CATALOGUE 48

Rare Books, Manuscripts & Autographs in Science & Medicine

For the 47th California International Antiquarian Book Fair

Pasadena Convention Center, February 7–9, 2014

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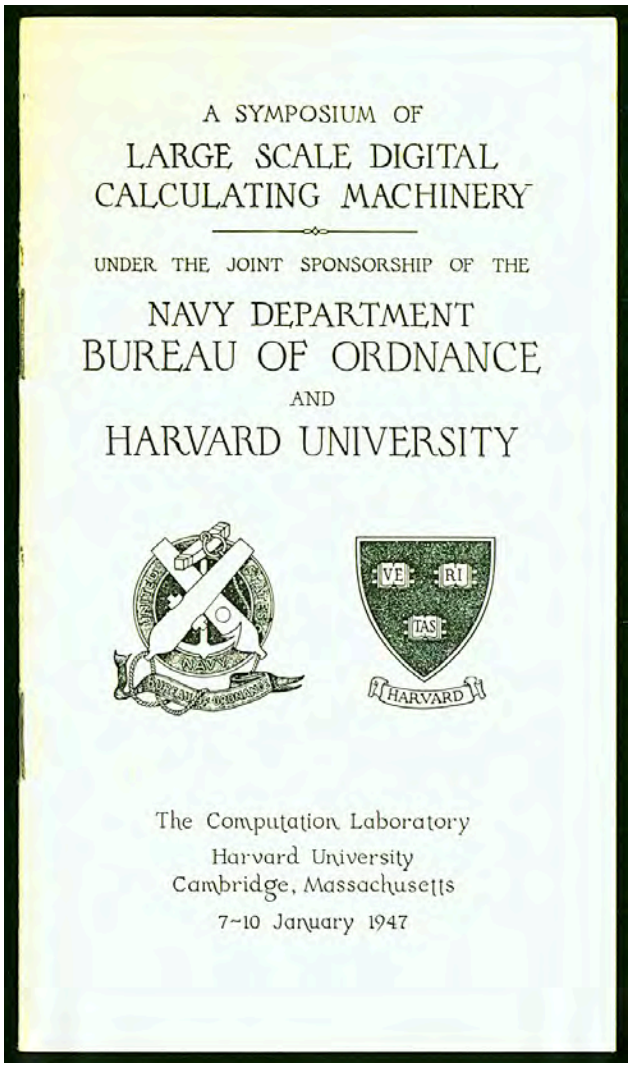
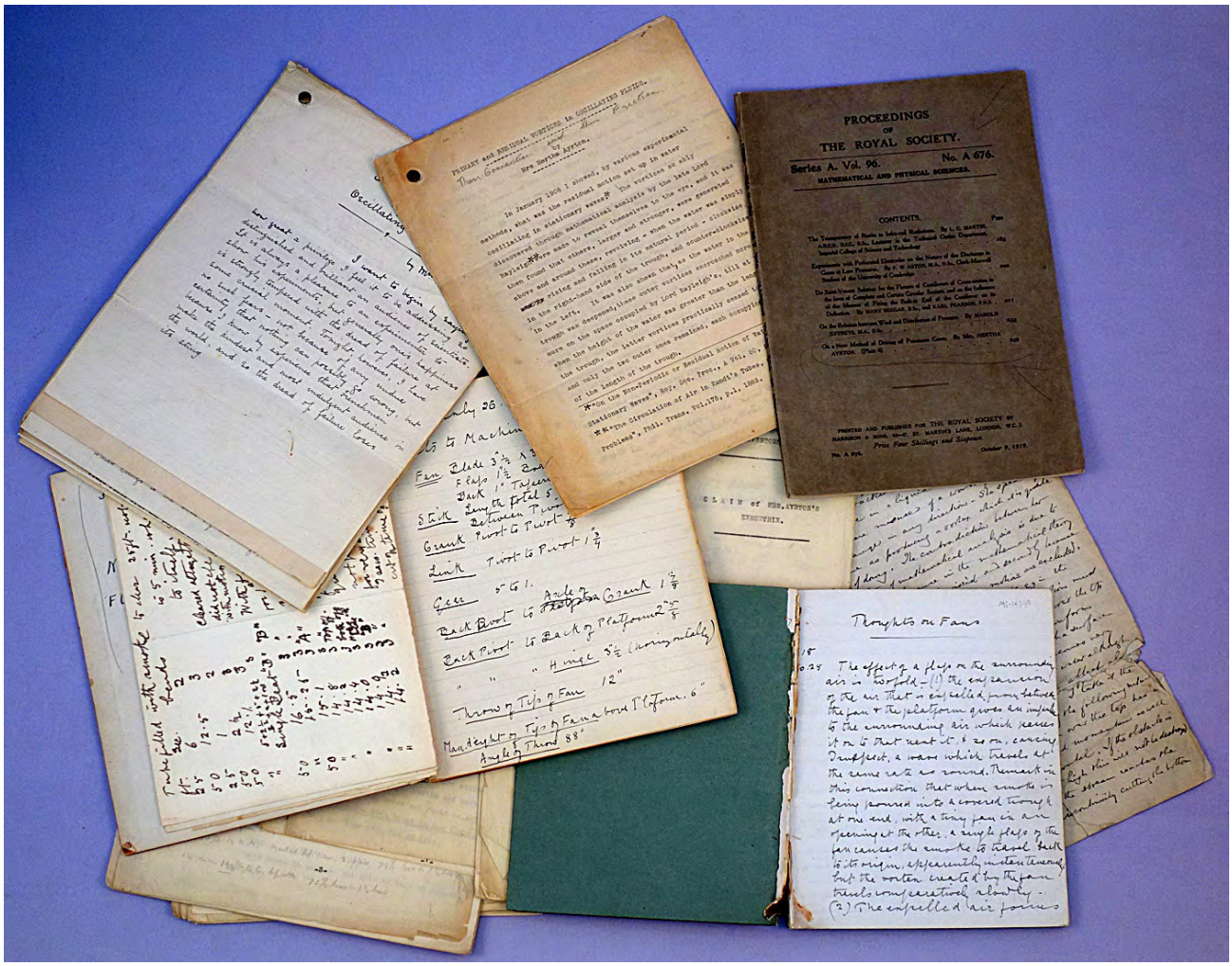


Extremely Rare Program for the First Full-Scale Symposium on Electronic Computers

1. [**Aiken, Howard (1900-73).**] Symposium on large-scale digital calculating machinery. Under the joint sponsorship of the Navy Department Bureau of Ordnance and Harvard University. [8]pp. Illustrated. Cambridge: Computation Laboratory, Harvard University, 7-10 January 1947. 153 x 89 mm. Original white printed wrappers. Boxed. Fine. $4500

Extremely rare printed program for the first of the computing symposia held at Harvard University's Computation Laboratory. This was the first full-scale symposium on electronic and electromechanical digital computers in the world. It took place more than a year after the first postwar conference on mechanical and electronic computation techniques, held at MIT in October 1945, for which no proceedings were published. When we last checked OCLC cited no copies of this pamphlet. *Origins of Cyberspace* 413. 39000



Remarkable Collection Documenting the Work of One of the First Female Physicists

2. Ayrton, Hertha (1854-1923). Collection of autograph manuscript, typescript and printed materials, consisting of the following: (1) 27-page typescript, with extensive autograph manuscript corrections and additions, of Ayrton's lecture "Sand ripples and oscillating water" [1911?]. 280 x 240 mm. Creased along folds, some soiling. (2) 2-1/2 page manuscript critique, by an anonymous Royal Society referee, of Ayrton's paper "On some new facts connected with the motion of oscillating water" (1911). 325 x 205 mm. Creased along folds, some soiling, a few tears. (3) 12-page typescript, with autograph manuscript corrections, of Ayrton's paper "Primary and residual vortices in oscillating fluids—Their connection with skin friction," left unpublished at her death. Dated "ca. 1915" in pencil on the first leaf. 256 x 205 mm. Creased along folds, minor soiling. (4) 2 partially filled autograph notebooks concerning her research on fans, 1918-23. 195 x 157 mm; 227 x 180 mm. Quarter leather and quarter cloth, hinges weak. (5) *Proceedings of the Royal Society,* Series A, Vol. 96, no. A 676 (1919), containing Ayrton's paper "On a new method of driving off poisonous gases." Orig. printed wrappers; sheet of Ayrton's manuscript notes, on United Suffragists stationery, laid in. (6) Collection of 7 mimeographed and carbon typescripts, on legal-size paper (330 x 204 mm.) fastened with brads, pertaining to the

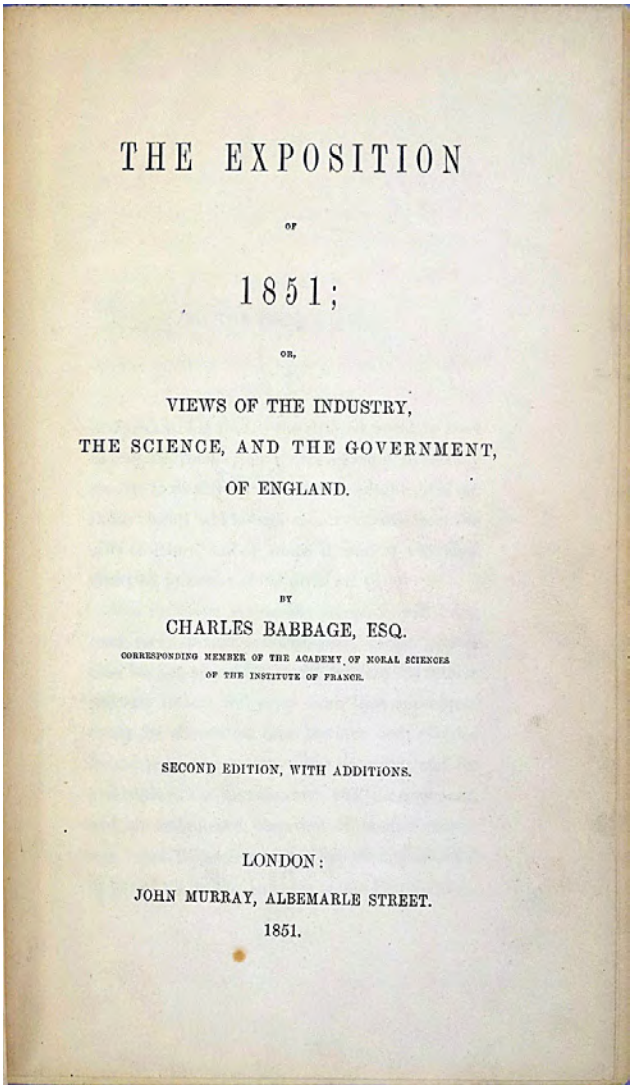
claim made by Ayrton's estate for an award for the Admiralty's use of her negative carbons (1924). A few leaves loose, creased along folds, some soiling & chipping. 2 of the documents bear the pencil signature of C. E. Greenslade, Ayrton's research assistant. (7) *Hertha Ayrton: A Memoir*, by Evelyn Sharp. xiv, 304 pp. 5 plates. London: Arnold, 1926. Orig. cloth, shaken, some leaves loose. $9500

Ayrton (born Sarah Phoebe Marks) was a British physicist and electrical engineer who made important contributions to the study of electric arcs and of the physics of waves in water with obstacles and boundaries. "Her research on electricity demonstrated a deep understanding of the non-intuitive characteristics of electricity conducted in arc discharges and led to significant improvement in the operation of arc lighting systems. . . . Her later research about the characteristics of wave motion in liquids and about how the wave motion influences the contours of underwater surfaces have withstood the passage of time" (Grolier Club, *Extraordinary Women in Science & Medicine*, p. 44). Ayrton's research on the properties of electric arcs led to her being the first woman elected to the Institution of Electrical Engineers, and her monograph *The Electric Arc*, published in 1902, remained the standard textbook on the subject until the 1920s. She was the first woman to read a research paper at a Royal Society meeting, and the first (and still only) woman to receive the Society's Hughes Medal, awarded for original discoveries relating to the generation, storage and use of energy.

This collection of original manuscripts and typescripts documents three of Ayrton's major areas of research: (A) the formation of sand ripples under water by ripple-forming vortices (nos. 1-3); (B) the creation of satisfactory specifications for the carbons used in searchlight projectors, as requested by the Admiralty (no. 6); and (C) the invention of the Ayrton Fan for dispelling clouds of poison gas, an outgrowth of her research on sand-ripples and vortices (nos. 4-5). Ayrton began investigating the causes of sand-ripples in 1901, after observing these formations on a beach; her researches led to the establishment of important new facts about wave motion in both water and air, and were instrumental in gaining her the Royal Society's Hughes Medal for original research in 1906. Nonetheless, not all of Ayrton's work on this subject met with approval; see Sharp, pp. 225-27 for an account of the rejection of Ayrton's 1911 paper "On some new facts connected with the motion of oscillating water," the subject of the anonymous Royal Society critique cited here as No. 2. No. 3, Ayrton's "Primary and residual vortices in oscillating fluids—Their connection with skin friction," was written ca. 1915 but left unpublished at Ayrton's death; Sharp states in a footnote (p. 281) that the paper was "probably" read before the Royal Society in spring 1926.

Ayrton's work on carbons for searchlights, which she began in 1904, was an offshoot of her research on the electric arc, in which she had become recognized as a leading authority. It was Ayrton who discovered what caused the erratic behavior of electric arcs in searchlights, and who invented improved negative carbons to ameliorate these problems in both searchlights used by the military (1910; see Sharp, ch. XV), and in the lights used by cinematographers (1913; see Sharp, p. 247). Ayrton's improved carbons, which she patented in 1913, were the source of the legal dispute documented in no. 6, Ayrton's estate claiming that the Admiralty had used Ayrton's 1913 negative carbons in searchlights during 1915-16, and demanding an award. The legal documents in no. 6 include the "Brief on behalf of the Claimant" by the Estate's lawyer, George Beloe Ellis, and 5 of the 21 documents listed on p. 2 of the brief. Two of the documents are signed in pencil by Ayrton's research assistant, C. E. Greenslade.

The work for which Ayrton is perhaps best known is her Ayrton Fan, a simple hand-held device she invented during the First World War to repel clouds of poison gas. This device, adopted by the British armed forces only after much delay and prevarication, was still responsible for saving many lives, and Ayrton continued to work on improvements to the fan even after the Armistice (nos. 4-5; see Sharp, ch. XVIII). The most authoritative account of Ayrton's life remains Evelyn Sharp's 1926 biography (no. 7), which describes not only Ayrton's scientific activities but also her untiring labors on behalf of the women's suffrage movement. Grolier Club, *Extraordinary Women in Science & Medicine*, pp. 42-46. Ogilvie, *Women in Science*, pp. 32-34. Surprisingly, Ayrton is not noticed in Kass-Simon and Farnes, *Women of Science, Righting the Record* (1990). 14390.



THE EXPOSITION

OF

1851;

OR,

VIEWS OF THE INDUSTRY,

THE SCIENCE, AND THE GOVERNMENT,

OF ENGLAND.

BY

CHARLES BABBAGE, ESQ.

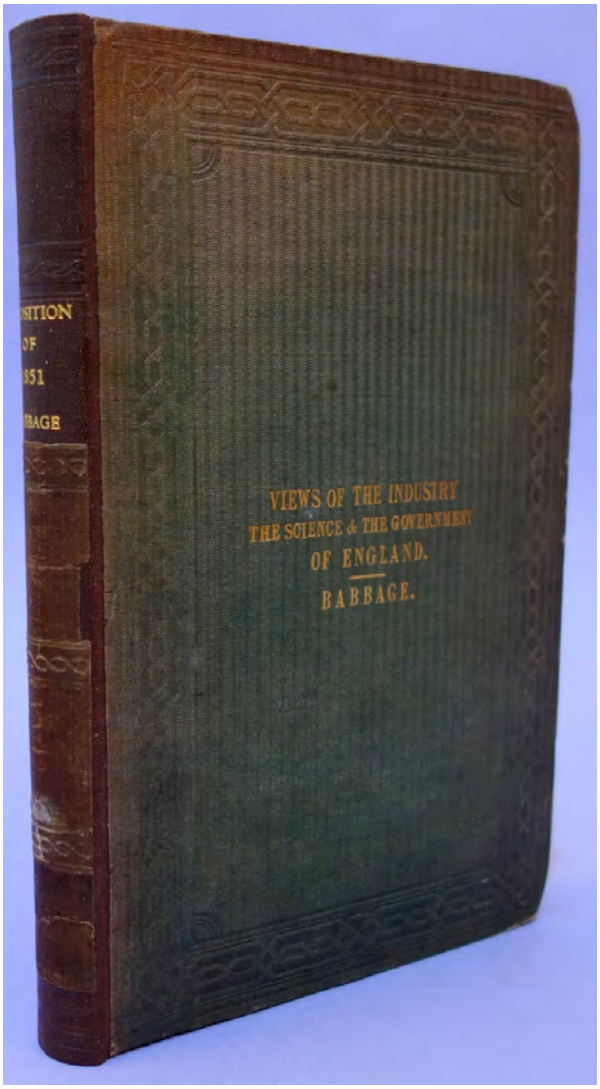
CORRESPONDING MEMBER OF THE ACADEMY OF MORAL SCIENCES OF THE INSTITUTE OF FRANCE.

SECOND EDITION, WITH ADDITIONS.

LONDON:

JOHN MURRAY, ALBEMARLE STREET.

1851.

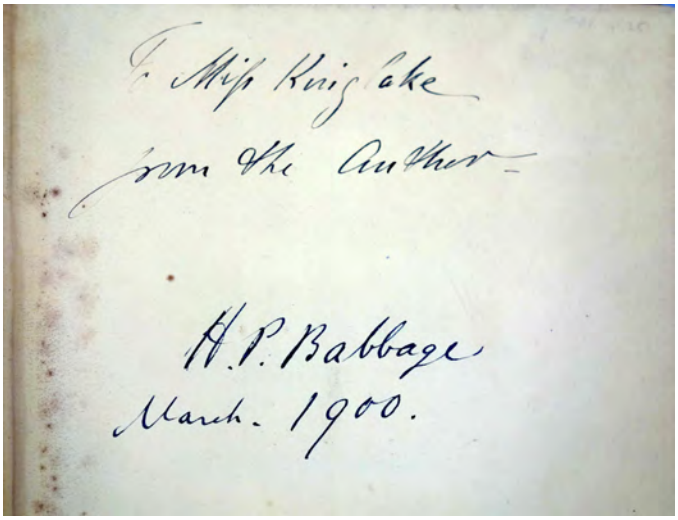


Presentation Copy in the Original Binding, Inscribed by Both Babbage and His Son

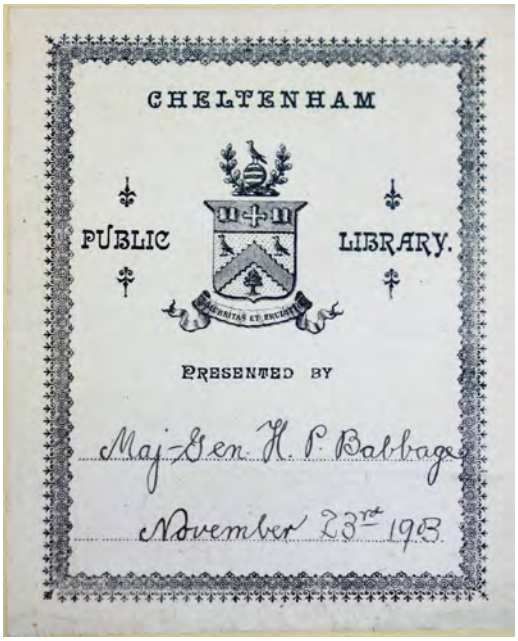
3. Babbage, Charles (1791-1871). The exposition of 1851; or, views of the industry, the science, and the government, of England. xvi, 289, [5, incl. adverts.]pp.; 16-page publisher's catalogue bound in back. 227 x 142 mm. London: John Murray, 1851. Original green cloth stamped in gilt and blind, recased, spine repaired, light wear and fading. Very good copy. Babbage's Presentation Inscription on the front free endpaper: "To Miss Kinglake from the Author"; signature of Babbage's son H. P. [Henry Prevost] Babbage (1824-1918), dated March 1900, beneath; bookplate of the Cheltenham Public Library on rear pastedown noting H. P. Babbage's gift of this copy on November 23, 1903. Library bookplate, tag and withdrawal stamp on front endpapers. $7500

Second edition, expanded. The only presentation copy we have ever seen of this work in its original binding, and the only example we have seen of a work inscribed by both Babbage and his son. Miss Kinglake, to whom Babbage inscribed this copy, was most likely the sister of Babbage's friend Alexander William Kinglake (1809-91), travel writer and historian of the Crimean War. This copy was subsequently owned by Henry Prevost Babbage, Babbage's youngest son, who worked with Babbage on the Difference and Analytical Engines.

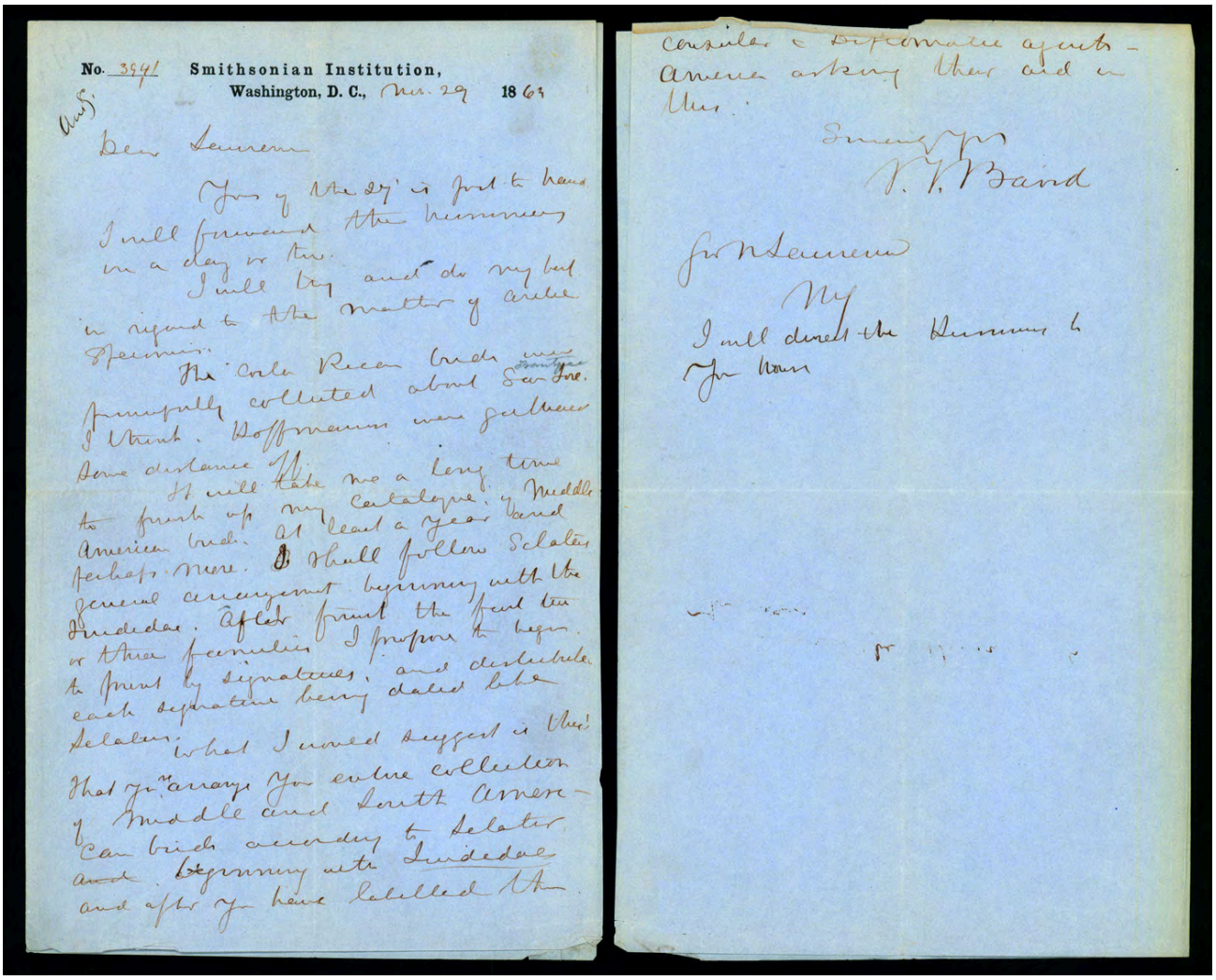
Henry continued his father's efforts to develop and publicize the Engines after Babbage's death, editing and publishing the comprehensive work, *Babbage's Calculating Engines*, in 1889.



The Great Exhibition of 1851, held at the specially constructed Crystal Palace in Hyde Park, London, was the first of the great international exhibitions held to celebrate progress in the world's arts and manufactures. Lyon Playfair, who played a leading role in organizing the exhibition, had originally suggested that Babbage be put in charge of the exhibition's Industrial Commission, but Playfair's suggestion was rejected by the British government, which was still at loggerheads with Babbage over funding for his calculating engines. Babbage was also refused permission to display the completed portion of his Difference Engine no. 1 at the exhibition, even though the exhibition's purpose was to display the latest advances in industry, and Babbage's machine, though built twenty years earlier, was arguably the finest product of precision mechanical engineering to date.



Angered at these slights, Babbage published this vitriolic history of the exhibition, in which he skewered the insularity and snobbism of its organizers, put forth his own ideas about how the exhibition should have been run, and sounded off on the corrupt state of science in England, much as he had two decades earlier. Chapter 13, entitled "Calculating engines," contains a description of the current state of development of his Analytical Engine. The expanded second edition, published a few months after the first, adds an extract from Charles R. Weld's *History of the Royal Society*, and also Augustus De Morgan's review of Weld's book, both of which give a supportive account of Babbage's Difference Engine project. *Origins of Cyberspace* 67. Van Sinderen 1980, no. 61. 42965



"It Will Take Me a Long Time to Finish Up My Catalogue of Middle American Birds"

4. Baird, Spencer Fullerton (1823-87). (1) Autograph letter signed, with postmarked envelope, to George Newbold Lawrence (1806-95). 3+ pages. Washington DC, Nov. 29, 1863. 230 x 141 mm. Very good. (2) Autograph letter signed to J. W[. . .] Cheney. 2pp. Washington DC, June 19, 1861. 206 x 133 mm. Very good. (3) Dall, William Healey (1845-1927). Spencer Fullerton Baird: A biography. xvi, 462pp. 19 plates. Philadelphia & London: J. B. Lippincott, 1915. 233 x 160 mm. Original blue cloth, gilt-lettered spine and front cover, light wear at extremities but very good. $950

(1) Excellent scientific letter from Spencer Baird, one of the foremost American zoologists of the nineteenth century, who devoted much of his career to establishing the U. S. National Museum at the Smithsonian Institution and developing it into an internationally known center for scientific research. Baird was appointed the National Museum's first curator in 1850; over his lifetime he expanded the museum's natural history collections from 6000 specimens to over two million. He also helped to establish the Smithsonian as the hub of an international exchange network of scientific information and publications, which was so efficient that "scientific men in [the United States] had better facilities for exchange with Europe than European countries had with each other" (Billings, p. 152). In 1871 Congress appointed Baird the head of the newly created U.S. Fish Commission, and in 1878 Baird succeeded Joseph Henry as secretary of the Smithsonian, a position he held until his death. Baird was the author of over 1000 scientific publications, including *Catalog of North American Reptiles*

(1853; with C. Girard), *Mammals of North America* (1859), *Birds of North America* (1860; with J. Cassin and G. N. Lawrence) and the monumental three-volume *History of North American Birds* (1874; with T. M. Brewer and R. Ridgway).

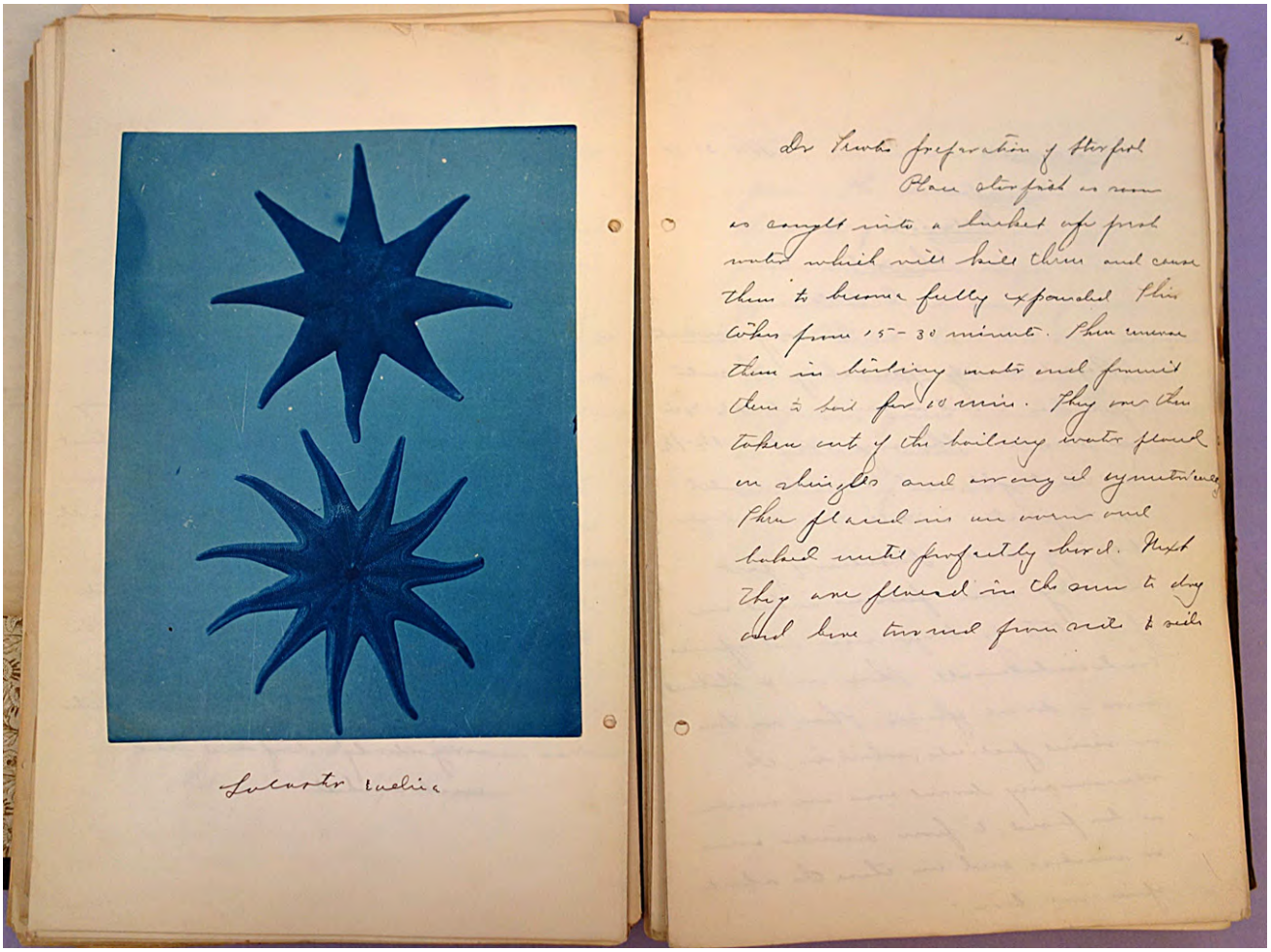
Baird wrote the present letter to American ornithologist George Newbold Lawrence, who had worked with him on *Birds of North America*. Baird devoted most of the letter to discussing his work on a catalogue of Central and South American birds, which apparently was never published:

> . . . It will take me a long time to finish up my catalogue of Middle American birds. At least a year and perhaps more. I shall follow Sclater's general arrangement beginning with the Turdidae . . .
>
> What I would suggest is that you rearrange your entire collection of Middle and South American birds according to Sclater beginning with Turdidae and after you have labelled them let me have the Mexican – Central American specimens (including West Indies and Panama) one family at a time. I will then mention all your species in my catalogue . . . All species in your collection, which proved to be new and were not in [. . .] I would of course refer to you for their names and to be described by yourself . . . Your own collection would thus receive a value as mentioned in our catalogue, and compared with our types, that would place it far above most others . . .
>
> Salvin's specimens I expect daily: as soon as they arrive I would be glad to have your Turdidae if you would let me have them . . .
>
> Years hence, when we get back all the S. Americans in Cassin's hands, and life, health and opportunity be spared, I hope to make a similar list of our S. American birds. We are about issuing a circular to all our consular and diplomatic agents . . . asking their aid in this.

"Sclater" refers to British zoologist and ornithology expert Philip Sclater (1829-1913), best known for being the first to identify and describe the world's six major zoogeographic regions; he was also the founder and editor of *The Ibis*, the journal of the British Ornithologists' Union. Other ornithologists mentioned in Baird's long letter are John Cassin (1813-69), Baird's second co-author on *Birds of North America* and author of a number of ornithological works including Illustrations of the Birds of California, Texas, Oregon, British and Russian America (1853-56); and British naturalist Osbert Salvin (1835-98), co-author of the 52-volume Biologia Centrali-Americana (1879-1915).

(2) A letter exemplifying Baird's administrative duties at the Smithsonian: ". . . I am instructed by Professor Henry to say that he will forward your pamphlets to Europe, and that if you will have some friend take them to New York City and there deliver to Adams Express, that he will settle the freight from New York . . ."

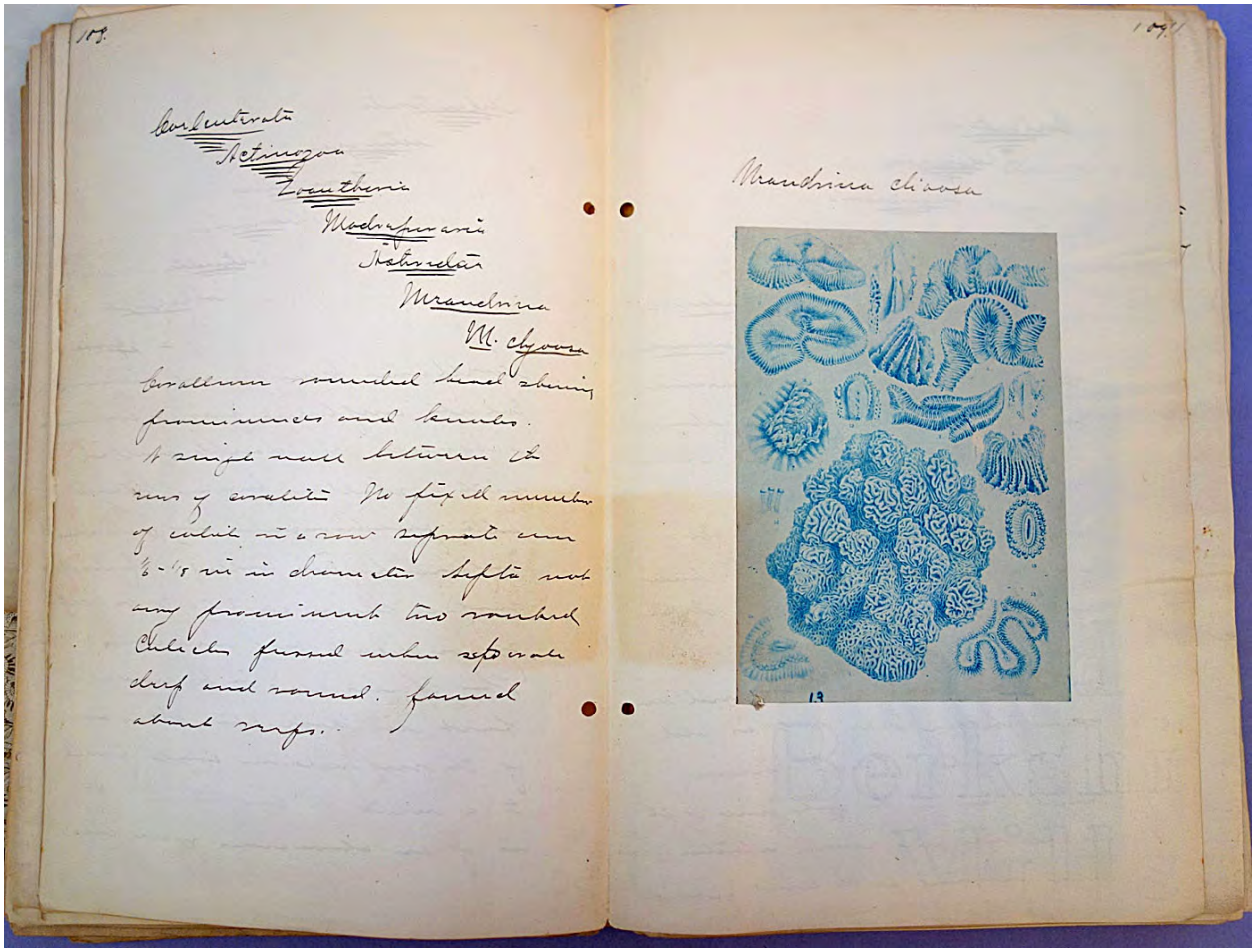
(3) **First Edition.** Dall's work is still the only complete biography of Baird. Billings, "Memoir of Spencer Fullerton Baird 1823-1887," *Biographical Memoirs of the National Academy of Sciences* 3 (1895): 141-160. *Dictionary of Scientific Biography.* 43070



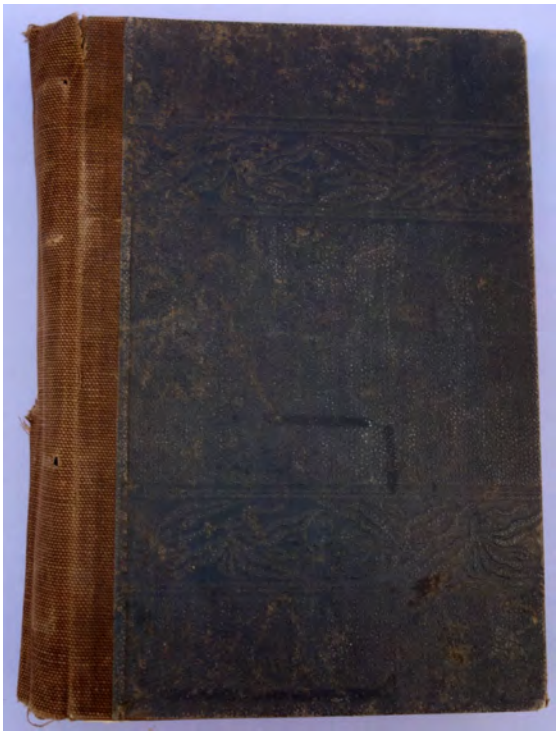
Autograph Manuscript Notebook of One of America's Foremost Zoologists

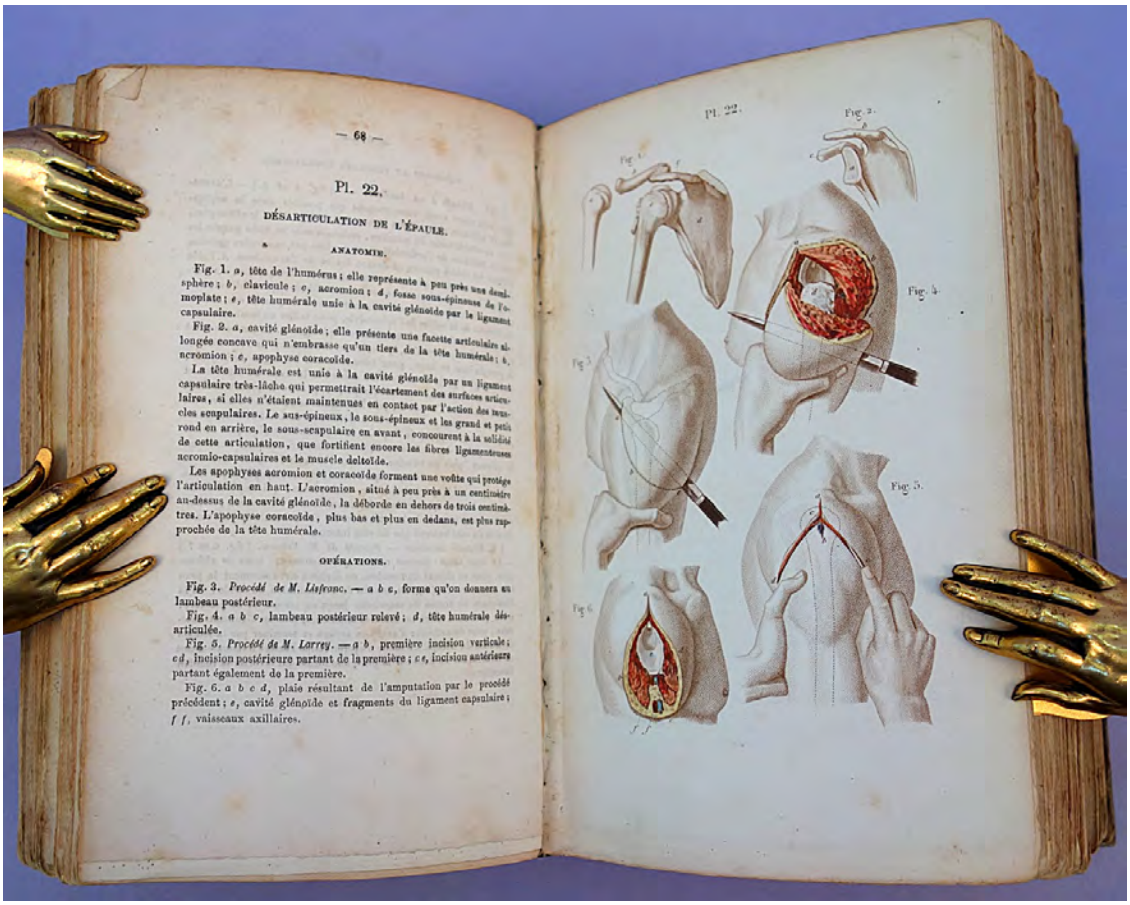
5. Bartsch, Paul (1871–1960). Zoology. Autograph manuscript notebook, signed by Bartsch on the first leaf. 407pp. Illustrated with 77 cyanotypes and several pencil drawings. [Iowa,] 1894–95. 230 x 147 mm. Loose leaves in original cloth-bound notebook, leaves punched in inner margins for insertion into notebook, notebook's binding cords frayed but present, some wear. Leaves a bit chipped and frayed due to acidic paper, otherwise in good to very good condition. $3250

Bartsch was one of the foremost specialists in the field of malacology, the branch of invertebrate zoology that deals with the study of mollusks. He spent more than fifty years at the Smithsonian's National Museum of Natural History, where he began as an assistant to the eminent American malacologist William H. Dall and later became curator of the Museum's divisions of mollusks and marine invertebrates. During his long career Bartsch participated in several scientific expeditions to the tropics, collecting in total over half a million mollusk species; on the first of these voyages, to the Philippines, he collected over 87,000 specimens of marine and non-marine snails—the largest collection of mollusks ever made on a single expedition. Bartsch was the author of hundreds of papers and monographs, including *A Monograph of West American Pyramidellid Mollusks* (1909; with W. H. Dall) and *Fishes and Shells of the Pacific World* (1945; with John T. Nichols). He named nearly 3000 new mollusk species and subspecies; to aid his studies, he invented one of the first underwater cameras.



The notebook we are offering is from Bartsch's student days at the University of Iowa, where he matriculated in 1893, receiving his bachelor's degree in 1896 and his Ph.D. in 1905. The book contains Bartsch's meticulously detailed notes for a course in zoology that he took in 1894-95. Nearly half of the notes are devoted to invertebrate species, including shellfish. The notes are illustrated with 77 small photographic prints of zoological specimens made with the cyanotype process, which gives a blue image. The cyanotype process is simple and inexpensive, and it is certainly possible that Bartsch produced the images in the notebook himself. The thoroughness of Bartsch's notes and his attention to scientific detail testify to the dedication and energy Bartsch would bring to his career as an invertebrate zoologist. Rehder, "Paul Bartsch 1871-1960," *Journal of Conchology* 25 (1962): 41-43. 43060





— 68 —

Pl. 22.

DÉSARTICULATION DE L'ÉPAULE.

ANATOMIE.

Fig. 1. *a*, tête de l'humérus ; elle représente à peu près une demi-sphère ; *b*, clavicule ; *c*, acromion ; *d*, fosse sous-épineuse de l'omoplate ; *e*, tête humérale unie à la cavité glénoïde par le ligament capsulaire.

Fig. 2. *a*, cavité glénoïde ; elle présente une facette articulaire allongée concave qui n'embrasse qu'un tiers de la tête humérale ; *b*, acromion ; *c*, apophyse coracoïde.

La tête humérale est unie à la cavité glénoïde par un ligament capsulaire très-lâche qui permettrait l'écartement des surfaces articulaires, si elles n'étaient maintenues en contact par l'action des muscles scapulaires. Le sous-épineux, le sous-épineux et les grand et petit rond en arrière, le sous-scapulaire en avant, concourent à la solidité de cette articulation, que fortifient encore les fibres ligamenteuses acromio-capsulaires et le muscle deltoïde.

Les apophyses acromion et coracoïde forment une voûte qui protége l'articulation en haut. L'acromion, situé à peu près à un centimètre au-dessus de la cavité glénoïde, la déborde en dehors de trois centimètres. L'apophyse coracoïde, plus bas et plus en dedans, est plus rapprochée de la tête humérale.

OPÉRATIONS.

Fig. 3. *Procédé de M. Listranc.* — *a b c*, forme qu'on donnera au lambeau postérieur.

Fig. 4. *a b c*, lambeau postérieur relevé ; *d*, tête humérale désarticulée.

Fig. 5. *Procédé de M. Larrey.* — *a b*, première incision verticale ; *c d*, incision postérieure partant de la première ; *c e*, incision antérieure partant également de la première.

Fig. 6. *a b c d*, plaie résultant de l'amputation par le procédé précédent ; *e*, cavité glénoïde et fragments du ligament capsulaire ; *f f*, vaisseaux axillaires.

Pl. 22.

Fig. 1.

Fig. 2.

Fig. 4.

Fig. 3.

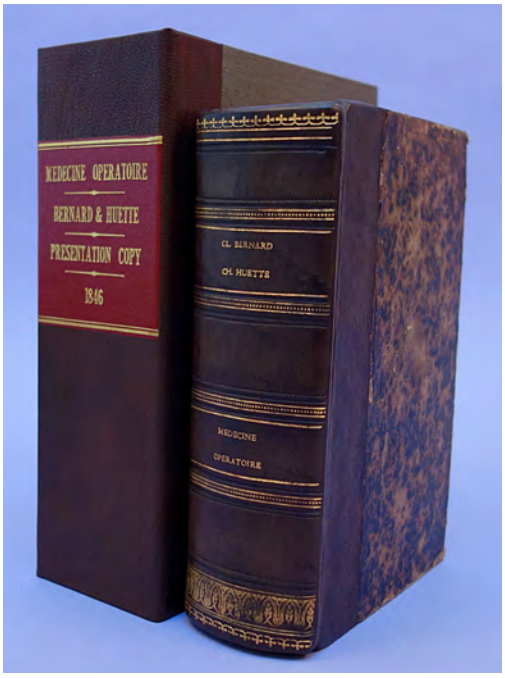
Fig. 5.

Fig. 6.

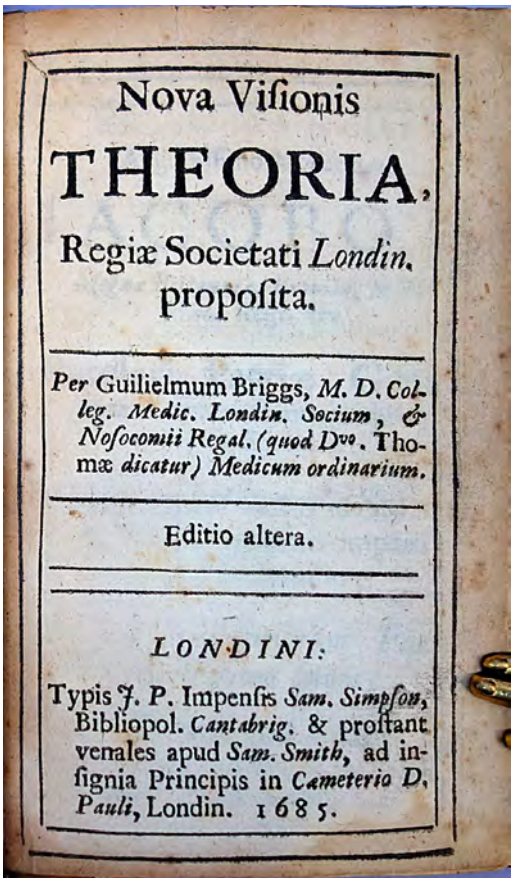
f f

Rare Presentation Copy of the First Edition

6. Bernard, Claude (1813-73) & Huette, Charles. Précis iconographique de médecine opératoire et d'anatomie chirurgicale. 8vo. [4] xxvi [2], 488pp. Engraved frontispiece of Vesalius with printed tissue guard, issued only to subscribers, 113 engraved plates printed in sepia and hand-colored. Paris: Méquignon-Marvis, 1846. 188 x 117 mm. Quarter calfca. 1846, rebacked in period style. Lightly foxed throughout, but very good. Presentation copy, inscribed by the authors on the half-title: "A mon ami / A. Molinard /Cl. Bernard Ch. Huette." Boxed. $7500



First Edition, and *rare in commerce*. Bernard and Huette's influential surgical textbook was one of the first of its kind to enjoy a world-wide market, and was still being reprinted at the end of the 19th century. Presentation copies of the first edition are extraordinarily rare; this is the only one that we have ever seen! Blocker, p. 34. 33317



Nova Visionis

THEORIA,

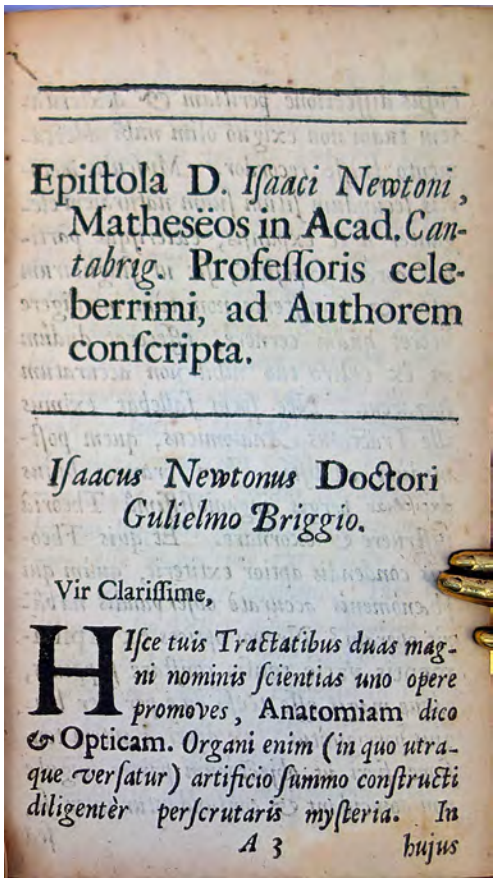
Regiæ Societati *Londin.* propositа.

Per Guilielmum Briggs, *M. D. Colleg. Medic. Londin. Socium, & Nosoconii Regal. (quod Dvo. Thomæ dicatur) Medicum ordinarium.*

Editio altera.

LONDINI:

Typis J. P. Impensis *Sam. Simpson,* Bibliopol. *Cantabrig.* & prostant venales apud *Sam. Smith,* ad insignia Principis in *Cæmeterio D. Pauli,* Londin. 1685.



Epistola D. *Isaaci Newtoni,* Matheseos in Acad. *Cantabrig.* Professoris celeberrimi, ad Authorem conscripta.

