Milestones of Science Books











Catalogue 04-2015

39 New Arrivals

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Milestones of Science Books

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From the library of Federico Cesi with his stamps

BAUHIN, Jean. *De plantis a divis sanctivse nomen habentibus*. Basel: Conrad Walderich, 1591. 8vo (153 x 100 mm). [1-6] 7-163 [1] pp. Printer's device on verso of final leaf. Contemporary limp



vellum, spine darkened, old shelf mark labels to spine. Uneven browning troughout, occasional minor spotting. Provenances: Federico Cesi (ink stamps to title-page and p.156); St. Charles Borromeo Seminary, Wynnewood, PA (ink stamp to title-page). (#002321) € 2,900

DSB I, 526; Hunt 162; OCLC 8656839. - First edition of an alphabetical inventory of plants named for saints. From the library of Federico Cesi (1585-1630), founder of the Accademia dei Lincei, one of the earliest Italian scientific academies. Includes the letters of Conrad Gesner to Caspar Bauhin.

BLUMENBACH, Johann Friedrich. *De generis humani varietate nativa liber. Editio altera longe auctior et emendatior.* Göttingen: Vandenhoek & Ruprecht, 1781. 8vo (203 x 125 mm), [6], 128 pp., including 2 engraved folding plates bound at the end. Modern papercard boards. Edges untrimmed. Internally browned, with some spotting and soiling mainly to margins. Provenance: Royal College of Surgeans in Ireland (ink stamp to title-page). Good copy. (#002362) € 1,400



PMM 219 (first ed.); NLM/Blake 51; Wellcome II, p.183; Garrison-Morton 156; Norman 250 (first ed.). - The rare second edition. The first edition was a dissertation printed for private distribution only and is practically unobtainable. "Blumenbach was the founder of anthropology... he classified mankind into four races, based on selected combinations of head shape, skin colour and hair form... his famous terms 'Caucasian, Mongolian, Ethiopian, American, and Malayan' were not used until the third edition of 1795" (Garrison-M. 156).

Blumenbach 'was preceded by Tyson and Linné who had prepared the ground for his studies by relating man to the order of the primates. Linné had distinguished four races of man chiefly by the color of their skin. From these premises Blumenbach was able to develop the thesis that all living races are varieties of a single species, homo sapiens, and that their differences were small compared with those between man and the nearest animal; "innumerable varieties of mankind run into each other by insensible degrees". It is not surprising therefore that Blumenbach was opposed to the practice of slavery and the then current belief in the inherent savagery of the colored races' (PMM).

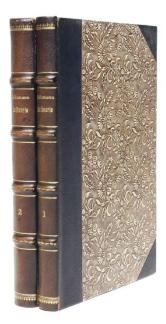
BLUMENBACH, Johann Friedrich; BORN, Ignaz Edler von; WOLFF, Caspar Friedrich. Zwo Abhandlungen über die Nutritionskraft welche von der Kayserlichen Academie der Wissenschaften in St. Petersburg den Preis getheilt erhalten haben. Die erste von Herrn Hofrath Blumenbach, die zwote von Herrn Prof. Born. Nebst einer fernern Erläuterung eben derselben Materie, von C. F. Wolff. St.



Petersburg: gedruckt bey die Kayserl. Akademie der Wissenschaften, 1789. 4to (295 x 220 mm). 63 [1]; 94 pp. Signatures: A-H⁴; A-L⁴ M-N² (-N2, presumed blank), 79 of 80 leaves, lacking the engraved plate to Blumenbach's text. Text block untrimmed and partially unopened. Early 19th-century blue paper covered boards (old rebacking, head of spine torn). A stipple engraved portrait of Blumenbach by Ball after Grimm is bound in as a frontispiece. Internally little age-toned, untrimmed leaves little soiled and frayed at fore-margins. Provenance: William Lister*, with engraved booklabel "Dr. Lister, Lincoln's Inn Fields", Walter Pagel Library (paper label to front pastedown). Except for the lacking portrait a fine, unsophisticated copy. (#002368)

FIRST EDITION, exceedingly rare. "Two papers responding to the prize question on plant nutrition set by the St. Petersburg Academy of Sciences for 1782 and resubmitted in 1788. There is an appendix by Wolff, the larger second section of the book, *Von der eigenthümlichen und wesentlichen Kraft der vegetabilischen sowohl als auch der animalischen Substanz*. This is cited as a separate item in Gaissinovitch's D.S.B. article, but it was not published independently. This was a crucial period in the history of the theories of plant nutrition, begun by Ingenhousz's discovery of photosynthesis (1779) but only fully developed when Lavoisier's new chemistry was assimilated. This is discussed by Sachs (*History of Botany*, 1890, pp. 494), though he does not mention these prize essays on the subject. Wolff is a key Figure in the history of botany, the first since Malpighi and Grew to devote attention to plant anatomy. His *Theoria Generationis* (1759), which established the theory of epigenesis, laid the foundation of our understanding of the development of plant cells. *William Lister (1757?-1830), the former (perhaps first) owner of this copy took his MD at Edinburgh in 1781. He settled in London and was physician to St. Thomas' Hospital. He was a good classical scholar. (Munk II, pp. 329-7)" R. Gaskell, *Books from the Library of Walter Pagel*, Pt. 2, 16. This book is very rare with no copy in the USA and the U.K. according to OCLC/Worldcat.

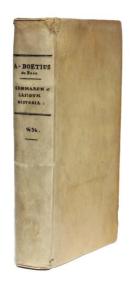
4 BOLTZMANN, Ludwig. *Vorlesungen über Gastheorie*. Two volumes. Leipzig: Johann Ambrosius Barth, 1896-1898, 8vo (213 x 138 mm). viii, 204; x, 265 [1] pp., including half-titles.



Contemporary three-quarter morocco over floral embossed paper, spines gilt with 4 raised bands. Little age-toning to text. A very fine, clean and unmarked set. (#002380) $\qquad \qquad \qquad \qquad$ £ 1,500

Stanitz 79; Poggendorff IV, p. 153; DSB II, p. 266-7. FIRST EDITION of both parts. "In 1872, the Austrian physicist Ludwig Boltzmann (1844-1906) derived the transport equation for distribution of velocity among the molecules of a gas. This equation, which is so important in the kinetic theory of gases, had been previously derived by Maxwell, but the form in which Boltzmann derived it led him immediately to the concept of entropy as related to the probability of various velocity distributions among an assembly of gas molecules. This major contribution and many others that Boltzmann made to the kinetic theory of gases were summarized in his masterpiece of theoretical physics, 'Vorlesungen über Gastheorie'. This work can rightly be considered the peak of development achieved in the modern kinetic theory of gases." (Stanitz, Sources of Science & Technology, no. 79).

BOODT, Anselmus Boetius de. *Gemmarum et lapidum historia. Commentariis et melioribusque figuris illustravit ... A.Toll.* Leiden: Joannis Maire, 1636. 8vo (179 x 111 mm). [8], 576, [22] pp., including over 40 woodcuts of gem stones, minerals etc. in text, 2 folding tables.

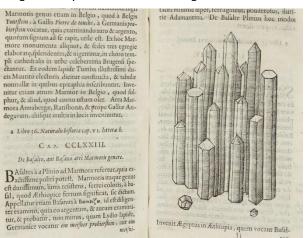


Contemporary vellum, spine titled in script. Provenance: DuBouches (inscription on title-page, dated 1645), Museum d'Histoire Naturelle de Paris (ink stamp to title-page). Little browning and spotting to text. Good copy. (#002319) € 1,500

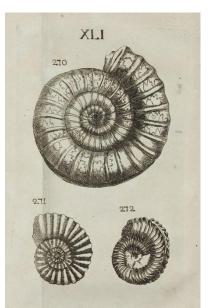
Sinkansas 779; Hoover 146; Wellcome I, 981; Graesse I, 493; Brunet I, 11 08. Second edition. "This celebrated encyclopedic work, by far the most thorough and complete up to date, easily surpasses Bacci, Marbod, and Leonardus in quantity and quality of information; it is further distinguished by its intimate knowledge of the art of the

lapidary and must therefore be regarded as the first treatise to offer more than the briefest of views of gem cutting" (Sinkankas 778, about the first edition from 1609). This edition was

revised and enlarged by Adrian Toll, professor of medicine at Leyden. Many of the woodcuts were improved, and several of them appeared here for the first time. The extensive index of twenty pages allowed ready access to Boodt's magnificent treatise.



[BOURGUET, Louis and CARTIER, Pierre]. *Traité de petrifications*. Paris: chez Briasson, 1742. Two parts in one volume, 4to (249 x 193 mm). xvi, [1] 2-163 [1]; [3] 4-91 [1] pp., title-page with large vignette, 60 folding engraved plates bound at end. Contemporary French calf, spine with 5 raised

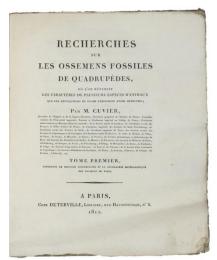


bands gilt in compartment and with red morocco label titled in gilt (head and foot of spine damaged, hinges split at ends, some worming, corners bumped, extremities worn), marbled endpapers, red-sprinkled edges. Internally somewhat browned (few pages stronger), occasional minor spotting. Provenance: Prof. Carlo Sasali(?), ink stamp to title-page partially erased, further two illegible old stamps to title-page. Still good, unmarked copy with ample margins. (#002298) € 2,400

Hoover 160; Honeyman 450; Barbier IV, 785 (mention Pierre Cartier as co-author); Nissen ZBI 498 (Den Haag edition); Cobres 723. - THE RARE FIRST EDITION, published anonymously. Louis Bourguet was a student of Scheuchzer and Vallisnieri and - like his teachers - one of the first scientists to devote himself to the science of the study of fossils. He published three works on the subject. Born at Nantes in 1685 he was a professor of philosophy and mathematics at the University of Neuchatel and died there in 1742. The 60 plates show 440 fossil specimens. The work also includes a paleontological bibliography and a list of international locations where fossils have been found.

In its original wrappers

7 CUVIER, Georges L.C., Baron. Recherches sur les Ossemens Fossiles de Quadrupèdes. Paris: Deterville, 1812. 4to (275 x 220 mm). 4 volumes. Including half-titles to each volume, large folding hand-coloured engraved map to vol. I and in total 154 engraved plates. All leaves untrimmed.



