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978-1-108-00466-4 - John Ray, Naturalist: His Life and Works

Charles Raven

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John Ray, Naturalist

John Ray (1625-1705) was a clergyman and botanist who was dismissed from his post at Cambridge in 1662 for political and sectarian reasons and thereafter funded his research by private teaching and sponsorship. He was admitted to the Royal Society, and was a pioneer of the systematic classification of plants; his *Historia Plantarum* was the first textbook of modern botany. About a century after his death, Sir J. E. Smith (1759-1828), founder of the Linnean Society, praised 'our immortal naturalist, John Ray, the most accurate in observation, the most philosophical in contemplation, and the most faithful in description, of all the botanists of his own, or perhaps any other time.' This biography of Ray was first published in 1942 at the height of the Second World War. It was written by Charles Raven, an eminent theologian who shared Ray's deep respect for intellectual integrity, honest exploration of the natural world, and the value of both theology and scientific endeavour. More than a superb history, this offers an opportunity to reassess the pivotal contributions of a brilliant but often undervalued scientist. Ray's major publications were written in Latin; Raven's linguistic skills – coupled with his passion for natural history – made him ideally and uniquely suited to interpret Ray's scientific legacy. Raven reviews Ray's academic and scientific careers in the context of the dramatic social upheavals of his time. He evaluates the remarkable long-term and widespread influence of Ray's work on the development of science, alongside the significance of the tolerant philosophy in his final book, *The Wisdom of God*.

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JOHN RAY

NATURALIST

HIS LIFE AND WORKS

by

CHARLES E. RAVEN, D.D.

*Master of Christ's College and
Regius Professor of Divinity in the
University of Cambridge*



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TO ALL
WHO LIKE JOHN RAY
HAVE SACRIFICED SECURITY & CAREERS
FOR CONSCIENCE' SAKE

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Preface

‘A good book needs no preface; a bad book deserves none.’ That is no doubt true. But when a student of theology turns aside (as it would seem) from his proper concern, when a normally active citizen in the middle of a great war fills much of his time with the life and work of a naturalist of the seventeenth century, it is reasonable that he should give some account of his eccentricity. Hence this personal explanation.

The history of science, with every respect for Mr Crowther and even Dr Hogben, has not yet been written. Nor in these days, when the use and abuse of scientific achievements are so significant, can the subject be regarded as unimportant. But my concern is not with the general record of man’s discovery of the scientific method or of his application of it to the service of his needs and ambitions, so much as with one consequence of those events. As a theologian my primary task long ago convinced me of the importance of the change in man’s aesthetic, moral and religious outlook which had accompanied and in large measure inspired the scientific movement. It was plain to me as a parson that the mixed folk whom I met as an entomologist and a bird-watcher had found an interest in nature which was singularly rich in educative and recreational value. Observation convinced me that this new resource was almost peculiar to the countries of Protestant Europe and North America; and enquiry disclosed that it was hardly compatible with the traditional devaluation of nature by the Churches. Experience affirmed that though the great poets and artists had seldom lacked it, its widespread influence was comparatively modern. Life in a great city suggested that as an antidote to the effects of urban and suburban environment here was a discovery which the sociologist and the reformer could not ignore.

Of its theological and religious value I have written at length elsewhere. In so doing the question of its origin inevitably arose; and my first answer—Linnaeus—was obviously inadequate. The great Swede had grace of character, diligence, vigour of intellect, a high opinion of his own importance, and the good fortune to hit upon a convenient system of nomenclature. He gave his name to an epoch: he was assuredly not a pioneer.

As I pursued the subject it became clear that the change from the old world of superstition, the world in which there was no settled frame of reference except that fashioned by deduction from the Bible and Aristotle, the world of alchemy and magic, took place not in the eighteenth century but in the seventeenth; that the transition was made by the simultaneous labours of the ‘new philosophers’ in Italy, France, Holland and Britain; and that in

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the realm of biology, or at least of botany and zoology, there was one man of outstanding genius, 'our countryman, the excellent Mr Ray'.

