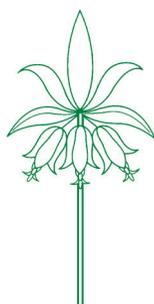


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Contents

- Nomenclatural and biographical tabular indexes to J. S. Bowerbank's
A History of the Fossil Fruits and Seeds of the London Clay (1840)
R. B. Williams 71–86
- Madeira giant bellflower (*Musschia aurea*), an endemic species from
Madeira, in the botanical literature of the 18th and 19th centuries
Sandra Mesquita, Cristina Castel-Branco and Miguel Menezes de Sequeira 87–118

Nomenclatural and biographical tabular indexes to J. S. Bowerbank's *A History of the Fossil Fruits and Seeds of the London Clay* (1840)

R. B. Williams

Abstract

James Scott Bowerbank's *A History of the Fossil Fruits and Seeds of the London Clay* (1840) was a landmark work, remarkable for the 12 genera and 106 species (save one) that were described in the first and only part that was issued being new to science. Although many of these taxa have since been reclassified or synonymized, the original descriptions and illustrations nevertheless remain essential sources for any further critical taxonomic research. Accounts of the publishing history of the two issues of the sole edition and precise dating of the original issue have already been published. However, because the work was never finished, the customary title-page and other informative front and end matter that would normally have been published in the final part to complete the consolidated volume never appeared. Major omissions are nomenclatural and general indexes and captions and explanatory notes for the illustrative plates. A nomenclatural tabular index collating the names and illustrations of the included taxa has accordingly been compiled to aid future researchers in more easily accessing the original descriptions for any future taxonomic work. Moreover, this index with explanatory notes clarifies and corrects Bowerbank's occasionally confusing original collations of textual descriptions and illustrations; it does not, however, in itself constitute a source of taxonomic opinion. Furthermore, since Bowerbank alluded to certain associates, and a number of taxa were given eponymous names, a biographical tabular index with supplementary notes has also been prepared, providing some new insights into the extent of Bowerbank's social and scientific networks.

Introduction

In 1840 James Scott Bowerbank (1797–1877) commenced publication of his groundbreaking palaeobotanical monograph, *A History of*

the Fossil Fruits and Seeds of the London Clay, with part I, which was published by John Van Voorst (1804–1898). Although this first part was highly regarded by Bowerbank's peers, publication unfortunately progressed no further, perhaps, as suggested by Williams and Torrens (2016a, pp. 262–263), because of the likely great expense of the copperplate engravings made by James de Carle Sowerby (1787–1871), combined with probably rather poor sales due to the somewhat esoteric subject matter. Only one edition of this sole part was published, but there were two issues (Bowerbank 1840, ?1877) by different publishers, one of them after Bowerbank had died. Poor sales of the first issue are strongly suggested by the fact that 37 years later, enough sets of the original sheets of letterpress remained to make publication of a second issue seem worthwhile, although the plates apparently had to be reprinted from the original coppers (Williams and Torrens 2016a, pp. 270–272).

The publishing history of Bowerbank's monograph was thoroughly documented by Williams and Torrens (2016a), and because of the many diagnoses of newly described genera and species that it contains, the crucial original publication date of 1 January 1840 was also carefully determined (Williams 2017). This is important because some of Bowerbank's taxa described therein remain valid today and therefore might possibly enter into any competition for nomenclatural priority. Whilst there is some uncertainty about the exact date

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of the reissue (?1877), this has no bearing on priority of the names of the new taxa in the original 1840 issue.

The customary title–page with other front and end matter that would have completed the consolidated volume was never published. Extremely important omissions include captions and explanatory notes for the plates, which were *de rigueur* in many other natural-history monographs published in Van Voorst’s highly respected “The Natural History of the British Isles” series (see Freeman 1980; Williams 2004). Furthermore, there is neither a nomenclatural nor a general index in either issue of the original publication.

These omissions make comprehensive searches for particular scientific names and their associated illustrations, and other more general information, tedious and difficult, particularly because the taxa in this work were arranged systematically rather than alphabetically. Of additional interest are Bowerbank’s inclusions of the names of naturalists who facilitated access to specimens or information or who were memorialized in eponyms, providing insights into the extent of his social and scientific networks, particularly among botanists and palaeontologists.

Therefore, nomenclatural and biographical tabular indexes have now been compiled and are presented here to aid future researchers in accessing the still essential original descriptions and other historical information in this seminal palaeobotanical work. Whilst it may be argued that, in the case of the nomenclatural index, online searches of digitized copies of this work might achieve the same objective, it must be pointed out that such searches would not solve the problems of ambiguous statements and errors in collation of text and illustrations in the original work. The present nomenclatural index does not, in itself, constitute a source of taxonomic opinion. Indeed, taxonomic matters, including synonymies, are not

addressed at all herein, since reclassifications and emendations (up to the family level), new combinations and synonymizations of Bowerbank’s taxa have been previously published by, amongst others, Ettingshausen (1854), Reid and Chandler (1933), Chandler (1964) and Stull et al. (2016). Such work does not, however, preclude the possibility of further changes in systematics being made.

Notes on the text

Bowerbank’s monograph on the fossil fruits and seeds of the London Clay is systematic rather than stratigraphic. The authority for all the new taxa in this work is Bowerbank (1840); the only new combination is *Nipadites parkinsonis* (Brongniart) Bowerbank (1840). Since no nomenclatural index to the newly described fossils was published, the pagination of the textual descriptions and the figures on each plate have now been carefully collated. This was at times rather difficult for two main reasons: first, because of the lack of captions with explanatory notes that customarily face the plates in taxonomic monographs published by Van Voorst; and second, because Bowerbank’s textual descriptions were sometimes rather unclear. For instance, to demonstrate comparative morphological features when describing a species, he had a confusing tendency to refer to images of congeneric species by figure numbers (sometimes even omitting the plate numbers), rather than by their scientific names. On occasion, that practice has sometimes conveyed, at first sight, the impression that an illustration has been assigned to a wrong species; however, with patience these convoluted references, not possibly detectable in online digital searches, may be disentangled.

