gregory 1929, p. lxvi). This was despite his never being a Fellow, any more than Anning had been (Caroline Lam, pers. comm. 2014). In old age, Donne could not remember painting it when asked by Cyril Wanklyn (1864–1943), Roberts's successor as Lyme Regis's historian (Lang 1960, p. 90). But Donne did recall that he knew Anning well (C. Wanklyn to L. I. Belinfante, copy of letter dated 21 October 1922, GSL POR/1; also quotation by Donne given above). This is to be expected, given Donne's youthful interests, and the location of Roberts's school in Broad Street, latterly (until 2022) the Post Office, directly opposite Anning's later shop (Sharpe 2020, p. 78; Powell 2018, p. 17).

Wanklyn (1927, p. xviii) stated that the Society painting was commissioned by the donors of the stained glass memorial window to Mary Anning. The inscription on the window records that its donors comprised a group of Fellows of the Geological Society, together with the Vicar, Frederic Parry Hodges (1801–80) (Sharpe 2020, p. 146). The window was set up in the parish church at Lyme Regis in 1850 and the coincidence of timing certainly supports Wanklyn's explanation (Fig. 1; Sharpe 2020, p. 155). But Wanklyn gave no source. Also against his statement is the 1875 donation of the portrait to the Society by a single Fellow, William Willoughby Cole (1807–1886), Third Earl of Enniskillen (Anon 1875, p. lxxxvii). He had seemingly acquired it in Lyme Regis, presumably by purchase; at any rate, the Lyme Regis pharmacist James W. Marder (1824–1888) despatched it directly to the Society (GSL/L/R/19/151). Marder, who was himself an important local fossil collector, could have been the vendor, or simply a respectable go-between. Enniskillen already knew him and had, for instance, been instrumental in ensuring that Marder's important specimen of the Lyme pterosaur *Dimorphodon* went to the British Museum in 1869 (Owen 1861–1881, p. 45; Woodward 1870, p. 98).

It would certainly seem odd for the group of Fellows to donate a painting to private hands, unless perhaps to one of the Anning family (to complement the oil painting which they already had, so that more than one branch could have a copy?). But another possibility is that Donne's pastel was commissioned to be given to some public institution, perhaps the short-lived Lyme Regis and Charmouth Mechanics Institute which, as shown by local directories, had a museum in Bridge Street in the 1840s and 1850s (LYMPH records). On the failure of the institution, the painting perhaps ended up with whomsoever later sold it to Enniskillen. The matter remains open, and we cannot rule out Donne having made the painting as a gift or commission for one of the Anning or Marder families. Its timing can be explained by it simply arising from the wider question of commemorating Mary, its urgency re-emphasized by Joseph's death in 1849.

Wanklyn (1928) believed that the painting was commissioned by the Geological Society, presumably simply because it was then in Burlington House. Yet neither the window nor the painting can have been official Society donations, as there is no record in the Council Minutes or Society publications (Caroline Lam, pers. comm. 2014). The Society did, however, donate £1000 to the church to help with repairs to the window following a break-in in 2008 (Anon 2009).

Discussion

This study makes better known the content of the unpublished manuscript memoir of Anning at the University of Bristol and strongly corroborates its previous attribution, and that of the short *Athenaeum* obituary, to George Roberts. It also clarifies the sources used by De la Beche in his Geological Society obituary. However, the Society's original connection to the portrait of Anning by Roberts's pupil Benjamin Donne remains uncertain.

As with Roberts's original 1834 *History* (Torrens 1995), his memoir's account of Anning seems somewhat child-centred. In fact, this is to some extent an artefact of the structure of the *History*, which discussed some of Anning's fossils in a separate, and more technical, section on Lyme Regis palaeontology. Undoubtedly it also reflects the fact that Roberts was consciously aiming at a general audience, who liked good human interest stories, in the biographical section of the book. In fairness to Roberts, De la Beche's own approach for this very journal was not much more technical. Comparison with the other obituaries he delivered beside Anning's suggests that this was not just because Anning was female, except insofar as she had no substantial formal papers to her credit. The anecdote of the lightning strike, admittedly, might interest a

geologist. It is certainly matched in human interest by the equally quasi-geological story of the lung concretions of calcium carbonates and phosphates coughed up by the late Joseph Channing Pearce (1811–47), Bradford-on-Avon medical man and ichthyosaur collector (De la Beche 1848, pp. xxi–xxii).

