

# Science 2019

with sections on

Stephen Hawking

Genetics and Evolution

Computer History

General Science

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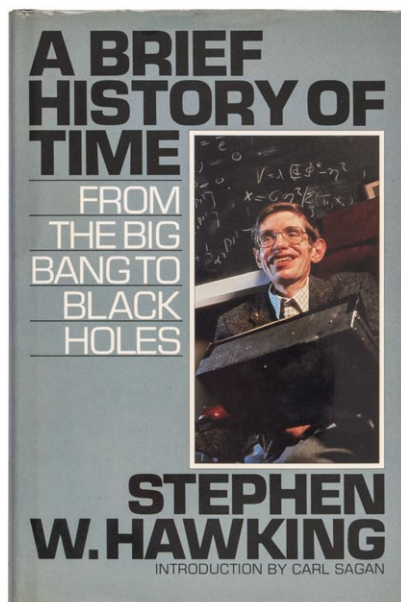
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## STEPHEN HAWKING



**1. HAWKING, Stephen.** A Brief History of Time. From the Big Bang to Black Holes. Bantam Books. 1988. **£1,000**

8vo. Original black cloth, in dustwrapper; pp. x + 198, numerous text illustrations by Ron Miller; wrapper slightly dulled, very good.

First UK edition, first issue. With Introduction by Carl Sagan. Professor Hawking demanded the recall of the first US issue of his masterpiece, which was published simultaneously but was riddled with errors, making this the true first edition. It goes without saying that this is one of the great classics of twentieth century science writing and remains the greatest public monument to Hawking's phenomenal mind.

## ONE OF STEPHEN HAWKING'S LAST SIGNATURES



**2. MILLIGAN, Spike.** "Rommel?" "Gunner Who?" Signed by Stephen Hawking. London: Michael Joseph, 1974. **£24,000**

8vo. Original cloth and wrapper; pp. 192, illustrations throughout; very good. Provenance: signed by Stephen Hawking to dedication page. With letter of provenance, unpublished photograph of Hawking with friends c. 2000 and order of service for the funeral of the previous owner.

First edition. This copy of Spike Milligan's wartime memoir carries **one of the very few verified autographs of Stephen Hawking**. It was signed in 1974, the year before he became confined to a wheelchair by amyotrophic lateral sclerosis. The shakiness of the signature is a testament to the physical difficulty he had in holding a pen and forming letters.

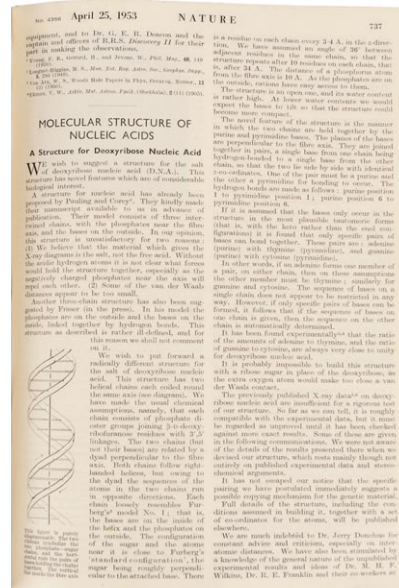
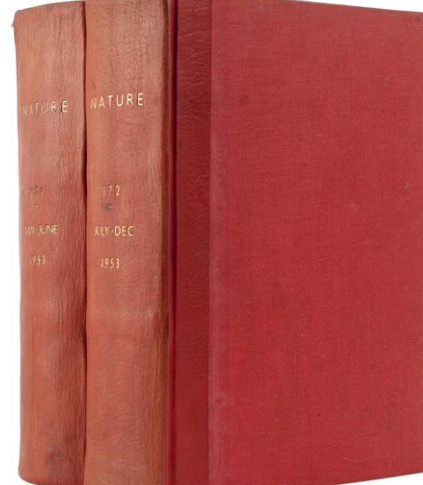
The book actually belonged to James Hawkins (1928-2003), a poet and author who befriended Hawking through Trinity College Cambridge. Hawkins was also a good friend of Somerset Maugham, who called him the "new Rupert Brooke", and of Yehudi Menuhin. A copy of his selected poems *Lamps in the Darkness* (1976) was presented to Hawking.

The occasion of this signing was extremely light-hearted. Hawkins was reading this copy of Milligan's book when Hawking commented on how funny the dedication was ("To my dear brother Desmond who made my boyhood happy and with whom I have never had a cross word, mind you he drives his wife mad"). In a spirit of *joie de vivre* and perhaps recognising that he would not be able to sign his name for much longer, Hawking scrawled his autograph beneath the dedication. It was the only example of his handwriting that existed in his friend's collection. At this point, Hawking had not written a full-length book and was far from being a household name, and so one would not expect an autograph on one of his own works; there are only a couple of verified Hawking signatures from this period, including his PhD thesis in 1965 and an archaeological book given to a departing colleague at the Institute of Astronomy in 1974. We don't expect to find a great scientist's signature in such an incongruous book. Yet it is a perfect representation of Hawking's famously anarchic sense of humour as well as a poignant suggestion that he knew his physical abilities were waning fast.

James Hawkins remained friends with Hawking for the rest of his life and passed this book on to his friend John Masih Fleming, the musician and dealer, shortly before his death. Fleming was also a friendly acquaintance of Stephen Hawking.



# GENETICS AND EVOLUTION

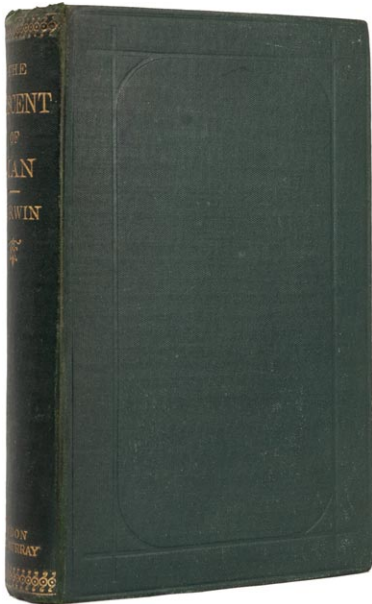


## 3. CRICK, Francis and James WATSON Molecular Structure of Nucleic Acids: A Structure of Deoxyribose Nucleic Acid etc. *Nature* 1953. **£15,000**

8vo. 2 vols. Contemporary red morocco backed buckram, gilt lettering to spine; vols 171 and 172 of the journal *Nature*, covering 1953; diagrams and illustrations; very good.

First editions of the first papers on the ground-breaking discovery of the structure of DNA, comprising: "Molecular Structure of Nucleic Acids: A Structure for Deoxyribose Nucleic Acid", in *Nature* Vol.171, No. 4356, pp.737-738, 25th April, 1953 [and] Wilkins, Maurice H.F., A.R. Stokes and H.R. Wilson. "Molecular Structure of Deoxypentose Nucleic Acids", in *Nature* Vol.171, No. 4356, pp.738-740, 25th April, 1953 [and] Franklin (Rosalind E.) and R.G. Gosling. "Molecular Configuration in Sodium Thymonucleate", in *Nature* Vol.171, No. 4356, pp.740-741, 25th April, 1953 [and] Watson (James D.) & Francis Crick. "Genetic Implications of the Structure of Deoxyribonucleic Acid", in *Nature* Vol.171, No. 4361, pp.964-967, 30th May, 1953 [and] Wilkins (M. H. F.), W. E. Seeds, A. R. Stokes and H. R. Wilson. "Helical Structure of Crystalline Deoxypentose Nucleic Acid", in *Nature*, vol.172, No. 4382, pp.759-762, 24th October, 1953.

These papers record the greatest biological advance of the twentieth century, a discovery which won Crick, Watson and Wilkins the Nobel Prize.



**4. DARWIN, Charles Robert.** *The Descent of Man, and Selection in Relation to Sex ... Second Edition, Revised and Augmented.* London: William Clowes and Sons, Limited for John Murray, 1890. **£450**

8vo. Original green cloth, boards with blind-ruled borders and panelled in blind, spine lettered and decorated in gilt, pp. xvi, 693, [1 (blank)]; wood-engraved illustrations in the text; a little browning to endpapers, slight rubbing to binding with two small faint spots to upper board, very good.