In many of the textual descriptions, references to the figures on some plates do not appear in numerical order. The reason becomes

apparent when Bowerbank reveals that he was acquiring additional specimens while he was writing the text, sometimes after Sowerby had already engraved relevant examples (for instance, Bowerbank 1840, pp. 13, 14, 27, 39, 46, 74, 76, 86, 95, 135). Furthermore, Sowerby therefore was having to add some engravings to the copperplates as further specimens became available (see below). On one occasion Bowerbank altered his opinion on an identification of a specimen after Sowerby had engraved its image among a series of another species, leading to its figures being split between two plates (see description of *Hightea oviformis* on p. 37). In another instance, a similar situation arose after Bowerbank's deliberations over specimens from different sources that he originally thought to be of different species but finally deemed to be conspecific (see description of *Petrophiloides richardsonii* on pp. 44–46). For various reasons, then, a plate may comprise only specimens of a single species; or of several congeneric species; or of species of different genera.

Other points of confusion also remained, and there are some unquestionable errors in references to plates or figures that are explained in the following notes. Hence, corrected figure numbers in the present index do not agree exactly with what appears in the original text or on the plates.

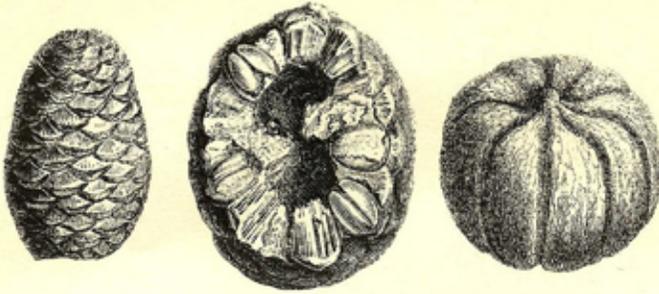
Notes on the plates

The fact that Sowerby had begun to engrave the plates before he could be certain of how many specimens were required to be illustrated is evident from several plates having the last-numbered figures squeezed into available spaces in the middle of the plate, the originally engraved figures having been otherwise neatly arranged in rows (for instance, plates 10, 13, 14). This has also resulted in figures of the same species appearing on different plates

(for instance *Hightea turgida* and *Petrophiloides richardsonii*). In February 1839, when Van Voorst (1839) announced that Bowerbank's monograph was in preparation, Sowerby was evidently already busy with the plates; in fact, he had probably begun engraving at least as early as 1837 (see pp. 44, 46). Three sample specimens were illustrated in this advertisement (Fig. 1) and were re-used on the wrapper of part I published in 1840 (Fig. 2). They are, from left to right, identifiable with plate 9, figure 9 (*Petrophiloides richardsonii*); plate 9, figure 13 (*Petrophiloides richardsonii*); and plate 13, figure 23 (*Cucumites variabilis*), but the fine details are not identical with those of the finished images on the plates (see Fig. 3). Although the 1839 images predate the publication of part I (Bowerbank 1840), they cannot be regarded as the type-specimens of newly recognized species because they are not associated with any names.

The 1840 published plates comprise various numbered figures or groups of figures: plate 1 has 11; plate 2 has 12; plate 3 has 8; plate 4 has 6; plate 5 has 2; plate 6 has 6; plate 7 has 12; plate 8 has 47; plate 9 has 23; plate 10 has 36; plate 11 has 44; plate 12 has 41; plate 13 has 35; plate 14 has 15; plate 15 has 33; plate 16 has 33; plate 17 has 47. In some instances different views of the same specimen are given separate figure numbers. Alternatively, a group of views may be allocated a single figure number with or without italic letters to distinguish the separate images. Care must be taken not to confuse italic letters that label morphological features (with or without leaders) with letters distinguishing particular images. Cautionary notes on the arrangements of figures on the plates follow:

1. Although plate 6 has six numbered figures, there are actually seven images because figure 2 comprises two views of the same specimen, labelled "a" and "b". Confusingly, particular features of figure



A HISTORY OF THE FOSSIL FRUITS AND SEEDS
OF THE
LONDON CLAY.

BY JAMES SCOTT BOWERBANK, F.G.S. &c.

Among the numerous and highly interesting fossils found in the London clay, none are more abundant than the remains of fruits and seeds, which, although found in such amazing quantities in the Isle of Sheppey, have hitherto received but little attention from geologists, and consequently present a wide field for inquiry and research.

For many years past the Author of the present work has made these interesting remains his peculiar study, and during this period there have passed through his hands more than 120,000 fruits and seeds, from which he has selected about 25,000 specimens. He proposes to publish figures and descriptions of as many of the species as can with certainty be determined, and, as a guarantee for the accuracy of the delineations, he considers it will be sufficient to announce that the whole of the drawings and engravings will be executed by MR. JAMES DE CARL SOWERBY.

In these beautiful remains of an extinct Flora, the minute and delicately-formed vegetable tissues are preserved in the most perfect manner; and it is part of the Author's plan to give numerous highly magnified illustrations of the anatomical structure as well as of the external form.

The work will be printed in royal 8vo, and completed in about five parts, each containing from fifteen to twenty copper-plates; many of the plates will contain from forty to fifty figures each.

JOHN VAN VOORST, 1, PATERNOSTER ROW.

FEB. 1839.

Figure 1. Announcement (February 1839) of proposed publication of Bowerbank's *A History of the Fossil Fruits and Seeds of the London Clay* (photo by R. B. Williams, personal collection).