Our study further emphasizes Roberts's importance, both direct and in secondary literature, as a historical source for Anning, as noted by Torrens (1995). It is an uncomfortable reflection of the debt historians owe to Roberts, directly and indirectly, for Anning's story, and how much less material they would have without him. It emphasizes more widely that, despite the intense current interest in Mary Anning, we have rather few contemporary witness statements about her and her achievements.

Scientific editing by Xiaoya Ma

Acknowledgements We are most grateful to the University of Bristol Library Special Collections for permission to publish the text and images of the subject manuscript, and to the Geological Society of London, Heather Britton and Lyme Regis Museum for the provision of images and permission for their use. We thank Ian Coates and Hannah Lowery (University of Bristol Library), Richard Bull and Richard Wells (Lyme Regis Museum), Cindy Howells (Amgueddfa Cymru – National Museum of Wales) and Caroline Lam (Geological Society) for the provision of archival material and information, Claudia Hildebrandt (University of Bristol) for photographing the manuscript, and Richard Bull and Tom Sharpe for discussion. We thank Leslie F. Noè and Renee M. Clary for their careful and helpful refereeing. MAT acknowledges the support of the libraries and staff of National Museums Scotland and the University of Leicester.

Author contributions MAT: conceptualization (lead), formal analysis (lead), investigation (lead), writing – original draft (lead); MJB: resources (lead), writing – review & editing (equal).

Competing interests The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability We provide a complete image and transcript of the main historical document within the paper. Otherwise, data sharing is not applicable to this article as no datasets were generated or shared during the current study.

