

CATALOGUE 49

*Rare Books, Manuscripts & Autographs
in Science & Medicine*



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A small sample of letters from the Agnew archive

The Largest Physician's Archive We Have Ever Handled

I. Agnew, Cornelius Rea (1830-88). Extensive archive of correspondence and ephemera, consisting of 2987 letters (totaling circa 5770 pages) and 395 pieces of ephemera including postcards, calling cards, printed pieces, telegrams and a photograph. 1838 – 1908, with all but 12 of the letters dating from the period 1873 – 1888. Very good.

\$20,000

The Largest Physician's Archive That We Have Ever Handled, containing nearly 3000 pieces of correspondence, on about 5770 pages, to New York physician Cornelius Rea Agnew, one of the most prominent American eye and ear specialists in the nineteenth century. As such, this is an invaluable source for medical and social history.

Included are letters from some of New York City's most eminent citizens, as well as a large number of letters from doctors and patients discussing medical issues. Also included are letters on personal and social issues, as well as hundreds of pieces of ephemera documenting Agnew's professional and philanthropic activities in the last fifteen years of his life.

Agnew, a native of New York City, obtained his medical degree from Columbia University's College of Physicians and Surgeons in 1852 and received further training in Europe under such physicians as William Wilde (father of Oscar Wilde), William Bowman, Alfred Velpeau and Philippe Ricord. Just after his graduation Agnew accepted surgical posts at the New York Hospital and the Eye and Ear Infirmary, and in 1858 he was appointed Surgeon-General of the State of New York.

When the Civil War broke out in 1861 the governor of New York appointed Agnew Director of the New York State Volunteer Hospital. That same year Agnew became one of the founding members of the United States Sanitary Commission, the civilian organization authorized by the U. S. government to provide medical and charitable aid to the soldiers of the Union Army. Agnew dedicated himself to the Sanitary Commission during the next four years, even resigning his post at the Eye and Ear Infirmary in 1864 so that he could devote more time to his Commission duties. "The life-saving work of the Commission at Antietam, the battles of the Wilderness, and the relief to the wounded and sick soldiers who returned from Southern prisons were made so successful principally by the carefully arranged plans of Dr. Agnew, and which were superintended by him" (Obituary). Agnew remained a member of the Sanitary Commission's Standing Committee until the Commission was dissolved in 1878.

In 1864 Agnew helped to establish the Columbia School of Mines, and after the war he set up an ophthalmic clinic at the College of Physicians, where he also served as Clinical Professor of Diseases of the Eye and Ear. In 1868 he founded the Brooklyn Eye and Ear Hospital and the following year he established the Manhattan Eye and Ear Hospital, which is still in operation. Agnew served as secretary of the first society organized in New York for sanitary reform, and helped to prepare the first draft of the city's public health laws. He was active in a large number of medical, scientific, educational and philanthropic organizations, including the American Ophthalmological Society, the American Otological Society, Columbia University, the New York Academy of Medicine, the New York Academy of Sciences, and the Union League Club, which he helped found.

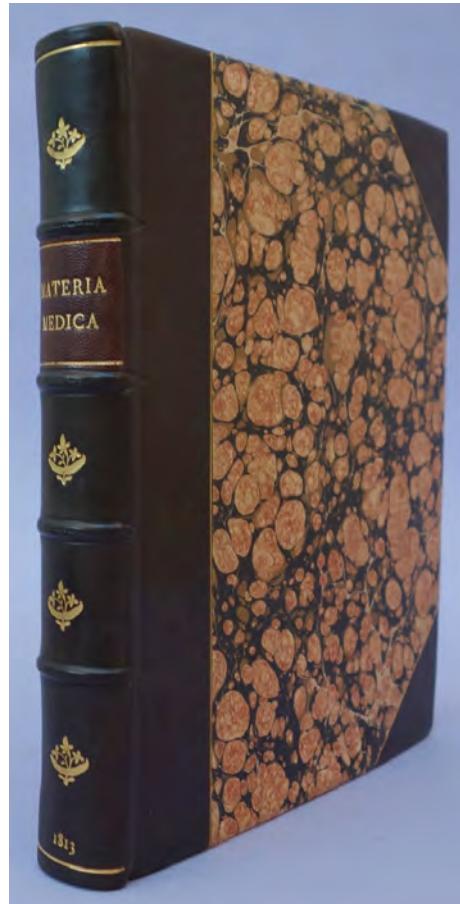
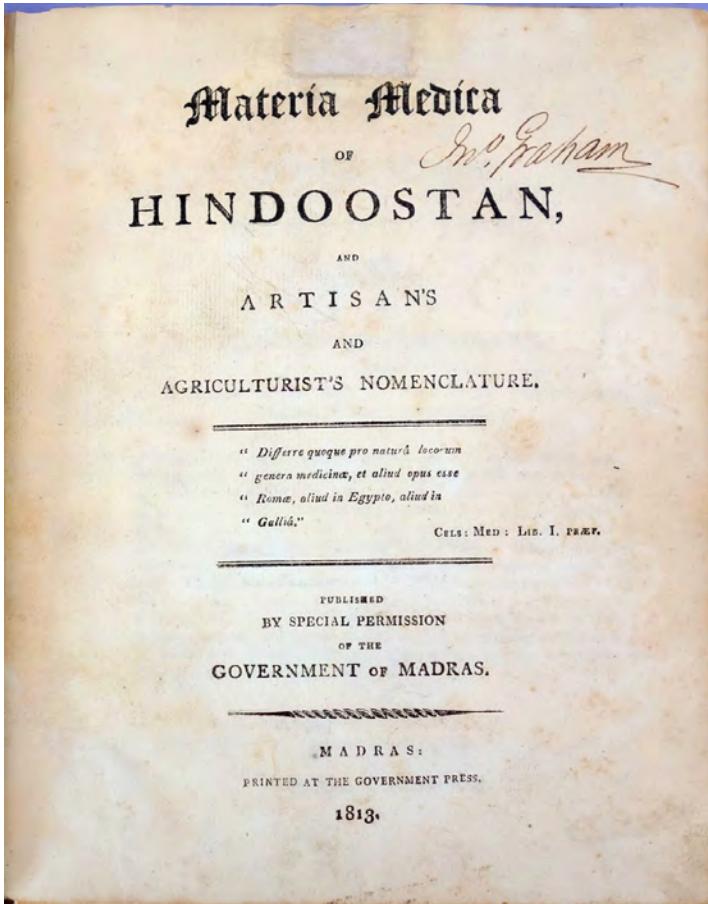
Agnew made several important contributions to ophthalmological literature, including "A method for operation for divergent squint" (1865; Garrison-Morton 5894), and "Practical suggestions for the treatment of lachrymal diseases" (1871), a paper describing a new incision for drainage of the lacrimal sac. He also wrote several works on otology and on medical ethics.

Several of Agnew's correspondents were members of the U.S. Sanitary Commission Standing Committee. The archive also contains a number of letters from Agnew's fellow physicians discussing cases, along with letters from current and prospective patients asking for medical advice. Other letters deal with Agnew's real estate investments. The letters are from all over the United States and from several other countries, and are rich in content.

Agnew's medical, financial and philanthropic activities in New York during the last fifteen years of his life are well represented in our archive, which includes letters from such notable correspondents as:

- John Jacob Astor III (1822-90), financier and philanthropist
- Frederick Augustus Porter Barnard (1809-89), deaf American scientist and educator; president of Columbia University from 1864-88; advocate of higher education for women; Barnard College named in his honor
- Lyman K. Bass (1836-99), U.S. Congressman (1873-77) and a partner with Grover Cleveland in the law firm of Bass, Cleveland & Bassell
- Oliver Wolcott Gibbs (1822-1908), American chemist who performed the first electrogravimetric analyses
- Winthrop S. Gilman (1808-84), founder of the New York banking house of Gilman, Son & Co.
- Stuyvesant Fish Morris (1843-1928), founder of a prominent family of New York physicians
- John Strong Newberry (1822-92), American physician, geologist and explorer; member of the U.S. Sanitary Commission
- Howard Potter (1826-97), industrialist and philanthropist; Treasurer of the U.S. Sanitary Commission; founding member of the Metropolitan Museum of Art and the American Museum of Natural History; holder of the chair of geology and paleontology at Columbia University from 1866 to 1890; one of the founders of the Geological Society of America
- Louisa Lee Schuyler (1837-1926), corresponding secretary of the Women's Central Association of Relief during the Civil War; founder of the first training school for nurses in the United States
- Benjamin Silliman, Jr. (1816-85), professor of chemistry at Yale; instrumental in developing the petroleum industry
- George Templeton Strong (1820-75), lawyer and noted diarist; founding member of the U. S. Sanitary Commission

"Obituary—Cornelius Rea Agnew, M.D." *Boston Medical and Surgical Journal* 98, no. 17 (1888): 438. 43150

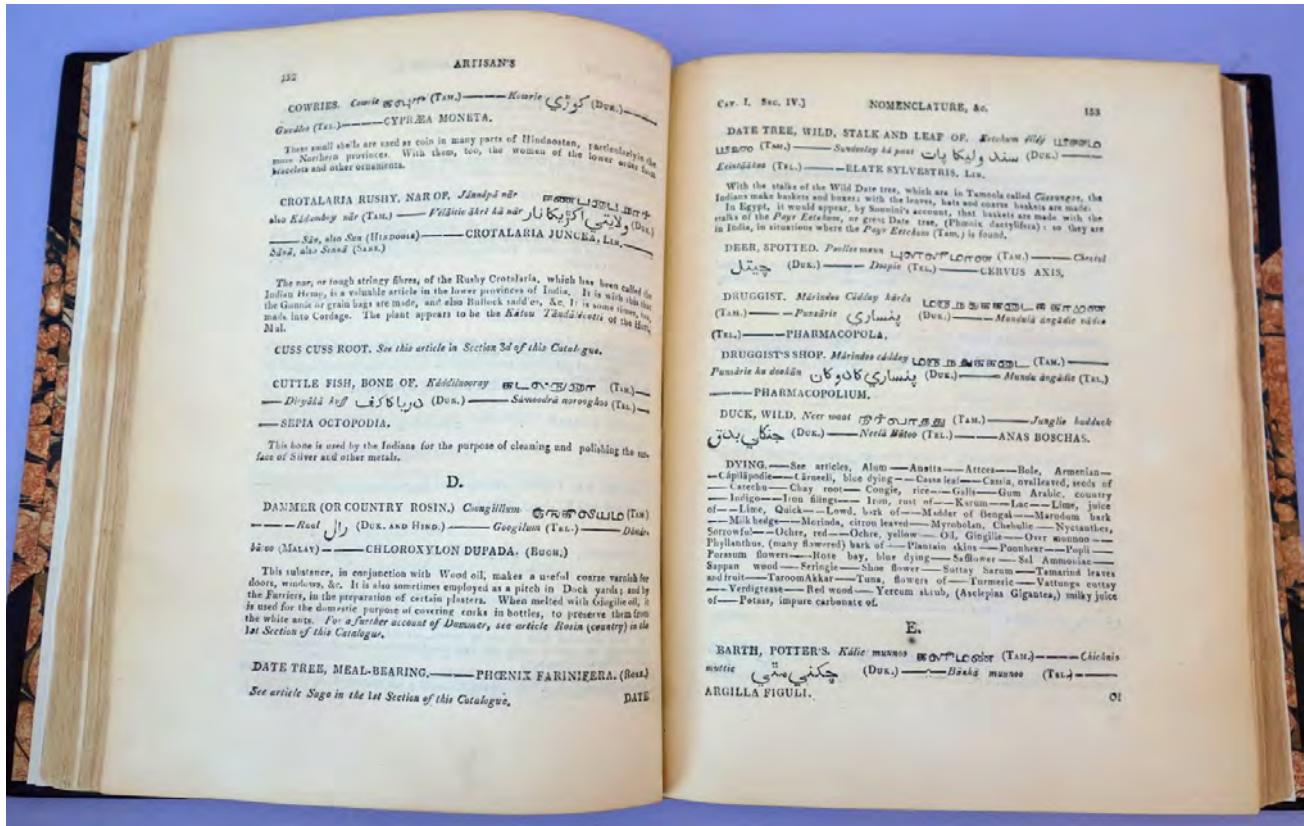


First Book on the Materia Medica of India, Printed in Madras

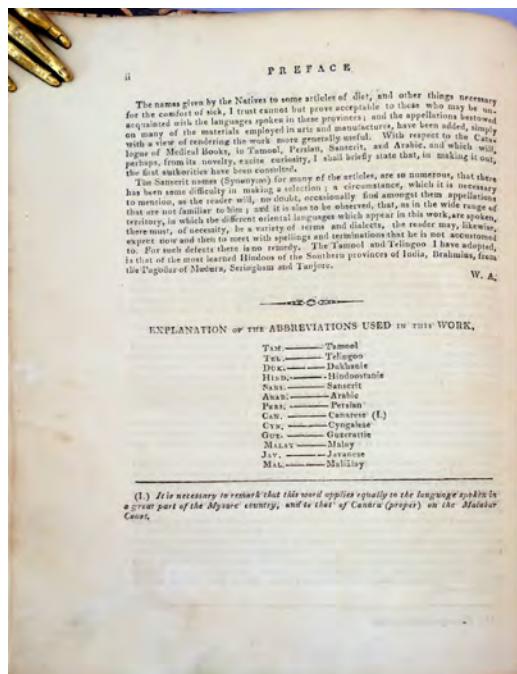
2. Ainslie, Whitelaw (1767-1837). *Materia medica of Hindooostan, and artisan's and agriculturist's nomenclature.* 4to. [6], ii, [2], 301, [3], xlviii pp. Madras: Government Press, 1813. 230 x 186 mm. Modern half calf, marbled boards in period style, endpapers renewed. Small repair on title, light toning, occasional foxing but very good. Errata slip pasted to last page of contents. 19th century ownership inscription ("Jno. Graham") on title; faint pencil inscription on verso. \$9500

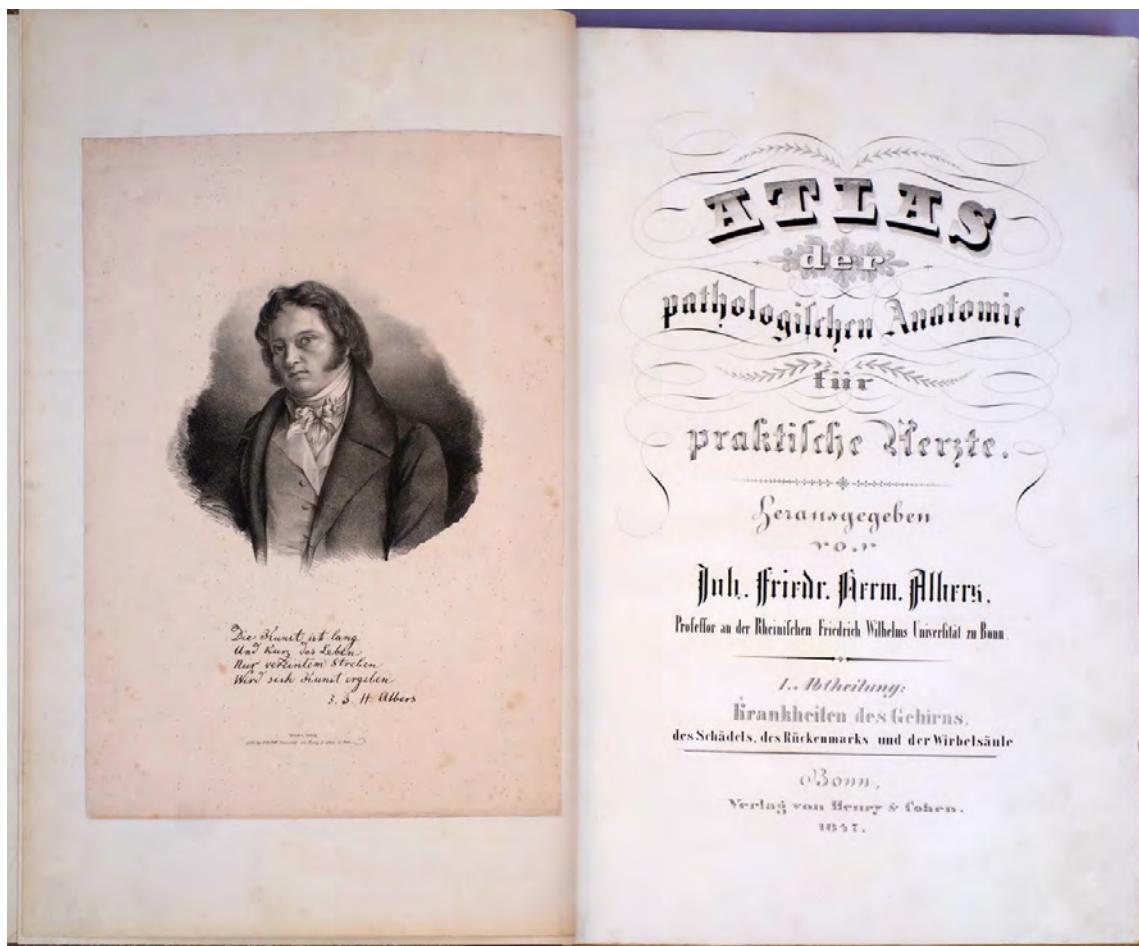
First Edition of the First Book on the Materia Medica of India, and a pioneering work in the field of Indian medical history. The work is rare on the market; this is the first copy we have handled in over 40 years in the trade. It is extremely uncommon for books printed in India to survive in such good condition, given the country's extremely hot and humid climate.

Whitelaw Ainslie joined the British East India Company as an assistant surgeon in 1788 and spent the next 27 years in India, eventually rising to the position of superintending surgeon of the southern division of the army in Madras. Ainslie was one of the first European scholars to investigate the traditional Hindu medical system known as Ayurveda, and he was "greatly impressed by the range and practical value of India's *materia medica* and by the skills of the physicians he encountered in Madras" (Arnold, *Colonizing the Body: State Medicine and Epidemic Disease in Nineteenth-Century India*, p. 45). The specific purpose of Ainslie's *Materia Medica of Hindooostan* was to make indigenous remedies available to the British Army, thus reducing its reliance on expensive imported drugs; however, Ainslie's larger purpose was to bridge the gap between the medical cultures of Europe and Asia, and he was careful to distinguish the Indian medicines already known in Europe from those exclusively used by native physicians.



Materia Medica of Hindooostan draws upon an enormous range of materials on Indian medicine, including numerous works in Sanskrit, Tamil, Persian and Arabic, all of which Ainslie cited in a bibliography at the end of his work. The names of the medicaments listed in the work are given in several languages, using roman, Tamil and Arabic types, making this work also an example of exotic printing. The explanation of abbreviations on p. ii (see image below) cites thirteen different languages. Zysk, *Medicine in the Veda*, p. 264. 43089



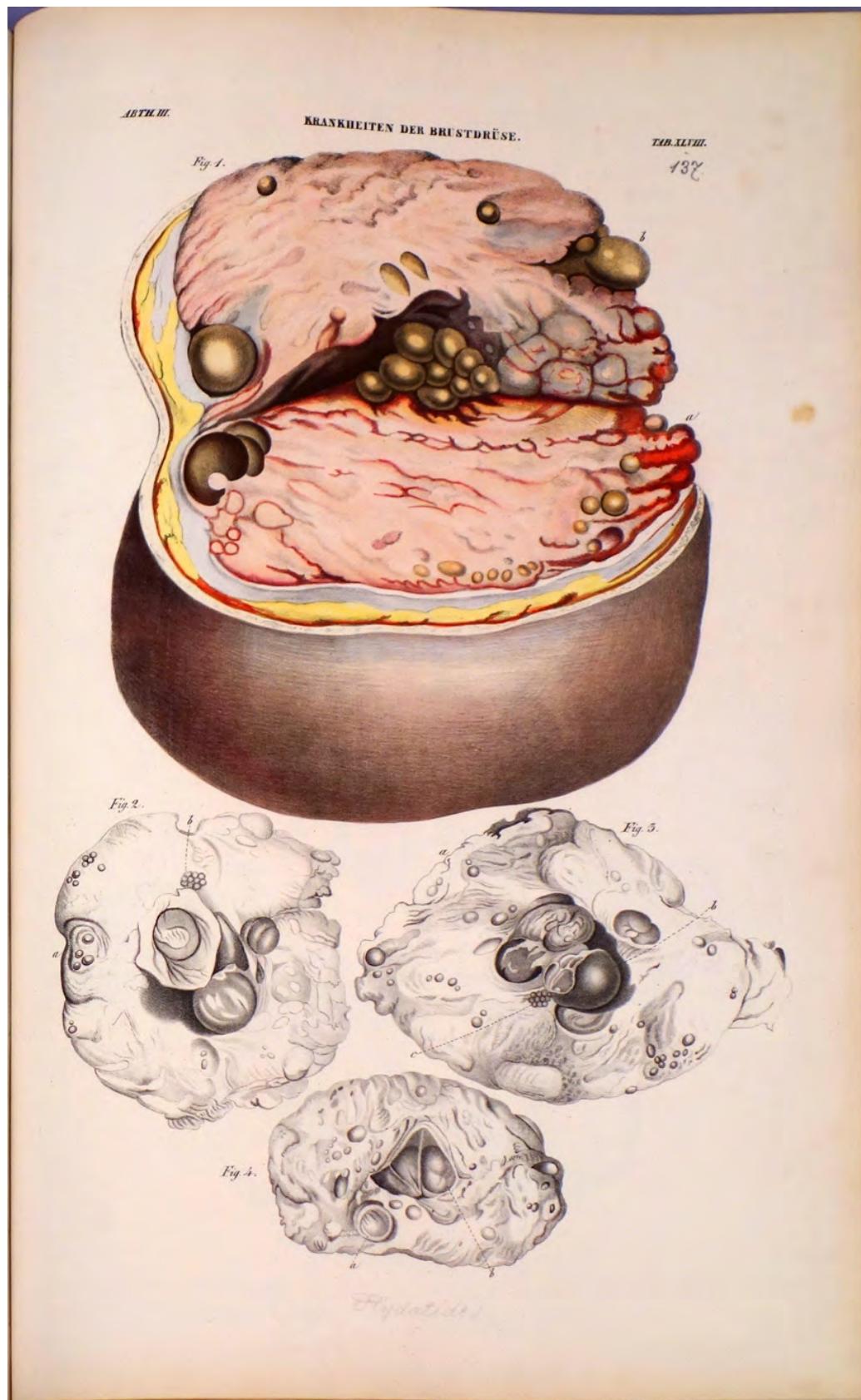


Rare Atlas of Pathology

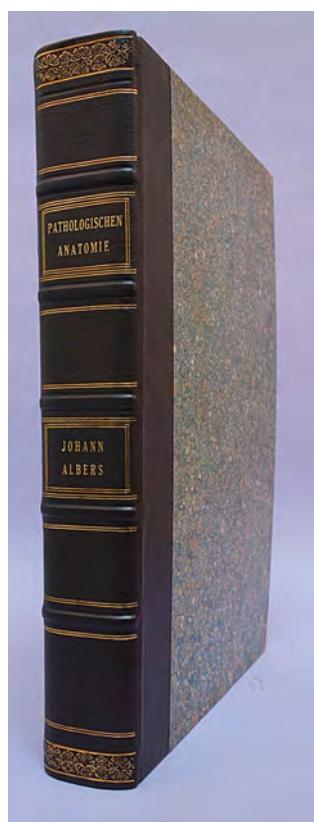
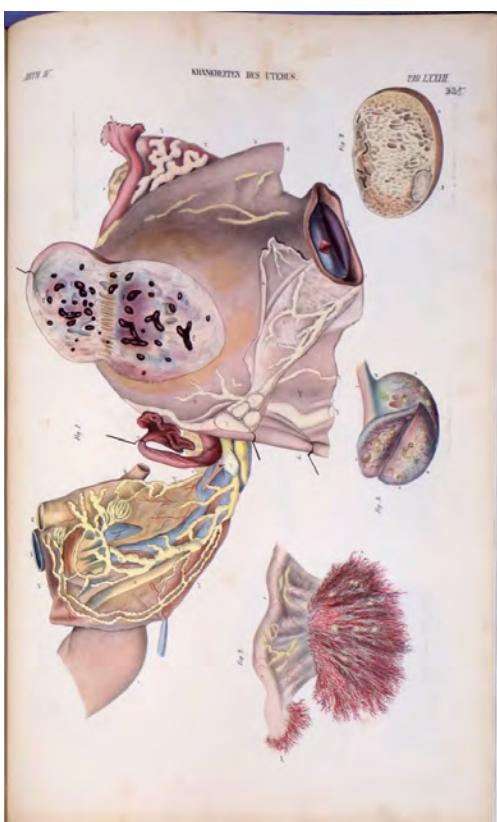
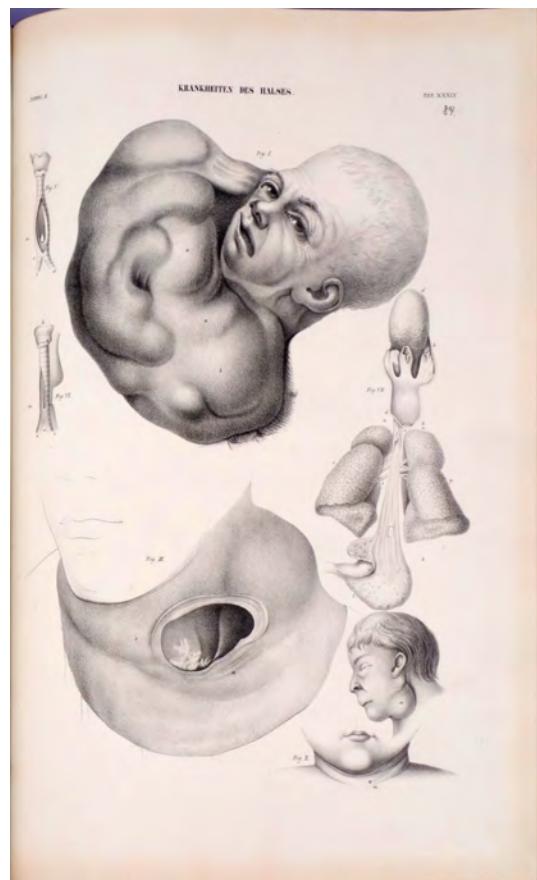
3. Albers, Johann F. H. (1805-67). *Atlas der pathologischen Anatomie für praktische Aerzte.* 4 parts in 1, folio. Lithographed title-pages for the 4 parts, 257 lithographed plates (93 hand-colored), added portrait of Albers tipped to leaf opposite the first title. Bonn: Henry & Cohen, 1847-1842-1846-1862. 499 x 326 mm. Quarter morocco, marbled boards in period style. Plates cleaned, leaving some stains on a few hand-colored plates. Paper color varies because of different kinds of paper used for plates. Fine copy. *See following pages for illustrations of selected plates from this work.* \$12,500

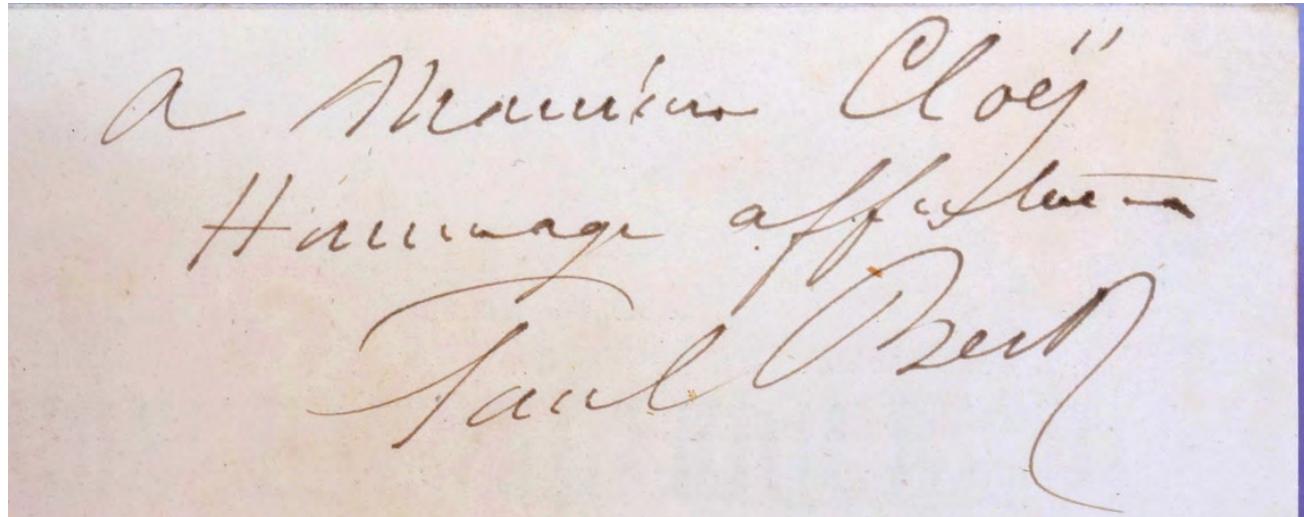
First Edition. Albers' atlas of pathology was originally issued in 45 fascicules over a period of twenty years. Because it was issued in so many parts over such a long period of time, it is very rare on the market, with only one complete copy noted in auction records over the past 35 years. This is the only copy we have handled in our more than forty years of trading in rare medical books.