Isaacus Newtonus Doctori *Gulielmo Briggio.*

Vir Clarissime,

Hisce tuis Tractatibus duas magni nominis scientias uno opere promoves, Anatomiam *dico* & Opticam. *Organi enim (in quo utraque versatur) artificio summo constructi diligenter perscrutaris mysteria. In*

A 3 *hujus*

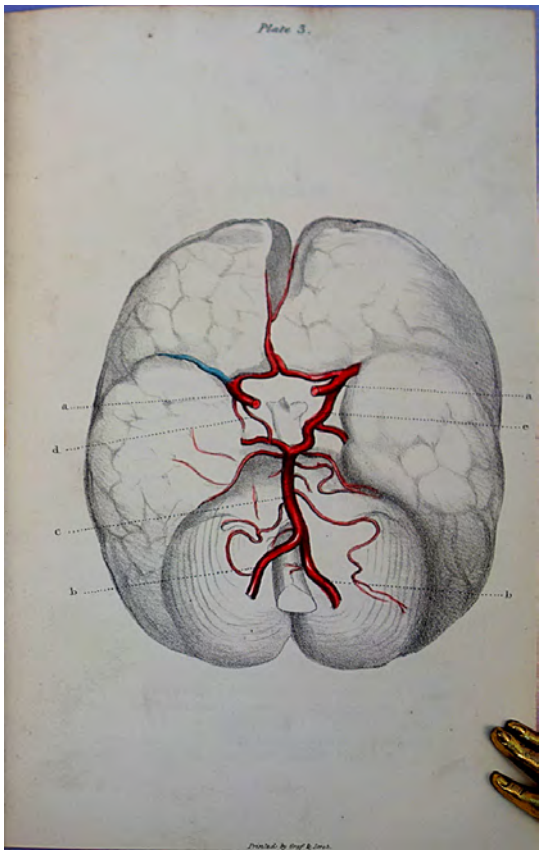
Recommended by Newton

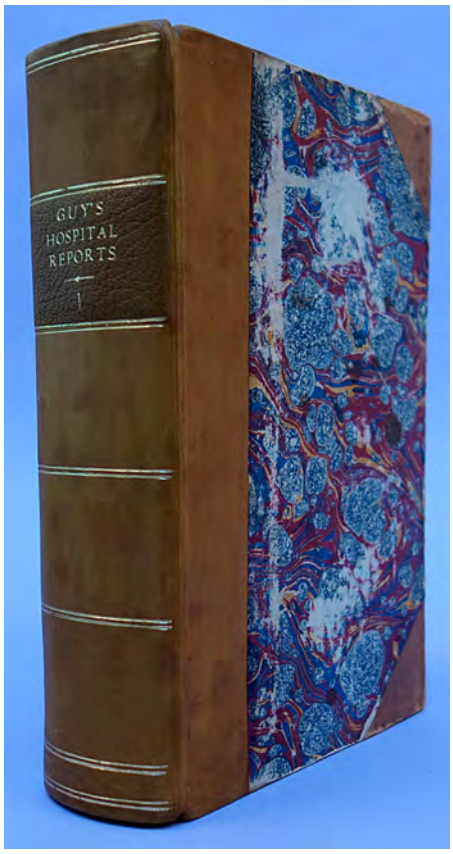
7. Briggs, William (1642–1704). Nova visionis theoria. . . . 8vo. [16], 80pp. Folding plate. London: J. P. for Simpson; sold by Smith, 1685. 150 x 87 mm. Modern half calf, marbled boards in antique style. Some foxing & browning but a very good copy. $6500

First Edition in Latin & First Complete Edition of this early British excursion into the physiology of the eye, a work so appreciated by Isaac Newton that he recommended it for publication and used it in developing his system of optics. Newton's letter commending the text is printed on leaves A3r to A4v. Briggs's text had originally appeared in English in two separate parts in *Philosophical Collections* (1681) and *Philosophical Transactions* (1683) before Newton suggested its publication in book form.

"Briggs tries to show that the fibres of the optic nerve as arising from the two protuberances of the thalami optici are more concerned in vision than either cornea, humours or retina (as considered by writers on optics) . . . He refers to the vibrations in a spider's web whereby impulses are conveyed from the periphery to the centre. 'Rays of light strike correspondent fibres and the percussion or vibration being towards the bottom or papilla of the eye is conveyed to the nerve' . . . Briggs's metaphor of a spider in the midst of its web, and the fibres of the retina conveying vibrations to the papilla and so to the optic thalami, is distinctly pleasing" (James, *History of Ophthalmology*, pp. 78, 80; also 74–83).

The *Nova visionis theoria* is sometimes found separately as here, and sometimes bound with Briggs's *Ophthalmographia* (1685; orig. ed. 1676). Combined editions of both works were issued in London in 1685, and in Leiden in 1686. OCLC shows only two North American libraries with copies of the separate edition (U. Chicago & Johns Hopkins). Wing B 4667. 37808



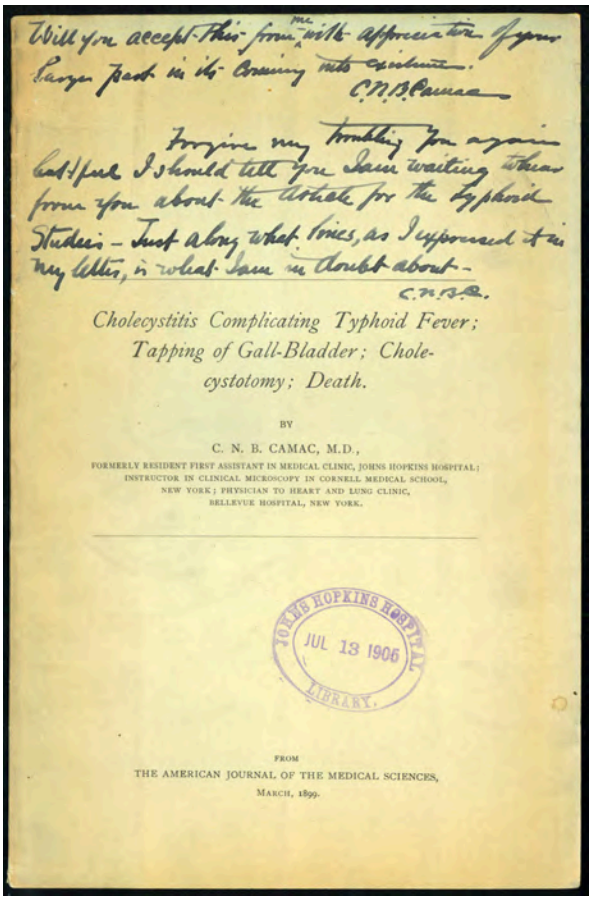


Bright on Epilepsy

8. Bright, Richard (1789-1858). (1) Fatal epilepsy, from suppuration between the dura mater and arachnoid, in consequence of blood having been effused in that situation. In *Guy's Hospital Reports* 1 (1836): 36-40. (2) Cases and observations, illustrative of renal disease accompanied with the secretion of albuminous urine [part 1 only]. In *ibid.*, 338-400. (3) Observations on jaundice. In *ibid.*, 604-37. Whole volume, 8vo. [4], xii, 188, [8], 189-414, [14], 415-660, [24]pp. 29 plates (some hand-colored). 216 x 135 mm. Half calf, marbled boards c. 1836, rebacked, a bit rubbed. Minor browning and foxing, some of the plates trimmed a little closely touching some keywords and images, otherwise very good. $3750

First Editions of these three papers, the first containing the earliest description of unilateral ("Jacksonian") epilepsy (Garrison-Morton 4811); the second representing the first part of Garrison-Morton 4207, in which Bright recorded his extended observations of kidney disease; and the third containing the original description of acute yellow atrophy of the liver (Garrison-Morton 3617). The second part of Bright's paper on kidney disease was published in *Guy's Hospital Reports* 5 (1840): 101-61.

Volume 1 of *Guy's Hospital Reports*, in which Bright's three papers appear, contains more Garrison-Morton citations than any other—eight in all. This is probably more Garrison-Morton citations than any other journal volume published. Besides those mentioned above, there are the following: (1) Astley Cooper, "Case of femoral aneurism for which the external iliac artery was tied" (pp. 43-52; Garrison-Morton 2954); (2) Cooper, "Account of the first successful operation, performed on the common carotid artery, for aneurism, in the year 1808 . . ." (pp. 53-58; Garrison-Morton 2955); Cooper, "Some experiments and observations on tying the carotid and vertebral arteries . . ." (pp. 457-75, 654; Garrison-Morton 2956); (4) Charles Aston Key, "Femoral aneurism successfully treated by a ligature of the external iliac artery" (pp. 59-78; Garrison-Morton 2957); and (5) Thomas Wilkinson King, "Observations on the thyroid gland, with notes on the same subject by Sir Astley Cooper," anticipating the endocrine action of the thyroid (pp. 429-56; Garrison-Morton 1126). 38075


Will you accept this from me with appreciation of your larger part in its coming into existence.
C.N.B.Camac

Forgive my troubling you again but I feel I should tell you I am waiting to hear from you about the article for the Typhoid Studies – Just along what lines, as I expressed it in my letter, is what I am in doubt about –
C.N.B.C.

Cholecystitis Complicating Typhoid Fever; Tapping of Gall-Bladder; Cholecystotomy; Death.

BY

C. N. B. CAMAC, M.D.,

FORMERLY RESIDENT FIRST ASSISTANT IN MEDICAL CLINIC, JOHNS HOPKINS HOSPITAL; INSTRUCTOR IN CLINICAL MICROSCOPY IN CORNELL MEDICAL SCHOOL, NEW YORK; PHYSICIAN TO HEART AND LUNG CLINIC, BELLEVUE HOSPITAL, NEW YORK.

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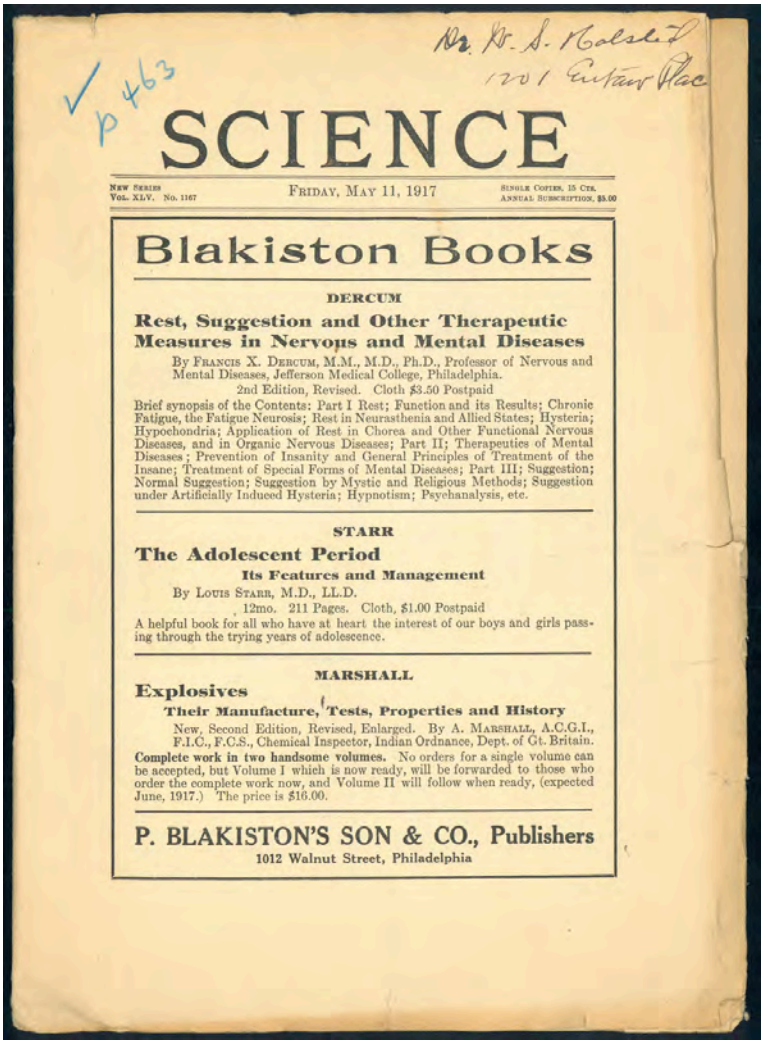
FROM THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES, MARCH, 1899.

Inscribed to Osler

9. Camac, Charles Nicoll Bancker (1868-1940). Cholecystitis complicating typhoid fever; tapping of gall-bladder; cholecystectomy; death. Offprint from *The American Journal of the Medical Sciences* (March 1899). 11pp. 238 x 156 mm. Original printed wrappers, a bit faded, small split in upper spine. Very good. *Presentation Copy, inscribed by Camac to William Osler* (1849-1919) on the front wrapper. Stamp of the Johns Hopkins Hospital Library, dated July 13, 1905, on front wrapper. $950

First Edition, Offprint Issue. Camac's long inscription to Osler reads: "Will you accept this from me with appreciation of your larger part in its coming into existence. C. N. B. Camac. Forgive my troubling you again but I feel I should tell you I am waiting to hear from you about the article for the Typhoid Studies—Just along what lines, as I expressed it in my letter, is what I am in doubt about. C. N. B. C."

Camac served as Osler's house officer at Johns Hopkins Hospital until October 1897; he encountered the above described case of typhoid accompanied by cholecystitis (gall-bladder inflammation) on Sept. 15, 1897 while working "in Professor Osler's service" (p. 1). Although Camac did not include Osler's name in his inscription, it is clear that Osler was the intended recipient: Not only does the inscription express Camac's thanks for his mentor's "larger part in [the work's] coming into existence," but it refers explicitly to Osler's "Typhoid studies," a series of clinical papers on the disease by Osler and other Johns Hopkins physicians (including Camac), which Osler had begun publishing in the *Johns Hopkins Hospital Reports* in 1895 (Osler later collected and published these papers in book form under the title *Studies in Typhoid Fever* [1901]). Cushing, in his *Life of Sir William Osler,* quotes a letter from Osler to Camac written on Feb. 9, 1899, just before Camac's paper appeared in print in the *American Journal of Medical Sciences;* in the letter Osler thanked Camac for "the gall-bladder article," stating that "it will do too for our third Typhoid studies at which I am at last at work" (quoted in Cushing, p. 490). 43023



Dr. W. S. Halsted
1201 Eutaw Place

p 463

SCIENCE

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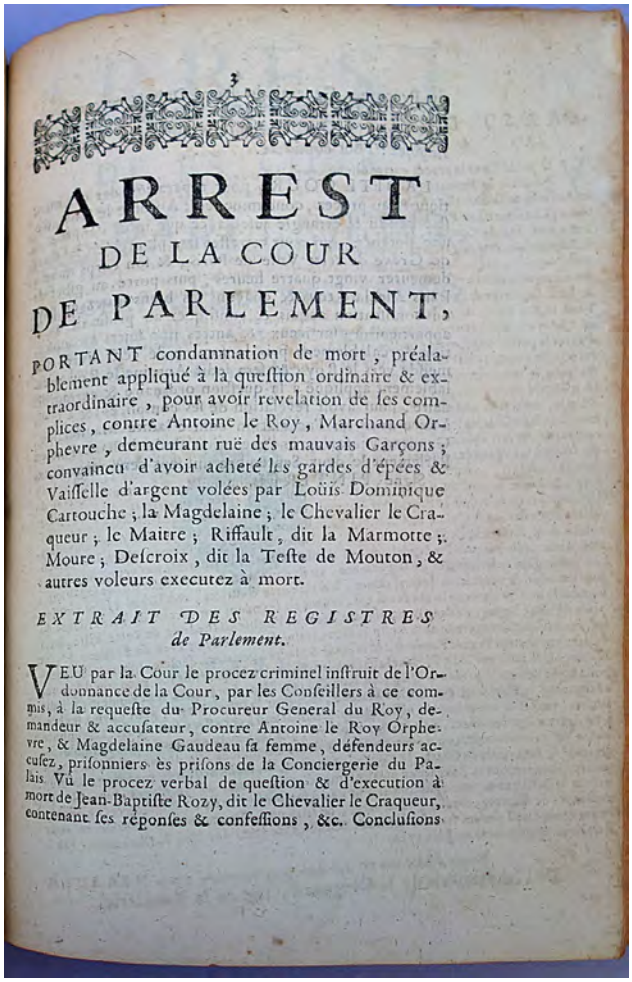
Halsted's Copy

10. Cannon, Walter Bradford (1871-1945). A note on the effect of asphyxia and afferent stimulation on adrenal secretion. In *Science,* new series, 45 (1917): 463-464. Whole number. i-iv, 441-464, v-viii pp. 280 x 205 mm. Original printed wrappers, some marginal tears, edges a bit frayed. Light browning, occasional mild soiling, but very good. From the library of William S. Halsted (1852-1922), with his signature ("Dr. W. S. Halsted 1201 Eutaw Place") and blue check-mark on the front wrapper; marginal note probably by him on p. 463. $500

First Edition. Cannon's brief paper contains an early reference to his use of the denervated heart as an indicator of sympathetic nervous system activity, a technique that he perfected in the 1920s. This copy of the journal issue containing Cannon's paper is from the library of William S. Halsted, one of the founding professors at Johns Hopkins Hospital, best known for his radical mastectomy operation for breast cancer and his introduction of the use of rubber gloves in surgery. Halsted signed this copy and probably wrote the marginal note next to Cannon's paper: "Index under adrenal secret. + Canon [sic]." Thus the paper shows how Halsted indexed his research library. 43024

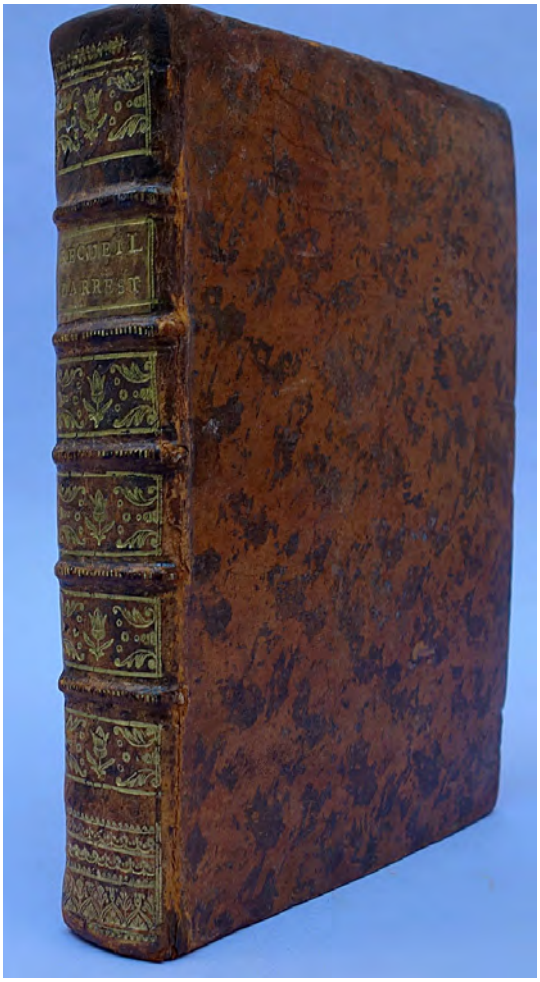


ARREST
DE LA COUR
DE PARLEMENT,

PORTANT condamnation de mort ; préalablement appliqué à la queſtion ordinaire & extraordinaire, pour avoir revelation de ſes complices, contre Antoine le Roy, Marchand Orphevre, demeurant ruë des mauvais Garçons ; convaincu d'avoir acheté les gardes d'épées & Vaiſſelle d'argent volées par Loüis Dominique Cartouche ; la Magdelaine ; le Chevalier le Craqueur ; le Maitre ; Riffault, dit la Marmotte ; Moure ; Deſcroix, dit la Teſte de Mouton, & autres voleurs executez à mort.

EXTRAIT DES REGISTRES de Parlement.

VEU par la Cour le procez criminel inſtruit de l'Ordonnance de la Cour, par les Conſeillers à ce commis, à la requeſte du Procureur General du Roy, demandeur & accuſateur, contre Antoine le Roy Orphevre, & Magdelaine Gaudeau ſa femme, défendeurs accuſez, priſonniers ès priſons de la Conciergerie du Palais. Vû le procez verbal de queſtion & d'execution à mort de Jean-Baptiſte Rozy, dit le Chevalier le Craqueur, contenant ſes réponſes & confeſſions, &c. Concluſions



Crime and Punishment during the Ancien Régime

11. [**Cartouche, Louis Dominique Bourguignon (1693-1721).**] Collection of 76 official court records relating to the arrests, trials, sentences and executions of Cartouche and members of his criminal gang. Various places and publishers, 1721-22. With: 62 documents, including official arrest and sentencing records, relating to crimes committed in France in the 17th and 18th centuries. Various places and publishers, 1676, 1716 and 1727-64. 138 documents in total. Various sizes (mostly 4to). 247 x 177 mm. Bound together in one volume, 18th cent. mottled calf, gilt spine, leather label, light wear. Minor foxing, a few leaves repaired, but overall fine. Manuscript notations on a few leaves. Manuscript label reading "Ex libris C. T. Noel du Payrat" on front pastedown, referring either to French jurist Pierre Théodore Noël du Payrat (1761-1832) or a member of his family; see below. Complete listing available on request. $18,500

An extraordinary collection of 17th and 18th century French legal documents and other papers on specific crimes committed in France during this period. Over half the documents relate to the arrests, trials and punishments of Louis Dominique Bourguignon, called Cartouche, and his notorious "Cours des Miracles" gang of criminals. One of France's most famous outlaws, Cartouche has been portrayed (and romanticized) in countless stories, plays, songs and films, including the 1962 film "Cartouche," starring Jean-Paul Belmondo and Claudia Cardinale. His crimes and those of his followers are exhaustively detailed in this collection, which consists chiefly of documents issued by the Cour de Parlement de Paris, the ancien régime's primary legislative and judicial body.


ARREST
DE LA COUR
DE PARLEMENT,
PORTANT CONDAMNATION de mort contre Jeanne Rey, femme de débauche, convaincuë de vols dans les Foires, Marchez, à Paris, dans le Louvre, & autres Maisons Royales; complice de défunts Louis-Dominique Cartouche, Jean-François Notary du Bourguet, Charles Heode, dit Provençal, d'Elizabeth Gonon, & autres voleurs de Paris & de Campagne.
Du 16. Juin 1722.
A PARIS,
Chez LOUIS-DENIS DELATOUR & PIERRE SIMON, Imprimeurs du Parlement & de la Cour des Aydes, rue de la Harpe, aux trois Rois.
M. D. C. C. X X I I.
ARREST
DE LA COUR DE PARLEMENT
DE ROUEN.

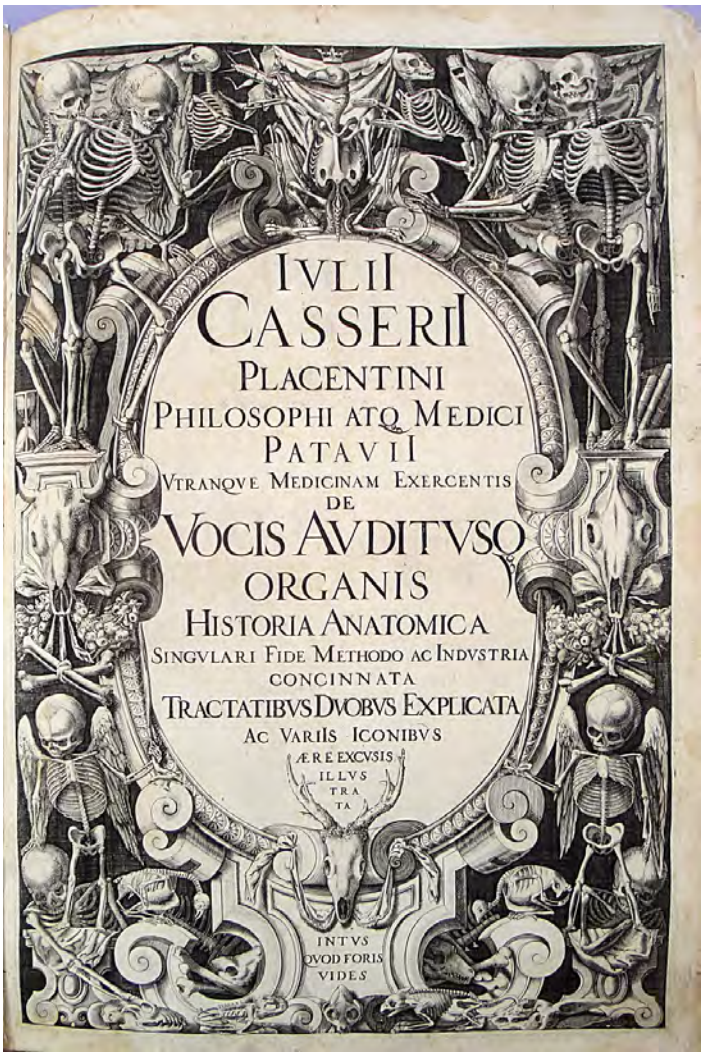
Cartouche was the son of a wine merchant. After expulsion from school, he became the head of a gang in Normandy, then served for a time as a police informant before joining the army. Upon leaving the army, Cartouche and some of his fellow soldiers formed a new criminal gang, headquartered in the Cours des Miracles, a notorious Parisian slum. The Cours des Miracles gang, which appears to have had over one hundred members (both male and female), was an early example of organized crime in France: Cartouche had himself elected leader, and punished challenges to his authority with death. Members of Cartouche's gang terrorized the city with almost daily robberies and murders; they were especially feared for their attacks on carriages traveling from Versailles to Paris.

Betrayed by one of his accomplices, Cartouche was arrested on January 6, 1721 and thrown into prison. Believing that his gang would rescue him, he at first refused to divulge any information to the authorities, even when subjected to the question extraordinaire, a particularly brutal form of judicial torture. Cartouche was scheduled to be executed on November 27, 1721 and hoped for rescue up until the last minute; however, when he finally realized his gang had broken faith with him, he begged the officiating priest for a reprieve so that he in turn could betray his former associates. On November 28, after making his confession, Cartouche was broken on the wheel (rompu vif), the standard execution for robbers and brigands in 18th-century France. A document in our collection, dated November 26, 1721, records the death sentence given to Cartouche and seven of his associates by the Cour de Parlement de Paris.

After Cartouche's execution most of the remaining Cours des Miracles gang members were arrested and tried for their crimes, which included murder, armed robbery, breaking and entering, stealing from churches and royal residences, receiving stolen goods, and harboring other criminals. These proceedings, which took place at the Cour de Parlement de Paris in the summer and fall of 1722, are recorded in several documents in the collection. The sentences included hanging, being burned alive, the wheel, branding, whipping, the stocks, banishment and the galleys.

Of the remaining documents in this collection, the most interesting are a defense of the notorious Marquise de Brinvilliers, executed in 1676 for poisoning her family; the arrest records of Robert-François Damiens, drawn and quartered in 1757 for attempting to stab Louis XV, and of Damiens's family, arrested and punished for their association with him; and a record of the judgment against the famous French smuggler and bandit Louis Mandrin. The remaining documents record arrests and punishments for diverse crimes, including theft, pimping, infanticide, fraud, heresy, and refusing a dying person the last rites.

This remarkable collection on crime may have been assembled by Pierre Théodore Noël du Payrat, seigneur de Razat (1761-1832), jurist, King's counsel, acting procurer general of the Parlement of Paris, delegate from the Dordogne to the États généraux in 1789, and member of the Council of Five Hundred. Noël de Peyrat's descendants still maintain the Chateau de Razat and its important library of books on jurisprudence. A complete listing of the documents in this collection is available on request. 39858



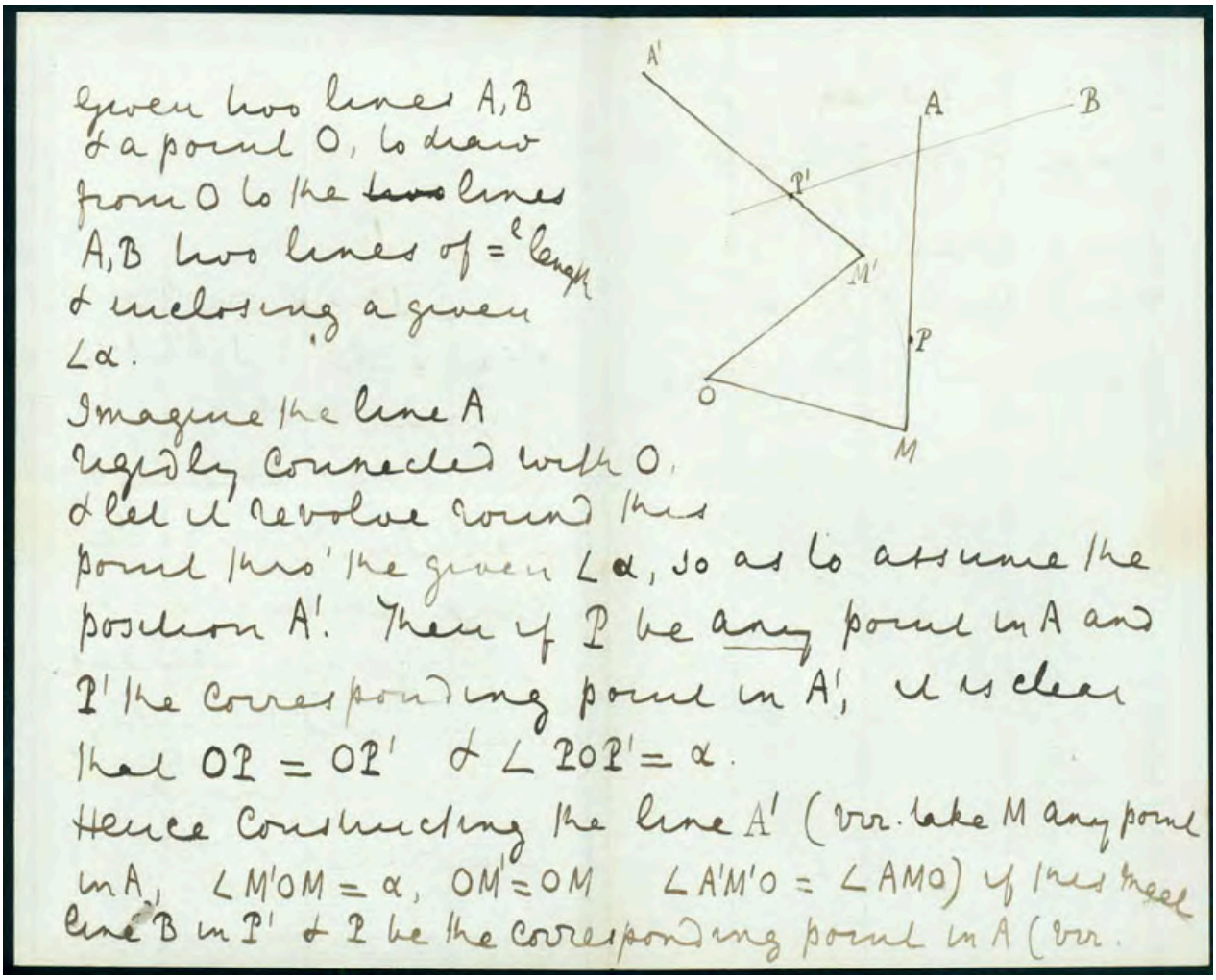
Classic of Comparative Anatomy

12. Casserio, Guilio (1552-1616). De vocis auditusque organis historia anatomica. Folio. 2 parts in 1 vol. [60], 191, 126, [2]pp. Fine and unusual engraved titlepage, portraits of Casserio and of the Duke of Parma, and 33 (of 34) exquisite anatomical plates, paginated in the text. Our copy is one of those printed with a blank verso 2M3 in part 2 instead of plate XII, considered by researchers to be an earlier issue; a facsimile of this plate is tipped in for continuity. [Ferrara: Victorio Baldino, 1600-1601.] 386 x 264 mm. Vellum c. 1601, spine and margin of back cover repaired, light wear. A little light browning and offsetting, occasional faint dampstains, otherwise a fine copy. $20,000

First Edition. Casserio began his career as the manservant of Girolamo Fabrici (see nos. 748-752), who trained him in the art of dissection and encouraged him to pursue his medical studies; upon Fabrici's retirement in 1608, Casserio succeeded him in the chair of anatomy at the University of Padua. Like Fabrici, Casserio attempted to explain human anatomy by reference to the lower animals, and his *De vocis*, containing the first comparative studies of the vocal and auditory organs, represents one of the sixteenth century's most ambitious and detailed investigations in comparative anatomy. The work is divided into two treatises, on the anatomy of the larynx and on that of the ear. In the first, Casserio compared the human vocal apparatus to those of other mammals, birds, amphibians and even insects. He recognized the larynx to be the principal organ of voice, gave the first precise description of the cricoid-thyroid muscles and accurately depicted the superior and inferior laryngeal nerves, which he correctly assumed to originate from cranial nerves. He also was the first to under-

stand the complex sound-producing organs on the abdomen of the cicada. In the second treatise, Casserio provided the first detailed comparative account of the auditory ossicles, the first adequate description of the mammalian osseous labyrinth, and the first representation of the ear of the fish—this last all the more remarkable in that, up to this time, no one had believed fishes to possess a sense of hearing.

None of *De vocis*'s full-page engravings, including the title engraving and portraits, are signed. The drawings for them have generally been attributed to the German painter and etcher Joseph Maurer, on the basis of a passage (cited in Choulant) in the treatise on the ear; however, recent research indicates that the engraved title and two portraits are most likely the work of Jacopo Ligozzi (1547-1626), who also illustrated specimens for the Bolognese naturalist Ulisse Aldrovandi. In accuracy and artistry, the anatomical illustrations rank with the woodcuts of Vesalius, and, like the Vesalian illustrations, they provided a model and a standard for subsequent draftsmen. Choulant/Frank 223-24. Garrison-Morton 286 & 1540. Grolier Club, *100 Books Famous in Medicine* 24. Hoffer, *Baroque Book Illustration* (1970) 62. Cole, *History of Comparative Anatomy* (1944), pp. 112-25, reproducing 7 plates. Norman 410. 41482

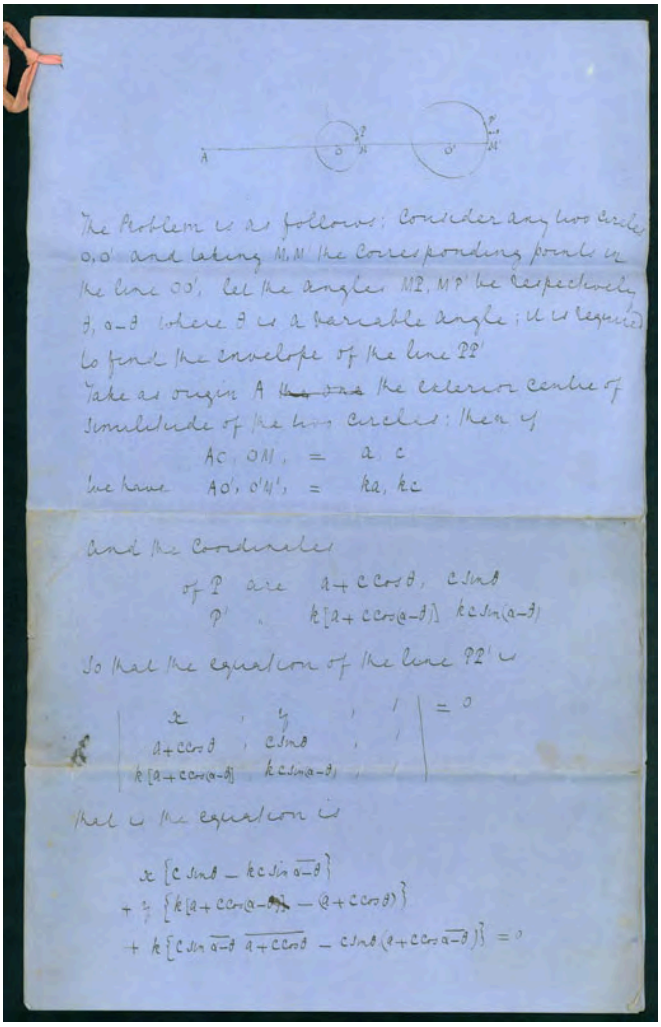


Three Mathematical Autograph Letters, Signed, Plus a Four Page Autograph Mathematics Manuscript

13. Cayley, Arthur (1821-95). (1) Autograph letter signed ("A. C.") to Archibald Smith (1813-72), written in the margins of an autograph letter signed from Smith to Cayley. 1 page. London, 9 August 1863 [date of Smith's letter]. 280 x 226 mm. (2) Autograph letter signed to Smith. 3 – 1/2pp. Cambridge, 14 November 1866. 180 x 112 mm. (3) Autograph letter signed to Smith. 3pp. Cambridge, 19 October 1868. 180 x 112 mm. (4) Autograph manuscript (originally enclosed with Cayley's 19 Oct. 1868 letter). 4ff., tied with linen tape. 412 x 257 mm. N.p., n.d. [1868]. Together 4 items. Very minor marginal tears in nos. (1) and (4), otherwise very good. $22,500

Exceptionally rare mathematical correspondence from Arthur Cayley, one of the founders of the British school of pure mathematics, consisting of three autograph letters, all containing mathematics, plus an extensive 4-page mathematical proof written on four extra-large legal sheets. These are the first mathematical letters or manuscripts by Cayley that we have seen on the market in over forty years.

Cayley was the author of over 900 papers covering nearly every aspect of modern mathematics; his greatest contributions were his development of the algebra of matrices, his work in non-Euclidean geometry and n-dimensional geometry, and his contributions to invariant theory. A large number of mathematical constructs bear his name, including Cayley's theorem (group theory), the Cayley-Hamilton theorem (linear algebra), Cayley's formula (graph theory) and the Cayley-Klein model (hyperbolic geometry). Cayley's correspondent



was Archibald Smith, who in 1836 helped to found the *Cambridge Mathematical Journal,* the periodical in which Cayley had published his first mathematical paper (see Crilly, p. 68). Smith also made significant contributions to the study of magnetism and the Earth's magnetic field.

Both Cayley and Smith were alumni of Trinity College, Cambridge and both subsequently entered Lincoln's Inn to study law, with Smith being called to the bar in 1841 and Cayley in 1849. Cayley remained in the legal profession until 1863, at which time he left the bar to take the newly established Sadleirean professorship of pure mathematics at Cambridge. It is evident from our letters that Smith and Cayley had a cordial relationship based on their shared love for mathematics; Smith apparently was in the habit of sending Cayley mathematical problems and requesting his help in solving them. Letter (1) contains both Smith's query and Cayley's response; in it Smith asked Cayley to give him

> a simple construction for the following problem. Given three points in a plane to draw the straight line such that the sum of the squares of the perpendiculars shall be a minimum.

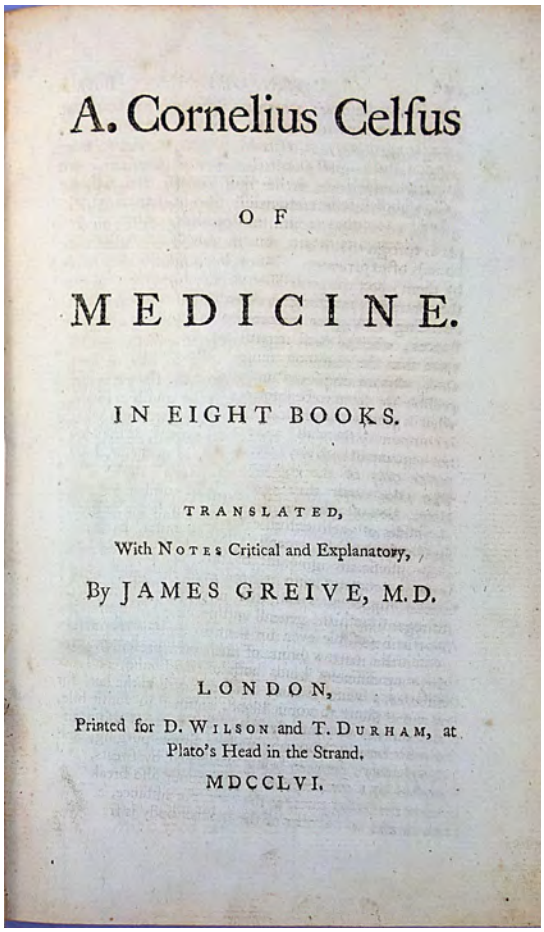
Cayley responded by writing his solution in the margins of Smith's letter:

> Considering the points as material points of equal mass, then taking the origin at the C. G. it is easy to show that the required line is the principal axis of least moment. E.g. if the three points be an isosceles Δ base […] less than 60° required line is [parallel] to base—if greater than 60° it is [perpendicular] to base—if equal 60° or triangle is equilateral there the position is indeterminate. The construction for the principal axes depends of course on finding the axes of an elliptic. A. C.

In letter (2), dated 1866, Cayley gave the solution to another of Smith's mathematical queries; "it comes out easily & prettily enough." In letter (3), dated 1868, Cayley enclosed the four-page autograph manuscript listed above under no. (4), containing "a solution, such as I have been able to obtain, of your problem, but the solution is I am afraid in a form which will not be of any use to you. May I send the problem—of course in your name—to the Educational Times; it is very likely that you will so obtain a solution of it in a more practical form; and at any rate, the problem, quà problem is an excellent one." In the manuscript Cayley stated the problem as follows:

> Considering any two circles O, O' and taking M, M' the corresponding points in the line OO', let the angles MP, M'P' be respectively θ, $\alpha - \theta$ where θ is a variable angle; it is required to find the envelope of the line PP'.

Cayley's solution covers four folio pages and includes several equations and two diagrams. Biggs et al., *Graph Theory*, ch. 3. *Dictionary of Scientific Biography*. Crilly, *Arthur Cayley: Mathematician Laureate of the Victorian Age,* pp. 68, 120-121. Kline, *Mathematical Thought from Ancient to Modern Times*, pp. 804-9. Ewald, *From Kant to Hilbert,* p. 542. 42843


A. Cornelius Celsus

OF

MEDICINE.

IN EIGHT BOOKS.

TRANSLATED,

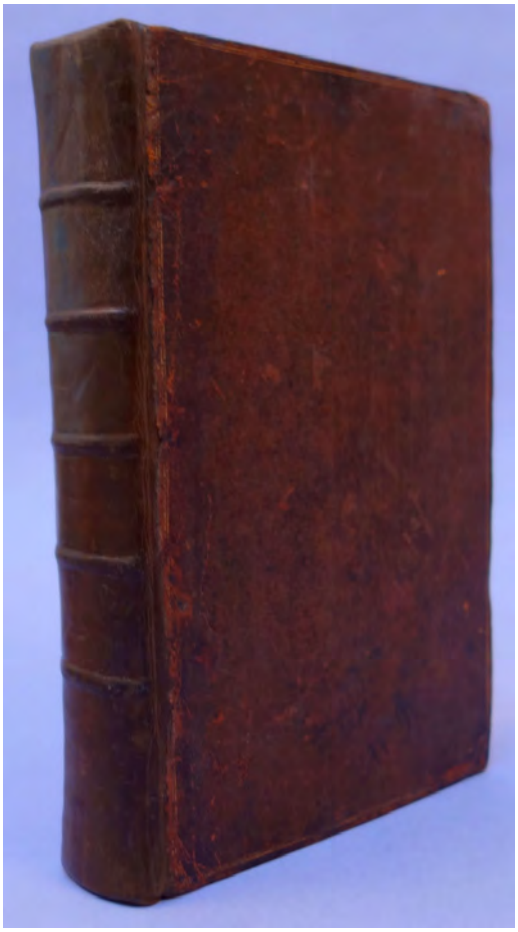
With NOTES Critical and Explanatory,

By JAMES GREIVE, M.D.

LONDON,

Printed for D. WILSON and T. DURHAM, at Plato's Head in the Strand.

MDCCLVI.



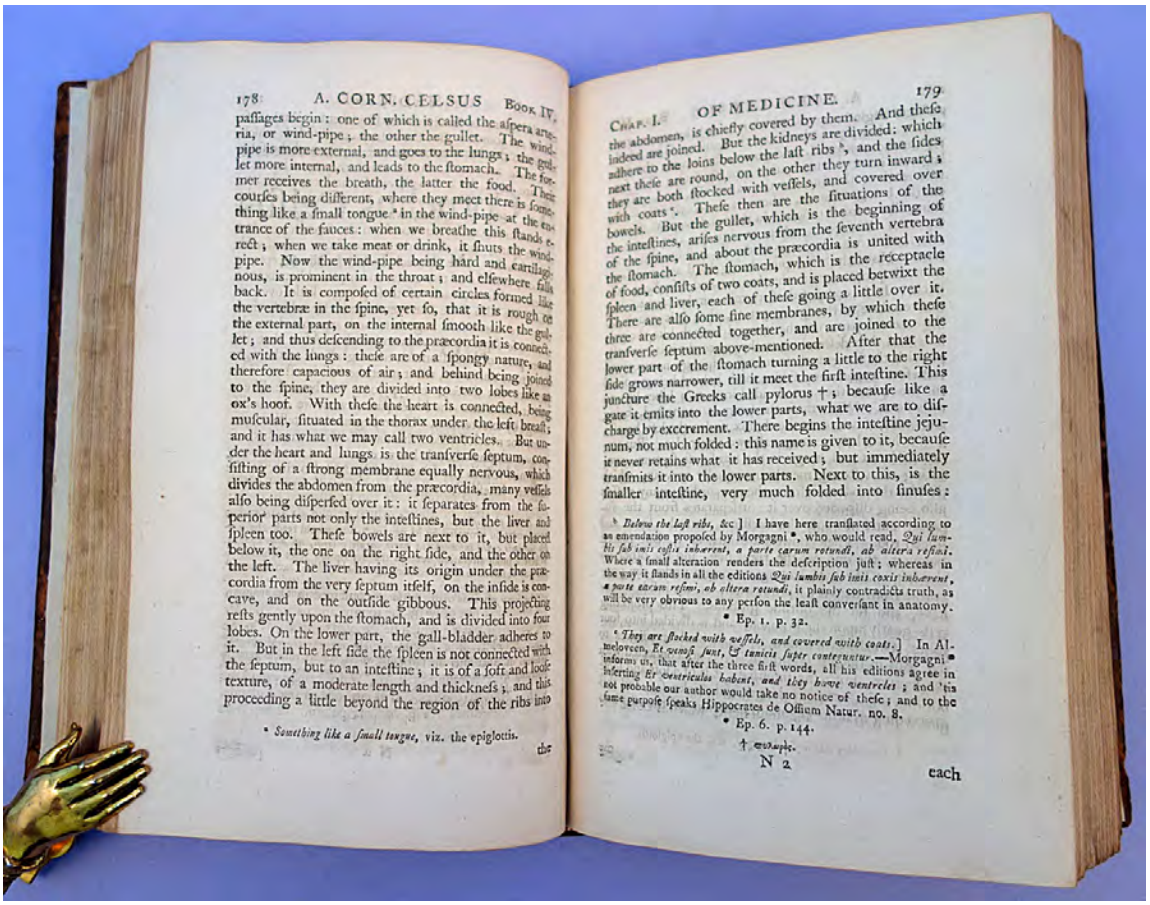
Origin of the Medical Term "Cancer"

14. Celsus, Aulus Cornelius (fl. 1st cent. A.D.). Of medicine. In eight books. Translated, with notes critical and explanatory, by James Greive, M.D. 8vo. xxxii, 519, [7]pp. London: D. Wilson and T. Durham, 1756. 208 x 131 mm. Calf c. 1756, rebacked, corners repaired, endpapers renewed. Light toning, occasional spotting, but very good. 18th century owner's signature ("George Howell January 21 1757") on the front flyleaf. $3750

First Edition in English. Celsus' *De medicina,* written circa 30 C.E., is the oldest Western medical document after the Hippocratic writings, the earliest major medical treatise written in Latin to survive, and the first of the treatises on medicine from the ancient world to be published in English. Prior to this edition of Celsus, fragments of Hippocrates, such as the Hippocratic Oath, were translated into English , but virtually all of Hippocrates, Galen and other classical writers on medicine and surgery waited until the nineteenth or twentieth century to be translated.

Celsus remains the most important source of present-day knowledge of medicine in the Roman empire. *De medicina* was originally part of a larger encyclopedic work covering agriculture, military science, rhetoric, government, law, philosophy and medicine, but only the eight books on medicine survived intact. Like many of the ancient classics, the text was lost during the Middle Ages, and rediscovered by humanists in the Renaissance. In this case manuscripts were discovered in 1427 in the Laurentian Library, Florence, from which the first printed edition, edited by Bartholomaeus Fontinus, was published in 1478.

Book I of *De medicina* contains a historical overview of medicine; Book II deals with the course and general treatment of diseases; Books III and IV with special therapy; Books V and VI with pharmacology (drugs and



178 A. CORN. CELSUS Book IV.

paſſages begin: one of which is called the aſpera arteria, or wind-pipe; the other the gullet. The wind-pipe is more external, and goes to the lungs; the gullet more internal, and leads to the ſtomach. The former receives the breath, the latter the food. Their courſes being different, where they meet there is ſomething like a ſmall tongue * in the wind-pipe at the entrance of the fauces: when we breathe this ſtands erect; when we take meat or drink, it ſhuts the wind-pipe. Now the wind-pipe being hard and cartilaginous, is prominent in the throat; and elſewhere falls back. It is compoſed of certain circles formed like the vertebræ in the ſpine, yet ſo, that it is rough on the external part, on the internal ſmooth like the gullet; and thus deſcending to the præcordia it is connected with the lungs: theſe are of a ſpongy nature, and therefore capacious of air; and behind being joined to the ſpine, they are divided into two lobes like an ox's hoof. With theſe the heart is connected, being muſcular, ſituated in the thorax under the left breaſt; and it has what we may call two ventricles. Under the heart and lungs is the tranſverſe ſeptum, conſiſting of a ſtrong membrane equally nervous, which divides the abdomen from the præcordia, many veſſels alſo being diſperſed over it: it ſeparates from the ſuperior parts not only the inteſtines, but the liver and ſpleen too. Theſe bowels are next to it, but placed below it, the one on the right ſide, and the other on the left. The liver having its origin under the præcordia from the very ſeptum itſelf, on the inſide is concave, and on the outſide gibbous. This projecting reſts gently upon the ſtomach, and is divided into four lobes. On the lower part, the gall-bladder adheres to it. But in the left ſide the ſpleen is not connected with the ſeptum, but to an inteſtine; it is of a ſoft and looſe texture, of a moderate length and thickneſs; and this proceeding a little beyond the region of the ribs into

* *Something like a ſmall tongue*, viz. the epiglottis.

the

CHAP. I. OF MEDICINE. 179

the abdomen, is chiefly covered by them. And theſe indeed are joined. But the kidneys are divided: which adhere to the loins below the laſt ribs [b], and the ſides next theſe are round, on the other they turn inward; they are both ſtocked with veſſels, and covered over with coats [c]. Theſe then are the ſituations of the bowels. But the gullet, which is the beginning of the inteſtines, ariſes nervous from the ſeventh vertebra of the ſpine, and about the præcordia is united with the ſtomach. The ſtomach, which is the receptacle of food, conſiſts of two coats, and is placed betwixt the ſpleen and liver, each of theſe going a little over it. There are alſo ſome fine membranes, by which theſe three are connected together, and are joined to the tranſverſe ſeptum above-mentioned. After that the lower part of the ſtomach turning a little to the right ſide grows narrower, till it meet the firſt inteſtine. This juncture the Greeks call pylorus †; becauſe like a gate it emits into the lower parts, what we are to diſcharge by excrement. There begins the inteſtine jejunum, not much folded: this name is given to it, becauſe it never retains what it has received; but immediately tranſmits it into the lower parts. Next to this, is the ſmaller inteſtine, very much folded into ſinuſes:

[b] *Below the laſt ribs, &c.*] I have here tranſlated according to an emendation propoſed by Morgagni *, who would read, *Qui lumbis ſub imis coxis inhærent, a parte earum rotundi, ab altera reſidi.* Where a ſmall alteration renders the deſcription juſt; whereas in the way it ſtands in all the editions *Qui lumbis ſub imis coxis inhærent, a parte earum reſidi, ab altera rotundi*, it plainly contradicts truth, as will be very obvious to any perſon the leaſt converſant in anatomy.

* Ep. 1. p. 32.

[c] *They are ſtocked with veſſels, and covered with coats.*] In Almeloveen, *Et venoſi ſunt, & tunicis ſuper contegnuntur.*—Morgagni * informs us, that after the three firſt words, all his editions agree in inſerting *Et ventriculos habent, and they have ventricles*; and 'tis not probable our author would take no notice of theſe; and to the ſame purpoſe ſpeaks Hippocrates de Offium Natur. no. 8.

* Ep. 6. p. 144.

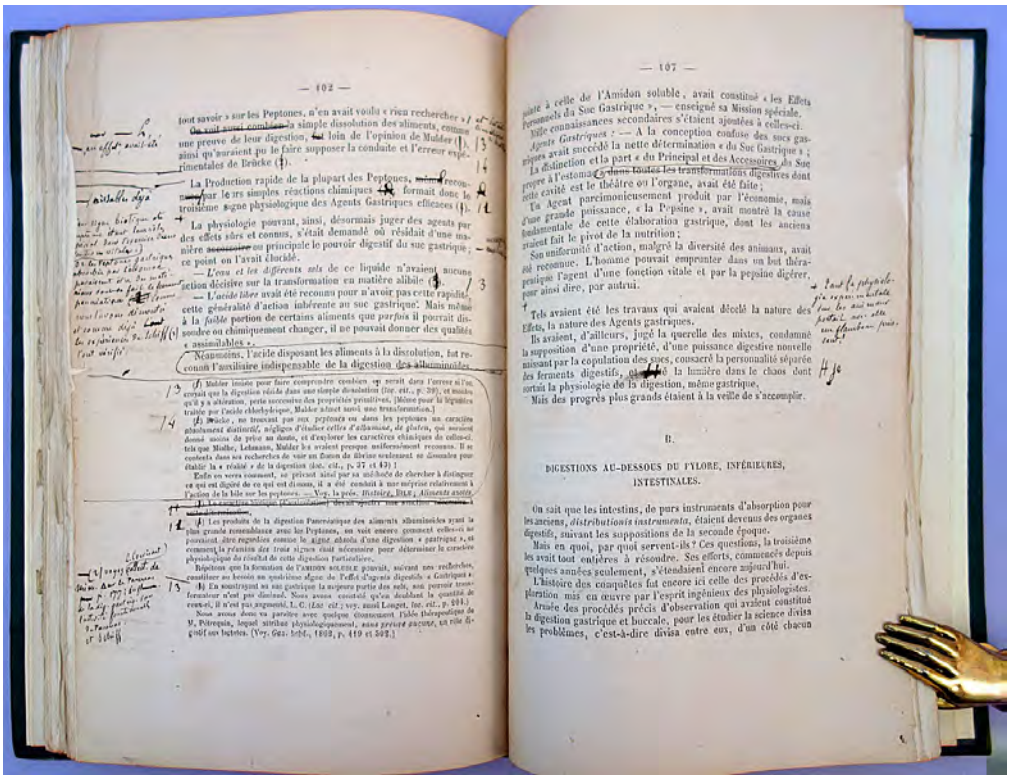
† ευπυλος.

medication); Book VII with surgery; and Book VIII with bone diseases. Celsus is credited with recording the cardinal signs of inflammation: calor (warmth), dolor (pain), tumor (swelling) and rubor (redness and hyperaemia). He goes into great detail regarding the preparation of numerous ancient medicinal remedies including the preparation of opioids. In addition, he describes many first-century Roman surgical procedures which included removal of a cataract, treatment for bladder stones, and the setting of fractures.