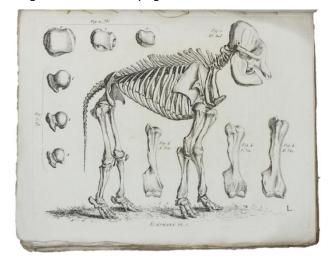
Original publisher's blue wrappers with printed paper label to spines (some marginal chipping and cracking of wrappers at spine). Internally virtually unspotted and unmarked, occasional very light age-toning. Some warping to book blocks, occasional soiling to paper edges. In custom-made slip case. An outstanding, unsophisticated and crisp set.

(#002331)€ 12,500

Horblit 20b; Nissen ZBI 1011; Norman 566 - FIRST EDITION. "Cuvier was considered by the public to be a bit of a wizard, a man who had brought to life animals that had long since become extinct... Cuvier knew how to make great strides in studying these creatures and could

endow this study with new accuracy. His

famous paleontological reconstructions had the living being as their point of departure... before witnesses he removed from a stone block the marsupial bones of a small opossum fossil, bones whose existence he had surmised on the basis of the conformation of the visible part of the skeleton. As early as 1804 Cuvier had the idea of reconstructing the musculature of extinct animals from imprints left by the muscles on the bones; then he merely had to imagine the skin over the muscles and the animal was practically brought back to life" (DSB).





DARWIN, Charles. On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life. Second edition, 'fifth thousand.' London: John Murray, 1860. 8vo (196 x 125 mm). ix [1], 502, 32 pp., including half-title, publisher's advertisements at end dated 'January 1860', and folding table facing p.117. Original publishers green cloth (spine ends and corners slightly bumped, upper board little stained, slight wear to extremities), inner hinges cracked but holding. Custom clamshell box. Pages untrimmed. Slight foxing, first and final leaves a bit stronger. Provenance: front free-endpaper inscribed 'M. P. Martin'. A very good copy.



(#002303) € 4,900

Freeman 376; Norman 594. - SECOND EDITION, second printing OF "THE MOST INFLUENTIAL SCIENTIFIC WORK OF THE NINETEENTH CENTURY. Its publication aroused world-wide criticism and controversy, both religious and scientific" (Grolier/Horblit). The whole edition of 1250 copies was sold on the day of publication. Though the work was initially prompted by observations, made during his travels aboard the Beagle from 1831 to 1836, of the biology and geology of isolated islands, Darwin spent nearly 25 years after his return to England accumulating evidence and considering his theory before publishing. "Although the theory of evolution can be traced to the ancient Greek belief in the 'great chain of being,' Darwin's greatest achievement was to make this centuries-old 'underground' concept acceptable to the scientific community by cogently arguing for the existence of a viable mechanism -- natural selection -- by which new species evolve over vast periods of time. Darwin's influence on biology was fundamental and continues to be felt today" (Garrison-Morton 220).

Exceedingly rare Euler work

9 EULER, Leonhard. *Vernünftige Gedanken von dem Raume dem Orth der Dauer und der Zeit theils aus dem Französischen des H. Professor Eulers übersetzt theils aus verschiedenen ungedruckten Briefen dieses berühmten Mannes mitgetheilt Nebst einigen Anmerkungen und einem Versuche einer unparteyischen Geschichte der Streitigkeiten über diese Dinge*. Quedlinburg: bey Gottfried Heinrich Schwans Wittwe, 1763. 8vo (173 x 105 mm). [16], 231 [1] pp. Signatures:)(⁸ A-O⁸ P⁴, 124 leaves. Contemporary glazed plain paper boards, red sprinkled edges (binding soiled and a little worn, corners bumped). Text only little age-toned, very minor spotting in places. Provenance:



undeciphered inscriptions on endpapers; 19th-century armorial bookplate "Bibliotheca SeckendorWana" to front pastedown. A good fresh and unmarked copy. (#002363) € 2,800

Euler Archive 149A. First edition in German and the only separate edition, a translation of Réflexions sur l'éspace et le tems, Mémoires de l'académie des sciences de Berlin 4 (1750), p.324-33. "Euler outlays his views on the relation between Metaphysics and Mechanics. The truths of mechanics are "so indubitably constant" that they must be founded in the natures of bodies. Metaphysics is the study of the nature of bodies, therefore the laws of Mechanics constrain Metaphysical theories. In fact, any Metaphysical idea or conclusion corresponding to a Mechanical one must agree in all its implications with Mechanics. This applies in particular to space and time. Real, absolute, space and time are assumed by the laws of Mechanics. Therefore, Metaphysical arguments for the unreality of space and time must be unfounded and 'hide some parlogism'." (The Euler Archive: http://www.math.dartmouth.edu/~euler/). (R. Gaskell, Books from the Library of Walter Pagel, Pt. II, 53). This edition is exceedingly rare. OCLC/Worldcat lists no copies in US libraries and only two copies outside Germany (Swiss libraries).

10 FERRI, Alfonso. *De ligni sancti multiplici medicina, & vini exhibitione, libri quatuor*. [With:] **FRACASTORO, Girolamo**. *Syphilis sive morbus gallicus. Cum indice locupletissimo*. Lyon: J. Frellon, 1547. 16mo (118 x 81 mm). 168, [56] pp. Signatures: A-O⁸. Printer's device on title. Contemporary



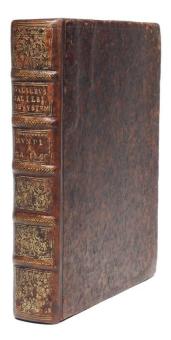
limp vellum (soiled), spine titled in script. Text only little browned, very minor occasional spotting and faint marginal dampstaining towards the end, final leaf with hole at lower margin touching catchword. A few faint marginalia in contemporary hand. Provenance: Francois Moutier, M.D. (exlibris on first flyleaf). A good, crisp copy of a very rare edition. (#002359) € 590

Fulton 9; NLM/Durling 1510; Wellcome I, 2244; Waller 3008. The 3rd collected edition (first printed 1539 in Paris) of the two works by Ferri and Fracastoro on syphilis. Ferri's *lignum sanctum* was an American tree, Guaiacum, that was reputed to cure the morbus gallicus, or syphilis. Ferri's treatise, first printed 1537 in Rome by Blado, proved popular and later editions were sometimes, as here, issued together with Fracastoro's poetic treatise on syphilis, first published in 1530 (the second edition of 1531 was printed by Blado). Ferri was physician to Paul III, whose arms appear on the title-page. This edition is very rare at auctions, only one copy sold in the past 50 years (Sotheby's 1973).

11 FUCHS, Leonhart. *Paradoxorum medicinae libri tres...* Paris: Carole Guillard, 1555. 8vo (164 x 108 mm). [20], 238 ff. Text in Greek and Latin. Modern vellum, spine titled in script. Text with only little marginal browning or soiling, occasional minor light spotting, first 3 leaves including title cleaned, a few neat annotation in contemporary hand to first pages. Provenance: illegible ownership inscription on title-page. A fine copy. (#002326) € 800

Adams F 1125; NLM/Durling 1716; Hirsch/H. II, 638; vgl. Bird 956, Haeser II, 17, Osler 2689, STC 190, Waller 3298, Wellcome I, 2433. - Very rare third, and considerably revised and enlarged, edition of Fuch's *Errata recentiorum medicorum* of 1530 against Arabian medicine, first printed under the title *Paradoxorum* in 1535. "As in the original work, the three books concern questions of medical botany, therapeutics, and anatomy" (Durling).





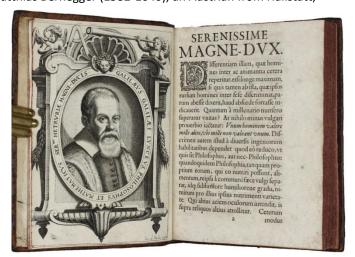
12 **GALILEI, Galileo.** Systema cosmicum ... in quo quatuor dialogis, de duobus maximis mundi systematibus, Ptolemaico et Copernicano, translated from Italian by Matthias Bernegger (1582-1640). Strasbourg: D. Hauttius for the Elzevirs [at Leiden], 1635. 8vo (184 x 142 mm), [16], 495 [1], [24] pp. Engraved frontispiece, fullpage engraved portrait by Jacob van der Heyden, woodcut diagrams. Final leaf of errata. Engraved title trimmed at lower margin just cutting into the last line with printer's place, portrait of Galileo slightly trimmed at fore-margin but otherwise fine, text lightly browned throughout as usual, minor spotting in places. 18th-century mottled calf, spine with 5 raised bands richly gilt in compartments (hinges and corners restored, spine rebacked using most of the original leather), original endpapers present. Provenance: Gordon W. Jones, M.D., Falmouth, Virginia (old bookplate to front pastedown). Except for the slight trimming of the engraved title and portrait a



Honeyman IV 1409; Horblit 18c, Dibner 8; Carli-Favaro 32 (148); Caspar 11 (88); Cinti 196 (96); Riccardi I 512. - First Latin and first international edition of Galileo's enormously influential Dialogo demonstrating the validity of the Copernican heliocentric theory over the Ptolemaic theory of the solar system. It was the only major work of Galileo published outside Italy during his lifetime and made a huge impact outside professional scientific circles. If ordinary educated non-Italians read no other Galileo, they read this edition of this text. This edition also influenced generations of scientists outside Italy, among them Mersenne and Gassendi in France, Kepler in Germany and Wilkins and Wallis in England. Galileo's Dialogo is the summation of his ideas, presented in a didactic dialogue. It is a philosophical debate that takes place over four days between three speakers, Salviati (ie. Galileo), Sagredo and Simplicio (both Simplicius the commentator on Aristotle, and 'simplicio' ie. simple or naïve). Salivati puts forward the case for the heliocentric Copernican system and Simplicio puts forward the Aristotelian view. Sagrado, a Venetian nobleman, is the layman who is willing to learn from the other two (but who always agrees with Salivati in the end). The first day is