Albers studied medicine at the University of Bonn, where he became a professor in 1831 and was named director of the university's pharmacological Kabinett. He published a number of works on pathology, pathological anatomy, pharmacology, psychiatry and clinical medicine; Hirsch notes that Albers' writings show "good observation skills, versatile utilization of clinical and experimental material and boast a worthy knowledge of the literature." The present atlas of pathology covers diseases of the brain and spinal cord (Part 1), the throat (Part 2), the thorax (Part 3) and the abdomen (part 4). Goldschmidt singles out several of Albers' plates as being of particular interest, including his illustrations of the parasitic worm *Distomum* (Part 4, plate 45), urogenital tuberculosis (Part 4, plate 53), tumor of the sinus and dura (Part 1, plate 3a), and tumors of the breast (Part 3, plates 44-53). Albers published four text volumes to accompany his atlas; these are not present here. Goldschmidt, *Entwicklung und Bibliographie der pathologisch-anatomischen Abbildungen*, p. 171. 43098



This page and opposite page: No. 3, Albers' Atlas der pathologischen Anatomie





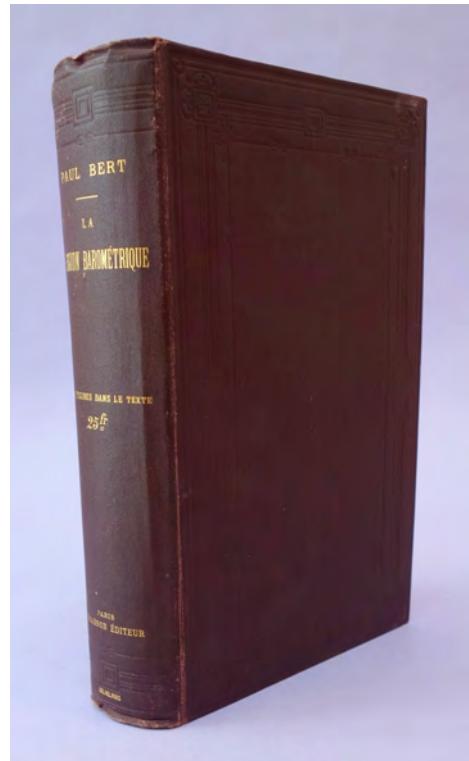
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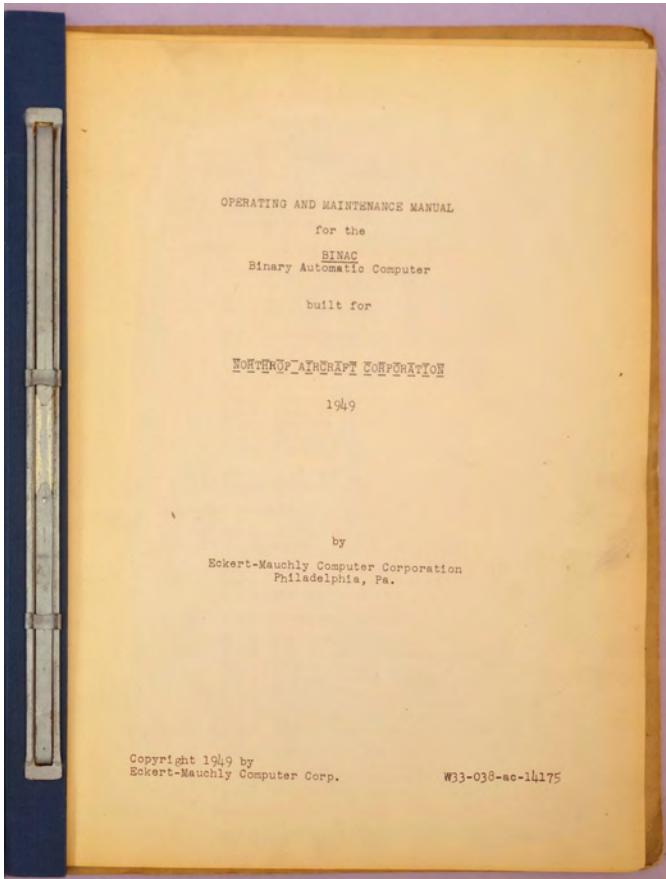
Foundation of Altitude Physiology

4. Bert, Paul (1833-86). *La pression barométrique*. 8vo. [8], viii, 1168pp. 89 text illustrations. Paris: Masson, 1878. 240 x 153 mm., uncut and unopened. Original maroon cloth stamped in gilt and blind, slight wear along hinges and at extremities but very fresh and bright. Very fine copy, inscribed by Bert on the front flyleaf: "A Monsieur Cloij[?Cloéj?Cloëj?] hommage affectueux Paul Bert." \$12,500

First Edition, and the Finest Copy We Have Ever Seen of Paul Bert's classic work, which marks the foundation of altitude physiology. The copy is in its original cloth binding, with the signatures uncut and unopened, and bears Bert's autograph signed presentation inscription on the front flyleaf.

In this monumental work Bert proved that the symptoms of altitude sickness arise from reduced partial pressure of oxygen and not from diminution of total pressure, and described the relationship between the external partial pressure and the behavior of the blood gases. He introduced oxygen apparatus for ascent to high altitudes, and was the first to study in a pressure chamber the conditions of high-altitude ascents. He discovered and described oxygen poisoning and explained caisson disease. Bert's researches on the physiological effects of air pressure gained him the Académie des Sciences' biennial prize of 20,000 francs in 1875, and paved the way for later researchers such as Christian Harald Bohr (father of Niels), K. A. Hasselbalch and A S. Krogh, who demonstrated the nature of the oxygen "dissociation curve" in 1904 (see Garrison-Morton 726). We have not been able to identify the recipient of this presentation copy. Garrison-Morton 944. Norman/Grolier, *One Hundred Books Famous in Medicine*, 77. Fulton, *Aviation Medicine* (1948), pp. 35-40. Hoff & Fulton, *Bibliography of Aviation Medicine* (1942), p. 227. Jones, *The Ins and Outs of Breathing*, p. 132. 43113





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|--|---|
| 1. to 1.2 | |
| <u>1. Introduction</u> | |
| The BINAC (Binary Automatic Computer) specifications and instruction code form Section 2 of this Operating and Maintenance Manual. Section 3 describes the various procedures which must be performed by the operator during input-output operations and procedures connected with warm-up. The computing process is automatic unless the operator chooses to interfere by means of break point or stop instructions. Section 4 describes adjustment procedures for several electrical circuits. | |
| <u>1.1 Power Requirements</u> | |
| The primary power source for the BINAC is 220 volts, 60 cps, three-wire, alternating current. The input to the power supplies is a two-wire and neutral single phase system. The power consumption is approximately 8KVA. The supply should be regulated to within 1% of a nominal voltage. The blower system may be operated from a separate supply. | |
| <u>1.2 Components of System</u> | |
| The following is a list of the components making up the BINAC System: | |
| <u>Quantity</u> | <u>Item</u> |
| 1 1/2 cartons | Typewriter Typewriter Table and Keyboard Typewriter Paper |
| 1 | Memory No.2 |
| 1 | Memory No.1 |
| 1 | Converter |
| 1 | Computer No. 2 |
| 1 | Computer No. 1 |
| 1 | Power Supply No. 2 |
| 1 | Power Supply No. 1 |
| 1 carton | Cables (36 units) |
| 2 | Computer Block |
| 2 | Remote Control Boxes |
| 2 | Reactors 2.1 H 0.7 A.D.C. RCA Type 901020 CRV 30554 |
| 8 | Capacitors 150V 1000 MFD Mallory |
| 8 | Selenium Rectifiers No. 7D1452 |
| 7 | Forced Air Hoods |
| 16 | Mallory Push Switches |
| 8 | Dust Stop for Computer Doors 10" x 20" x 1" |
| 2 sets | Door and Door Frame Assembly |
| 22 | Dust Stop 15" x 20" x 1" for Memory Units |
| 2 | Spanner Wrenches |
| 22 | Dust Stop for Converter 7" x 10" x 1" |
| 2 | Tape Reels |
| 5 | Thermistats "Klixon" S1851-1NSW |
| 5 | Relay Covers |
| 13 | Extenders, Chassis |
| 2 | Bottom Covers for Mercury Memory |
| 1 | Test Fixture |

The World's First Electronic Computer Manual—The Only Copy Known

5. BINAC. [Chapline, Joseph D. (1920-2011).] Operating and maintenance manual for the BINAC binary automatic computer built for Northrop Aircraft Corporation 1949. Reproduced typescript. 37ff. Full-page text diagrams. Philadelphia: Eckert-Mauchly Computer Corp., 1949. 282 x 217 mm. Original gray binder, cloth backstrip, slight edgewear, small stain on front cover. Light toning but fine. From the library of technology historian R. John Brockman.

\$25,000

The Only Known Copy of the World's First Electronic Computer Manual, and the only record of how the BINAC actually operated. It is also the model for the countless numbers of operating manuals for computers that were written in the following decades. OCLC records no copies of this work in libraries, and there was no copy in the Origins of Cyberspace collection. As only one BINAC was ever built, it is likely that only a handful of copies of the manual were ever produced.

Eckert and Mauchly's BINAC was the first stored-program computer to be fully operational, since the Moore School's EDVAC, which was designed to be the first stored-program computer, did not in fact become operational until 1952. The BINAC was also the first stored-program computer ever to be sold.

In 1946, after developing and building the ENIAC (the world's first general-purpose electronic computer) for the U. S. Army during World War II, J. Presper Eckert and John Mauchly founded their own company for the purpose of designing and manufacturing electronic stored-program computers on a commercial basis. In October 1947, needing money to keep their business afloat while working on their UNIVAC machine for the U.S. Census Bureau, Eckert and Mauchly entered into a contract with Northrop Aircraft to build the Binary Auto-

matic Computer (BINAC). Northrop was then engaged in a project to build a long-range guided missile for the U.S. Air Force, and had the idea of using electronic computers for airborne navigation; the BINAC, while not designed to work in flight, was considered to be an initial step toward that eventual goal. Airborne computers did not become feasible until the 1960s, when miniaturized solid-state transistorized components became available.

The BINAC was completed in August 1949, \$178,000 over budget; Eckert and Mauchly absorbed the loss themselves. It was delivered to Northrop on August 31, 1949 and, contrary to what many histories of computing state, operated at least somewhat successfully for at least a year afterwards (see the following entry in this catalogue).

The task of writing the BINAC's operating manual was assigned to Joseph D. Chapline, an EMCC employee who had helped Eckert and Mauchly on the ENIAC project at the Moore School. Realizing that the BINAC's users at Northrop would not be electronic computer specialists, Chapline decided to model his BINAC guide on the owner's manuals issued by automobile companies, rather than on the technical reports written for the Moore School's ENIAC and EDVAC, which were intended for highly trained engineers and scientists already familiar with the respective machines. Chapline's Operating and Maintenance Manual provided the BINAC user with a full overview of the machine's construction, operations and maintenance in a step-by-step, readable manner, with clear diagrams illustrating the BINAC's various components. Chapline's instructional, user-oriented approach set the pattern for the millions of computer manuals that followed.

Chapline, who also wrote the documentation for the ENIAC, was a pioneer in the field of modern technical writing. Chapline taught over 200 classes in technical writing at the Moore School before leaving the computer profession in 1953 to become the organist and choirmaster at the Unitarian Church of Germantown in Philadelphia. Brockman, *From Millwrights to Shipwrights to the Twenty-First Century*, ch. 7. Re Chapline see "In Memory of the First Technical Writer – 1920 to 2011." Writing Assistance Inc RSS. Writing Assistance, Inc., 24 Aug. 2011. Web. Accessed 21 Feb. 2014. 43096

The First Description of a Corporate Computing Center

6. BINAC. Northrop Aircraft, Inc. Description of Northrop Computing Center. Mimeographed typescript on engraved Northrop letterhead. 3, [1], 4ff. N.p., September 16, 1950. 280 x 218 mm. Light creasing, small spot on first leaf, but very good. \$1750

Possibly Unique Document from the First Corporation to Purchase an Electronic Computer, Demonstrating the BINAC's Functionality a Year after its Completion and Delivery. The BINAC, designed and built by J. Presper Eckert and John Mauchly (creators of the ENIAC and UNIVAC), was the first fully operational stored-program computer, and the first stored-program computer ever sold commercially. The machine was commissioned by Northrop Aircraft in 1947 and delivered to the company on August 31, 1949. The present document, written a year later, states that "Northrop Aircraft, Inc. has established a Computing Department for the solution of engineering and other problems" and notes that the Computing Center consists of "three major groups of computing equipment," one of which was "the high speed digital general purpose computer called the BINAC" (p. 1).

Many histories of computing state that the BINAC never operated successfully; however, as the present document indicates, this is certainly an error. The document's description of the BINAC indicates that even though the machine was then "being revised and improved for more reliable operation," it was still functioning at least somewhat satisfactorily a year after its delivery.

DESCRIPTION OF NORTHROP COMPUTING CENTER

Northrop Aircraft, Inc., has established a Computing Department for the solution of engineering and other problems. Facilities of the Computing Center include three major groups of computing equipment. Each of these differ markedly from the others in speed, principle and mathematical capacity. While each is adaptable to a wide variety of problem types, each is particularly and better suited to certain classes of problems than the others. Hence, in actual operation, they supplement each other and form a powerful engineering tool for the solution of problems in the aircraft industry as well as in many other fields in the Armed Forces and civilian life.

PUNCHED-CARD COMPUTING EQUIPMENT

The first of the computing facilities includes special IBM punched-card computing equipment. One of these is the original Card-Programmed Calculator developed by Northrop personnel to solve special problems not readily soluble on standard IBM components. By an ingenious cross-wiring of an electronic multiplier, a tabulator, and a summary punch with the addition of relays, switches, and an extra control board, it was made possible for the standard IBM tabulator to read operating instructions from punched cards and completely program the operation of itself and the other two IBM standard units in such a way that numerical integration could be performed on this combination machine. This prototype Card-Programmed Calculator is the only one of its kind in existence and has proven invaluable in the solution of many problems in aircraft and special weapon design and testing. These include problems in aerodynamics, flutter, vibration, stresses, weights, trajectories, computer design, and the very important investigation of the penetration of radiation through shielding materials. The other machines in this same area are the usual accessories such as key punches, sorters and collators.

With this prototype, you will see one of the subsequent commercial versions of the IBM Card-Programmed Calculator. Although many of you may already be familiar with this larger and faster machine, it should be observed that the one you will see is now being revised to meet the Northrop specifications for greater flexibility.

BINAC

The second of the pieces of computing equipment being demonstrated today is a high speed digital general purpose computer called the BINAC. This is an electronic computer constructed under contract for Northrop Aircraft, Inc., and now being revised and improved for more reliable operation. While the unit you will see

(more)

This machine has solved in seven minutes a problem on the effect of a certain wind pressure on a rubber diaphragm that would have occupied a mathematician for a year. It has solved Poisson's Equation and obtained a network of 26 solutions in only two hours. For each of these solutions, the BINAC performed 500,000 additions, 200,000 multiplications, and 300,000 transfers of control, all in the space of five minutes. . . . This machine, which is a general purpose computer calculating in the binary system but receiving and emitting its instructions in the octal system, will be demonstrated today on a short test problem ("Description of Northrop Computing Center," p. 2).

The BINAC was extremely advanced from a design standpoint: A binary computer with two serial processors, it functioned more like two computers than one. Each part of the device was built as a pair of systems that would check each step. All instructions were carried out once by each unit, and then the result would be compared between the units. If they matched, the next instruction would be carried out; but if there was a discrepancy between the two parts of the machine, it stopped. The processors were only five feet tall, four feet long and a foot wide, tiny for those days. The machine could only do 3,500 additions per second compared to 5,000 on the ENIAC, but it could do 1,000 multiplications per second, compared to only 333 on the ENIAC. 43100

Dear Sister

Norwalk. Connecticut Government.
June 21. 1770.

Yours of the 31. March 1770. I received
the 3rd. instant. And was very glad to hear
My Father was well to whom I beg my Duty.
I have been very busy in packing up my things
for you which I hope will get safe all I have
to say I have done every thing in my power
Insects have been in some of them but when
you have seen the Birds you may throw such
away you do not like, all I have aimed at is
to give you and any of your friends as full
an Idea as I have been able of the Birds in
generall as well as Eggs and Nests, Snakes,
Flies, Beetles &c. I wished I had been in better Health.
How far I may have succeeded you will be the
best Judge but you must not expect much
from one that knows little or nothing of
the matter. Let it suffice that I have done
my best and should it afford ^{them} any amusement
I shall be Happy —

I have been very much at a loss what to do with
birds that has had insects in, and have tried
many ways, before I could hit upon any that
would be of the least service, till, I recollected
hearing that they smoaked Roomes with them
stone to kill Buggs. which I determined to
try, and I succeeded pretty well in the end ^{the}
I had like to have suffocated my self the first
I tryed it. It will kill them if you will persevere
but they take a great dale some of them. ^{and} ~~and~~ ^{the} ~~the~~ day

Extraordinary Letter Documenting the Beginnings of Natural History in North America

- 7. Blackburne, Ashton (ca. 1730 – ca. 1780).** Autograph letter signed to his sister **Anna Blackburne** (1726-93). 7pp. plus address, on 4 leaves. Norwalk, Connecticut Province, June 21, 1770. 321 x 202 mm. Tears in last two leaves expertly repaired, a few lacunae along folds and where seal was broken, but clean and legible. Transcript included. \$9500

One of the Earliest Documents Recording the Beginnings of Natural History in North America. As far as we have been able to determine, this may be the only extant letter from Ashton Blackburne, who was one of only a handful of people in colonial America known to have collected zoological and botanical specimens for scientific purposes. Only scant information about Ashton Blackburne's life has survived, so this letter must be regarded as the most important primary source for this significant figure in early North American natural history. At seven small folio pages and over 2400 words, Blackburne's letter is also one of the longest and most detailed scientific letters we have ever handled.

Ashton Blackburn was the brother of Anna Blackburne, a knowledgeable and dedicated collector of natural history specimens from all over the world. Anna was highly regarded by such leading European naturalists of her day as Carl Linnaeus, Johann Reinhold Forster, Peter Simon Pallas and Thomas Pennant, who named the blackburnian warbler (*Dendroica fusca*) after her. The few surviving letters from Anna Blackburn are primarily preserved in her correspondence with Linnaeus. Both Ashton and Anna inherited their love of natural history from their father, John Blackburne of Orford Hall, Lancashire, a well-known horticulturalist whose impressive gardens rivalled those at Kew.

At some point in his life Ashton emigrated from England to the North American colonies, where he devoted much of his time to collecting specimens for his sister's museum. Anna referred to her brother's activities in her first letter to Linnaeus (29 July 1771), in which she noted that her "Brother who lives near New York in north America . . . annually enriches my Cabinet with the productions of that Country" (quoted in Wystrach 1977, p. 151). In her second and final letter to Linnaeus (14 October 1771) Anna stated that her "collection of dry'd birds is pritty numerous" and that her "cabinet is not destitute of shells, Insects, fish & Fossils & if my Brother lives will increase fast" (*ibid.*, p. 154).

The ornithological specimens Ashton sent to Anna provided a valuable source of information to Thomas Pennant when he was writing his *Arctic Zoology* (1784-85), as he acknowledged in the preface to that work:

To the rich museum of American Birds, preserved by Mrs. Anna Blackburn, of Orford, near Warrington, I am indebted for the opportunity of describing almost every one known in the provinces of Jersey, New York, and Connecticut. They were sent over to that lady by her brother the late Mr. Ashton Blackburn; who added to the skill and zeal of a sportsman, the most pertinent remarks on the specimens he collected for his worthy and philosophical sister (*Arctic Zoology*, I, p. [iii]).

Over 100 of Pennant's descriptions of North American birds were based on the specimens Ashton sent to Anna for her museum; among these were no fewer than 16 species that had never been described before (see Wystrach 1975, p. 609). Pennant also obtained information directly from Ashton, as noted in Pennant's description of the passenger pigeon in *Arctic Zoology*: "I shall conclude this account with what was communicated to me by the late Mr. Ashton Blackburne, from his own observations, or those of his friends, who were eye-witnesses to the wondrous facts related of these birds" (*Arctic Zoology*, II, p. 324; Ashton's notes on the passenger pigeon, dated the same day that our letter was written, are quoted on pp. 325-326).

Ashton's letter to his sister, filled with details about his collecting activities, adds a great deal to the little we know about his life. The letter reaffirms Blackburne's connection with Pennant and sheds some light on the nature of Pennant's scientific inquiries:

I wish it was in my power to answer Mr. Pennants questions, many of which I cannot give any answer at all too [sic].... I have sent you some of his queries answered in some degree. He desires I will collect the Birds that pass but do not stay in the Province in the Spring for their passage N. or S. to Breed. This is too difficult for me to answer with any certainty. The Black or House Martin, I had enquired when he came & the people here tould me for certain that he never was seen before the 19 or 20 of Aprill and I fancyed the last Year I saw some few sooner. I observed particularly this Year on Mr Pennants Account and the 14th of Aprill I saw three at one set of Boxes. There is a particular circumstance attending that Bird here for it is not used to frequent this place nor near it till about Thirty Years ago one of this place was at Cape Cod where he met with some young ones and brought them with him and turned them out. The Year following they returned and have been an inhabitant yearly ever since.... The Barn Swallow I think did not appear till the middle of May but I am not quite certain. The Chimbley-Bird is still later before he comes some thing as I fancy the Bank Swallow is for it is June generally but here again I am not certain. I never heard of any being found in a torpid state. The accounts I have given. As for the True European woodcock you will see the account I have given and Mr. Pennant will be the best judge of that when he sees it and the Bird &c....

From his letter we can see that Ashton had great respect for his sister's collecting and natural history expertise:

... all I have aimed at is to give you and any of your friends, as full an Idea as I have been able of the Birds in general as well as Eggs and Nests, Snakes, Flies, Beetles &c &c since I have been in America. How far I may have succeeded you will be the best judge ...

I shall expect Sister you point out to me what Birds if there be any that are Curious and what sort you like best; and if I should meet with any Large ones whether you would have me send them and what sort of small ones you like the best and whether there be any that I have sent that you want more of if I can get them and how many of a sort you think sufficient to send for you see I have sent many of some sorts ... I should be glad you would tell me how you aprouve of casing(?) of the Large Birds, and whether a skin of a Bird would be thought a sufficient Specimen. I sent some of all the different ways I did them for you to see the difference that you might let me know what way you liked the Best. In a Damp Day you may alter the Shape of many of the Birds by working their Necks, Legs, and Bodies, backwards and forwards gently at first as some of them are not thoroughly Dryed, but this you will be the best judge of, when you come to examine them ...

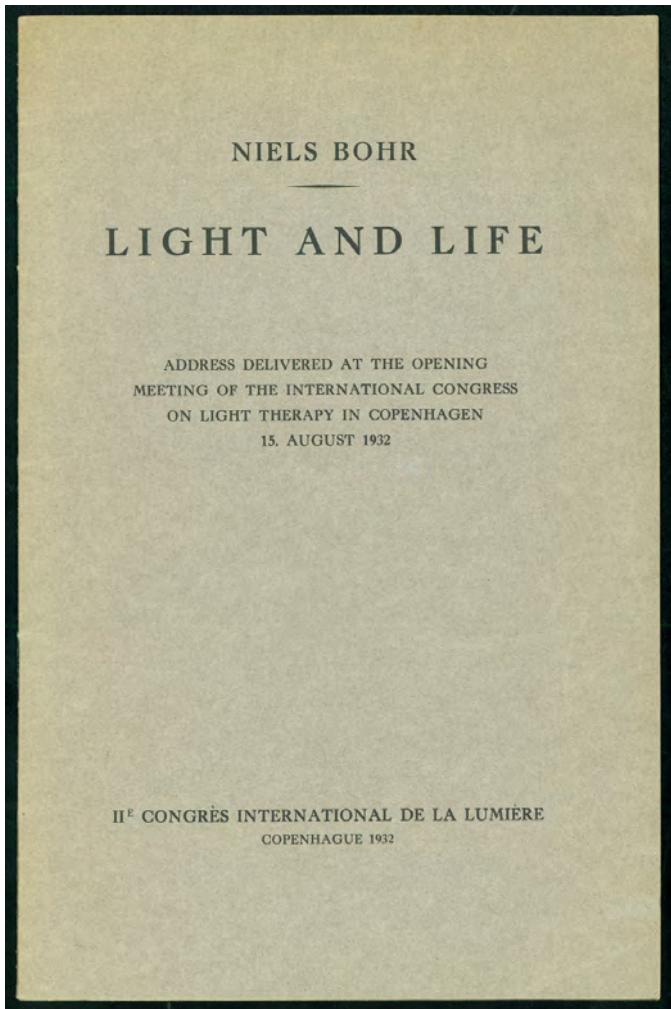
Ashton touched on the difficulty of preserving specimens:

I have been very much at a loss what to do with birds that has had insects in, and have tryed many ways, before I could hit upon any that would be of the least service, till, I recollectd hearing that they smoaked Roomes with Brimstone to kill Buggs, which I determined to try, and I succeeded pritty well in the end tho I had like to have suffocated myself the first time I tryed it....

As to fish I cannot keep them well in Rum, some will keep pritty well and others grow soft and mould over and I can assign no reason for it....

Elsewhere in the letter Ashton discussed American deer, elk, caribou, wild turkeys, foxes and "Indian dogs," "... some amazingly like Racoones, others like Foxes, & others like Wolves" ... The Indian Dogs hate both the Whites and their Dogs, and our Dogs are up with them for if an Indian comes through any Town with or without a Dog all the Curs in the place will bark at him. The first time I saw it was at Albana and his ploding through the streets with the Dogs after him put me in mind of a Bear ... When the Indians are encamped near any of the out posts it is dangerous to go amongst them without a stick for the Dogs bite before the Bark in generall tho the Indians will not let them molest you if they can help it."

The only published references on Ashton or Anna Blackburn are: Wystrach, V.P., "Ashton Blackburne's place in American ornithology," *Auk* 92 (1975): 607-610; Wystrach, "Anna Blackburne—patroness of natural history," *Journal of the Society for the Bibliography of Natural History* 8 (1977): 148-168. Also see Evans, *Pioneer Naturalists*, pp. 252-253, noting that entomologist J. C. Fabricius named the dung beetle *Scarabaeus blackburni* for Ashton after the specimen Ashton had provided for Anna's museum. 43160



*One of the Earliest Classics of Molecular Biology—
Inspiration for Delbrück and Schrödinger*

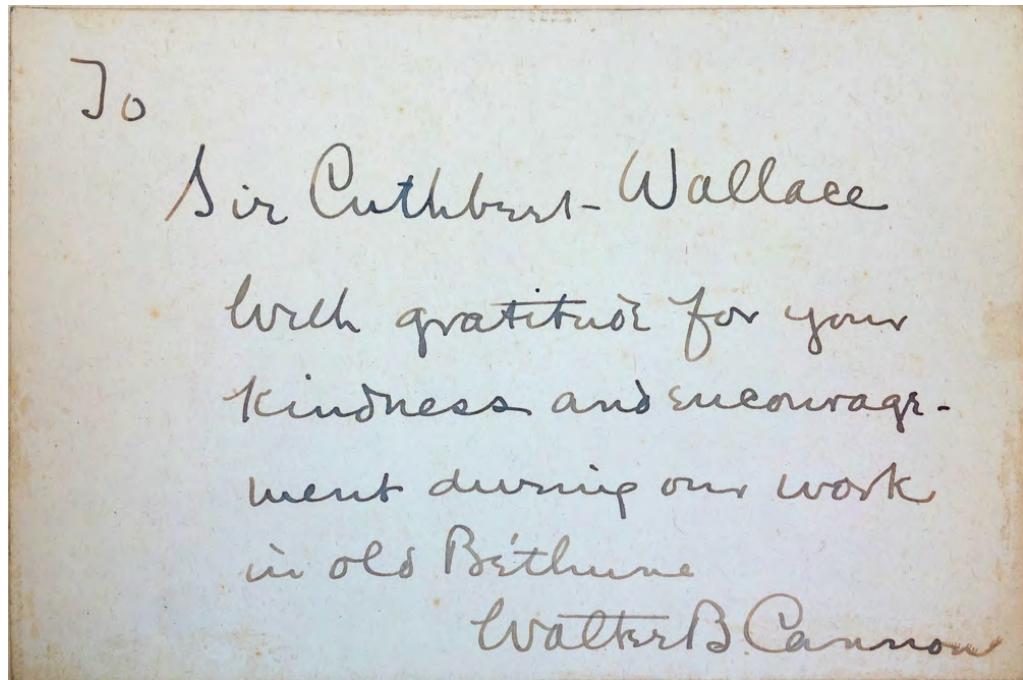
8. Bohr, Niels (1885-1962). Light and life. Address delivered at the opening meeting of the International Congress on Light Therapy in Copenhagen 15. August 1932. 10pp. Copenhagen: IIe Congrès International de la Lumière, 1932. 236 x 158 mm. Original printed wrappers. Fine copy. \$4750

First Edition. The earliest publication of Bohr's lecture on "Light and life," which can be considered one of the foundation stones of molecular biology. This pamphlet, dated 1932, predates both the lecture's publication in Danish ("Lys og liv") in *Naturens Verden* and the English version in *Nature*, both of which were published in 1933. A German translation appeared in *Naturwissenschaften*, also in 1933. This 1932 pamphlet is rare, with only three copies listed in OCLC (Danish Union Catalogue, U.Toronto and U.Virginia).

Bohr's lecture marks his first detailed attempt to apply concepts arising from quantum mechanics (particularly complementarity) to areas outside physics. "Here, for the first time, Bohr raised a question that was to preoccupy him, off and on, until his death: Would it ever be possible to push the analysis of living processes to the limit where they can be described in terms of pure physics and chemistry?" (Pais, p. 441).