In compiling *De medicina* Celsus drew heavily upon the Hippocratic corpus, referencing some 80 Greek medical writers, some of whom are now known only from Celsus's work. He translated Greek medical terms into Latin, and many of these Latin terms have remained standard in medicine to the present day. Included among these terms is the word "cancer" (Latin for the Greek karkinos [crab]), which Celsus used to describe various types of non-malignant ulceration such as erysipelas and gangrene. In discussing malignant disease Celsus used the words carcinoma and carcinode, terms derived directly from the Greek. In his principal account of the disease (pp. 302-4 in the 1757 Greive translation),

> he starts by saying that it is not very dangerous unless interfered with by injudicious treatment, but goes on to mention a more dangerous form which he describes as cacoethes (κακοηθες), malignant, using the Greek adjective which is often applied to the disease by Hippocrates. For this variety alone he suggests operative treatment though he gives no details.
>
> He goes on to refer to several varieties of local superficial cancer or rodent ulcer using the terms carcinode and carcinoma and mentions the disease as occurring on the face, nose, ears, lips, corner of the eye and in the breast; he also speaks of cancerous nasal polypus and carcinoma at the umbilicus. (Celsus, *De medicina,* ed. and trans. by W. G. Spencer [1935], vol. III, p. 592).

Dictionary of Scientific Biography. Prioreschi, *A History of Medicine*, vol. III, pp. 182-211. Garrison-Morton 21 (note). 40803

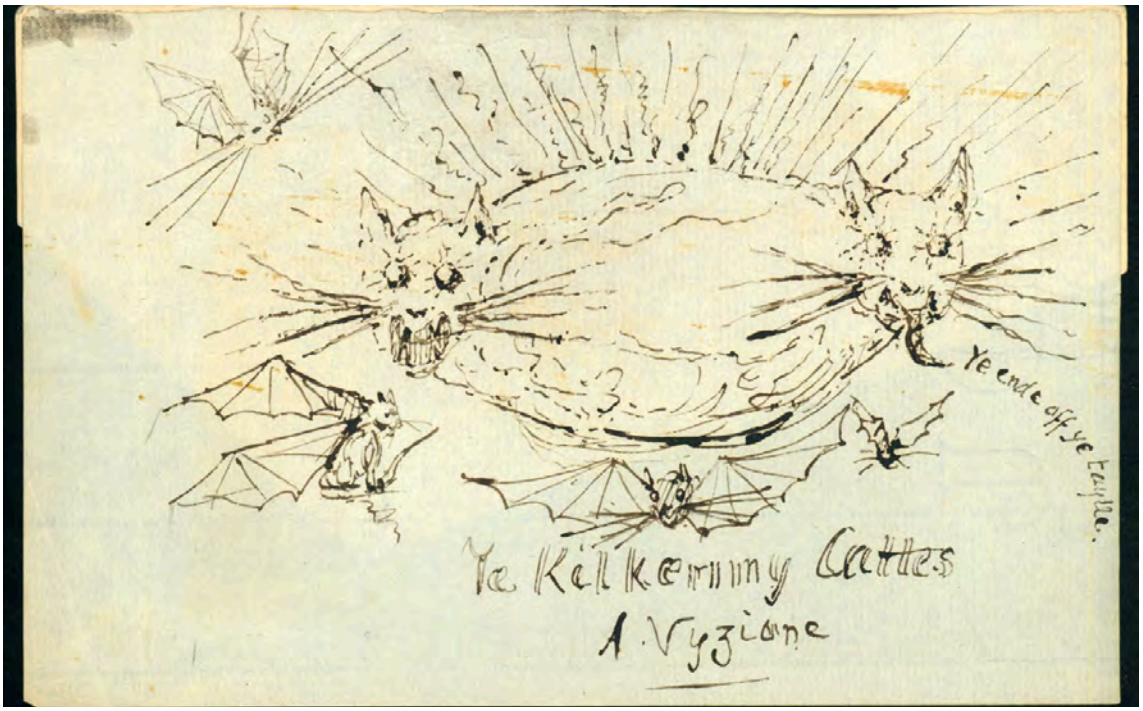


Corrected Galleys of an Unpublished Work

15. Corvisart, Lucien (1824-82). Histoire générale de la digestion [caption title]. Author's interleaved & corrected proofs, bound in 2 vols., 8vo, the first volume comprising the Introduction historique sur la digestion en général. [ix]-clii; 144pp. Both paginations incomplete (text on last pages breaks off in mid-sentence). N.p., n.d. [Paris, not before 1863]. 216 x 138 mm. 19th cent. half calf, a little rubbed. Uneven browning, occasional foxing & soiling, but very good. Bookplate of British physiologist John Yudkin (1910-95). $3000

Corrected Galley Proofs, with author's extensive annotations on about one-quarter of the pages, of what appears to be an unpublished work—it is not listed in NUC, OCLC, or the Wellcome Library's online catalogue. Corvisart, the nephew of Jean Nicolas Corvisart des Marest, devoted a good portion of his career to the physiology of digestion, performing important research on the pancreas (see Garrison-Morton 1001) and publishing several works in the mid-19th century on various aspects of digestion and nutrition. He may have intended his *Histoire générale de la digestion* to be his crowning work in this field: written some time after the publication of his *Collection de mémoires sur une fonction peu connue du pancréas* (1857-63), it tackles the entire history of digestion physiology from ancient times to his own era, and presents a detailed study of the function and purpose of the entire digestive and nutritional system from the stomach to the large intestine, with particular emphasis on the pancreas. A check of NUC and the online databases shows no works on digestion by Corvisart published after the *Collection de mémoires,* so that our set of corrected proofs represents what may be the only written evidence of Corvisart's scientific work on this subject after 1863.

These proofs are from the library of British physiologist John Yudkin, professor of nutrition and dietetics at the University of London; Yudkin is best known for his investigations of the link between sugar and various diseases, including coronary artery disease and type 2 diabetes. Hirsch. 34307



Original Sketch by De la Beche

16. De la Beche, Henry (1796-1855). Ye Kilkenny Cattes. A vyzione. Pen-and-ink sketch. N.p., n.d. [late 1851]. 116 x 183 mm. A few tiny spots, portion of former mount present, but fine. Inscribed on the verso in pencil in an unknown hand: "By Sir Henry De la Beche, geologist." $3000

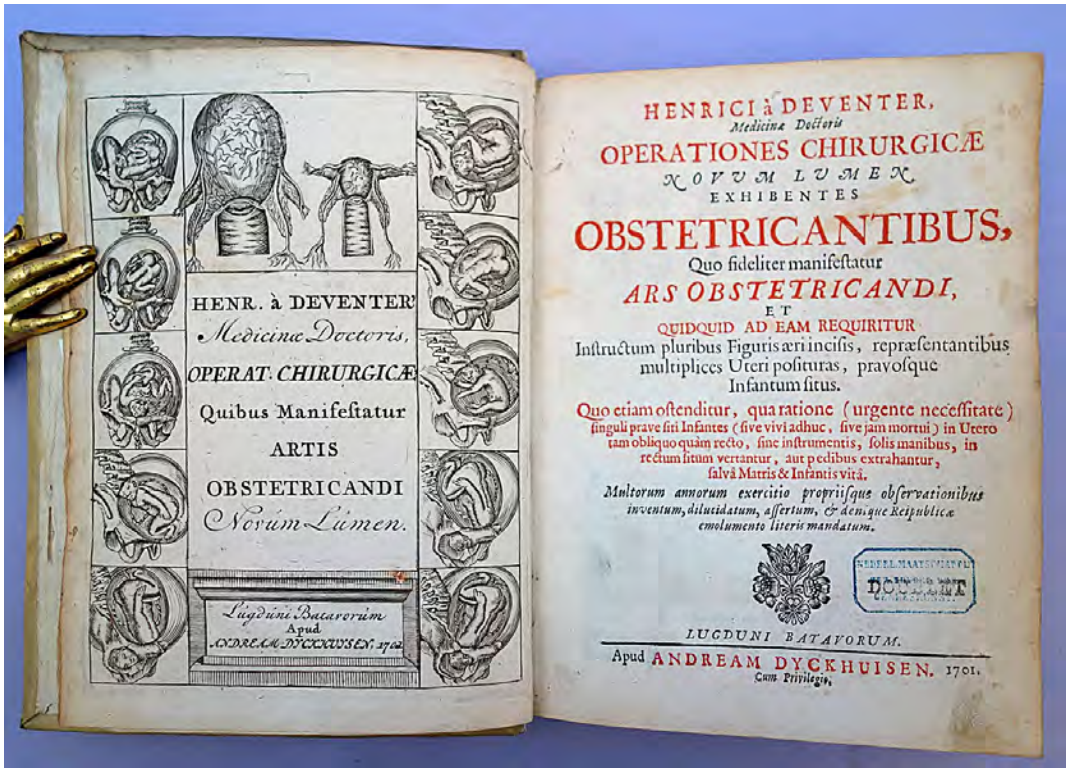
By British geologist and paleontologist Henry De la Beche, the first director of the Geological Survey of Great Britain and an accomplished amateur artist and cartoonist; as an artist he is best known for his "Duria antiquior," illustrating a lively gathering of antediluvian creatures in prehistoric Dorset.

De la Beche's amusing sketch of "Ye Kilkenny Cattes" depicts conjoined cats surrounded by bats in flight; the cat on the right has the remains of a tail in its mouth, identified by the caption "Ye ende off ye taylle." The title of the cartoon references the nursery rhyme about the fatally rivalrous "Two Cats of Kilkenny," who "Each thought there was one cat too many / So they fought and they fit / And they scratched and they bit / Till excepting their nails and the tips of their tails / Instead of two cats, there weren't any."

De la Beche's cartoon almost certainly relates to the speculation over who would be named to succeed Charles Konig as the British Museum's Keeper of Mineralogy and Geology, a post left vacant by Konig's sudden death in September 1851. For a time Richard Owen was in the running for the position, a situation that caused Thomas Huxley (who was famously biased against Owen) to remark that

> There is a great stir in the scientific world at present about who is to occupy Konig's place at the British Museum . . . The heart-burnings and jealousies about this matter are beyond all conception. Owen is both feared and hated, and it is predicted that if [zoologist John Edward] Gray and he come to be officers of the same institution, in a year or two the total result will be a caudal vertebra of each remaining after the manner of the Kilkenny cats (Huxley, *Life and Letters,* vol. 1, p. 136).

Owen ended up refusing the position, which went instead to George Robert Waterhouse. In 1856 Owen was named the British Museum's first Superintendent of the Natural History Department, a post he occupied for the rest of his long career. Whatever difficulty Owen had with John Edward Gray, the Museum's Keeper of Zoology, was apparently resolved by then, as the two men immediately began working together to campaign for more space for the museum's scientific collections. Rupke, *Richard Owen: Victorian Naturalist*, pp. 30-31. 43014



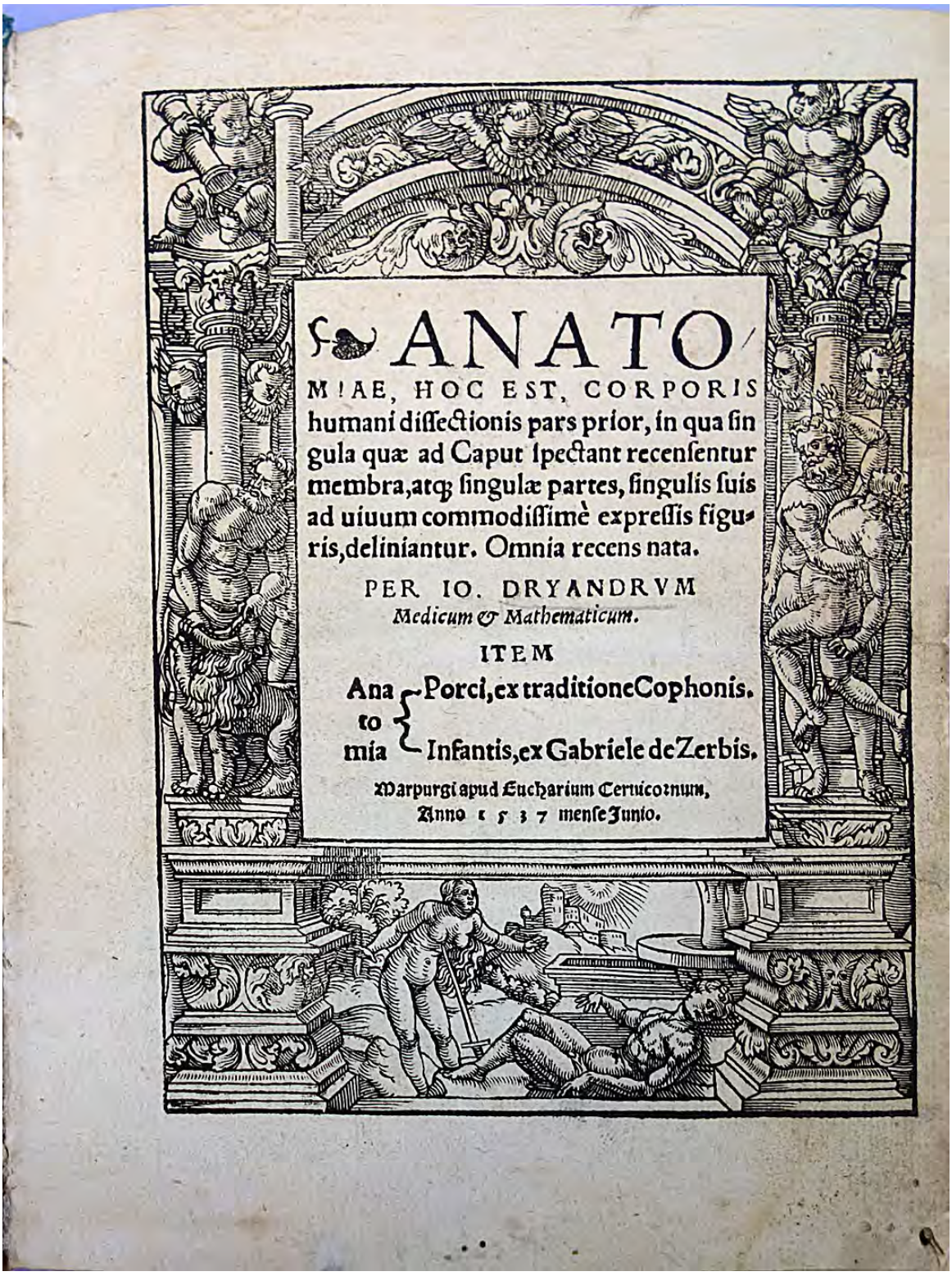
First Accurate Description of the Female Pelvis

17. Deventer, Hendrik van (1651-1724). Operationes chirurgicae novum lumen exhibentes obstetricantibus. . . . 4to. Engraved title, [18], 274, [6]pp. 38 figures on 35 sheets, some signed Phi[lippe] Bouttats. Leiden: Dyckhuisen, 1701. 198 x 157 mm. Dutch tooled vellum c. 1701. Minor worming in inside covers & first & last 2 or 3 leaves, light foxing & browning, but a fine copy, in an unrestored Dutch binding. Small stamp of Dutch library on printed title. Booklabel of Hector Treub (1856-1920), professor of obstetrics & gynecology at Leiden & Amsterdam (see Hirsch). $2750

First Edition in Latin. See Garrison-Morton 6253, citing the Dutch original published the same year. Deventer gave the first accurate description of the female pelvis and its deformities, thus providing the practical basis for modern obstetrics. Deventer made it absolutely clear that the woman's bony pelvis was unyielding during labor, and that pelvic abnormalities and deformities of the spine as well had to be considered by the obstetrician. He corrected Mauriceau's misconception of the growth of the uterus in pregnancy, and made the first attempt at an accurate description of the axis of the birth-canal.

Deventer "became interested in bone deformities because of his extensive experience in obstetrics, unusual for a male practitioner at that time. He noted, first, the many abnormal pelves which interfered with parturition. Among them were many cases associated with scoliosis. The latter condition attracted his attention, and much of his effort thereafter was spent in the study of spinal deformities. His fame in these matters became so great that his practice was confined almost entirely to obstetrics and deformities of the spine and pelvis. He left excellent descriptions of abnormalities commonly found in the pelvis and vertebral column, and in discussing treatment, advocated the use of suspension apparatus for the correction of scoliosis. . ." (Bick 56).

Operationes chirurgicae was translated into German, French and English. Deventer's knowledge of the pelvis was not superseded until the mid-nineteenth century. Speert, *Milestones* 159 & *Iconographia* 212 & 517. Cutter & Viets, p. 13. 7960



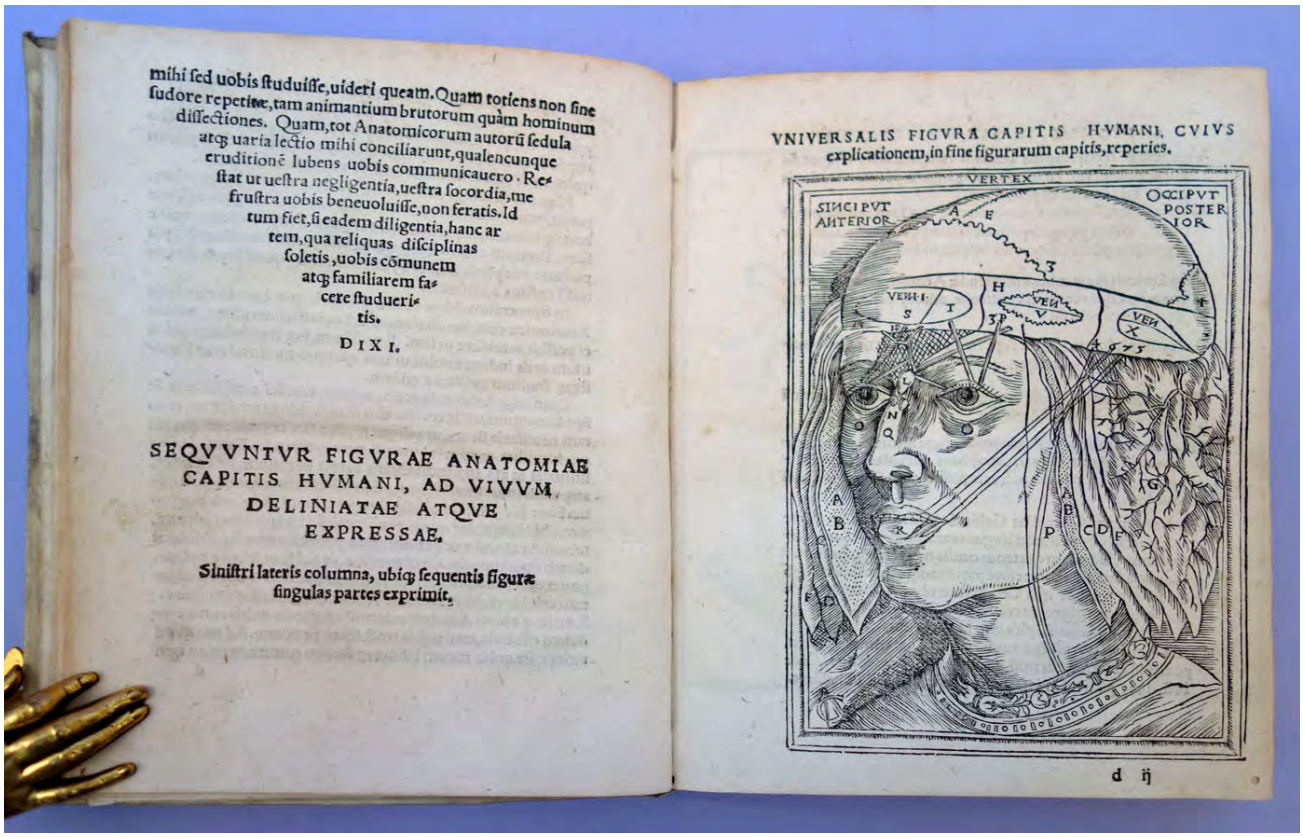
ANATOMIAE, HOC EST, CORPORIS humani dissectionis pars prior, in qua singula quæ ad Caput spectant recensentur membra, atq; singulæ partes, singulis suis ad uiuum commodissimè expressis figuris, deliniantur. Omnia recens nata.

PER IO. DRYANDRVM
Medicum & Mathematicum.

ITEM

Anatomia { Porci, ex traditione Cophonis.
Infantis, ex Gabriele de Zerbis.

Marpurgi apud Eucharium Cervicornum,
Anno 1537 mense Junio.

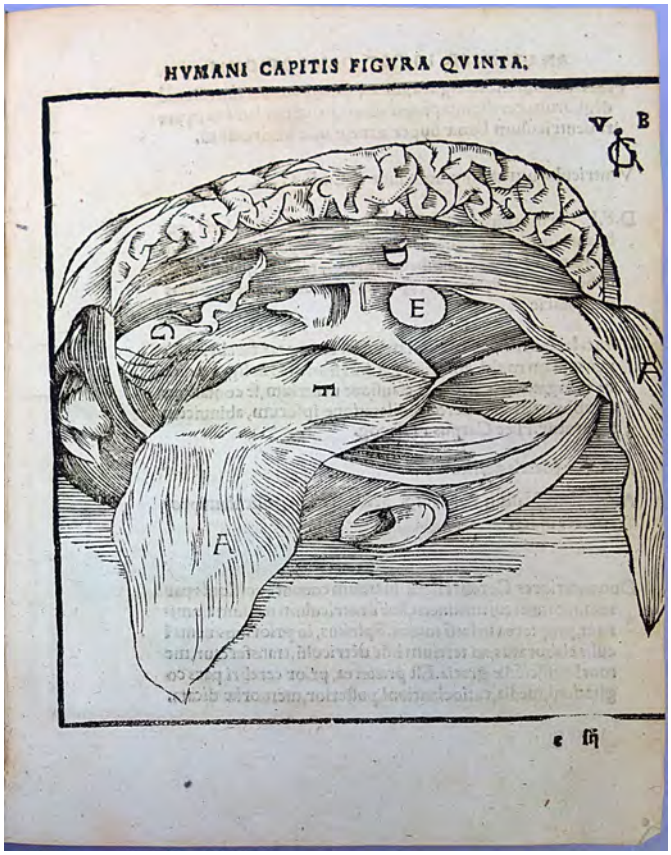


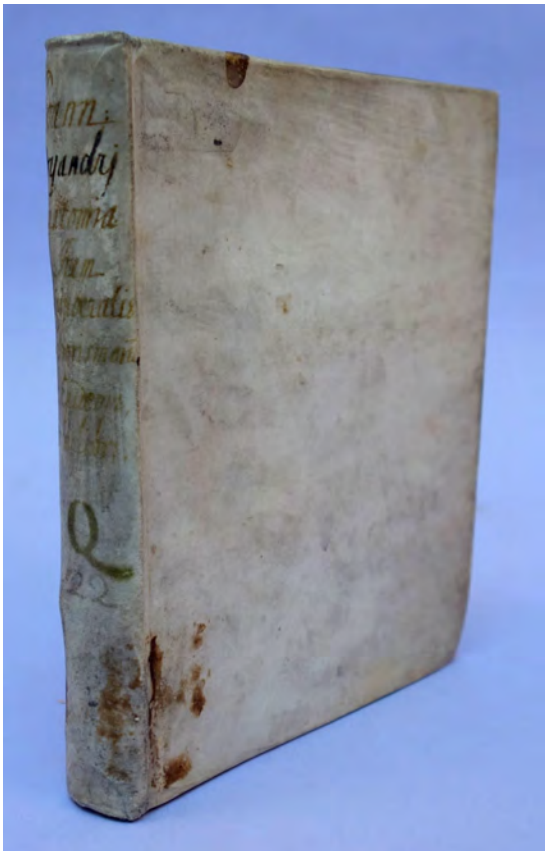
First Significant Work on Cerebral Anatomy

18. Dryander, Johannes (Johannes Eichmann) (1500–60). Anatomiae, hoc est, corporis humani dissectionis pars prior . . . [all published]. Marburg: Eucharius Cervicornus [Hirtzhorn], 1537. 36 leaves, unpaginated. 21 woodcuts in text (19 full-page, 2 repeated), plus woodcut title border and woodcut historiated initials. Lacking the folding table, which is present in only a very few copies and was probably added as an afterthought. Bound with: Hippocrates (ca. 460 – ca. 370 B.C.). Hippocratis Coi medicinae et medicorum omnium principis aphorismorum & sente[n]tiarum medicarum libri septem . . . Edited by Johann Agricola (1496-1570). 199pp, [Ingolstadt: Alexander Weissenhorn,] 1537. Together 2 items, 4to. 186 x 147 mm. 17th-century vellum, title hand-inked on spine. Woodcuts on leaves e1, e3 and f1 of the Dryander shaved in the outer margins with minimal loss of image, minor toning, but very good. $27,500

First Edition of the first significant book on the anatomy of the head, one of the first anatomical treatises illustrated after drawings made from the author's own dissections, and one of the most beautiful of the pre-Vesalian anatomical works. This is the first copy of Dryander's work that we have handled in three decades. Dryander, who studied anatomy in Paris at the same time as Vesalius, was on the faculty of the Protestant University of Marburg; he was one of the first physicians in Germany to perform public dissections.

Dryander's *Anatomiae* was an expansion of his *Anatomia capitis humani* (1536), a thin quarto of 14 leaves containing 11 woodcut illustrations of the anatomy of the head which is of extreme rarity; we have handled only one copy of that edition in fifty years. Both the 1536 and 1537 works were published as pamphlets, surviving chiefly in *sammelbands*, from which they were usually later disbound. Both of the Haskell F. Norman copies were in modern bindings.

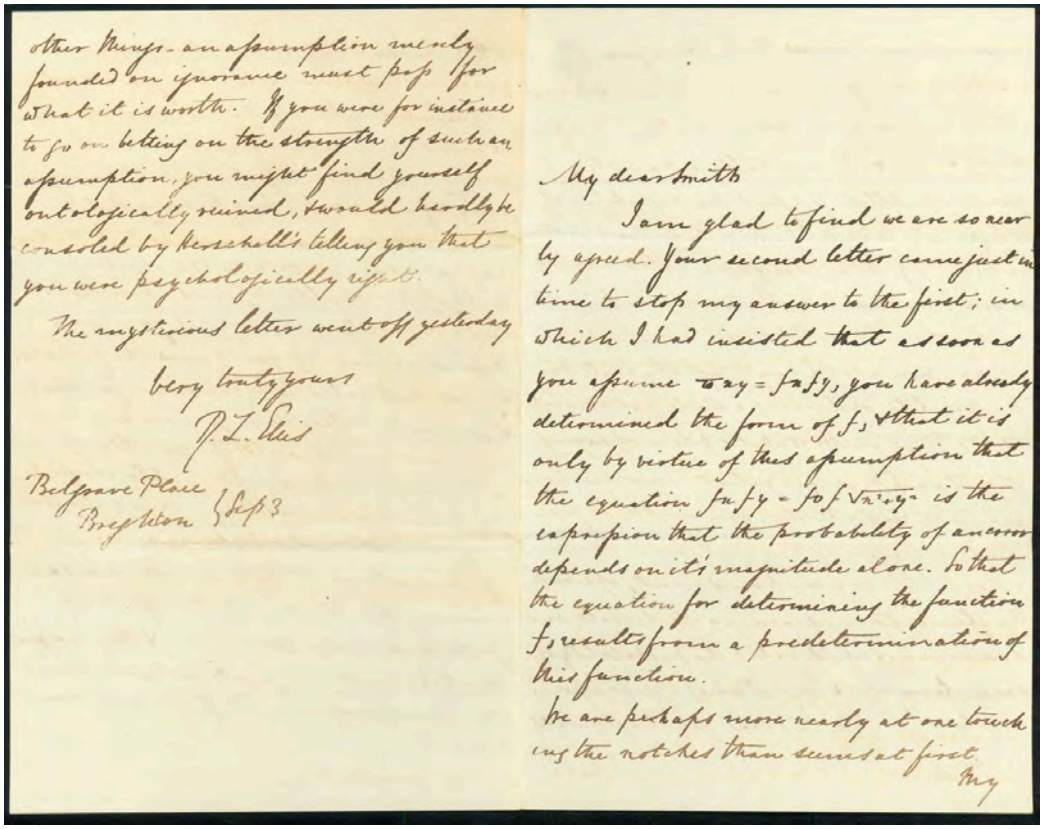




As its title indicates, Dryander's 1537 *Anatomiae* was intended to form the first part of a full-scale anatomical work, which was never published. The first eight woodcuts of the head in the 1537 *Anatomiae* had first appeared in the 1536 *Anatomia capitis humani*; another eight woodcuts of cerebral anatomy were prepared especially for the *Anatomiae*. The remaining illustrations in the *Anatomiae* include images rearranged from woodcuts used in the earlier work, plus a woodcut of the heart and lungs. "Dryander's illustrations in this book formed a dissection sequence starting with removing the scalp and skull-cap, and the continued to expose the meninges and the cerebral hemispheres, then the cerebellum, and finally the base of the skull" (Roberts and Tomlinson, p. 84). Several of the woodcuts are signed with a monogram consisting of an open pair of compasses (the emblem of the Apostle Thomas) above the letter "G", frequently with the initials "GVB" or "VB" above. This monogram has been linked to the Basel woodcutter Georg Thomas (see Herrlinger, p. 83n), and also to the German artist Hans Brosamer (see Choulant, p. 148).

A very few copies of both the *Anatomia capitis humani* and the *Anatomia* also have a folding table, which was most likely added as an afterthought. The Haskell F. Norman copy of the *Anatomia capitis humani* had the table in facsimile, while the Norman copy of the 1537 *Anatomiae* contained the original table. This was the only copy with the original table that we have handled during the past 50 years. Jeremy faintly recalls finding the folding table separately in a print shop 30 or 40 years ago, and adding it to the HFN copy. This was, of course, one of those "once in a lifetime" experiences.

Also included in Dryander's *Anatomiae* is a reprint of the manual for pig dissection, *Anatomia porci,* traditionally ascribed to Copho (fl. 1110), and excerpts from the *Anatomia infantis* of Gabriele de Zerbis. Our copy of the work is bound with an incomplete copy of Agricola's 1537 edition of Hippocrates' *Aphorisms*, lacking the final signature containing Georg Leonberger's *Circknizae descriptio*. Choulant, *History and Bibliography of Anatomic Illustration,* pp. 148-149. Garrison-Morton 371. Herrlinger, *History of Medical Illustration*, pp. 83-85. Norman 657. Roberts & Tomlinson, *The Fabric of the Body,* pp. 84-91. 43071



other things - an assumption merely
founded on ignorance must pass for
what it is worth. If you were for instance
to go on betting on the strength of such an
assumption, you might find yourself
ontologically ruined, & would hardly be
consoled by Herschell's telling you that
you were psychologically right.

The mysterious letter went off yesterday

very truly yours
R. L. Ellis

Belgrave Place
Brighton Sept 3

My dear Smith

I am glad to find we are so near
by agreed. Your second letter came just in
time to stop my answer to the first; in
which I had insisted that as soon as
you assume $\varphi x = fx.fy$, you have already
determined the form of f, & that it is
only by virtue of this assumption that
the equation $fx.fy = f.f\sqrt{x^2+y^2}$ is the
expression that the probability of an error
depends on it's magnitude alone. So that
the equation for determining the function
f results from a predetermination of
this function.

We are perhaps more nearly at one touch
ing the notches than seems at first.

My

"When You Resolve a Compound Event into Simple Ones"

19. Ellis, Robert Leslie (1817-59). Autograph letter signed to Archibald Smith (1813-72). Belgrave Place, Brighton, Sept. 3, 1850. 4pp. plus postmarked envelope. 174 x 111 mm. Envelope a bit soiled, otherwise fine. $750

From Robert Leslie Ellis, mathematician and editor of the works of Francis Bacon, to Scottish mathematician Archibald Smith, best known for his work on magnetism and the Earth's magnetic field, particularly in relation to navigation. Both Smith and Ellis had attended Trinity College, Cambridge and both had graduated as Senior Wrangler (the name given to Cambridge University's top mathematics undergraduate), Smith in 1836 and Ellis in 1840. Both men were also instrumental in founding the *Cambridge Mathematical Journal*, which Ellis edited in 1845.

Ellis's major mathematical contributions were on functional and differential equations and on the theory of probability, the latter of which is discussed in his letter:

> . . . My meaning was to show that when you resolve a compound event into simple ones these must be in rerum natura independent, & not only mentally separable, if you are entitled to assert the probability of the former to be the product of those of the latter. If there were three balls in a bag & you knew one to be white & notched, one to be black & notched, & one to be white & plain, you would say & rightly that the probability of drawing a white notched ball is 1/3. But on Herschell's plan of saying a deviation SW is equivalent to two deviations S and W respectively, you would be justified in reasoning thus. "To draw a white notched ball is a compound event, of which the elements are drawing a white ball and drawing a notched ball: the probability of each element is 2/3 [therefore] that of the compound event is 4/9." In this case you clearly would be wrong . . .

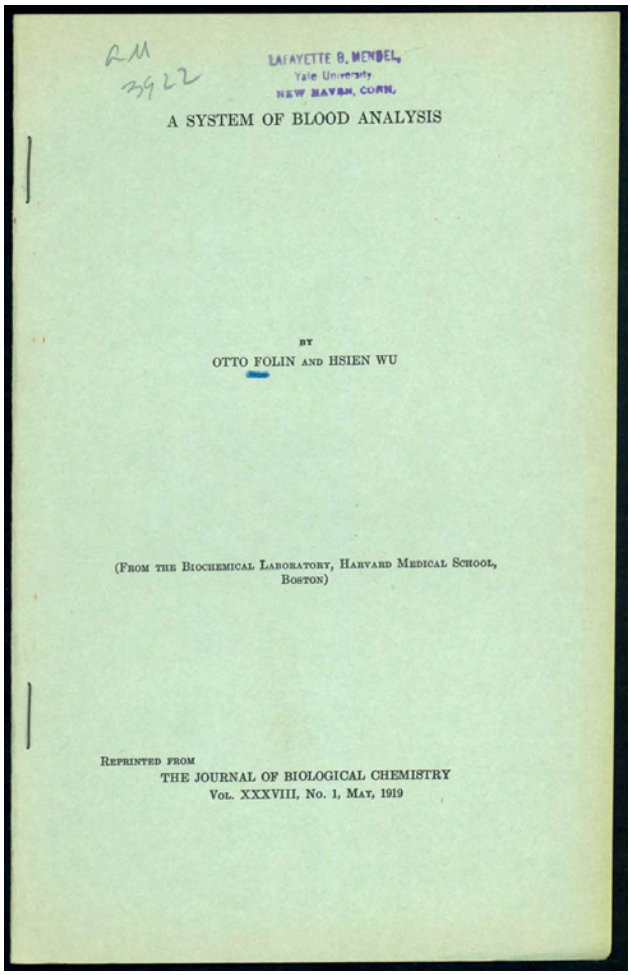
Ellis is here criticizing the proof of the law of errors published by astronomer John Herschel (1792-1871) in his 1850 review of the theories of Adolphe Quetelet ("Quetelet on probabilities," *Edinburgh Review* 92: 1-57). Ellis wrote his letter to Smith a few months after suffering the attack of rheumatic fever that left him an invalid for the last ten years of his life; he died at the age of 41. 42859

Finest Photographic Portrait

20. Faraday, Michael (1791–1867). Portrait photograph by Maull and Polyblank, from the series Photographic Portraits of Living Celebrities (London: Maull & Polyblank, 1856–59). Original albumin print mounted on heavy paper printed with gilt borders and the photographers' imprint: "Photographed by Maull & Polyblank, 55, Gracechurch Street and 187A Piccadilly, London." 1857. 200 x 148 mm.; mount measures 297 x 248 mm. Archivally framed (frame measures 332 x 274 mm.). Very fine, unfaded condition. $5000

Probably the finest photographic portrait of the great British physicist and chemist, best known for his discoveries of electromagnetic induction, diamagnetism and electrolysis. Faraday's research on the magnetic field around a conductor established the basis for the concept of the electromagnetic field, and his inventions of electromagnetic rotary devices formed the foundation of electric motor technology. He discovered benzene, and popularized the terms anode, cathode, electrode and ion. Faraday's work was summarized by James Clerk Maxwell in a set of mathematical equations that are now accepted as the basis of all modern theories of electromagnetic phenomena.

This portrait of Faraday holding a bar magnet was taken by the London photographers Henry Maull and George Henry Polyblank, who founded their studio in 1856. The portrait forms part of Maull and Polyblank's most famous work, *Photographic Portraits of Living Celebrities*, which was initially issued in parts to subscribers over 41 months between 1856 and 1859. The work consisted of 40 portraits of celebrated Victorians—scientists, statesmen, artists, actors, churchmen and other mid-nineteenth century notables. All of Maull and Polyblank's photographic portraits are very rare on the market. 42979



The Folin-Wu Test for Blood Sugar

21. Folin, Otto K. O. (1867-1934) and Hsien Wu (1893-1959). A system of blood analysis. Offprint from *Journal of Biological Chemistry* 38 (1919). 81-110pp. 230 x 149 mm. Original printed wrappers. Fine copy. Stamp of Lafayette B. Mendel (1872-1935) on the front wrapper. $600

First Edition, Offprint Issue. Folin, a professor of biological chemistry at Harvard University, developed practical methods of determining the constituents of protein-free blood filtrates. "[Folin] found that tungstic acid was a simple and effective way to precipitate completely at about neutral reaction all of the proteins of the blood without adsorbing the non-protein constituents. These tools were the basis for the 'system of blood analysis' developed from 1920 on with the collaboration of Hsien Wu" (Shaffer, p. 64). The present paper describes Folin and Wu's test for blood sugar. This copy is from the library of American biochemist Lafayette B. Mendel, best known for his discovery of vitamin A. Garrison-Morton 3922. Shaffer, "Otto Folin 1867-1934," *National Academy of Sciences Biographical Memoirs* 27 (1952). 43036

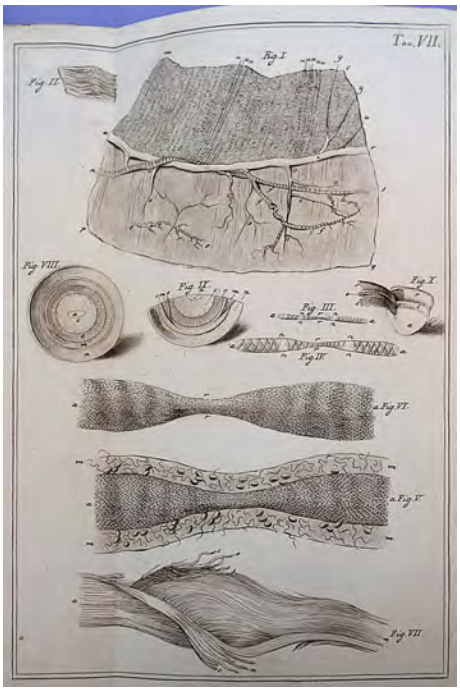

TRAITÉ
SUR LE VÉNIN DE LA VIPERE
SUR LES POISONS AMERICAINS
SUR LE LAURIER-CERISE
ET
SUR QUELQUES AUTRES POISONS VÉGETAUX.

ON Y A JOINT
DES OBSERVATIONS
SUR LA STRUCTURE PRIMITIVE DU CORPS ANIMAL.
DIFFÉRENTES EXPÉRIENCES
SUR LA REPRODUCTION DES NERFS
LA DESCRIPTION D'UN NOUVEAU CANAL
DE L'OEIL.

PAR
M. FELIX FONTANA
PHYSICIEN DE S. A. R. L'ARCHIDUC GRAND-DUC DE TOSCANE
... TEUR DE SON CABINET D'HISTOIRE NATURE
AVEC PLUSIEURS PLANCHES.

TOME PREMIER.

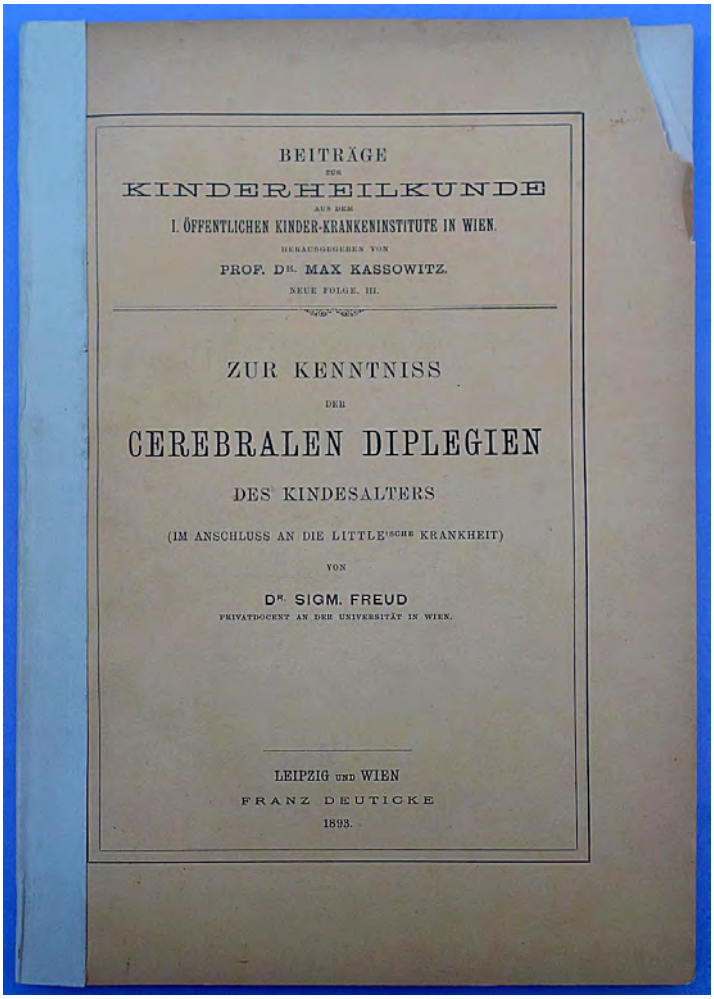
FLORENCE M. DCC. LXXXI.
AVEC APPROBATION.
... chez Nyon l'Aîné ...



Classic of Toxicology

22. Fontana, Felice (1730-1805). Traité sur le vénin de la vipère, sur les poisons américains, sur le laurier-cerise et sur quelques autres poisons végétaux. 2 vols., 4to. xxviii, 329 [1]; xi [1] 373[1]pp. 10 folding engraved plates. Florence: n.p., 1781. 287 x 213 mm. (uncut). Marbled boards c. 1781, somewhat worn. Fine, unpressed copy, from the library of Chauncey D. Leake (1896-1978), with his signature in both volumes. $2250

First Edition in French, extensively revised and augmented by the author, and containing the **First Edition** of his work on the anatomy of nerves and nerve regeneration. See Garrison-Morton 2103. Fontana's *Traité sur le vénin de la vipère* is the first modern investigation of the subject; the French edition, containing over twice as much text as the 1767 Italian edition, contains the results of more than 6000 experiments in which Fontana used "upwards of 3000 vipers" (quoted in Knoefel, p. 270). "Fontana retraced the action of the bite of the viper to an alteration in the irritability of the fibers, which he maintained was mediated by the blood; in other words, the viper's poison directly alters the blood, coagulating it, and this in turn alters all parts of the organism—especially the nerve fibers—that the blood would normally nourish. Fontana extended his toxicological experiments to other substances, especially to curare" (*Dictionary of Scientific Biography*). The curare studies are found in Vol. 2, along with Fontana's toxicological investigations of nicotine, opium, "toxicodendron" (poison ivy), and the cherry-laurel. This volume also contains Fontana's microscopical observations of the skin of eels, in which he gave the first description (albeit primitive) of an adult animal cell nucleus and nucleolus other than in a blood corpuscle; see Knoefel, pp. 240-41. The brief treatise on the nerves, found at the end of Vol. 2 of the *Traité*, is "a little gold mine of ideas. . . . Not only did [Fontana] describe and illustrate the solid axis 'cylinder' of the 'primitive nerve fiber,' but also the degeneration of nerve, as it loses its function when separated from its center" (Haymaker & Schiller, *Founders of Neurology,* p. 205). This copy is from the library of Chauncey D. Leake, co-discoverer of the anesthetic properties of divinyl ether (Garrison-Morton 5713) and author of histories of pharmacology (Garrison-Morton 2068.14) and old Egyptian medical papyri (Garrison-Morton 6471.1). Knoefel, *Felice Fontana: Life and Works,* pp. 267-306; *Felice Fontana 1730-1805: An Annotated Bibliography,* 35. 37533


BEITRÄGE
ZUR
KINDERHEILKUNDE
AUS DEM
I. ÖFFENTLICHEN KINDER-KRANKENINSTITUTE IN WIEN.
HERAUSGEGEBEN VON
PROF. DR. MAX KASSOWITZ.
NEUE FOLGE. III.

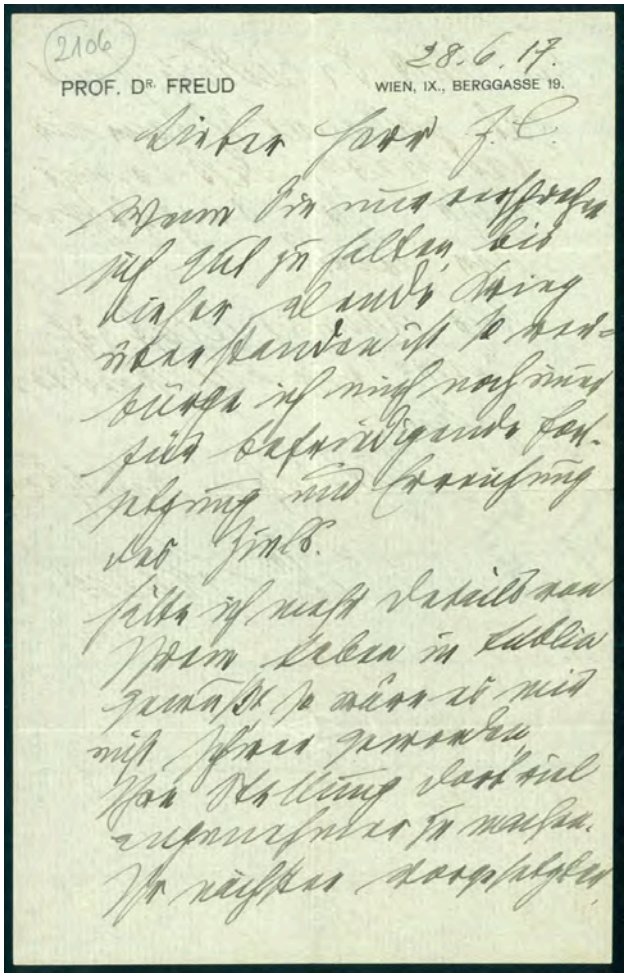
ZUR KENNTNISS
DER
CEREBRALEN DIPLEGIEN
DES KINDESALTERS
(IM ANSCHLUSS AN DIE LITTLE'SCHE KRANKHEIT)
VON
DR. SIGM. FREUD
PRIVATDOCENT AN DER UNIVERSITÄT IN WIEN.

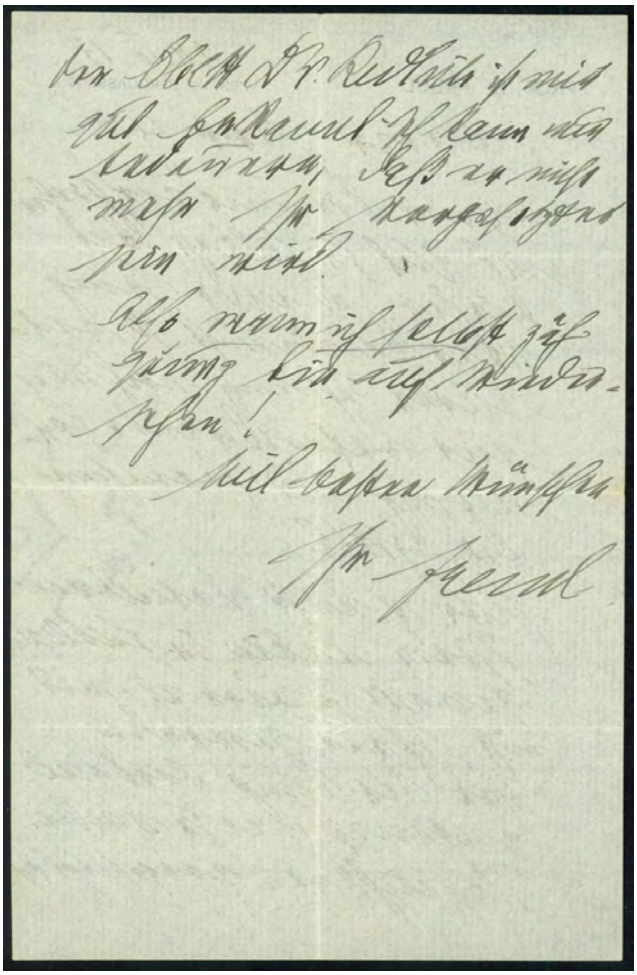
LEIPZIG UND WIEN
FRANZ DEUTICKE
1893.

Freud on Cerebral Palsy

23. Freud, Sigmund (1856-1939). Zur Kenntnis der cerebralen Diplegien des Kindesalters (im Anschluss an die Little'schen Krankheit). [12], 168pp. 2 folding tables. Leipzig & Vienna: Deuticke, 1893. Original wrappers, upper corners of front wrapper and first 2 leaves chipped, spine repaired, split in back wrapper. Very good. In cloth drop-back box. $2500

First Edition. Freud devoted several years to the study of the cerebral palsies of childhood, making several important contributions to our knowledge of the subject; his classification of cerebral palsy is still in use today, and he was the first to suggest that cerebral palsy might result from abnormal fetal development. The present work is a companion to Freud and Rie's 1891 clinical study of the unilateral paralyses of children; it deals with the bilateral paralyses of children, and contains Freud's observations of 53 clinical cases. The case histories were divided into four groups: (1) general cerebral spasticity ("Little's disease"); (2) paraplegic spasticity from bilateral cerebral lesion; (3) centralized chorea and bilateral athetosis; and (4) bilateral spastic hemiplegia. Grinstein 25. Norman F23. 31783





"If You Can Promise to Hold Out Until This Wretched War is Over"

24. Freud, Sigmund (1856-1939). Autograph letter signed in German to "Herr F. C."; i.e., Arthur Fischer-Colbrie (1895-1968). Vienna, 28 June 1917. 1 -1/2 pages. 211 x 136 mm. Fine. English translation included. $9500

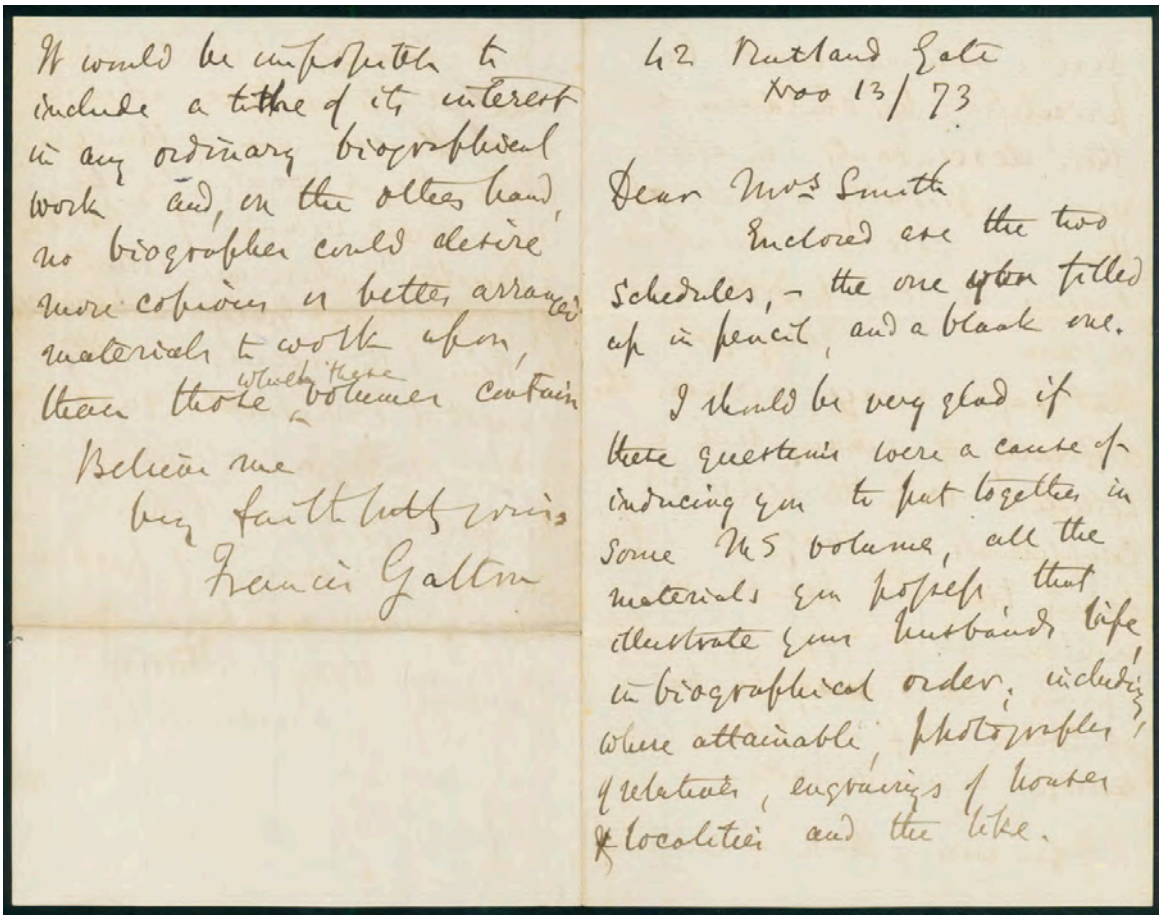
To his patient, the Austrian poet and librettist Arthur Fischer-Colbrie, who served in the army during World War I: "If you can promise to hold out until this wretched war is over, I still guarantee a satisfactory resumption and attainment of the goal . . . So, if I am tough enough myself, farewell until we see each other again!"