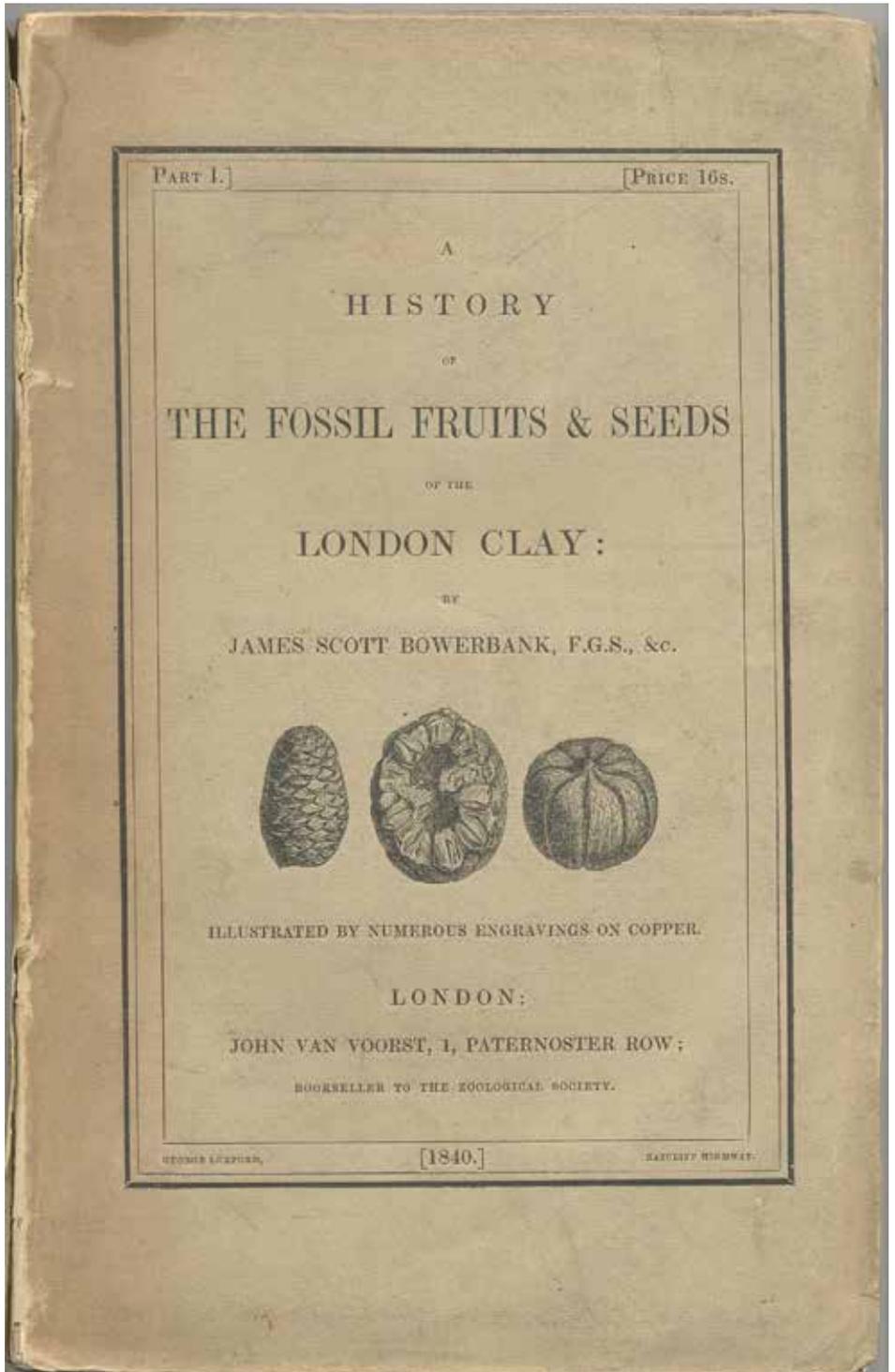


Figure 2. Front wrapper of part I (1840) of Bowerbank's *A History of the Fossil Fruits and Seeds of the London Clay* (photo by R. B. Williams, personal collection).