Bohr's lecture inspired the young physicist Max Delbrück—who was in the audience when Bohr delivered it—to switch from physics to biology "to find out whether indeed there was anything to this point of view" (quoted in Pais, p. 442). In 1935, two years after hearing Bohr's lecture, Delbrück and two other scientists pub-

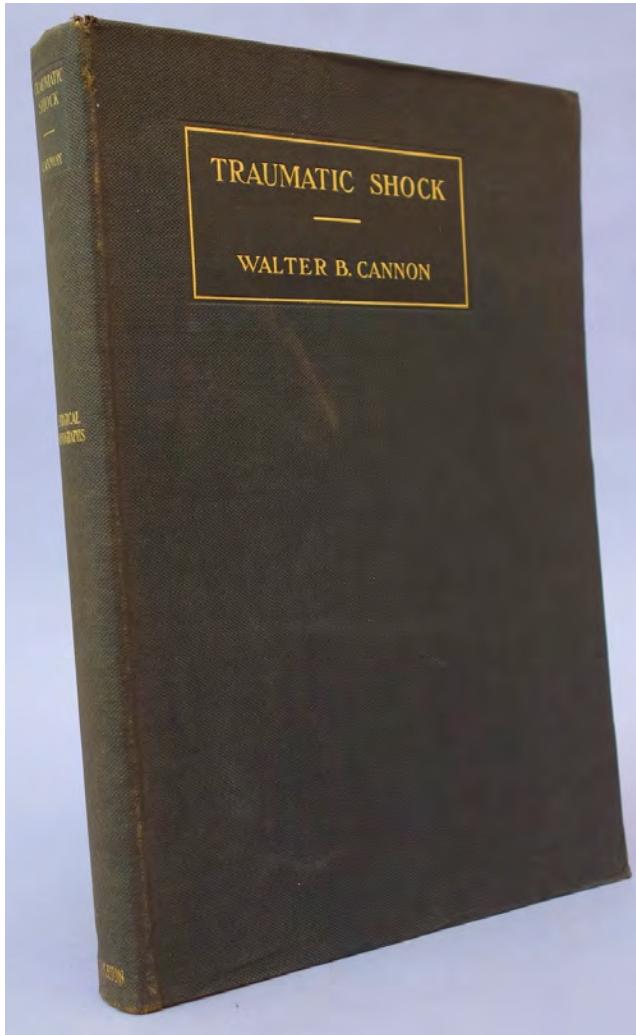
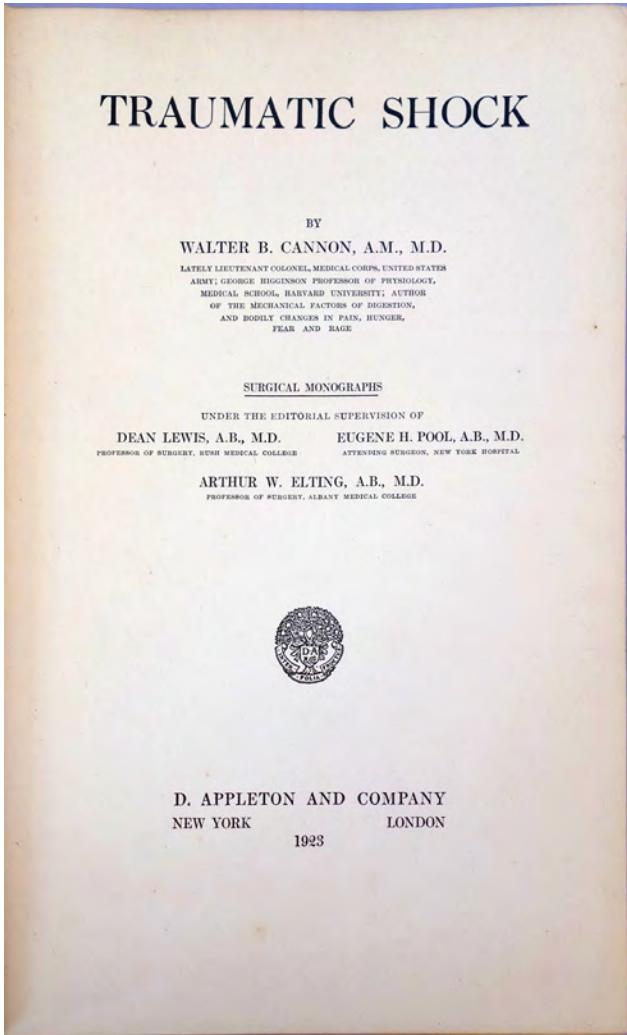
lished a paper on genetic mutations caused by x-ray irradiation, in which they concluded that the gene must be a molecule. The ideas expressed in this paper inspired Schrödinger to write his famous *What is Life?*, a work which in turn motivated Watson, Crick, Wilkins and other scientists to devote their careers to unraveling “the secret of the gene.” Delbrück himself became a leader of what was known as the “phage group” of bacterial geneticists; in 1969, he received a share of the Nobel Prize for physiology / medicine for describing the means by which living cells are infected with viruses. “It is fair to say that with Max [Delbrück], Bohr found his most influential philosophical disciple outside the domain of physics, in that through Max, Bohr provided one of the intellectual fountainheads for the development of 20th century biology” (quoted in Pais, p. 442). Pais, *Niels Bohr's Times*, pp. 411; 441-42. Judson, *The Eighth Day of Creation*, pp. 32-35. 43092



Presented to His Commanding Officer

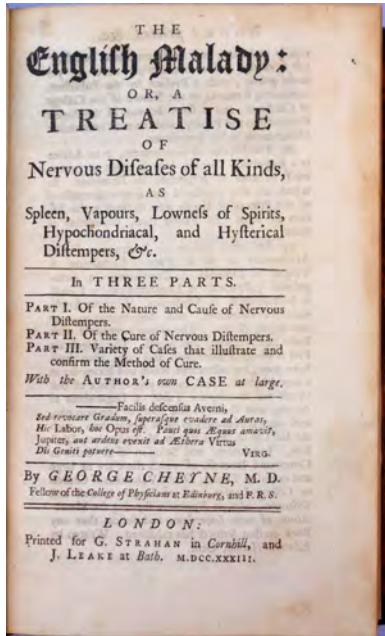
9. Cannon, Walter B. (1871-1945). Traumatic shock. xvii, 201pp. Text illustrations. New York & London: D. Appleton, 1923. 263 x 173 mm. Original gilt-stamped cloth, one corner bumped. Light toning but very good. *Presentation Copy, inscribed by Cannon to Sir Cuthbert Wallace (1867-1944) on slip tipped to front pastedown: "To Sir Cuthbert Wallace with gratitude for your kindness and encouragement during our work in old Béthune. Walter B. Cannon."* \$2750

First Edition. Cannon, professor and chair of the Department of Physiology at Harvard Medical School, was one of the pre-eminent physiologists of the 20th century, making fundamental contributions to our knowl-



edge of digestion, the autonomic nervous system, homeostasis, and stress response. "In the fall of 1916, before the United States entered World War I, the National Research Council named Cannon a member of a committee on traumatic shock. Later he joined the Harvard University Hospital Unit. On his way to France in May 1917, he stopped in London and arranged with Fletcher, first secretary of the Medical Research Committee, to join the group of physicians and surgeons of the British Expeditionary Forces who were dealing with shock cases at the Casualty Clearing Station at Béthune. . . . Initially Cannon and his associates in the field concentrated their therapeutic efforts on treating the acidosis that accompanies shock. Later they recognized that the acidosis was merely a secondary phenomenon, the result of the inadequacy of tissue perfusion. In 1923 Cannon summarized his wartime experience in *Traumatic Shock*" (*Dictionary of Scientific Biography*).

Cannon presented this copy of *Traumatic Shock* to his commanding officer at Béthune, Colonel Cuthbert Sidney Wallace, consulting surgeon to the First Army, British Expeditionary Force. Cannon noted in his preface that "We were serving under Colonel Cuthbert Wallace, later Major-General Sir Cuthbert Wallace, who was as eager as any of us to secure further knowledge of shock and who helped and encouraged us in our efforts" (p. ix). 43094



Left to right: Title page and binding of Cheyne's English Malady (no. 10), binding of Cheyne's Natural Method (no. 11)

Cheyne on Nervous Disease and Healthy Living

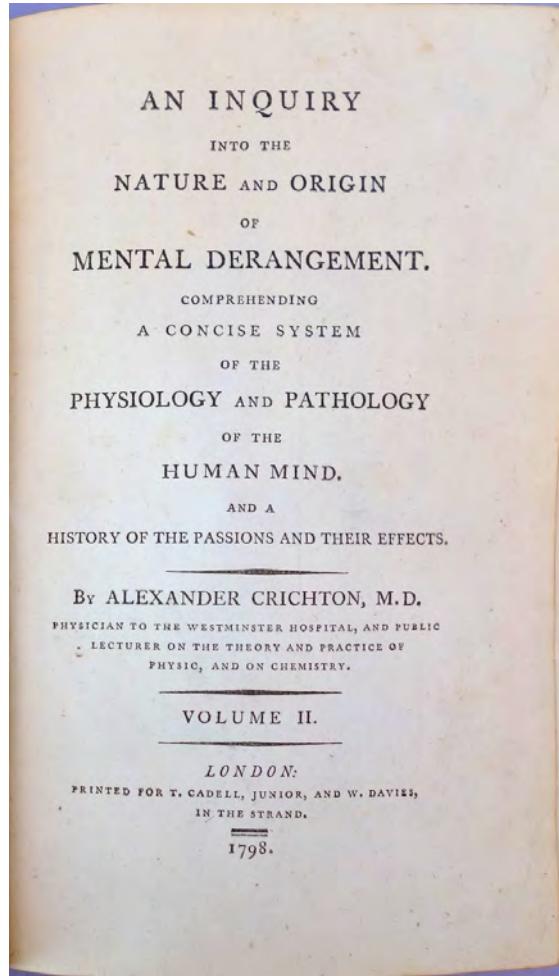
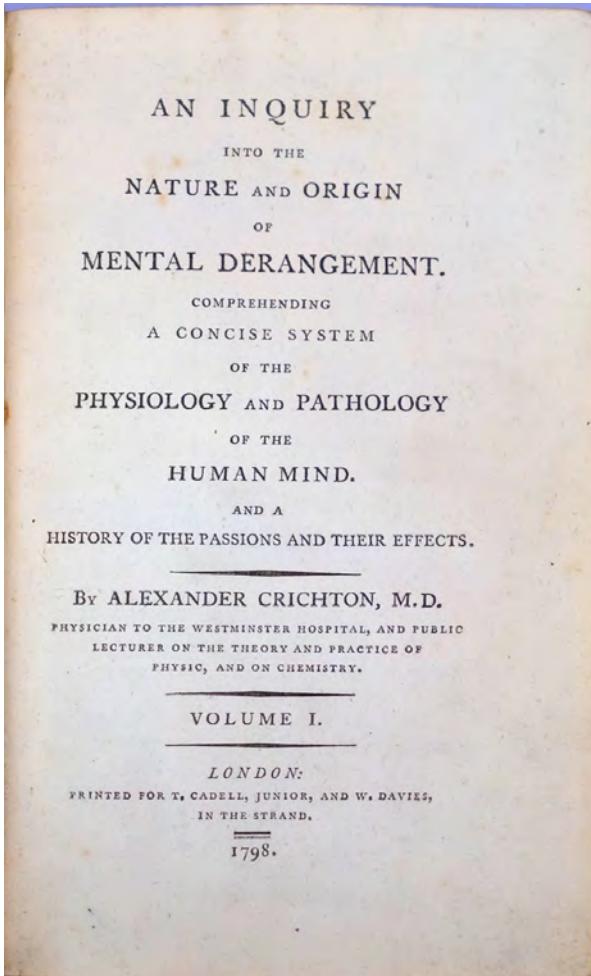
10. Cheyne, George (1671-1743). The English malady: Or, a treatise of nervous diseases of all kinds, as spleen, vapours, lowness of spirits, hypochondriacal, and hysterical distempers, &c. 8vo. xxxii, [2], 370, [6]pp. London: G. Strahan; Bath: J. Leake, 1733. 195 x 125 mm. Paneled calf ca. 1733, gilt edges, rebacked, endpapers renewed. Very good copy. Engraved armorial bookplate of Charles Hope, first Earl of Hopetoun (1681-1742) or his son John Hope, the second earl (1704-81). \$750

First Edition. Cheyne's term "English malady" refers to depression, the causes of which Cheyne listed as moist air, the variable English climate, too much meat and alcohol, sedentary habits and overcrowding. Among the clinical illustrations Cheyne included his own case, which he cured by purges, a milk and vegetable diet and the study of religious writings. Cheyne's work inspired an interest in England in exploring the metaphysical relationship between mind and body.

"Drawing upon modern advances in anatomy and physiology, Cheyne saw what we would term 'functional disturbances' and 'neuroses' as the products of disorders in the nervous system, and thus may be seen as one of the originators of the neurological school of psychiatry. Believing such sickness was growing more frequent, he contended that it should be regarded as a 'disease of civilization,' the product of the pressures and affluence of modern life, especially among the rich. Hence his approach may broadly be termed that of epidemiological psychiatry. By making 'neurosis' acceptable, even fashionable, Cheyne's book assumed considerable wider cultural significance during the Enlightenment" (Porter, "Preface," in *George Cheyne: The English Malady* (1733), ed. Porter). Garrison-Morton 4840. Hunter & Macalpine, pp. 351-354. Norman 471. 41766

II. Cheyne, George (1671-1743). The natural method of curing the diseases of the body, and the disorders of the mind depending on the body. 8vo. [20], 316pp. London: Geo. Strahan [etc.], 1742. 202 x 127 mm. Gilt-ruled calf ca. 1742, rebacked, light wear at hinges. Some ink spots on a few preliminary leaves, one leaf (pp. 25-26) coming loose, but very good otherwise. \$500

First Edition. Cheyne's last work, in which he "boiled down the pity of healthy living into a few basic practical principles: (1) Proper evacuations, (2) Attenuating and deobstruent medicines, (3) Astringents and strengtheners of the solids, and (4) Proper and specific diet, with air and exercise" (Porter, "Introduction," in *George Cheyne: The English Malady* (1733), ed. Porter). The author, then in his seventies, attributed his continuing good health to a strictly vegetarian diet and moderation of the "sensual appetites." 41768

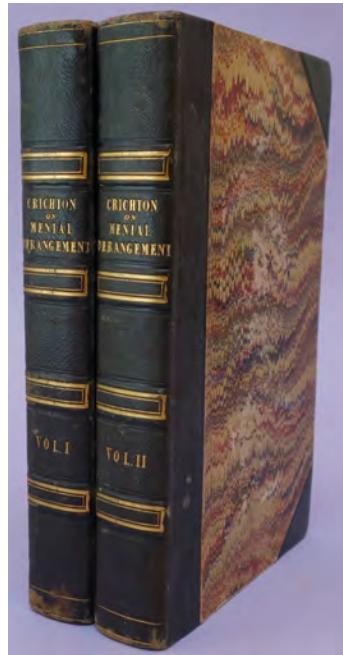


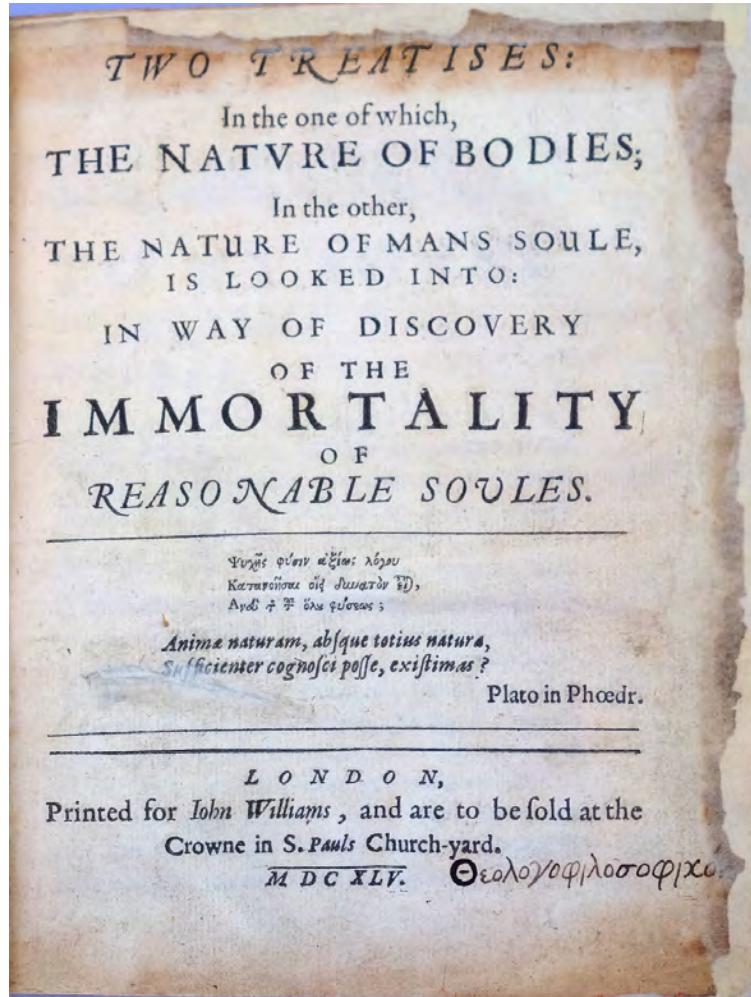
"Philosophy and Pathology of the Human Mind"

12. Crichton, Alexander (1763-1856). An inquiry into the nature and origin of mental derangement. Comprising a concise system of the physiology and pathology of the human mind . . . 2 vols., 8vo. [4], xxix, [5], 407; [4], 455, [13, including index and errata]pp. London: T. Cadell, Jr. and W. Davies, 1798. 210 x 129 mm. 19th century quarter morocco, marbled boards, light rubbing, front hinge of Vol. I a little tender. Tiny marginal wormhole in last several leaves of Vol. II, but very good. Engraved armorial bookplate of J. A. Clarke; ownership stamp of Malcolm Brown.

\$2500

First Edition of an important work on mental illness that “broke new ground in psychiatry in a number of ways . . . [combining] the latest philosophical ideas, that is psychological knowledge, with accumulated medical experience of mental disease, that is psychiatry, into a ‘philosophy and pathology of the human mind’” (Hunter & Macalpine, p. 559). Crichton’s treatise was the first in English to discuss forensic aspects of psychiatry. It also contained the earliest description of what is now known as ADHD (attention-deficit hyperactivity disorder), and was the first to recognize aphasia as a “disturbance of memory” rather than a symptom of paralysis or insanity. 41767



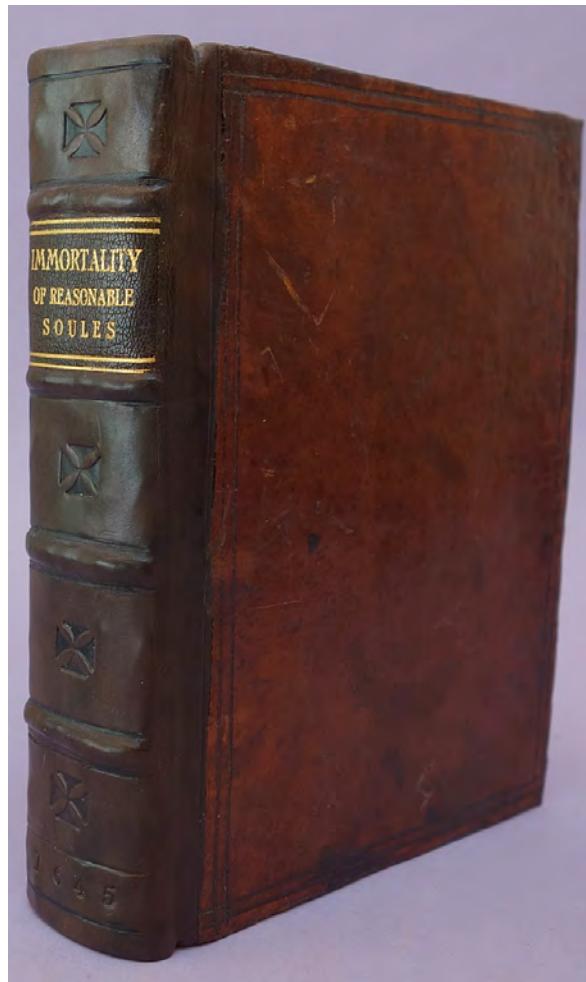


Landmark Work of Early Science

13. Digby, Kenelm (1603-65). Two treatises. . . . 4to. [48], 429, [11], 142, [3]pp. Without engraved portrait of Digby, which is not always present. Woodcut diagrams. London: Printed for John Williams, 1645. 190 x 146 mm. Blind-ruled calf ca. 1645, gilt-ruled edges, rebacked, corners repaired, endpapers renewed. Margins of title-leaf and last leaf repaired, light toning, one or two faint dampstains but generally clean and sound. 20th century bookplate of Clements C. Fry (1892-1955), Psychiatrist-in-Chief at Yale University's Department of University Health and noted print collector. \$1500

First Edition published in England (the *Two Treatises* was first published at Paris in 1644, while Digby and his family were in exile). Digby's *Two Treatises* is a landmark work in several fields of early science. It is the first fully developed expression of atomism or corpuscular theory; the first important defense of Harvey on the circulation in English; a modern presentation of the nervous system predating Descartes; and a ground-breaking work in embryology. It also contains the first recorded patch-test for allergy; the fullest early account in English of teaching lip-reading; and material on conditioning anticipating Pavlov.

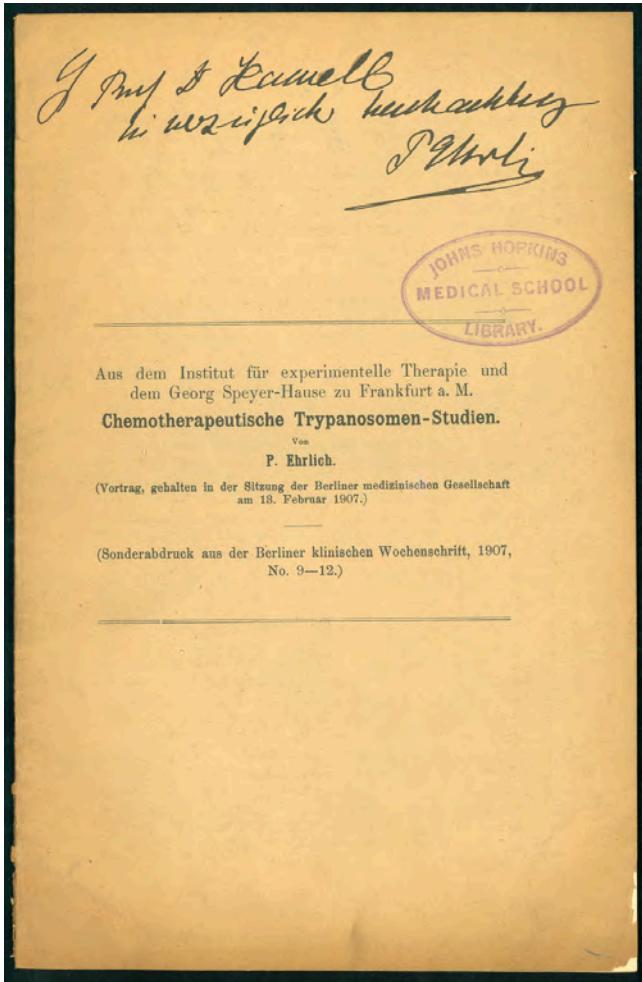
Digby introduced atomism to England, and in his *Two Treatises* he provided "the first fully developed atomistic system of the seventeenth century" (Petersson, *Sir Kenelm Digby*, p. 187). Atomism became in the hands of Boyle and Newton the foundation for modern chemistry and physics. Digby also provided a wealth of experimental data on simple bodies, mixed bodies, physics, physiology, botany, and the operation of the senses and mind. Twenty of thirty-eight chapters in the treatise on bodies are experimental, and exhibit competent technique.



Fulton, in his *Sir Kenelm Digby: Writer, Bibliophile and Protagonist of William Harvey* (1937), points out that from his remarks on the circulation, it is clear that Digby had met with Harvey and discussed his discovery with him. Fulton also noted that Digby gave a statement of reflex action “about as clear as anything” in Descartes’ *Discours*. In his discussion of the development of plants and animals, Digby raised the question of epigenesis versus preformation for practically the first time since the medieval Albertus Magnus (whom Digby translated). Prior to Harvey, Highmore, and Malpighi, Digby “well expresses the most modern conception of embryonic development . . . Digby has not received his due in the past; he stands to embryology as an exact science, much in the same relationship as Bacon to science as whole” (Needham, *A History of Embryology* [1959], p. 123).

Hunter and Macalpine, in *Three Hundred Years of Psychiatry* (1963; pp. 124ff.), point out three firsts in the behavioral sciences for Digby: “assuefaction” by which he meant the process of producing artificial responses by combining normally frightful objects with pleasing circumstances, and vice-versa, which contains the germ of Pavlov’s work on conditioning and conditioned reflexes; echopraxia, one of the manifestations of suggestibility; and the first patch-test on record, in which he distinguished psychological aversion from physical allergy in a case of antipathy to roses by placing a rose on an affected lady’s cheek while she slept.

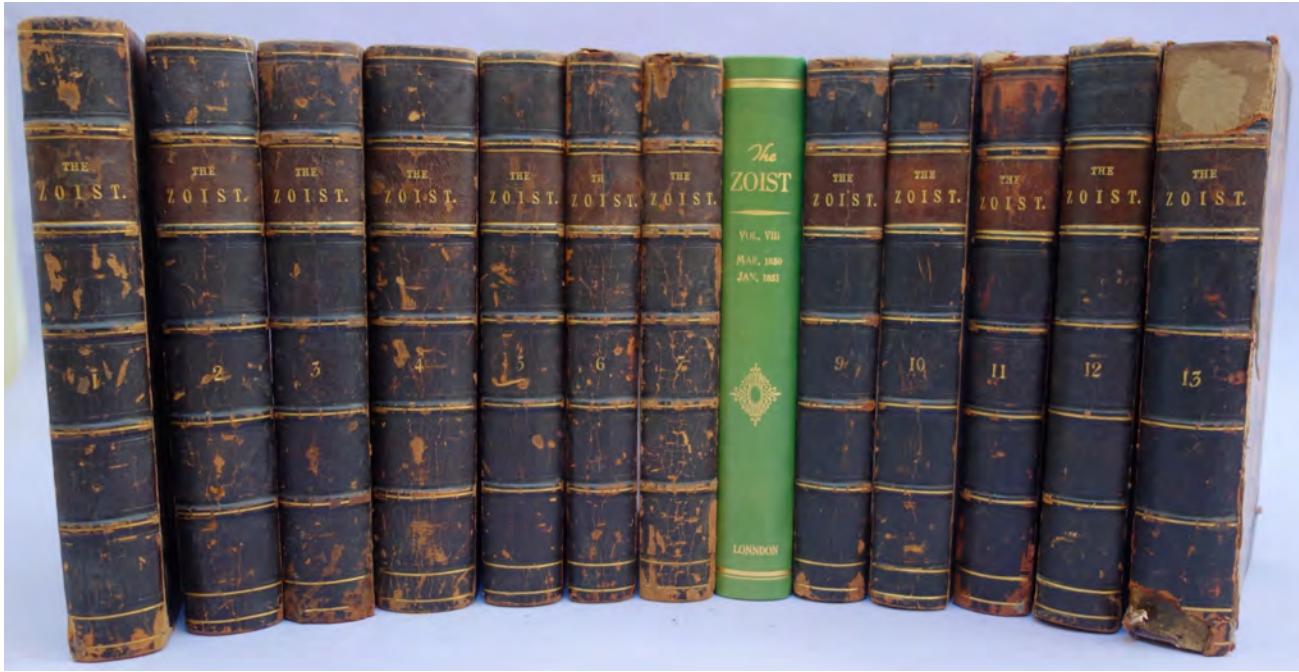
The fullest English account of teaching the deaf and dumb the new lip-reading developed by the Spanish priest Bonet is also found in the *Two Treatises*. Digby had seen the method in use while in Madrid on a mission in the 1620s, the same mission on which he tried his famous powder of sympathy for the first time. Rubin, *Digby*, no. 24. 41765



The First Account of Microbial Drug Resistance, Inscribed

14. Ehrlich, Paul (1854-1915). *Chemotherapeutische Trypanosomen-Studien.* Offprint from *Berliner klinischen Wochenschrift*, no. 9-12 (1907). 42pp. 222 x 145 mm. Original printed wrappers, slightly toned and chipped, small split in lower spine. Very good copy. *Presentation Copy, inscribed by Ehrlich on the front wrapper:* “H. Prof. Dr. Kamell(?) in [...] hochachtung P. Ehrlich.” Stamp of the Johns Hopkins Medical School Library. \$3750

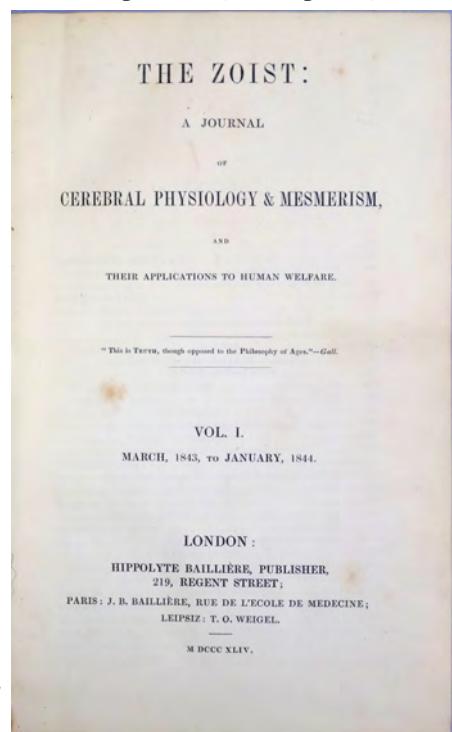
First Edition, Offprint Issue. The first account of induced microbial drug resistance, a now widespread phenomenon that has become a major concern for physicians and the pharmaceutical industry. Ehrlich encountered induced drug resistance in microbes while researching arsenical preparations as cures for sleeping sickness and other trypanosome-caused illnesses. In his paper, delivered as a lecture on Feb. 13, 1907, Ehrlich “explained how the widely varying stains of trypanosomes, which at first reacted with great sensitivity to chemotherapeutic agents, gradually became drug resistant and how this property was passed on to their offspring for many generations” (Bäumler, *Paul Ehrlich*, p. 128). Ehrlich continued to investigate drug-resistant trypanosomes for several years, recognizing that resistance provided an important tool for studying mechanisms of immune response. This copy bears a presentation inscription in Ehrlich’s bold hand; we have not been able to identify the recipient. This offprint is *very rare*, especially when inscribed. Franklin and Snow, *Biochemistry and Molecular Biology of Antimicrobial Drug Action*, p. 135. Gradmann, “Magic bullets and moving targets: Antibiotic resistance and experimental chemotherapy, 1900-1940,” *Dynamis* 31 (2011). Gradmann, “It seemed about time to try one of those modern medicines,” in *Twentieth Century Ethics of Human Subject Research*, ed. Roelcke and Maio, pp. 83-98. 43157

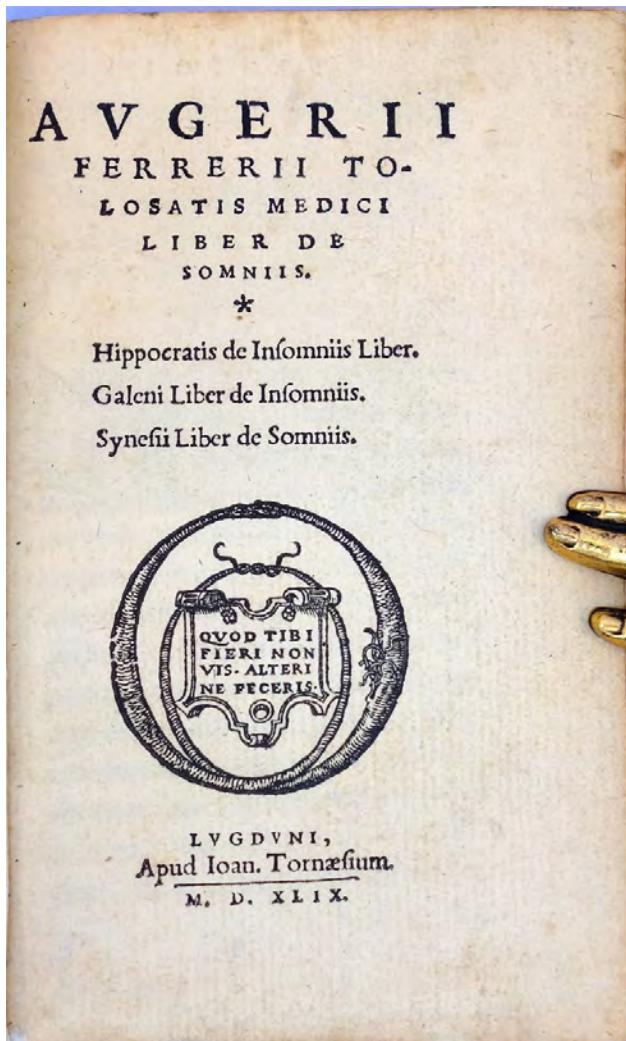


“Most Important Source about British Mesmerism of the Period”

15. [Elliotson, John (1791-1868).] *The Zoist: A journal of cerebral physiology & mesmerism, and their applications to human welfare.* Vols. I (1843/44) – XIII (1855/56) [all published]. London: Hippolyte Baillière, 1844-56. 209 x 135 mm. 13 volumes, bound in 19th century half calf, marbled boards (except for Vol.VIII in 20th century quarter calf, marbled boards), some wear and chipping, a few hinges tender, hinges in Vol. XIII repaired with glue. Very good set. \$4500

First Edition of “the most important source about British mesmerism of the period” (Gault, p. 206), and an invaluable reference for contemporary ideas and developments not only in mesmerism (hypnosis) but also in phrenology, neurology and psychiatry. The journal was founded and edited by Dr. John Elliotson, Britain’s leading advocate of mesmerism, who in 1843 had performed the first surgical operation on a patient anesthetized via hypnosis. “It was round *The Zoist*, and hence of course round Elliotson, that British mesmerism centered during its period of most active expansion, from 1843 until the early 1850s. Popular practitioners looked up to it, even though they perhaps resented its lofty tone. More serious and more educated adherents subscribed, contributed and sent in cases; interested outsiders turned to it to find out more. . . . Setting aside articles on phrenology, mesmeric cures of disease fill the greatest percentage of its pages, followed by cases of surgical operations performed with mesmeric anesthesia” (Gault, pp. 207-208). One of the most prolific contributors to the journal was Scottish surgeon James Esdaile, who performed over a hundred painless operations on mesmerized patients in the 1840s while stationed in India; a partial list of these operations, including the amputation of an arm and breast and the removal of 17 scrotal tumors, is included in the 1846 volume of *The Zoist*. Crabtree, *Animal Magnetism, Early Hypnotism, and Psychical Research 1766-1925*, no. 490. Gault, *A History of Hypnotism*, pp. 205-208. 41653





Renaissance Treatise on Dreams

16. Ferrier, Auger (1513-88). Augerii Ferrerii tolosatis medici liber de somniis. Hippocratis de insomniis liber. Galeni liber de insomniis. Synesii liber de somniis. 16mo. 202, [2]pp. Lyon: Jean de Tournes, 1549. 119 x 76 mm. Bound in early vellum manuscript leaf painted over in green and tooled in blind, some wear but sound, traces of original leather ties present. Endpapers toned, occasional minor spots and dampstains, but very good. Signature of Arnoldus Freitag (ca. 1560-1614), author of *Mythologia ethica* (1579), on the front pastedown; Freitag's autograph table of contents on the front free endpaper showing that this volume originally contained three other works in addition to the Ferrier—these were evidently removed at a later date as the binding shows evidence of having been cut down after their extraction. 19th-century bookplate of the Hammer Library, Stockholm, 19th century library stamp on front free endpaper, 19th-century owner's signature (Richard Bergström) on endpaper verso. \$2750

First Collected Edition and **First Available Edition** of Ferrier's *Liber de somniis* (Book on dreams). Ferrier's work was originally published in Toulouse circa 1541; the undated edition is *extremely rare*, with only one copy (Bibliothèque nationale) recorded in OCLC.

