

CATALOGUE 327

Neuchâtel  
SWITZERLAND



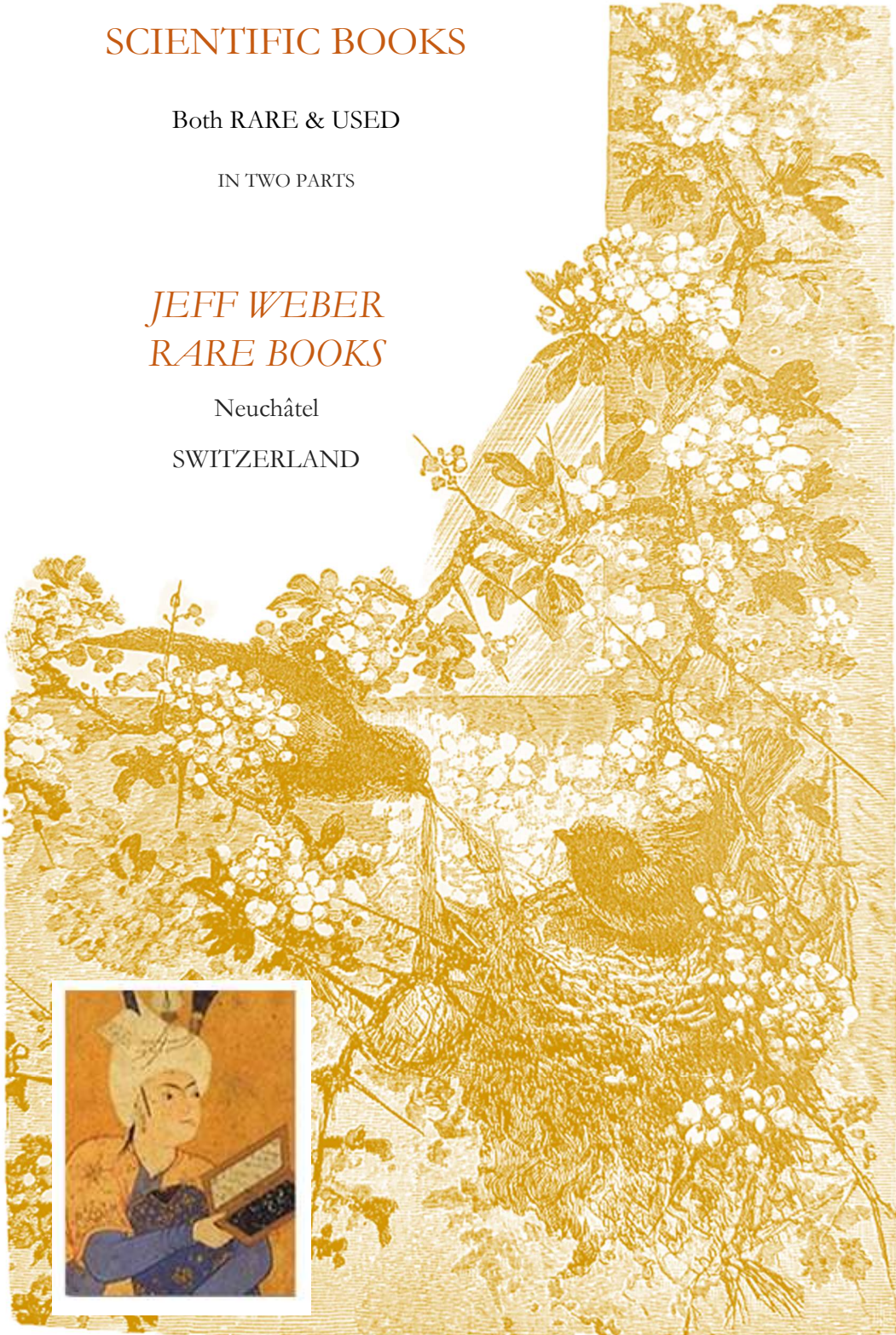
# SCIENTIFIC BOOKS

Both RARE & USED

IN TWO PARTS

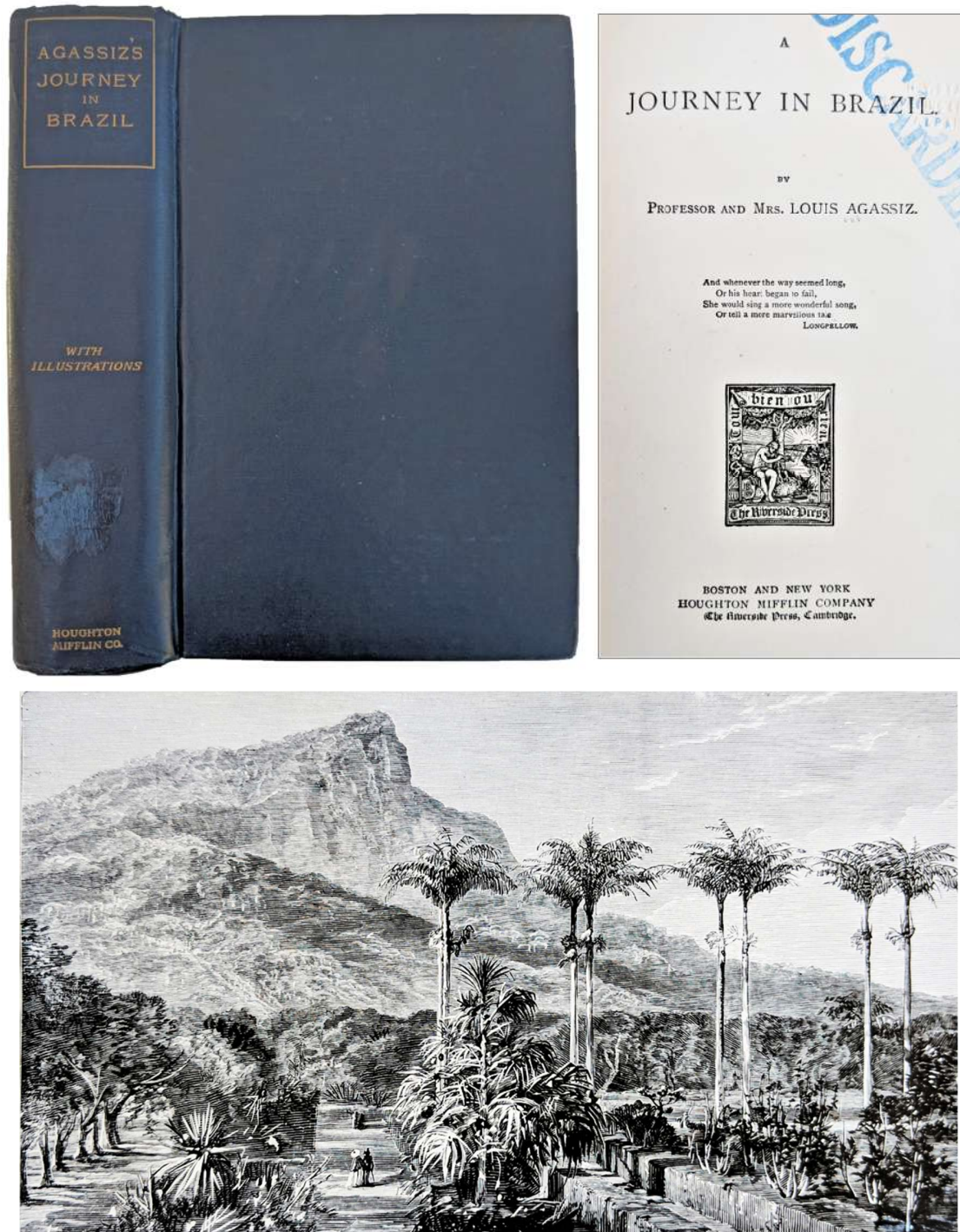
*JEFF WEBER*  
*RARE BOOKS*

Neuchâtel  
SWITZERLAND





**PART I** : From a Private Collection: Mostly Science, including physics, mathematics, astronomy, chemistry, & some literary additions [#1-42]





1. **AGASSIZ, Jean Louis Rodolphe** (1807-1873); **Elizabeth Cabot AGASSIZ** (nee CARY) (1822-1907). *A Journey in Brazil*. Boston: Houghton Mifflin, 1909. ¶ 8vo. [2], xix, [3], 540 pp. Frontis., plate, maps, figs. Original navy gilt-stamped cloth, top edge gilt; library markings, rear pocket, rubbed. Ownership label of Richard A. Weiss; bookplate of Albany, NY, Traveling Library. Good. [RW1001]

\$ 25

Dedicated to Nathaniel Thayer. In 1865 Louis Agassiz, already a famed naturalist and explorer, traveled to Brazil both to research fish and in hopes of recovering his health. He was accompanied by a number of assistants, as

well as his wife. This volume describes in detail their experiences in the country, focusing principally on the experiences with Brazilian societies, and including descriptions of both urban and rural environs.

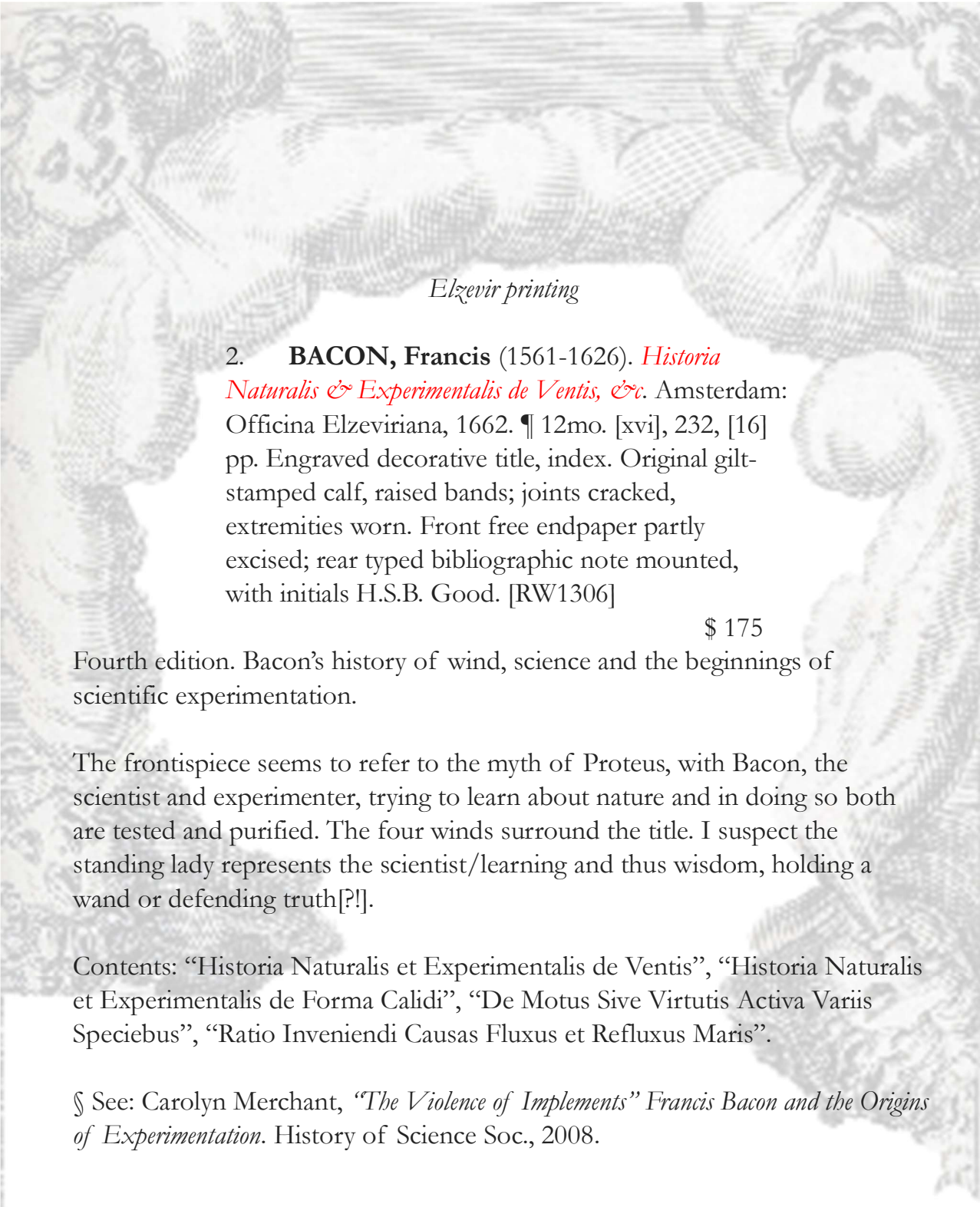
Subjects of interest include chapters "Physical History of the Amazons", "Life in Tefee", "Life at Manaos. — Voyage from Manaos to Tabatinga.", "Public Institutions of Rio. — Organ Mountains."





[2] BACON





*Elzevir printing*

2. **BACON, Francis** (1561-1626). *Historia Naturalis & Experimentalis de Ventis, &c.* Amsterdam: Officina Elzeviriana, 1662. ¶ 12mo. [xvi], 232, [16] pp. Engraved decorative title, index. Original gilt-stamped calf, raised bands; joints cracked, extremities worn. Front free endpaper partly excised; rear typed bibliographic note mounted, with initials H.S.B. Good. [RW1306]

\$ 175

Fourth edition. Bacon's history of wind, science and the beginnings of scientific experimentation.

The frontispiece seems to refer to the myth of Proteus, with Bacon, the scientist and experimenter, trying to learn about nature and in doing so both are tested and purified. The four winds surround the title. I suspect the standing lady represents the scientist/learning and thus wisdom, holding a wand or defending truth[?!].

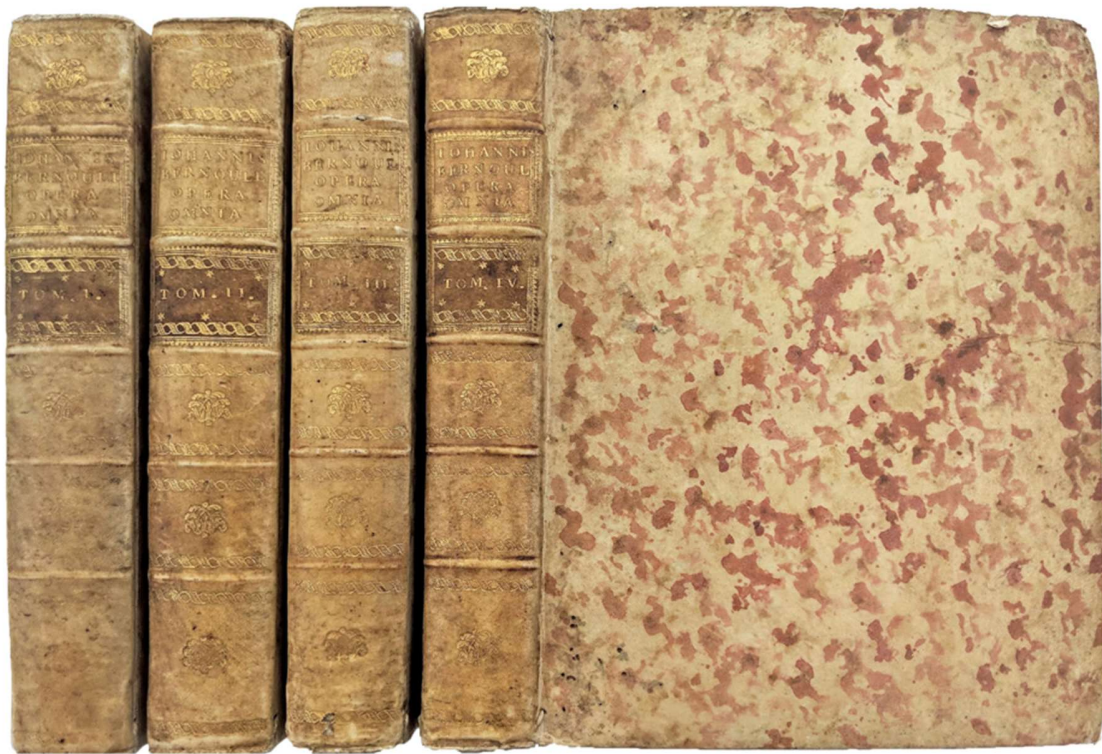
Contents: "Historia Naturalis et Experimentalis de Ventis", "Historia Naturalis et Experimentalis de Forma Calidi", "De Motus Sive Virtutis Activa Variis Speciebus", "Ratio Inveniendi Causas Fluxus et Refluxus Maris".

§ See: Carolyn Merchant, *"The Violence of Implements" Francis Bacon and the Origins of Experimentation*. History of Science Soc., 2008.









3. **BERNOULLI, Johann** (1667-1748). *Opera Omnia, tam antea sparsim edita, quam hactenus inedita*. Lausanne & Geneva: M. M. Bousquet, 1742. ¶  
4 volumes. Large 4to. Engraved frontis., engraved title vignettes, 91 engraved folding plates, titles printed in red and black. Fine contemporary mottled vellum over boards, spines gilt; minor binding defects, very slight worming to final leaves of index of vol. 4. Small Jesuit library stamp on titles. Near fine. [RW1316]

\$ 2,795

First edition, a lovely set. Bernoulli rose to fame, along with his brother Jakob, for his investigations into the then-new fields of differential and integral calculus. Most of Bernoulli's writing appeared only in the journals of the time, and remained uncollected until the present edition.

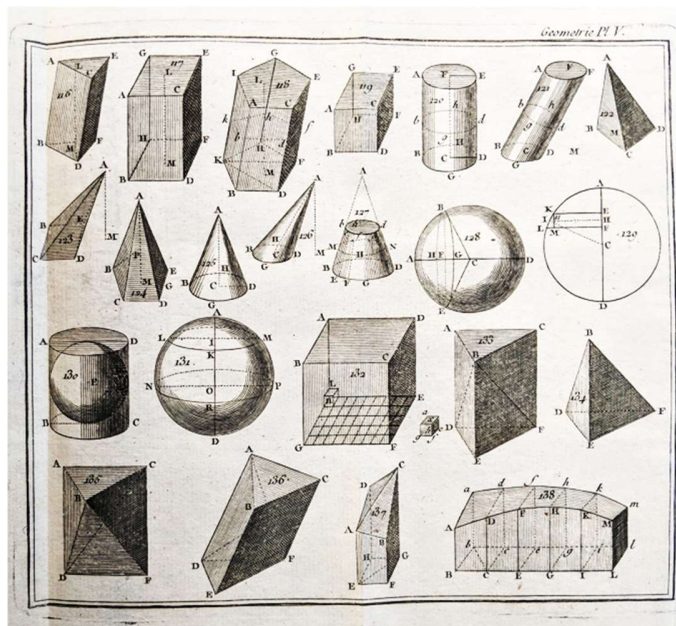
“His chief discoveries are the exponential calculus, the treatment of trigonometry as a branch of analysis, the conditions for a geodesic, the determination of orthogonal trajectories, the solution of the brachistochrone, the statement that a ray of light traversed such a path that *Smds* [in Greek] is a minimum, and the enunciation of the principle of virtual work . . . The general adoption on the continent of the differential rather than the fluxional notation



was largely due to his influence.” – Ball, *A Short Account of the History of Mathematics*, p. 368.

“...the first edition of [Johann] Bernoulli’s collected works brings together 189 of his papers and 59 of his lectures. The first volume is primarily devoted to problems in geometry and the early calculus, but also contains papers on muscular mechanics, the resistance of solids, and a geometrical demonstration of the motion of pendulums and projectiles in resisting and unresisting media. Volumes two and three are almost totally devoted to problems of mechanics, the first of these containing his theoretical essay on the maneuvering of vessels and related papers, as well as numerous contributions on the analysis of trajectories. His discourse on the laws governing the communication of movement opens volume three, which also contains his essay on celestial mechanics. The last volume contains contributions on the curvature of elastic plates, his mecanico-dynamical propositions, and problems in dynamics. Most important, its appearance in this volume represents the first printing of the *Hydraulica*, which was written in competition with his son, Daniel.” – *Bibliotheca Mechanica*, pp. 367-37.

§ Roberts & Trent, *Bibliotheca Mechanica* pp. 36-37; DSB; Honeyman; 293; Norman 217; Poggendorff I 157-59.



[3]



COURS  
DE  
MATHÉMATIQUES;  
A L'USAGE  
DES GARDES DU PAVILLON  
ET DE LA MARINE.

*Par M. BÉZOUT, de l'Académie Royale  
des Sciences, & de celle de la Marine, Exa-  
minateur des Gardes du Pavillon & de la  
Marine, des Éleves & Aspirans au Corps  
Royal de l'Artillerie, & Censeur Royal.*

PREMIERE PARTIE.

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*ÉLÉMENTS D'ARITHMÉTIQUE.*

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A PARIS,  
DE L'IMPRIMERIE DE PH.-D. PIERRES,  
Premier Imprimeur Ordinaire du Roi.

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M. DCC. LXXXVII.

*Avec Approbation, & Privilège du Roi.*





4. **BEZOUT, Etienne** (1730-1783). *Cours de Mathematiques; a l'Usage des Gardes du Pavillon et de la Marine*. Paris: Ph. -D. Pierres, 1787, 1782, 1787, 1784, 1784, 1781. ¶ 6 volumes. 8vo. xvi, 256; viii, 357, [1]; xii, 488; viii, 432; viii, 479, [1]; [ii], xiv, 319, [1], 98 pp. Title woodcut vignettes, vol. VI with half-title [*Traite de Navigation*], extensive logarithmic tables, 37 [=7 + 4 + 5 + 11 +10] engraved folding plates (incl. atlas & star maps). Contemporary full calf, gilt-decorated spine, red leather gilt-stamped spine labels; minor wear to spine ends. Near fine, a choice complete set. [RW1318]

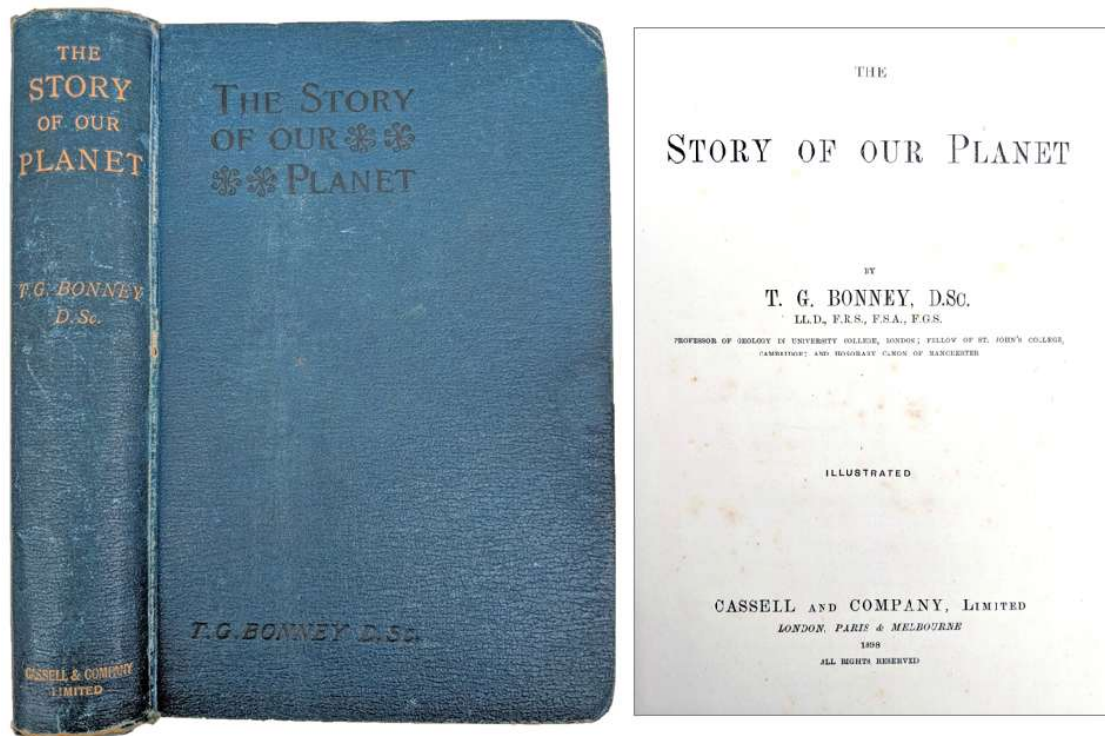
\$ 1,250

Bezout was a French mathematician and member of the French Academy of Science who did pioneering work in elimination theory. He is the namesake of Bezout's Theorem, which plays a crucial role in the study of intersection of manifolds in algebraic geometry. While his impact on mathematical research was significant, he played a larger role in the development of mathematical education, as his textbooks dramatically influenced the course of math education in both France and abroad. His works were popular and thus frequently reprinted. "Bezout treated geometry before algebra, observing that beginners were not yet familiar enough with mathematical reasoning to understand the force of algebraic demonstrations, although they did appreciate



proofs in geometry. He eschewed frightening terms like ‘axiom,’ ‘theorem,’ ‘scholium,’ and tried to avoid arguments that were too close and detailed. Although criticized occasionally for their lack of rigor, his texts were widely used in France. In the early nineteenth century, they were translated into English for use in American schools; one translator, John Farrar, used them to teach the calculus at Harvard University. The obvious practical orientation, as well as the clarity of exposition, made the books especially attractive in America. These translations considerably influenced the form and content of America mathematical education in the nineteenth century.” – *DSB* II, p. 112.

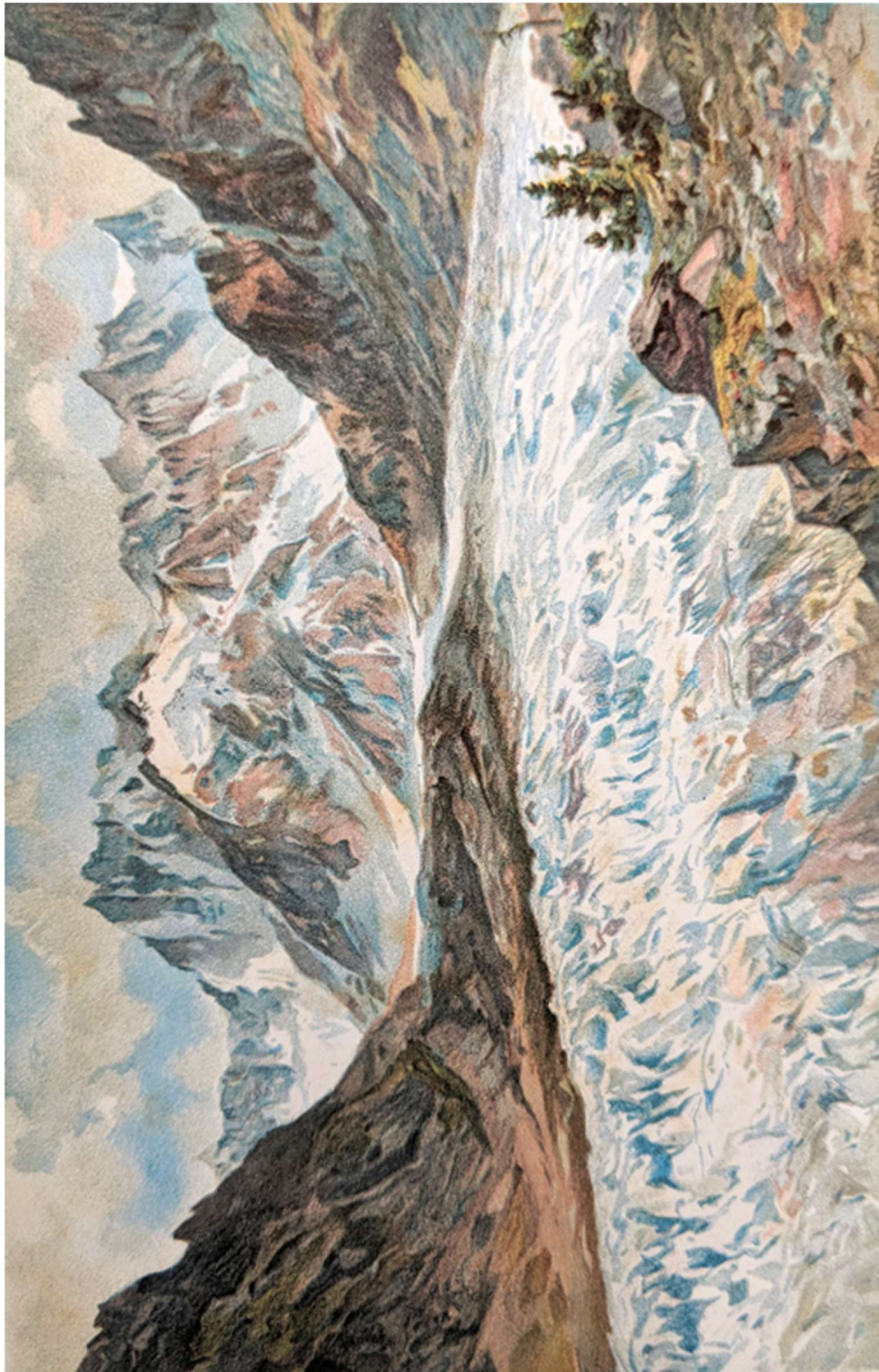
§ Jean Polak, *Bibliographie Maritime Francaise*, 811-812; Poggendorff I, 184. Note: Honeyman had only a Spanish translation in one volume, 1805.



5. **BONNEY, Thomas George** (1833-1923). *The Story of Our Planet*. London: Cassell, 1898. ¶ 8vo. xv, [3], 592, [18] pp. Color frontis., color plates, 168 figs., index, ads. Original dark bluish-green black- and gilt-stamped cloth, top edge gilt; extremities worn. [RW1322]

\$ 15

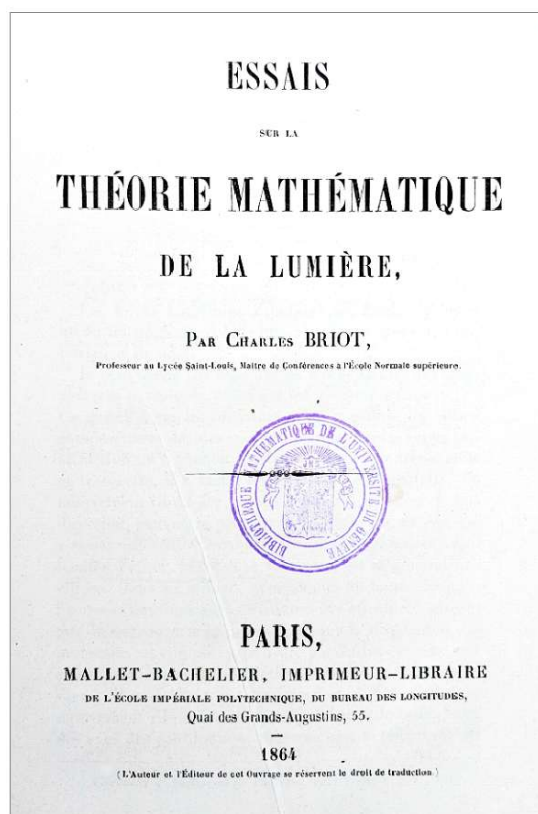
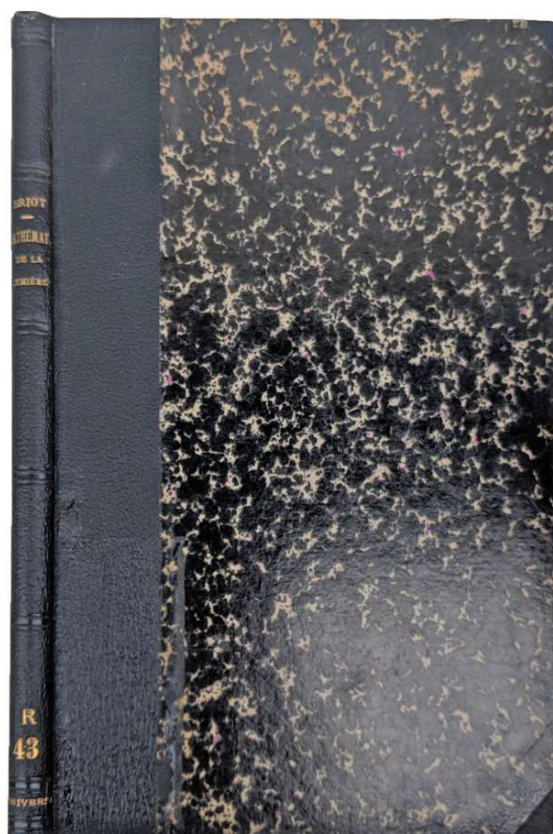
Bonney was a British geologist and former president of the Geological Society of London.



[5]

Glacier, with the Grandes Jorasses, Mount Blanc, in the distance

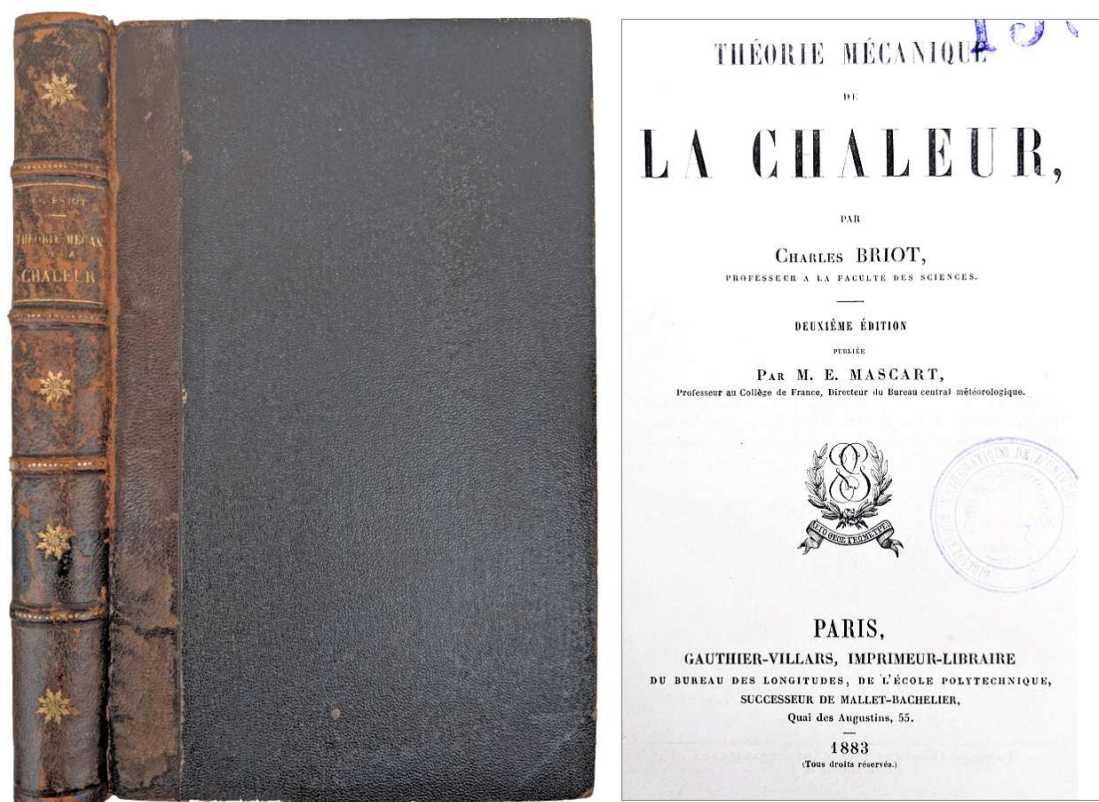




6. **BRIOT, Charles Auguste** (1817-1882). *Essais sur la Théorie Mathématique de la Lumière*. Paris: Mallet-Bachelier, 1864. ¶ 8vo. xxii, 132 pp.  
Contemporary quarter black blind- and gilt-stamped cloth, marbled boards; University of Geneva library stamps, title creased, light foxing.  
Very good. [RW1328]

\$ 100

Briot was a French mathematician who won the Poncelet Prize in 1882. “Briot’s studies on heat, light, and electricity were based on the hypothesis of the existence in the ether of imponderable molecules acting upon each other, as well as upon the ponderable molecules of matter. Particularly in his study of the crystalline medium, he linked his findings to Pasteur’s experimental work on the dissymmetry of crystals. These studies, which were conducted from a mathematical point of view, led to the simplification of methods for integral calculus and the advance of the theories of elliptic and Abelian functions. To honor him for this work, the Gottingen Academy named him a corresponding member.” – *DSB II*.



7. **BRIOT, Charles Auguste** (1817-1882). *Theorie Mecanique de la Chaleur*. Paris: Gauthier-Villars, 1883. ¶ 8vo. viii, 350, [2] pp. 88 figs. Original quarter brown gilt-stamped calf, black grained boards. University of Geneva Library rubberstamps on title and half-title. Good. [RW1330] \$ 85

Second edition (first issued in 1869). The text was arranged in two parts (thermodynamics & electricity), issued posthumously, with a preface by E. Mascart. Briot was a French mathematician who won the Poncelet Prize in 1882. "Briot's studies on heat, light, and electricity were based on the hypothesis of the existence in the ether of imponderable molecules acting upon each other, as well as upon the ponderable molecules of matter. Particularly in his study of the crystalline medium, he linked his findings to Pasteur's experimental work on the dissymmetry of crystals. These studies, which were conducted from a mathematical point of view, led to the simplification of methods for integral calculus and the advance of the theories of elliptic and Abelian functions. To honor him for this work, the Gottingen Academy named him a corresponding member." – *DSB II*.





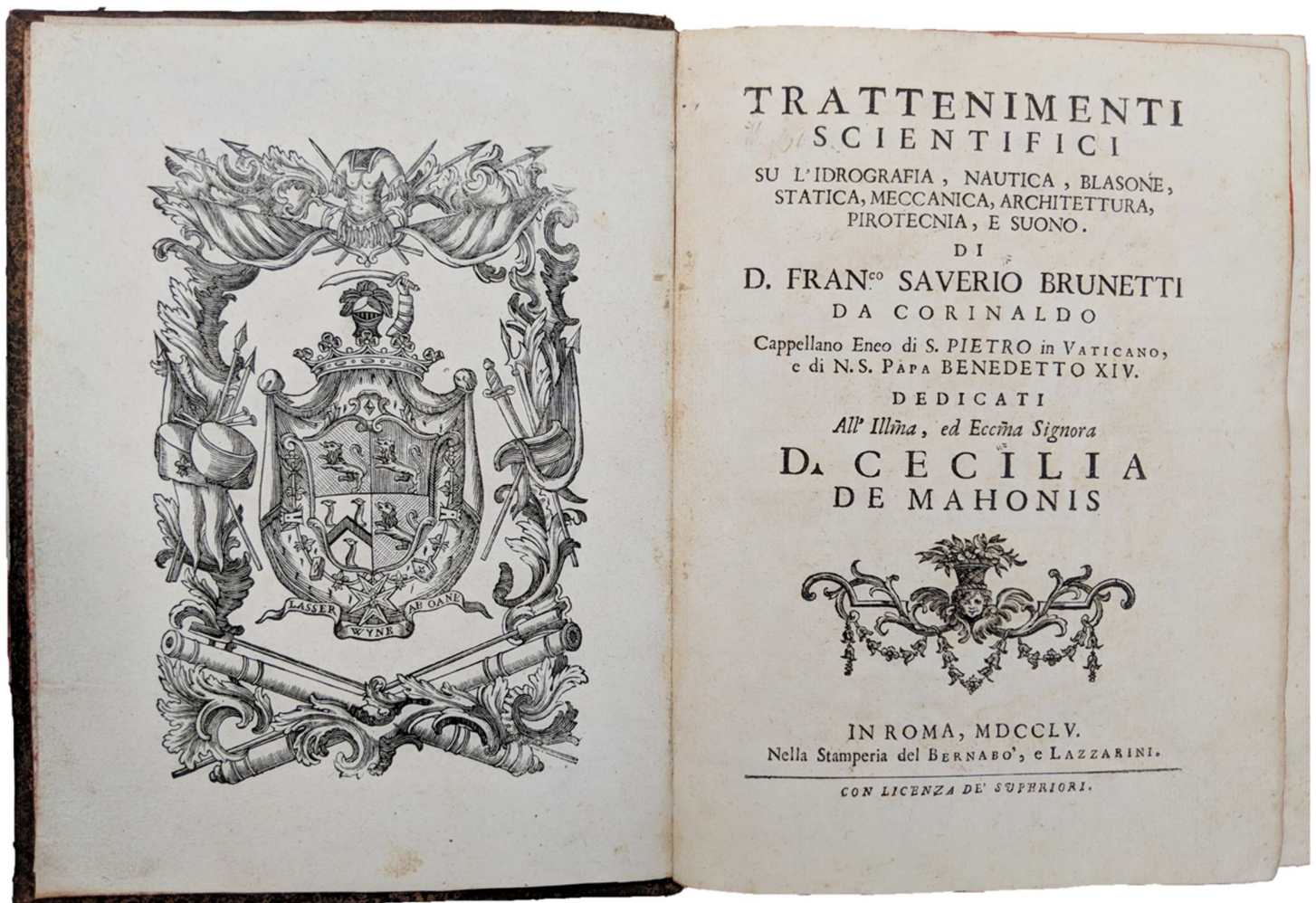
[8] BRUNETTI



8. **BRUNETTI, Francesco Saverio** (1693-?). *Trattenimenti Scientifici su L'Idrografia, Nautica, Blasone, Statica, Meccanica, Architettura, Pirotecnia, e Suono*. Rome: Bernabo, e Lazzarini, 1755. ¶ Four parts in one vol. Small 4to. [viii], 173, [1] pp. Elaborate woodcut frontispiece, title vignette, figs., decorative headpieces. Original speckled calf, gilt-tooled spine, raised bands; rubbed. Ownership stamp of Wm. Frear. Very good. Rare. [RW1025]

\$ 1,000

First edition. A survey of various scientific subjects of interest to Brunetti, who was principally a mathematician. These subjects range from mechanics, to the properties of sound, to pyrotechnics, and offer insight into the state of Italian popular science in the mid-18th century.



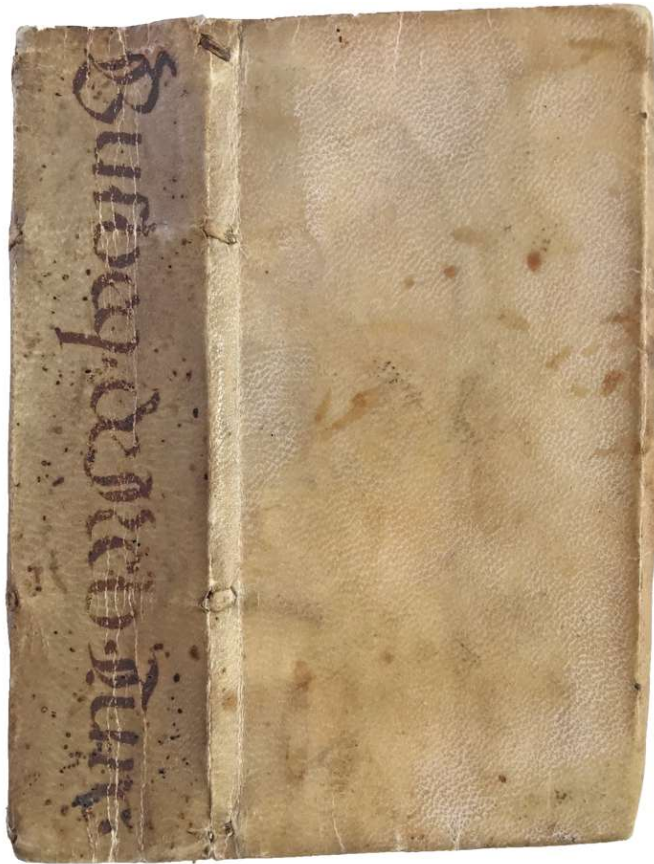


CONTENTS: Frontespizio -- Dedicata : Eccellentissima Signora -- Approvazioni -- Imprimatur -- [Trattenimenti Scientifici] -- Idrografia. Parte Prima -- Dialogo I -- Articolo Primo. Vantaggi del navigare -- Articolo II. Acqua -- Articolo III. Moti del Mare -- Articolo IV. Varie riflessioni su la Filosofia Newtoniana -- Articolo V. Moti particolari del Mare -- Articolo VI. Nautica -- Articolo VII. Blasone -- Articolo VIII. Regola Nautiche -- Articolo IX. Carta Nautica -- Statica. Parte Seconda -- Dialogo II -- Articolo Primo -- Articolo II. Idrostatica -- Articolo III. Moto Artificiale in ordine all'Architettura -- Articolo IV. Resistenza dei solidi -- Articolo V. Contatto, e Confricazione nelle Macchine -- Architettura. Parte Terza -- Dialogo III -- Articolo Primo -- Articolo II. Colonne, e Pilastri -- Articolo III. Gradi della Bellezza, o sia percettibilità delle Opere Architettoniche -- Articolo IV. Magnificenza, e Disegno -- Articolo V. Fondamenti -- Articolo VI. Volte, Cupole, Tetti, e Scale -- Articolo VII. Camini, Cisterne, e Fontane -- Pirotecnia. Parte Quarta -- Dialogo IV -- Articolo Primo. Pirotecnia Militare, e Festiva -- Articolo II. Pirotecnia Militare -- Articolo III. Suono -- Articolo IV. Suoni Pneumatici -- Tavola degli Articoli. In 1754 the author issued another similarly styled work on geography, meteorology, astronomy, entitled, *Trattenimenti scientifici su la sfera, geografia istorica, meteore, ed astronomia*.

Unknown to Honeyman (who had two other works by this author), Hunter Rouse, Singer.

“The cited works of Brunetti are fairly rare and sought after more for the singular way in which he deals with the subjects of applied mathematics rather than for their scientific importance.” – Riccardi, *Biblioteca Matematica Italiana* (note is translated from the Italian).

§ Angelo Comolli, *Bibliografia storico-critica dell'architettura civile ed arti subalterne*, Milano Labor riproduzioni e documentazioni 1964, t. iii, p. 43; Riccardi, col. 495. “Raro.”



*Letters from a Turkish Ambassador, Augher Busbecq, himself a collector of manuscripts, coins & plants*

9. **BUSBEC, Augher Ghislen** [also: **Ogier Ghislain de Busbecq**] (1522-1592). *Omnia Quæ Extant. Cum Privilegio*. Leiden: Elzeviriana, 1633. ¶ 12mo. 575, [23] pp. Elaborate engraved architectural title (Sofia Mosque with crescent Moon on the dome), index; small red rubberstamp on first page of chapter 1, occasional early underlining. Contemporary full vellum, ms. spine title. Bookseller's ticket of William Salloch, inside rear cover, early red rubber-stamp on dedication page (over the text) with three initials and a crown, early notes written neatly on rear endpaper. Very good. Rare. [RW1341]

\$ 550

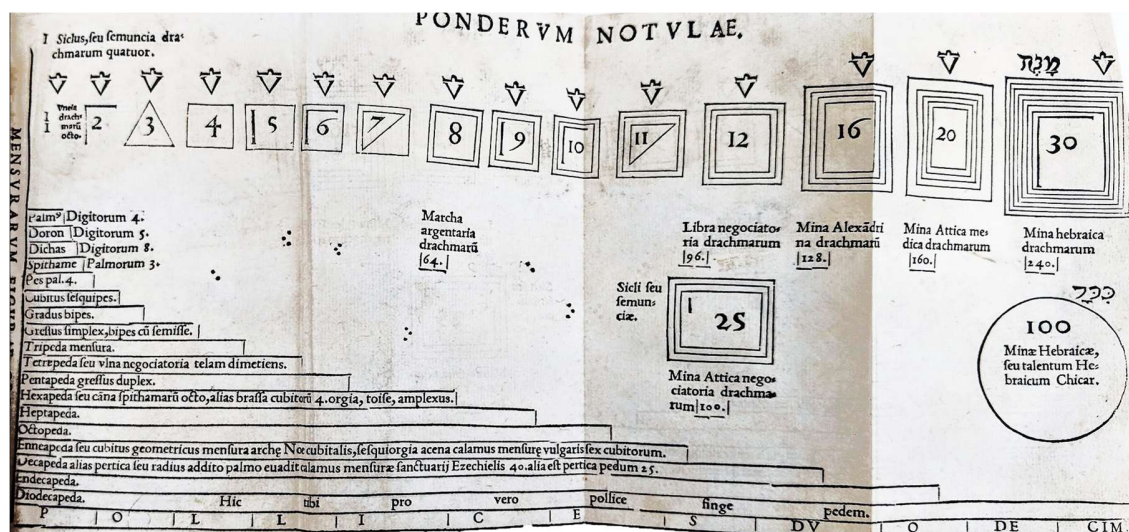
FIRST COLLECTED EDITION, of Augher Busbecq's [Busbequius] famous Turkish letters, or Epistles, relating his experience and observations as ambassador to Turkey. Augher Busbecq, Flemish traveler and writer, was

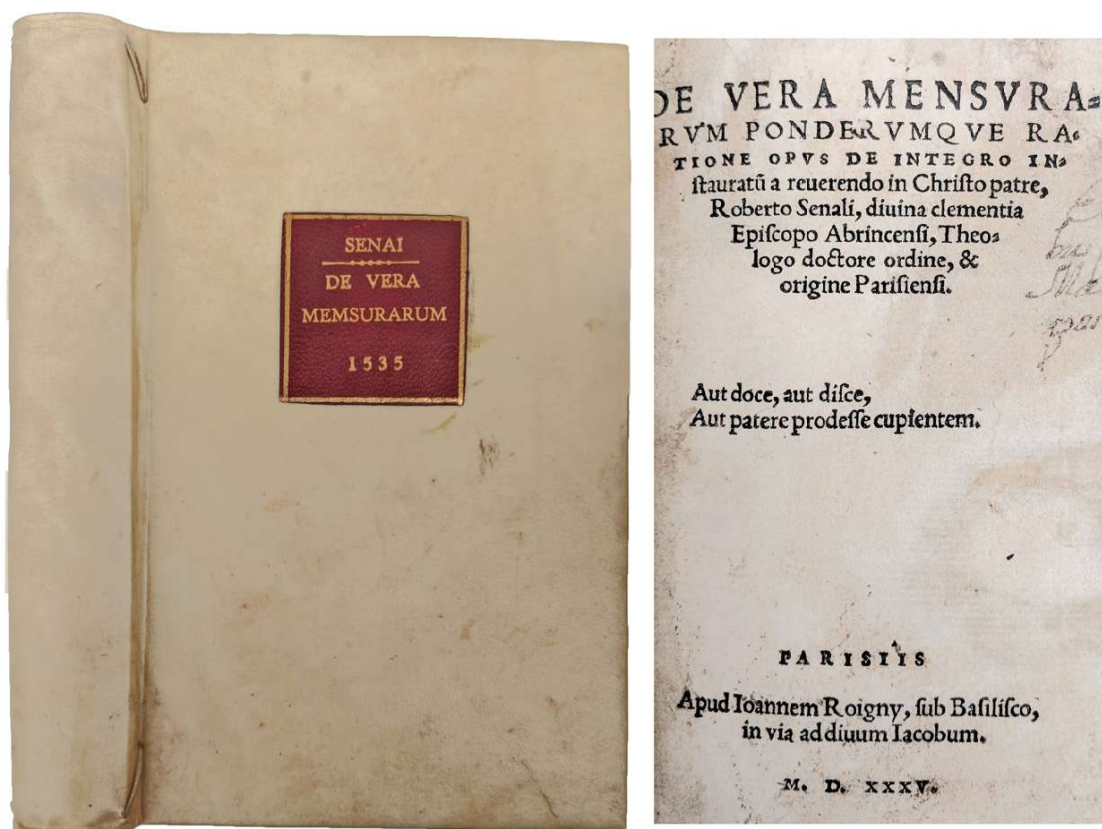


appointed ambassador, in 1554, to the Sultan Suleiman the Magnificent (1494-1566), one of the most important of all Ottoman emperors. Augher Busbec was himself in the service of the emperor Ferdinand I of the Austrian empire, which he served in the Ottoman state from 1555-1562 and again in 1566. It also contains, de *Re Militari contra Turcam instituend consilium* [pp. 393-462]: “He acquired a perfect knowledge of the state of the Ottoman empire, and the true means of attacking it with success; on which subject he composed a very judicious discourse. . . “ – Chalmers.

Alexander Chalmers calls Busbec “an extraordinary genius,” was himself very well educated. It is known that Busbec collected valuable manuscripts, rare coins and curious inscriptions and rare plants, which he had delivered to Vienna, including some 240 ancient Greek manuscripts, and the famous illustrated Dioscorides. His own writings display considerable insight into Turkish politics and further provide an interesting account of affairs at the French court. Finally, in the service of Rudolf II (1552-1612), as the Holy Roman Emperor (1576-1612), on a trip to the Low Countries, a party of soldiers who assaulted and robbed him, at which time he became feverish, and never recovered.

§ Brunet, I, co. 1417; Encyclopedia Britannica, IV, pp. 868-867; Chalmers, Biographical Dictionary, vol. VII, 1813; Graesse, I, p. 580; Sandys, A History of Classical Scholarship, II, p. 305; III, p. 377; Willems 380. See: Charles Thornton Forster & F. H. Blackburne Daniel, eds., The Life and Letters of Ogier Ghiselin de Busbecq, (London: Kegan Paul, 1881), 2 vols.





10. **CENEAU, Robert [Roberto SENALI; CENALIS]** (1483-1560). *De Vera Mensurarum Ponderumque Ratione Opus de Integro Instauratu a reuerendo in Christo patre*. Paris: Joannem Roigny, 1535. ¶ Small 8vo. [xvi], 82 ff., 83-86 pp., 87-119 ff. Signatures: A-B8 a-k8 l4 m-n8 o10 p8 (p8 blank). Large woodcut initial letter, folding table [Ponderum Notulae], table in text (f.29 verso). Modern vellum, gilt-stamped maroon cover label; small tears to folios 25, 57, [60]=70. Title a bit soiled, rebaked with paper, faint waterstaining, old manuscript inscription on title, printing flaw on f.113 [P1] with four words partly supplied in manuscript. Occasional marginalia. RARE. Very good. [RW1348]

\$ 950

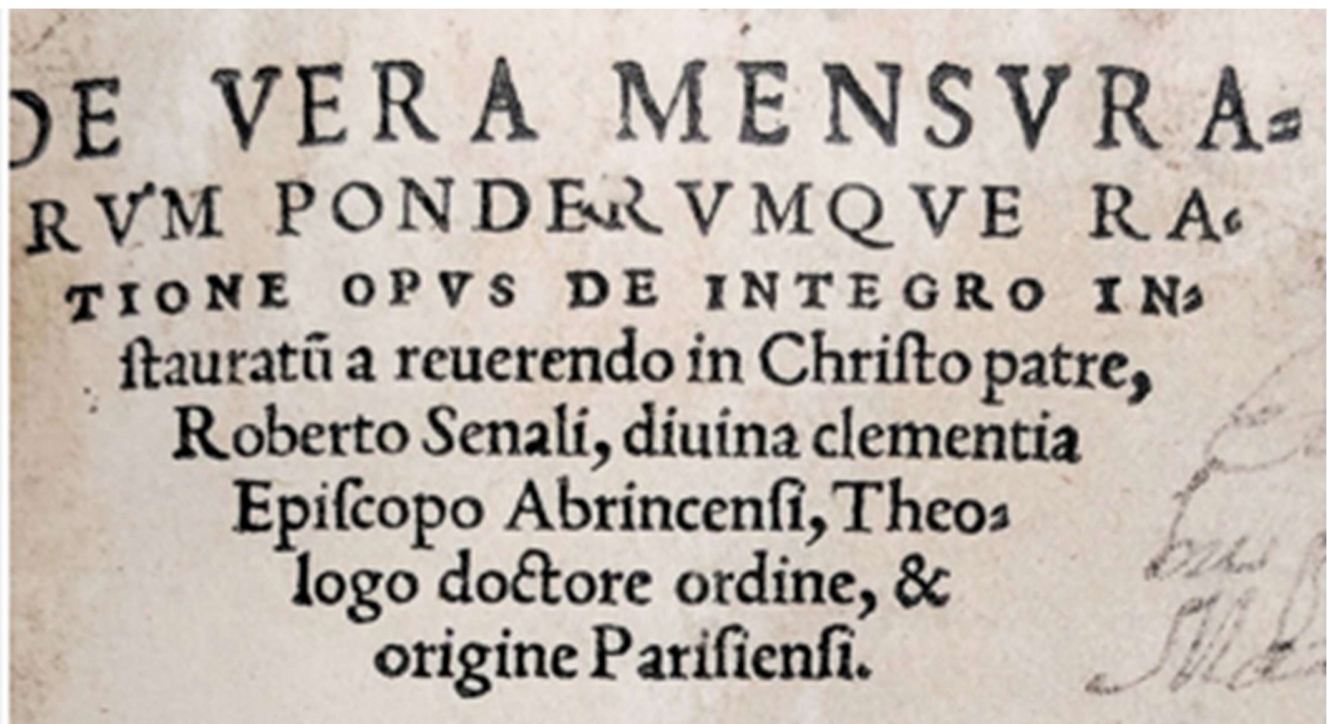
Ceneau was a French Catholic theologian and historian. After graduating from the Sorbonne in 1513, he served successively as Bishop of Vence, Riez, and Avranches. He was a vigorous antagonist of the reformation and sought to repress "Lutheranism". This work is on the history of weights and measures in France "with a view to encourage uniformity." – Martin Bucer p. xii. The fifth



part deals with the calculation and use of the abacus [f.57]. Printed by Jean de Roigny, fl. 1529-1566. Note: not all copies have the folding table. Not in: Bruno Kisch, *Scales and Weights: an historical outline*.