Second edition, twenty-ninth thousand. In this work, which complements *On the Origin of Species*, Darwin expounded fully his theory of sexual selection and discussed at length the link he recognised between human and ape lineage: 'In the *Origin* Darwin had avoided discussing the place occupied by *Homo sapiens* in the scheme of natural selection, stating only that "light will be thrown on the origin of man and his history." Twelve years later he made good his promise with *The descent of man*, in which he compared man's physical and psychological characteristics to similar traits in apes and other animals, showing how even man's mind and moral sense could have developed through evolutionary processes. In discussing man's ancestry Darwin did not claim that man was directly descended from apes as we know them today, but stated simply that the extinct ancestors of *Homo sapiens* would have to be classified among the primates; however, this statement, as misinterpreted by the popular press, caused a furor second only to that raised by the *Origin*' (Norman, p. 218). This book further enhanced Darwin's fame, if not his popularity, and is one of the most significant works in the evolutionary canon. The second edition, which first appeared in 1874, was 'extensively revised and contains a note of the brains of man and apes by T.H. Huxley at pp. 199-206 [...] the twelfth thousand of 1877 has added at the end, pp. 620-624, a supplemental note which is reprinted from *Nature* of November 2 1876, p. 18. This is the final definitive text, and subsequent one volume issues until the turn of the century [including this] are from stereos of it' (Freeman p. 130).

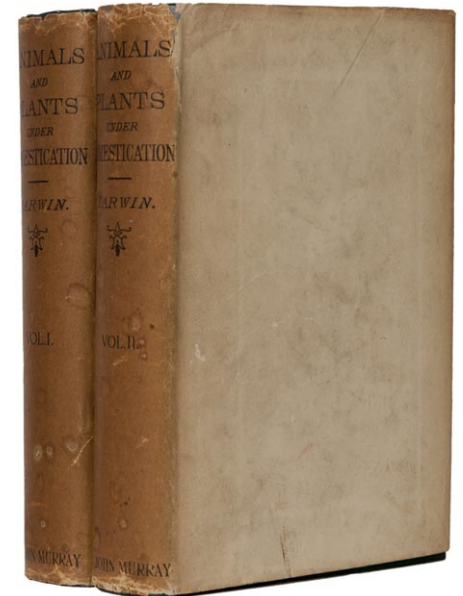
BM(NH) I, p. 423; Freeman 970.

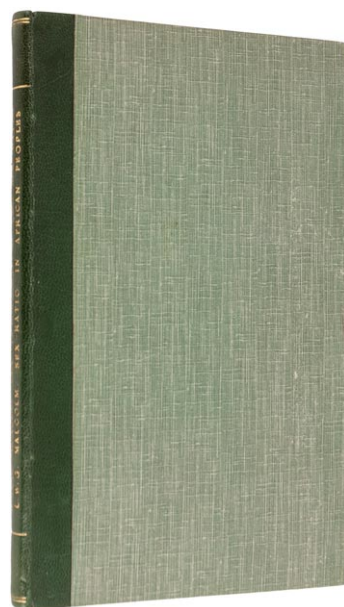
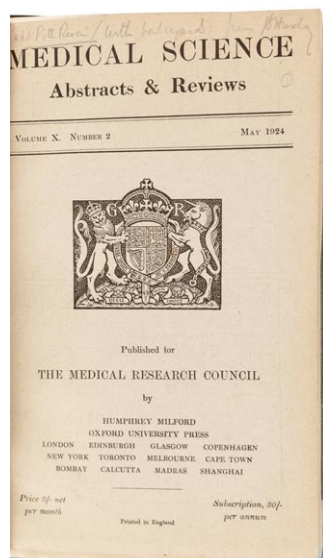
**5. DARWIN, Charles Robert.** *The Variation of Animals and Plants Under Domestication... In Two Volumes.* John Murray, 1899. **£3,350**

8vo. Two vols. Original green cloth with **original dustwrappers**; pp. xiv + 473, x + 494; bindings pristine, dustwrappers a little dulled to spines, mainly uncut, a little internal foxing, very good.

Second edition, eighth impression. **Copies in the original wrappers are extremely rare.** We have never before seen a copy of a Darwin in the classic Murray binding with an original dustwrapper. Wrappers were customarily discarded by the original buyer, or even the bookshop stocking the book. "This represents the only section of Darwin's big book on the origin of species which was printed in his lifetime and corresponds to its first two intended chapters" (Freeman, p. 122).. The theory of Pangenesis, currently discussed as the inheritance of acquired characteristics, is here expounded by Darwin for the first time. Other chapters consider "the amount and nature of the changes which animals or plants have undergone whilst under man's dominion", employing observations of inheritance within a species in an effort to understand the causes of variability. This is one of Darwin's most influential and wide-ranging books. It is also his longest and most detailed work.

Freeman 898.





**6. HUXLEY, Julian.** Sex-Determination and Related Problems. Oxford: The Medical Research Council. 1924. **£150**

8vo. 6 papers bound in 1 vol. Sometime bound in green morocco-backed green cloth boards, gilt lettering to spine; insect damage to fore-edges of last paper, otherwise very good.

The papers included are:

1. **HUXLEY, Julian.** Sex-Determination and Related Problems. Offprint from *Medical Science*, Vol X, Number 2, May 1924, pp 91-124. Wrappers bound in. Front of wrapper **inscribed by Huxley** "Capt Pitt-Rivers/ With best regards from J Huxley". Captain George Pitt-Rivers (1890-1966), son of the explorer Augustus, was a war hero, anti-Bolshevist, anti-semitic and eugenicist whose fascist tendencies led to him being interned during the Second World War. At the time of writing this paper, Huxley was also a eugenicist - he became a Life Fellow of the Eugenics Society the following year - but was far softer politically, seeing eugenics as a means to eradicating disease and poverty rather than promoting 'racial purity'.

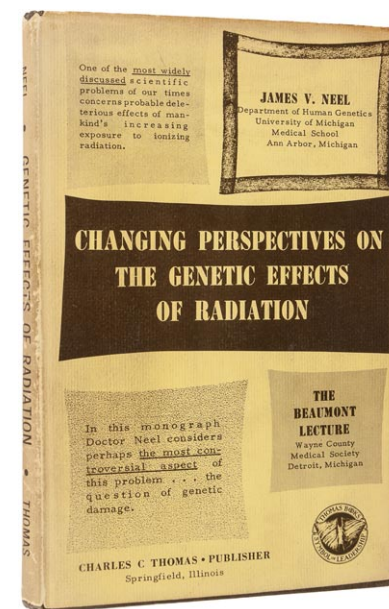
2. **HUXLEY, Julian.** Late fertilization and sex-ratio in trout. Extracted from *Science*, October 12 1923, pp. 291-292,

3. **HUXLEY, Julian.** The Great Crested Grebe and the idea of secondary sexual characters. Reprinted from *Science*, Vol 36, No. 931, November 1 1912, pp 601-2.

4. **HUXLEY, Julian.** Some further notes on the courtship behaviour of the Great Crested Grebe. Reprinted from *British Birds*, Vol XVIII, No. 5, October 1 1925, pp. 129-134, wrappers bound in.

5. **HUXLEY, Julian.** Some points in the breeding behaviour of the Common Heron. Reprinted from *British Birds*, Vol XVIII, No. 6, November 1 1925, pp. 155-163, wrappers bound in.

6. **MALCOLM, L.W.G.** Sex Ratio in African Peoples. Reprinted from *American Anthropologist*, Vol 26, No. 4, October-December 1924, pp. 454-473, wrappers bound in. Presentation copy **inscribed by the author.**

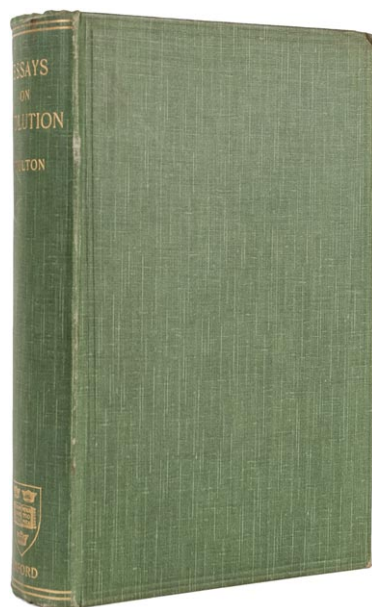


**7. NEEL, James V.** Changing Perspectives on the Genetic Effects of Radiation. Springfield, Illinois: Charles C. Thomas. 1963. **£100**

8vo. Original cloth and wrapper; pp. viii + 97, diagrams in text; occasional pencil annotation to margins, wrapper a little dulled, very good. Provenance: ffep with ownership inscription of Professor R.J. 'Sam' Berry, dated 2nd July 1963.