"The Austrian writer A. Fischer-Colbrie underwent an analysis with Freud in 1915-16 and then again in 1919 . . . When the cure had to be interrupted because of the young man's military service, Freud sustained an unusual correspondence with him that reflected his efforts to maintain their therapeutic contact. At the same time his letters witness Fischer-Colbrie's burgeoning literary talents" (Walder, C. "I Don't Want to Be Eternally Imprisoned in the Cage of My Own Self . . .". Assumptions about the Relationship between Sigmund Freud and His Juvenile Patient Arthur Fischer-Colbrie (1895-1968) [abstract]." National Center for Biotechnology Information. U.S. National Library of Medicine. Web. 24 Feb. 2012). 40589

Pollak's Portrait of Freud

25. [**Freud, Sigmund (1856-1939).**] Pollak, Max (1886-1970). Etching of Freud from life (seated at desk), unnumbered. Signed and titled in pencil by the artist. Vienna, 1914. Archivally framed together with an example of Freud's autograph signature. 757 x 701 mm. (frame size). Fine. $10,000

Pollak's well-known portrait of Freud seated at his desk in Vienna surrounded by his antiquities. Rare. Hugo Heller, the publisher of Imago and an early member of Freud's circle, began selling the portraits by subscription in 1914. An advertisement in Imago (Heft 5, 1915-1916) indicates that fifty copies of the etchings were for sale, nos. 1-25 on "Kaiserlich Japan" for 100 kroner (85 marks) and nos. 26-50 on "Van Geldern-Bütten" for 60 kroner (50 marks). This copy is not numbered. Karl Abraham mentioned the Pollak portrait in his letter to Freud of 2 April 1914: "Pollak's etching arrived a few days ago. I like the pose very much. It takes some time to get used to the facial expression but one comes to like it in the end. The whole composition, especially the distribution of the black and white, is very well done" (*A Psycho-Analytic Dialogue: The Letters of Sigmund Freud and Karl Abraham 1907-1926,* p. 170). Norman F169. 42741



It would be impossible to include a tithe of its interest in any ordinary biographical work and, on the other hand, no biographer could desire more copious & better arranged materials to work upon, than those which these volumes contain

Believe me
very faithfully yours
Francis Galton

42 Rutland Gate
Nov 13/73

Dear Mrs Smith

Enclosed are the two schedules, – the one you filled up in pencil, and a blank one.

I should be very glad if these questions were a cause of inducing you to put together in some MS volume, all the materials you possess that illustrate your husband's life in biographical order, including, where attainable, photographs of relatives, engravings of houses & localities and the like.

In Preparation for his "English Men of Science"

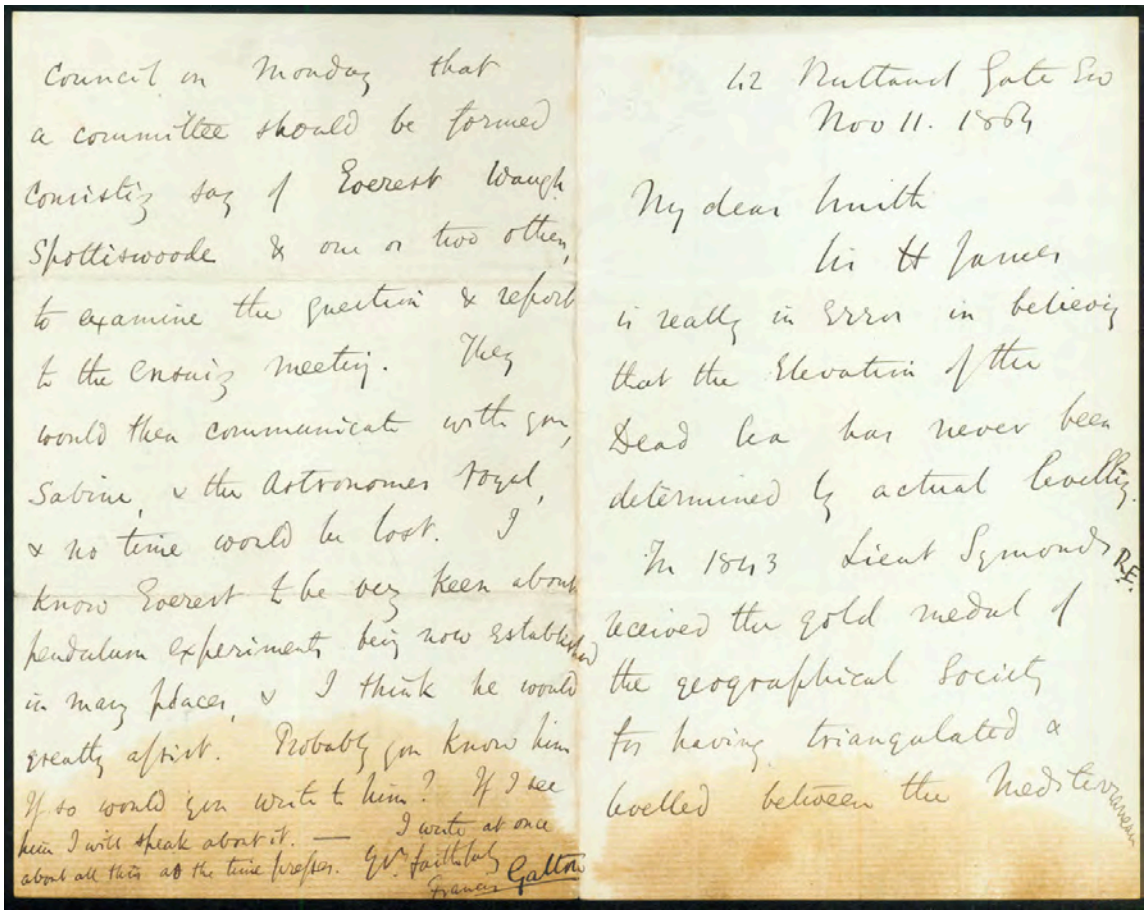
26. Galton, Francis (1882–1911). Autograph letter signed to Mrs. Archibald Smith. 4pp. London, November 13, 1873. 178 x 114 mm. Fine apart from light soiling to creases. $1500

From Galton to the widow of his friend Archibald Smith (1831–72); Smith was a Scottish mathematician best known for his important work on magnetism and the Earth's magnetic field, particularly in relation to navigation. In his letter Galton sends Mrs. Smith "two schedules" (not included here) and urges her to create a memorial volume of materials relating to her husband's life.

Galton's letter to Mrs. Smith was almost certainly written in connection with the preparation of his *English Men of Science* (1874), a continuation of his lifelong research on the heritability of human intelligence and other talents; the work contains data about Archibald Smith on page 157. Galton's purpose in *English Men of Science* was to determine whether the British scientists surveyed owed their interest in science to some innate quality or to the encouragement of others; in other words, the relative importance of "nature and nurture," a phrase Galton is credited with coining. To gather information on the hereditary and environmental factors affecting the lives of these British scientists, Galton compiled a seven-page questionnaire, a novel data-gathering technique at the time; this may have been the "schedule" Galton refers to in his letter.

> Enclosed are the two schedules,—the one you filled up in pencil, and a blank one. I should be very glad if these questions were a cause of inducing you to put together in some MS volume, all the materials you possess that illustrate your husband's life in biographical order, including, where attainable, photographs of relatives, engravings of houses & localities and the like. Such a volume would be priceless to his children and their descendants in after years, especially to such of them as followed similar careers & rose to distinction in them. . .

42851



Council on Monday that
a committee should be formed
consisting say of Colonel Waugh
Spottiswoode & one or two others,
to examine the question & report
to the ensuing meeting. They
would then communicate with you,
Sabine, & the Astronomer Royal,
& no time would be lost. I
know Colonel to be very keen about
pendulum experiments being now established
in many places, & I think he would
greatly assist. Probably you know him
If so would you write to him? If I see
him I will speak about it. — I wrote at once
about all this at the time I suppose. Ever faithfully
Francis Galton

42 Rutland Gate Sw
Nov 11. 1864

My dear Smith

Sir H James
is really in error in believing
that the Elevation of the
Dead Sea has never been
determined by actual levelling.
In 1843 Lieut Symonds R.E.
received the gold medal of
the geographical Society
for having triangulated &
levelled between the Mediterranean

Galton on Measuring the Elevation of the Dead Sea

27. Galton, Francis (1822-1911). Autograph letter signed to Archibald Smith (1813-72). 4pp. London, November 11, 1864. 179 x 113 mm. Light oil-stain in lower margins, but very good otherwise.

$1500

From Galton to Scottish lawyer and mathematician Archibald Smith, best known for his work on magnetism and the Earth's magnetic field, particularly in relation to navigation. Galton was (among many other things) a Fellow of the Royal Geographical Society; he devoted the whole of his letter to Smith to geographical subjects, beginning with a discussion of the measurement of the Dead Sea's elevation:

> Sir H. James is really in error in believing that the elevation of the Dead Sea has never been determined by actual levelling. In 1843 Lieut. Symonds R.E. received the gold medal of the Geographical Society for having triangulated & levelled between the Mediterranean and Dead Sea. He did his work very carefully. You will see an account of it in Vols. 12 & 13 of the Geograph. Society's transactions, in the first in the President's address & in the second in the President's speech, when he gave the gold medal. I had thought, but I believe now I was wrong, that it had also been levelled in more recent years, but I see that Lynch only used barometers & I suppose (from you not having referred to him) that Van der Welde did the same.

Galton here refers to the measurement of the level of the Dead Sea by Lieutenant John F. A. Symonds (d. 1852), the leader of the Royal Engineers' survey of Palestine undertaken in 1841. As Galton notes, this achievement earned Symonds the Royal Geographical Society's gold medal in 1843. Galton also mentions the measurement made by William F. Lynch (1801-65), leader of the U.S. Navy's 1848 expedition to Jordan and the Dead Sea. "Van der Welde" refers to Dutch cartographer Carel W. M. Van de Velde (1818-98), who published a map of Pal-

estine in 1858; Van de Velde did not do any surveying, however, and his Dead Sea measurements were taken from Symonds. "Sir H. James" is Sir Henry James (1803-77), who served as the director-general of the British government's Ordnance Survey from 1854 to 1875.

Galton next brings up the question of whether Smith would "press the pendulum matter" before the Geographical Society:

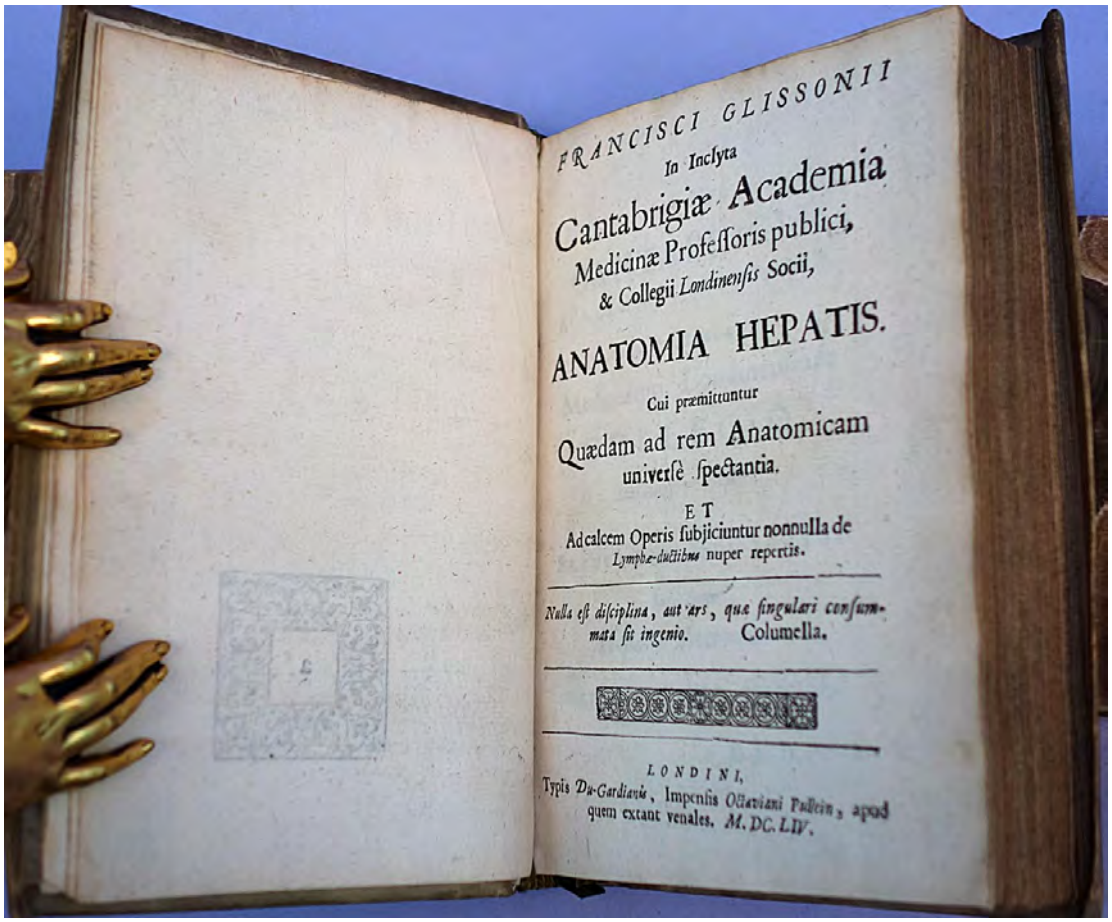
> If you do not think it well to press the pendulum matter, pure & simple, there remains nothing else for our Society to take up but if you do care to press it I will move at our meeting of council on Monday that a committee should be formed consisting say of Everest Waugh Spottiswoode & one or two others, to examine the question & report to the ensuing meeting. They would then communicate with you, Sabine & the Astronomer Royal, & no time would be lost. I know Everest to be very keen about pendulum experiments being now established in many places, & I think he would greatly assist. . . .

Galton here is referring to the Royal Society's proposal, supported by Smith, that pendulum measurements of the Dead Sea elevation be made as part of the Ordnance Survey's survey of Jerusalem, then in progress. The Jerusalem survey at first lacked both the money and the trained personnel necessary to perform these measurements, but Smith's advocacy of the project evidently paid off: The Royal Society and the Royal Geographical Society each contributed £100 towards the cost of the pendulum work and the Ordnance Survey team was able to make accurate measurements of the difference between the levels of the Mediterranean and the Dead Sea (see Wilson, Ordnance Survey of Jerusalem). "Everest" is Sir George Everest (1790-1866), Surveyor-General of India from 1830 to 1843 and the namesake of Mount Everest; "Waugh" is Sir Andrew Scott Waugh (1810-78), who succeeded Everest as Surveyor-General of India and who was responsible for naming Mount Everest after his predecessor; "Spottiswoode" is mathematician and physicist William Spottiswoode (1825-83), who served on the council of the Royal Geographical Society from 1862 to 1864. Spottiswoode was the author of *On Typical Mountain Ranges: An Application of the Calculus of Probabilities to Physical Geography* (1861), a work that Galton credited with inspiring him to apply statistics in the social sciences. "Sabine" is Edward Sabine (1788-1883), head of the British Government's magnetic survey of the Earth, who in the 1820s had used pendulum observations made in various latitudes to come up with the most accurate assessment of the Earth's shape and size that had yet been made. The Astronomer Royal, also mentioned in Galton's letter, was George Biddell Airy (1801-92), who, among many other accomplishments, established Greenwich as the location of the prime meridian. Wilson, Charles W., "Excerpts from the Ordnance Survey of Jerusalem." www.templemount.org. N.p., 21 Oct. 1996. Web. Accessed 31 October 2013. 42850

"Glisson's Capsule"

28. Glisson, Francis (1597?-1677). Anatomia hepatis. Cui praemittuntur quaedam ad rem anatomicam universe spectantia. . . . 8vo. [48] 458 [14]pp. 2 folding engraved plates, engraved text illustration, text woodcuts. London: Du-Gard for Octavian Pulleyn, 1654. 165 x 111 mm. Vellum c. 1654, author's name in ink in a later hand on spine. Very fine, crisp copy. Long neat marginal note in pen in an early hand, a few penciled notes in the same hand. Minute early owner's signature (?) on front free endpaper, along with gift inscription dated October 9, [19]23 from Harry Friedenwald (1864-1950), author of *The Jews and Medicine* (1944-46; Garrison-Morton 6501.1), to Louis P. Hamburger. $12,500

First Edition. The first book printed in England to present a detailed account of a single organ based on original research, and the most important book to date on the physiology of the digestive system. Glisson used advanced anatomical methods, such as casts and injection of colored fluids, which enabled him to illustrate the vessels of the liver (portrayed in the two engraved plates). He described the passage of blood from the portal vein to the vena cava, and proved that lymph flows not to the liver, as was then believed, but from it, passing to



FRANCISCI GLISSONII

In Inclyta

Cantabrigiæ Academia

Medicinæ Professoris publici,

& Collegii Londinensis Socii,

ANATOMIA HEPATIS.

Cui præmittuntur

Quædam ad rem Anatomicam universè spectantia.

ET

Ad calcem Operis subjiciuntur nonnulla de Lymphæ-ductibus nuper repertis.

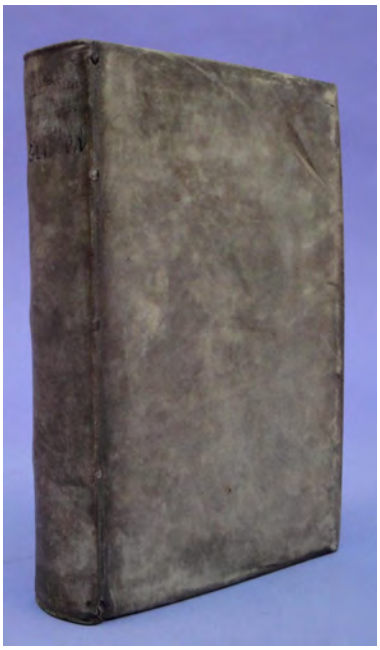
Nulla est disciplina, aut ars, quæ singulari consummata sit ingenio. Columella.

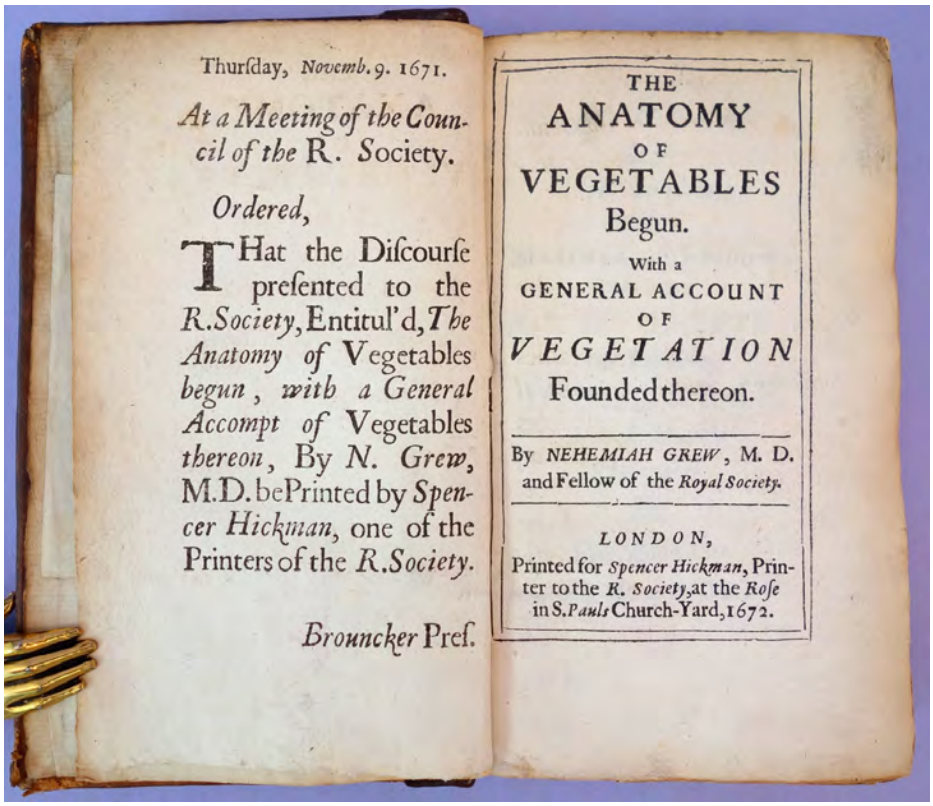
LONDINI,

Typis Da-Gardianis, Impensis Octaviani Pulleyn, apud quem extant venales. M. DC. LIV.

the recently discovered capsula communis. This fibrous capsule, which Glisson was the first to describe accurately, is now known as "Glisson's capsule."

"Educated at Cambridge, where he later served as Regius Professor of Physic, Glisson was part of the extraordinary ferment in medicine and the life sciences that occured in the two English universities in the earlier seventeenth century. Like his influential colleague and friend, William Harvey, Glisson epitomized the English style of biological research: he was theoretically conservative and non-dogmatic; and at the same time he was committed to a rigorous program of experimentation, precise observation, and accurate description. His principal publications, especially the Anatomia hepatis, join an experimental exactitude and direct observation of the particular with a felt concern to preserve basic Aristotelian and Galenic traditions of natural philosophy. . . . Glisson's classic work on the liver . . . was based on dissections that Glisson had done over a decade earlier. It was the first work to recast fundamentally the physiology of the abdominal organs, to delineate the structure and function of the liver, and to identify and describe the fibrous tissue encasing the liver (Glisson's capsule). It also introduced Glisson's important concept of 'irritability,' in which he argued that irritation was the organism's way of recognizing substances to be expelled. The property of irritability was thus basic to the health of the organism" (Grolier Club, *100 Books Famous in Medicine,* 29). Garrison-Morton 972. Lilly, p. 67. Norman 911. Russell 322. 29376





Thurſday, *Novemb.* 9. 1671.

At a Meeting of the Council of the R. *Society.*

Ordered,

THat the Diſcourſe preſented to the *R. Society*, Entitul'd, *The Anatomy of* Vegetables *begun, with a General Accompt of* Vegetables *thereon*, By *N. Grew*, M.D. be Printed by *Spencer Hickman*, one of the Printers of the *R. Society*.

Brouncker Pref.

THE
ANATOMY
OF
VEGETABLES
Begun.
With a
GENERAL ACCOUNT
OF
VEGETATION
Founded thereon.

By *NEHEMIAH GREW*, M. D. and Fellow of the *Royal Society*.

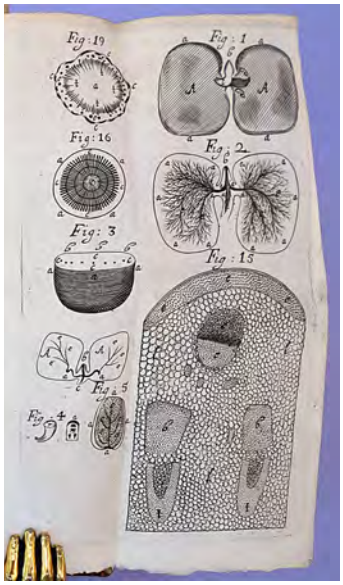
LONDON,
Printed for *Spencer Hickman*, Printer to the *R. Society*, at the *Roſe* in S. *Pauls* Church-Yard, 1672.

Very Large Copy

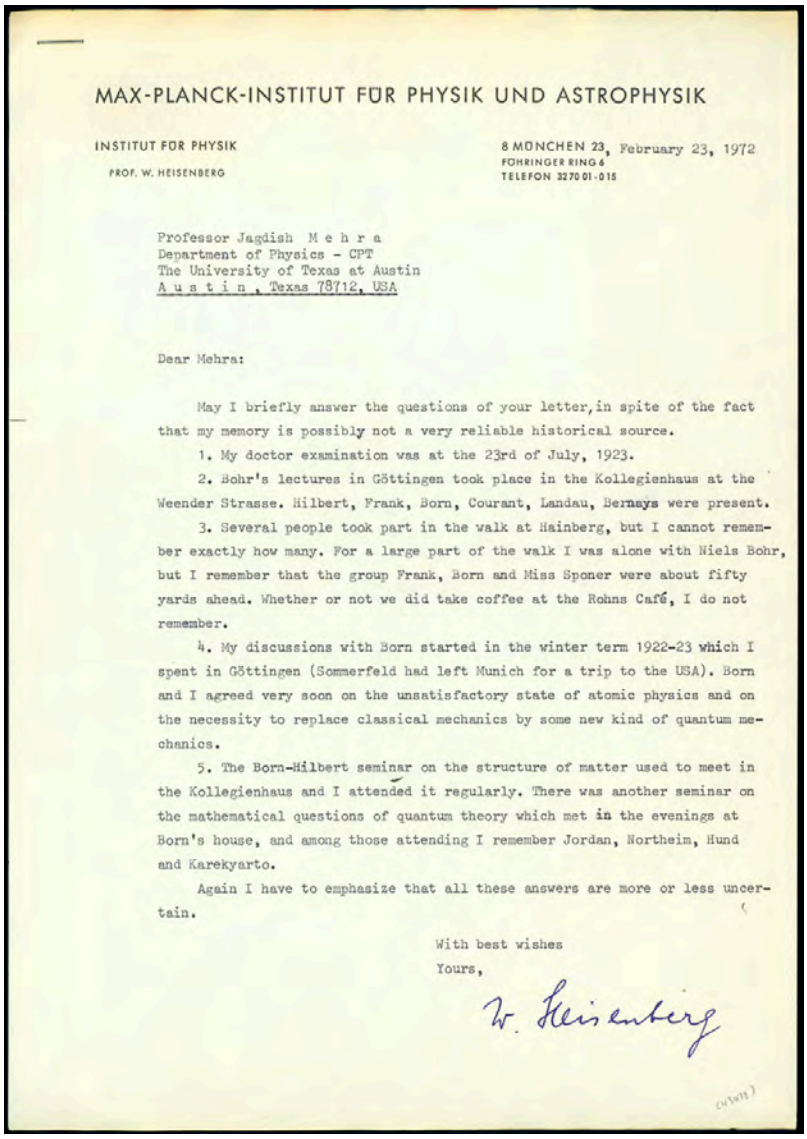
29. Grew, Nehemiah (1641-1712). The anatomy of vegetables begun, with a general account of vegetation founded thereon. 8vo. [32], 186, [22]pp. 3 folding engraved plates. London: Spencer Hickman, 1672. 163 x 96 mm. Contemporary sheep, later red leather spine label, rehinged, corner repaired. Small area of edgewear on back cover, light toning, but a very good and unusually tall copy. Bookplates of the High Legh Library, Edward Neville da Costa Andrade (1887-1971) and Haskell F. Norman.

$6000

First Edition. Along with Malpighi, Grew is considered the founder of plant anatomy; his pioneering investigations into how organs and tissues are formed during plant growth marked the beginning of efforts to link plant structure and development. As a physician, Grew was originally interested in the structures of animal life, but turned to plant anatomy because, unlike animal anatomy, it had not yet been investigated. Anatomy of Vegetables, his first book, contained accurate observations of the structures of wood, bark and roots, and introduced the term "parenchyma." Grew also described fruits, seeds and flowers, distinguishing in the last the calyx, stamen and pistils, and he was the first to observe that plants had two sexes. The title-page gives 1672 as the date of publication, but the printing was completed by 7 December 1671, when four copies were delivered to the Royal Society for presentation.



This copy was once owned by E. N. da C. Andrade, Quain Professor of Physics at University College, London, who collaborated with Ernest Rutherford on experiments to determine the wavelengths of gamma rays from radium. During his lifetime Andrade amassed an important collection of British 17th-century science texts. Dibner 21. Henrey, *British Botanican and Horticultural Literature* 163; pp. 135-138. Morton, *History of Botanical Science,* pp. 178-195. Norman 944. Wing G-1946. 42936



MAX-PLANCK-INSTITUT FÜR PHYSIK UND ASTROPHYSIK

INSTITUT FÜR PHYSIK
PROF. W. HEISENBERG

8 MÜNCHEN 23, February 23, 1972
FÖHRINGER RING 6
TELEFON 327001-015

Professor Jagdish M e h r a
Department of Physics - CPT
The University of Texas at Austin
A u s t i n , Texas 78712, USA

Dear Mehra:

May I briefly answer the questions of your letter, in spite of the fact that my memory is possibly not a very reliable historical source.

1. My doctor examination was at the 23rd of July, 1923.

2. Bohr's lectures in Göttingen took place in the Kollegienhaus at the Weender Strasse. Hilbert, Frank, Born, Courant, Landau, Bernays were present.

3. Several people took part in the walk at Hainberg, but I cannot remember exactly how many. For a large part of the walk I was alone with Niels Bohr, but I remember that the group Frank, Born and Miss Sponer were about fifty yards ahead. Whether or not we did take coffee at the Rohns Café, I do not remember.

4. My discussions with Born started in the winter term 1922-23 which I spent in Göttingen (Sommerfeld had left Munich for a trip to the USA). Born and I agreed very soon on the unsatisfactory state of atomic physics and on the necessity to replace classical mechanics by some new kind of quantum mechanics.

5. The Born-Hilbert seminar on the structure of matter used to meet in the Kollegienhaus and I attended it regularly. There was another seminar on the mathematical questions of quantum theory which met in the evenings at Born's house, and among those attending I remember Jordan, Northeim, Hund and Karekyarto.

Again I have to emphasize that all these answers are more or less uncertain.

With best wishes
Yours,

W. Heisenberg

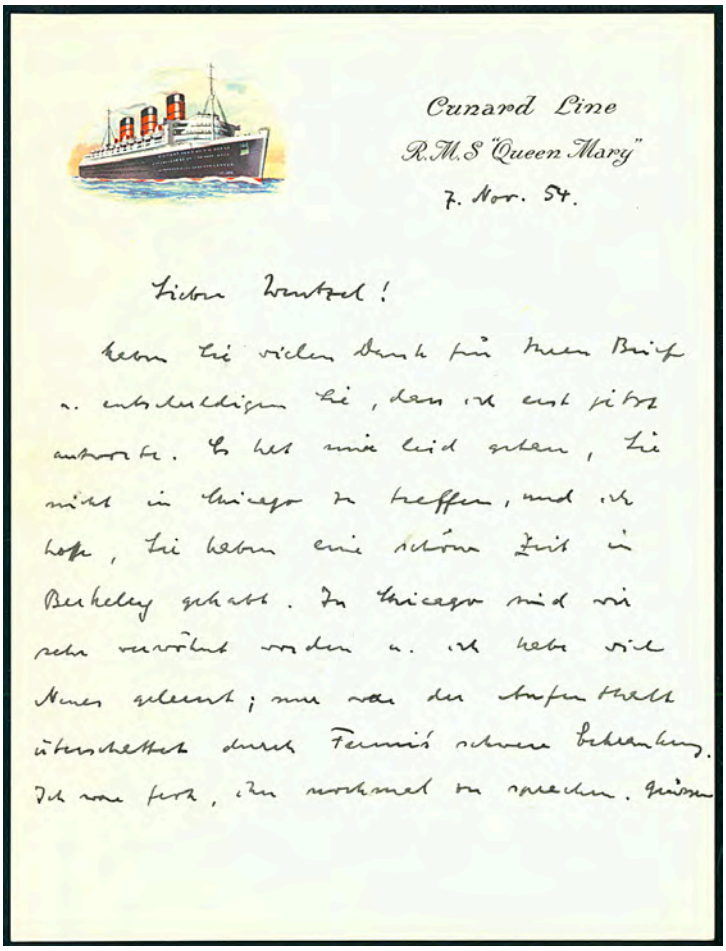
(over)

"Born and I Agreed Very Soon on the Unsatisfactory State of Atomic Physics"

30. Heisenberg, Werner (1901-76). (1) Autograph letter signed, in German, to Gregor Wentzel (1898-1978). 1 – ½ pages. R.M.S. "Queen Mary," 7 November 1954. 175 x 134 mm. (2) Typed letter signed, in English, to Jagdish Mehra (1931-2008). 1 page. 26 February 1969. 298 x 211 mm. (3) Typed letter signed, in English, to Mehra. 1 page plus cover. Munich, 23 February 1972. 298 x 211 mm. (4) Typed letter signed, in German, to Mehra. 1 page plus cover. Munich, 20 March 1972. 298 x 211 mm. Together 4 items plus additional materials as described below. Very good. $6000

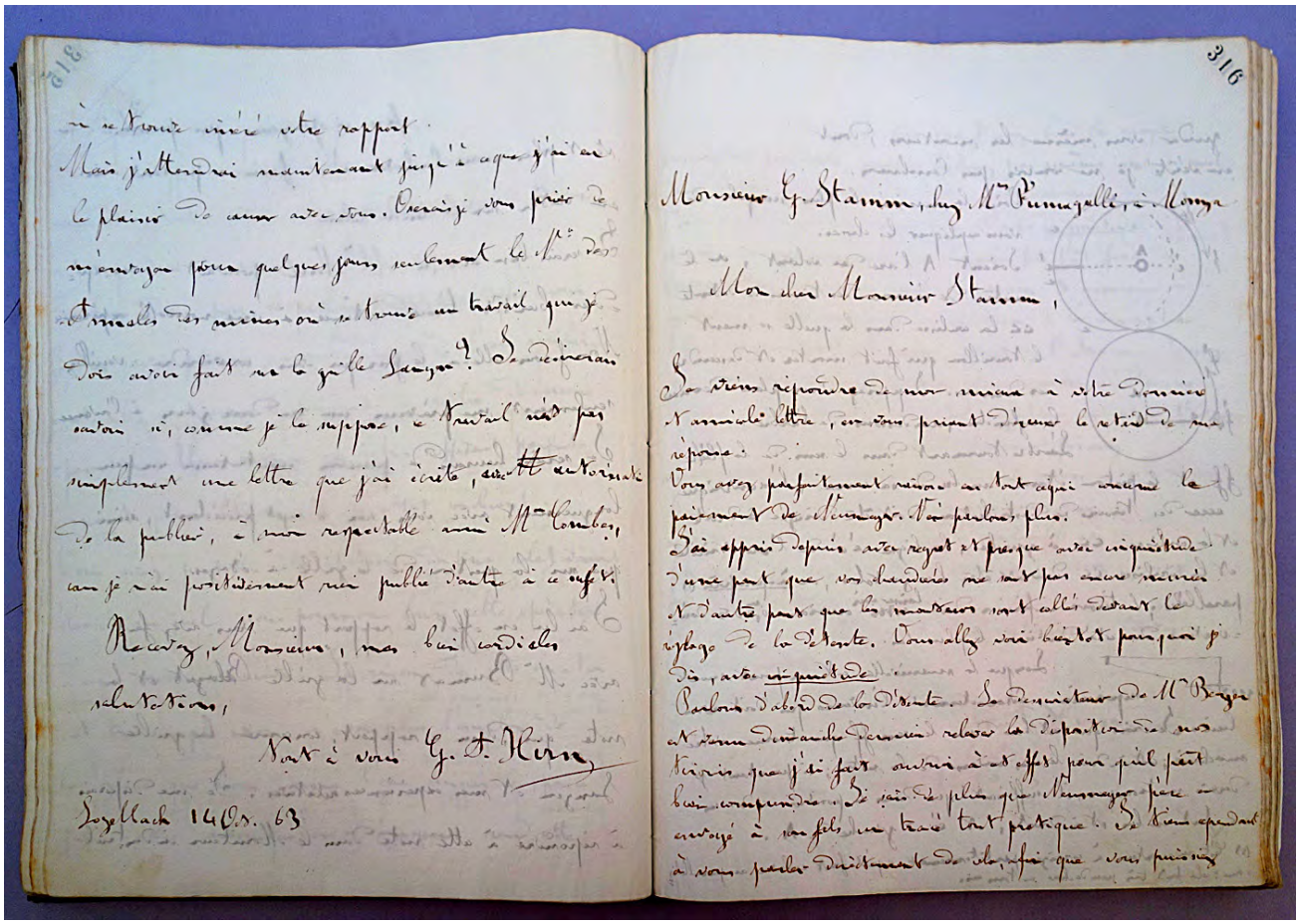
From Werner Heisenberg, one of the main architects of quantum mechanics, who received the Nobel Prize in 1932 for this achievement.

The first letter listed above, written on board the *Queen Mary*, was to his colleague Gregor Wentzel, who had also played an important role in the creation of quantum mechanics, developing what is now known as the Wentzel-Kramers-Brillouin method for finding approximate solutions to linear partial differential equations with spatially varying coefficients. In his letter Heisenberg expresses his regret that he had missed seeing Wentzel at the University of Chicago (where Wentzel had a professorship), and refers to Enrico Fermi's "grave illness"; Fermi died of stomach cancer in Chicago on November 28, 1954.



The remaining letters are to historian of physics Jagdish Mehra, author of the definitive *Historical Development of Quantum Theory* (1982–2001) as well as numerous other works. Mehra had written to Heisenberg to inform him of his projected history of quantum theory and to ask him several questions relating to it (a carbon copy of one of Mehra's letters to Heisenberg, dated 17 September 1971, is included in this collection). Heisenberg supplied answers to Mehra in his letter of 23 February 1972, stating, among other things, that "My discussions with [Max] Born started in the winter term 1922–23 which I spent in Göttingen . . . Born and I agreed very soon on the unsatisfactory state of atomic physics and on the necessity to replace classical mechanics by some new kind of quantum mechanics." In his letter of 20 March 1972, Heisenberg told Mehra that "I am glad that your new field of activity focusing on the history of physics is satisfying to you, and I am convinced that there are many interesting tasks in this area that need to be solved." Also included here is Heisenberg's 26 February 1969 letter to Mehra agreeing to a meeting in Munich in May of that year.

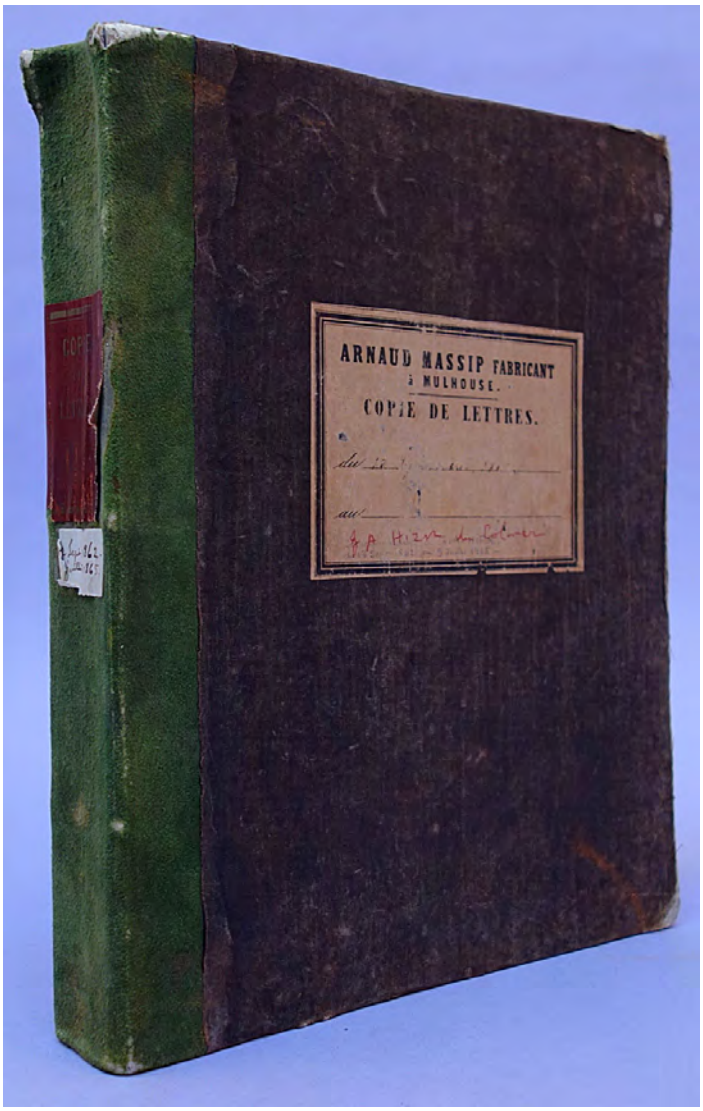
Other items in this collection include a photocopy of Heisenberg's letter to Mehra of 20 January 1976, discussing some of Mehra's works; and a card sent to well-wishers on Heisenberg's 70th birthday, printed in a facsimile of Heisenberg's hand: "Für Glückwünsche und Zeichen der Freundschaft zum 70ten Geburtstag dankt herzlichst Werner Heisenberg." 43078



Unique Manuscript Archive of his Scientific Thought

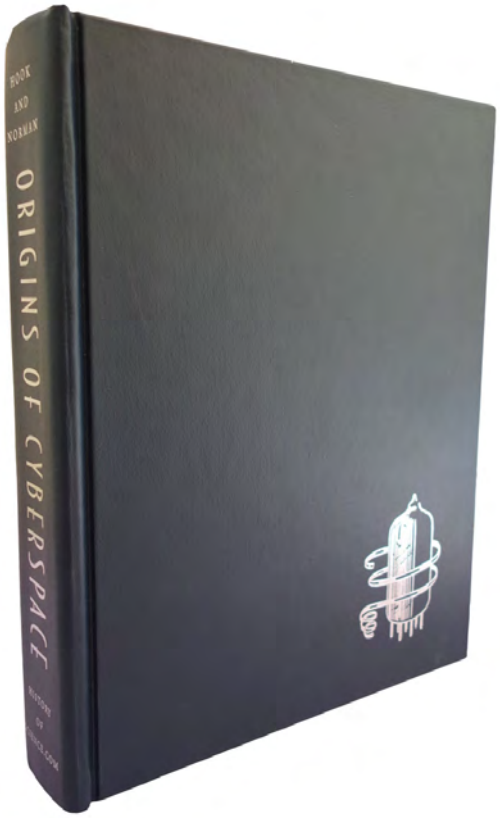
31. Hirn, Gustave Adolfe (1815-90). Album containing crush-paper copies of ca. 600 autograph letters signed and letters signed written between 13 Sept. 1862 and 9 July 1865. [Colmar, 1862-65]. 280 x 222 mm. Original cloth, suede backstrip with cloth label, paper label on front cover, worn at edges, corners & spine. One or two small tears, otherwise very good internally. $9500

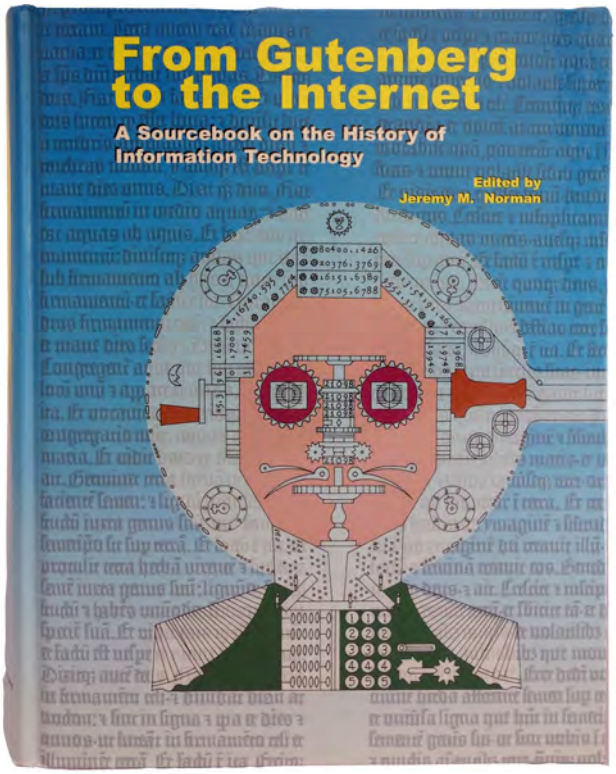
Hirn, a civil engineer, was one of the first to investigate the phenomena of the steam engine, and he made several fundamental contributions to mechanics and thermodynamics, including his *Exposition analytique et expérimentale de la théorie mécanique de la chaleur* (1862), one of the first systematic treatises on thermodynamics. The album we are offering contains crush-paper copies of ca. 600 letters that Hirn wrote between 1862 and 1865, shortly after the publication of his *Exposition analytique.* The crush-paper method of letter duplication involved pressing a freshly written letter against special absorbent paper; only one such copy could be made, so that our album is unique. The album almost certainly represents the most complete manuscript archive of Hirn's scientific thought and activity during this time, since the original letters duplicated here were sent to a number of different recipients, and many have probably not survived. Among the letters are several written to François Napoléon Marie Moigno (1804-84), the eminent Jesuit mathematician and physicist; one of most interesting of these is Hirn's letter to Moigno of 16 February 1864, containing a long and detailed discussion, intended for publication, of the thermodynamic principles of Rudolf Clausius (1822-88). Clausius's name appears numerous times in Hirn's correspondence, along with those of physicist Léon Foucault (1819-68) and chemist Henri Étienne St. Claire Deville (1818-81).



Another letter, of 13 December 1862, is to Charles X. Thomas, inventor of the first commercially successful calculator; Hirn thanked Thomas (also a native of Colmar) for the receipt of his 16-digit Thomas Arithmometer, which Hirn used daily in his "laborious calculations in physics and mechanics." Hirn was impressed enough with the Thomas de Colmar Arithmometer that he published a paper on it the following year ("Notice sur l'utilité de l'arithmomètre et de l'hydrostat," A*nnales du génie civil,* 2nd part, 2 [1863]: 113-17; 152-64), which included "an exposition of advanced techniques which extended the arithmometer's reach beyond the apparent restrictions of the four basic arithmetical rules" (Johnston).

Other letters in the album relate to Hirn's interests in climatology and meteorology, or to his business activities as director of the mechanical department of the mill he managed jointly with his brother—it was his connection with this mill that first led Hirn to investigate the mechanics of heat. Time has permitted us to make only a cursory examination of this unique album; a thorough study will surely reveal other letters of equal or greater interest. DSB. NBG & Wheeler Gift for Moigno. Aspray et al., *Computing before Computers*, p. 50 (Thomas). Johnston, "Making the Arithmometer Count," *Bulletin of the Scientific Instrument Society* 52 (1997): 12-21. 34272





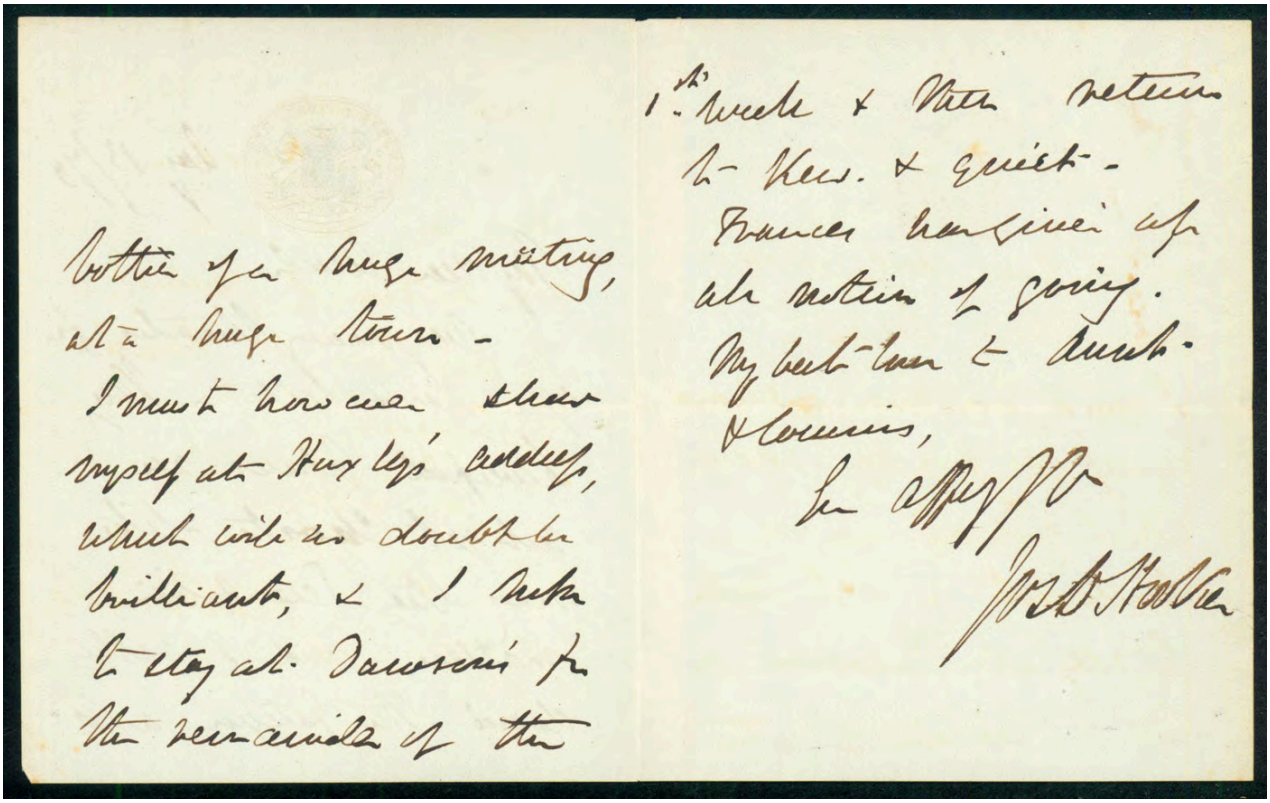
History of Computing

32. Hook, Diana H. and Jeremy M. Norman, with contributions by Michael R. Williams. Origins of cyberspace: A library on the history of computing, networking, and telecommunications. 670 pages. 284 illustrations. 8-1/2 x 11 inches. Novato: Historyofscience.com, 2002. Cloth, 80-pound acid-free paper. ISBN 978-0-930405-85-4. Limited to 500 copies. $500

Extensively annotated and illustrated bibliography describing 1411 books, technical reports, pamphlets, blueprints, typescripts, manuscripts, photographs and ephemera on the history of computing and computer-related aspects of telecommunications. Covers the period from the 17th century to circa 1970; includes several lengthy essays and a detailed timeline of significant events and publications in computer history. Indexed. Printed in two colors throughout. 38301

33. Norman, Jeremy M., editor. From Gutenberg to the Internet: A sourcebook on the history of information technology. xvi, 899pp. Illustrated. Novato: Historyofscience.com, 2005. 8-1/2 x 11 inches. Pictorial boards, laminated. ISBN 978-0-930405-87-8. $89.50

Presents 63 original readings from the history of computing, networking and telecommunications, arranged thematically by chapters. Most of the readings record basic discoveries from the 1830s through the 1960s that laid the foundation of the world of digital information. With an illustrated historical introduction, timeline, and introductory notes. 38950



"I Must Show Myself at Huxley's Address, Which Will No Doubt Be Brilliant"

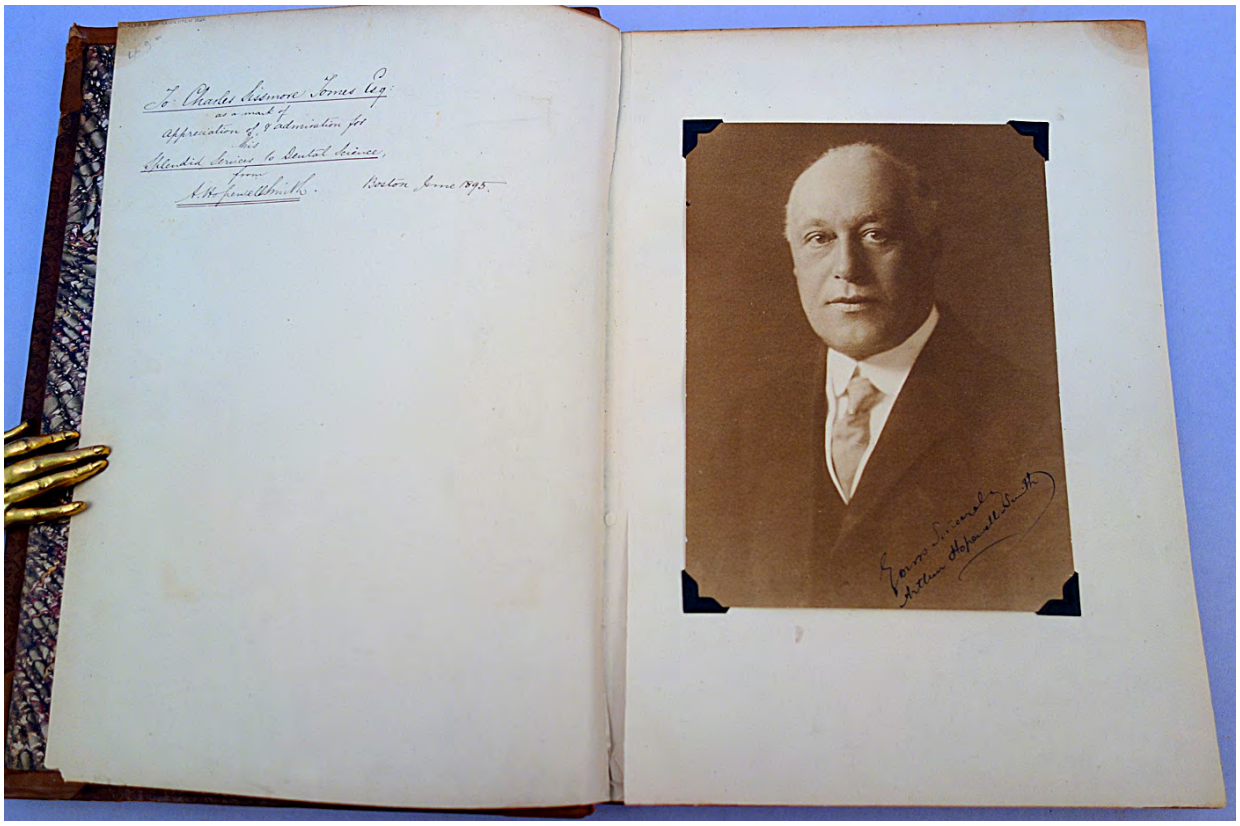
34. Hooker, Joseph Dalton (1817-1911). Autograph letter signed to one of his uncles ("My dear Uncle"). 3pp. N.p., August 30, 1870. 112 x 92 mm. Trace of former mounting along central fold, a few minor spots, but very good otherwise. $1250

From Joseph Dalton Hooker, the eminent British taxonomic botanist, plant geographer, and supporter of Darwinian evolution, who served as director of Kew Gardens (succeeding his father, William Jackson Hooker) from 1865 to 1885. His correspondent was probably William Jacobson (1803-84), Regius Professor of Divinity at Oxford, who had married Hooker's aunt, Eleanor Jane Turner, in 1836. Eleanor was the younger sister of Hooker's mother, Maria Turner Hooker; both were daughters of banker and botanist Dawson Turner (1775-1858). Hooker had no living uncles on his father's side.