§ Adams, *Catalogue of Books Printed on the Continent of Europe, 1501-1600*, no. 1253; Andrew Pettegree, Malcolm Walsby (eds.), *French Books III & IV (FB) (2 vols.): Books published in France before 1601 in Latin . . .* Brill, 2012, no. 60610; John McClintock, James Strong, *Cyclopaedia of Biblical, Theological, and Ecclesiastical Literature*, 1891, p. 863; B. Moreau, *Inventaire Chronologique des éditions Parisiennes du XVI<sup>e</sup> siècle*, Paris, 1972-2004, vol. IV, no. 1233.

See also: Martin Bucer, *Martin Bucer Opera Latina*, v. 5, William Ian P. Hazlett (ed.), p. xii; Jean Calvin, *Institutes of the Christian Religion . . .* 1536; trans. Ford Lewis Battles; Iain Fenlon, Inga Mai Groote, (eds.), *Heinrich Glarean's Books: The Intellectual World of a Sixteenth-Century Musical Humanist*, Cambridge University Press, (2013), pages 171, 348, etc.





[11] CHESEAUX



TRAITÉ  
DE LA  
COMETE

QUI A PARU EN DECEMBRE 1743.  
& en JANVIER, FEVRIER & MARS  
1744.

*Contenant*

Outre les Observations de l'Auteur, celles qui  
ont été faites à *Paris* par Mr. CASSINI,  
& à *Geneve* par Mr. CALANDRINI.

*On y a joint diverses*

OBSERVATIONS & DISSERTATIONS

ASTRONOMIQUES,

*Le tout accompagné de Figures en taille douce.*

P A R

Mr. J. P. LOÿS DE CHESEAUX.

*Mort à Paris le 30<sup>bre</sup> 1781 à 6<sup>h.</sup> 1/2 du matin.*



A LAUSANNE & à GENEVE.

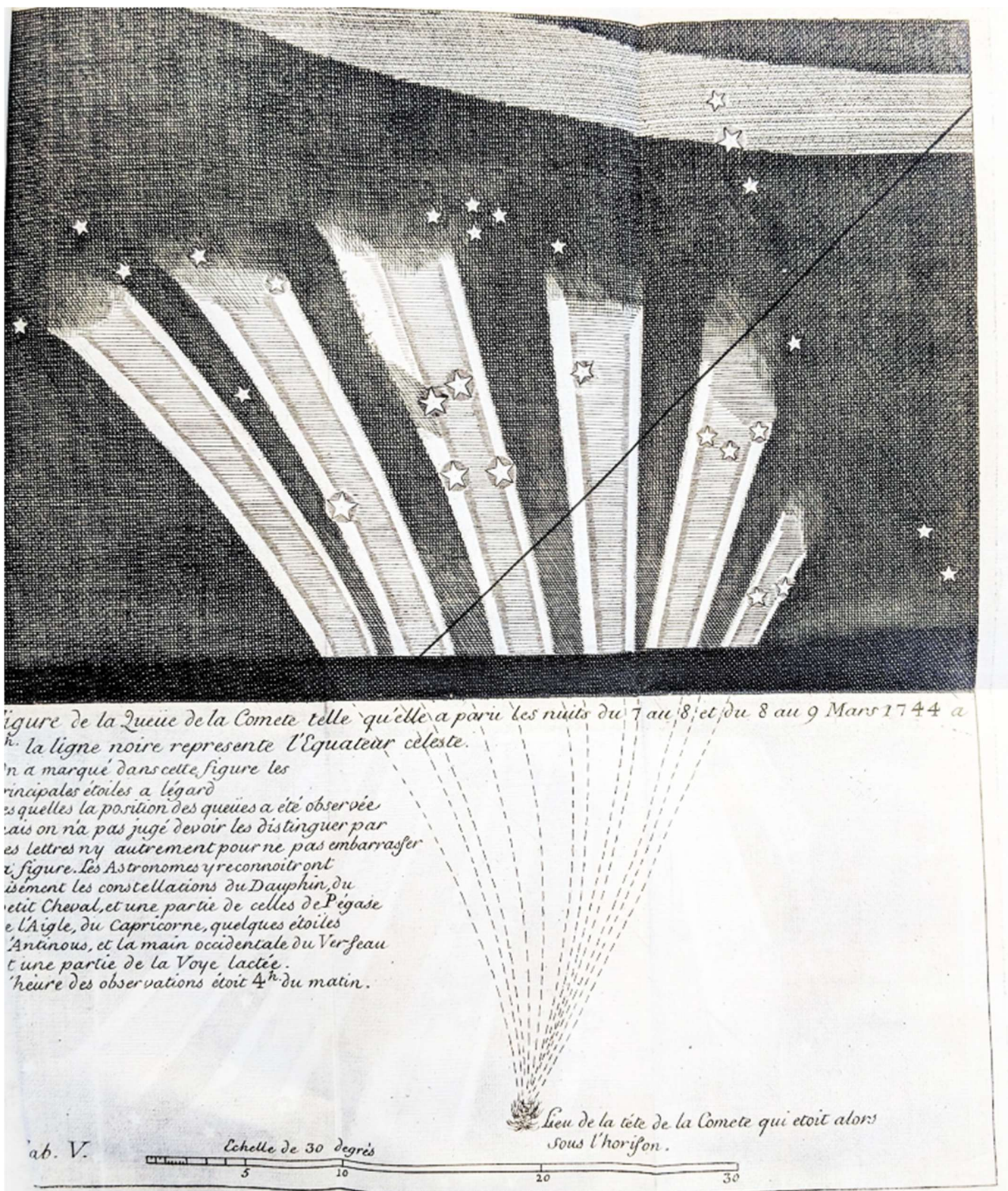
Chez MARC-MICHEL BOUSQUET  
& Compagnie,

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MDCCXLIV.

-1744-





[11] The six-tailed comet of 1744



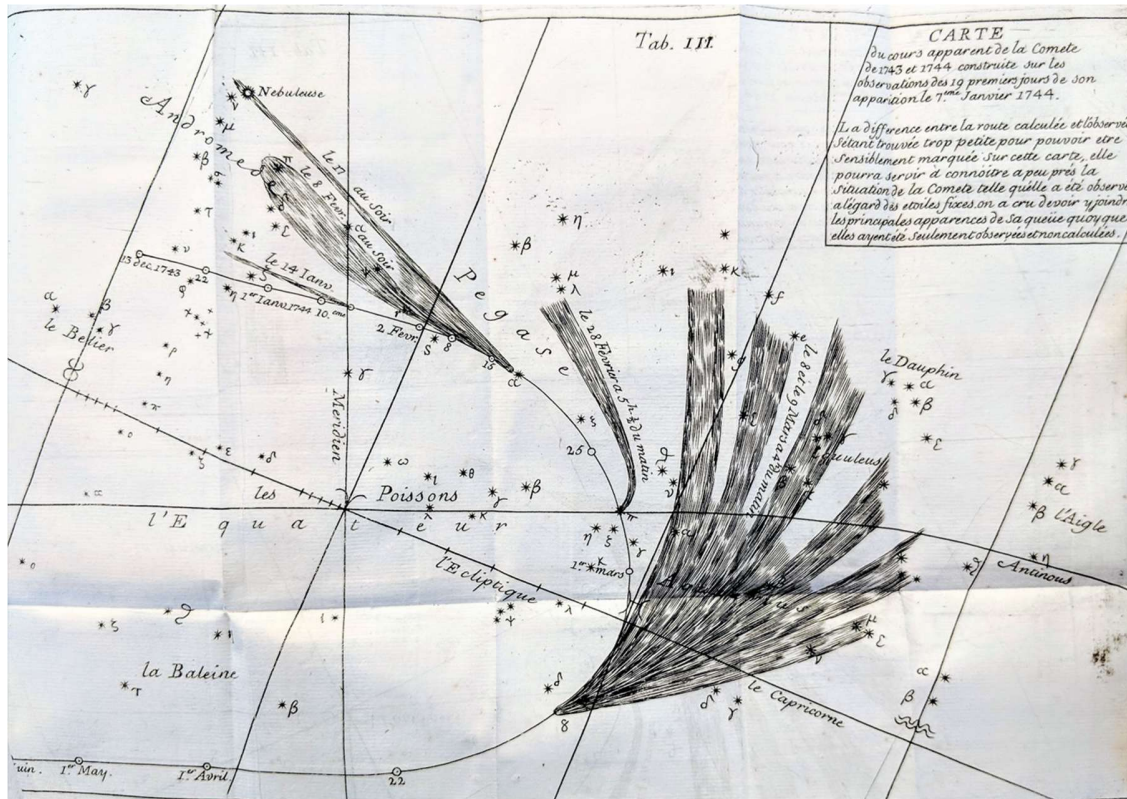
11. **CHESEAUX, Jean-Philippe Loys de** (1718-1751). *Traite de la Comete. Qui a paru en Decembre 1743 & en Janvier, Fevrier & Mars 1744. Contenant Outre les Observations de l'Auteur, celles qui ont ete faites a Paris par Mr. Cassini, & a Geneve par Mr. Calandrini. On y a joint diverses Observations & Dissertations Astronomiques, Le Tout Accompagne de Figures en Taille Douce.* Lausanne & Geneva: Chez Marc-Michel Bousquet, 1744. ¶ 8vo. [2], 308 pp. Title printed in red and black, woodcut title vignette, woodcut headpiece, initial letter, 1 folding table (p. 166), 2 double-page folding tables of lunar observations (between pp. 266(a), 267(b)), 6 folding engraved plates, errata; small repair on verso of title, 2 leaves with waterstaining. Tiny manuscript note on title, recording the author's death date, larger ink ms. also on foot of title: "1744". Original full mottled calf, leather gilt-stamped spine label, raised bands; joints cracked. Very good. With a manuscript notation on title marking the date of the author's passing on 30 September 1751 at 6:30 in the morning. Extremely rare. [RW1353]

\$ 4,500

First edition. Cheseaux was a Swiss astronomer living near Lausanne, who was the first to observe a number of nebulae. Loys de Cheseaux "earned his European reputation as an astronomer thanks to his *Traite de la Comete* (1744, in which he defends Newton's physics and discusses Olbers' Paradox." – *Historical Dictionary of Switzerland*.

Halley, having banked his reputation on the predicted return of his comet's return in 1758 spurred similar efforts at understanding the computation and understanding of a comet's orbit by Cheseaux and Leonhard Euler. It was Cheseaux who put together the hypothesis that the 76- and 75-year periods between returns of the comets seen in 1531, 1607, and 1682, were probably, "two comets, each traveling on identical orbits such that when one comet was at perihelion, the other was close to its aphelion. Their orbital periods were constant and identical. Calculating the interval between the perihelion passages in 1531 and 1682 to be 151 years and 10 days, he predicted that the comet last seen in 1607 could be expected to reach perihelion on November 7, 1758, by the Gregorian calendar. This prediction was given in his 1744 work on the comet of that year. Though not discovered by Cheseaux, this comet is often referred to as Cheseaux's because he computed its orbit and ephemeris and described its impressive, multiple tails." – Yeomans, p. 123. Yeomans, Donald

K. *Comets; a chronological history of observation, science, myth, and folklore*, Wiley, (1991).

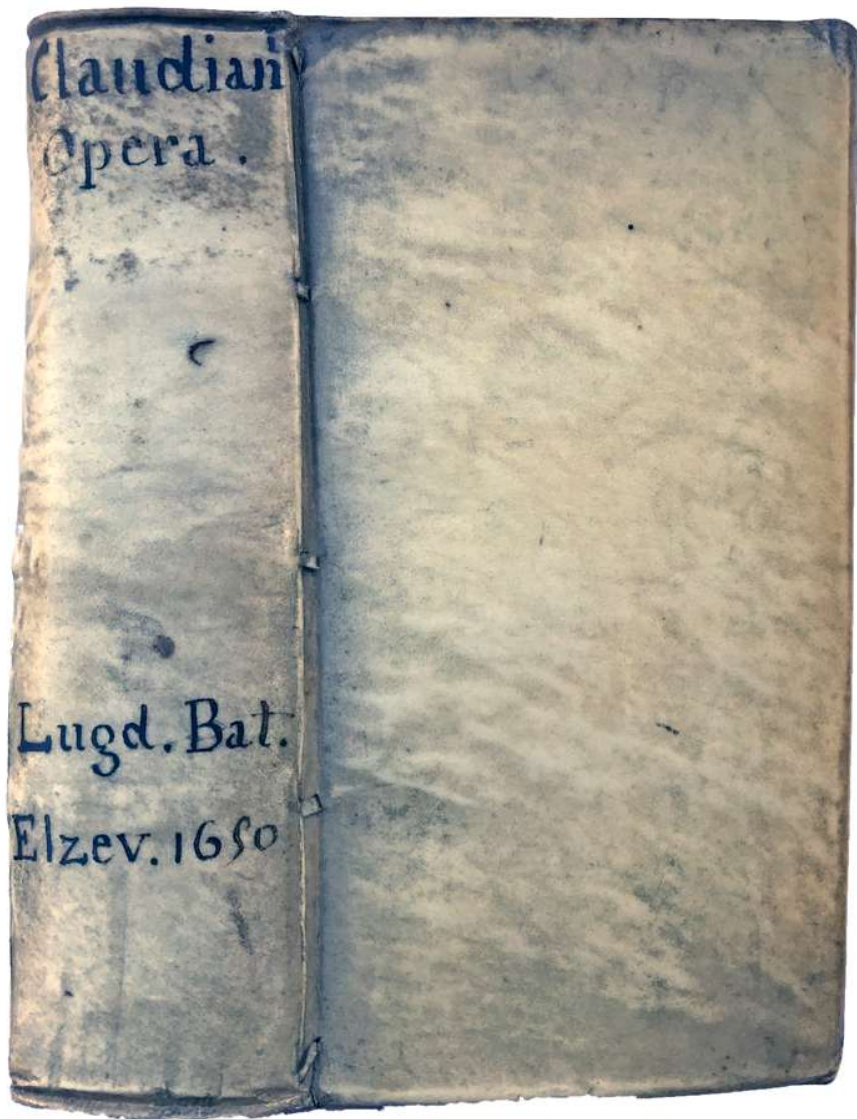


“Jean-Philippe Loys de Cheseaux, a Swiss astronomer from Lausanne, was born on May 4, 1718, which is not today’s date. We celebrate him today because on Dec. 13, 1743, de Cheseaux spotted a comet in the sky. He was not the first to see the comet, having been preceded by a Dutch astronomer and a German. But the comet has been known ever since as Cheseaux’s comet, because de Cheseaux observed it closely for the next three months, and when the comet passed near the sun (passed through perihelion) on Mar. 1, 1744 and soon thereafter sprouted six tails, he was there to sketch the unprecedented phenomenon. Better yet, within months, he brought to press a sizeable book on comets in general, and on the comet of 1743/44 in particular. The book includes an engraving of the six-tailed comet, as drawn on Mar. 8/9, 1744, as well as several diagrams of the path of the comet through the heavens, and its orbit through the solar system, both before and after it grew the six tails. We have this book in our History of Science collection, and we reproduce two of the engravings here. One shows the drawing of Mar. 8/9, and we show it twice:



in detail, in our first image, and in its entirety, with half of the comet's appearance extrapolated, since half of it was below the horizon at the time [see image, below].” – Linda Hall Library ‘Scientist of the day.’

Cheseaux died at 6:30am on the morning of the 30<sup>th</sup> of September, 1751. There is a manuscript notation on the title-page of this copy marking the author's passing. He died after a short illness; he was just 33 years of age.



[12] CLAUDIAN

*Elsevir edition*

12. **CLAUDIAN** [Claudius Claudianus] (370-404); **HEINSIUS, Nicolaus** (1620-1681). *Cl. Claudiani Quae Exstant; [Bound with] Nicolai Heinsii Daniel. fil. in Claudiani Poemata Notae*. Leiden: Elzeviriana, 1650. ¶ 12mo. [24], 270; 276, [2] pp. Elaborate engraved architectural title. Second work with Printer's device on title. Contemporary full vellum, ms. spine title. Bookplate of James Elwin Millard, D.D. Fine copy. Rare. [RW1356]

\$ 200

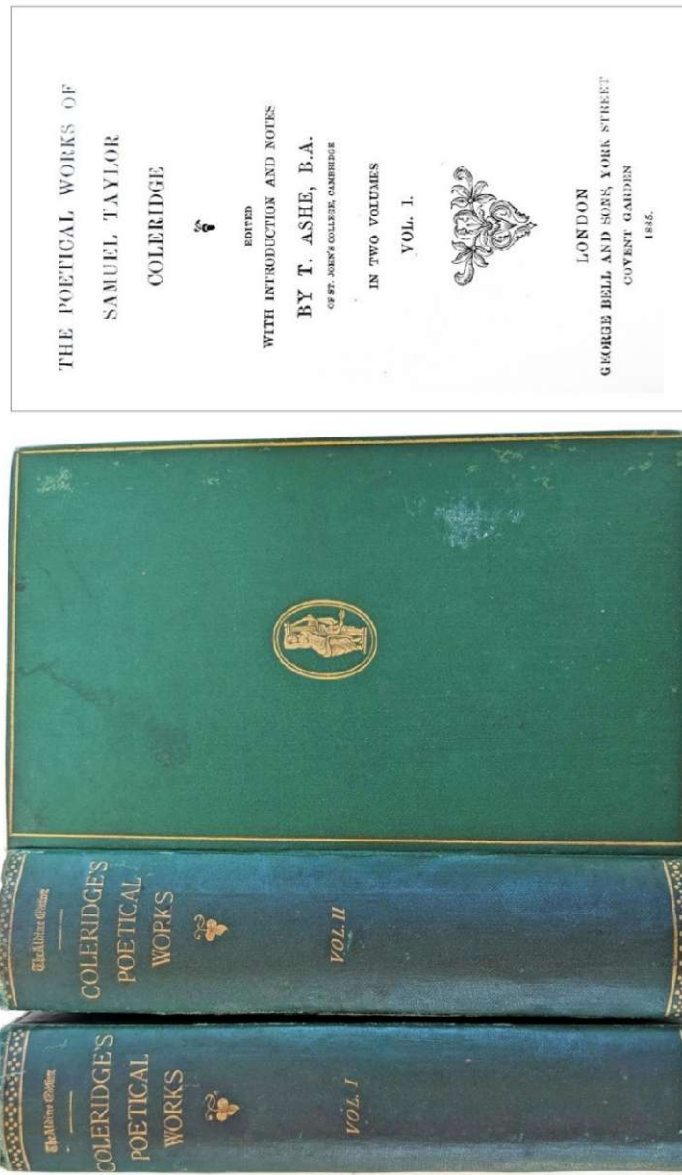
There are two issues of this work from 1650: the other has 256 pages. This issue is often seen bound together with the *Poemata Notae*. The second work bound within is edited and extensively annotated by Nicolaus Heinsius the Elder. Printed for the Officina Elzeviriana by Louis Elsevier (1604-1670). Lilio Gregorio Giraldi (1479-1552) has contributed a life of the author.

Claudian was a Latin poet associated with the emperor Honorius and the general Stilicho, both of whose exploits are recorded in his poems.

PROVENANCE: James Elwin Millard (1823-1894) was admitted Chorister of Magdalen College in 1835 which office he resigned in 1841. In the following year he was matriculated at Magdalen Hall. He was elected Demy at Magdalen College in 1848 and a Fellow in 1853. He took the degrees of BA (1845), MA (1848), BD (1855) and DD (1859). Millard was ordained deacon in 1846 and priest in 1847. In 1846, he was appointed Master of Magdalen College School and curate of Bradfield, Berkshire. He served Magdalen College as the Junior Dean of Arts in 1855, Bursar in 1856, and Dean of Divinity in 1863. Millard was appointed to Basingstoke in 1864 and made an Honorary Canon of Winchester in 1882. Millard resigned his Basingstoke office in 1890 when he removed to Oxford. He died in Oxford 20 Sept. 1894, aged 71. [See Macray Vol. 6 pp 159-60 and Bloxam Vol. iii pp 286-92.] – Papers of Millard, preserved at Magdalen College, University of Oxford [web-source].

§ Sandys *History of Classical Scholarship*, vol. II, p. 325.

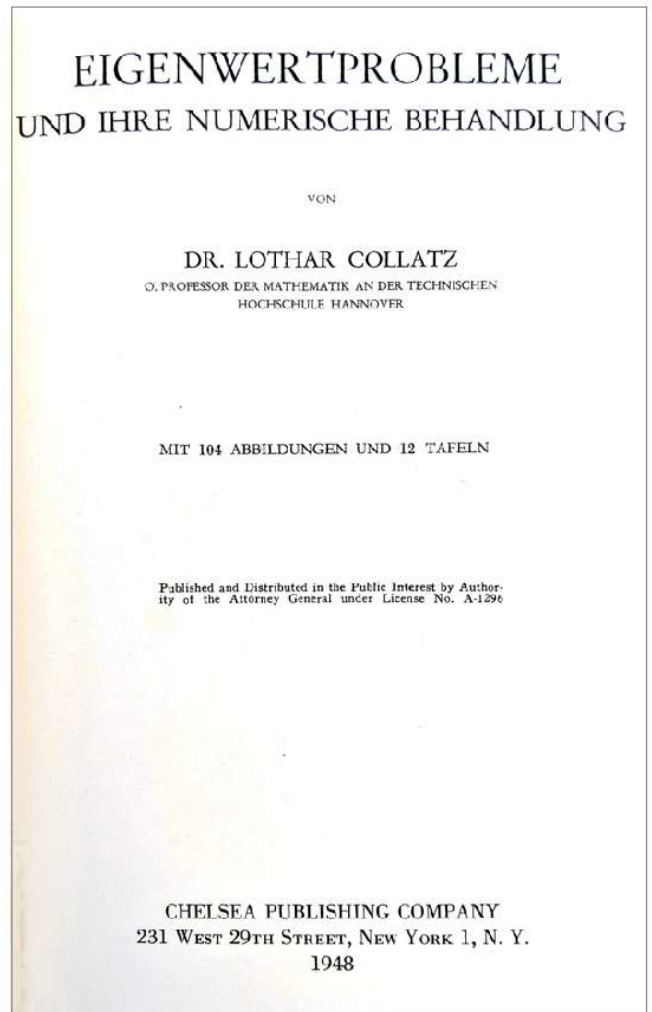
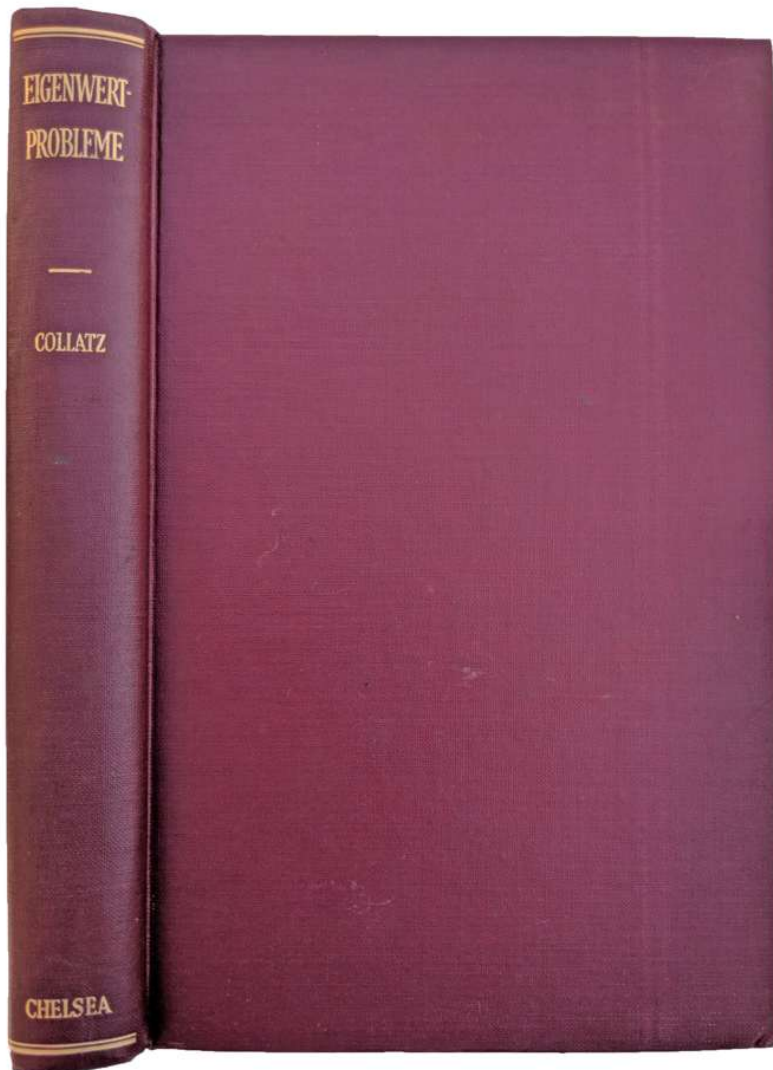




13. **COLERIDGE, Samuel Taylor** (1772-1834). *The Poetical Works of Samuel Taylor Coleridge. Edited with introduction and Notes by T. Ashe.* [2 volumes]. London: George Bell and Sons, 1885. ¶ 2 volumes. Sm. 8vo. clxxxvi, 212; xiii, [1], 409, [1] pp. 2 frontispieces, addenda. Green gilt-stamped cloth; rubbed, spine ends frayed. Very good. [RW1361]

\$ 20

This edition is edited by the Coleridge scholar Thomas Ashe (1836-1889), himself an English poet.

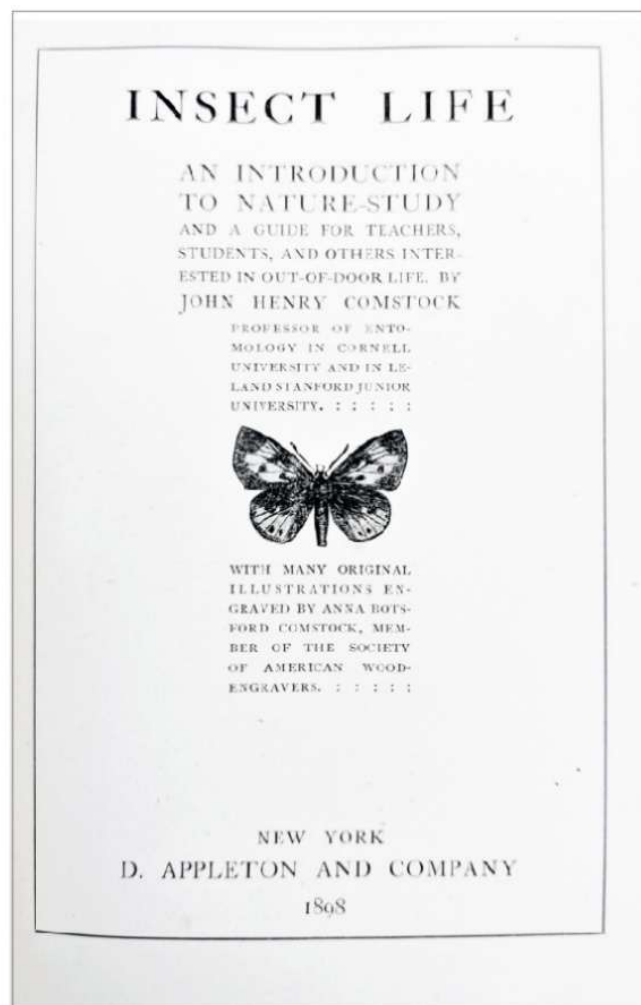
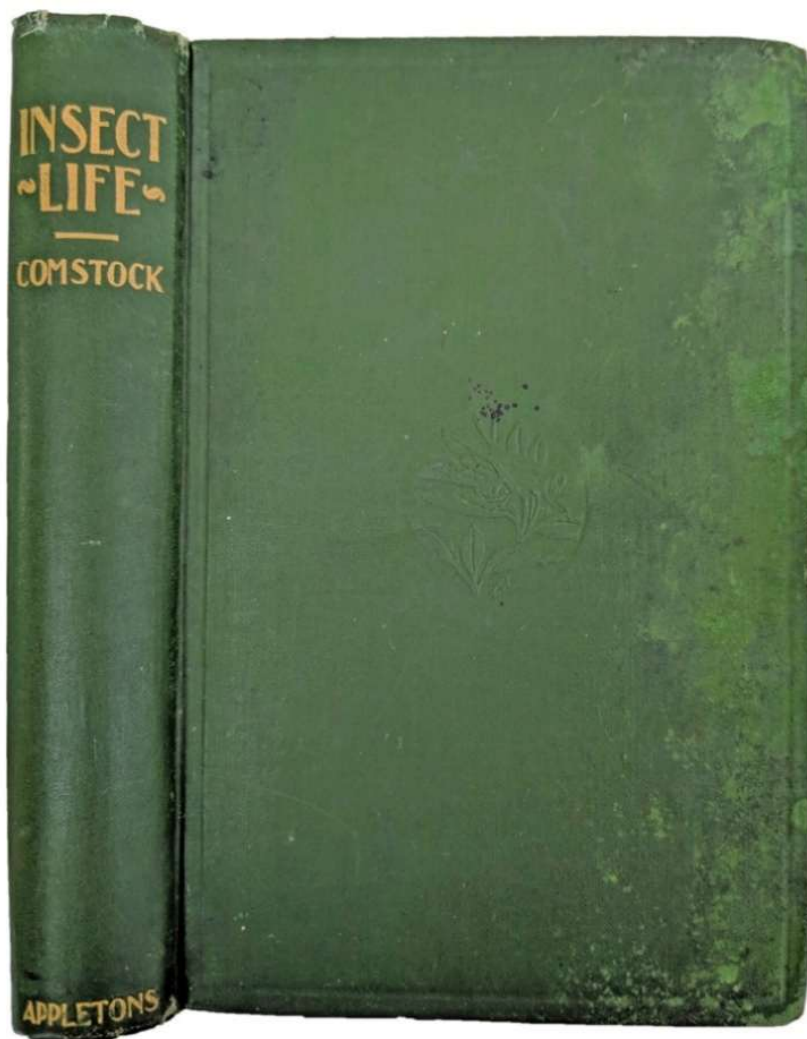


14. **COLLATZ, Lothar** (1910-1990). *Eigenwertprobleme und ihre Numerische Behandlung*. New York: Chelsea, 1948. ¶ Reprint. 8vo. xiii, [1], 338 pp. 12 tables, 104 figs. Burgundy gilt-stamped cloth. Ownership label of Richard A. Weiss. Near fine. [RW1035]

\$ 10

First issued in 1945. The  $3x + 1$  problem is also known as the Collatz conjecture, named after him and still unsolved.

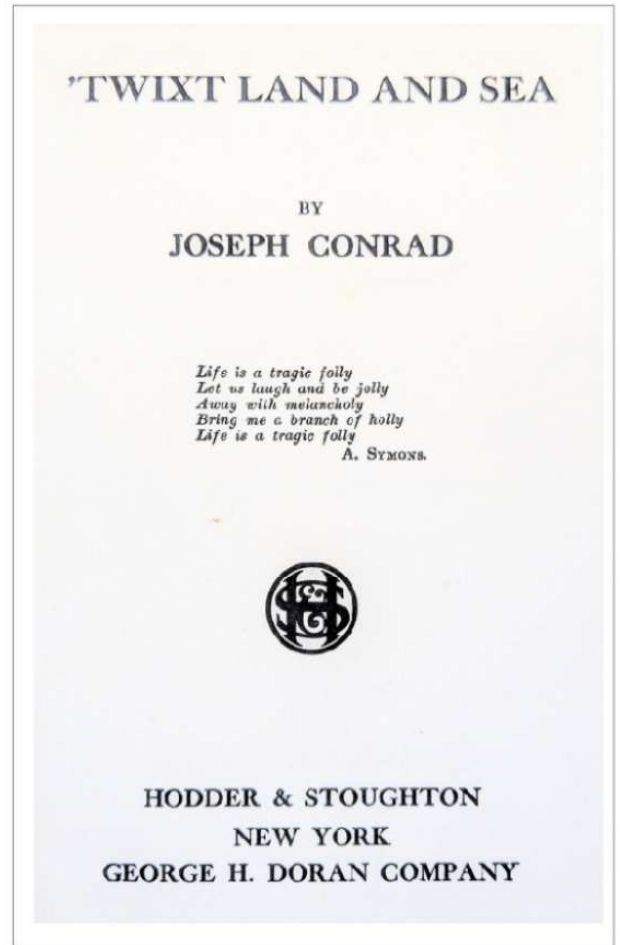
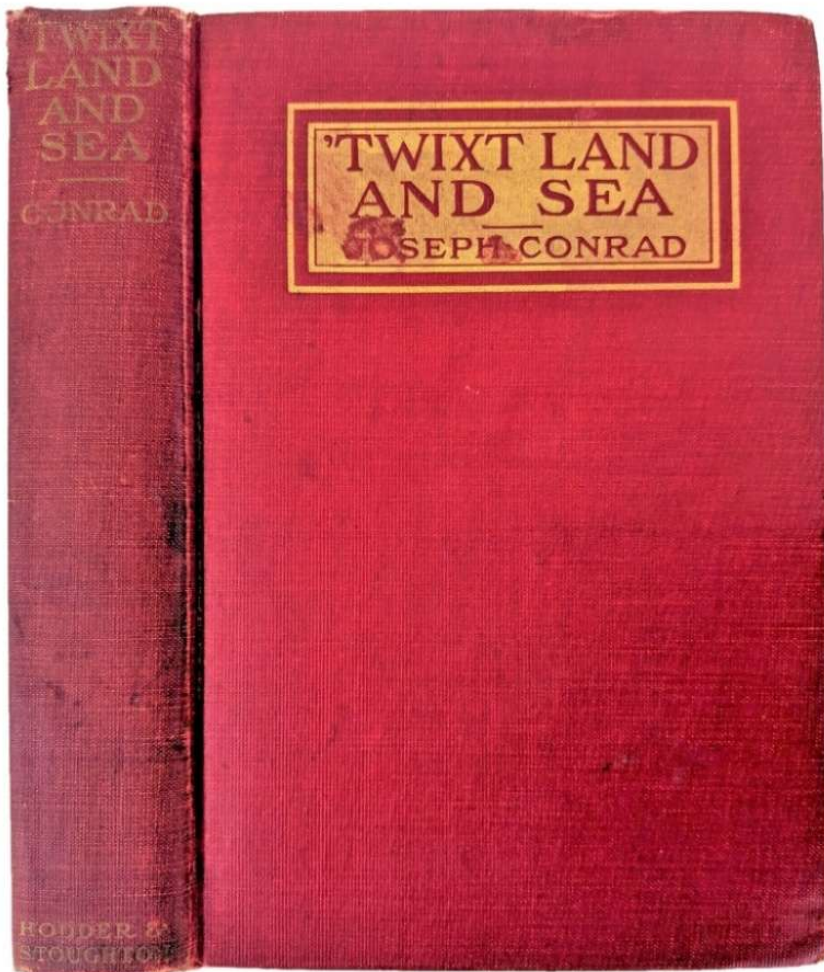




15. **COMSTOCK, John Henry** (1849-1931). *Insect Life: An Introduction to Nature-Study and a Guide for Teachers, Students and Others Interested in Out-of-Door Life*. New York: D. Appleton, 1898. ¶ Sm. 8vo. [vi], 349, [9] pp. 296 figs., index. Original Olive blind- and gilt-stamped cloth; rear joint reinforced, covers and top margins waterstained. Good. [RW1036]

\$ 15

Comstock was a pioneer in the fields of entomology and arachnology, while his wife, Anna Botsford Comstock, was an accomplished wood-engraver who provided many illustrations for his work.

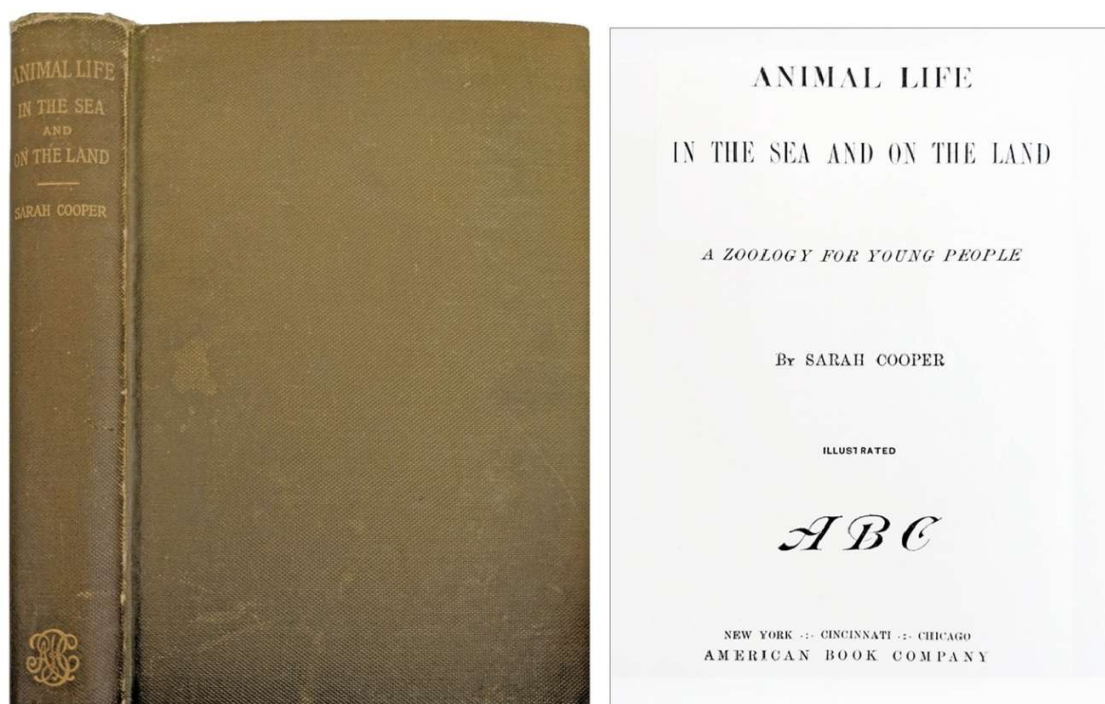


16. **CONRAD, Joseph** (1857-1924). *Twixt Land and Sea*. New York: George H. Doran/Hodder & Stoughton, 1912. ¶ 8vo. 287, [1] pp. Original crimson gilt-stamped cloth; spine faded, rubbed. Ownership signature of physicist Richard Weiss: "Richard Weiss owns this book until he is dead." Very good. [RW1366]

\$ 10

First American edition. Published by Doran, in collaboration with the London Publisher Hodder & Stoughton. Stories include: "A Smile of Fortune," "The Secret Sharer," "Freya of the Seven Isles."





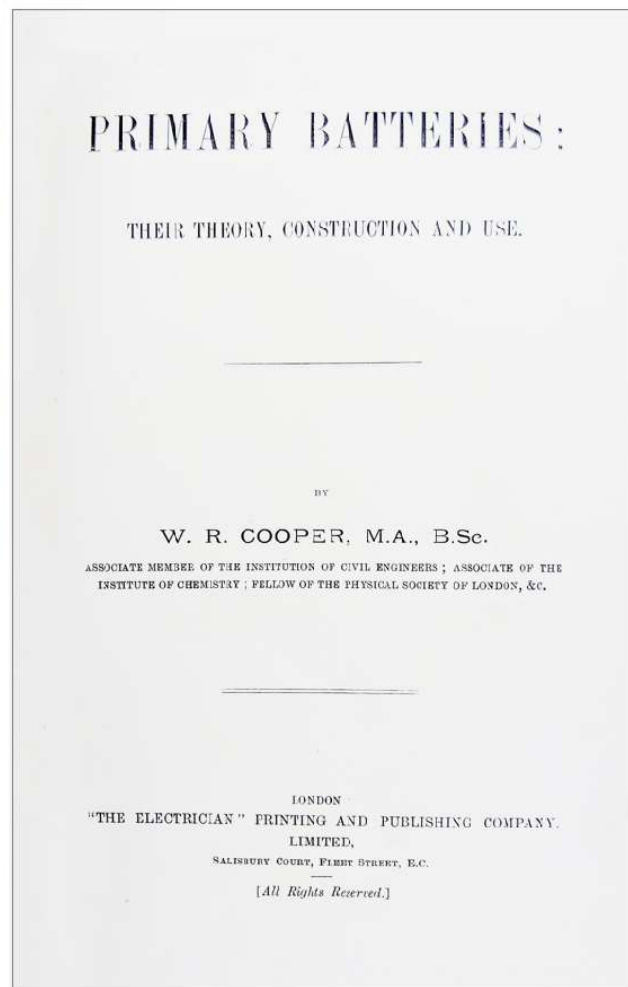
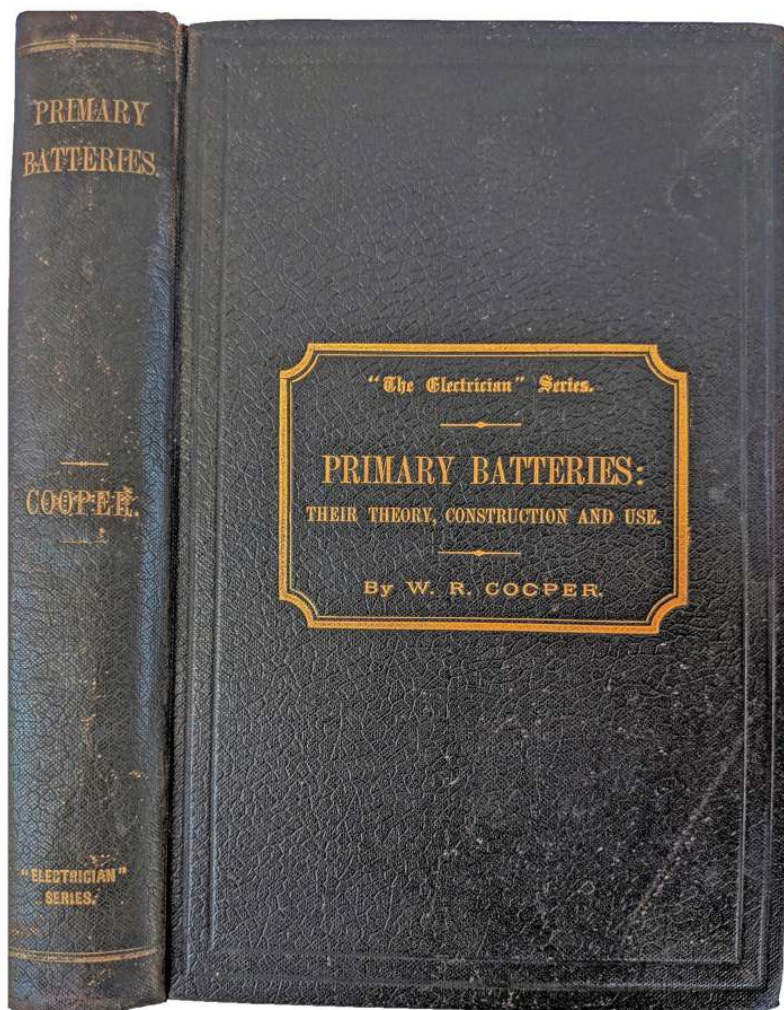
17. **COOPER, Sarah.** *Animal Life; In the Sea and on the Land; A Zoology for Young People.* New York: American Book Company, 1887. ¶ 8vo. xiii, [1], 413, [1] pp. Frontis., 278 figs., index. Olive gilt-stamped cloth; extremities frayed. Very good. [RW1369]

\$ 12

Content includes: Sponges, Hydroids, The 'Portuguese Man-of-War', Jelly-fishes, Wasps and Mosquitoes, Clams and Razor-fishes, The Pearly Nautilus, Crabs, Lobsters, Spiders, Bees, Oysters, Snakes, various birds, Kangaroos, Sloths, Whales, Camels, Bats, and Man.



detail



## Batteries

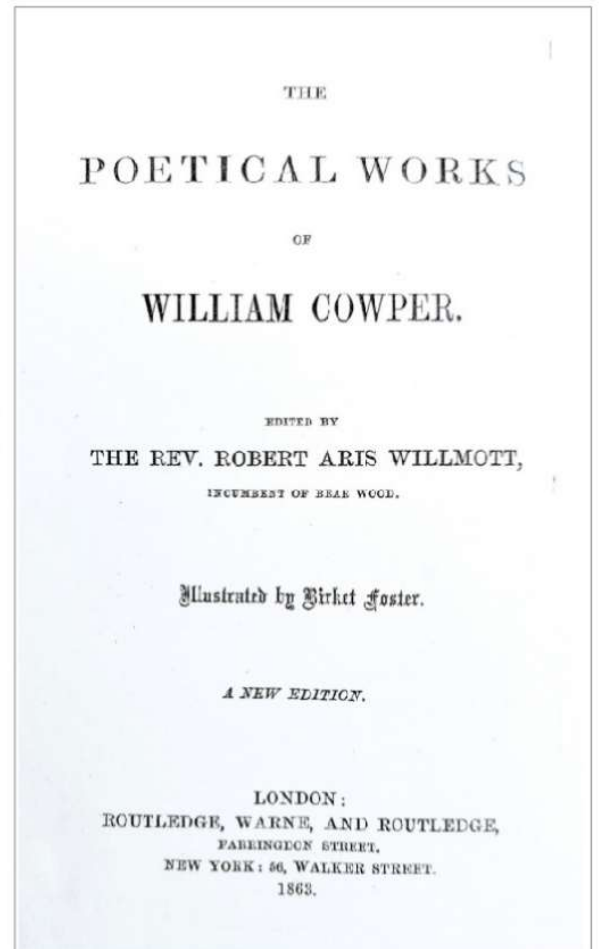
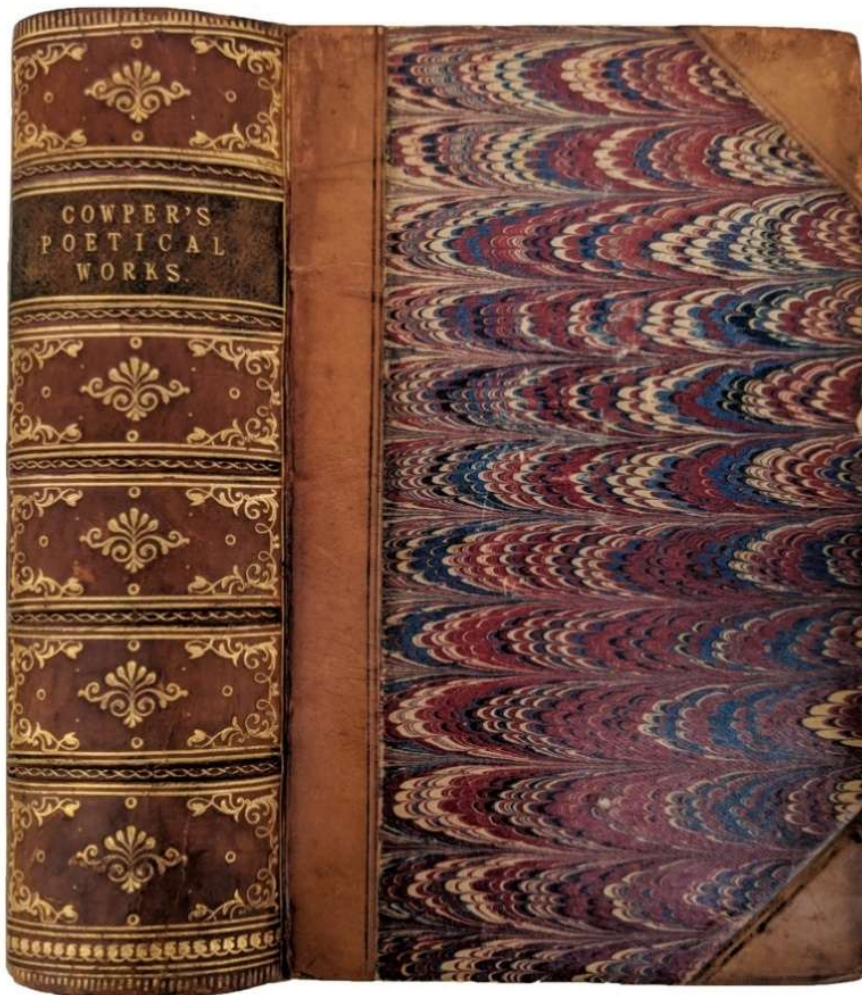
18. **COOPER, William Ranson** (1868-1926). *Primary Batteries: Their Theory, Construction and Use*. London: "The Electrician" Printing and Publishing Company, [1901]. ¶ Series: "The Electrician" Series. 8vo. iv, [2], 324, 31, [1] pp. 131 figs., errata, index, ads. Black blind- and gilt-stamped cloth. Very good. [RW1370]

\$ 30

Chapters include: "The Simple Voltaic Element", "One-Fluid Cells", "Two-Fluid Cells", "Theory of the Voltaic Cell", and "Carbon-Consuming Cells and the Commercial Generation of Electrical Energy."



“William Ranson Cooper, M.A., B.Sc, was born in 1868, at Hampstead, and died on the 15th March, 1926. He graduated in the Royal University of Ireland as Master of Arts in Mathematical Science in 1890, afterwards going to the Central Technical College, where he studied for three years. Gaining a works premium there, he went to the Richmond Electricity Supply station, and to Messrs. Latimer, Clark, Muirhead and Co., who were then manufacturing dynamos and other electrical plant. He next went to King’s College and took his B.Sc, London, in physics and chemistry. In 1895, Mr. G. H. Baillie and he joined Mr. J. Swinburne as assistants, becoming partners soon after. Mr. Swinburne had started Science Abstracts, and was editor at first. Mr. Cooper took over the editorship with its rapidly growing responsibilities; and its subsequent success is largely due to the good work he did in those days. During his partnership he did a great deal of difficult work. At one time he would be analysing the rare earths used in gas mantles; at another, he was putting in sewage plant and refuse destructors. Not only had he a good knowledge of general engineering, but he was also a good chemist and an able electrician, with a good mathematical foundation. His chief characteristic from a technical point of view was accuracy and thoroughness. All his work could be relied upon absolutely. It was always done, and always done correctly. While in partnership with Mr. Swinburne he became editor of the *Electrician*. As this gradually absorbed his whole time his partnership was dissolved, but not the friendship which went with it. He was secretary and director of the Damard Lacquer Co., makers of phenol formaldehyde resin products; and the success of that company is largely due to his strenuous work in its development. He wrote a valuable work on “*Primary Batteries*,” and edited the present edition of the *Electrician* primers. He also revised W. G. McMillan’s “*Electro-Metallurgy*.” He contributed various papers to scientific societies and the technical Press. In 1902 he was awarded a Telford Premium by the Institution of Civil Engineers for a paper on “*Electric Traction*.” He was also interested in automobile matters, and carried out investigations on the problem of dust prevention. He served on the Council of the Institution of Electrical Engineers (1900-3), and of the Faraday Society. He was also vice-president of the Physical Society, and was honorary secretary for many years.” – *Grace’s Guide to British Industrial History*.

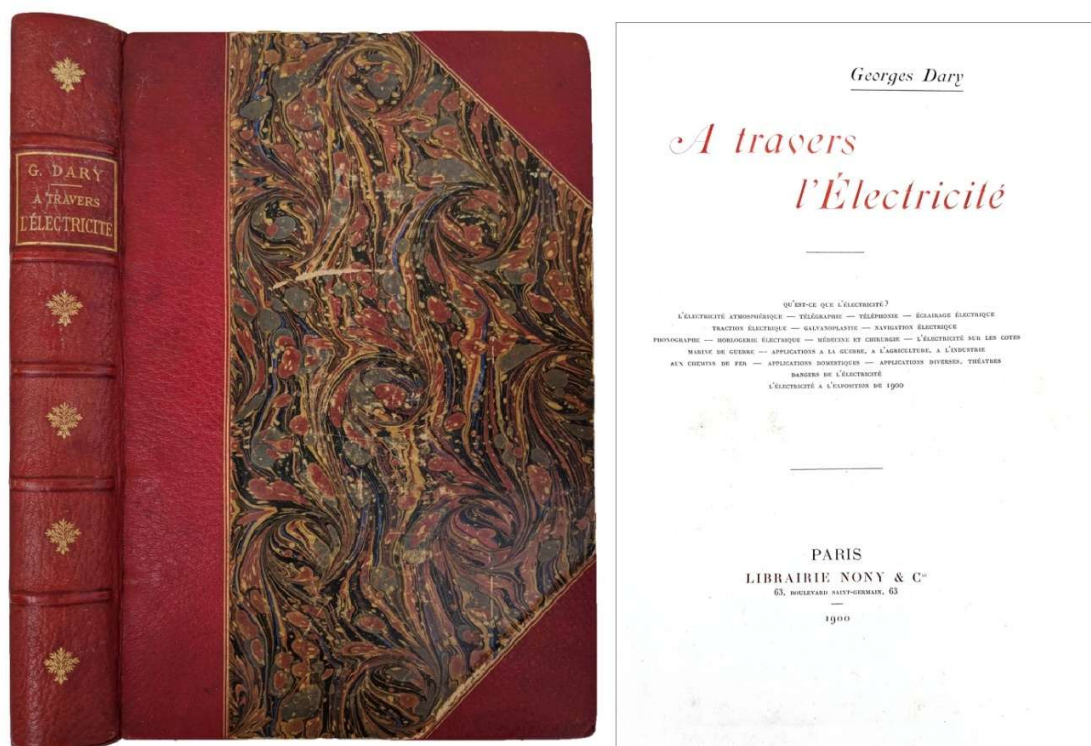


19. **COWPER, William.** *The Poetical Works of William Cowper. Edited by the Rev. Robert Aris Willmott. A New Edition.* London: Routledge, Warne, and Routledge, 1863. ¶ 16.5 cm. Small 8vo. xlviii, 630, [2] pp. Frontispiece, engravings by Birket Foster. Contemporary half gilt-stamped light-brown calf, marbled boards. Very good. [RW1371]

\$ 40

A nice bright copy of Cowper's collected poems (excluding the Olney Hymns), as well as his translations of various Latin and Italian poems.