concerned with the principles of motion, which in the second day is extended to include the earth's motion on a daily basis and the principle of relativity in observed motion. The third day treats of the sun's annual motion around the earth, which contains some pro-Copernican arguments, and the fourth gives us Galileo's idea that the ebb and flow of tides is due to the motion of the earth. The text closes with the editio princeps of Kepler's Perioche and a long letter of Foscarini on the opinions of Pittagorichi and Copernicus.' The Dialogue has been described as "the story of the mind of Galileo." The book reveals Galileo as physicist and astronomer, sophisticate and sophist, polemicist and polished writer. Unlike the works of Copernicus and Kepler, the Dialogue was a book for the educated public not just specialists, hence this edition's huge importance. In 1616 the Vatican declared the theories of Copernicus to be "foolish and absurd" and "formally heretical." De Revolutionibus was not banned but changes had to be made to the text, notably the removal of references to the compatibility of the ideas of Copernicus with scripture. Galileo was warned by the Pope not to continue defending the views of Copernicus, to which he acquiesced. In 1623 Maffeo Barberini became Pope. He had written a poem in praise of Galileo's telescopic discoveries and Galileo felt he might now be more receptive to his ideas. Galileo presented a copy of his *Il Saggiatore* to the Pope in which he ridiculed the Aristotelian views of Horatio Grassi and argued that scientific investigation should not be hindered by reliance on authority. The Pope enjoyed the book and this emboldened Galileo to ask for permission to publish his theories about tides. The Pope agreed on certain conditions. First, no mention was to be made to tides in the title as this would give too much prominence to a phenomenum which was used as evidence that the Earth moved. Second, Galileo was to state that this was only one of the ways in which the tides could have been created. The Dialogo was the result. The Pope felt that he had been misled. Permission had been given for a balanced discussion of the two theories but Galileo had written a barely disguised attempt to demolish the Aristotelian system and to establish the Copernican system as fact. The Pope seemed especially embittered by Galileo's decision to put the Pope's own arguments concerning the tides into the mouth of the simple-minded Simplico, an attempt, as he saw it, to ridicule him. Galileo was summoned to Rome. After interrogation he was told to abjure his Copernican theories and was sentenced to house arrest for life. This Latin translation, through which the Dialogo was to reach the widest audience, is by Matthias Bernegger (1582-1640), an Austrian from Hallstatt,

who had studied in Strassburg, where he settled in 1603. In his preface he explains how he came to translate it, how he had taught himself Italian, and how eventually the Elzeviers, at the urging of the Hebraist Marcus Zuerius Boxhorn and others, persuaded him to undertake the work and agreed to publish it. "It is a masterly polemic for the new science. It displays all the great discoveries in the heavens which the ancients had ignored... The *Dialogo*, far more than any work, made the heliocentric system a commonplace." Printing and the Mind of Man 128 (of the first Italian edition).



First edition of the manifesto of classic homeopathy

HAHNEMANN, Samuel. *Organon der rationellen Heilkunde*. Dresden: Arnoldische Buchhandlung, 1810. 8vo (231 x 142 mm). [2], xlviii, 222, [2] pp., including errata leaf at end. Titleleaf is a cancel as called for, printed on stronger and shorter-margined paper, p.43 and 206 with



instructions to bookbinder at lower margin. Contemporary marbled papercard boards, spine with paper label lettered in script (little soiled, corners bumped, little chipping to upper hinger). Text leaves untrimmed. Even mild browning of text throughout, very little occasional spotting, title-page foxed as usual due to different paper-stock. An exceptional, unsophisticated and unmarked copy in a rare untrimmed state. (#002317) € 24,000

PMM 265; Norman 964; Lilly Library, *Notable Medical Books*, p. 163; Garrison-M. 1966; Wellcome III, 191; Waller 3960; Tischner, p. 348, No. 14; Schmidt, Hahnemann 3; Müller, Hahnemann 122. - RARE FIRST EDITION. 'Hahnemann, the founder of homeopathy, embodied his theories in the Organon. The minute doses set down by him did much to

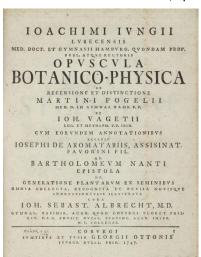
correct the evils of the polypharmacy of his time, in which overdosage was pervasive. He professed to base medicine on a knowledge of symptoms, regarding investigation of causes of symptoms as useless; he thus rejected all the lessons of pathology and morbid anatomy. There are several English translations, the first of which appeared in 1833' (Garrison-Morton).

"Hahnemann was convinced that minute doses of drugs in greatly attenuated concentrations were efficacious cures. When modern practice is compared with the indiscriminate and massive prescriptions of his own day it will be seen how much closer we are to his views than to those of his contemporaries. Certainly his treatment showed that the *vis medicatrix naturae*, given a chance, with occasional and gentle assistance, often suffices to effect a cure. He gave great prominence to therapeutics, introduced many new specifics, but ignored the growing science of pathology. In his emphasis on the importance of studying the patient as a whole, he foreshadowed the psychosomatic component of modern medicine." (PMM, 265).



Jung's Binomial plant classification

JUNG, Joachim [JUNGIUS, loachim]. *Opuscula botanico-physica*. Coburg: sumptibus ex typis Georgii Ottonis, typogr. Ducal. Priv., 1747. 4to (198 x 155 mm). [24] 183 [1] pp. Signatures: a-c⁴ A-Z⁴, 108 leaves. Errata on final page. Woodcut headpieces, woodcuts of three forms of tree growth on p. 169. Recent marbled boards, spine with gilt lettering piece, new endpapers. Text only little browned,



very minor faint spotting. Provenance: library of Walter Pagel. A fine, clean and unmarked copy. (#002364) € 6,500

Dibner 23; Evans 82; Norman 1193; Pritzel 4524. - THE VERY RARE FIRST EDITION of this collection, inluding Jungius, *Doxoscopiae physicae minores* (first edition 1662) and *Isagogae phytoscopia*, first printed in *Praecipuae Opiniones Physicae* (1679); and Giuseppe degli Aromatari's *Epistola de generatione plantarum ex seminibus* first printed in his *Disputatio de rabie contagiosa* (1625). This collection reprints Jungius' seminal works in the history of botany. Jungius gave botany much of its present nomenclature and first clearly divided the subject into morphology, physiology and ecology. Linnaeus based his system of nomenclature on Jungius' work, via Ray's *Historia plantarum* (1686-1704). Accused of heresy, most of his writings were only published after his death. 'Some few treatises were published by his pupils, among them one entitled *Isagoge phytoscopica* (Handbook of Botanical Study). This

work, comprising a volume of 46 quarto pages, must be regarded as one of the pioneering works in botany. It gives a concentrated account of the theory of botany, under the obvious influence of Cesalpino's, but without the latter's profitless Aristotelian speculations... The whole exposition, with its concise, vigorous sentences and its analyses of different parts of the plant drawn up in tabular form, is more reminiscent of Linnaeus' work than that of any other of the early botanists. Linnaeus, in fact, mentions Jung as his precursor as far as the drawing up of rules for the description of flowers is concerned and actually took up the characteristic description of plant-organs at the point where Jung had finished and certainly brought it up to a far higher standard.' (Nordenskiöld pp. 194-95). The edition also includes Giuseppe degli Aromatari's letter on the germination of plants from seeds. Jungius' published works were based on transcripts of lectures, edited shortly after his death and annotated by his students Martin Fogel and Johann Vaget. Presumably the rarity of the earlier publications meant that McLean Evans could only obtain the *Opuscula* to represent Jungius' 'epochal achievement', and Dibner as his 'herald'. Julius von Sachs, trs. Henry E. F. Garnsey, *History of Botany* (1890), pp. 58-63; Erik Nordenskiöld, trs. Leonard Bucknall Eyre, *The History of Biology* (1928); A. G. Morton, *History of Botanical Science* (1981) pp. 167-75. (R. Gaskell, *Books from the Library of Walter Pagel*, Pt. 2, 104).

Kant's nebular hypothesis of solar system formation

KANT, Immanuel. Allgemeine Naturgeschichte und Theorie des Himmels, oder Versuch von der Verfassung und dem mechanischen Ursprunge des ganzen Weltgebäudes nach Newtonischen Grundsätzen abgehandelt. Frankfurt, Leipzig: [publisher unknown], 1797. 8vo (190 x 119 mm). [20], 130 pp. Contemporary half calf, spine with gilt lettering piece (marbled paper on upper board torn with loss to lower part). Text little browned and spotted throughout. Illegible ownership inscription on first flyleaf. (#002381) € 1,600



D.S.B VII, p.231; Warda 6. - Scarce second edition of Kant's third work, first printed in 1755. An "Auszug", i.e only part of the Naturgeschichte, was printed in 1791, but no other editions or part of the work appeared between 1755 and 1797, though a third and fourth edition appeared in 1798 and 1808. All editions of this work are of greatest rarity.

In his youth Kant was a great admirerer of Newton, and in this work he bases his theories on him, but at the same time goes far beyond him. Kant describes how the solar system originated, and does this on the basis of his own mechanical principles. "In his "Theory of the heavens", Kant, by a series of bold strokes, anticipated astronomical facts that were later confirmed by very powerful observational techniques and with the help of relativistic cosmological theory. He conjectured that our solar system is a part of a vast system of stars making up a single galaxy, that the so-called nebolous-stars are galactic systems external to but similar to our own galaxy (a fact that was not confirmed until the twentieth century), and that there are many such galaxies making up the universe as a whole." (D.S.B.)

In this work, Kant explains the origin of the solar system by the collapse of a rotating cloud, which flattens into a disk, within which planets subsequently form. With this model, Kant is closer to today's

accepted ideas than that of some of his contemporary thinkers, such as Pierre-Simon Laplace. Moreover, Kant's thought is strongly influenced by atomist theory, in addition to the ideas of Lucretius (Marc Ollivier et al., Planetary Systems, Spinger, 2008, p.4, see also Wikipedia on this work).

This edition is almost as rare as the first edition with no copies in US libraries according to OCLC/Worldcat.

KEPLER, Johannes. Ad Vitellionem paralipomena, quibus astronomiae pars optica traditur... Tractatum luculentum de modo visionis, & humorum oculi usu, contra opticos & anatomicos.