Hooker's letter reads in part as follows:

> Very many thanks for your kind letter. My Liverpool plans are not yet choate, like many other scientific matters, and I rather dread the fatigue and bother of a huge meeting, at a huge town.
>
> I must however show myself at Huxley's address, which will no doubt be brilliant, & I hope to stay at Dawson's for the remainder of the 1st week & then return to Kew & quiet. . . .

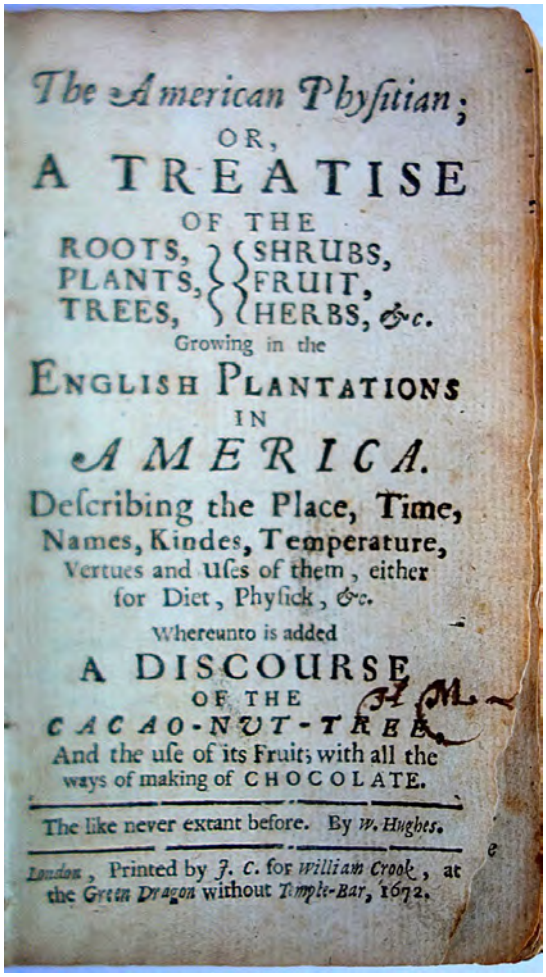
Hooker refers here to the 40th annual meeting of the British Association for the Advancement of Science, which was held in Liverpool in 1870. Hooker's good friend Thomas Huxley (1825-95) was President of the BAAS that year; his presidential address, on the abiogenesis controversy, was delivered before the Society on Sept. 14. Abiogenesis—more commonly (and less accurately) known as spontaneous generation—is the hypothetical natural process by which life arises from simple organic compounds. Abiogenesis was a topic much discussed in the mid to late 19th century due to the bacteriological work of Louis Pasteur, which provided overwhelming evidence against it, and the opposing viewpoint of scientists such as Henry Bastian. "Dawson" refers to Hooker's uncle, Dawson William Turner (1815-85), headmaster of the Royal Institution School at Liverpool and author of several works on education. 43053

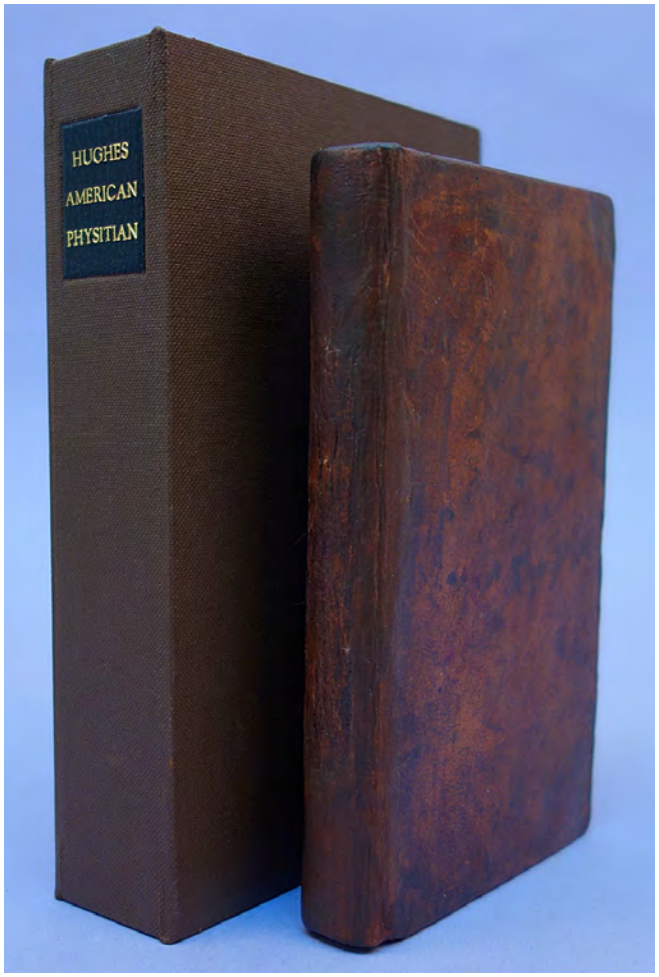


Dedication Copy, With an Inscribed Photograph of the Author

35. Hopewell-Smith, Arthur (1865-1931). Dental microscopy. xxviii, 119pp. 8 lithograph plates after the author's drawings, text illustrations. London: Dental Manufacturing Company; Philadelphia: S. S. White Dental Manufacturing Company, 1895. 248 x 181 mm. Tree calf gilt ca. 1895, rebacked, minor wear. The Dedication Copy, with Hopewell-Smith's autograph inscription to dedicatee Charles Sissmore Tomes (1846-1928) on the verso of the front free endpaper: "To Charles Sissmore Tomes Esq. as a mark of appreciation of & admiration for his splendid services to dental science from Arthur Hopewell Smith. Boston June 1895." On the page opposite the inscription is mounted a portrait photograph of Hopewell-Smith (160 x 118 mm.) inscribed in the same hand "Yours sincerely Arthur Hopewell-Smith." $1500

First Edition. Hopewell-Smith was a specialist in dental histology, having served as a lecturer and demonstrator at the Royal Dental Hospital of London before coming to the United States to take the position of professor of dental histology at the University of Pennsylvania. He was known for "the striking excellence of his practical work in preparing sections of dental tissues and in photomicrography" (*British Medical Journal* 1, no. 3665 [1931]: 606). Hopewell-Smith dedicated *Dental Microscopy* to the eminent British dentist Charles Sissmore Tomes, consulting dental surgeon at the Royal Dental Hospital and author of *Manual of Dental Anatomy Human and Comparative* (1882 and later eds.). We are offering the dedication copy of Hopewell-Smith's work, inscribed to Tomes and with a signed portrait photograph of the author. 40504


The American Physitian;
OR,
A TREATISE
OF THE
ROOTS, PLANTS, TREES, SHRUBS, FRUIT, HERBS, &c.
Growing in the
ENGLISH PLANTATIONS
IN
AMERICA.
Describing the Place, Time, Names, Kindes, Temperature, Vertues and Uses of them, either for Diet, Physick, &c.
Whereunto is added
A DISCOURSE
OF THE
CACAO-NUT-TREE
And the use of its Fruit; with all the ways of making of CHOCOLATE.
The like never extant before. By W. Hughes.
London, Printed by J. C. for William Crook, at the Green Dragon without Temple-Bar, 1672.



Earliest Work in English on Medicinal Virtues of North American Tropical Plants—Extremely Rare

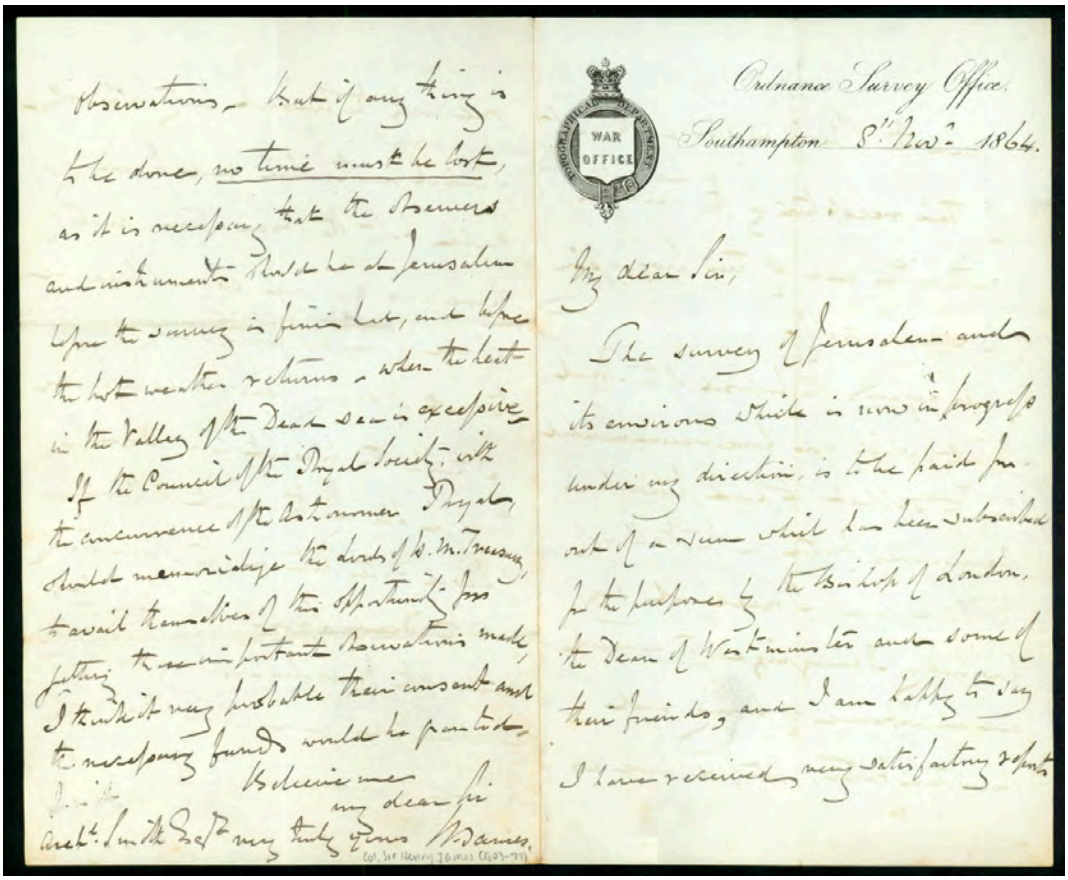
36. Hughes, William (d. 1683). The American physitian; Or, a treatise of the roots, plants, trees, shrubs, fruit, herbes &c. growing in the English plantations in America. 12mo. [22], 159, [7]pp. London: J. C. for William Crook, 1672. 140 x 80 mm. Sheep ca. 1672, hinges repaired preserving most of the spine, corners repaired; boxed. Minor browning and foxing, a few leaves with marginal chips (not affecting text), but very good. 17th century initials "H.M." on the title; early 19th century inscriptions on front pastedown. $30,000

First Edition of the earliest work in English on the medicinal virtues of North American tropical plants. Hughes's work was published the same year as John Josselyn's *New-Englands Rarities Discovered*, which Garrison-Morton (no. 1826.1) calls "the first detailed account of the natural history and botany of North America." This copy of Hughes's work is the first I have seen in fifty years of specializing in the history of medicine and science; it was very surprising to find a classic on early American medicine that was completely unknown to me after all these years. Had I known of this work I would most certainly have included it in my 1991 revised and expanded fifth edition of "Garrison-Morton". It definitely deserves a citation there alongside John Josselyn's work. An imperfect copy sold in the 1970s is the only copy sold at auction during the past fifty years.

Based on first-hand observations made in the West Indies, Hughes's work "contributed greatly to the spread of the American indigenous use of plants 'either for Meat or Medicine'" (Wilson & Hurst, p. 55). However, apart from his authorship of *The American Physitian* and two pioneering works on gardening and horticulture,

very little is known about Hughes's life. Evidence suggests that he began his career in 1651 with a privateering voyage to the West Indies, during which he traveled to Barbados, St. Kitts, Cuba, Jamaica and mainland Florida. He appears to have spent a good deal of time visiting British plantations on Jamaica and Barbados, where he observed and made descriptions of a large number of New World tropical plants including potatoes, yams, maize ("the wheat of America"), bananas, avocadoes ("Spanish pears"), chili peppers, watermelons, sugarcane, guavas, prickly pears, coconuts and manioc. The title of Hughes's work consciously references Culpeper's popular herbal, *The English Physitian* (1653), and like Culpeper Hughes wrote for a lay audience: "If you expect to find [my book] deckt up with fine Metaphysical Notions and Expressions, or stuft with hard or strange words . . . you are likely to be mistaken, and quite beside the Cushion, for you will finde it only in plain and easy Terms, such as I myself best understand."

Hughes's accounts of the plants' virtues make delightful reading: Potatoes "chear the heart and are provocative of bodily lust"; the juice of sugarcane "drieth and cleaneth the stomach, and smootheth the roughness of the Breast, Lungs, Arteries"; prickly pear fruits "coloreth the Urine of a purple-colour" and as a wound dressing are "better than any preparation that could have been made from a well-furnished Chest"; bananas are "exhilarating and provoking to Venery" as well as "good against a Flux." Hughes also described encounters with some of the local fauna, including white coral, sea-urchins and a 14-foot alligator, which he and his party "dispacht with our Oars" after running aground on a coral reef. The last third of Hughes's work is devoted to the medicinal properties of chocolate (the "American nectar"), which he praised for its "wonderful faculty of quenching thirst, allaying Hectick Heats, [and] of nourishing and fatning the body"; he also claimed it to be "good against all coughs, shortness of breath" and "excellent against Consumptions." Wing H3332. Henrey, *British Botanical and Horticultural Literature before 1800*, 203. Sabin 33605. Wilson & Hurst, *Chocolate as Medicine* (2012), ch. 3. 43061



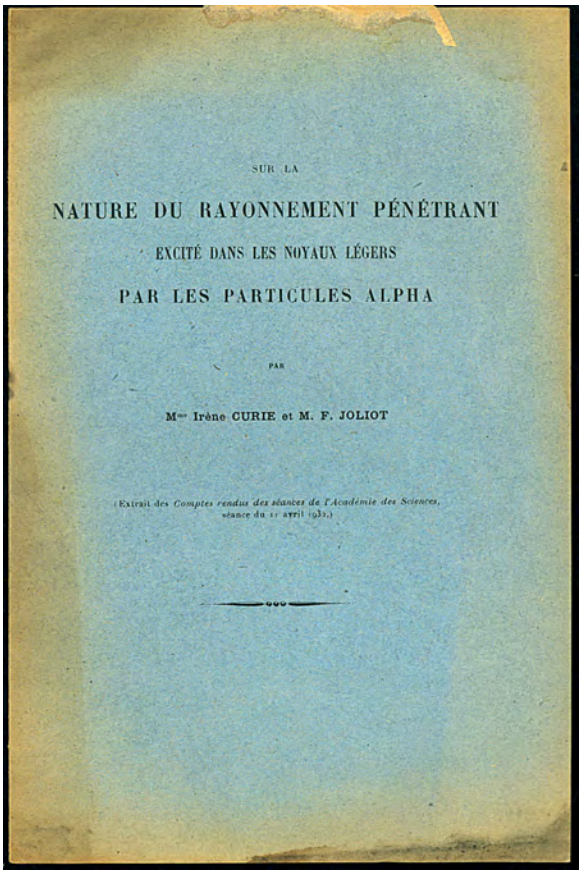
"Pendulum Observations Taken in the Valley of the Dead Sea"

37. James, Henry (1803-77). Autograph letter signed to Archibald Smith. 4pp. London, November 8, 1864. 184 x 117 mm. Fine. $750

From Sir Henry James, director-general of the Ordnance Survey (the British government mapping agency), to Scottish lawyer and mathematician Archibald Smith, best known for his work on magnetism and the Earth's magnetic field, particularly in relation to navigation. James' letter discusses the survey of Jerusalem (then part of the Ottoman Empire) which was being performed by the Ordnance Survey for the purpose of improving the city's water supply and sanitary services (the results of this survey were published in 1865 under the title Ordnance Survey of Jerusalem). Smith was an advocate of the Royal Society's proposal that pendulum measurements of the Dead Sea elevation be taken during this survey; James replied as follows:

> . . . As regards the proposal of the Royal Society, which you have recommended them to support, to have pendulum observations taken in the Valley of the Dead Sea, I need not say how fully I recognize the interest and importance of having such observations taken, but we have not one with the present party, who without special instruction and training could take the observations, and if there was any one so qualified, we should have no funds out of which the cost of taking them could be paid.
>
> I think the present is a most favorable time for having the exact difference of level taken between the Mediterranean and the Dead Sea . . . But if anything is to be done, no time must be lost, as it is necessary that the observers and instruments should be at Jerusalem before the survey is finished, and before the hot weather returns . . .

Smith's advocacy of the Jerusalem pendulum project evidently paid off: The Royal Society and the Royal Geographical Society each contributed £100 towards the cost of the pendulum work and the Ordnance Survey team was able to make accurate measurements of the difference between the levels of the Mediterranean and the Dead Sea (see Wilson). Wilson, Charles W., "Excerpts from the Ordnance Survey of Jerusalem." www.templemount.org. N.p., 21 Oct. 1996. Web. Accessed 31 October 2013. 42869



SUR LA

NATURE DU RAYONNEMENT PÉNÉTRANT

EXCITÉ DANS LES NOYAUX LÉGERS

PAR LES PARTICULES ALPHA

PAR

Mme Irène CURIE et M. F. JOLIOT

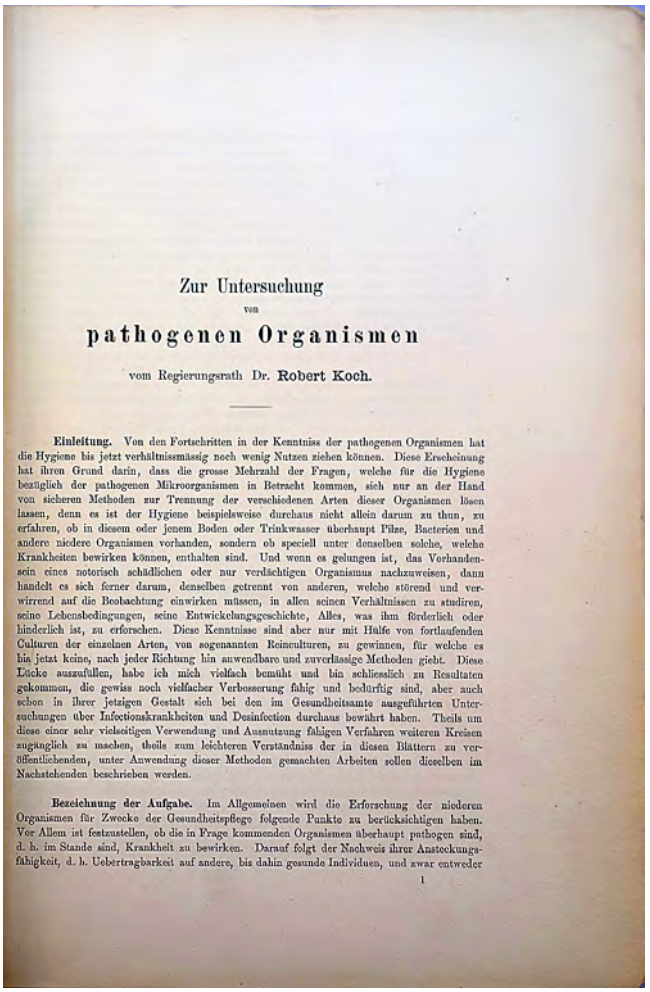
(Extrait des *Comptes rendus des séances de l'Académie des Sciences*, séance du 11 avril 1932.)

Artificial Radioactivity

38. Joliot, Frédéric (1900-1958) & Joliot-Curie, Irène (1897-1956). Sur la nature du rayonnement pénétrant excité dans les noyaux légers par les particules alpha. Offprint from *Comptes rendus des séances de l'Académie des Sciences* (April 11, 1932). 8vo. 3, [1]pp. 243 x 161 mm. Original printed wrappers, somewhat faded. Moderate browning, otherwise very good. $1250

First Separate Edition. In 1931, Irène Joliot-Curie, daughter of Pierre and Marie Curie, and her husband Frédéric Joliot began four years of intensive collaborative research on radioactivity that culminated in their discovery of artificial radioactivity. In November 1935 the couple were awarded the Nobel Prize in chemistry for their synthesis of new radioactive elements; they are thus numbered among the small group of outstanding physicists (including Marie Curie) who have received Nobel awards in chemistry (see Weber, *Pioneers of Science*, p. 4).

The present paper is one of several originating from the first experiments that the Joliot-Curies carried out during this period, which focused on the penetrating radiation (known as Bothe-Becker radiation) emanating from beryllium, boron and certain other light elements when bombarded with alpha rays. During the course of these experiments, the Joliot-Curies made an important discovery: interposing a plate of hydrogen-containing material between the radiation source and the ionization chamber caused a large increase in the current. "It appeared that this radiation, produced only in hydrogen-containing substances, consisted of protons ejected by the penetrating Bothe-Becker radiation" (*Dictionary of Scientific Biography*). The Joliot-Curies first announced their discovery in a paper presented in January 1932; the present paper, published three months later, describes further progress in their investigations. The Joliot-Curie's work in this field led directly to James Chadwick's discovery of the neutron in February 1932. 43039



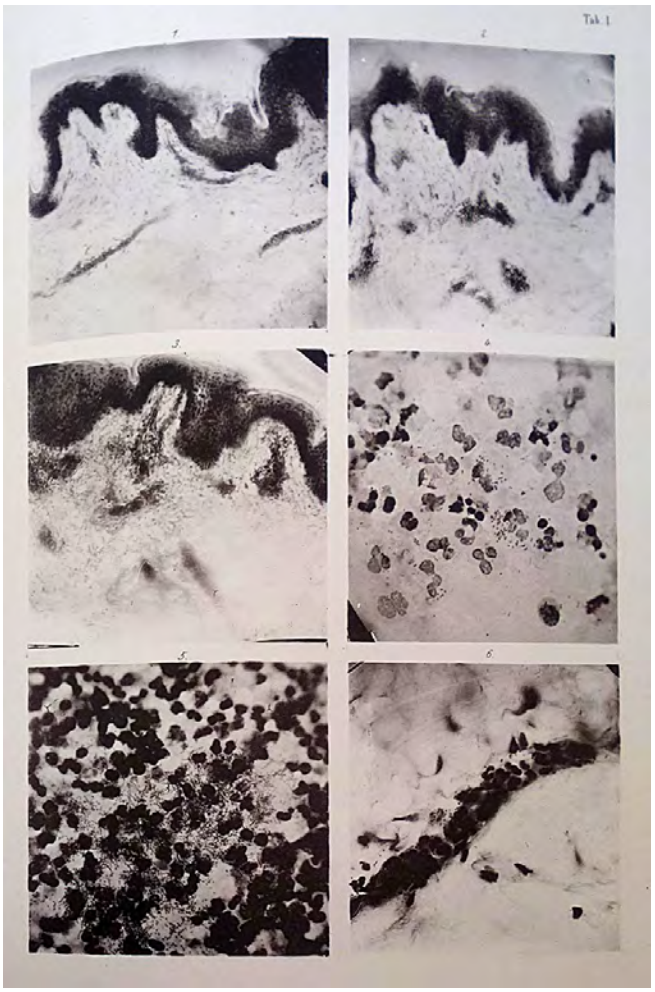
Zur Untersuchung
von
pathogenen Organismen

vom Regierungsrath Dr. Robert Koch.

Einleitung. Von den Fortschritten in der Kenntniss der pathogenen Organismen hat die Hygiene bis jetzt verhältnissmässig noch wenig Nutzen ziehen können. Diese Erscheinung hat ihren Grund darin, dass die grosse Mehrzahl der Fragen, welche für die Hygiene bezüglich der pathogenen Mikroorganismen in Betracht kommen, sich nur an der Hand von sicheren Methoden zur Trennung der verschiedenen Arten dieser Organismen lösen lassen, denn es ist der Hygiene beispielsweise durchaus nicht allein darum zu thun, zu erfahren, ob in diesem oder jenem Boden oder Trinkwasser überhaupt Pilze, Bacterien und andere niedere Organismen vorhanden, sondern ob speciell unter denselben solche, welche Krankheiten bewirken können, enthalten sind. Und wenn es gelungen ist, das Vorhandensein eines notorisch schädlichen oder nur verdächtigen Organismus nachzuweisen, dann handelt es sich ferner darum, denselben getrennt von anderen, welche störend und verwirrend auf die Beobachtung einwirken müssen, in allen seinen Verhältnissen zu studiren, seine Lebensbedingungen, seine Entwickelungsgeschichte, Alles, was ihm förderlich oder hinderlich ist, zu erforschen. Diese Kenntnisse sind aber nur mit Hülfe von fortlaufenden Culturen der einzelnen Arten, von sogenannten Reinculturen, zu gewinnen, für welche es bis jetzt keine, nach jeder Richtung hin anwendbare und zuverlässige Methoden giebt. Diese Lücke auszufüllen, habe ich mich vielfach bemüht und bin schliesslich zu Resultaten gekommen, die gewiss noch vielfacher Verbesserung fähig und bedürftig sind, aber auch schon in ihrer jetzigen Gestalt sich bei den im Gesundheitsamte ausgeführten Untersuchungen über Infectionskrankheiten und Desinfection durchaus bewährt haben. Theils um diese einer sehr vielseitigen Verwendung und Ausnutzung fähigen Verfahren weiteren Kreisen zugänglich zu machen, theils zum leichteren Verständniss der in diesen Blättern zu veröffentlichenden, unter Anwendung dieser Methoden gemachten Arbeiten sollen dieselben im Nachstehenden beschrieben werden.

Bezeichnung der Aufgabe. Im Allgemeinen wird die Erforschung der niederen Organismen für Zwecke der Gesundheitspflege folgende Punkte zu berücksichtigen haben. Vor Allem ist festzustellen, ob die in Frage kommenden Organismen überhaupt pathogen sind, d. h. im Stande sind, Krankheit zu bewirken. Darauf folgt der Nachweis ihrer Ansteckungsfähigkeit, d. h. Uebertragbarkeit auf andere, bis dahin gesunde Individuen, und zwar entweder

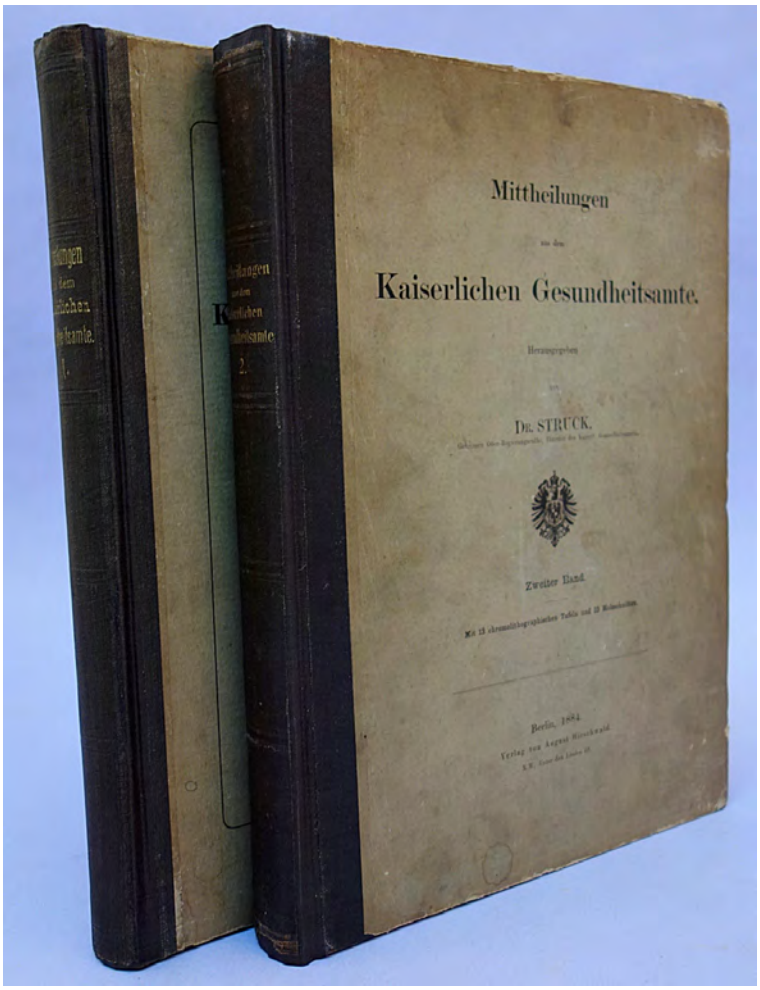
1



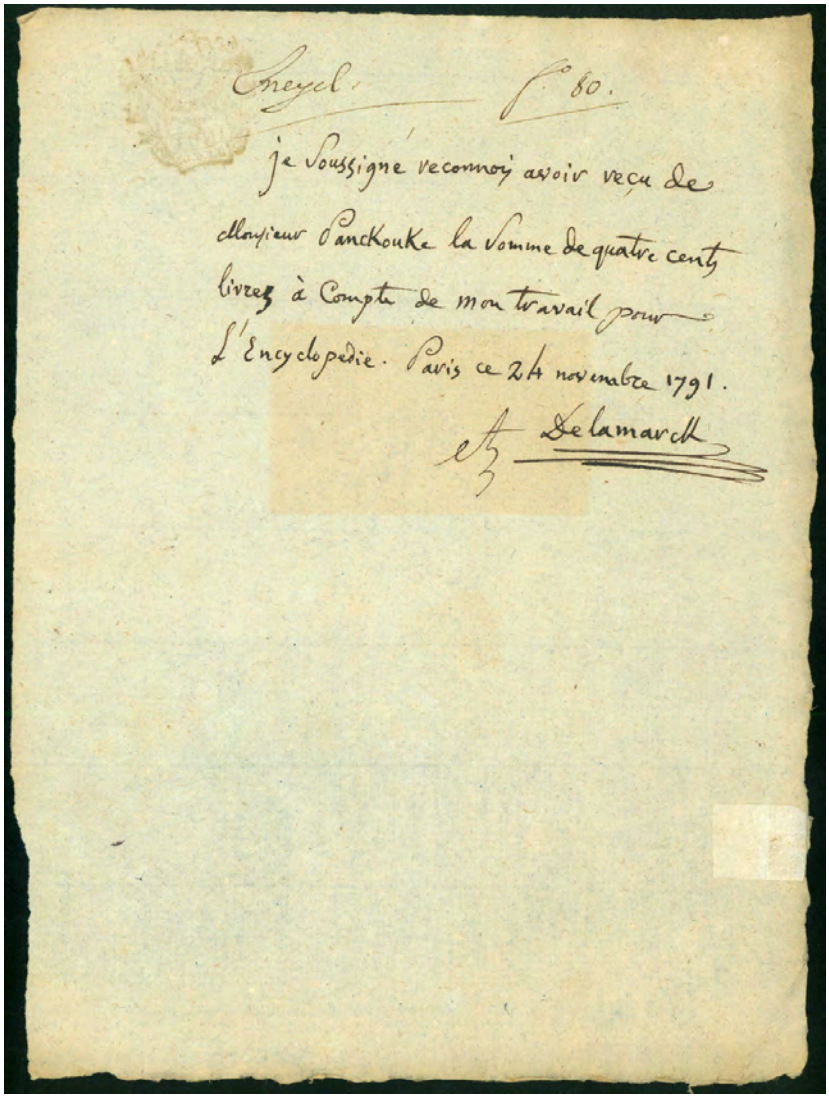
Koch's Landmark Papers on Bacteriology and Tuberculosis

39. Koch, Robert (1843-1910). Zur Untersuchungen von pathogenen Organismen. In: *Mittheil. kais. Gesundheitsamte* 1 (1881): 1-48. With: Ueber Desinfection. In: *ibid*.: 234-82. With: Die Aetiologie der Tuberkulose. In: *ibid*. 2 (1884): 1-88. Together 2 vols., 4to. [6], 399 [1]; [6], 499 [1]pp. 27 plates (14 chromolithographed, 3 double-page). Berlin: A. Hirschwald, 1881-84. 307 x 218 mm. Original boards, cloth backstrips rebacked retaining original spines, a little worn & chipped. Library stamps on titles, light browning, but very good. Boxed. $5000

First Editions; Rare in the Original Printed Boards. Many of the bacteriological studies for which Koch became famous were published in the *Mittheilungen aus dem Kaiserlichen Gesundheitsamte*, a "house organ" of the Imperial Department of Health where Koch had been appointed government advisor (Regierungsrat) in 1880. The first volume of the *Mittheilungen* is particularly rich in Koch material: It contains no fewer than five papers written or co-written by Koch, including his landmark "Zur Untersuchung von pathogenen Organismen," in which he described his development of the plate technique for cultivating—the first consistent method for obtaining pure cultures of virtually any species of bacteria. The remaining papers include Koch's "Ueber Desinfection," in which he demonstrated mercuric chloride's superiority to carbolic acid as a disinfectant, as well as his "Zur Aetiologie des Milzbrandes," a continuation of his anthrax studies, and two papers co-written with Wolffhügel, Gaffky and Loeffler on disinfection with hot air and steam.



Vol. II of the *Mittheilungen* opens with Koch's "Die Aetiologie der Tuberculose," an expanded account of his epochal discovery that tuberculosis is caused by a specific bacterium (Bacillus tuberculosis); this followed two years after Koch's preliminary announcement of the discovery in a paper of the same title, published in the *Berliner klinische Wochenschrift* 19 (1882). The 1884 paper records Koch's success in producing experimental tuberculosis in animals after cultivating the bacillus, and also announces what became known as "Koch's postulates" for isolating and testing a disease-causing organism. It was this paper, rather than the 1882 preliminary announcement, that was selected by the Grolier Club to represent Koch's achievement in its exhibit and catalogue of *100 Books Famous in Medicine*. This volume of the *Mittheilungen* also contains "Experimentelle Studien über die künstliche Abschwächung der Milzbrandbacillen und Milzbrandinfection durch Fütterung," a paper on artificial attenuation of the anthrax bacillus co-written by Koch, Gaffky and Loeffler. Koch was awarded the Nobel Prize in 1905, in a large part for his work on tuberculosis. Garrison-Morton 2495.1; 5636.1; 2331(n). Grolier Club, *100 Books Famous in Medicine*, 80 (Tuberculose). Horblit, *One Hundred Books Famous in Science,* 60 (Pathogenen Organismen). 36297


Cheycl. f° 80.

Je soussigne reconnois avoir reçu de
Monsieur Panckouke la somme de quatre cents
livres à Compte de mon travail pour
l'Encyclopedie. Paris ce 24 novembre 1791.
De lamarck

Rare Signed Document by Lamarck

40. Lamarck, Jean Baptiste (1744-1829). Autograph receipt signed. 1 sheet. Paris, 24 November 1791. 244 x 188 mm. Stamp (possibly that of a notary) on verso. Traces of former mounting, but fine otherwise. $750

Rare signed document by Lamarck, best known as an early evolutionary theorist, and particularly for his belief that an animal's environment could stimulate it to acquire certain physical characteristics (such as a neck made long by stretching it to eat from trees) that would then be passed on to subsequent generations. Lamarck here acknowledges receipt of 400 livres for his work on the *Encyclopédie methodique*:

> Je soussigne reconnois avoir reçu de Monsieur Panckouke la somme de quatre cents livres à compte de mon travail pour l'Encyclopedie. Paris ce 24 novembre 1791. De Lamarck.

The *Encyclopédie methodique,* a greatly expanded and reorganized version of Diderot and d'Alembert's *Encyclopédie*, was published by Charles Joseph Panckouke (1736-98) and his heirs between 1781 and 1832. Lamarck's contribution to the *Encyclopédie* consisted of vols. 1-3 and half of vol. 4 of the 8-volume *Dictionnaire de botanique* (1783-95), along with the 3-volume *Illustration des genres* (1791-1800). 43055

Liquid Crystals

41. Lehmann, Otto (1855-1922). Group of 29 offprints, pamphlets, etc. on liquid crystals and related subjects. Various sizes. V.p., 1901-13. Original wrappers or without wrappers as issued. 21 of the items are from the library of Henri Becquerel (1852-1908) and his family; these bear the characteristic gummed label on the front or back wrapper. The remainder are from the library of Theodore von Karman (1881-1963), with his characteristic cataloguing stamp and docketing. Complete listing available on request. $3000

First / First Separate Editions. Lehmann discovered liquid crystals, defined as "collections of long molecules tending statistically to lie along a specific direction" (*Twentieth Century Physics,* III, p. 1540); these have found numerous industrial and technological uses in the 20th century. Lehmann made his discovery in 1888-89, after the Austrian botanist Friedrich Reinitzer had sent him some cholesteric esters which showed two distinct melting points about 30 degrees apart. Lehmann determined "that the cloudy intermediate phase [between the two melting points] contained areas that possessed a molecular structure similar to that of solid crystals, and he called this phase 'liquid crystal'. . . . Lehmann's work stimulated much research in this area as well as studies to find technical applications of the phenomenon, and these efforts are still continuing" (*Dictionary of Scientific Biography*). Lehmann published two important books on liquid crystals (1904 & 1911), as well as about 120 papers in scientific journals; the present collection represents about one-fifth of his output of articles.

Twenty-one of the items in this collection are from the library of Nobel laureate Henri Becquerel and his family. Becquerel and his son Jean both performed important research on crystals, with the latter's scientific career being primarily devoted to examination of the effect of a magnetic field on a crystal's optical properties. The remainder of this collection's offprints are from the library of Hungarian physicist Theodore von Karman, who in 1912 co-authored with Max Born the theory of crystal lattices. 37107


RECHERCHES

SUR

LES MOUVEMENTS

DE

LA PLANÈTE HERSCHEL,

PAR U.-J. LE VERRIER.

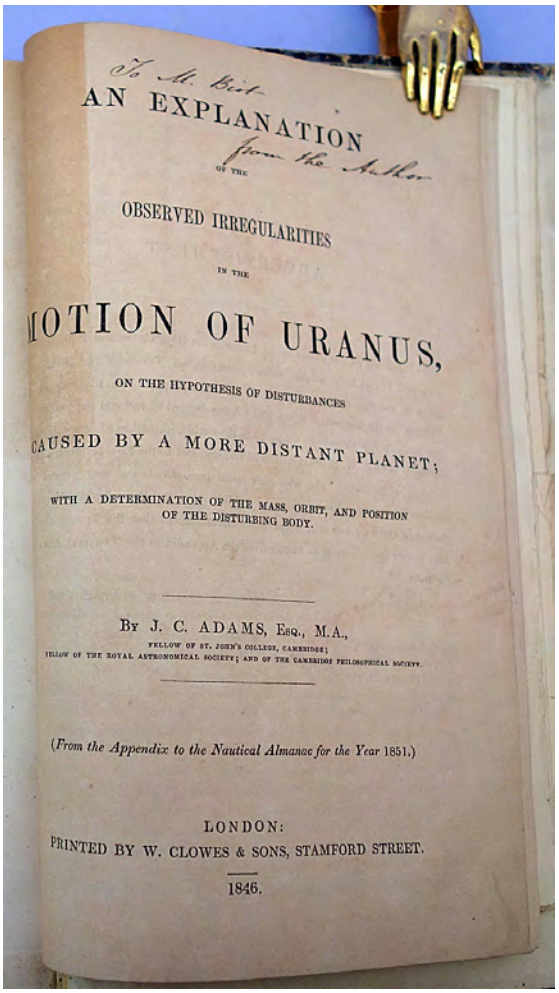
PARIS,

BACHELIER, IMPRIMEUR-LIBRAIRE

Du Bureau des Longitudes et de l'École royale Polytechnique,

QUAI DES AUGUSTINS, 55.

1846


To M. Biot

from the Author

AN EXPLANATION

OF THE

OBSERVED IRREGULARITIES

IN THE

MOTION OF URANUS,

ON THE HYPOTHESIS OF DISTURBANCES

CAUSED BY A MORE DISTANT PLANET;

WITH A DETERMINATION OF THE MASS, ORBIT, AND POSITION OF THE DISTURBING BODY.

By J. C. ADAMS, Esq., M.A.,

FELLOW OF ST. JOHN'S COLLEGE, CAMBRIDGE;

FELLOW OF THE ROYAL ASTRONOMICAL SOCIETY; AND OF THE CAMBRIDGE PHILOSOPHICAL SOCIETY.

(*From the Appendix to the Nautical Almanac for the Year* 1851.)

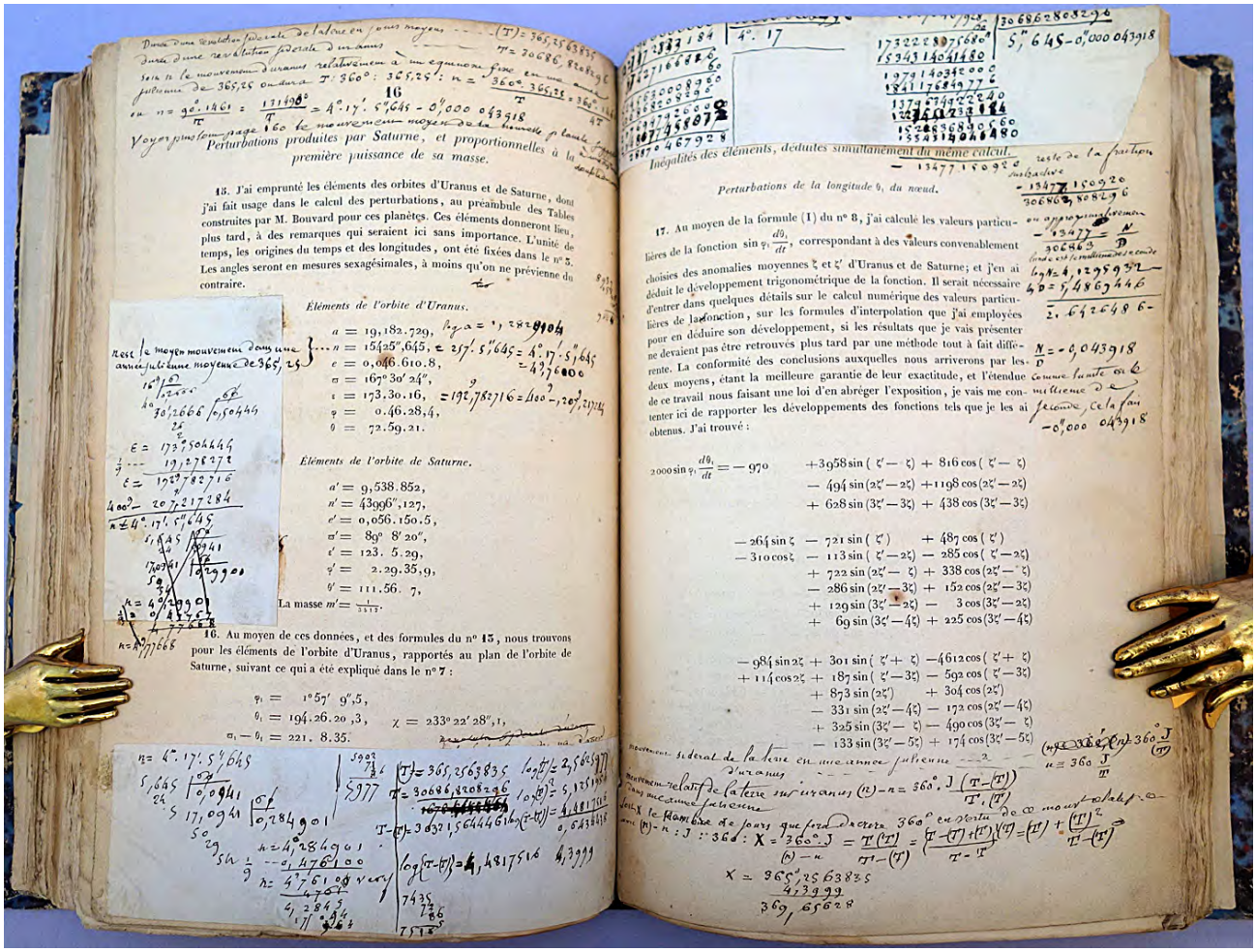
LONDON:

PRINTED BY W. CLOWES & SONS, STAMFORD STREET.

1846.

Discovery of Neptune, the First Planet Found by Mathematical Rather than Observational Means—Jean-Baptiste Biot's Copies with Presentation Inscription and Very Extensive Annotations

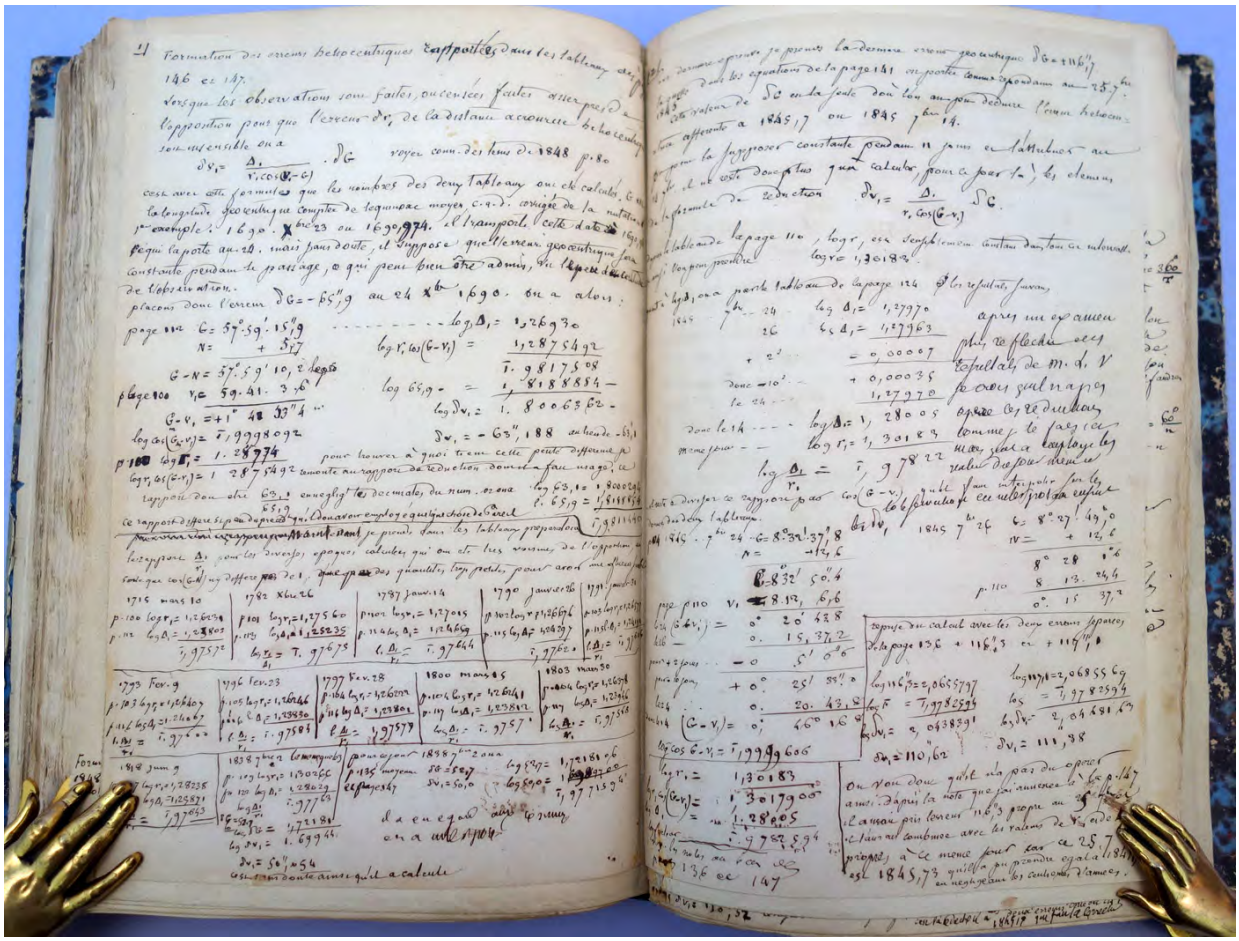
42. Le Verrier, Urbain Jean Joseph (1811-77). Recherches sur les mouvements de la planète Herschel. Offprint from *Connaissance des temps . . . pour l'an 1849* (1846). 254pp. Paris: Bachelier, 1846. From the library of French physicist Jean Baptiste Biot (1774-1862), heavily annotated by Biot in the margins; slips with Biot's manuscript notes and calculations tipped to pages 16, 164 and 192; additional autograph manuscript leaves by Biot bound in before pages 111, 145 and 235. Bound with: **Adams, John Couch (1819-92).** An explanation of the observed irregularities in the motion of Uranus, on the hypothesis of disturbances caused by a more distant planet; with a determination of the mass, orbit, and position of the disturbing body. 31pp. London: W. Clowes & Sons, 1846. Adams' autograph presentation inscription on the title-leaf: "To M. Biot from the Author." Bound with: 3 other papers on planetary astronomy by Le Verrier, plus the special advance printing of the Royal Astronomical Society's *Monthly Notice* 7, no. 9 (Nov. 13, 1846) containing abstracts of papers delivered by George Biddell Airy, James Challis and J. C. Adams on the discovery of Neptune. Together 6 items in one volume. 243 x 154 mm. 19th century marbled boards, rebacked in calf, light rubbing and edgewear. Minor foxing and toning, fore-edges a bit frayed, but very good. Sheet with Biot's autograph manuscript astronomical table and calculations laid in. $25,000



First Edition of Adams' work, and the **First Edition** of Le Verrier's **First Complete Account** of the existence and position of Neptune, the eighth major planet in our solar system. These copies of Le Verrier's and Adams' papers are **the most historically valuable that have been on the market in the fifty years of our experience. The manuscript notes by Jean Baptiste Biot in this volume are so extensive as to represent a significant autograph manuscript by him**.

Both Adams and Le Verrier independently predicted the existence and position of Neptune using only mathematics—a pivotal event in the history of astronomy. Neptune, the existence of which was visually confirmed in 1846, was *the first planet to be discovered by mathematical rather than observational means*. The discovery of Neptune not only represents the greatest triumph for Newton's gravitational theory since the return of Halley's Comet in 1705, but it also marks the point at which mathematics and theory, rather than observation, began to take the lead in astronomical research.

Both the Adams and the Le Verrier works were once part of the library of French physicist Jean Baptiste Biot, best known for his important researches on the polarization of light and for his collaboration in 1806 with the young François Arago in redetermining the arc of the meridian, the measurement on which the standard meter is based. The Adams work is a presentation copy inscribed by Adams to Biot, and the Le Verrier work bears Biot's extensive autograph mathematical notations on 63 of its 254 pages, plus five additional leaves of calculations in Biot's hand. Biot, an early supporter of Le Verrier (see Lequeux, p. 12), published in 1846 and 1847 a five-part paper ("Sur la planète nouvellement découverte par M. Leverrier, comme conséquence de la théorie de l'attraction," *Journal des savants* 1846: 577-96, 641-64, 750-68; 1847: 18-35, 65-86) analyzing the very difficult mathematics Le Verrier used to predict the planet's existence. Biot's copy of Le Verrier's *Recherches* bears wit-



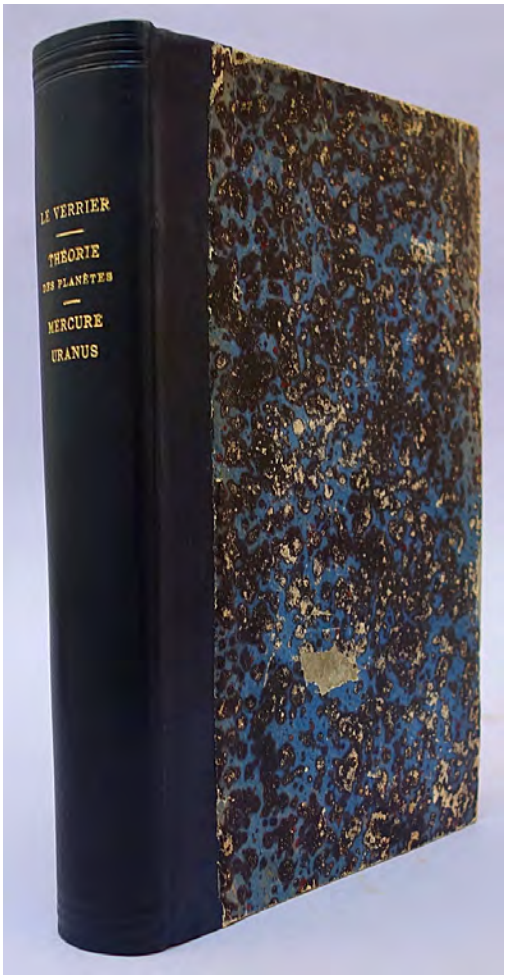
ness to the extent of his efforts to understand Le Verrier's methods. This was no easy task, as Biot remarked in the third part of his paper: "As I progress in the job I have undertaken, the difficulty of the subject seems to increase."