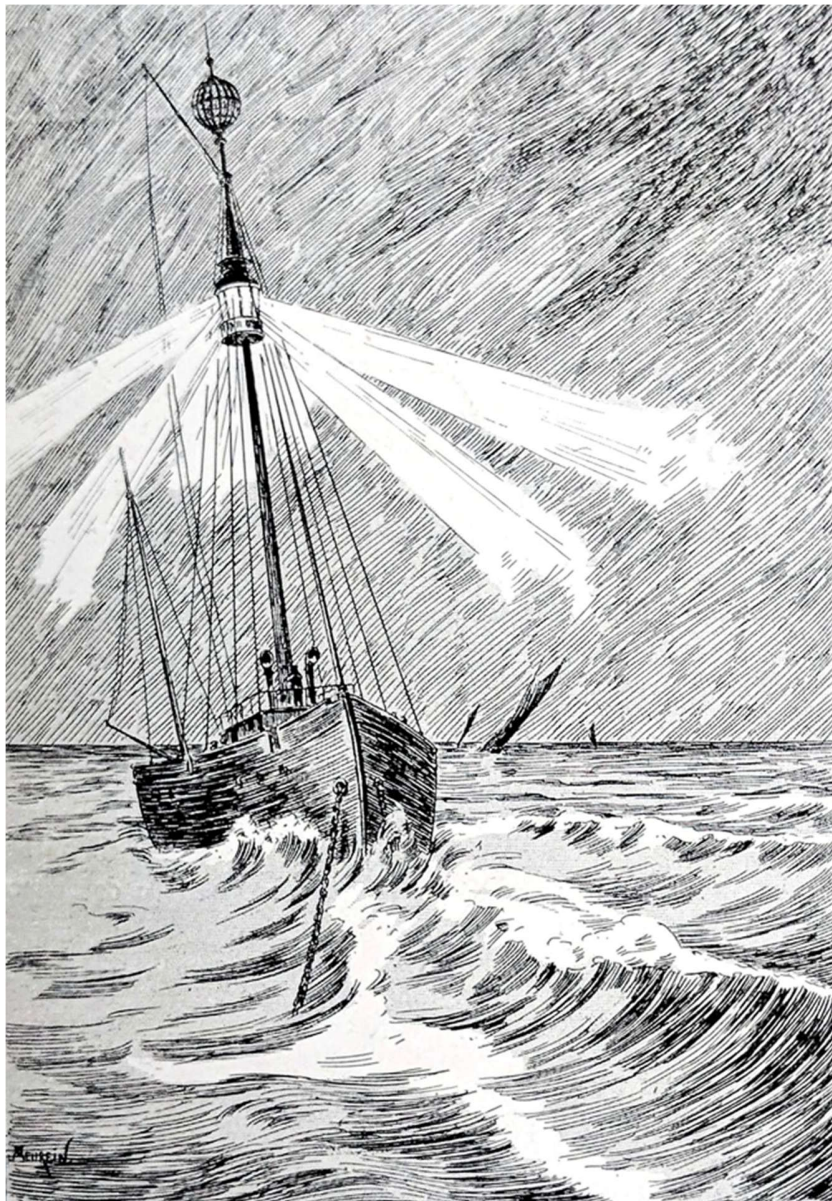
20. **DARY, Georges** (b. 1857). *A travers l'électricité. . . Qu'est-ce que l'électricité ? L'électricité atmosphérique – télégraphie – téléphonie – éclairage électrique – traction électrique – galvanoplastie – navigation électrique – phonographie – horlogerie électrique – médecine et chirurgie – l'électricité sur les côtes marine de guerre – applications a la guerre, a l'agriculture, a l'industrie, aux chemins de fer – applications domestiques – applications diverses, théâtres – dangers de l'électricité – l'électricité a l'exposition de 1900*. Paris: Librairie Nony & Cie, 1900. ¶ 316 x 222 mm. 4to. [vi], 439 pp. PROFUSELY ILLUSTRATED WITH 345 figs., numerous ports.; foxed. Quarter red morocco, morocco corners, gilt-ruled covers, marbled boards, raised bands, gilt spine, top edge gilt, marbled end-leaves. Very good. [RW1046]

\$ 85

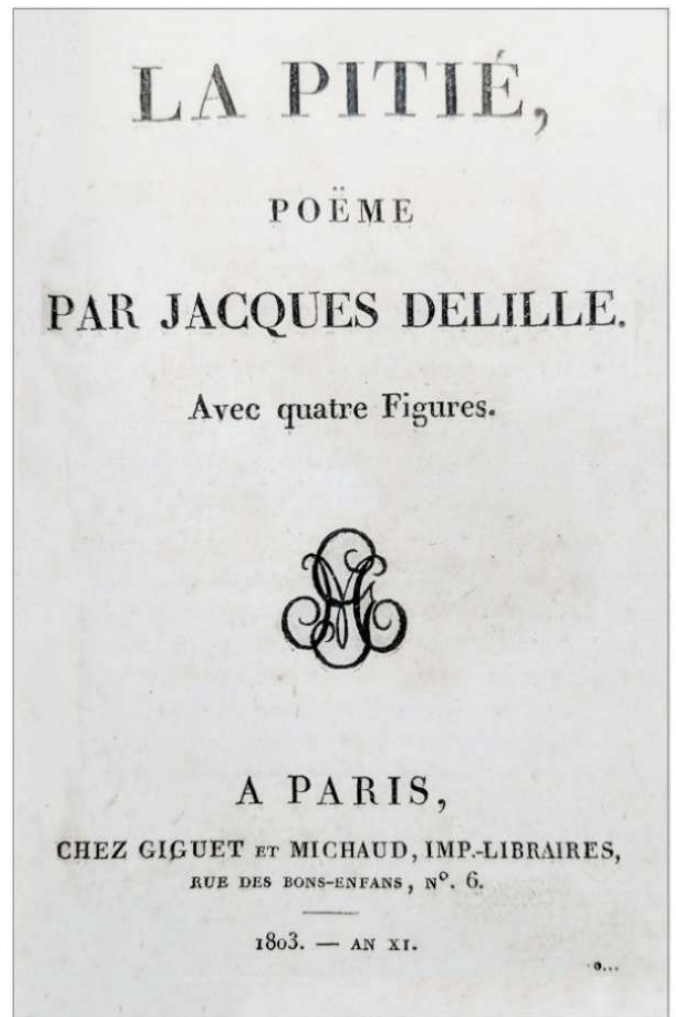
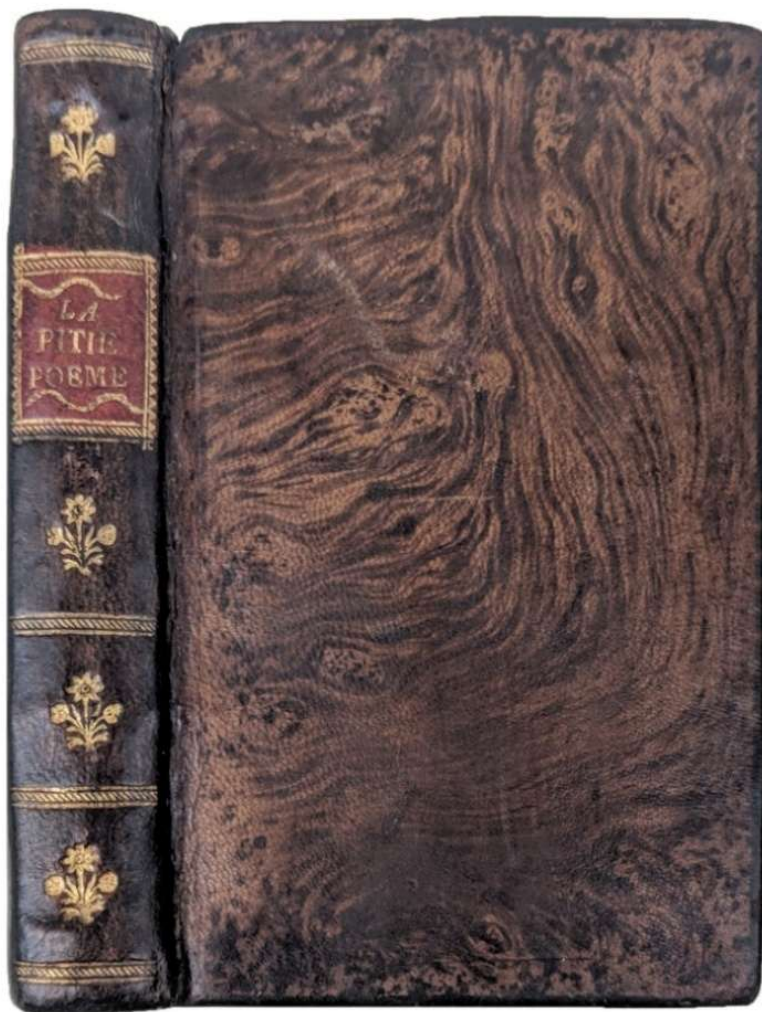
First edition of this beautifully illustrated summary of practical applications of electricity up to 1900 by Georges Dary, who published five general works on electricity from 1881 to 1900, including the electrical industry in France. The work concludes with the Paris International Exposition in 1900, of the Palace of Electricity and the House of Water. At least 3 editions were issued through 1903, the author adding material to the later editions. Copies differ widely due to different binding treatments.

[TITLE in English] "About electricity. . . What is electricity? Atmospheric electricity - telegraphy - telephony - electric lighting - electric traction - electroplating - electric navigation - phonography - electric clocks - medicine and surgery - electricity on the coasts navy of war - applications to war, agriculture, industry, railroads - domestic applications - various applications, theatres - dangers of electricity - electricity at the 1900 exhibition."

§ Zeitlinger 7174 (3rd ed., 1903).



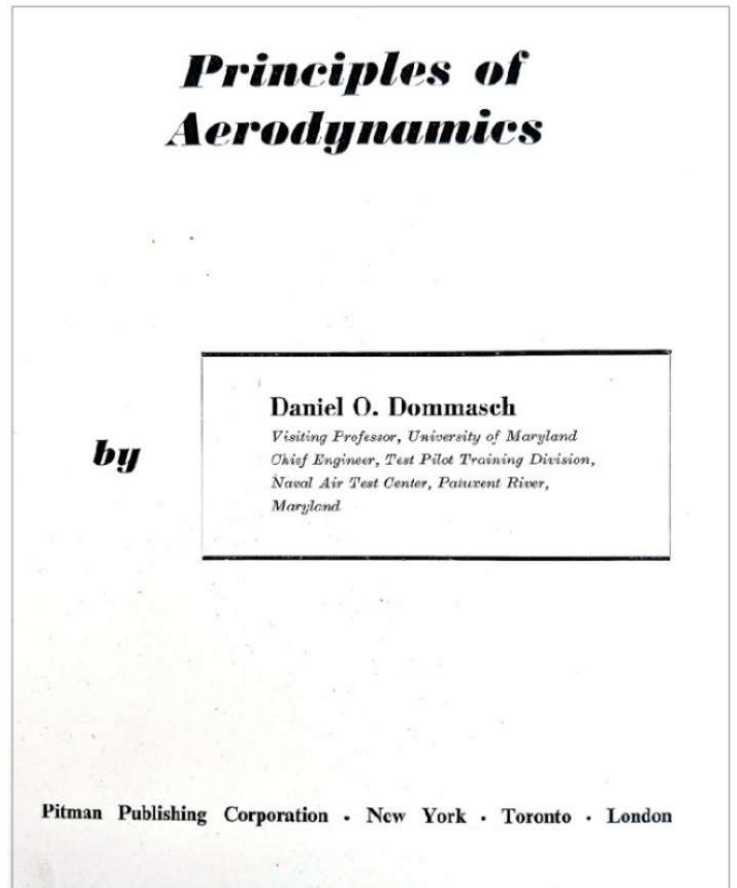
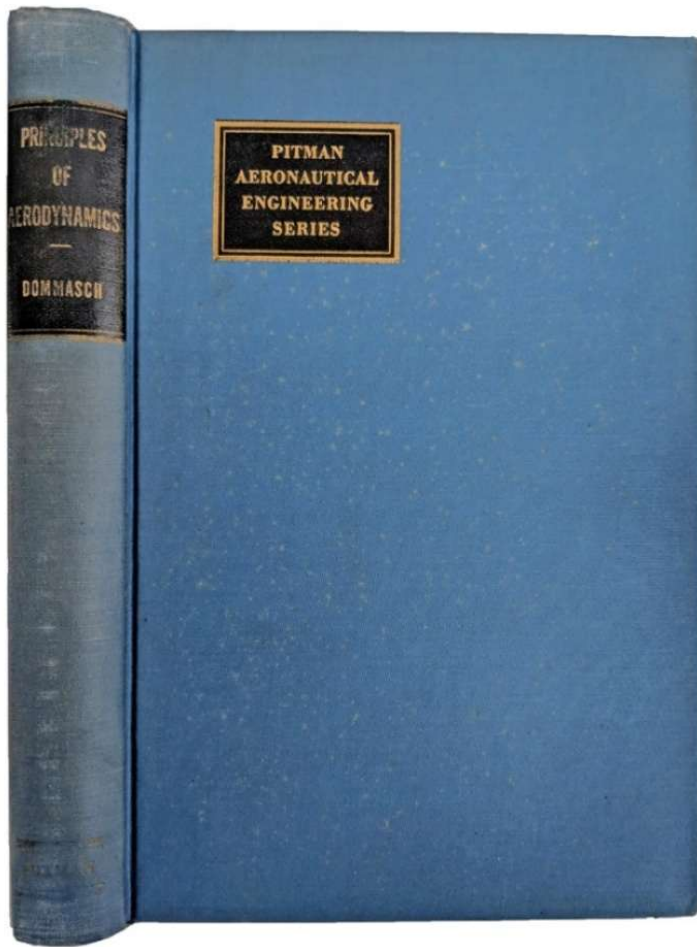




21. **DELILLE, Jacques** (1738-1813). *La Pitié, Poème*. Paris: Giguet et Michad, 1803. ¶ Sm. 8vo. [iv], 243, [1] pp. Half-title, 4 engraved plates. Original brown tree calf, gilt spine, red leather spine label. Bookplate of Romero & Martinez. Fine. [RW1383]

\$ 30

Delille was a French poet and translator who first came to prominence for his translation of Virgil's *Georgics*, after which Voltaire recommended him for the Académie française, to which he was promptly elected. The French revolution reduced him to poverty and caused him to flee the country, first to Switzerland and then to Germany, where he composed arguably his most famous work *La Pitié*.



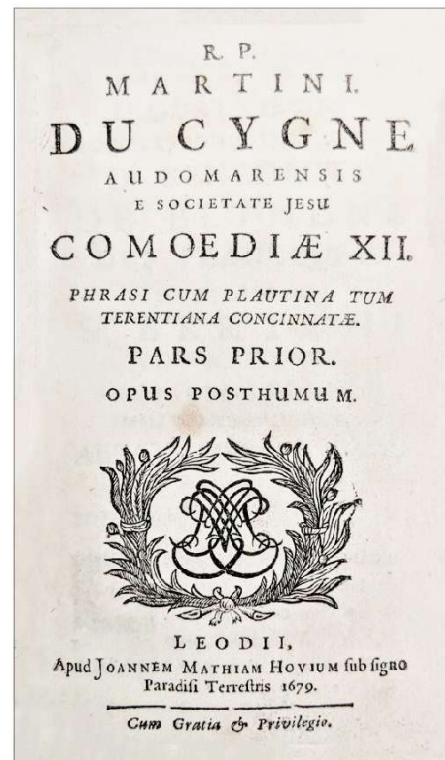
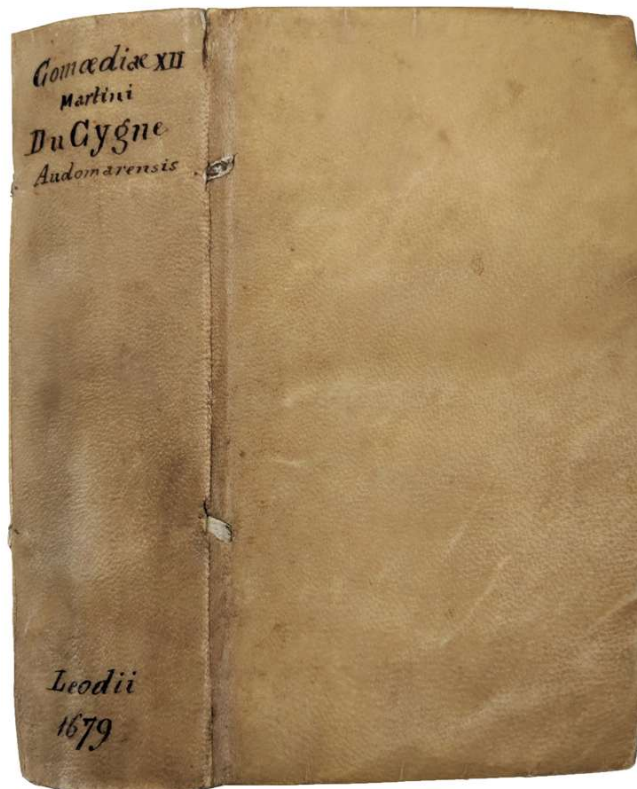
## *Aerodynamics*

22. **DOMMASCH, Daniel O.** (b. 1921). *Principals of Aerodynamics*. New York: Pitman, 1953. ¶ Series: *Pitman Aeronautical Engineering Series*. First edition. 8vo. xvii, [1], 389, [1] pp. Figs., tables, index. Blue black and gilt-stamped cloth. Very good. RARE. [RW1048]

\$ 20

Dommasch was a visiting professor at the University of Maryland, chief engineer, test pilot training division, Naval Air Test Center.

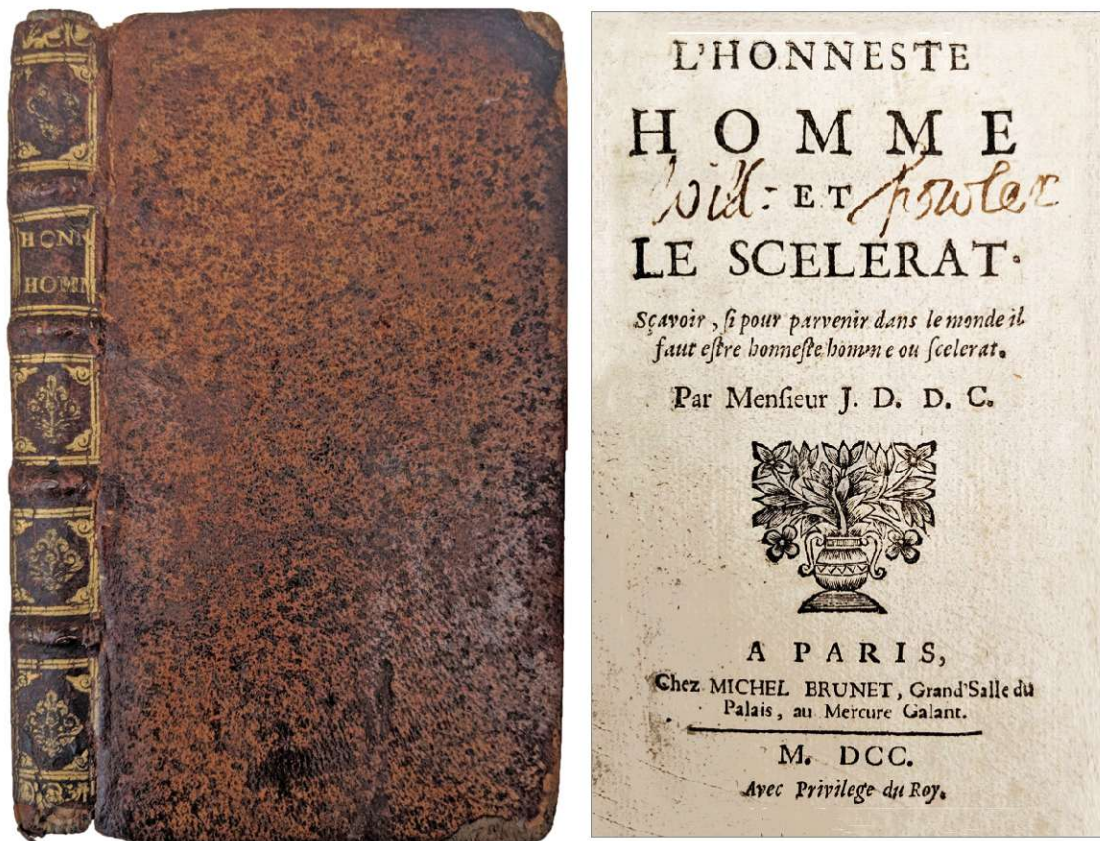




23. **DU CYGNE, Martin** (1619-1669). *Comoediæ XII phrasi cum Plautina tum Terentiana concinnatæ. Opus posthumum*. [Liege]: Apud Joannem Mathiam Hovium, 1679. ¶ 2 parts in 1 volume. 12mo. [xvi], 287, [1]; [4], 290, [2] pp. [final leaf is misnumbered as "90"]. Woodcut title-vignette, head and tail pieces. Contemporary full vellum. Very good +. RARE. [RW1385]

\$ 350

First edition, though published posthumously. A French Jesuit, Du Cygne spent 40 years as professor of rhetoric at the College of Saint-Omer, where he wrote a number of texts on rhetoric. This volume represents a rather unique effort on du Cygne's part to mimic the language and structure of the plays of Plautus and Terrence while removing the sort of bawdiness that made the original plays, to his mind, unsuitable for young readers. Locations: National Library of Scotland; Biblioteca Nazionale Centrale di Roma; Koninklijke Bibliotheek; Tilburg University Library; Zentral- und Hochschulbibliothek Luzern Standort Sempacherstrasse.



24. **DUBOIS DE CHASTENAY, Jacques “J.D.D.C.” (1660?-1716?).** *L'Honneste Homme et le Scelerat. Scavoir, si pour parvenir dans le monde il faut estre honneste homme ou scelerat.* Paris: Chez Michel Brunet, 1700. ¶ 12mo. [vi], 185, [1] pp. Title woodcut vignette. Contemporary mottled calf, gilt spine, raised bands; extremities showing. Early armorial bookplate: “Bonne et Belle Assez”; title-page signed “Will: Fowler”. Very good. [RW1498]

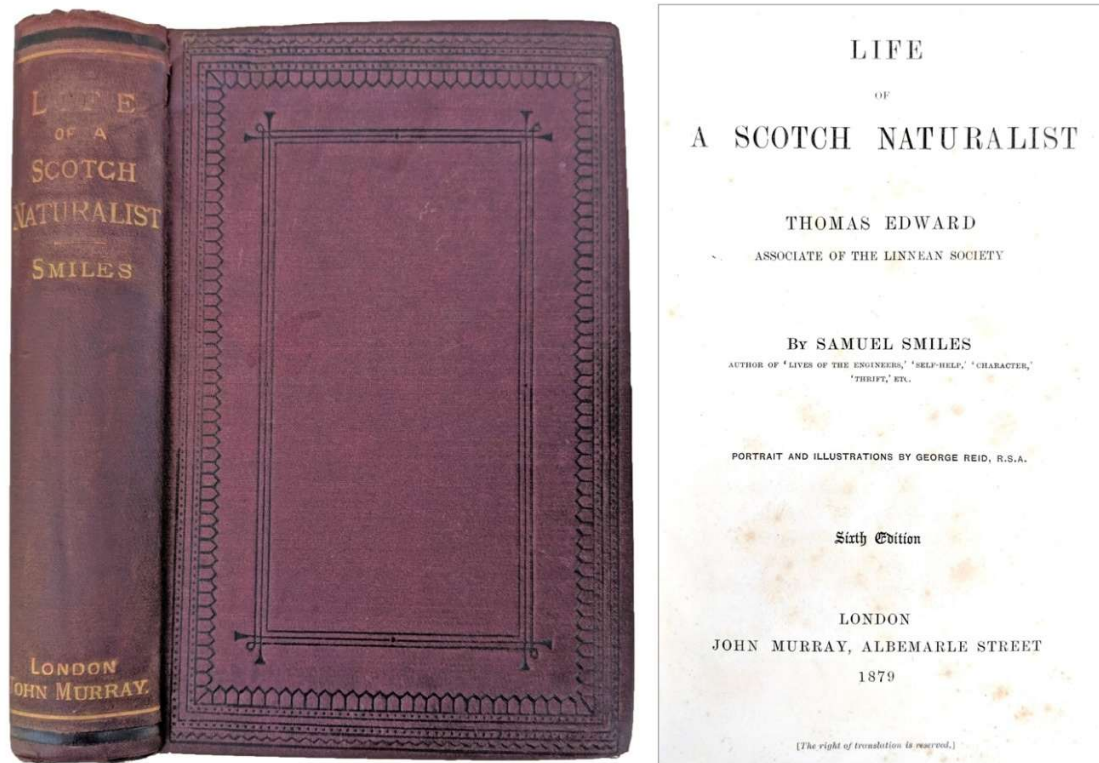
\$ 100

Second of three parts, each separate and apparently not referring the others issues (the first was 1699); a third issue was printed in 1701 [considered tome 2 and it contained 143 pp.]. “The Honneste Man and the Scelerat [Villain]. Scavoir, if to reach the world you have to be honest man or scelerate [Villain].” Arranged in four parts, or books [pp. 1, 41, 92, 144], with a final section entitled, “Ingenie a Agathandre”. Some copies have a frontispiece (not this one); nonetheless rare. Dubois de Chastenay also wrote, *Arsene, ou La vanite du monde: dedie a Madame de Maintenon*, 1690; *Uranie ou Les secours*



inopinez de la Providence, de diez A S.A.R. Monseigneur Le Duc D'Orleans, Regent de France, 1716, etc.

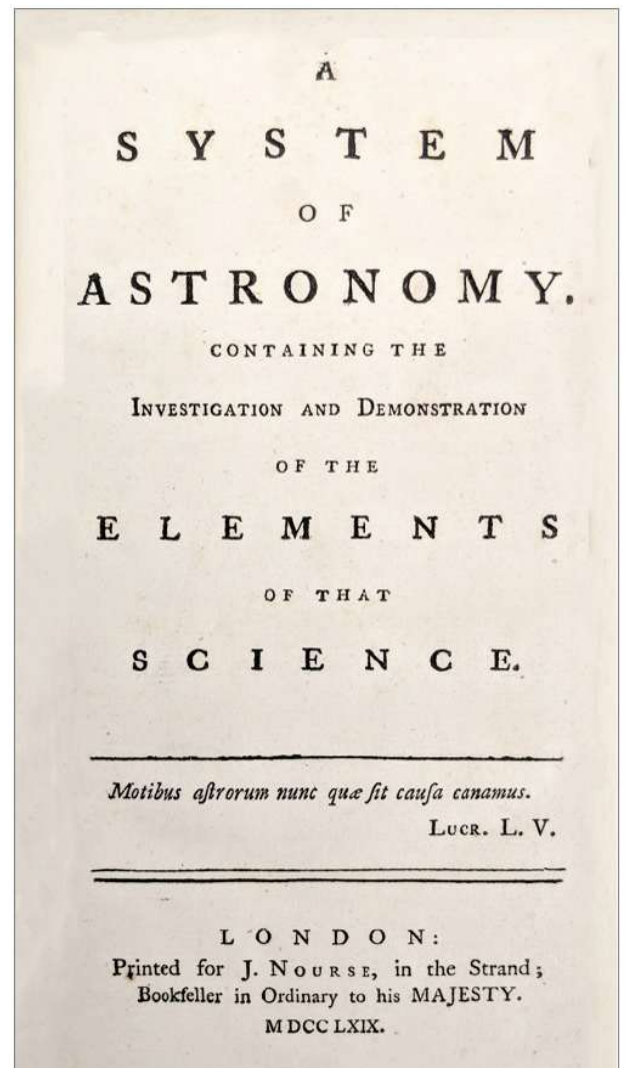
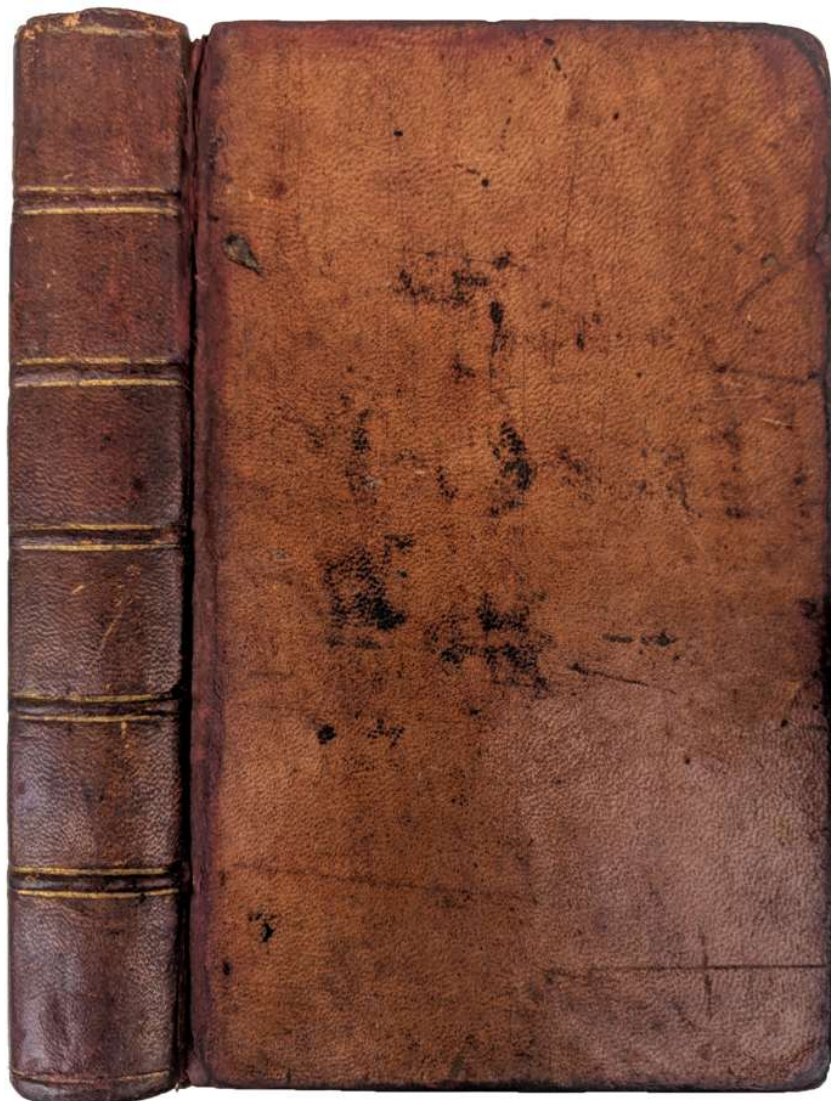
Possibly from the Bellasis or Bellasys family. See: Octave Comte de Behague, *Catalogue des livres rares et precieux composant la bibliotheque . . .*, Paris, 1880, volume 2, no. 79.



25. **EDWARD, Thomas** (1814-1886)]; **SMILES, Samuel** (1812-1904). *Life of a Scotch Naturalist. Thomas Edward, Associate of the Linnean Society.* London: John Murray, 1879. ¶ 8vo. xix, [3], 448 pp. Frontis. port., plates by George Reid, figs., ads. Original blind- and gilt-stamped maroon cloth; upper corner bumped. Bookplate of John Burton Craig, Edinburgh 1879. Very good. [RW1387]

\$ 25

Sixth edition. Edward was not particularly important in terms of direct impact on research or conservation. He was not trained as a naturalist—in fact he was a shoemaker—however his love of nature eventually led to him spending all his time collecting specimens of Scottish Fauna, discovering numerous new species.



*The Industrious Late-Producer Emerson*

26. **EMERSON, William** (1701-1782). *A System of Astronomy. Containing the Investigation and Demonstration of the Elements of that Science*. London: J. Nourse, 1769. ¶ 8vo. x, ii, 368, [4] pp. 16 engraved folding plates, last two leaves contain the errata and advertisements. Original full calf, gilt-stamped raised bands; front cover reinforced with kozo. Bookplate of Rev. N. Hubbersty, Wirksworth [U.K.]. Very good. Scarce. [RW1388]  
\$ 400



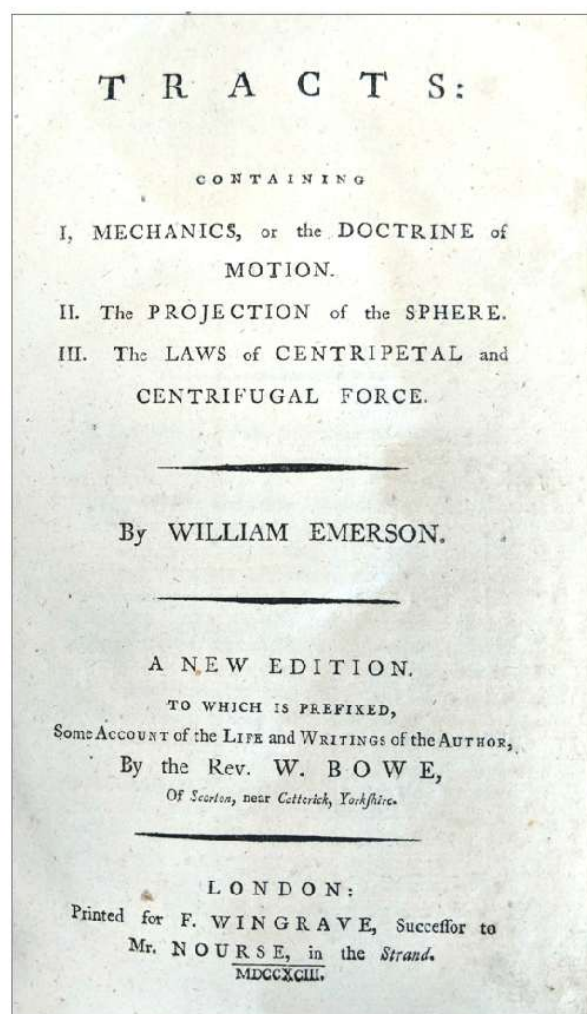
First edition. Preface signed: 'W. Emerson'. Emerson was an English mathematician. "Unsuccessful as a teacher he devoted himself entirely to studious retirement, and published many works which are singularly free from errata. In mechanics he never advanced a proposition which he had not previously tested in practice, nor published an invention without first proving its effects by a model." – *Britannica*.

Niccol- Guicciardini describes Emerson as among the group in Britain that developed Newtonian calculus during the eighteenth century. As Emerson was industrious he produced, perhaps by contract with his publisher John Nourse, several solid works on mechanics, mathematics and the present one on astronomy. All are considered part of the growing literature of presenting advance science to the masses, rather than keeping highly technical knowledge to a select few. – Niccol- Guicciardini, *The Development of Newtonian Calculus in Britain, 1700-1800*, Cambridge University Press, (1989), p. 61.

"[Emerson] refused to become a member of the Royal Society because, as he said, 'it was a d---d hard thing that man should burn so many farthing candles as he had done, and have to pay so much a year for the honour of F.R.S. after his name.'" – DNB. "Emerson was an eccentric, living on a small private income, and devoting himself to mathematical writing and teaching. He was widely known and his books highly esteemed." – Taylor, *The Mathematical Practitioners of Hanoverian England*, 1966, p. 157.

Reverend Nathan Hubbersty, Church of England, (1767-1828), attended Clare College, Cambridge and became Head Master of the Grammar School at Wirksworth, Derbyshire. – My Hubberstey/Hubbersty Family History Blog, A genealogical journey to discover what I can about the Hubberstey past. [web-source].

§ ESTC: T77160; DNB. Not in Honeyman.



27. **EMERSON, William** (1701-1782). *Tracts: Containing I, Mechanics, or the Doctrine of Motion. II. The Projection of the Sphere. III. The Laws of Centripetal and Centrifugal Force. A new edition.* London: Printed for F. Wingrave, 1793. ¶ 8vo. [2], xxii, [3]-302, [2] pp. 27 folding plates [plate counts: 9 + 12 + 6], figs. Original dark brown gilt-stamped leather; small piece of leather missing at front lower cover, joints worn. Ownership inscription of Geo. Couper, 1815. Good. [RW1053]

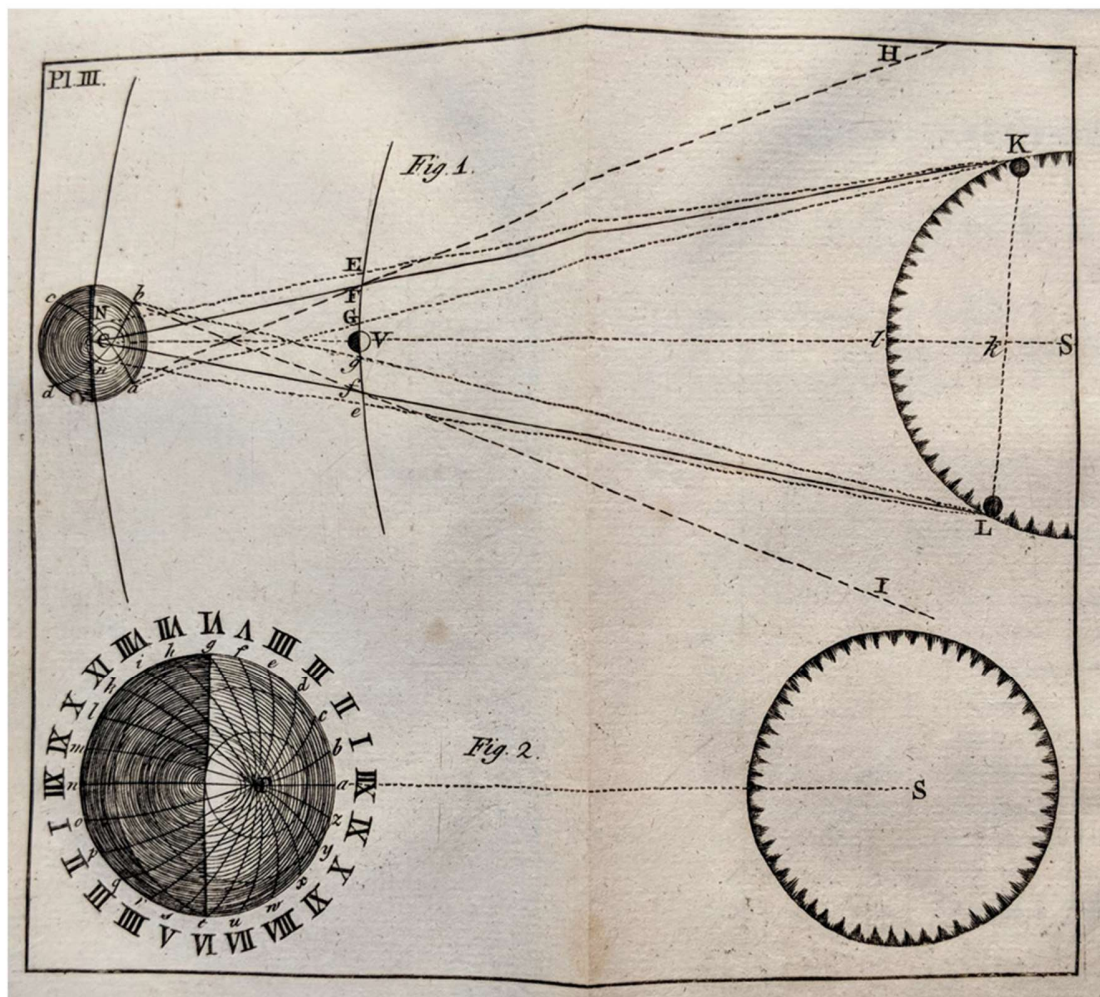
\$ 295

Three parts in one volume. Emerson was an eccentric English Mathematician best known for his textbooks. The three parts: I: *Mechanics; or, the doctrine of motion* . . . II: *The Projection of the Sphere, orthographic, stereographic, and gnomonical.*

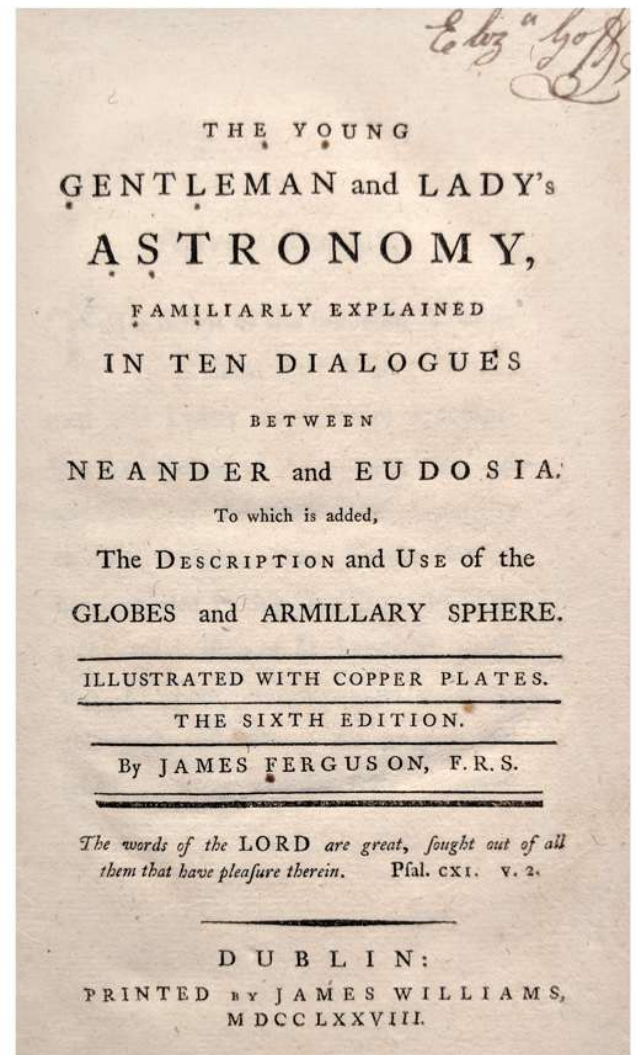
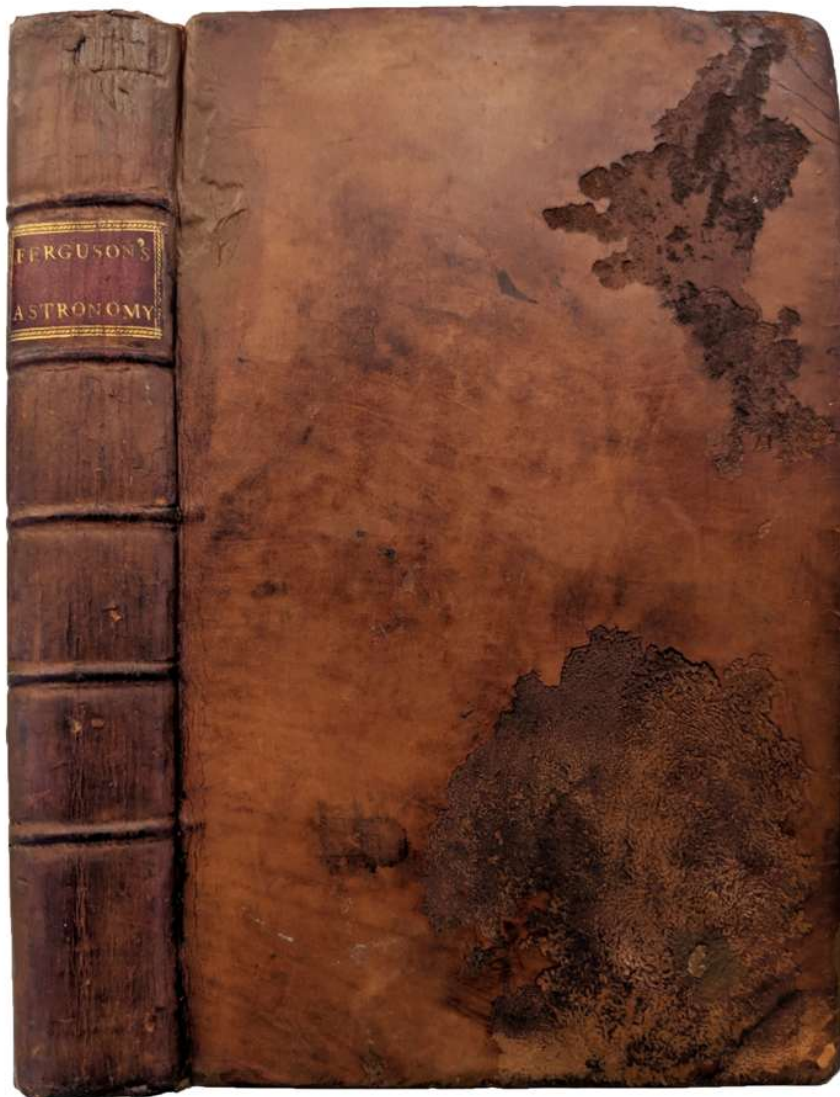


III: *The Laws of Centripetal and Centrifugal Force* . . . The text contains a wide range of practical applications to mechanics: the pendulum, planes, curved surfaces, beams of timber, strength of materials, stress, power of engines, hydrostatics, pneumatics, gravity, friction, wheel carriages, hand mill, watches, etc. Emerson was a mathematician and taught the subject. He wrote prolifically, with, for example, his *Principles of Mechanics* being first issued in 1754 and re-issued in subsequent editions.

George Couper (1788-1861), Heugh Street, South Shields [county of Durham, U.K.], was a colonel in the British army, and made a baronet in 1841.



Ferguson



28. **FERGUSON, James** (1710-1776). *The Young Gentleman and Lady's Astronomy, Familiarly Explained in Ten Dialogues Between Neander and Eudisia. To which is added, The Description and Use of the Globes and Armillary Sphere.* Dublin: James Williams, 1778. ¶ 8vo. [iv], 247, [1], 112 [p. 112 misprinted as 111], [4] pp. 8 folding copper plates, erratum, ads. Original full calf, red leather gilt-stamped spine label; scuffed, joint head mended. Armorial bookplate of John James Lecky, early ownership inscriptions of Elizabeth Goff. Very good. [RW1397]

\$ 225



Sixth edition. Ferguson was a Scottish astronomer, one of the few truly pioneering autodidacts in the field. Born to a large poor family, Ferguson taught himself to read and was taught writing by his father. He had no formal education beyond 3 months at grammar school in Keith. “[Ferguson’s] forte was popularization, and his confessedly weak mathematical background stood him in good stead in writing books for the lay public, particularly his classic *Young Gentleman’s and Lady’s Astronomy* (1768) . . . His models of the planetary system were classics of engineering design whose accuracy far surpassed anything previously available. Several of his books were used in British grammar schools as late as the 1840’s.” – *DSB* IV, p. 565.

PROVENANCE: John James Lecky (1799-1878), his armorial bookplate with the boar’s head, of Ballykealey. His father, John Leckey, esq., married in 1780 Elizabeth Goff (1762-1841).

[29]



A military reconnaissance with the use of an electric light, illuminating the field, and powered by a steam engine mounted on a horse-drawn carriage.





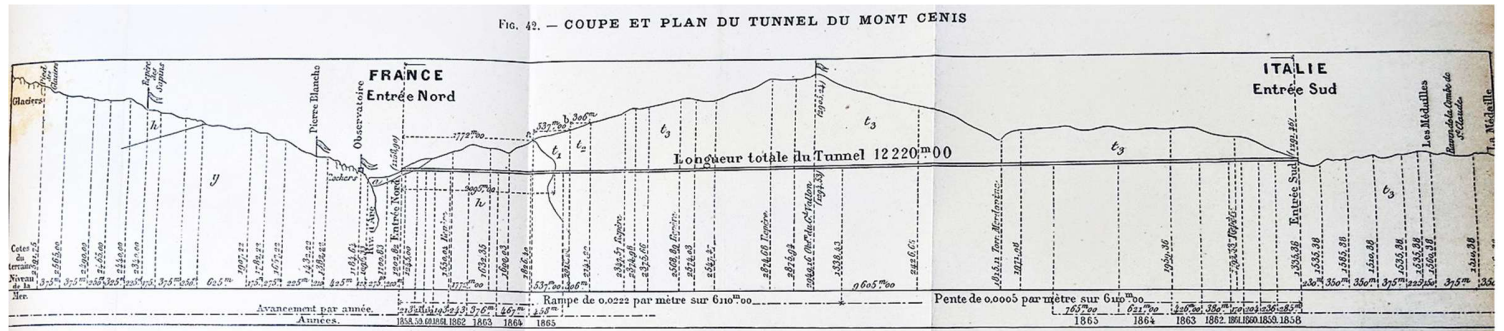
29. **FIGUIER, Louis** (1819-1894). *Les Nouvelles Conquetes de la Science*. [4 volumes]. Paris: Librairie Illustree, [after 1882]. ¶ 4 volumes. 4to. [4], iii, [1], 644; [iv], 644; [iv], 644; [iv], 614 pp. 224 + 215 + 263 + 190 figs. (including 4 frontispieces), indexes; foxed. Contemporary quarter tan morocco, marbled boards, gilt spine, raised bands. Small rubberstamps of Paul Sengier, Ingenieur, Charleroi. Very good. [RW1405]

\$ 275

A nice tall set, largely focused on the ways technology allowed people greater freedom to travel. Books: I: Electricity, II: Great Tunnels and Metropolitan Railways, III: The Railways in Both Worlds [new and old], IV: Isthmuses and Canals.



PROVENANCE: Paul Sengier (fl. 1882-1902), an engineer, resided in Charleroi, Hainaut, Belgium.



detail

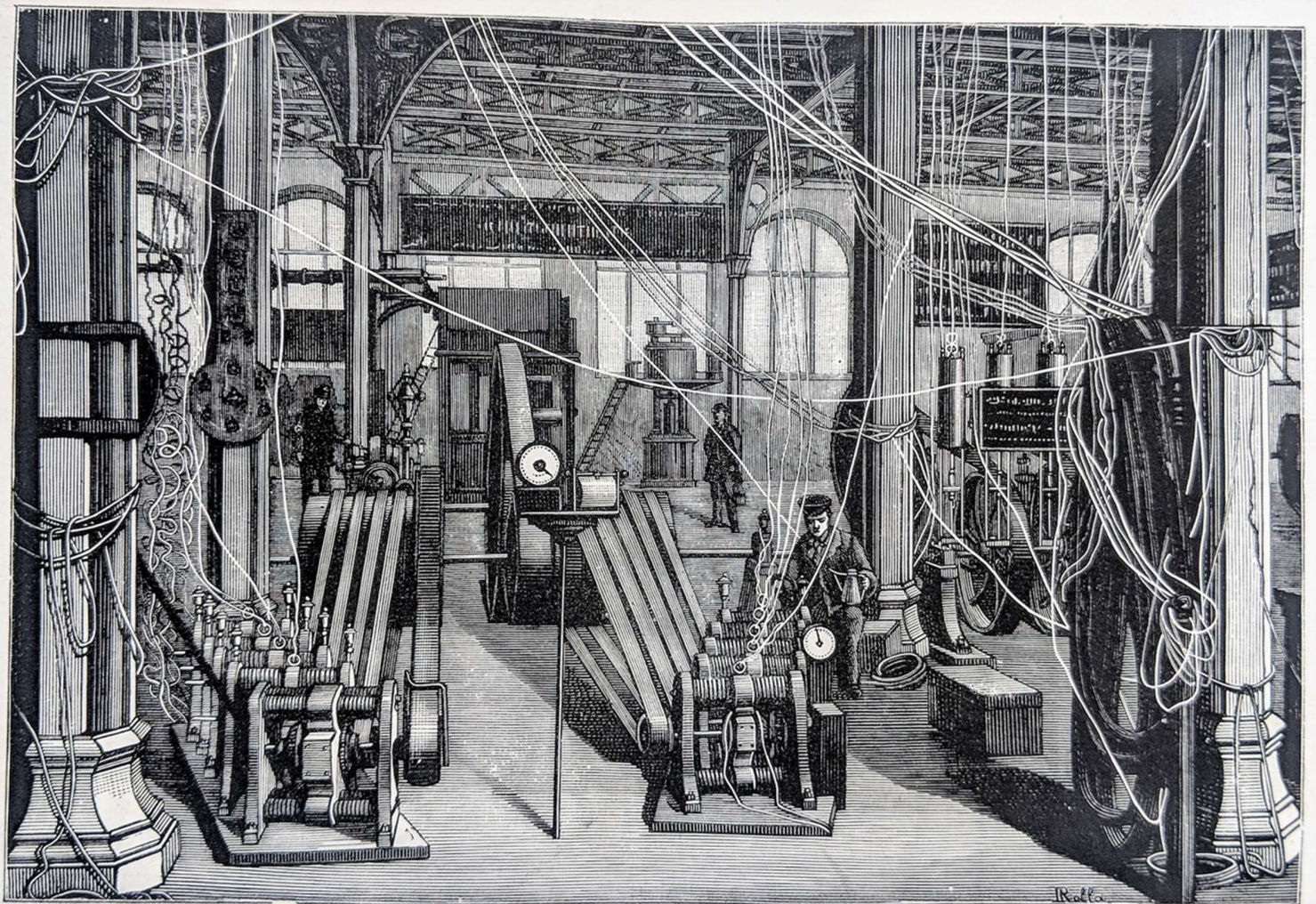
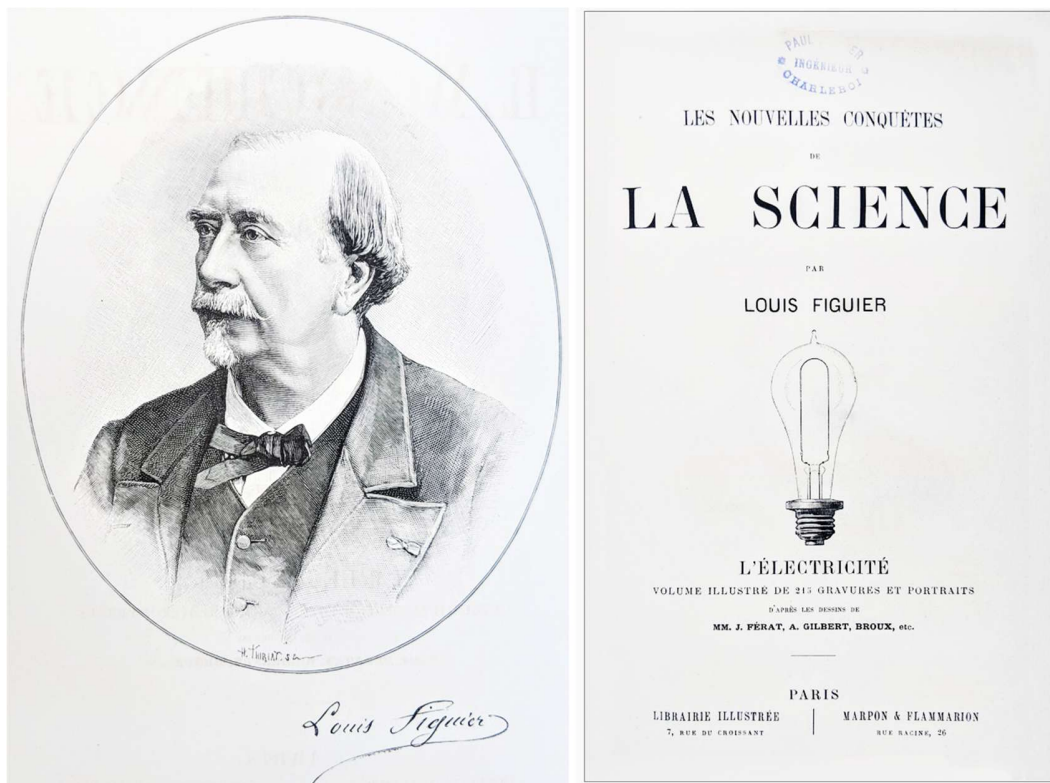
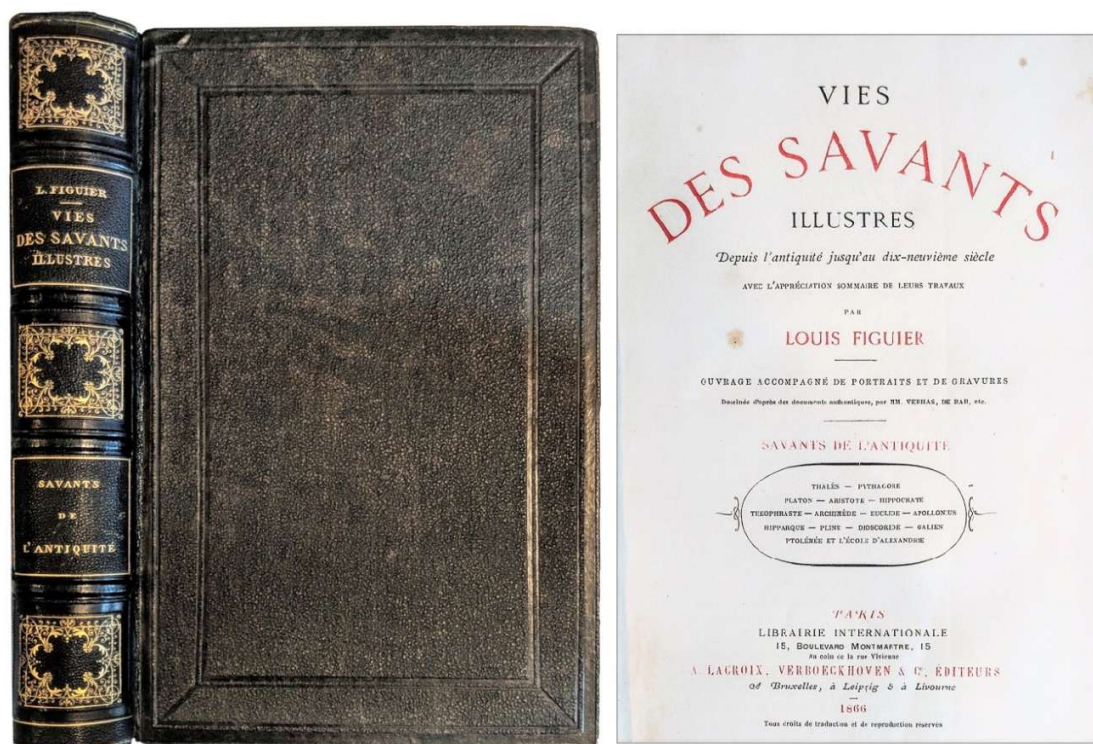


FIG. 88. — LES MACHINE GRAMMES A L'EXPOSITION D'ÉLECTRICITÉ DE 1881.