First edition. A product of the Cold War, based on the author's own research into the genetic aftermath of the Hiroshima and Nagasaki bombs.

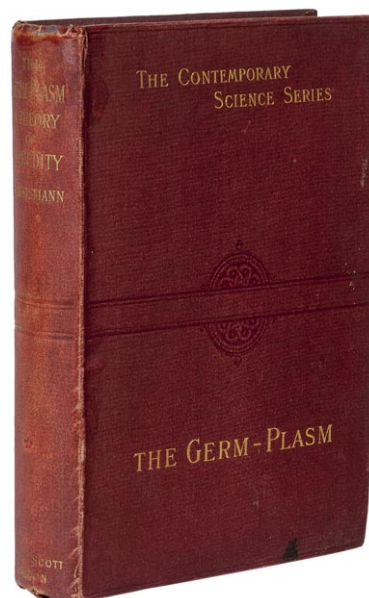




**8. POULTON, Edward Bagnall.** *Essays on evolution* 1889 - 1907. Oxford: Clarendon Press. 1908. **£220**

8vo. Original green cloth, gilt lettering to spine, t.e.g.; pp. xlviii + 479, 1 plate; a little spotting to endpapers, very good.

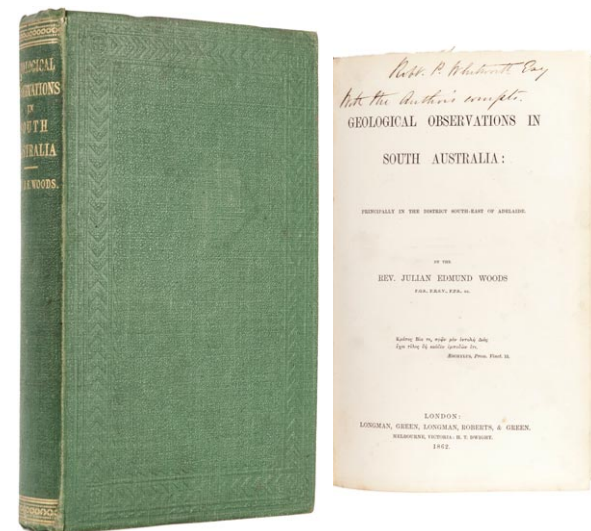
First edition. Sir Edward Bagnall Poulton (1856 - 1943) was a convinced proponent of natural selection at a time when its importance was held in doubt by early geneticists such as Reginald Punnett. Poulton was instrumental in demonstrating how the recently rediscovered work of Mendel complimented rather than invalidated the theory of natural selection and thus initiating the idea of the evolutionary synthesis. He provides an interesting overview of theories of heredity and recent genetic discoveries in the early chapters of this book. Poulton was best known for his work on animal coloration and mimicry, subjects that are dealt with extensively in this volume.



**9. WEISMANN, August** *The Germ-Plasm: A theory of heredity.* Walter Scott, Ltd. 1893. **£90**

8vo. Original red cloth, gilt lettering to upper board and spine; pp. xxiv + 477 + [24, ads.], text illustrations; a little rubbing to spine, ink spot to lower edge of upper board, a little spotting to endpapers, very good.

First English language edition. Weismann's realisation that heredity was passed through the 'germ-plasm' alone disproved Darwin's theory of pangenesis and took evolutionary science another step further; Lamarckism was now thoroughly discredited. The 'Weismann barrier', which stated that hereditary information can only pass from the gametes to somatic cells and never vice versa, pointed the way towards genetics. This book marked Weismann's first elucidation of his fully formed theory, although he had been publishing material on the subject for ten years prior to its appearance.

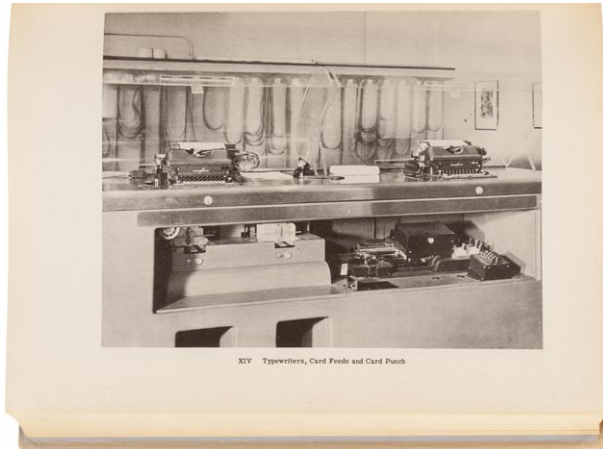


**10. WOODS, Rev. Julian Edmund.** *Geological Observations in South Australia: principally in the district south-east of Adelaide.* Longman, Green, Longman, Roberts & Green. 1862. **£425**

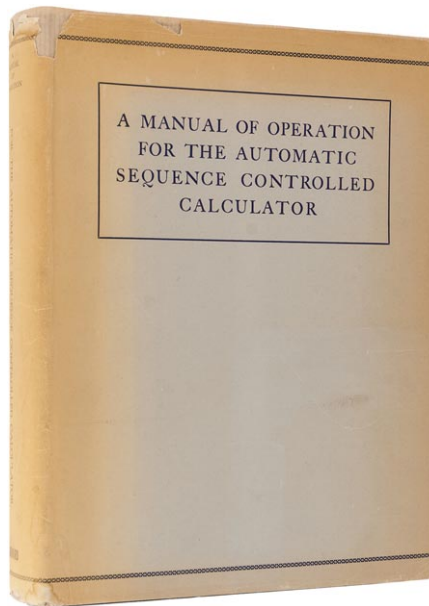
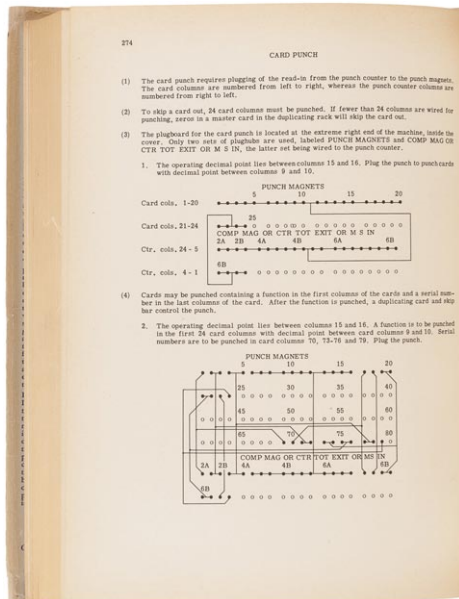
8vo. Original green blind-stamped cloth, gilt lettering to spine; pp. xviii + 404, frontispiece, map, numerous text engravings; a trifle bumped to extremities; very good. *Provenance: fep inscribed by the author to Robert P. Whitworth.* Whitworth (1831-1901) was a British-born journalist, playwright and actor who emigrated to Australia in 1854 and worked with most of the major newspapers.

First edition. Woods (1832-1889) was a British Catholic priest who took a parish in Penola, south Australia in 1857. This work, his first, followed in 1862. The book came out only three years after *On the Origin of Species*, yet Woods mentions Darwin only in relation to his theories on coral islands. However, a long passage (pp. 136-147) deals with the idea of evolution, and reveals a nuanced, theistic conception of the theory: "All God's works are equally perfect, and there is as much room for wonder and admiration at the perfection of design in the simplest plants as there is in the most complicated animal ... But there has been ... a development [*sic*] from the earlier periods of an approach to a more complex organisation, which ended in man".