Frankfurt: Claudius Marnius & heirs of Joannes Aubrius, 1604. 4to (205 x 157 mm). [16], 449, [19], [2] pp., including woodcut device on title, one engraved plate showing various anatomical sections of the eye bound at end, numerous woodcut diagrams in the text, two folding printed tables, and the unnumbered leaf with plate explanations. Browned throughout (about half of the text heavily) as usual due to poor quality of paper-stock, some waterstains to final leaves, short wormhole to blank fore-margin. Contemporary vellum over thin boards, spine titled in ink (boards soiled, spine tanned, vellum chipped and torn at fore-edges, little worming to spine). Still good, unsophisticated and well-margined copy in its original binding, collated complete. (#002389) € 20,000



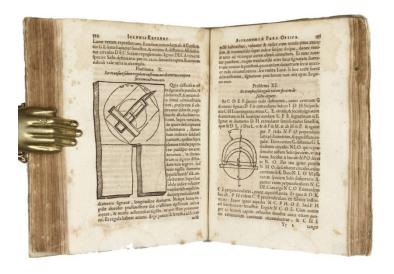
Caspar 18; Cinti 13; Zinner 3993; Honeyman 1781; Garrison, 260; NLM/Krivatsy 6343; DSB VII, 298. - FIRST EDITION of Kepler's important and highly significant book in the history of optics. The first part of 5 chapters deals with human vision and the functions of the eye, the crucial role played by the retina, the process of refraction and the first scientifically correct explanation of myopia. The second part is divided into six sections,



which "include not only a discussion of parallax, astronomical refraction, and his eclipse instruments but also the annual variation in the apparent size of the sun. Since the changing size of the solar image is inversely proportional to the sun's distance, this key problem was closely related to his planetary theory; unfortunately, his observational results were not decisive. "The immediate impact of Kepler's optical work was not great; but ultimately it changed the course of optics" (DSB).

"The physical theory of vision, which might be styled the ground-bass [sic] of ophthalmology, owes its development mainly to the work of great astronomers and physicists. The *Ad Vitellionem paralipomena*... contains a treatise on vision and the human eye in which is shown for the first time how the retina is essential to sight, the part the lens plays in refraction, and that the convergence of luminous rays before reaching the retina is the cause of myopia" (Garrison, p. 260).

Kepler was responsible for introducing the terms "prism," "lens," "meniscus," and many others into the field of optics.



17 LA HIRE, Philippe de. Sectiones conicae in novem libros distributae... Adjecta demum est brevis expositio propositionum septem librorum conicorum Apollonii Pergaei... Paris: Apud

> Stephanum Michallet, 1685. Folio (361 x 232 mm). [8], 249 [1] pp., numerous woodcut diagrams in text. Contemporary calf, spine with 6 raised bands richly gilt in compartments and with gilt morocco lettering piece (boards scratched,

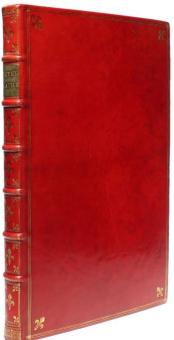
extremities and spine-ends worn, corners bumped), sprinkled edges. Minor browning of text, very few occasional spots, ink smudge at margin of pp.73 and 81, small burnhole in leaf 3P3 affecting one letter. A fine copy. (#002324)

D.S.B. VII, p. 577; Honeyman 1886; Sotheran, Suppl. I, 1350. - FIRST EDITION of La Hire's extensive treatise on conic sections. La Hire published in 1673 his first work (in French) on conic sections, a work clearly showing the influence of Desargues. This Latin treatise is a much more general work, but it too served as a primary vehicle for the transmission of the ideas of Desargues, making use of Cartesian analytic geometry in its analyses and solutions. "Important for having started, with Pascal and Desargues, synthetic geometry" (Sotheran).

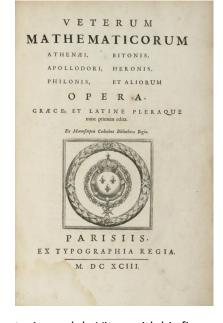


Among the most sumptuous books in science

18 LA HIRE, Philippe de; THEVENOD, Melchisedec; BOIVIN, Jean (editors). Veterum mathematicorum Athenaci, Apoiiodori, Philonis, Bitonis, Heronis, et aliorum opera, Gracce et Latine pleraque nunc primum edita. Paris: Imprimerie Royale, 1693. Folio (432 x 286 mm). [xvi], 365 (i.e.



355), [9] pp. Signatures: a-e⁴ A-Z⁴ 2A-2Y⁴ 2Z². Parallel Greek and Lating text in two columns. Engraved title-vignette, engraved dedication, engraved head- and tail-pieces, 171 fine engraved illustrations in text. Fine 20th century full red morocco with 6 raised bands, gilt in compartments, green lettering piece, sides ruled in gilt and with gilt fleurs-de-lis in the corners and inside dentelles, red sprinkled edges, marbled endpapers. Internally little browned (some gatherings stronger), minor spotting in places, many leaves with waterstain at lower gutter, short



Provenance: from the library of comte Arnaud de Vitry, with his fine etched full-page bookplate bound in. A good copy in a magnificient binding. (#002383) € 7,500

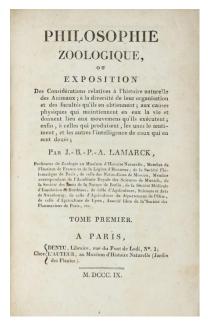
Dibner 84; Norman 2148; Brunet V, 1163; Schweiger I, 358. - FIRST EDITION. Edited by Melchisédec Thévenot (1620?-1692), Philippe de la Hire (1640-1718) and Jean Boivin (1665-1726). This collection of early Greek writings in hydrostatics and mechanics contains the first Greek edition of Hero's Pneumatica and Automata and

tear in inner margin of Gg4.

the first edition of Biton in Greek and Latin. The above is one of a series of publications of the French Academy of Sciences. "Printed at the royal press in small editions they were intended as gifts of the King and Academy... they are among the most sumptuous books in science" (Dibner).

"A classic in the literature of evolutionary theory"

LAMARCK, Jean Baptiste de. Philosophie Zoologique, ou Exposition des Considérations Relatives à l'Histoire Naturelle des Animaux. Paris: Dentu et l'Auteur, 1809. Three parts in two volumes, 8vo (199 x 125 mm). [4], [i] ii-xxv [1], [1] 2-428 pp., [4], [1] 2-475 [1] pp, including half-titles. Contemporary boards (rebacked, rubbed), later paper dust-jackets torn and creased. Internally somewhat browned and spotted, some worming affecting upper blank margin of about 13 leaves in each volume, tiny holes in p.7/8 and 21/22 affecting a few letters, ink shelf numbers on half-titles. Provenance: D. S. Russo (ink stamp to half titles). (#002289) € 8,500



PMM 262; Sparrow 121; Evans 103; Norman 1267; DSB VII, pp.590-1; Wellcome III, p.435; Garrison-Morton 216. FIRST EDITION OF LAMARCK'S MOST COMPLETE PRESENTATION OF HIS THEORY OF EVOLUTION - "a classic in the literature of evolutionary theory" (PMM). The first two parts of Philosophie zoologique restate and elaborate upon Lamarck's theory of evolution (originally posited in his Recherches sur l'organisation des corps vivans, Paris, 1802), which attributes evolution to two factors: the tendency of species toward increasing complexity, and the influence of the environment, which he considered responsible for these variations from the norm. "The third part contains the most important additions to the earlier theories. In this section Lamarck deals in great detail with the problem of a physical explanation for the emergence of higher mental facilities ... Lamarck's breakthrough was tying a progressive development of higher mental facilities in a physical way to structural development of the nervous system ... Higher mental faculties could emerge precisely because they were a product of increased structural complexity ... For Lamarck one of the most important events in the evolutionary process was the development of the nervous system, particularly the brain, because at that point animals began to form ideas and control their movements" (DSB).

Although Darwin initially disparaged Lamarck's work, he later amended his opinion, stating in the "Historical Introduction" to the third edition of *On the Origin of Species* that Lamarck "first did the eminent service of arousing attention to the probability of all change in the organic as well as in the inorganic world being the result of law, and not of miraculous intervention" (London: 1861, p. xiii).

This work is the standard source for the study of Lamarck's theory of evolution and a classic in its field. "It is a theory of the evolution of animal life, depending upon variations brought about mainly through use and disuse of parts, and also by responses to external stimuli, and the direct inheritance of the same. His theory is comprehensive, so much so that he includes mankind in his general conclusions" (W.A. Locy, *Biology and its Makers*, 1930, pp.384-385).



LEIBNIZ, Gottfried Wilhelm. Essais De Theodicée Sur La Bonté De Dieu, La Liberté De L'Homme Et L'Origine Du Mal. Amsterdam: Chez Isaac Troyel, 1714. Three parts in two volumes. 12mo (163 x 93 mm). [36], 386; [2], 216, 132 pp. Drop title Discours de la conformité de la foy avec la raison on page 1 of first volume, separate title-page to part two and separate pagination with drop title Reflections sur l'ouvrage que M. Hobbes on p.1 of third part in second volume. Contemporary leather, spines with 5 raised bands gilt in compartments (rubbed, old paper label to foot of spines). Internally only little browned, minor spotting in places. Provenance: College Royal de Juilly (shelf-mark to free endpaper, small stamp and inscription to title pages). A fine set of a very rare edition. (#002302) € 3,500

Second edition of the most popular work published in his lifetime. Consciously written at a popular level, this became the most widely read of his works. Leibniz coined the term "theodicy" here to mean "justice of God" or that branch of philosophy seeking to reconcile the existence of evil with the assumption of a benevolent God. Composed as a response to Pierre Bayle's view that faith and reason are in opposition, Leibniz tries to reconcile philosophy and theology.

"In the preface to the *Theodicee*, Leibniz declares that there are two famous labyrinths in which our reason goes astray: the one relates to the problem of liberty (which is the principal subject of the Theodicee), the other to the problem of continuity and the antimonies of the infinite" (DSB). The work was composed with the encouragement of Sophia Charlotte of Brandenburg, who wished a reply to Pierre Bayle's view that faith and reason are in opposition. The work includes a reply to the views of Thomas Hobbes on liberty, and a brief essay on the qualities of the deity.

A very rare issue of the second edition by Troyel with only two copies recorded in OCLC/Worldcat: Wolfenbüttel Herzog August Bibliothek and Dresden, Sächsisches Landesmuseum.

The starting-point of modern systematic botany

21 LINNAEUS, Carlous [Linné, Carl]. *Genera plantarum : eorumque characteres naturales secundum numerum, figuram, situm, & proportionem omnium fructificationis partium*. Leiden: Conrad Wishoff, 1737. [Bound with:] *Corollarium Generum Plantarum...* Leyden: Wishoff, 1737.