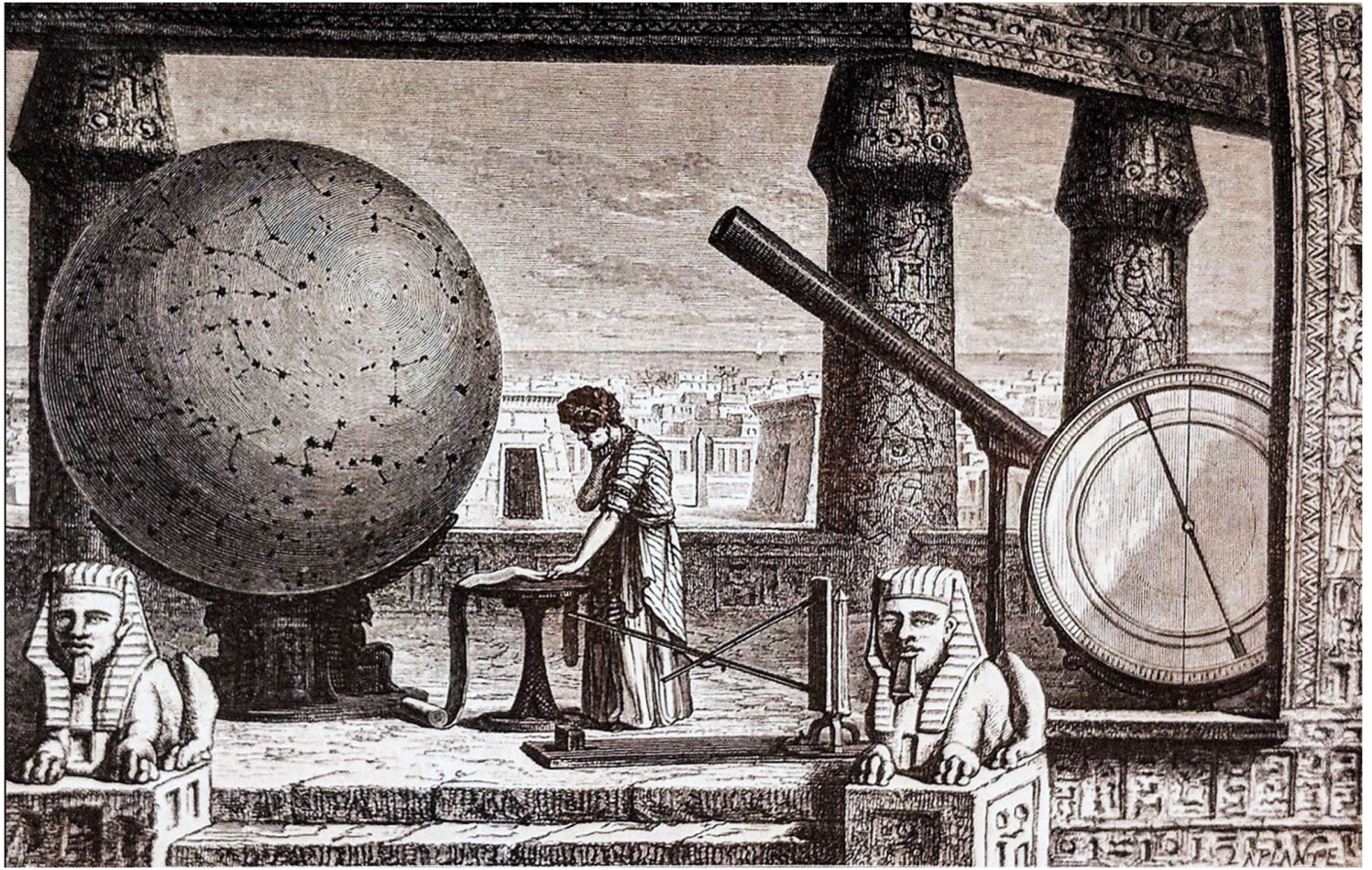




[29]







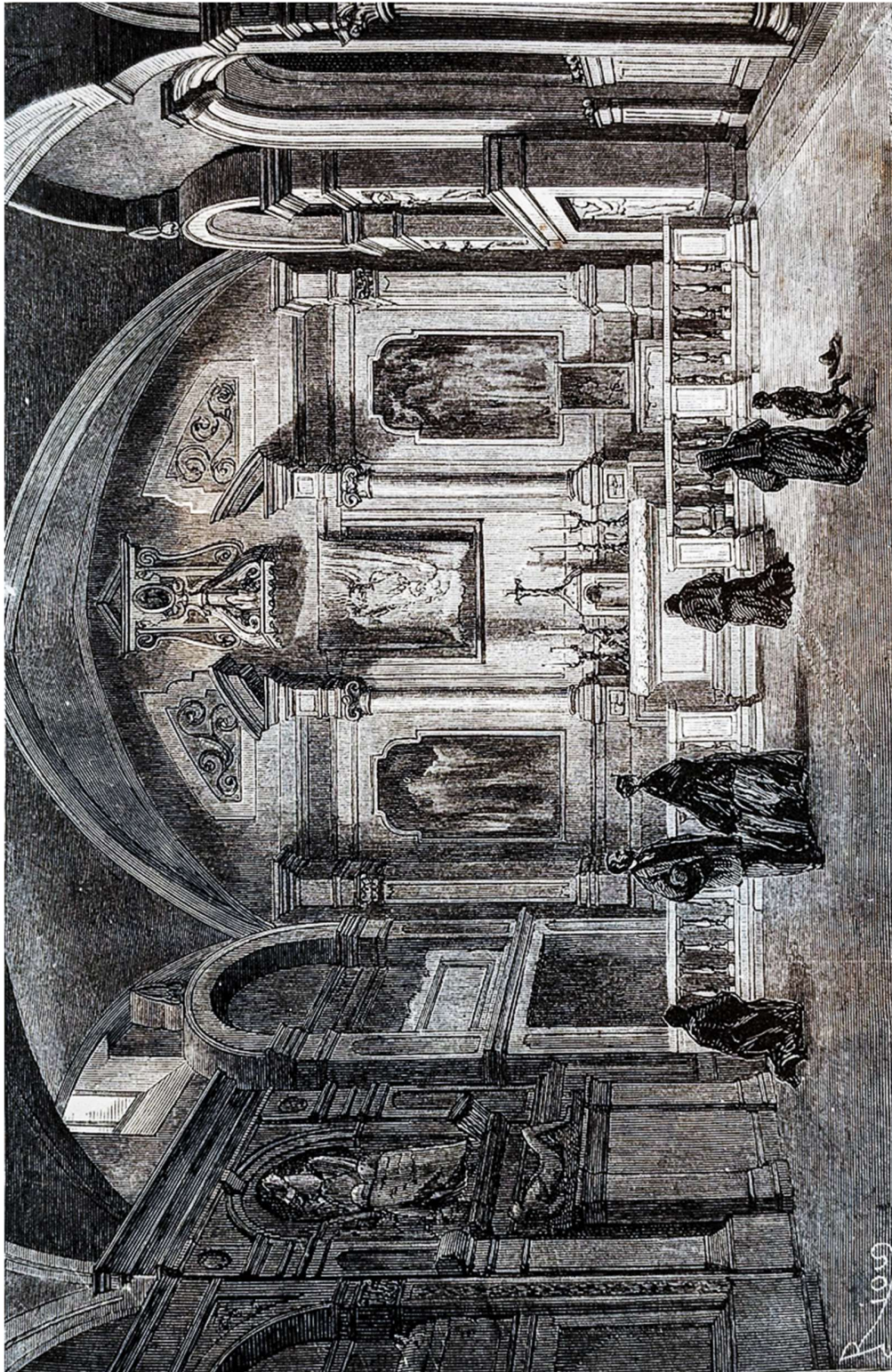
[30]

30. **FIGUIER, Louis** (1819-1894). *Vies des Savants Illustres. Depuis l'antiquité jusqu'au dix-neuvième siècle avec l'Appréciation sommaire de leurs travaux. Savants de l'Antiquité*. Paris: Librairie Internationale, 1866. ¶ 8vo. [4], v, [3], 468, [4] pp. Frontis., plates, index. Contemporary quarter dark green morocco, green pebbled cloth, gilt-decorated spine, raised bands, all edges gilt; rubbed, light foxing. Very good. [RW1413]

\$ 40

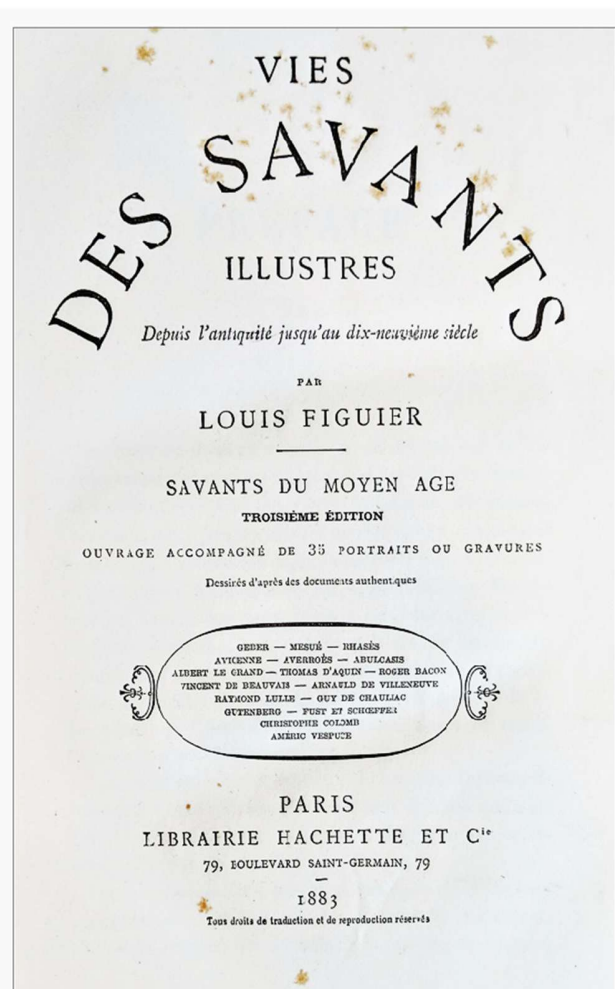
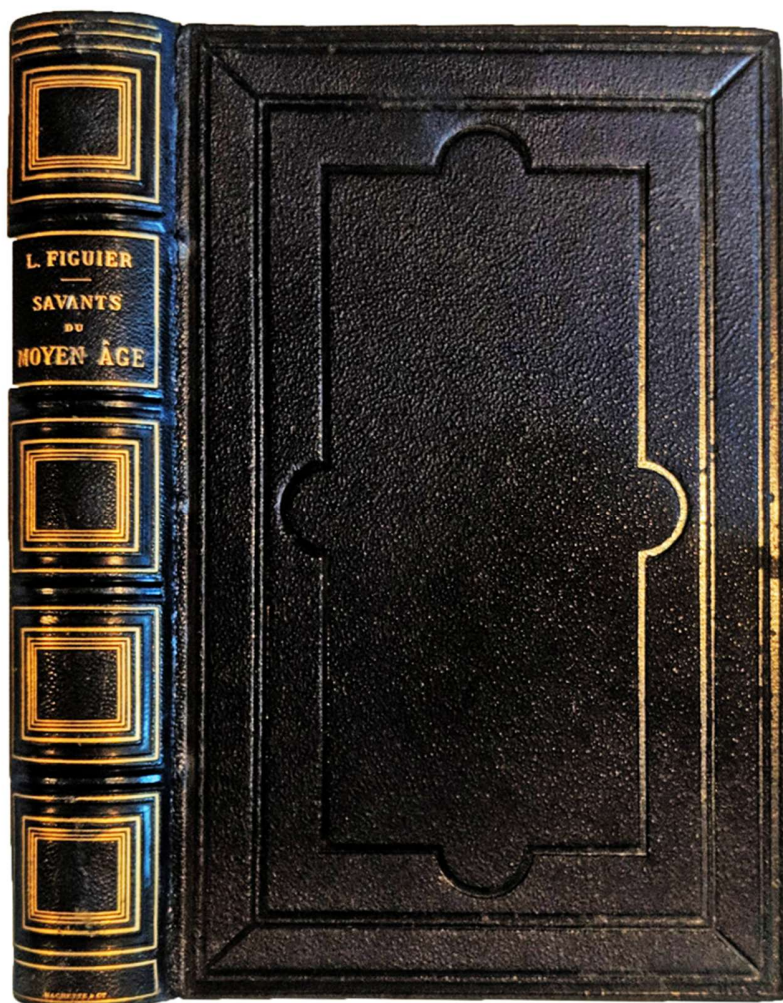
Includes biographies of Thales, Pythagoras, Plato, Aristotle, Archimedes, Euclid, Apollonius, Hipparchus, Pliny, Galen, Ptolemy, Theophrastus, Dioscorides, and the School of Alexandria.





[31]

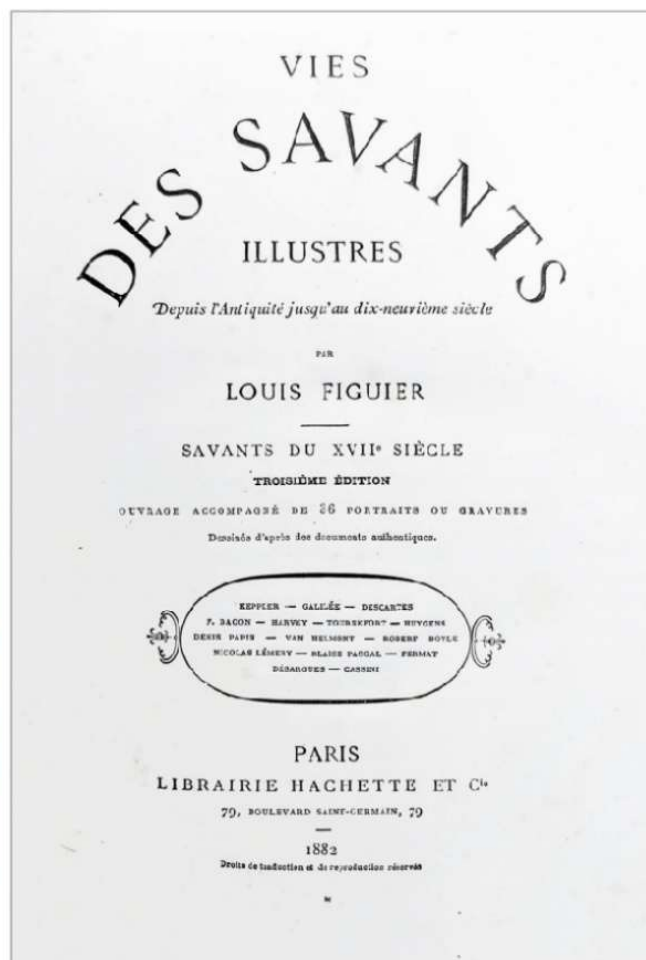
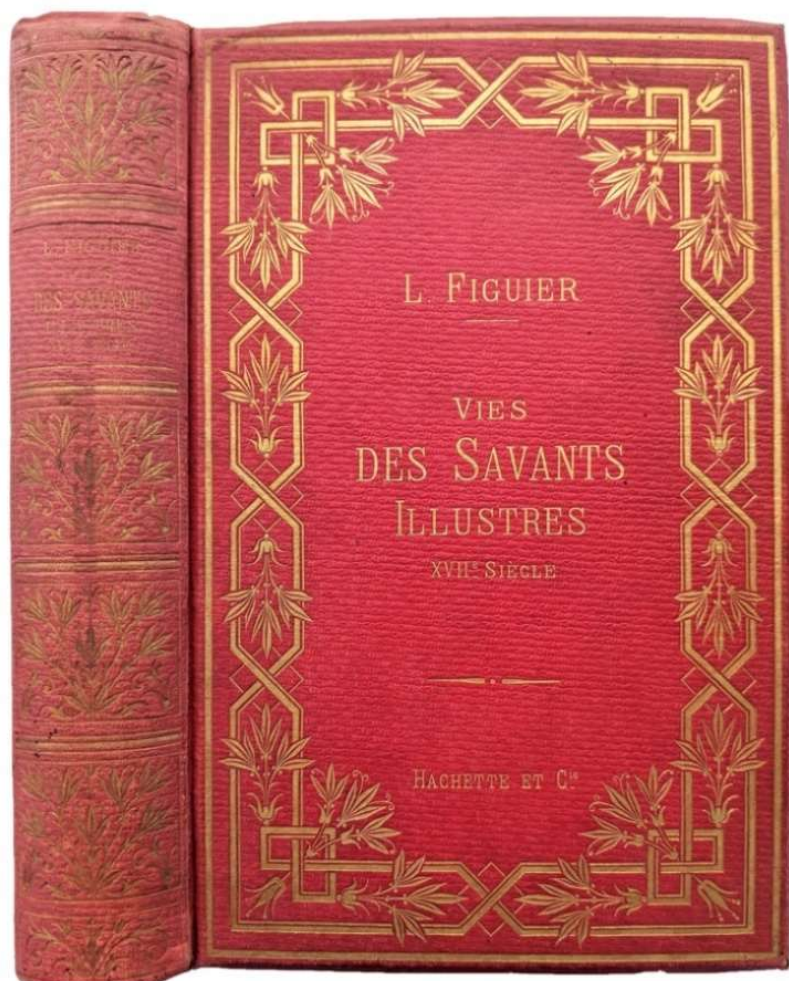




31. **FIGUIER, Louis** (1819-1894). *Vies des Savants Illustres. Depuis l'antiquité jusqu'au dix-neuvième siècle. Savants du Moyen âge*. Paris: Librairie Internationale, 1883. ¶ 8vo. vii, [1], 503, [1], 7, [1] pp. Frontis., 35 engraved portraits. Original quarter blue morocco, blue cloth, blind-stamped gilt-decorated spines, raised bands, all edges gilt; spine rubbed, foxing. Very good. [RW1415]

\$ 40

Third edition.

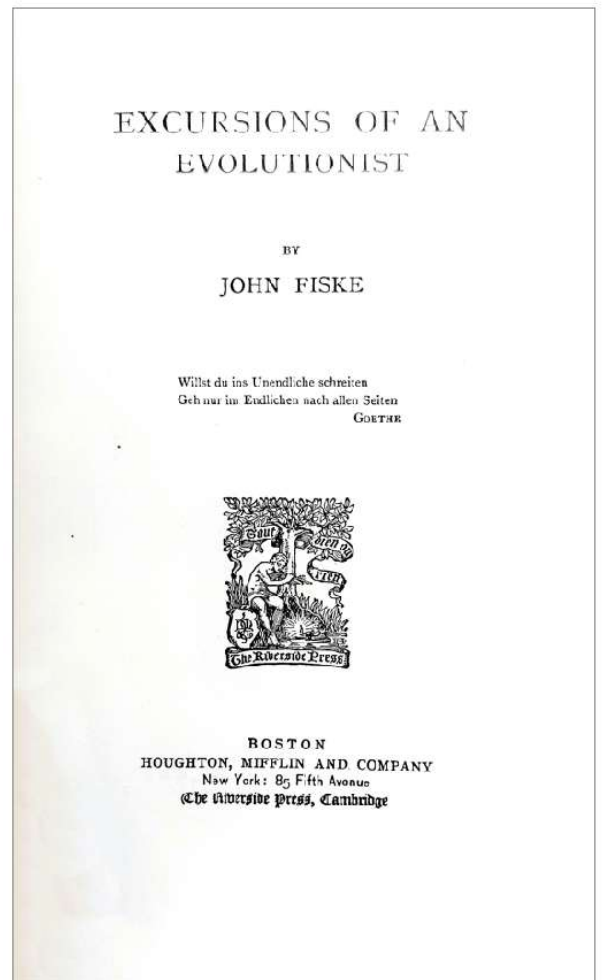
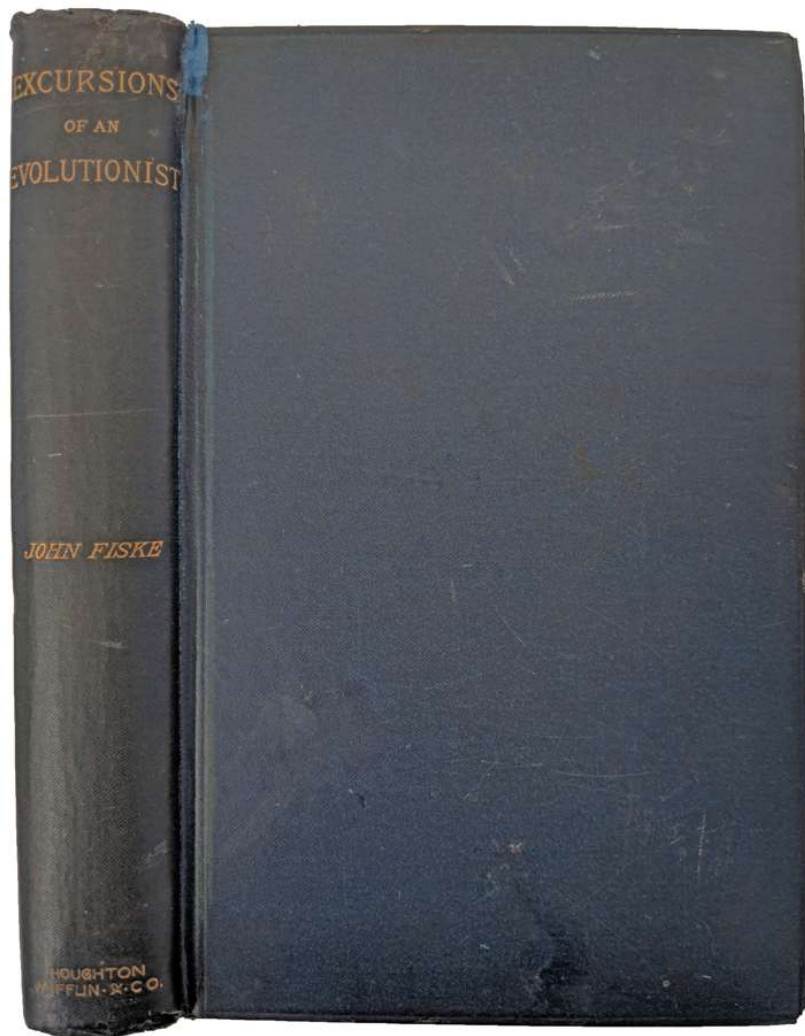


32. **FIGUIER, Louis** (1819-1894). *Vies des Savants Illustres. Savants du XVIII<sup>e</sup> Siècle. Troisième édition.* Paris: Librairie Hachette, 1882. ¶ Large 8vo. [4], ii, 528 pp. Frontis., 36 plates, index; light foxing. Brick red gilt-decorated cloth, all edges gilt. Very good. [RW1412]

\$ 40

The great thinkers & inventors: Kepler, Galileo, Descartes, Francis Bacon, Harvey, Tournefort, Huygens, Denis Papin, Van Helmont, Robert Boyle, Nicolas Lemery, Blaise Pascal, Fermat, Desargues, and Dominique Cassini.





33. **FISKE, John** (1842-1901). *Excursions of an Evolutionist*. Boston: Houghton Mifflin, 1883. ¶ 8vo. [2], [vi], [7]-379, [7] pp. Index. Navy blue blind- and gilt-stamped cloth, top edges gilt; extremities lightly worn. Else very good. [RW1056]

\$ 10

Fiske was an American philosopher and historian, and a dedicated Darwinist. Darwin himself told him in a letter "I never in my life read so lucid an expositor (and therefore thinker) as you are."

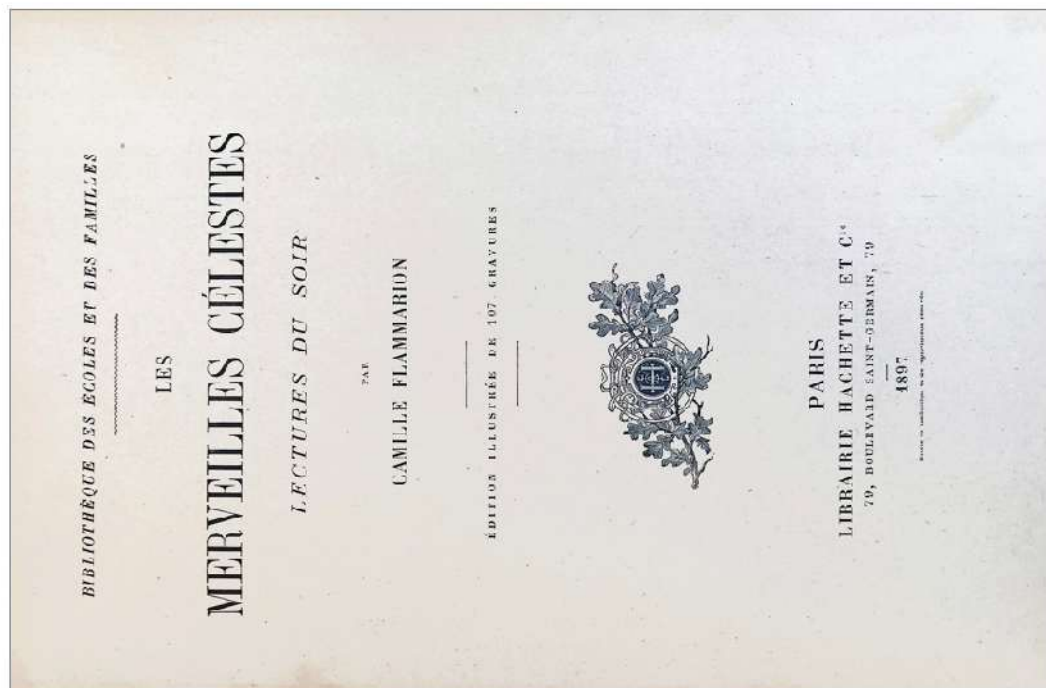
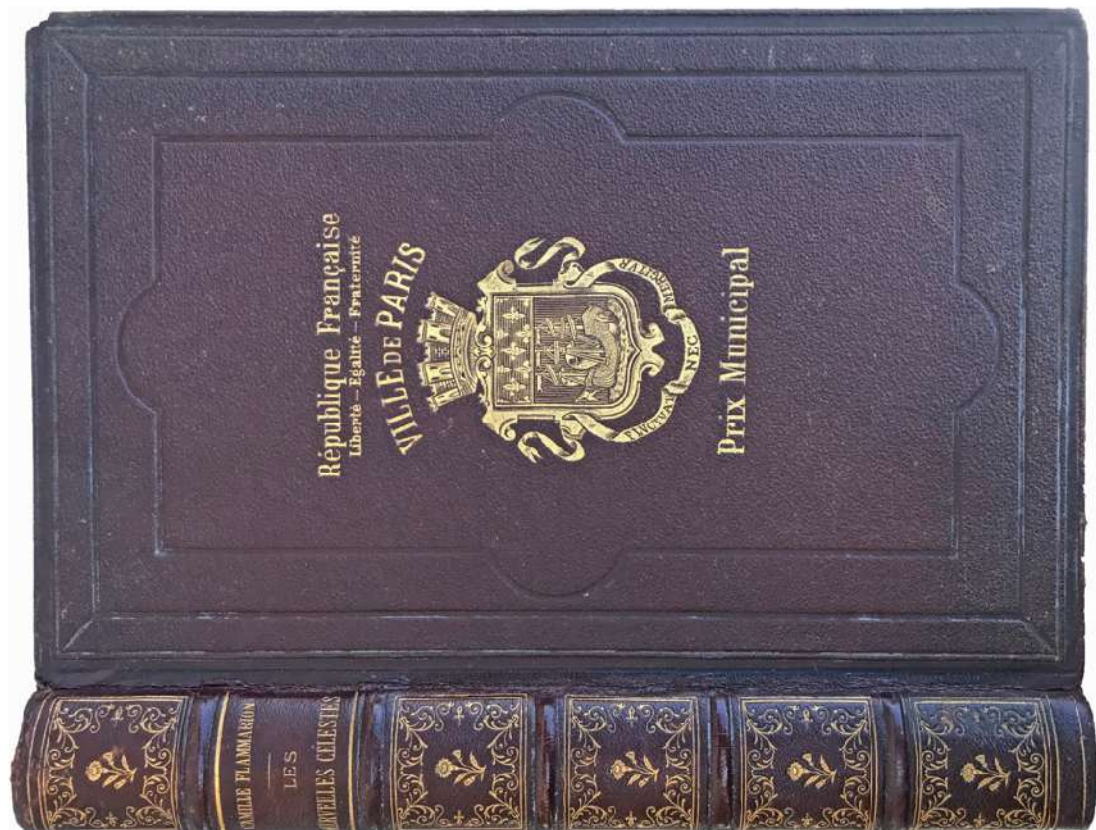


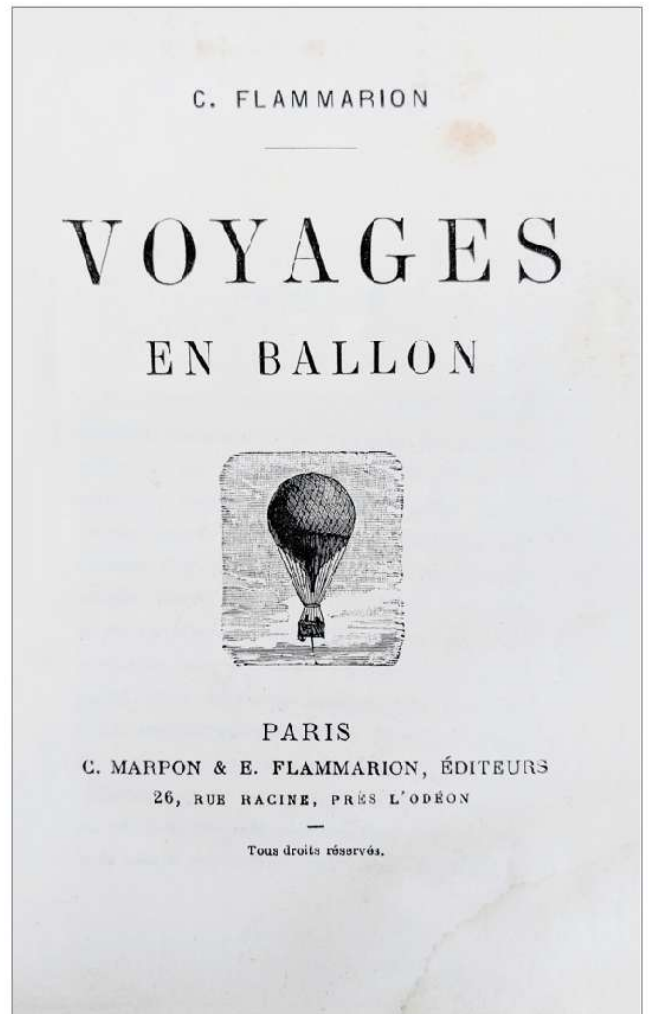
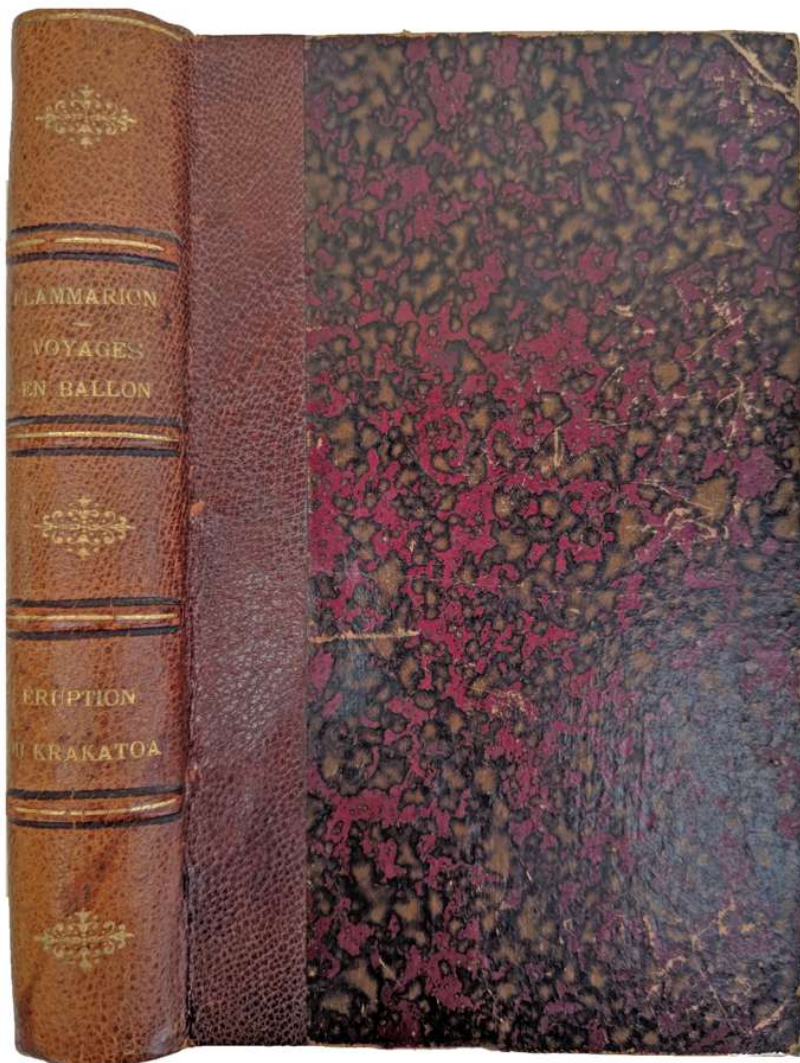
Fig. 97. — Une montagne lunaire. Le mont Copernic.

34. **FLAMMARION, Camille** (1842-1925). *Les Merveilles Celestes; Lectures du Soir*. Paris: Hachette, 1897. ¶ 8vo. viii, 313, [3] pp. 107 engravings; paper browned. Contemporary quarter brown blind- and gilt-stamped morocco, brown blind- and gilt-stamped cloth, raised bands, a.e.g. Very good (in a beautiful binding). [RW1069]

\$ 180







*Balloon Voyages based on experience*

35. **FLAMMARION, Camille** (1842-1925). *Voyages en Ballon*. Paris: C. Marpon et E. Flammarion, [1890s?]. ¶ Small 8vo. [iv], iii, [1], 247, [3] pp. 18 figs. Contemporary quarter brown gilt-stamped morocco, marbled boards, raised bands; extremities slightly rubbed. Waterstains to corners of early pages. Very good. [RW1075]

\$ 20

Between 1867 and 1880, Camille Flammarion made no fewer than twelve balloon trips, which he reported on for his readers, notably in the newspaper *Le Siècle*. These ascents were intended to demonstrate the scientific usefulness of



ballooning, particularly for meteorology, which was then in its infancy. At least, this is what Flammarion claimed in *Voyages aériens* (1870), then in *Mes voyages aériens* (1883) and *Voyages en ballon* (1889). But his *Mémoires*, published in 1911, better reflect the deep motivations betrayed in every page of his accounts of ascents: the “vehement [...] desire to rise in a balloon into the air”, and to enjoy the marvelous “panorama” that unfolds before the aeronaut’s eyes. Being born on February 26, 98 years after the birth of Etienne Montgolfier, Flammarion considered himself predestined to develop a passion for air travel.

In fact, it was his enthusiasm and tenacity that enabled him to obtain, after a hard fight, permission to borrow the Emperor’s balloon in 1867. Marshal Vaillant, then a minister, was finally convinced that nothing would prevent the young Camille from attempting the adventure. On May 30, the day of the ascent, he was aboard the *Imperial* for his first flight alongside Eugène Godard, aeronaut. The trips then followed one another (nine ascents in less than a year!), then became less frequent, but until the end of his life, Camille and his wife were linked to the aerostatic adventure. The couple became famous for the astronomer’s eleventh ascent, for their honeymoon, from Paris to Spa. For a long time, newspapers cited them as examples of curiosities, or to testify to exploits achieved by women.

The attached maps represent the routes that Camille Flammarion estimates he took during these twelve voyages, identifying “such a fort, such a bell tower, such a road, such a point that is easy to observe.” The first account of his ascents in the illustrated collective edition of *Voyages aériens* also included a series of cartographic engravings that represented his journeys. However, unlike Flammarion’s accounts, these images tended to smooth out the wanderings, the backtracking, or the impromptu turns undergone by the balloon, carried by the air currents alone. The routes presented here are more faithful to the enigma of the direction of the nacelles, which, in the 1860s, had not yet been resolved. – French Astronomical Society, Camille Flammarion Observatory.



36. **FONTENELLE, Bernard Le Bovier** (1657-1757). *Elements de la Geometrie de l'Infini. Suite des memoires de l'Academie Royale des Sciences*. Paris: L'Imprimerie Royale, 1727. ¶ 4to. [xxvi], 548 pp. Title-page vignette, tailpieces, headpieces, 1 engraved chapter vignette, 1 engraved initial, 1 engraved folding plate, occasional light foxing or browning. Full contemporary mottled calf, blind-ruled covers, raised bands, red and brown leather spine labels, gilt decorated spine, all edges red, marbled end papers, leather separation at top of spine, all edges red, marbled



end-papers; leather separation at top of spine, hint of worming, but strong, lightly rubbed. A very clean and tight copy. Fine. [RW1716]

\$ 1,350

E L E M E N S  
D E L A  
G E O M E T R I E  
D E  
L' I N F I N I.

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S U I T E D E S M E M O I R E S  
*de l'Académie Royale des Sciences.*

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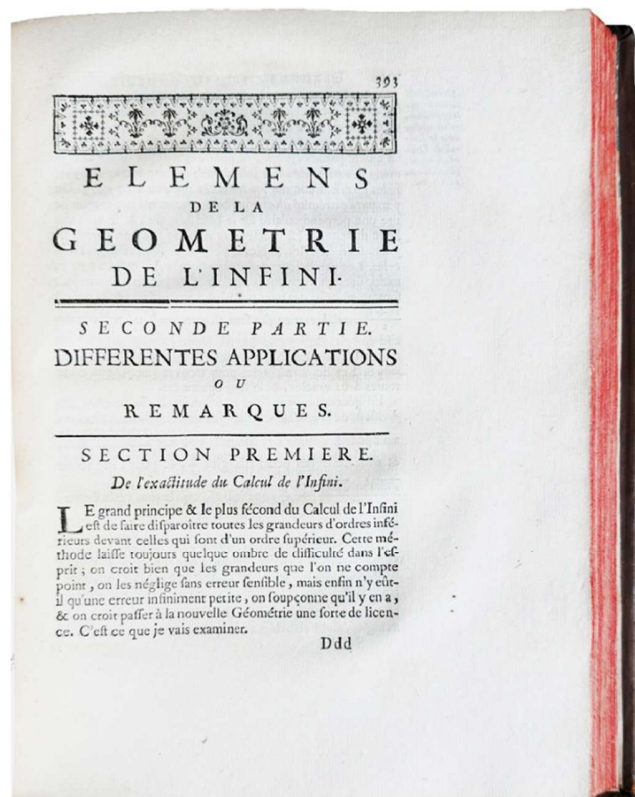
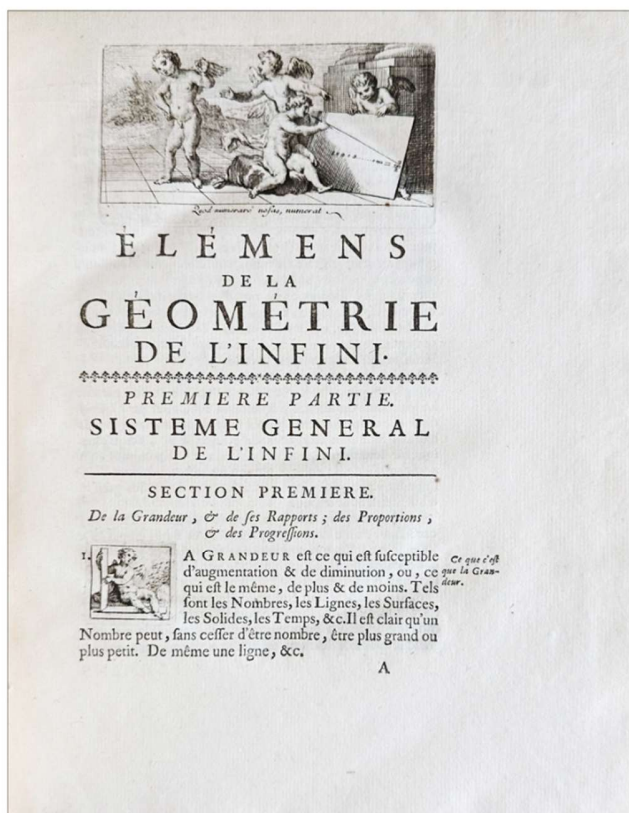


A P A R I S.  
D E L' I M P R I M E R I E R O Y A L E.  

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M. D C C X X V I I.

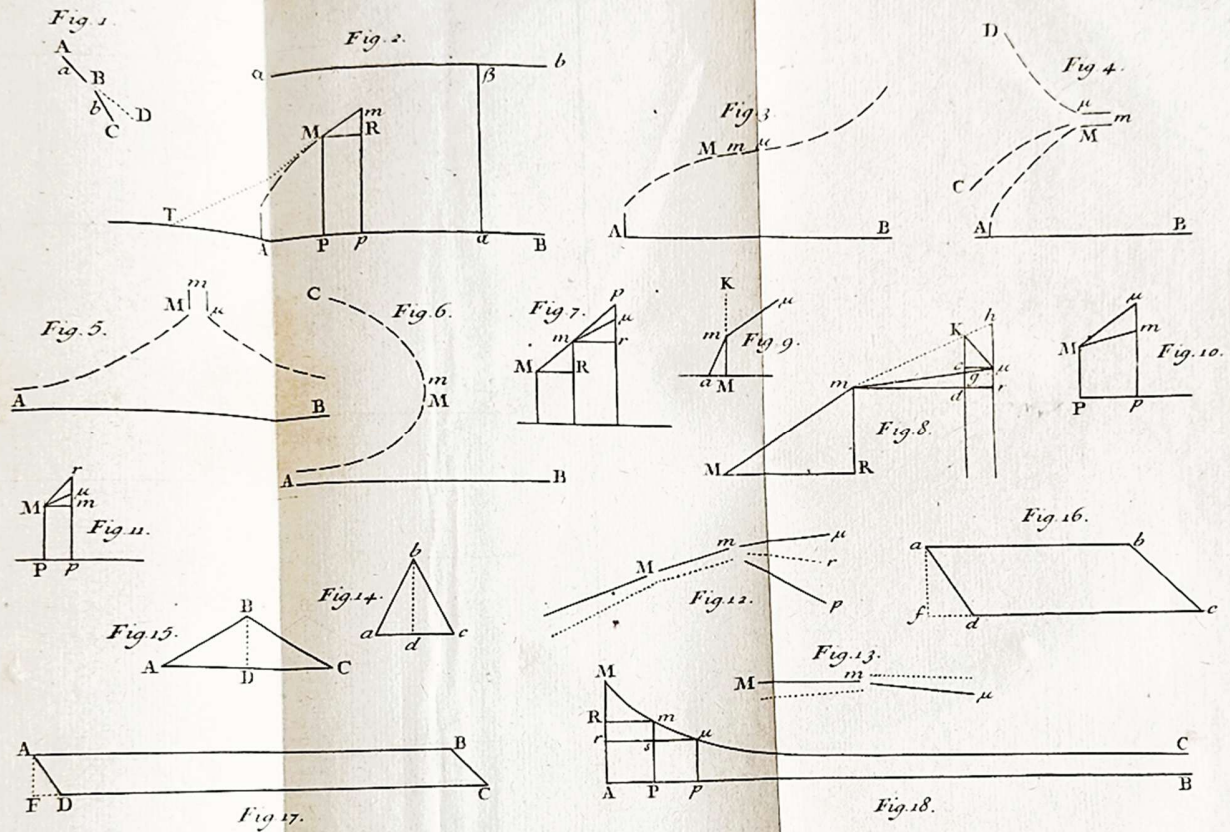
FIRST EDITION of an extensive treatise on the principles of calculus, by Bernard Fontenelle, the distinguished French philosopher and scientist who is famous for his book on the plurality of worlds. Through his friend Varignon, Fontenelle made the acquaintance of the Parisian scientific circle and became friends with Nicolas de Malezieu and l'Hopital. Fontenelle wrote the preface to l'Hopital's *Analyse des infiniment petits pour l'intelligence des lignes courbes* (11690). "In it he displayed his interest in the notion of infinity and his talent as a historian; in a few pages he retraces the history of the mathematical study of curved lines from Archimedes to Newton and Leibniz . . . In 1727 he published his *Elements de la geometrie de l'infini*, which he had worked on for a long time, probably since the period of his preface to the *Analyse des infiniment petits* . . . According to Fontenelle, none of the geometers who had invented or employed the calculus of infinity had given a general theory to it; that is what he proposed to do. The work is divided into a preface relating to the history of this branch of calculus and into two main part . . . 'the infinite series or in progression of numbers' and then examines 'the infinite in straight and curved lines . . . " *DSB*.

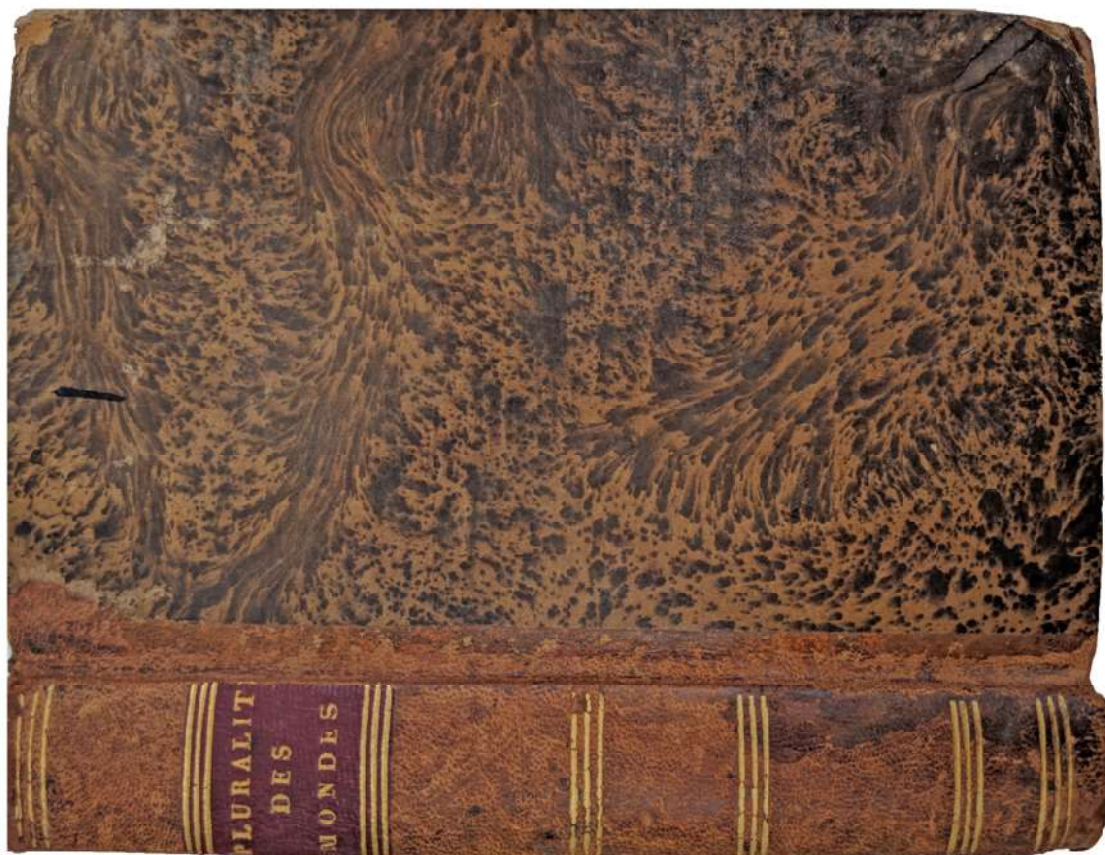
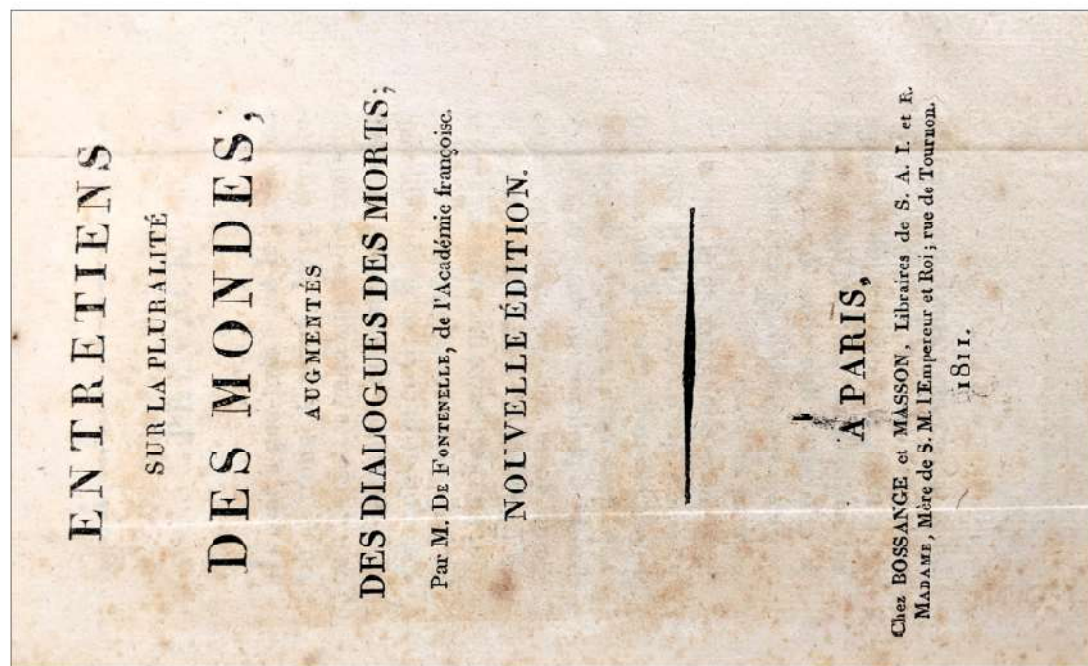




Bernard Fontenelle was born at Rouen and pursued a literary career. Fontenelle dabbled in poetry and writing for the stage, but it is better known for his work as secretary to the Academy of Sciences. Among his published works are *Entretiens sur la pluralite des mondes* (1686), the *Histoire du renouvellement de l'Academie des Sciences* (1708-1722) and a number of eloges of the members.

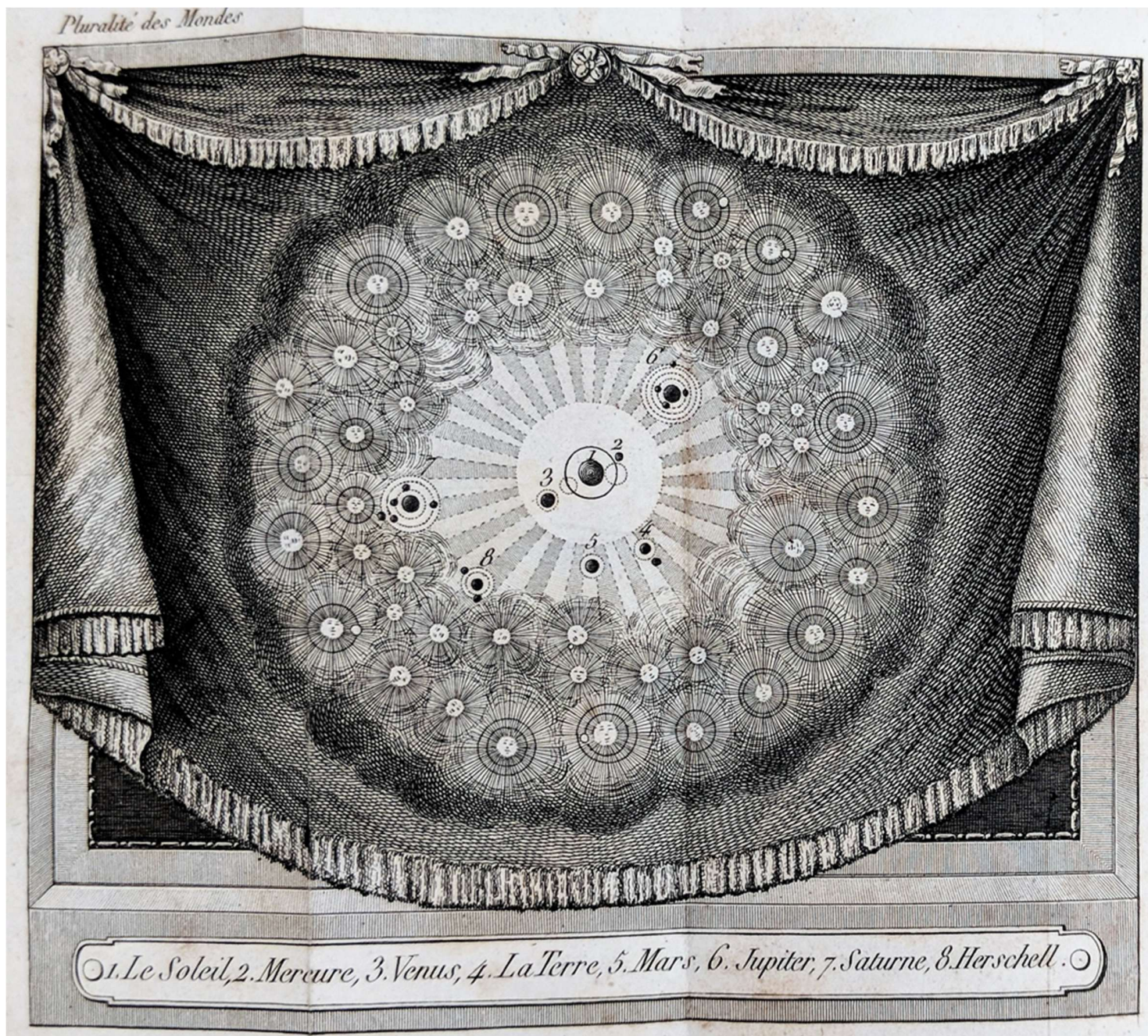
§ DSB, V, pp. 57-63; Poggendorf, 1, col. 770, Zeitlinger 1360.