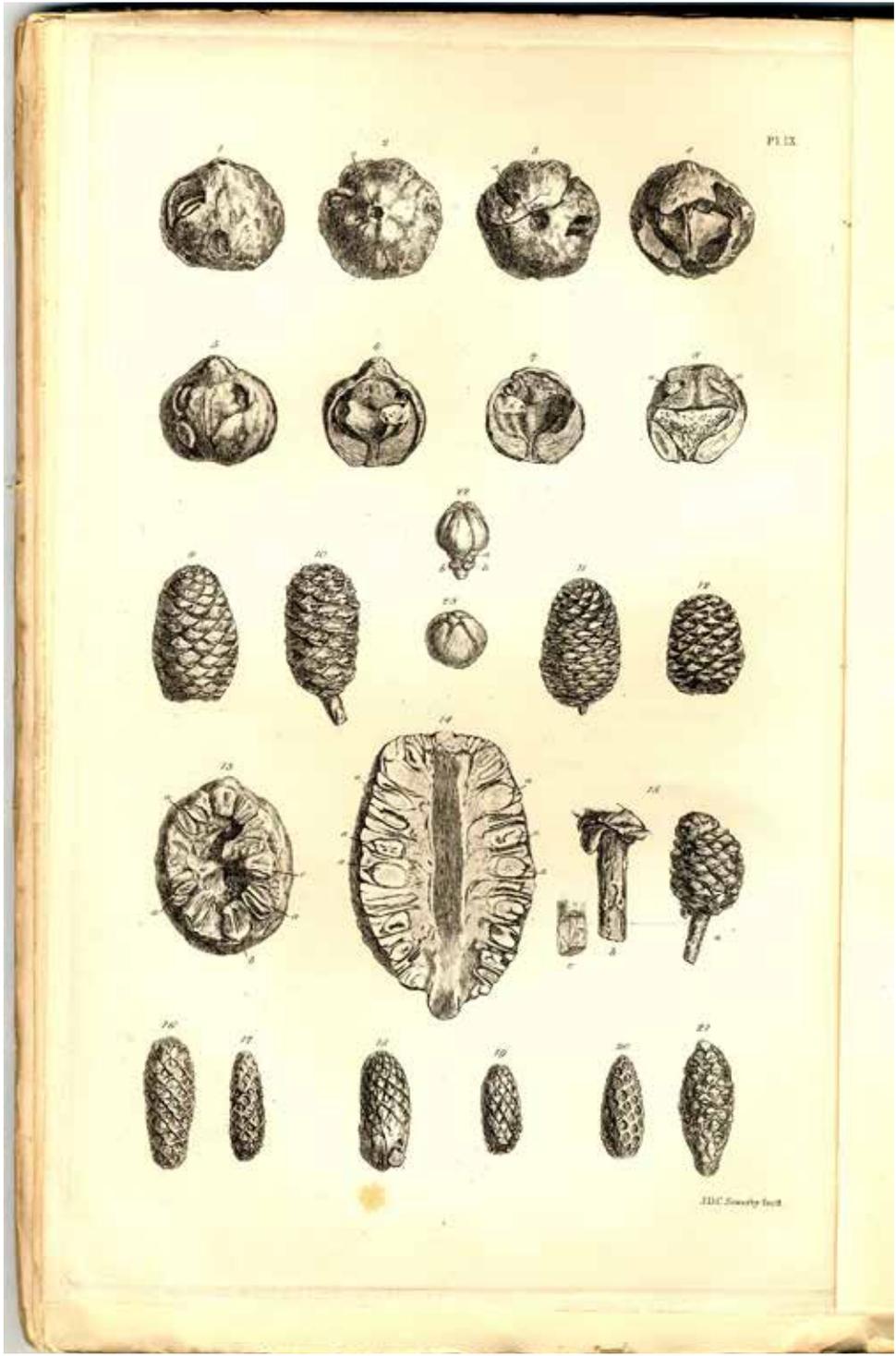


Figure 3. Plate 9 of part I (1840) of Bowerbank's *A History of the Fossil Fruits and Seeds of the London Clay* (photo by R. B. Williams, personal collection).

- 2a are labelled "c" and "d", but, even more confusingly, only label "d" has a leader.
2. Plate 7, with twelve numbered figures, has fourteen images; figure 5 comprises three views, associated with letters "a-d", none of which have leaders. The descriptive text (p. 28) refers to "fig. 5, a, b, c", but the purpose of the label "d" is unclear.
 3. Whilst plate 8 has forty-seven numbered figures, there are fifty-one images. Figure 6 comprises five separate examples of seeds; four are marked "a", and the other "b" to distinguish their shapes (p. 25). Figure 14 is misnumbered "41" due to an engraving error.
 4. Plate 9 has twenty-three numbered figures, but there are twenty-five images because figure 15 comprises three images of a specimen, clearly labelled "a-c".
 5. Although plate 10 has thirty-six numbered figures, there are thirty-nine images. Figure 4 comprises three images showing a seed from different aspects, labelled "a", "c", "d" (p. 50). Figure 9 includes two views, unlettered individually, of the same specimen; morphological features are indicated by letters with leaders, "b b", "c c", "d d", "e e".

Errors and ambiguities in collation of descriptions and figures

The following notes provide explanations for the circumstances surrounding entries in the nomenclatural index that differ from what is to be found in the original text.

1. Although the heading for *Hightea* (p. 25) refers to plates 7, 8 and 9 without specifying any figures, only plates 7 and 8 illustrate solely *Hightea* species. Plate 9 includes figures of species of *Hightea*, *Cupressinites* and *Petrophiloides*.
2. The heading for *Hightea attenuata* (p. 33) refers only to figures 12–17 of plate 8, but the description refers also to figure 20, comparing it with figure 15. Although the text is ambiguous, this reference to figure 20 (actually of *H. fusiformis*) is apparently intended to illustrate a comparative morphological feature within the genus, rather than to represent another example of *H. attenuata*. Since figures 18–21 of plate 8 explicitly refer to *H. fusiformis* (pp. 34–35), this reference to figure 20 in the description of *H. attenuata* (pp. 33–34) can therefore only be for the purpose of comparison.
3. Only figures 29 and 30 of plate 8 are assigned to *Hightea turbinata* (p. 38), but figure 24 is also alluded to in the species description. Whether as another illustration of *H. turbinata* or to compare some morphological feature is not immediately obvious, but this may be resolved because figure 24 is already specifically referred to as an example of *H. oviformis* in its description (pp. 36–37).
4. *Hightea orbicularis* (pp. 38–39) is illustrated in figures 31–33 of plate 8, but figures 7 and 24 (illustrative of *H. elliptica* (p. 32) and *H. oviformis* (p. 36), respectively) are also referred to for particular morphological features of congeners.
5. The illustrations assigned to *Hightea turgida* (pp. 41–42) are particularly confusing. The indication of figure 27 of plate 7 in the heading is erroneous because the text description clearly states in two instances that figure 27 of plate 8 (definitely *H. turgida*) is intended; that figure is the one originally assigned by Bowerbank to *H. oviformis* (see p. 37). Furthermore, reference is made to figure 8 (*H. elliptica*) of plate 8; and also (without explicitly indicating which species they illustrate) to figures 37, 39 and 47 (*Hightea*, ?spp.) of plate 8; and figure 2 (*Hightea*, ?sp.) of plate 7. Apart from figure 8 of plate 8