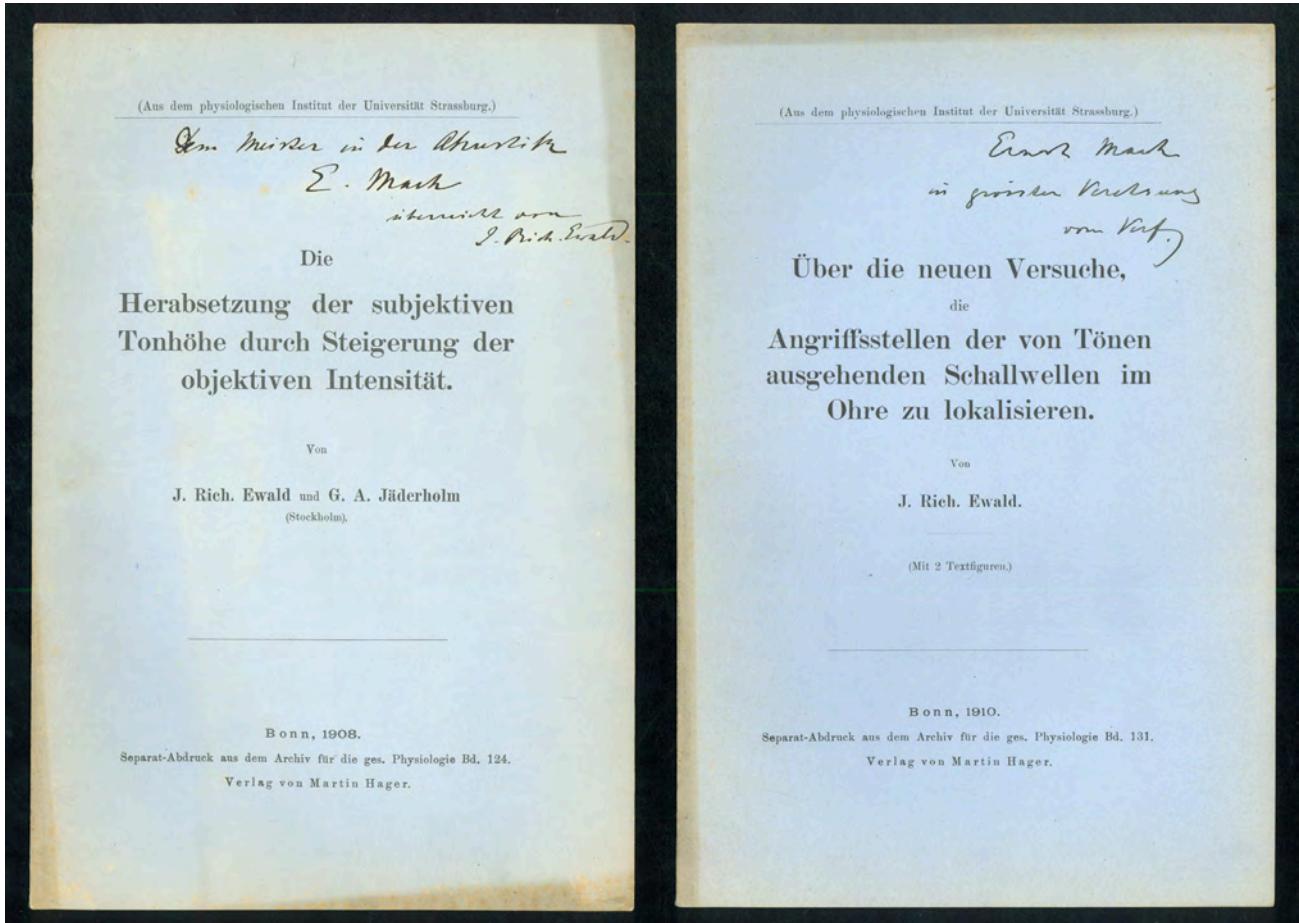
Ferrier's *Liber de somniis* was the longest treatise on dreams and dream interpretation since the 13th-century *De somno et vigilia* of Albertus Magnus. Like many other 16th-century scholars Ferrier maintained the belief, dating



back to classical times, that dreams were divinely (or demonically) inspired, and that dreams were meaningful and could be interpreted. He held that demons were responsible for erotic dreams and “dreams of luxury that tempted the sober” (Siriasi, p. 180); he also noted that some people in his time still followed the ancient practice of sleeping in hallowed spots after undergoing religious purification in order to encourage prophetic dreams.

A native of Toulouse, Ferrier was a professor of medicine in that city’s university; he also attained fame as a poet and astrologer. Sometime in the 1540s he befriended the great Italian humanist scholar Julius Scaliger (1484–1558), who held him in great esteem (see de Smet, p. 375). A few years later he was appointed physician in ordinary and astrologer to Catherine de Médicis, the queen of France. The *Liber de somniis* was Ferrier’s first publication; he went on to write a number of medical works, including a very successful treatise on syphilis (*De lue hispanica sive morbo gallico* [1564]).

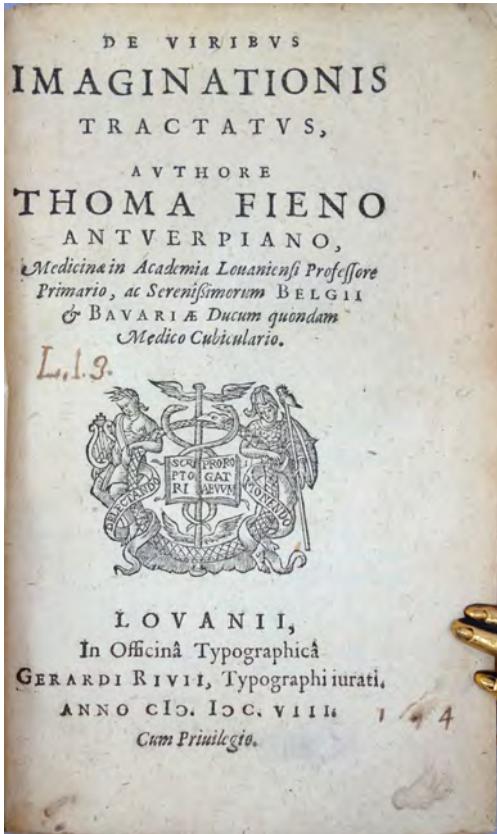
Ferrier published the 1549 edition of his work together with three classical treatises on dreams: Hippocrates’ *De insomniis liber*, translated by Scaliger; Galen’s *Liber de insomniis*, translated by Johann Guinter von Andernach (1505–74); and the *Liber de somniis* by the Greek bishop and Neoplatonist philosopher Synesius (c. 373–c. 414), translated by Marsilio Ficino (1433–99). This copy once belonged to Arnold Freitag of Emmerich, who in 1579 published the *Mythologia ethica*, a Latin translation illustrated with emblematic engravings of the collection of anonymous French fables known as the *Esbatement moral*. De Smet, “Of doctors, dreamers and soothsayers: The interlinking worlds of Julius Caesar Scaliger and Auger Ferrier,” *Bibliothèque d’Humanisme et Renaissance* 70 (2008): 351–376. Siriasi, *The Clock and the Mirror: Girolamo Cardano and Renaissance Medicine*, pp. 180; 188. 41646



Inscribed to Ernst Mach

17. Ewald, Ernst Julius Richard (1855-1921). (1) (with G. A. Jäderholm) Die Herabsetzung der subjektiven Tonhöhe durch Steigerung der objektiven Intensität. Offprint from *Archiv für die gesamte Physiologie* 124 (1908). 29-36pp. 236 x 162 mm. Original printed wrappers, slight discoloration at edges. *Presentation Copy, Inscribed by Ewald to Ernst Mach (1838-1916)* on the front wrapper: "Dem Meister in der Akustik E. Mach überreicht von J. Rich. Ewald." (2) Über die neuen Versuche, die Angriffsstellen der von Tönen ausgehenden Schallwellen im Ohr zu lokalisieren. Offprint from *Archiv für die gesamte Physiologie* 131 (1910). 188-198pp. 235 x 161 mm. Original printed wrappers, slight discoloration at edges. *Presentation Copy, Inscribed by Ewald to Mach* on the front wrapper: "Ernst Mach in grösster Verehrung vom Verf." Together 2 items. Fine. \$1250

First Editions, Offprint Issues. Ewald, who held the chair of physiology at the University of Strasbourg, is best known for his investigations of the vestibular system of the inner ear (see Garrison-Morton 1568 and 1569). Ewald presented the above two offprints on acoustics—"The reduction of subjective pitch by increasing objective intensity" and "On new attempts to locate the points of attack of outgoing sound waves in the ear"—to physicist Ernst Mach, whom Ewald praised as the "Master of acoustics." In the last decades of the 19th century Mach had devised and perfected optical and photographic techniques for studying sound waves; his famous acoustical studies of shock waves from bullets were published in the 1880s. 43158



“By Thinking Happy Things We Rejoice”

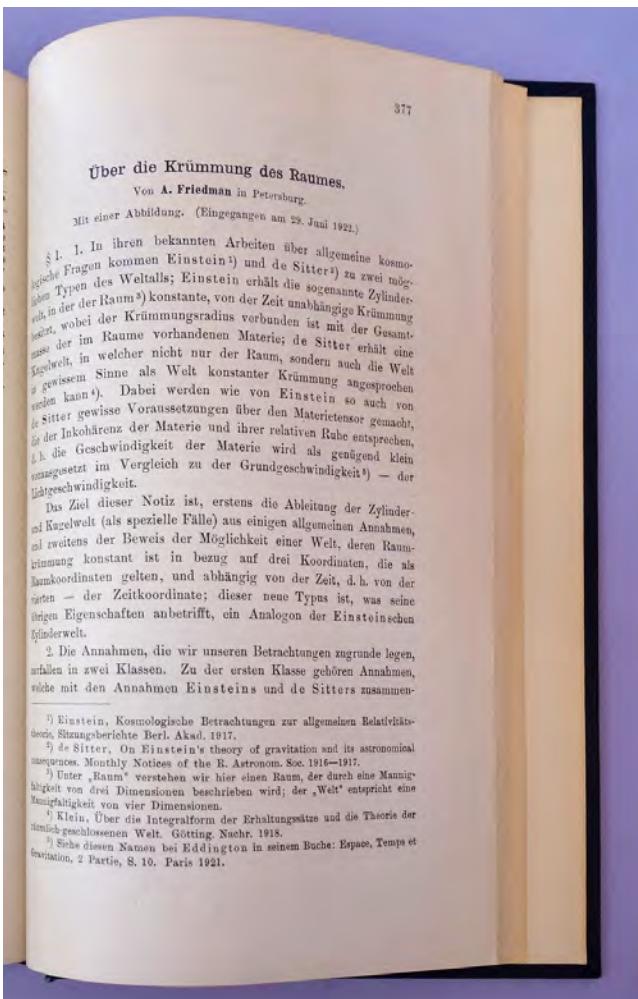
18. Fienus, Thomas (1567-1631). *De viribus imaginationis tractatus*. 8vo. [16], 200pp. Louvain: In officina typographica Gerardi Rivii, 1608. 167 x 104 mm. Old vellum, rebacked preserving portion of spine, endpapers renewed. Worming in lower margin of first four leaves, not affecting text, but very good otherwise. \$1500

First Edition. Fienus's treatise deals with the physiological or psychosomatic effects of the imagination on the body. Working within the psychological framework established by Thomas Aquinas, who identified imagination as one of the four apprehensive powers of the sensory soul, Fienus posited that the imagination exerts its influence indirectly on the body via the emotions:

The imagination is fitted by nature to move the appetite and excite the emotions, as is obvious, since by thinking happy things we rejoice, by thinking of sad things we fear and are sad, and all emotions follow previous thought. But the emotions are greatly alterative with respect to the body. . . . Since the imagination produces change by means of the emotions and the emotions produce change by means of the natural movement of the heart and by means of the movement of the humors and the spirits, the imagination does also (quoted in Brown, p. 42).

Fienus believed that maternal imagination influences the developing fetus, an argument he illustrated with 32 case histories, but denied that there was any relation between the human soul and the stars.

A native of Antwerp, Fienus received his medical training in Louvain and in Italy, where he studied under Girolamo Mercuriale, Ulisse Aldrovande and other prominent Italian physicians. He was appointed professor of medicine at Louvain in 1593, remaining there until his death nearly 40 years later. He was the author of several medical treatises, including three works on embryology and one on cauterization; he also wrote a book on the comet of 1618. Brown, “Descartes, dualism, and psychosomatic medicine,” in *The Anatomy of Madness*, ed. Bynum, Porter and Shepherd, pp. 40-62. 41647



Das Ziel dieser Notiz ist, erstens die Ableitung der Zylinderräum-Kugelwelt (als spezielle Fälle) aus einigen allgemeinen Annahmen, sei zweitens der Beweis der Möglichkeit einer Welt, deren Raumkrümmung konstant ist in bezug auf drei Koordinaten, die als Raumkoordinaten gelten, und abhängig von der Zeit, d.h. von der *Zeitkoordinate*; dieser neue Typus ist, was seine reichen Eigenschaften anbetrifft, ein Analogon der Einsteinischen Kugelwelt.

2 Die Annahmen, die wir unseren Betrachtungen zugrunde legen, teilen sich in zwei Klassen. Zu der ersten Klasse gehören Annahmen, welche mit den Annahmen Einsteins und de Sitters zusammen-

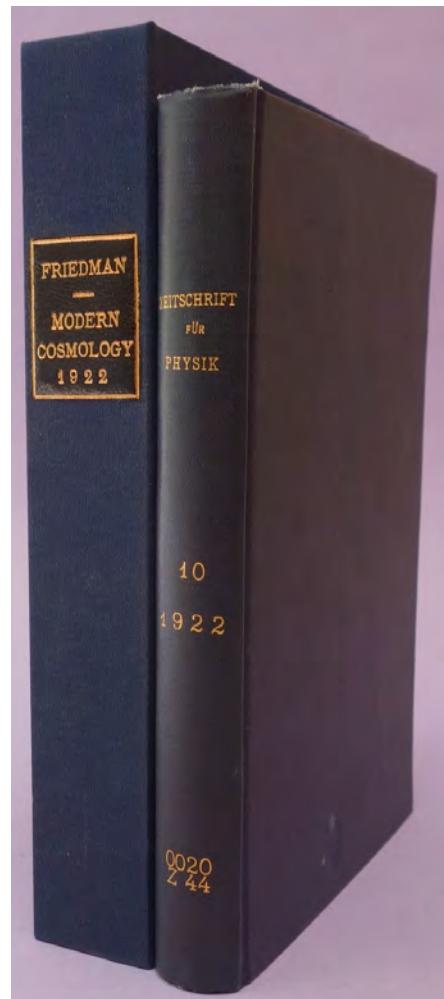
¹⁾ Einstein, Kosmologische Betrachtungen zur allgemeinen Relativitätstheorie, Sitzungsberichte Berl. Akad. 1917.

²⁾ de Sitter, On Einstein's theory of gravitation and its astronomical consequences. Monthly Notices of the R. Astronom. Soc. 1916=1917.

³⁾ Unter „Raum“ verstehen wir hier einen Raum, der durch eine Mannigfaltigkeit von drei Dimensionen beschrieben wird; der „Welt“ entspricht eine Mannigfaltigkeit von vier Dimensionen.

⁴⁾ Klein, Über die Integralform der Erhaltungssätze und die Theorie der spherisch geschlossenen Welt. Götting. Nachr. 1918.

⁵⁾ Siehe diesen Namen bei Eddington in seinem Buche: *Espace, Temps et gravitation*, 2. Partie, S. 10. Paris 1921.

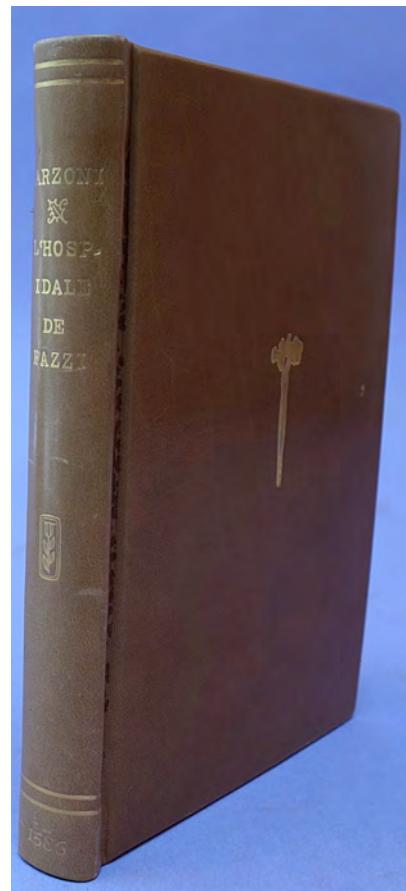


The Expanding Universe

19. Friedmann, Alexander Alexandrovich (1888-1925). Über die Krümmung des Raumes. In Zeitschrift für Physik 10 (1922): 377-386. Whole volume. iv, 413pp. 231 x 160 mm. Blue cloth, gilt-lettered spine, small spot on front cover; boxed. Very good copy. Embossed library stamp of the Carnegie Institution of Washington, Mount Wilson Observatory.

\$950

First Edition of Friedmann's paper on the equations governing the expansion of space, which made a valuable contribution to Einstein's theory of relativity by allowing for an expanding universe. "Friedmann's work on the theory of relativity dealt with one of its most difficult questions, the cosmological problem. In his paper 'Über die Krümmung des Raumes' (1922), he outlined the fundamental ideas of his cosmology: the supposition concerning the homogeneity of the distribution of matter in space and the consequent homogeneity and isotropy of space-time; that is, the existence of 'world' time, for which, at any moment in time, the metrics of space will be identical at all points and in all directions. This theory is especially important because it leads to a sufficiently correct explanation of the fundamental phenomenon known as the 'red shift.' This solution of the Einstein field equations, obtained from the above propositions, is the model for any homogenous and isotropic cosmological theory. It is interesting to note that Einstein thought that the cosmological solution to the equations of a field had to be static and had to lead to a closed model of the universe. Friedmann discarded both conditions and arrived at an independent solution. Einstein welcomed Friedmann's results because they showed the dispensability of the ad hoc cosmological term Einstein had been forced to introduce into the basic field equation of general relativity" (*Dictionary of Scientific Biography*). Pais, *Subtle is the Lord*, pp. 268, 288. 43153



“Hospital of Incurable Fools”

20. Garzoni, Tomaso (1549-89). *L'hospidale de' pazzi incurabili.* 8vo. [8], 107, [1]ff. Ferrara: Giulio Cesare Cagnacini & Fratelli, 1586. 149 x 103 mm. Modern calf. Light foxing and dampstaining, top margin trimmed a little close not affecting text, but very good. Early ownership inscription on title, library stamps on verso of last leaf. \$1500

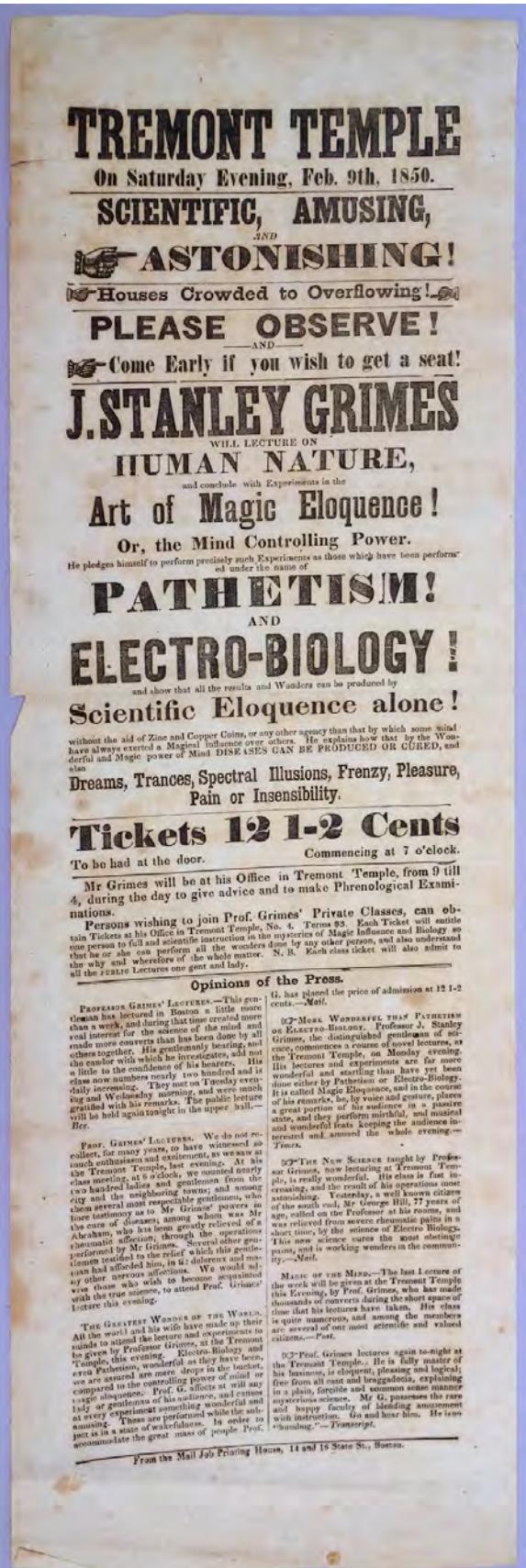
First Octavo Edition (a quarto edition and a duodecimo edition were also published the same year, in Venice and Piacenza respectively). Garzoni, an Italian monk, published a number of historical, philosophical and theological works during his short life, the best known of which is the present work on mental illness. It is remarkable for offering a glimpse of the 16th-century layman's (i.e., non-physician's) attitude toward insanity.

As the author specifically states, his book is intended to popularize the issue of insanity in order to enhance good mental health for the average person. In so doing, Garzoni in fact presents a reliable picture of the contemporary view of mental illness as held by the general public rather than by the medical profession.

In the first thirty chapters he presents a series of abnormal persons, each one characterized by a particular adjective according to the custom of the time (for instance, odd, stubborn, extravagant). From the description of the behavior of these individuals it is possible to relate these adjectives to modern psychopathological conditions: depression, schizophrenia, stupor, mental retardation, anxiety, psychopathic personality, impulsivity, paranoia, sexual disorders, periodic mania, psychomotor agitation, negativism, homicidal tendency, and others (Mora, pp. 245-246).

Garzoni's work went through a number of editions, and was translated into English in 1600 as *The Hospital of Incurable Fools*. Mora, "Renaissance conceptions and treatments of madness," in *History of Psychiatry and Medical Psychology*, ed. Wallace and Gach, pp. 227-254. 41650

"Mind-Controlling Power"



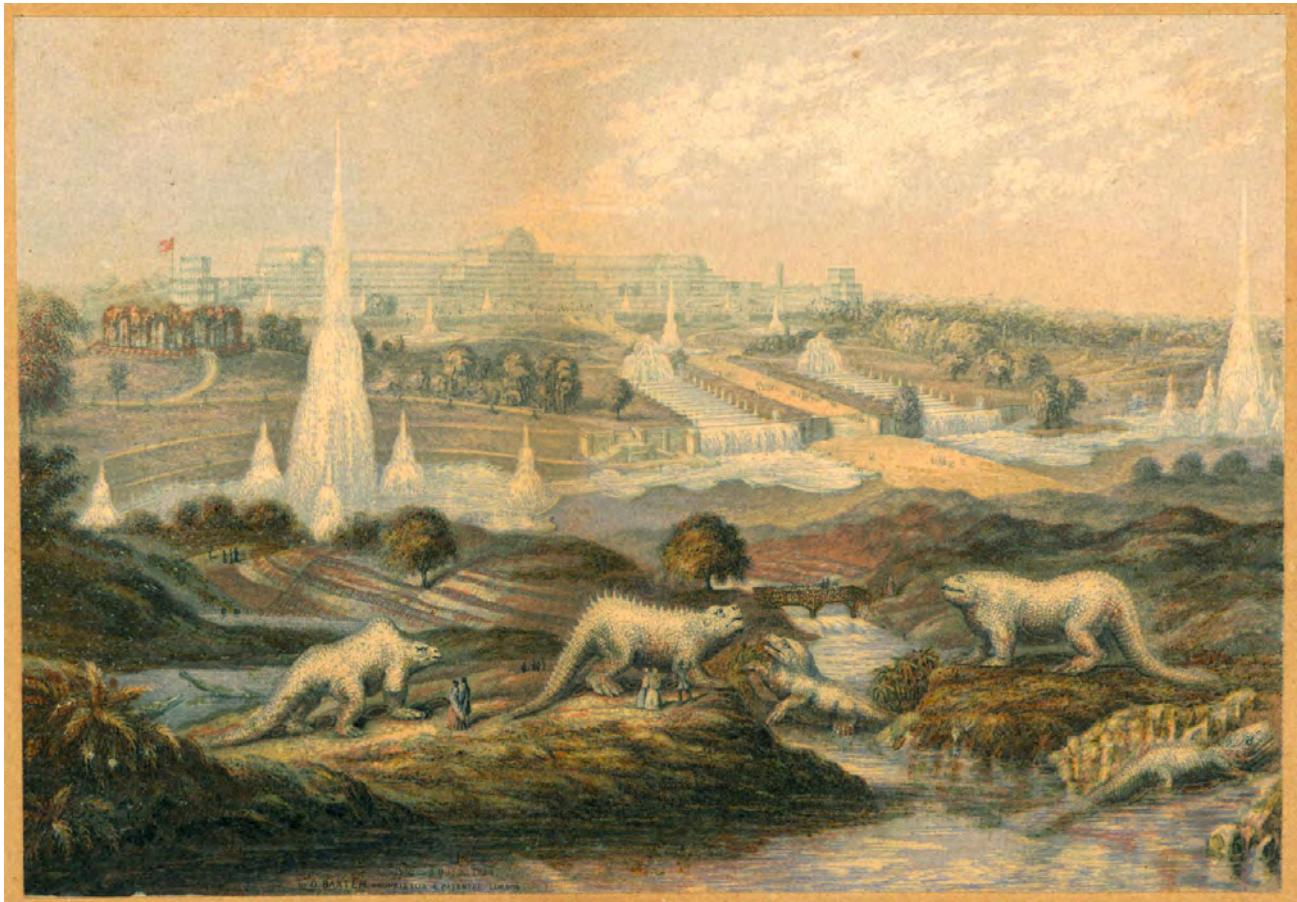
21. Grimes, James Stanley (1807-1903). Tremont Temple on Saturday evening, Feb. 9th, 1850. Scientific, amusing, and astonishing! . . . J. Stanley Grimes will lecture on human nature and conclude with experiments in the art of magic eloquence! Or the mind controlling power . . . Broadside. Boston: Mail Job Printing House, 1850. 517 x 163 mm. Moderate foxing, one or two marginal tears, but very good. \$1500

Rare, Possibly Unique Broadside advertising Grimes' lecture on the "Mind-controlling power" at Boston's Tremont Temple on the single night of February 9, 1850. No copies of the broadside are recorded in OCLC. Grimes, a phrenologist, was one of the leading American advocates of mesmerism, which had been introduced in the United States in 1838 by French lecturer Charles Poyen. Grimes was the author of a number of books on mesmerism, phrenology and related subjects, including *A New System of Phrenology* (1839), *Etherology, or the Philosophy of Mesmerism and Phrenology* (1845), and *The Mysteries of Human Nature Explained by a New System of Nervous Physiology* (1857).

In 1850 Grimes gave a series of lectures at the Tremont Temple debunking the recently introduced "sciences" of pathetism and electro-biology, the practitioners of which used metal coins to place their subjects into trances and effect miraculous cures. The broadside states that Grimes

pledges himself to perform precisely such Experiments as those which have been performed under the name of Pathetism! and Electro-Biology! and show that all the results and Wonders can be produced by Scientific Eloquence alone! without the aid of Zinc and Copper Coins, or any other agency than that by which some minds have always exerted a Magical influence over others. He explains how that by the Wonderful and Magic power of Mind DISEASES CAN BE PRODUCED OR CURED, and also Dreams, Trances, Spectral Illusions, Frenzy, Pleasure, Pain or Insensibility.

As the above statement indicates, Grimes believed that mesmeric phenomena were caused solely by the mesmerist's ability to influence his subject's mental state. He repeated this assertion in his *Great Discussion of Modern Spiritualism* (1860), where he stated that the effects caused by pathetism, electro-biology, spiritualism, etc. were "merely . . . produced upon the body and the mind, by affecting certain faculties of the mind," and dismissed these "sciences" as "the same old mesmerism in a new guise" (p. 121). Given this, it is clear that James Braid, coiner of the term "hypnosis," was in error when he associated Grimes with electro-biology in his *Electro-Biological Phenomena* (1851). Haller, *American Medicine in Transition, 1840-1910*, p. 104. 43101



Dinosaurs at the Crystal Palace—Original Color Print by George Baxter

22. Hawkins, Benjamin Waterhouse (1807-89). The Crystal Palace from a drawing by W. Hawkins. Original color print by George Baxter (1804-67), signed in the print: "Published Oct. 30, 1854 by G. Baxter Proprietor & Patentee London." Mounted on stiff paper embossed with Baxter's seal and the title of the print. 113 x 160 mm. (print); mount measures 186 x 231 mm. Mount creased in two corners, light edgewear but very good.