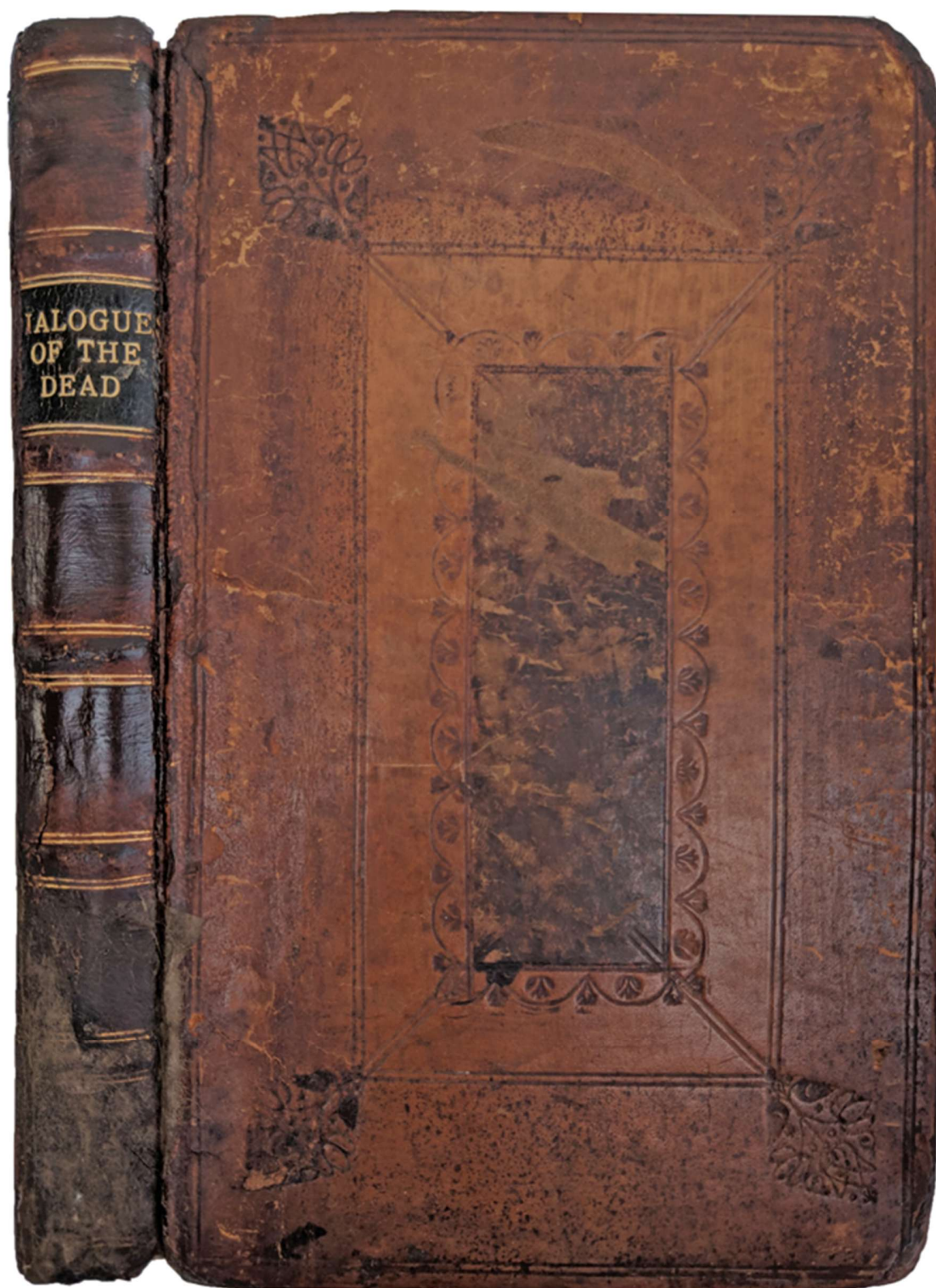
[37] FONTENELLE





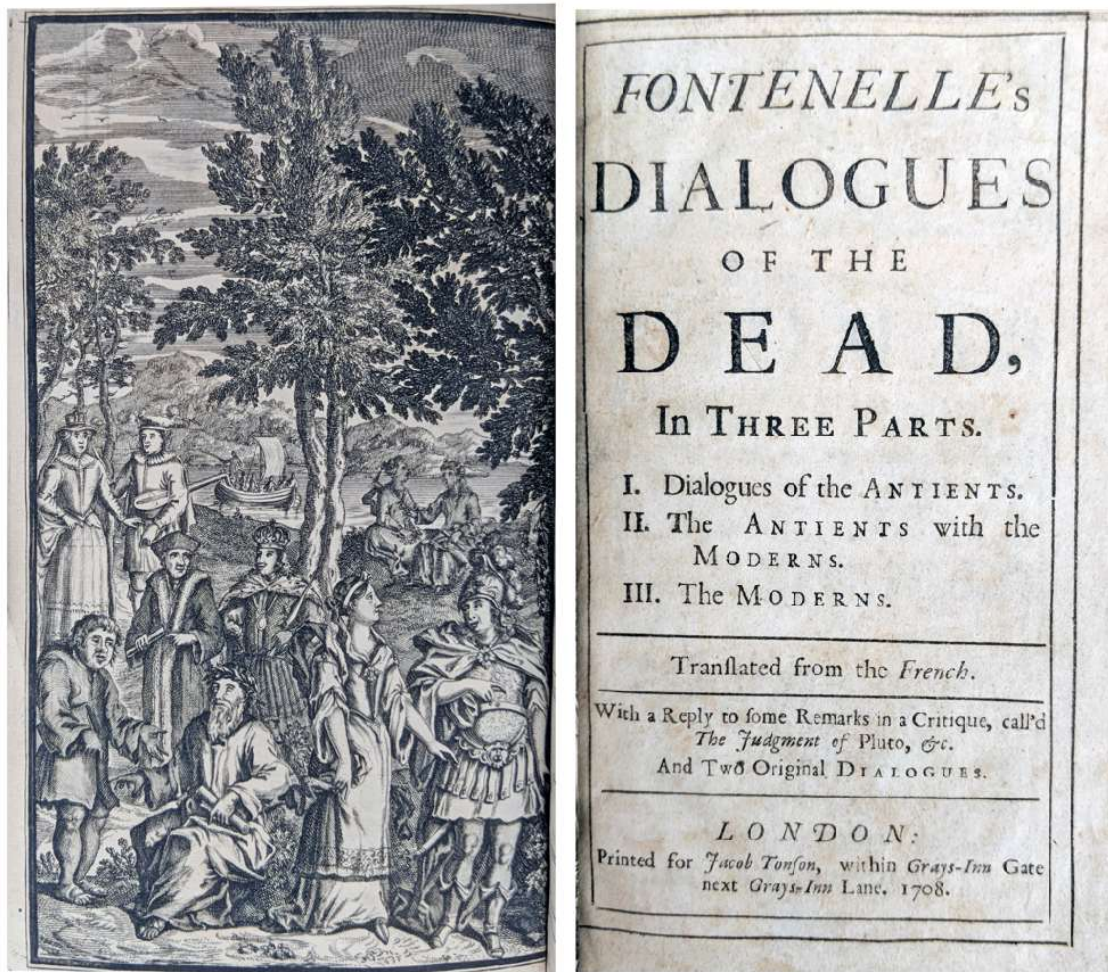
37. **FONTENELLE, Bernard Le Bovier** (1657-1757). *Entretiens sur la Pluralité des Mondes, Augmentés des Dialogues des Morts. Nouvelle Edition*. Paris: Bossange et Masson, 1811. ¶ Sm. 8vo. xiv, 392 pp. Fold-out engraved frontis. with a decorative design of the solar system including the planet “Herschell” (a.k.a. Uranus), half-title; light foxing. Original quarter tan calf, marbled boards, burgundy gilt-stamped spine label; spine head worn, corners showing. Else very good. [RW1078] \$ 65





[38] FONTENELLE





38. **FONTENELLE, Bernard Le Bovier** (1657-1757). *Fontenelle's Dialogues of the Dead, In Three Parts. I Dialogues of the Antients. II. The Atients with the Moderns. III. The Moderns. Translated from the French. With a Reply to Some Remarks in a Critique, call'd The Judgment of Pluto, &c. And Two Original Dialogues.* London: Jacob Tonson, 1708. ¶ Sm. 8vo. [ii], l, [2], 209, [1] pp. Original blind- and gilt-stamped calf, later gilt-stamped black leather spine label, raised bands; rebacked, preserving original spine, inner joints reinforced with brown cloth tape, covers splitting at pp. 62-63, upper cover scratched. Embossed ownership stamps of S. G. Morten [heraldic bearing: crowned eagle, wings raised]. Good. [RW1077]

\$ 350

Early edition in English, of the author's *Nouveaux dialogues des morts*. Fontenelle was one of the earliest authors of "popular science" texts. While not much of a researcher himself, he found great success expounding the



discoveries of his contemporaries in such a way that a broad audience could make sense of them. In his own time his popularity as an author among educated French society was second only to Voltaire, and he was in fact “described by Voltaire as having the most universal mind produced by the era of Louis XIV” – *Britannica*.

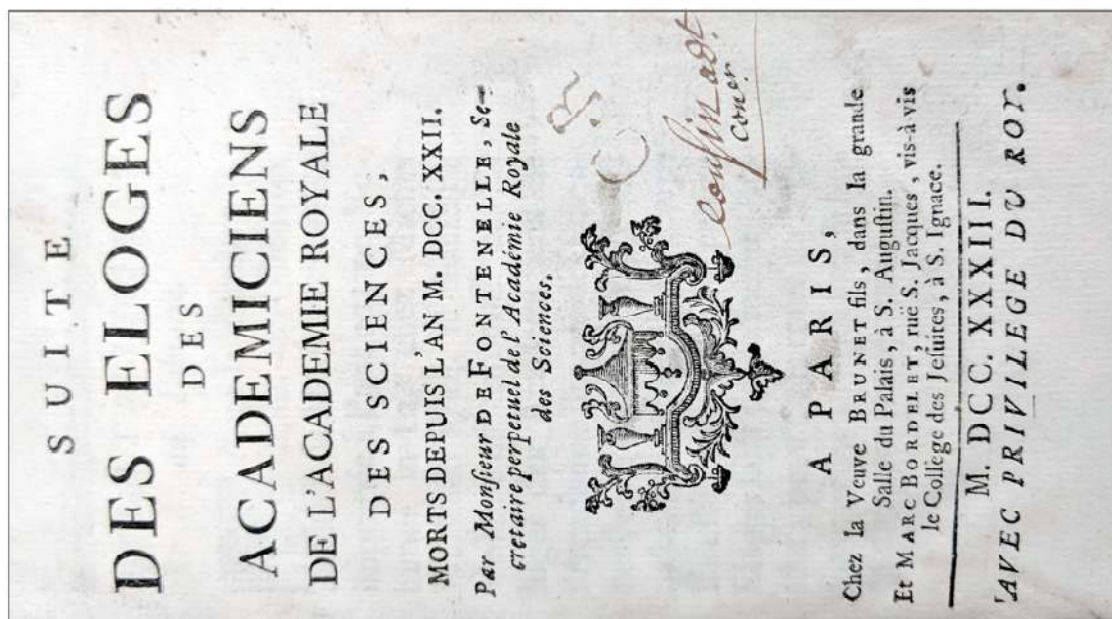
Fontenelle’s *Dialogues of the Dead* was very popular at the time of its publication, and the basic conceit of the book is still employed by authors today. In the work, Fontenelle imagines dialogues between great minds of various eras, such as the philosophers Socrates and Montaigne or the physicians Erasistratus and William Harvey. This allows the imagined speakers to present their views in a naturalistic way, making them much more palatable to lay readers who might have difficulty sloughing through more scholarly works like *On the Motion of the Heart and Blood in Animals*.

§ ESTC T139460.

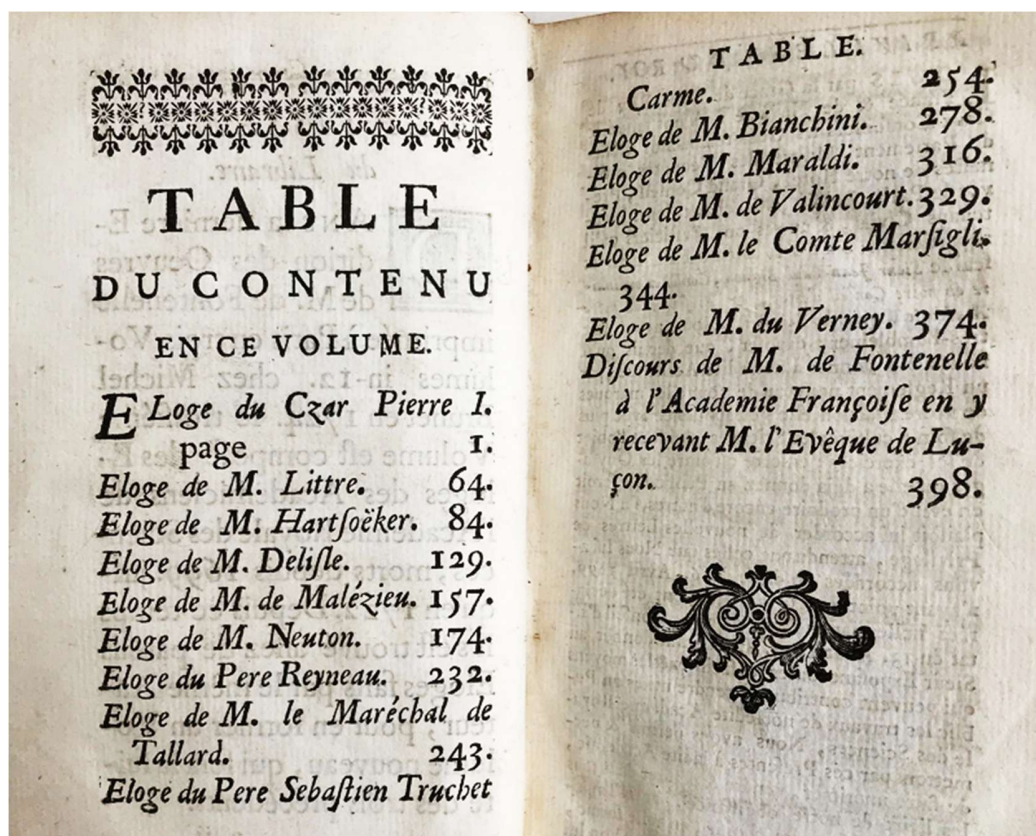


[39]





[39] FONTENELLE



39. **FONTENELLE, Bernard Le Bovier** (1657-1757). *Suite des Eloges des Academiciens de L'Academie Royale des Sciences, morts depuis l'an M.DCC.XXII.* Paris: Chez la Veuve Brunet fils . . . et Marc Bordelet 1733. ¶ 12mo. [viii], 422 [misnumbered "322"], [2] pp. Frontis. engraved portrait. (of Fontenelle (wearing the velvet bonnet/cap he is fond of wearing) – is trimmed, folded at the upper and lower edges), by "[Cre]py rue St. Jacques au lion d'Argent", title woodcut vignette. Original gilt-stamped calf, gilt-stamped spine label, raised bands. Inscription on title: "C.R., Cousin adt coner"[!]. Very good copy with a handsome binding. [RW1080]

\$ 300

"Extra-illustrated" with an added engraved bound-in folding frontispiece. This edition of the author's eulogies includes fourteen members of the Academie des Sciences who died between 1725 and 1730. There were two issues of this work printed in 1733: one showing "Brunet fils and Marc Bordelet, the other issue showing only Marc Bordelet's name as publisher. They also feature a



resetting of the type (at least for the title-page) and a different title woodcut vignette.

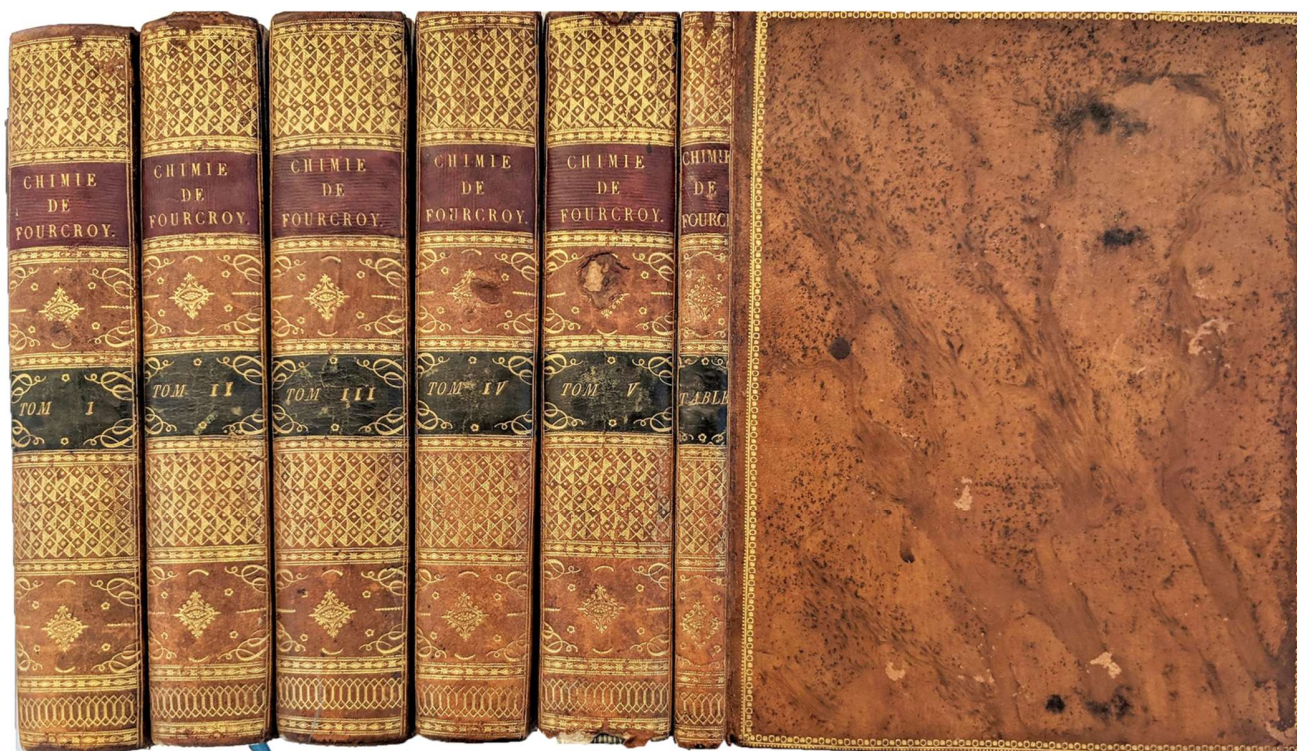
There was an earlier 1731 Dutch edition of the *Eloges* printed by Isaac van der Kloot, but I have been unable to determine if the biographies contained therein are the same. A note indicates this was also re-issued as miscellany works, *Oeuvres diverses*, of Fontenelle in 1736 [see pt. 4].

Fontenelle was a prolific biographer of notable persons, publishing also a series of Dialogues with famous (past) historical figures. His *Eloges* commenced with a 1699 work on Claude Bourdelin. He also issued collective editions starting in 1708. This is the first 'separate' edition of the "Suite" containing biographies of 14 scientific notables.

"It was Bernard Bovier de Fontenelle (1657-1757) who by his eulogies of scientists first bridged the gap between the scientific communities and the world at large [...] the eulogies of the old Academy of Sciences acquainted laymen with a discipline that was at once esoteric by its novelty and forbidding by its terminology and methodology. Hence the eulogies, aside from the other functions they performed in the service of science, also served as a public relations organ in the same manner as journals, textbooks, public lectures, literary dialogues, scientific expositions, and cabinets de physique and d'histoire naturelle" - Charles Bennett Paul, *Science and immortality: the Eloges of the Paris Academy of Sciences (1699-1791)*, Berkeley: University of California Press, 1980. (pages 1-2).

CONTENTS: eulogies du Czar Pierre I - Alexis Littre (1658-1726) – Nicolas Hartsoeker (1656-1725)- Guillaume Delisle (1675-1726) - Nicolas de Malezieu (1650-1727) – Isaac Newton [published 1727, 1728] - Charles-Rene Reyneau (1656-1728) - Marechal de Tallard (1652-1728) - Sebastien Truchet (1656-1729) – Francois Bianchini (1662-1720) – Jacques-Philippe [also known as: Giacomo Filippo. . . ] Maraldi (1665-1729) - Jean-Baptiste-Henri de Valincourt (1653-1730) – Count Luigi Ferdinando Marsigli (1658-1730) – Du Verney (1648-1730) - et le discours de Fontenelle a l'Academie francaise recevant l'evêque de Luçon.

§ See: Suzanne Delorme, "Contribution a la bibliographie de Fontenelle." (p. 305). *Revue d'histoire des sciences, Année 1957*, vol. 10-4, pp. 300-309.



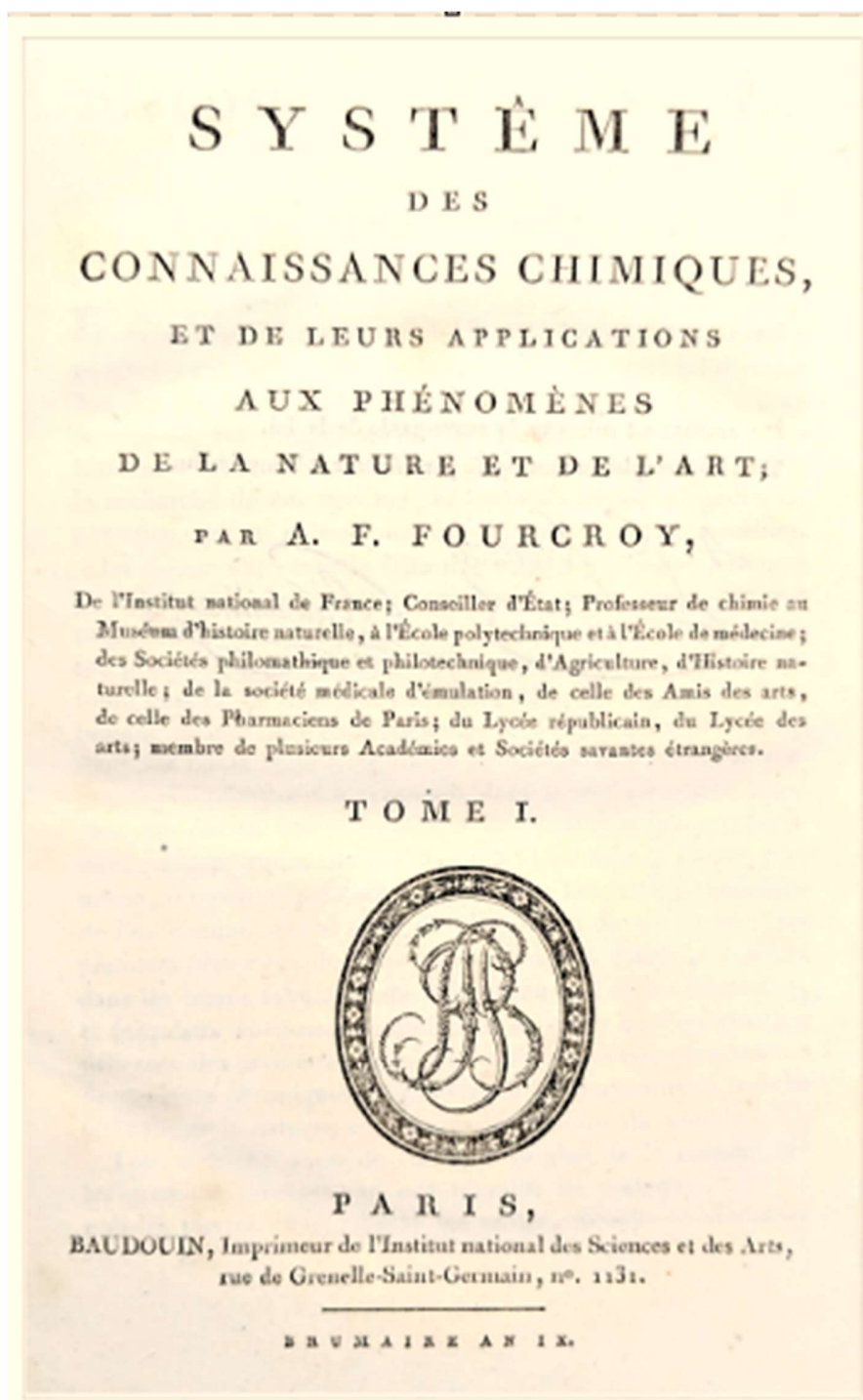
40. **FOURCROY, Antoine François, comte de** (1755-1809). *Système des Connaissances Chimiques, et de Leurs Applications aux Phenomenes de la Nature et de l'Art*. [6 volumes]. Paris: Baudouin, an IX-X (1800-1802). ¶ 6 volumes (including index vol.) 4to. [4], cxi, 474; [iv], 576; [iv], 700; 593, [1]; [iv], 686; [iv], 170 pp. Half-titles, title vignettes, index. Original full gilt-stamped tree calf, red and green leather gilt-stamped spine labels; vol. V spine ends worn, several covers with minor surface wear, corners showing. Early bookseller's label of Potey, Libraire, Paris. Despite the wear to vol. V, this is clearly a beautiful copy with minimal wear, very clean & fresh. [RW1434]

\$ 2,595

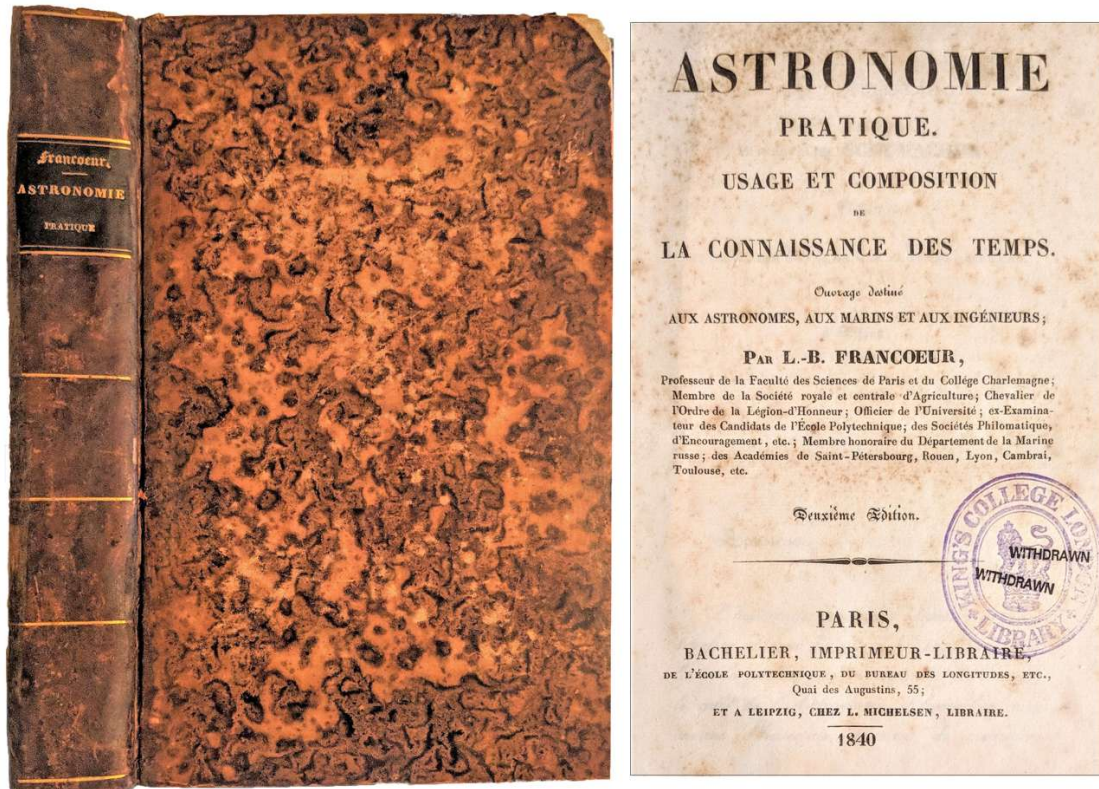
First edition, in the preferred taller quarto format. Fourcroy was a French chemist and a collaborator of Antoine Lavoisier. Politically active, he was appointed to the council of state by Napoleon in 1799, shortly before publishing this set. In 1802 Fourcroy became director-general of public instruction, where Fourcroy played an instrumental role in modernizing France's educational system. During this time, Fourcroy's *Système des Connaissances Chimiques* played an important role in popularizing a systematic approach to chemical research throughout France. "This great treatise



contained more information than any previously published, and was not intended for beginners, but for those who wished to make a thorough study of chemistry” - William Arthur Smeaton, Fourcroy: Chemist and revolutionary: 1755- 1809. Cambridge: Heffer, (1962), pp. 76-77.



§ Cole 481; Duveen p. 226; Neville I, pp. 472-473; Partington III, p. 538; Smeaton, Fourcroy, pp. 76-77.



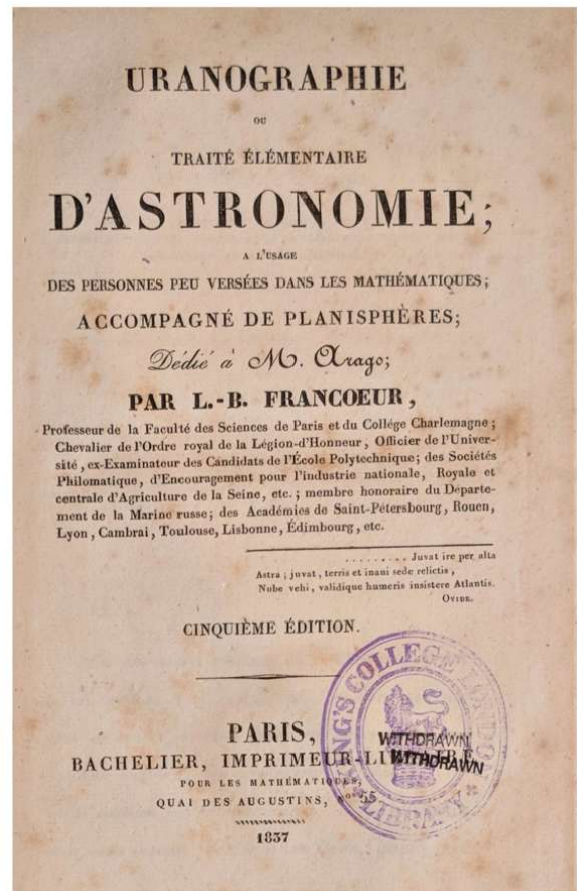
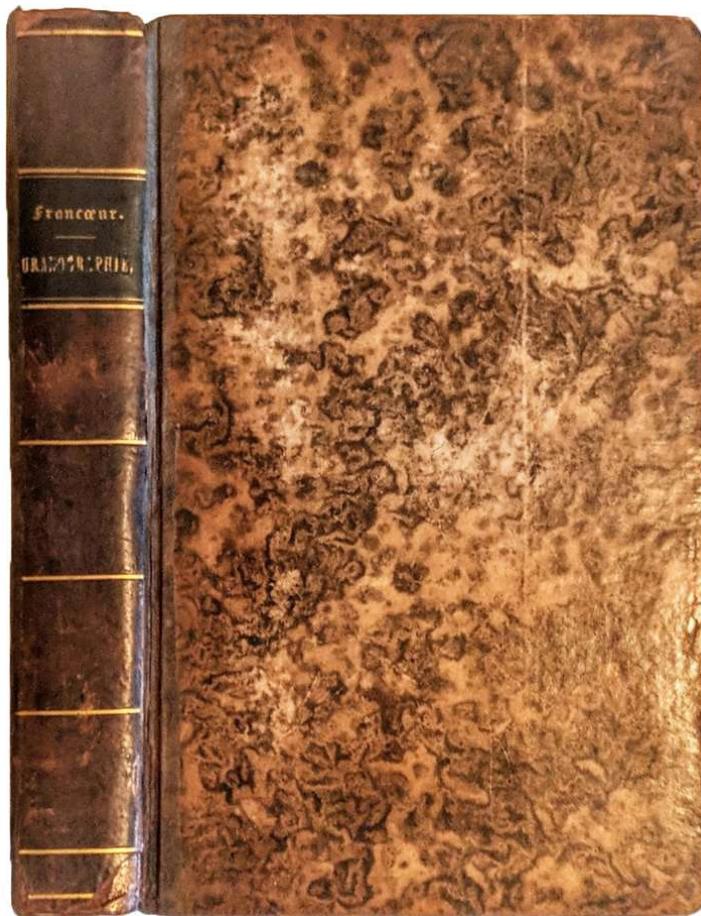
41. **FRANCOEUR, Louis-Benjamin** (1773-1849). *Astronomie Pratique. Usage et Composition de la Connaissance des Temps. Ouvrage destiné Aux Astronomes, aux Marins et aux Ingenieurs.* Paris: Bachelier, 1840. ¶ 8vo. xv, [1], 528 pp. 4 folding plates. Marbled boards, gilt-decorated spine; upper joint reinforced with kozo, foxing. Early neat pen marginalia, ownership signatures of G. Pearry[?], 1843; V.G. Plarr, esq., 1904. King's College rubberstamp on title. Very good. [RW1436]

\$ 40

Second edition. Francoeur was a professor of mathematics at the Ecole Polytechnique, who made his name as a writer of popular science texts.

Victor Gustave Plarr (1863-1931), was librarian of the Royal College of Surgeons, from 1897.





42. **FRANCOEUR, Louis-Benjamin** (1773-1849). *Uranographie ou Traité Élémentaire d'Astronomie; à L'Usage des Personnes peu Versées dans les Mathématiques; Accompagne de Planisphères*. Paris: Bachelier, 1837. ¶ 8vo. xiv, [2], 512 pp. 4 folding plates, 4 folding star maps; foxed. Contemporary quarter calf, marbled boards, gilt-decorated spine; joints worn. Ownership signatures of G. Pleary, 1843[?], & V.G. Plarr, esq., 1904; small rubberstamp of King's College Library on title and preface. Very good. [RW1438]

\$ 50

Fifth edition. Francoeur was a professor of mathematics at the Ecole Polytechnique, who made his name as a writer of popular science texts.

Victor Gustave Plarr (1863-1931), was librarian of the Royal College of Surgeons, from 1897.

**PART II:** Science: Mostly from selected private collections: Philosophy of Science, Genetics, Optics, & Physics (20<sup>th</sup> century).

CONTINUING FROM CATALOGUE 314

Selections from the Personal Libraries:

**ROGER HAHN** [French History of Science]

Professor of History, University of California, Berkeley

**NORMAN HAROLD HOROWITZ** [Genetics]

Geneticist, California Institute of Technology

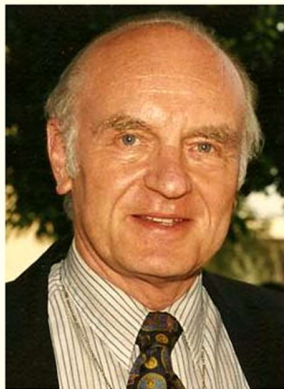
**DAVID CHARLES LINDBERG** [Optics]

Hilldale Professor Emeritus of History of Science,  
University of Wisconsin, Madison

**'BRAM' PAIS** [Physics]

Professor of Physics, Rockefeller University

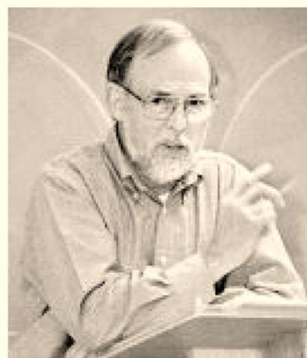
HAHN



HOROWITZ



LINDBERG



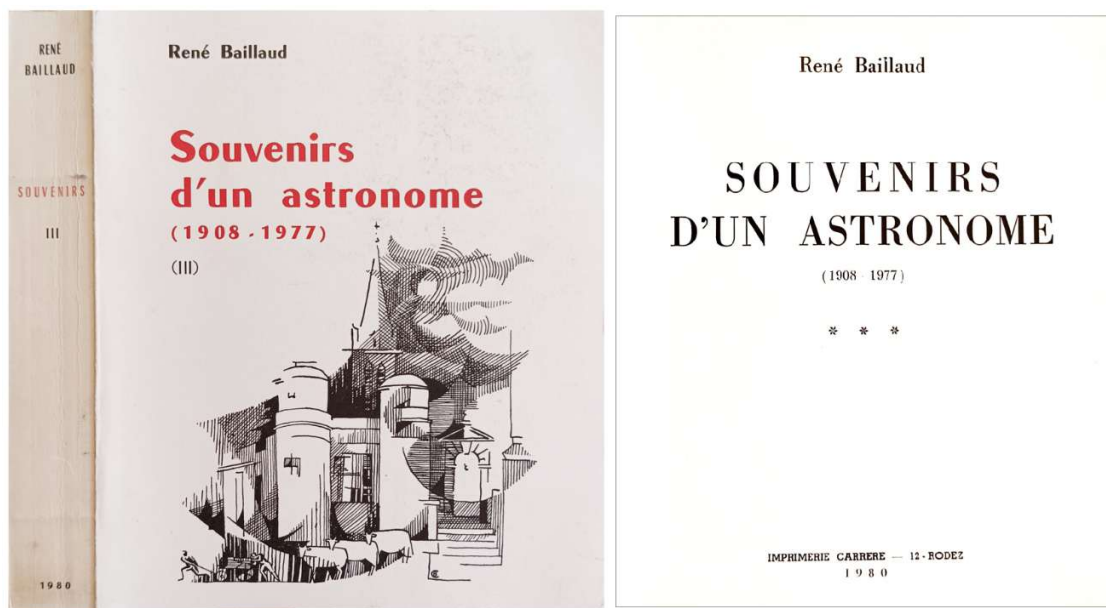
PAIS



*JEFF WEBER RARE BOOKS*

Neuchâtel  
SWITZERLAND



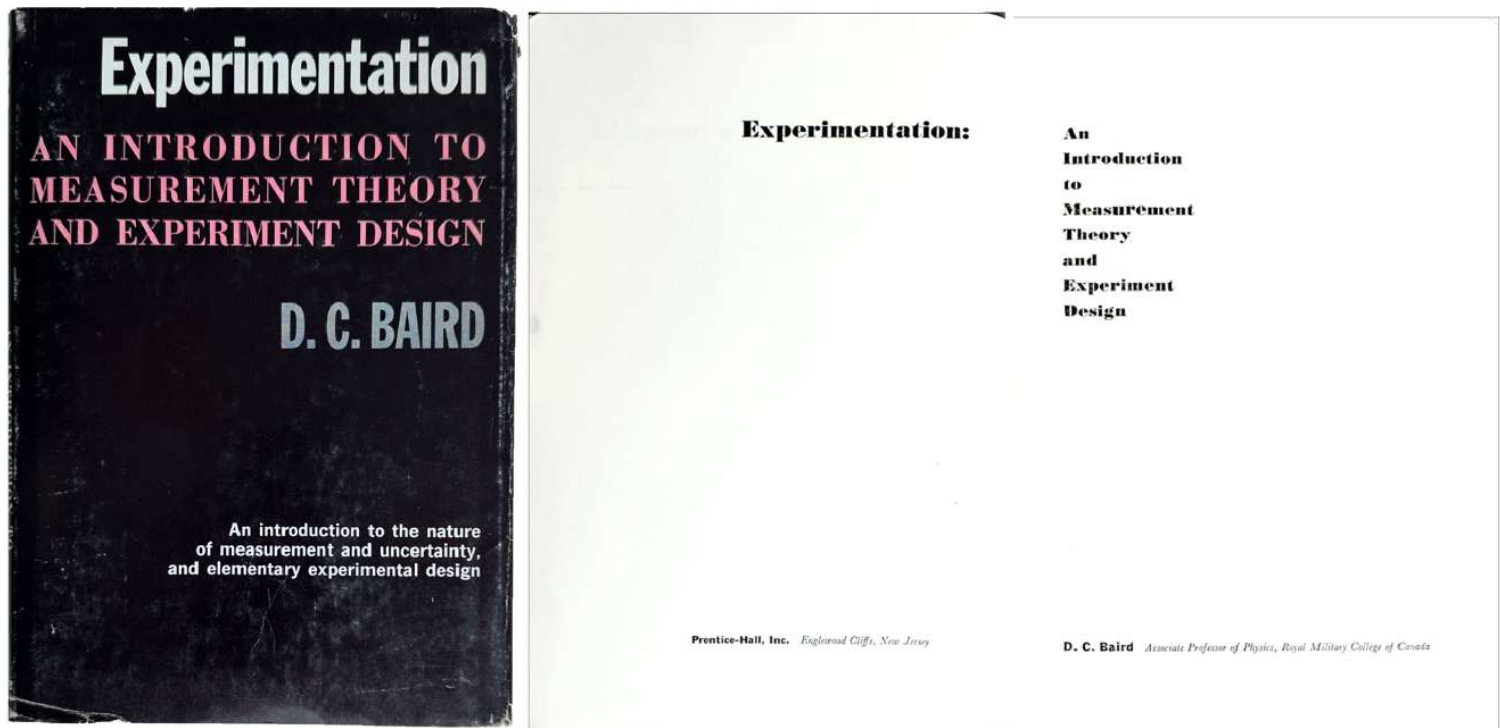


229. **BAILLAUD, Rene** (1885-1977). *Souvenirs d'un Astronome (1908-1977)*. Paris: Carrere, 1980. ¶ Vol. III only. 8vo. 631, (1) pp. Illus., index. Printed wrappers. Fine. [RH1367]

\$ 20

“Baillaud is a French astronomer born in Toulouse (1885–1977). He invented the “paraboloïde” a precursor of the radar. This instrument made it possible to establish the position of planes without having to see them, using only the sound they produced. The precision of the instrument was such, that it was used during the first World War by the French military, to repel night attacks from German bombers by pointing searchlights at them. This furthermore represented a rare technological superiority for the French. After this remarkable start in the fields of acoustics, he nonetheless decided to abandon this field. The reason being that his professor’s own instrument didn’t get chosen by the French military, and Rene feared he would have no academic future in this field. He then turned chronometry. He initially worked at the observatories of Nice (1910–1924) and Marseille (1924–1930), while already teaching at the “Ecole d’Ingenieurs de Marseille”, before taking a chair as professor at the University of Besancon and becoming director of the Besancon observatory until 1957. During this time he oversees the installation of special clock, in a specially built room 5 meter underneath the observatories’ library to maintain constant temperature, allowing the observatory to Join the establishment of a global time network. He is a founding member of the French society of chronometry, and its first chief of staff, creating in 1931 the

journal “Annales Francaises de Chronometrie”. In order to join the global mapping project “Carte du Ciel” (directed by his brother), he oversees the installation of a specific instrument: “astrographe triple” dedicated to this purpose.” – Wikip.



230. **BAIRD, D. C.** [David Carr]. *Experimentation: an introduction to measurement theory and experiment design*. Englewood Cliffs, New Jersey: Prentice-Hall, (1962). ¶ Reprint. 208 x 147 mm. 8vo. vi, 198 pp. Figs., tables, index. Gray cloth, dust-jacket; jacket worn. Very good. [S3627] \$ 5



# THE COMING AGE

PRESAGED BY AN ERA OF  
PROFUNDER RESEARCH

By  
FREDERICK AUGUSTUS BAKER  
Author of Cosmic Causes, Veiled Wonders and Scientific  
Blunders, The Science of Light and Heat, The Atom  
Defined and Located, The Dawn of the  
Modern Scientific Era, Etc.



MAPLEWOOD, NEW JERSEY  
1933

# THE COMING AGE

By FREDERICK AUGUSTUS BAKER

## FOREWARD

When one contemplates the confused state of astronomical data in their extremely limited and erroneous portrayal of the bare outlines of the Universe and which lacks scientific detail and corresponding scholarship, even with respect to the planet Earth, he concludes that it is essential that vastly increased knowledge thereof shall succeed the archaic formula of three centuries ago; which, however, still retains the adherence of the schools, altho discreet advancement in other scientific fields has been attained to by diversified achievements in a development unsymmetrical, inharmonious and incomplete.

Also it is apprehended, in conjunction with the present status of Public Education, that failure to inculcate an intelligent comprehension by the masses is due to the amazing contradictions and vacuous attempts at explanations, largely comprised in Grossly Exaggerated Spatial Dimensions, which are computed by a mathematical system that is fundamentally inapplicable, as well as absolutely inadequate, to delineate and calculate curvilinear elevations and segmental arcs that are introactive to Solar Bases within the planetary scope; to say aught of enlarged computational defects which pertain to the more Expanded Universe.

Again, it may not be regarded as irrelevant and illogical to suggest that in the thought of some there has serious question arisen of compounded erratic subsisting prismatic conventionalities, which are tamely and tacitly submitted to by astrophysical coteries, who apparently have not observed the limitations of the tenets of the Copernican System; for the reason that multifarious opacities of the unscrupulous past are still adhered to in the classified scientific schedules.

Hence there is a demand for concrete correction of Cosmological Teachings, in order to provide essential supporting propaganda, which is not only calculated to establish confidence in the stability of the Cosmic Universe in the Public Mind, but to elucidate a much more diminished Spatial Area than is entertained by the prevailing method; but which is spheroidally increased to a vaster extent by reason of the Curvilinear, or Spiroellipsoidal Convolutionary, attributes that are demonstrably apparent in the same.

Thus, for the reasons above defined, it shall be sought to outline herein a wide-spread plan, with particular application to the future of academic learning and Human Destiny in connection with which, due to the employment of by-gone instrumental vagaries, grossly inaccurate logarithmic calculations and resulting misleading scientific dogmas, there has been a disastrous failure to exploit, or attain to, Eternal Principles, in the maintenance of which the Human Race has a predominant solicitude that is entirely ignored, save in purely Moral Teachings, which it is the loftiest function of Science to sustain by proofs irrefutable and as simple as revealed Truth, Cosmic-wisdom and Multiplied may be.

In 1672, the inefficient unspheroidal speculum, contracted and maimed, confusedly based upon a provisional three-dimensional plane, was adopted as the misleading and mischief making, or false, interpreter of extrinsic Light Projection, which until the present day has led the unwary physicist astray.

However, prior to the time when the illustrious Newton first unsuspectingly subjected Light to the torturing abnormal deflections of the non-synchronous prism, with its flat and isolated sides, that are uncorrelated with Radiant Spheroidal Sunbeams, the especial Science of Astronomy had swerved from the path which leads to Wisdom; and ever since has been plunged into abyssal depths wherein Cosmic Research has vacillated between perplexed activity and bewildered drowsiness.

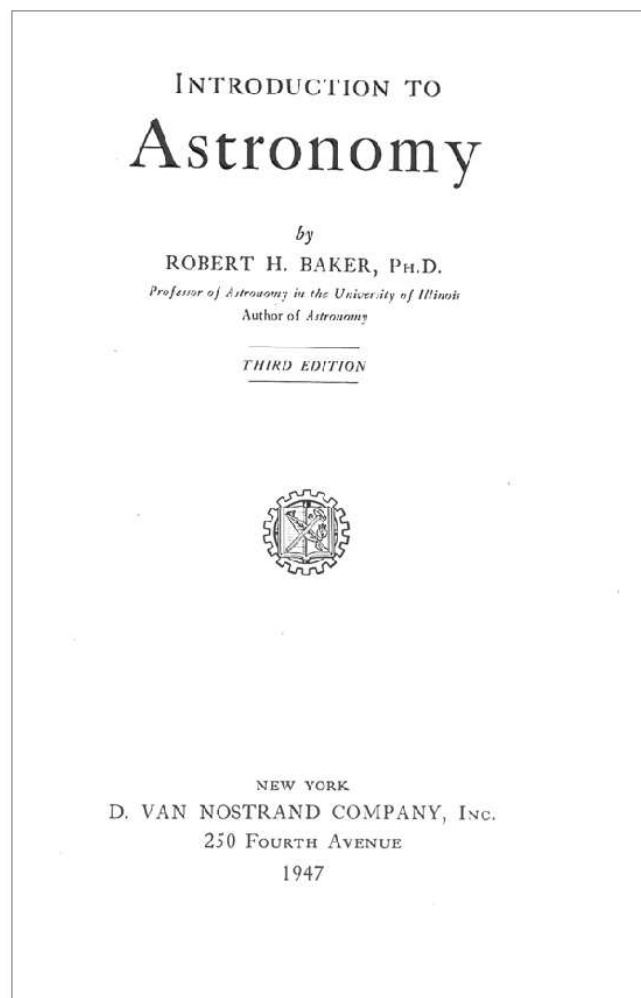
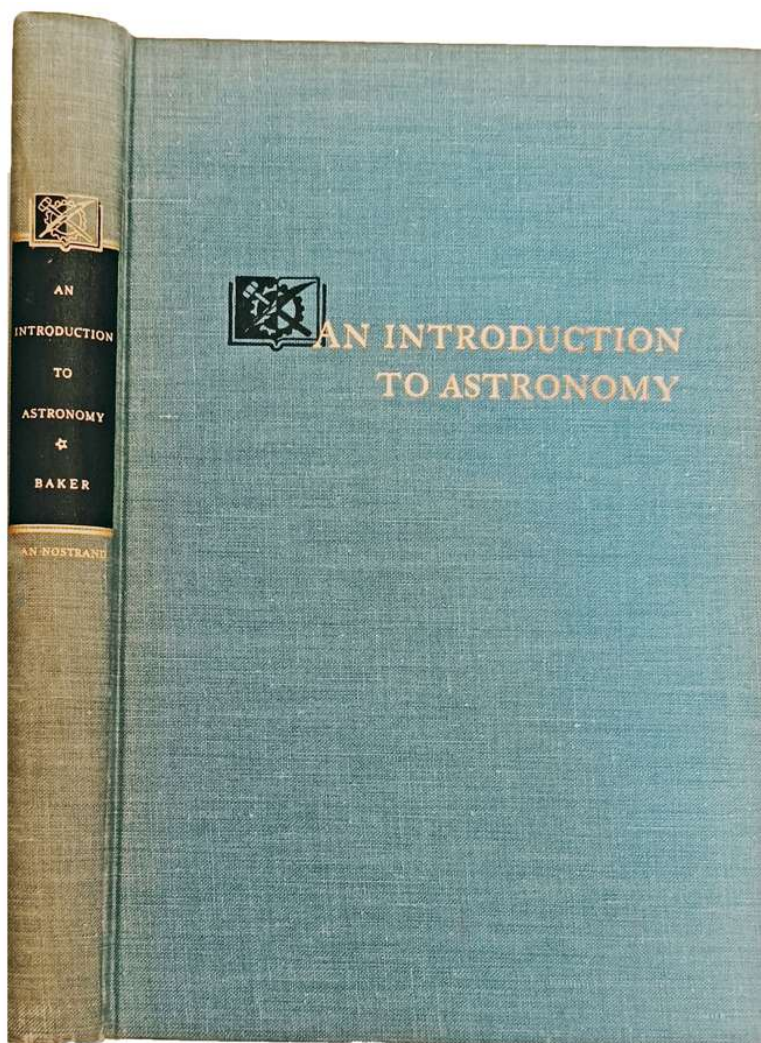
For instance, when the secret intricacies of the Universe one shall inspect by the assistance of the improved spectra of increased telescopic and photographic facilities, which modern investigators demand, he shall perceive that suns with planets indubitably have been confused, and that the latter with lunar appendages have been unjustifiably confounded; also it may be convincingly implied that spiral nebulae as super-gigantic suns have been distractingly classified.

Thus, when stellar objectivity shall become more wisely tabulated, it is suggestively predicated that regenerated Space shall be found to be as full of differentiated elements, ponderous and minute, as an orange is full of juice, which fact has been subdued even since the day when Aris-

231. **BAKER, Frederick Augustus** (1866-1932). *The coming age presaged by an era of profounder research*. Maplewood, New Jersey, 1933. ¶ 8vo. 26 pp. Printed wrappers. SIGNED BY THE AUTHOR on page 26. Very good. [S5896]

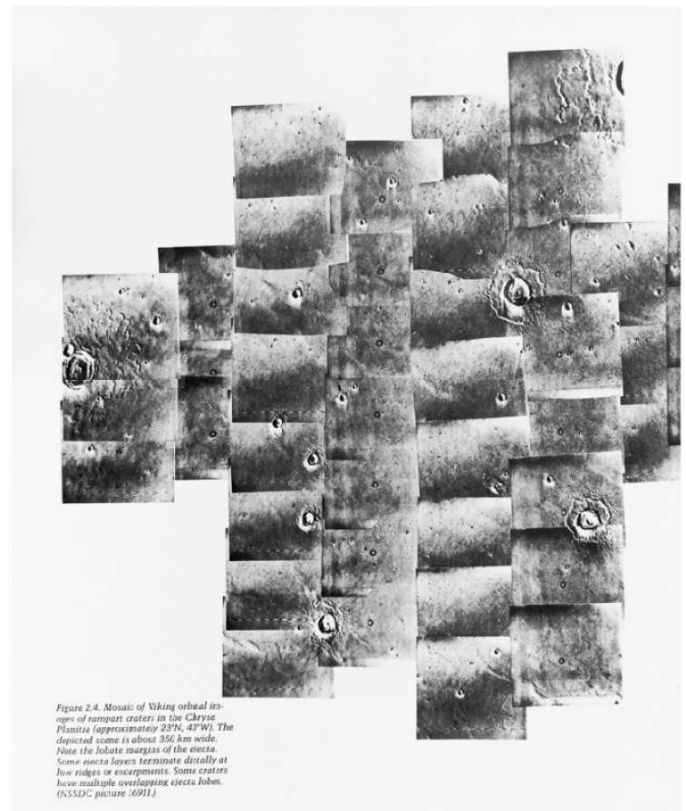
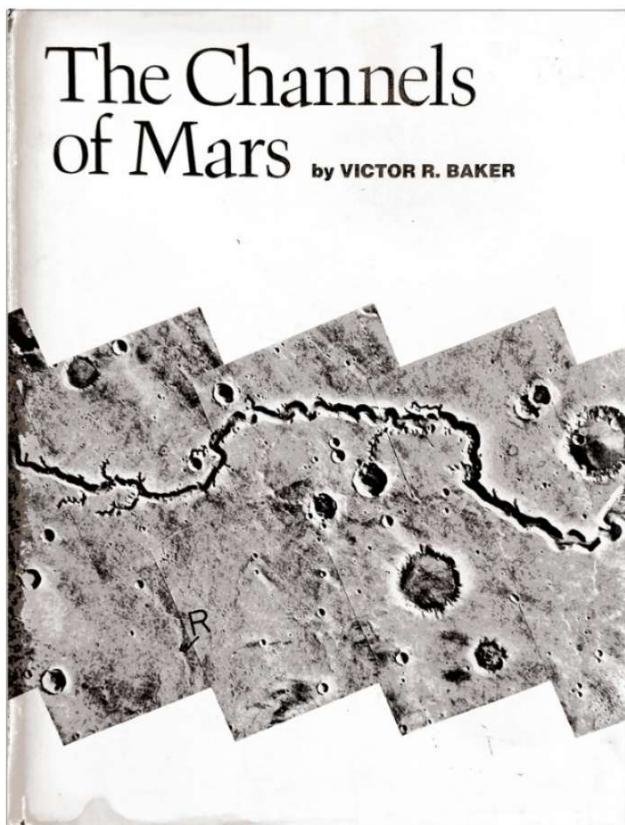
\$ 5

The author also wrote other papers: Cosmic causes – Veiled Wonders and Scientific Blunders, or nature maligned, (1930) – The Science of Light and Heat, or Optical effects and defects, (1931) – The Atom defined and located; or, The dawn of the modern scientific era, (1932) etc.