It is proof of the neglect into which Ray has fallen that whereas a century ago my discovery was a commonplace, it should come to me as unforeseen and surprising. But the reasons for this neglect are not obscure. No adequate biography of Ray exists, thanks to the default of his literary executor; his books were written in Latin and their contents had supposedly been taken over by his successors; his only writings in English were full of an old-fashioned religion and an unfashionable teleology. Why bother to preserve the memory of a man whose work may have made an era but has now passed out of mind?

The quality of the man himself prevented such an attitude. Behind the vast and varied achievement of one who had laid the foundation of the modern outlook upon nature lay a fascinating and heroic personality. The blacksmith's son who in an age of almost feudal class-consciousness won for himself reverence and friendship and that without sycophancy or aggressiveness; the fellow of Trinity who when consciences were elastic gave up everything sooner than declare that the Covenant which he had not subscribed was no oath; the explorer who 'trusting in Providence and good friends' toured Western Europe for its plants and birds, fishes and fossils, and travelled Britain so thoroughly that he could supply at first hand a list of the rarer plants for every English county; the writer who in the last twenty years of his life, straitened in means and racked with pain, produced some fifteen new books, including the 3000 folio pages of the *History of Plants*, the *Synopses* of animals, reptiles, birds and fishes, the first serious treatises on science and religion, and in addition some nine revised editions of these and earlier works; the naturalist who in the last decade of the century with the help of his four little daughters bred and described the life cycle of nearly three hundred local lepidoptera; could anyone with powers of admiration and interests in natural history resist so intrinsically a subject?

To do him justice requires qualifications beyond my range. A deeper knowledge of science and of the seventeenth century would have saved me from blunders; a training in the history and practice of biology would have given me criteria for the estimation of his work and acquaintance with his background and contemporaries; ease of travel would have enabled me to trace his records more exactly. But at least I live in Cambridge, and the influence of the Cambridge Platonists who shaped him has also shaped me; I know enough Latin to read and appreciate his masterly language and descriptions; I have collected nearly all the plants, birds and insects that he records, and often in the same localities; and the thing that he tried to do, to reinterpret the faith of a Christian in the light of a sound knowledge of nature, has been my continuous and chief concern.

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The form and length of the book require a word of explanation. It would have been easier and more popular to treat the subject in broad outline and subjectively; to pay my tribute and give my impression without bothering to survey a mass of detail. A sketch of the seventeenth century, that age of vitality and contrasts; a simplified rendering of Ray's character and achievement; a selection from his more memorable writings—the book could have been finished in three months. But if the work was worth doing, it was worth doing thoroughly and objectively. Only by meticulously collating every record of his travel and research could the blunders of his biographers be corrected and the details of his career be disclosed; only by setting out these details could the greatness of his work be established. It may be that others will not share my delight at the first discovery of the Sulphur Clover or the Alpine Bartsia, the Manx Shearwater or the Purple Emperor. For them perhaps it strikes no chord that he too enjoyed the abundance of Jacob's Ladder at Malham Cove or of Cornish Heath at Goonhilly, or that he marvelled at the loop of the trachea in the Whooper Swan, and the sanitary habits of newly hatched hawks, and the presence of Smelts in Rostherne Mere, and the *Ammophila* dealing with its caterpillar, and the assembling of male moths round a freshly emerged female. When he was confused by the defects of the books on which he relied, when he wrestled with the problems of local variation and plumage change, when he found himself compelled to question the orthodoxies of his day, when his friends reported to him impossible new species and fantastic new speculations, what naturalist will not remember his own experiences and feel a thrill of human sympathy? These things to me are of the stuff of life, and to omit them as trivial would have been to condone a false valuation. Ray must speak for himself, must tell us how he sought and what he found. It is surely good to praise famous men and our fathers that begat us—and never more good than when our dreams of the future are black and blank and when the story of a man who strove to bring order out of chaos and initiated a great epoch of human growth may be an encouragement and an example.

In view of what has been said it would be disingenuous not to add that in days when the first-hand study of nature which has for many years given me health and ability for hard work is impossible, it has been a refreshment to follow such pursuits vicariously and in the setting of an earlier time.