[And:] *Methodus Sexualis...* Leiden: Wishoff, 1737. Three works in one volume, 8vo (200 x 124 mm). [16], 384 (i.e. 380), [20]; [6], 25; 23 pp. Signatures: * 4 ** 4 A-3D 4 ; π^4 (- π 4) A-C 4 χ 1; A-C 4 . *Genera* with woodcut title vignette, folding letterpress table "Clavis Classium" and folding engraved plate after G. D. Ehret. *Corollarium* and *Methodus sexualis* with separate title pages and pagination. Contemporary Dutch vellum, spine titled in script (boards soiled, corners slightly bumped). Small ink stamp to title-pages, plates and a few text pages, old paper label pasted onto first title page. Internally only little browned, occasional spotting and minor ink staining. B. Baumeister (insciption on first flyleaf "ex bibl. B. Baumeister M. C."); Centre Culturel des Premontres; Bibliotheque de Pont-A-Mousson. A fine copy of a rare edition.

(#002361) € 12,000

Soulsby 284, 285; Garrison-Morton 1829; D.S.B. VIII, p.375, Stafleu and Cowan 4714, 4715, 4716. - FIRST EDITIONS. "The *Genera plantarum* ... next to *Systema naturae* is his outstanding early work" (DSB).

"Linnaeus' botanical classification, the starting-point of modern systematic botany" (Garrison-M. 1829).

It describes all 935 plant genera then known. Ehret had produced an engraving illustrating the Linnean method of plant classification in 1736 which is found in a few copies of the *Systema naturae*. Linneaus was so pleased by the diagram that he had it re-engraved and it was issued with all but the earliest copies of the *Genera plantarum*. The three works bound together here were issued separately as well as together.

This first edition is very rare at auction: only two copies are recorded for the past decades (Christie's 2006 and Sotheby's 2004).

LINNAEUS, Carlous [Linné, Carl]. *Philosophia Botanica in qua explicantur fundamenta botanica cum definitionibus partium, exemplis terminorum, observationibus rariorum, adjectis figuris aeneis*. Stockholm: Godofr. Kiesewetter, 1751. 8vo (201 x 121 mm). [6], 362 pp. Engraved frontispiece portrait of the author engraved by I. M. Bernigeroth, 9 engraved plates, and 2 woodcuts



in text. Contemporary half calf with gilt lettering piece to spine (boards and extremities rubbed). Internally little browned throughout, endpapers, title and preliminaries brown-burned in outer corners from tanned leather turn-ins, otherwise a fine, virtually unspotted and unmarked copy. Rare with the engraved frontispiece portrait. (#002391) € 1,800

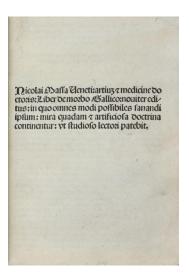
Sparrow; *Milestones of Science* 135; Soulsby 437; Hulth 72; D.S.B. VIII, p.376. First edition. "Continuing his study on the classification of plants, Linnaeus published Philosophica botanica in 1751. In this he attempted to organize a natural system based on structure, but this work was never completed" (Sparrow).

"In 1751 he published *Philosophies botanica*, his most influential work but actually only an expanded version of *Fundamenta botanica*. In it Linnaeus dealt with the theory of botany, the laws and rules that the botanist must follow in order to describe and name the plants correctly and to combine them into higher systematic categories." (DSB)

The plates have also been used in *Hortus Cliffortianus*. The engraved portrait, which was supplied to only a few copies, is present in this copy.

One of the earliest books on syphilis

MASSA, Niccolò. Liber de Morbo Gallico: noviter editus: in quo omnes modi possibiles sanandi ipsum: mira quadam & artificiosa doctrina continentur: ut studioso lectori patebit. Venice: Francesco Bindoni & Maffeo Pasini, 1527. 4to (194 x 136 mm). Signatures: A-L⁴, 44 unnumbered leaves. [Colophon:] Venetiis in aedibus Francisci Bindoni, ac Maphei Pasini summa dilige[n]tia impressus. Anno domini millesimo quingentesimo septimo. Mensis Iulii. Roman letter with title in gothic on A1r. 8-line white on black initial on A2 and one other small initial. Recent vellum boards. A carefully washed copy, some light browning, a few wormholes filled, mostly marginal but affecting a few letters. Provenance: No early ownership marks; old underlining on f3r -f3v. Walter Pagel library (paperslip on pastedown). (#002371) € 6,000



Wellcome 4102; Garrison-Morton 2365; CNCE 60434. - FIRST EDITION, falsely dated 1507 in the colophon; another issue with the same false date has the imprint Parma, Francesco Ugoleto and Antonio Viotti. The edition of 1532 was previously thought to be the first, and further editions were printed in 1536, re-issued in 1559, and 1563 and a French translation was published in 1565.

"This early work on syphilis (the 4th after Grünpeck, Leoniceno and Lopez de Villalobos) includes a description of the neurological manifestations of the disease (Garrison-Morton). It is a comprehensive description of the symptoms and effects of



syphilis. Massa believed that although usually contracted by sexual intercourse, syphilis could also arise spontaneously without contact. He discusses the role of diet, sleep and exercise together, and the use of drugs, bloodletting, leeches, and guaiac in the treatment of syphilis (Heirs of Hippocrates 195, describing the 1532 edition). Niccolò Massa studied at Padua and was professor of anatomy at Venice. He is best known as one of the earliest anatomists (with Benedetti and Berengario), to perform dissections, as he states in his Anatomiae liber introductorius, first published in 1536. Peter Krivatsky, *Nicola Massa's Liber de morbo gallico - Dated 1507 but printed in 1527*, Journal of the History of Medicine and Allied Science 29 (1974) 230-233; D.Casagrande,

Errore o falso in piena regola? Il Liber de Morbo Gallico di Nicolò Massa, Charta, 3 (2005), 24-29." (R. Gaskell, Books from the Library of Walter Pagel, Pt. I, 69).

MASSA, Niccolò. Liber de febre pestilentiali, ac de pestichiis, morbillis, variolis, & apostematibus pestilentialibus... Venice: Francesco Bindoni & Maffeo Pasini, 1540. 4to (211 x 154 mm). Signatures: A-T⁴, 76 leaves, foliated. Roman letter. [Colophon:] *Venetiis, apud Franciscum Bindonem, & Maphaeum Pasinum maxima diligentia excussum. Mense Iulii. Anno a Virgineo Partu. M. D. XL.* Modern marbled paper binding with gilt lettering piece to spine, original free endpapers preserved. Contemporary manuscript title on lower page edges. Light browning internally, light dampstains to fore-margin (first three leaves stronger). Provenance: Early inscription "Ad Baptista"



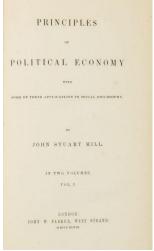
Zucculii usum" on title-page and in probably the same hand "Costo [undeciphered] 25. bononie 1579 die 21 januarii [undeciphered] 327" on free end-paper; later signature "Genesii Soncini[?] M.D." on rear free endpaper; circular censor's stamp "Prof Pietro Tonelli Censore Stati Estensi" on title and a similar stamp (name illegible), dated Regio, 1839; Walter Pagel library (paperslip pasted on flyleaf). (#002372) € 1,500

EDITI6 CNCE 23345; NLM/Durling 2988; Wellcome I, 4105. - First edition. "Another edition was printed in 1555 (some copies dated 1556). This work on infectious diseases includes an early description of the typhus epidemics that occurred in the first half of the century. It was only in 1546 that Fracastoro, in his *De contagione*, properly distinguished between plague and typhus (Castiglione, trs Krumbhaar, *History of Medicine*, 1947, p. 467)." (R. Gaskell, *Books from the Library of Walter Pagel*, Pt. I, 71).

MILL, John Stuart. Principles of Political Economy with some of their applications to social philosophy. Four parts in two volumes. London: John W. Parker, 1848. 8vo (224 x 140 mm). xvi, 593 [1], [2], [4]; xv (i.e. xiii) [1],549 [1], [2] pp. Including advertisements at end of each volume. Original publisher's green cloth with blind-stamped borders and printed paper spine labels (spine slightly discoloured, boards little rubbed, corners bumped). Paper block untrimmed. A fine, unusually well preserved copy. (#002384) € 5,000



Einaudi 3907; Schumpeter p. 450; Goldsmiths 35525; Kress C7500; PMM 345 (note). - The most widely read work on economics of its time. Mill followed many of the free market ideas of Adam Smith, although with a utilitarian focus. Herein can also be found a basis for environmentalism in economics and politics. John Stuart Mill (1806-1873) was an English philosopher and economist and all-round publicist. The present work became the standard for the next 50 years in the field of political economy. The first volume discusses production, the second volume distribution, the third exchange and the fourth and final volume discusses the effects of the progress of society on production and distribution.



"He aimed in fact at producing a work which might replace in ordinary use the *Wealth of Nations*, which in his opinion was 'in many parts obsolete and in all imperfect'... His book is very far indeed from

being a 'modern Adam Smith'. It is an admirably lucid, and even elegant, exposition of the Ricardian economics, the Malthusian theory being of course incorporated with these...' (Encyclopaedia Britannica).

NOCETI, Carlo; BOSCOVICH, Roger Joseph. *De iride et aurora boreali, carmina... cum notis Josephi Rogerii Boscovich*. Rome: Ex typographia Palladis, excudebant Nicolaus et Marcus Palearini, 1747. 4to (224 x 165 mm). [12] 127 [1] pp. Signatures: a⁶ A-Q⁴ (K3 cancel), 70 leaves. Half-title,



woodcut device on title, woodcut initials, head and tail-pieces. Two engraved plates of diagrams, numbered Tab I-II (bound as throwouts at pp. 48 and at the end). Contemporary sprinkled sheep, richly gilt spine, sprinkled paper pastedowns, red and yellow mottled edges, old paper shelf-labels on spine (worming in upper joint). Worm holes in inner margin, well away from the text and images. Text bright and unspotted, early annotations in French, mostly in pencil but a longer annotation in ink on p. 93 on a pasted in strip of paper; Walter Pagel library (paper label to front pastedown). A clean, crisp copy. (#002366)

Sommervogel V, col. 1784, no. 1; Riccardi I/1, 175, 29; de Backer-S. V, 1784,1. - First edition. "An Italian translation was published in 1753. Two didactic poems, the first on the rainbow, the second on the aurora borealis, each followed by a long scientific commentary by Boscovich (pp. 19.48 and 89.127). Boscovich's own work, *De aurora boreali* had been published at Rome in 1738." (R. Gaskell, *Books from the Library of Walter Pagel*, Pt. II, 147).