Biot's presentation copy of Adams' *Explanation of the Observed Irregularities in the Motion of Uranus* is also particularly noteworthy. Among Adams's papers preserved at St. John's College, Cambridge are two letters from Biot to Adams, written in early 1847, in which Biot requested information about Adams' work on Neptune for inclusion in the final parts of his *Journal des savants* paper. It is very likely that Adams sent this inscribed copy of his work to Biot as part of his response.

The discovery of Neptune resulted from the need to develop a theory explaining the motion of the solar system's seventh planet, Uranus, the movements of which could not be completely accounted for by the gravitational effects of Jupiter and Saturn. Several astronomers since the planet's discovery in 1781 had suggested that the perturbations in Uranus's orbit could be caused by an as yet unknown trans-Uranian planet. However, the complex mathematics required for proving this hypothesis was so daunting that no one had attempted the task.

This situation changed in the 1840s when John Couch Adams, a brilliant young British mathematician recently graduated from Cambridge, and Urbain J. J. Le Verrier, a professor of astronomy at the École Polytechnique in Paris, each independently started working on a mathematical theory of Uranus's movements that would take into account the existence of an eighth planet in our solar system. Adams began tackling the problem in 1843 and by 1845 had completed his solution, which later proved to predict the unknown planet's position within two degrees. He communicated his results to James Challis, the director of the Cambridge Observatory, and to Astronomer Royal George Biddell Airy, but neither man recognized the significance of Adams' achievement, and Adams' work remained for the time disregarded and unpublished.

Meanwhile, Le Verrier had begun his own work on the Uranus problem in the summer of 1845, encouraged by François Arago, who by then had become France's leading astronomer. On November 19, 1845 Le Verrier published his first brief paper on the subject in the *Comptes rendus de l'Académie des sciences,* following it with three more equally brief papers published on June 1, August 31 and October 5, 1846. These short papers, totaling only 34 pages, were preliminary to the full and detailed account Le Verrier gave of his results in the 254-page *Recherches sur les mouvements de la planète Herschel*; on p. 5 of that work Le Verrier referred to the *Comptes rendus* papers as "publications partielles." *Recherches sur les mouvements de la planète Herschel* ("Herschel" being an alternative name for Uranus) was issued both as part of France's official astronomical annual, *Connaissance des temps* (equivalent to Britain's *Nautical Almanac*), and as a separate offprint like the copy we are offering here. The offprint can be distinguished by the presence of the publisher's imprint and the phrase "Extrait de la Connaissance des Temps pour 1849" on p. 254 (the *Connaissance de Temps pour 1849* was published in 1846).



Le Verrier sent his results to several European astronomers, including Johann Gottfried Galle at the Berlin Observatory, who received Le Verrier's communication on September 23, 1846. Two days later, after scanning the night skies with the Observatory's 9-inch telescope, Galle wrote to Le Verrier with exciting news:

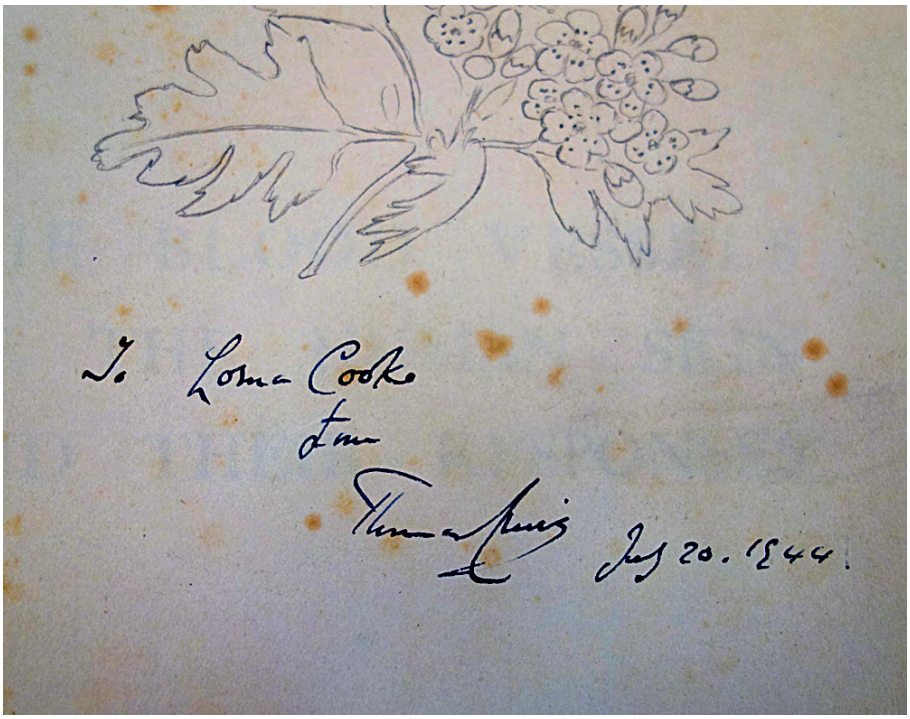
> The planet whose position you indicated really exists. The same day I received your letter I found a star of the eighth magnitude that was not recorded on the excellent Carta Hora XXI (drawn by Dr. Bremiker) . . . The observation of the following day confirmed that it was the planet sought (quoted in *Dictionary of Scientific Biography*).

In June 1846 word of Le Verrier's trans-Uranian researches reached Astronomer Royal Airy, who had let Adams' work on the same subject languish neglected over the previous several months. Attempting to claim priority of discovery for England, Airy ordered Professor Challis to begin searching for the new planet (which Challis observed, but failed to recognize as such, prior to Galle's sighting), and informed Le Verrier of Adams' results in a letter written on October 14. The resulting priority dispute, inflamed by the French press, aroused bitter feelings on both sides, but Adams remained gracious throughout. In his *Explanation of the Observed Irregularities in the Motion of Uranus,* read before the Royal Astronomical Society on November 13, 1846, Adams gave the chronology of his own findings but explained that

> I mention these dates merely to shew that my results were arrived at independently and previously to the publication of M. Le Verrier, and not with the intention of interfering with his just claims to the honors of the discovery, for there is no doubt that his researches were first published to the work, and led to the actual discovery of the planet by Dr. Galle, so that the facts stated above cannot detract, in the slightest degree, from the credit due to M. Le Verrier (p. 5).

The two astronomers later became good friends.

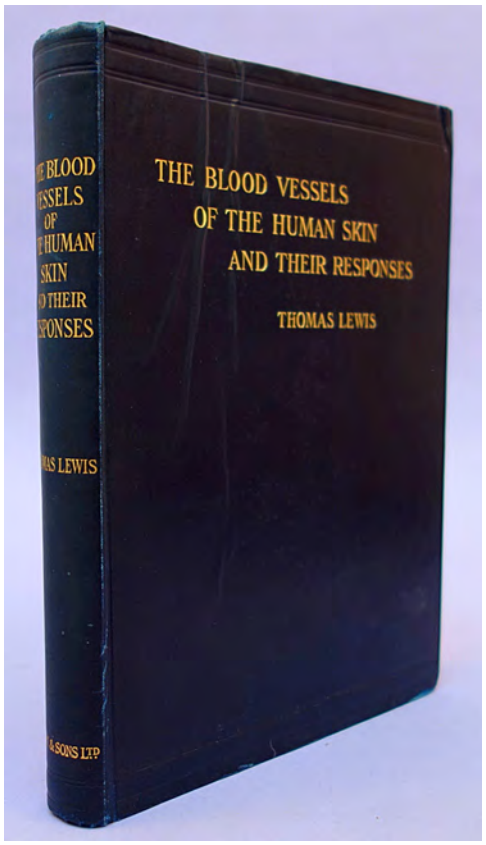
Biot's copies of Le Verrier's and Adams' works that we are offering here are bound in a single volume with four other papers on planetary astronomy from Biot's library, three by Le Verrier and the fourth the special advance printing of the Royal Astronomical Society's *Monthly Notice* 7, no. 9 (Nov. 13, 1846) containing abstracts of the papers delivered to the Society by Airy, Challis and Adams on the discovery of Neptune. A listing of these works is available on request. Dibner, *Heralds of Science*, 16 (Adams). Lequeux, *Leverrier: Magnificent and Detestable Astronomer* (2013), p. 12; ch. 2. Littmann, *Planets Beyond: Discovering the Outer Solar System* (2004), ch. 4. Norman 7 (Adams), 1342 & 1343 (Le Verrier, citing this publication). 43016



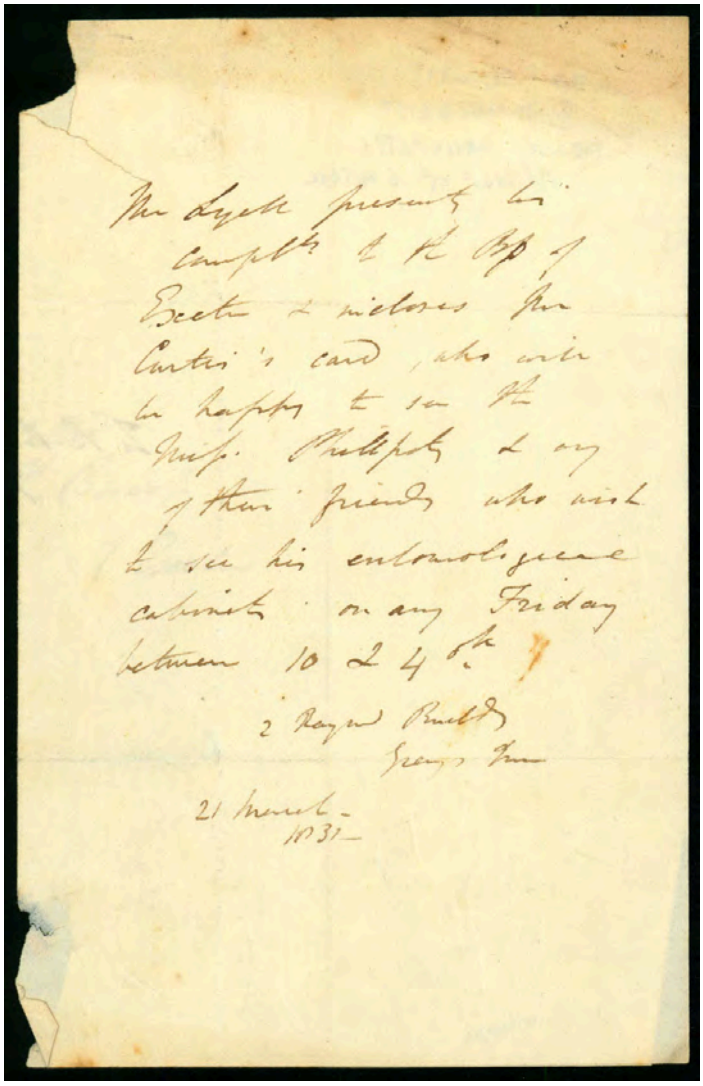
Rare Presentation Copy

43. Lewis, Thomas (1881-1945). The blood vessels of the human skin and their responses. v, 322pp. 76 text illustrations. London: Shaw & Sons, 1927. 247 x 181 mm. Original cloth, front cover warped with wrinkles in the cloth. Minor foxing on endpapers and first and last leaves, but very good. Inscribed by Lewis on the front free endpaper: "To Lorna[?] Cooke from Thomas Lewis July 20 1944." Botanical drawing in pencil above inscription.

$1500



First Edition. Lewis (1881-1945), an eminent cardiologist and pioneer of the clinical use of electrocardiography, began researching the cutaneous vessels during the First World War, but put his investigations aside for several years to concentrate on electrocardiography. "By 1925 Lewis had had enough of his elaborate electrocardiographical work and, believing that 'the cream was off,' returned to observations on the cutaneous vessels which he had started during the war. . . A series of observations on the vascular reaction of the skin to various injuries led to his description of the red line, flare, and wheal so produced as the triple response, with the postulate that the original stimulus acts by damaging the tissues, which produce a histaminelike compound that Lewis called the H-substance. This work was gathered together in 1927 in his monograph *The Blood Vessels of the Human Skin and their Responses* (1927)" (*Dictionary of Scientific Biography*). Inscriptions by Lewis are rare; this is the first one we have handled in over four decades in business. Garrison-Morton 797. Fulton & Wilson, *Selected Readings in the History of Physiology*, pp. 100-102. 40640

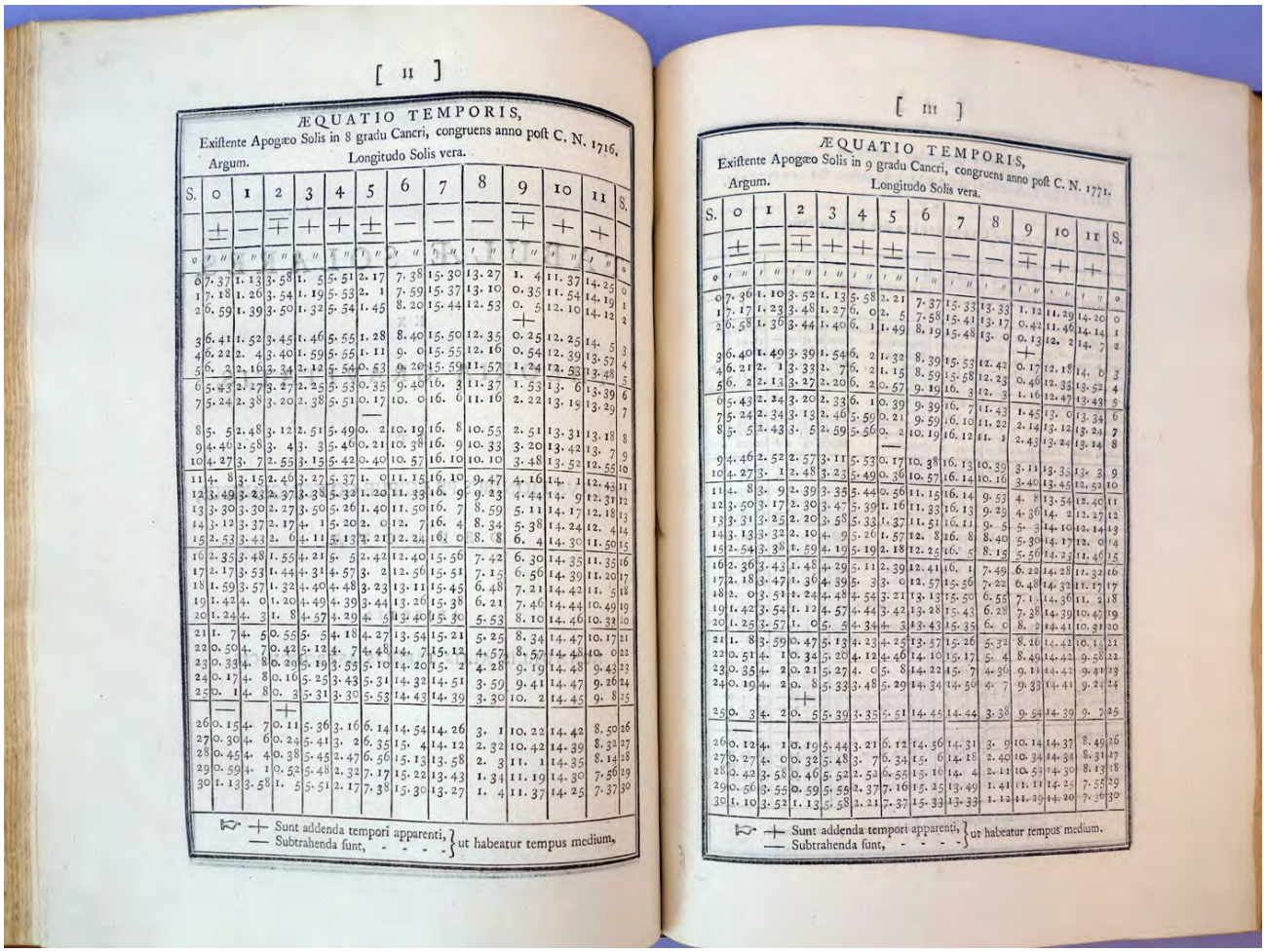


"To See His Entomological Cabinets"

44. Lyell, Charles (1797-1875). Autograph letter signed in the third person to the Rt. Rev. Henry Phillpotts (1778-1869), Bishop of Exeter. 1 sheet. N.p., 21 March 1831. 187 x 234 mm. Lacunae in upper and lower margins where seal was removed (not affecting text), light soiling, but very good.

$950

"Mr. Lyell presents his complts. to the Bp. of Exeter & incloses Mr. Curtis's card, who will be happy to see the Misses Phillpots & any of their friends who wish to see his entomological cabinets on any Friday between 10 & 4 o'cl. . . ." Lyell here refers to his friend John Curtis (1791-1862), author of the monumental *British Entomology, Being Illustrations and Descriptions of the Genera of Insects Found in Great Britain and Ireland* (1824-39). While Lyell was writing his famous *Principles of Geology* (1830-32), Curtis provided him with useful information on the geographical distribution of insects, and was also able to identify several genera of fossil insects found in Aix-en-Provence and Scotland. Lyell himself had a deep and abiding interest in entomology, having begun collecting insects while still a schoolboy; his biographer noted that "never, even in old age, would [Lyell] lose his delight in the beauty of rare moths and butterflies" (Wilson, p. 146). The Bishop of Exeter had an astonishing 18 children, at least some of whom apparently were interested in natural history. 43052



[II]

ÆQUATIO TEMPORIS,

Exiſtente Apogæo Solis in 8 gradu Cancri, congruens anno poſt C. N. 1716.

Argum. Longitudo Solis vera.

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2	6. 59	1. 39	3. 50	1. 32	5. 54	1. 45	8. 20	15. 44	12. 53	0. 5	12. 10	14. 12	2
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3	6. 41	1. 52	3. 45	1. 46	5. 55	1. 28	8. 40	15. 50	12. 35	0. 25	12. 25	14. 5	
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30	1. 13	3. 58	1. 5	5. 51	2. 17	7. 38	15. 30	13. 27	1. 4	11. 37	14. 25	7. 37	30

☞ + Sunt addenda tempori apparenti, } ut habeatur tempus medium.
— Subtrahenda ſunt, - - - - }

[III]

ÆQUATIO TEMPORIS,

Exiſtente Apogæo Solis in 9 gradu Cancri, congruens anno poſt C. N. 1771.

Argum. Longitudo Solis vera.

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						−							8
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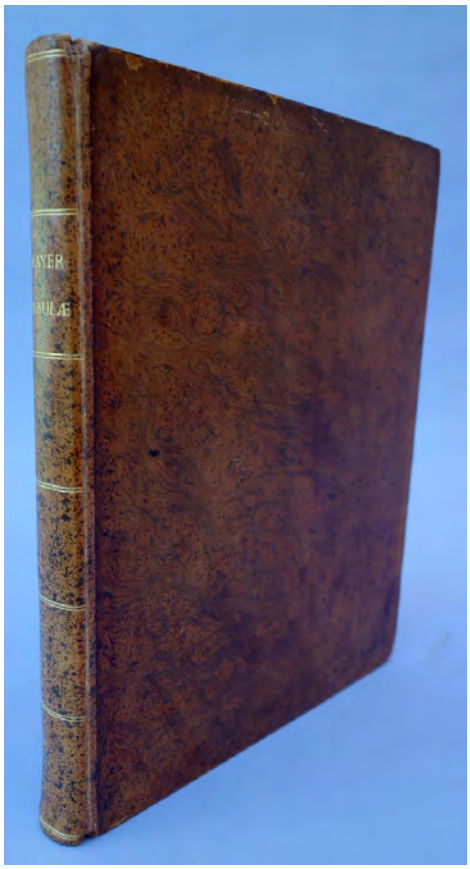
21	1. 8	3. 59	0. 47	5. 13	4. 23	4. 25	13. 57	15. 26	5. 32	8. 26	14. 42	10. 15	21
22	0. 51	4. 1	0. 34	5. 20	4. 12	4. 46	14. 10	15. 17	5. 4	8. 49	14. 42	9. 58	22
23	0. 35	4. 2	0. 21	5. 27	4. 0	5. 8	14. 22	15. 7	4. 36	9. 11	14. 42	9. 41	23
24	0. 19	4. 2	0. 8	5. 33	3. 48	5. 29	14. 34	14. 56	4. 7	9. 33	14. 41	9. 24	24
			+										
25	0. 3	4. 2	0. 5	5. 39	3. 35	5. 51	14. 45	14. 44	3. 38	9. 54	14. 39	9. 7	25
	—												
26	0. 12	4. 1	0. 19	5. 44	3. 21	6. 12	14. 56	14. 31	3. 9	10. 14	14. 37	8. 49	26
27	0. 27	4. 0	0. 32	5. 48	3. 7	6. 34	15. 6	14. 18	2. 40	10. 34	14. 34	8. 31	27
28	0. 42	3. 58	0. 46	5. 52	2. 52	6. 55	15. 16	14. 4	2. 11	10. 53	14. 30	8. 13	28
29	0. 56	3. 55	0. 59	5. 55	2. 37	7. 16	15. 25	13. 49	1. 41	11. 11	14. 25	7. 55	29
30	1. 10	3. 52	1. 13	5. 58	2. 21	7. 37	15. 33	13. 33	1. 12	11. 29	14. 20	7. 36	30

☞ + Sunt addenda tempori apparenti, } ut habeatur tempus medium.
— Subtrahenda ſunt, - - - - }

The First Tables Accurate Enough to Find the Longitude at Sea—
Editor Nevil Maskelyne's Copy

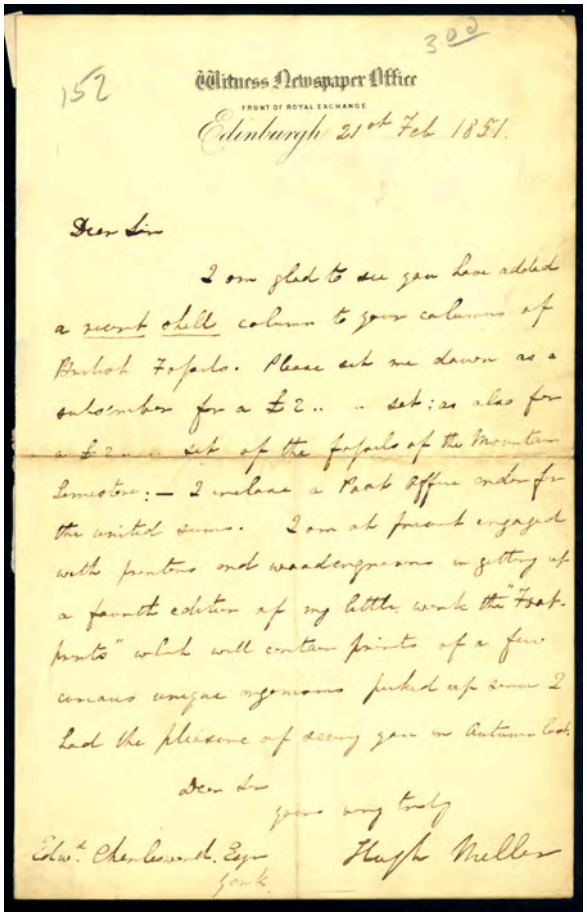
45. Mayer, Johann Tobias (1723-1762). Tabulae motuum solis et lunae novae et correctae. . . quibus accedit methodus longitudinum promota, eodem auctore. Edited by Nevil Maskelyne (1732-1811). 4to. vii, 136, cxxx, [2]pp. 2 folding engraved plates. London: William and John Richardson for John Nourse, John Mount and Thomas Page, 1770. 270 x 217 mm. Contemporary tree calf (rebacked). Fine copy. Bookplate of Margaret Maskelyne (1786-1858), the only child of Nevil Maskelyne, on front pastedown. Bookplate of Haskell F. Norman. $9500

First Edition of Mayer's highly accurate lunar tables, which were the first to allow mariners to calculate longitude at sea to within a degree (60 miles). For these tables Mayer's widow received £3000 of the British Admiralty's prize established by the Act of Parliament of 12 November 1713 to "such person or persons as shall discover the longitude at sea." The Yorkshire clockmaker John Harrison, inventor of the marine chronometer, received between £8000 and £9000 of the same prize money some years later for his contribution to the longitude-finding problem.



A preliminary version of Mayer's tables was published in the proceedings of the Göttingen Scientific Society in 1753; meanwhile, Mayer continued to improve the tables until his death in 1762. In 1763 Mayer's widow sent a copy of the improved tables to the Board of Longitude in application to the prize. The tables were first edited for publication seven years later by Nevil Maskelyne, the Astronomer Royal, who had tested Mayer's earlier tables with positive results on a voyage to St. Helena in 1761. Maskelyne used Mayer's tables to compute the lunar and solar ephemerides in the early editions of his Nautical Almanac, and since he was on the Board of Longitude we may assume that he was influential in having a portion of the prize awarded to Mayer's widow. Appended to Mayer's tables are two short tracts, one on determining longitude by lunar distances, together with a description of the reflecting circle (invented by Mayer in 1752), and the other on a formula for atmospheric refraction, which applies a remarkably accurate correction for temperature.

This copy bears the bookplate of Nevil Maskelyne's only child, Margaret, who was not an astronomer and would not have otherwise had a reason to own these tables except as an inheritance from her father. *Dictionary of Scientific Biography.* Norman 1468. Wepster, *Between Theory and Observations: Tobias Mayer's Explorations of Lunar Motion* (2010), pp. 33-40. 42935


Witness Newspaper Office
FRONT OF ROYAL EXCHANGE
Edinburgh 21st Feb 1851.

Dear Sir

I am glad to see you have added a recent shell column to your columns of British Fossils. Please set me down as a subscriber for a £2 .. .. set; as also for a £2 .. .. set of the fossils of the Mountain Limestone: — I enclose a Bank Office order for the united sums. I am at present engaged with printers and woodengravers in getting up a fourth edition of my little work the "Footprints" which will contain prints of a few curious unique organisms picked up since I had the pleasure of seeing you in Autumn last.

Dear Sir
yours very truly
Hugh Miller

Edw.d Charlesworth. Esqr
&c. &c.

"Getting up a Fourth Edition of my Little Work the 'Footprints'"

46. Miller, Hugh (1802-56). Autograph letter signed to Edward Charlesworth (1803-93). 1 page plus integral blank. Edinburgh, 21 February 1851. 201 x 126 mm. Small tears along fold not affecting text, traces of former mounting, light soiling along folds but very good. Docketed by recipient.

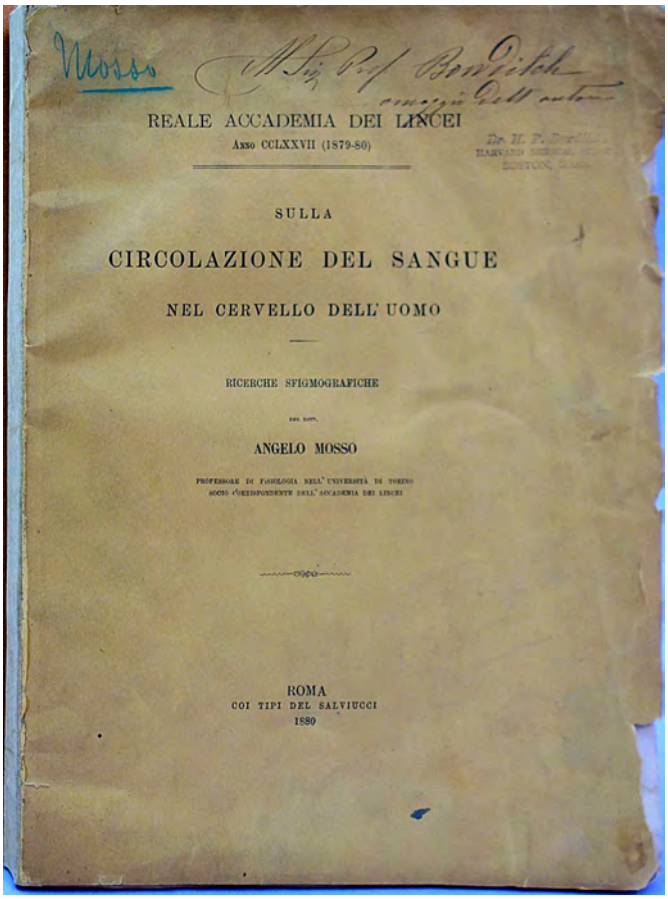
$750

From Scottish paleontologist and geologist Hugh Miller, author of works of popular science including *The Old Red Sandstone* (1841), *Footprints of the Creator* (1850) and *The Testimony of the Rocks* (1856), to fellow paleontologist Edward Charlesworth, editor of the *Magazine of Natural History*.

> I am glad to see you have added a [...] shell column to your columns of British Fossils. Please set me down as a subscriber for a £2 .. .. set; as also for a £2 .. .. set of the fossils of the Mountain Limestone . . . I am at present engaged with printers and woodengravers in getting up a fourth edition of my little work the "Footprints" which will contain prints of a few curious unique organisms picked up since I had the pleasure of seeing you in Autumn last . . .

Although he had little formal scientific training, Miller made important contributions to paleontology including the discovery of several previously unknown species of fossil fish. A deeply religious man, Miller believed that "the fossil record confirmed*, in broad outline, the cosmic drama depicted symbolically in the Bible"* (Dictionary of Scientific Biography). His geological studies had convinced him of the Earth's great age, but he held that the fossil record represented separate creations rather than the transmutation of species over time. His *Footprints of the Creator* was intended as a rebuttal of the evolutionary theory put forth in Robert Chambers's *Vestiges of the Natural History of Creation* (1844). The fourth edition of *Footprints*, mentioned in Miller's letter, came out in 1853. Miller's letter is on the letterhead of *The Witness*, a Scottish evangelical newspaper of which he was the editor.

43015



Foundation of Brain Imaging—Inscribed to Henry Pickering Bowditch

47. Mosso, Angelo (1846-1910). Sulla circolazione del sangue nel cervello dell'uomo. Ricerche sfigmografiche. *Reale Accademia dei Lincei. Memorie,* 3rd series, 5 (1879-80). 127pp. 2 lithographed plates, 7 double-page charts, text illustrations. Rome: Tipi del Salviucci, 1880. 300 x 223 mm. Original printed wrappers, spine repaired, edges a bit chipped; boxed. Light toning, edges a little frayed but very good. *Presentation Copy, inscribed by Mosso to Henry Pickering Bowditch* (1840-1911) on the front wrapper: "Al Sig. Prof. Bowditch omaggio dell'autore." Bowditch's ownership stamp beneath the inscription.

$3750

First Edition. Mosso discovered that blood circulation in the brain increases in certain discrete areas during mental activity; the machine he invented to record these changes paved the way for modern-day brain imaging techniques such as CT scans, PET scans and magnetic resonance imaging. "Italian physiologist Angelo Mosso was the first to experiment with the idea that changes in the flow of blood in the brain might provide a way of assessing brain function during mental activity. Mosso knew that, in newborn children, the fontanelles—the soft areas on a baby's head where the bones of the skull are not yet fused—can be seen to pulsate with the rhythm of the heartbeat. He noticed similar pulsations in two adults who had suffered head injuries that left them with defects of the skull, and observed, in particular, a sudden increase in the magnitude of those pulsations when the subjects engaged in mental activities" (Kolb & Whishaw, p. 132). Mosso devised a graphic recorder to document these pulsations, demonstrating that blood pressure fluctuations in the brain caused by mental exertion occur independently of any pressure changes in the rest of the body. Mosso concluded that brain circulation changes selectively in accordance with mental activity, stating that "we must suppose a very delicate adjustment whereby the circulation follows the needs of the cerebral activity. Blood very likely may rush to each region of the cortex according as it is most active" (quoted in Shepherd, p. 185).

Mosso studied in the early 1870s under the famous German physiologist Carl Ludwig, who pioneered the use of graphic recording machines in physiological research. Mosso was one of the major promoters of Ludwig's methods in Italy, particularly after he became head of the physiological institute at the University of Turin. While at Ludwig's laboratory in Leipzig Mosso became close friends with fellow student Henry Pickering Bowditch, an American physiologist who would later become the dean of Harvard's medical school. Just as Mosso had done in Italy, Bowditch brought Ludwig's research methods to the United States, establishing the country's first physiological laboratory at Harvard in 1871. Mosso presented this copy of his *Sulla circolazione del sangue nel cervello dell'uomo* to Bowditch, inscribing it to his friend in his beautiful copperplate handwriting. Cannon, "Biographical Memoir: Henry Pickering Bowditch 1840-1911," *Biographical Memoirs of the National Academy of Sciences* 17, eighth memoir (1922): 181-196. Kolb & Whishaw, *Fundamentals of Human Neuropsychology,* pp. 132-133. Shepherd, *Creating Modern Neuroscience*, pp. 185-186. 43017

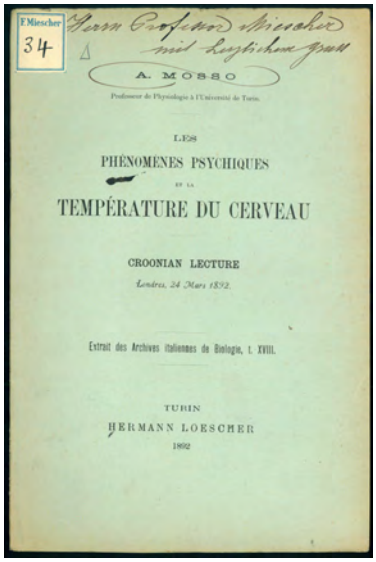
Miescher's and von Bunge's Copies

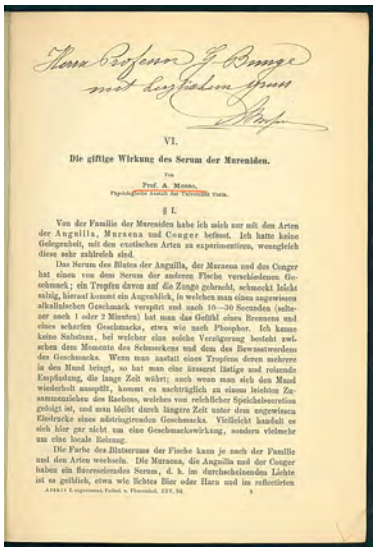
48. Mosso, Angelo (1846-1910). Collection of 14 offprints on physiology, as listed below. 1874-96. Most offprints in original wrappers;s. The majority of the offprints are from the library of Johann Friedrich Miescher (1844-95), the first to identify and isolate DNA; three bear Mosso's presentation inscriptions to Miescher. Two of the offprints bear Mosso's presentation inscriptions to German physiologist Gustav von Bunge (1844-1920). $3000

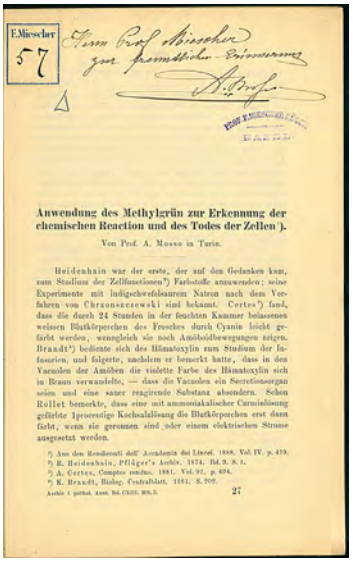
First Editions, Offprint Issues. The Italian physiologist Mosso, a student of Carl Ludwig, was one of the pioneers in the use of machines to graphically register physiological phenomena. He was the first to use neuroimaging techniques to measure changes in blood flow to the brain caused by mental activity, and he also invented the plethysmograph for measuring slow changes in the volume of blood vessels.

These 14 offprints illustrate the breadth of Mosso's physiological researches, which included important investigations of blood circulation, motor functions, respiration and the relationship between physiological and psychic phenomena. "The importance of Mosso's physiological research lies in his emphasis on experimenting directly on man whenever possible, as well as on animals, so that his research was truly in human physiology. His scientific experiments were carried out with special equipment, which he devised to suit the requirements of the studies . . . Mosso carried out highly accurate studies on movements of both smooth and striated muscles, in relation to a great variety of physiological and pathological conditions . . . he studied the variations in the frequency and energy of cardiac systoles, the increase of blood flow into the brain, and the increase of blood pressure in situations that today would be described as those of intellectual or emotional stress" (*Dictionary of Scientific Biography*).

Most of these offprints are from the library of Johann Friedrich Miescher, who was the first to identify and isolate the cell nucleus compounds now known as DNA; three of the offprints below bear Mosso's presentation







inscriptions to Miescher. Two of the offprints bear Mosso's presentation inscriptions to German physiologist Gustav von Bunge, best known for his contributions to nutrition physiology. Several of the offprints are from the *Archives italiennes de biologie*, the journal that Mosso founded in 1882. 43077

1. Von einigen neuen Eigenschaften der Gefässwand. Offprint from *Berichten der math.-phys. Classe der Königl. Sächs. Gesellschaft der Wissenschaften* (1874). 305-372pp. Illustrated. 216 x 137 mm. Original plain wrappers. Booklabel and stamp of J. F. Miescher.

2. Ueber die gegenseitigen Beziehungen der Bauch- und Brustathmung. Offprint from *Archiv für Anatomie und Physiologie, physiologische Abtheilung* (1878) .441-468pp. Illustrated. 228 x 157 mm. Original printed wrappers. Booklabel and stamp of J. F. Miescher.

3. (with P. Pellacani) Sur les fonctions de la vessie. Offprint from *Archives italiennes de biologie* 1 (1882). 97-128pp. 5 plates, text illustrations. 240 x 160 mm. (uncut and unopened). Later plain wrappers, original back wrapper bound in. Booklabel and stamp of J. F. Miescher.

4. Application de la balance à l'étude de la circulation du sang chez l'homme. Offprint from *Archives italiennes de biologie* 5 (1884). 16pp. Plate, text illustrations. 233 x 158 mm. Original printed wrappers. Booklabel and stamp of J. F. Miescher.

5. Periodische Athmung und Luxusathmung. Offprint from *Archiv für Anatomie und Physiologie, physiologische Abtheilung* (1886). 37-116pp. 8 plates, text illustrations. 232 x 157 mm. Original printed wrappers. Tear in first plate.

6. Die Umwandlung der rothen Blutkörperchen in Leukocyten und die Nekrobiose der rothen Blutörperchen bei der Coagulation und Eiterung. Offprint from *Archiv für pathologische Anatomie und Physiologie* 109 (1887). 205-277pp. 216 x 149 mm. Original plain wrappers, front wrapper nearly detached. Inscribed to German physiologist Gustav von Bunge (1844-1920) on the first page: "Herrn Professor G. Bunge mit herzlichen Gruss A Mosso."

7. Anwendung des Methylgrün zur Erkennung der chemischen Reaction und des Todes der Zellen. Offprint from *Archiv für pathologische Anatomie und Physiologie* 113 (1888). 397-409pp. 216 x 137 mm. Original plain wrappers. Inscribed to J. F. Miechser on the first leaf: "Herrn Prof. Miescher zur fremdlichen Erinnerung A. Mosso." Miescher's booklabel and stamp.

8. Kritische Untersuchung der beim Studium der Blutkörperchen befolgten Methoden. Offprint from *Archiv für pathologische Anatomie und Physiologie* (1888). 410-420pp. 216 x 137 mm. Original plain wrappers, creased vertically.

9. Die giftige Wirkung des Serum der Mureniden. Offprint from *Archiv für experimentelle Pathologie und Pharmakologie* 25 (1888). 111-135pp. 223 x 155 mm. Original printed wrappers, lower corner of back wrapper creased. Inscribed to G. von Bunge on the first page: "Herrn Professor G. Bunge mit herzlichen Gruss A Mosso."

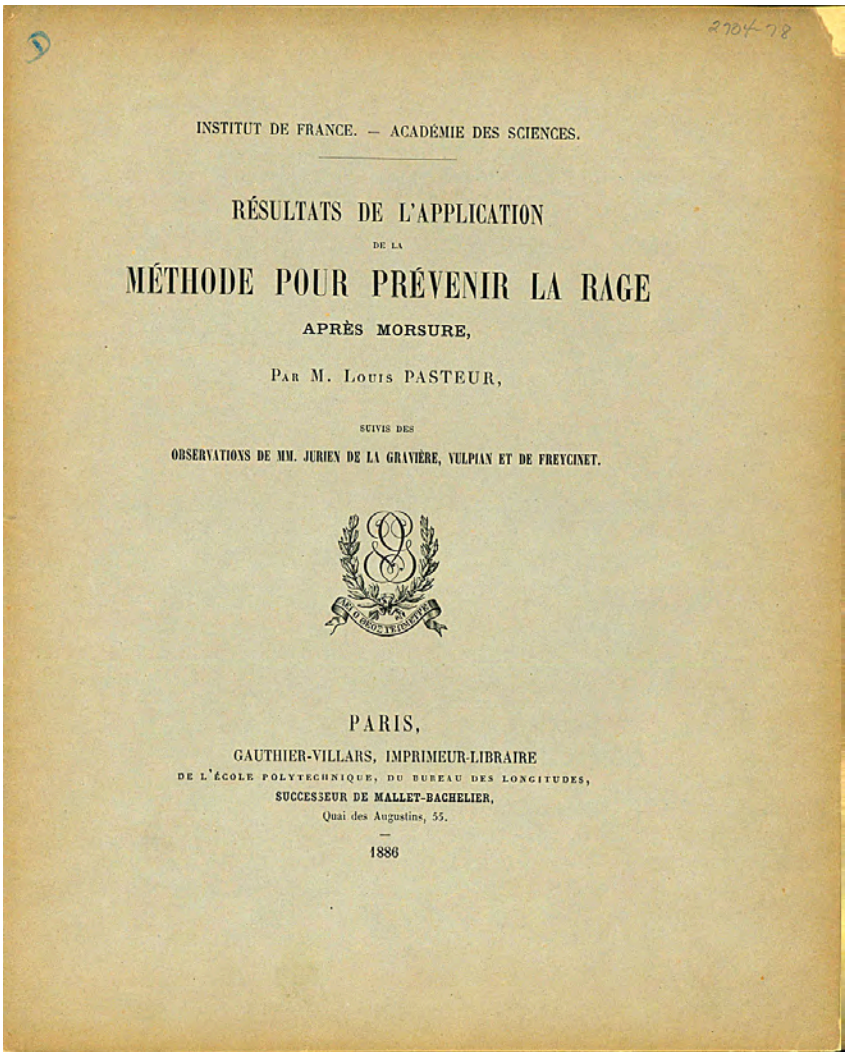
10. Un venin dans le sang des Murénides. Offprint from *Archives italiennes de biologie* 10 (1888). 29pp. 232 x 156 mm. Original printed wrappers. Inscribed to J. F. Miescher on the first leaf: "With the compliments of the autor [sic]." Miescher'

11. Les phénomènes psychiques et la temperature du cerveau. Offprint from *Archives italiennes de biologie* 18 (1892). 14pp. Illustrated. 233 x 154 mm. Original printed wrappers. Inscribed to J. F. Miescher on the front wrapper: "Herrn Professor Miescher mit herzlichen Gruss." Miescher's booklabel and stamp.

12. The temperature of the brain, especially in relation to psychical activity [abstract]. Offprint from *Proceedings of the Royal Society* 51 (1892). 83-85pp. 217 x 139 mm. Without wrappers. Miescher's booklabel and stamp.

13. Sphygmomanomètre pour mesurer la pression du sang chez l'homme. Offprint from *Archives italiennes de biologie* 23 (1895). 22pp. Illustrated. 234 x 155 mm. Original printed wrappers. Miescher's booklabel and stamp.

14. Biologie: Matérialisme et mysticism. Extract from *Revue scientifique*, 4th series, 5 (1896): 1-8. 282 x 212 mm. Disbound, leaves loose.



INSTITUT DE FRANCE. — ACADÉMIE DES SCIENCES.

RÉSULTATS DE L'APPLICATION

DE LA

MÉTHODE POUR PRÉVENIR LA RAGE

APRÈS MORSURE,

PAR M. LOUIS PASTEUR,

SUIVIS DES

OBSERVATIONS DE MM. JURIEN DE LA GRAVIÈRE, VULPIAN ET DE FREYCINET.

PARIS,

GAUTHIER-VILLARS, IMPRIMEUR-LIBRAIRE

DE L'ÉCOLE POLYTECHNIQUE, DU BUREAU DES LONGITUDES,

SUCCESSEUR DE MALLET-BACHELIER,

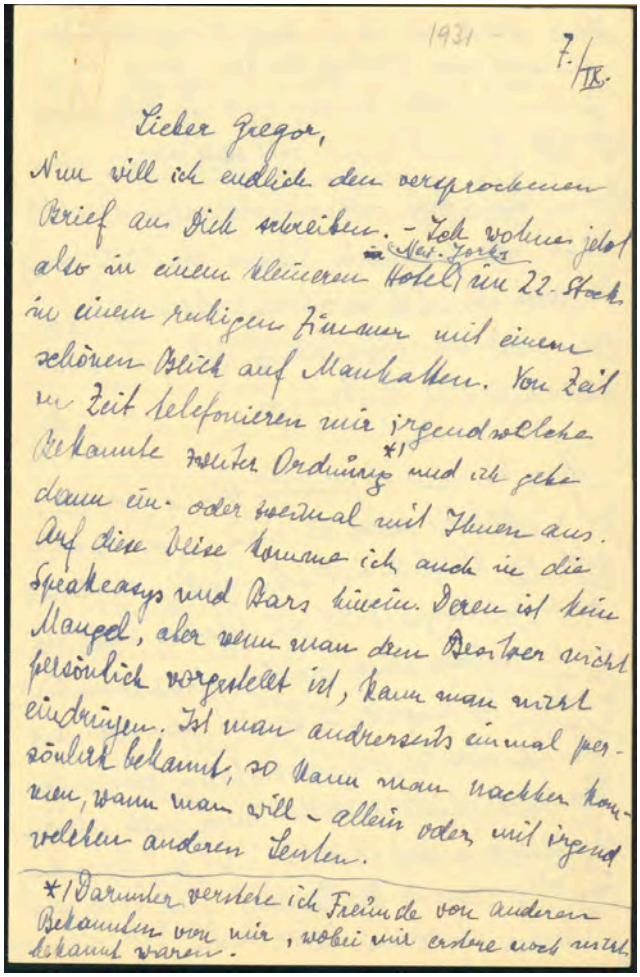
Quai des Augustins, 55.

1886

Pasteur on Rabies

49. Pasteur, Louis (1822-95). (1) Résultats de l'application de la méthode pour prévenir la rage après morsure. Offprint from *Comptes rendus des séances de l'Académie des Sciences* 102 (1886). 13pp. Paris: Gauthier-Villars, 1886. 270 x 221 mm. Original printed wrappers, small chip in one corner of front wrapper. (2) Note complémentaire sur les résultats de l'application de la méthode pour prévenir la rage après morsure. Offprint from *Comptes rendus des séances de l'Académie des Sciences* 102 (1886). 4pp. Paris: Gauthier-Villars, 1886. 270 x 221 mm. Original printed wrappers. Very good. $2750

First Editions, Offprint Issues. Two of Pasteur's further communications on his rabies vaccine, following his landmark 1885 paper reporting his successful administration of the vaccine to two young boys who had been bitten by rabid dogs. No. (1), written after Pasteur had administered the treatment to 350 patients, gives brief case histories 20 of these patients and calls for the establishment of a institute for rabies vaccination. No. (2) updates the results of the previous paper and breaks down the number of persons treated by nationality. "Pasteur's papers describing his rabies vaccine, and the results he attained with it gave further proof of the value of attenuated virus as a protective inoculum against infective diseases in man and animals. This is considered Pasteur's greatest triumph. A grateful public subscribed two and a half million francs and made possible the erection of the Institut Pasteur" (Garrison-Morton 5483, citing these papers along with the 1885 paper and one other). 43050

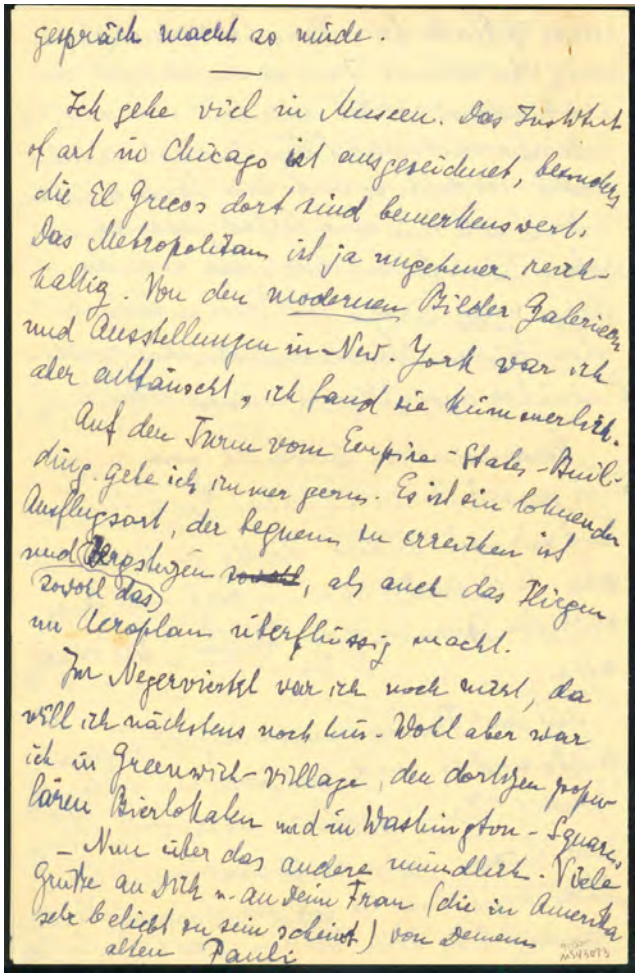


1931 7./IX.

Lieber Gregor,

Nun will ich endlich den versprochenen Brief an Dich schreiben. – Ich wohne jetzt also in einem kleineren Hotel (in Nat. Yorks) im 22. Stock in einem ruhigen Zimmer mit einem schönen Blick auf Manhatten. Von Zeit zu Zeit telefonieren mir irgendwelche Bekannte meiner Ordinary *) und ich gehe dann ein- oder zweimal mit Ihnen aus. Auf diese Weise komme ich auch in die Speakeasys und Bars hinein. Deren ist kein Mangel, aber wenn man den Besitzer nicht persönlich vorgestellt ist, kann man nicht eindringen. Ist man andrerseits einmal persönlich bekannt, so kann man nachher kommen, wann man will – allein oder mit irgend welchen anderen Leuten.

*) Darunter verstehe ich Freunde von anderen Bekannten von mir, wobei mir erstere noch nicht bekannt waren.



Gespräch macht so müde.

Ich gehe viel in Museen. Das Institut of art in Chicago ist ausgezeichnet, besonders die El Grecos dort sind bemerkenswert. Das Metropolitan ist ja ungeheuer reichhaltig. Von den modernen Bilder Galerien und Ausstellungen in New York war ich eher enttäuscht, ich fand sie kümmerlich. Auf den Turm vom Empire-State-Building gehe ich immer gern. Es ist ein lohnender Aussichtsort, der bequem zu erreichen ist und Ergötzen [illegible], als auch das Fliegen im Aeroplan überflüssig macht.

Im Negerviertel war ich noch nicht, da will ich nächstens noch hin. Wohl aber war ich in Greenwich-Village, den dortigen provinziellen Bierlokalen und in Washington-Square. – Nun über das andere mündlich. Viele Grüße an Dich u. an Deine Frau (die in Amerika sehr beliebt zu sein scheint) von Deinem alten Pauli

Pauli's First Trip to America—An Historic Letter

50. Pauli, Wolfgang (1900-1958). Autograph letter signed, in German, to physicist Gregor Wentzel (1898-1978). 8 pages. [New York City,] 7 September [1931]. 210 x 137 mm. Faint rust stain from paper clip in upper corner, but fine otherwise. $12,500

An outstanding long autograph letter from Wolfgang Pauli, who received the Nobel Prize in 1945 for his discovery of the exclusion principle (also known as the Pauli principle) in quantum mechanics, describing in detail to his good friend Gregor Wentzel his experiences in the United States, which he visited for the first time between June and October 1931.

In early June 1931 Pauli, who was then Professor of Theoretical Physics at the Federal Institute of Technology (ETH) in Zurich, traveled to America to give a lecture at the first national summer meeting of the American Association for the Advancement of Science, held in Pasadena, California, and to take part in the University of Michigan's eight-week Summer Symposium on Theoretical Physics. The high point of Pauli's trip was his June 16 lecture in Pasadena, in which Pauli first publicly announced a new atomic particle that he proposed to call the "neutron," the existence of which he had predicted mathematically a few months before. He expanded on this topic during his time in Ann Arbor, where he "presented the considerations which led him to the introduction and definition of the magnetic neutron" (Oppenheim, quoted in Enz, p. 224) and presented the modified Dirac equation for the relativistic electron. The trip to America also gave Pauli the opportunity to meet up and work with several of his physicist colleagues, including Samuel Goudschmidt, H. A. Kramers, G. E. Uhlenbeck,

R. A. Millkan, Otto Laporte, J. R. Oppenheim, Paul Dirac, Eugene Wigner, John von Neumann and Arnold Sommerfeld; several of these men are mentioned in Pauli's letter. Despite these scientific highlights, this was a difficult time in Pauli's life: He had recently ended his marriage to his first wife, an unhappy event that left him heartbroken and depressed. These sad feelings, as well as his characteristic wit, are displayed the present letter.