It remains for me to explain that in the case of a man pursuing so many different studies simultaneously a strictly chronological treatment was impossible. To trace his life as a botanist and then to add chapters on his work in other fields was the only practicable arrangement. The dated summary of his career sets out the sequence of events.

In the matter of orthography I have modernised the spelling of his English letters; and have written his own name as Ray even though until

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1670 he spelled it Wray. I have translated his Latin letters; and have generally replaced his long and often difficult names for plants by their modern equivalents, printing these in italics. In the controversial matter of the modern nomenclature of flora and fauna (in which at present there seems little prospect of a permanent agreement) I have followed the best text-books rather than the latest alterations. I have adopted the 'new style' for dates.

To express gratitude by name to all those who have helped me would be to compile a long list of friends and acquaintances, and of experts in many fields from whom I have sought and received assistance. I would especially thank the officials of the Libraries of Cambridge University, Trinity College and St Catharine's College, of the Botanical School and of the Balfour Library, and of the Linnean Society of London. The Vice-Master of Trinity, Mrs and Miss Arber, Dr C. F. A. Pantin, Dr C. P. Snow and Dr F. H. A. Marshall have read and commented upon parts of the script; they and many others have given invaluable suggestions. The Rev. J. R. Southern, Rector of Black Notley, Mrs Turner of Dewlands, Mrs Moss of Ray Cottage, and in particular Mr Alfred Hills of The Buck, have helped me on my visits to Ray's home, and by much subsequent information. Lord Middleton gave me news of his discovery of the relics of Francis Willughby's collections, of the dried plants named by him and Ray and of the originals of the pictures illustrating the *Ornithology* and the *History of Fishes*; and his hospitality made it possible for me to see and study them—an unforgettable experience. To Mr A. E. Gunther and to Dr John Johnson, Printer to Oxford University, I am indebted for the loan of proofs of the late Dr R. W. T. Gunther's book on Ray's friend, Edward Lhwyd. Acknowledgments of help received from readers of the University Press are by tradition anonymous. But it happens that the press reader of this book was my friend of old days, Mr W. E. C. Browne, and I wish to thank him for his generous and expert help. Finally I must record my deep gratitude to the Council of the Royal Society for a grant towards the cost of publication, and must apologise to my family, to my long-suffering colleagues in Christ's College, and 'to all others whom it may concern' for the shamelessness with which I have bored them with my enthusiasms.

C. E. R.

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SOURCES

The need for a fresh study of the life of Ray has long been recognised. Not only are the existing biographical notices (they cannot be called ‘lives’) admittedly defective, but thanks largely to the energy of G. S. Boulger and R. W. T. Gunther we have now available all the material that is likely to be recovered. It may be that the manuscript of his ‘Catalogue of plants grown in the Cambridge gardens’, which he seems to have written in or before 1662 and used in his *Historia Plantarum*, may yet be found: it will not add much to our knowledge of him or its subject. There may possibly be a few additional letters, perhaps even the letters to Robinson which Derham used and epitomised, but it is unlikely; and under present conditions search for them is impossible.

Apart from his own books the main sources are as follows:

1. The Life by ‘a worthy friend’, certainly Samuel Dale of Braintree, printed in *A Compleat History of Europe for the year 1706* under the heading ‘Additions to the Remarkables of the year 1705’: in 1705 the editor announcing Ray’s death had complained that he had failed to obtain a worthy notice of him. This is the Life printed by R. W. T. Gunther, *Further Correspondence of John Ray*, London, 1928, from a MS. in the Bodleian: Dr Gunther was apparently not aware that it had been printed before.
2. *Philosophical Letters*, London, 1718, a volume of extracts from letters to and from Ray edited by Derham and arranged chronologically (with some errors). Derham omitted all personal details and selected what he thought scientifically interesting: of this he was not always a good judge.
3. The notice in Edmund Calamy, *A Continuation of the Account of the Ministers ejected*, London, 1727, I, pp. 120–2. Calamy had mentioned Ray in his *Abridgment of Mr Baxter’s History*, ed. I, London, 1702, p. 239, and had given a note and a list of his books in ed. II, London, 1713, p. 87. This expanded notice is mainly concerned with his religious views: it cites I and comments on it.
4. The Life in *A General Dictionary Historical and Critical*, London, 1739, VIII, pp. 692–5: the author acknowledges help from Samuel Dale and his work is a slightly abbreviated and annotated version of I.
5. A similar Life in *Biographia Britannica*, London, 1760, v, pp. 3494–9: this contains little new except a criticism of Calamy’s notice.
6. The Life preserved in a small notebook written in 1711–12 by James Petiver and now among the Sloane MSS., no. 3338: this is printed by Gunther, *Further Correspondence*, pp. 9–12: it shows acquaintance with I but is probably by William Derham, a sketch in 1710 for the following.
7. *Select Remains*, the Life written by Derham, the Itineraries, Prayers, etc. published London, 1760, by Derham’s nephew, George Scott. This was reprinted as
8. *Memorials of John Ray*, published by the Ray Society, London, 1846, with added notices from 16 and 17 below.

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9. *Correspondence of John Ray*, Ray Society, London, 1848, a reprint of 2 with the addition of Ray's letters to Hans Sloane in the Sloane MSS. The editing, by Edwin Lankester, is very defective, the sequence of the letters being distorted by his ignorance that they were dated in the old style, and the footnotes, unless supplied by C. C. Babington, being usually and often grotesquely misleading.

10. *Further Correspondence*, edited by R. W. T. Gunther for the Ray Society, London, 1928, containing series of letters from Ray to Courthope, Lister, Aubrey and Lhwyd, together with 1 and 6 above, with Ray's contributions to the Royal Society, and with Derham's epitomes of his letters to Robinson: a useful volume marred by some carelessness in editing.

11. Certain further letters of Ray to Courthope obtained by Gunther and printed in *Journal of Botany*, August 1934, and in his *Early Science in Cambridge*, 1937.

12. Two letters of Ray to T. Burrell in facsimile in *Early Science in Cambridge*, pp. 351, 354.

13. A letter of Ray to Aubrey printed in Aubrey's *Natural History of Surrey*, London, 1719, v, pp. 408–11, and in his *Natural History of Wiltshire* edited by J. Britton, London, 1847.

Apart from allusions in the letters and books of his contemporaries, and these are very few, this appears to be all the original or early material except his own books. Both as correspondent and as author Ray is singularly reticent about his own life, his feelings and actions. His notes of the localities of flora and fauna give a clue to his journeys: very occasionally there is a reference to his neighbourhood or, in the unfinished *Historia Insectorum*, to his family: and on a few occasions, hardly a dozen in all, he mentions some fact not directly connected with his work. His diary, alluded to by Dale in 1 above, seems to have perished without trace.

More recent records are without exception based upon 2 and 7, Derham's two books: several of the earlier ones show an appreciative knowledge of his writings. The chief of them are the following.

14. Albrecht von Haller in his *Bibliotheca Botanica*, Zürich, 1771, I, pp. 500–6, a very generous tribute to 'the greatest botanist of all time'.

15. Richard Pulteney in his *Sketches of the Progress of Botany*, London, 1790, I, pp. 189–281, probably still the best account of Ray and his works.

16. James E. Smith in *Rees' Cyclopaedia*, London, 1819, a condensed version of 15 with the author's own estimate of Ray's botanical studies.

17. Georges Cuvier and Albert Dupetit-Thouars in *Biographie Universelle*, Paris, 1824, xxxvii, pp. 155–63 or 2nd edition, Paris, 1843, xxxv, pp. 252–6, a careful and appreciative account by two distinguished French savants.

18. Edward Stanley, 'Philosophical Correspondence of Ray and Willughby', in the *Retrospective Review*, London, 1826, xiv, pp. 1–31, a survey of the various scientific subjects dealt with in 2.

19. John Lindley in *Penny Cyclopaedia*, London, 1841, xix, pp. 317–19, short résumé of 7 with some useful comment on Ray's systematic work.

20. James Duncan, 'Memoir of Ray', in *Jardine's Naturalist's Library*, Edinburgh, 1843, xxxv, pp. 17–70, pleasant but entirely secondary.