# COMPUTER HISTORY



XIV Typewriters, Card Feeds and Card Punch

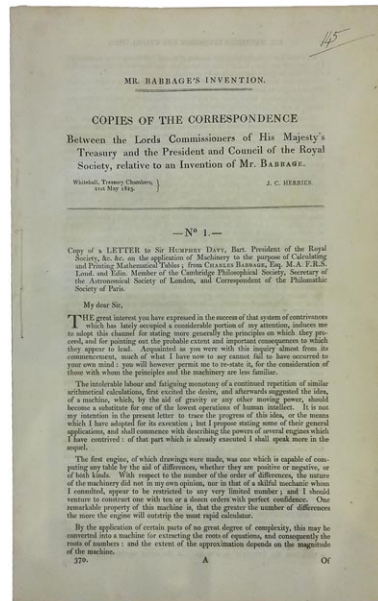
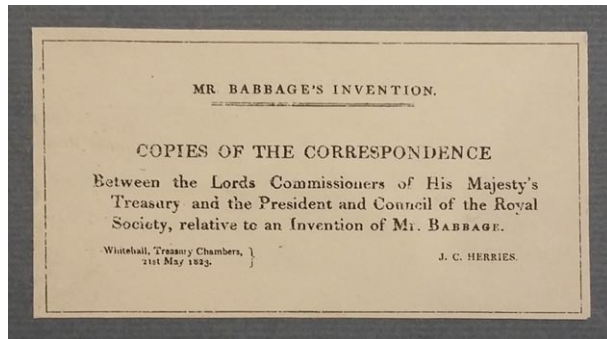


11. [AIKEN, Howard and Grace HOPPER]. A manual of operation for the automatic sequence controlled calculator. Cambridge, Massachusetts: Harvard University Press. 1946. **£3,000**

4to. Original blue cloth, gilt lettering to spine, with **very scarce dustwrapper**; pp. [16] + 561 + [3], 17 numbered plates including frontispiece, text illustrations; wrapper faded with chips to head and foot of spine; otherwise very good indeed. *Provenance*; front pastedowns with inkstamps of W.C. Rockefeller, an aerodynamicist and meteorologist whose work in creating a 24 hour weather forecast centre for Howard Hughes's pioneering Spruce Goose flight formed the basis of the Flight Advisory Weather Service. As a student a Caltech he was the first person to win the Sperry Award for aeronautical instrument design.

First edition. The Harvard Mark I, or IBM Automatic Sequence Controlled Calculator, was the first programmable calculating machine to fulfil Babbage's dreams and produce mathematical tables. Based on existing IBM punched-card technology and completed in 1943, it was not long before it was commandeered by the military and its creator, Aiken, given a commission in the US Navy. It was used by John von Neumann to calculate the effects of atom bomb implosion as part of the Manhattan Project. One of Aiken's staff was Lieutenant Grace Hopper who, having "never met a digit" until she was assigned to the team, would become not only a Rear Admiral but also one of the most important post-war computer programming pioneers, making fundamental contributions to the development of compilers. She was also responsible for writing most of this manual.

*Origins of Cyberspace 411.*



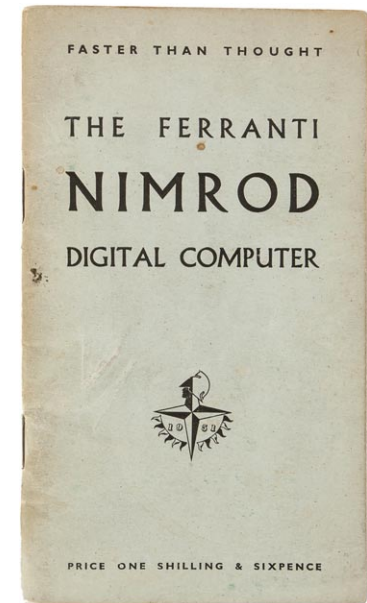
**12. BABBAGE, Charles** Mr Babbage's Invention. Copies of the correspondence between the Lords Commissioners of His Majesty's Treasury and the President and Council of the Royal Society, relative to an Invention of Mr. Babbage. *House of Commons*. 1823. **£3,500**

Folio. Unbound, stitched at inner margin as issued, in custom-made blue cloth-backed chemise with silk ties and paper label to front; pp. 6 + [ii], docket title to verso of last leaf; joint sometime subtly reinforced, contemporary ink number '145' to front page and '157' to recto of final leaf, near fine.

First edition, offprint version, after the extremely rare privately printed version from 1822. This copy is the first separate printing of the British government's reprint of Babbage's 1822 letter to Sir Humphry Davy which also appears in Vol 15 of *The House of Commons Sessional Papers*, paginated 9-16. This separate printing also includes for the first time copies of accompanying letters from the Treasury and the Royal Society.

Babbage's letter to Sir Humphry Davy upon the completion of his experimental difference engine led the great man to recommend the project to the government for funding. Consequently, in 1823 Babbage was granted £1500 from the Civil Contingency Fund to build the full scale Difference Engine No. 1. 'Babbage had Clement assemble a small section of the engine as a demonstration piece. The assembly, which worked impeccably, represented about one-seventh of the whole machine and was ready toward the end of 1832. This section of Difference Engine no. 1, transferred to the Science Museum, London, in 1862, is the first known automatic calculator and ranks among the most celebrated icons in the prehistory of computing.' (ODNB).

No copies on OCLC; one auction record in past 20 years.

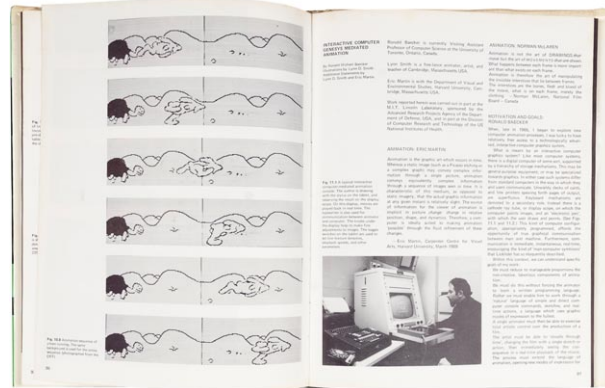
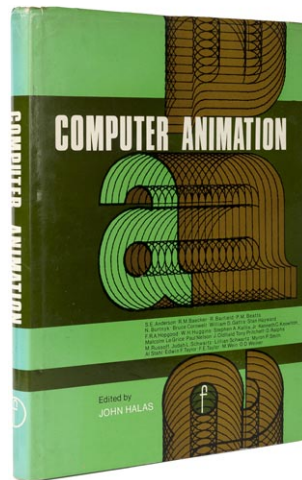


**13. FERRANTI.** Faster Than Thought. The Ferranti Nimrod Digital Computer. *Hollinwood, Lancs: Ferranti Ltd.* [1951]. **£3,000**

12mo. Original green wrappers, printed in black; pp. 40, tables in text; wrapper with a little creasing and small split to foot of spine, annotation in red pen to rear of wrapper, previous owner's signature to inside of front wrapper, very good.

First edition. Scarce. The Ferranti Nimrod Computer, unveiled the world at the 1951 Festival of Britain, was the world's first computer game. It was built to play the ancient two-layer logic game of Nim/ It could either play itself or a human opponent. At the end of the game it would flash up either 'COMPUTER WINS' or 'COMPUTER LOSES'. It usually won, until it faced Alan Turing. According to legend, when Turing defeated Nimrod, it appeared to have a fit of temperament, flashing up 'COMPUTER WINS' and refusing to stop.



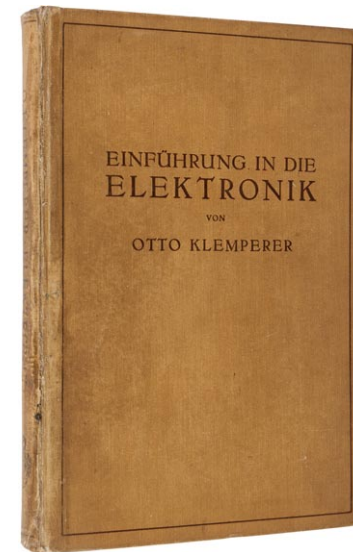
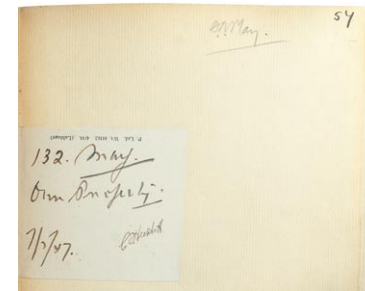


**14. HALAS, John [editor].** *Computer Animation*. Focal Press Ltd. 1974.

**£48**

4to. Original cloth and wrapper; pp. xviii + 176, illustrated throughout; a little spotting mainly to edges, otherwise very good.