\$1250

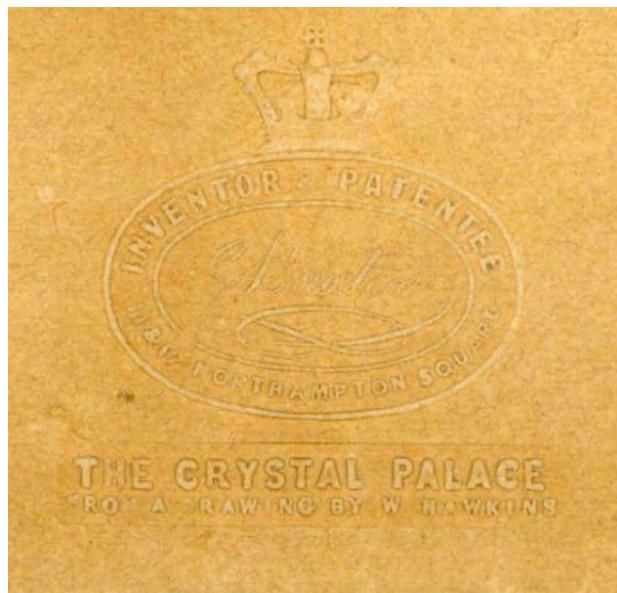
First Edition, and the Only Copy We Have Seen on the Market. A rare and attractive color print made from a drawing by British sculptor and nature artist Benjamin Waterhouse Hawkins, depicting the life-size concrete dinosaur models he created for display at the Crystal Palace after the building's relocation in 1854 from Hyde Park to Sydenham. Hawkins "was already familiar with scientific illustration: his were the drawings in the report on reptiles (1842-45) from the voyage of the Beagle, on which the young Charles Darwin had been unofficial naturalist. For his work at the Crystal Palace, Hawkins had the scientific help of the 'British Cuvier,' the anatomist Richard Owen. . . . Owen expounded his own ideas about the original forms of the animals; Hawkins made scale models and then prepared to expand them up to life size. In a large temporary workshop on the Crystal Palace site, using vast quantities of mundane materials, the extinct animals gradually took on huge and three-dimensional shape" (Rudwick, *Scenes from Deep Time*, pp. 140-141). Hawkins' dinosaur sculptures were placed on an artificial island on the Crystal Palace grounds, where artificial tides "would alternately submerge and reveal the marine reptiles of the Liassic period" (Rudwick, p. 144); this setting is clearly illustrated in our print. The dinosaur models, installed in 1854, proved to be one of the most popular features of the Crystal Palace and served to bring these prehistoric creatures into general public awareness.

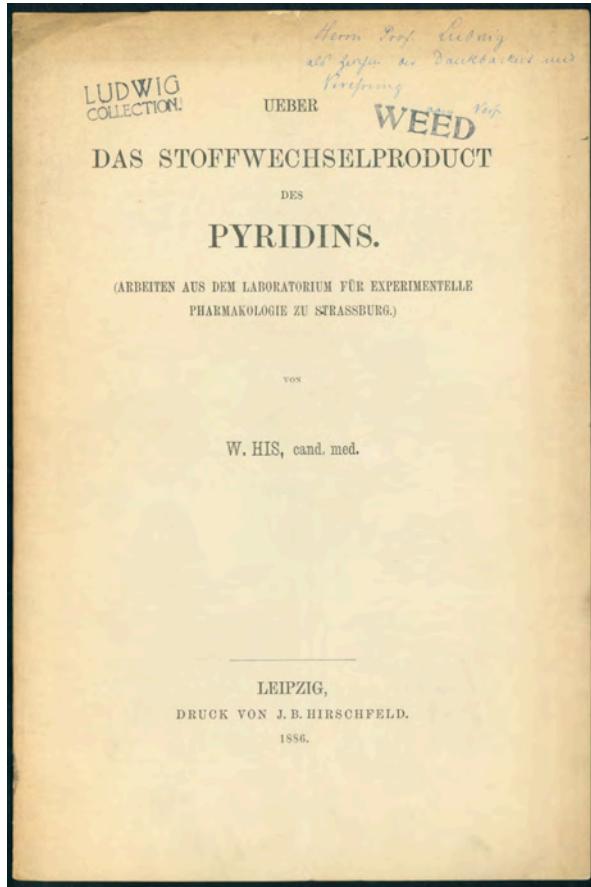


Top: Baxter's nearly invisible imprint in the plate (shown much larger than actual size)

Bottom: Baxter's embossed seal in the mount (shown much larger than actual size)

George Baxter, the printer of this image, invented the first commercially viable color printing process, a combination of intaglio and relief methods that he dubbed “oil-color printing.” The process, which he patented in 1835, involved “the coloring of an impression from an outline or key block, which could be either a copper, zinc or steel plate, or a litho stone—though the latter was but seldom used—by successive impressions from color blocks of wood or metal, one for each tint used . . . there was, in fact, no color printing in use in England at the time when Baxter commenced his work, and for a few years he had the field to himself” (Burch, p. 126). Baxter remained in the oil-color printing business until his retirement in 1860, at which time his methods were beginning to be superseded by cheaper color-printing processes like chromolithography. The present Baxter print is rare on the market, and is not cited in Rudwick’s *Scenes from Deep Time*. Burch, *Colour Printing and Colour Printers*, pp. 125–131. Lewis, *George Baxter (Color Printer) His Life and Work*, no. 193, noting both mounted and unmounted versions of the print. 43124





Discovery of Methylation of Organic Compounds, Inscribed to Carl Ludwig

23. His, Wilhelm, Jr. (1863-1934). Ueber das Stoffwechselproduct des Pyridins (Arbeiten aus dem Laboratorium für experimentelle Pharmakologie zu Strassburg). 8pp. Leipzig: J. B. Hirschfeld, 1886. 235 x 157 mm. Original printed wrappers, creased vertically, a little darkened at edges. Very good. Presentation Copy, inscribed by His to Carl Ludwig (1816-95) on the front wrapper: "Herrn Prof. Ludwig als Zeigen der Dankbarkeit und Verehrung, vom Verf." Stamps of the Ludwig Collection and of Lewis Hill Weed (1886-1952). \$1500

First Edition, preceding the paper's publication in the *Archiv für experimentelle Pathologie und Pharmakologie* 22 (1887). While a medical student at the University of Strasbourg, His discovered the body's ability to methylate organic compounds when he isolated N-methyl-pyridinium hydroxide from the urine of dogs that had been dosed with pyridine acetate. The son of noted anatomist and embryologist Wilhelm His Sr. (1831-1904), the younger His went on make a notable contribution to cardiology with his discovery in 1893 of the "bundle of His," a specialized tissue in the heart that helps synchronize contraction of the cardiac muscles (see Garrison-Morton 836). He was one of the first to recognize that the heartbeat originates in the individual cells of heart muscle.

His presented this copy of his paper to Carl Ludwig, the first professor of physiology at the University of Leipzig and founder of the physiological institute that now bears his name. His was working in Ludwig's laboratory at the time he made his discovery of the bundle of His. This copy was later owned by neuroanatomist Lewis H. Weed, director of the Johns Hopkins Medical School from 1929-46; Weed discovered the origin of the cerebrospinal fluid and mapped its circulation (see Garrison-Morton 1439). Jeffrey, *Machines in Our Hearts*, ch. 1. "Conjugation: Acetylation, Methylation." *Xenobiotic Metabolism*. Bioanalytical Systems, Inc., 2000. Web. Accessed 24 Apr. 2014. 43155

SCIENTIFIC AMERICAN

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NEW YORK, AUGUST 30, 1890.

[\$3.00 A YEAR.
WEEKLY.]



THE NEW CENSUS OF THE UNITED STATES—THE ELECTRICAL ENUMERATING MECHANISM.—[See page 132.]

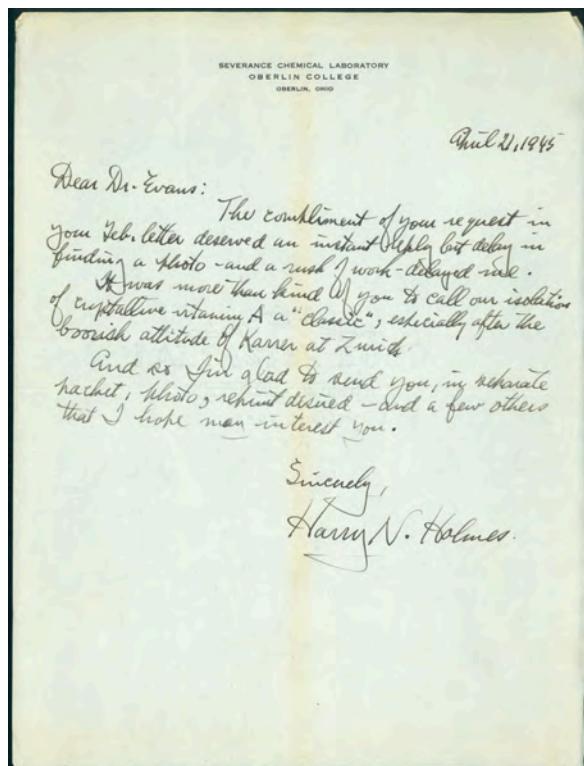
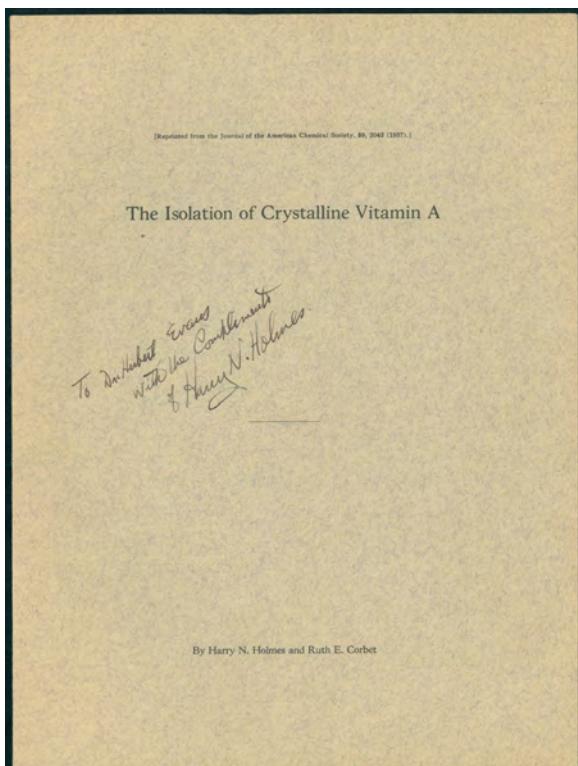
Remarkable Early Image of the Hollerith Tabulator

24. [Hollerith Machine.] The new census of the United States—the electrical enumerating mechanism. Wood-engraved illustration. In *Scientific American* 63, no. 9 (August 30, 1890): 122 [front wrapper]. Whole number. [122]-142pp. 395 x 277 mm. Original self-wrappers. Stab-holes in gutter margin (not affecting image), small marginal tear in first leaf mended with tape, but very good. \$950

First Edition of this large and remarkable early illustration of the Hollerith punched-card tabulator, which adorns the front wrapper of the August 30, 1890 issue of the *Scientific American* (the accompanying article, titled “The census of the United States,” is on p. 132). The image shows male and female workers using card-punch machines, tabulators and counting machines, while a group of clerks manually sorts and bundles the printed data sheets. This image, and its associated article, is the main source of visual documentation of the Hollerith machine. We have never seen any brochures published by Hollerith concerning his electric punch card tabulators.

The punched-card tabulator, which reigned as the primary large-scale data-processing system until the advent of the electronic digital computer, was invented in the 1880s by Herman Hollerith, a onetime clerk at the United States Census Bureau. Acting on a suggestion by John Shaw Billings, the Bureau’s head of vital statistics, Hollerith perfected a system that used punched cards for recording statistical data; the cards were read by electrical sensors and the results tabulated by machine. In 1890 the Census Bureau contracted with Hollerith to use his tabulator in the 1890 census, an event that has been described as “a milestone in the history of modern data processing” (Cortada, *Before the Computer: IBM, NCR, Burroughs, and Remington Rand and the Industry they Created, 1865–1956*, p. 48). Hollerith’s machines, which could tabulate data for as many as fifteen thousand people a day, cut the time needed to complete the census by nearly eighty percent over manual methods; they also enabled the Census Bureau to process a larger variety of data than ever before. The age of mechanized data handling had begun.

In December 1896 Hollerith incorporated his business under the name of the Tabulating Machine Company, manufacturing and leasing his tabulators to government agencies and, increasingly, to commercial users such as banks, insurance companies and department stores. Hollerith sold his company in 1911 to industrialist Charles R. Flint, who merged it with several other manufacturing companies to form C-T-R (the initials stood for Computing, Tabulating and Recording). In 1915 Thomas J. Watson became president of C-T-R; nine years later Watson changed the name of the company to International Business Machines (IBM). 43137



From the Isolator of Vitamin A to the Discoverer of Vitamin E

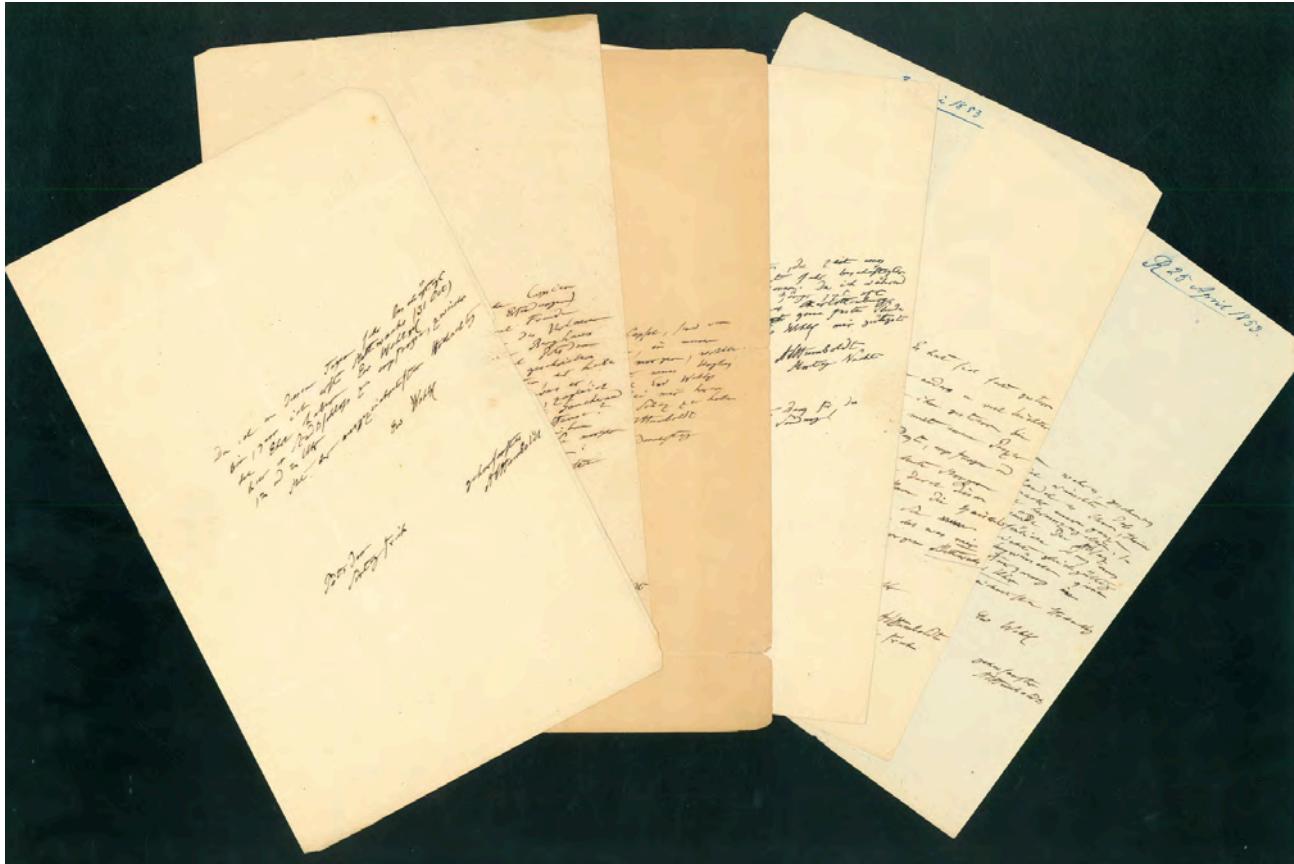
26. Holmes, Harry Nicholls (1879-1958). (1) (with Ruth E. Corbet) The isolation of crystalline vitamin A. Offprint from *Journal of the American Chemical Society* 59 (1937). 2042-2047pp. Original printed wrappers. Inscribed by Holmes to Herbert M. Evans (1882-1971) on the front wrapper: "To Herbert M. Evans with the Compliments of Harry N. Holmes." (2) Autograph letter signed to Evans. 1 page. Oberlin, April 21, 1945. 282 x 214 mm. (3) Black and white photograph of Holmes in his laboratory. 255 x 207 mm. Signed on the verso by Holmes: "Harry N. Holmes Oberlin College." (4) (with Henry M. Leicester) The isolation of carotene. Offprint from *Journal of the American Chemical Society* 54 (1932). 716-720pp. Original printed wrappers. 236 x 160 mm. Together 4 items, plus cover addressed in Holmes's hand to Evans with Evans's pencil note "Isolation of crystalline Vitamin A" on the front. Very good to fine.

\$2500

First Editions, Offprint Issues of nos. (1) and (3). Holmes and Corbet were the first to isolate vitamin A in pure crystalline form. Their paper, "The isolation of crystalline vitamin A," was the first full-length description of their achievement, following a very brief announcement published in *Science* earlier in 1937 (see Garrison-Morton 1074). Holmes inscribed this copy to Herbert M. Evans, the co-discoverer of vitamin E (see Garrison-Morton 1070), after Evans had written to Holmes requesting a copy and other materials:

The compliment of your request in your Feb. letter deserved an instant reply but delay in finding a photo—and a rush of work—delayed me. It was more than kind of you to call our isolation of crystalline vitamin A a "classic," especially after the boorish attitude of Karrer at Zurich. And so I'm glad to send you, in separate packet, photo, reprint desired—and a few others that I hope may interest you.

No. (3) is the photograph Holmes sent to Evans. "Karrer" refers to Paul Karrer (1889-1971), who was the first to establish the structure of beta-carotene (the chief precursor of vitamin A); Karrer received a share of the 1937 Nobel Prize in chemistry for his research on vitamins. No. (4), the paper by Holmes and Leicester, describes a laboratory method of isolating carotene "which would minimize the exposure of the materials to air at all times" (p. 717). Hutton, ed., *Chemistry* (2001), pp. 11-12. 43154



“The King Wants Me to be Present in Charlottenburg this Morning”

25. Humboldt, Alexander von (1769-1859). Collection of six autograph letters signed, in German, to Dr. Eduard Stolle (d. 1854). 6pp. total, plus 2 covers. 1841-1853. Various sizes (the largest measuring 228 x 141 mm.). Very good apart from a few small marginal tears and lacunae where seals were cut. English translations provided. \$4500

From the celebrated German polymath Alexander von Humboldt, the most popular figure in the sciences in the early 19th century. Humboldt's exploration of the Americas at the turn of the 19th century was legendary; his support of scientific endeavors was exemplary, as were his efforts in behalf of humanitarian policies in government and education; and the range of his competence, from geomagnetism to ethnography, was unequaled. He served as royal chamberlain to the court of Prussia, and was one of Friedrich Wilhelm IV's closest and most trusted advisors. Humboldt's correspondent was Dr. Eduard Stolle, a chemist and writer on art and science; he wrote a number of works on sugar beet farming and processing.

These six letters, written during Humboldt's years in the Prussian court, touch on Humboldt's scientific interests and his services to the king. Two of them mention the famous German cartographer Heinrich Berghaus (1797-1884), author of the *Physikalischer Atlas* (1845-48), which Humboldt had intended to serve as the atlas to his own *Kosmos*. Another letter mentions Alois Auer (Ritter von Welsbach), director of the Austrian State Printing house and author of the first work on “nature-printing”; i.e. the use of plants, rocks, animals and other natural materials to produce printed images. A complete listing of the letters is available on request. 43086



Huygens' Discovery of Saturn's Ring, Fabri's Rebuttal, and Huygens' Reply to Fabri

27. Huygens, Christiaan (1629-95). (1) *Systema Saturnium, sive de causis mirandorum Saturni phaenomenon et comite ejus planeta novo.* 4to. [12], 84pp. Folding engraved plate between pp. 34-35, duplicate copy of plate inserted before page 1; text engravings and woodcuts. The Hague: Adriaan Vlacq, 1659. (2) *Brevis assertio systematis Saturnii sui, ad serenissimum principem Leopoldum ab Hetruria.* 4to. 20pp. Engraved and woodcut text illustrations. The Hague: Adriaan Vlacq, 1660. (3) [Fabri, Honoré (1607-88).] *Eustachii de Divinis Septempedani brevis annotatio in sistema Saturnium Christiani Hugenii ad serenissimum principem Leopoldum . . .* 4to. [2], 23pp. Engraved full-page illustration on leaf C1. The Hague: Adriaan Vlacq, 1660. Together 3 works in 1. Red morocco gilt ca. 1660, hand-lettered paper spine label mostly worn off. A few pinhole wormholes in spine and covers, some worming to insides of boards and blank endpapers but text leaves almost completely unaffected, with only two tiny pinholes, almost invisible, affecting the outer margin of the first three leaves, and two tiny pinholes, also almost invisible, in the inner margin of the last two leaves of Fabri's pamphlet. An old paper repair, probably contemporaneous with the binding, is in the lower margin of leaf B4 in the work by Fabri. Light toning but otherwise fine, in the original 17th-century morocco binding. Contemporary morocco bindings on 17th century scientific works are very rare.

SOLD

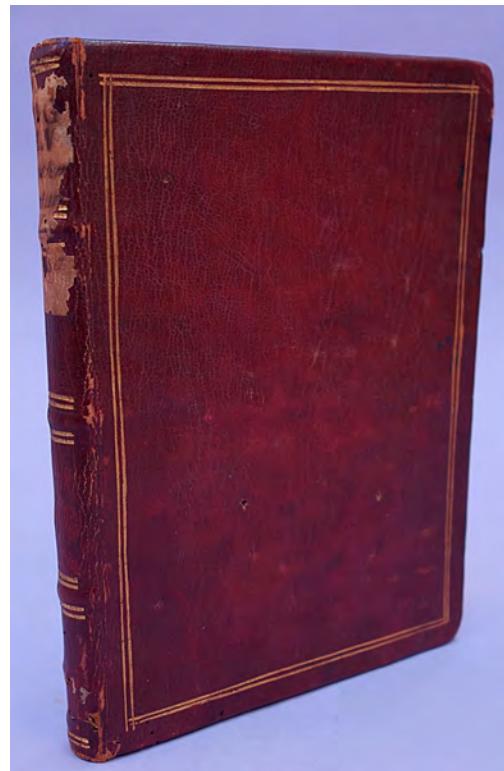
First Edition of Huygens' landmark work announcing his discovery of Saturn's ring, together with the **First Editions** of Honoré Fabri's pamphlet challenging Huygens' theory and Huygens' reply to Fabri. This collection of works was assembled in the 17th century and is still in its original unrestored red morocco binding.

In early 1655 Huygens and his older brother, Constantijn, designed and built a high-quality 12-foot telescope that enabled him to not only discover Saturn's moon Titan (the first of Saturn's moons to be observed and recorded), but to solve the problem of the nature of Saturn's mysterious and variable "arms," which had puzzled astronomers since Galileo discovered them in 1616. Huygens hypothesized that the planet's shape-changing "arms" were actually the phases of a single flat ring surrounding but not touching the main planet and inclined at an angle of 28 degrees to the ecliptic. Huygens encoded his solution to the Saturn problem in a single-sentence anagram at the end of his "De Saturni luna observatio nova," issued in March 1656; he published his complete "System of Saturn" three years later. Besides Huygens' explanation of his Saturn hypothesis, the *Systema Saturnium* contains many other observations on the planets and their satellites, all contributing to a strong defense of the Copernican heliocentric system.

"Huygens carefully describes his telescopes and discusses his observations of other celestial phenomena. He relates the whole history of his observations of Saturn's moon, and gives the elements of its orbit fairly accurately. Since it was he who discovered Saturn's satellite, Huygens argues that his telescopes are better than those of anyone else, and therefore he is justified in sitting in judgment on the observations of others. After criticizing the theories of Hevelius,

Roberval and Odierna, and ascribing the failure of these men to arrive at the correct solution to the puzzle to the inferiority of their telescopes, Huygens presents the solution of the anagram which he had published in *De Saturni luna* three years earlier: Annulo cingitur, tenui, plano, nusquam cohaerente, ad eclipticam inclinator, or, 'He is surrounded by a thin flat ring which does not touch him anywhere and is inclined to the ecliptic.' The rest of *Systema Saturnium* is an exhaustive exposition of how this ring, which stays parallel to itself, can account for all Saturn's appearances, fixing its inclination to the ecliptic and its points of intersection with the ecliptic, and making predictions as to when future appearances will be seen. The lucidity of the tract is well-illustrated by the explanatory figure used by Huygens, which is still used today to explain the appearances" (Van Helden, pp. 161-162).

Huygens' Saturn ring theory aroused some controversy among his fellow astronomers, in part because of his disparaging remarks about the superiority of his telescopes to their own, and in part because of his advocacy of the Copernican system. One of those upset by Huygens' work was the powerful French Jesuit Honoré Fabri, who "took exception to Huygens' frank Copernicanism. Fabri teamed up with the telescope maker Eustachio Divini, whose telescopes had supposedly been slighted by Huygens, and in the summer of 1660 a polemic tract entitled *Brevis annotatio in systema Saturnium* [no. (3) above] appeared in Rome. It was written by Fabri, although Divini's name appeared on the title page . . ." (Van Helden, p. 164). Fabri rejected Huygens' ring hypothesis, postulating instead that Saturn had two massive but dark satellites close to the planet and two small but bright satellites farther out, which would account for all the planet's observed appearances. "It was not difficult for Huygens to find fault with this hypothesis, and he quickly issued a reply, entitled *Brevis assertio systematis Saturni* [no. (2) above], in which he pointed out that the outline of the anses [arms] is elliptical, not circular, and also challenged Fabri to find the appropriate periods of these supposed satellites" (Van Helden, p. 165). Dibner, *Heralds of Science* 9 (no. 1 only). Norman 1136 (no. 1 only). Van Helden, "Annulo cingitur': The solution of the problem of Saturn," *Journal for the History of Astronomy* 5 (1974): 155-173. 43091

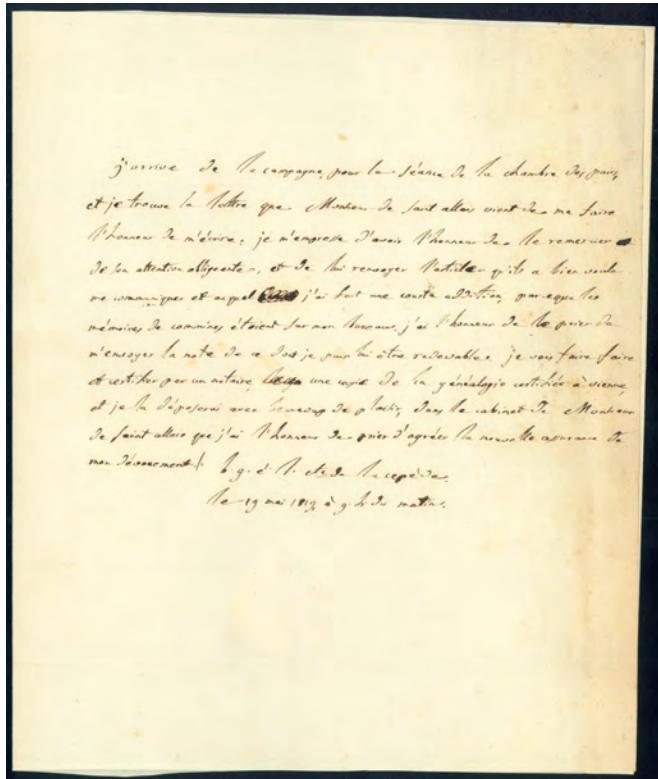
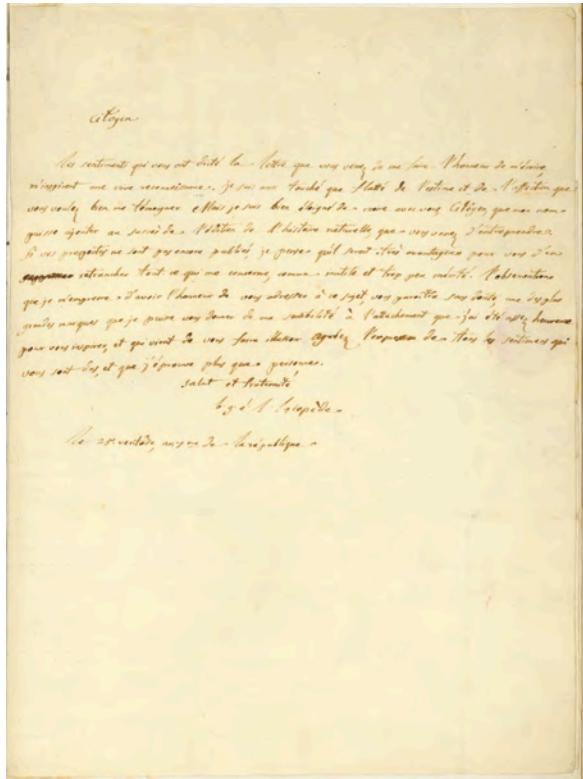




IBM Before the Computer

28. IBM. (1) A visit to the Endicott plant of the International Business Machines Corporation. 31pp. Endicott, NY: Press of International Business Machines Corp., 1938. 228 x 154 mm. Original printed wrappers. (2) IBM factory training school 1939-1940. 34, [2]pp. Endicott, NY: International Business Machines Corporation Educational Department, 1939. 215 x 142 mm. Original printed wrappers, slightly soiled. Stamp on front wrapper. (3) Facts about our factory. 30, [2]pp. Text illustrations. Endicott, NY: International Business Machines Corporation, 1939. 239 x 154 mm. Original printed wrappers. Small rust-marks on a few leaves. (4) Guide manual. 55pp. 3 folding diagrams. Endicott, NY: International Business Machines Corporation, 1940. 224 x 150 mm. Original printed wrappers, spine a bit worn. (5) Employes' manual. 37, [3]pp. Endicott, NY: International Business Machines Corporation, 1943. 230 x 155 mm. Original printed wrappers, slightly soiled. Stamp on front wrapper. (6) Shop terms. Prepared by the Department of Education, International Business Machines Corporation. 106pp. Syracuse, NY: Syracuse University Press, 1945. 192 x 134 mm. Original printed wrappers. Together 6 items. Library of Congress duplicate stamp on back wrappers and perforated library stamp on several leaves, pencil notations on four of the pamphlets. Very good. \$1250

First Editions of these six scarce informational pamphlets issued by IBM during the period just before the invention of the electronic computer, when the company dominated the market for electric punch-card tabulators and other calculating and data-processing machines. The pamphlets give a glimpse into IBM's corporate culture during this time: The company maintained a training school for workers at its Endicott factory offering classes in engineering and sales, and the plant also had a research library, on-site medical department, country club (complete with two golf courses, a bowling alley and a pistol range) and music room for the company-sponsored band, orchestra and glee clubs. IBM offered tours of its Endicott plant; the *Guide Manual* listed as no. (4) includes maps of the factory with tour routes and points of interest indicated. 43136

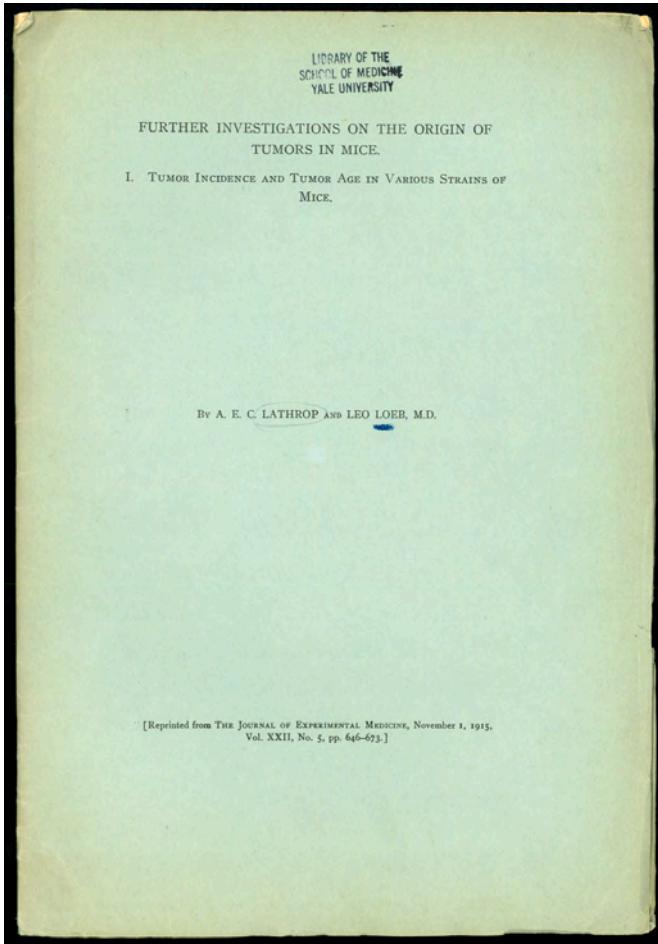


“The Esteem and Affection You Are Pleased to Show Me”

29. Lacépède, Bernard Germain de (1756-1825). (1) Autograph letter signed, in French, to publisher M. Saugrain. 1 page plus integral address leaf. N.p., "25 ventose, an 7me de la République" (i.e., 15 March 1799). 233 x 188 mm. Top portion of address leaf torn away, not affecting text, lacuna where seal was broken, small marginal tear. (2) Autograph letter signed, in French, to Nicolas Viton de Saint-Allais (1773-1842). 1 page plus integral address leaf. N.p., 19 May 1819. 207 x 175 mm. Light marginal soiling. Together 2 letters, enclosed in cloth portfolio stamped "P.V.H." in gilt on the front cover; accompanied by several printed items, including 2 engraved portraits of Lacépède, brief extracts from several of his printed works and 2 biographical notices. Very good. \$650

From French naturalist Lacépède, best known for his collaboration with Buffon on the continuation of the latter's monumental *Histoire naturelle*, to which Lacépède contributed eight volumes including the five-volume *Histoire naturelle des poissons* (1798–1803). These volumes were issued by the French publisher Saugrain, to whom the first letter above is addressed. Saugrain had apparently wanted to feature Lacépède's name in a prospectus for the *Histoire naturelle*; Lacépède responded by stating that although he was “as much touched as flattered by the esteem and affection you are pleased to show me,” he was “far from believing” that his name “might add to the success of the edition of the *Histoire naturelle* that you are undertaking.” He asked Saugrain that if the prospectuses had not yet been printed, “everything concerning me” should be removed “as useless and too little merited.”