An early compilation of the botanical knowedge

RUEL, Jean. *De Natura stirpium libri tres*. Paris: Simon de Colines, 1536. Folio (382 x 245 mm). [xii], 884, [128] pp. Signatures: A⁶, a-y⁸ z¹⁰ 2a-3i⁸, A-H⁸. Elaborate woodcut title-border, incorporating Colines' device in the lower right-hand corner, numerous woodcut white-on-black criblé initials in



several sizes, including large blocks from the Tory alphabet. 62 ff. of index bound at end. Final two blank leaves present. 17th-century calf over thick boards (hinges, spine ends and corners repaired, rubbing and soiling to boards), all edges gilt. Internally only little age-toned. Two unobtrusive paper repairs on title page (not affecting text), weak waterstaining to lower corner of some leaves, occasional pencil underscorings and annotations. A fine, crisp and wide-margined copy. Collated complete. (#002284) € 5,500

Norman 1857; Adams R-872; Mortimer (French) 471 (first state); Hunt 39; Pritzel 7885; Stillwell Science 693. - FIRST EDITION of this compilation of the botanical knowedge of the period by one of the very earliest of the French botanists. Ruel was physician to Francis I and is more widely known in the field of botany for his translation of

Dioscorides. The first 22 chapters of this work are devoted to a general treatment of botany and is based largely on Theophrastus's De historia et causas plantarum; the remainder contains approximately 600 plant descriptions taken primarily from classical authorities, arranged in alphabetical order and supplemented with plant names in the vernacular. The book stands out more for its achievement in book design than for its contribution to botanical classification. Mortimer states "it is generally cited as one of the handsomest books of its time." It has been suggested that the title-border might be the work of Oronce Finé. This copy contains the second state of the title-page and its conjugate A6 as described by Mortimer.



The first book devoted exclusively to the anatomy of an animal

RUINI, Carlo. Anatomia del cavallo, infermità, et svoi rimedii: opera nuoua, degna di qualsiuoglia prencipe, & caualiere, & molto necessaria à filosofi, medici, cauallerizzi, & marescalchi / Del sig. Carlo Rvini... Venetia: Appresso G. Bindoni, il giouane, 1599. Two parts in one volume. Folio



(321 x 231 mm). [36], 295 [1]; [4], 386, [30] pp., titles-pages printed in red and black and with large woodcut device, 64 woodcut plates within pagination, alphabetical index at end of part II, errata on ***4r of part I and final page of part II, separate title-page to part II. Signatures: π² *6 **6 ****4, a-2a6 2b4; π² A-2L6 2M4. Printed on strong paper. With the two blanks in part II. Contemporary flexible vellum (soiled and browned, binding restored with upper portion of spine repaired), remnant of paper label to spine. Little agetoning of text, occasional spotting and finger-soiling, faint dampstaining mainly to upper portion, repaired tear to upper margin of Dd4 costing two letters of headline text, chipped corners of part I title-leaf restored. Collated complete. A fine, wide-margined copy. (#002306) € 26,000

Dibner 186 (this ed.); Norman 1858 (1st ed.); BM/STC Italian, p. 592; D.S.B. XI, p.604ff; Nissen ZBI 3514; Garrison-Morton 285; Osler 918; Mortimer Italian 448; Wellcome 5625. - RARE

SECOND EDITION of the first book devoted exclusively to the anatomy of an animal, and the first monograph on horses. "Besides being one of the foundation-stones of modern veterinary medicine, it contains a description of the lesser circulation. The admirable woodcuts were inspired by those in Vesalius' *De humani corporis fabrica* (1543)" (Garrison-Morton).

"The fine engravings and fluent text detail the anatomy and physiology of the horse, with the eye, ear, intestines, kidneys and bladder being especially well treated. The heart and the lesser circulation are described but it is stated that left ventricle sent blood and vital spirits to all parts of the body but the lung (which prompted the Veterinary School in Bologna to honor Ruini with a tablet proclaiming him the discoverer of the circulation!) In exactness and beauty of treatment, Ruini's book has been favorably compared to Vesalius' treatment of man (Dibner 186).





"One of the finest achievements of the heroic age of anatomy... its truly magnificent figures need not fear comparison with those of Vesalius or Eustachius" (C. Singer, *The Evolution of Anatomy*, p.153). Of the woodcuts Cole writes "it is impossible to avoid the conclusion that Ruini's work is the direct and logical outcome of the Vesalian tradition, since it resembles, if it does not equal, the masterpiece of the founder of anatomy in almost every detail" (Cole, *Hist. of Comparative Anatomy*, pp.83-97).

The first part deals with horse anatomy, the second part with horse diseases. The second edition was issued one year after the first and differs only in title-page and name of dedicee. It is even rarer than the first edition with only two complete copies recorded at auction in the past 20 years.

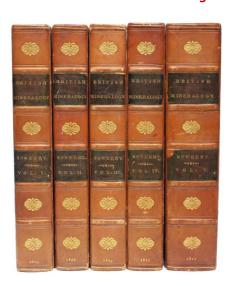
SOEMMERRING, Samuel Theodor von. *Ueber das Organ der Seele*. Königsberg: bey Friedrich Nicolovius, 1796. 4to (247 x 210 mm). [8] 86 [2] pp. Signatures: π⁴ A-K⁴ L² χ², 48 leaves. Errata on final leaf chi2r. 3 engraved plates, the first signed 'Koeck delineavit, Soemmering direxit, Lud. Schmidt scups' (the other two with the engraver's signature only), numbered Tab I, Tab I (an outline of the previous plate) and Tab II. 20th century quarter calf over marbled boards, spine titled in gilt (little rubbed, corners bumped). Text only little browned, title-page a bit soiled, browned and spotted; light dampstains to lower corner of first and final leaves and plates, foxing to final plate and final leaf. Provenance: Walter Pagel library (ownership label to front pastedown), autograph letter from Walther Riese to Walter Pagel and xerox copy of article by Riese about this work loosely inserted*. (#002367)



Norman 1973; NLM/Blake, p. 424; Waller 9052; Choulant-Frank p. 306; Warda, Kant, 159. FIRST EDITION. Soemmerring held to the ancient notion that the cerebral cavities were the seat of the soul. His investigation in support of this hypothesis advanced our knowledge of the anatomy of the brain and provoked important philosophical discussion. "The effect of Soemmerring's publication was sensational. But it also provoked much criticsm. It was openly rejected by others. What the profession had to say was of minor importance when compared with the comments made by two of Soemmerring's greatest contemporaries: Goethe and Kant. The work was dedicated to Kant" (Riese, p.314). Soemmerring corresponded with Kant before the publication of the book and invited him to write a response to his work. Kant's 'Bemerkungen zu Soemmerring's Ueber das Organ der Seele'

were appended to a letter to Soemmering, 10 August 1795, and first printed here on pp. 81-86. Tab I is "the first correct picture of the mesial aspect of the cerebral hemispheres, a sagittal section, showing the ventricular system and its walls" (Riese, p. 312). According to Choulant it was still the best available in 1852, though Riese says that it falls far short of modern illustrations. Tab II "represents the fourth ventricle of the brain opened from above and from behind" (Choulant). The plates were drawn by Christian Koeck (1759-1825), trained by Soemmering as a scientific draughtsman. Tab I is followed by an outline plate, also labeled as Tab I; Tab II has the shaded and outline images one above the other. The outlines are keyed to the printed captions on the last leaf of letterpress.

*Laid in is a long autograph letter from Walther Riese to Pagel ('Mein Lieber Walter (ohne H.) Pagel...') dated 10 March 1966 and referring to Riese's article on the book (present as a xeroxcopy). Walther Riese, *The 150 th anniversary of S. T. Soemmerring's Organ of the Soul. The reaction of his contemporaries and its significance today*, Bulletin of the History of Medicine, 20 (1946) pp. 310-321. (R. Gaskell, *Books from the Library of Walter Pagel*, Pt. II, 173).



With the larges number of hand-coloured plates ever published

SOWERBY, James. British Mineralogy: Or Coloured Figures Intended to Elucidate the Mineralogy of Great Britain.
London: R. Taylor & Co., and Arding & Merrett, 1804-1817. In 5 volumes (all published). 8vo (229 x 143 mm). xii, 223 [1]; [2], 19* [1], 199 [1]; [2], 209 [1]; [2], 184; vi, 281 (i.e. 285) [1], [24] pp. 550 hand-coloured plates by James Sowerby (many heightened with gum arabic), 100 to each of the first four volumes, and 150 to the final one. A few mispaginations. Plate 421 misnumbered 221. Leaf C8 in vol. III a blank. Systematic- and general index at end of vol. V. Some plates protected by old paper slips. Contemporary English diced calf, spines with old rebacking, gilt lettering pieces, and 5 raised bands to each volume (boards and extremities somewhat rubbed, corners slightly bumped), marbled edges, fore-

margins partially untrimmed. Internally crisp and unmarked with only little marginal browning, occasional foxing to text (plates much less affected). A fine copy with ample margins. Collated complete. (#002297) € 19,000

Ward-Carozzi 2090; DSB XII, p.552; Conklin, *James Sowerby, his Publications and Collections*. In: The Mineralogical Record, 26 (1995): pp. 85-105; Knight, *Natural Science*, p. 93. - FIRST EDITION OF SOWERBY'S RARE AND IMPORTANT WORK ON MINERALS, containing the largest number of hand-colored mineral illustrations ever published. Originally issued in 84 parts, *British Mineralogy* became an influential source of information at a time when the study of minerals was confined to the medical world. The wide scope of Sowerby's work, together with his meticulous and skilfully-coloured engravings after drawings of his own collection of mineralogical specimens, met his stated ambition in the preface, "to leave no stone unturned, to make the work as universally useful as possible." (Conklin).