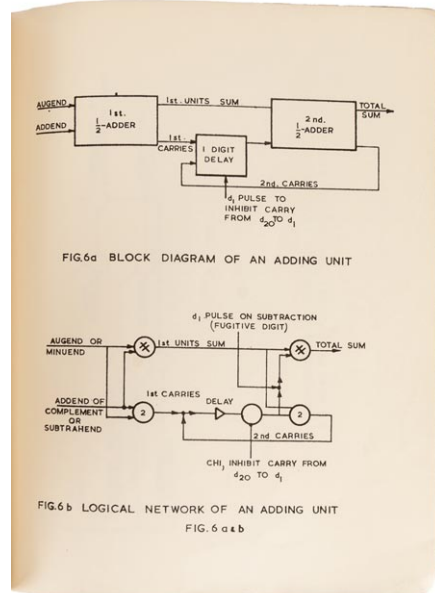
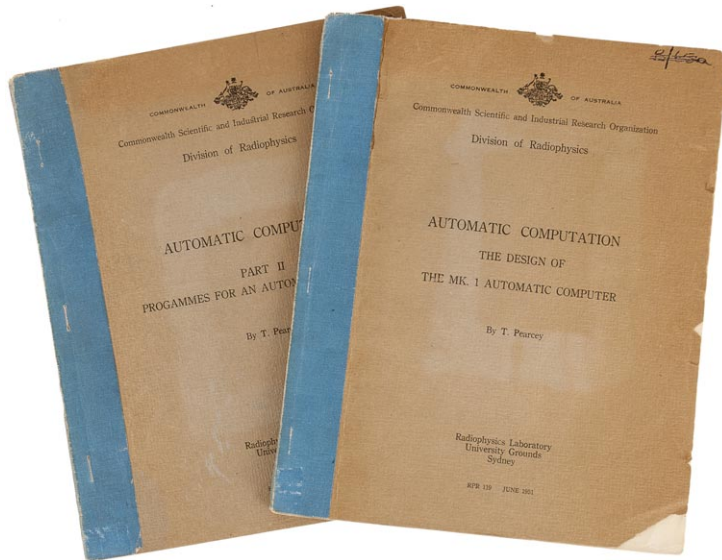
First edition. A compilation of essays by pioneers of computer animation with accompanying diagrams and illustrations.



**15. KLEMPERER, Otto.** *Einführung in die Elektronik*. Berlin: Springer. 1933. **£150**

8vo. Original brown cloth; pp. xii + 303, text illustrations; spine rubbed, hinges tender, very good. *Provenance:* ffp with signature of Alan Nunn May and hand-written label "132. May/ Own Property/ 1/ 1 [?]/ 47". Alan Nunn May (1911-2003) was a British physicist who worked on radar and the Manhattan Project during World War II, and who passed samples of uranium isotopes to Russia in 1946. He was sentenced to ten years hard labour in Wormwood Scrubs and this book, as shown by the label, accompanied him there.

First edition. An introduction to electronics, alas not by the great German orchestral conductor but by a pioneering engineer of the same name.

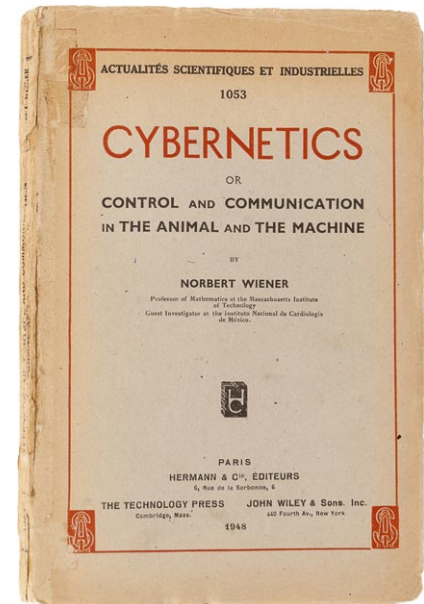


**16. PEARCEY, Trevor.** Automatic Computation. The Design of the Mk. 1 Automatic Computer [with] Part II. Programmes for an Automatic Computer. Sydney: Radiophysics Laboratory 1951. **£2,000**

Square 8vo. Original blue cloth-backed brown paper wrappers, printed in black, staple bound; pp. 35, 52 and 11 plates, text figures; wrappers chipped especially at corners, very good. Provenance: inside of front wrappers with library labels of Imperial College London, with library inkstamps and deaccession stamps to title pages.

First edition. Very rare. Trevor Pearcey's CSIR Mk 1, built in Sydney, ran its first programs in 1949 and was the fifth electronic stored program computer in the world. It was the first in the Southern Hemisphere. It was notable for a number of novel features, including its then unique ability to play digital music and most especially its speed - it was 1000 times faster than the best mechanical calculator. It can now be seen at the ScienceWorks museum in Victoria and is the oldest electronic computer still extant in its entirety. This manual is extremely rare; it appears never to have been at auction, and no sales records can be found.

Worldcat finds only 2 copies, one in the National Library of Australia and the other in University of Tasmania library.



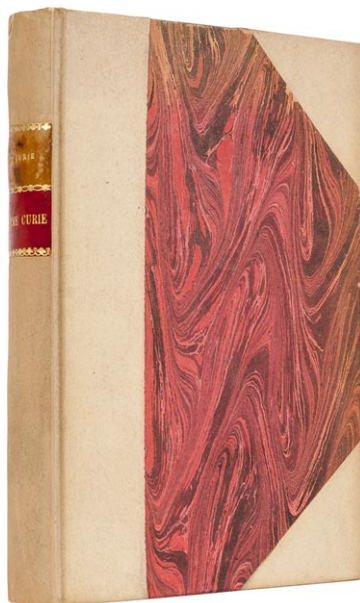
**17. WIENER, Norbert.** Cybernetics or Control and Communication in the Animal and the Machine Paris: Hermann & Cie.. 1948 **£1,000**

8vo. Original brown paper wrapper, printed in black and red; pp. 194, several diagrams in text; spine sometime tape repaired, very good.

First edition, preceding the first American edition by a few months. Scarce. Norbert Wiener (1894 - 1964) was the founder of the discipline of cybernetics, the study of regulatory systems that has had profound implications for studies of both physical and mechanical processes. The idea grew from Wiener's work on the automatic firing of anti-aircraft guns at MIT during the war. His experience of the way that feedback affects a closed system loop and causes it to change gave him an insight in to the processes of learning and adaptation that can be applied to artifical and animal intelligences alike. It was in this book that Wiener first named and defined his concept and thus launched a discipline that has since been central to the development of robotics, bioengineering, evolutionary science and psychology. Wiener was awarded the National Medal of Science in 1963 and had a crater on the Moon named after him.



## GENERAL SCIENCE



**18. CURIE, Eve.** Madame Curie. Paris: Gallimard. 1938. **£200**

8vo. Sometime rebound in cream paper-backed red marbled boards, gilt morocco lettering pieces to spine, patterned endpapers; pp. 313, frontispiece portrait of Marie Curie; previous owner's inscription to flyleaf, edges slightly browned, very good.

First French trade edition, printed a year after first limited edition. Text in French. Eve Curie's biography of her mother was an enormous hit and was adapted in to a film in 1943, starring Greer Garson.

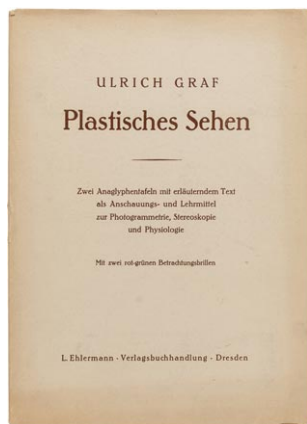
**19. EHRENBURG, Christian Gottfried.** Organisation, Systematik und geographisches Verhältniss der Infusionsthierchen. Zwei Vorträge, in der Akademie der Wissenschaften zu Berlin gehalten in den Jahren 1828 und 1830. Berlin: Druckerei der Königl. Akademie der Wissenschaften for F. Dümmler, 1830. **£600**

Folio in 4s (363 x 260mm). 20th-century full brown buckram by Fowler Wilson for the Royal Institution, lettered in gilt on the spine and with the Institution's crest in gilt at the foot; pp. [2 (title, verso blank)], 108; 8 hand-coloured copper-engraved plates by Schmidt, Wiencker, M. Haas, E. Weber, and C. Haas after Ehrenberg, letterpress tables in the text; occasional light spotting or marking, light offsetting from last text l. onto first plate, final plate slightly browned, otherwise a very good and crisp copy; provenance: The Royal Institution (inkstamps on versos of title and final plate, and front endpapers, crest on spine).