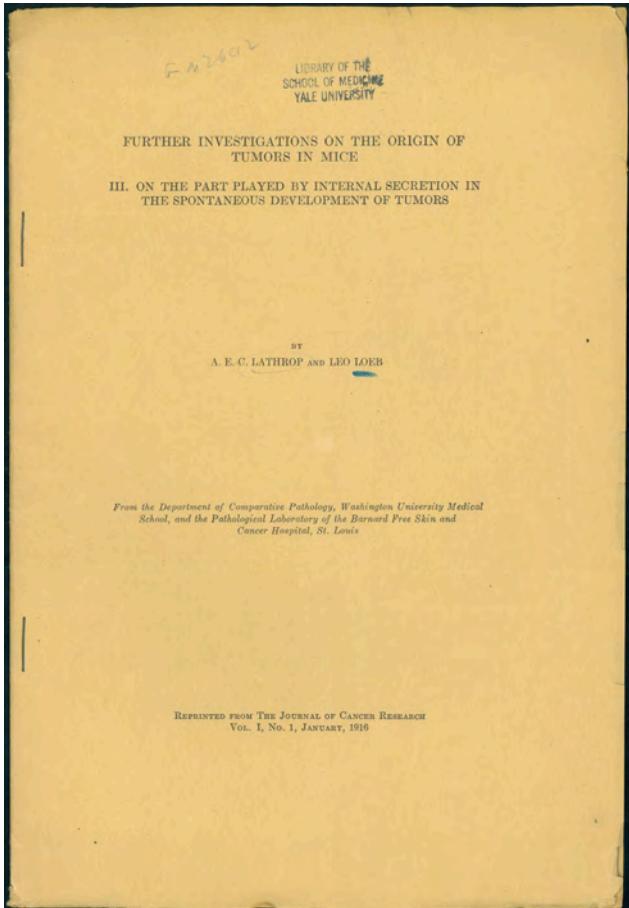
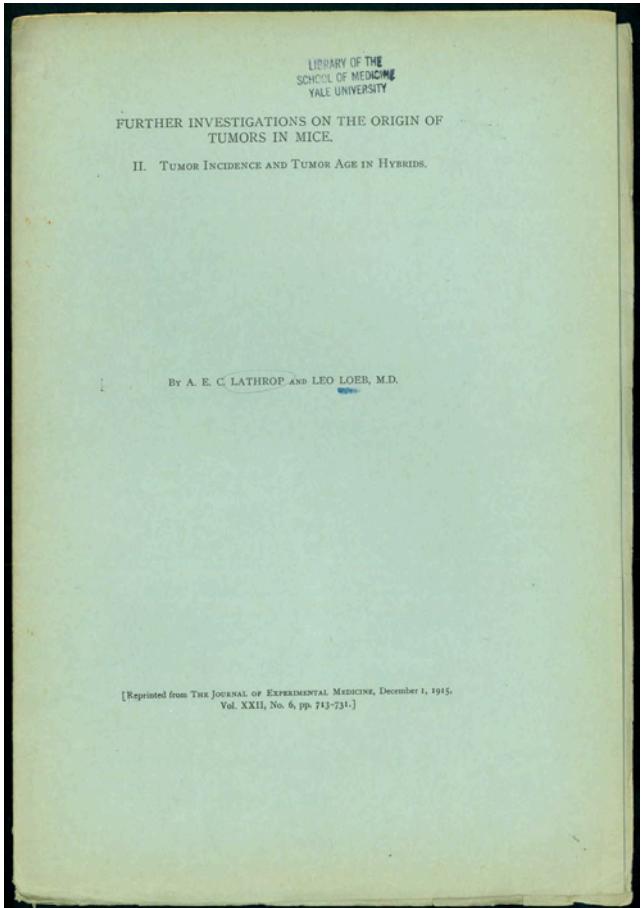
In the second letter, written in the third person to genealogist Nicolas Viton de Saint-Allais, Lacépède informed his correspondent that he was returning “the article [Saint-Allais] was so kind as to send me and to which I made a short addition, because the Mémoires of [Philippe de] Commynes were on my desk.” He further promised to send a certified copy of a genealogy to the French city of Vienne, which he would deposit “with great pleasure” in Saint-Allais’s collection. Saint-Allais was the head of the Bureau Générale de la Noblesse de France. “Commynes” refers to French historian and diplomat Philippe de Commynes (1447–1511), whose famous *Mémoires* were first published in 1524. 43134



Heredity and Breast Cancer

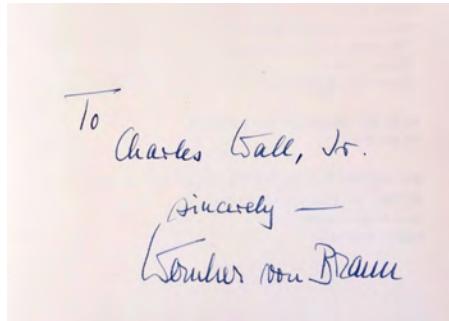
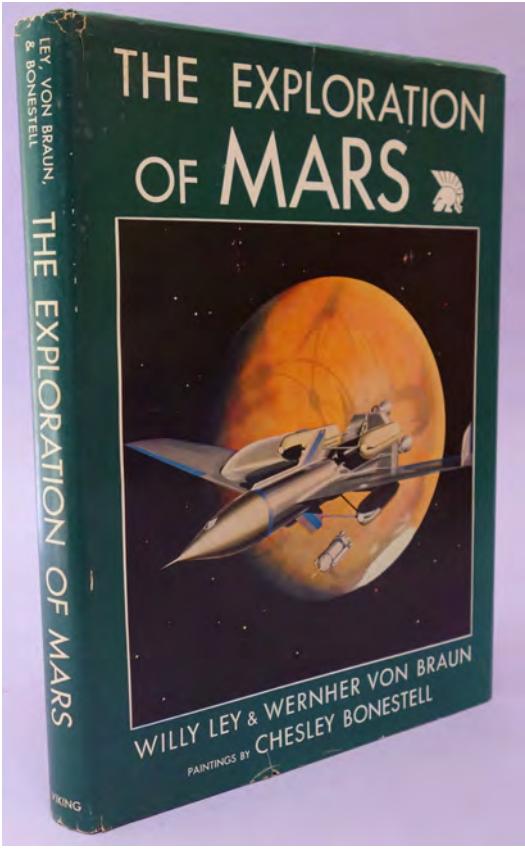
30. Lathrop, Abbie E. C. (1868-1918) and Leo Loeb (1869-1959). (1) Further investigations on the origin of tumors in mice. I. Tumor incidence and tumor age in various strains of mice. Offprint from *Journal of Experimental Medicine* 22 (1915). 646-673pp. 266 x 183 mm. (uncut and unopened). Original printed wrappers. (2) Further investigations on the origin of tumors in mice. II. Tumor incidence and tumor age in hybrids. Offprint from *Journal of Experimental Medicine* 22 (1915). 713-731pp. 266 x 182 mm. Original printed wrappers. (3) Further investigations on the origin of tumors in mice. III. On the part played by internal secretion in the spontaneous development of tumors. Offprint from *Journal of Cancer Research* 1 (1916). 19pp. 267 x 181 mm. Original printed wrappers. Together 3 items. Edges of wrappers slightly chipped, stamps of the Yale Medical Library on front wrappers, small tear in back wrapper of (3). Very good. \$2000

First Editions, Offprint Issues of these groundbreaking papers on the heritability of breast cancer in mice. Lathrop, a breeder of pet mice and other small animals in Granby, Massachusetts, began noticing that certain of her mouse strains had the tendency to develop breast tumors. She sent samples of these tumor-prone mice to several scientific researchers, including pathologist Leo Loeb, who was then on the faculty of the University of Pennsylvania. Loeb confirmed the mouse mammary tumors as cancerous, and he and Lathrop embarked on a five-year program of joint research on the nature and transmission of the tumors in these mice, in which Lathrop carried out experiments suggested by Loeb. Unusually for the time, Loeb recognized Lathrop as a full collaborator even though she was a woman and had not been trained as a scientist; her name appears on all their papers as a co-author.



The ten articles Lathrop and Loeb wrote over the period from 1913 to 1919 represent the first work establishing the connection between certain strains of mice and the inheritance of cancer. . . . Lathrop and Loeb used breeding experiments with the "silver fawn" and other Granby mice to show that the incidence of mammary tumors varied among different "families" of mice: for example, such tumors were high in the "English tan" and "sable" but low in "cream." Furthermore, they reported that ovariectomies reduced the frequency of mammary tumors, while pregnancies increased it. And finally, they observed that when members of high-tumor and low-tumor families were crossed the incidence of tumors in the new generation emulated that of the high-tumor family (*Rader, Making Mice: Standardizing Animals for American Biomedical Research, 1900-1955*, pp. 42-43).

During the period of his research with Lathrop, Loeb was appointed director of the Barnard Free Skin and Cancer Hospital in St. Louis, where he continued to pursue his cancer researches and gained an international reputation. His collaboration with Lathrop ended with her death from pernicious anemia in 1918. Garrison-Morton 2642 (part III only: "Demonstration of the influence of an internal secretion on the development of spontaneous cancer"). 43156



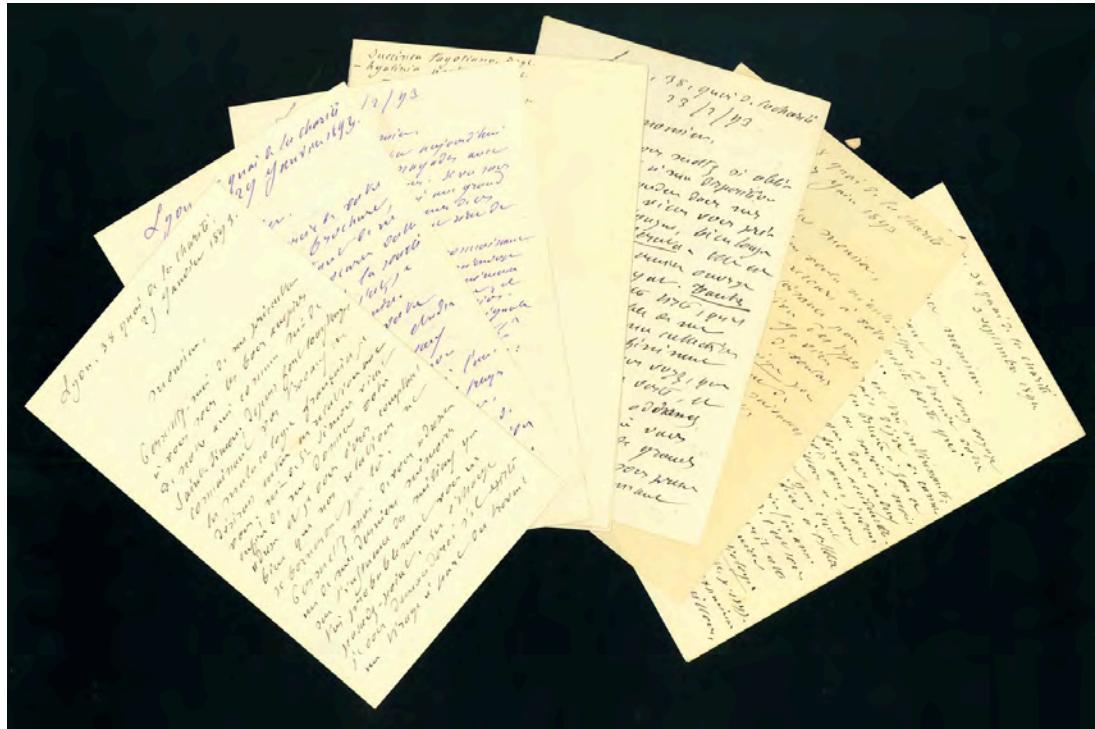
Inscribed by Wernher von Braun

31. Ley, Willy (1906-69) and Wernher von Braun (1912-77).

The exploration of Mars . . . with 16 paintings in color and 5 in black and white by Chesley Bonestell [1888-1986]. x, 176pp. 40 plates, included in pagination; text illustrations. New York: Viking Press, 1956. 272 x 202 mm. Original cloth, pictorial dust-jacket (slightly foxed, light edgewear). A few spots on edges, but very good to fine. *Presentation Copy, inscribed by von Braun on the half-title: "To Charles Wall, Jr. sincerely—Wernher von Braun."*

\$2500

First Edition. Ley and von Braun's master blueprint for man's first exploring trip to Mars, published six years before the Soviet Union launched the first manned space flight in April 1961. Updating the Mars exploration plan von Braun had outlined in his *Mars Project* (1952), *The Exploration of Mars* "detailed the architecture of a 12-man expedition and its unique lander . . . the Mars mission would center around a huge glider with a 450-foot wingspan. This vast glider-lander would carry nine explorers, in a dramatic descent to the Martian surface for a grueling land expedition lasting over a year. . . . Working out the technical details of all these scenarios made von Braun an engineering expert on space exploration well before any of it had occurred. His visions, brought grandly to life by Bonestell, stirred the American imagination. They also made von Braun the man who could design the real rockets and space stations to carry real astronauts across the space frontier" (Reynolds, *Apollo: The Epic Journey to the Moon*, 1963-1972, p. 29). The illustrations include 21 images by Chesley Bonestell, the "father of modern space art," whose breathtakingly realistic space paintings helped inspire the American space program. The work includes an historical bibliography of the astronomical literature on Mars. 43138



"I am Just Now Printing a Fairly Large Volume Entitled: Conchyliologie française"

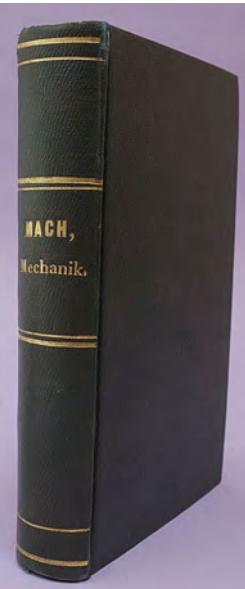
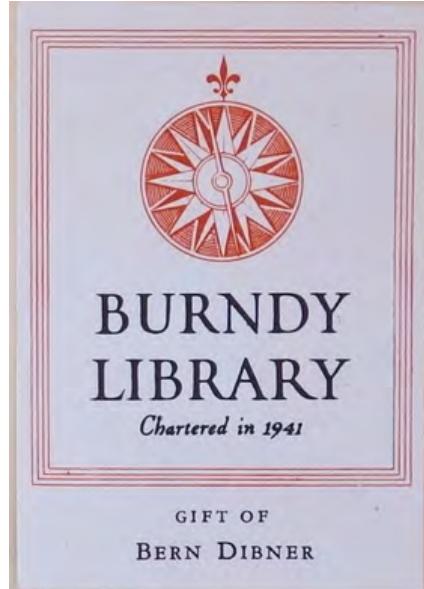
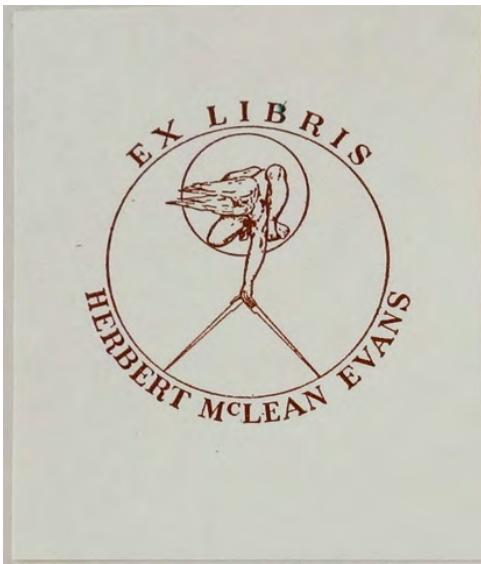
32. Locard, Arnould (1841-1904). Seven autograph letters signed, in French, to Maurice Gourdon (1847-1941), plus undated list of specimens in Locard's hand, another list in what is presumably Gourdon's hand, and two postmarked covers. 23pp. total. 21 January 1893 – 3 September 1894. 150 x 115 mm. Very good to fine. \$1250

From French malacologist Arnould Locard, author of *Contributions à la faune malacologique française* (1881-90), *Matériaux pour servir à l'histoire de la malacologie française* (1884-87) and numerous other works on both fossil and living mollusks; he is credited with describing hundreds of specimens, particularly freshwater mussels and gastropods from the genus *Helix*. His correspondent, Maurice Gourdon, was an explorer, cartographer, photographer and writer on the flora, fauna and geology of the Pyrenees; he was one of the seven noted *pyrénéistes* who conquered the mountain range's peaks in the latter half of the nineteenth century.

All of the letters in this collection—dated 21 January, 24 January, 13 February, 19 February, 23 February, 7 June 1893 and 3 September 1894—concern malacology. In his first letter to Gourdon, Locard introduced himself and proposed an exchange of publications and specimens:

... I am just now printing a fairly large volume entitled: Conchyliologie française; the first part on the shells found in the fresh and brackish waters of France, description of their families, genera and species. This volume, written in the same spirit as the one I published last year on French coastal marine shells, demanded a lot of me; all that relates to fresh and brackish waters is finished and partly printed, but despite this I am forced to surround myself with every document possible in order to avoid involuntary omissions! This winter I will tackle terrestrial fauna, and if you will permit me, I would once more appeal to you regarding species that you have identified in your region that are as yet unknown to me . . .

In further letters Locard discusses his planned examination of Gourdon's collection of freshwater shells, provides commentary on Gourdon's collections and sends Gourdon a long list of desiderata (mentioned in his letter of 23 February 1893). Accompanying this collection of Locard's letters to Gourdon is a list of "Coquilles désirées par A. Locard," presumably in Gourdon's hand. 43132

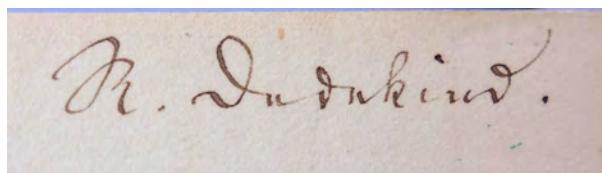


One of the Forerunners of Relativity Theory—Richard Dedekind's Copy

33. Mach, Ernst (1838-1916). Die Mechanik in ihrer Entwicklung historisch-kritisch dargestellt. x, 483pp. Text diagrams. Leipzig: F.A. Brockhaus, 1883. 183 x 118 mm. Original cloth, gilt-lettered spine, slight wear at corners and extremities, front hinge cracking. Slightly shaken, but very good. From the library of mathematician Richard Dedekind (1831-1916), with his signature on the front free endpaper. Bookplates of Herbert McLean Evans (1882-1971) and the Burndy Library. \$950

First Edition. Mach's *Die Mechanik*, containing his historical and critical analysis of Newtonian mechanics, was one of the most influential works on the philosophy of science of its time. *Die Mechanik* was highly praised by Einstein, who first encountered it during his student days in the late 1890s; in his 1916 obituary of Mach, Einstein cited Mach's famous critique of Newton's concepts of absolute space and absolute motion and concluded that "Mach clearly recognized the weak sides of classical mechanics and that he was not far from demanding a general theory of relativity" (Pais, p. 282). "Mach's critique of Newtonian mechanics, interpreted by Einstein within the context of Riemannian field theory, served as one of the strongest incentives for the development of Einstein's gravitational theory" (*Dictionary of Scientific Biography*).

This copy was once owned by Richard Dedekind, who made important contributions to abstract algebra, algebraic number theory and the foundations of real numbers. A large number of mathematical concepts now bear Dedekind's name, and he was responsible for introducing "a new style of mathematics that has been a major influence on mathematicians ever since" (O'Connor and Robertson). Later this copy passed into the hands of Herbert M. Evans, best known for his discoveries of Vitamin E and human growth hormone, and for being one of the pioneers in collecting books in the history of science. Pais, *Subtle is the Lord*, pp. 282-285. O'Connor, J.J., and E. F. Robertson, "Julius Wilhelm Richard Dedekind." The MacTutor History of Mathematics Archive. N.p., Sept. 1998. Web. Accessed 09 Apr. 2014. 43144





Letterpress Color Printing Tour de Force

34. Maret, Russell. Interstices & intersections or, an autodidact comprehends a cube. Thirteen Euclidean propositions. Translated by Thomas Little Heath with commentary by Russell Maret. 58pp., accordion-folded. 31 color images. New York: Russell Maret, 2014. Bound in leather and handmade paper by Daniel Kelm. One of 71 numbered copies printed by Maret on a special making of Zerkall paper. Preserved in a clamshell box. Prospectus included. \$6800

A **Letterpress Color Printing Tour de Force** based on Euclid's *Elements*, designed by Russell Maret and set in type designed by him, and with 31 beautiful color illustrations by Maret derived from Euclidean diagrams, each one requiring from ten to fourteen or more impressions to produce. Maret's book has been compared to Oliver Byrne's *The First Six Books of the Elements of Euclid* (1847), but it is vastly superior in its design and execution, and includes color images that it is unlikely that any other letterpress printer could achieve. Maret described his design process for this work as follows:

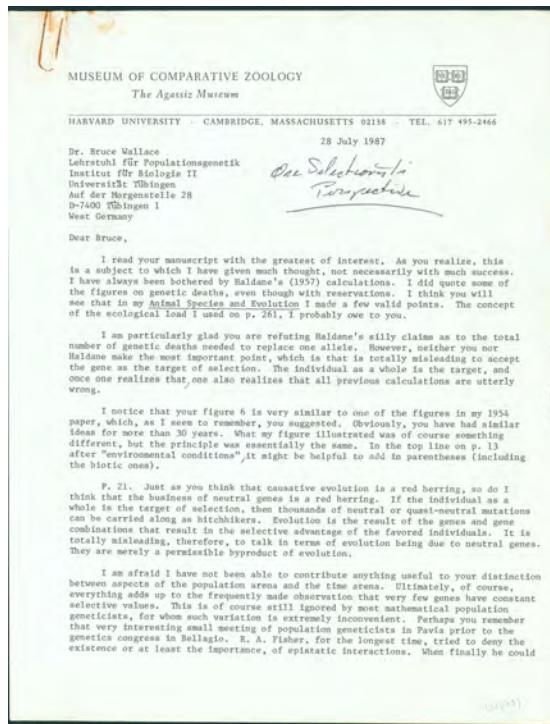
I am beginning the project by reading and drawing proofs for all the propositions in Euclid's thirteen books [of the Elements]. In the process, certain propositions stand out as having a particular interest or relevance: they spark associations in literature, letter forms, or life experience (or all three). I then develop visual ideas, write sections of text, and read books that might inspire or relate to the proposition at hand. Eventually, I will choose one proposition from each of the thirteen books and pair them with accompanying textual and visual commentaries of my own. For the illustrations, I am first painting them in pencil, ink, watercolor, and/or acrylic. Once I am satisfied with an illustration, I redraw it in separations to prepare it for printing. For the translation from painting to print to work, most of the spreads I have designed so far involve between ten and fourteen press runs each. The text of the book will be set in my proprietary type family, Gremolata & Cancellaresca Milanese, and printed from photo-polymer plates. The binding will be executed by Daniel Kelm (Prospectus).



Russell Maret is a fine printer and type designer working in New York City. He began printing in San Francisco as a teenager before apprenticing with Peter Koch in Berkeley and Firefly Press in Somerville, Massachusetts. He set up his own press at the Center for Book Arts, New York in 1993 and has been printing and publishing ever since. In 1996 Russell began teaching himself how to design typefaces, which led to a twelve-year study of letter forms before he completed his first typeface in 2008. The next year Russell was awarded the Rome Prize in Design from the American Academy in Rome. In 2011, he began working with the Dale Guild Type Foundry to convert some of his designs into new metal typefaces. 43151



View of Maret's studio showing the pages of Interstices & Intersections mounted on the wall



"Evolution is the Result of the Genes and Gene Combinations . . ."

35. Mayr, Ernst (1904-2005). (1) Typed letter signed to Bruce Wallace (1920-), on letterhead of Harvard's Museum of Comparative Zoology. 1+ pp. on 2 sheets. Cambridge, 28 July 1987. 280 x 217 mm. Small rust-mark from paper clip in upper corner. (2) Typed letter signed to Hampton L. Carson (1914-2004), on same letterhead. 1 page plus 6-leaf attachment, consisting of a photocopy of Mayr's "The why and how of species" (*Biology and Philosophy* 3 [1988]: 431-441). Cambridge, 22 September 1988. 280 x 217 mm. (3) Collection of letters, printed materials, etc. by Mayr and others on evolutionary biology; complete listing available on request. Very good. **\$750**

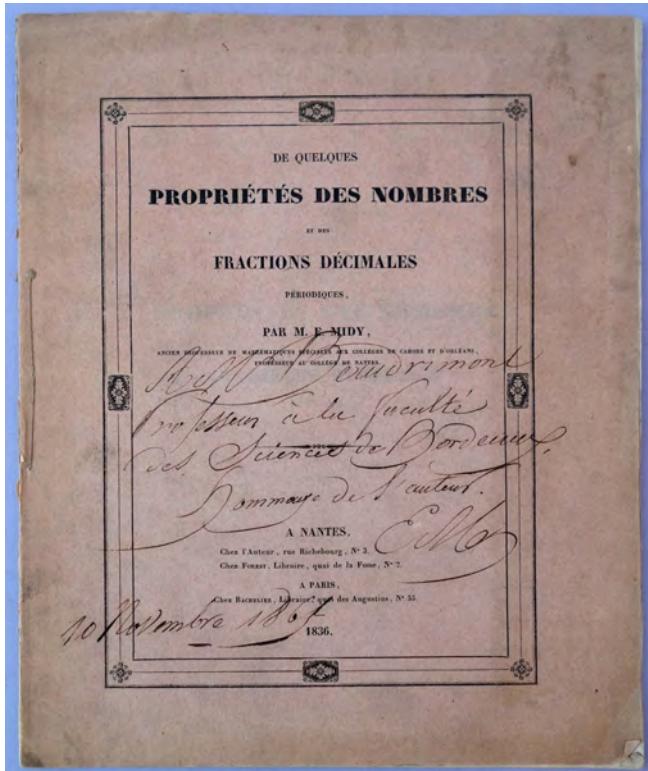
Two scientific letters from Ernst Mayr, one of the 20th century's leading biologists, whose work contributed to the modern evolutionary synthesis of Mendelian genetics, systematics and Darwinian evolution. Mayr was instrumental in developing the biological species concept, which defines species as a group of organisms that can breed only among themselves. He is also credited with inventing the modern philosophy of biology.

In his letter to Bruce Wallace, author of *Topics in Population Genetics* (1968), Mayr critiques the manuscript of a paper on evolutionary genetics that Wallace had sent him:

... I am particularly glad you are refuting [J. B. S.] Haldane's silly claims as to the total number of genetic deaths needed to replace one allele. However, neither you nor Haldane make the most important point, which is that it is totally misleading to accept the gene as the target of selection. The individual as a whole is the target, and once one realizes that one also realizes that all previous calculations are utterly wrong.

In his brief letter to biologist Hampton L. Carson, a professor at the University of Hawaii who made important contributions to our understanding of the evolution of *Drosophila*, Mayr agrees with Carson that "Paterson is confused," referring to Hugh E. H. Paterson and his definition of species as a set of organisms that recognize one another as potential mates. Mayr enclosed a copy of his paper "The why and how of species" (1988), in which he critiques Paterson's concept.