References

- Anonymous 1836. Mary Anning, a female in humble life [...]. *St James's Chronicle*, 2 February 1836, 2.
- Anonymous 1839. Scientific intelligence. *The Atlas*, 6 July 1839, 11.
- Anonymous 1841. Education on the South Coast. *Bristol Times and Mirror*, 31 July 1841, 3.
- Anonymous 1847a. [Obituary, Mary Anning]. *Athenaeum*, **1013**, 337.
- Anonymous 1847b. The late Miss Anning. *Dorset County Chronicle*, 1 April 1847, 4.
- Anonymous 1847c. Lyme Regis. *Gardeners' Chronicle and Agricultural Gazette*, 3 April 1847, newspaper section, 110.
- Anonymous 1875. June 23, 1875. *Quarterly Journal of the Geological Society, London*, **31**, lxxxvii–lxxxviii.
- Anonymous 2009. Grant for Mary Anning window. *Midweek Herald*, 19 March 2009, online edn, <https://www.midweekherald.co.uk/news/20394814.grant-mary-anning-window/> [last accessed 4 January 2023].
- Bassett, D.A. 2001. North, Frederick John (1889–1968), geologist, educator, historian of science and museum curator. *Y Bywgraffiadur Cymreig. Dictionary of Welsh Biography*, online edn, <https://biography.wales/article/s2-NORT-JOH-1889> [last accessed 9 February 2022].
- Buckland, W. 1842. Address to the Geological Society, delivered at the anniversary, on the 21st of February, 1840. *Proceedings of the Geological Society, London*, **3**, 210–267.
- Carus, C.G. (trans. Davison, S.C.). 1846. *The King of Saxony's Journey Through England and Scotland in the Year 1844*. Chapman & Hall, London.
- Chevalier, T. 2009. *Remarkable Creatures*. HarperCollins, London.
- De la Beche, H.T. 1848. Anniversary address of the President. *Quarterly Journal of the Geological Society, London*, **4**, xxi–cxx, <https://doi.org/10.1144/GSL.JGS.1848.004.01-02.03>
- Donne, B.J.M. 1898. *Colloquy and Song; or, Sport in Leash of the Muses*. Kegan Paul, Trench, Trübner, London.
- Goodhue, T.W. 2004. *Fossil Hunter. The Life and Times of Mary Anning (1799–1847)*. Academica Press, Bethesda, MD.
- Gregory, J.W. 1929. The anniversary address of the President. *Quarterly Journal of the Geological Society, London*, **85**, lvi–cxxii.
- Helmstadter, R. 2004. Condescending harmony: John Pye Smith's Mosaic geology. In: Wood, P. (ed.) *Science and Dissent in England, 1688–1945*. Ashgate, Aldershot, 167–195.
- Hide, E.A. 2022. Mary Anning comes home. *Palaeontology Newsletter*, **110**, 44–46.
- Hoare, M.R. 2009. Scientific and technical dictionaries. In: Cowie, A.P. (ed.) *The Oxford History of English Lexicography. Volume II. Specialized Dictionaries*. Clarendon Press, Oxford, 47–93.
- Humble, W. 1840. *Dictionary of Geology and Mineralogy, Comprising Such Terms in Botany, Chemistry, Comparative Anatomy, Conchology, Entomology, Palaeontology, Zoology, and Other Branches of Natural History, as are Connected with the Study of Geology*. Washbourne, London.
- Kulling, M. 2017. *Mary Anning's Curiosity*. Groundwood Books, London.
- Lang, W.D. 1959. Mary Anning's escape from lightning. *Proceedings of the Dorset Natural History and Archaeological Society*, **80**, 91–93.
- Lang, W.D. 1960. Portraits of Mary Anning and other items. *Proceedings of the Dorset Natural History and Archaeological Society*, **81**, 89–91.
- Lawrence, S. 2020. *Anthology of Amazing Women*. Templar Publishing, London.
- Lee, F. 2021. *Ammonite* [film], <https://www.imdb.com/title/tt7983894/> [last accessed 4 April 2022].
- Lyell, C. 1830–1833. *Principles of Geology, Being an Attempt to Explain the Former Causes of the Earth's Surface, by Reference to Causes now in Operation*. Murray, London.
- Morrell, J. and Thackray, A. 1981. *Gentlemen of Science: Early Years of the British Association for the Advancement of Science*. Clarendon Press, Oxford.
- Müller, C. 2018. Hidden no more: on- and offline rewritings of the history of women in science. *Hard Times*, **102**, 12–21, <https://hard-times-magazine.org/index.php/Hardtimes/article/view/23/33>
- Owen, R. 1861–1881. *A Monograph of the Fossil Reptilia of the Liassic Formations. Part III. Plesiosaurus, Dimorphodon and Ichthyosaurus*. Palaeontographical Society, Monographs.
- Pierce, P. 2006. *Jurassic Mary: Mary Anning and the Primeval Monsters*. Sutton Publishing, London.
- Powell, C. 2018. *Lyme Regis Monographs*. FeedaRead.com Publishing.
- Pye Smith, J. 1843. *On the Relation between the Holy Scriptures and Some Parts of Geological Science*. 3rd edn. Jackson & Walford, London.
- Roberts, G. 1823. *The History of Lyme-Regis, Dorset, from the Earliest Periods to the Present Day*. Printed for the author by Langdon & Harker, Sherborne.
- Roberts, G. 1834. *The History and Antiquities of the Borough of Lyme Regis and Charmouth*. Bagster, London.
- Roberts, G. 1839. *An Etymological and Explanatory Dictionary of the Terms and Language of Geology; Designed for the Early Student, and Those who have not Made Great Progress in that Science*. Longman, Orme, Brown, Green, & Longmans, London.
- Roberts, G. 1840. *An Account of the Mighty Landslip at Dowlands and Bindon near Lyme Regis, December 25, 1839: with the Incidents of its Progress, the Locality, Historical Particulars, its Causes Popularly Treated and the Claims of Being the Effect of an Earthquake Considered with Mention of a More Recent Disturbance at Whitlands*. 4th edn. Dunster, Lyme Regis.
- Roberts, G. 1844. *Life, Progresses, and Rebellion of James, Duke of Monmouth, to his Capture and Execution, with a Full Account of the Bloody Assize*. Longman, Brown, Green, & Longmans, London.
- Roberts, G. 1855. [Henry Fielding at Lyme Regis]. *Athenaeum*, **1464**, 1339–1340.
- Roberts, G. 1856. *The Social History of the People of the Southern Counties of England in Past Centuries; Illustrated in Regard to their Habits, Municipal Bye-Laws, Civil Progress, etc.* Longman, Brown, Green, Longmans, & Roberts, London.
- Roberts, G. [undated, c. 1828]. *A Guide, Descriptive of the Beauties of Lyme-Regis, being a Sketch of the Situation, Salubrity, and Picturesque Scenery; with an Account of the Environs, and a Description of the Great Storm, in 1824*. Printed for the author by Ham, Lyme Regis.
- Rudwick, M.J.S. 1985. *The Great Devonian Controversy: the Shaping of Scientific Knowledge among Gentlemanly Specialists*. University of Chicago Press, Chicago, IL.
- Rudwick, M.J.S. 2005. *Bursting the Limits of Time: the Reconstruction of Geohistory in the Age of Revolution*. University of Chicago Press, Chicago, IL.
- Rudwick, M.J.S. 2008. *Worlds before Adam: the Reconstruction of Geohistory in the Age of Reform*. University of Chicago Press, Chicago, IL.
- Sharpe, T. 2013. New insights into the early life of Henry Thomas De la Beche (1796–1855). In: Morris, R. (ed.) *A Journal of Sir Henry De la Beche Pioneer Geologist (1796–1855) Written in His Own Hand*. Royal Institution of South Wales, Swansea, 5–21.
- Sharpe, T. 2020. *The Fossil Woman. A Life of Mary Anning*. Dovecote Press, Wimbome Minster.
- Spini, L., Buckeridge, J., Smagghe, G., Maree, E. and Fomproix, N. 2021. Women must be equal partners in science: gender-balance lessons from biology. *Pure and Applied Chemistry*, **93**, 857–867, <https://doi.org/10.1515/pac-2020-1210>
- Taylor, M.A. 2020. Mary Anning (1799–1847) of Lyme Regis, and the Great Storm of 1824. *Proceedings of the Dorset Natural History and Archaeological Society*, **141**, 31–40.
- Taylor, M.A. 2021. Reverend John Glead (1785–1870), Independent minister and fossil collector of Lyme Regis. *Proceedings of the Dorset Natural History and Archaeological Society*, **142**, 79–90.
- Taylor, M.A. and Bull, R. 2015. A token found at Lyme Regis, Dorset, England, apparently associated with Mary Anning (1799–1847), fossil collector.