232. **BAKER, Robert H.** *Introduction to astronomy*. New York: D. Van Nostrand, 1947. ¶ THIRD EDITION. 235 x 160 mm. 8vo. [x], 292 pp. Frontis., figs., tables, index. Blue cloth; lightly rubbed. Bookplate. Very good. [S3071] \$ 5



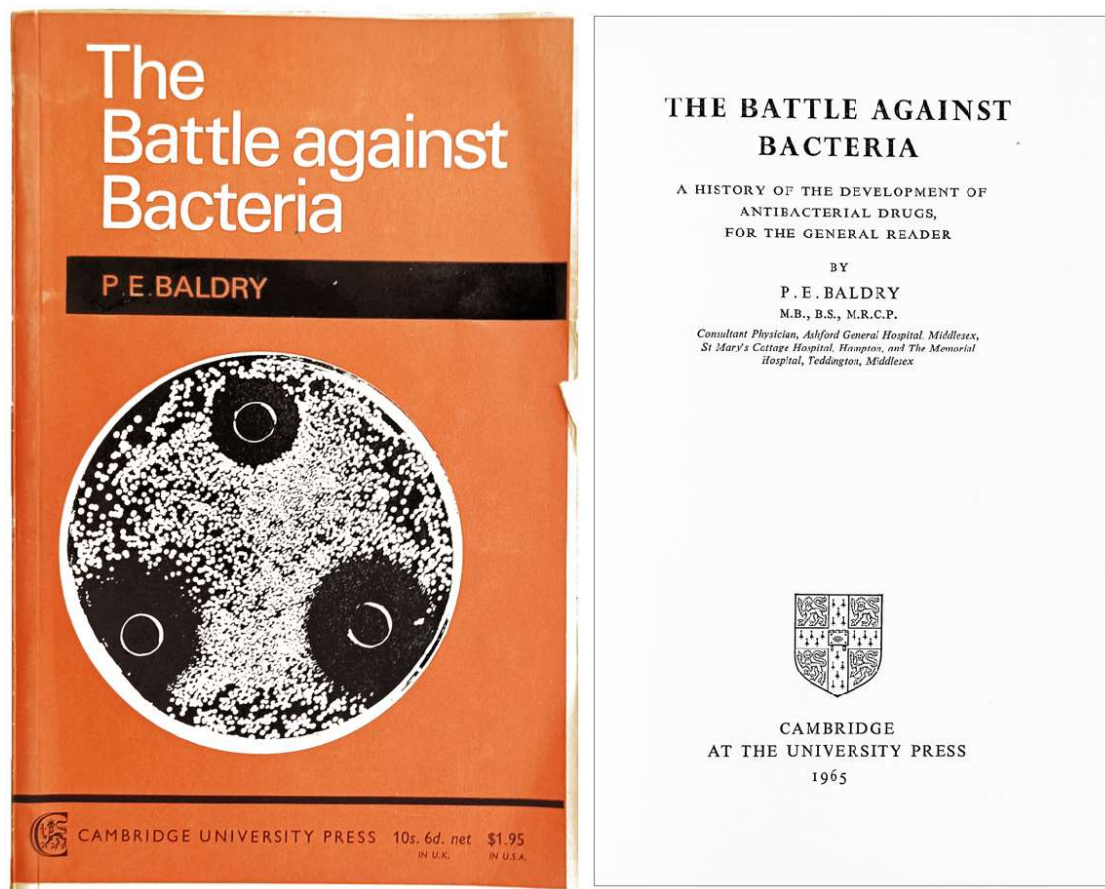


233. **BAKER, Victor R.** *The Channels of Mars*. Austin: University of Texas Press, (1982). ¶ 4to. xiii, 198 pp. Photos, illus., bibliog., index. Red cloth, dust jacket; jacket slightly soiled & worn. Very good. [S7448]

\$ 75

First edition. Detailed study of Martian channels using the latest information from the Mariner IX & Viking space vehicles.

Baker is Professor of Hydrology and Atmospheric Sciences, University of Arizona. His research has concerned paleoflood hydrology (a field of study that he defined in the 1970s and 1980s); flood geomorphology; channels, valleys, and geomorphic features on Mars and Venus; catastrophic Pleistocene megaflooding in the northwestern U.S. and central Asia; history/philosophy of Earth and planetary sciences; and the interface of environmental science with public policy.



234. **BALDRY, Peter E.** (1920-2016). *The battle against bacteria. A history of the development of antibacterial drugs, for the general reader.* Cambridge: University Press, 1965. ¶ First edition. 8vo. 102 pp. Illus., index. Pictorial wrappers; slightly rubbed, back dust-soiled, one small tear, otherwise very good. [S3399]

\$ 10

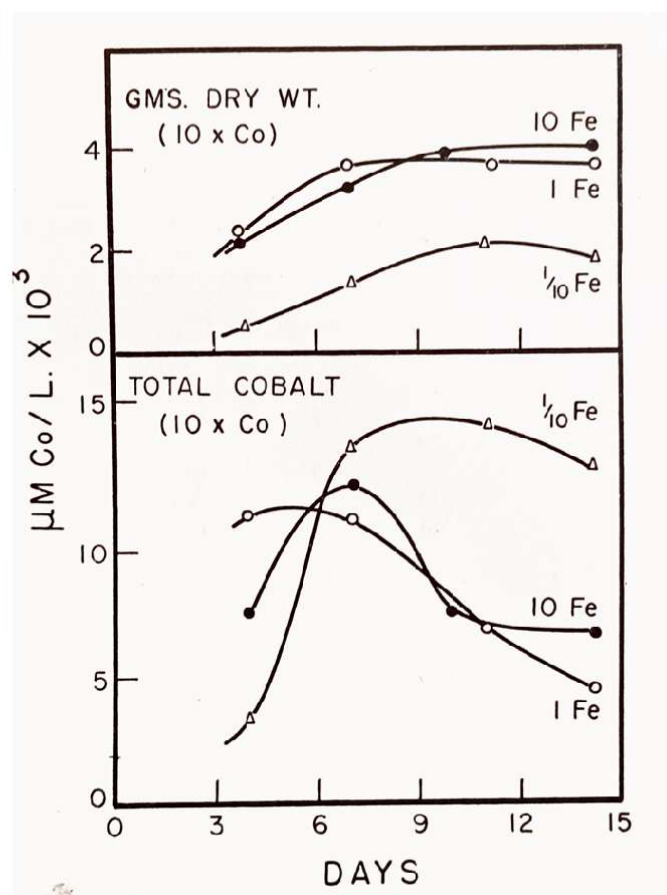
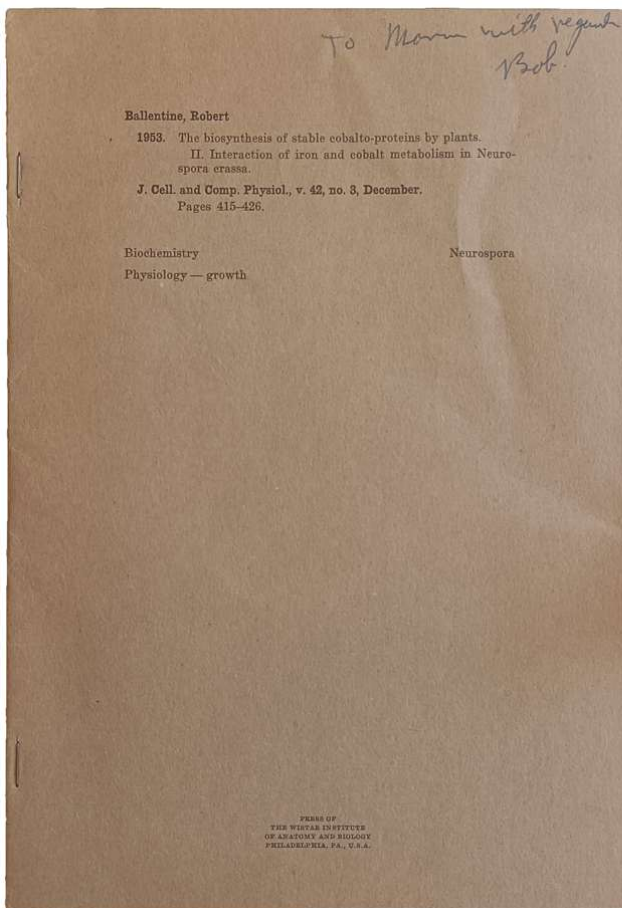
In the foreword to his book *The battle against bacteria. A history of the development of antibacterial drugs, for the general reader*, published by the Cambridge University Press in 1965, Peter Baldry cited Louis Pasteur's observation that '...in the field of experiment, chance favours only the prepared mind'. It was a combination of chance and a 'prepared mind' that determined Peter Baldry's career.

In his book, *The battle against bacteria*, Peter Baldry, in his conclusions, made two observations that are worth repeating.



'It cannot be over-emphasised that both in hospitals and in the general community the instance of drug resistance amongst bacteria is directly related to the degree to which antibiotics are used and for this reason it is now accepted that much constraint should be placed on their use. The general public should learn not to expect to be given antibiotics for every febrile illness unless there is good reason to believe that the illness is of bacterial origin and furthermore, it is of such severity that it cannot be overcome by the body's natural defences.'

And, reflecting that the successes of post war generations of medical practitioners had led to much longer life expectancy, he concluded '... there is a challenge to society to see that the benefits conferred on it by modern science, are not replaced by the miseries associated with a mounting tide of loneliness in old age'.

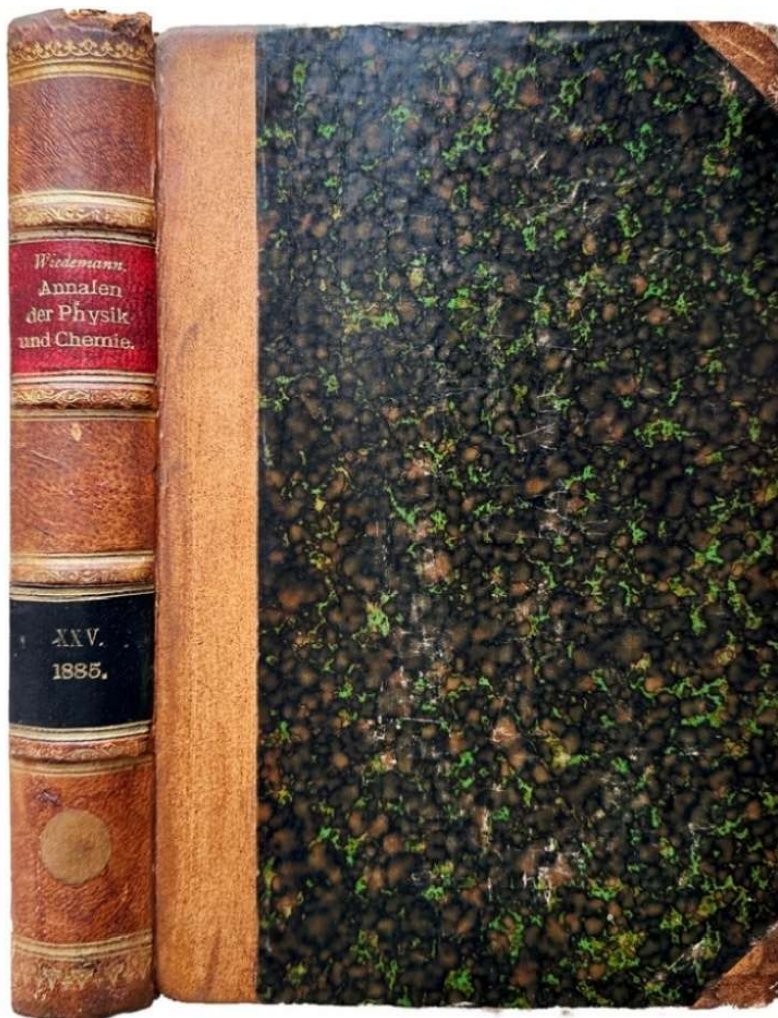


235. **BALLENTINE, Robert** (d. 1998). "The Biosynthesis of Stable Cobalto-Proteins by Plants. II. Interaction of Iron and Cobalt Metabolism in *Neurospora Crassa*." Offprint from: *Journal of Cellular and Comparative Physiology*, vol. 42, no. 3. No place: Journal of Cellular and Comparative Physiology, 1953. ¶ 8vo. 415-426 pp. Tables. Printed wrappers. INSCRIBED BY AUTHOR to Norman Horowitz. Fine. [S7636]

\$ 15

Ballentine was associated with the McCollum-Pratt Institute, The Johns Hopkins University, where he worked for nearly 50 years.

[236]



80

J. J. Balmer.

Bildung einer elastischen leitenden Verbindung in dem Gase zwischen den Electroden<sup>1)</sup>, so könnte in beiden Fällen das Vorstehende als Beitrag zur theoretischen Untersuchung der Wirkung magnetischer Kräfte auf diese Entladungen gelten. Zittau, November 1884.

V. Notiz über die Spectrallinien des Wasserstoffs; von J. J. Balmer.

(Aus den Verhandl. d. Naturforsch. Ges. zu Basel, Bd. 7, p. 548, mitgetheilt vom Hrn. Verfasser.)

Ausgehend von den Messungen von H. W. Vogel und Huggins über die ultraviolettten Linien des Wasserstoff spectrums habe ich versucht, eine Gleichung aufzusuchen, welche die Wellenlängen der verschiedenen Linien in befriedigender Weise ausdrückt, ich wurde dazu durch die Aufmunterung von Hrn. Prof. E. Hagenbach ermuthigt. Die sehr genauen Messungen Angström's der vier Wasserstofflinien ermöglichten es, für deren Wellenlängen einen gemeinschaftlichen Factor aufzusuchen, der zu den Wellenlängen in möglichst einfachen Zahlenverhältnissen stand. So gelangte ich denn allmählich zu einer Formel, welche wenigstens für diese vier Linien als Ausdruck eines Gesetzes gelten kann, durch welches deren Wellenlängen mit einer überraschenden Genauigkeit dargestellt werden. Der gemeinschaftliche Factor für diese Formel ist, wie er sich aus den Angström'schen Bestimmungen ableitet:

$$\left( h = 3645,6 \frac{\text{mm}}{10^3} \right).$$

Man könnte diese Zahl die Grundzahl des Wasserstoffs nennen; und wenn es gelingen sollte, auch für andere

<sup>1)</sup> Hittorf, Pogg. Ann. 136, p. 215. 1869. Die von Hittorf beobachteten Spiralen des negativen Glimmlichtes unter Einwirkung eines Magnetpols scheinen mit unseren kürzesten Linien auf Rotationskegeln gut übereinzustimmen.



236. **BALMER, Johann Jakob** (1825-1898). “**Notiz über die Spectrallinien des Wasserstoffs.**” Leipzig: Johann Ambrosius Barth, 1885. ¶ In: *Annalen der Physik und Chemie*, Neue Folge, Band XXV, 1885. 8vo. Pages 80-87. [Entire volume: viii, 680 pp.] Tables. Contemporary quarter calf, leather corners, marbled boards, gilt spine; rubbed. Ex library ms. spine label, rubber stamps. Very good. [S6021]

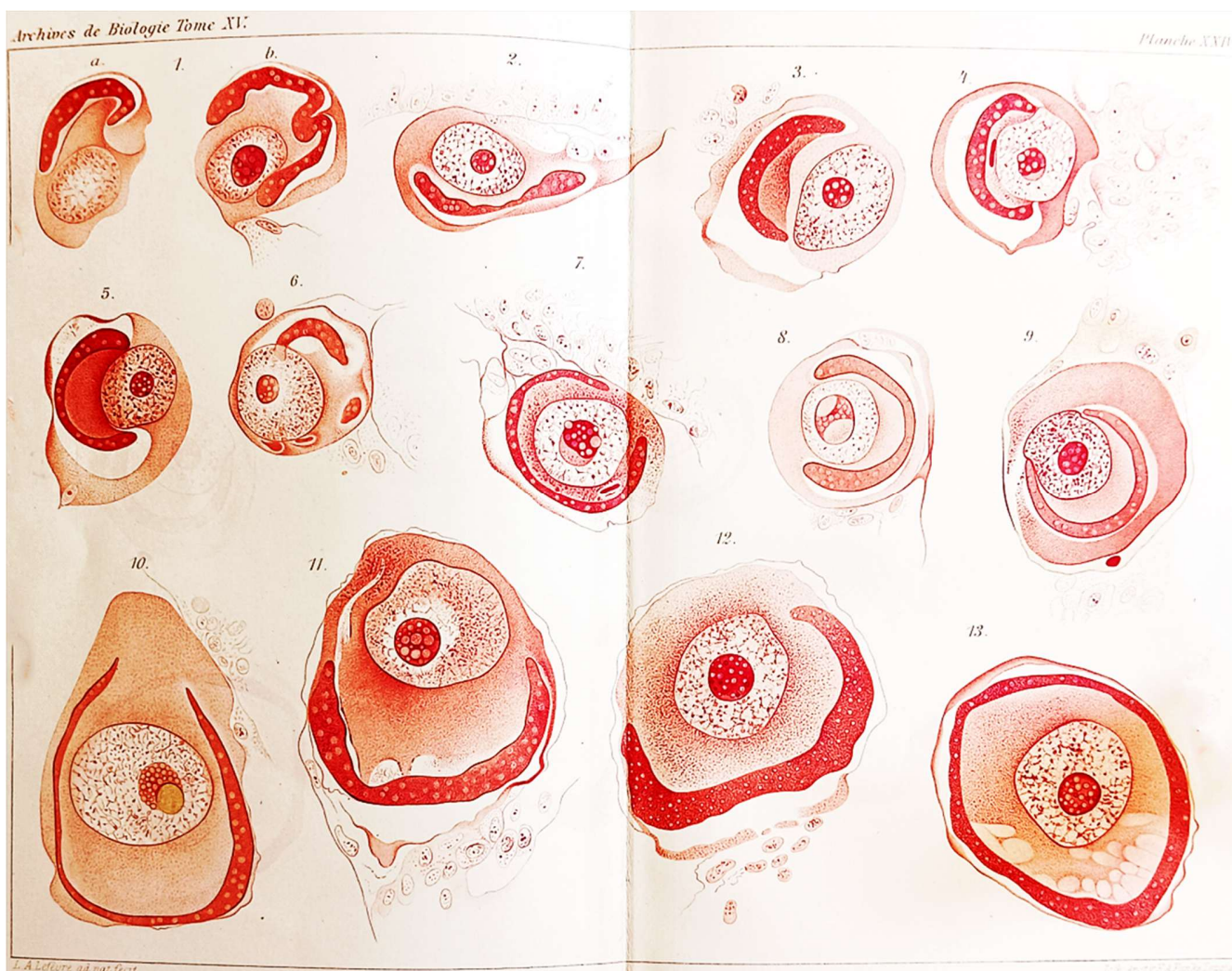
\$ 695

First edition. Balmer was the first to discover a mathematical relationship between the frequencies of atomic spectral lines. “As soon as I saw Balmer’s formula the whole thing was immediately clear to me,” Niels Bohr remarked to Leon Rosenfeld (see: Hermann, *Frühgeschichte der Quantentheorie*, pp. 173 ff.).

At the beginning of the nineteenth century, it had been found that the wavelength of the light emitted by some elementary substances when heated in a flame were characteristic of the atom involved. It became clear from the work of Fraunhofer, Bunsen and Kirchhoff that all the chemical elements could be identified by unique but complicated line spectra. At first these were merely tabulated, for their complexity baffled any attempt to see order in them. The first sign of this order was found in 1885 by the Swiss privatdozent Johann Balmer. Balmer made his great discovery without having received any specialized training in physics, and when he was almost sixty years of age. In 1884 he announced to the Basle Natural Science Society his finding that the frequencies of the lines in the hydrogen spectrum form a convergent series, now called the Balmer Series in his honor. (Appeared simultaneously in *Verhandlungen der Naturforschenden Gesellschaft* in Basel, Vol. 7, 1885, pp. 548-556, 750-752).

Selection of other papers in this volume: **Gustav Kirchhoff**, (1824-1887), *Ueber einige Anwendungen der Theorie der Formänderung, welche ein Körper erfährt, wenn er magnetisch oder dielectrisch polarisirt wird.* – **E. Budde**, *Ueber eine von Gauss angeregte Ableitung electrodynamischer Punktgesetze.* – **Hans Jahn**, *Ueber die Gültigkeit des Joule'schen Gesetzes für Electrolyte.* – **L. Lorenz**, *Bestimmung des electrischen Widerstände von Quecksilbersäulen in absolutem electromagnetischen Maasse.* (etc.).

§ Cajori, *A history of physics*, pp. 336-339; DSB, I, p. 425; Magie, *A source book in physics*, pp. 360-365; Pais, *Inward Bound*, pp. 170-173; Schonland, *The atomists*, pp. 65 ff.



237. **BAMBEKE, Charles Eugène Marie van** (1829-1918). [Two papers]  
**“L’Oocyte de Pholcus Phalangioides Fuessl.”** Offprint from: *Bulletins de l’Academie Royale de Belgique*, 3rd series, t. XXXIII, no. 4. Brussels: l’Academie Royale de Belgique, 1897; 1898. ¶ BOUND WITH:  
**“Recherches sur l’Oocyte de Pholcus Phalangioides (Fuessl).”** Offprint from: *Archives de Biologie*, tome XV. Liege: Vaillant-Carmanne, 1898. 8vo. 307-321; 511-598 pp. 6 double-page chromolithographic plates (2nd paper). Early brown cloth, gilt spine, original printed wrappers bound in. INSCRIBED & RUBBER STAMPED “Hommage de l’Auteur.” Ownership signature of F. M. MacFarland. FINE. [S8470]

\$ 75



Includes six stunning double-page chromolithographs of microscopic scenes.  
Inscribed by the author.

At this time, Bambeke “maintained scientific relations with the Ghent Medical Society , first as a corresponding member in 1858 and in 1860 as a resident member. From 1857 to 1863, he worked as a doctor for the poor, especially during the cholera epidemic. In 1860, he was awarded the Medal of Epidemics.”

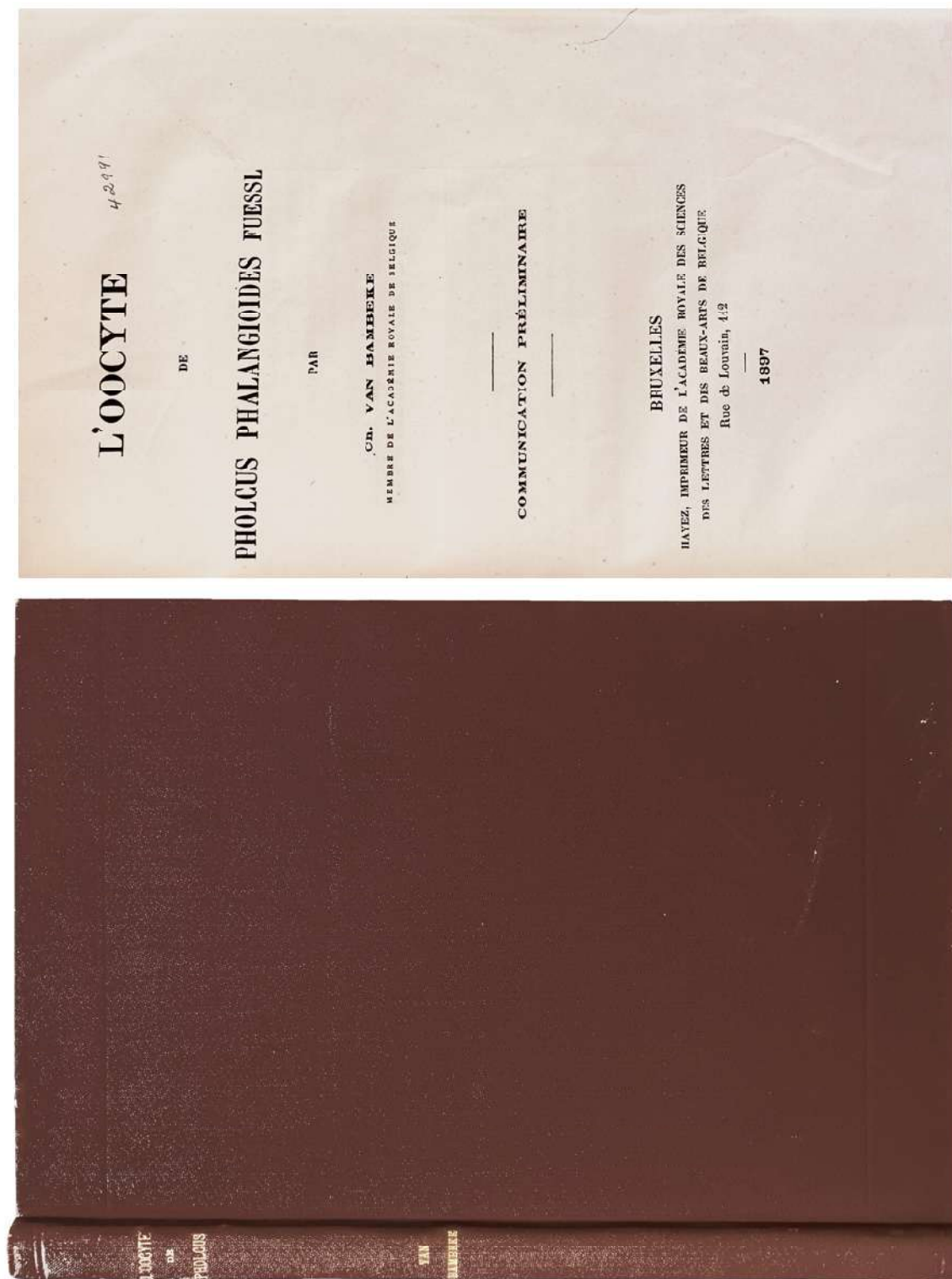
“In this capacity, he attended various institutions. He was assistant surgeon at the St-Jean Hospital and the Hospice for Foundlings and Abandoned Children, and later assistant surgeon at the Civil Hospital, from which he resigned in 1880.”

“He began an academic career in 1863 as a preparatory lecturer for Professor Poelman, who was in charge of the comparative anatomy and physiology course. That same year, he went to London and then to Paris in 1865 for scientific trips. In 1869, he became Professor Poelman's substitute for the comparative anatomy course. He was in charge of the general anatomy and hygiene course in 1871. He was appointed extraordinary professor in 1872 and was promoted to the ordinariate in 1876. In 1878, he obtained the modernization of the laboratories and new premises for studying anatomy.”

“In 1884, he gave up the hygiene course to devote himself to histology and embryology.”

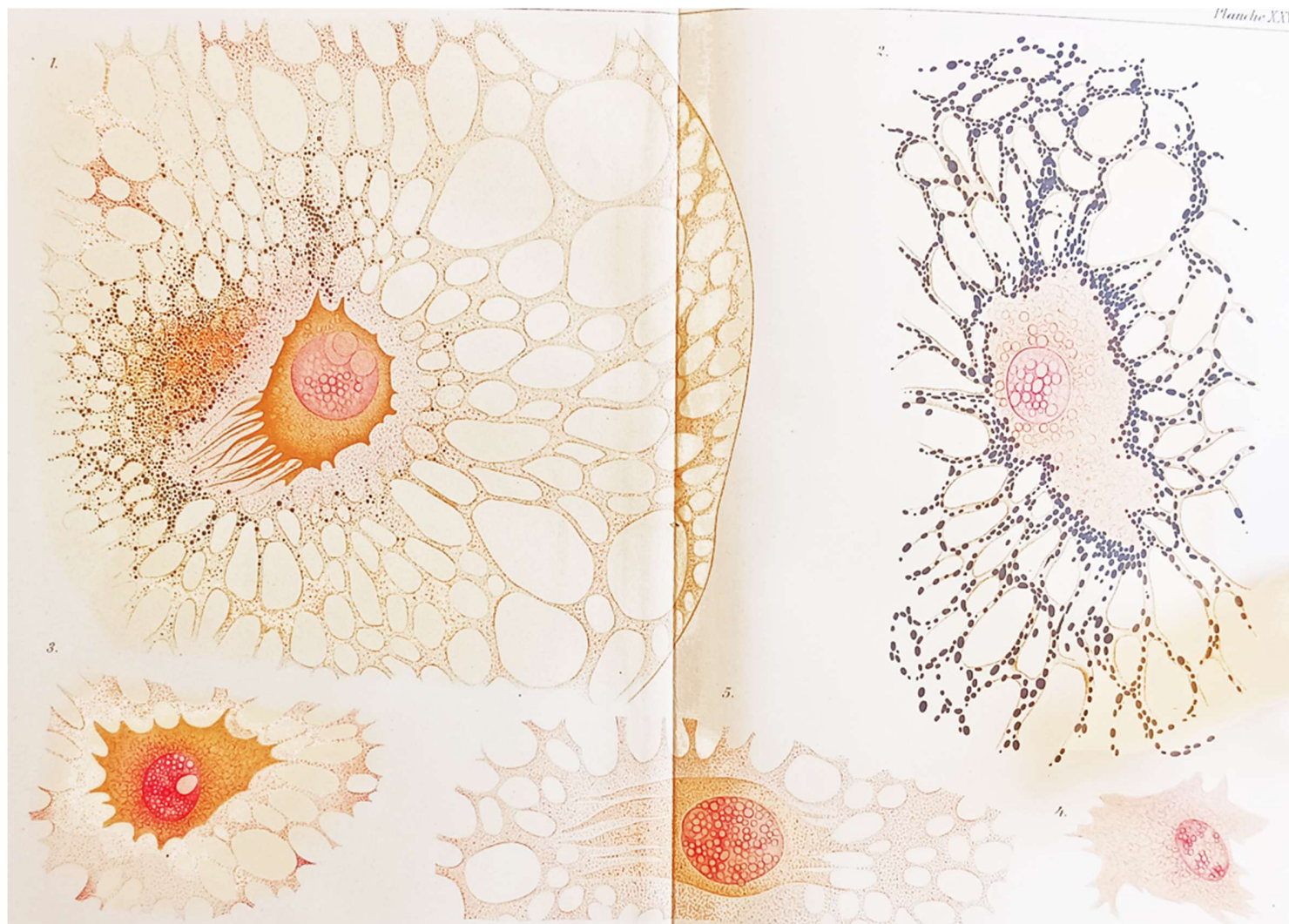
“He published a series of memoirs on the constitution of the egg in the Bulletins of the Belgian Academy of Sciences and in Archives de biologie , including: a mediating report of the germinal vesicle with the periphery of the vitellus (1883), on the ovarian egg of Scorpène (1893), on the oocyte of *Pholcus phalangioides* (1898).” [This paper].

“He subsequently extended his research to botany to make a systematic study of it. He devoted himself more particularly to the observation of fungi. From 1886 until April 2, 1918, he kept herbal journals in which he recorded details of the process, interesting specimens and watercolors representing fresh mushrooms or macroscopic preparations.”



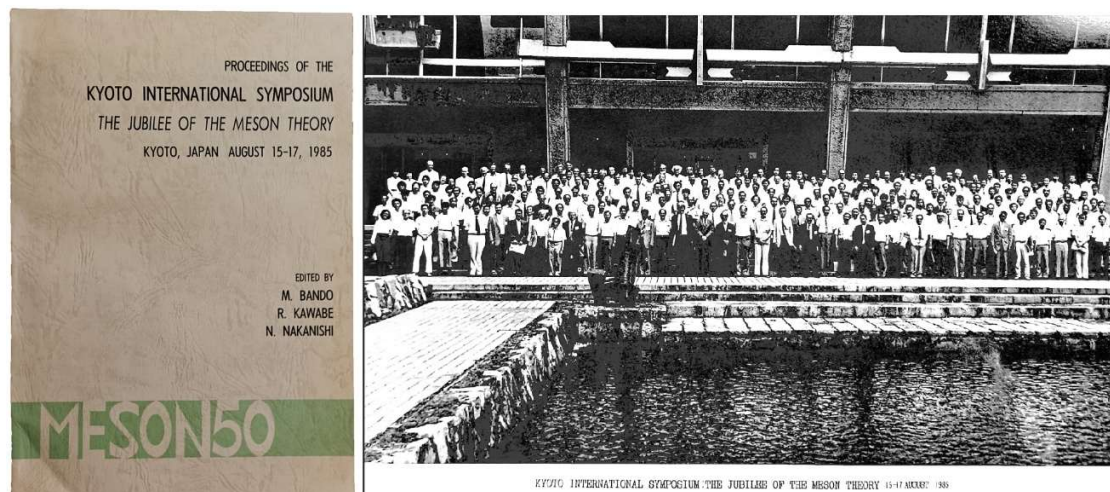
[237] BAMBEKE





[237]

PROVENANCE: Frank Mace MacFarland (1869–1951) was an American malacologist associated with Stanford University in California. He played a leading role in organizing the Hopkins Seaside Laboratory (now Hopkins Marine Station) in Pacific Grove, California, of which he was in charge from 1910 to 1913 and co-director from 1915 to 1917, and in which he maintained an active interest throughout the remainder of his life.



238. **BANDO, Masako; Noboru NAKANISHI; Rokuo KAWABE** (editors). *MESON50: Proceedings of the Kyoto International Symposium. The jubilee of the meson theory. August 15-17, 1985*. Kyoto, Japan: [unstated publisher], 1985. ¶ *Progress of Theoretical Physics*, Supplement 85, 1985. 258 x 182 mm. 8vo. vi, 311 pp. Figs., tables, list of participants. Printed wrappers. Very good. [Bram Pais' copy (1918-2000)]. [S4788]

\$ 20

Contributors include and a few selected papers among many: Chen Ning Yang, Remarks on the 1935 paper of Yukawa.

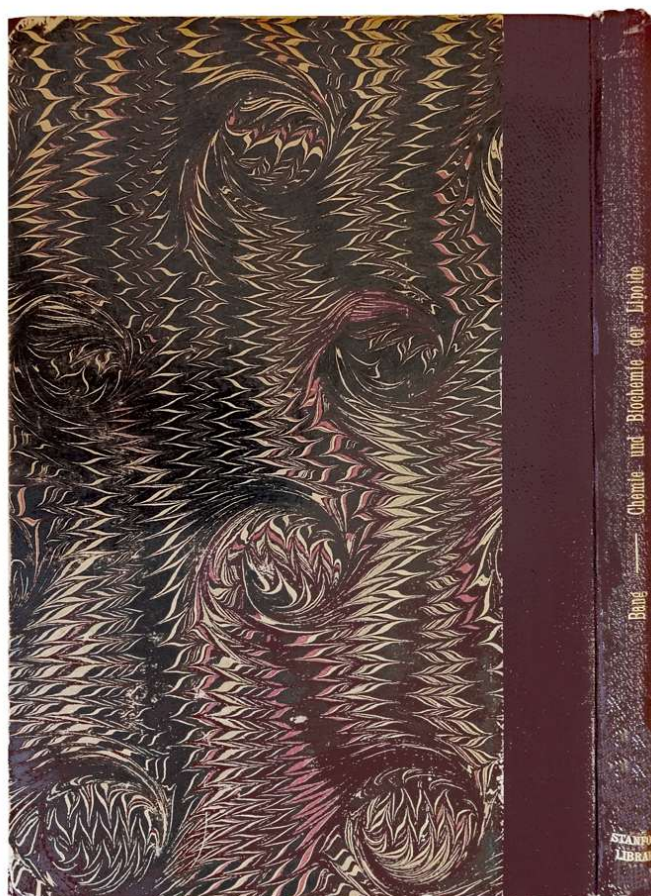
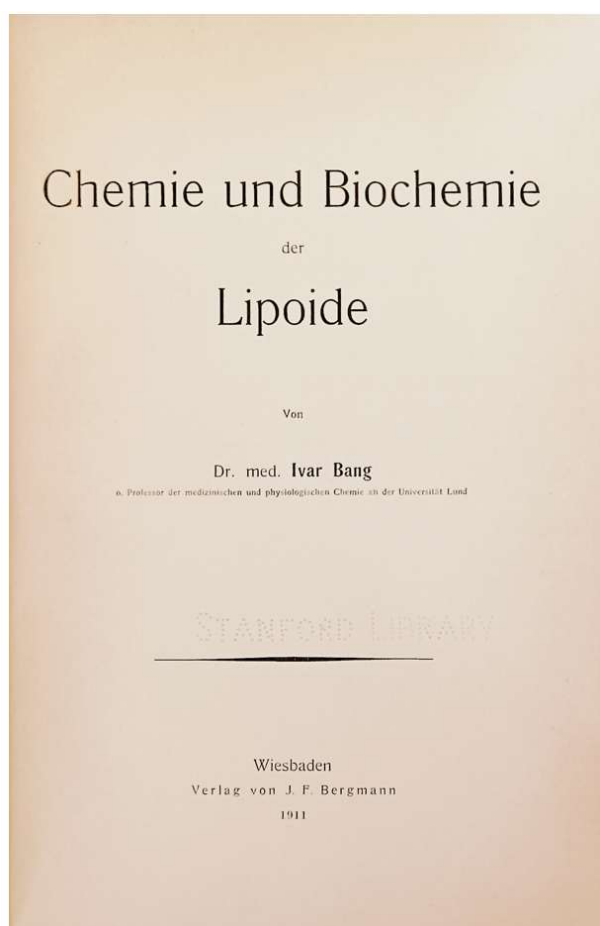
“Kyoto International Symposium: The Jubilee of the Meson Theory (MESON50) was held at Kyoto International Conference Hall on August 15-17, 1985, under the auspices of the Research Institute for Fundamental Physics (RIFP), the Faculty of Science, and the College of Liberal Arts of Kyoto University, in cooperation with the Physical Society of Japan, the Faculty of Science of Osaka University, the Institute for Nuclear Study and the Institute for Cosmic Ray Research of the University of Tokyo, the National Laboratory for High Energy Physics (KEK), and the Yukawa Foundation.

“Meson Theory was proposed by Hideki Yukawa (1907-1981) in 1935, namely, only a decade after the birth of quantum mechanics. At that time, much confusion prevailed about the applicability of quantum theory. Yukawa's Meson Theory indicated the right direction for developing particle physics: It established that quantum field theory is the correct theory even inside a nucleus, it explained how to describe nuclear force at the fundamental level,



and it clarified the necessity of distinguishing strong and weak inter-actions. Thus one may say that particle physics began with Yukawa's Meson Theory.

“The purpose of this Symposium were firstly, of course, to celebrate the 50th Anniversary of Yukawa's Meson Theory, secondly to review the development of particle physics during these fifty years and the application of meson physics to various fields, and thirdly to discuss current topics in particle physics in order to obtain some insight into its future progress in the fundamental theory of space-time and matter. The participants of this Symposium were 88 foreign physicists from 18 countries and 172 Japanese scientists, and 32 interesting talks were given as shown in the Programme. All participants enjoyed fruitful discussions and conversations. The Symposium was quite successful; this success was due to the cooperation of the participants, the members of the Advisory and the Organizing Committees, and the scientific secretaries and assistants.”

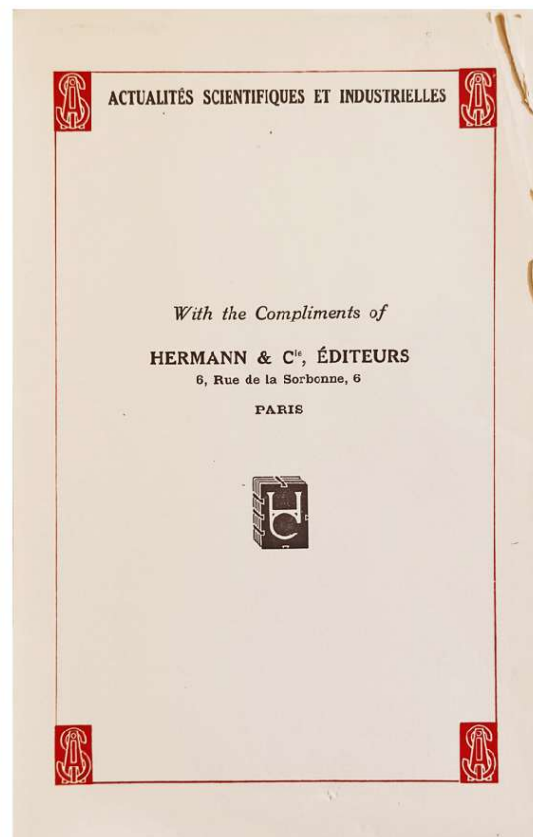
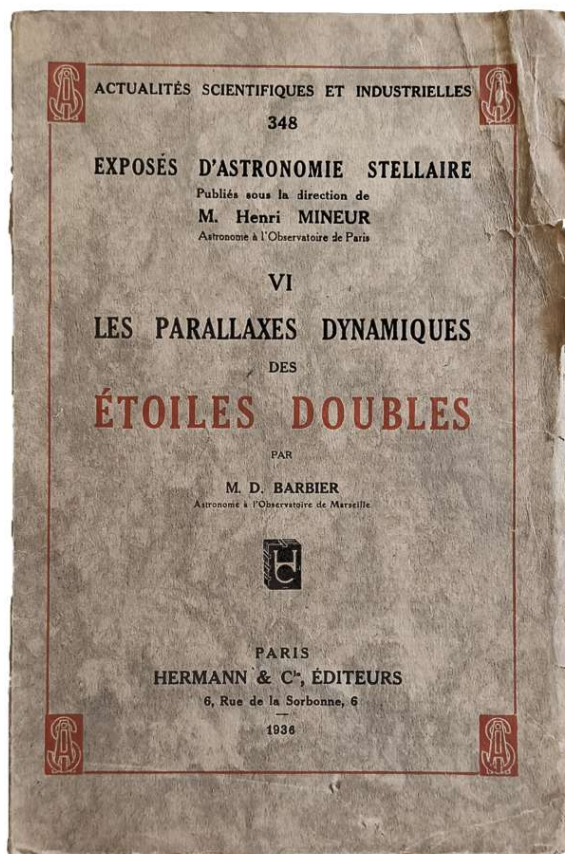


[239] BANG

239. **BANG, Ivar Christian** (1869-1918). *Chemie und Biochemie der Lipide*. Wiesbaden: J. F. Bergmann, 1911. ¶ 8vo. xi, 187, (4 ads.) pp. Contemporary quarter pebbled brown cloth over marbled boards, gilt-stamped spine title. Exlib bookplate and perforated stamps on title-page. Very good. [S10016]

\$ 45

“Bang is considered the founder of modern clinical microchemistry. Some of Bang’s earliest investigations were on nucleoproteins and nucleic acid. He elucidated the structure of guanylic acid-previously isolated by Hanunarsten-as a compound of guanine, pentose, and phosphoric acid in equimolar proportions. This research was a major factor in revealing the framework of the nucleotides. He also performed early work on fat, protein, and nitrogen metabolism, so that he coincidentally developed methods useful to clinical chemistry as he demonstrated “normal” and “abnormal” (disease) chemical processes of the body.” [*Clinical Chemistry*, 32/1, pp. 213-215 (1966)].



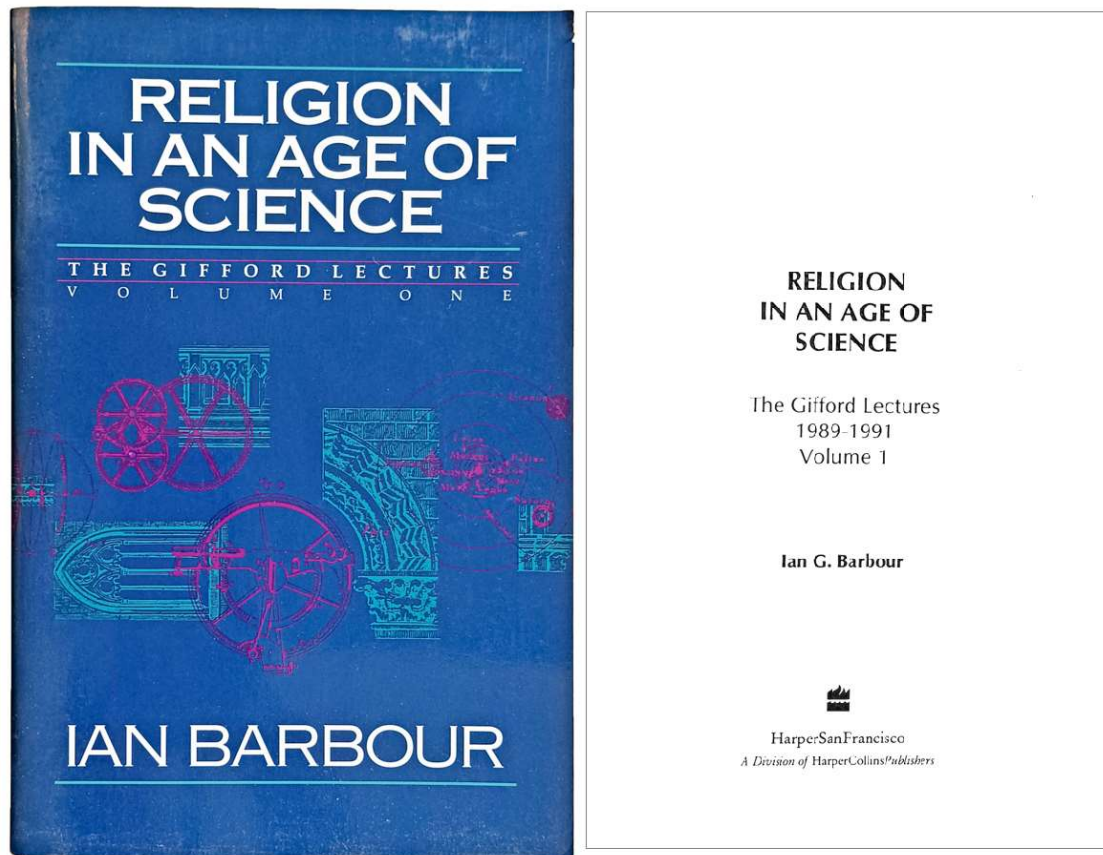
[240]



240. **BARBIER, Daniel** (1907-1965). *Les parallaxes dynamiques des étoiles doubles*. Paris: Hermann & Cie, 1936. ¶ Series: *Actualités Scientifiques et Industrielles*, 348, *Exposes d'Astronomie Stellaire*, Publiés sous la Direction de Henri Mineur, VI. 8vo. 31, [5] pp. Tables, figs. Printed wrappers; fore-edge of top cover torn and wrinkled. Publisher's compliments slip laid in. Unopened. Good. [S5899]

\$ 10

Daniel Barbier was a French astronomer born in Lyon. Between 1930 and 1965 he published nearly 100 scientific papers on astronomy. Among his works were studies of stellar atmospheres and lunar occultations and eclipses. He passed away at 57 years of age, just at the end of an observing run at Observatoire de Haute-Provence.

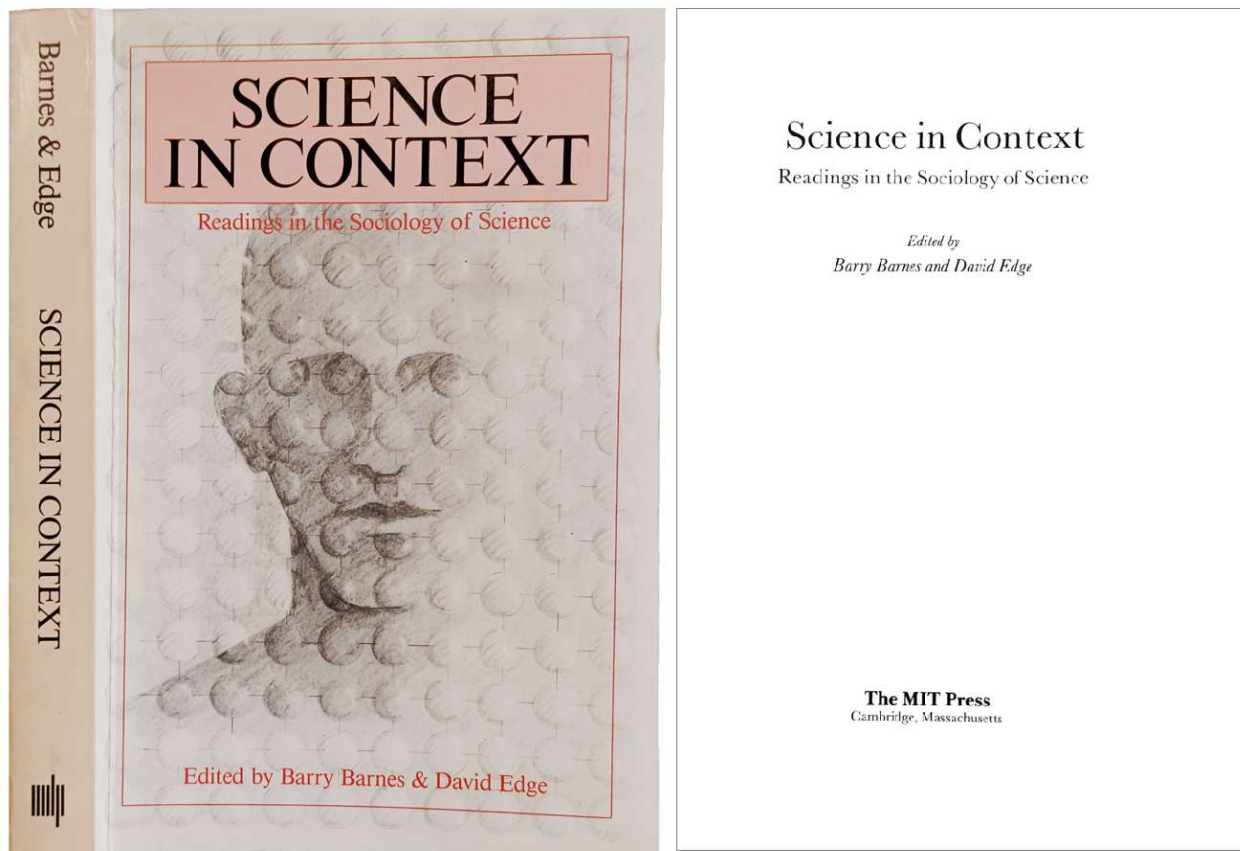


241. **BARBOUR, Ian** (1923-2013). *Religion in an Age of Science. The Gifford Lectures 1989-1991, volume one*. San Francisco: HarperCollins, (1990). ¶ 8vo. xv, 297 pp. Printed wrappers. Fine. [DL1028]

\$ 4

Ian Graeme Barbour was an American scholar on the relationship between science and religion. According to the Public Broadcasting Service his mid-1960s Issues in Science and Religion "has been credited with literally creating the contemporary field of science and religion."

Barbour was Bean Professor of Science, Technology, and Society at Carleton College.

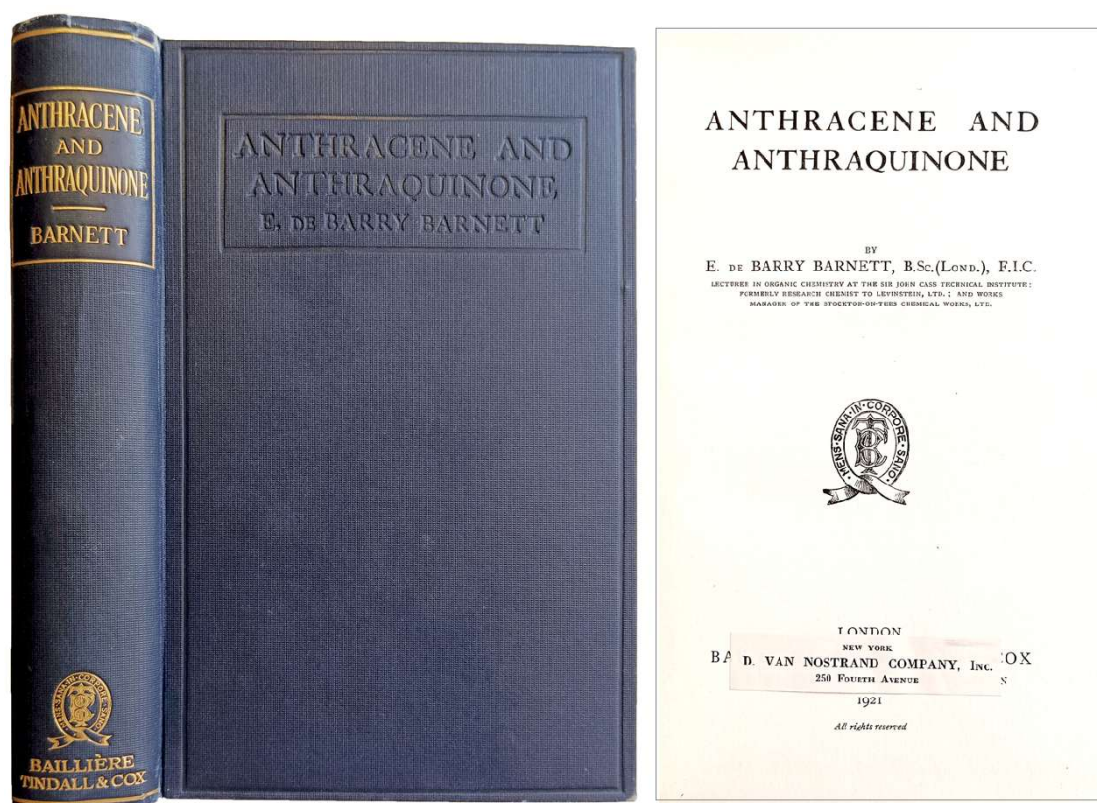


242. **BARNES, Barry** (1943-); **David EDGE** (editors). *Science in Context; Readings in the Sociology of Science*. Cambridge: MIT Press, (1982). ¶ 8vo. xi, 371 pp. Bibliography, index. Printed wrappers; faded spine. Very good. [RH1014]

\$ 5

S. Barry Barnes was Professor of Sociology at the University of Exeter.





243. **BARNETT, E. De Barry** (1886-1961). *Anthracene and anthraquinone*. New York: D. Van Nostrand Co., 1921. ¶ 8vo. x, 436 pp. ABERRANT COPY; pp. 129-144 omitted, pp. 145-160 in duplicate. Navy cloth, gilt-stamped spine title. Embossed stamp of John M. Andreas. As is. [S9560] \$ 10

Barnett "could truly be described as a character. He was held in great affection but was often unpredictable. His instructions to his executors were definitely that he did not wish any obituary notice to be published, but he left a summary of his life among his papers, realizing, no doubt, that it would not be possible to avoid such notice and desiring, as always, to be of help. He was born on October 20, 1886, and educated at Malvern College and University College, London, graduating with first-class honours in chemistry in 1908. After holding some industrial appointments in the dyestuff and explosives industries, he went back to academic work and was appointed lecturer in organic chemistry at the Sir John Cass Technical Institute in 1919; eventually he became head of the Department and deputy principal, retiring in 1947. He was the author of a number of well-known books, the latest of which, *Mechanism of Organic Chemical Reactions*, was published in 1956. His own summary of his life

passes very lightly over much that was significant. It does not tell of the extent or the high quality of his published papers, numbering more than a hundred, chiefly in the field of anthracene chemistry. It does not indicate his rather lonely private life as a bachelor, isolated by his deafness in so many ways. It gives no idea of the extent of his help to his students. He had an uncanny knack of selecting as junior laboratory staff those applicants who had the ability to advance . . .” [A. M. WARD, Obituary, *Nature*, 190, page 1058 (1961)].