First and only edition. An important and early publication on the (now-obsolete) class *infusoria* by Ehrenberg (1795-1876), one of the leading experts on the subject: 'With the microscope he discovered single-celled fossils that built up geological strata; he gave exact descriptions of and discriminated among the shells and skeletons of freshwater and marine animals, thereby becoming the founder of microgeology and micropaleontology in Germany' (DSB IV, p. 291). The work is illustrated by eight finely-engraved and -coloured plates, and is composed of two papers based on the author's expeditions: the first, read to the Akademie der Wissenschaften on 10 January 1828, is 'Die geographische Verbreitung der Infusionsthierchen in Nord-Afrika und West-Asien, beobachtet auf Hemprich und Ehrenbergs Reisen', and is based on the findings of Ehrenberg's travels through north Africa and Arabia in 1820-1825, during which he accumulated a vast collection which included some 34,000 zoological and 46,000 botanical specimens. The second, read to the Akademie der Wissenschaften on 4 and 18 March 1830, is 'Beiträge zur Kenntniss der Organisation der Infusorien und ihrer geographischen Verbreitung, besonders in Sibirien', which draws upon Ehrenberg's findings during his travels through Russia, which were patronised by Alexander von Humboldt and financed by Czar Nicholas I.

Brunet II, col. 954; Nissen, ZBI 1246; F.C.S. Roper, *Catalogue of Works on the Microscope* (London: 1865), p. 29.





**20. GRAF, Ulrich.** *Plastisches Sehen.* Zwei Anaglyphentafeln mit erläuterndem text als Anschauungs- und Lehrmittel zur Photogrammetrie, Stereoskopie und Physiologie. Mit zwei rot-grünen Betrachtungsbrillen. Dresden: L. Ehlermann. [nd, c. 1935].

**£190**

4to. Two anaglyph 3D cards 300 x 210 mm, printed in red, cyan and black, printed text mounted to verso, with two pairs of 3D glasses in red and cyan, contained in original cream printed envelope; envelope a little browned and worn at edges, otherwise very good indeed.

A rare example of an early demonstration of 3D vision. Plate I illustrates image separation using a picture of a wine glass, while Plate II uses the image of a cuboid to demonstrate spatial affinity.

**“IT IS HARD TO FIND POINTS OF CRITICISM  
OF THE VOLUME” - LINUS PAULING**

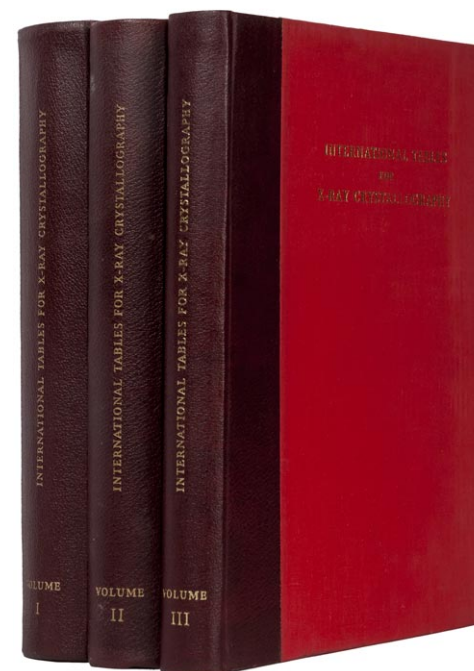
**21. [CRYSTALLOGRAPHY] HENRY, Norman F.M. and LONSDALE, Kathleen (Editors).** *International Tables for X-Ray Crystallography.* Vol. I Symmetry Groups. Vol. II Mathematical Tables. Vol. III Physical and Chemical Tables. *Published for the International Union of Crystallography by the Kynoch Press, Birmingham.* 1952 - 1962. **£248**

4to., 3 volumes in original cloth lettered in gilt on spines and upper boards. Ink name in vol. I A very good set.

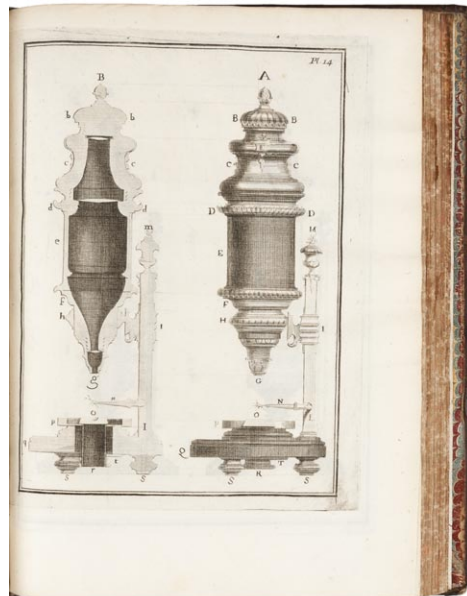
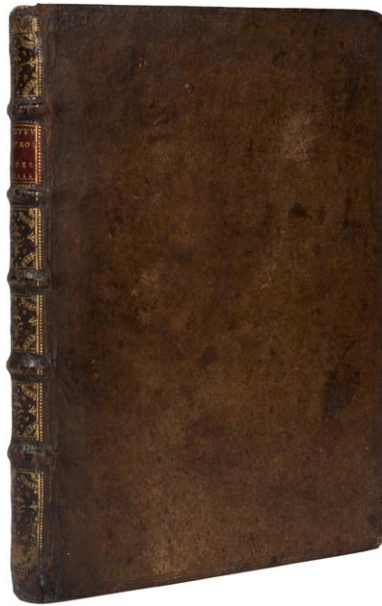
From a contemporary book review by Linus Pauling, “During the years since 1935 X-ray crystallographers have made much use of the *International Tables for the Determination of Crystal Structures*, prepared through the informal cooperation of scientists in several countries, and initiated at a conference in Zurich in 1929. These tables are now being revised, under the supervision of the Editorial Committee of the International Union of Crystallography (M.J. Buerger, C.H. MacGillavry, N.F.M. Henry, J.S. Kasper, and K. Lonsdale (Chairman). The first volume, on symmetry groups has appeared; it is beautifully printed on fine paper and has an interesting odor (an unusual feature) [not now apparent, sadly]. It will be followed by a volume of mathematical tables and a volume of physical and chemical tables.

The book contains detailed descriptions of the one-dimensional, two-dimensional, and three-dimensional lattices, the two-dimensional and three-dimensional point groups, and the two-dimensional and three-dimensional space groups, in a form designed to be of the greatest usefulness to X-ray crystallographers.

It is hard to find points of criticism of the volume... My co-workers and I have been strikingly unsuccessful in the search for errors. I feel a sense of personal indebtedness, which I am sure is felt by all of my fellow X-ray crystallographers, to the Editors of this beautiful and useful volume and to the members of the Editorial Committee of the the International Union of Crystallography and the other workers who contributed in one way or another in the preparation of the new *International Tables*.”







**22. JOBLLOT, Louis.** *Descriptions et usages de plusieurs nouveaux microscopes, tant simples que composez.* Paris: Collombat. 1718.

**£2,750**

Small quarto. Contemporary full calf, gilt spine with red morocco gilt label, marbled endpapers; pp. [x] + 78 + 96 + [v, contents], 34 plates, engraved headpieces; binding a little bumped to extremities, previous owner's bookplate to front pastedown, manuscript notes in ink to flyleaf, previous owner's signature to title page, internally very clean and bright, very good.