The remaining letters and other materials in this collection all have to do with evolutionary biology; a complete listing is available on request. 43080



Rare Proof of Midy's Theorem, With Author's Presentation Inscription

36. Midy, E. (fl. 1835-61). *De quelques propriétés des nombres et des fractions décimales périodiques.* vii, 21pp. Nantes: chez l'auteur; chez Forest; Paris: chez Bachelier, 1836. 262 x 209 mm. Original pink printed wrappers, light soiling, splits in upper and lower spine. Light dampstain in one corner, but very good. *Presentation Copy, inscribed by Midy to Alexandre-Edouard Baudrimont (1806-80) on the front wrapper: "A M. Baudrimont Professeur à la Faculté des Sciences de Bordeaux Hommage de l'auteur E. Midy. 10 Novembre 1836."*

\$7500

First Edition of the proof of Midy's Theorem, published by the author, a professor of mathematics at the Collège de Nantes. Very little is known about Midy apart from the fact that he also taught at the Collèges de Cahors and d'Orléans, and that he published a handful of brief mathematical and stenographic works at his own expense in the 1830s. As one might expect, Midy's *De quelques propriétés de nombres* is quite rare, with only five copies noted in OCLC (Bibliothèque Nationale, Bordeaux, Toulouse, Columbia U. and NYPL). Midy presented this copy to Alexandre-Edouard Baudrimont, professor of chemistry at the University of Bordeaux from 1848-1880 and author of works on industrial chemistry and the Basque language.

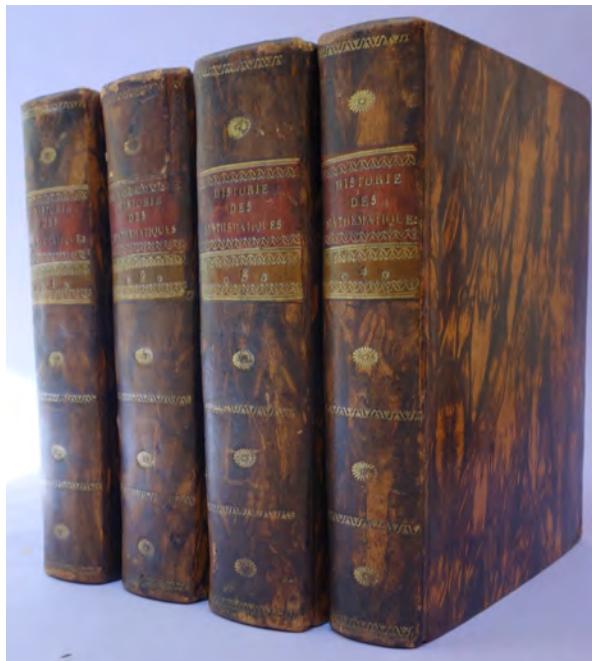
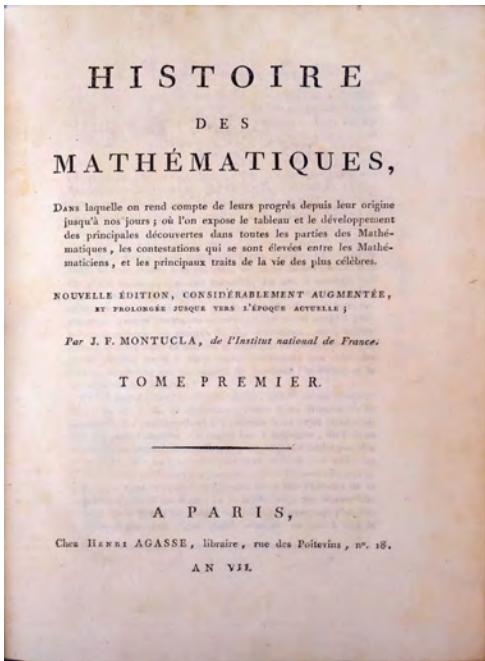
Midy's Theorem is a statement about the decimal expansion of fractions a/p where p is a prime number and a/p has a repeating decimal expansion with an even period. Specifically, Midy's Theorem states that for any prime number p , if a/p has an even period $2d$, then writing

$$a/p = 0.(UV)(UV)\dots$$

where U, V are blocks of d digits each, one has $U + V = 10^d - 1$; that is, a block of d nines (Gupta and Sury, p. 1). This also applies to powers of p (e.g., $p = 49$), or when the greatest common factor of p and d is 1. A specific example of Midy's theorem is the fraction $1/7$, which when decimalized has a repeating period of 6 digits: $0.142857\ 142857\dots$. Breaking each periodic string in half and adding the halves ($142 + 857$) yields the sum 999.

Midy's Theorem languished in obscurity until 2004, when Yale student Brian Ginsberg published an extension of it in his paper "Midy's (nearly) secret theorem—an extension after 165 years" (*College Mathematics Journal* 35

No. 37:
Montucla

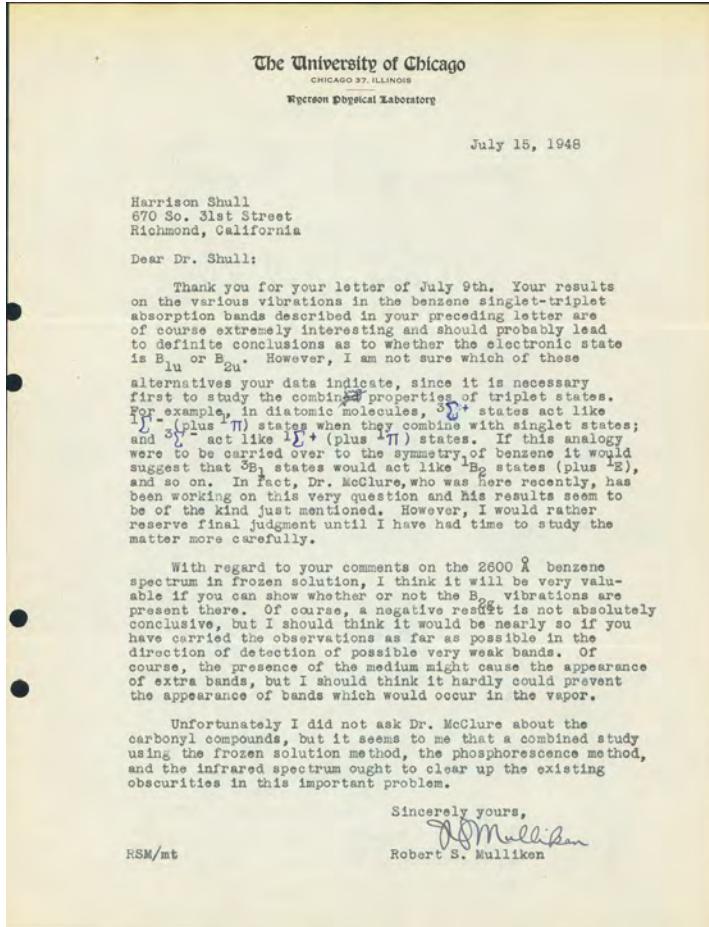


[2004]: 26–30). Since then a number of mathematicians have published further generalizations of Midy's Theorem, including Gupta and Sury ("Decimal expansion of $1/p$ and subgroup sums," *Integers: Electronic Journal of Combinatorial Number Theory* 5 [2005], #A19); Gil and Weiner ("On cyclic numbers and an extension of Midy's theorem," <http://arxiv.org/pdf/math.NT/0605347.pdf>); Lewittes ("Midy's theorem for periodic decimals," *Integers: Electronic Journal of Combinatorial Number Theory* 7 [2007], #A03) and Hamarsheh ("On Ginsberg theorem in base b ," *International Journal of Contemporary Mathematics* 8 [2013]: 633–636). Kemeny, John, "The Secret Theory of M. E. Midy = Casting in Nines," A Misplaced Blog, JohnKemeny.com, 6 Sept. 2007. Web. Accessed 28 Mar. 2014. 43133

The First Classical History of Mathematics

37. Montucla, Jean Etienne (1725-99). *Histoire des mathématiques . . . Nouvelle édition, considérablement augmentée, et prolongée jusque vers l'Époque actuel.* 4 vols., 4to. [4], viii, 739; [4], 717, [1]; viii, 832; [4], 688pp. 45 folding engraved plates, engraved portraits of Montucla and Lalande. Paris: Henri Agasse, 1799–1802. 255 x 193 mm. 19th century tree sheep, gilt spines with leather labels, a few scratches on covers, very minor edgewear. Minor occasional foxing, but overall a fine set, with all half-titles present. Bookplate of the Bibliotheca Lindesiana in all volumes. \$950

Second and most complete edition, considerably expanded from the first edition of 1758. Montucla's *Histoire*, the first classical history of mathematics, was "a comprehensive and, relative to the state of contemporary scholarship, accurate description of the development of the subject in various countries. The account also included mechanics, astronomy, optics, and music, which were then considered subdivisions of mathematics" (*Dictionary of Scientific Biography*). The first edition covered mathematical history only to the end of the 17th century; Montucla had intended to add a third volume covering mathematics to the mid-18th century but was unable to do so at the time. In the 1790s Montucla began working on the second edition of his *Histoire*, revising and expanding the first two volumes and adding a third devoted to 18th-century mathematics. He died when this last volume was in press and the remainder of the second edition was completed (with the assistance of others) by his friend, the astronomer J. J. L. de Lalande (1732–1807). Volume three covers 18th century pure mathematics, optics and mechanics, while the fourth volume covers 18th century astronomy, mathematical geography and navigation. O'Connor, J. J., and E. F. Robertson. "Jean Etienne Montucla." The MacTutor History of Mathematics Archive. N.p., n.d. Web. Accessed 07 Jan. 2013. 43147



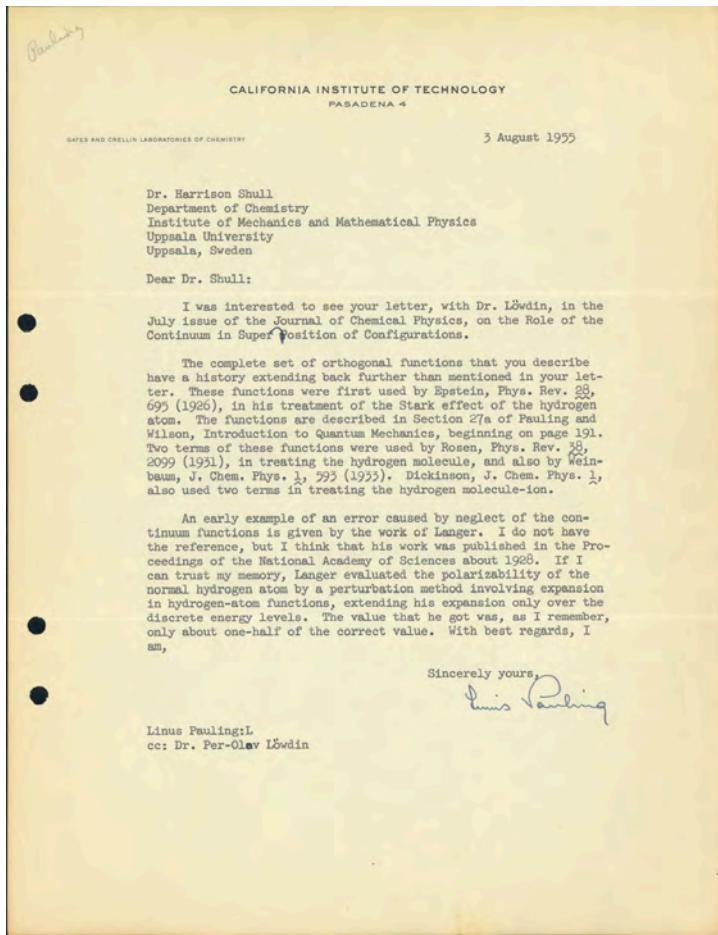
Archive of 122 Letters Featuring Correspondence from Two Nobel Chemistry Laureates

38. Mulliken, Robert Sanderson (1896-1986), Harrison Shull (1923-2003) et al. Extensive archive of correspondence primarily between Mulliken and Shull, but also including letters from Linus Pauling (1901-94), Charles A. Coulson (1910-74) and others. 1942-1978. 122 items in all; complete calendar of the archive available on request. Most letters with binder holes punched in left margin. Very good.

\$9500

This remarkable scientific archive, representing over thirty years of correspondence, is the largest collection of correspondence from a Nobel Prize-winning scientist that we have ever handled. The archive features over 70 letters from American physicist and chemist Robert S. Mulliken, who received the Nobel Prize for chemistry in 1966 for his development of molecular orbital theory; i.e. the elaboration of the molecular orbital method of computing the structure of molecules. “[Mulliken’s] unique individual achievement was the devising of a conceptual framework and terminology with which to describe, explain, and predict chemical phenomena. This helped place chemistry, largely an empirical science until World War II, on a firmer theoretical foundation” (James, *Nobel Laureates in Chemistry 1901-1992*, p. 477).

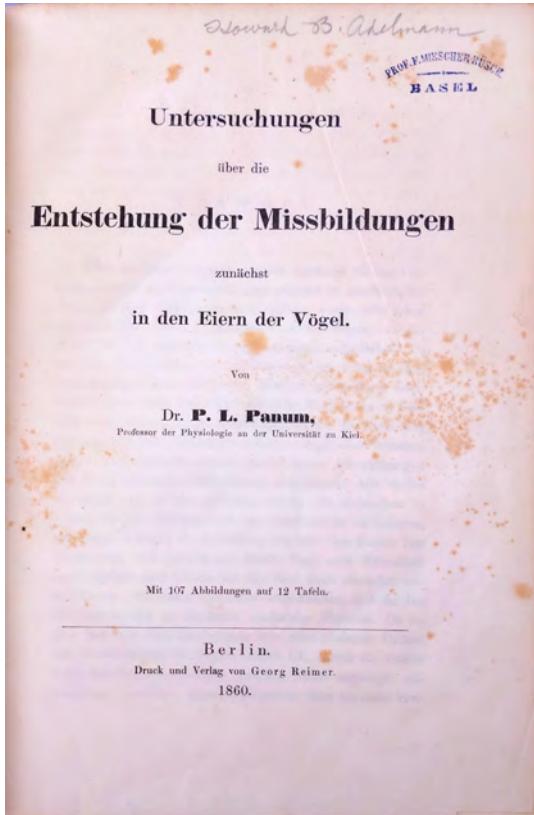
Mulliken’s correspondent was quantum chemist Harrison Shull, the son of noted geneticist George H. Shull. The two men first met in 1948 when Shull worked with Mulliken for a year as a post-doc at the University of Chicago; they enjoyed a warm relationship and collaborated on several projects over the years. Shull went on to a prestigious scientific and academic career that included election to the National Academy of Science in 1969.



The archive contains 77 signed letters from Mulliken to Shull, together with 33 carbons of Shull's responses. The letters date from 1948, when Shull received his fellowship to study with Mulliken, to the mid-1960s. A good number of Mulliken's letters contain detailed critiques or commentary on Shull's research; others document Shull's pioneering work in the 1950s on developing computer programs for use in quantum chemistry; and a later group reflects Mulliken and Shull's roles as administrators, organizers of scientific conferences, etc. One of the last letters in the correspondence is Mullikan's letter to Shull dated February 14, 1967, written "to express on paper, very belatedly, our most sincere thanks for your message of congratulations" on Mulliken's receipt of the Nobel Prize.

Also featured in the archive are two letters to Shull from Linus Pauling, who received the Nobel Prize in 1954 for his research into the nature of the chemical bond. The first, dated August 3, 1955, was written in response to a letter in the *Journal of Chemical Physics* by Shull and Swedish physicist Per-Olov Löwdin, in which the two recommended the use of Laguerre functions over Legendre functions and traced the use of the former back to the work of Egil Hylleraas in the late 1920s. Pauling corrected this latter statement in his letter, noting that "these [Laguerre] functions were first used by Epstein, Phys. Rev. 28, 695 (1926), in his treatment of the Stark effect of the hydrogen atom," and further pointing out that the functions had been described in his and Wilson's *Introduction to Quantum Mechanics* (1935). A carbon typescript of Shull's chagrined response to Pauling is included. Pauling's second letter to Shull, dated July 30, 1975, is a response to Shull's letter of congratulation on Pauling's receipt of the National Medal of Science.

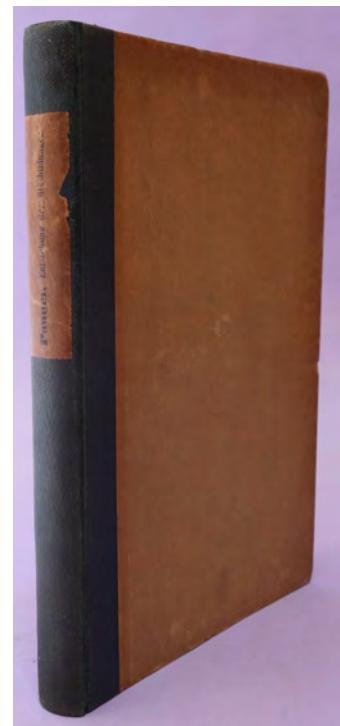
Another group of letters in this archive is from British theoretical chemist Charles A. Coulson, who pioneered in the application of the quantum theory of valency to problems of molecular structure, dynamics and reactivity. A complete calendar of the archive is available on request. 43110

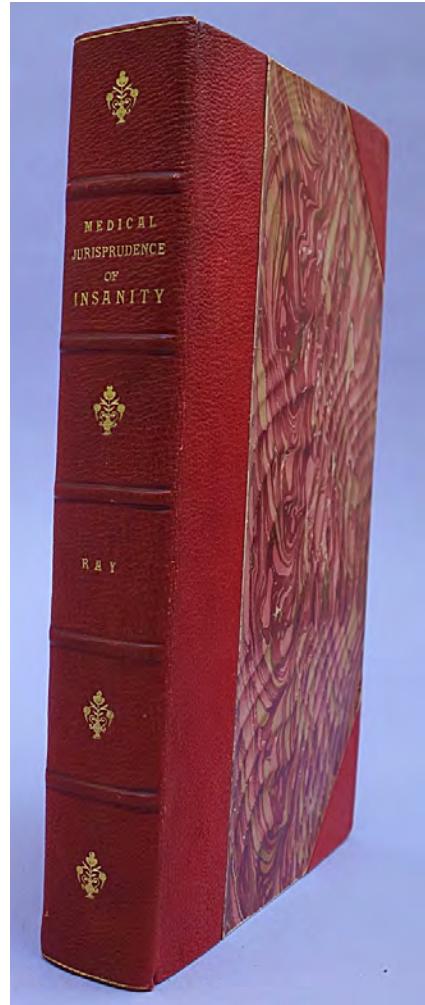
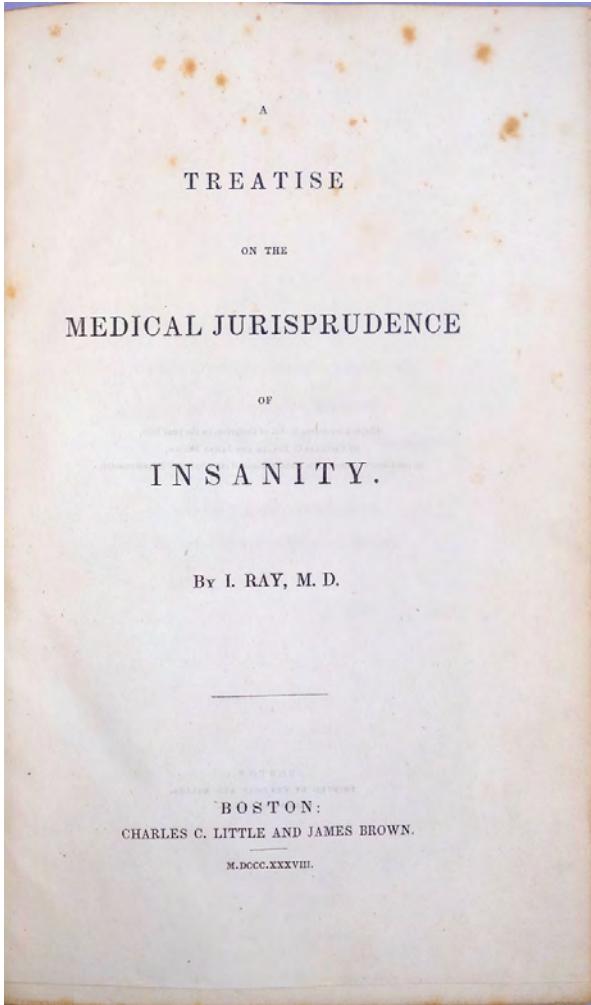


From the Libraries of Miescher and Adelmann

39. Panum, Peter Ludvig (1820-85). *Untersuchungen über die Entstehung der Missbildungen zunächst in den Eiern der Vögel.* xii, 260pp. 12 plates. Berlin: Georg Reimer, 1860. 242 x 162 mm. Quarter cloth, boards ca. 1860, rebacked preserving original spine with printed paper label, slightly warped. Minor foxing but very good. From the library of Johann Friedrich Miescher (1844-95), with his stamp on the title; later pencil signature of historian of embryology Howard B. Adelmann (1898-1988). \$1500

First Edition of the first monograph on experimental teratology, describing Panum's creation of malformations in chicken embryos by interfering with embryonic development, and discussing the relationship between egg abnormalities and the emergence of malformed chicks. Panum, professor of physiology and pathology at Kiel and the University of Copenhagen, was one of the leading figures in 19th century Scandinavian medicine; he is also known for his classic epidemiological study of measles (Garrison-Morton 5443) and his investigation of the chemical products of putrefaction (Garrison-Morton 2534). This copy of Panum's work was once in the library of Johann Friedrich Miescher, who was the first to identify and isolate the cell nucleus compounds now known as DNA; see Garrison-Morton 695. This copy was later owned by Howard B. Adelmann, author of *Marcello Malpighi and the Evolution of Embryology* (1966; see Garrison-Morton 534.1) and editor of the works of Malpighi and Fabricius of Aquapendente. Garrison-Morton 534.2. 43093

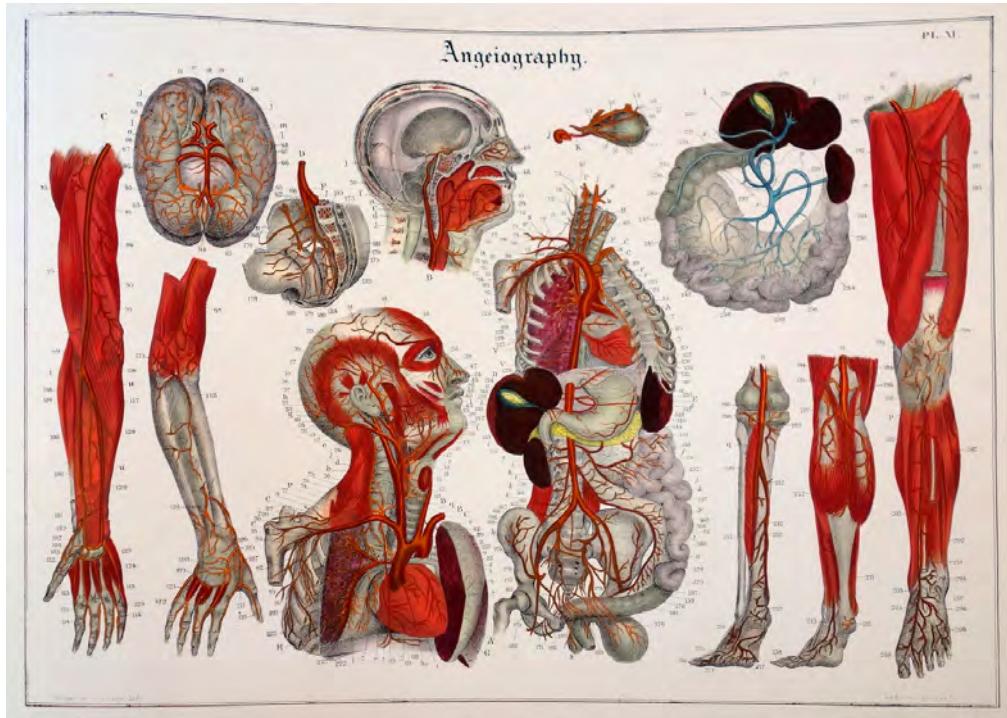




American Psychiatry Classic

40. Ray, Isaac (1807-81). A treatise on the medical jurisprudence of insanity. 8vo. xv, [1], 480pp. Boston: Charles C. Little & James Brown, 1838. 227 x 145 mm. 19th century half morocco, gilt spine, marbled boards, slight wear. Some foxing as usual. Very good copy. Bookplate of American psychiatrist Charles W. Pilgrim (1855-1934). \$2500

First Edition of the first modern treatise on the medico-legal aspects of psychiatry, and the first American treatise on a psychological subject since Benjamin Rush's *Medical Inquiries and Observations upon the Diseases of the Mind* (1812). One of the greatest classics of nineteenth century American thought, Ray's work "is still quoted and accepted as an authority on many phases of medico-legal practice in the United States and abroad" (Deutsch, *The Mentally Ill in America*, p. 204). Ray's work exerted a considerable influence on Anglo-American jurisprudence, particularly in the famous M'Naughton trial of 1843, which prompted the establishment of the M'Naughton Rules redefining the common law of insanity. Ray became the most influential American writer on forensic psychiatry of the nineteenth century. This copy was once owned by psychiatrist Charles W. Pilgrim, who served as New York State's Commissioner of Mental Health in the early part of the 20th century. Garrison-Morton 1739. Norman 1783. 41533

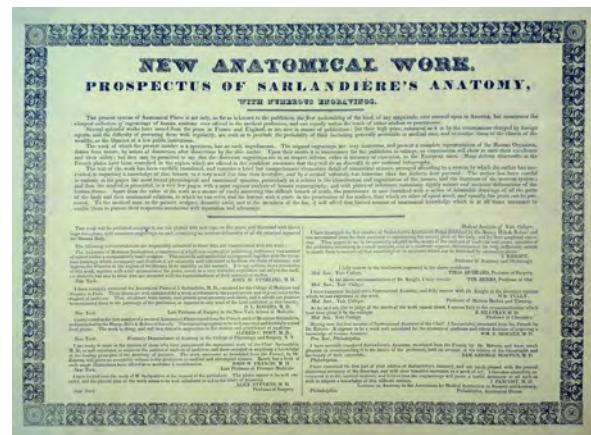


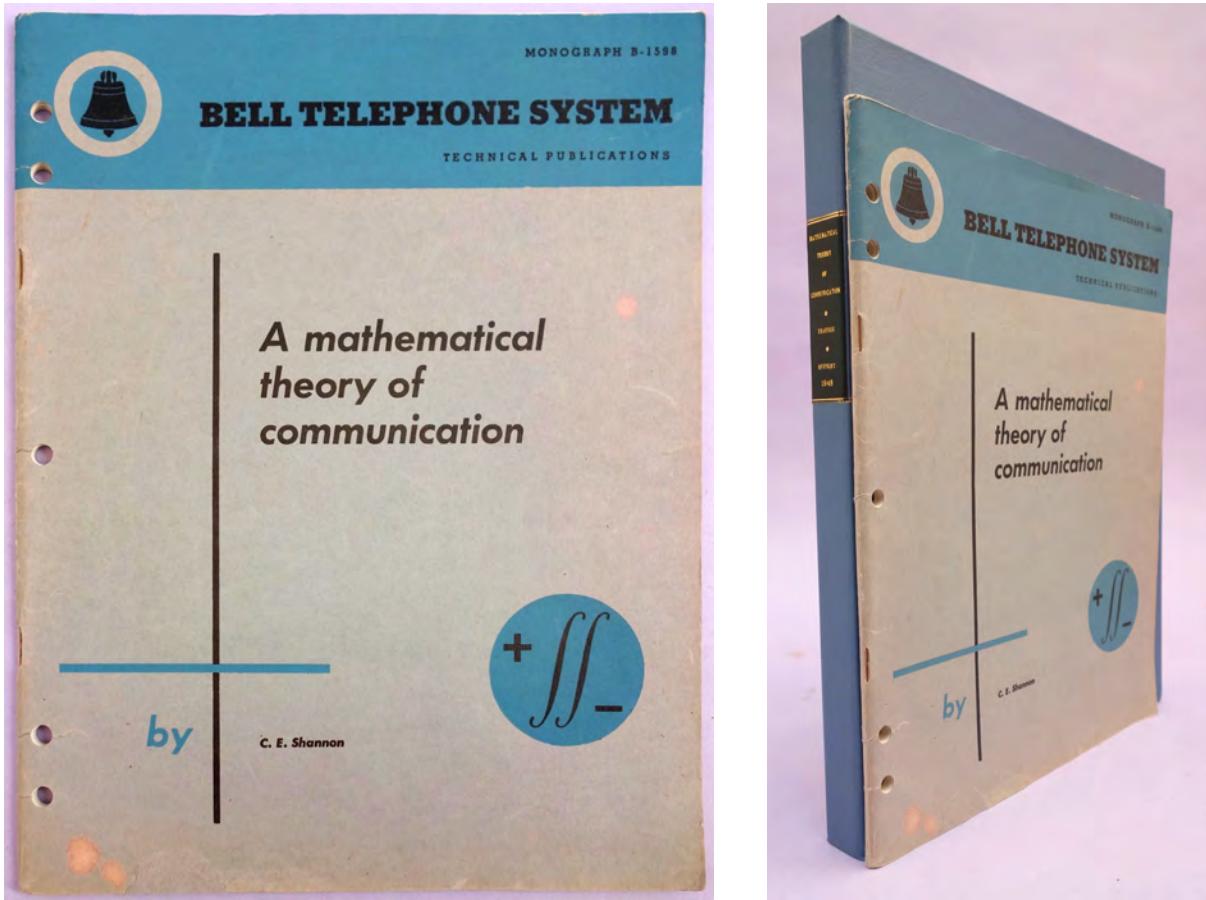
Beautiful Anatomical Plates

41. Sarlandière, Jean Baptiste (1787-1838). Systematized anatomy, or human organography . . . translated from the French by W. C. Roberts. Oblong folio. [2], iii ff. 15 hand-colored lithographed plates, each with several figures and explanation leaves. New York: Rohrer & Hills, 1837. 350 x 520 mm. Half calf c. 1837, rubbed, rebacked, corners restored. Some browning, stamp on title and text leaves and versos of plates (no show-through), but a good copy, with the plates themselves quite clean and bright.