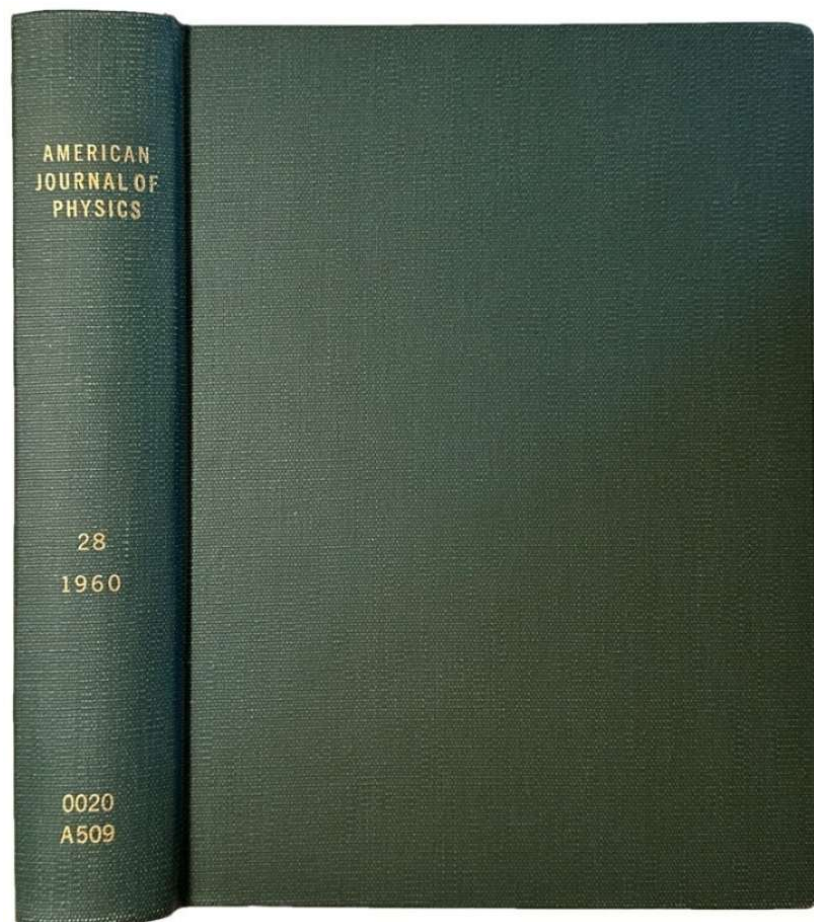
**PROVENANCE:** John M. Andreas, chemist, was head of the research department at Technicolor from the 1940s to '60s. He maintained his own color dye laboratory at home in Pasadena.



244. **BARONDEISS, Jeremiah A.** (4 offprints). Includes [1]: **“The unity of medicine.”** Offprint from: *The Pharos of Alpha Omega Alpha*, Spring 1979, vol. 42, no. 2. No place: *The Pharos of Alpha Omega Alpha*, 1979. ¶ 4to. pp. 2-5. Self-wraps. FINE. [S7163]
- [2] WITH: **“Disease and Illness - a crucial distinction.”** Offprint from: *The American Journal of Medicine*, vol. 66, March, 1979. 4to. pp. 375-376. Self-wraps. Fine. [3] WITH: **“Science in Medicine: some negative feedbacks.”** Offprint from the *Archives of Internal Medicine*, vol. 134, July, 1974. 4to. pp. 152-157. Self-wraps. Fine. [4] WITH: **“The Training of the Internist, with some messages from practice.”** Offprint from the *Annals of Internal Medicine*, vol. 90, no. 3, March, 1979. 4to. pp. 412-417. Self-wraps. Fine.



The author was associated with the Cornell University Medical College, and graduated from Johns Hopkins University. He served as President of The American College of Physicians. He wrote his own biography in *The Pharos*, Summer 2024, "Reflections."



velocity is increased. This is an excellent demonstration of conservation of angular momentum. It is very easy to show and it can readily be dismissed with the comment "You see, the smaller  $l$  the larger  $\omega$ , since  $l\omega$  is conserved." And this is what is done with it more often than not. The matter is dropped. This in my view kills a beautiful experiment which is really filled with first-rate inquiries for the beginner (and, parenthetically, for those who are not beginners!). It grieves me to witness how little is made of this experiment. It is indeed a grand one, elementary in execution, but profound in physics. I ask no less than a dozen questions all of which the student must explore analytically. [For example, if  $m$  moves in a circle of radius  $r$  with an angular velocity  $\omega$ , its

$K E_R$  is, say,  $E$ . At  $r/2$  its  $K E_R$  is  $4E$ . (Four times as much!). Where did this gain in energy come from? If, now, off the record we pulled down on the lower string surreptitiously and unseen, have we not brought forth a plaguing dilemma for the beginner?]

And so I conclude this narration. My points of view are these: (1) There must be more analytical problems and less numerical exercises. (2) Limiting and special cases must be explored. (3) The habit of asking more penetrating questions must be cultivated. And finally, the absolutely necessary process of imagination must be stirred and aroused and awakened. This ingredient is far too wanting at all levels of instruction.

#### Historical Survey of the Early Development of the Infrared Spectral Region\*

E. SCOTT BARR†  
Army Rocket and Guided Missile Agency, Redstone Arsenal, Alabama  
(Received July 6, 1959)

This account of the early history of the infrared spectral region is concerned with tracing the growth in understanding of the nature and properties of this radiation from the time of its discovery by Herschel in 1800 up to the first part of the present century. After workers in the first half of the 19th century had demonstrated the fundamental similarity of infrared and visible radiation, investigators during the second half discovered the materials and evolved the techniques of measurement and control of infrared radiation which provide the foundation for the current extensive use of infrared equipment in research, industry, and ordnance.

IN his address as retiring President of the American Association for the Advancement of Science, Samuel Pierpont Langley (1834-1906) had these words to say in 1899: "In these days, when a man can take but a very little portion of knowledge to be his province. . . I have selected as my theme, the history of our present views about radiant energy. . . It is important to look with our own eyes at the very words of the masters themselves, and to take down the

dusty copy of Newton, or Boyle, or Leslie, instead of a modern abstract; for, strange as it may seem, there is something of great moment in the original that has never yet been incorporated into any encyclopedia, something really essential in the words of the man himself which has not been indexed in any textbook, and never will be.

"We often hear (the progress of science) likened to the march of an army towards some definite end; but this, it has seemed to me, is not the way science usually does move, but only the way it seems to move in the retrospective view of the compiler, who probably knows almost nothing of the real confusion, diversity, and retrograde motion of the individuals comprising the body, and only shows us such parts of it as he, looking backward from his present standpoint, now sees to have been in the right direction.

\*The present-day military importance of infrared may be inferred from the Special Issue on Infrared Physics and Technology [Proc. Inst. Radio Engs. 47, 1411-1649 (1959)] which was edited by Stanley S. Ballard and prepared by a select group of specialists concerned with this field. The issue provides a splendid survey of the present status of infrared, especially insofar as application is concerned, and includes much new information on detectors, optical components, circuits, and systems.  
†Permanent address: Department of Physics, University of Alabama, University, Alabama.  
‡S. P. Langley, *Ann. J. Sci. Ser.* 3, 37, 1 (1889).

245. **BARR, E. Scott [Ernest].** "Historical survey of the early development of the infrared spectral region." In: *American Journal of Physics*, Vol. 28, 1960. (Lancaster, PA): Published for the American Association of Physics Teachers by the American Institute of Physics, 1960. ¶ 268 x 203 mm. 4to. Pages 42-54, [Entire volume: [ii], 838 pp.] 13 figs. Green buckram, gilt spine. Ex library blind-stamp of the Carnegie Institution of Washington, Mount Wilson Observatory. Fine. [S5511]

\$ 45

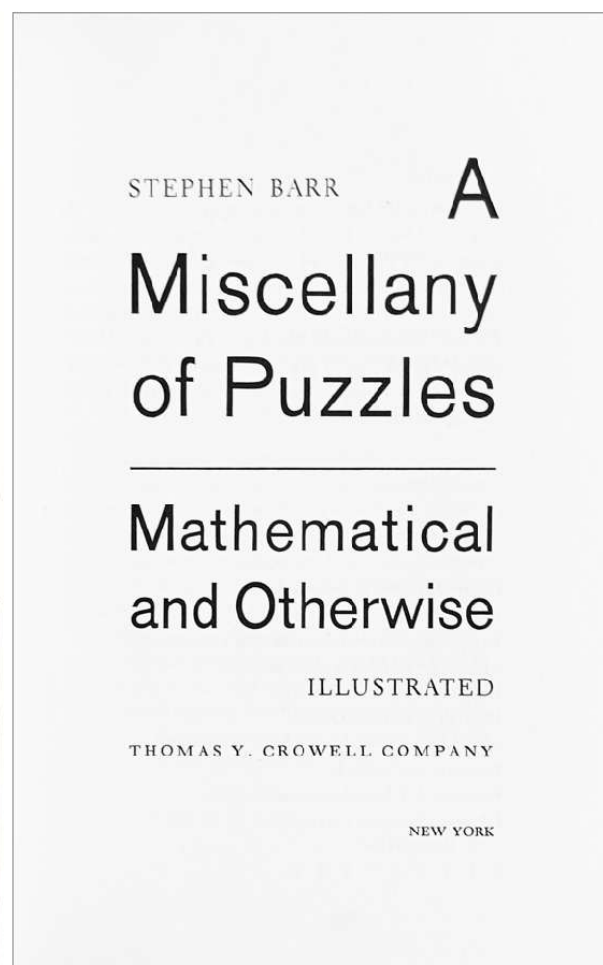
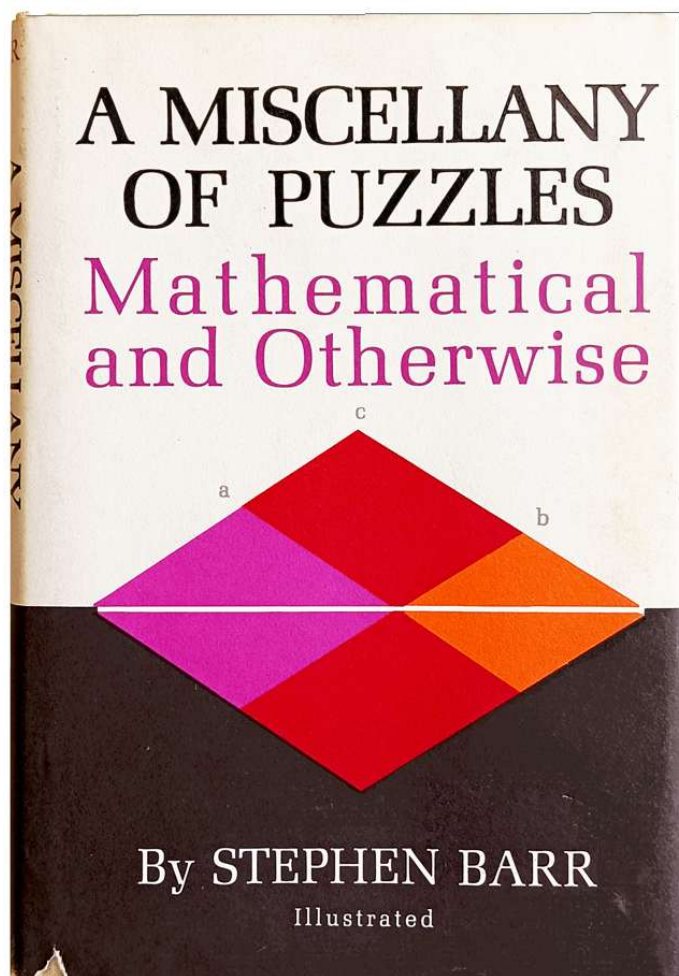
An account of the early history of the infrared spectral region from its discovery by Herschel in 1800 to the first part of the twentieth century. Traces

materials and techniques of measurement and control of infrared radiation. This is just one of many contributions to this AJP annual (838 pages worth!).

Among the other papers: Lee A. DuBridge (1901-1994), Fun in Space. – T.K. [Thomas Kirk] Caughey (1927-2004) [1], Hula-Hoop: An example of heteroparametric excitation. – M.A. Weinstein, On the validity of Kirchhoff's law for a freely radiating body. – J.R. Barker, Conducting analogs of a magnetic field. – Livio Scarsi (1927-2006), Cosmic radiation. – Surendra Nath Srivastava, Method of virtual work for some problems in physics. – H.R. Crane, Creative thinking and experimenting. – John W. Dewdney, Graphical method for comparing Galvanometer sensitivities. – Edward A. Desloge (1926-2020) & Steven W. Matthyse (1939-2024), Collision term in the Boltzmann transport equation.

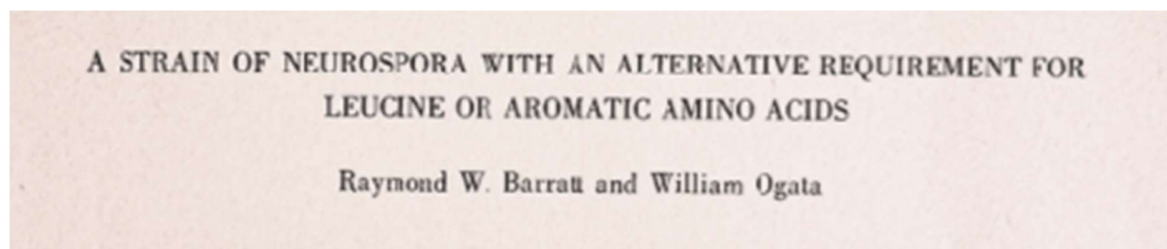
[1] Caughey, California Institute of Technology, Pasadena, California: This paper considers the parametric excitation of a pendulum swinging in a horizontal plane. It is shown that there exist a number of different limit cycle motions, one of which is a steady rotation about the point of support. This motion is associated with the mechanism whereby a Hula-Hoop may be kept in rotation by an oscillatory motion of the point of support. The stability and dependence of this type of motion on the initial conditions are analyzed in detail.





246. **BARR, Stephen** (1904-1989). *A miscellany of puzzles. Mathematical and otherwise. Illustrated.* New York: Crowell, (1965). ¶ Sm. 8vo. 164 pp. Cloth, dust-jacket; jacket with small chip at bottom edge. Very good. [S3552] \$ 5

Barr, who lived in Woodstock, New York, was also a science fiction writer. He was also friends with Malcolm Gardner.



[247] Barratt & Ogata

Reprinted from SCIENCE, July 28, 1950, Vol. 112, No. 2900, pages 122-123.

## A Simplified Method of Lyophilizing Microorganisms<sup>1</sup>

R. W. Barratt and E. L. Tatum<sup>2</sup>

Department of Biological Sciences, Stanford University,  
Stanford, California

The lyophilization of microorganisms is almost essential for their preservation without change of characteristics. It was shown to be effective for bacteria (1-7), for yeast (8, 9), and for fungi (4) and has been used satisfactorily for a number of years in our laboratories as a means of maintaining original and derived strains of many microorganisms. A simplified method developed in our laboratories for lyophilizing organisms, and in use for over a year, is herein described.

The method requires a minimum of special equipment and materials. A 0.1-ml sample (Fig. 1, A) of the spores, bacterial cells, or yeast cells in sterile skim milk or serum is introduced with a capillary pipette into a 12-in. length of 8-mm pyrex tubing sealed at one end and previously plugged loosely with nonabsorbent cotton and sterilized. This cotton plug (B) is pushed down the tube to a level  $3\frac{1}{2}$  in. above the sample, and 2-3 in. of the desiccant, powdered phosphoric anhydride (C), is added. A second and tight cotton plug (D) pushed down the tube wipes the loose  $P_2O_5$  from the walls and holds the desiccant in place during evacuation. The  $P_2O_5$  is introduced into the lyophil tubes from a dispenser such as that diagrammed in Fig. 2. This device consists of a funnel turned on a lathe out of 2-in. brass stock; the lower end (Fig. 2, E) fits inside the lyophil tube and the upper end (F) is sealed with deKhotinsky cement to the open end of an inside section of a 45/50 standard taper pyrex interchangeable joint (G). The outside section of the joint (H) is fitted with a rubber stopper (I), carrying through the center a brass rod (J), which is long enough to be used as a plunger for ejecting the dry powdered  $P_2O_5$ . This apparatus is mounted in a ring stand. Enough  $P_2O_5$  can be held in the dispenser when  $\frac{1}{2}$  full for approximately 35 samples, a convenient unit of work.

After preparation of all the tubes for a given run the samples are frozen rapidly by immersing either in a solvent-dry ice mixture or in powdered dry ice alone. Each

<sup>1</sup> This work was done in part under grants-in-aid from the American Cancer Society upon recommendation of the Committee on Growth, National Research Council, and from the Jane Coffin Childs Fund for Medical Research.

<sup>2</sup> The authors acknowledge the technical assistance of Dorothy Van Hacht and Carol Fuller.

tube is individually evacuated by attaching with pressure tubing to a high vacuum electric pump. In order to keep the sample frozen during evacuation, an insulated shell vial containing powdered dry ice is held over the sample end of the tube. When evacuation is complete (usually in about 1 min or as indicated by a manometer), the tube, still under vacuum and in a horizontal position, is sealed with a flame<sup>3</sup> above the  $P_2O_5$  (as indicated by

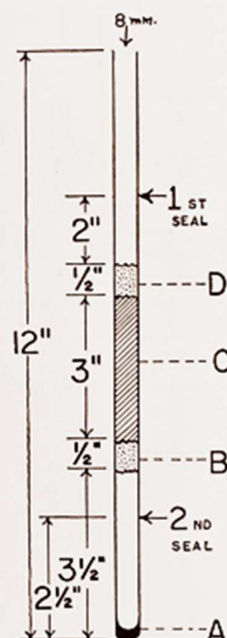
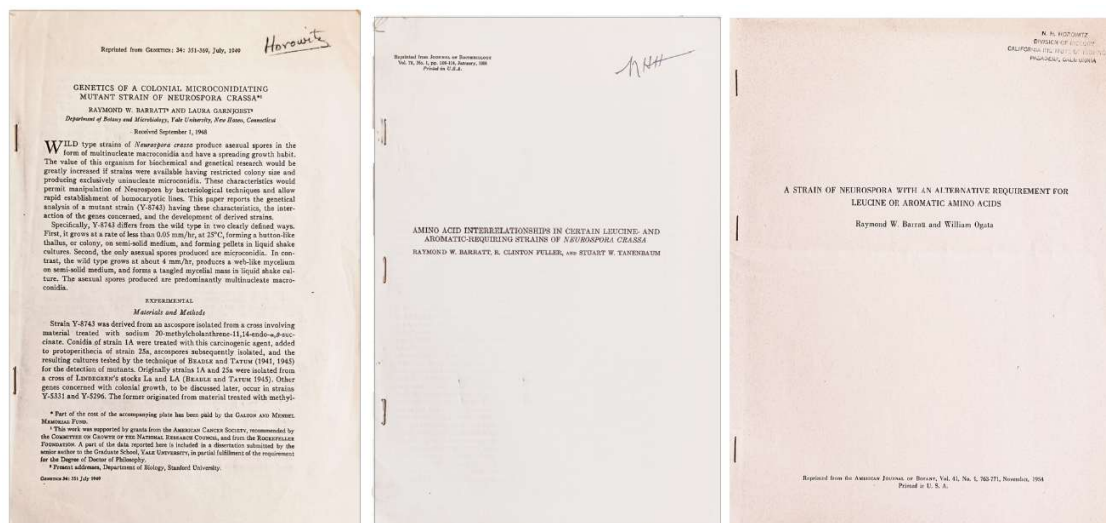


FIG. 1. Schematic drawing of a lyophil tube. A, Sample. B, First cotton plug. C, Phosphoric anhydride. D, Second cotton plug.

an arrow in Fig. 1). Each tube is then placed in a rack with the sample immersed to a depth of 1 cm in a freezing mixture. A brine-ice bath or a glycol-water mixture, held at  $-5^{\circ}\text{C}$  to  $-10^{\circ}\text{C}$  in an open-topped refrigerator,

<sup>3</sup> Hand gas-air torch, type 3A, National Welding Equipment Company, San Francisco, California, with tip size N-1.





247. **BARRATT, Raymond W.** (1920-2002). Group of 9 offprints. Includes: **BARRATT, & Edward Lawrie TATUM** (1909-1975). “**A Simplified Method of Lyophilizing Microorganisms.**” Offprint from: *Science*, vol. 112, no. 2900. No place: Science, 1950. ¶ 4to. 122-123 pp. Figs. Self-wraps. Ownership rubber stamp & signature of Norman Horowitz, California Institute of Technology. Fine. [S7639]

\$ 200

Barratt was a prominent player in the early development of fungal genetics. He was Tatum's first graduate student at Yale, and his detailed work on *Neurospora* provided the backbone for many later developments in genetics. He went on to work with the Dept. of Biological Sciences, Stanford University. Tatum (1909-1975) was one of the fathers of modern genetics and worked extensively with George W. Beadle on *Drosophila* and *Neurospora*. This work culminated in the 1958 Nobel Prize for physiology or medicine, which Tatum shared with Beadle and Joshua Lederberg. WITH: **BARRATT, & Laura GARNJOBST**.

“**Genetics of a Colonial Microconidiating Mutant Strain of *Neurospora Crassa*.**” Offprint from: *Genetics*, 34, 1949. 8vo. 351-369 pp. 1 color plate, figs., photos. Self-wraps. Ownership signature of Horowitz. Fine. WITH: **BARRATT, R. Clinton FULLER, & Stuart W. TANENBAUM**. “**Amino Acid Interrelationships in Certain Leucine-and-Aromatic-Requiring Strains of *Neurospora Crassa*.**” Offprint from: *Journal of Bacteriology*, vol. 71, no. 1, 1956. 8vo. 108-114 pp. Figs. Self-wraps. Ownership signature of Horowitz. Fine. WITH: **BARRATT**, et al. “**Map Construction in *Neurospora Crassa*.**” Offprint

from: *Advances in Genetics*, vol. VI, 1954. 8vo. 93 pp. Figs., tables. Self-wraps; first leaf loose but present, else fine. Ownership rubber stamp of Norman Horowitz. WITH: **BARRATT**, & **W. N. STRICKLAND**. “**Purification and Characterization of a TPN-Specific Glutamic Acid Dehydrogenase from *Neurospora Crassa*.**” Offprint from: *Archives of Biochemistry and Biophysics*, vol. 102, no. 1, 1963. 8vo. 66-76 pp. Photos, figs. Self-wraps. Ownership signature of Horowitz. Fine. WITH: **BARRATT**, & **William OGATA**. “**A Strain of *Neurospora* with an Alternative Requirement for Leucine or Aromatic Amino Acids.**” Offprint from: *American Journal of Botany*, vol. 41, no. 9, 1954. 4to. 763-771 pp. Figs. Printed wrappers. Ownership rubber stamp of Norman Horowitz. Fine. WITH: **BARRATT**, **R. W. TUVESON**, & **D. J. WEST**. “**Allosteric Effects in Nicotinamide Adenine Dinucleotide Phosphate-Specific Glutamate Dehydrogenase from: *Neurospora*.**” Offprint from: *Journal of Biological Chemistry*, vol. 242, no. 9, 1967. 4to. 2134-2138 pp. Figs. Plain wrappers. Ownership signature of Horowitz. Fine. WITH: **BARRATT**, **G. J. STINE**, & **W. N. STRICKLAND**. “**Methods of Protein Extraction from *Neurospora Crassa*.**” Offprint from: *Canadian Journal of Microbiology*, vol. 10, 1964. 8vo. 29-35 pp. Self-wraps. Ownership signature of Horowitz. Fine. WITH: **BARRATT**. Proposal for Genetic Nomenclature and Symbolism of *Neurospora*. 1952. 4to. Typed sheets. 11 pp. Fine.

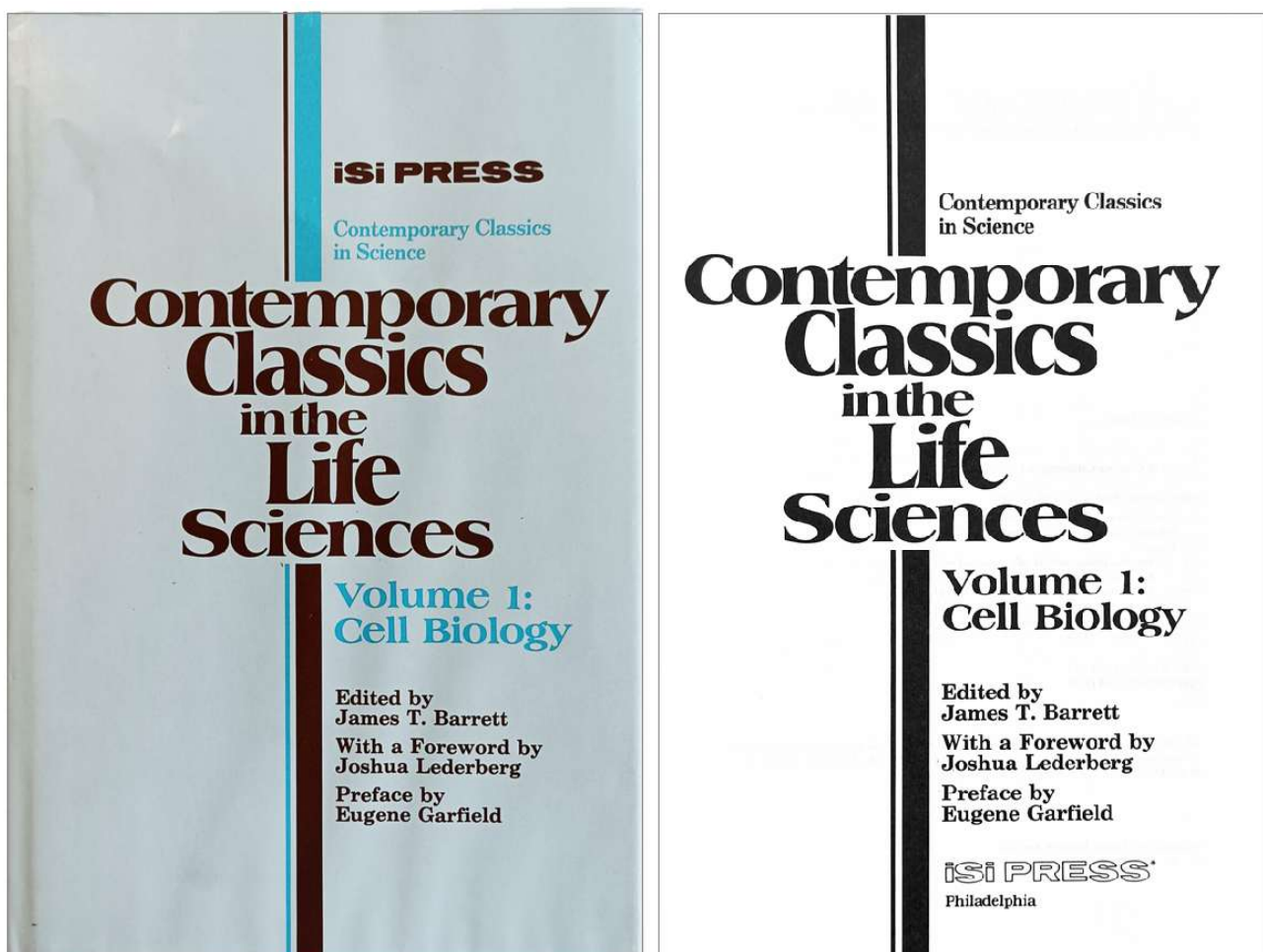
Raymond Barratt “was a prominent player in the early development of fungal genetics. After early work with fungal plant pathogens at the Connecticut Agricultural Experiment Station, he switched to *Neurospora* and became Ed Tatum's first graduate student at Yale. When the Tatum lab moved to Stanford in 1948, Ray continued as a Research Fellow, conducting his own research, supervising the laboratory, and becoming a teacher, helper, and friend to all the new students and postdocs. During this period, he took the initiative in assigning gene names and formulating rules of genetic nomenclature for *Neurospora* and in bringing together genetic and phenotypic information on all the known genes into what might be called the first *Neurospora* compendium, which included the first comprehensive maps. In 1954 he went to Dartmouth as a faculty member. He organized the Fungal Genetics Stock Center (FGS C), gathering *Neurospora* mutant and wild-type strains, obtaining funding from



NSF, perfecting preservation methods, and periodically publishing stock lists in the Neurospora Newsletter (now Fungal Genetics Newsletter).”

“Edward Lawrie Tatum was an American geneticist. He shared half of the Nobel Prize in Physiology or Medicine in 1958 with George Beadle for showing that genes control individual steps in metabolism. The other half of that year's award went to Joshua Lederberg.”

PROVENANCE: This was the personal copy of Norman Horowitz (1915-2005), who was a geneticist at Caltech who achieved national fame as the scientist who devised experiments to determine whether life might exist on Mars.



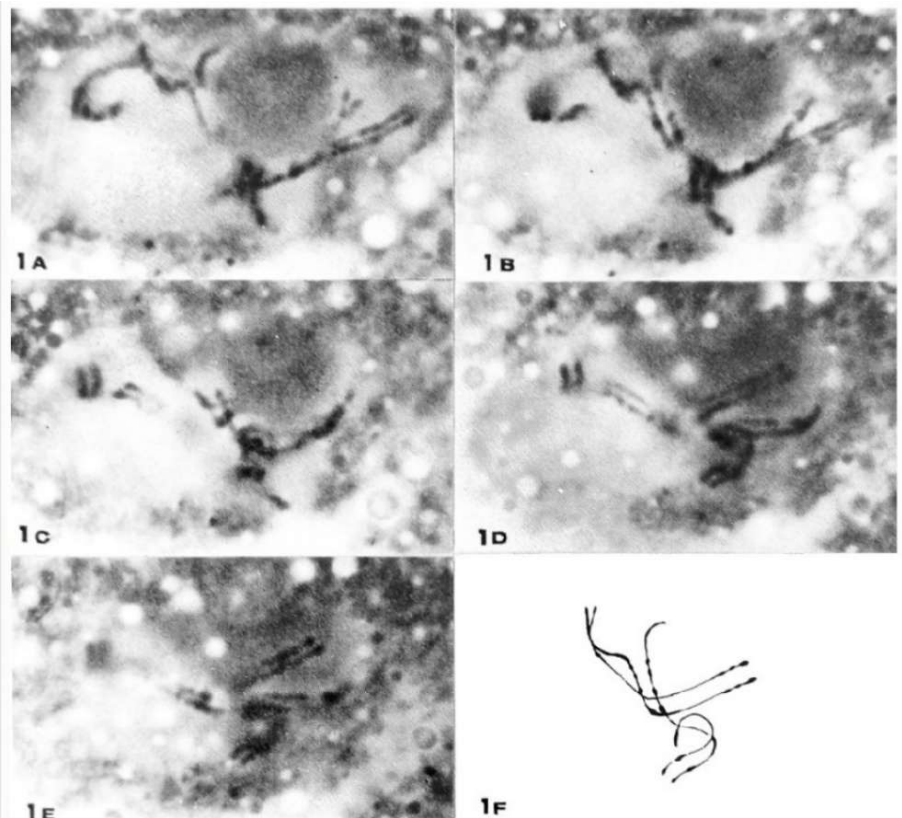
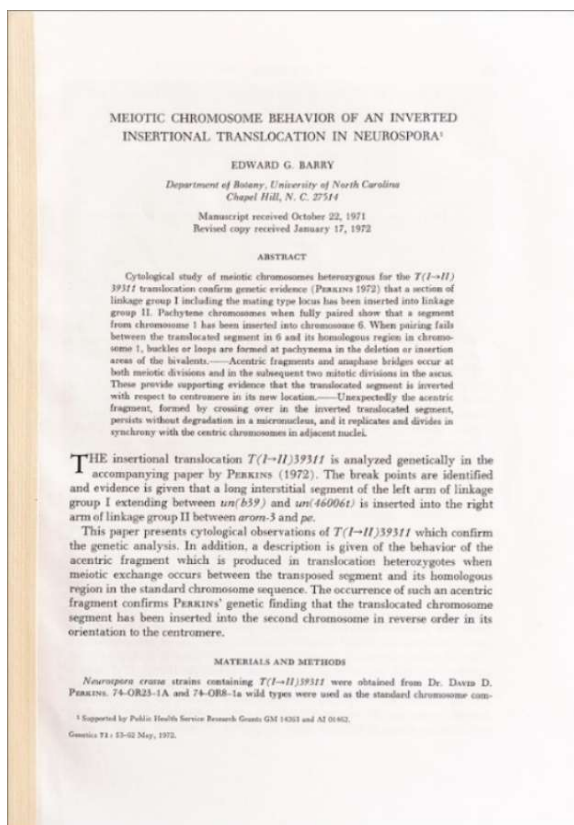
248. **BARRETT, James T.**, editor. *Contemporary classics in the life sciences . . .*  
Philadelphia: iSi Press, (1986). ¶ Series: *Contemporary Classics in Science*.  
Two volumes. 235 x 159 mm. 8vo. xviii, 368; xviii, 282 pp. Indexes. Gilt-  
stamped brown cloth, dust-jackets. Very good. [S3887]

\$ 35

The history of life sciences. With a foreword by Joshua Lederberg. Preface by  
Eugene Garfield.

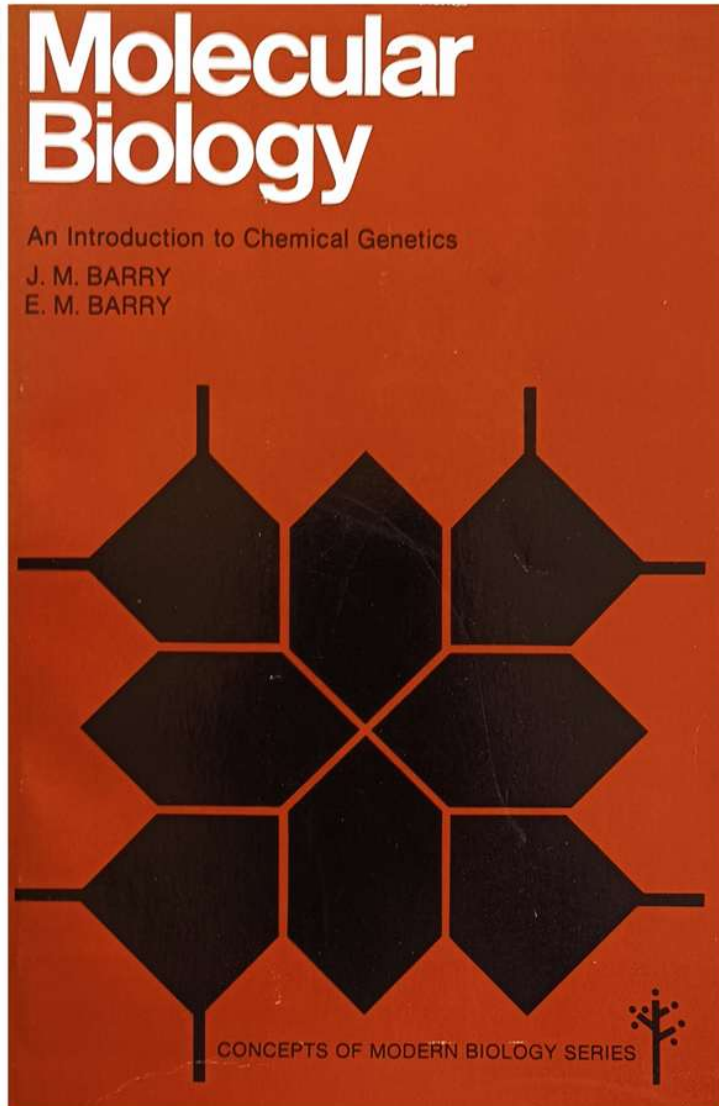
Vol. I deals with Cell Biology: Electron Microscopy, Microbiology,  
Immunology, Virology, Tissue Culture, Genetics, Physiology, Cell Structure,  
Pharmacology, Neurobiology. Vol. II: *The Molecules of Life*. Vol. II deals with  
Carbohydrates, Lipids & related compounds, Nucleic acids, Proteins & amino  
acids, Enzymes, Physical analysis & instrumentation, Chemical analysis &  
preparative methods, Statistics.

[249]





249. **BARRY, Edward G.** "Meiotic Chromosome Behavior of an Inverted Insertional Translocation in *Neurospora*." Offprint from: *Genetics*, 71, 1972. [No place: no publisher], 1972. ¶ 8vo. 53-62 pp. Photos. Self wraps. Fine. [S7114] \$ 4



***Molecular Biology:  
An Introduction to  
Chemical Genetics***

**J. M. Barry**

*University Lecturer  
and Fellow of St. John's College  
University of Oxford, England*

and

**E. M. Barry**

*Prentice-Hall, Inc., Englewood Cliffs, New Jersey*

250. **BARRY, J. M. & E. M. BARRY.** *Molecular Biology: An Introduction to Chemical Genetics*. Englewood Cliffs: Prentice-Hall, (1973). ¶ 8vo. xiii, 142 pp. Figs., photos, index. Pictorial wrappers. Ownership rubber stamp of M. W. Strickberger. FINE. [S8472] \$ 5

J. M. BARRY

# Molecular Biology Genes and the Chemical Control of Living Cells

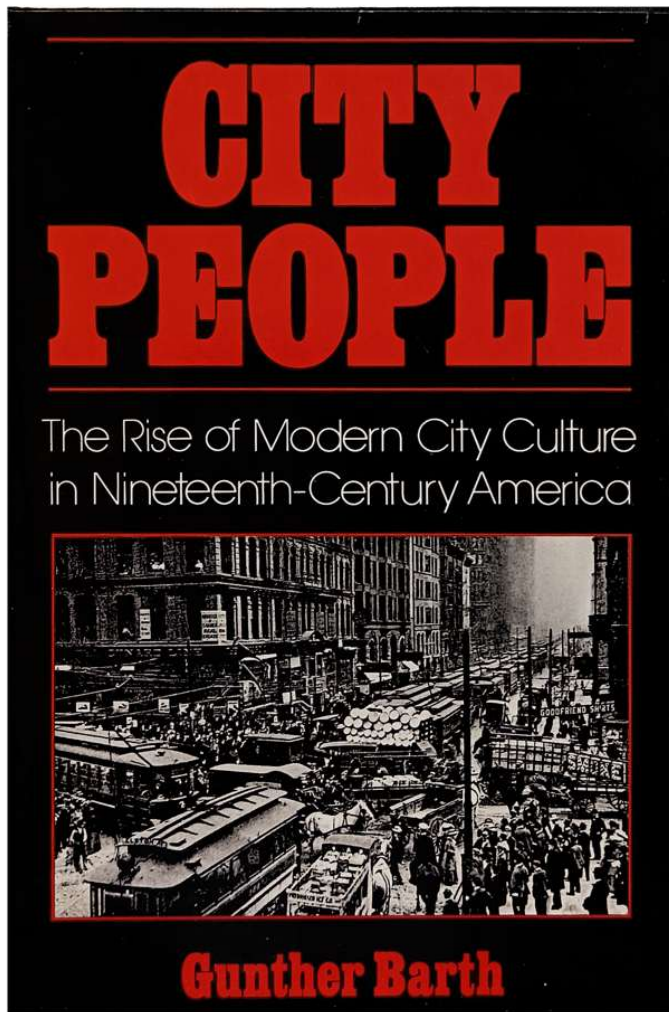


CONCEPTS OF MODERN BIOLOGY SERIES

Molecular Biology: Genes and the  
Chemical Control of Living Cells  
by J. M. Barry, University Lecturer,  
University of Oxford, England.  
Published by Prentice-Hall, Inc.,  
Englewood Cliffs, New Jersey

251. BARRY, J. M. & E. M. BARRY. *Molecular Biology: Genes and the Chemical Control of Living Things*. Englewood Cliffs: Prentice-Hall, (1964). ¶ 8vo. 139 pp. Figs., index. Pictorial wrappers. Ownership rubber stamp of M. W. Strickberger. FINE. [S8473] \$ 5





## CITY PEOPLE

The Rise of Modern City Culture  
in Nineteenth-Century America

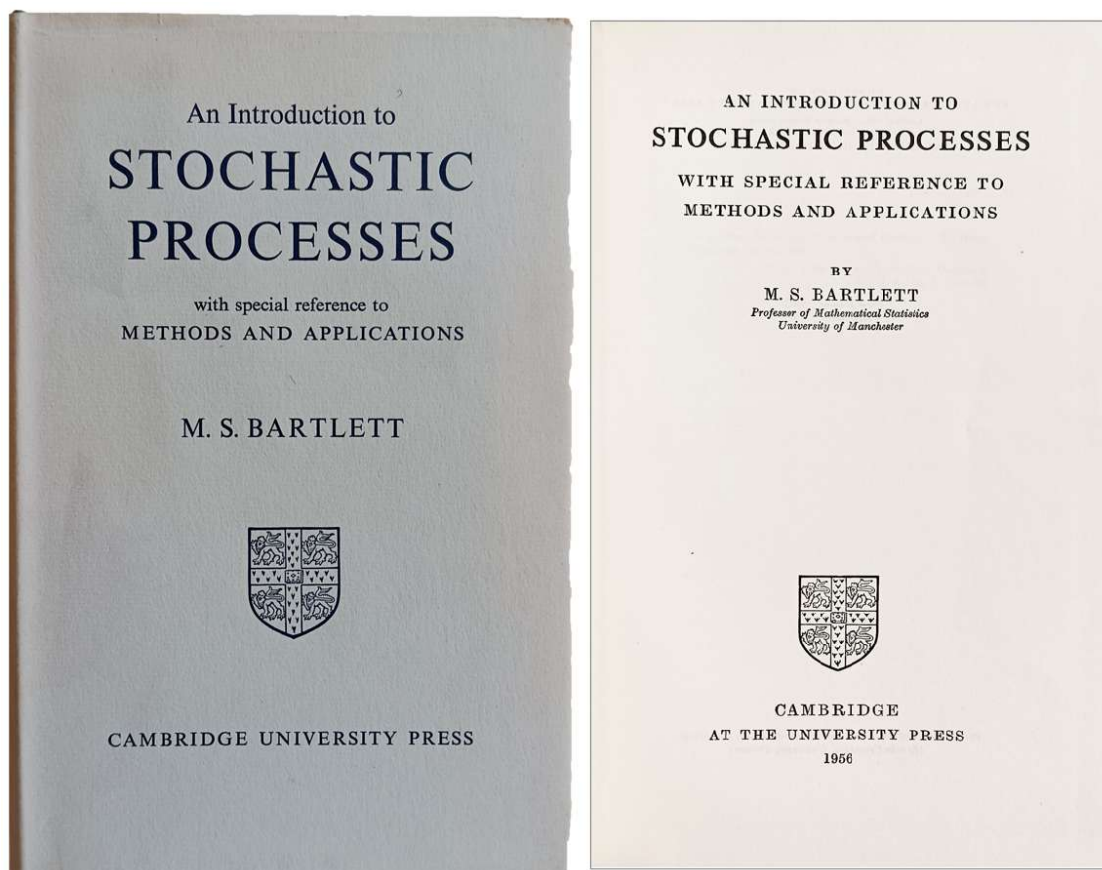
GUNTHER BARTH

New York Oxford  
OXFORD UNIVERSITY PRESS  
1980

252. **BARTH, Gunther** (1925-2004). *City People: The Rise of Modern City Culture in Nineteenth-Century America*. New York: Oxford University Press, 1980. ¶ Sm. 8vo. viii, 289 pp. Plates, index. Cloth, dust-jacket. INSCRIBED BY THE AUTHOR TO ROGER HAHN. Very good. [RH1521]

\$ 15

Gunther Paul Barth was an American historian. Barth joined the University of California, Berkeley faculty in 1962, became a professor of History in 1971, and taught Western American and urban history until his retirement in 1995. Roger Hahn and Barth were both in the History Dept. at Berkeley and would surely have been friends for this book to be inscribed to Roger.



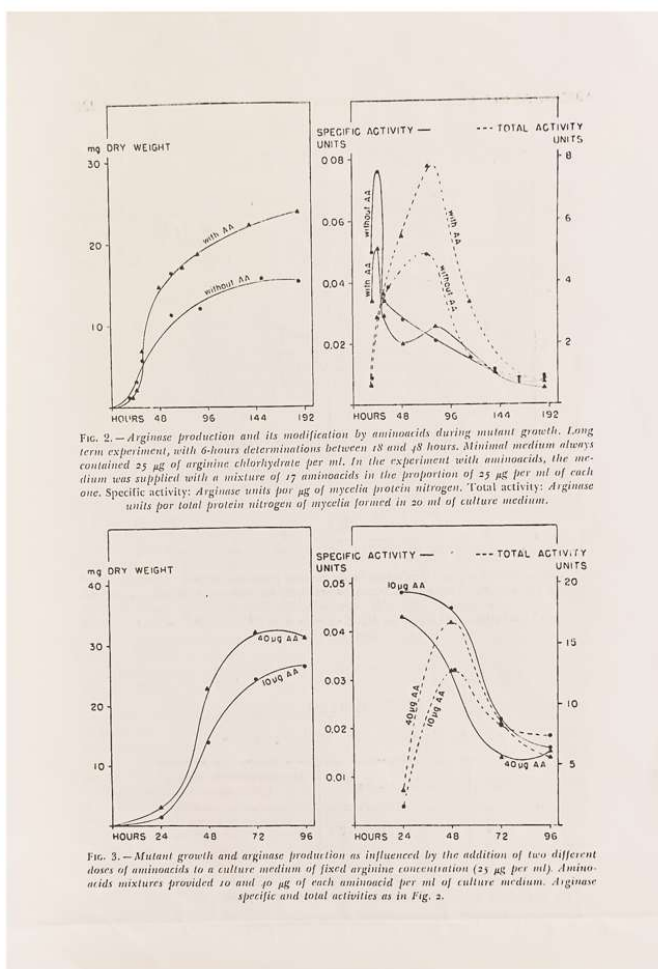
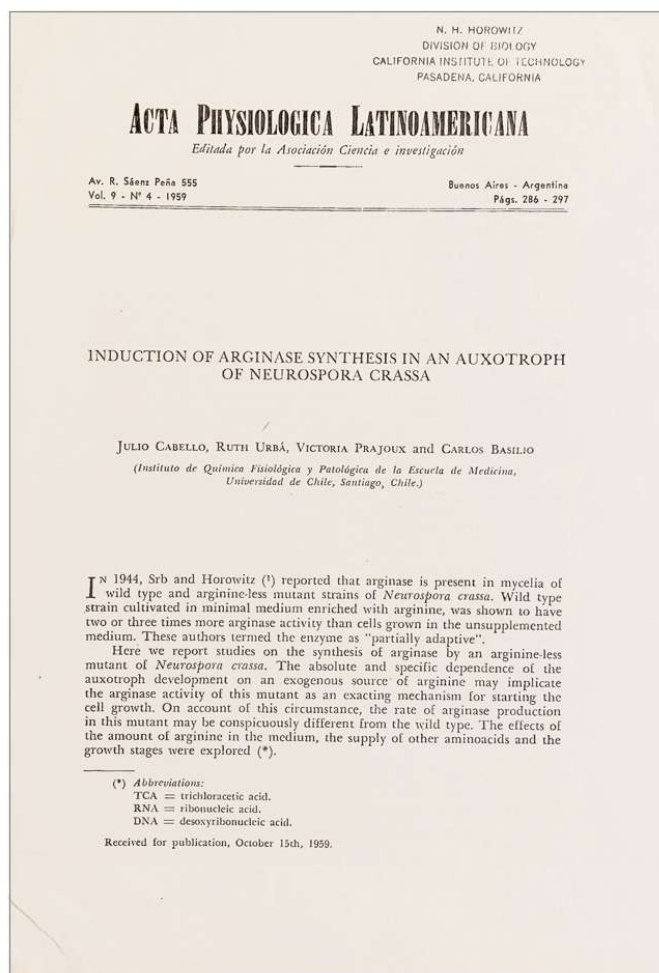
253. **BARTLETT, M. S. [Maurice Stevenson]** (1910-2002). *An introduction to stochastic processes with special reference to methods and applications*. Cambridge: Cambridge University Press, 1956. ¶ Reprint. 8vo. xiv, 312 pp. 15 figs., tables, bibliog., index. Blue cloth, gilt-stamped spine title, dust jacket. Ink signature of Morris Asimow. Fine. [S9868]

\$ 12

Maurice Stevenson Bartlett, FRS, was an English statistician who made particular contributions to the analysis of data with spatial and temporal patterns. He is also known for his work in the theory of statistical inference and in multivariate analysis.

PROVENANCE: Morris Asimow (1906-1982) was an American educator. Professor of Engineering Systems at the University of California in Los Angeles.

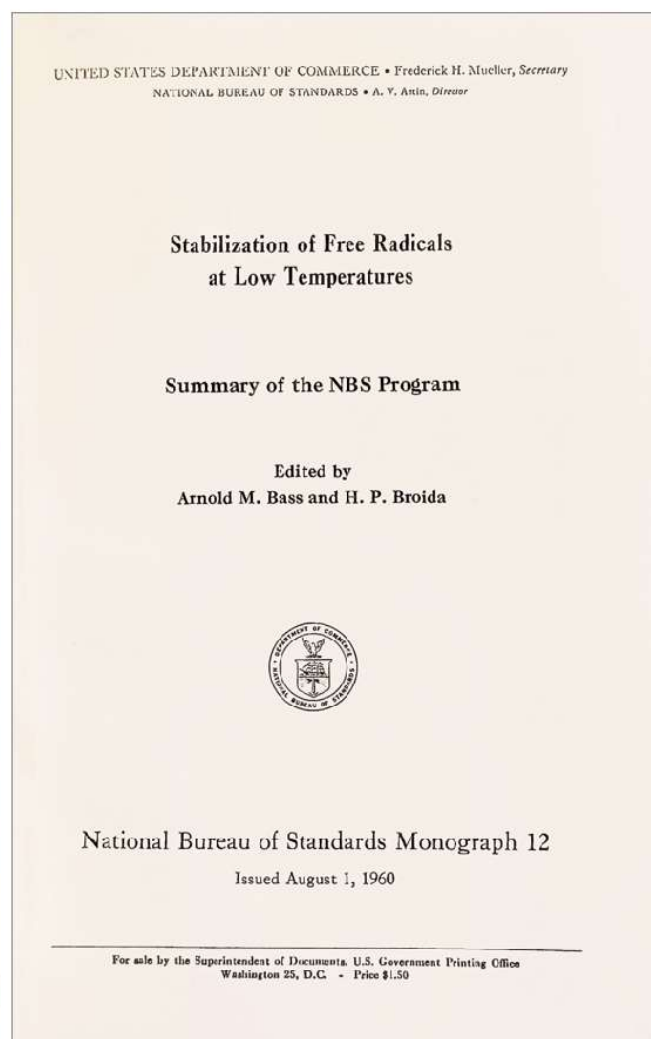
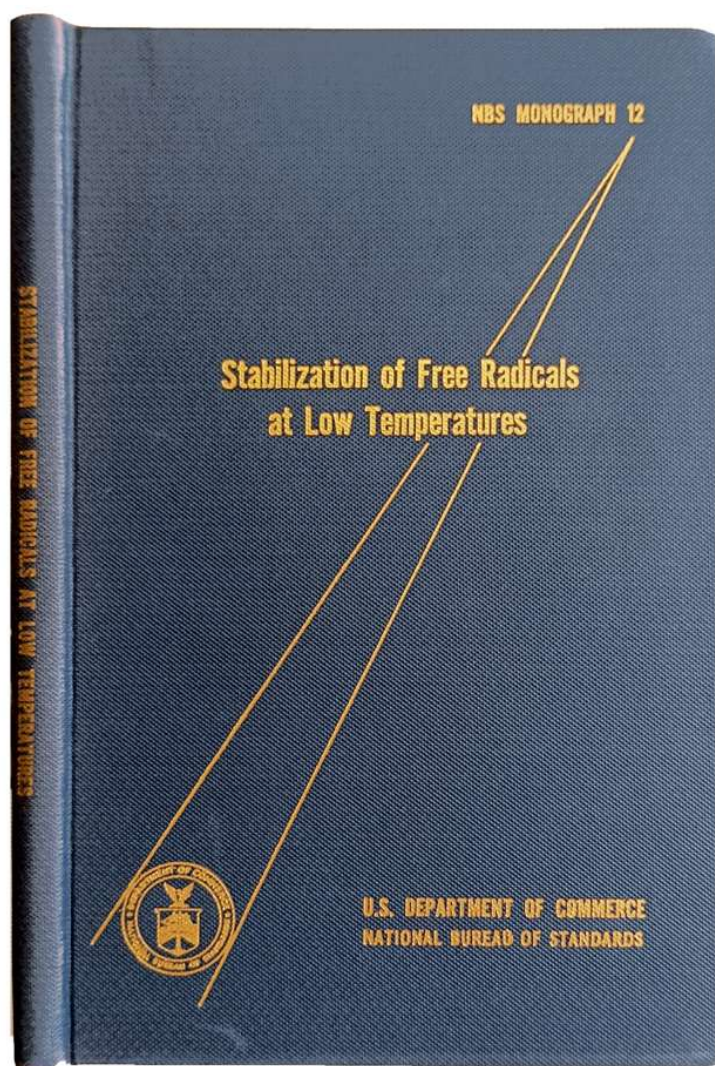




254. **BASILIO, Carlos; Ruth URBA; Victoria PRAJOUX; Julio CABELLO, et al.** "Induction of Arginase Synthesis in an Auxotroph of *Neurospora Crassa*." Offprint from: *Acta Physiologica Latinoamericana*, vol. 9, no. 4, 1959. [No place: no publisher], 1959. ¶ 8vo. 286-297 pp. Figs. Self wraps. Ownership rubber stamp of Norman Horowitz, California Institute of Technology. Fine. [S7115]

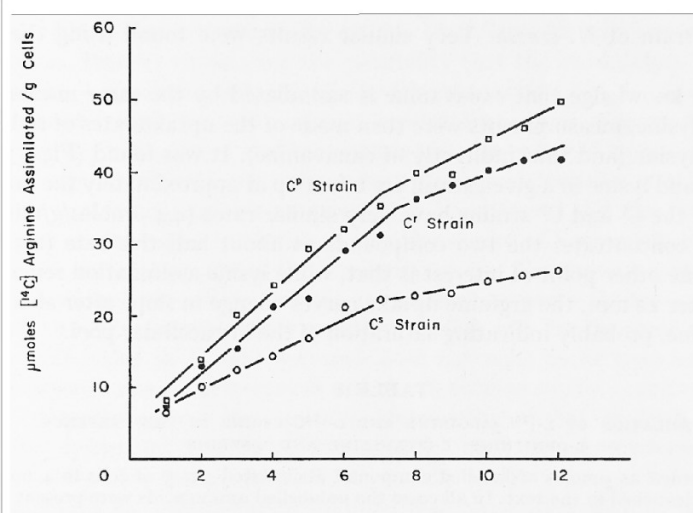
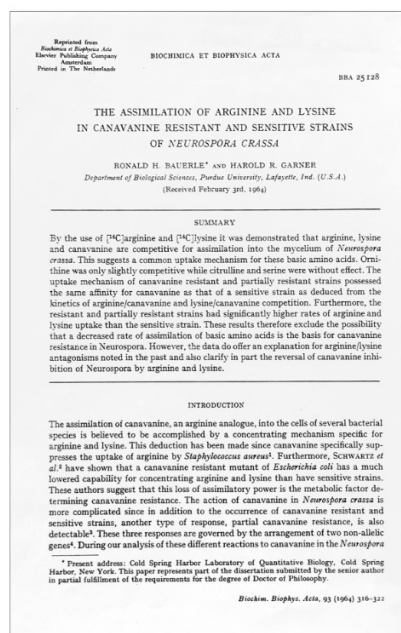
\$ 5

Work done at the institute of chemistry, Universidad de Chile, Santiago. This paper opens with citing Norman Horowitz, which is the reason it was kept by Horowitz (thus here).