- (*H. elliptica*), those remaining figures were left unidentified by Bowerbank, being possibly of undescribed species (see p. 42). Although figures 1–8 of plate 9 are indicated in the heading for *H. turgida*, there is no explicit mention of figure 7 in its description or anywhere else, although there seems no doubt that it is one of the same series.
6. Although the heading for the genus *Cupressinites* (p. 51) refers only to plate 10, two of its species (*C. semiplotus* and *C. sulcatus*) are figured on plate 9.
 7. In addition to the figures given in the heading for *Cupressinites globosus* (p. 52), figure 10 (implicitly of plate 10) is stated in the description (p. 54) to represent this species, which is evidently an error for figure 13 of plate 10. Figure 10 of plate 10 correctly refers to *Petrophiloides oviformis* (pp. 49–50).
 8. Only figure 22 of plate 9 is stated to illustrate *Cupressinites sulcatus* (p. 61) in its heading, but an allusion to figure 29 of plate 9 occurs erroneously in the description; in fact there are only 23 figures on plate 9. Comparison of the text description of the purported figure 29 with the actual illustration indicates that figure 22, rather than 29, is actually intended.
 9. Figures 18–22 of plate 11 are given in the heading of *Cupanoides inflatus* (pp. 73–74), but figures 5 and 6 are also included in the description and are explicitly referred to the same species. The reference to figure 14 of plate 11 (p. 74) clearly indicates *C. tumidus*, but the further reference to figure 13 (p. 74) is ambiguous. Nevertheless, it is shown to represent *C. tumidus* in the heading of the description of that species (p. 72).
 10. Although only figure 24 of plate 11 is referred to the description of *Cupanoides pygmaeus* (p. 75), figures 5 and 6 of plate 11 are mentioned on p. 76. The indication is at first sight ambiguous, but it has already been confirmed that they refer to *C. inflatus* (see note 9 above).
 11. Indications in the description of *Tricarpellites patens* (p. 80) of figures 27 and 28 are apparently comparative references to images of *T. communis* on plate 11, as is the explicit reference to figure 31.
 12. Figures 27 and 28 of plate 11 also appear in the description of *Tricarpellites crassus* (p. 82), but, as for the description of *T. patens*, they apparently serve for comparison with *T. communis* (see note 11 above).
 13. The heading of the description of *Cucumites variabilis* (p. 91) specifies 34 figures of plate 13, whereas there are, in fact, 35 as confirmed on p. 98.
 14. In the heading for the genus description of *Faboidea* (p. 98), the illustrations indicated are plates 14, 15 and 16. All of the figures 1–15 of plate 14 are used as general descriptions of the genus but do not appear under any of the individual species descriptions. However, all of the figures 1–33 of plate 15 and figures 1–33 of plate 16 appear subsequently under individual species descriptions.
 15. The illustrations given in the heading for *Faboidea quadrapes* (p. 120) are figures 18 and 19 of plate 16. Only figure 18 is explicitly referred to in the very brief species description, although figure 19 is implicit in the heading (p. 98) for the genus description (see note 14 above). Direct comparison of figures 18 and 19 does suggest that they are of the same species, and they are herein accepted as such, although the latter is not mentioned in the species description.

**Nomenclatural index: New genera,
species and nomenclatural
combinations**

Since Bowerbank's monograph is not arranged alphabetically, the tabular index presented here serves to guide the reader to the included taxa and their illustrations. It also compensates for the lack of captions and explanations of the plates customarily included in similar taxonomic monographs.

In the general headings of taxa, Bowerbank provided indications of relevant illustrations for his descriptions of new genera, as he did for each new species. For the genus headings, the indications sometimes comprise whole plates or sometimes individual figures; the ensuing textual descriptions are more specific. The illustrations listed in the present index

refer only to the particular figures included explicitly in the text, rather than in the general headings, which may be different. If a genus heading in the original text refers to one or more whole plates, only those figures referred to in the detailed genus description plus those others remaining after having taken account of figures mentioned in the species descriptions, are listed herein under the genus alone. Other deviations of index listings from the original text have been explained above. Comparison of the numbers of the figures provided in the text with the actual images on each plate confirms that all, except figure 7 of plate 9 (see note 5 of errors and ambiguities), were specifically referred to by Bowerbank and are collated in the present index.

New genera	New species (n.s.) or combinations (n.c.)	Page nos.	Illustrations referred to in descriptions
<i>Cucumites</i>		90	Pl. 13; no specific figures
	<i>Cucumites variabilis</i> n.s.	91–98	Pl. 13, figs. 1–35
<i>Cupanooides</i>		65–68	Pl. 11, figs. 3, 5–8, 10–12
	<i>Cupanooides corrugatus</i> n.s.	69–70	Pl. 11, figs. 3, 4
	<i>Cupanooides depressus</i> n.s.	74–75	Pl. 11, fig. 23
	<i>Cupanooides grandis</i> n.s.	71–72	Pl. 11, figs. 10–12
	<i>Cupanooides inflatus</i> n.s.	73–74	Pl. 11, figs. 5, 6, 18–22
	<i>Cupanooides lobatus</i> n.s.	69	Pl. 11, figs. 1, 2
	<i>Cupanooides pygmaeus</i> n.s.	75–76	Pl. 11, fig. 24
	<i>Cupanooides subangulatus</i> n.s.	70–71	Pl. 11, figs. 7–9
	<i>Cupanooides tumidus</i> n.s.	72–73	Pl. 11, figs. 13–17
<i>Cupressinites</i>		51	Pl. 10, no figures additional to those below
	<i>Cupressinites comptonii</i> n.s.	57–58	Pl. 10, fig. 34
	<i>Cupressinites corrugatus</i> n.s.	61	Pl. 10, figs. 28, 29
	<i>Cupressinites crassus</i> n.s.	59	Pl. 10, fig. 9
	<i>Cupressinites curtus</i> n.s.	56–57	Pl. 10, figs. 20, 21
	<i>Cupressinites elongatus</i> n.s.	54–55	Pl. 10, figs. 15–18
	<i>Cupressinites globosus</i> n.s.	52–54	Pl. 10, figs. 12–14, 32, 33
	<i>Cupressinites recurvatus</i> n.s.	55	Pl. 10, fig. 19
	<i>Cupressinites semiplotus</i> n.s.	62–63	Pl. 9, fig. 23