At the time of writing Pauli was staying on the 22nd floor of a hotel in New York City, where

> from time to time various "second-order" acquaintances phone me and I'll go out with them once or twice. In this way I make my acquaintance with the "Speakeasys" and bars of the city. New York has no lack of them, but if the owners don't know you personally, you can't get in. On the other hand, once they do know you, you can enter any time you want, alone or with anyone else . . . This evening I will go to a very good bar and drink many whiskies. For I'm feeling very lonely and have gotten too much caught up with myself.

Pauli was generally favorably impressed with the United States, especially with California, which he described as the most interesting part of the country ("der interessanteste Teil vom Amerika"). He gave a wry, bemused account of his experience with America's "small-bourgeois, philistine side": "At a dinner with Dr. Kraus, dean of the summer school at Ann Arbor, there was a prayer instead of coffee and cigars—not to speak at all of alcohol (the cigars Sommerfeld missed very much)." Although still subject to bouts of gloom, Pauli wrote that he was beginning to take more interest in physics than he had for some time and that he was looking forward to visiting Princeton, where he was slated to participate in a colloquium with Dirac, Wigner and von Neumann.

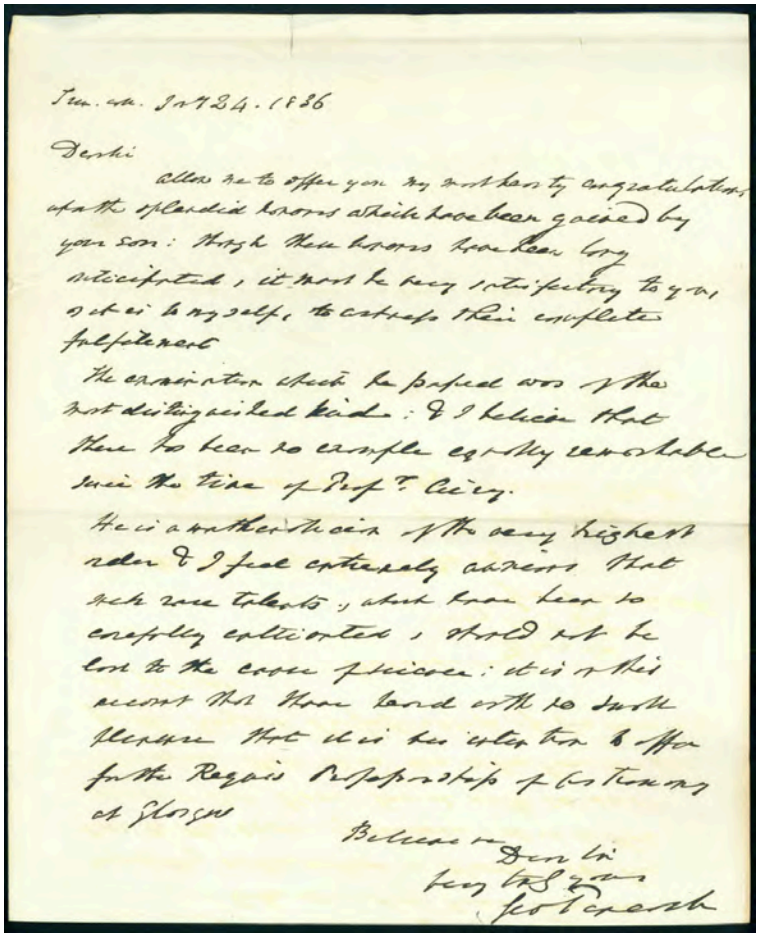
Pauli's correspondent, the German physicist Gregor Wentzel, is best known for his role in the development of quantum mechanics and quantum electrodynamics. He was ordinarius professor of theoretical physics at the University of Zurich; together he and Pauli built the reputation of Zurich as a center for theoretical physics. Enz, *No Time to be Brief: A Scientific Biography of Wolfgang Pauli*, pp. 222-225; Enz quotes from this letter on p. 224. 43073

"He is a Mathematician of the Very Highest Order"

51. Peacock, George (1791-1858). Autograph letter signed to James Smith (1781-1867). 1 page plus integral blank. Trinity College [Cambridge], January 24, 1836. 228 x 187 mm. Small marginal tears at upper edge, a few tiny tears along folds, but very good otherwise. Docketed by the recipient.

$850

From mathematician George Peacock, lecturer in mathematics at Trinity College, Cambridge and one of the prime movers behind the reform of mathematics teaching at the University; he was a founder, along with Charles Babbage and John Herschel, of the Analytical Society, the purpose of which was to introduce at Cambridge the differential notation for calculus. His correspondent was Scottish geologist James Smith of Jordanhill, who made significant contributions to the post-Tertiary geology of Scotland and was one of the few early British supporters of Agassiz's glacial theory. Smith was the father of mathematician Archibald Smith (1813-72), who had just graduated with distinction from Trinity College: He was Senior Wrangler, the title given to Cambridge's top mathematics student, and also winner of Cambridge's prestigious Smith Prize in mathematics. Peacock congratulates the elder Smith on his son's achievements:



Allow me to offer you my most hearty congratulations upon the splendid honors which have been gained by your son: though these honors have been long anticipated, it must be very satisfactory to you, as it is to myself, to [. . .] their complete fulfillment.

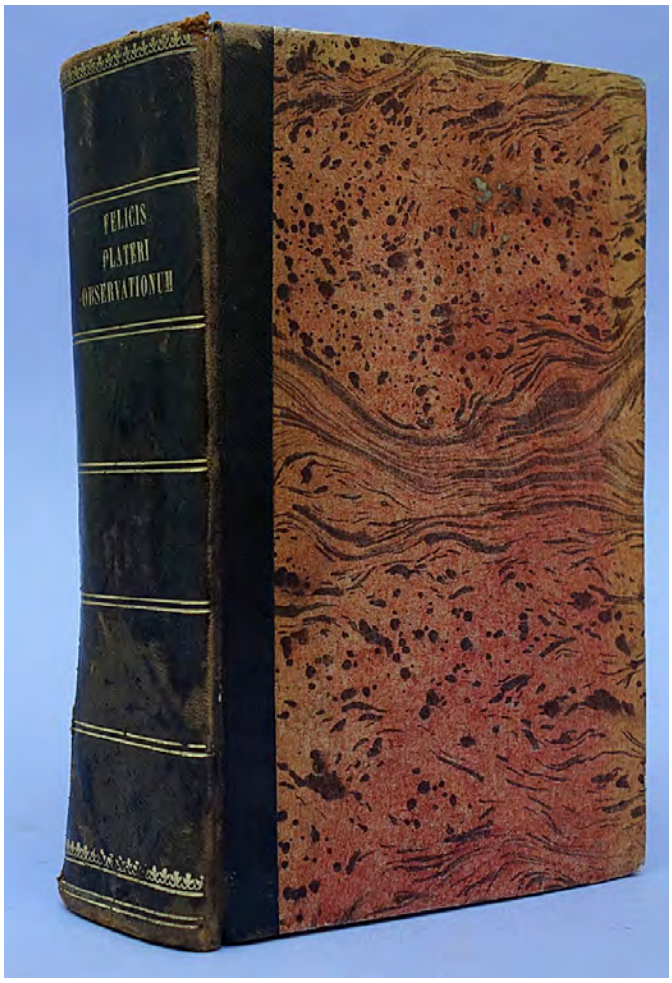
The examination which he passed was of the most distinguished kind: & I believe that there has been no example equally remarkable since the time of Profr. Airy

He is a mathematician of the very highest order & I feel extremely anxious that such rare talents, which have been so carefully cultivated, should not be lost to the cause of science . . .

The younger Smith fulfilled Peacock's hopes: He made significant contributions to the study of terrestrial magnetism, issued tables for correcting magnetic compass observations aboard ship, and in 1862 published the *Admiralty Manual for Ascertaining and Applying the Deviations of the Compass Caused by the Iron in a Ship.* His work was of critical importance to British navigation. "Profr. Airy" refers to George Biddell Airy (1801–92), who had also been one of Peacock's students; he was the Plumerian professor of astronomy at Cambridge as well as Britain's Astronomer Royal. 42864

FELICIS
PLATERI
ARCHIATRI ET
PROFES. BASIL.
Obſeruationum,
In Hominis Affectibus pleriſq;, corpori & animo, functionum læſione, dolore, aliáve moleſtiâ & vitio incommodantibus,
LIBRI TRES.
Ad Praxeos illius Tractatus tres, quorum primus Functionum læſiones, ſecundus Dolores, tertius Vitia continet, accommodati.
In quibus eo ordine, diuerſorum affectuum ſub generibus hiſce comprehenſorum, progreſſus, euentus, curationes, vti ab authore hæc obſeruata tractatáq; fuerunt, Hiſtoricè deſcribuntur.

BASILEÆ,
Impenſis LVDOVICI KÖNIG,
Typis CONRADI WALDKIRCHII.
M DC XIIII.



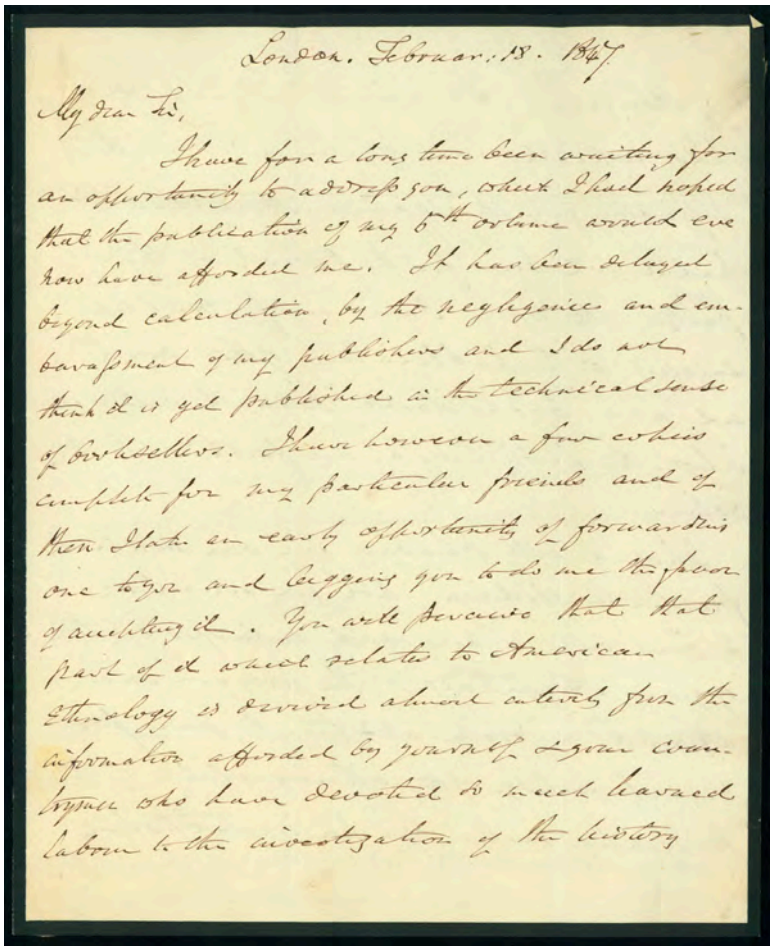
Classic of Pathology

52. Platter, Felix (1536-1614). Observationum, in hominis affectibus plerisq[ue], corpori & animo, functionum laesione, dolore, aliave molestia & vitio incommodantibus, libri tres. . . . 8vo. [48], 845 [1] pp. Basel: C. Waldkirch for Ludwig König, 1614. 170 x 103 mm. 19th cent. quarter morocco, worn at spine, small split in rear hinge. Uneven browning & foxing, but very good. Bookplate and library stamp. $4500

First Edition. A disciple of Eustachi, Falloppio and Vesalius, Platter was one of the foremost pathologists of the sixteenth and early seventeenth centuries, occupying a place midway between Fernel (1497-1558) and Bonet (1620-89). His *Observationes*, published the year of his death, contains a lifetime's worth of detailed pathological observations of a wide variety of human ailments, including veneral and genito-urinary diseases, tuberculosis, bodily deformities, disorders of the sensory organs, gynecological diseases, etc., gathered from both living patients (Platter was chief physician of Basel from 1571 until his death) and from 48 post-mortem examinations. "For many, Platter's fame is based on the abundance of individual observations contained in the case histories in his *Observationes.* . . . The *Observationes* contains observations in all branches of medicine. . . . It is astonishing how [Platter] could see and grasp originalities in every field" (Karcher, *Platter*, pp. 80-81 [our translation]; also pp. 56-87).

Long, in his *History of Pathology*, credits Platter with performing over 300 dissections during his 57-year medical career—an astounding number if true, since the obtaining of cadavers was severely restricted by both church and secular authorities during this time. Platter's enthusiasm for dissecting is recorded in his lively and

entertaining diary, kept while he was a medical student at Montpellier; according to his diary, Platter's love of dissecting even made him turn grave-robber at one point! Platter was probably the first to practice anatomic pathology, noting during post-mortem examinations that certain illnesses appeared to be caused by anatomic abnormalities. He was ahead of his time in including exact dates in his case histories, and would often include the names, sexes and occupations of his patients as well. Platter was also one of the earliest to study mental illnesses scientifically, seeking their origins in physiological rather than supernatural causes; the *Observationes* contains accounts of all the then known psychiatric disorders together with details of their treatment. Other notable contributions contained in the *Observationes* are the first known case report of death from hypertrophy of the thymus (in an infant) and an account of a meningioma. Platter has also been credited with including in the *Observationes* an early description of the deformity of the fingers now known as "Dupuytren's contracture"; however, this is incorrect (see Boyes, *On the Shoulders of Giants,* p. 22). Garrison-Morton 3789; 4297.9; 4511.1. Krivatsy 9073. Long, *Hist. Pathol.,* p. 41. Norman 1716. Waller 7505. Pusey, *History of Dermatology,* p. 44, crediting Platter with studying "universal exfoliative dermatitis, gangrene of the skin, and the use of white precipitate ointment in pustular eczema." 34427



London. February 18. 1847

My dear Sir,

I have for a long time been awaiting for an opportunity to address you, which I had hoped that the publication of my 6th volume would ere now have afforded me. It has been delayed beyond calculation, by the negligence and embarassment of my publishers and I do not think it will yet be published in the technical sense of booksellers. I have however a few copies complete for my particular friends and of them I take an early opportunity of forwarding one to you and beggeing you to do me the favor of accepting it. You will perceive that that part of it which relates to American Ethnology is derived almost entirely from the information afforded by yourself & your countrymen who have devoted so much learned labour to the investigation of the history

"You Have Established Many New and Curious Facts"

53. Prichard, James Cowles (1786-1848). Autograph letter signed to Samuel George Morton (1799-1851). 3pp. London, February 18, 1847. 229 x 187 mm. Traces of mounting on address page, otherwise fine. $1850

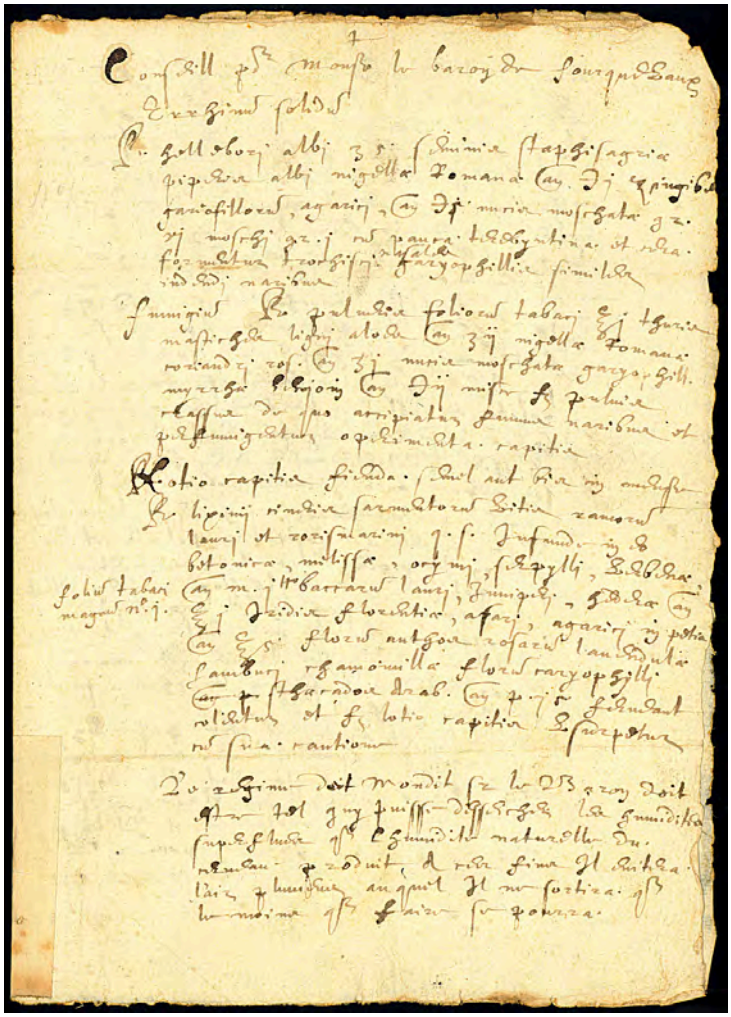
From anthropologist and ethnographer James Cowles Prichard, author of the seminal *Researches into the Physical History of Mankind* (1813 and two subsequent editions). Originally published in two unillustrated volumes in 1813, Prichard's work had expanded to five illustrated volumes by the third edition (1836-57); in this form it "synthesized all the then known information about the various races of mankind, forming a basis for modern ethnological research" (Garrison-Morton 159). Prichard's correspondent was Samuel George Morton, professor of anatomy at the University of Pennsylvania and originator of the "American School" of ethnography; he was the author of *Crania Americana* (1839) and *Crania Aegyptiaca* (1844).

Prichard and Morton held opposing views on the origin of the human races. Prichard, a monogenist, believed that all the human races had descended from a common ancestor and sought to defend his position by compiling evidence from a variety of fields, including anatomy, physiology, comparative psychology, linguistics and cross-cultural studies. Morton, on the other hand, was a confirmed polygenist, believing that the human races had been separately (and unequally) created by God, and that the races' characteristics had not changed since their creation. Working in an environment in which slavery was mainstream in much of America, Morton used physical measurement of skull capacity to rank each race's intellectual abilities, placing Caucasians at the top and Africans at the bottom; his work is seen as one of the foundations of scientific racism, and a rationalization for slavery and colonialization.

Despite their philosophical differences, Prichard appears to have had great respect for Morton and his work, so much so that he was eager to present Morton with a copy of his latest volume:

> I have for a long time been waiting for an opportunity to address you, which I had hoped that the publication of my 5th volume [of the Researches] would ere now have afforded me. It has been delayed beyond calculation, by the negligence and embarrassment of my publishers and I do not think it is yet published in the technical sense of booksellers. I have however a few copies complete for my particular friends and of these I take an early opportunity of forwarding one to you and begging you to do me the favor of accepting it. You will perceive that that part of it which relates to American Ethnology is derived almost entirely from the information afforded by yourself & your countrymen who have devoted so much learned labour to the investigation of the history of American Aborigines. I should have copied some of your admirable engravings from the "Crania Americana" had it not been for the poverty of the parties with whom I was unfortunately engaged in the publication of this work . . .
>
> I heard with pleasure from our mutual friend Mr. Gliddon that you are about to bring out a new and enlarged edition of your Aegyptiaca. The former one afforded a great addition to our previous knowledge of the ethnography of the Egyptian race. You have established many new and curious facts and you are too much a philosopher to make any objection, if some of your readers occasionally draw inferences from them, which differ somewhat from your own . . .

"Mr. Gliddon" refers to American Egyptologist George Gliddon (1809–57), an advocate of Morton's polygenist ideas of human origins; his monumental *Types of Mankind* (1854), written with Josiah Nott, supported and extended Morton's racial theories. Both Gliddon and Morton believed that the ancient Egyptians were not African but Caucasian, based on their studies of ancient Egyptian crania. Morton expressed these views in *Crania Aegyptiaca*, published in both London and Philadelphia in 1844; despite what Prichard had heard from Gliddon, Morton did not publish a second edition. 43054



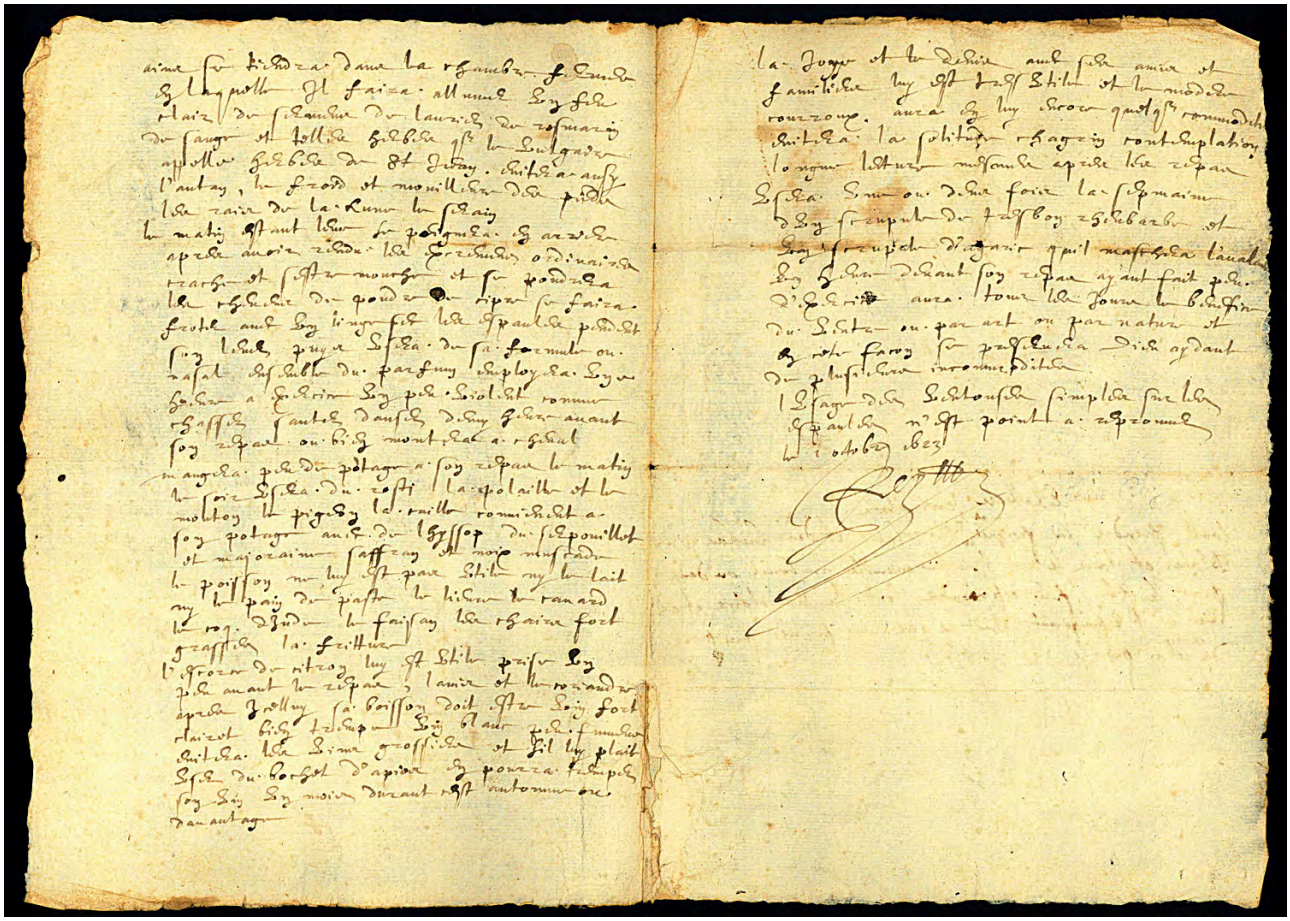
One of the Rarest Autographs in the History of Science

54. Rey, Jean (ca. 1583– ca. 1645). Pour Monsieur le baron de Fourquevaux. Autograph document signed, in Latin and French. N.p., 1 October 1623. 2-1/2 pages. 261 x 187 mm. Lower part of center fold reinforced, minor soiling, but fine otherwise. 18th century inscription in French on the last page.

$15,000

The Only Autograph in Private Hands from the hand of French physician and chemist Jean Rey, author of *Essays de Jean Rey . . . Sur la recherche de la cause pour laquelle l'estain & le plomb augmentent de poids quand on les calcine* (1630). This extraordinarily rare book, of which only seven copies are known, was Rey's only publication; it anticipated by more than one hundred years Lavoisier's discovery that the calcination of metals involves combination with air—a discovery fundamental to the overthrow of the phlogiston theory and the foundation of modern chemistry. Lavoisier published his discovery in 1774; the following year, chemist Pierre Bayen alerted Lavoisier to the existence of Rey's *Essays.* Lavoisier was so struck by "the apparent modernity of Rey's ideas" (McKie, p. xl) that he at first believed Rey's work to be a forgery; he later spoke of the work with admiration. In 1777 a second edition of Rey's *Essays*, edited by Nicolas Gobet, was published in Paris; this edition—the earliest obtainable—has also become rare (see Duveen, *Bibliotheca alchemica et chemica*, p. 505 and Neville, *Historical Chemical Library*, II, p. 372).

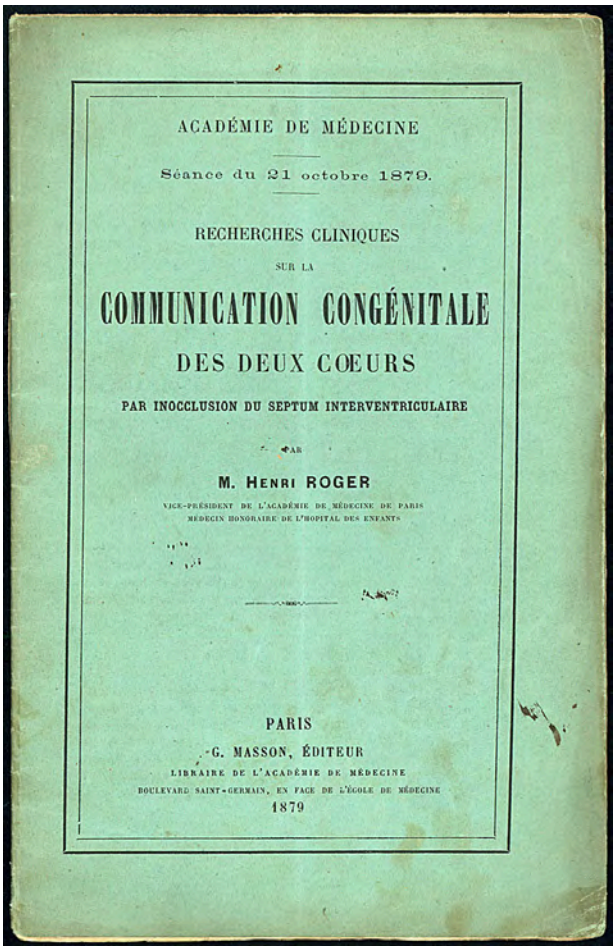
Douglas McKie, in the historical introduction to his facsimile edition of Rey's *Essays* (1951), relates what little is known of Rey's life, describing in detail the scant documentary evidence that remains, and reproducing examples of Rey's handwriting. The University of Montpellier, where Rey studied medicine from 1605 to 1609,



preserves a signed 6-line inscription in Latin written by Rey when he matriculated at the University (1605), as well as four other documents bearing Rey's signature: two consilia (1608 and 1609), Rey's *licence en medicine* (1609) and a document Rey signed upon receiving his doctorate (1609). Apart from these, the only other signed autograph document of Rey's is the one we are offering here,

> containing his signed prescriptions and dietary for a distinguished patient living near Toulouse, Baron de Fourquevaux, whose father had been Governor of Narbonne and ambassador of several French Kings, and had escorted to Scotland Marie de Guise, bride of James V and mother of Mary Stewart . . . After 1623 we have no further record of Rey until the appearance of his *Essays*, dated from Le Bugue, lieu de ma naissance, on 1 January 1630 (McKie, p. xix).

It is hard to imagine any autograph in the history of science rarer than this! Our 2-1/2 page autograph document was at one time owned by Dr. Pierre Lemay, who published a study of Rey in the *Bullétin de la Société française d'histoire de la médecine* 32 (1938): 148; see McKie, *The Essays of Jean Rey,* p. xix (n). *Dictionary of Scientific Biography*. Partington, *History of Chemistry,* II, pp. 631-36. 40656


ACADÉMIE DE MÉDECINE

Séance du 21 octobre 1879.

RECHERCHES CLINIQUES

SUR LA

COMMUNICATION CONGÉNITALE

DES DEUX CŒURS

PAR INOCCLUSION DU SEPTUM INTERVENTRICULAIRE

PAR

M. HENRI ROGER

VICE-PRÉSIDENT DE L'ACADÉMIE DE MÉDECINE DE PARIS
MÉDECIN HONORAIRE DE L'HOPITAL DES ENFANTS

PARIS

G. MASSON, ÉDITEUR

LIBRAIRE DE L'ACADÉMIE DE MÉDECINE

BOULEVARD SAINT-GERMAIN, EN FACE DE L'ÉCOLE DE MÉDECINE

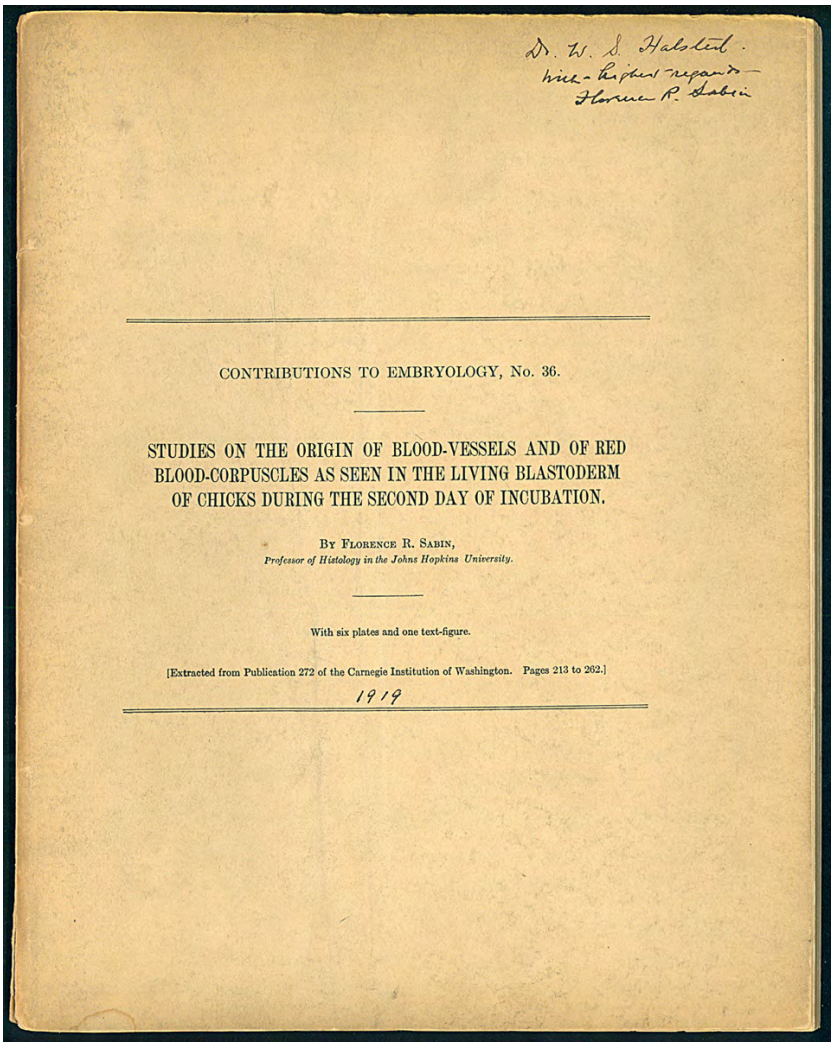
1879

"Roger's Disease" and "Roger's Murmur"

55. Roger, Henri (1809-91). Recherches cliniques sur la communication congénitale des deux coeurs par inocclusion du septum interventriculaire. 19pp. Paris: G. Masson, 1879. 221 x 142 mm. Original printed wrappers, minor soiling and spotting, creased vertically. Very good. $2250

First Separate Edition of the first clinical description of a ventricular septal defect (VSD). Roger, a French pediatrician, "drew attention to an important anomaly of the septum, interventricular patency ('maladie de Roger'), demonstrating the presence of a murmur in this condition. This is sometimes called 'Roger's murmur'" (Garrison-Morton 2872, noting the journal publication of Roger's paper in *Bulletin de l'Académie de Médecine,* 2nd series, 8 [1879]).

"Roger's keen interest in auscultation combined with his skill as a pediatrician led him to discover an important anomaly of the septum, simple interventricular communication, later known as 'Roger's disease.' In 1861, in performing a necropsy on the body of a boy about twelve years of age, he found a malformation of the heart which consisted of failure of occlusion of the interventricular septum in its upper portion, without concomitant stenosis of the pulmonary artery. Necropsy also showed that the communication between the two ventricles would occur without cyanosis. After having listened to the heart sounds of thousands of children, Roger, with the aid of this pathologic discovery, was able to demonstrate that this lesion was characterized by the presence of a thrill and systolic murmur situated at the middle of the heart. . . . In 1879 Roger, after demonstrating this lesion in several instances, presented his observations to the Academy of Medicine" (Willius & Keys, p. 623). Willius and Keys included an English translation of Roget's paper on pp. 624-636 of their *Cardiac Classics* (1941). Very rare. This is the first copy we have handled in nearly fifty years. 43038


Dr. W. S. Halsted.
With highest regards—
Florence R. Sabin

CONTRIBUTIONS TO EMBRYOLOGY, No. 36.

STUDIES ON THE ORIGIN OF BLOOD-VESSELS AND OF RED BLOOD-CORPUSCLES AS SEEN IN THE LIVING BLASTODERM OF CHICKS DURING THE SECOND DAY OF INCUBATION.

By Florence R. Sabin,
Professor of Histology in the Johns Hopkins University.

With six plates and one text-figure.

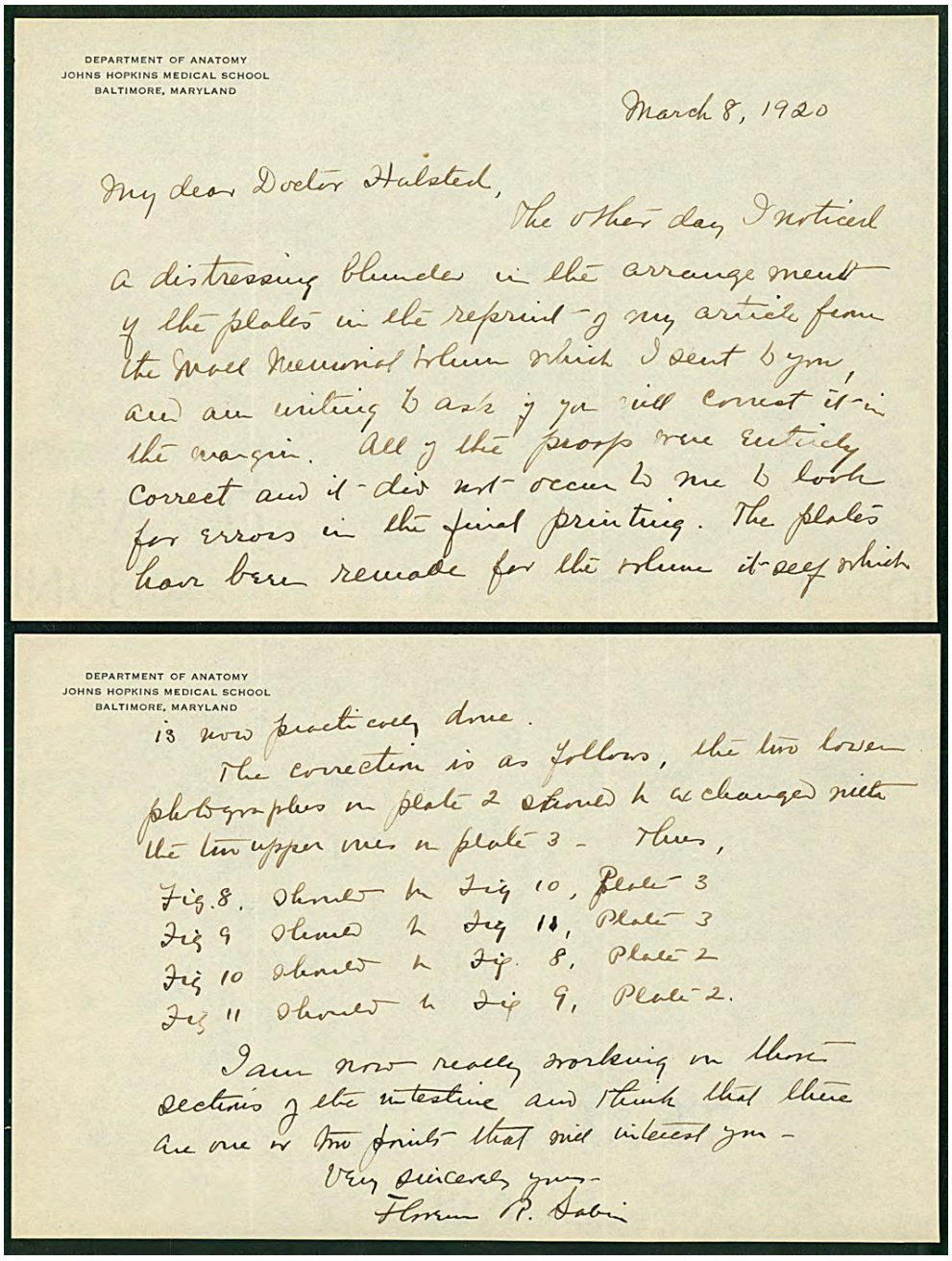
[Extracted from Publication 272 of the Carnegie Institution of Washington. Pages 213 to 262.]

1919

Presented to Halsted, with Accompanying Autograph Letter Signed

56. Sabin, Florence R. (1871-1953). Studies on the origin of blood-vessels and of red blood-corpuscles as seen in the living blastoderm of chicks during the second day of incubation. Offprint from Carnegie Institution of Washington, *Contributions to Embryology* 9, no. 36 (1919). [2], 215-262pp. 6 plates. 293 x 232 mm. Original printed wrappers, small split in spine. Presentation Copy, inscribed by Sabin to William S. Halsted (1852-1922): "Dr. W. S. Halsted with highest regards—Florence R. Sabin." Halsted's autograph corrections present on two of the plates. [With:] Accompanying Autograph Letter signed from Sabin to Halsted, on Johns Hopkins Department of Anatomy stationery. 2pp. on 2 sheets. Baltimore, March 8, 1920. 140 x 215 mm. Together 2 items. Very good to fine. $2500

First Edition, Offprint Issue. Sabin was the first woman to graduate from Johns Hopkins University School of Medicine, studying anatomy under Franklin P. Mall and interning at Johns Hopkins Hospital under William Osler. After graduating Sabin remained at Mall's laboratory at Hopkins, where she did important and innovative work on the origins of the lymphatic system. She began teaching at Hopkins in 1902 and in 1917 was promoted to full professor of embryology and histology, becoming the first woman ever to hold a full professorship at a medical college. After her retirement from Hopkins Sabin became a strong advocate for public health reform in her native state of Colorado; her efforts resulted in passage of the "Sabin Health Laws," which modernized the state's public health system.



DEPARTMENT OF ANATOMY
JOHNS HOPKINS MEDICAL SCHOOL
BALTIMORE, MARYLAND

March 8, 1920

My dear Doctor Halsted,

The other day I noticed a distressing blunder in the arrangement of the plates in the reprint of my article from the Welch Memorial Volume which I sent to you, and am writing to ask if you will correct it in the margin. All of the proofs were entirely correct and it did not occur to me to look for errors in the final printing. The plates have been remade for the volume itself which is now practically done.

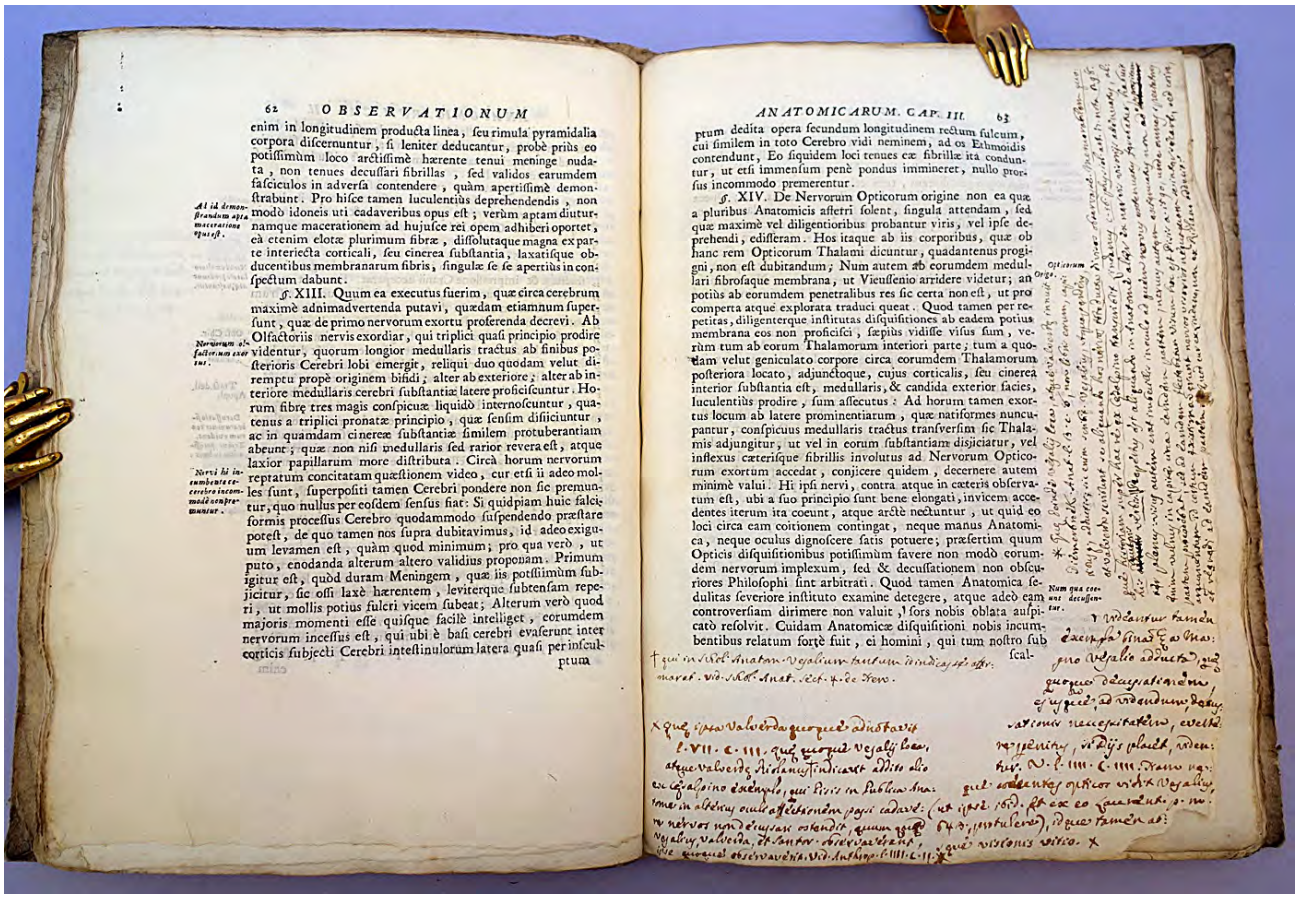
The correction is as follows, the two lower photographs on plate 2 should be changed with the two upper ones on plate 3. Thus,

Fig. 8. Should be Fig 10, Plate 3
Fig 9 Should be Fig 11, Plate 3
Fig 10 Should be Fig. 8, Plate 2
Fig 11 Should be Fig 9, Plate 2.

I am now really working on those sections of the intestine and think that there are one or two points that will interest you.

Very sincerely yours.
Florence R. Sabin

One of Sabin's primary areas of research was in the origin of blood, blood vessels and blood cells, subjects which are discussed in the present paper. Sabin presented this copy of her paper to William S. Halsted, professor of surgery at Johns Hopkins. Her accompanying letter informs Halsted of "a distressing blunder in the arrangement of the plates in the reprint of my article" and gives him the correct plate numbers; Halsted made the appropriate corrections to the plates in this copy. Sabin ended her letter by telling Halsted that "I am now really working on those sections of the intestine and think that there are one or two points that will interest you." Grolier Club, *Extraordinary Women in Science & Medicine,* pp. 146-150. "The Florence R. Sabin Papers." *Profiles in Science*. N.p., n.d. Web. Accessed 21 Oct. 2013. 43031

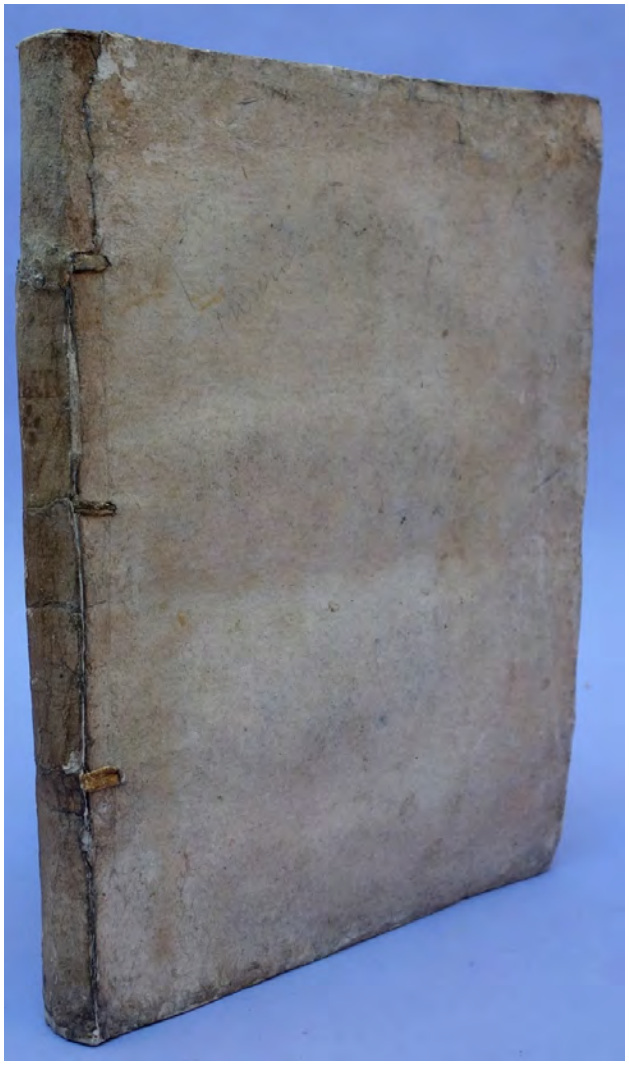


Heavily Annotated by an 18th-Century Medical Scholar

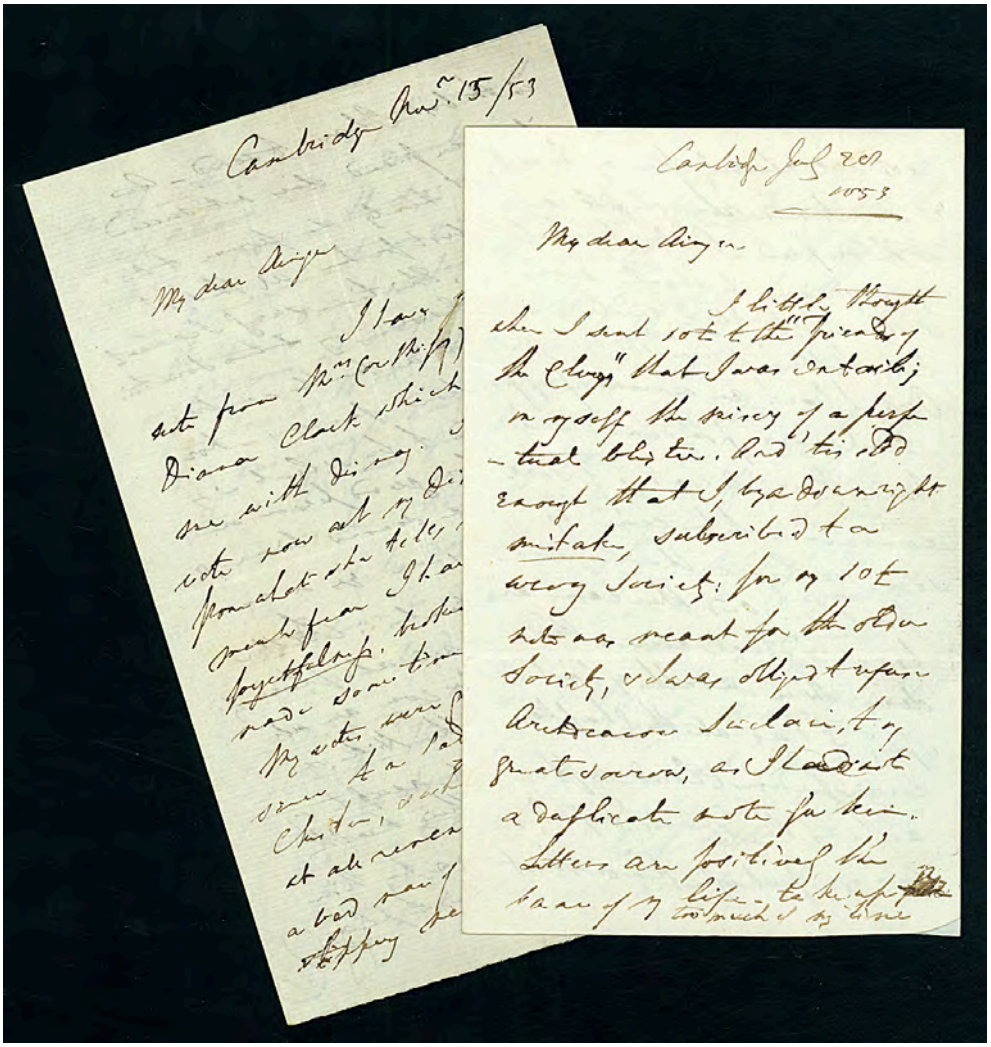
57. Santorini, Giovanni Domenico (1681–1737). Observationes anatomicae. 4to. [12], 250 [i.e., 252]pp. 3 folding engraved plates, the second plate signed by the artist Marcus Galli and the engraver Carlo Orsolini (ca. 1710–ca. 1780). Venice: Giovanni Battista Recurti, 1724. 286 x 208 mm. (uncut). Original *carta rustica* boards, spine repaired, slight wear. Minor dampstain in upper margins of plates and last approx. 15 leaves, otherwise very good to fine. Extensive scholarly annotations in a legible and attractive 18th-century hand in the margins of several leaves; note on Santorini's death in the same hand on the front pastedown. $4750

First Edition. "Santorini was generally acknowledged as the outstanding anatomist of his time, carefully dissecting and delineating many difficult and complex gross features of the human body, such as facial muscles involved in emotional expression, accessory pancreatic ducts, and duodenal papillae. His name has been given to some of these structures, such as the arytenoid cartilages (1724), the risorius muscle, and the plexus pudendalis venosus . . . His most important work was *Observationes anatomicae*, a valuable exposition of details of human anatomy" (Dictionary of Scientific Biography). The four major anatomical discoveries for which Santorini is known eponymically—Santorini's cartilage (larynx), Santorini's vein, Santorini's duct (pancreas) and Santorini's caruncula (pancreas / bile duct)—are described in this work.

OBSERVATIONES
ANATOMICÆ
JO: DOMINICI SANTORINI,
Supremi MAGISTRATUS ſaluti Venet: Protomedici,
& in Veneto LYCEO Anatomes Profeſſoris.
PETRO I. MAGNO
IMPERATORI,
Totiuſque Magnæ, Parvæ, & Albæ Ruſſiæ AUTOCRATORI,
Magno DUCI Moſchoviæ, Chioviæ, Uladimiriæ,
Novogradiæ, CZARO Caſani, &c.
D. D. D.
VENETIIS,
Apud Jo: BAPTISTAM RECURTI, MDCCXXIV.
SUPERIORUM PERMISU.