\$1250

Second edition in English (first English ed. 1835). An atlas for medical schools and academies of art, with elegantly colored, detailed plates, by the French neurologist Sarlandière. Sarlandière, a friend and assistant to François Magendie, was the inventor of electro-acupuncture, the only significant Western contribution to acupuncture. It is one of the most widely used methods of acupuncture today. The prospectus for this edition is printed on the rear pastedown. Choulant / Frank, p. 354. Hirsch. 6989





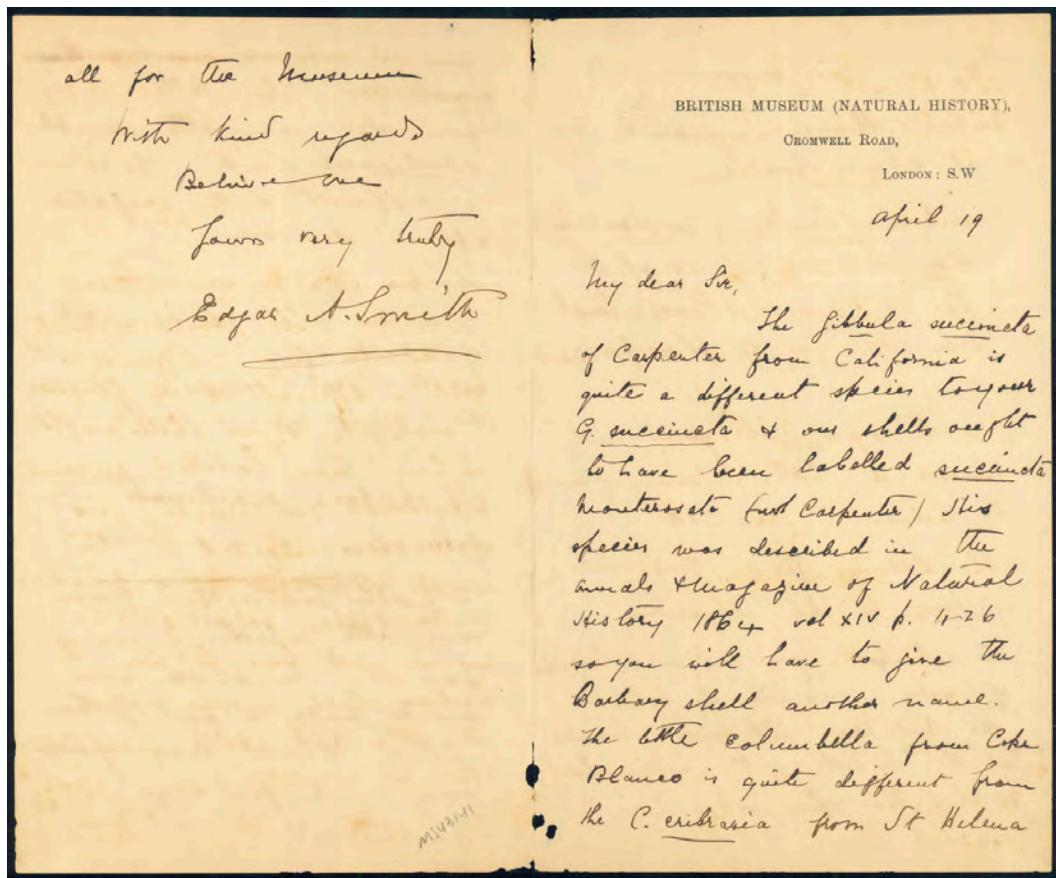
Rare First Printing of the Offprint Issue

42. Shannon, Claude E. (1916-2002). *A mathematical theory of communication*. Offprint from Bell System Technical J. 27 (1948). 8opp. Text diagrams. 280 x 216 mm. Original printed wrappers, holes punched in left margin, as in all copies. Small repair to lower margin of front wrapper, a few tiny stains on front wrapper, but very good. Boxed. \$10,000

First Edition, Offprint Issue, Rare First Printing. The first printing can be distinguished by the absence of reprint dates on the inside back wrapper; later reprints include these. Demand for Shannon's paper was no doubt much greater than Bell Labs anticipated, necessitating at least one reprint.

Basing his work on research begun during World War II, "Shannon developed a general theory of communication that would treat of the transmission of any sort of information from one point to another in space or time. His aim was to give specific technical definitions of concepts general enough to obtain in any situation where information is manipulated or transmitted—concepts such as information, noise, transmitter, signal, receiver, and message. . . . What began as a study of transmission over telegraph lines was developed by Shannon into a general theory of communication applicable to telegraph, telephone, radio, television, and computing machines—in fact, to any system, physical or biological, in which information is being transferred or manipulated through time or space" (Aspray, pp. 119-22).

Shannon's paper was also responsible for introducing the term "bit" (for binary digit) into the published literature, and for giving the term its current meaning of "a unit of information derived from a choice between two equally probable alternatives or 'events'" (*Supplement to the Oxford English Dictionary* [1972]). The word itself was suggested by John Tukey in 1946. Aspray, "The scientific conceptualization of information: A survey," *Annals of the History of Computing* 7: 117-40. *Origins of Cyberspace* 880. 43079



"You Will Have to Give the Barbary Shell Another Name"

43. Smith, Edgar A. (1847-1916). Autograph letter signed, on British Museum (Natural History) letterhead, to an unidentified correspondent. 3 - 1/2 pp. London, April 19, n.d. [1867 or after]. 190 x 115 mm. A few small holes along gutter margin, not affecting text, light browning but very good.

\$350

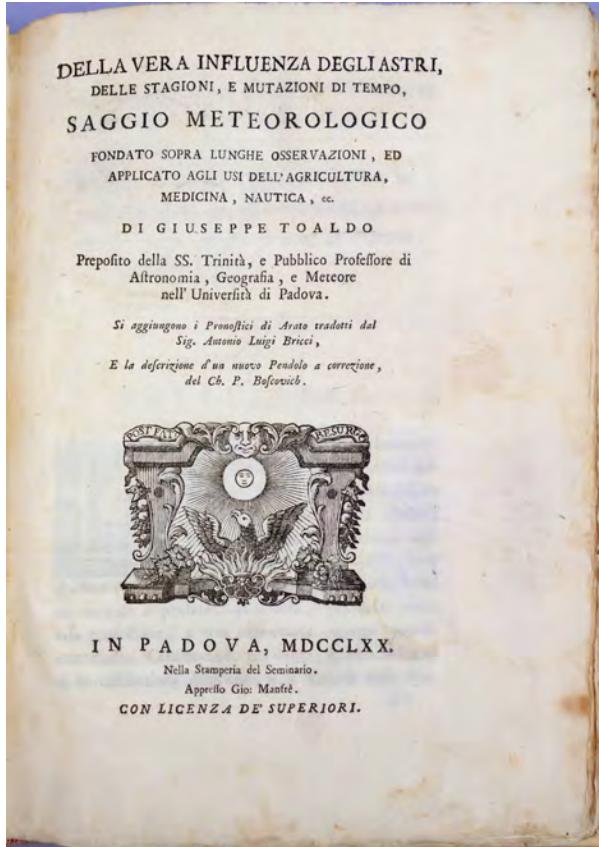
From British malacologist Edgar A. Smith, Assistant Keeper of the Zoological Department at the British Museum and author of over 300 scientific memoirs on the *Mollusca*, including accounts of specimens collected on the HMS *Challenger* expedition and on various expeditions to the Arctic and Antarctic regions. He was particularly interested in the freshwater mollusks of Africa, describing 18 new African taxa based on shells collected by explorer Joseph Thomson in the late 1870s.

Smith's letter, written to an unidentified scientific correspondent, deals almost entirely with mollusk taxonomy:

The *Gibbula succincta* of Carpenter from California is quite a different species to your *G. succincta* & our shells ought to have been labelled *succincta Monterosata* (not Carpenter). This species was described in the Annals & Magazine of Natural History 1864 vol XIV p. 426 so you will have to give the Barbary shell another name. The little columbella from Cape Blanco is quite different from the *C. eribraxia* from St. Helena and is not in the British Museum. . . .

The two specimens you name *G. sulcose* . . . are identical with the types in Cuming's Coll. and the locality given by Adams (Sir C. Hardy's Is) is evidently a mistake. . . .

"Cuming" refers to conchologist Hugh Cuming (1791-1865), whose large collection of shells was acquired by the British Museum in 1846. Smith worked on the Cuming collection when he was first hired by the Museum in 1867. 43141



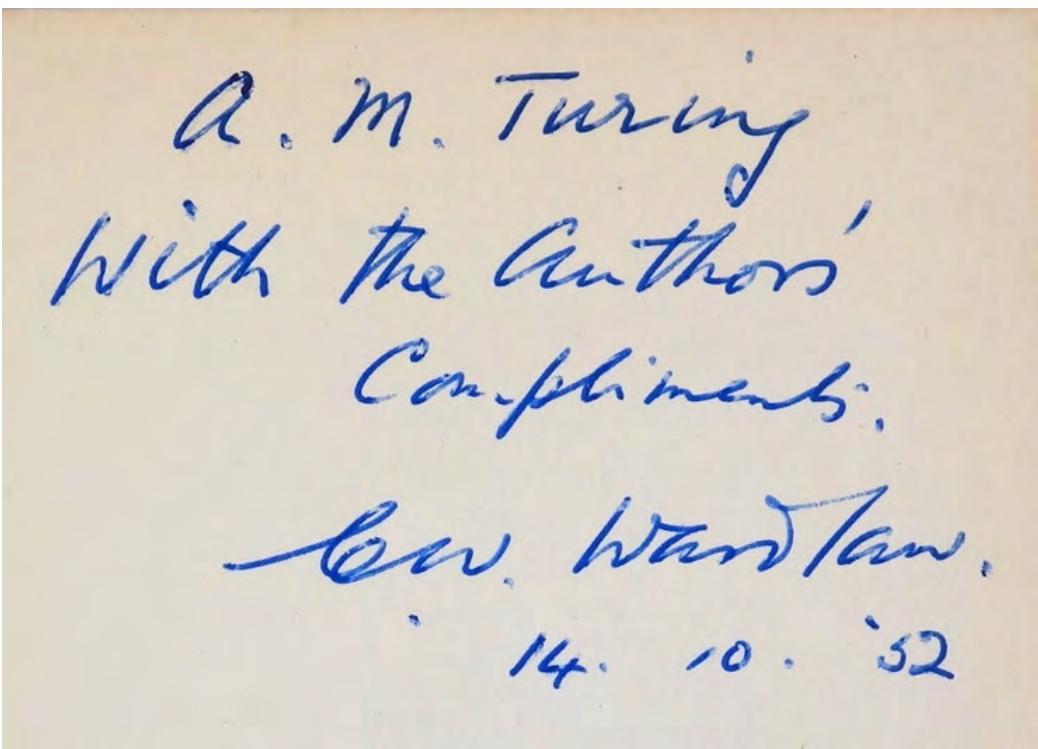
18th Century Meteorology

44. Toaldo, Giuseppe (1719-97). *Della vera influenza degli astri, delle stagioni, e mutazioni di tempo, saggio meteorologico . . . 4to.* [20], 222pp. Engraved plate, 4 folding printed tables. Padua: Nella Stamperia del Seminario, 1770. 255 x 193 mm. (uncut). 20th century half vellum, marbled boards, hand-lettered spine. Minor foxing and soiling, marginal tear in half-title repaired, but very good.

\$1250

First Edition of Toaldo's work on the influence of the stars and planets on the Earth's weather and atmosphere, an influential work at the time which went through three editions in the 18th century and was translated into French. Toaldo was a professor of astronomy and meteorology at the University of Padua and the first director of the city's astronomical observatory, which he was instrumental in having built. He began taking meteorological observations in 1766 and in 1778 founded the *Giornale astro-meteorologico*, a yearly journal whose purpose was to perform meteorological forecasts based on astronomical cycles and the previous years' statistical data. He was very interested in "performing sound statistical analyses, to find teleconnections between astronomical and meteorological events, and to establish practical connections between meteorology and human health or agriculture" (Camuffo, p. 33).

Included in Toaldo's work is a brief paper by astronomer and physicist Roger Joseph Boscovich (1711-87) describing a new type of pendulum ("Descrizione d'un nuovo pendolo a correzione," pp. 216-222). Camuffo, "History of the long series of daily air temperature in Padova (1725-1998)," in Camuffo and Jones, ed., *Improved Understanding of Past Climatic Variability from Early Daily European Instrumental Sources*, pp. 12, 33-34. 43143



(Inscription shown larger than actual size)

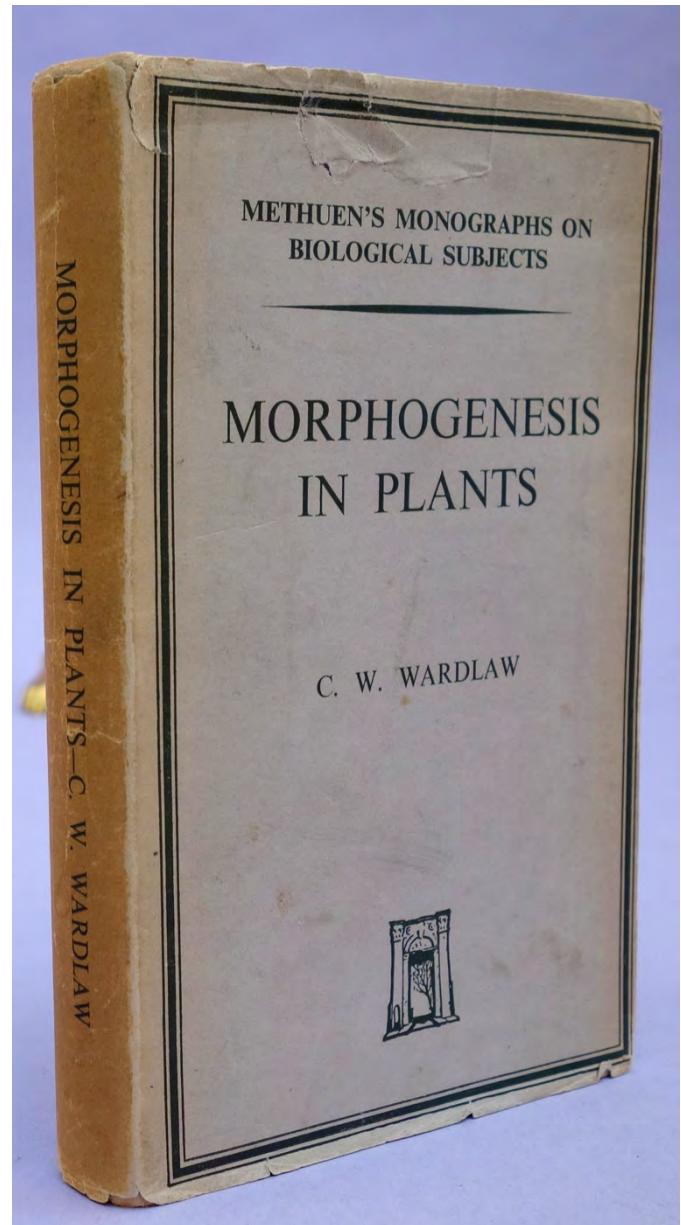
Inscribed to Alan Turing by a Collaborator

45. [Turing, Alan Mathison (1912-54).] Wardlaw, Claude Wilson (1901-85). *Morphogenesis in plants.* xi, 176pp. 2 leaves of plates. London: Methuen & Co.; New York: John Wiley & Sons, 1952. 168 x 112 mm. Original cloth, printed dust-jacket (spine sunned, minor chips and marginal tears). Very good. *Presentation Copy, Inscribed to Turing* by the author on the front free endpaper: "A. M. Turing with the Author's compliments C. W. Wardlaw 14.10.52." \$3250

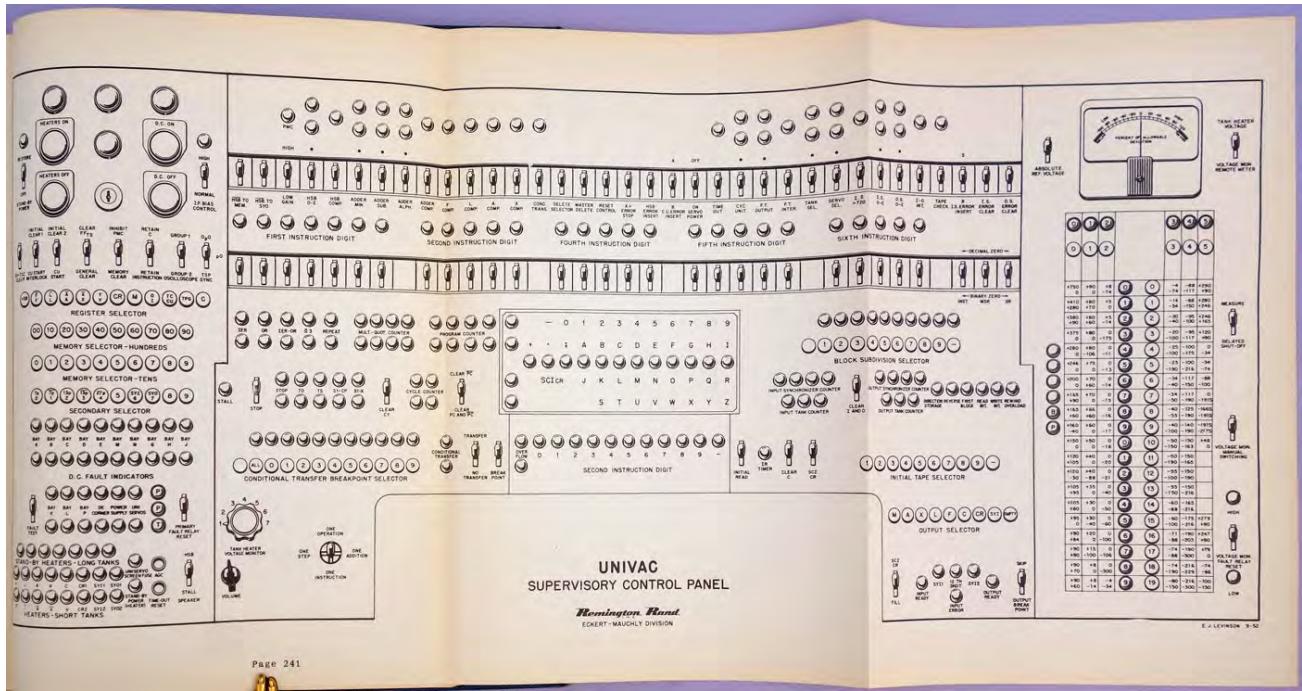
First Edition. In the early 1950s Turing, who was then Deputy Director of Manchester University's Computing Machine Laboratory, became interested in the physical bases of morphogenesis, the biological process that causes an organism to develop its particular shape. At a time when biomathematics and theoretical biology hardly existed, Turing embarked on the project of creating a mathematical model for form and pattern generation in organisms based solely on the laws of physics and chemistry. Some of the initial mathematical analysis for this project was done on Manchester University's prototype computer (the Manchester "Baby"), which Turing had helped to program, but this machine was shut down at the end of 1950 and Turing had to use a desk calculator for his numerical work while awaiting the February 1951 delivery of the University's Ferranti Mark I.

In the spring of 1952 Turing completed his paper on "The chemical basis of morphogenesis," his only work on the subject to be published prior to his death in 1954; it appeared in the *Philosophical Transactions* on August 14, 1952. It is one of the most successful of Turing's papers, being cited widely in the scientific literature. The reaction-diffusion model of pattern formation that Turing presented in it is now one of the standard mechanisms of theoretical biology.

After this paper's publication Turing continued with his mathematical investigation of the physico-chemical basis of morphogenesis. He began collaborating with botanist C. W. Wardlaw, a specialist on plant morphogenesis, on a paper titled "A diffusion reaction theory of morphogenesis in plants," addressing some of the subject's



deeper theoretical issues (a scan of the typescript of the Turing-Wardlaw paper is included in the Turing Digital Archive). This joint paper remained unpublished until its inclusion in Turing's collected works (1992), but Wardlaw, who was greatly influenced by Turing's ideas, published his own paper on the subject in 1953 titled "A commentary on Turing's diffusion-reaction theory of morphogenesis" (*New Phytology* 52: 40–47). It was during their period of collaboration that Wardlaw presented this copy of his *Morphogenesis in Plants* to Turing, inscribing it to him on October 14, 1952. Hodges, *Alan Turing: The Enigma*, pp. 429–437; 477. Saunders, P.T., "Alan Turing and biology," *IEEE Annals of the History of Computing* 15 (1993): 33–36. Turing, Alan M., "AMT/C/7." The Turing Digital Archive. King's College, Cambridge, n.d. Web. Accessed 03 Mar. 2014. 43102



The First Obtainable UNIVAC Programming Manual

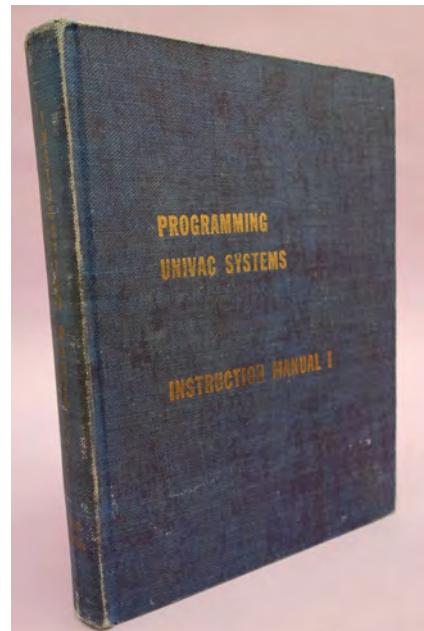
46. UNIVAC. Programming for the UNIVAC Fac-Tronic system. January 1953. [8], 249pp. 2 folding plates included in the pagination, plus 2 loose folding plates in a pocket in the inside back cover. N.p.: Remington Rand, Eckert-Mauchley Division, 1953. 281 x 216 mm. Original blue buckram, gilt titling on front cover and spine, light edgewear [title on front cover reads: Programming UNIVAC systems. Instruction manual I]. Light toning but very good.

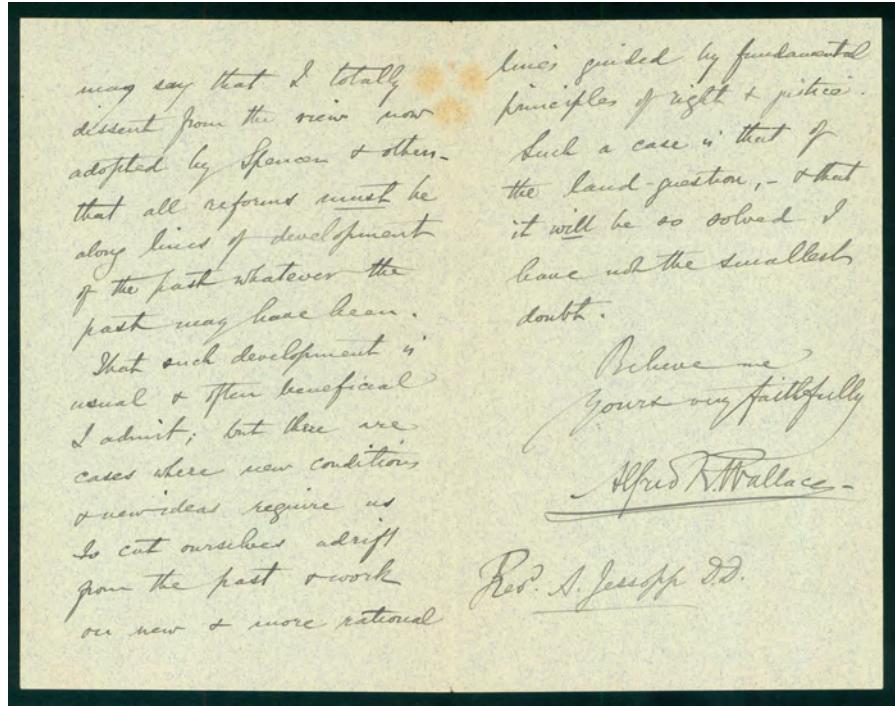
\$750

First Edition. This appears to be the **First Obtainable Programming Manual** for the UNIVAC I, the first electronic computer (excluding the one-off BINAC) to be commercially manufactured in the United States. The preface states that this is the “first revision of the UNIVAC programming manual of March 23, 1951,” but we have found no record in OCLC of the 1951 manual, and the *Origins of Cyberspace* collection did not have a copy.

UNIVAC I, serial 1—the first example built—was signed over to the U.S. Census Bureau on March 23, 1951. Serial nos. 2 – 6, also purchased by branches of the U.S. government, were delivered in 1952 and 1953; serial no. 7 was installed at Remington Rand’s sales offices in New York in 1953. The present manual, published in January 1953, was intended for operators of these seven machines. The manual was likely also distributed to later purchasers of the UNIVAC I like General Electric, which bought serial no. 8 in 1954; GE was the first non-governmental customer for the UNIVAC I. Remington Rand may also have printed extra copies of the manual for use as a sales tool.

The preface calls for a folding summary sheet in the back pocket, as well as the two charts. The summary sheet is not present either in this copy or the *Origins of Cyberspace* copy, and may never have been printed. *Origins of Cyberspace* 1190. 43103





Wallace on Land Reform—“Fundamental Principles of Right & Justice”

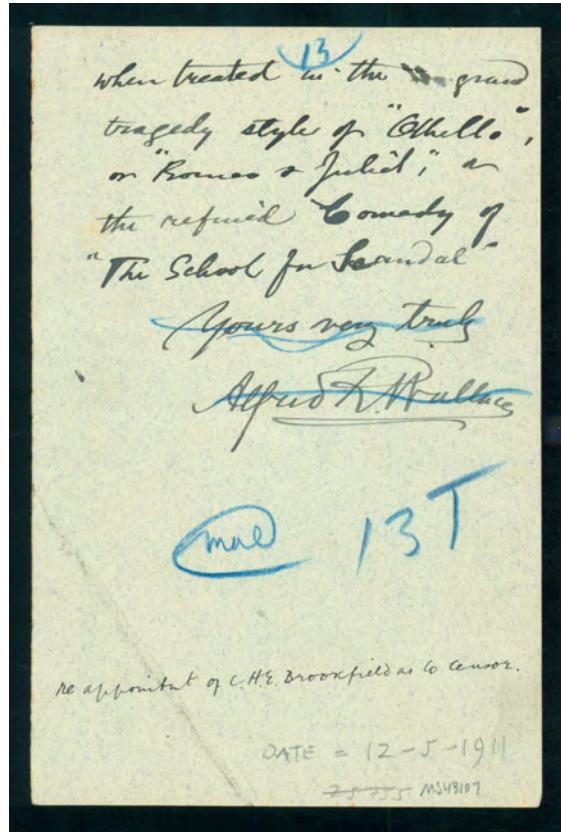
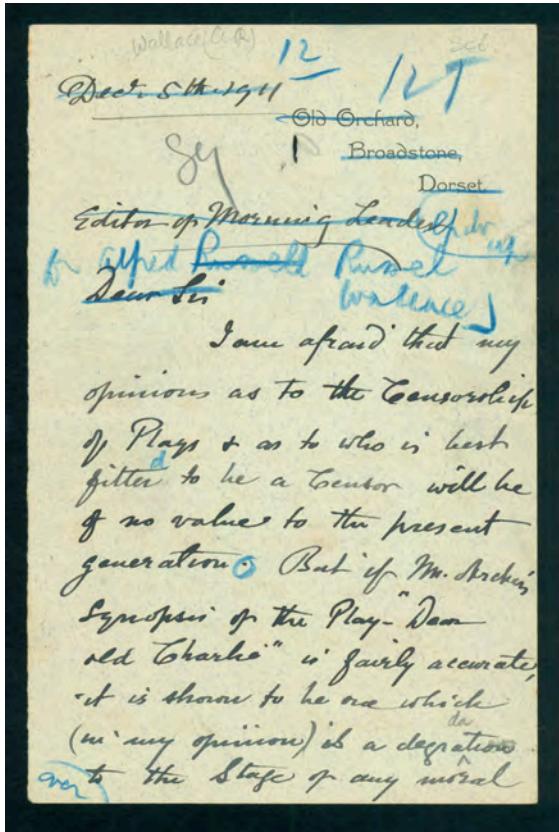
47. Wallace, Alfred Russel (1823-1913). Autograph letter signed to Augustus Jessopp (1823-1914). 3pp. Parkstone, Dorset, August 31, 1893. 179 x 115 mm. Minor spotting but fine. \$2000

From Wallace, co-founder with Darwin of the theory of evolution by natural selection, to the Rev. Augustus Jessopp, a British scholar, antiquary and journalist. Wallace's letter discusses land reform, a cause that had taken up most of his energies since 1879; "he believed that rural land should be owned by the state and leased to people who would make whatever use of it that would benefit the largest number of people, thus breaking the often-abused power of wealthy landowners in English society" (Wikipedia). In 1881 Wallace was elected first president of the newly founded Land Nationalisation Society, and in the following year he published his *Land Nationalisation: Its Necessity and Aims* (1882).

Wallace begins by thanking Jessopp for sending him a copy of "your very handsome volume"; this most likely refers to Jessopp's *Studies by a Recluse* (1893), which includes an essay on the historical roots of British property laws. Later in the letter Wallace discusses a philosophical disagreement between himself and Herbert Spencer (1820-1903), whose *Social Statics* (1851) had helped lay the foundation of Wallace's progressive views.

I may say that I totally dissent from the view now adopted by Spencer & others, that all reforms must be along lines of development of the past whatever that past may have been. That such development is usual & often beneficial I admit; but there are cases where new conditions & new ideas require us to cut ourselves adrift from the past & work on new & more rational lines guided by fundamental principles of right & justice. Such a case is that of the land-question, & that it will be so solved I have not the smallest doubt.

"The land-question," as pointed out by Wallace scholar David A. Stack, is "integral to all elements of Wallace's thought—social and scientific. His career was suffused with land-related questions, and all his most important work was concerned with the ecological interaction of men, animals, and their natural environment. . . . Even in his writings on natural selection the hovering Malthusian spectre provides a constant reminder that Wallace is concerned with species life in relation to the land. And he first made public his interest in land reform in the final paragraphs of one of the most important natural history books of the nineteenth century: *The Malay Archipelago*" (Stack, p. 280). Stack, "Wallace and land nationalization," in *Natural Selection and Beyond: The Intellectual Legacy of Alfred Russel Wallace*, ed. C. H. Smith and G. Beccaloni (2008), pp. 279-304. 43106



"No Censorship of the MSS. Can Stop Them"

48. Wallace, Alfred Russel (1823-1913). Autograph letter signed to the editor of the *Morning Leader*. 3pp. Dorset, December 5, 1911. 177 x 115 mm. One corner creased, small pin-holes not affecting text, typesetter's marks in blue pencil on all pages, but very good. \$1250

From Wallace to the editor of the British newspaper *Morning Leader*, regarding playwright Charles H. E. Brookfield's appointment in 1911 as Examiner of Plays. The Examiner of Plays, a government position established in 1737, functioned as an official licenser and censor; whoever held the post had the authority to prohibit the performance of any new plays that were deemed to violate "good manners, decorum or the public peace." The post was not abolished until 1968.

The appointment of Brookfield as Examiner raised much hue and cry, as he was the author of a large number of risqué farces filled with sexual innuendo. One of the most egregious of these was *Dear Old Charlie*, featuring a protagonist who successfully seduces his friends' wives; the play (which passed the censor) was roundly condemned in the press for its "cynical, shameless immorality" (quoted in Hynes). Wallace was among those who opposed Brookfield's appointment, as he states in his letter:

I am afraid that my opinions as to the Censorship of Plays & as to who is best fitted to be a Censor will be of no value to the present generation. But if Mr. Archer's synopsis of the Play "Dear old Charlie" is fairly accurate, it is shown to be one which (in my opinion) is a degradation to the Stage of any moral society, both in subject matter and in details of composition.

The only way to deal with such plays, by a refined or moral audience, is to hiss them down on the first presentation; but as long as they are received in silence or with applause they degrade the audience, and no Censorship of the MSS. can stop them . . .

"Archer" refers to William Archer, an influential drama critic and translator of Ibsen. Hynes, *The Edwardian Turn of Mind*, ch. 7. 43107