New genera	New species (n.s.) or combinations (n.c.)	Page nos.	Illustrations referred to in descriptions
	<i>Cupressinites subangulatus</i> n.s.	60	Pl. 10, figs. 24, 25
	<i>Cupressinites subfusiformis</i> n.s.	56	Pl. 10, figs. 35, 36
	<i>Cupressinites sulcatus</i> n.s.	61–62	Pl. 9, fig. 22
	<i>Cupressinites tessellatus</i> n.s.	63–64	Pl. 10, figs. 26, 27, 30, 31
	<i>Cupressinites thujoides</i> n.s.	58	Pl. 10, figs. 22, 23
<i>Faboidea</i>		98–104	Pl. 14, figs. 1–15; pl. 15, figs. 10, 13, 33; pl. 16, figs. 10, 18–25
	<i>Faboidea acuta</i> n.s.	123	Pl. 16, figs. 32, 33
	<i>Faboidea bifalcis</i> n.s.	120–121	Pl. 16, figs. 20, 21
	<i>Faboidea complanata</i> n.s.	112	Pl. 15, figs. 25–27
	<i>Faboidea crassa</i> n.s.	105–106	Pl. 15, figs. 3–5
	<i>Faboidea crassicutis</i> n.s.	106–107	Pl. 15, figs. 6–8
	<i>Faboidea doliformis</i> n.s.	123	Pl. 16, figs. 28, 29
	<i>Faboidea larga</i> n.s.	111–112	Pl. 15, figs. 23, 24
	<i>Faboidea longiuscula</i> n.s.	104–105	Pl. 15, figs. 1, 2
	<i>Faboidea marginata</i> n.s.	109–110	Pl. 15, figs. 16–19
	<i>Faboidea oblonga</i> n.s.	114	Pl. 15, figs. 31–33
	<i>Faboidea ovata</i> n.s.	115	Pl. 16, figs. 1–3, 30, 31
	<i>Faboidea pinguis</i> n.s.	117–118	Pl. 16, figs. 10, 11
	<i>Faboidea plana</i> n.s.	108–109	Pl. 15, figs. 14, 15
	<i>Faboidea planimeta</i> n.s.	119–120	Pl. 16, figs. 15–17
	<i>Faboidea planodorsa</i> n.s.	107	Pl. 15, figs. 9, 10
	<i>Faboidea quadrupes</i> n.s.	120	Pl. 16, fig. 18
	<i>Faboidea robusta</i> n.s.	117	Pl. 16, figs. 7–9
	<i>Faboidea rostrata</i> n.s.	122–123	Pl. 16, figs. 26, 27
	<i>Faboidea semicurvilinearis</i> n.s.	110–111	Pl. 15, figs. 20–22
	<i>Faboidea subdisca</i> n.s.	113	Pl. 15, figs. 28–30
	<i>Faboidea subrobusta</i> n.s.	118–119	Pl. 16, figs. 12–14
	<i>Faboidea subtenuis</i> n.s.	122	Pl. 16, figs. 24, 25
	<i>Faboidea symmetrica</i> n.s.	108	Pl. 15, figs. 11–13
	<i>Faboidea tenuis</i> n.s.	121	Pl. 16, figs. 22, 23
	<i>Faboidea ventricosa</i> n.s.	116	Pl. 16, figs. 4–6
<i>Hightea</i>		25–31	Pl. 7, figs. 1–12; pl. 8, figs. 1–7, 9–11, 15–21, 24–28, 36–47; pl. 9, figs. 1–4
	<i>Hightea attenuata</i> n.s.	33–34	Pl. 8, figs. 12–17
	<i>Hightea elegans</i> n.s.	32–33	Pl. 8, figs. 10, 11
	<i>Hightea elliptica</i> n.s.	32	Pl. 8, figs. 7–9
	<i>Hightea fusiformis</i> n.s.	34–35	Pl. 8, figs. 18–21
	<i>Hightea inflata</i> n.s.	35–36	Pl. 8, figs. 22, 23

New genera	New species (n.s.) or combinations (n.c.)	Page nos.	Illustrations referred to in descriptions
	<i>Hightea minima</i> n.s.	39–41	Pl. 8, figs. 34–36
	<i>Hightea orbicularis</i> n.s.	38–39	Pl. 8, figs. 31–33
	<i>Hightea oviformis</i> n.s.	36–37	Pl. 8, figs. 24–26, 28
	<i>Hightea turbinata</i> n.s.	38	Pl. 8, figs. 29, 30
	<i>Hightea turgida</i> n.s.	41–42	Pl. 8, fig. 27; pl. 9, figs. 1–6, 8
<i>Leguminosites</i>		124	Pl. 17, figs. 1, 2, 5–7, 12, 13, 15, 16, 19, 37
	<i>Leguminosites aequilateralis</i> n.s.	137–138	Pl. 17, figs. 35–37
	<i>Leguminosites cordatus</i> n.s.	139–140	Pl. 17, figs. 40, 41
	<i>Leguminosites crassus</i> n.s.	125–126	Pl. 17, figs. 3, 4
	<i>Leguminosites curtus</i> n.s.	136–137	Pl. 17, figs. 31, 32
	<i>Leguminosites dimidiatus</i> n.s.	130–131	Pl. 17, figs. 16–18
	<i>Leguminosites elegans</i> n.s.	126–127	Pl. 17, figs. 5–7
	<i>Leguminosites enormis</i> n.s.	129–130	Pl. 17, figs. 14, 15
	<i>Leguminosites gracilis</i> n.s.	129	Pl. 17, figs. 12, 13
	<i>Leguminosites inconstans</i> n.s.	134	Pl. 17, figs. 26–28
	<i>Leguminosites lentiformis</i> n.s.	131–132	Pl. 17, figs. 19, 20
	<i>Leguminosites lobatus</i> n.s.	133–134	Pl. 17, figs. 23–25
	<i>Leguminosites longissimus</i> n.s.	128	Pl. 17, figs. 10, 11
	<i>Leguminosites planus</i> n.s.	132–133	Pl. 17, figs. 21, 22
	<i>Leguminosites reniformis</i> n.s.	135–136	Pl. 17, figs. 29, 30
	<i>Leguminosites rotundatus</i> n.s.	127–128	Pl. 17, figs. 8, 9
	<i>Leguminosites subovatus</i> n.s.	125	Pl. 17, figs. 1, 2
	<i>Leguminosites subquadrangularis</i> n.s.	137	Pl. 17, figs. 33, 34
	<i>Leguminosites trapeziformis</i> n.s.	138–139	Pl. 17, figs. 38, 39
<i>Mimosites</i>		140	Pl. 17, fig. 42
	<i>Mimosites browniana</i> n.s.	140–141	Pl. 17, fig. 42
<i>Nipadites</i>		[1]–8	Pl. 1, figs. 7, 8, 10; pl. 3, fig. 7; pl. 4, figs. 1–6
	<i>Nipadites acutus</i> n.s.	14–15	Pl. 3, figs. 1–3
	<i>Nipadites clavatus</i> n.s.	15–16	Pl. 3, figs. 4–6
	<i>Nipadites cordiformis</i> n.s.	13–14	Pl. 2, figs. 6–10
	<i>Nipadites crassus</i> n.s.	12–13	Pl. 2, figs. 4, 5
	<i>Nipadites ellipticus</i> n.s.	11–12	Pl. 2, figs. 1–3
	<i>Nipadites giganteus</i> n.s.	22–23	Pl. 6, fig. 1
	<i>Nipadites lanceolatus</i> n.s.	16	Pl. 3, figs. 7, 8
	<i>Nipadites parkinsonis</i> n.c.	16–21	Pl. 4, figs. 1–6
	<i>Nipadites pruniformis</i> n.s.	14	Pl. 2, figs. 11, 12
	<i>Nipadites pyramidalis</i> n.s.	24–25	Pl. 6, figs. 5, 6
	<i>Nipadites semiteres</i> n.s.	23–24	Pl. 6, figs. 2–4