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21. Mrs Jacob Howell Pattisson¹ in the *Englishwoman's Magazine* for May 1847, II, pp. 257–75, an exceptionally careful and well-informed article, based upon 7, but also upon a MS. life by the Rev. W. L. P. Garnons, and upon local knowledge, her husband, a solicitor of Witham, being at this time owner of Ray's house, Dewlands; she gives an admirable list of sources.

22. G. S. Boulger in *Dictionary of National Biography*, vol. XLVII, in *Transactions of Essex Field Club*, *Essex Naturalist* and *Essex Review*, interesting but not free from errors and guess-work.

23. Albert C. Seward, *John Ray*, Cambridge, 1937, a sketch of his career and character, slight but vivid, often mistaken through reliance on Lankester and Boulger.

In addition there are a number of brief accounts in recent histories of botany: e.g. S. H. Vines in *Makers of Modern Botany*; J. Reynolds Green, *History of Botany in the United Kingdom*; R. J. Harvey-Gibson, *Outlines of the History of Botany*; Ellison Hawks, *Pioneers of Plant Study*. These are all slight and show no signs of serious or independent study.

Besides these printed sources a thesis for the degree of M.Sc. in the University of London entitled 'Studies in the Biological Works of John Ray' was presented in 1933 by D. C. Gunawardena. A typed copy of this in the Library of the Linnean Society of London was lent to me by the kindness of Mr S. Savage. It is a useful survey of Ray's botanical works and traces with considerable insight the development of his ideas of structure and classification. The author is handicapped by incomplete knowledge of Ray's works, of the seventeenth-century background and of the British Flora. A résumé of its findings is in *Proceedings of the Linnean Society*, 27 March 1936, p. 71.

EPITOME OF RAY'S LIFE

- 1627 29 Nov. Born at the smithy, Black Notley.
- 6 Dec. Christened, Black Notley church.
- 1638 13 Aug. Joseph Plume became Rector.
- ? Ray went to Braintree school.
- 1644 12 May Admitted Trinity College, Cambridge.
- 28 June Entered Catharine Hall, pupil of Daniel Duckfield.
- 1646 21 Nov. Transferred to Trinity, pupil of James Duport.
- 1647/8 Graduated B.A.
- 1649 8 Sept. Elected Minor Fellow.
- 1650 Illness: began study of botany.
- 1651 1 Oct. Appointed Greek Lecturer.
- M.A. degree.

¹ This is stated by the *Gazetteer of Essex*, published 1848, and is borne out by internal evidence.

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- 1653 1 Oct. Appointed Mathematical Lecturer and Tutor.
 1655 2 Oct. Appointed Humanities Lecturer.
 1656 31 Aug. Death of his father: he built Dewlands for his mother.
 ? Again appointed Greek Lecturer.
 1657 1 Oct. Appointed Praelector.
 1658 3 Jan. First letter to Courthope.
 Refused living of Cheadle.
 9 Aug.— Journey to Derbyshire and North Wales, alone.
 18 Sept.
 2 Oct. Appointed Junior Dean.
 1659 ? March Death of his friend John Nidd.
 26 Dec. Appointed Steward.
 1660 Published *Catalogus Cantabrigiam*.
 June— Journey to North England and Isle of Man with Willughby.
 July
 Aug. Visited Thomas Browne at Norwich.
 25 Sept. To Cambridge from Black Notley.
 16 Dec. Appointed Steward, second year.
 23 Dec. Ordained in London.
 1661 26 July— Journey to York, Edinburgh, Glasgow, Carlisle with Skippon.
 7 Sept.
 Oct. Refused living of Kirkby Lonsdale.
 1662 Jan.— In Sussex with Courthope and Burrell.
 April
 April Visited London, Morison's and Morgan's gardens.
 April. Cambridge, last botanising there.
 8 May— Journey round Wales with Willughby and Skippon: sea-birds
 16 June studied, Prestholm, Bardsey, Caldey.
 16 June— Journey continued to Land's End with Skippon.
 24 July
 24 July— At Black Notley, explored Essex.
 30 Aug.
 24 Aug. Forfeited Fellowship under Act of Uniformity.
 31 Aug.— Visited Cambridge.
 10 Sept.
 11 Sept. Visited Barnham at Boughton.
 Oct. In London.
 ? 13 Oct. At Friston as tutor with Thomas Bacon.
 1663 19 March Left Friston for Black Notley.
 Published Appendix to *Catalogus Cantabrigiam*.
 1 April Met Skippon in Kent.
 18 April Left Dover for Calais.
 Journey through Low Countries, up the Rhine to Vienna and
 Venice.
 1664 Winter At Padua, studying anatomy.
 Spring Genoa, Leghorn, Naples, Willughby leaving for Spain.
 Summer Went with Skippon to Sicily, Malta, Florence and Rome.
 1 Sept.— At Rome studying birds and fishes in markets.
 24 Jan.