SOWERBY, James. A New Elucidation of Colours... with some Observations on the Accuracy of Sir Isaac Newton. London: Richard Taylor and Co., 1809. 4to (293 x 235 mm). [4], 51 [1] pp. 7 engraved plates, of which 5 hand-coloured by the author. 20th century half calf over older marbled boards. Internally little bowned, some foxing (first and final leaves stronger), library stamps (those to plates within plate mark). Provenance: Birm Library, Birmingham. (#002294) € 3,900



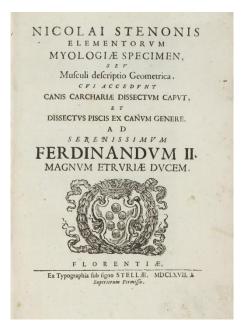
Babson 162; Wallis 229; Honeyman 2876. - At the beginning of the 19th century, James Sowerby (1757-1822), already known as author of books on botany, conchology and mineralogy, introduced a colour system, which he dedicated to "the great Isaac Newton." Sowerby set himself two tasks with this work: firstly, he wished to re-emphasise the significance of brightness and darkness, which after Newton had "fallen into obscurity"; and, secondly, he wanted to clarify the difference which exists between colours. Johann Heinrich Lambert had already pointed out that the colours of light and the colours of materials behave in a different way when mixed. Sowerby, in his system, assumed the existence of three basic colours: red, yellow and blue. Sowerby's text describes the optical mixtures which result when narrow and tightly packed strips of primary colour are applied to paper. The sketches included in his work exemplify the three parts which Sowerby's theory rests on and express the stabilising continuity which can exist between them. Incidentally, Sowerby's attempt to transform Newton's seven primary colours into three materially renderable basic colours attracted the attention of the English painter William Turner (the two were, in

fact, acquainted). Later, in about 1820, Turner followed the painter Otto Runge in trying to assimilate the system of the three colours red, yellow and blue into a diurnal pattern (for which there is more than just one

possibility, as was soon apparent). Sowerby's system originated at the same time as Thomas Young (1773-1829) submitted his theory stating that the eye generates all colours by combining only three wavelengths. This "Theory of Trichromatic Vision" is based on the primary additive colours red, green and blue (N. Silvestrini, U. Baumann & Stromer, *IdeaColour*, Zürich, 1994; see also www.colorsystem.com).

The first outline of a scientific theory of the development of the earth

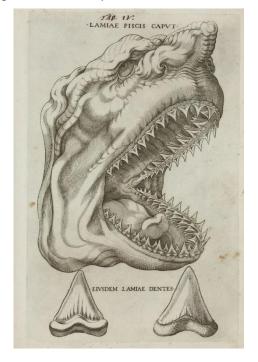
STENSEN, Nils [STENO, Nicolaus]. Elementorum myologiae specimen, seu musculi descriptio geometrica. Cui accedunt canis carchariae dissectum caput, et dissectus piscis ex canum genere. Florence: [Joseph Cocchini], ex typographia sub signo Stellae, 1667. 4to (280 x 167 mm). [8], 123 [1] pp. Signatures: ♣ A-P⁴ Q², 66 leaves. Woodcut Medici arms on title, 7 plates: 3 large folding woodcut plates numbered Tabula I-III and 4 full page engraved plates numbered Tab. [IV], V, [VI], VII (bound at the end with the engravings first). 18th-century roan-backed boards, vellum tips, gilt-tooled spine (extremities little rubbed, front endpaper removed, corners bumped). Small stain in preliminaries, some very light occasional spotting, a few early ink annotations and 3 neat ink diagrams in text. A fine, fresh and clean copy. Provenance: library of Walter Pagel (label fixed to inner pastedown). (#002373)



Norman 2012; Garrison-Morton 577; NLM/Krivatsy 11432; Osler 4021; Waller 9223; LeFanu, *Notable Medical Books from the Lilly Library*, p. 79. - FIRST EDITION of "the first outline of a scientific theory of the development of the earth" (Norman), also important for Steno's contributions to the fields of myology and embryology. In collaboration with the mathematician Vicenzio Viviani, Steno (or Stensen) developed a geometrical description of muscular contraction, attempting to demonstrate theoretically that muscles did not increase in volume during contraction. The appendix contains his anatomical descriptions of the head of two sharks, and a study of their teeth (subjects of two of the fine plates), leading him to develop "his theories of how geological structures and fossils might be formed" (Garrison-Morton).

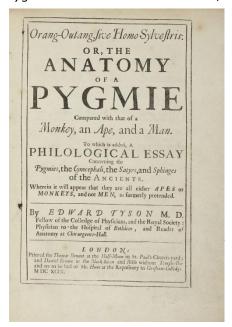
This is one of the most remarkable of the scientific classics because it made seminal contributions to three quite distinct fields: myology, embryology and geology. First, Stensen shows that muscular contraction is not due to an influx of nerve fluid, but that on the contrary, the volume of muscle does not increase during contraction. His purely geometrical description of muscular

contraction, written in collaboration with the mathematician Vincenzio Viviani (1622-1703), laid the foundation of muscle mechanics. The next section of the book describes the dissection of a shark's head, shown in a memorable and often reproduced plate. This led Stensen to the discovery that the so-called tonguestones, common on Malta, are fossilised shark's teeth. Discussing how fossils are formed, Stensen outlines the basic principles of modern geology and gained for the work the title of 'The earliest geological treatise' (Garboe, quoted in Garrison-M.). Finally, there is a study in comparative anatomy demonstrating the correspondence between the roe of dogfish and the ovaries in women. This was the first recognition of the egg-producing function of the female ovary. Stensen was born in Denmark and studied under Thomas Bartholin at Copenhagen. His first work on the muscles, De musculis et glandulis observationum, was published at Copenhagen in 1664. He then settled in Florence, where the present work was published, and two years later the same publisher issued his classic treatise on geology and paleontology, De solido (Florence 1669), intended as an introduction to a larger work that was never written. Stensen was a fine draughtsman and presumably the illustrations in the



A fine association copy

TYSON, Edward. Orang-Outang, sive Homo Sylvestris: or, the Anatomy of a Pygmie Compared with a Monkey, an Ape, and a Man... [ISSUED WITH:] A Philological Essay Concerning Pygmies... London: Thomas Bennet, Daniel Brown, Mr. Hunt, 1699. Two parts in one. 4to (288 x 213)



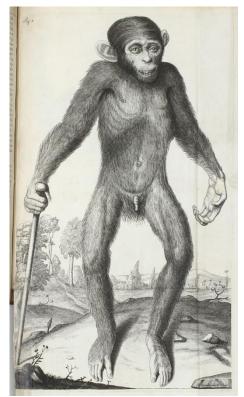
mm). [12] 1-108, [2] 1-58 [2] pp. Signatures: π^4 A² B-O⁴ π^2 χ^2 2B-2H⁴ 2I₁, 91 leaves. Imprimatur leaf before title, separate title to second part, publisher's advertisement leaf at end, 8 folding engraved plates after William Cowper by Michael Vander Gucht (small tears at folds without loss). Modern blind-stamped calf, gilt red morocco spine label, red-dyed edges, new endpapers. Little browning, marginal soiling and spotting of text. Provenance: Joshua Brookes* (2 different bookplates). A fine, wide-margined copy. (#002375) € 14,000

PMM 169; Norman 2120; Wing T-3598; Garrison-M. 153; NLM/Krivatsy 12028; Nissen ZBI 4194. - FIRST EDITION of the first anatomical study of a great ape and to identify the chimpanzee as the link directly below mankind in the 'Great Chain of Being': "'Tis a true Remark, which we cannot make without Admiration; That from Minerals, to Plants; from Plants, to Animals; and from Animals, to Men; the Transition is so gradual, that there appears a very great Similitude, as well between the meanest Plant, and some Minerals; as between the

lowest Rank of men, and the highest kind of Animals. The Animal of which I have given the Anatomy, coming nearest to mankind; seems the Nexus of the Animal and Rational" (Tyson, from The *Epistle Dedicatory*). This represents the first formulation of the idea of the 'missing link', which was more fully explored by the works of Huxley and Darwin in the 19th century. The 'typical pygmy' which Tyson placed between man and monkey was in fact an African chimpanzee.

"The earliest important study in comparative morphology ... he established a new family of anthropoid apes standing between monkey and man ... Tyson did not foresee the theory of evolution; but his work contributed substantially to its formulation and in that sense he was a forerunner of Blumenbach, Buffon, Huxley and Darwin" (PMM).

*Joshua Brookes (1761-1833). "Brookes taught anatomy to approximately 7000 students over a forty-year period... [and was] generally esteemed to be among the best teachers of practical anatomy in London, having the benefit of original specimens rather than pictures" (ODNB). He assembled a vast collection of specimens of human and comparative anatomy, which he displayed in the two upper floors of his house in Blenheim Street. The collection, dispersed in sales in 1828 and 1830, was considered as second only to that of John Hunter.



The first published monograph on veterinary medicine

VEGETIUS RENATUS, Publius. Artis veterinariae, sive mulomedicinae libri quatuor V, jam primum typis in lucem aediti. Opus sane in rebus medicis minime aspernandum. Basle: Johann Faber of Emmich, 1528. 4to (200 x 145 mm). [8] 72 ff. Signatures: [a]-b⁴ A-S⁴, 80 leaves. Italic letter with Roman headings. Title within a woodcut border made up of 4 blocks; woodcut initials. [Colophon:] Basileae. Anno. M. D. XXVIII. Excudebat Joannes Faber Emmeus Juliacensis. 18th-century calf-backed boards (spine a bit damaged by worming), marbled pastedowns. Some gatherings of text unevenly browned, lower margin a bit stained towards end. (#002382) € 6,000

Schweiger II, 1123-24; VDI6 V468; Adams V341; NLM/Durling 4563; Wellcome 6524. - FIRST EDITION of the first published monograph on veterinary medicine. In addition to practical advice Vegatius Renatus stressed the economic benefits of good veterinary practice.



"A German translation was published in 1532, and two further Latin editions in 1574 and 1781, respectively. The first work of the Christian era entirely devoted to veterinary medicine and the first monograph on the subject to be printed. Publius Vegetius Renatus was a Roman man of letters who flourished about 450-500 AD. He is not to confused with Flavius Vegetius Renatus, a soldier and author of the famous military textbook. Nor was he a horse trader and farrier as is often stated. Publius Vegetius had travelled widely and set out to restore veterinary medicine to the position it held in ancient Greece and to counter the public indifference to the profession. He stresses the economic benefits of veterinary medicine and says that good hygiene is important as it is better to preserve the health of horses and cattle than to try to restore it. He says that he has consulted contemporary veterinarians as well as physicians. Frederick Smith gives a full analysis of the text in his unpublished The history of veterinary medicine (1900, pp. 20-30). Having said in his section on Vegetius that his work, which he calls 'epoch making', was 'the first veterinary work ever printed', he later corrects this in a footnote (p. 42), saying that veterinary science was treated by Ruffus in a book printed at Venice in 1492

and also that Moulé refers to 14th and 15th-century works printed as early as 1486 and others in 1494 and 1495. None-the-less it seems safe to say that this is the first printed monograph on veterinary science. Frederick Smith, *The history of veterinary medicine* (1900), unpublished proof, Cambridge University Library, Syn 4.91.36." (R. Gaskell, *Books from the Library of Walter Pagel*, Pt. I, 127).