New genera	New species (n.s.) or combinations (n.c.)	Page nos.	Illustrations referred to in descriptions
	<i>Nipadites turgidus</i> n.s.	21–22	Pl. 5, figs. 1, 2
	<i>Nipadites umbonatus</i> n.s.	9–11	Pl. 1, figs. 1–11
<i>Petrophiloides</i>		43–44	Pl. 9, figs. 13, 15; pl. 10, fig. 4
	<i>Petrophiloides cellularis</i> n.s.	47	Pl. 9, figs. 16, 17
	<i>Petrophiloides conoideus</i> n.s.	48	Pl. 9, fig. 20
	<i>Petrophiloides cylindricus</i> n.s.	48	Pl. 9, figs. 18, 19
	<i>Petrophiloides ellipticus</i> n.s.	49	Pl. 9, fig. 21
	<i>Petrophiloides imbricatus</i> n.s.	50–51	Pl. 10, figs. 1–4
	<i>Petrophiloides oviformis</i> n.s.	49–50	Pl. 10, figs. 10, 11
	<i>Petrophiloides richardsonii</i> n.s.	44–47	Pl. 9, figs. 9–15; pl. 10, figs. 5–8
<i>Tricarpellites</i>		76–79	Pl. 11, figs. 25–28, 30–32, 36, 39, 43, 44
	<i>Tricarpellites aciculatus</i> n.s.	83	Pl. 11, figs. 39, 40
	<i>Tricarpellites communis</i> n.s.	79–80	Pl. 11, figs. 25–31
	<i>Tricarpellites crassus</i> n.s.	81–82	Pl. 11, fig. 36
	<i>Tricarpellites curtus</i> n.s.	81	Pl. 11, fig. 35
	<i>Tricarpellites gracilis</i> n.s.	82	Pl. 11, figs. 37, 38
	<i>Tricarpellites patens</i> n.s.	80	Pl. 11, figs. 32–34
	<i>Tricarpellites rugosus</i> n.s.	83–84	Pl. 11, figs. 41–44
<i>Wetherellia</i>		84–89	Pl. 12, figs. 1–4, 6–13, 15–20, 22–41
	<i>Wetherellia variabilis</i> n.s.	89–90	Pl. 12, figs. 1–21
<i>Xulinospriornites</i>		142–143	Pl. 17, figs. 43–47
	<i>Xulinospriornites latus</i> n.s.	143	Pl. 17, figs. 43, 44
	<i>Xulinospriornites zingiberiformis</i> n.s.	144	Pl. 17, figs. 45–47

Biographical index: Associates and eponyms

Bowerbank was particularly noted for his generous hospitality and affable personality, sharing his considerable knowledge with peers and tyros alike (Williams and Torrens 2016b). Not unnaturally, therefore, a good number of associates are mentioned in various contexts

in this monograph. Some were acknowledged for donating or lending specimens, others for providing background information, and some were memorialized in the name of a newly described genus or species. Hence, this index provides some new insights into the extent of Bowerbank's social and scientific networks. Standard citations of authorities of taxon names are omitted, however.

Name as given in text	Page numbers	Further information in text	Reason for mentioning	Eponym
Brown, John ¹	140	Of Stanway, Essex; associate of Dr. Mitchell (<i>q. v.</i>)	Loan of specimen from pit at Ossington, Suffolk	<i>Mimosites browniana</i>
Brown, Dr. R. ²	43	Author of "Prodromus Florae Novae Hollandiae"	Identification of specimens	—
Hight, John ³	25	"Able botanist" and "highly-esteemed friend"	—	<i>Hightea</i>
Hope, Rev. F. W. ⁴	21	—	Gift of specimen	—
Hunt, Thos. ⁵	47, 49, 56	Of Herne Bay, Kent	Gift of specimens	—
Loddiges, Mr. G. ⁶	4, 5, 6, 20	"My friend"	Donation and identification	—
Masters, W. ⁷	45–46, 54, 56	Curator of Canterbury Museum, Kent	Loan of specimens	—
Mitchell, Dr. ⁸	140	Associate of John Brown (<i>q. v.</i>)	Facilitator of specimen loan	—
Northampton, Marquis [sic] of ⁹	57	—	Loan of specimen	<i>Cupressinites comptonii</i>
Parkinson, Mr. ¹⁰	17	"The late"; "author of Organic Remains of a Former World"	Previous illustration of a specimen	<i>Nipadites parkinsonis</i>
Richardson, Wm. ¹¹	44, 47, 48 (twice), 49	"My friend"; F.G.S.	Gift of specimens (Swale Cliff, Herne Bay, 1837)	<i>Petrophiloides richardsonii</i>
Roberts, Captain ¹²	4, 22	Ship <i>Indemnity</i> ; known to N. B. Ward	Plant specimens from Java	—
Sowerby, Mr. Jas. de Carle ¹³	15	Primrose Hill, excavation for tunnel of Birmingham Railway	Donation of specimen	—
Ward, Mr. ¹⁴	3, 4, 5, 22, 30, 34, 60	"My friend", N. B. Ward of Wellclose-square; known to Captain Roberts	Specimens from Swan River settlement, Australia	—
Wetherell, N. T. ¹⁵	84	Of Highgate, London; London Clay specialist and friend	—	<i>Wetherellia</i>