- Proceedings of the Dorset Natural History and Archaeological Society*, **136**, 63–67.
- Taylor, M.A. and Torrens, H.S. 2014a. An anonymous account of Mary Anning (1799–1847), fossil collector of Lyme Regis, England, published in *Chambers's Journal* in 1857, and its attribution to Frank Buckland (1826–1880), George Roberts (c. 1804–1860), and William Buckland (1784–1856). *Archives of Natural History*, **41**, 309–325, <https://doi.org/10.3366/anh.2014.0250>
- Taylor, M.A. and Torrens, H.S. 2014b. An anonymous account of Mary Anning (1799–1847), fossil collector of Lyme Regis, Dorset, England, published in *All the year round* in 1865, and its attribution to Henry Stuart Fagan (1827–1890), schoolmaster, parson and author. *Proceedings of the Dorset Natural History and Archaeological Society*, **135**, 71–85.
- Torrens, H.S. 1995. Mary Anning (1799–1847) of Lyme; 'the greatest fossilist the world ever knew'. *British Journal for the History of Science*, **28**, 257–284, <https://doi.org/10.1017/S0007087400033161>
- Wanklyn, C. 1927. *Lyme Regis. A Retrospect*. Hatchards, London.
- Wanklyn, C. 1928. The late B.J.M. Donne. *Dorset County Chronicle and Somersetshire Gazette*, 26 April 1928, 7.
- Whewell, W. 1839a. Address to the Geological Society. *Proceedings of the Geological Society, London*, **3**, 61–98.
- Whewell, W. 1839b. Address delivered by the Rev. William Whewell, B.D. F.R.S. President. *London and Edinburgh Philosophical Magazine and Journal of Science*, **14**, 376–387, 449–461, 502–507.
- Woodward, H. 1870. British fossils. *Geological Magazine*, **7**, 97–100, <https://doi.org/10.1017/S001675680020962X>