First edition. Louis Joblot (1645-1723) is now overshadowed by his contemporary Leeuwenhoek but was an equally innovative scientist. In this volume, his landmark work and the first French book on microscopical research, he presents his own technical improvements to the microscope, his observations of protozoa and, crucially, his rejection of spontaneous generation. He observed many animalcules for the first time, classifying them according to shape, and was the leading discoverer of infusoria until 1773, making this book an important document of early microbiology.

## THE AUTHOR'S FINAL TEXT

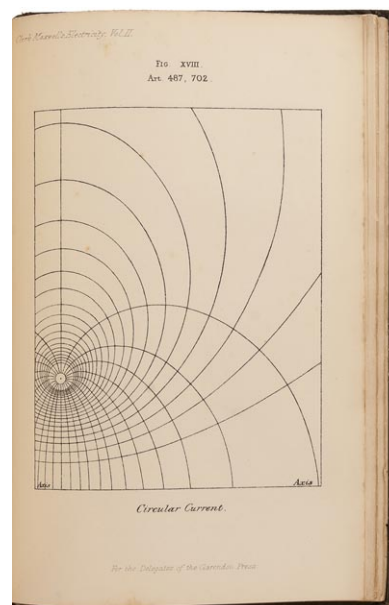
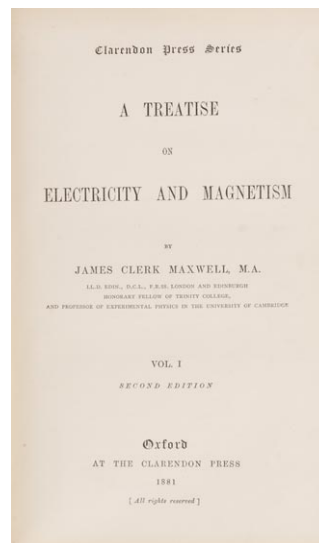
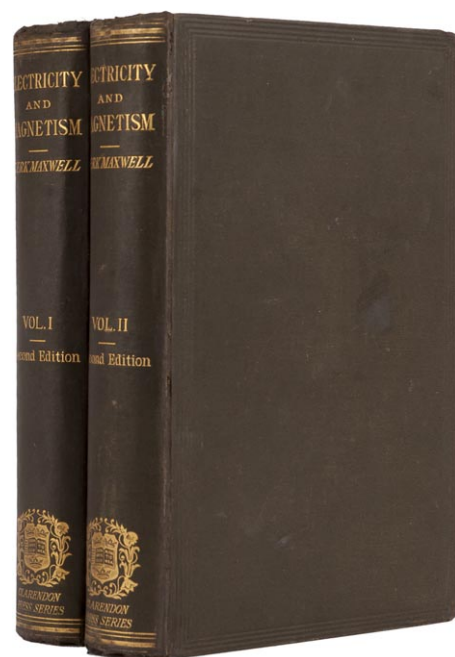
**23. MAXWELL, James Clerk.** A Treatise on Electricity and Magnetism, edited by W.D. Niven. *Oxford: The Clarendon Press, 1881.* **£4,500**

8vo, 2 volumes. Original olive cloth, boards with blind-ruled borders, spines lettered and decorated in gilt; pp. I: xxi, [1], 464; II: xxiii, [1], 456, 36 (publisher's catalogue dated March 1887), 21 plates, those at the end of the volumes preceded by a lithographic leaf "Plates. Vol. I [... II]", diagrams in the text; light rubbing to extremities, extensive manuscript pencil notes on endpapers with occasional marginal notes, very good.

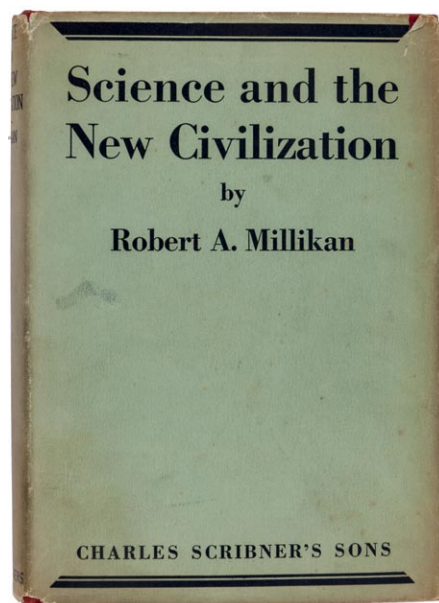
Second, revised edition. Scarce, especially in original cloth. This is one of the most influential books of nineteenth century physics. "Maxwell once remarked that the aim of his *Treatise* was not to expound the final view of his electromagnetic theory, which he had developed in a series of five major papers between 1855 and 1868; rather, it was to educate himself by presenting a view of the stage he had reached in his thinking. Accordingly, the work is loosely organized on historical and experimental, rather than systematically deductive lines. It extended Maxwell's ideas beyond the scope of his earlier work in many directions, producing a highly fecund (if somewhat confusing) demonstration of the special importance of electricity to physics as a whole. He began the investigation of moving frames of reference, which in Einstein's hands were to revolutionize physics; gave proofs of the existence of electromagnetic waves that paved the way for Hertz's discovery of radio waves; worked out connections between the electrical and optical qualities of bodies that would lead to modern solid-state physics; and applied Tait's quaternion formulae to the field equations, out of which Heaviside and Gibbs would develop vector analysis" (Norman).

The *Treatise* first appeared in 1873, and Maxwell then revised the first nine chapters, which were with the printers, in preparation for a second edition at the time of his death in 1879. As Niven explains in his preface: "Those who are familiar with the first edition will see from a comparison with the present how extensive were the changes intended by Professor Maxwell both in substance and in treatment of the subject [...]. The first nine chapters were in some cases entirely rewritten, much new matter being added and the former contents rearranged and simplified" (p. xv). The remainder of the text was lightly revised by Niven, with assistance from his brother Charles Niven and J.J. Thomson, who edited the third edition of 1893.

*For the first edition, cf. Norman 1466-1467; Grolier, Science 72, cf. PMM 355.*



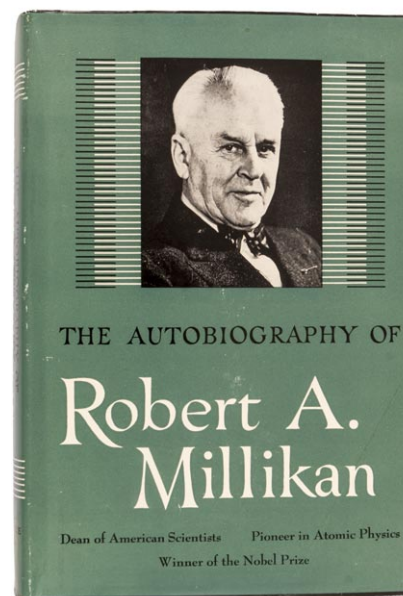




**24. MILLIKAN, Robert Andrews** *Science and the New Civilization*.  
New York: Charles Scribner's Sons. 1930. **£100**

8vo. Original red cloth with dustwrapper; pp. [vi] + 194; marking to front board, wrapper a little browned to edges, very good.

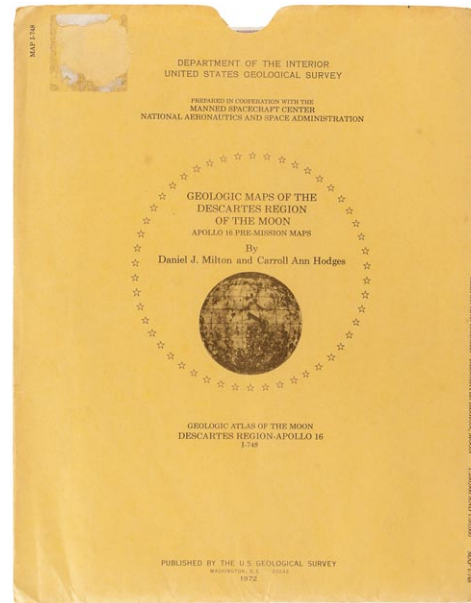
First edition. Millikan addresses the future of mankind in the age of the machine, and is optimistic. He foresees a world where people have more leisure, great quality of life and liberation from physical toil. This remains a contentious and pressing issue.