Notes to biographical index

A valuable general source for biographical information on palaeontologists is *World Palaeontological Collections* by Cleevely (1983), where much additional material about the associates and collections of the following persons may be found.

1. John Brown F.G.S. (1780–1859). An Essex stonemason attracted to geology through his craft. An associate of J. S. Henslow and Richard

Owen (who were his executors), and of James Mitchell, Joseph Prestwich, S. P. Woodward, Benjamin Waterhouse Hawkins and Adam Sedgwick. Bequeathed his whole fossil collection to Richard Owen. See also Wire (1890), Cleevely (1983) and Thackray (2004).

2. Robert Brown D.C.L., F.R.S., F.L.S. (1773–1858). The eminent botanist, naturalist of the Flinders expedition to Australia (1801–1805) and discoverer of "Brownian motion"; librarian to the Linnean Society of London and then to Sir Joseph Banks. See also Desmond (1977), Cleevely (1983) and Mabblerly (2009).

3. John Hight. An obscure personage who, judging by the Royal Society's *Catalogue of Scientific Papers*, apparently published nothing of significance. I was unable to discover any information about him in the archives of contemporary learned societies. Not listed by Cleevely (1983).
4. Frederick William Hope F.R.S., F.L.S. (1797–1862). A generous benefactor of the University of Oxford, primarily an entomologist, but presented London Clay fossils from Sheppey and Bognor to the Geological Society (Cleevely 1983). See also Bettany (1891) and Foote (2015).
5. Thomas Hunt M.R.C.S. (1798–1879). A dermatologist, epidemiologist and amateur geologist of Herne Bay, Kent; a London Clay enthusiast. See also Hunt (1846) and <https://www.findmypast.co.uk/> (accessed 22 March 2019). Not listed by Cleevely (1983).
6. George Loddiges F.L.S. (1786–1846). A nurseryman and botanist of Hackney, London; member of the Royal Horticultural Society and the Microscopical Society. See also Desmond (1977) and Hayden (2004). Not listed by Cleevely (1983).
7. William Masters (1796–1874). A nurseryman and horticulturist; founder and curator of the Canterbury Museum. See also Desmond (1977). Not listed by Cleevely (1983).
8. James Mitchell LL.D., F.G.S. (178?–1844). An associate of John Brown, first employed as a school teacher, then in the insurance business. Later became a scientific writer with an extremely wide range of interests, including mathematics, physics, botany, astronomy, chemistry, universal history, industrial technology, working conditions in factories, antiquities and, most of all, geology. His date of birth has been given as 1785, 1786 or 1787 in various sources. See also Cleevely (1983), Osborne (2006) and Atkinson (2017).
9. Spencer Joshua Alwyne Compton, 2nd Marquess of Northampton (1790–1851). An amateur palaeontologist and patron of science and the arts; F.R.S. (president 1838–1848), F.G.S. (president 1820–1822). See also Cleevely (1983) and Morrell (2004).
10. James Parkinson F.G.S. (1755–1824). A surgeon, palaeontologist and radical politician who accumulated “a matchless collection” of fossils. Founder member of the Geological Society and celebrated author of *Organic Remains of a Former World* (1804–1811). Published the classic description of the shaking palsy, now known as Parkinson's disease. See also Desmond (1977), Cleevely (1983) and Bevan (2010).
11. William Richardson F.G.S. (d. ca.1855). A somewhat obscure London solicitor (M.A., Christ's College, Cambridge) and a London Clay enthusiast. Few details of him are known, but see Anonymous (1831), Richardson (1841) and Venn (1953). Apparently not one of the W. Richardsons briefly mentioned by Cleevely (1983).
12. Captain Roberts (fl.1830s and 1840s). Master of the barque *Indemnity*, carrying cargoes and emigrants between London and Australia. For some voyages 1838–1841, see <http://www.oocities.org/vic1847/40/b.html?201920> and <http://www.oocities.org/vic1847/41/e.html?201920> (both accessed 20 March 2019).
13. James de Carle Sowerby F.L.S., F.Z.S. (1787–1871). A naturalist, botanical and geological artist, member of Bowerbank's London Clay Club, perhaps the most prolific and accomplished member of the famous Sowerby family, illustrating fossils for leading geologists, including Sedgwick, Murchison, Buckland and Fitton. See also Elliott (1970), Desmond (1977) and Cleevely (1974, 1983, 2006).
14. Nathaniel Bagshaw Ward M.R.C.S., F.R.S., F.L.S. (1791–1868). The eminent botanist who invented the Wardian case for transporting living plants and managed the Chelsea Physic Garden for the Society of Apothecaries. See also Desmond (1977) and Allen (2011). Not listed by Cleevely (1983).
15. Nathaniel Thomas Wetherell M.R.C.S., F.G.S. (1800–1875). The Highgate surgeon, geologist and a founder member of Bowerbank's London Clay Club who discovered the petrological and palaeontological evidence for glaciation of southern England. See also Woodward (1876), Bonney (1899), Reid and Chandler (1933), Elliott (1970) and Cleevely (1983).

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