This copy of Santorini's *Observationes anatomicae* bears numerous marginal annotations and corrections in Latin by an anonymous but remarkably erudite 18th-century medical scholar. Many of the notes are so long and detailed that they appear to represent an ongoing writing project—possibly in preparation for a future corrected edition, although no such edition was ever published (the text in the 1739 second edition of Santorini's work is unchanged from the first edition). The manuscript notes appear on 34 pages throughout the text; the most extensive notes are on pages 4-5, 63, 98-99, 108, 147, 148-149 and 160. The notes on pages 98-99 are of particular interest in that they comment on (and possibly dispute) Santorini's description of the laryngeal cartilages. Also remarkable are the notes on pp. 148-149, which comment on Santorini's description of pulmonary circulation. The notes cite the works of over a dozen medical writers, including Eustachius, Morgagni, Fallopio, Fabricius, Heister, Valverde, Vesalius, Columbo, Cesalpino, Diemerbroeck, Bartholin and Estienne. A few of the notes are dated 1738. The inscription on the inside front cover gives the date of Santorini's death as May 7, 1737 ("die Maij septima A.D. MDCCXXXVII") and states that he died of a periodic intermittent fever ("febre periodica intermittente"). Garrison-Morton 392. 43063



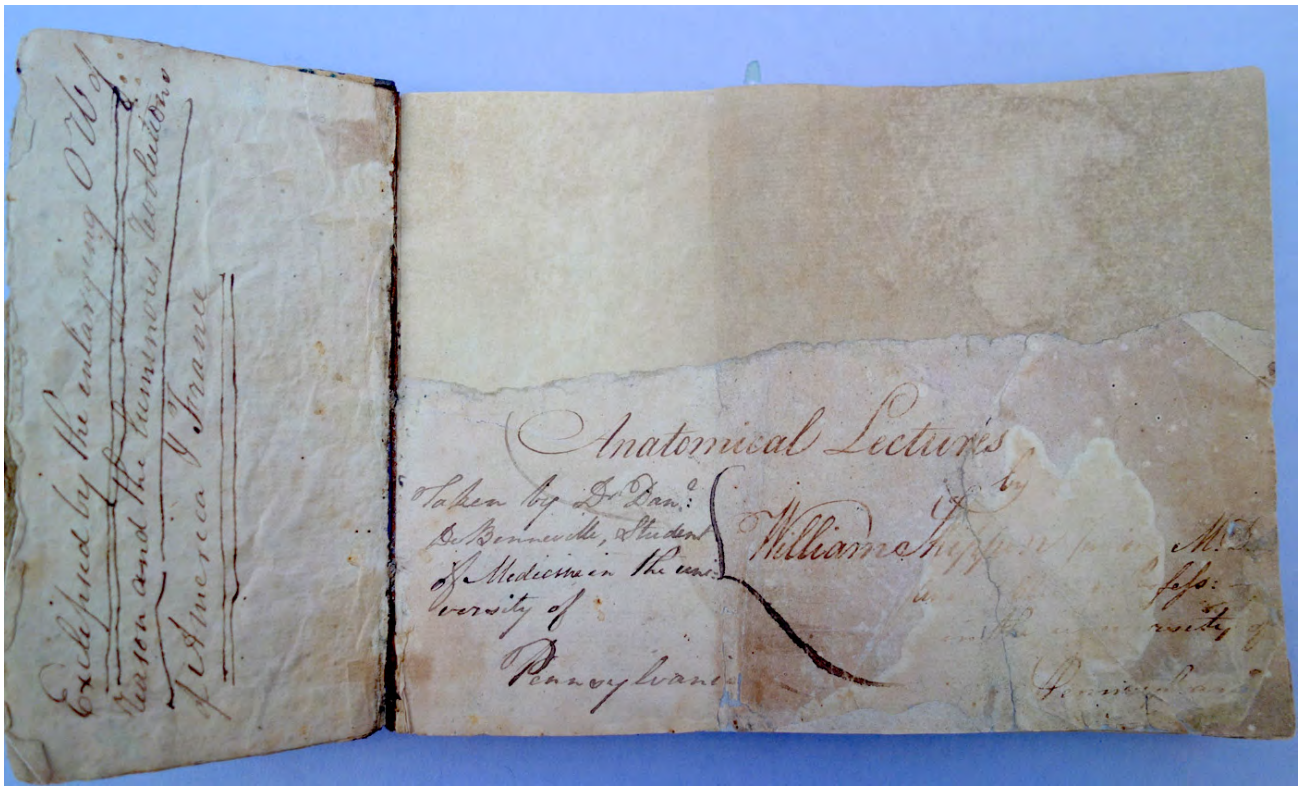
"Letters are Positively the Bane of my Life"

58. Sedgwick, Adam (1785-1873). (1) Autograph letter signed to Thomas Ainger (1799-1863). 4pp. Cambridge, July 28, 1853. 186 x 114 mm. (2) Autograph letter signed to Ainger. 4pp. Cambridge, November 15, 1853. 203 x 125 mm. Together 2 items; 8pp. total. Trace of former mounting on last leaf of first letter, but fine otherwise. $950

Two lively letters from eminent British geologist Adam Sedgwick, who defined the Devonian and Cambrian ages in the geological time scale, to British clergyman Thomas Ainger, younger brother of Sedgwick's late longtime friend William Ainger. Neither of these letters is included in Clark and Hughes's Life and Letters of the Reverend Adam Sedgwick (1890).

In the first letter Sedgwick complains about his burden of work and his poor health: "Letters are positively the bane of my life—take up too much of my time, root out charity from my heart & sometimes almost fill me with despair. Could I select my instance, I should now & then delight to enclose a long letter of fireside gossip. But I have an immense professional correspondence. I have horrible cases of sore conscience to be cured by some geologico-theological pastime . . . I had the torment of suppressed gout to bother my brain & turn my fluids into vinegar." He promises Ainger to "help, with my vote, your friend Caroline Diana Clack. 'Tis for your sake, as my old Whittlesea friend & companion at the Snap table—For I like not your friend's name. Caroline is well enough—But Diana reminds me of a very unfeminine Maid [...] that drew a long bow and wore very short petticoats. And as for the Clacks, they were of old, & are still, a tiresome & mischievous generation."

In the second letter Sedgwick writes again to Ainger, having completely forgotten to fulfil his promise to help Mrs. (or Miss) Clack: "I have thro' shameful forgetfulness broken a promise I made some time since to you. My votes were given some time since to a lady who lives at Chester, & whose name I do not at all remember—I was always a bad man of business, & had a slippery memory. 'Tis but a sorry apology, but it is the best I have to send." After complaining further about the demands of charitable societies, "which inflict a terrible number of applications upon me," Sedgwick reminisces about his and Ainger's first meeting: "'Tis a long time now since I began to play snap with you - My first visit to Whittlesea was in December 1804. I arrived the day after our Commemoration . . . and I suspect that our first game at snap must have been on the 18th. What changes time has wrought among us since then! If I live five months more I shall enter my 70th year." He again mentions his poor health: "I broke down in my lectures. I had a bad head ache, a swimming in my head, & a bleeding from the nose . . . I was forbidden to do anything requiring thought. So I became as idle & as listless as a paralytic idiot." However, a regimen of leeches, calomel, salts, water gruel "& other stimulants" have "set me on my legs again," although his doctor has forbidden him to write long letters(!). 43075

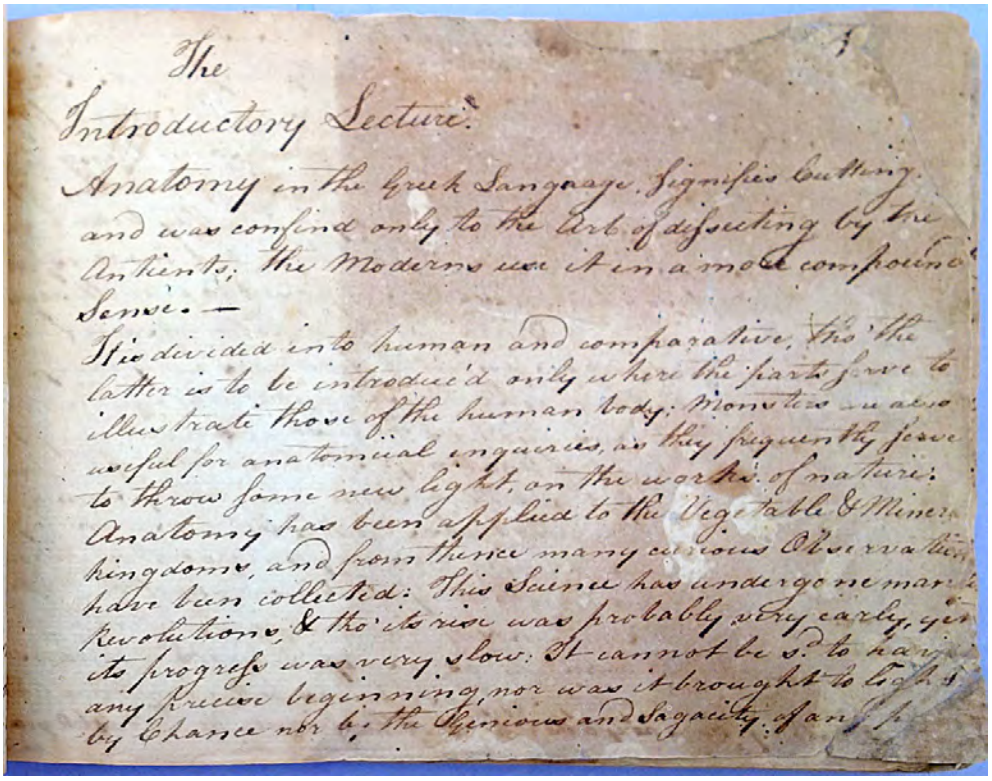


Exceptionally Rare Contemporary Manuscript Record of Shippen's 18th Century Anatomical Lectures

59. [**Shippen, William, junior (1738-1808).**] De Benneville, Daniel (1753-1827). Anatomical lectures by William Shippen Junior M.D. anat: & chirurg: profess: in the University of Pennsylvania. Manuscript medical commonplace book. 93 leaves. Philadelphia, n.d. [1781 or after]. 144 x 190 mm. Original boards, leather backstrip, worn, portion of front cover lacking. Upper half of first leaf extensively repaired replacing missing upper half, dampstain in lower portion of first leaf, first few leaves frayed, evenly toned throughout, but a good example of an 18th-century American medical manuscript, written in a neat and legible hand. Boxed. $15,000

Rare contemporary manuscript record of anatomical lectures given by William Shippen junior, the first systematic teacher of anatomy, surgery and obstetrics in the United States. Shippen never published his anatomical lectures (or any other medical works apart from his 1761 doctoral thesis), so that the only record we have of his teachings is contained in student notebooks like the one we are offering. Notebooks containing Shippen lectures are rare—OCLC records seven examples written between 1766 and the early nineteenth century, three at the University of Pennsylvania, two at the College of Physicians of Philadelphia (which Shippen helped to found), one at the National Library of Medicine and one at McGill University's Osler Library (see Bibliotheca Osleriana 7635). Most of these examples have probably been in institutional collections since the 19th century.

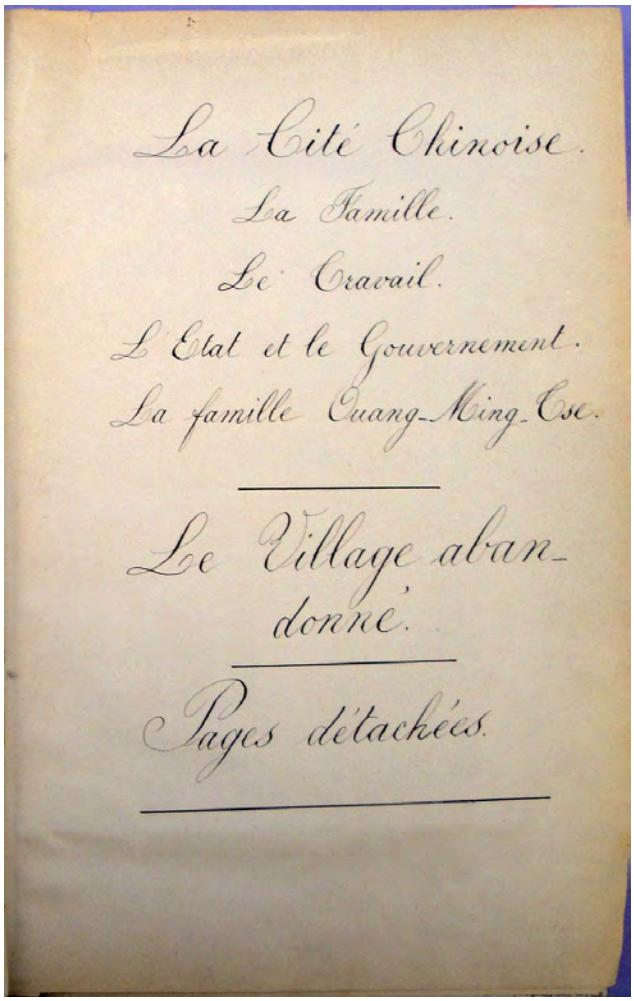
Shippen, the son of physician and statesman William Shippen senior (1712-1801), obtained his medical degree at the University of Edinburgh. Shippen's career as a professor of medicine began in 1762, when he started giving anatomical lectures in Philadelphia for medical students. In 1765, when John Morgan established the first medical school in the United States at the College of Philadelphia, Shippen joined the faculty as professor of anatomy and surgery. When the Pennsylvania state legislature created the University of the State of Pennsylvania in 1779, Shippen taught there as well, and in 1791, when the University merged with the College of Philadelphia


The
Introductory Lecture.
Anatomy in the Greek Language Signifies Cutting
and was confind only to the Art of dissecting by the
Antients; the Moderns use it in a more compound
Sense. —
It is divided into human and comparative, tho' the
latter is to be introduc'd only where the parts serve to
illustrate those of the human body: Monsters are also
useful for anatomical inquiries, as they frequently serve
to throw some new light on the works of nature:
Anatomy has been applied to the Vegetable & Miner
kingdoms, and from thence many curious Observation
have been collected: This Science has undergone many
Revolutions & tho' its rise was probably very early, yet
its progress was very slow: It cannot be so to any
any precise beginning, nor was it brought to Light
by Chance nor by the Ingenious and Sagacity of an

to form the University of Pennsylvania, Shippen was appointed to the University's chair of anatomy, surgery and midwifery. Shippen also served as a physician in the Pennsylvania Hospital and held important medical posts, including Physician-in-Chief of the American Army, during the American Revolutionary War.

Our notebook, which records the first two lectures in Shippen's anatomy course, was written by Dr. Daniel de Benneville, the eldest son of physician and Universalist preacher George de Benneville (1703-93). De Benneville received his first medical training from his father; when the Revolutionary War broke out he served as a surgeon in the 12th (some sources say 13th) Virginia regiment of the Continental Army. It is entirely possible that De Benneville and Shippen encountered each other during their military service. De Benneville retired from Army service in 1781, and it is likely that he began attending Shippen's lectures at the University of Pennsylvania sometime after this date. Shippen virtually ceased lecturing at the University after the death of his son in 1798; this date makes a likely end point to the period during which De Benneville would have studied anatomy under Shippen.

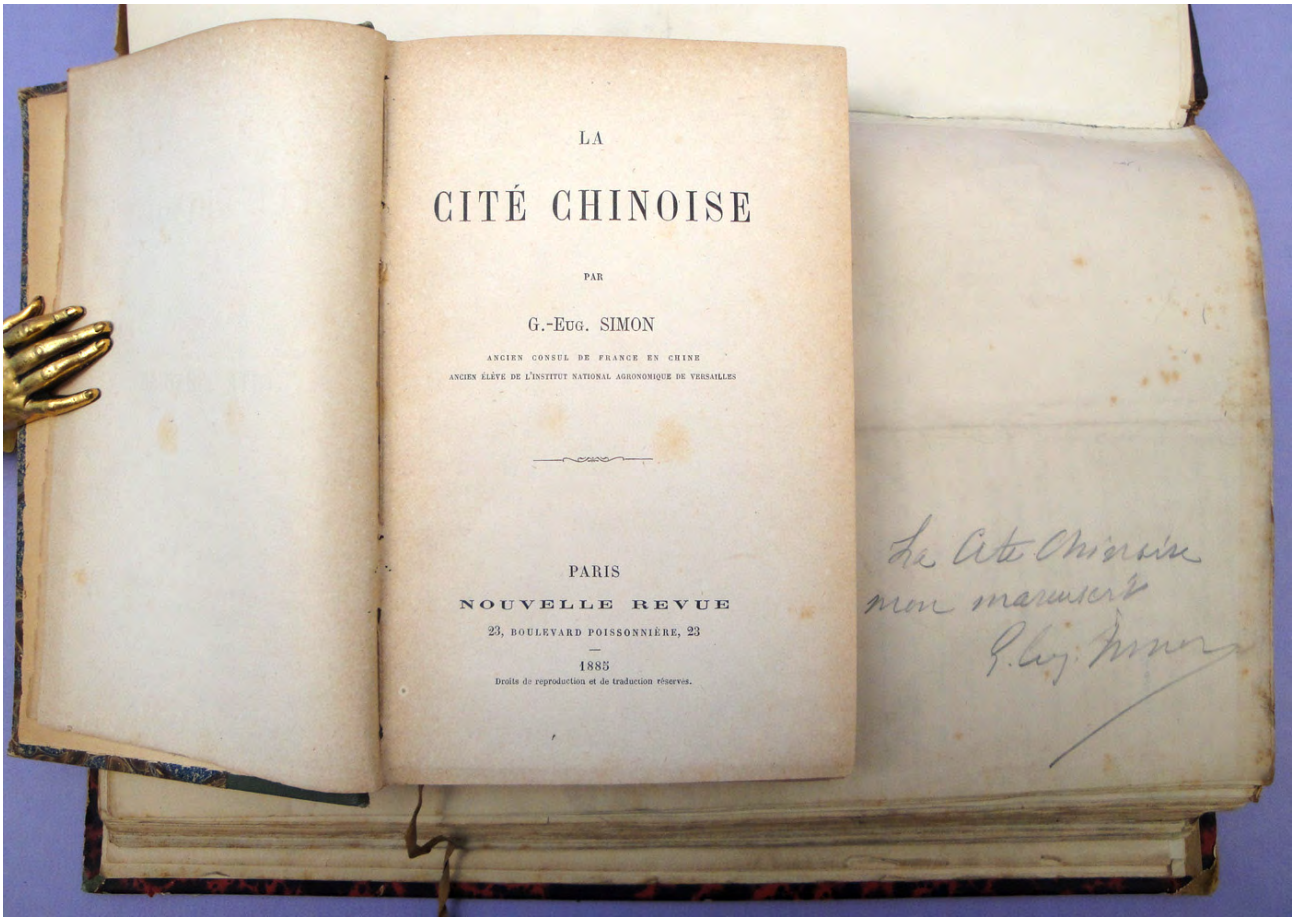
Apart from the Shippen lectures, De Benneville's notebook contains several detailed case histories, the first of which was "under Dr. Morgan's care"; this may be a reference to John Morgan. Also in the notebook are numerous recipes for medical compounds, accounts of cures performed by other physicians, a long essay on puerperal fever, a multi-page outline of Cullen's *Nosology* (1769), notes on the treatment of pregnant and laboring women, and a "Table of Attraction" recording the actions of various medicines. Altogether, De Benneville's notebook represents a complex and extensive record of an American doctor's experience in the late 18th century. Heitman, *Historical Register of Officers of the Continental Army* (1892) (De Benneville). Kelly & Burbage, *Dictionary of American Medical Biography*. 43069



Manuscript of a Pioneering Sociological Treatise on China, Together with a Presentation Copy of the Published Work

60. Simon, G. Eugène (1829-96). (1) Manuscrits. [On following leaf:] La cité chinoise . . . Le village abandonné. Pages détachées. Autograph manuscript. 253ff., variously numbered, plus unnumbered cover sheets. N.p., [ca. 1885]. 317 x 202 mm. Bound in quarter morocco, mottled boards, gilt-lettered spine, light rubbing. Some edges frayed, minor soiling. Inscribed by Simon on the first leaf: "A ma bien aimée soeur Adeline G. Eug. Simon" and signed by him in a few other places in the manuscript. Printer's marks and annotations. (2) La cité chinoise. 12mo. [8], 389, [3]pp. Paris: Nouvelle Revue, 1885. 183 x 116 mm. Marbled boards, cloth spine c. 1885, light rubbing. Light browning and foxing. Sheet bound in front with Simon's autograph presentation inscription: "Monsieur Maret hommage de l'auteur G. Eug. Simon." Pencil notes of former owner on this sheet and several leaves of text. $15,000

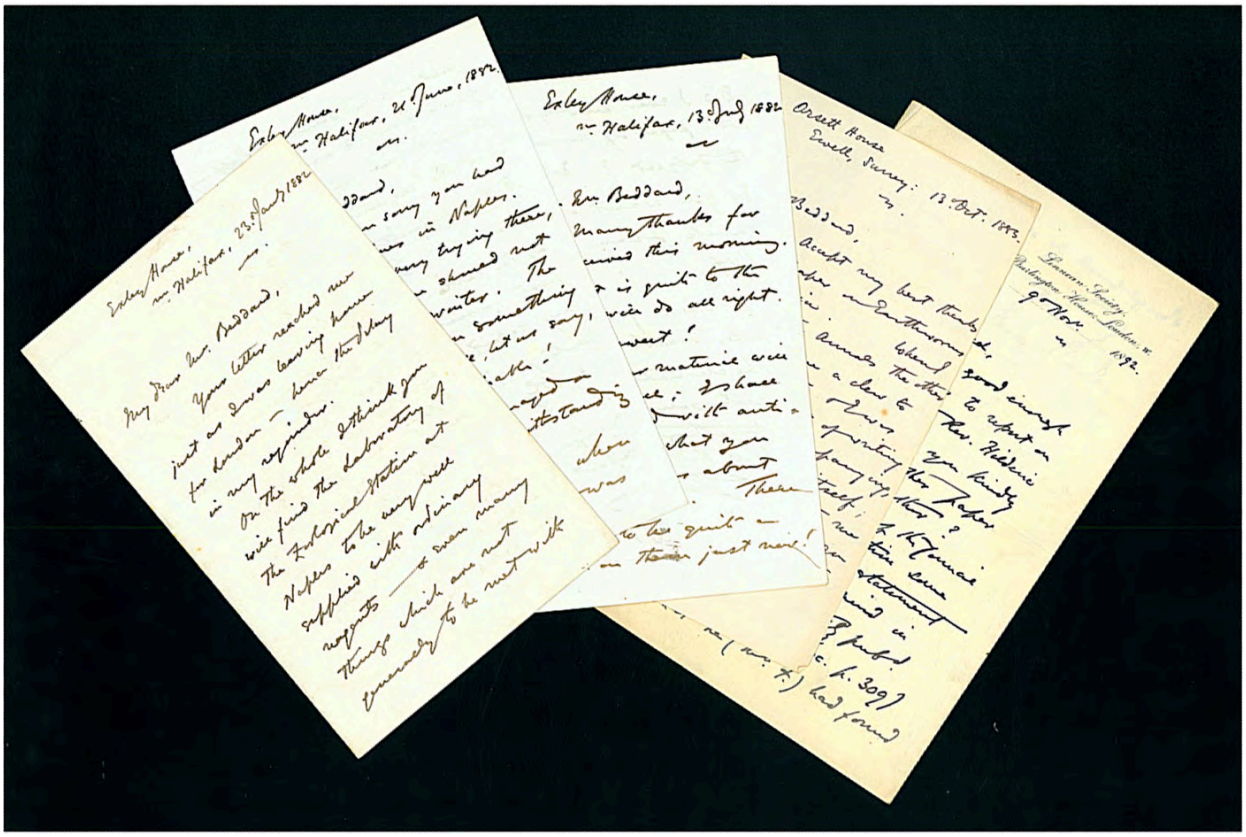
(1) The manuscript of Eugène Simon's La cité chinoise (1885), a pioneering sociological analysis of Chinese culture and traditions that was later praised by one Chinese scholar as "the best book written in any European language on the spirit of the Chinese civilization" (Gu Hongming, Spirit of the Chinese People [1915]; quoted by David Gosset). Simon, an agricultural engineer, traveled to China in the early 1860s and spent four years touring the country and studying its inhabitants and customs. During the latter part of the 1860s he served as France's consul in China. After his return to France Simon published La cité chinoise, a work that helped to counter the prevailing mid-nineteenth century European view of China as a stagnant, despotic and morally inferior society. Simon's book



idealizes China as a peasant society where liberty in all its forms—political, economic, religious, and intellectual—is realized. Simon's book, which was very popular, prophesied that all European attempts to subject China to industrialization, colonization, or modernization would fail because of the astounding vitality of the rural nation and its naturalistic civilization. On contemporaries, Simon's book . . . had an impact out of all proportion to its intrinsic importance. Paul Ernst, the German poet, was inspired by Simon to adulate the collectivist peasant culture of China for giving a higher place to spiritual than to material values ("China in Western Thought and Culture," *Dictionary of the History of Ideas,* I, p. 371).

The manuscript volume we are offering contains the manuscript of *La cité chinoise* that Simon sent to the printer (as evidenced by typesetters' notations on several leaves), as well as an additional, apparently unpublished shorter work entitled "Le village abandonee." Also included is a section titled "Pages détachées," which appears to contain drafts, revisions or deleted pages from *La cité chinoise*. Some of these pages have portions cut from them; these probably correspond to some of the pasted-in corrections in Simon's manuscript. The manuscript does not include the appendices and tables found at the end of the published work; these were no doubt added while the work was at the printer. The manuscript text varies a bit from the published version, indicating that Simon continued to revise the text while it was being typeset. Simon presented this manuscript book to his sister, as indicated in his presentation inscription on the first leaf.

(2) **First Edition.** Simon's book went through seven editions between 1885 and 1891; an English translation, titled *China: Its Social, Political, and Religious Life*, was published in London in 1887. This copy of the first edition bears Simon's presentation inscription to a M. Maret. Gosset, "The Dragon's Metamorphosis," *Asia Times,* Dec 9, 2006. 34390



"You Will Find the Laboratory of the Zoological Station at Naples to be Very Well Supplied"

61. Sladen, Walter Percy (1849-1900). 5 autograph letters signed to Frank Evers Beddard (1858-1925), plus 2 covers postmarked 21 June 1882 and 13 July 1882. 23 January 1882 – 9 November 1892. 15pp. total. Fine apart from faint dust-soiling. $950

From British naturalist Percy Sladen, a leading authority on starfish and other echinoderms, to his younger colleague Frank Evers Beddard, who would become one of foremost experts on earthworms and annelids in general. Both men were involved in dealing with the findings of the groundbreaking *HMS Challenger* scientific expedition (1872-76), which helped establish the science of oceanography. Beddard served as the naturalist to the Challenger Expedition Commission between 1882 and 1884, while Sladen was charged with organizing and writing up the starfishes collected during the expedition, a decade-long task that resulted in a thousand-page illustrated report (*Report on the Scientific Results of the Voyage of H.M.S. Challenger during the Years 1873 - 76 . . . Zoology*, Vol. 30, Part LI Asteroidea [1889]).

The three earliest letters in this collection, dated 23 January, 21 June and 13 July 1882, deal with Beddard's research at the International Zoological Station in Naples. Beddard occupied the British Association's table at the Station from April 24 to June 9, 1882, where he devoted himself to "a study of the histology of the Pedicellariae of certain echinoderms" (*Report of the . . . Meeting of the British Association for the Advancement of Science* 52 [1883]: 291). In the first letter, written before Beddard's departure, Sladen—who had spent three months at the Naples station in 1878— informed Beddard that "you will find the laboratory of the Zoological Station at

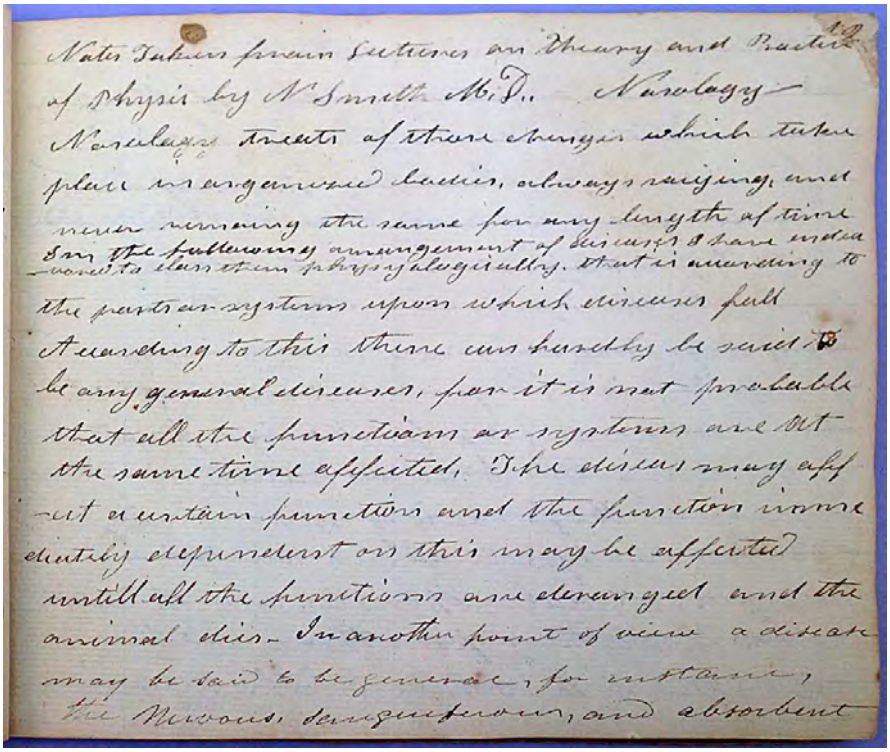
Naples to be very well supplied with ordinary reagents & even many things which are not generally to be met with in other foreign establishments." However, Beddard should make sure to bring with him anything "which you particularly rely upon for your projected work," and he was also expected to bring his own "microscopes, objectives, scalpels, scissors, &c." Beddard's time in Naples was marred by illness, as Sladen noted in his second letter: "I am sorry that you had such bad times in Naples. It really is very trying there . . . I hope you managed a little work notwithstanding the ill health." He asked Beddard to furnish him with a brief account of his research to be published in the upcoming BAAS *Report:* "It need not be a lengthy affair or tiresome to you & if you can let me have it within the course of a fortnight I shall be greatly obliged." Beddard complied with Sladen's request, for which Sladen thanked him in the third letter: "Many thanks for yours received this morning. The report is quite to the point & will do all right. Short & sweet!" Beddard's report can be found on p. 291 of the BAAS's *Report* for 1882.

In this collection's fourth letter, written on 13 October 1883, Sladen thanked Beddard "for your paper on Earthworms from India," a reference to Beddard's "Notes on some earthworms from India" published in the *Annals and Magazine of Natural History* 5 (1883): 213-224. In the fifth letter, dated 9 November 1892, Sladen asked Beddard to comment on a recent paper by naturalist Hilderic Friend: "A member of the [...] drew my attention some days ago to a statement made by Mr. Friend in his paper . . . that he (Mr. F.) had found *Lumbricus rubellus* [the European earthworm] in copulation with his *L. rubescens*; & my informant considers that the statements which range around the sentence in which the assertion is made appear to render it extremely improbable that the two species can be good ones." 43076

Rare Manuscript Record of Nathan Smith's Medical and Surgical Lectures

62. Smith, Nathan (1770-1835). (1) Notes taken from lectures on the theory & practice of physic by N. Smith M.D. Manuscript document in the hand of Calvin Hubbard (1795 - post 1846). 92pp. [Dartmouth, 1817-1818]. 154 x 185 mm. Original stiff wrappers, front wrapper inscribed with Hubbard's name and "Vol. No. 1st / The Prac. Phys." Upper corners of first 5 or 6 leaves gnawed affecting page numerals, small wormhole in upper margin not affecting text. (2) Notes taken from Dr. Smith's lectures on surgery. Manuscript document in the hand of Hubbard and another unidentified hand. 176, [4]pp. plus 2 blank leaves at the end. [Dartmouth, 1817-1818]. 202 x 165 mm. Original stiff wrappers. Front flyleaf inscribed "Calvin Hubbard's Book." Minor foxing and dampstaining. Together 2 items. Very good. $8500

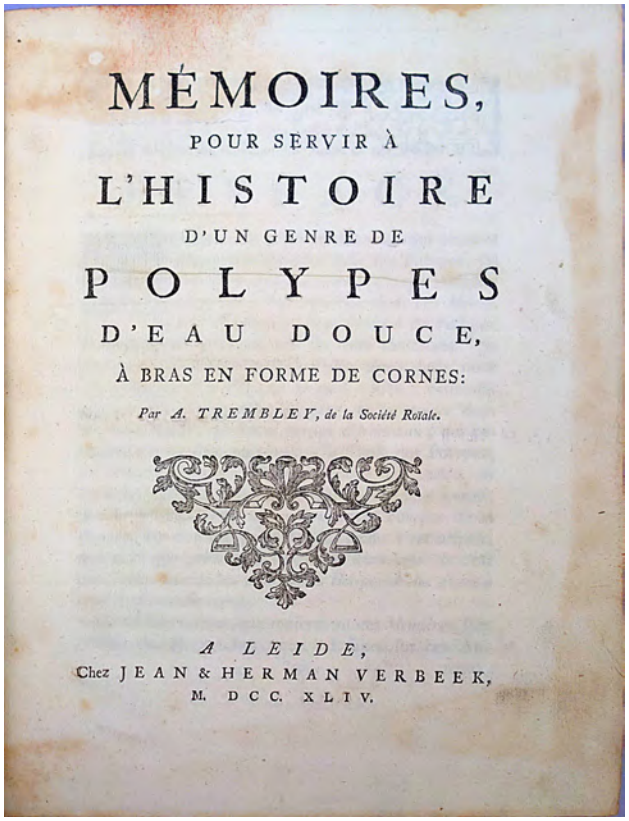
Smith was one of the great American medical and surgical pioneers, both as an educator and as a promoter of a rational, clinically-based approach to medicine and surgery. He singlehandedly founded Dartmouth Medical School (the fourth oldest medical school in the United States) and was for several years Dartmouth's sole professor of medicine and surgery. He also participated in founding the medical schools at Yale, Bowdoin and the University of Vermont and taught extensive medical and surgical courses at each. He is noted for his successful operations for cataract and for necrosis of the bone (see Garrison-Morton 4313), his pioneering amputation of the knee-joint (see Garrison-Morton 4450), and for having performed the second ovariotomy in this country following McDowell (see Garrison-Morton 6024). He was also one of the first in the United States to perform vaccination. As a surgeon, Smith "upheld a conservative form of treatment. He acted by using keen and perspective techniques in assessing the needs of the patient and avoided amputation and drastic measures as much as possible" (Kamath and Weissman, p. 37). In medicine Smith campaigned against bloodletting, vomiting, purging and other "heroic" practices used by the physicians of his day, and emphasized the accurate identification and diagnosis-specific treatment of disease.


Notes Taken from Lectures on Theory and Practice of Physic by N. Smith M.D. Nosology

Nosology treats of those changes which take place in organized bodies, always varying, and never remaining the same for any length of time. On the following arrangement of diseases I have undertaken to class them physiologically. That is according to the parts or systems upon which diseases fall. According to this theme can hardly be said to be any general diseases, for it is not probable that all the functions or systems are at the same time affected. The disease may affect a certain function and the function in some distinct dependence on this may be affected until all the functions are deranged and the animal dies. In another point of view a disease may be said to be general, for instance, the Nervous, sanguiferous, and absorbent

Smith was not a prolific author; his published medical and surgical writings are confined to a few journal articles and his *Practical Essay on Typhous Fever* (1824; see Garrison-Morton 5022). It is in manuscript collections of Smith's lecture notes made by his students—collections such as the one we are currently offering—that we find a rich source of information regarding his innovations in surgery and medicine, as well as his exemplary teaching methods. "With every improvement in patient care and surgery, Smith made sure to pass on such advancements to his students, the future generation of physicians. He found instruction to be as important as treating patients. His emphasis on clinical experience rather than theory was in fact ahead of his time, as was evident and most recognizable in his skillful ability to lecture. He used real life examples from his medical practice to illustrate the importance of careful patient examination in order to make an accurate diagnosis" (Kamath and Weissman, p. 37).

Smith served on the faculty of Dartmouth's medical school from 1798 until 1813, when he accepted an offer from the newly founded school of medicine at Yale. However, even after joining Yale's medical school Smith continued to deliver lectures on the theory and practice of physic and surgery at Dartmouth, Bowdoin and the University of Vermont. The two manuscript notebooks of Smith's lectures on these subjects that we are offering here were written in 1817 and 1818 by Calvin Hubbard, a native of Springfield, Vermont, who "attended two courses of medical Lectures at the Medical School of Dartmouth College" (Cogswell, vol. I, p. 279) during his apprenticeship with a local physician. Each of the notebooks has an index in Hubbard's hand in the back. The first notebook covers diseases such as typhus fever, smallpox, measles, mumps, pertussis, scarlatina, pneumonia and "inflammation of the brain." The first six pages of this notebook are devoted to the "Lectures on theory and practice of physic and obstetrics" given by Reuben Dimond Mussey (1780-1866), one of Nathan Smith's students, who served as Dartmouth's chair of anatomy and surgery from 1812 to 1838. The second notebook covers all aspects of early 19th-century surgical practice, including treatment of wounds, cancer, fractures and dislocations, amputations, fistulas, abscesses and ulcers, surgery of the arteries and veins, tooth extraction, cataracts, bladder stone, etc. Pages 138-176 of this second notebook are in what appears to be a secretarial or professional copyist's hand, possibly someone employed by Hubbard to transcribe notes of lectures he was unable to attend. Cogswell, *New Hampshire Repository* (1846). Kamath and Weissman, "Nathan Smith: Dartmouth's Medical Pioneer," *Dartmouth Undergraduate Journal of Science* (Fall 2002): 34-38. Williams, *American Medical Biography* (1967), pp. 524-545. 43059


MÉMOIRES,
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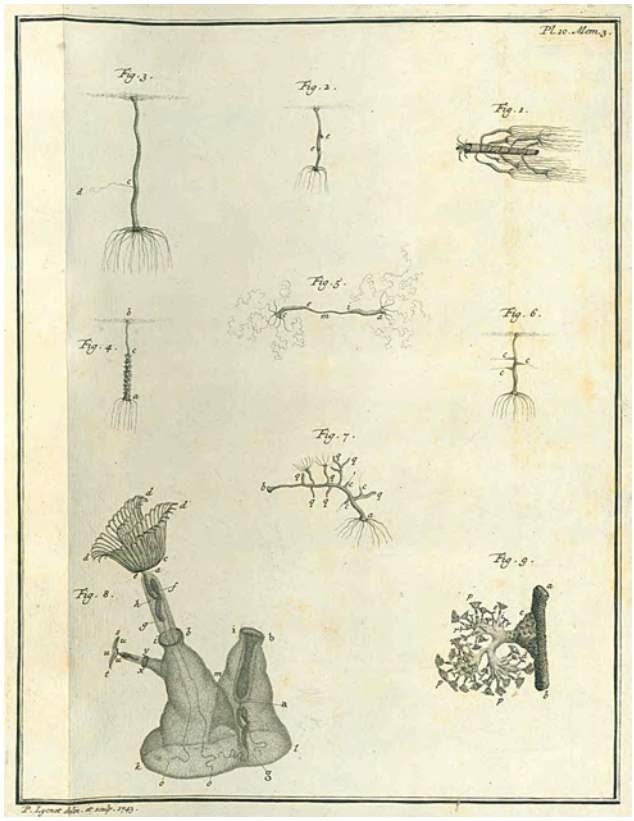
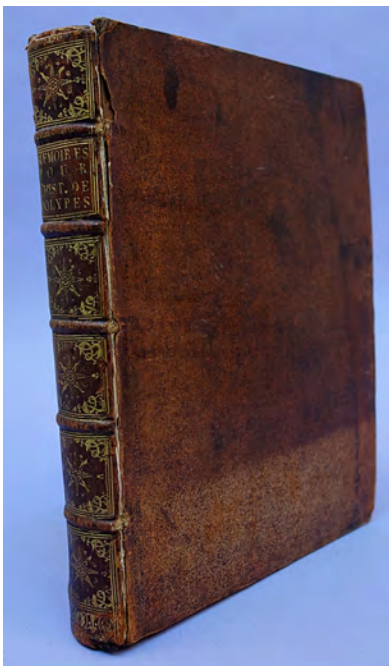
L'HISTOIRE
D'UN GENRE DE
POLYPES
D'EAU DOUCE,
À BRAS EN FORME DE CORNES:
Par A. TREMBLEY, de la Société Royale.
A LEIDE,
Chez JEAN & HERMAN VERBEEK,
M. DCC. XLIV.

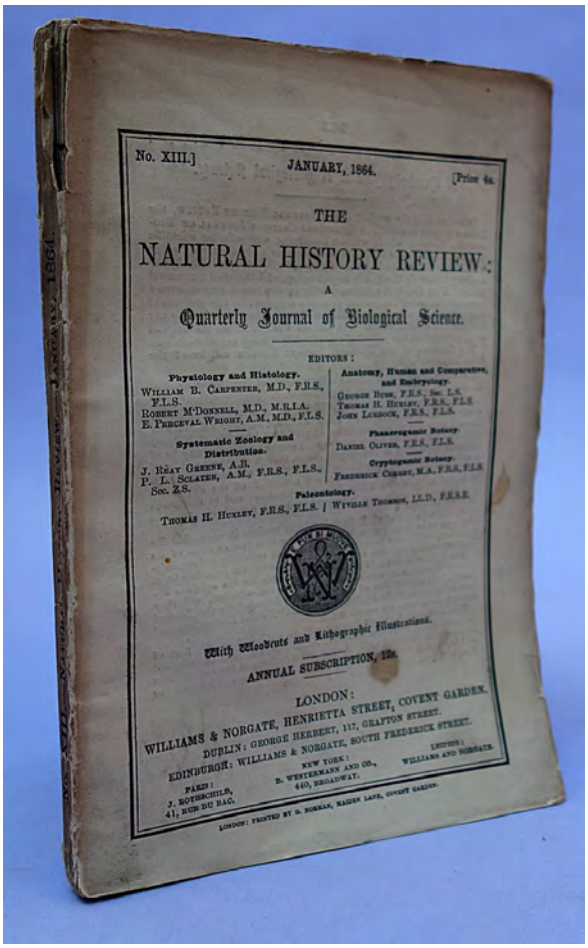


Plant or Animal?

63. Trembley, Abraham (1710-1784). Mémoires pour servir à l'histoire d'un genre de polypes d'eau douce, à bras en forme de cornes. 4to. xv [1], 324 [2] pp. 13 folding engraved plates numbered 1-13, by Pieter Lyonet (1708-1789); plates 1-5 engraved by Jakob van Schley (1715-1779) after Lyonet. Leiden: Jean & Herman Verbeek, 1744. 246 x 194 mm. Contemporary speckled calf, gilt spine with red leather label, hinges cracked. Light browning & dampstaining, but very good. Engraved armorial bookplate of Sir James Dashwood of Northbrook (1715-79). Modern bookplate. $2000



First Edition. In 1740 the scientific world was electrified by Trembley's discovery that the green hydra (*Chlorohydra viridissima*) was definitely an animal, even though it contained chlorophyll and—a fact even more astonishing—possessed powers of multiplication from artificial division, hitherto thought to be unique to plants. Trembley first demonstrated the hydra's regenerative abilities by bisecting a specimen horizontally, so that the tentacles were confined to one part; he then observed the regeneration of both fragments over the course of several days, until two complete and indistinguishable organisms had been formed. In further investigations Trembley described the hydra's living substance, conducted feeding experiments, demonstrated that a hydra could survive and feed after being turned inside out, made a detailed study of the budding process, and performed the first permanent graft of animal tissues by inserting one hydra within another. He was also the first to describe cell division of a sort in the fission of a protozoan. Garrison-Morton 307. Mayr, pp. 201, 674. Norman 2094. 37546


No. XIII.] JANUARY, 1864. [Price 6s.

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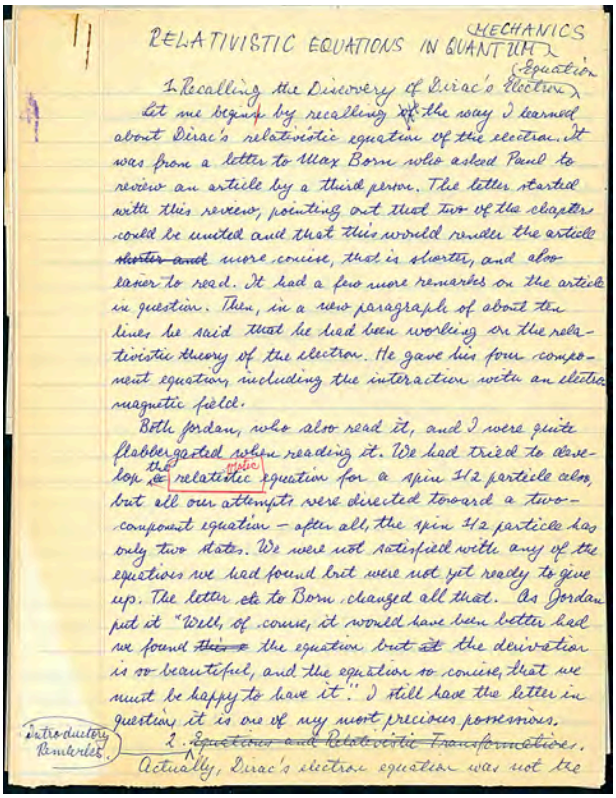
Wallace on Geographical Distribution of Species

64. Wallace, Alfred Russel (1823-1913). On anomalies in zoological and botanical geography. In *Natural History Review* (1864): 111-123. Whole number. [4], 156, vi, 627-631pp. plus 8 leaves of advertisements. 223 x 146 mm. (uncut and partly unopened). Original printed wrappers, a little worn and chipped, small split in upper spine. Very good copy. $750

First Edition. Up to about 1860 Wallace explained the similarities of plant and animal species in regions now separated by water (such as Britain and continental Europe) by postulating, along with Edward Forbes and other naturalists, that land extensions between these regions had existed in the recent geological past. By 1863 Wallace had abandoned this position, adopting instead Lyell's uniformitarian view that the Earth's topography had not altered substantially over time. This change was based on Wallace's analysis of the global distribution of species, which convinced him of the theoretical as well as the descriptive validity of the six zoogeographical regions outlined in ornithologist Philip Sclater's "On the general distribution of the members of the class Aves" (Proceedings of the Linnean Society 2 [1858]). Wallace's altered position was first made explicit in the present paper, which "treated several cases of apparently anomalous distributional patterns that had been advanced as objections to Wallace's extension of Sclater's ornithological regions. Wallace refined his argument that the six regions represented 'a true Zoological and Botanical division of the earth'" (Fichman, p. 53). "The conversion of Wallace to a position that made him a forceful opponent of the extensionist tradition and the preeminent defender of the doctrine of the permanence of the continents and oceans was a crucial development in nineteenth-century evolutionary science" (ibid., p. 52). Fichman, *An Elusive Victorian: The Evolution of Alfred Russel Wallace* (2010). 43044



RELATIVISTIC EQUATIONS IN QUANTUM MECHANICS

1. Recalling the Discovery of Dirac's Electron Equation

Let me begin by recalling the way I learned about Dirac's relativistic equation of the electron. It was from a letter to Max Born who asked Paul to review an article by a third person. The letter started with this review, pointing out that two of the chapters could be united and that this would render the article ~~shorter and~~ more concise, that is shorter, and also easier to read. It had a few more remarks on the article in question. Then, in a new paragraph of about ten lines he said that he had been working on the relativistic theory of the electron. He gave his four component equations including the interaction with an electromagnetic field.

Both Jordan, who also read it, and I were quite flabbergasted when reading it. We had tried to develop the relativistic equation for a spin 1/2 particle also, but all our attempts were directed toward a two-component equation – after all, the spin 1/2 particle has only two states. We were not satisfied with any of the equations we had found but were not yet ready to give up. The letter ~~of~~ to Born changed all that. As Jordan put it "Well, of course, it would have been better had we found ~~this~~ the equation but ~~it~~ the derivation is so beautiful, and the equation so concise, that we must be happy to have it." I still have the letter in question it is one of my most precious possessions.

Introductory Remarks

~~2. Equations and Relativistic Transformations.~~

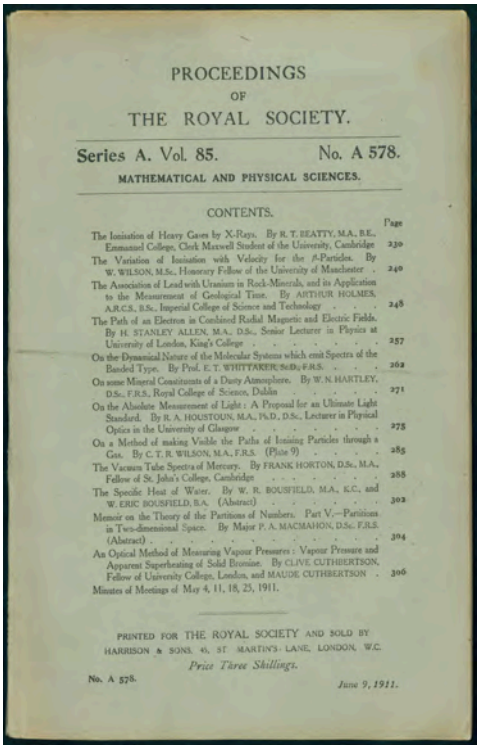
Actually, Dirac's electron equation was not the

Autograph Manuscript Lecture by a Nobel Laureate

65. Wigner, Eugene Paul (1902–95). Relativisitic equations in quantum mechanics. Autograph manuscript. 23ff. N.p., n.d. [1972]. 282 x 216 mm. First leaf a bit toned, small rust-stain from paper clip on first and last leaves, but very good otherwise. From the library of historian of physics Jagdish Mehra (1931–2008). $5000

The manuscript of Wigner's lecture delivered at the 1972 Symposium on the Development of the Physicist's Conception of Nature, organized by Jagdish Mehra and Abdus Salam in honor of Paul Dirac's seventieth birthday. The manuscript bears a number of corrections and a few editorial notes in the margins, and several of its sheets have been put together by the "cut-and-paste" method to incorporate Wigner's more extensive revisions. Wigner's lecture was subsequently published on pp. 320-329 of *The Physicist's Conception of Nature* (1973), the festschrift volume, edited by Mehra, prepared from the 43 lectures delivered at the symposium.

Wigner, who shared the 1963 Nobel Prize in physics for his discovery and application of fundamental principles of symmetry to the theory of atomic nuclei particles, played an essential role in the development of quantum and nuclear physics. In 1926-27 he and Heisenberg pioneered the first explicit applications of group-theoretical methods to the physical problems of many-electron systems; in 1927 he introduced the idea of parity as a conserved property of nuclear reactions; between 1928 and 1932 he and John von Neumann developed the theory of energy levels in atoms on the basis of group theory; and in 1931 he published a classic book on group theory and quantum mechanics (*Gruppentheorie und ihre Anwendung auf die Quantenmechanik der Atomspektren*), the first work on this subject to be written by a physicist. In 1932 Wigner devised the "Wigner function" of momenta and coordinates, which has become a major tool in the study of quantum chaos; the following year he and his student Frederick Seitz provided a basis for solid state physics in their method of treating electron wavefunctions in a solid; and in 1936 he and Gregory Breit worked out the "Breit-Wigner" formula explaining neutron absorption by a compound nucleus. Wigner also played an important role in the United States' development of the atomic bomb and nuclear reactors, working on the Manhattan Project during World War II and serving as director of the AEC Laboratory at Oak Ridge in 1946-47. Mehra, "Eugene Paul Wigner: A biographical sketch," in *Collected Works of Eugene Paul Wigner* (1993), pp. 3-13. 43074



PROCEEDINGS
OF
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C. T. R. Wilson. Roy. Soc. Proc., A. vol. 85, Plate 9.

Fig. 1.
Cloud formed on ions due to α-Rays.

Fig. 2.
Cloud formed on ions due to X-Rays.

"The Most Original Apparatus in the Whole History of Physics"

66. Wilson, Charles Thomson Rees (1869-1959). (1) On a method of making visible the paths of ionising particles through a gas. In: *Proceedings of the Royal Society,* series A, 85 (1911): 285-88. Plate. (2) On an expansion apparatus for making visible the tracks of ionising particles in gases and some results obtained by its use. In: *ibid*. 87 (1912): 277-292. 4 plates on 2 leaves. Together two whole numbers, 8vo. London: Harrison & Sons, 1911-12. 255 x 179 mm. Orig. printed wrappers, very slightly worn, pencil notations on back wrappers. Fine copies. $1500

First Editions. Wilson received a share of the 1927 Nobel Prize for physics for his invention of the cloud chamber, which makes visible the tracks of ionizing particles. Wilson's device, which Rutherford called "the most original apparatus in the whole history of physics" (quoted in Magill, p. 344) became standard equipment in physics laboratories, and made possible numerous important discoveries in the fields of particle and nuclear physics.

"The phenomena discovered empirically by Wilson may, briefly, be explained as follows. When air saturated with water vapor is suddenly cooled by an adiabatic expansion, it becomes supersaturated. In this condition, condensation into droplets will occur, provided there are nuclei present. Dust particles allow drops to form immediately, so Wilson carefully eliminated all gross matter from his apparatus. Negative ions act as nuclei at an expansion ratio of 1.25 (fourfold supersaturation) and positive ions become nuclei at 1.31 (sixfold supersaturation)" (*Dictionary of Scientific Biography*).

Wilson constructed his first cloud chamber in 1895, and in 1910 designed an improved model with better illumination which allowed results to be photographed. In March 1911 Wilson was able to observe the track of an alpha ray by condensing water drops onto the ions produced by its passage, describing his results in "On a method of making visible the paths of ionising particles through a gas" (no. 1 above). His classic "On an expansion apparatus for making visible the tracks of ionising particles in gases and some results obtained by its use," published a little over a year later, contains "some of the best photographs of alpha-particle, beta-particle and X-ray tracks" (Magill, p. 343). Weber, *Pioneers of Science*, pp. 85-87. Magill, *The Nobel Prize Winners: Physics,* pp. 339-47. 37540