**25. MILLIKAN, Robert Andrews** *The Autobiography of Robert A. Millikan*. MacDonal, 1951. **£300**

8vo. Publisher's blue cloth titles in gilt to spine; pp. 334 + 3, black and white photograph plates; wrapper slightly rubbed to front hinge, otherwise very good indeed. *Provenance*: presentation copy, ffeep **inscribed by the author** to Patricia McCune, with McCune's bookplate to front pastedown.

First edition. In the present volume Robert Millikan provided "...valuable accounts of his childhood and education, work on the electric charge and the photoeffect, and the involvement in the mobilization of science during World War I; curiously, he devoted little space to his research in hot spark spectra or cosmic rays..." [D.S.B.]. He helped establish Caltech as one of the country's leading academic centres and was a renowned educator and advocate for science in the public sphere. During a period which saw great debate about the teaching of science and creationism - culminating in the high-profile Scopes trial - Millikan was also a spokesperson for the reconciliation of science and religion. The work that won him the Nobel prize in 1923 was crucial to the ratification of theories postulated by Einstein and Bohr, and provided conclusive proof of the particulate nature of electrons and atoms.

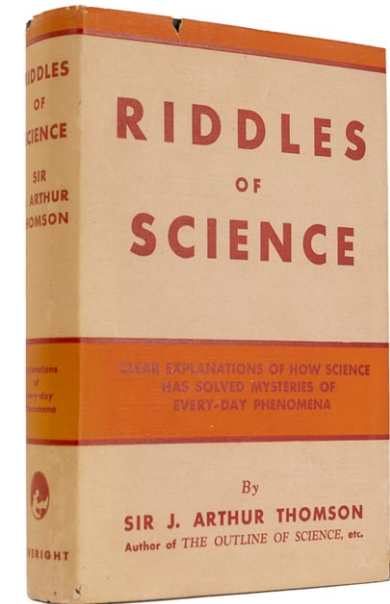


**26. [MOON]. MILTON, Daniel J. and Carroll Ann HODGES.** Geologic Maps of the Descartes Region of the Moon. Apollo 16 Pre-Mission Maps. Washington D.C.: The US Geological Survey. 1972.

**£150**

Two sheets, 77 x 112 cm and 54.5 x 96 cm, in original printed buff envelope; coloured maps of the moon, columns of text surrounding maps with keys to the colouring, both with inset maps indicating the Apollo 16 landing area; remains of old sticker to upper left corner of front of envelope, slightly bumped to edges, very good.

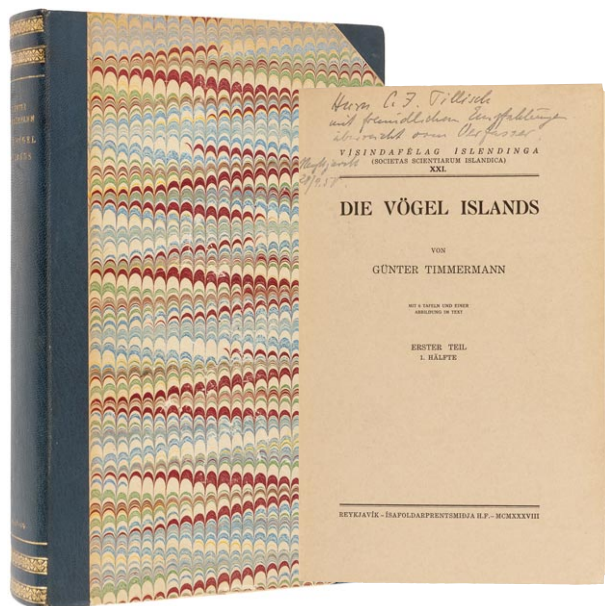
First edition. Rare Apollo moon mission material.



**27. THOMSON, Sir J. Arthur.** Riddles of Science. Clear explanations of how science has solved mysteries of every-day phenomena. New York: Liveright Publishing Corporation. 1932. **£50**

8vo. Original cloth and wrapper; pp. 387, text illustrations throughout; a little browning to endpapers, two spots to fore-edges, small chip to top edge of wrapper, otherwise very good.

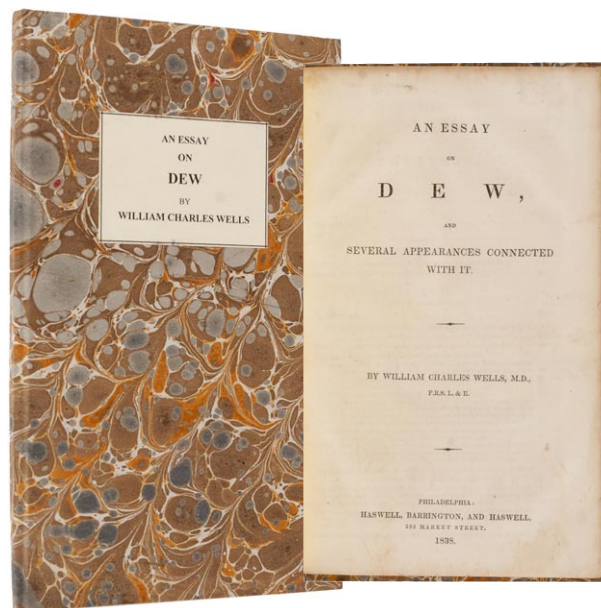
First edition. An interesting overview of scientific curiosities by the respected Scottish biologist.



**28. TIMMERMANN, Günter.** Die Vögel Islands. Reykjavík: Ísa foldarprentsmi ja H.F./ H.F. Leifur. 1937, 1939, 1949. **£200**

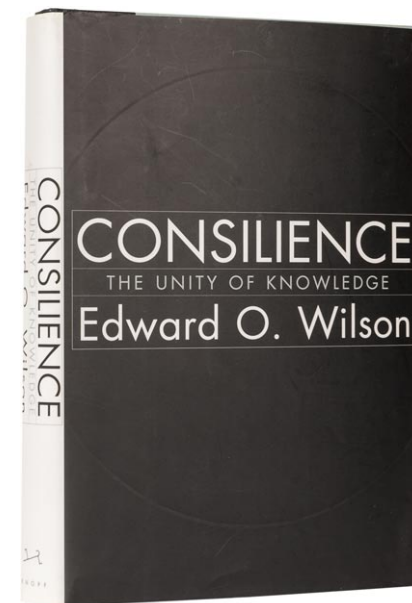
8vo. 3 vols bound in one. Half blue morocco, marbled boards, gilt lettering to spine; pp. 110, 6 plates, 1 text illustration; 111-238, 3 plates, 7 text illustrations; 239-524, 5 plates, 5 text illustrations; loose map of Iceland to rear, original wrappers of vol. 1 bound in; loose map with small tape repair, very good. *Provenance:* presentation copy, front wrapper of vol. 1 **inscribed by the author.**

First edition. Text in German. These three volumes of the *Visindafélag Íslendinga* comprise Günter Timmermann's scarce work on Icelandic ornithology. Timmermann (1908-1979) was German zoologist who was posted to Iceland in 1932 to study the avifauna there. He left in 1939, just before the war, and returned to Germany where he became a lecturer at the University of Rostock. He went back to Iceland from 1949-1952 to finish his fieldwork. This comprehensive work is scarce on the market.



**29. WELLS, William Charles.** An Essay on Dew, and several appearances connected with it. Philadelphia: Haswell, Barrington, and Haswell. 1838. **£300**

First US edition, originally published in Britain in 1814. A classic of meteorology, for which Wells was awarded the Rumford Medal of the Royal Society. "It would take too much space to follow all of Wells' ingenious experiments, but his conclusions can be stated. The cooling of the Earth's surface, and of the bodies that accumulate dew, is the result of radiation to space. This radiation is always going on, but can be largely interrupted by clouds; and in the daytime it is overbalanced by the radiation to the Earth from the Sun" (Middleton). It is clear that Wells had hit upon what is now called the "greenhouse effect." Moreover, it was of "major importance in the development of the science of ventilation, particularly in its relation to relative humidity and the influence of the latter on the comfort of the occupants of factories, ships, theatres, etc". (Garrison-Morton 1604).



**30. WILSON, Edward O.** Consilience. The Unity of Knowledge. New York: Alfred A. Knopf. 1998. **£80**

8vo. Original leatherette-backed green boards with dustwrapper; pp. 332; fine.

First edition. Wilson's groundbreaking book of scientific philosophy in which he argues that our world is underpinned by a small number of fundamental natural laws.