255. **BASS, Arnold M.** [Marvin], (1922-1989); **H. P. BROIDA**, editors.  
*Stabilization of free radicals at low temperatures. Summary of the NBS program.*  
 Washington, D.C.: US GPO, 1960. ¶ Series: National Bureau of  
 Standards Monograph, 12. 8vo. iii, 110 pp. Figs., bibliog. Blue cloth, gilt.  
 Ex-Carnegie. Fine. [S0009] \$ 10



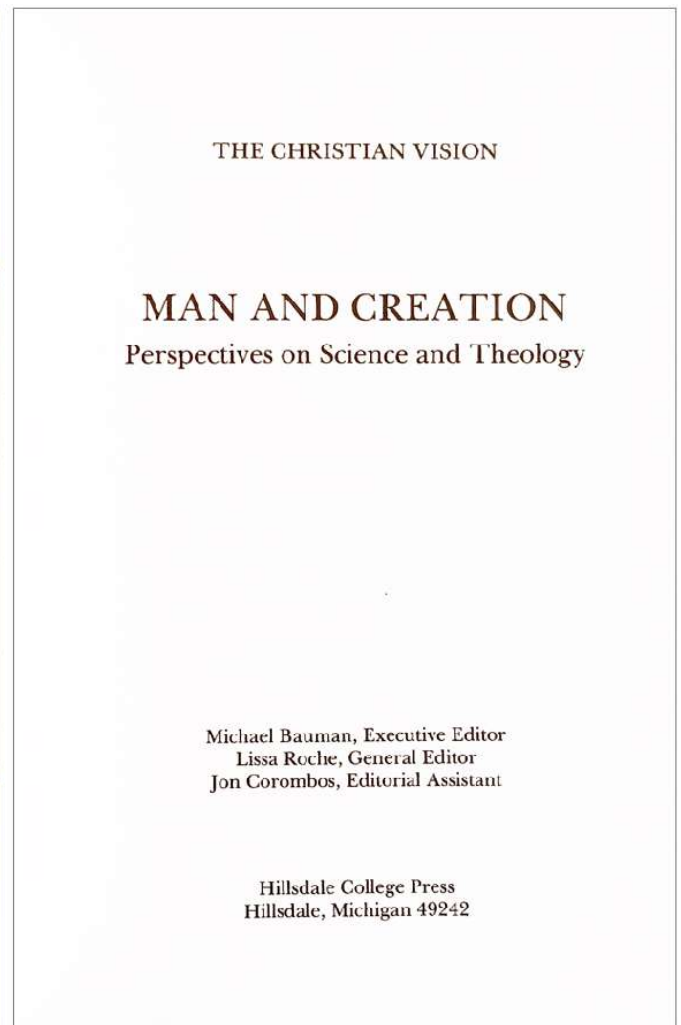
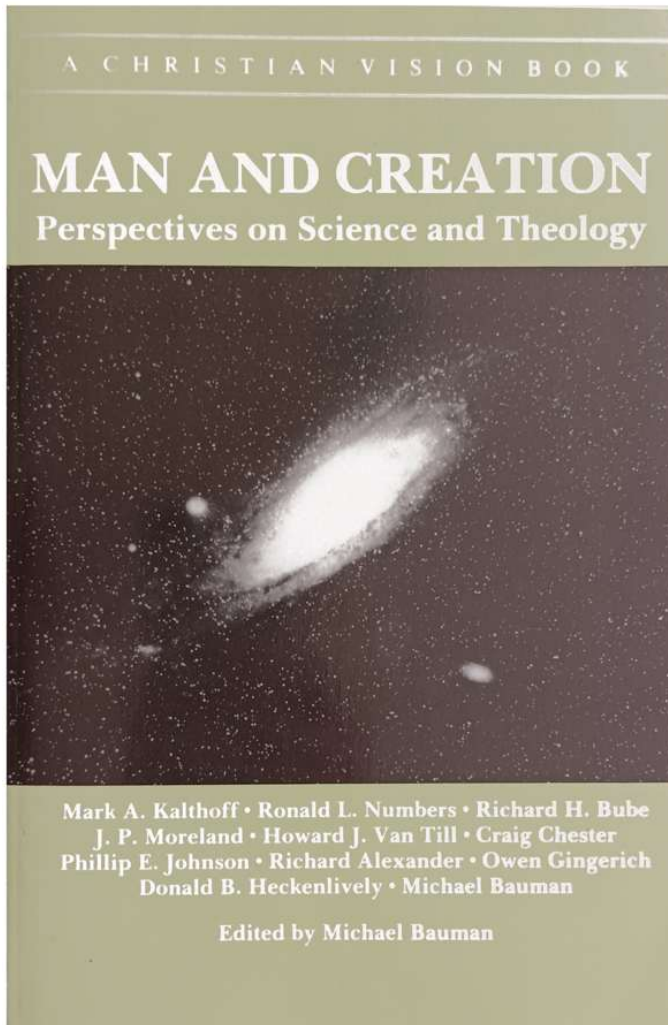


256. **BAUERLE, Ronald H., & Harold R. GARNER.** "The Assimilation of Arginine and Lysine in Canavanine Resistant and Sensitive Strains of *Neurospora Crassa*." Offprint from: *Biochimica et Biophysica Acta*, 93, 1964. [No place: no publisher], 1964. ¶ 8vo. 316-322 pp. Tables. Self wraps. Ownership signature of Norman Horowitz. Self wraps. Fine. [S7116]

\$ 4

By the use of Lysine it was demonstrated that arginine, lysine and canavanine are competitive for assimilation into the mycelium of *Neurospora crassa*. This suggests a common uptake mechanism for these basic amino acids. Ornithine was only slightly competitive while citrulline and serine were without effect. The uptake mechanism of canavanine resistant and partially resistant strains possessed the same affinity for canavanine as that of a sensitive strain as deduced from the kinetics of arginine/canavanine and lysine/canavanine competition. Furthermore, the resistant and partially resistant strains had significantly higher rates of arginine and lysine uptake than the sensitive strain. These results therefore exclude the possibility that a decreased rate of assimilation of basic amino acids is the basis for canavanine resistance in *Neurospora*. However, the data do offer an explanation for arginine/lysine antagonisms noted in the past and also clarify in part the reversal of canavanine inhibition of *Neurospora* by arginine and lysine.

AUTHORS: Ronald H. Bauerle was with Cold Spring Harbor Laboratory. Harold R. Gardner was at the Department of Biological Sciences, Purdue University, Lafayette, Indiana.



257. **BAUMAN, Michael** (ed.). *Man and Creation; Perspectives on Science and Theology*. Hillsdale: Hillsdale College Press, (1993). ¶ Series: *The Christian Vision*. 8vo. vi, 306 pp. Index. Printed wrappers. Very good. [DL1029] \$ 6

Includes: Numbers, Ronald L., "The Evolution of Scientific Creationism."



[ 169 ]

# A THERMODYNAMICAL INVESTIGATION OF THE SYSTEM BENZENE-DIPHENYL

PART I. By J. H. BAXENDALE, B. V. ENUSTUN AND J. STERN

*Department of Physical and Inorganic Chemistry, the University of Leeds*

PARTS II, III AND IV. By J. H. BAXENDALE AND B. V. ENUSTUN

*(Communicated by M. G. Evans, F.R.S.—Received 2 March 1950—Revised 27 June 1950)*

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Conventions to be applied to the observed pressures	174	Relative partial molal heat con- tents, non-ideal entropies and free energies	185
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III. VAPOUR PRESSURES OF BENZENE- DIPHENYL SOLUTIONS	182	References	194
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The partial molal heat content, entropy and free energy of benzene in solutions of diphenyl in benzene have been determined by measurement of the partial pressures of benzene over the solutions. The whole comparative range has been covered (as far as the solubility of diphenyl will allow), at temperatures from 30 to 80° C. A check on the accuracy of the experimental method has been made by measuring the vapour pressure of pure benzene over this temperature range, and good agreement has been found with recent values reported in the literature.

The calculation of the thermodynamic functions from the vapour pressures requires a knowledge of the compressibility of benzene vapour. An experimental method has been devised for determining the compressibility of vapours, and using this the second and third virial coefficients of benzene vapour at various temperatures have been obtained.

The values of the thermodynamic functions of benzene with the composition of the solutions has been compared with that to be expected on the basis of recent statistical theories. It is found that where the non-ideal partial molal free energy can be accounted for almost exactly by the theoretical expressions, the apparent heat contents and entropies show some deviations. It is suggested that these deviations arise from slight changes in molecular packing as the composition is varied.

The activities of benzene and diphenyl in saturated solutions at 20 to 80° C have been obtained from the vapour pressures of saturated solutions at these temperatures. These lead to values for the latent heat of fusion of diphenyl in agreement with the calorimetric value.

The vapour pressure of saturated solutions is discussed.

VOL. 115, A. 36. (Price 6s. 6d.)

25

(Published 10 January 1951)

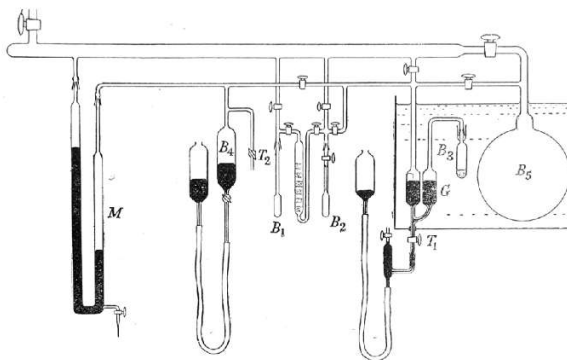


FIGURE 1. Apparatus for the measurement of vapour pressures.

23-2

258. **BAXENDALE, J. H. (ca.1916-1982) ; B. V. ENUSTUN ; & H. STERN.** *A thermodynamical investigation of the system benzene-diphenyl.*  
Extract from: *Philosophical Transactions of the Royal Society of London, Series A, Volume 243, Mathematical and Physical Sciences.* London; New York: Published for the Royal Society by the Cambridge University Press, 1951.  
¶ 292 x 228 mm. 4to. Pages 169-196. 12 figs., 11 tables. Dis-bound.  
[S4115]

\$ 15

The authors present their measurements of the heat content, entropy, and free energy of benzene in solutions of diphenyl.

“During the early 'fifties Bax's curiosity was attracting him already to the use of ionizing radiation as a tool for studying free-radical kinetics both in solution and in the gas phase. In those days, indeed for many years later, scientific pundits were prone to dismiss radiation chemistry with comments such as 'sledgehammer to crack a nut', 'lack of specificity', 'everyone knows the rules of thermal free-radical chemistry don't apply', etc. Bax used to say, always politely of course, 'Don't you believe it, radiation chemistry is still chemistry'. He lived to witness these ghosts well and truly laid and to see the techniques of radiation chemistry, particularly pulse radiolysis, become part and parcel of the armamentarium of the kineticist.” – Obituary for John H. Baxendale, G.E. Adams, *International Journal of Radiation Biology*, 1982, vol. 42, no. 2, pp. 117-119.

J. H. [John H.] "Bax" Baxendale was with the Chemistry Department, University of Manchester, Manchester, England.

I.D.4

*Nuclear Physics* 9 (1958/59) 596—599; © North-Holland Publishing Co., Amsterdam

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# ON THE CONNECTION BETWEEN THE CLUSTER MODEL AND THE $SU_3$ COUPLING SCHEME FOR PARTICLES IN A HARMONIC OSCILLATOR POTENTIAL

B. F. BAYMAN and A. BOHR

*Institute for Theoretical Physics, University of Copenhagen*

Received 14 October 1958

**Abstract:** It is shown that the cluster model of Wildermuth and Kanellopoulos provides an alternative description of certain states in the  $SU_3$  coupling scheme of Elliott.

In a recent series of papers <sup>1,2)</sup>, Wildermuth and Kanellopoulos have discussed a "cluster model" for particles moving independently in a harmonic oscillator field. They utilize the separability of this field to write their wave functions in terms of clusters of particles moving relative to each other. They then argue that, when interactions are added, the states of lowest energy will be those in which the clusters remain unexcited, but are in different states of relative motion. This set of states is also found to have certain properties characteristic of a rotational band. For example, they consider  $Be^8$  in terms of two unexcited  $\alpha$ -particles in relative motion. Because of the exclusion principle, their relative oscillations must have at least four quanta, and so one obtains  $^{11}S$ ,  $^{11}D$  and  $^{11}G$  levels. Similarly,  $F^{19}$  is considered in terms of unexcited  $O^{16} + H^3$ ; the lowest states of relative motion have in this case six quanta, giving rise to  $^{22}S$ ,  $^{22}D$ ,  $^{22}G$  and  $^{22}I$  levels.

For low-lying nuclear states, such as those just mentioned, the cluster model can be thought of as a coupling scheme for the particles outside closed shells. The problem arises of the relationship between this coupling scheme and other known coupling schemes appropriate to the harmonic oscillator potential. Connected with this problem is that of characterizing the interactions which are diagonal in the cluster scheme. It is the purpose of this note to show that the cluster model coupling scheme is intimately connected with the  $SU_3$  coupling scheme recently introduced by Elliott <sup>3)</sup>. The latter gives a classification of states which is similar to that obtained by considering the individual particles as moving independently in a spheroidal rotating field. In accordance with this physical picture, the  $SU_3$  coupling scheme is realized for inter-particle forces of quadrupole type, which can alternatively be described in terms of a deformation of the field (cf. also ref. <sup>4)</sup>).

Before considering these relationships, we note the connection of the

596

[259]

*Written in partnership with Aage Bohr who later won the Nobel Prize (1975)*



259. **BAYMAN, B. F. [Benjamin]; & A. [Aage] BOHR** (1922-2009). [2 papers] “**On the Connection Between the Cluster Model and the SU[3] Coupling Scheme for Particles in a Harmonic Oscillator Potential.**” Offprint from: Amsterdam, *Nuclear Physics*, 9, 1958-59. Amsterdam: Amsterdam, Nuclear Physics, 1959. ¶ 8vo. pp. 596-599. Self wraps. Very good. [S7166]

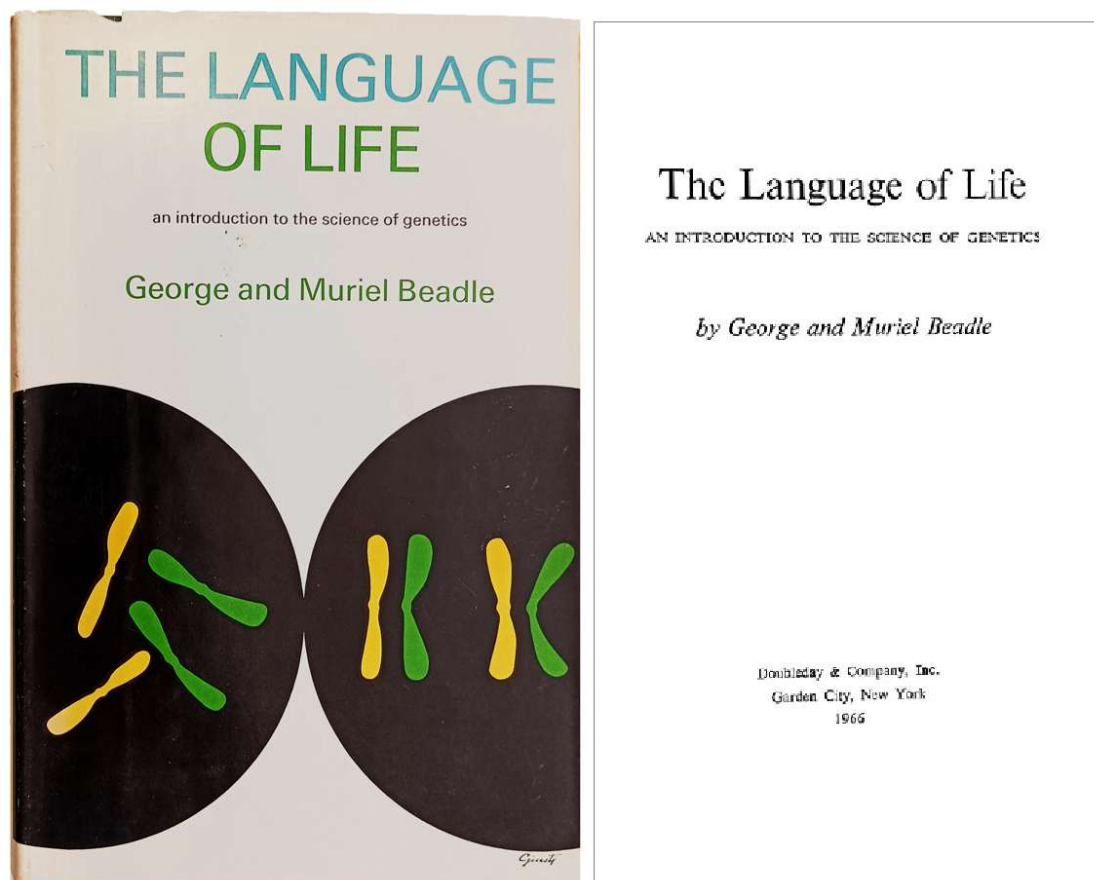
\$ 45

It is shown that the cluster model of Wildermuth and Kanellopoulos provides an alternative description of certain states in the  $SU_3$  coupling scheme of Elliott.

[2] WITH: **BAYMAN, B. F.** “**A Derivation of the Pairing-Correlation Method.**” Offprint from: Amsterdam, *Nuclear Physics*, 15, 1960. 8vo. pp. 33-38. Self wraps. Very good.

The author was associated with the Institute for Theoretical Physics, University of Copenhagen. “With the help of a Fulbright Scholarship, I then did graduate work in physics at the University of Edinburgh, where I earned my PhD. From 1956 through 1960, I was a Ford Foundation Fellow at the Niels Bohr Institute of the University of Copenhagen. From 1960 through 1965, I worked in the Physics Department of Princeton University, as Research Associate, Lecturer, and Assistant Professor. In 1965, I joined the Physics faculty of the University of Minnesota as an Associate Professor, and was promoted to Professor in 1968. I retired in 2000. I continue to do research in theoretical nuclear physics, mostly in collaboration with colleagues at the Universities of Padua and Milan.”

Aage Niels Bohr was a Danish nuclear physicist who shared the Nobel Prize in Physics in 1975 with Ben Roy Mottelson and James Rainwater "for the discovery of the connection between collective motion and particle motion in atomic nuclei and the development of the theory of the structure of the atomic nucleus based on this connection".



260. **BEADLE, George** (1903-1989); **Muriel** (1915-1994). *The language of life; an introduction to the science of genetics*. Garden City, New York: Doubleday, 1966. ¶ 8vo. x, 242 pp. Figs., index. Cloth, dust-jacket; jacket with slight edge wear, but a very good copy. [S3403]

\$ 15

George Wells Beadle was an American geneticist. In 1958 he shared one-half of the Nobel Prize in Physiology or Medicine with Edward Tatum for their discovery of the role of genes in regulating biochemical events within cells. "Organisms' metabolism—the chemical processes within its cells—are regulated by substances called enzymes. George Beadle and Edward Tatum proved in 1941 that our genetic code, our genes, govern the formation of enzymes. They exposed a type of mold to x-rays, causing mutations, or changes in its genes. They later succeeded in proving that this led to definite changes in enzyme formation. The conclusion was that each enzyme corresponds to a particular gene." – Nobel Prize. Muriel Beadle was married to George Beadle.



# CHANGING TRENDS IN SOVIET ATTITUDES TO BIOLOGY

by  
G. H. BEALE

An offprint of an Article by G. H. BEALE  
from Volume VII, No. 1 of SOVIET STUDIES

1155 1174-79

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Vol. 17, No. 1, August 1957

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BEALE, G. H. & KACSER, H. (1957). *J. gen. Microbiol.* 17, 68-74

## Studies on the Antigens of *Paramecium aurelia* with the Aid of Fluorescent Antibodies

By G. H. BEALE AND H. KACSER

Department of Animal Genetics, University of Edinburgh

**SUMMARY:** Preparations of *Paramecium aurelia*, which had been immobilized by placing the organisms in a solution containing antiserum conjugated with fluorescein (conjugated antiserum), were examined by fluorescence microscopy. Unfixed paramecia accumulated fluorescent antibody in a thin layer around the entire surface of the organisms, and in globules at the clumped tips of the cilia, but not in the cilia themselves. No fluorescence was seen in the nuclei or the cytoplasm, but the food vacuoles became brightly fluorescent when the paramecia remained in conjugated antiserum for a few hours. Paramecia, which had been fixed with osmic acid and subsequently treated with fluorescent antibody, showed a faint fluorescence along the whole lengths of the cilia. When transformation from one serotype to another took place, the change in ability to take up a given kind of fluorescent antibody was seen to occur uniformly over the whole surface of the organism. It is concluded that the immobilization antigen is a fluid substance which covers the whole surface of the paramecia and is exuded into the medium under certain conditions, especially when homologous antibody is present.

Extensive studies have been made on the genetics of antigen variation in *Paramecium aurelia* by Sonneborn, Beale and others (for references, see Beale, 1954, 1957). In all such work only one immunological reaction has been used, namely, the immobilization of the organisms which takes place when living paramecia are placed in a fluid containing dilute homologous antiserum. It is known that this immobilization reaction is associated with a clumping of the cilia, and for this reason the antigens concerned have been generally referred to as the 'ciliary antigens'. However, definite evidence that these antigens are derived from part of the ciliary structure has never been brought forward.

The paramecium antigen system, with its complex array of determining factors in the nucleus, cytoplasm and environment, has been considered as a model, valuable for the understanding of mechanisms of cell differentiation generally (Sonneborn, 1947; Beale, 1952). It is therefore important to obtain as much information as possible concerning the nature and location of the final products in the system, namely the specific antigens themselves. The elegant technique developed by Coons and collaborators (Coons, Creech, Jones & Berliner, 1942; Coons & Kaplan, 1950), offers a means for localizing the sites of deposition of antibodies in tissues, and thus enables inferences to be drawn regarding the sites of the corresponding antigens. Essentially the method involves conjugating the antibodies in suitable antisera with a fluorochrome such as fluorescein, applying the conjugated antiserum thus obtained to the tissue under investigation, washing away the fluorescent solution, and observing the treated material by fluorescence microscopy, that is, under

Volume XXXII

## Annals of the Missouri Botanical Garden



APRIL, 1945

Special number, Conference on "Gene Action in Micro-organisms"

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*J. Genet.* Vol. 68, No. 3, December 1989, pp. 201-206. © Printed in India.

George Wells Beale  
(1903-1989)

261. **BEALE, G. H. [Geoffrey Herbert]** (1913-2009). [Group of 8 offprints]. Includes: “**The Process of Transformation of Antigenic Type in Paramecium Aurelia, Variety 4.**” Offprint from: *Proceedings of the National Academy of Sciences*, vol. 34, no. 8. No place: National Academy of Sciences, 1948. ¶ 8vo. 418-423 pp. Self-wraps. Ownership rubber stamp of Norman Horowitz, California Institute of Technology. FINE. [S7880]

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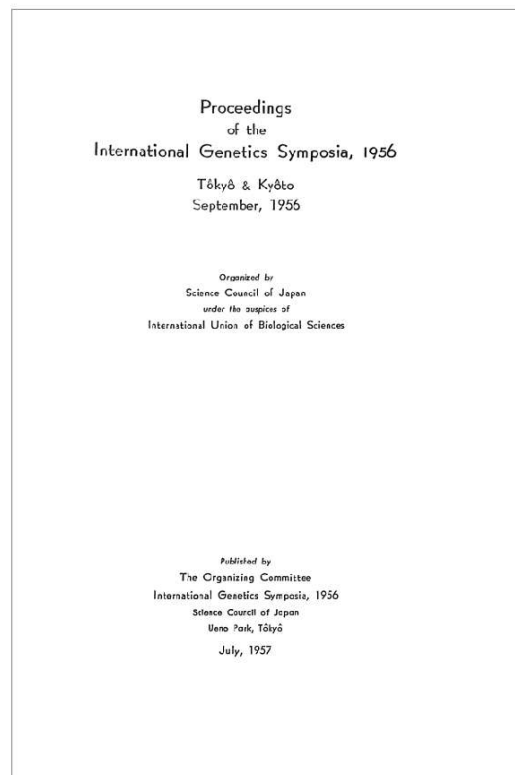
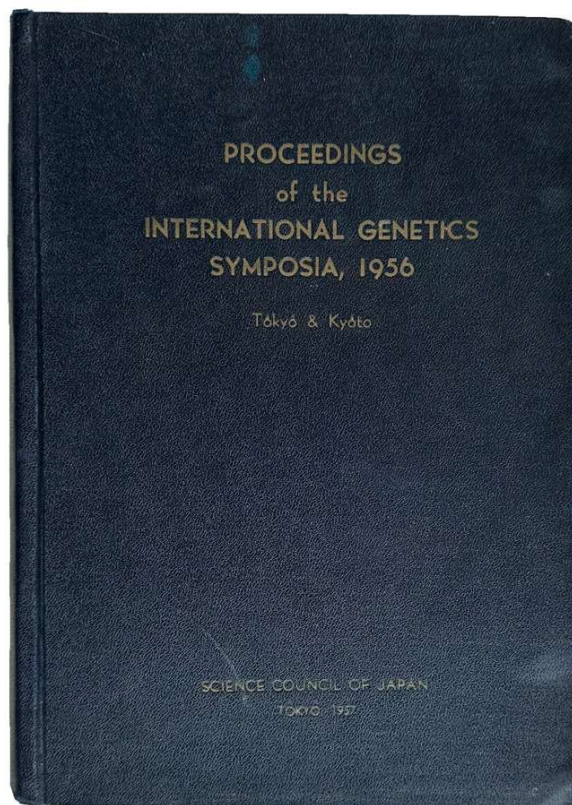
WITH: **BEALE.** “**Antigen Variation in Paramecium Aurelia, Variety 1.**” Offprint from: *Genetics*, vol. 37, no. 1, 1952. 8vo. 62-74 pp. Self-wraps. FINE. Full list available on request.

“In 1947, back at Cold Spring Harbour, he received a Rockefeller Fellowship which required him to return to the UK. He was duly offered a lectureship by C.H. Waddington at the Institute of Animal Genetics in Edinburgh where Beale continued his work on Paramecium. He was promoted to Senior Lecturer in 1954 and Reader in 1959 before being appointed a Royal Society Research Professor in 1963, a position he held until his retirement in 1978. At the Institute, Beale became close friends with Henrik Kacser and Charlotte 'Lotte' Auerbach, about whom he would later write an account.”

“With funding from the University of Edinburgh and the Wellcome Trust, Beale was able to design and build dedicated research laboratories, including the Protozoan Genetics building for his research group. This group worked on the genetics of Paramecium and on protozoan parasites, and attracted visiting scientists from all over the world. Over the next few decades the research of Beale and his colleagues incorporated the effect of the cytoplasm on serotypes in *P. primaurelia*, symbionts and 'metagons' in Paramecium (although Beale later declared his 'metagon hypothesis' defunct) and mitochondria in Paramecium.” – University of Edinburgh Archive & Mss. Collections.

Geoffrey Herbert Beale was previously with the Dept. of Zoology at Indiana University, Bloomington. He is known as the founder of malaria genetics, and a Royal Society professor. He also taught at the University of Edinburgh.



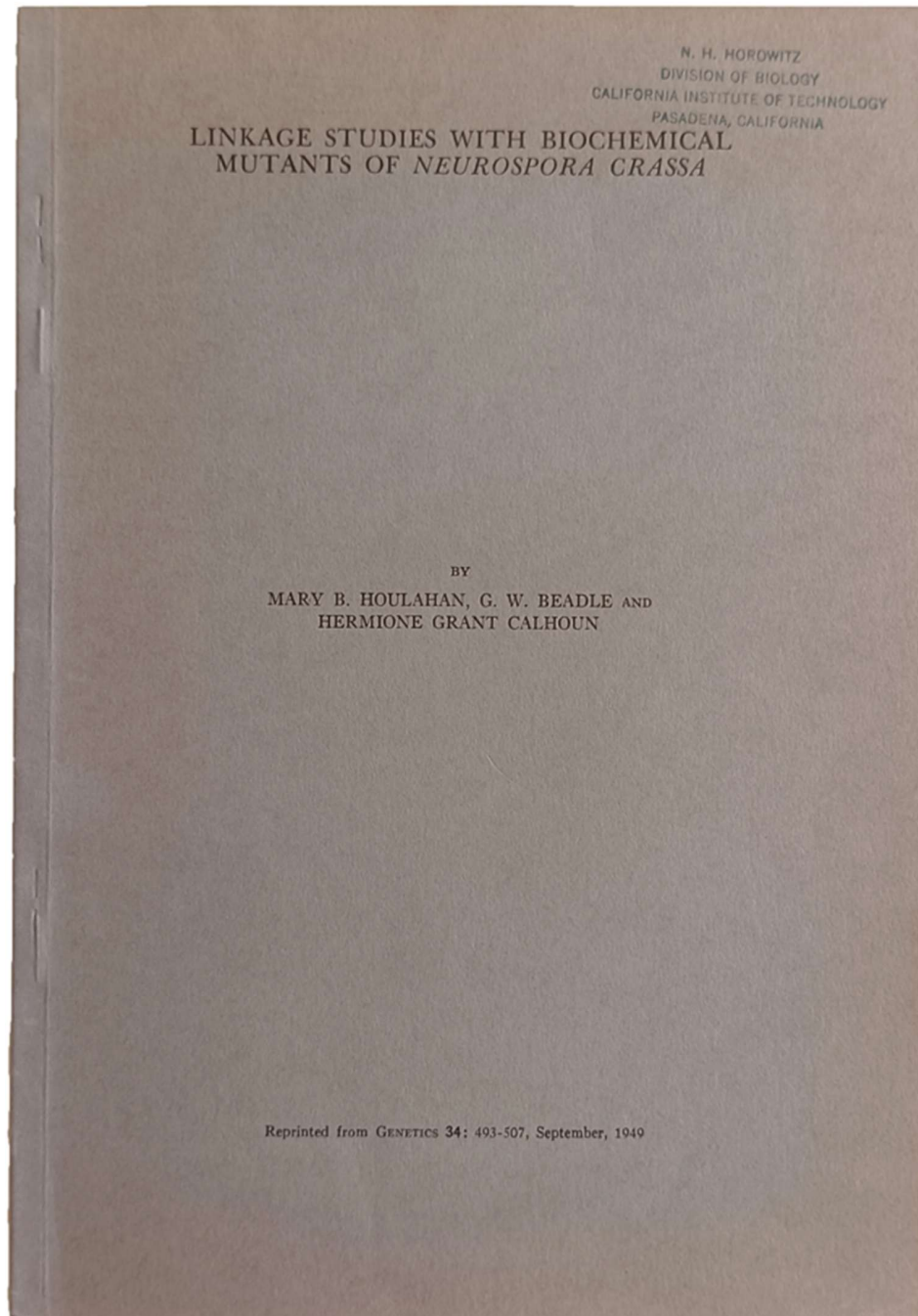


262. **BEADLE, George Wells** (1903-1989). “**Gene Structure and Gene Function.**” & “**Some Recent Advances in Neurospora Genetics.**” In: *Proceedings of the International Genetics Symposia, 1956, Tokyo & Kyoto, September, 1956.* Tokyo: The Organizing Committee, 1957. ¶ Thick 8vo. (Articles): 1-4; 142-145 pp. (Whole volume): xxiii, 12, 680 pp. Articles, photos, figs. Dark blue-black cloth. FINE. [S7881]

\$ 45

George Wells Beadle was an American geneticist. In 1958 he shared one-half of the Nobel Prize in Physiology or Medicine with Edward Tatum for their discovery of the role of genes in regulating biochemical events within cells. “Organisms' metabolism—the chemical processes within its cells—are regulated by substances called enzymes. George Beadle and Edward Tatum proved in 1941 that our genetic code, our genes, govern the formation of enzymes. They exposed a type of mold to x-rays, causing mutations, or changes in its genes. They later succeeded in proving that this led to definite changes in enzyme formation. The conclusion was that each enzyme corresponds to a particular gene.” – Nobel Prize.

SELECTED CONTENTS: Tsung Dao Lee, Black-hole radiation. – James V. Neel, & William J. Schull, Studies on the potential genetic effects of the atomic bombs. – Yoshimaro Tanaka, Genetics in Japan.



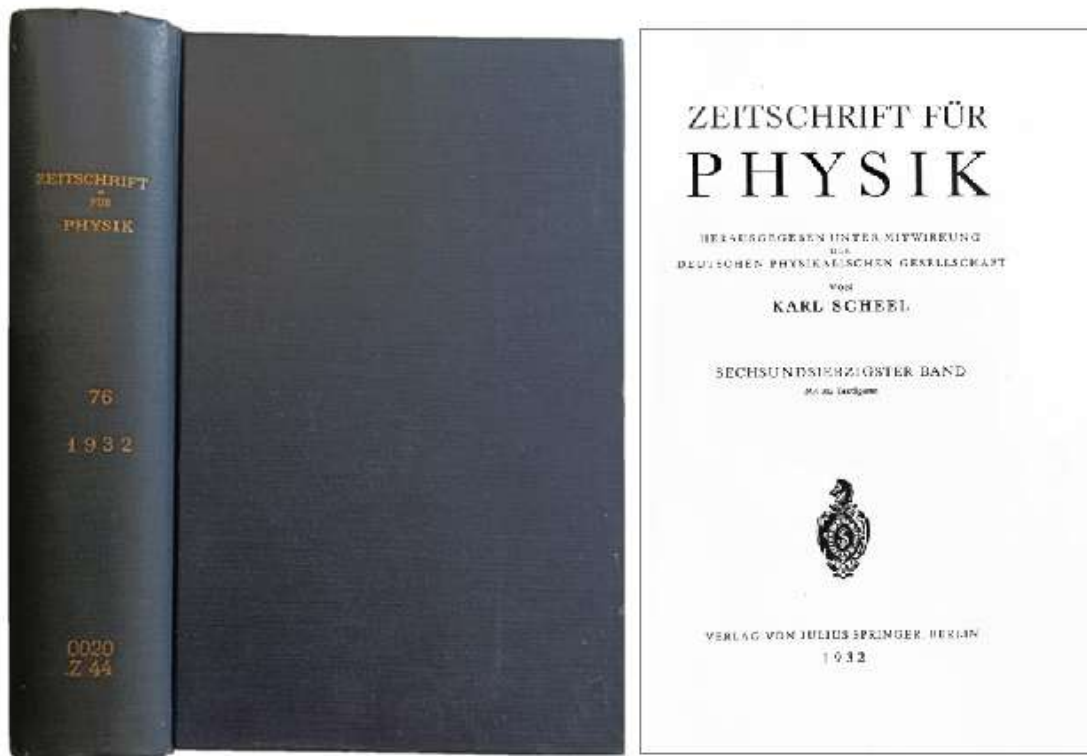
[263]



263. **BEADLE, George Wells** (1903-1989); **Mary B. HOULAHAN**; & **Hermione Grant CALHOUN**. “**Linkage Studies with Biochemical Mutants of *Neurospora Crassa***.” Offprint from: *Genetics*, 34. No place: Genetics, 1949. ¶ 8vo. 493-507 pp. Tables. Printed wrappers. Ownership rubber stamp of Norman Horowitz. FINE. [S8213]

\$ 300

Beadle is one of the great figures in the history of modern genetics, and with E. L. Tatum, Beadle was awarded half of the 1958 Nobel Prize for Physiology or Medicine (along with Joshua Lederberg) for their discovery that genes act by regulating definite chemical events. Norman Harold Horowitz (1915-2005) was He completed his PhD at Caltech in 1939 under embryologist Albert Tyler, and a postdoctoral researcher at Stanford University in the laboratory of George W. Beadle, and also, later a colleague of Beadle at Caltech. In 1946 Beadle returned to the California Institute of Technology as Professor of Biology and Chairman of the Division of Biology. Here he remained until January 1961 when he was elected Chancellor of the University of Chicago.



[264]

# Die in Bor und Beryllium erregten $\gamma$ -Strahlen.

Von H. Becker und W. Bothe in Gießen.

Mit 8 Abbildungen. (Eingegangen am 26. April 1932.)

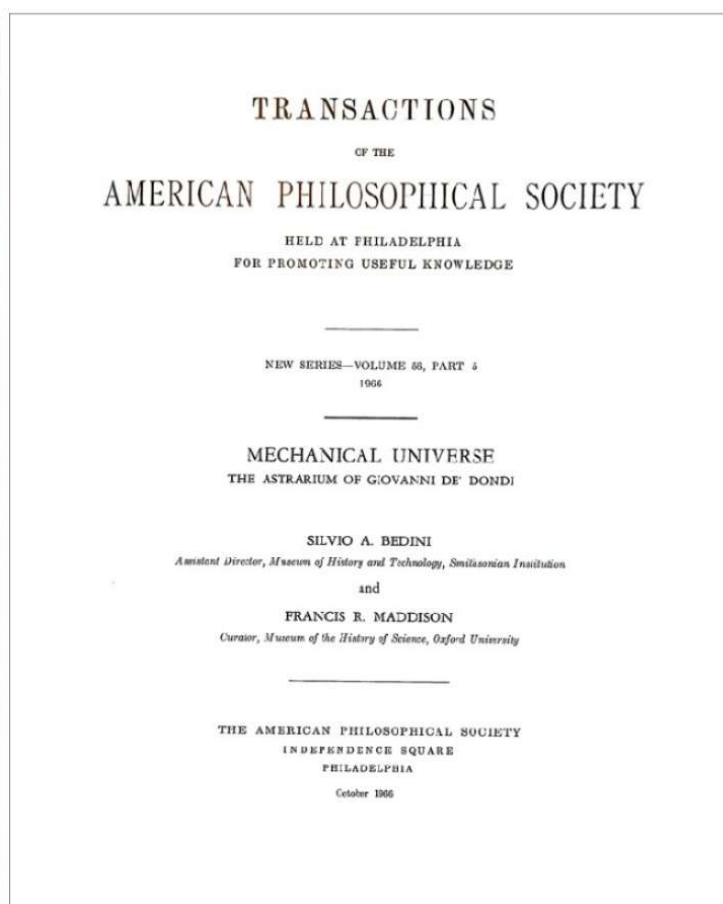
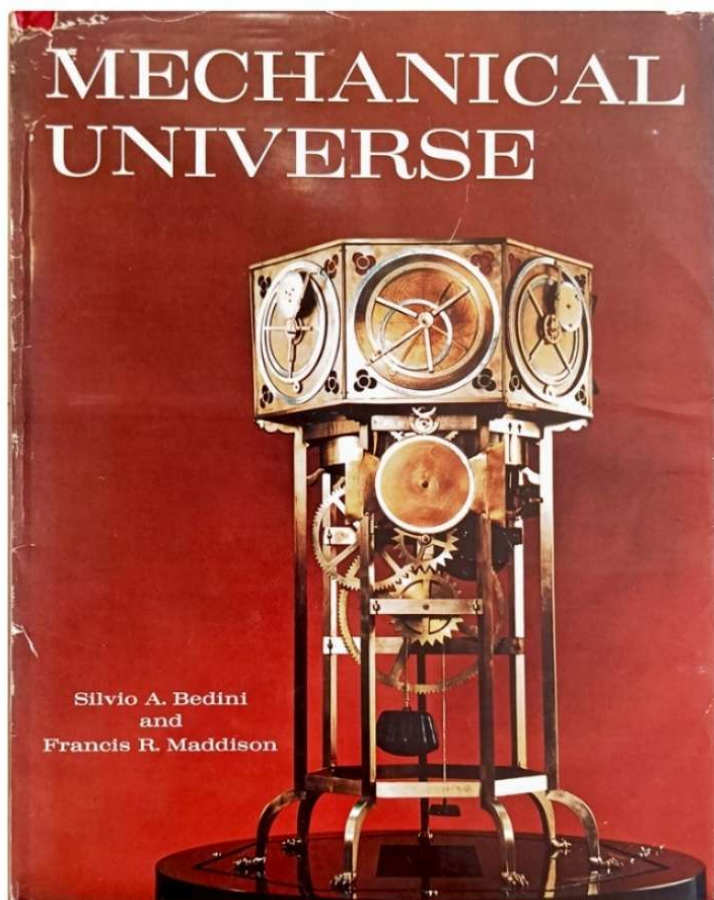
264. **BECKER, Herbert & Walther Wilhelm George BOTHE** (1891-1957). *Die in Bor und Beryllium erregten . . . Strahlen*. In: *Zeitschrift für Physik*, Vol. 76, 1932. Berlin: Julius Springer, 1932. ¶ 232 x 157 mm. 8vo. Pages 421-429. [Entire volume: vii, [1 blank], 856 pp.] 8 figs., 5 tables. Navy cloth, gilt spine. Blind-stamps of the Carnegie Institution of Washington, Mount Wilson Observatory. FINE. [S5087]

\$ 95

First edition. Beginning in 1926, Walther Bothe investigated the transmutation of elements that occurs when their atomic nuclei are bombarded by alpha particles. In 1930 Bothe and Becker detected a highly penetrative radiation from beryllium bombarded by alpha particles, and they assumed that it was gamma radiation. Bothe estimated the photon energy from the degree of absorption of the secondary electrons. When physicists studied this “beryllium radiation,” estimating its energy constituted a problem, for it varied greatly according to the substance used as absorber. Chadwick later suggested that the radiation was particulate and consisted of a new particle, the neutron. Walther Bothe shared the Nobel Prize for Physics with Max Born “for the coincidence method and his discoveries made therewith.” Wasson, *Nobel Prize winners*, pp. 125-128.

§ *DSB*, II, pp. 337-339.



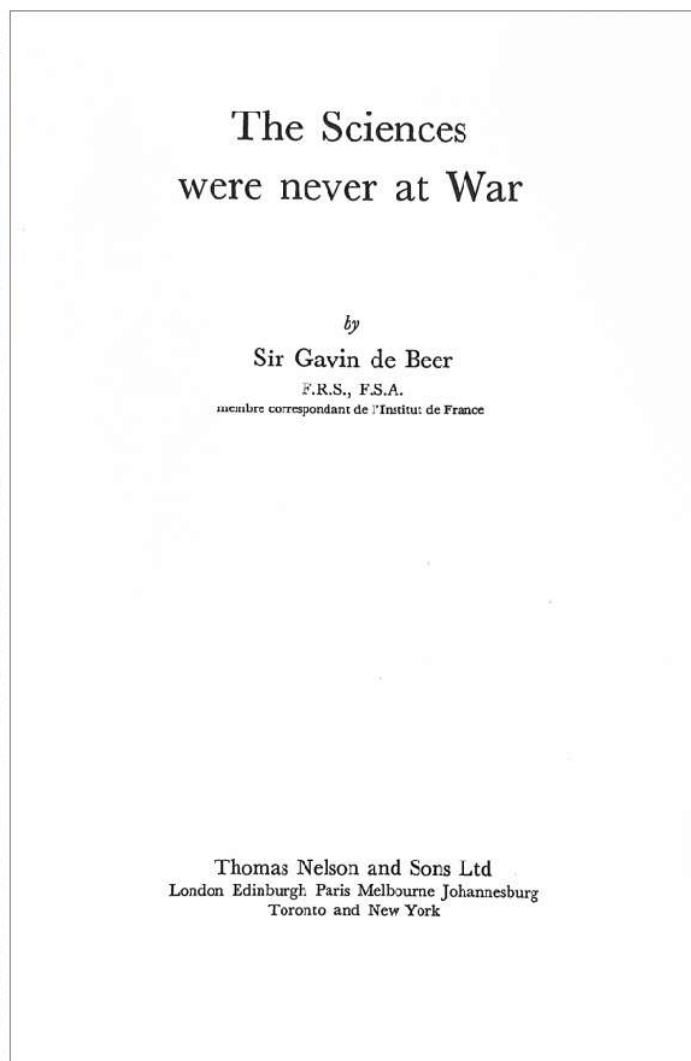
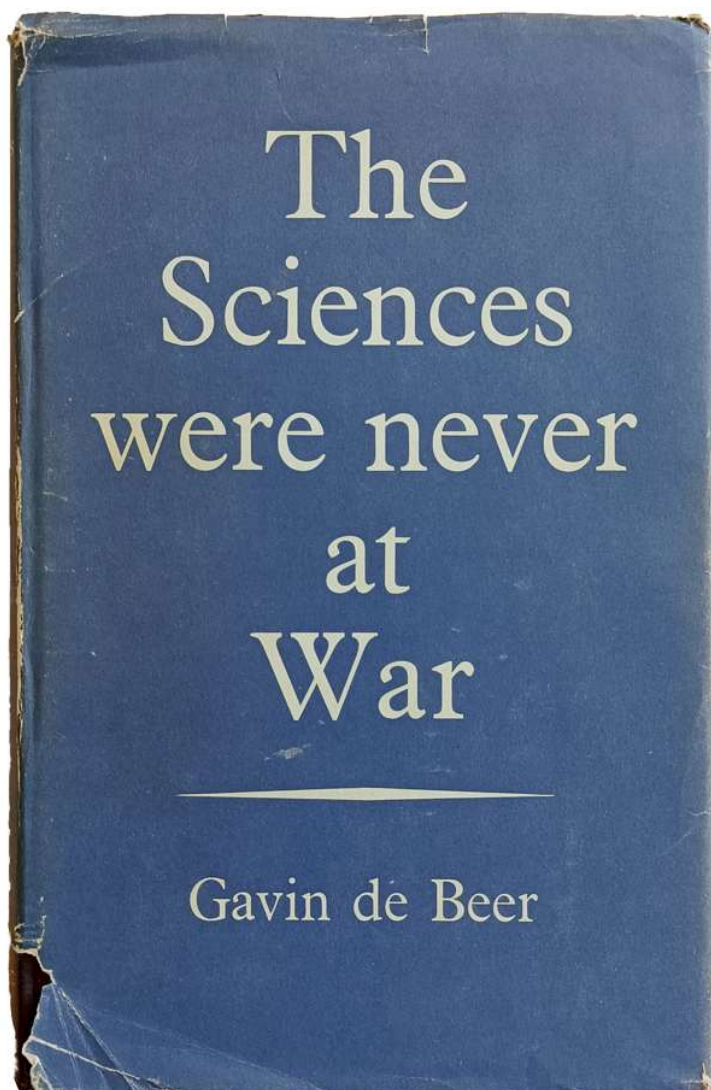


*Inscribed by the author to I Bernard Cohen*

265. **BEDINI, Silvio A.** (1917-2007); **Francis R. MADDISON.** *Mechanical Universe: The Astrarium of Giovanni de' Dondi* . . . Philadelphia: The American Philosophical Society, 1966. ¶ Series: *Transactions of the American Philosophical Society held at Philadelphia for promoting useful knowledge*. 4to. 69 pp. Frontis., 53 figs., chronology, bibliog., index. Boards, dust jacket; jacket edge chipped, spine worn. Good. INSCRIBED BY THE AUTHOR to I Bernard Cohen. [S6042]

\$ 50

Silvio A. Bedini was an American historian, specializing in early scientific instruments. He was Historian Emeritus of the Smithsonian Institution, where he served on the professional staff for twenty-five years, retiring in 1987.

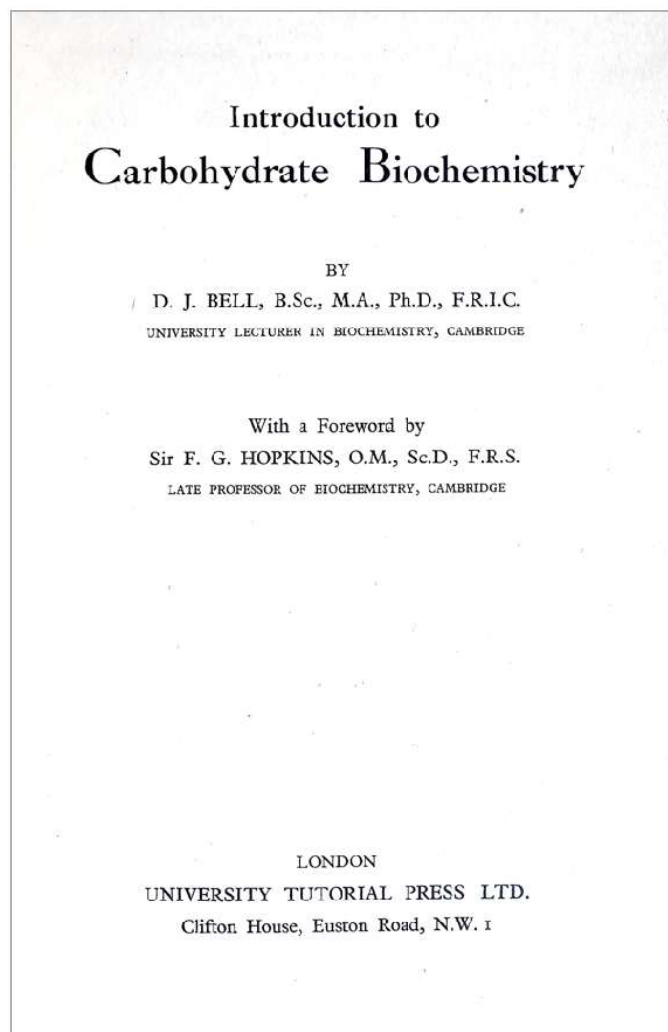
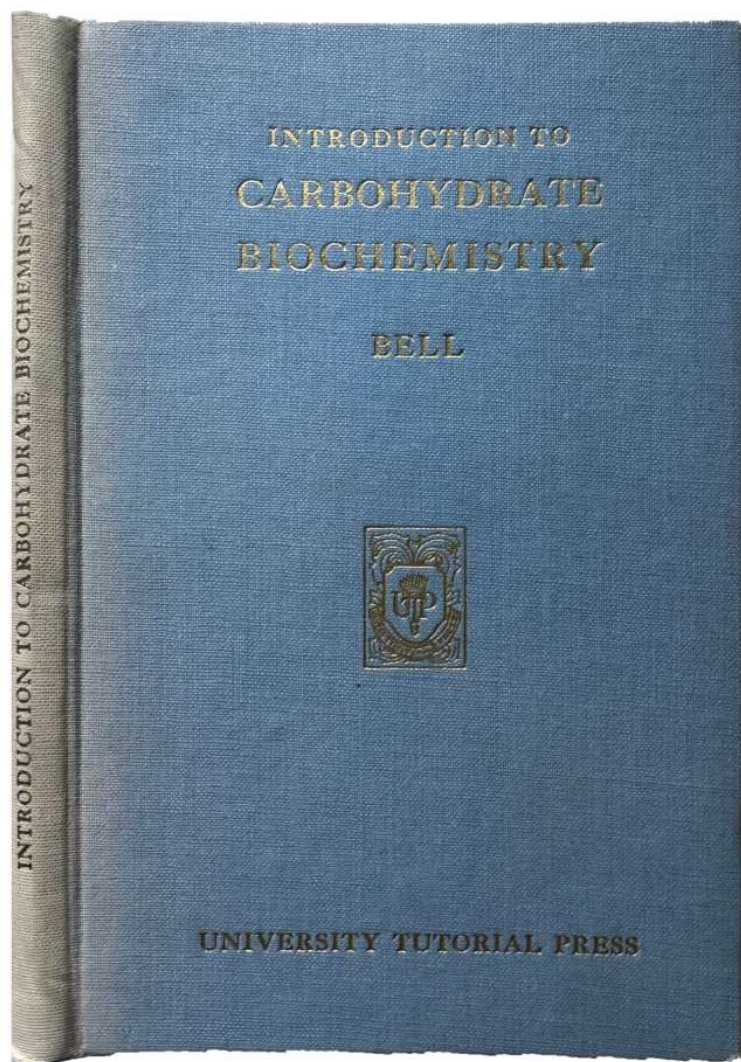


266. **BEER, Sir Gavin de** (1899–1972). *The Sciences Were Never at War*.  
 London et al: Thomas Nelson, (1960). ¶ 8vo. xv, 279 pp. Illus., index.  
 Gilt-stamped navy cloth; dust jacket; jacket worn with portion missing.  
 Very good. [RH1245]

\$ 12

Sir Gavin Rylands de Beer, FRS, was a British evolutionary embryologist considered by many as a forerunner of modern evolutionary developmental biology (evo-devo).





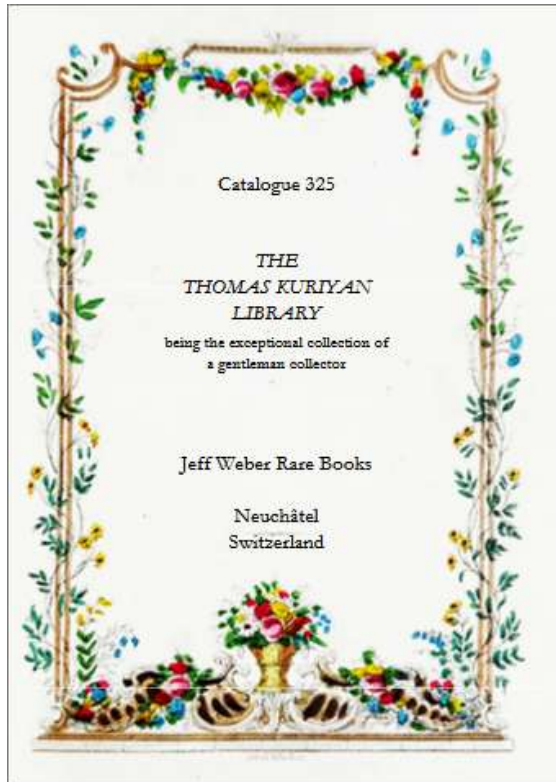
267. **BELL, D. J. [David James]** (1905-1972). *Introduction to Carbohydrate Biochemistry*. London: University Tutorial Press, 1948. ¶ Second edition. 8vo. viii, 107 pp. Figs., index; minor ink underlining. Gilt stamped blue cloth; spine faded. Ownership rubber stamp of Norman Horowitz, California Institute of Technology. Very good. [S7883]

\$ 8

See: John S.D. Bacon, David J. Manners, "David James Bell 1905-1972," *Advances in Carbohydrate Chemistry and Biochemistry*, Volume 30, 1974, Pages 1-9.

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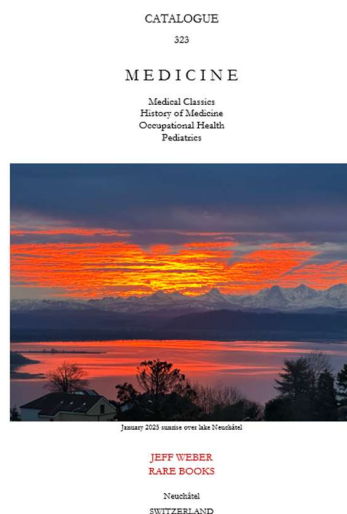
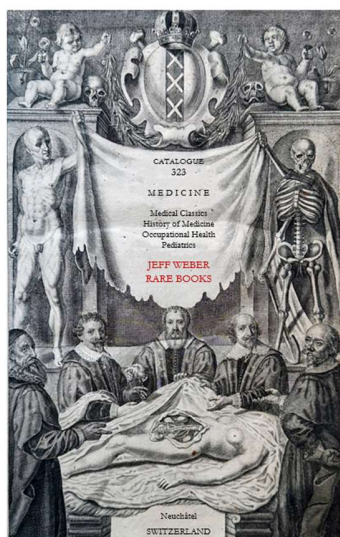


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