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- 1665 24 Jan.– To Rimini, Venice, Bolzano, and across Switzerland.
 June
 Summer At Geneva botanising.
 Autumn At Montpellier with Skippon and Lister.
- 1666 Spring From Montpellier to Paris, Calais and Essex.
 ? June Visited Cambridge and Sussex.
 Winter At Middleton with Willughby.
 Composed Tables for Wilkins's *Real Character*.
- 1667 June Cambridge (passing) and Black Notley.
 18 June First letter to Lister—from Middleton.
 25 June– Journey to Worcester, Gloucester, Cornwall, Dorset, Hants,
 13 Sept. with Willughby.
 13 Sept.– At Black Notley seriously ill.
 7 Nov. Admitted Fellow, Royal Society, London.
 ? 24 Nov. In Sussex with Courthope.
- 1668 April At Boughton with the Barnhams.
 May–June Much travel, London, Essex, Haslingfield.
 July Fortnight's journey in Yorkshire and Westmorland alone.
 26 July– At Broomhall with Jessop.
 Sept.
 17 Sept. At Middleton.
 29 Sept. At Black Notley.
 Nov.–Dec. At Middleton with Willughby.
- 1669 Jan. At Chester with Wilkins.
 Feb.–March At Middleton, experiments with sap.
 April At Chester, dissects porpoise.
 May At Middleton, visit to Dorking, Oxford, Dartford.
 14 Oct. Journey to Wharton, Salop.
- 1670 28 April– At Wollaton with Willughby.
 29 June
 July At Middleton.
 22 Aug. Changed spelling of name, Wray to Ray.
 Published *Catalogus Angliae*.
 And *Collection of English Proverbs*.
- 1671 Spring Jaundice at Middleton.
 ? 21 June Visit to Cambridge.
 3 July Journey to Settle, Berwick, Brignall with Willisel.
 Autumn At Middleton.
 9 Nov.– In London at Royal Society.
 7 Dec.
 Dec.–Feb. At Chester with Wilkins.
- 1672 Feb.–7 March At Middleton.
 March Visited Black Notley.
 March–Nov. At Middleton.
 3 July Death of Willughby.
 18 Nov. In London.
 19 Nov. Death of Wilkins: returned to Middleton.
- 1673 ? Feb. Published *Observations and Catalogus Exteris*.
 5 June Married Margaret Oakeley at Middleton.