VENTURI, Giovanni Battista. *Commentarj sopra la storia e le teorie dell'ottica. Tomo primo* (all published). Bologna: Fratelli Masi, 1814. 4to (304 x 227 mm). [2], xxxii, 246 pp. Engraved portrait



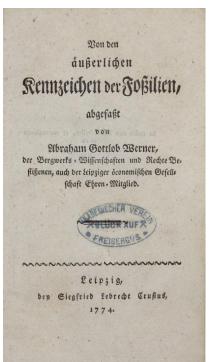
and 10 engraved plates. Original blue paste-paper stiff wrappers, spine and extremities worn, paper letting piece to spine. 4 leaves (pp. 79-86) misbound, some foxing to plates and text, small repair to foot of title where stamp has been removed. Provenance: Robert & Marian S. Honeyman (bookplate loosly inserted). A fine,wide-margined copy with interesting provenance. (#002301) € 1,500

Honeyman 3037 (this copy); Riccardi II/5, 51; Poggendorff II, 1193. Giovanni Battista Venturi (15 March 1746 - 24 April 1822) was an Italian physicist, savant, man of letters, diplomat and historian of science. He was the first to call attention to the importance of Leonardo da Vinci as a scientist, rather than simply as an artist. He compiled, edited and published many of Galileo's manuscripts and letters. In this book on the history and theories of optics, he recounts the observations of Bonaventura Corti, who discovered protoplasm in cells in 1774, but whose observations were overlooked until protoplasm was discovered by Treviranus in 1811. Venturi restates the original observations made by Corti, who later, in 1839 was finally credited with the first description of

protoplasm. He also gives a history of the dioptra by recounting the Hero of Alexandria's treatise on the subject.

By the father of modern mineralogy

WERNER, Abraham Gottlob. Von den äusserlichen Kennzeichen der Fossilien. Leipzig: Siegfried Lebrecht Crusius, 1774. 8vo (178 x 105 mm). [1-5] 6-302 [2] pp. 8 printed folding tables. Errata on T8v. Early 19th century paper card binding with paper label to spine (extremities rubbed, corners bumped, chipping to spine probably due to removed label). Internally only little age-toned, a few occasional ink corrections in contemporary hand. Provenance: Akademischer Verein und Burschenschaft "Glück Auf" Freiberg (old library stamp to title page, shelf mark and 3 stamps to



endpaper). A fresh, crisp and virtually unspotted copy internally. (#002290) € 3,900

Dibner 91; Norman 2205; Sparrow 196; Evans 64; Honeyman 3106; DSB XIV, p.257; Sotheran II, 9271; Wilson, Mineral Collecting, 99-100; Ward-Carozzi 2299; Ferchl 575; Zittel 56. FIRST EDITION of Werner's very rare work in which he classified the outward characteristics of minerals and established standards of quantification which continued to be used into the 19th-century. He is best known as the author of an influential oceanic theory of the origin of world's crust, which gave rise to the Neptunist-Vulcanist theory which was to dominate 19th-century geology (Norman).

The first book by "the most renowned geologist and mineralogist of his day" (Zittel); Wilson describes Werner as "the father of modern mineralogy." "Von den äusserlichen Kennzeichen der Fossilien was not a mineral system but a classification of external characteristics of minerals, designed to aid the worker of the student in the field. In it Werner gave an unprecedented number of external characteristics with definitions, usually accompanied by homely examples which could be understood by both the layman and the natural philosopher. He also attempted to establish some standards of quantification and thus to clear away the vagueness in the terminology then in use" (D.S.B.)

WILLIS, Thomas. *De anima brutorum quae hominis vitalis ac sensitiva est, exercitationes duae*. London: William Wells & Robert Scott, 1672. 8vo (157 x 95 mm). [48], 565 (i.e. 563), [16] pp.

and 8 folding engraved plates. Signatures: A8 a-b8 B-Z8 Aa-Dd8. Contemporary polished

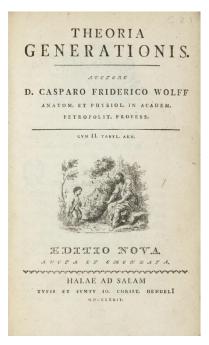
calf, spine with 5 raised bands richly gilt in compartments (very minor wear to extremities). Internally only little browned. Plates 2 and 8 split at lower fold, plate 3 with closed tear at gutter; leaf D3 with small hole affecting page number. A fine copy printed on strong paper. (#002308) € 2,600



Norman 2246; Wing, W-2828; NLM/Krivatsy 13017; Garrisson-M. 1544; Wellcome V, p. 443. One of two octavo editions, published in England shortly after the initial quarto and with copperplates identical to the quarto version. Willis recognized the difference between the symptoms of gross brain disease and those of mental illness. Because he postulated a disturbance of the brain and nerves in terms of disordered "animal spirits" in the absence of pathological findings, he is often considered the first to have equated mind disease with brain disease. Also includes probably the earliest description of general paralysis, and the paracusis of Willis.

A fundamental work on embryology

WOLFF, Caspar Friedrich. Theoria generationis... editio nova, aucta et emendata. Halle: typis et sumtu lo. Christ. Hendeli, 1774. 8vo (200 x 120 mm). lxiv, 231 [1] pp. (errata on last page). Signatures: a-d⁸ A-O⁸ P⁴, 148 leaves. 2 engraved plates, numbered Tab I–II, signed 'Auctor ad. nat. del' (bound as throwouts on full blank leaves at the end). 19th century cardboards (extremities worn), spine with paper label titled in script. Paper little age-toned, very minor occasional spotting. Provenance: Early signature P. Wagner on free endpaper; Walter Pagel library. A fine, clean and unmarked copy. (#002369) € 2,400



Wellcome V, p. 460; Blake p. 494; Waller 11038; Norman 2257 (1st ed.); Garrison-Morton 470 (1st ed.) - Second edition (first 1759). "Wolff observed in great detail the early processes of embryonic differentiation. He disposed of the 'preformation' theory, substituting his view that the organs are formed from leaf-like (blastodermic) layers" (Garrison-M.).

A fundamental work on embryology ... in which he refuted the theory of preformation and put forward a theory of epigenesis which laid the foundations of the germ-layer theory of Baer and Pander. He demonstrated the truth of his theory with detailed microscopic observations on developing plant and chick embryos. In the latter he followed the development of the heart and blood vessels. "Wolff's fundamental achievement was the refutation of the theory of preformation, which considered the development of an organism to be simply the expansion of an invisible, transparent, fully formed embryo" (D.S.B. XV, p. 524).

This edition adds a foreword dated 4 November 1773, a long 'Praemonenda de theoria generationis' and an index replying to criticisms (pp. xi–lxiv), but omits the 'Expositio et ratio instituti' and 'Conspectus dissertationis' in the first edition (1759, pp. 5–11). (R. Gaskell, Books from the Library of Walter Pagel, Pt. II, 192).

The most important and influentual book in the history of music theory

ZARLINO, Gioseffo. *Le Istitutioni Harmoniche*. Venice: Francesco Senese, 1558. 4to (306 x 207 mm), [12], 347 [1] pp., including numerous woodcut diagrams (many full page), including a keyboard instrument, extensive type-set music (including pieces illustrating imitative counterpoint), and historiated 5- & 8-line initials, italic letter. Early 19th-century half vellum (soiled, spine darkened with



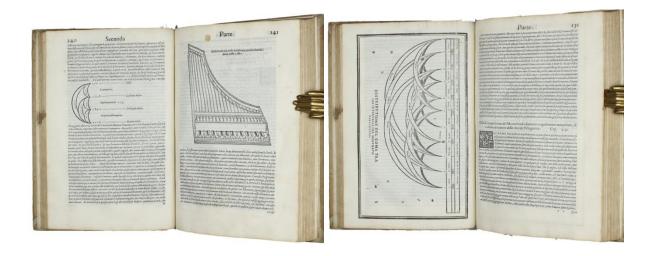
short crack at top of front joint), red morocco lettering piece to spine. Internally only very little age-toned, a few annotation in contemporary hand, ink stain on fore edge slightly showing internally, faint marginal dampstains to a few pages, contents otherwise bright and clean. Provenance: Thomas Mauritus(?), signature on title-page, modern ownership inscriptions on front pastedown. An outstanding, wide-margined copy. (#002320) € 42,000

PMM 81; RISM Écrits, p.907; Censimento 16 CNCE 25277; Gregory & Bartlett, i, 296; Ricardi II, 661; Hirsch, i 623; not in Adams. - FIRST EDITION, FIRST ISSUE of arguably the most important and influentual book in the history of music theory. Gioseffo Zarlino (1517-1590) laid down the theoretical basis for almost all aspects of modern music, for which he was cited as the ultimate authority for the next two hundred years. He codified the contrapuntal techniques of the great composers of his time and was the first to explain the modern tonal system of major and minor modes. In the *terza parte* Zarlino treats counterpoint in a conservative manner, particularly regarding the treatment of dissonances, provoking

widespread attacks by Vincenzo Galilei and others. Artusi cited Zarlino in his attacks on Monteverdi and brought forth the latter's distinction between the *prima prattica* and his own *seconda pratica*. The *Istitutioni* "opened the way for the new tonality which has governed music from the seventeenth century to the present day" (PMM). This is the first issue of the *Istitutioni*, with the privilege and errata list both placed on recto of final leaf of preliminaires, and with its verso blank.

The Istitutioni harmoniche fully approved of the practise of composition, as Willaert had taught. It is explained in the third part and is the central theme of the book. However, Zarlino was too much the Philosopher and Theologian, to confine himself to the reproduction of rules of composition. The first two parts of the book are devoted to practical theories of cosmology, philosophy and acoustics, as interpreted at that time. The most important humanist sources on which Zarlino based his thoughts were those of M. Ficino's translation and commentary of Plato's Timaios and the Harmonika of Ptolemy. He borrowed his ideas on harmony of the worlds from Plato. $Zarlino\pi$'s rules of composition are far more detailed and fully developed than those of his predecessors. The most prominent characteristic of his method is the idea of the harmonia perfetta. Zarlino objected strongly and loudly to those who did not respect modern music as much as that of the ancient Greeks or believed that it could not be as expressive without imitating the antique chromatic and enharmonic modes. He insisted, rather, on the integration of four elements: harmony, metre, text and a receptive audience.

Very rare, only 3 copies of the first edition recorded at auctions in the past 50 years.



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