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Charles Raven

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- 1673 ? Nov. Published *Collection of English Words*.
 1675 ? March Published *Dictionariolum*.
 15 March In London with Hooke and Sir John Cope.
 Left Middleton for Coleshill.
 1676 ? 4 April Moved to Sutton Coldfield.
 Summer Visited Essex.
 ? Jan. Published Willughby's *Ornithologia*.
 1677 28 Sept. Refused Secretaryship, Royal Society.
 Nov. Left Sutton Coldfield for Faulkbourne Hall near Black Notley.
 Catalogus Angliae, second edition.
 1678 Published English version of *Ornithology*.
 Collection of Proverbs, second edition.
 1679 15 March Death of his mother.
 24 June Moved to Dewlands, Black Notley.
 1682 Published *Methodus Plantarum*.
 1683 27 July First letter to Robinson.
 1684 12 Aug. Birth of twin daughters, Margaret and Mary.
 11 Nov. First letter to Sloane.
 1685 Second Appendix to *Catalogus Cantabrigiam*.
 1686 March Published Willughby's *Historia Piscium*.
 June *Historia Plantarum*, vol. I.
 1687 3 April Birth of daughter Catharine.
 Sept. Visit to London.
 1688 Published *Historia Plantarum*, vol. II.
 And *Fasciculus Britannicarum*.
 1689 10 Feb. Birth of daughter Jane.
 21 June First letter to Lhwyd.
 Nomenclator Classicus, second edition.
 1690 March Attack of pneumonia.
 May Published *Synopsis Britannicarum*.
 Began collecting insects.
 1691 Visited Bishop Compton at Fulham.
 Published *Wisdom of God*.
 Collection of English Words, second edition.
 1692 ? Aug. Visit of John Aubrey.
 Feb. Published *Miscellaneous Discourses*.
 Wisdom of God, second edition.
 1693 Published *Synopsis Quadrupedum*.
 And *Collection of Curious Travels*.
 Three Physico-Theological Discourses, second edition.
 1694 ? Dec. Published *Sylloge Europeanarum*.
 1695 11 July Visit of J. Morton.
 ? Oct. Visit of Robinson and W. Moyle.
 ? Nov. Visit of Vernon.
 Published County Lists in Camden.
 1696 Published *Dissertatio de Methodis*.
 Synopsis Britannicarum, second edition.
 Nomenclator Classicus, third edition.
 1697 July Visit of Krieg.

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1698	? 29 Jan.	Death of daughter Mary.
	July	Illness of wife and Margaret.
1699	July	Visit of Petiver and Buddle.
1700	? Sept.	Published <i>Persuasive to a Holy Life</i> .
1701		Visit of Sir T. Millington. <i>Wisdom of God</i> , third edition.
1703	April	Visit of Bishop Compton, and of J. Breyne.
	Jan.	Published <i>Methodus Emendata</i> . <i>Nomenclator Classicus</i> , fourth edition.
1704	March	Seriously ill.
	May	Visit of Derham.
	Aug.	Visit of Sloane. Published <i>Historia Plantarum</i> , vol. III. And <i>Methodus Insectorum</i> . And <i>Wisdom of God</i> , fourth edition.
1705	17 Jan.	Died at Dewlands.
1710	Spring	Publication of <i>Historia Insectorum</i> .
1713		Publication of <i>Synopsis Avium et Piscium</i> . And <i>Physico-Theological Discourses</i> , third edition.
1718		<i>Philosophical Letters</i> .
1760		<i>Select Remains</i> .

ABBREVIATIONS

<i>C.A.</i>	<i>Catalogus Angliae</i> . Ray, 1670.
<i>C.C.</i>	<i>Catalogus Cantabrigiam</i> . Ray, 1660.
<i>C.E.</i>	<i>Catalogus Exteris</i> . Ray, 1673.
<i>Corr.</i>	<i>Correspondence of J. R.</i> Ray Society, 1848.
<i>F.C.</i>	<i>Further Correspondence</i> . Ray Society, 1928.
<i>H.I.</i>	<i>Historia Insectorum</i> . Ray, 1710.
<i>H.P.</i>	<i>Historia Plantarum</i> . Ray, 1686.
<i>H. Pisc.</i>	<i>Historia Piscium</i> . Ray, 1685.
<i>Mem.</i>	<i>Memorials</i> . Ray Society, 1846.
<i>Obs.</i>	<i>Observations</i> . Ray, 1673.
<i>Orn.</i>	<i>Ornithology</i> . Ray, 1678.
<i>S.A.</i>	<i>Synopsis Avium</i> , Ray, 1713.
<i>S.B.</i>	<i>Synopsis Britannicarum</i> . Ray, 1690.
<i>S.P.</i>	<i>Synopsis Piscium</i> . Ray, 1713.
<i>S.Q.</i>	<i>Synopsis Quadrupedum</i> . Ray, 1693.